



MADE IN ITALY



submersible  
pumps



الموارد للهندسة والتجارة ش.م.م  
**AL MAWARED**  
ENGINEERING & TRADING S.A.E

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# VORTEX RANGE

IT

Elettropompe sommergibili caratterizzate da una girante semiaperta arretrata. Questa soluzione idraulica garantisce un ampio passaggio libero di corpi solidi riducendo il pericolo di blocco della girante. Soluzione molto indicata per il pompaggio di acque luride e reflui civili ed industriali.

EN

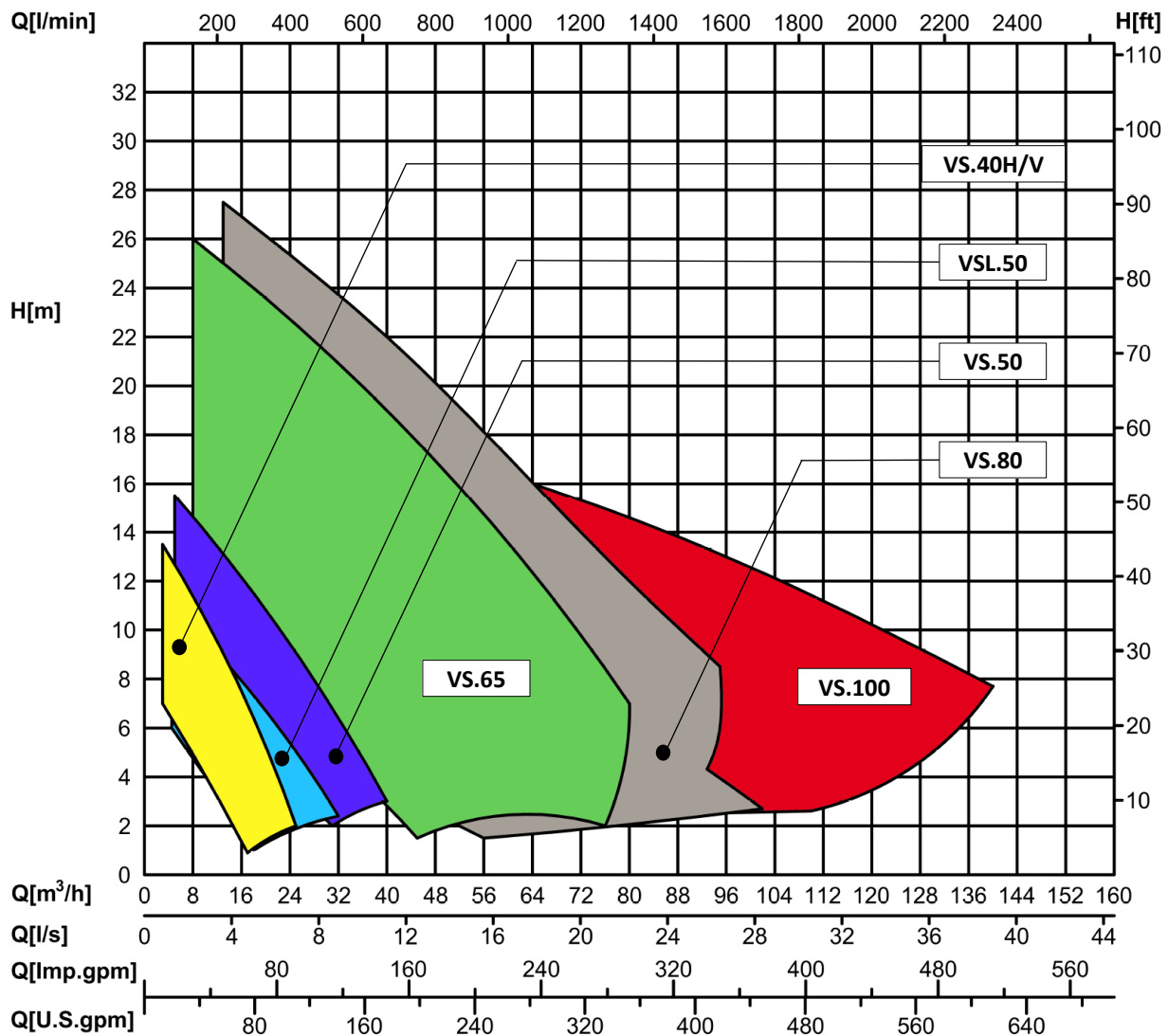
Submersible pumps characterized by a backward open impeller. This hydraulic solution guarantees a large free passage of solids reducing the risk of blocking of the impeller. This is a solution very suitable to pump sewage and domestic/industrial waste waters.

FR

Pompes submersibles caractérisées par une turbine ouverte vers l'arrière. Cette solution hydraulique garantit un large passage libre de solides réduisant le risque de blocage de la roue. C'est une solution très appropriée pour pomper les eaux usées et les eaux usées domestiques / industrielles.

ES

Bombas sumergibles caracterizadas por un impulsor abierto hacia atrás. Esta solución hidráulica garantiza un gran paso libre de sólidos, lo que reduce el riesgo de bloqueo del impulsor. Esta es una solución muy adecuada para bombear aguas residuales y aguas residuales domésticas / industriales.



# VORTEX RANGE

| Pipe outlet    | Range  | Poles | Type              | kW   | Kg   | Free passage | Outlet Flange                            | Pg. |    |
|----------------|--------|-------|-------------------|------|------|--------------|--|-----|----|
| DN 40          | VS.40H | 2     | VS.40H_04.2.110L  | 0,4  | 15   | 35           | 1 <sup>n</sup> 1/2                       | 3   |    |
|                |        |       | VS.40H_06.2.110   | 0,6  | 23   | 40           |  |     |    |
|                |        |       | VS.40H_09.2.110   | 0,9  | 24   |              |  |     |    |
|                |        |       | VS.40H_11.2.110   | 1,1  | 24,5 |              |  |     |    |
| DN 50          | VS.40V | 2     | VS.40V_04.2.110L  | 0,4  | 15   | 35           | G 2" - DN50 PN6<br>VERTICAL OUT          | 5   |    |
|                |        |       | VS.40V_06.2.110   | 0,6  | 23   | 40           |  |     |    |
|                |        |       | VS.40V_09.2.110   | 0,9  | 24   |              |  |     |    |
|                |        |       | VS.40V_11.2.110   | 1,1  | 24,5 |              |  |     |    |
|                | VSL.50 | 2     | VS.L.50_04.2.110L | 0,4  | 16   | 40           | G 2" - DN50 PN6                          | 27  |    |
|                |        |       | VS.L.50_06.2.110  | 0,6  | 24   | 50           |  |     |    |
|                |        |       | VS.L.50_09.2.110  | 0,9  | 25   |              |  |     |    |
|                |        |       | VS.L.50_11.2.110  | 1,1  | 25,5 |              |  |     |    |
|                | VS.50  | 4     | VS.50_11.4.125    | 1,1  | 33,7 | 48           | G 2" - DN50 PN6                          | 41  |    |
|                |        |       | VS.50_08.2.125    | 0,8  | 35   |              |  |     |    |
|                |        | 2     | VS.50_11.2.125    | 1,1  | 35,7 |              |  |     |    |
|                |        |       | VS.50_18.2.125    | 1,8  | 36   |              |  |     |    |
| VS.50_22.2.125 |        |       | 2,2               | 37,7 |      |              |  |     |    |
| DN 65          | VS.65  | 2     | VS.65_11.2.135    | 1,1  | 55   | 65           | G 2 <sup>n</sup> 1/2 - DN 65<br>PN6-PN16 | 53  |    |
|                |        |       | VS.65_18.2.135    | 1,8  | 57   |              |  |     |    |
|                |        |       | VS.65_22.2.135    | 2,2  | 58   |              |  |     |    |
|                |        |       | VS.65_30.2.135    | 3,0  | 62   |              |  |     |    |
|                |        |       | VS.65_37.2.173    | 3,7  | 80   |              |  |     |    |
|                |        | 4     | VS.65_55.2.173    | 5,5  | 85   | 60           |  |     |    |
|                |        |       | VS.65_11.4.135    | 1,1  | 58   |              |  |     | 65 |
|                |        |       | VS.65_18.4.135    | 1,8  | 62   |              |  |     |    |
|                |        |       | VS.65_22.4.135    | 2,2  | 66   |              |  |     |    |
| DN 80          | VS.80  | 4     | VS.80.11.4.135    | 1,1  | 71   | 80           | G 3" - DN 80-<br>PN16                    | 73  |    |
|                |        |       | VS.80.15.4.135    | 1,5  | 75   |              |  |     |    |
|                |        |       | VS.80.22.4.135    | 2,2  | 103  |              |  |     |    |
|                |        |       | VS.80.30.4.173    | 3,0  | 108  |              |  |     |    |
|                |        |       | VS.80.40.4.173    | 4,0  | 110  |              |  |     |    |
|                |        | 2     | VS.80.22.2.135    | 2,2  | 70   |              |  |     | 70 |
|                |        |       | VS.80.30.2.135    | 3,0  | 74   |              |  |     |    |
|                |        |       | VS.80.37.2.173    | 3,7  | 76   |              |  |     |    |
|                |        |       | VS.80.55.2.173    | 5,7  | 107  |              |  |     |    |
|                |        |       | VS.80.75.2.173    | 7,5  | 108  |              |  |     |    |
| DN 100         | VS.100 | 4     | VS.100_30.4.173   | 3,0  | 105  | 85           | DN 100-PN16                              | 93  |    |
|                |        |       | VS.100_40.4.173   | 4,0  | 110  |              |  |     |    |
|                |        |       | VS.100_55.4.200   | 5,5  | 112  |              |  |     |    |
|                |        |       | VS.100_75.4.200   | 7,5  | 108  |              |  |     |    |
|                |        | 2     | VS.100_37.2.173   | 4,0  | 110  | 100          |  |     |    |
|                |        |       | VS.100_55.2.173   | 5,5  | 220  |              |  |     |    |
|                |        |       | VS.100_75.2.173   | 7,5  | 220  |              |  |     |    |

**Poli - poles Modelli - models**

|          |                             |
|----------|-----------------------------|
| <b>2</b> | <b>VS.40H/40V_04.2.110L</b> |
|----------|-----------------------------|

**IT**

Elettropompa sommergibile compatta e di robusta costruzione fabbricata completamente in ghisa, senza camera olio, unica tenuta meccanica posizionata sopra alla girante a diretto contatto del liquido pompato

**EN**

Submersible electric pump compact and robust construction completely made of cast iron, without oil chamber, only mechanical seal positioned above the impeller in direct contact with the pumped liquid

**FR**

Pompe électrique submersible compacte et construction robuste entièrement en fonte, sans chambre à huile, seule garniture mécanique placée au-dessus de la roue en contact direct avec le liquide pompé

**ES**

Bomba eléctrica sumergible compacta y construcción robusta completamente de hierro fundido, sin cámara de aceite, solo sello mecánico colocado sobre el impulsor en contacto directo con el líquido bombeado

**Poli - poles Modelli - models**

|          |                                  |
|----------|----------------------------------|
| <b>2</b> | <b>VS.40H/40V_06/09/11.2.110</b> |
|----------|----------------------------------|

**IT**

Elettropompa sommergibile compatta e di robusta costruzione fabbricata completamente in ghisa, con camera olio interposta tra gruppo motore e gruppo pompa. Tenuta meccanica in camera olio non a diretto contatto del liquido pompato e protetta da un anello V-Ring posizionato dietro alla girante

**EN**

Compact and solid construction submersible electric pump completely made in cast iron, with oil chamber interposed between motor unit and pump unit. Mechanical seal inside the oil chamber not in direct contact with the pumped liquid and protected by a V-Ring ring positioned on the back of the impeller

**FR**

Pompe électrique submersible compacte entièrement réalisée en fonte, avec chambre à huile intercalée entre le groupe moteur et le groupe pompe. Joint mécanique dans la chambre d'huile non en contact direct avec le liquide pompé et protégé par un anneau en V situé à l'arrière de la roue

**ES**

Bomba eléctrica sumergible compacta hecha completamente de hierro fundido, con cámara de aceite interpuesta entre la unidad del motor y la unidad de la bomba. Cierre mecánico en la cámara de aceite que no está en contacto directo con el líquido bombeado y está protegido por un anillo en V ubicado en la parte posterior del impulsor

**VS.40H - G 1" <sup>1/2</sup>**

VS.40H\_06-09-11.2.110

VS.40H\_04.2.110L



pp. 5 ÷ 8



pp. 9 ÷ 14

**VS.40V - G 2"**

VS.40V\_06-09-11.2.110

VS.40V\_04.2.110L



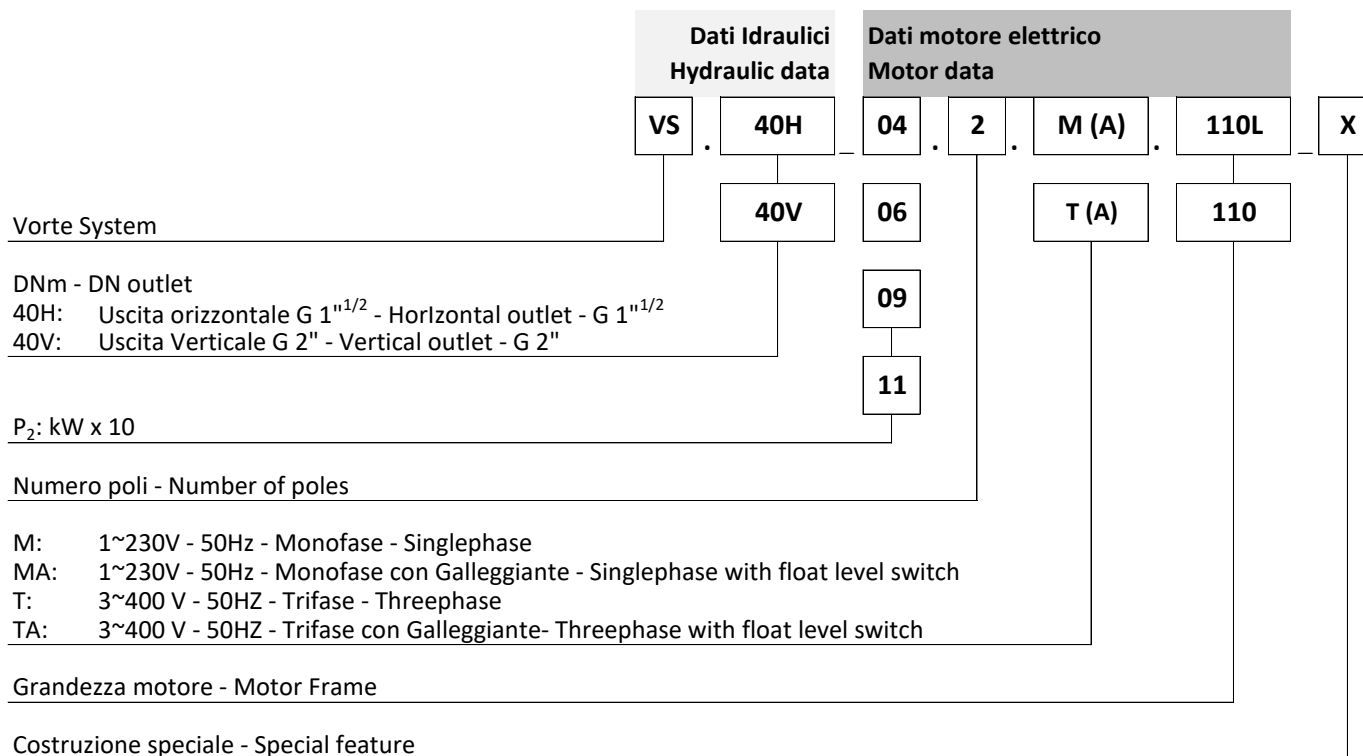
pp. 15 ÷ 18



pp. 19 ÷ 24

|        |                   |
|--------|-------------------|
| VS.40H | 1" <sup>1/2</sup> |
| VS.40V | 2"                |

## IDENTIFICAZIONE - IDENTIFICATION



## LISTA MODELLI - RANGE OF PRODUCTS

| Grandezza Motore<br>Motor Frame | Poles | P <sub>2</sub><br>[kW] | Alimentazione<br>Power supply | Modelli<br>Models       | Avviamento<br>Starting | Cavo alimentazione / segnali<br>Power / signals cable |               | Camera olio<br>Oil Chamber |
|---------------------------------|-------|------------------------|-------------------------------|-------------------------|------------------------|---|---------------|----------------------------|
|                                 |       |                        |                               |                         |                        | [m]   | Type          |                            |
| 110L                            | 2     | 0,4                    | 1ph                           | VS.40H/V_04.2.M(A).110L | μF: 16                 | 5*  | H07RN-F 3G1,5 | NO                         |
|                                 |       |                        | 3ph                           | VS.40H/V_04.2.T.110L    | D.O.L.                 | 5*  | H07RN-F 4G1   |                            |
| 110                             | 2     | 0,6                    | 1ph                           | VS.40H/V_06.2.M(A).110  | μF: 20                 | 10  | H07RN-F 3G1,5 | SI<br>YES                  |
|                                 |       |                        | 3ph                           | VS.40H/V_06.2.T(A).110  | D.O.L.                 | 10  | H07RN-F 4G1   |                            |
|                                 |       | 0,9                    | 1ph                           | VS.40H/V_09.2.M(A).110  | μF: 25                 | 10  | H07RN-F 3G1,5 |                            |
|                                 |       |                        | 3ph                           | VS.40H/V_09.2.T(A).110  | D.O.L.                 | 10  | H07RN-F 4G1   |                            |
|                                 |       | 1,1                    | 1ph                           | VS.40H/V_11.2.M(A).110  | μF: 25                 | 10  | H07RN-F 3G1,5 |                            |
|                                 |       |                        | 3ph                           | VS.40H/V_11.2.T(A).110  | D.O.L.                 | 10  | H07RN-F 4G1   |                            |

\* Per uso esterno è obbligatorio utilizzare la pompa con lunghezza cavo di 10m - vedi normativa EN 60335 - 2.41  
For external use it is mandatory to use the pump with a cable length of 10m - see standard EN 60335 - 2.41

## Caratteristiche costruttive - construction features

**Motore asincrono** in classe di isolamento F (155°C), a secco e raffreddato dal liquido circostante;  
**Asynchronous dry motor**, insulation class F(155°C), cooled by the surrounding liquid;  
**Moteur asynchrone**, classe d'isolation F (155°C), sec et refroidi par le liquide environnant;  
**Motor asíncrono**, aislamiento clase F (155 ° C), seco y refrigerado por el líquido que rodea.

### Camera condensatore

Capacitor chamber  
 Chambre de condensateur  
 Camara condensatore

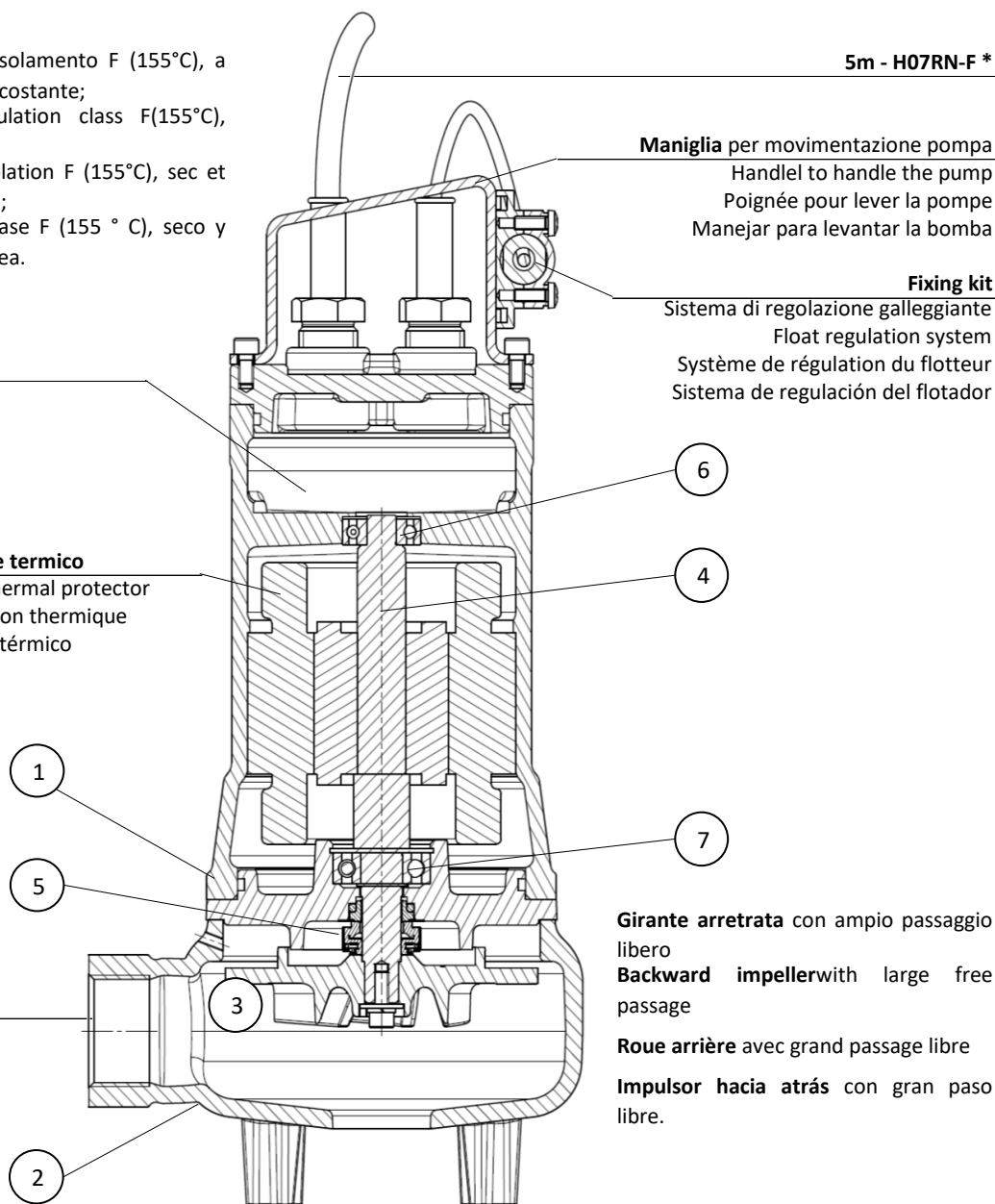
### Motore monofase con protettore termico

Singlephase motor with built in thermal protector  
 Moteur monophasé avec protection thermique  
 Motor monofásico con protector térmico

| Viti<br>Screws<br>Vis<br>Tornillos | Quality<br>A2 |
|------------------------------------|---------------|
|------------------------------------|---------------|

| O-RINGS | NBR |
|---------|-----|
|---------|-----|

DNm: G 1" <sup>1</sup>/<sub>2</sub>



5m - H07RN-F \*

**Maniglia** per movimentazione pompa  
 Handle to handle the pump  
 Poignée pour lever la pompe  
 Manejar para levantar la bomba

**Fixing kit**  
 Sistema di regolazione galleggiante  
 Float regulation system  
 Système de régulation du flotteur  
 Sistema de regulación del flotador

**Girante arretrata** con ampio passaggio libero  
**Backward impeller** with large free passage

**Roue arrière** avec grand passage libre

**Impulsor hacia atrás** con gran paso libre.

| NR. | DESCRIPTION       | MATERIAL     |
|-----|-------------------|--------------|
| 1   | Gruppo motore     | Ghisa        |
|     | Motor group       | Cast iron    |
|     | Groupe moteur     | Fer de fonte |
|     | Unidad de motor   | Hierro       |
| 2   | Corpo idraulico   | Ghisa        |
|     | Pump Housing      | Cast iron    |
|     | Corps de la pompe | Fer de fonte |
|     | Cuerpo hidráulico | Hierro       |
| 3   | Girante           | Ghisa        |
|     | Impeller          | Cast iron    |
|     | Roue              | Fer de fonte |
|     | Impulsor          | Hierro       |
| 4   | Albero motore     | Acciaio      |
|     | Shaft             | Steel        |
|     | Arbre moteur      | Acier        |
|     | Eje del motor     | Acero        |

| NR. | DESCRIPTION          | MATERIAL                   |
|-----|----------------------|----------------------------|
| 5   | Tenuta mecc.         | Carbon graphite / Al-Oxide |
|     | Mechanical seal      |                            |
|     | Garniture mécanique  |                            |
| 6   | Sello mecánico       | NBR                        |
|     | Cuscinetto superiore |                            |
|     | Top bearing          |                            |
| 7   | Roulement supérieur  | 6201 - 2RS1                |
|     | Cojinete superior    |                            |
|     | Cuscinetto inferiore |                            |
| 7   | Lower bearing        | 6203 - 2RS1                |
|     | Roulement inférieur  |                            |
|     | Cojinete inferior    |                            |

\* Per uso esterno è obbligatorio utilizzare la pompa con lunghezza cavo di 10m - vedi normativa EN 60335 - 2.41  
 For external use it is mandatory to use the pump with a cable length of 10m - see standard EN 60335 - 2.41

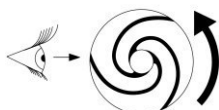
## Caratteristiche costruttive - construction data

|  |  |   |   |
|--|--|---|---|
| <b>Costruzione Motore - Motor Frame</b>                              | 110L   |   |   |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |   |   |
| <b>Classe di Isolamento - Insulation Class</b>                       | F (155°C)                                      |   |   |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent                |   |   |
| <b>Avvolgimento statore - Stator winding</b>                         | 1~PH - Singlephase                             | 3~PH - Threephase   |   |
|  | [V]  | 1~230V  | Y / Δ<br>3~400/230                        |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> |  | Standard  | Optional                                  |
| <input type="radio"/> Bimetallico - Bimetal disc                     |  | <input checked="" type="checkbox"/>                                 | <input checked="" type="checkbox"/> 130°C |
| <input type="radio"/> Solo su richiesta - on request only            | PT100  | <input type="checkbox"/>  | <input type="checkbox"/>                  |
| <input type="radio"/> Solo su richiesta - on request only            | PTC  | <input type="checkbox"/>  | <input type="checkbox"/>                  |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid |   |   |
| <b>Camera olio - Oil chamber</b>                                     | No   |   |   |
| <b>Protezione Tenuta - Leakage protection</b>                        | No   |   |   |
| <b>Tipo girante - Impeller</b>                                       | Vortex   |   |   |
| <b>DN mandata - Discharge</b>  | G 1"1/2  | Orizzontale - Horizontal  |   |
| <b>Controflangia filettata - Threaded counterflange</b>              | No   | -   |   |
| <b>DN aspirazione / Suction</b>                                      | [mm]   | Ø 40  |   |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard                                       | Vernice all'acqua - Water paint / 30µm<br>Opaco Nero - Opaque Black |   |
|  | Optional                                       | Epossidica - Epoxy coating / 80µm<br>RAL 7015 - Grigio - Grey       |   |

## Limiti di utilizzo - Operating Limits

|   |                       |        |
|---|-----------------------|--------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C]                  | ≤ 40   |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] | ~ 1    |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s]  | ~ 1    |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l]                | < 200  |
| <b>PH liquido pompato - PH value</b>                                |                       | 6 ÷ 12 |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m]                   | 20     |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l]                 | < 0,1  |

**Corretta rotazione della girante**  
**Rotation of the impeller**





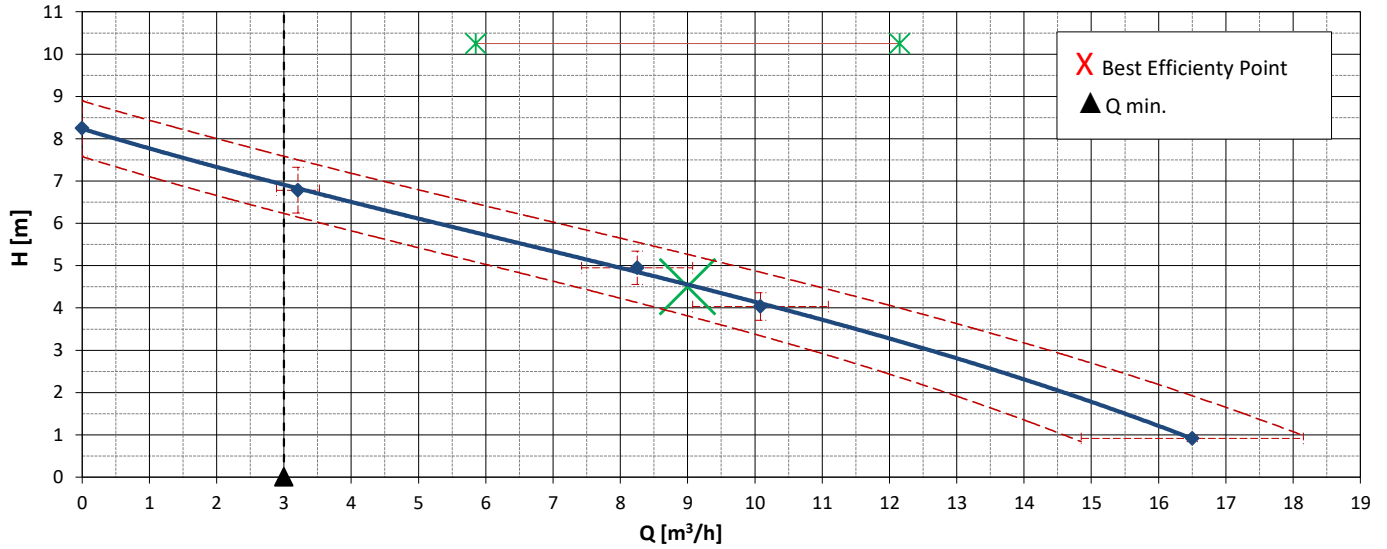
Tipo di pompa - Pump model  
**VS.40H\_04.2.110L**

Poles: 2 Hz: 50  
 r.p.m. 3000

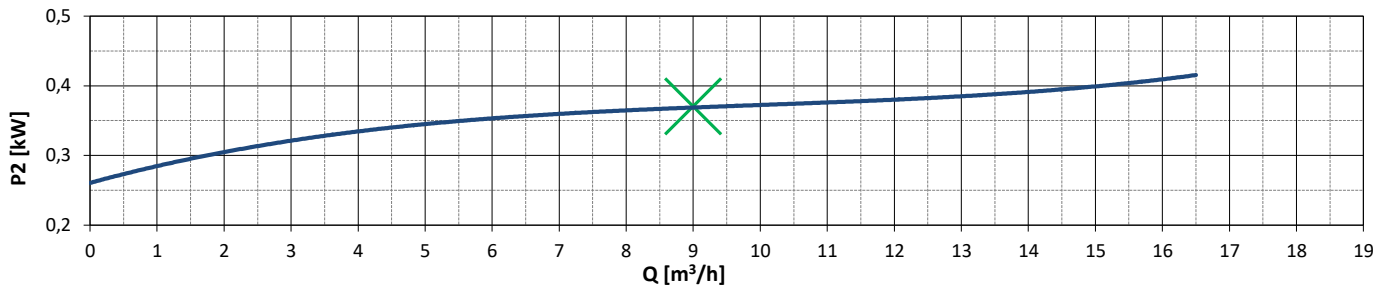
Girante Impeller **VORTEX**  
 Mandata Discharge **G 1" <sup>1/2</sup>**

1° serie

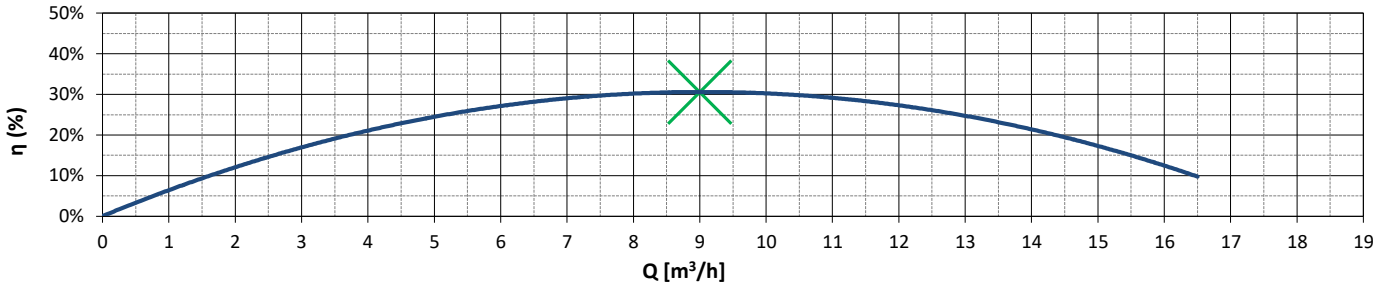
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |                   |     |     |     |     |     |  |  |  |  |  |  |
|----------|-------------------|-----|-----|-----|-----|-----|--|--|--|--|--|--|
| FLOW (Q) | l/min             | 0   | 53  | 138 | 168 | 275 |  |  |  |  |  |  |
|          | l/s               | 0   | 1   | 2   | 3   | 5   |  |  |  |  |  |  |
|          | m <sup>3</sup> /h | 0   | 3   | 8   | 10  | 17  |  |  |  |  |  |  |
| HEAD (H) | m                 | 8,3 | 6,8 | 5,0 | 4,0 | 0,9 |  |  |  |  |  |  |

**Dati pompa - Pumps data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>0,45</b> |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>0,41</b> |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>0,59</b> |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,89</b> |

|                                       |      |             |
|---------------------------------------|------|-------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 32</b> |
| Diametro girante<br>Impeller diameter | [mm] | <b>90</b>   |
| Peso pompa<br>Weight                  | [Kg] | <b>15</b>   |

**Model M/MA**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>1~230-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>16 µF</b>      |
| Corrente Nominale<br>Rated current     | [A] | <b>3,5</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>9,6</b>        |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>1,2</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>6,0</b>        |

|  |                      |           |
|--|----------------------|-----------|
| Galleggiante<br>Float level switch         | <b>Optional (MA)</b> | <b>No</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour | <b>30</b>            |           |

In accordo con ISO 9906:2012-Grade 3B (section 4.4.2)  
 In accordance to

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> -  
 viscosità/viscosity 1 mm<sup>2</sup>/s - temperature/temperature 20°C



## Dimensioni d'ingombro - overall dimensions

**S** Installazione mobile - Installation mobile - Installation mobile - Instalación móvil

Dimensione imballo  
Packaging dimensions

Misure - Measures [mm]

| A   | B   | C   |
|-----|-----|-----|
| 570 | 250 | 215 |

**FC** Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento

8FC000001      KG: 7,5

|   |  |
|---|--|
| 1 | Supporto tubi guida da 3/4" / 3/4" guide rails bracket |
| 2 | Piede orizzontale 2" / Horizontal foot - 2"out         |
| 3 | Slitta completa / Sliding bracket complete             |
| 4 | Esclusi dalla fornitura / Not supplied                 |

D

|   |     |
|---|-----|
| D | 260 |
| E | 175 |
| F | 195 |

## Caratteristiche costruttive - construction features

**Motore asincrono** in classe di isolamento F (155°C), a secco e raffreddato dal liquido circostante;  
**Asynchronous dry motor**, insulation class F(155°C), cooled by the surrounding liquid;  
**Moteur asynchrone**, classe d'isolation F (155°C), sec et refroidi par le liquide environnant;  
**Motor asincrono**, aislamiento clase F (155 ° C), seco y refrigerado por el líquido que rodea.

**Camera condensatore M-MA / Teleruttore TA**  
 Capacitor chamber M-MA / Contactor TA  
 Chambre condensateur M-MA / Contacteur TA  
 Camara condensador M-MA / Contactor TA

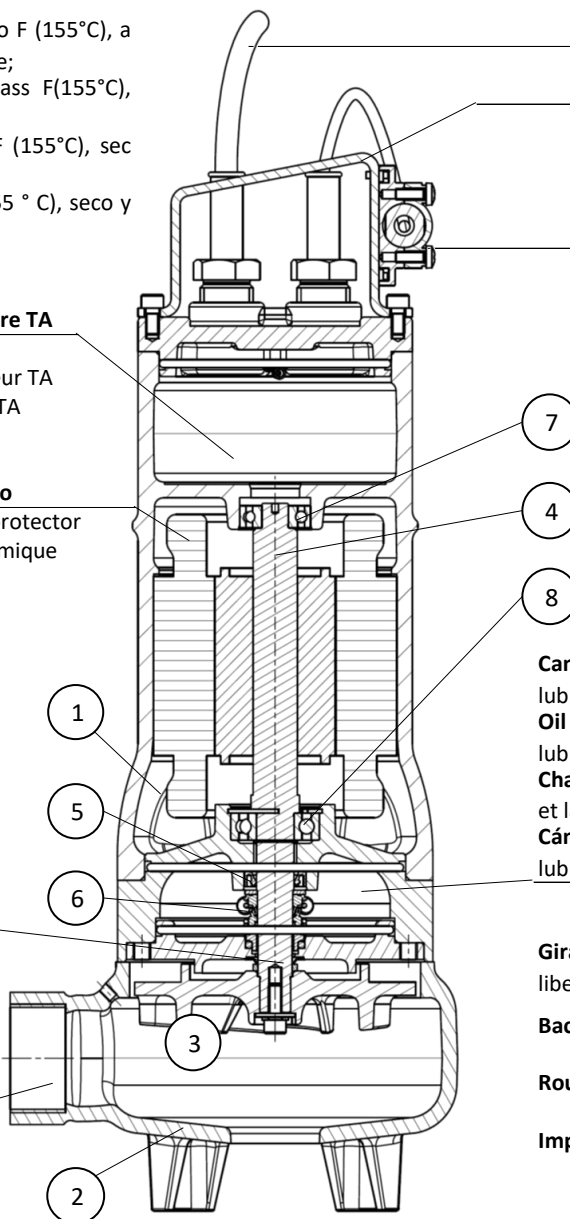
**Motore monofase con protettore termico**  
 Singlephase motor with built in thermal protector  
 Moteur monophasé avec protection thermique  
 Motor monofásico con protector térmico

|                  |                |
|------------------|----------------|
| <b>Viti</b>      | <b>Quality</b> |
| <b>Screws</b>    |                |
| <b>Vis</b>       | <b>A2</b>      |
| <b>Tornillos</b> |                |

|                |            |
|----------------|------------|
| <b>O-RINGS</b> | <b>NBR</b> |
|----------------|------------|

**V-Ring**  
 Protezione albero  
 Shaft protection  
 Protection de l'arbre  
 protección del eje

**DNm: G 1" <sup>1/2</sup>**



**10 m - H07RN-F**

**Maniglia per movimentazione pompa**  
 Handle to lift the pump  
 Poignée pour lever la pompe  
 Manejar para levantar la bomba

**Fixing kit**  
 Sistema di regolazione galleggiante  
 Float regulation system  
 Système de régulation du flotteur  
 Sistema de regulación del flotador

**Camera olio per il raffreddamento e la lubrificazione delle tenute meccaniche**  
**Oil chamber for the cooling and lubrication of mechanical seals**  
**Chambre d'huile pour le refroidissement et la lubrification des garnitures**  
**Cámara de aceite para el enfriamiento y lubricación de sellos mecánicos**

**Girante arretrata con ampio passaggio libero**

**Backward impeller with large free passage**

**Roue arrière avec grand passage libre**

**Impulsor hacia atrás con gran paso libre**

| NR. | DESCRIPTION       | MATERIAL     |
|-----|-------------------|--------------|
| 1   | Gruppo motore     | Ghisa        |
|     | Motor group       | Cast iron    |
|     | Groupe moteur     | Fer de fonte |
|     | Unidad de motor   | Hierro       |
| 2   | Corpo idraulico   | Ghisa        |
|     | Pump Housing      | Cast iron    |
|     | Corps de la pompe | Fer de fonte |
|     | Cuerpo hidráulico | Hierro       |
| 3   | Girante           | Ghisa        |
|     | Impeller          | Cast iron    |
|     | Roue              | Fer de fonte |
|     | Impulsor          | Hierro       |
| 4   | Albero motore     | Acciaio      |
|     | Shaft             | Steel        |
|     | Arbre moteur      | Acier        |
|     | Eje del motor     | Acero        |

| NR. | DESCRIPTION           | MATERIAL    |
|-----|-----------------------|-------------|
| 5   | Anello tenuta radiale |             |
|     | Upper sealing ring    | NBR         |
|     | Bague d'étanchéité    |             |
|     | Sello radial superior |             |
| 6   | Tenuta mecc.          | SiC / SiC   |
|     | Mech. seal            |             |
|     | Haut garniture mécan. | NBR         |
| 7   | Cuscinetto superiore  |             |
|     | Top bearing           | 6201 - 2RS1 |
|     | Roulement supérieur   |             |
|     | Cojinete superior     |             |
| 8   | Cuscinetto inferiore  |             |
|     | Lower bearing         | 6203 - 2RS1 |
|     | Roulement inférieur   |             |
|     | Cojinete inferior     |             |

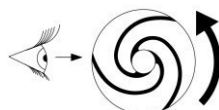
## Caratteristiche costruttive - construction data

|  |  |   |
|--|--|---|
| <b>Costruzione Motore - Motor Frame</b>                              | 110  |   |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |   |
| <b>Classe di Isolamento - Insulation Class</b>                       | F (155°C)                                      |   |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent                |   |
| <b>Avvolgimento statore - Stator winding</b>                         | 1~PH - Singlephase                             | 3~PH - Threephase   |
|  | [V] 1~230V                                     | Y / Δ<br>3~400/230  |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> | Standard                                       | Optional  |
| <input type="radio"/> Bimetallico - Bimetal disc                     | <input checked="" type="checkbox"/>            | <input checked="" type="checkbox"/> 130°C                           |
| <input type="radio"/> Solo su richiesta - on request only PT100      | <input type="checkbox"/>                       | <input type="checkbox"/>  |
| <input type="radio"/> Solo su richiesta - on request only PTC        | <input type="checkbox"/>                       | <input type="checkbox"/>  |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid |   |
| <b>Camera olio - Oil chamber</b>                                     | Si - Yes                                       |   |
| <b>Protezione Tenuta - Leakage protection</b>                        | No   |   |
| <b>Tipo girante - Impeller</b>                                       | Vortex   |   |
| <b>DN mandata - Discharge</b>  | G 1"1/2  | Orizzontale - Horizontal  |
| <b>Controflangia filettata - Threaded counterflange</b>              | No   | -   |
| <b>DN aspirazione / Suction</b>                                      | [mm] Ø 40                                      |   |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard                                       | Vernice all'acqua - Water paint / 30µm<br>Opaco Nero - Opaque Black |
|  | Optional                                       | Epossidica - Epoxy coating / 80µm<br>RAL 7015 - Grigio - Grey       |

## Limiti di utilizzo - Operating Limits

|   |                       |        |
|---|-----------------------|--------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C]                  | ≤ 40   |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] | ~ 1    |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s]  | ~ 1    |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l]                | < 200  |
| <b>PH liquido pompato - PH value</b>                                |                       | 6 ÷ 12 |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m]                   | 20     |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l]                 | < 1    |

**Corretta rotazione della girante**  
**Rotation of the impeller**





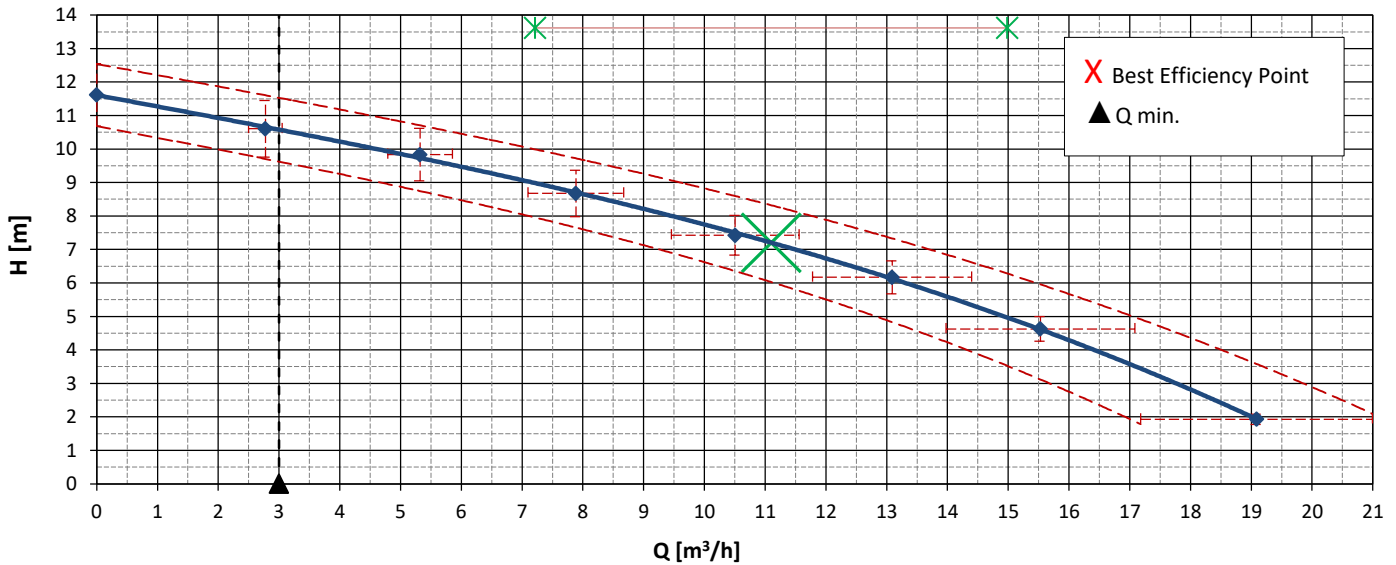
Tipo di pompa - Pump model  
**VS.40H\_06.2.110**

Poles: 2 Hz: 50  
r.p.m. 3000

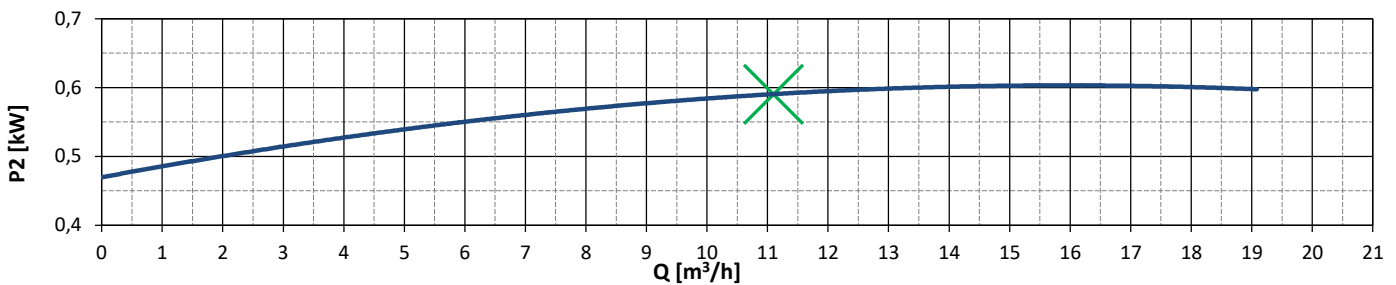
Girante Impeller **VORTEX**  
Mandata Discharge **G 1"1/2**

Serie 2

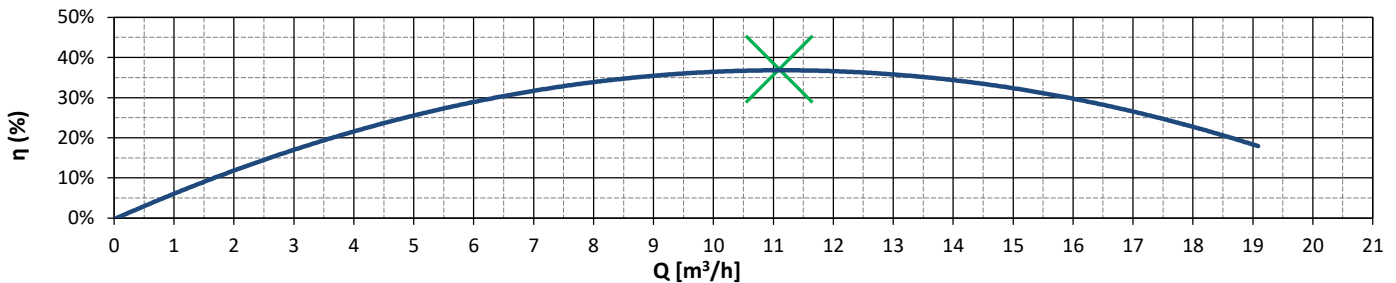
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |       |      |      |     |     |     |     |     |     |  |  |  |
|-----------------|-------|------|------|-----|-----|-----|-----|-----|-----|--|--|--|
| <b>FLOW (Q)</b> | l/min | 0    | 46   | 89  | 131 | 175 | 218 | 259 | 318 |  |  |  |
|                 | l/s   | 0    | 1    | 1   | 2   | 3   | 4   | 4   | 5   |  |  |  |
|                 | m³/h  | 0    | 3    | 5   | 8   | 11  | 13  | 16  | 19  |  |  |  |
| <b>HEAD (H)</b> | m     | 11,6 | 10,6 | 9,8 | 8,7 | 7,4 | 6,2 | 4,6 | 1,9 |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>0,65</b> |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>0,6</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>0,9</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,84</b> |

|  |     | Model M/MA        | Model T/TA        |
|--|-----|-------------------|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>1~230-50Hz</b> | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>20 μF</b>      | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>4,5</b>        | <b>1,6</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>13,5</b>       | <b>8,0</b>        |

|                                       |      |             |
|---------------------------------------|------|-------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>∅ 40</b> |
| Diametro girante<br>Impeller diameter | [mm] | <b>108</b>  |
| Peso pompa<br>Weight                  | [Kg] | <b>23</b>   |

|  |                      |                      |
|--|----------------------|----------------------|
| Galleggiante<br>Float level switch         | <b>Optional (MA)</b> | <b>Optional (TA)</b> |
| Cavo<br>Cable                              | <b>10m 3G1,5</b>     | <b>10m 4G1</b>       |
| Nr. Avviamenti / ora<br>Nr. Start per hour | <b>30</b>            |                      |

In accordo con  
In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C



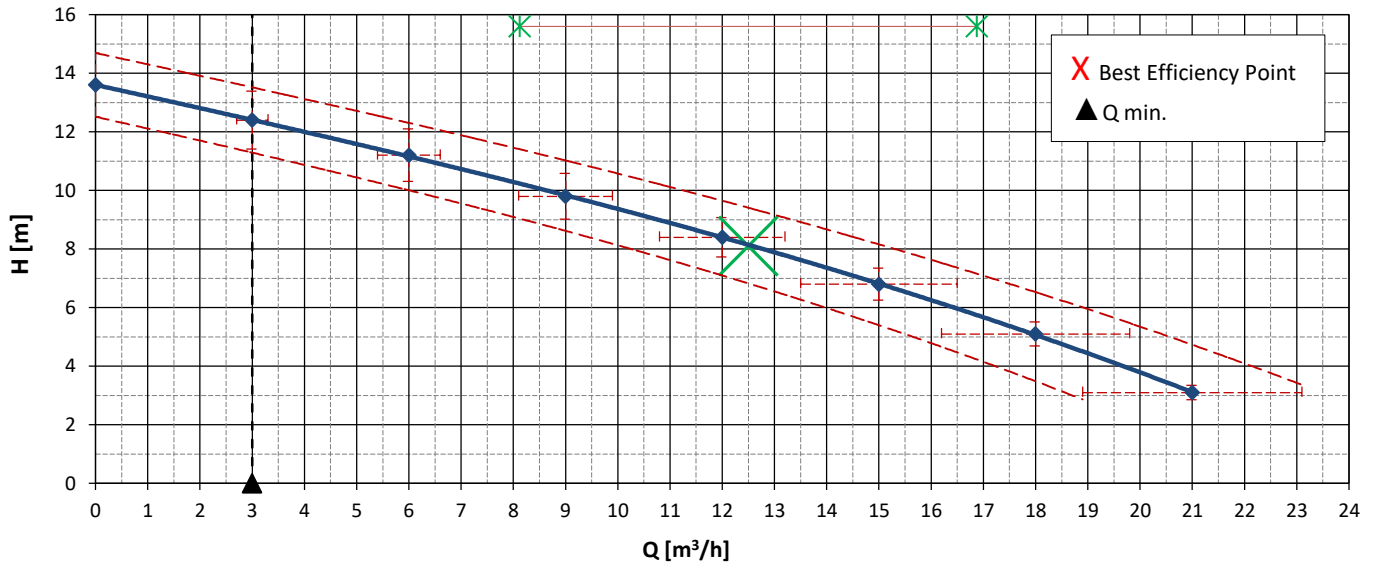
Tipo di pompa - Pump model  
**VS.40H\_09.2.110**

**Poles: 2 Hz: 50**  
**r.p.m. 3000**

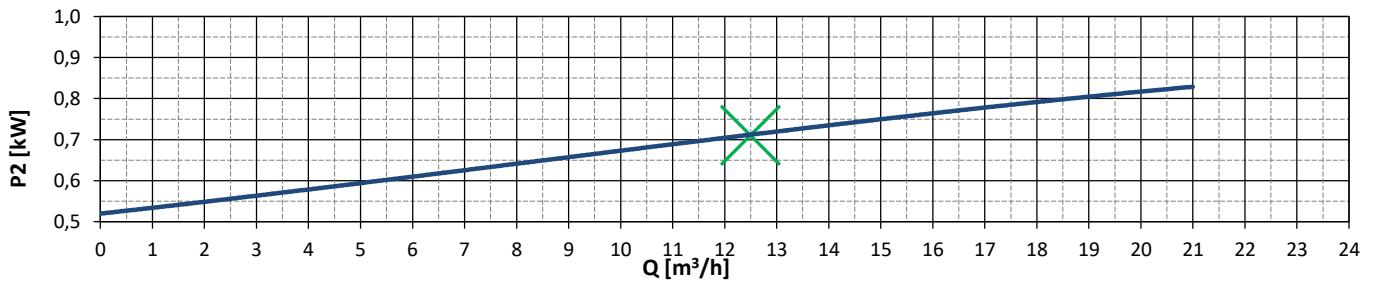
Girante Impeller **VORTEX**  
Mandata Discharge **G 1"1/2**

Serie 2

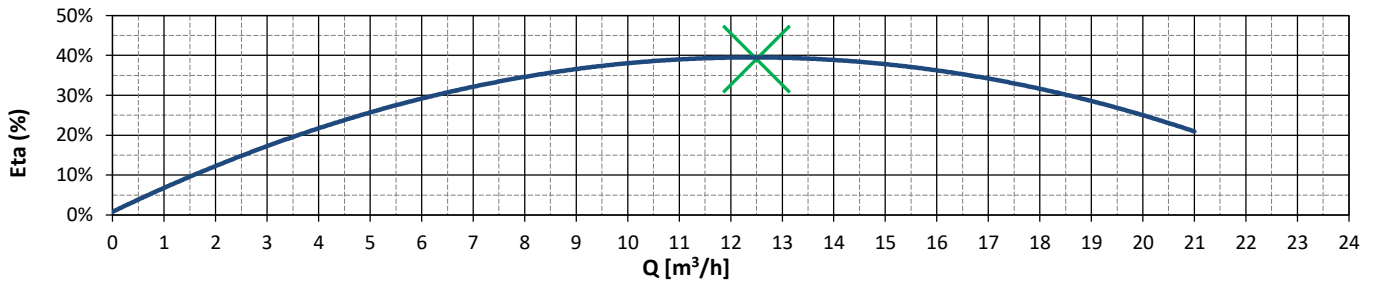
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |      |      |     |     |     |     |     |  |  |  |  |
|----------|-------|------|------|------|-----|-----|-----|-----|-----|--|--|--|--|
| FLOW (Q) | l/min | 0    | 50   | 100  | 150 | 200 | 250 | 300 | 350 |  |  |  |  |
|          | l/s   | 0    | 1    | 2    | 3   | 3   | 4   | 5   | 6   |  |  |  |  |
|          | m³/h  | 0    | 3    | 6    | 9   | 12  | 15  | 18  | 21  |  |  |  |  |
| HEAD (H) | m     | 13,6 | 12,4 | 11,2 | 9,8 | 8,4 | 6,8 | 5,1 | 3,1 |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>1,10</b> |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>0,83</b> |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>1,18</b> |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,85</b> |

|  |     | Model M/MA        | Model T/TA        |
|--|-----|-------------------|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>1~230-50Hz</b> | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>25 μF</b>      | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>6,5</b>        | <b>2,0</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>21</b>         | <b>11,0</b>       |

|                                       |      |             |
|---------------------------------------|------|-------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>∅ 40</b> |
| Diametro girante<br>Impeller diameter | [mm] | <b>121</b>  |
| Peso pompa<br>Weight                  | [Kg] | <b>24</b>   |

|  |                      |                      |
|--|----------------------|----------------------|
| Galleggiante<br>Float level switch         | <b>Optional (MA)</b> | <b>Optional (TA)</b> |
| Cavo<br>Cable                              | <b>10m 3G1,5</b>     | <b>10m 4G1</b>       |
| Nr. Avviamenti / ora<br>Nr. Start per hour | <b>30</b>            |                      |

In accordo con / In accordance to **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C



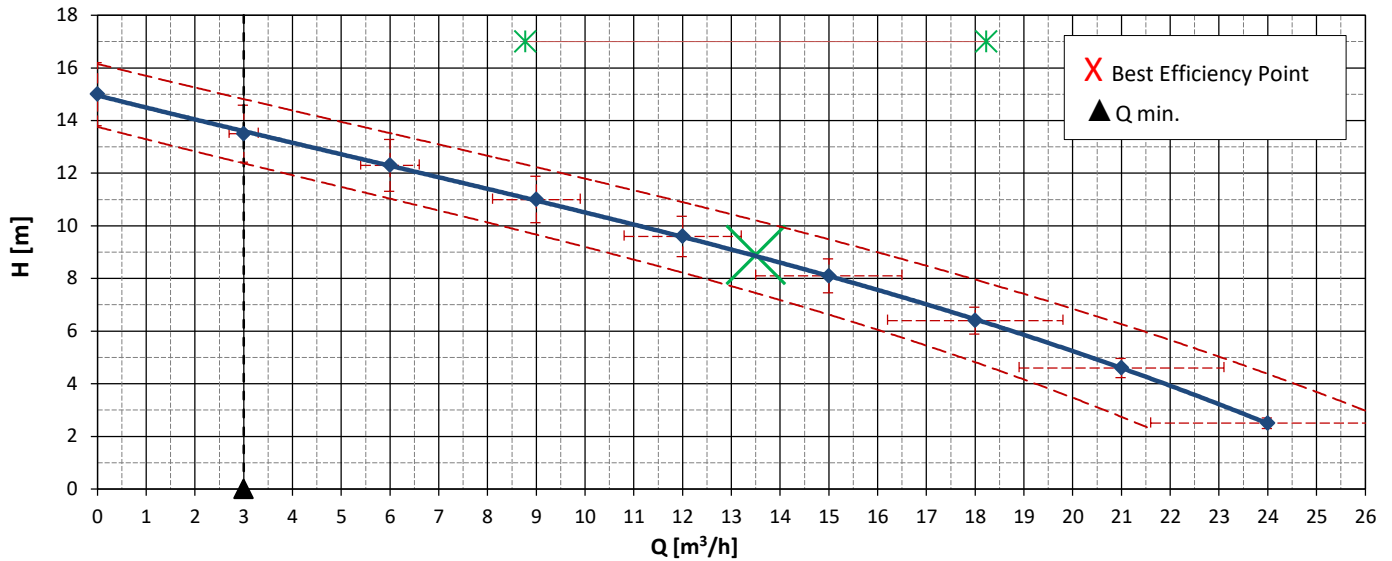
Tipo di pompa - Pump model  
**VS.40H\_11.2.110**

**Poles: 2 Hz: 50**  
**r.p.m. 3000**

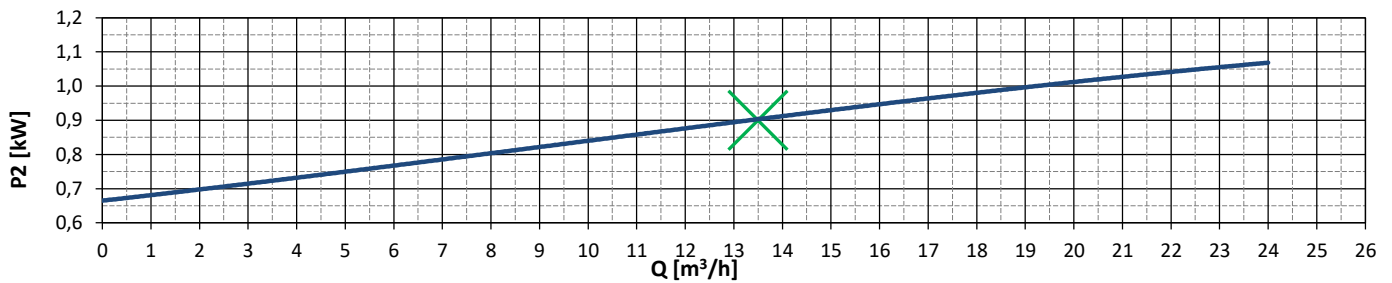
Girante Impeller **VORTEX**  
Mandata Discharge **G 1"1/2**

Serie 2

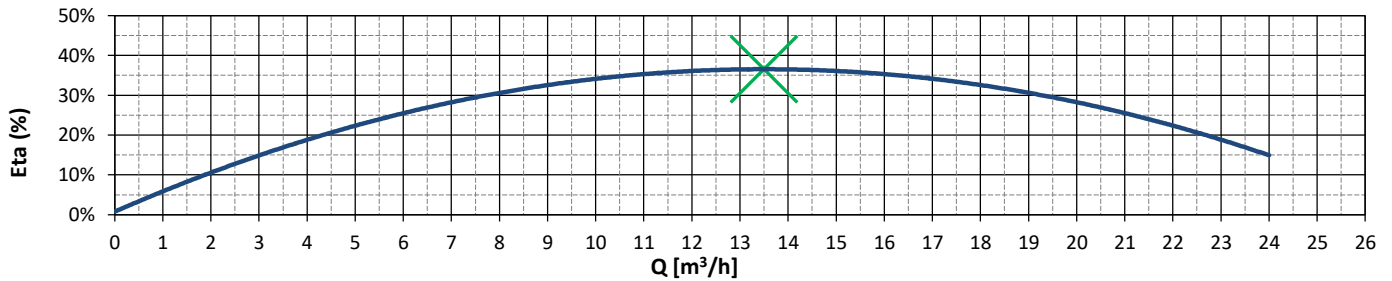
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |      |      |      |     |     |     |     |     |  |  |  |
|----------|-------|------|------|------|------|-----|-----|-----|-----|-----|--|--|--|
| FLOW (Q) | l/min | 0    | 50   | 100  | 150  | 200 | 250 | 300 | 350 | 400 |  |  |  |
|          | l/s   | 0    | 1    | 2    | 3    | 3   | 4   | 5   | 6   | 7   |  |  |  |
|          | m³/h  | 0    | 3    | 6    | 9    | 12  | 15  | 18  | 21  | 24  |  |  |  |
| HEAD (H) | m     | 15,0 | 13,5 | 12,3 | 11,0 | 9,6 | 8,1 | 6,4 | 4,6 | 2,5 |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>1,10</b> |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>1,07</b> |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>1,48</b> |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,87</b> |

|  |     | Model M/MA        | Model T/TA        |
|--|-----|-------------------|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>1~230-50Hz</b> | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>25 μF</b>      | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>7,7</b>        | <b>2,8</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>21,6</b>       | <b>14,0</b>       |

|                                       |      |             |
|---------------------------------------|------|-------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>∅ 40</b> |
| Diametro girante<br>Impeller diameter | [mm] | <b>127</b>  |
| Peso pompa<br>Weight                  | [Kg] | <b>24,5</b> |

|  |                      |                      |
|--|----------------------|----------------------|
| Galleggiante<br>Float level switch         | <b>Optional (MA)</b> | <b>Optional (TA)</b> |
| Cavo<br>Cable                              | <b>10m 3G1,5</b>     | <b>10m 4G1</b>       |
| Nr. Avviamenti / ora<br>Nr. Start per hour | <b>30</b>            |                      |

In accordo con / In accordance to **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C

## Dimensioni d'ingombro - overall dimensions

**S** Installazione mobile - Installation mobile - Installation mobile - Instalación móvil

Dimensione imballo  
Packaging dimensions

Misure - Measures [mm]

| A   | B   | C   |
|-----|-----|-----|
| 570 | 250 | 215 |

**FC** Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento

REF. 80 185 2xR6,50 65 38 92 min. Level 365 533 130 100 4XØ13 100 18 357

2xØ26,9 2xØ3/4" G 2" Ø165

|                 |                |
|-----------------|----------------|
| <b>8FC00001</b> | <b>KG: 7,5</b> |
|-----------------|----------------|

|   |  |
|---|--|
| 1 | Supporto tubi guida da 3/4" / 3/4" guide rails bracket |
| 2 | Piede orizzontale 2" / Horizontal foot - 2"out         |
| 3 | Slitta completa / Sliding bracket complete             |
| 4 | Esclusi dalla fornitura / Not supplied                 |

|   |       |
|---|-------|
| D | 260mm |
| E | 175mm |
| F | 195mm |

## Caratteristiche costruttive - construction features

**Motore asincrono** in classe di isolamento F (155°C), a secco e raffreddato dal liquido circostante;  
**Asynchronous dry motor**, insulation class F(155°C), cooled by the surrounding liquid;  
**Moteur asynchrone**, classe d'isolation F (155°C), sec et refroidi par le liquide environnant;  
**Motor asíncrono**, aislamiento clase F (155 ° C), seco y refrigerado por el líquido que rodea.

### Camera condensatore

Capacitor chamber  
 Chambre de condensateur  
 Camara condensatore

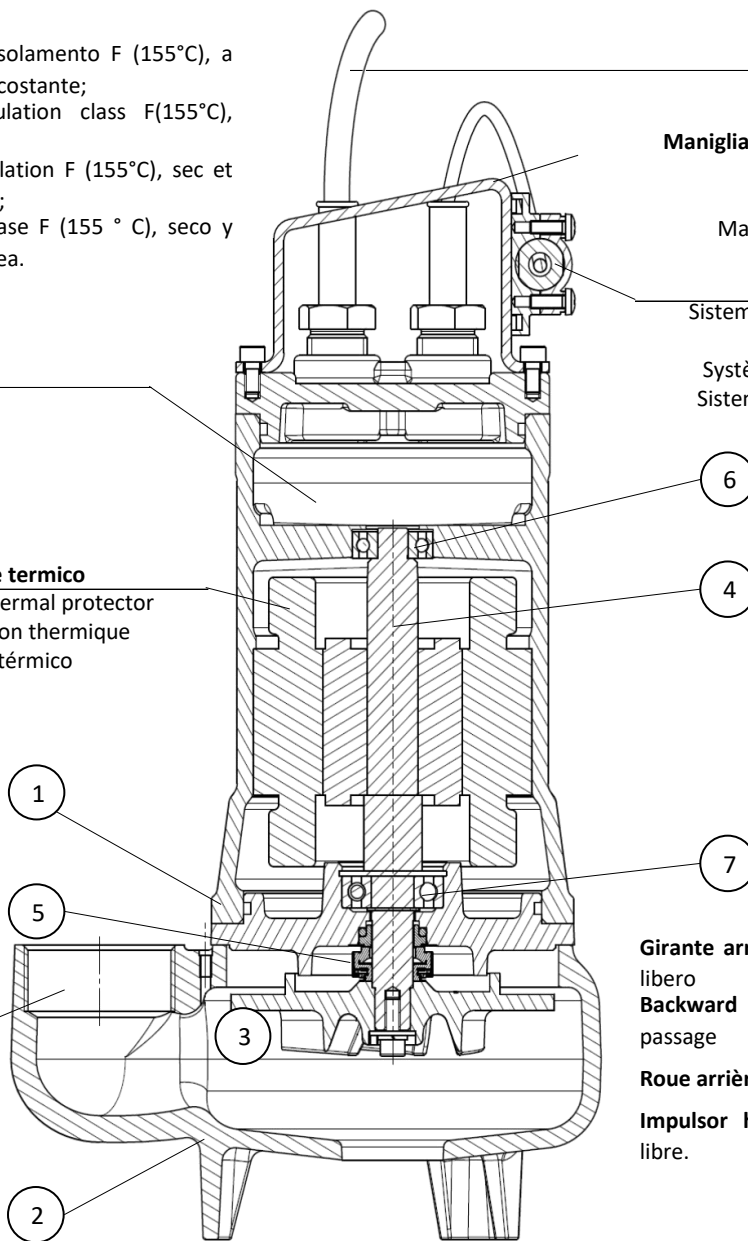
### Motore monofase con protettore termico

Singlephase motor with built in thermal protector  
 Moteur monophasé avec protection thermique  
 Motor monofásico con protector térmico

| Viti<br>Screws<br>Vis<br>Tornillos | Quality<br>A2 |
|------------------------------------|---------------|
|------------------------------------|---------------|

| O-RINGS | NBR |
|---------|-----|
|---------|-----|

DNm: G 2"



5m - H07RN-F \*

**Maniglia** per movimentazione pompa  
 Handle to handle the pump  
 Poignée pour lever la pompe  
 Manejar para levantar la bomba

**Fixing kit**  
 Sistema di regolazione galleggiante  
 Float regulation system  
 Système de régulation du flotteur  
 Sistema de regulación del flotador

**Girante arretrata** con ampio passaggio libero  
**Backward impeller** with large free passage

**Roue arrière** avec grand passage libre

**Impulsor hacia atrás** con gran paso libre.

| NR. | DESCRIPTION       | MATERIAL     |
|-----|-------------------|--------------|
| 1   | Gruppo motore     | Ghisa        |
|     | Motor group       | Cast iron    |
|     | Groupe moteur     | Fer de fonte |
|     | Unidad de motor   | Hierro       |
| 2   | Corpo idraulico   | Ghisa        |
|     | Pump Housing      | Cast iron    |
|     | Corps de la pompe | Fer de fonte |
|     | Cuerpo hidráulico | Hierro       |
| 3   | Girante           | Ghisa        |
|     | Impeller          | Cast iron    |
|     | Roue              | Fer de fonte |
|     | Impulsor          | Hierro       |
| 4   | Albero motore     | Acciaio      |
|     | Shaft             | Steel        |
|     | Arbre moteur      | Acier        |
|     | Eje del motor     | Acero        |

| NR. | DESCRIPTION          | MATERIAL                   |
|-----|----------------------|----------------------------|
| 5   | Tenuta mecc.         | Carbon graphite / Al-Oxide |
|     | Mechanical seal      |                            |
|     | Garniture mécanique  | NBR                        |
| 6   | Cuscinetto superiore | 6201 - 2RS1                |
|     | Top bearing          |                            |
|     | Roulement supérieur  |                            |
| 7   | Cuscinetto inferiore | 6203 - 2RS1                |
|     | Lower bearing        |                            |
|     | Roulement inférieur  |                            |

\* Per uso esterno è obbligatorio utilizzare la pompa con lunghezza cavo di 10m - vedi normativa EN 60335 - 2.41  
 For external use it is mandatory to use the pump with a cable length of 10m - see standard EN 60335 - 2.41



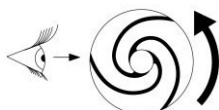
## Caratteristiche costruttive - construction data

|  |  |   |
|--|--|---|
| <b>Costruzione Motore - Motor Frame</b>                              | 110L   |   |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |   |
| <b>Classe di Isolamento - Insulation Class</b>                       | F (155°C)                                      |   |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent                |   |
| <b>Avvolgimento statore - Stator winding</b>                         | 1~PH - Singlephase                             | 3~PH - Threephase   |
|  | [V] 1~230V                                     | Y / Δ<br>3~400/230  |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> | Standard                                       | Optional  |
| <input type="radio"/> Bimetallico - Bimetal disc                     | <input checked="" type="checkbox"/>            | <input checked="" type="checkbox"/> 130°C                           |
| <input type="radio"/> Solo su richiesta - on request only PT100      | <input type="checkbox"/>                       | <input type="checkbox"/>  |
| <input type="radio"/> Solo su richiesta - on request only PTC        | <input type="checkbox"/>                       | <input type="checkbox"/>  |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid |   |
| <b>Camera olio - Oil chamber</b>                                     | No   |   |
| <b>Protezione Tenuta - Leakage protection</b>                        | No   |   |
| <b>Tipo girante - Impeller</b>                                       | Vortex   |   |
| <b>DN mandata - Discharge</b>  | G 2"   | Verticale - Vertical  |
| <b>Controflangia filettata - Threaded counterflange</b>              | No   | -   |
| <b>DN aspirazione / Suction</b>                                      | [mm] Ø 40                                      |   |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard                                       | Vernice all'acqua - Water paint / 30µm<br>Opaco Nero - Opaque Black |
|  | Optional                                       | Epossidica - Epoxy coating / 80µm<br>RAL 7015 - Grigio - Grey       |

## Limiti di utilizzo - Operating Limits

|   |                       |        |
|---|-----------------------|--------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C]                  | ≤ 40   |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] | ~ 1    |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s]  | ~ 1    |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l]                | < 200  |
| <b>PH liquido pompato - PH value</b>                                |                       | 6 ÷ 12 |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m]                   | 20     |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l]                 | < 0,1  |

**Corretta rotazione della girante**  
**Rotation of the impeller**





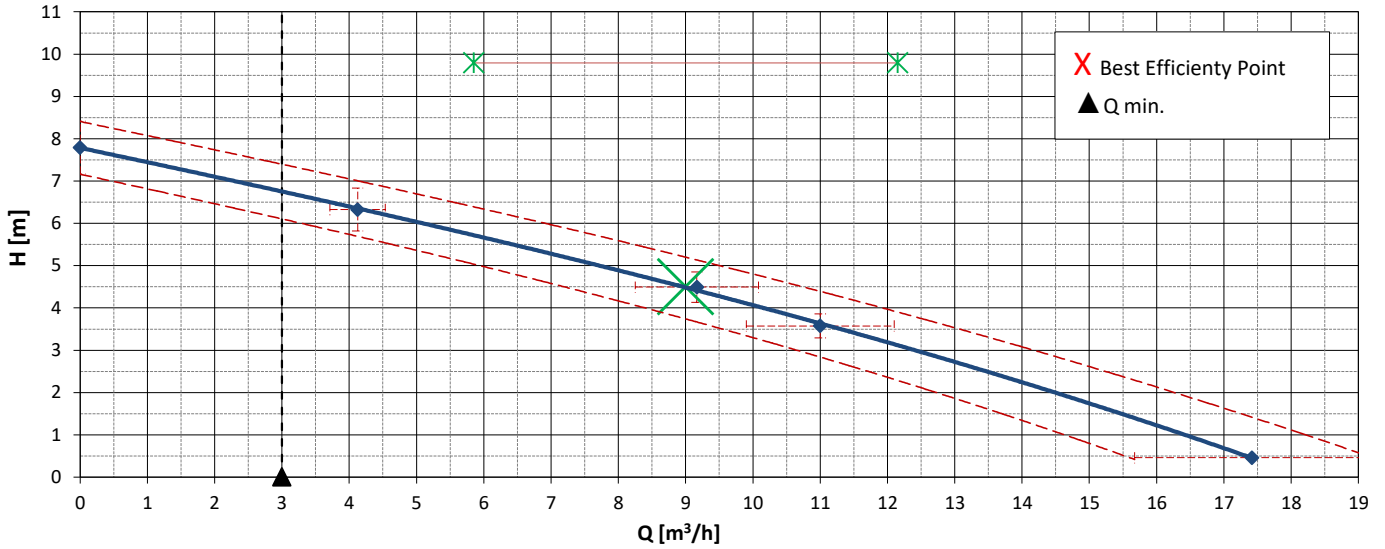
Tipo di pompa - Pump model  
**VS.40V\_04.2.110L**

Poles: 2 Hz: 50  
 r.p.m. 3000

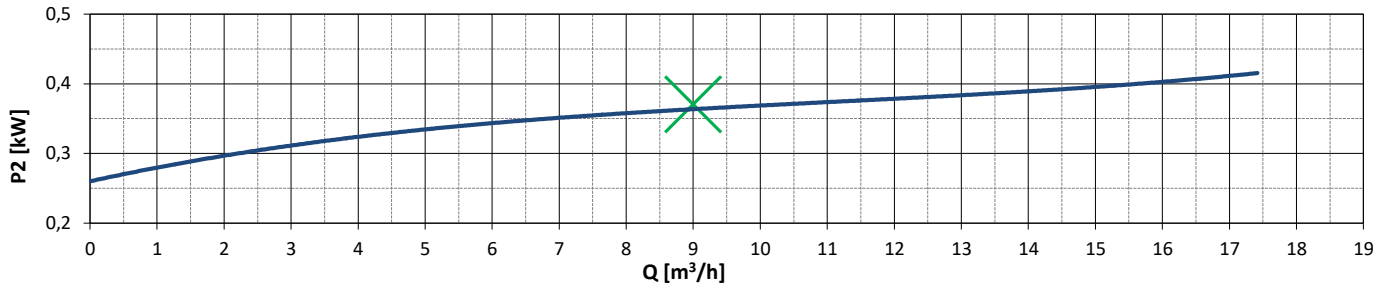
Girante Impeller **VORTEX**  
 Mandata Discharge **G 2"**

2° serie

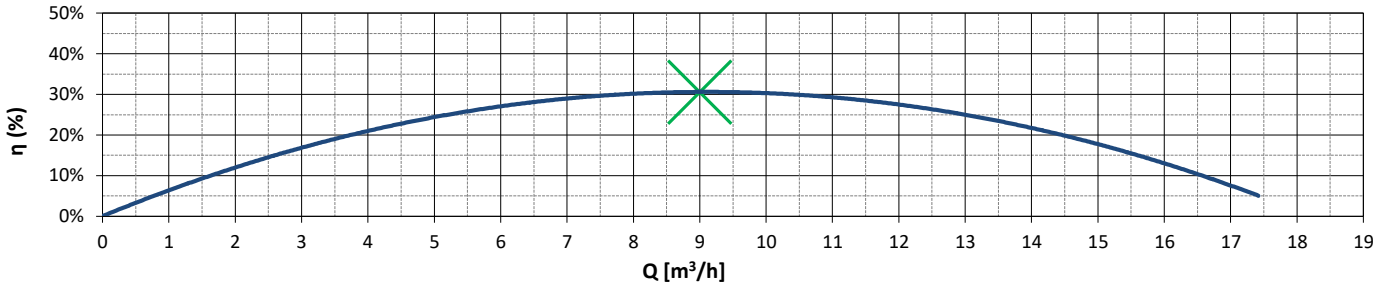
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |     |     |     |     |     |  |  |  |  |  |  |
|----------|-------|-----|-----|-----|-----|-----|--|--|--|--|--|--|
| FLOW (Q) | l/min | 0   | 69  | 153 | 183 | 290 |  |  |  |  |  |  |
|          | l/s   | 0   | 1   | 3   | 3   | 5   |  |  |  |  |  |  |
|          | m³/h  | 0   | 4   | 9   | 11  | 17  |  |  |  |  |  |  |
| HEAD (H) | m     | 7,8 | 6,3 | 4,5 | 3,6 | 0,5 |  |  |  |  |  |  |

**Dati pompa - Pumps data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>0,45</b> |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>0,41</b> |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>0,59</b> |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,89</b> |

|                                       |      |             |
|---------------------------------------|------|-------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 32</b> |
| Diametro girante<br>Impeller diameter | [mm] | <b>90</b>   |
| Peso pompa<br>Weight                  | [Kg] | <b>15</b>   |

|  | Model M/MA            | Model T           |
|--|-----------------------|-------------------|
| Alimentazione<br>Power supply          | [V] <b>1~230-50Hz</b> | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 | <b>16 µF</b>          | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] <b>3,5</b>        | <b>1,2</b>        |
| Corrente di spunto<br>Starting current | [A] <b>9,6</b>        | <b>6,0</b>        |

|  |                      |           |
|--|----------------------|-----------|
| Galleggiante<br>Float level switch         | <b>Optional (MA)</b> | <b>No</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour | <b>30</b>            |           |

In accordo con ISO 9906:2012-Grade 3B (section 4.4.2)  
 In accordance to

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> -  
 viscosità/viscosity 1 mm<sup>2</sup>/s - temperature/temperature 20°C

## Dimensioni d'ingombro - overall dimensions

| <b>S</b> | <b>Installazione mobile - Installation mobile - Installation mobile - Instalación móvil</b> | Dimensione imballo<br>Packaging dimensions  |   |   |   |     |     |     |
|----------|---|---|---|---|---|-----|-----|-----|
|          |   |   |   |   |   |     |     |     |
|          |   | Misure - Measures<br>[mm]   |   |   |   |     |     |     |
|          |   | <table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>570</td> <td>250</td> <td>215</td> </tr> </tbody> </table> | A | B | C | 570 | 250 | 215 |
| A        | B   | C   |   |   |   |     |     |     |
| 570      | 250   | 215   |   |   |   |     |     |     |

|   |   |  |
|---|---|--|
| <b>FC</b>   | <b>Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento</b> |  |
| <p><i>NON APPLICABILE</i></p> <p><i>NOT APPLICABLE</i></p> <p><i>NON APPLICABILE</i></p> <p><i>NO APLICABLE</i></p> |   |  |

## Caratteristiche costruttive - construction features

**Motore asincrono** in classe di isolamento F (155°C), a secco e raffreddato dal liquido circostante;  
**Asynchronous dry motor**, insulation class F(155°C), cooled by the surrounding liquid;  
**Moteur asynchrone**, classe d'isolation F (155°C), sec et refroidi par le liquide environnant;  
**Motor asincrono**, aislamiento clase F (155 ° C), seco y refrigerado por el líquido que rodea.

**Camera condensatore M-MA / Teleruttore TA**  
 Capacitor chamber M-MA / Contactor TA  
 Chambre condensateur M-MA/Contacteur TA  
 Camara condensador M-MA / Contactor TA

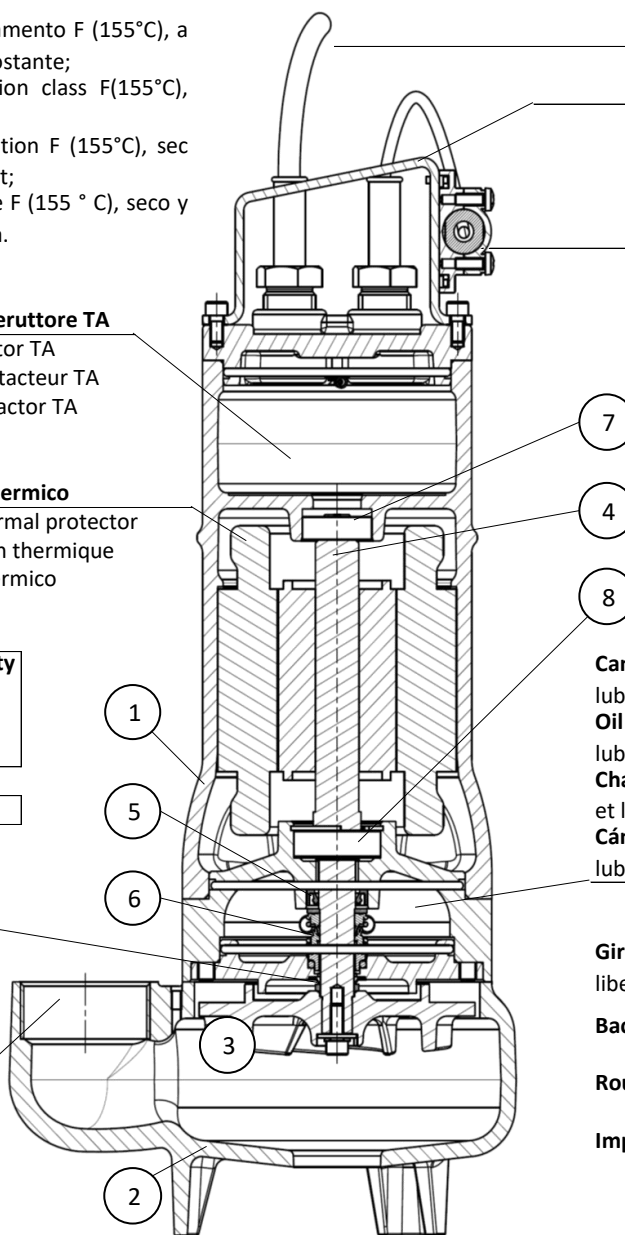
**Motore monofase con protettore termico**  
 Singlephase motor with built in thermal protector  
 Moteur monophasé avec protection thermique  
 Motor monofásico con protector térmico

|                  |                |
|------------------|----------------|
| <b>Viti</b>      | <b>Quality</b> |
| <b>Screws</b>    | <b>A2</b>      |
| <b>Vis</b>       |                |
| <b>Tornillos</b> |                |

|                |            |
|----------------|------------|
| <b>O-RINGS</b> | <b>NBR</b> |
|----------------|------------|

**V-Ring**  
 Protezione albero  
 Shaft protection  
 Protection de l'arbre  
 protección del eje

**DNm: G 2"**



**10 m - H07RN-F**

**Maniglia per movimentazione pompa**  
 Handle to lift the pump  
 Poignée pour lever la pompe  
 Manejar para levantar la bomba

**Fixing kit**  
 Sistema di regolazione galleggiante  
 Float regulation system  
 Système de régulation du flotteur  
 Sistema de regulación del flotador

**Camera olio per il raffreddamento e la lubrificazione delle tenute meccaniche**  
**Oil chamber for the cooling and lubrication of mechanical seals**  
**Chambre d'huile pour le refroidissement et la lubrification des garnitures**  
**Cámara de aceite para el enfriamiento y lubricación de sellos mecánicos**

**Girante arretrata con ampio passaggio libero**

**Backward impeller with large free passage**

**Roue arrière avec grand passage libre**

**Impulsor hacia atrás con gran paso libre**

| NR.      | DESCRIPTION       | MATERIAL     |
|----------|-------------------|--------------|
| <b>1</b> | Gruppo motore     | Ghisa        |
|          | Motor group       | Cast iron    |
|          | Groupe moteur     | Fer de fonte |
|          | Unidad de motor   | Hierro       |
| <b>2</b> | Corpo idraulico   | Ghisa        |
|          | Pump Housing      | Cast iron    |
|          | Corps de la pompe | Fer de fonte |
|          | Cuerpo hidráulico | Hierro       |
| <b>3</b> | Girante           | Ghisa        |
|          | Impeller          | Cast iron    |
|          | Roue              | Fer de fonte |
|          | Impulsor          | Hierro       |
| <b>4</b> | Albero motore     | Acciaio      |
|          | Shaft             | Steel        |
|          | Arbre moteur      | Acier        |
|          | Eje del motor     | Acero        |

| NR.      | DESCRIPTION             | MATERIAL    |
|----------|-------------------------|-------------|
| <b>5</b> | Anello tenuta radiale   |             |
|          | Upper sealing ring      | NBR         |
|          | Bague d'étanchéité      |             |
| <b>6</b> | Sello radiale superiore |             |
|          | Tenuta mecc.            | SiC / SiC   |
|          | Mech. seal              |             |
| <b>7</b> | Haut garniture mécan.   |             |
|          | Sello mecánico          | NBR         |
|          | Cuscinetto superiore    |             |
| <b>8</b> | Top bearing             | 6201 - 2RS1 |
|          | Roulement supérieur     |             |
|          | Cojinete superior       |             |
|          | Cuscinetto inferiore    |             |
|          | Lower bearing           | 6203 - 2RS1 |
|          | Roulement inférieur     |             |
|          | Cojinete inferior       |             |

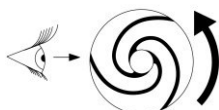
## Caratteristiche costruttive - construction data

|  |  |   |
|--|--|---|
| <b>Costruzione Motore - Motor Frame</b>                              | 110  |   |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |   |
| <b>Classe di Isolamento - Insulation Class</b>                       | F (155°C)                                      |   |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent                |   |
| <b>Avvolgimento statore - Stator winding</b>                         | 1~PH - Singlephase                             | 3~PH - Threephase   |
|  | [V] 1~230V                                     | Y / Δ<br>3~400/230  |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> | Standard                                       | Optional  |
| <input type="radio"/> Bimetallico - Bimetal disc                     | <input checked="" type="checkbox"/>            | <input checked="" type="checkbox"/> 130°C                           |
| <input type="radio"/> Solo su richiesta - on request only PT100      | <input type="checkbox"/>                       | <input type="checkbox"/>  |
| <input type="radio"/> Solo su richiesta - on request only PTC        | <input type="checkbox"/>                       | <input type="checkbox"/>  |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid |   |
| <b>Camera olio - Oil chamber</b>                                     | Si - Yes                                       |   |
| <b>Protezione Tenuta - Leakage protection</b>                        | No   |   |
| <b>Tipo girante - Impeller</b>                                       | Vortex   |   |
| <b>DN mandata - Discharge</b>  | G 2"   | Verticale - Vertical  |
| <b>Controflangia filettata - Threaded counterflange</b>              | No   | -   |
| <b>DN aspirazione / Suction</b>                                      | [mm] Ø 40                                      |   |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard                                       | Vernice all'acqua - Water paint / 30µm<br>Opaco Nero - Opaque Black |
|  | Optional                                       | Epossidica - Epoxy coating / 80µm<br>RAL 7015 - Grigio - Grey       |

## Limiti di utilizzo - Operating limits

|   |                       |        |
|---|-----------------------|--------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C]                  | ≤ 40   |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] | ~ 1    |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s]  | ~ 1    |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l]                | < 200  |
| <b>PH liquido pompato - PH value</b>                                |                       | 6 ÷ 12 |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m]                   | 20     |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l]                 | < 1    |

**Corretta rotazione della girante**  
**Rotation of the impeller**





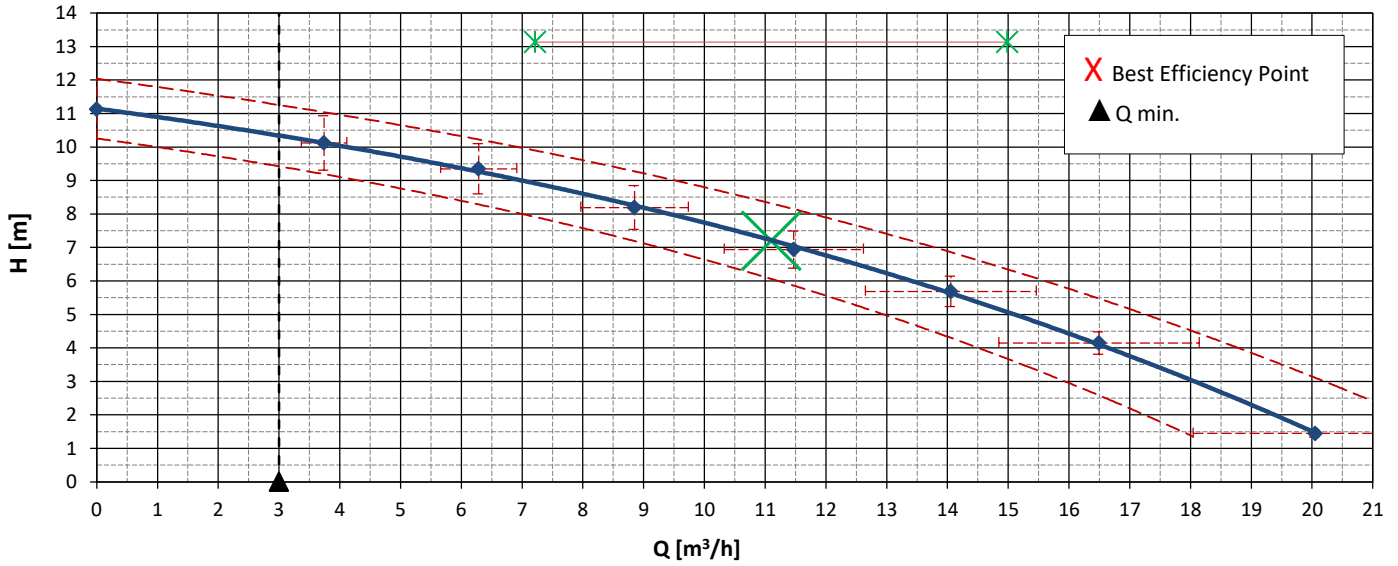
Tipo di pompa - Pump model  
**VS.40V\_06.2.110**

Poles: 2 Hz: 50  
r.p.m. 3000

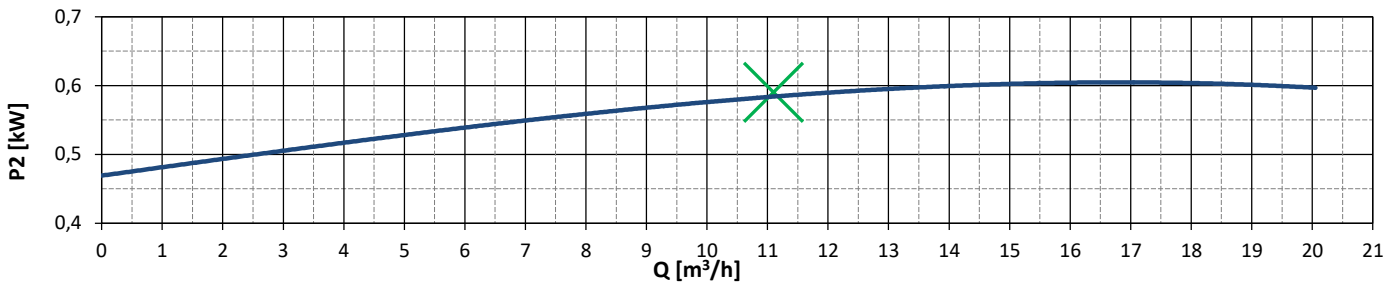
Girante Impeller **VORTEX**  
Mandata Discharge **G 2"**

Serie 2

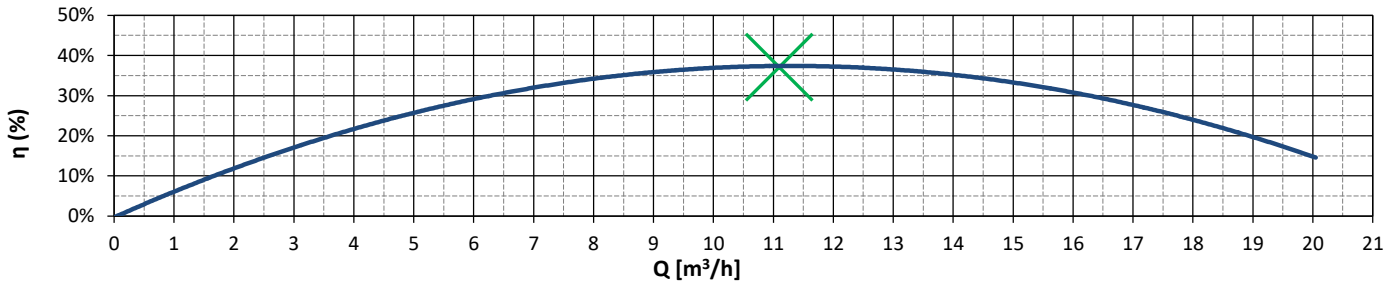
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |      |     |     |     |     |     |     |  |  |  |
|----------|-------|------|------|-----|-----|-----|-----|-----|-----|--|--|--|
| FLOW (Q) | l/min | 0    | 62   | 105 | 147 | 191 | 234 | 275 | 334 |  |  |  |
|          | l/s   | 0    | 1    | 2   | 2   | 3   | 4   | 5   | 6   |  |  |  |
|          | m³/h  | 0    | 4    | 6   | 9   | 11  | 14  | 16  | 20  |  |  |  |
| HEAD (H) | m     | 11,1 | 10,1 | 9,4 | 8,2 | 6,9 | 5,7 | 4,1 | 1,4 |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>0,65</b> |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>0,6</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>0,9</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,84</b> |

|  |     | Model M/MA        | Model T/TA        |
|--|-----|-------------------|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>1~230-50Hz</b> | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>20 μF</b>      | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>4,5</b>        | <b>1,6</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>13,5</b>       | <b>8,0</b>        |

|                                       |      |             |
|---------------------------------------|------|-------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>∅ 40</b> |
| Diametro girante<br>Impeller diameter | [mm] | <b>108</b>  |
| Peso pompa<br>Weight                  | [Kg] | <b>23</b>   |

|  |                      |                      |
|--|----------------------|----------------------|
| Galleggiante<br>Float level switch         | <b>Optional (MA)</b> | <b>Optional (TA)</b> |
| Cavo<br>Cable                              | <b>10m 3G1,5</b>     | <b>10m 4G1</b>       |
| Nr. Avviamenti / ora<br>Nr. Start per hour | <b>30</b>            |                      |

In accordo con / In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C



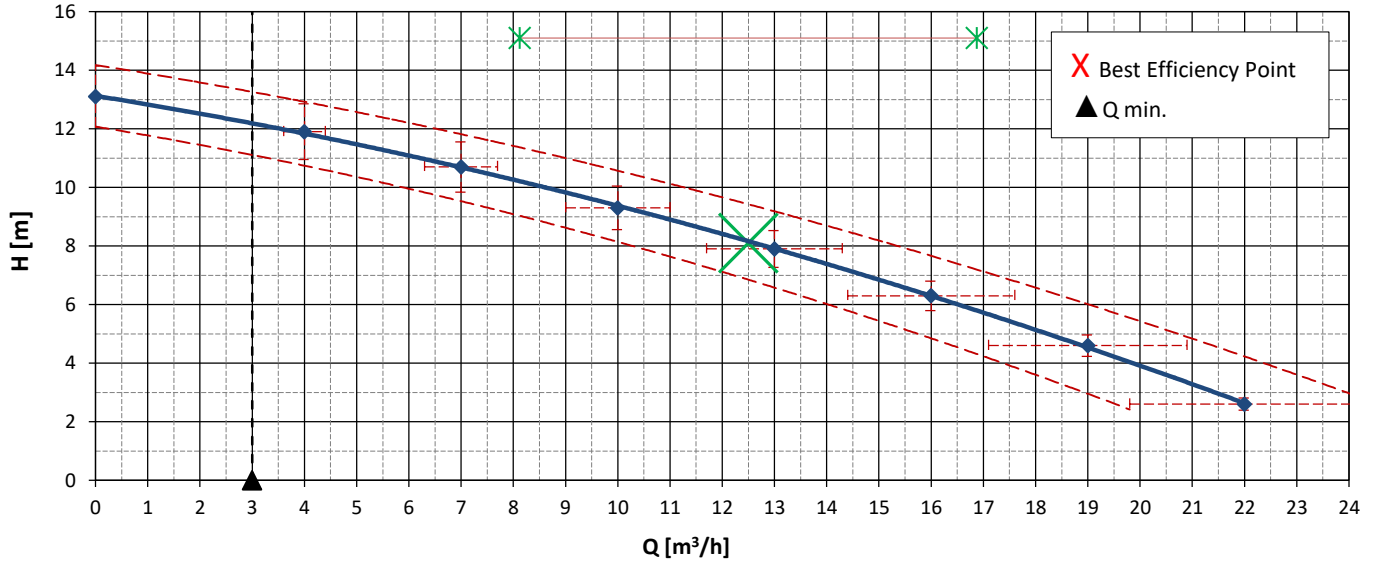
Tipo di pompa - Pump model  
**VS.40V\_09.2.110**

**Poles: 2 Hz: 50**  
**r.p.m. 3000**

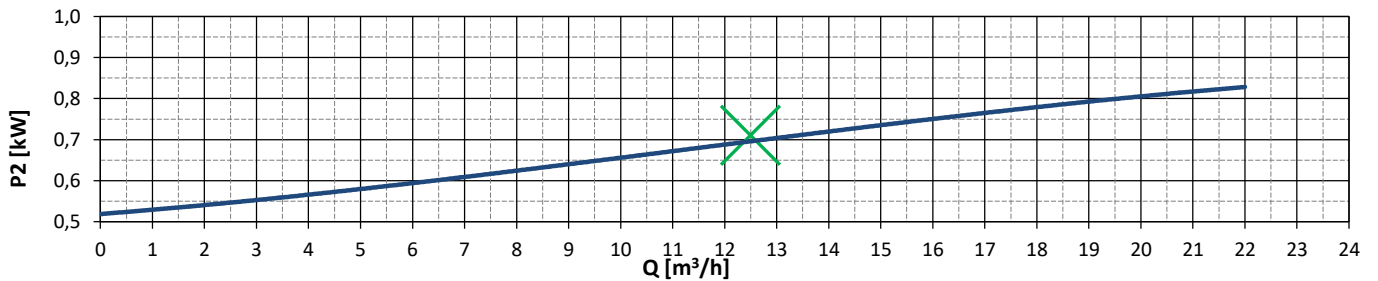
Girante Impeller **VORTEX**  
Mandata Discharge **G 2"**

Serie 2

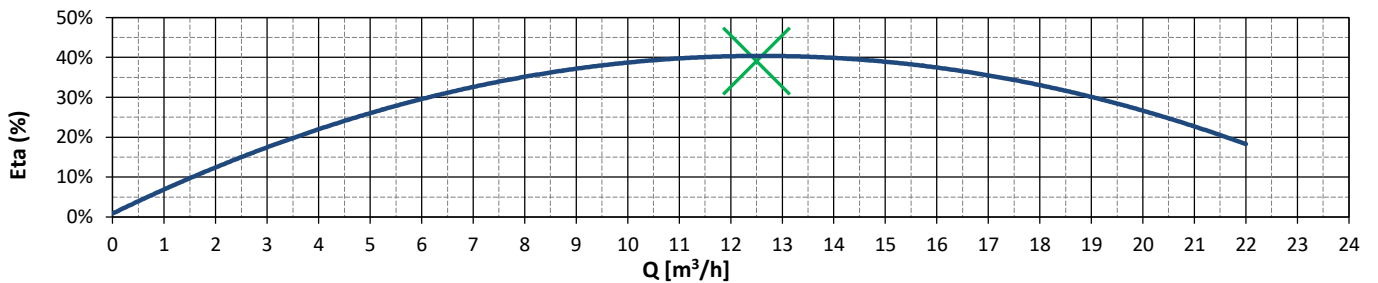
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |     |     |     |     |     |  |  |  |  |
|-----------------|--------------|------|------|------|-----|-----|-----|-----|-----|--|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 67   | 117  | 167 | 217 | 267 | 317 | 367 |  |  |  |  |
|                 | <b>l/s</b>   | 0    | 1    | 2    | 3   | 4   | 4   | 5   | 6   |  |  |  |  |
|                 | <b>m³/h</b>  | 0    | 4    | 7    | 10  | 13  | 16  | 19  | 22  |  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 13,1 | 11,9 | 10,7 | 9,3 | 7,9 | 6,3 | 4,6 | 2,6 |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>1,10</b> |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>0,83</b> |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>1,18</b> |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,85</b> |

|  |     | <b>Model M/MA</b> | <b>Model T/TA</b> |
|--|-----|-------------------|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>1~230-50Hz</b> | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>25 μF</b>      | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>6,5</b>        | <b>2,0</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>21</b>         | <b>11,0</b>       |

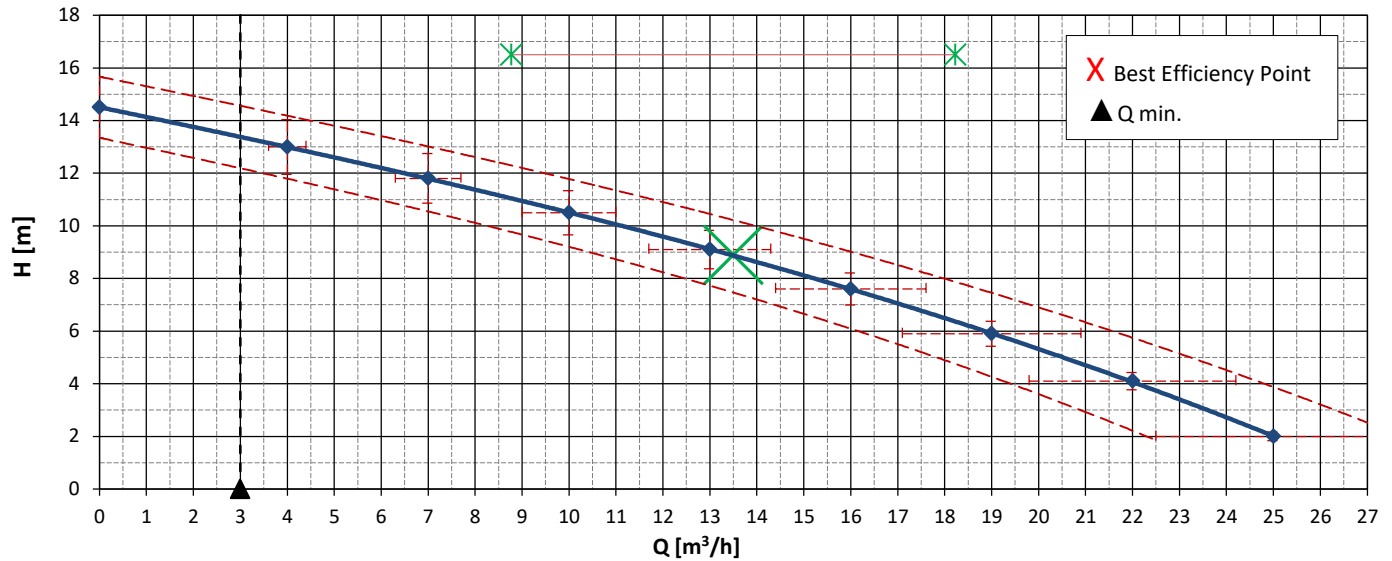
|                                       |      |             |
|---------------------------------------|------|-------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 40</b> |
| Diametro girante<br>Impeller diameter | [mm] | <b>121</b>  |
| Peso pompa<br>Weight                  | [Kg] | <b>24</b>   |

|  |                      |                      |
|--|----------------------|----------------------|
| Galleggiante<br>Float level switch         | <b>Optional (MA)</b> | <b>Optional (TA)</b> |
| Cavo<br>Cable                              | <b>10m 3G1,5</b>     | <b>10m 4G1</b>       |
| Nr. Avviamenti / ora<br>Nr. Start per hour | <b>30</b>            |                      |

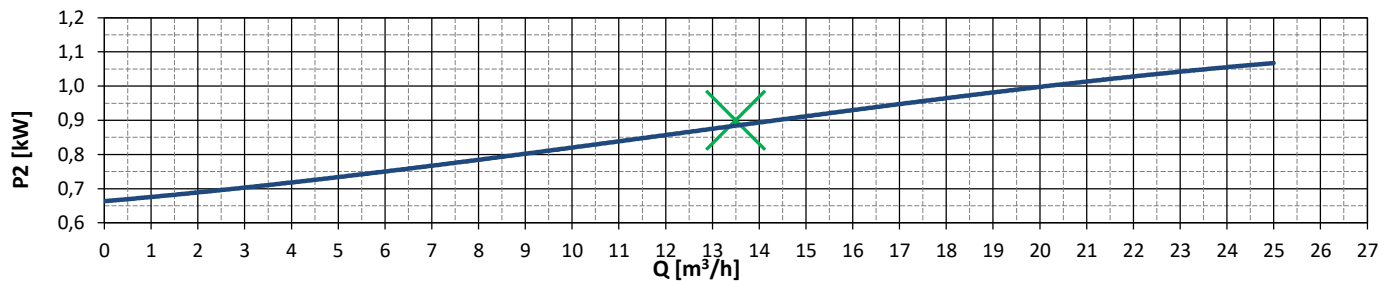
In accordo con  
In accordance to **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density 1  
Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C

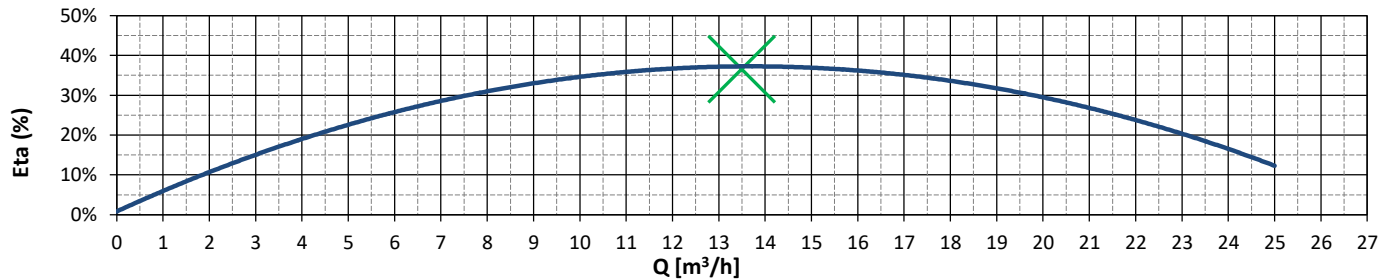
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |     |     |     |     |     |  |  |  |
|-----------------|--------------|------|------|------|------|-----|-----|-----|-----|-----|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 67   | 117  | 167  | 217 | 267 | 317 | 367 | 417 |  |  |  |
|                 | <b>l/s</b>   | 0    | 1    | 2    | 3    | 4   | 4   | 5   | 6   | 7   |  |  |  |
|                 | <b>m³/h</b>  | 0    | 4    | 7    | 10   | 13  | 16  | 19  | 22  | 25  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 14,5 | 13,0 | 11,8 | 10,5 | 9,1 | 7,6 | 5,9 | 4,1 | 2,0 |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>1,10</b> |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>1,07</b> |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>1,48</b> |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,87</b> |

|  |     | <b>Model M/MA</b> | <b>Model T/TA</b> |
|--|-----|-------------------|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>1~230-50Hz</b> | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>25 μF</b>      | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>7,7</b>        | <b>2,8</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>21,6</b>       | <b>14,0</b>       |

|                                       |      |             |
|---------------------------------------|------|-------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>∅ 40</b> |
| Diametro girante<br>Impeller diameter | [mm] | <b>127</b>  |
| Peso pompa<br>Weight                  | [Kg] | <b>24,5</b> |

|  |                      |                      |
|--|----------------------|----------------------|
| Galleggiante<br>Float level switch         | <b>Optional (MA)</b> | <b>Optional (TA)</b> |
| Cavo<br>Cable                              | <b>10m 3G1,5</b>     | <b>10m 4G1</b>       |
| Nr. Avviamenti / ora<br>Nr. Start per hour | <b>30</b>            |                      |

In accordo con  
In accordance to **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C



## Dimensioni d'ingombro - overall dimensions

| <b>S</b> | <b>Installazione mobile - Installation mobile - Installation mobile - Instalación móvil</b> | Dimensione imballo<br>Packaging dimensions  |   |   |   |     |     |     |
|----------|---|---|---|---|---|-----|-----|-----|
|          |   |   |   |   |   |     |     |     |
|          |   | Misure - Measures<br>[mm]   |   |   |   |     |     |     |
|          |   | <table border="1" style="margin: auto;"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">570</td> <td style="text-align: center;">250</td> <td style="text-align: center;">215</td> </tr> </tbody> </table> | A | B | C | 570 | 250 | 215 |
| A        | B   | C   |   |   |   |     |     |     |
| 570      | 250   | 215   |   |   |   |     |     |     |

|   |   |  |
|---|---|--|
| <b>FC</b>   | <b>Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento</b> |  |
| <p><i>NON APPLICABILE</i></p> <p><i>NOT APPLICABLE</i></p> <p><i>NON APPLICABILE</i></p> <p><i>NO APLICABLE</i></p> |   |  |

## ACCESSORI - ACCESSORIES - ACCESORIES - ACCESORIOS

| Descrizione - Description - Description - Descripción |  |   | Codice<br>Code    |
|---|--|---|-------------------|
|   | - Catena<br>- Chain<br>- Chaîne<br>- Cadena  | ferro zincato - galvanized Iron<br>fer galvanisé - hierro galvanizado | 2SC000019         |
|   |  | Acciaio - Stainless steel<br>acier inox - acero inox                  | 2SC000032         |
| TBV<br>   | - Valvola di ritegno a palla filettata<br>- Threaded valve<br>- Vanne fileté<br>- Válvula roscada  |   | G 1"1/2 4BV000002 |
|   |  |   | G 2" 4BV000003    |
| HF<br>  | - Regolatore di livello per acque reflue<br>- Level switch for sewage<br>- Interrupteur de niveau pour eaux usées<br>- Interruptor de nivel para aguas residuales  |   | [10 mt] 3CS000007 |
| SHELL<br>   | - Contrappeso SHELL per galleggiante<br>- Counterweight SHELL for level switch<br>- Cotrepoids SHELL pour interrupteur de niveau<br>- Contrapeso para interruptor de nivel   |   | 3CS000021         |
| TUTOR<br>   | - Sistema di guida del galleggiante per spazi ristretti<br>- Float guidance system for confined spaces<br>- Système de guidage à flotteur pour espaces confinés<br>- Sistema de guiado flotante para espacios reducidos. |   | 3CS000020         |

### SOLO SERIE / ONLY MODELS: VS.40H

| SOLO SERIE / ONLY MODELS: VS.40H |  |  | Codice<br>Code |
|----------------------------------|--|--|----------------|
| FC<br>                           | - Dispositivo di accoppiamento 1"1/2 - uscita G 2"<br>- 1"1/2 Coupling device - outlet 2"<br>- Dispositif de couplage 1"1/2 - sortie G 2"<br>- Dispositivo de acoplamiento 1"1/2 - salida G 2" |  | 8FC000001      |

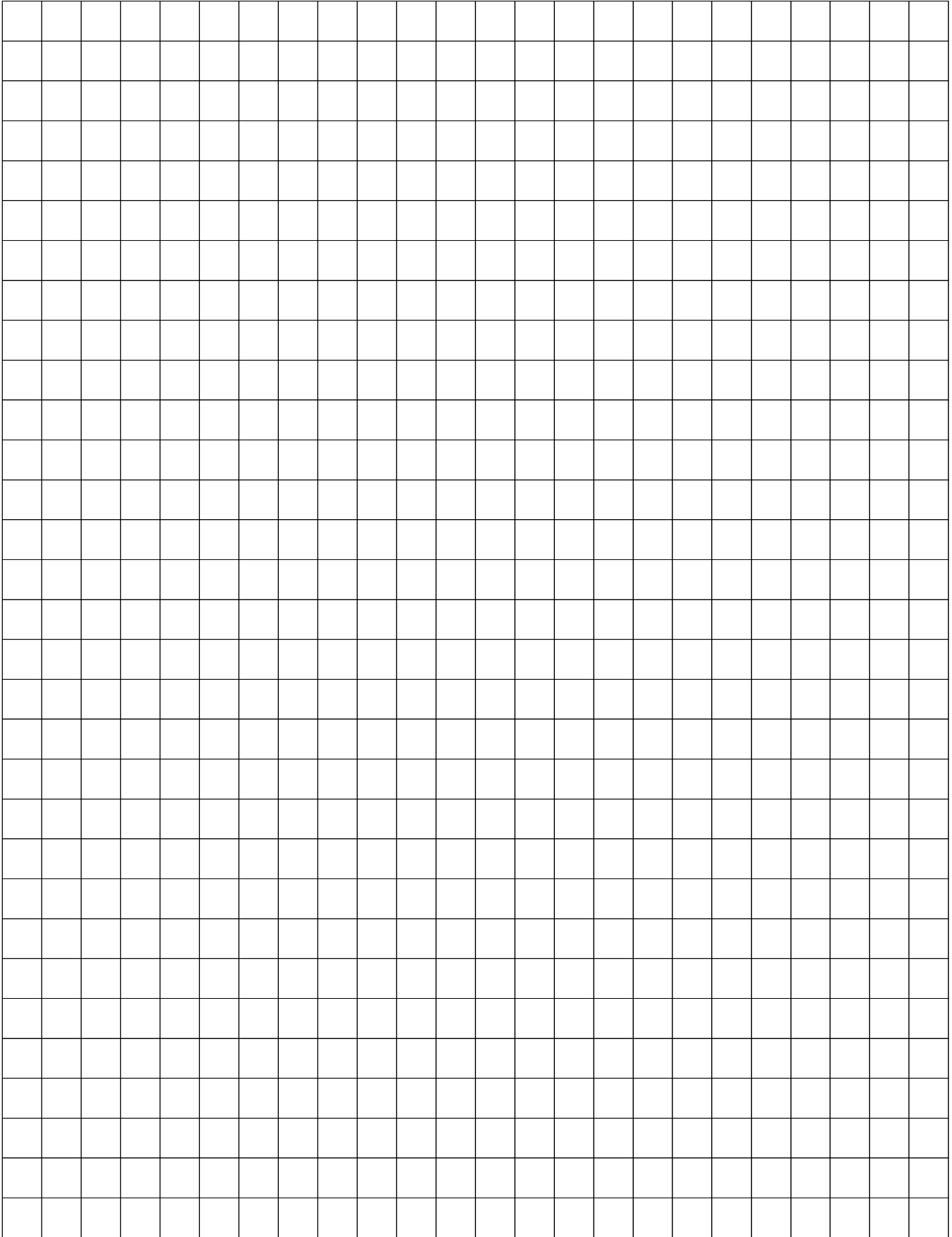
### SELEZIONE QUADRO DI CONTROLLO - CONTROL PANEL SELECTION

| Pole | Pump | Alim.<br>[V]            | P1<br>[KW] | In<br>[A] | Start.<br>Avv. | - ECH -<br>ELECTROMECHANICAL |                        |                       |                       |                        |                       |                        |                        | - ECL -<br>ELECTRONIC  |                        |         |  |  |
|------|------|-------------------------|------------|-----------|----------------|------------------------------|------------------------|-----------------------|-----------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|---------|--|--|
|      |      |                         |            |           |                | 1 Pump                       |                        |                       |                       | 2 Pumps                |                       |                        |                        | 1 Pump                 |                        | 2 Pumps |  |  |
|      |      |                         |            |           |                | ECH1.M-7<br>5EC000006        | ECH1.M-14<br>5EC000008 | ECH1.T-7<br>5EC000005 | ECH2.M-7<br>5EC000030 | ECH2.M-14<br>5EC000032 | ECH2.T-7<br>5EC000029 | ECL1.M-16<br>5EC000081 | ECL1.T-15<br>5EC000083 | ECL2.M-16<br>5EC000082 | ECH2.T-15<br>5EC000084 |         |  |  |
| 110L | 2    | VS.40H/V_04.2.M/MA.110L | 1~230      | 0,4       | 3,5            | 16µF                         | •                      |                       |                       | •                      |                       |                        | •                      |                        |                        |         |  |  |
|      |      | VS.40H/V_04.2.T.110L    | 3~400      | 0,4       | 1,2            | DOL                          |                        |                       | •                     |                        |                       | •                      |                        |                        | •                      |         |  |  |
| 110  | 2    | VS.40H/V_06.2.M/MA.110  | 1~230      | 0,6       | 4,5            | 20µF                         | •                      |                       |                       | •                      |                       |                        | •                      |                        |                        |         |  |  |
|      |      | VS.40H/V_06.2.T/TA.110  | 3~400      | 0,6       | 1,6            | DOL                          |                        |                       | •                     |                        |                       | •                      |                        |                        | •                      |         |  |  |
|      |      | VS.40H/V_09.2.M/MA.110  | 1~230      | 0,9       | 7              | 25µF                         |                        | •                     |                       |                        |                       |                        | •                      |                        |                        |         |  |  |
|      |      | VS.40H/V_09.2.T/TA.110  | 3~400      | 0,9       | 2,2            | DOL                          |                        |                       | •                     |                        |                       | •                      |                        |                        | •                      |         |  |  |
|      |      | VS.40H/V_11.2.M/MA.110  | 1~230      | 1,1       | 7,7            | 25µF                         |                        | •                     |                       |                        |                       |                        | •                      |                        |                        |         |  |  |
|      |      | VS.40H/V_11.2.T/TA.110  | 3~400      | 1,1       | 2,9            | DOL                          |                        |                       | •                     |                        |                       | •                      |                        |                        | •                      |         |  |  |



# VS.40H - VS.40V - VORTEX -

| Mandata - Outlet |                   |
|------------------|-------------------|
| VS.40H           | 1" <sup>1/2</sup> |
| VS.40V           | 2"                |



**Poli - poles Modelli - models**

|          |                       |
|----------|-----------------------|
| <b>2</b> | <b>VSL.50_04.110L</b> |
|----------|-----------------------|

**IT**

Elettropompa sommergibile compatta e di robusta costruzione fabbricata completamente in ghisa, senza camera olio, unica tenuta meccanica posizionata sopra alla girante a diretto contatto del liquido pompato

**EN**

Compact and solid construction submersible pump completely made in cast iron, without oil chamber, only one mechanical seal positioned above the impeller in direct contact with the pumped liquid

**FR**

Pompe électrique submersible compacte et construction robuste entièrement en fonte, sans chambre à huile, seule garniture mécanique placée au-dessus de la roue en contact direct avec le liquide pompé

**ES**

Bomba eléctrica sumergible compacta y construcción robusta completamente de hierro fundido, sin cámara de aceite, solo sello mecánico colocado sobre el impulsor en contacto directo con el líquido bombeado

**Poli - poles Modelli - models**

|          |                            |
|----------|----------------------------|
| <b>2</b> | <b>VSL.50_06/09/11.110</b> |
|----------|----------------------------|

**IT**

Elettropompa sommergibile compatta e di robusta costruzione fabbricata completamente in ghisa, con camera olio interposta tra gruppo motore e gruppo pompa. Tenuta meccanica in camera olio non a diretto contatto del liquido pompato e protetta da un anello V-Ring posizionato dietro alla girante

**EN**

Compact and solid construction submersible pump completely made in cast iron, with oil chamber interposed between motor unit and pump unit. Mechanical seal positioned inside the oil chamber not in direct contact with the pumped liquid and protected by a V-Ring ring positioned on the back of the impeller

**FR**

Pompe électrique submersible compacte entièrement réalisée en fonte, avec chambre à huile intercalée entre le groupe moteur et le groupe pompe. Joint mécanique dans la chambre d'huile non en contact direct avec le liquide pompé et protégé par un anneau en V situé à l'arrière de la roue

**ES**

Bomba eléctrica sumergible compacta hecha completamente de hierro fundido, con cámara de aceite interpuesta entre la unidad del motor y la unidad de la bomba. Cierre mecánico en la cámara de aceite que no está en contacto directo con el líquido bombeado y está protegido por un anillo en V ubicado en la parte posterior del impulsor

VSL.50\_06-09-11.110

VSL.50\_04.110L



**IDENTIFICAZIONE - IDENTIFICATION**

| Dati Idraulici<br>Hydraulic data  |    | Dati motore elettrico<br>Motor data |       |       |      |   |
|---|----|-------------------------------------|-------|-------|------|---|
| VSL   | 50 | 04                                  | 2     | M (A) | 110L | X |
| Vortex System / Versione leggera - Light version                                    |    | 06                                  | T (A) |       | 110  |   |
| DNm - DN outlet<br>50 Uscita orizzontale DN50-G 2" - Horizontal outlet DN50 - G 2"  |    | 09                                  |       |       |      |   |
| P <sub>2</sub> : kW x 10  |    | 11                                  |       |       |      |   |
| Numero poli - Number of poles   |    |                                     |       |       |      |   |
| M: 1~230V - 50Hz - Monofase - Singlephase   |    |                                     |       |       |      |   |
| MA: 1~230V - 50Hz - Monofase con Galleggiante - Singlephase with float level switch |    |                                     |       |       |      |   |
| T: 3~400 V - 50HZ - Trifase - Threephase  |    |                                     |       |       |      |   |
| TA: 3~400 V - 50HZ - Trifase con Galleggiante- Threephase with float level switch   |    |                                     |       |       |      |   |
| Grandezza motore - Motor Frame  |    |                                     |       |       |      |   |
| Costruzione speciale - Special feature  |    |                                     |       |       |      |   |

**LISTA MODELLI - RANGE OF PRODUCTS**

| Grandezza Motore<br>Motor Frame | Poles | P <sub>2</sub><br>[kW] | Alimentazione<br>Power supply | Modelli<br>Models     | Avviamento<br>Starting | Cavo alimentazione / segnali<br>Power / signals cable |               | Camera olio<br>Oil Chamber |
|---------------------------------|-------|------------------------|-------------------------------|-----------------------|------------------------|---|---------------|----------------------------|
|                                 |       |                        |                               |                       |                        | [m]   | Type          |                            |
| 110L                            | 2     | 0,4                    | 1ph                           | VSL.50_04.2.M(A).110L | μF: 16                 | 5*  | H07RN-F 3G1,5 | NO                         |
|                                 |       |                        | 3ph                           | VSL.50_04.2.T(A).110L | D.O.L.                 | 5*  | H07RN-F 4G1   |                            |
| 110                             | 2     | 0,6                    | 1ph                           | VSL.502.M(A).110      | μF: 20                 | 10  | H07RN-F 3G1,5 | SI<br>YES                  |
|                                 |       |                        | 3ph                           | VSL.50_06.2.T(A).110  | D.O.L.                 | 10  | H07RN-F 4G1   |                            |
|                                 |       | 0,9                    | 1ph                           | VSL.50_09.2.M(A).110  | μF: 25                 | 10  | H07RN-F 3G1,5 |                            |
|                                 |       |                        | 3ph                           | VSL.50_09.2.T(A).110  | D.O.L.                 | 10  | H07RN-F 4G1   |                            |
|                                 |       | 1,1                    | 1ph                           | VSL.50_11.2.M(A).110  | μF: 25                 | 10  | H07RN-F 3G1,5 |                            |
|                                 |       |                        | 3ph                           | VSL.50_11.2.T(A).110  | D.O.L.                 | 10  | H07RN-F 4G1   |                            |

\* Per uso esterno è obbligatorio utilizzare la pompa con lunghezza cavo di 10m - vedi normativa EN 60335 - 2.41  
For external use it is mandatory to use the pump with a cable length of 10m - see standard EN 60335 - 2.41

## Caratteristiche costruttive - construction features

**Motore asincrono** in classe di isolamento F (155°C), a secco e raffreddato dal liquido circostante;

**Asynchronous dry motor**, insulation class F(155°C), cooled by the surrounding liquid;

**Moteur asynchrone**, classe d'isolation F (155°C), sec et refroidi par le liquide environnant;

**Motor asíncrono**, aislamiento clase F (155 ° C), seco y refrigerado por el líquido que rodea.

**5m - H07RN-F \***

### Camera condensatore

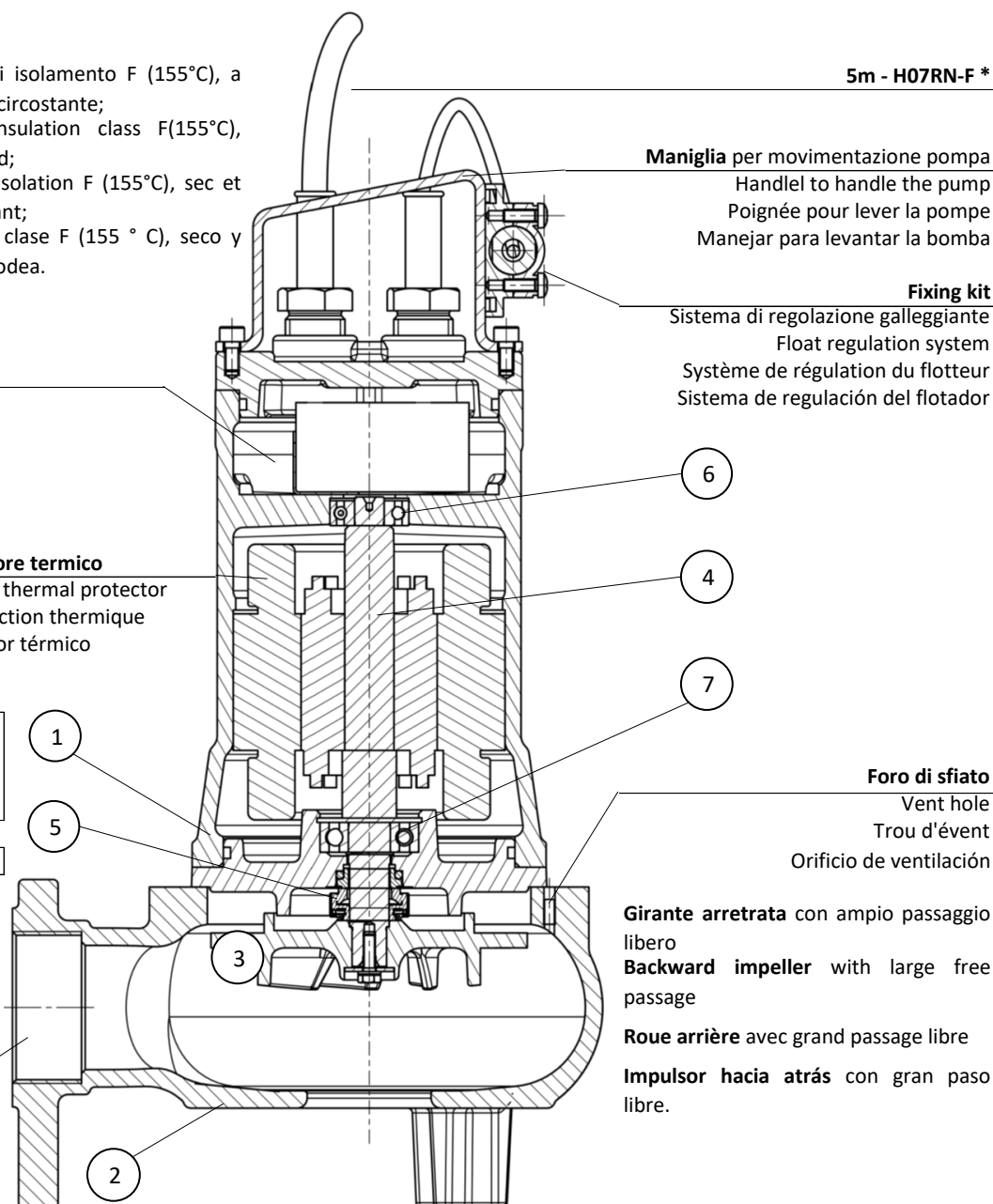
Capacitor chamber  
Chambre de condensateur  
Camara condensatore

### Motore monofase con protettore termico

Singlephase motor with built in thermal protector  
Moteur monophasé avec protection thermique  
Motor monofásico con protector térmico

|   |                                 |
|---|---------------------------------|
| <b>Viti</b><br>Screws<br>Vis<br>Tornillos | <b>Quality</b><br><br><b>A2</b> |
|---|---------------------------------|

|                |            |
|----------------|------------|
| <b>O-RINGS</b> | <b>NBR</b> |
|----------------|------------|

**DNm: G 2" - DN50 PN6**


| NR. | DESCRIPTION       | MATERIAL     |
|-----|-------------------|--------------|
| 1   | Gruppo motore     | Ghisa        |
|     | Motor group       | Cast iron    |
|     | Groupe moteur     | Fer de fonte |
|     | Unidad de motor   | Hierro       |
| 2   | Corpo idraulico   | Ghisa        |
|     | Pump Housing      | Cast iron    |
|     | Corps de la pompe | Fer de fonte |
|     | Cuerpo hidráulico | Hierro       |
| 3   | Girante           | Ghisa        |
|     | Impeller          | Cast iron    |
|     | Roue              | Fer de fonte |
|     | Impulsor          | Hierro       |
| 4   | Albero motore     | Acciaio      |
|     | Shaft             | Steel        |
|     | Arbre moteur      | Acier        |
|     | Eje del motor     | Acero        |

| NR. | DESCRIPTION          | MATERIAL                   |
|-----|----------------------|----------------------------|
| 5   | Tenuta mecc.         | Carbon graphite / Al-Oxide |
|     | Mechanical seal      |                            |
| 6   | Garniture mécanique  | NBR                        |
|     | Sello mecánico       |                            |
| 7   | Cuscinetto superiore |                            |
|     | Top bearing          | 6201 - 2RS1                |
|     | Roulement supérieur  |                            |
| 7   | Cojinete superior    |                            |
|     | Cuscinetto inferiore |                            |
|     | Lower bearing        | 6203 - 2RS1                |
| 7   | Roulement inférieur  |                            |
|     | Cojinete inferior    |                            |

\* Per uso esterno è obbligatorio utilizzare la pompa con lunghezza cavo di 10m - vedi normativa EN 60335 - 2.41  
For external use it is mandatory to use the pump with a cable length of 10m - see standard EN 60335 - 2.41

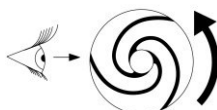
## Caratteristiche costruttive - construction data

|  |  |   |   |
|--|--|---|---|
| <b>Costruzione Motore - Motor Frame</b>                              | 110L   |   |   |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |   |   |
| <b>Classe di Isolamento - Insulation Class</b>                       | F (155°C)                                      |   |   |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent                |   |   |
| <b>Avvolgimento statore - Stator winding</b>                         | 1~PH - Singlephase                             | 3~PH - Threephase   |   |
|  | [V]  | 1~230V  | Y / Δ<br>3~400/230                        |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> |  | Standard  | Optional                                  |
| <input type="radio"/> Bimetallico - Bimetal disc                     |  | <input checked="" type="checkbox"/>                                 | <input checked="" type="checkbox"/> 130°C |
| <input type="radio"/> Solo su richiesta - on request only            | PT100  | <input type="checkbox"/>  | <input type="checkbox"/>                  |
| <input type="radio"/> Solo su richiesta - on request only            | PTC  | <input type="checkbox"/>  | <input type="checkbox"/>                  |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid |   |   |
| <b>Camera olio - Oil chamber</b>                                     | No   |   |   |
| <b>Protezione Tenuta - Leakage protection</b>                        | No   |   |   |
| <b>Tipo girante - Impeller</b>                                       | Vortex   |   |   |
| <b>DN mandata - Discharge</b>  | G 2" - DN 50 PN6                               |   |   |
| <b>Controflangia filettata - Threaded counterflange</b>              | NO   | -   |   |
| <b>DN aspirazione / Suction</b>                                      | [mm]   | Ø 50  |   |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard                                       | Vernice all'acqua - Water paint / 30µm<br>Opaco Nero - Opaque Black |   |
|  | Optional                                       | Epossidica - Epoxy coating / 80µm<br>RAL 7015 - Grigio - Grey       |   |

## Limiti di utilizzo - Operating Limits

|   |                       |        |
|---|-----------------------|--------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C]                  | ≤ 40   |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] | ~ 1    |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s]  | ~ 1    |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l]                | < 200  |
| <b>PH liquido pompato - PH value</b>                                |                       | 6 ÷ 12 |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m]                   | 20     |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l]                 | < 0,1  |

**Corretta rotazione della girante**  
**Rotation of the impeller**





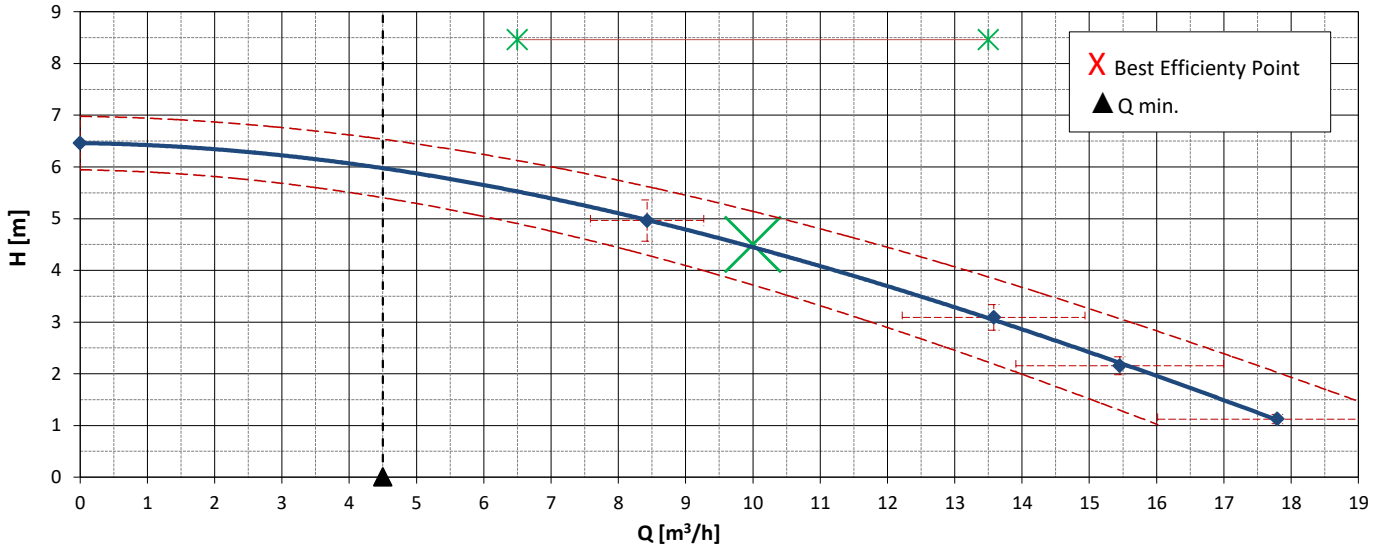
Tipo di pompa - Pump model  
**VSL.50\_04.2.110L**

Poles: 2 Hz: 50  
r.p.m. 3000

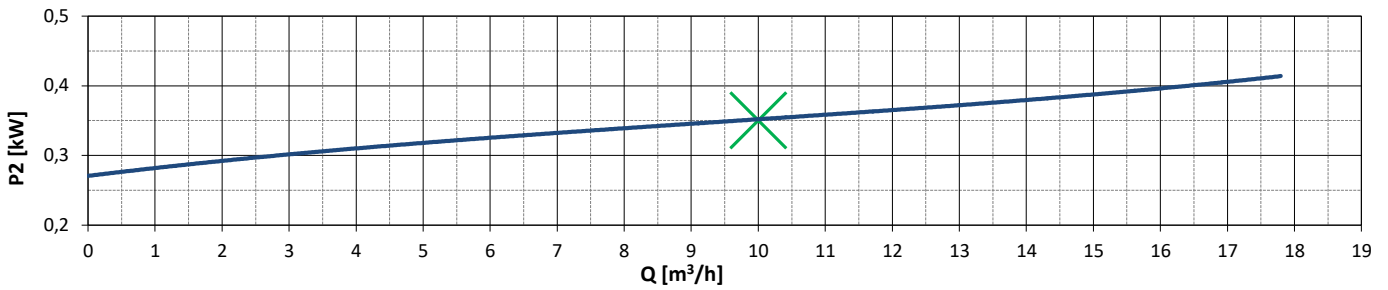
Girante Impeller **VORTEX**  
Mandata Discharge **DN 50 - G 2"**

2° serie

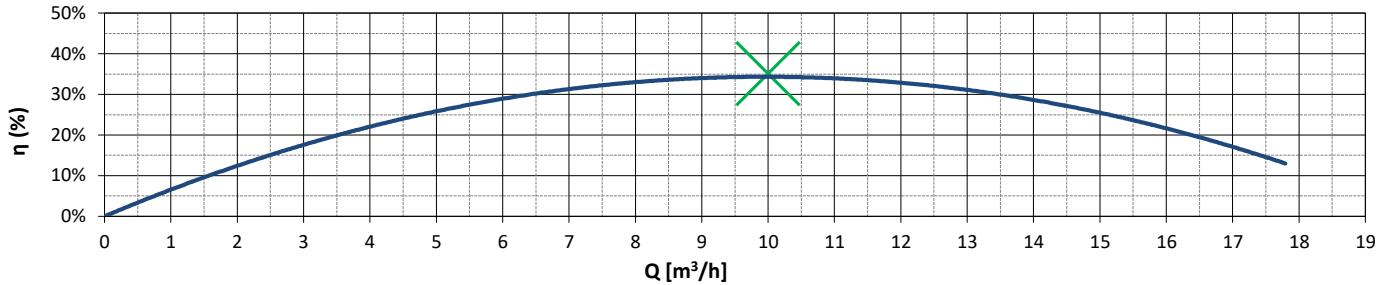
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |     |     |     |     |     |  |  |  |  |  |  |
|----------|-------|-----|-----|-----|-----|-----|--|--|--|--|--|--|
| FLOW (Q) | l/min | 0   | 140 | 226 | 258 | 297 |  |  |  |  |  |  |
|          | l/s   | 0   | 2   | 4   | 4   | 5   |  |  |  |  |  |  |
|          | m³/h  | 0   | 8   | 14  | 15  | 18  |  |  |  |  |  |  |
| HEAD (H) | m     | 6,5 | 5,0 | 3,1 | 2,2 | 1,1 |  |  |  |  |  |  |

**Dati pompa - Pumps data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>0,45</b> |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>0,41</b> |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>0,62</b> |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,89</b> |

|                                       |      |             |
|---------------------------------------|------|-------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 40</b> |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 90</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>15,5</b> |

|  | Model M/MA            | Model T           |
|--|-----------------------|-------------------|
| Alimentazione<br>Power supply          | [V] <b>1~230-50Hz</b> | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 | <b>16 µF</b>          | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] <b>3,5</b>        | <b>1,2</b>        |
| Corrente di spunto<br>Starting current | [A] <b>9,6</b>        | <b>6,0</b>        |

|  |                      |           |
|--|----------------------|-----------|
| Galleggiante<br>Float level switch         | <b>Optional (MA)</b> | <b>No</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour | <b>30</b>            |           |

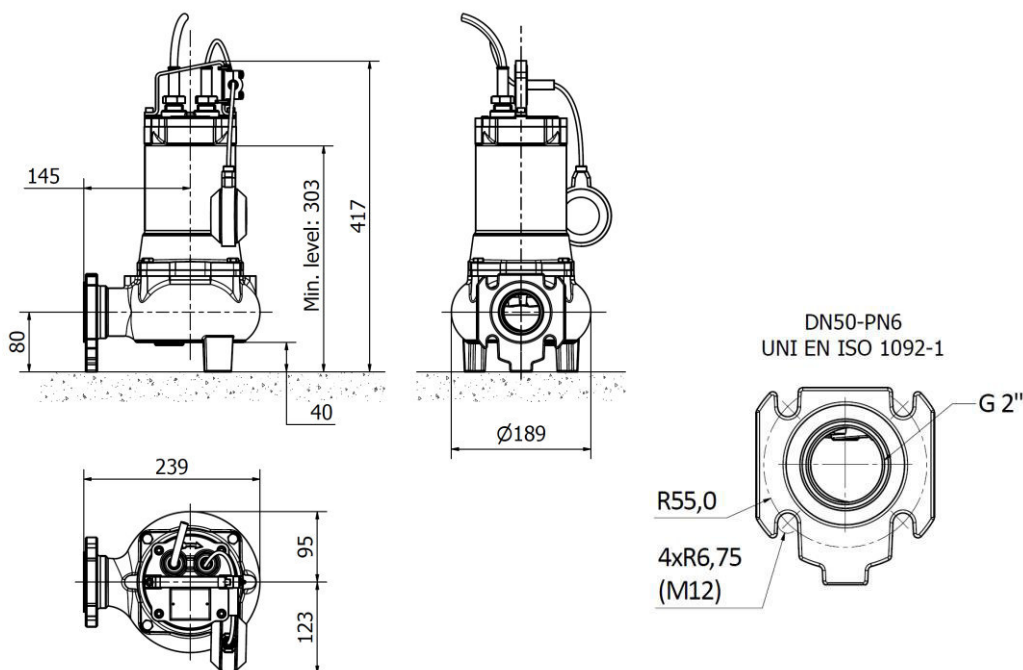
In accordo con: ISO 9906:2012-Grade 3B (section 4.4.2)  
In accordance to:

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> -  
Viscosità/viscosity 1 mm<sup>2</sup>/s - temperature/temperature 20°C

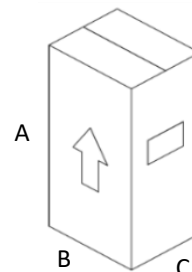


## Dimensioni d'ingombro - overall dimensions

### S Installazione mobile - Installation mobile - Installation mobile - Instalación móvil



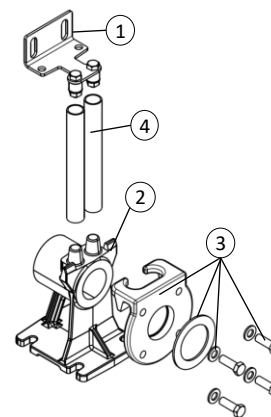
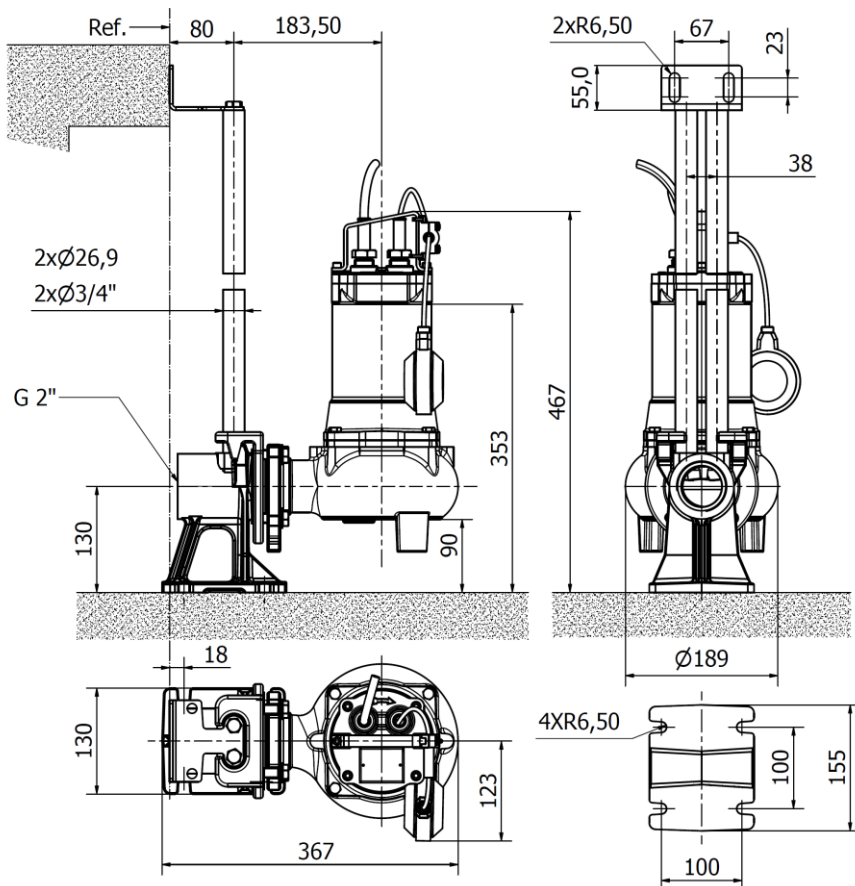
Dimensione imballo  
Packaging dimensions



Misure - Measures  
[mm]

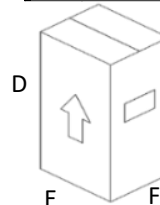
| A   | B   | C   |
|-----|-----|-----|
| 570 | 250 | 215 |

### FC Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento



**8FC00002**      **KG: 7,5**

- 1 Supporto tubi guida da 3/4"  
3/4" guide rails bracket
- 2 Piede orizzontale 2"  
Horizontal foot - 2"out
- 3 Slitta completa  
Sliding bracket complete
- 4 Esclusi dalla fornitura  
Not supplied



D 260

E 175

F 195

## Caratteristiche costruttive - construction features

**Motore asincrono** in classe di isolamento F (155°C), a secco e raffreddato dal liquido circostante;

**Asynchronous dry motor**, insulation class F(155°C), cooled by the surrounding liquid;

**Moteur asynchrone**, classe d'isolation F (155°C), sec et refroidi par le liquide environnant;

**Motor asincrono**, aislamiento clase F (155 ° C), seco y refrigerado por el líquido que rodea.

### Camera condensatore M-MA / Teleruttore TA

Capacitor chamber M-MA / Contactor TA

Chambre condensateur M-MA / Contacteur TA

Camara condensador M-MA / Contactor TA

### Motore monofase con protettore termico

Singlephase motor with built in thermal protector

Moteur monophasé avec protection thermique

Motor monofásico con protector térmico

|                  |                |
|------------------|----------------|
| <b>Viti</b>      | <b>Quality</b> |
| <b>Screws</b>    |                |
| <b>Vis</b>       | <b>A2</b>      |
| <b>Tornillos</b> |                |

|                |            |
|----------------|------------|
| <b>O-RINGS</b> | <b>NBR</b> |
|----------------|------------|

### V-Ring

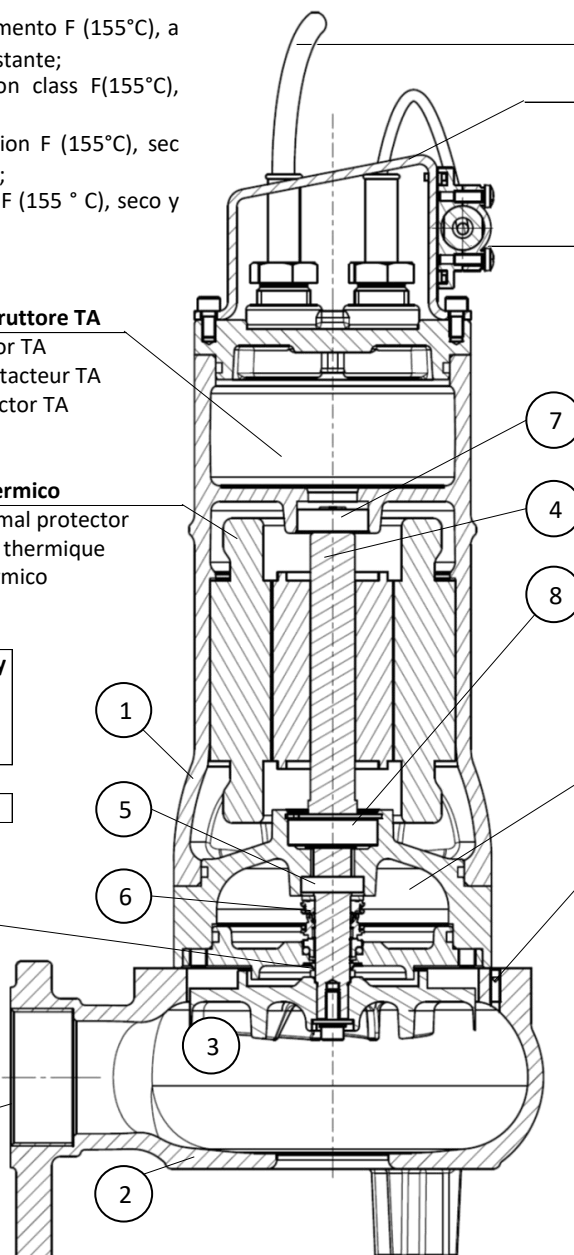
Protezione albero

Shaft protection

Protection de l'arbre

protección del eje

**DNm: G 2" - DN50 PN6**



**10 m - H07RN-F**

### Maniglia per movimentazione pompa

Handel to lift the pump

Poignée pour lever la pompe

Manejar para levantar la bomba

### Fixing kit

Sistema di regolazione galleggiante

Float regulation system

Système de régulation du flotteur

Sistema de regulación del flotador

**Camera olio** per il raffreddamento e la lubrificazione delle tenute meccaniche

**Oil chamber** for the cooling and lubrication of mechanical seals

**Chambre d'huile** pour le refroidissement et la lubrification des garnitures mécaniques

**Cámara de aceite** para el enfriamiento y lubricación de sellos mecánicos

### Foro di sfiato

Vent hole

Trou d'évent

Orificio de ventilación

**Girante arretrata** con ampio passaggio libero

**Backward impeller** with large free passage

**Roue arrière** avec grand passage libre

**Impulsor hacia atrás** con gran paso libre

| NR. | DESCRIPTION       | MATERIAL     |
|-----|-------------------|--------------|
| 1   | Gruppo motore     | Ghisa        |
|     | Motor group       | Cast iron    |
|     | Groupe moteur     | Fer de fonte |
|     | Unidad de motor   | Hierro       |
| 2   | Corpo idraulico   | Ghisa        |
|     | Pump Housing      | Cast iron    |
|     | Corps de la pompe | Fer de fonte |
|     | Cuerpo hidráulico | Hierro       |
| 3   | Girante           | Ghisa        |
|     | Impeller          | Cast iron    |
|     | Roue              | Fer de fonte |
|     | Impulsor          | Hierro       |
| 4   | Albero motore     | Acciaio      |
|     | Shaft             | Steel        |
|     | Arbre moteur      | Acier        |
|     | Eje del motor     | Acero        |

| NR. | DESCRIPTION             | MATERIAL    |
|-----|-------------------------|-------------|
| 5   | Anello tenuta radiale   |             |
|     | Upper sealing ring      | NBR         |
|     | Bague d'étanchéité      |             |
| 6   | Sello radiale superiore |             |
|     | Tenuta mecc.            | SiC / SiC   |
|     | Mech. seal              |             |
| 7   | Haut garniture mécan.   |             |
|     | Sello mecánico          | NBR         |
|     | Cuscinetto superiore    |             |
| 8   | Top bearing             | 6201 - 2RS1 |
|     | Roulement supérieur     |             |
|     | Cojinete superior       |             |
| 8   | Cuscinetto inferiore    |             |
|     | Lower bearing           | 6203 - 2RS1 |
|     | Roulement inférieur     |             |
|     | Cojinete inferior       |             |

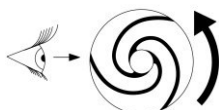
## Caratteristiche costruttive - construction data

|  |   |                                     |   |
|--|---|-------------------------------------|---|
| <b>Costruzione Motore - Motor Frame</b>                              | 110   |                                     |   |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8   |                                     |   |
| <b>Classe di Isolamento - Insulation Class</b>                       | F (155°C)   |                                     |   |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent   |                                     |   |
| <b>Avvolgimento statore - Stator winding</b>                         | 1~PH - Singlephase  | 3~PH - Threephase                   |   |
|  | [V]   | 1~230V                              | Y / Δ<br>3~400/230                        |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> |   | Standard                            | Optional                                  |
| <input type="radio"/> Bimetallico - Bimetal disc                     |   | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> 130°C |
| <input type="radio"/> Solo su richiesta - on request only            | PT100   | <input type="checkbox"/>            | <input type="checkbox"/>                  |
| <input type="radio"/> Solo su richiesta - on request only            | PTC   | <input type="checkbox"/>            | <input type="checkbox"/>                  |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid                                |                                     |   |
| <b>Camera olio - Oil chamber</b>                                     | Si - Yes  |                                     |   |
| <b>Protezione Tenuta - Leakage protection</b>                        | No  |                                     |   |
| <b>Tipo girante - Impeller</b>                                       | Vortex  |                                     |   |
| <b>DN mandata - Discharge</b>  | G 2"- DN 50 PN6   |                                     |   |
| <b>Controflangia filettata - Threaded counterflange</b>              | No  | -                                   |   |
| <b>DN aspirazione / Suction</b>                                      | [mm]  | Ø 50                                |   |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard: Vernice all'acqua - Water paint / 30µm<br>Opaco Nero - Opaque Black |                                     |   |
|  | Optional: Epossidica - Epoxy coating / 80mm<br>RAL 7015 - Grigio - Grey       |                                     |   |

## Limiti di utilizzo - Operating Limits

|   |                       |        |
|---|-----------------------|--------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C]                  | ≤ 40   |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] | ~ 1    |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s]  | ~ 1    |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l]                | < 200  |
| <b>PH liquido pompato - PH value</b>                                |                       | 6 ÷ 12 |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m]                   | 20     |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l]                 | < 1    |

**Corretta rotazione della girante**  
**Rotation of the impeller**





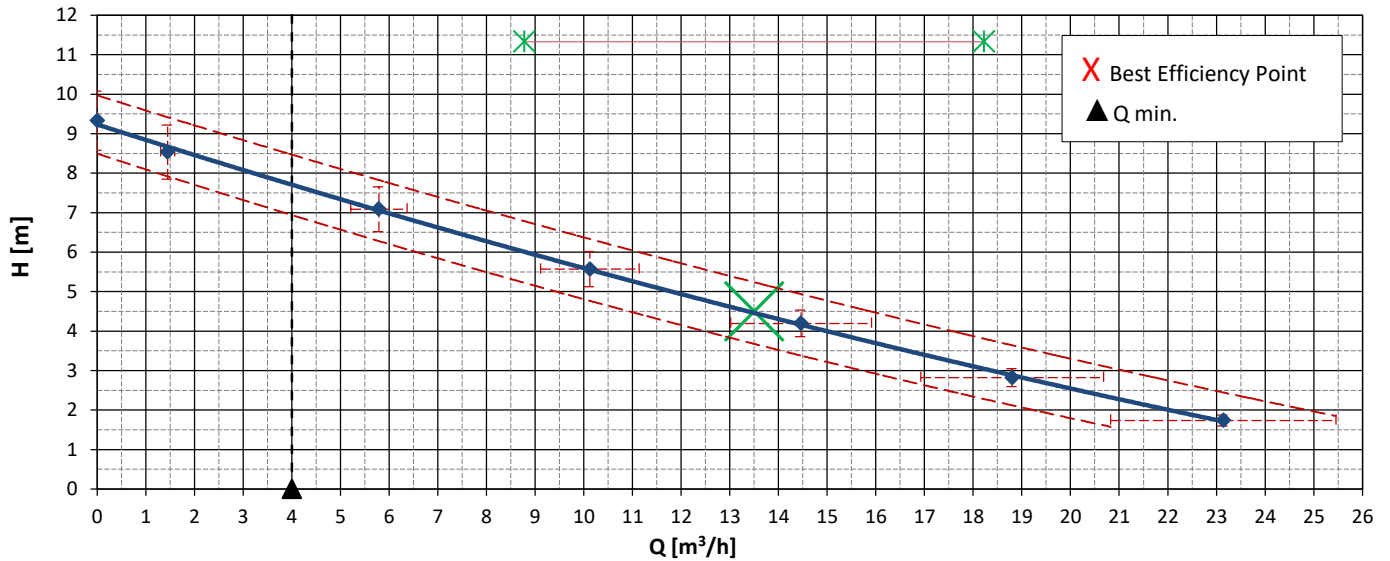
Tipo di pompa - Pump model  
**VSL.50\_06.2.110**

**Poles: 2 Hz: 50**  
**r.p.m. 3000**

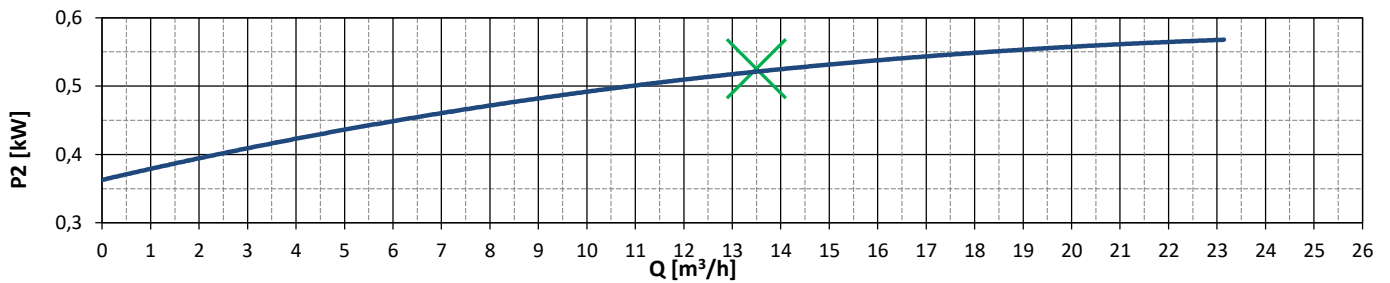
Girante Impeller **VORTEX**  
Mandata Discharge **DN 50 - G 2"**

Serie 2

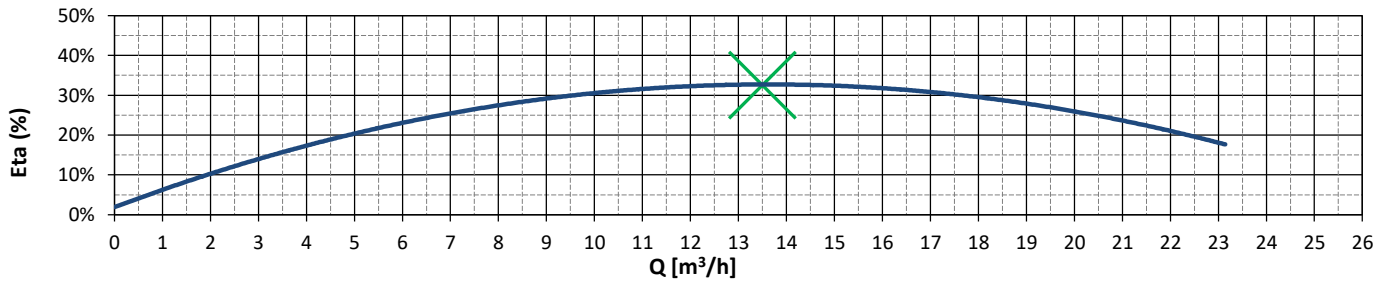
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |     |     |     |     |     |     |     |  |  |  |  |
|-----------------|--------------|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0   | 24  | 96  | 169 | 241 | 313 | 386 |  |  |  |  |
|                 | <b>l/s</b>   | 0   | 0   | 2   | 3   | 4   | 5   | 6   |  |  |  |  |
|                 | <b>m³/h</b>  | 0   | 1   | 6   | 10  | 14  | 19  | 23  |  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 9,3 | 8,5 | 7,1 | 5,6 | 4,2 | 2,8 | 1,7 |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>0,60</b> |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>0,57</b> |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>0,79</b> |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,85</b> |

|  |     | <b>Model M/MA</b> | <b>Model T/TA</b> |
|--|-----|-------------------|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>1~230-50Hz</b> | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>25 μF</b>      | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>4,5</b>        | <b>1,6</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>13,5</b>       | <b>8,0</b>        |

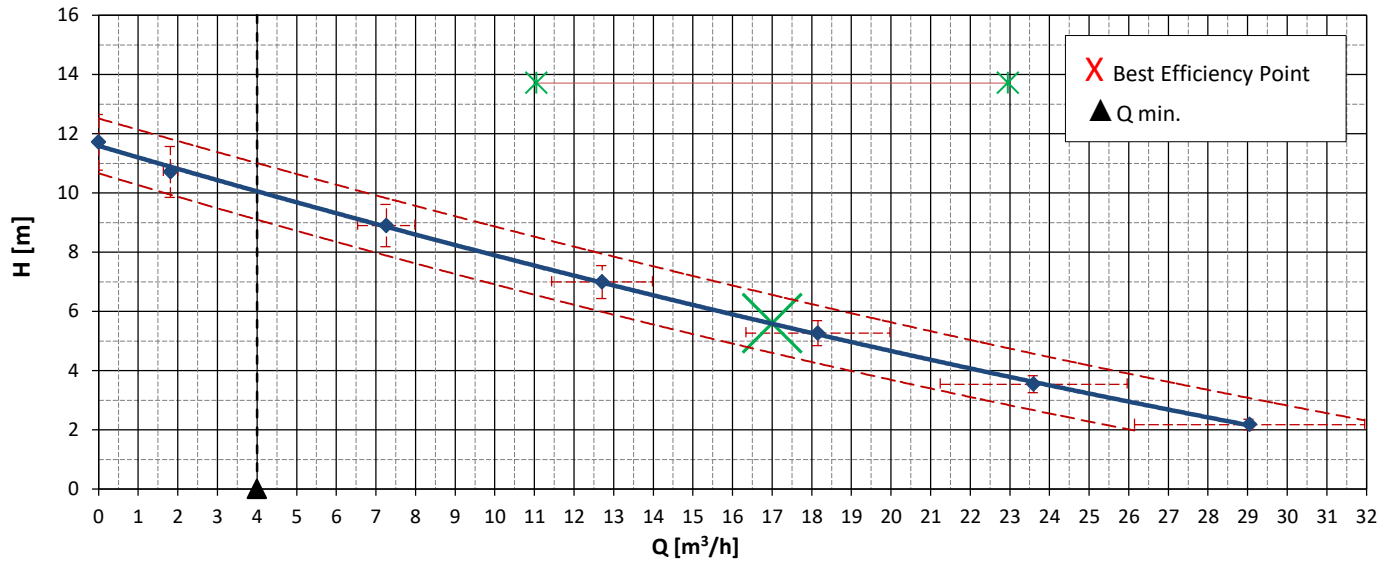
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>∅ 50</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>∅ 108</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>23,5</b>  |

|  |                      |                      |
|--|----------------------|----------------------|
| Galleggiante<br>Float level switch         | <b>Optional (MA)</b> | <b>Optional (TA)</b> |
| Cavo<br>Cable                              | <b>10m 3G1,5</b>     | <b>10m 4G1</b>       |
| Nr. Avviamenti / ora<br>Nr. Start per hour | <b>30</b>            |                      |

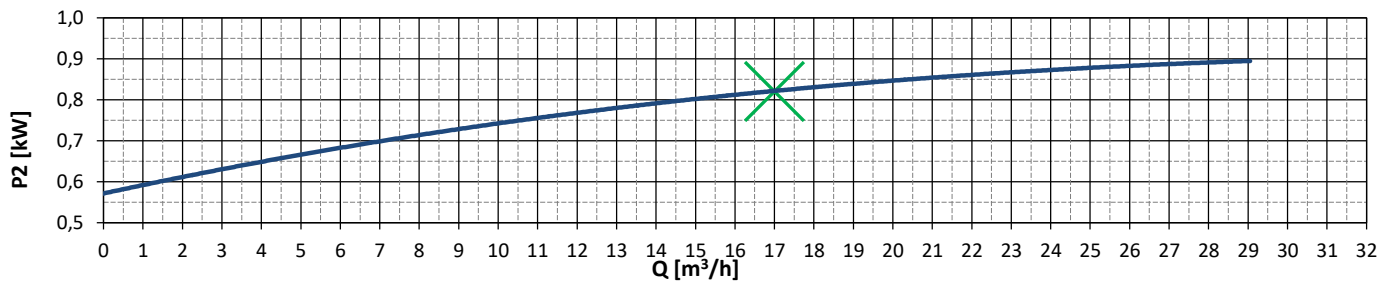
In accordo con:  
In accordance to: **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density  
1Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C

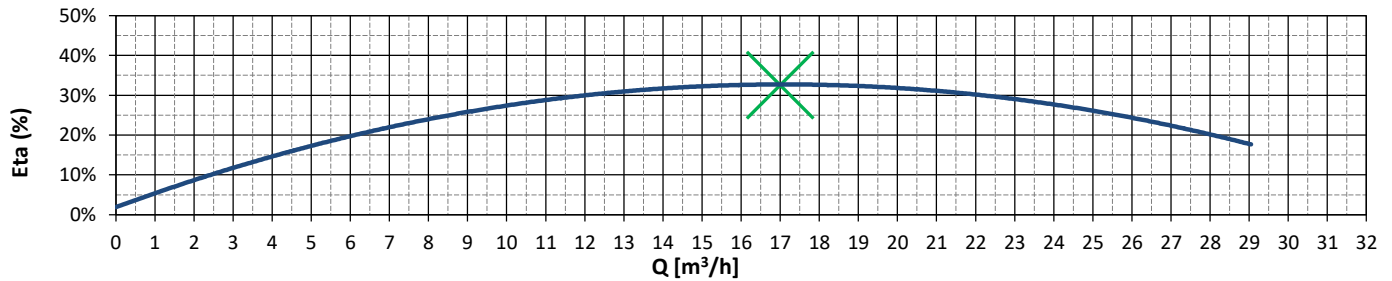
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |      |     |     |     |     |     |  |  |  |  |
|----------|-------|------|------|-----|-----|-----|-----|-----|--|--|--|--|
| FLOW (Q) | l/min | 0    | 30   | 121 | 212 | 303 | 393 | 484 |  |  |  |  |
|          | l/s   | 0    | 1    | 2   | 4   | 5   | 7   | 8   |  |  |  |  |
|          | m³/h  | 0    | 2    | 7   | 13  | 18  | 24  | 29  |  |  |  |  |
| HEAD (H) | m     | 11,7 | 10,7 | 8,9 | 7,0 | 5,3 | 3,5 | 2,2 |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>1,10</b> |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>0,90</b> |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>1,25</b> |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,85</b> |

|  |     | Model M/MA        | Model T/TA        |
|--|-----|-------------------|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>1~230-50Hz</b> | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>25 μF</b>      | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>6,7</b>        | <b>2,2</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>21,0</b>       | <b>11,5</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 50</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 121</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>24,5</b>  |

|  |                      |                      |
|--|----------------------|----------------------|
| Galleggiante<br>Float level switch         | <b>Optional (MA)</b> | <b>Optional (TA)</b> |
| Cavo<br>Cable                              | <b>10m 3G1,5</b>     | <b>10m 4G1</b>       |
| Nr. Avviamenti / ora<br>Nr. Start per hour | <b>30</b>            |                      |

In accordo con:  
In accordance to: **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density  
**1Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperature/temperature 20°C**



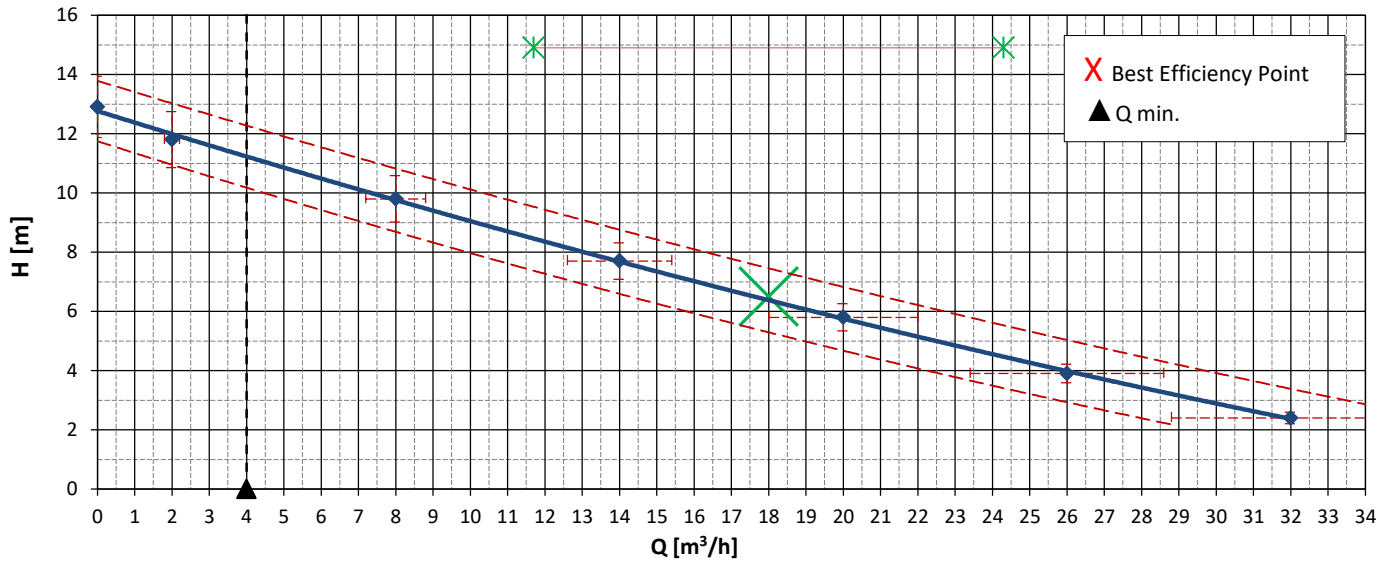
Tipo di pompa - Pump model  
**VSL.50\_11.2.110**

**Poles: 2 Hz: 50**  
**r.p.m. 3000**

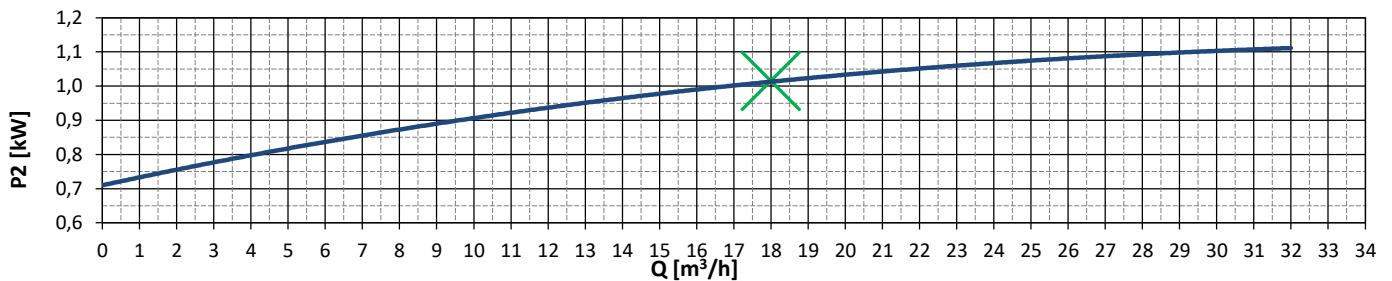
Girante Impeller **VORTEX**  
Mandata Discharge **DN 50 - G 2"**

Serie 2

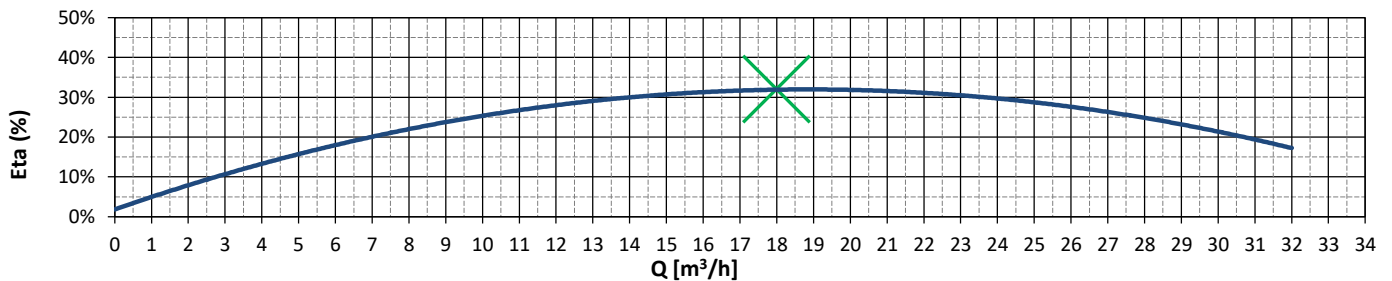
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |      |     |     |     |     |     |  |  |  |  |  |
|----------|-------|------|------|-----|-----|-----|-----|-----|--|--|--|--|--|
| FLOW (Q) | l/min | 0    | 33   | 133 | 233 | 333 | 433 | 533 |  |  |  |  |  |
|          | l/s   | 0    | 1    | 2   | 4   | 6   | 7   | 9   |  |  |  |  |  |
|          | m³/h  | 0    | 2    | 8   | 14  | 20  | 26  | 32  |  |  |  |  |  |
| HEAD (H) | m     | 12,9 | 11,8 | 9,8 | 7,7 | 5,8 | 3,9 | 2,4 |  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>1,10</b> |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>1,11</b> |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>1,55</b> |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,87</b> |

|  |     | Model M/MA        | Model T/TA        |
|--|-----|-------------------|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>1~230-50Hz</b> | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>25 μF</b>      | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>7,7</b>        | <b>2,8</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>21,6</b>       | <b>14,0</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 50</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 127</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>25,0</b>  |

|  |                      |                      |
|--|----------------------|----------------------|
| Galleggiante<br>Float level switch         | <b>Optional (MA)</b> | <b>Optional (TA)</b> |
| Cavo<br>Cable                              | <b>10m 3G1,5</b>     | <b>10m 4G1</b>       |
| Nr. Avviamenti / ora<br>Nr. Start per hour | <b>30</b>            |                      |

In accordo con:  
In accordance to: **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density  
**1Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C**

## Dimensioni d'ingombro - overall dimensions

**S** Installazione mobile - Installation mobile - Installation mobile - Instalación móvil

Dimensione imballo  
Packaging dimensions

Misure - Measures [mm]

| A   | B   | C   |
|-----|-----|-----|
| 570 | 250 | 215 |







**FC** Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento

8FC00002      KG: 7,5

|   |  |
|---|--|
| 1 | Supporto tubi guida da 3/4" / 3/4" guide rails bracket |
| 2 | Piede orizzontale 2" / Horizontal foot - 2"out         |
| 3 | Slitta completa / Sliding bracket complete             |
| 4 | Esclusi dalla fornitura / Not supplied                 |

|   |       |
|---|-------|
| D | 260mm |
| E | 175mm |
| F | 195mm |

## ACCESSORI - ACCESSORIES - ACCESORIES - ACCESORIOS

| Descrizione - Description - Description - Descripción |   | Codice<br>Code    |
|---|---|-------------------|
| FC  |  <ul style="list-style-type: none"> <li>- Dispositivo di accoppiamento DN50 - uscita G 2"</li> <li>- DN50 Coupling device - outlet 2"</li> <li>- Dispositif de couplage DN50 - sortie G 2"</li> <li>- Dispositivo de acoplamiento DN50- salida G 2"</li> </ul>                                 | 8FC000002         |
|   |  <ul style="list-style-type: none"> <li>- Catena ferro zincato - galvanized Iron</li> <li>- Chain fer galvanisé - hierro galvanizado</li> </ul>  | 2SC000019         |
|   | <ul style="list-style-type: none"> <li>- Catena Acciaio - Stainless steel</li> <li>- Cadena acier inox - acero inox</li> </ul>  | 2SC000032         |
| TBV   |  <ul style="list-style-type: none"> <li>- Valvola di ritegno a palla filettata</li> <li>- Threaded valve</li> <li>- Vanne fileté</li> <li>- Válvula roscada</li> </ul>   | G 2" 4BV000003    |
| HF  |  <ul style="list-style-type: none"> <li>- Regolatore di livello per acque reflue</li> <li>- Level switch for sewage</li> <li>- Interrupteur de niveau pour eaux usées</li> <li>- Interruptor de nivel para aguas residuales</li> </ul>   | [10 mt] 3CS000007 |
| SHELL   |  <ul style="list-style-type: none"> <li>- Contrappeso SHELL per galleggiante</li> <li>- Counterweight SHELL for level switch</li> <li>- Cotrepoids SHELL pour interrupteur de niveau</li> <li>- Contrapeso para interruptor de nivel</li> </ul>  | 3CS000021         |
| TUTOR   |  <ul style="list-style-type: none"> <li>- Sistema di guida del galleggiante per spazi ristretti</li> <li>- Float guidance system for confined spaces</li> <li>- Système de guidage à flotteur pour espaces confinés</li> <li>- Sistema de guiado flotante para espacios reducidos.</li> </ul> | 3CS000020         |

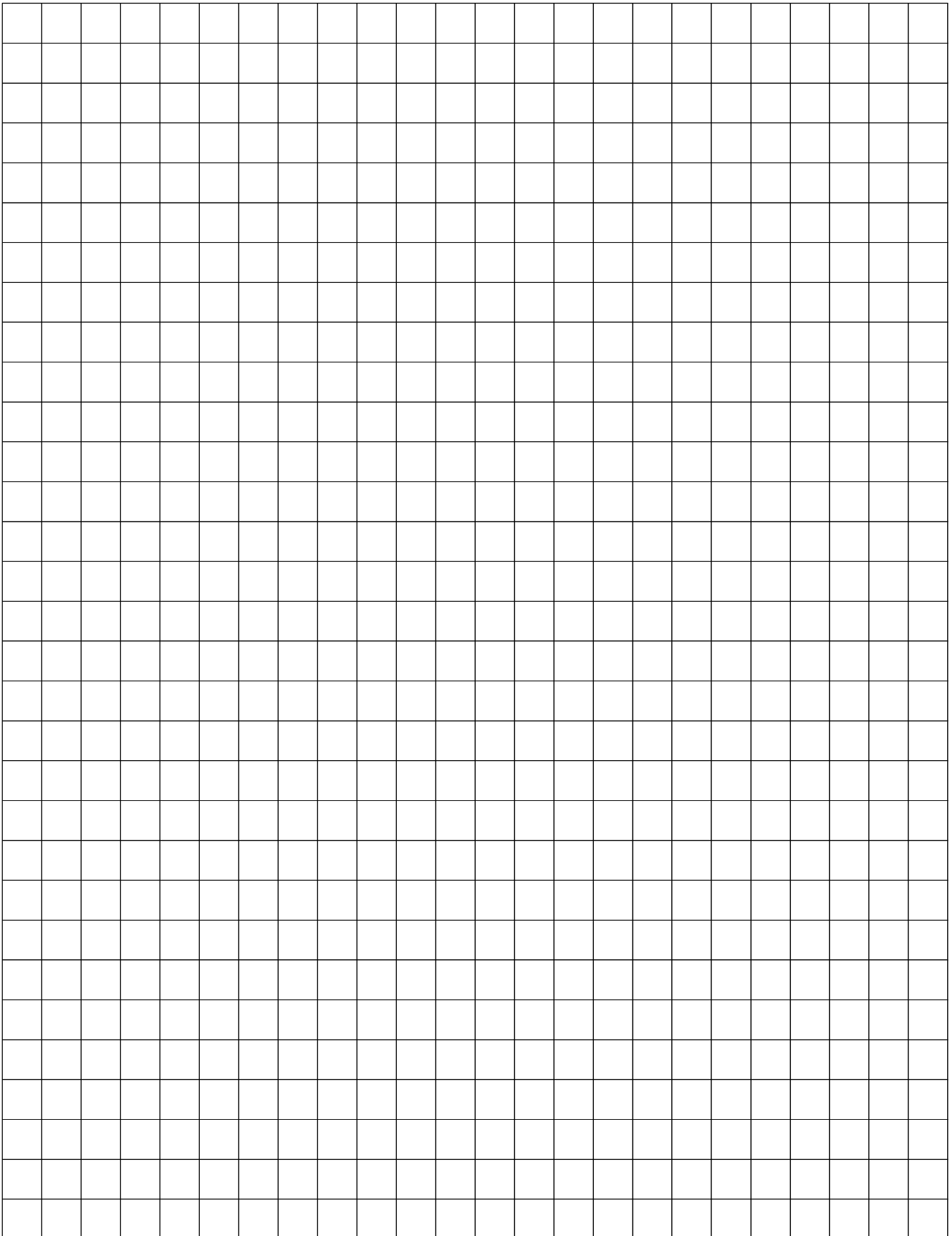
## SELEZIONE QUADRO DI CONTROLLO - CONTROL PANEL SELECTION

|      | Pole | Pump                  | Alim.<br>[V] | P1<br>[KW] | In<br>[A] | Start.<br>Avv. | - ECH -<br>ELECTROMECHANICAL |                        |                       |                       |                        |                       | - ECL -<br>ELECTRONIC  |                        |                        |                        |  |   |   |
|------|------|-----------------------|--------------|------------|-----------|----------------|------------------------------|------------------------|-----------------------|-----------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|--|---|---|
|      |      |                       |              |            |           |                | 1 Pump                       |                        |                       | 2 Pumps               |                        |                       | 1 Pump                 |                        |                        | 2 Pumps                |  |   |   |
|      |      |                       |              |            |           |                | ECH1.M-7<br>5EC000006        | ECH1.M-14<br>5EC000008 | ECH1.T-7<br>5EC000005 | ECH2.M-7<br>5EC000030 | ECH2.M-14<br>5EC000032 | ECH2.T-7<br>5EC000029 | ECL1.M-16<br>5EC000081 | ECL1.T-15<br>5EC000083 | ECL2.M-16<br>5EC000082 | ECL2.T-15<br>5EC000084 |  |   |   |
| 110L | 2    | VSL.50_04.2.M/MA.110L | 1~230        | 0,4        | 3,5       | 16µF           | •                            |                        |                       | •                     |                        |                       | •                      |                        |                        |                        |  |   |   |
|      |      | VSL.50_04.2.T.110L    | 3~400        | 0,4        | 1,2       | DOL            |                              |                        | •                     |                       |                        | •                     |                        |                        | •                      |                        |  | • |   |
| 110  | 2    | VSL.50_06.2.M/MA.110  | 1~230        | 0,6        | 4,5       | 20µF           | •                            |                        |                       | •                     |                        |                       | •                      |                        |                        |                        |  |   |   |
|      |      | VSL.50_06.2.T/TA.110  | 3~400        | 0,6        | 1,6       | DOL            |                              |                        | •                     |                       |                        | •                     |                        |                        | •                      |                        |  | • |   |
|      |      | VSL.50_09.2.M/MA.110  | 1~230        | 0,9        | 6,7       | 25µF           |                              | •                      |                       |                       | •                      |                       |                        | •                      |                        |                        |  |   |   |
|      |      | VSL.50_09.2.T/TA.110  | 3~400        | 0,9        | 2,2       | DOL            |                              |                        | •                     |                       |                        | •                     |                        |                        | •                      |                        |  |   | • |
|      |      | VSL.50_11.2.M/MA.110  | 1~230        | 1,1        | 7,7       | 25µF           |                              | •                      |                       |                       | •                      |                       |                        |                        | •                      |                        |  |   |   |
|      |      | VSL.50_11.2.T/TA.110  | 3~400        | 1,1        | 2,8       | DOL            |                              |                        | •                     |                       |                        | •                     |                        |                        | •                      |                        |  |   |   |



# VSL.50 - VORTEX -

**DN 50 - G 2"**



**Poli -poles Modelli - models**

|          |                                |
|----------|--------------------------------|
| <b>4</b> | <b>VS.50_11.4.125</b>          |
| <b>2</b> | <b>VS.50_08/11/18/22.2.125</b> |

**IT**

Elettropompa sommergibile di robusta costruzione fabbricata completamente in ghisa, con camera olio interposta tra gruppo motore e gruppo pompa e doppia tenuta meccanica: lato pompa posizionata sopra alla girante a diretto contatto del liquido pompato; tenuta meccanica lato motore interna alla camera olio.

APPLICAZIONE: l'elettropompa deve funzionare completamente immersa per garantire il raffreddamento da parte del liquido circostante. Sono idonee al pompaggio di acque piovane, o di falda con basso contenuto di solidi abrasivi (< 1 g/l), acque derivate da reflui civili e industriali.

**FR**

Pompe submersible de construction solide entièrement en fonte, avec chambre d'huile interposée entre le bloc moteur et le groupe pompe et double garniture mécanique: le côté pompe placé au-dessus de la roue en contact direct avec le liquide pompé; garniture mécanique côté moteur à l'intérieur de la chambre à huile.

APPLICATION: la pompe doit être complètement immergée pour assurer le refroidissement du liquide pompé. Elles sont adaptées pour le pompage de l'eau de pluie ou des eaux souterraines avec de faibles particules abrasives (<1g/l), de l'eau provenant des eaux usées municipales et industrielles.

**EN**

Robust construction submersible pump completely made in cast iron, with oil chamber interposed between motor unit and pump unit with double mechanical seal: the pump side one positioned above the impeller in direct contact with the pumped liquid; the motor side one, inside the oil chamber.

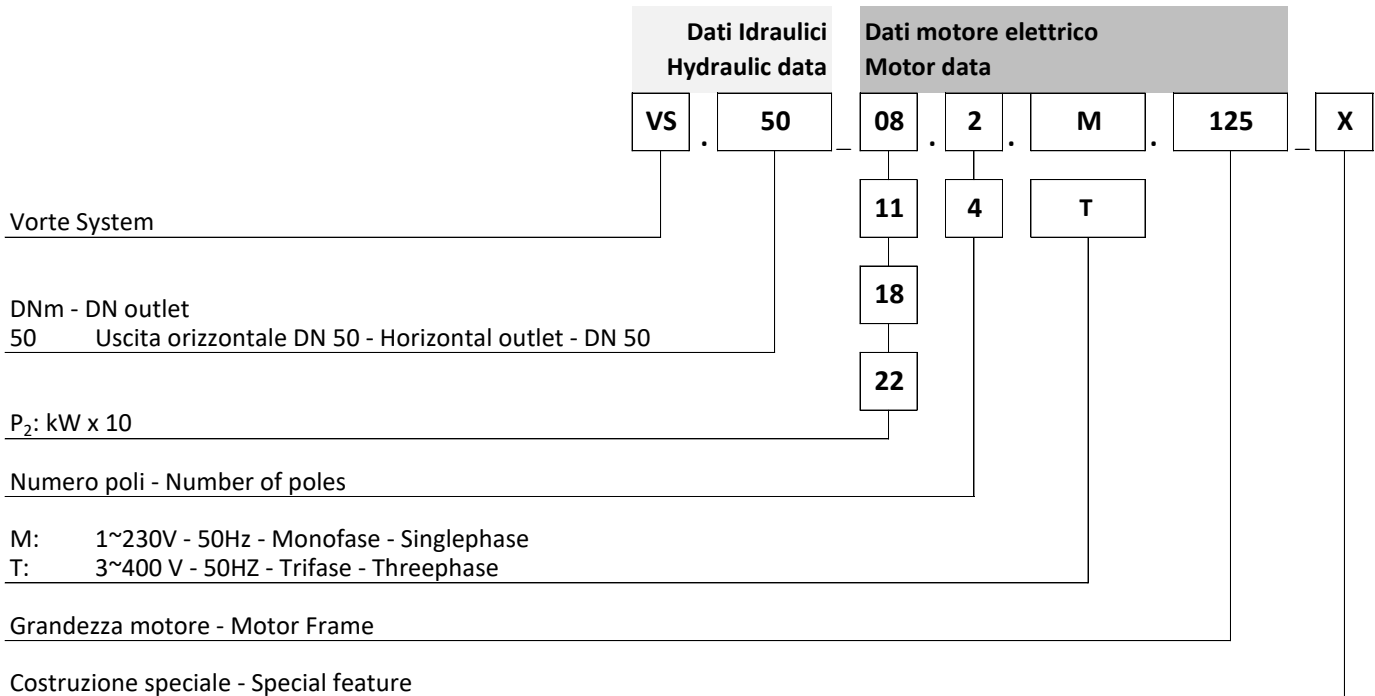
APPLICATION: the pump must be completely submerged to ensure the cooling by the pumped liquid. They are suitable to pump rain water or ground water with low quantity of abrasive solids (<1g / l), civil or industrial waste waters.

**ES**

Bomba sumergible de construcción sólida fabricada completamente de hierro fundido, con cámara de aceite interpuesta entre la unidad del motor y la unidad de la bomba y doble cierre mecánico: lado de la bomba colocado sobre el impulsor en contacto directo con el líquido bombeado; cierre mecánico en el lado del motor dentro de la cámara de aceite.

APLICACION: la bomba debe estar completamente sumergido para asegurar el enfriamiento del líquido bombeado. Son adecuadas para el bombeo de agua de lluvia o aguas subterráneas con bajo contenido de sólidos abrasivos (<1 g / l), el agua derivada de las aguas residuales municipales y industriales.



**IDENTIFICAZIONE - IDENTIFICATION**

**LISTA MODELLI - RANGE OF PRODUCTS**

| Grandezza Motore<br>Motor Frame | Poles | P <sub>2</sub><br>[kW] | Alimentazione<br>Power supply | Modelli<br>Models | Avviamento<br>Starting            | Cavo alimentazione / segnali<br>Power / signals cable<br>[m] Type | Camera olio<br>Oil Chamber |
|---------------------------------|-------|------------------------|-------------------------------|-------------------|-----------------------------------|---|----------------------------|
| <b>125</b>                      | 4     | 1,1                    | 3ph                           | VS.50_11.4.T.125  | D.O.L.                            | 10 H07RN-F 4G1,5 / H07RN8-F 7G1,5                                 | SI<br>YES                  |
|                                 | 2     | 0,8                    | 1ph                           | VS.50_08.M.125    | μF: 30+30                         | 10 H07RN-F 4G1,5 / H07RN8-F 7G1,5                                 |                            |
|                                 |       |                        | 3ph                           | VS.50_08.2.T.125  | D.O.L.                            | 10 H07RN-F 4G1,5 / H07RN8-F 7G1,5                                 |                            |
|                                 | 1,1   | 1ph                    | VS.50_11.2.M.125              | μF: 30+30         | 10 H07RN-F 4G1,5 / H07RN8-F 7G1,5 |   |                            |
|                                 |       | 3ph                    | VS.50_11.2.T.125              | D.O.L.            | 10 H07RN-F 4G1,5 / H07RN8-F 7G1,5 |   |                            |
|                                 | 1,8   | 3ph                    | VS.50_18.2.T.125              | D.O.L.            | 10 H07RN-F 4G1,5 / H07RN8-F 7G1,5 |   |                            |
|                                 | 2,2   | 3ph                    | VS.50.22.2.T.125              | D.O.L.            | 10 H07RN-F 4G1,5 / H07RN8-F 7G1,5 |   |                            |

## Caratteristiche costruttive - construction features

Anello per movimentazione pompa  
Shackel to handle the pump  
Manille pour lever la pompe  
Grillete para levantar la bomba

**Pastiglia termica**  
Built in Thermal protector  
Protecteur thermique intégré  
Protector térmico incorporado

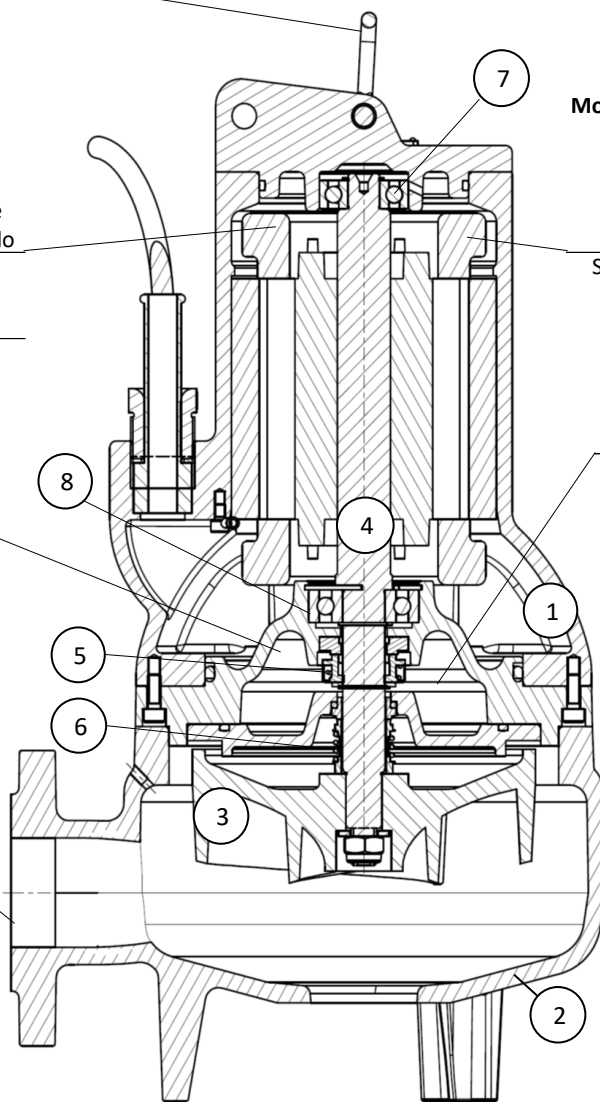
**10 m - H07RN-F**

**OPTIONAL**  
Sonda Olio  
Oil Probe  
Sonde d'huile  
Sonda de aceite

|   |                                 |
|---|---------------------------------|
| <b>Viti</b><br>Screws<br>Des vis<br>Empulgueras | <b>Quality</b><br><br><b>A2</b> |
|---|---------------------------------|

|                |            |
|----------------|------------|
| <b>O-RINGS</b> | <b>NBR</b> |
|----------------|------------|

**DNm: DN50 PN6**



**Motore asincrono** in classe di isolamento F (155°C),  
a secco e raffreddato dal liquido circostante;

**Asynchronous dry motor**, insulation class F(155°C),  
cooled by the surrounding liquid;

**Moteur asynchrone**, classe d'isolation F (155°C),  
sec et refroidi par le liquide environnant;

**Motor asíncrono**, aislamiento clase F (155 ° C), seco  
y refrigerado por el líquido que rodea.

**Motore monofase con protettore termico**  
Singlephase motor with built in thermal protector  
Moteur monophasé avec protection thermique  
Motor monofásico con protector térmico

**Camera olio** per il raffreddamento e la  
lubrificazione delle tenute meccaniche;  
**Oil chamber** for cooling and lubrication of  
mechanical seals;  
**Chambre d'huile** pour le refroidissement et la  
lubrification des garnitures mécaniques;  
**Cámara de aceite** para la refrigeración y la  
lubricación de los sellos mecánicos.

**Girante arretrata** con ampio passaggio  
libero  
**Backward impeller** with large free  
passage

**Roue arrière** avec grand passage libre

**Impulsor hacia atrás** con gran paso  
libre.

| NR. | DESCRIPTION       | MATERIAL     |
|-----|-------------------|--------------|
| 1   | Gruppo motore     | Ghisa        |
|     | Motor group       | Cast iron    |
|     | Groupe moteur     | Fer de fonte |
|     | Unidad de motor   | Hierro       |
| 2   | Corpo idraulico   | Ghisa        |
|     | Pump Housing      | Cast iron    |
|     | Corps de la pompe | Fer de fonte |
|     | Cuerpo hidráulico | Hierro       |
| 3   | Girante           | Ghisa        |
|     | Impeller          | Cast iron    |
|     | Roue              | Fer de fonte |
|     | Impulsor          | Hierro       |
| 4   | Albero motore     | Acciaio      |
|     | Shaft             | Steel        |
|     | Arbre moteur      | Acier        |
|     | Eje del motor     | Acero        |

| NR. | DESCRIPTION             | MATERIAL                   |
|-----|-------------------------|----------------------------|
| 5   | Tenuta mecc. superiore  | Carbon graphite / Al-Oxide |
|     | Upper mech. seal        |                            |
| 6   | Haut garniture mécan.   | NBR                        |
|     | Sello mecánico superior |                            |
| 7   | Tenuta mecc. Inferiore  | SiC / SiC                  |
|     | Lower mech. seal        |                            |
| 8   | Haut garniture mécan.   | NBR                        |
|     | Sello mecánico inferior |                            |
| 7   | Cuscinetto superiore    | 6302 2RS1                  |
|     | Top bearing             |                            |
| 8   | Roulement supérieur     | 6304 2RS1                  |
|     | Cojinete superior       |                            |
| 7   | Cuscinetto inferiore    | 6304 2RS1                  |
|     | Lower bearing           |                            |
| 8   | Roulement inférieur     | 6304 2RS1                  |
|     | Cojinete inferior       |                            |

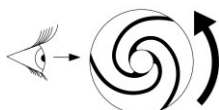
## Caratteristiche costruttive - construction data

|  |  |   |   |
|--|--|---|---|
| <b>Costruzione Motore - Motor Frame</b>                              | 125  |   |   |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |   |   |
| <b>Classe di Isolamento - Insulation Class</b>                       | F (155°C)                                      |   |   |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent                |   |   |
| <b>Avvolgimento statore - Stator winding</b>                         | 1~PH - Singlephase                             | 3~PH - Threephase   |   |
|  | [V]  | 1~230V  | Y / Δ<br>3~400/230                        |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> |  | Standard  | Optional                                  |
| <input type="radio"/> Bimetallico - Bimetal disc                     |  | <input checked="" type="checkbox"/>                                 | <input checked="" type="checkbox"/> 130°C |
| <input type="radio"/> Solo su richiesta - on request only            | PT100  | <input type="checkbox"/>  | <input type="checkbox"/>                  |
| <input type="radio"/> Solo su richiesta - on request only            | PTC  | <input type="checkbox"/>  | <input type="checkbox"/>                  |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid |   |   |
| <b>Camera olio - Oil chamber</b>                                     | Si - Yes                                       |   |   |
| <b>Protezione Tenuta - Leakage protection</b>                        | Optional                                       |   |   |
| <b>Tipo girante - Impeller</b>                                       | Vortex   |   |   |
| <b>DN mandata - Discharge</b>  | DN 50 PN6                                      |   |   |
| <b>Controflangia filettata - Threaded counterflange</b>              | Si - Yes                                       | G 2"  |   |
| <b>DN aspirazione / Suction</b>                                      | [mm]   | Ø 50  |   |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard                                       | Vernice all'acqua - Water paint / 30µm<br>Opaco Nero - Opaque Black |   |
|  | Optional                                       | Epossidica - Epoxy coating / 80µm<br>RAL 7015 - Grigio - Grey       |   |

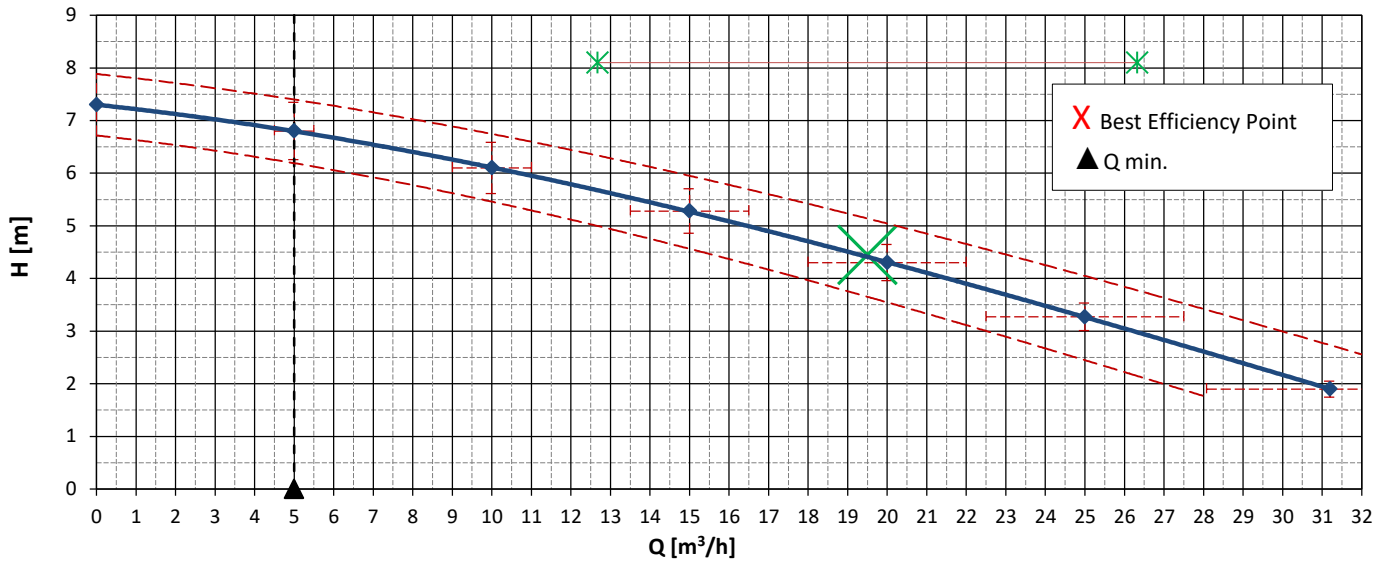
## Limiti di utilizzo - Operating Limits

|   |                       |        |
|---|-----------------------|--------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C]                  | < 40   |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] | ~ 1    |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s]  | ~ 1    |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l]                | < 200  |
| <b>PH liquido pompato - PH value</b>                                |                       | 6 ÷ 12 |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m]                   | 20     |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l]                 | < 0,1  |

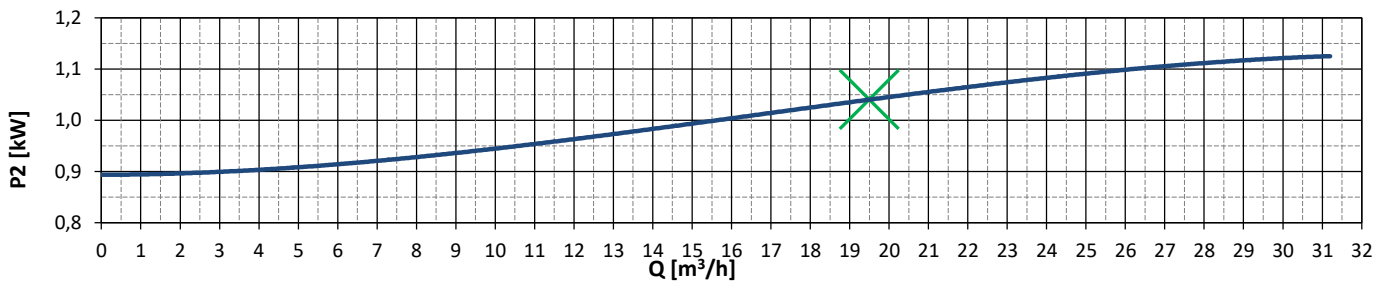
**Corretta rotazione della girante**  
**Rotation of the impeller**



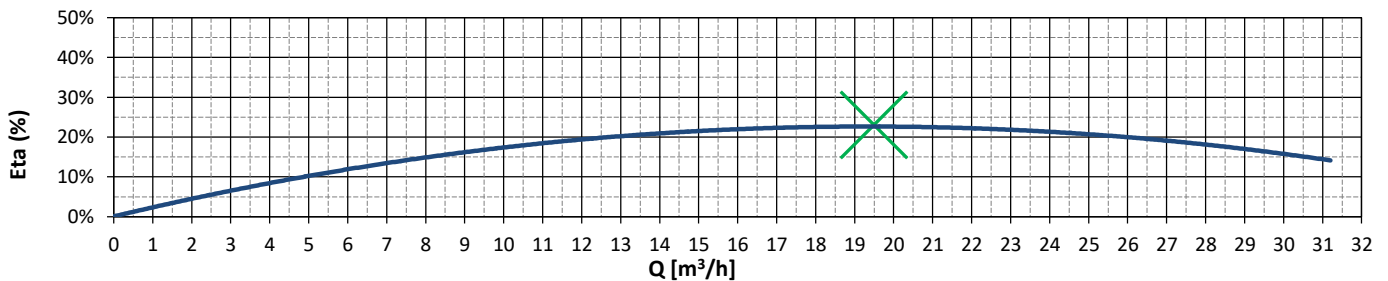
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |     |     |     |     |     |     |     |  |  |  |  |
|----------|-------|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| FLOW (Q) | l/min | 0   | 83  | 167 | 250 | 333 | 417 | 520 |  |  |  |  |
|          | l/s   | 0   | 1   | 3   | 4   | 6   | 7   | 9   |  |  |  |  |
|          | m³/h  | 0   | 5   | 10  | 15  | 20  | 25  | 31  |  |  |  |  |
| HEAD (H) | m     | 7,3 | 6,8 | 6,1 | 5,3 | 4,3 | 3,3 | 1,9 |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>1,2</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>1,1</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>1,7</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,71</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>3,8</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>15,6</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 45</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 181</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>37,7</b>  |

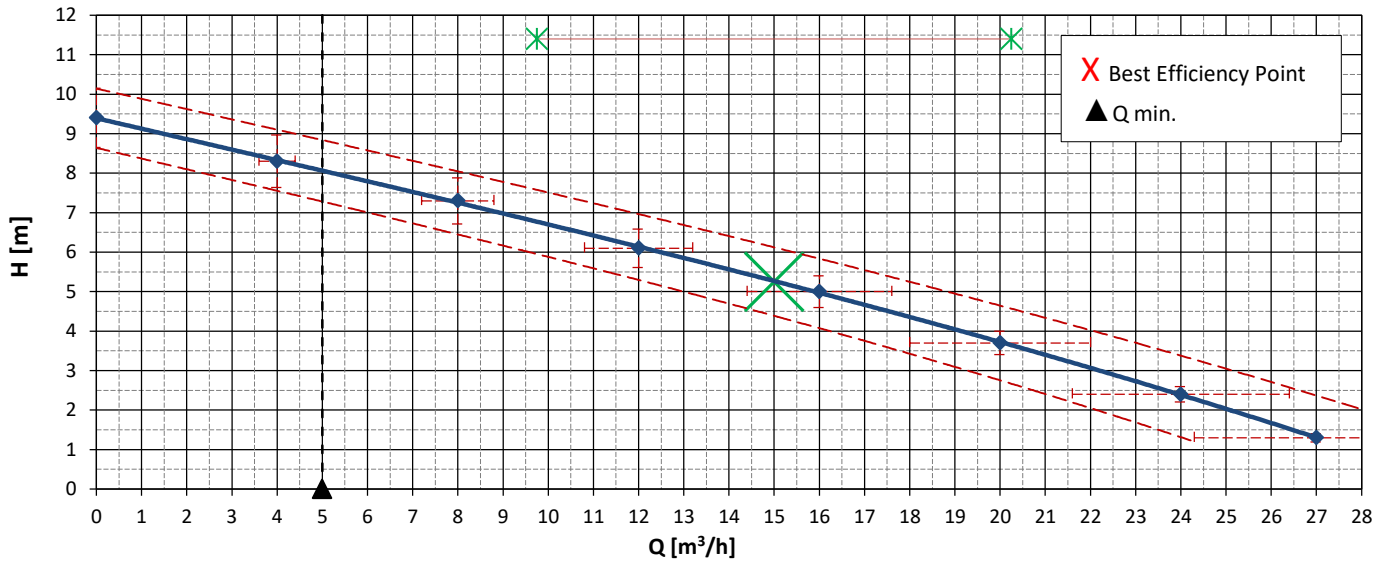
|  |  |                  |
|--|--|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>10m 4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>30</b>        |

In accordo con  
In accordance to

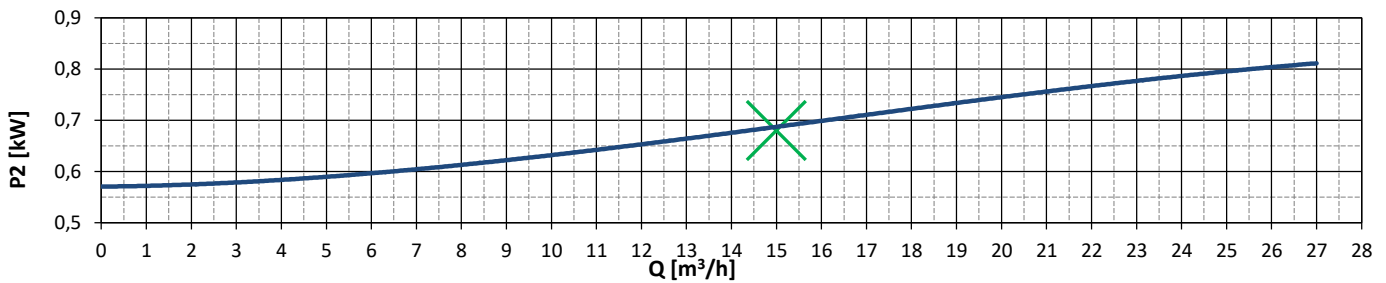
ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C

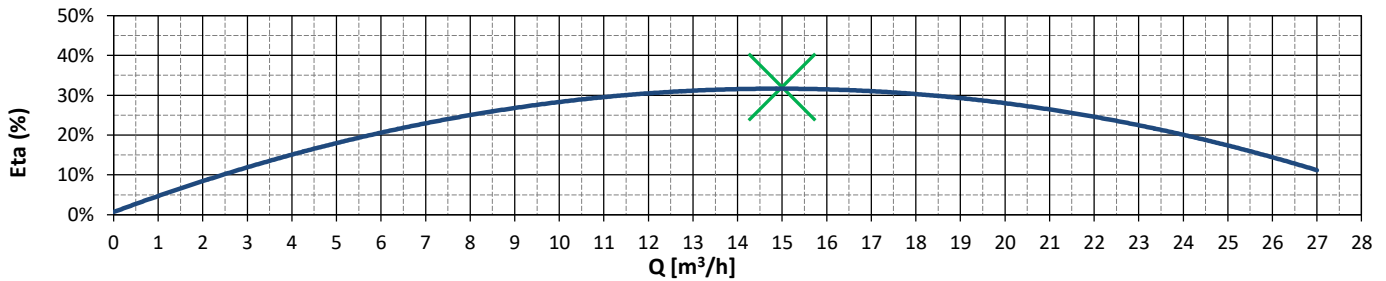
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |       |     |     |     |     |     |     |     |     |  |  |  |  |
|-----------------|-------|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| <b>FLOW (Q)</b> | l/min | 0   | 67  | 133 | 200 | 267 | 333 | 400 | 450 |  |  |  |  |
|                 | l/s   | 0   | 1   | 2   | 3   | 4   | 6   | 7   | 8   |  |  |  |  |
|                 | m³/h  | 0   | 4   | 8   | 12  | 16  | 20  | 24  | 27  |  |  |  |  |
| <b>HEAD (H)</b> | m     | 9,4 | 8,3 | 7,3 | 6,1 | 5,0 | 3,7 | 2,4 | 1,3 |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>1,1</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>0,8</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>1,14</b> |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,81</b> |

|  |     | Model M           | Model T           |
|--|-----|-------------------|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>1~230-50Hz</b> | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>30μF+30μF</b>  | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>7,0</b>        | <b>2,2</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>20,3</b>       | <b>14,0</b>       |

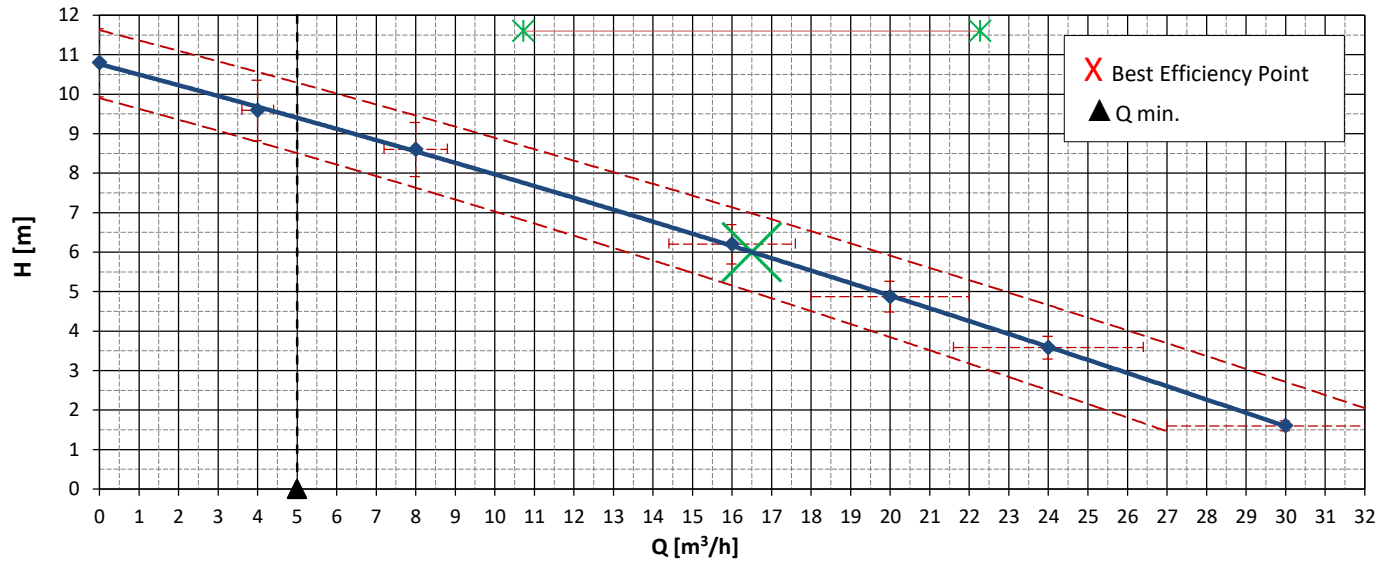
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 48</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 108</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>30,0</b>  |

|  |  |                  |                  |
|--|--|------------------|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>10m 4G1,5</b> | <b>10m 4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>30</b>        |                  |

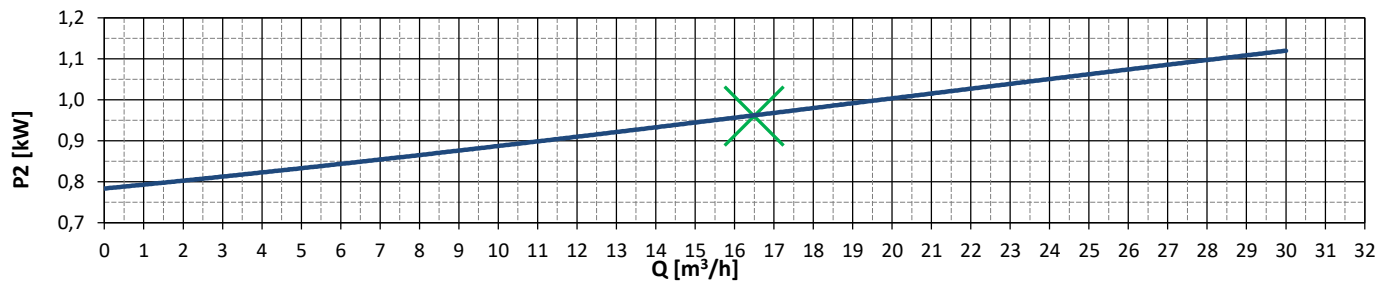
In accordo con / In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C

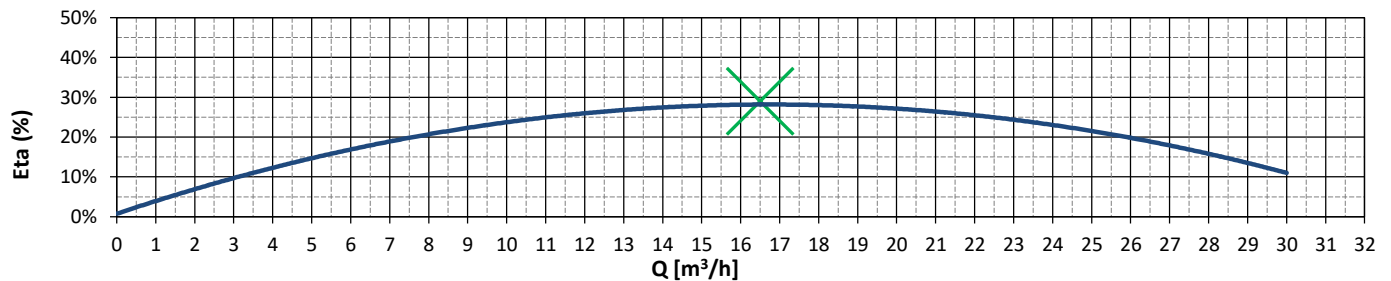
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |     |     |     |     |     |     |  |  |  |  |
|----------|-------|------|-----|-----|-----|-----|-----|-----|--|--|--|--|
| FLOW (Q) | l/min | 0    | 67  | 133 | 267 | 333 | 400 | 500 |  |  |  |  |
|          | l/s   | 0    | 1   | 2   | 4   | 6   | 7   | 8   |  |  |  |  |
|          | m³/h  | 0    | 4   | 8   | 16  | 20  | 24  | 30  |  |  |  |  |
| HEAD (H) | m     | 10,8 | 9,6 | 8,6 | 6,2 | 4,9 | 3,6 | 1,6 |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>1,1</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>1,1</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>1,5</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,85</b> |

|  |     | Model M           | Model T           |
|--|-----|-------------------|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>1~230-50Hz</b> | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>30μF+30μF</b>  | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>7,9</b>        | <b>2,7</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>20,3</b>       | <b>14,0</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 48</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 114</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>35,0</b>  |

|  |  |                  |                  |
|--|--|------------------|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>10m 4G1,5</b> | <b>10m 4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>30</b>        |                  |

In accordo con  
In accordance to

ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C





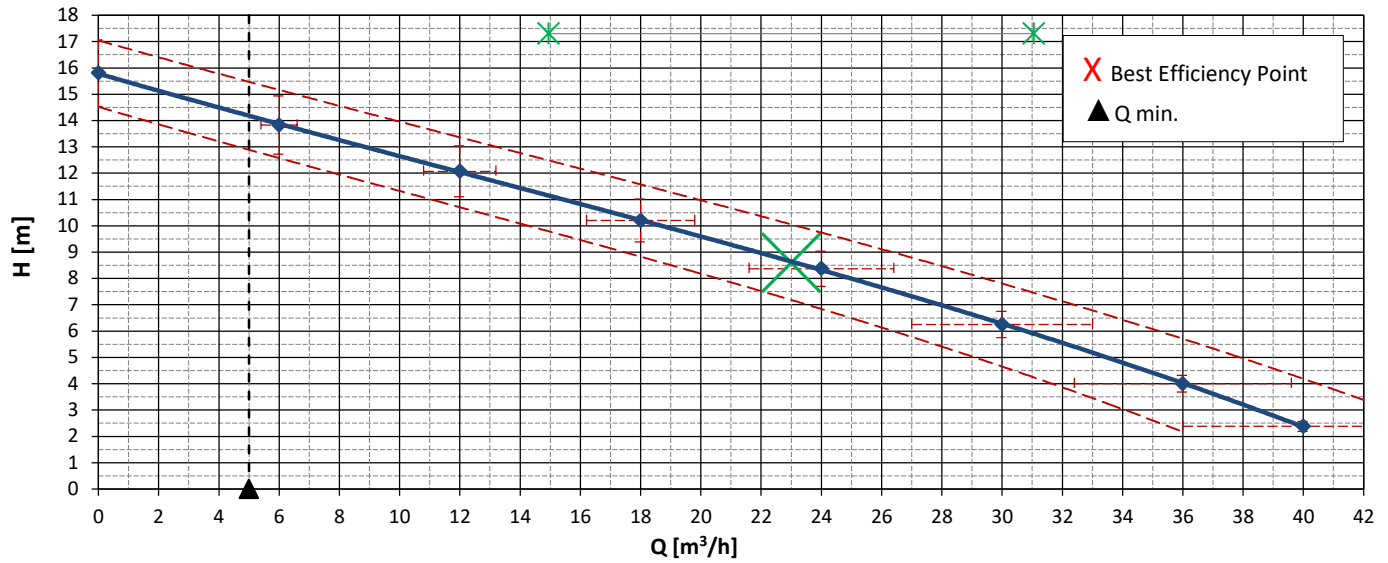
Tipo di pompa - Pump model  
**VS.50\_18.2.125**

**Poles: 2 Hz: 50**  
**r.p.m. 3000**

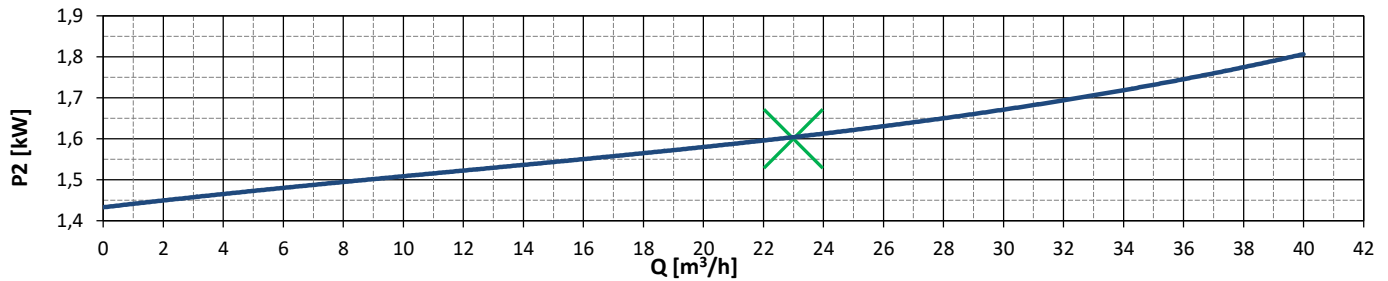
Girante Impeller **VORTEX**  
Mandata Discharge **DN 50 - G 2"**

Serie 1

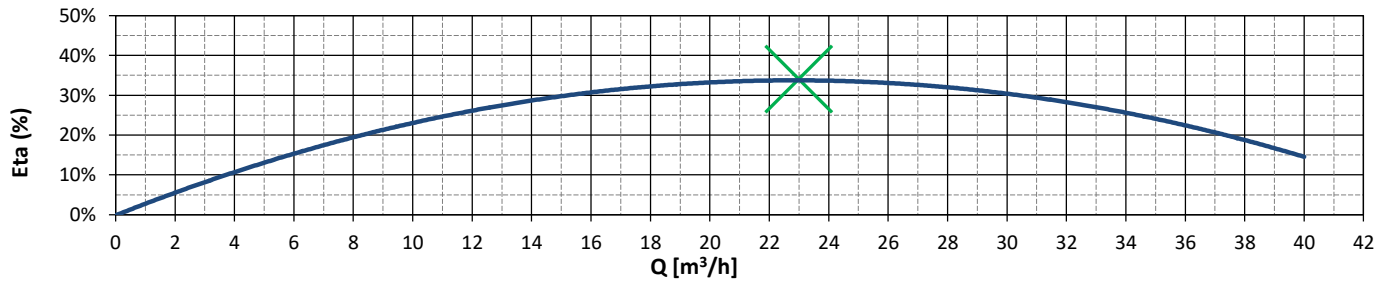
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |       |      |      |      |      |     |     |     |     |  |  |  |  |
|-----------------|-------|------|------|------|------|-----|-----|-----|-----|--|--|--|--|
| <b>FLOW (Q)</b> | l/min | 0    | 100  | 200  | 300  | 400 | 500 | 600 | 667 |  |  |  |  |
|                 | l/s   | 0    | 2    | 3    | 5    | 7   | 8   | 10  | 11  |  |  |  |  |
|                 | m³/h  | 0    | 6    | 12   | 18   | 24  | 30  | 36  | 40  |  |  |  |  |
| <b>HEAD (H)</b> | m     | 15,8 | 13,8 | 12,1 | 10,2 | 8,4 | 6,3 | 4,0 | 2,4 |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>1,8</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>1,8</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>2,3</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,71</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>4,8</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>24,0</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 48</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 145</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>35,7</b>  |

|  |  |                  |
|--|--|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>10m 4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>25</b>        |

In accordo con: **ISO 9906:2012 - Grade 3B ( section 4.4.2)**  
In accordance to:

Curve per liquidi con densità/curve established for liquid with density  
1Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C



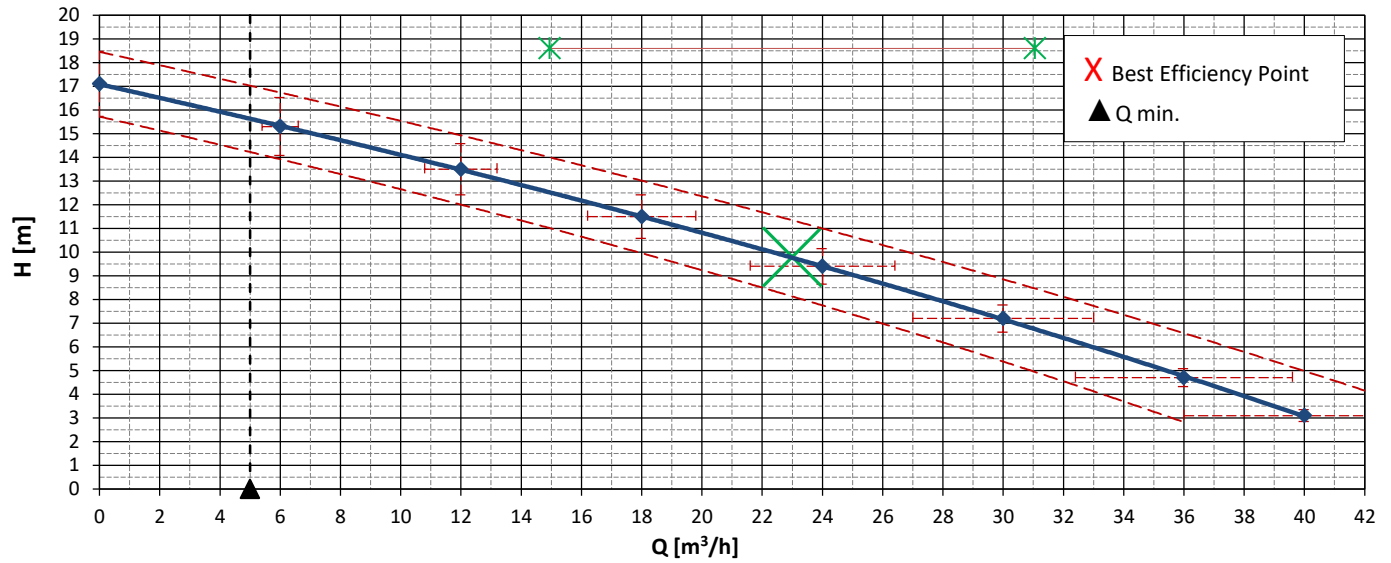
Tipo di pompa - Pump model  
**VS.50\_22.2.125**

Poles: 2 Hz: 50  
r.p.m. 3000

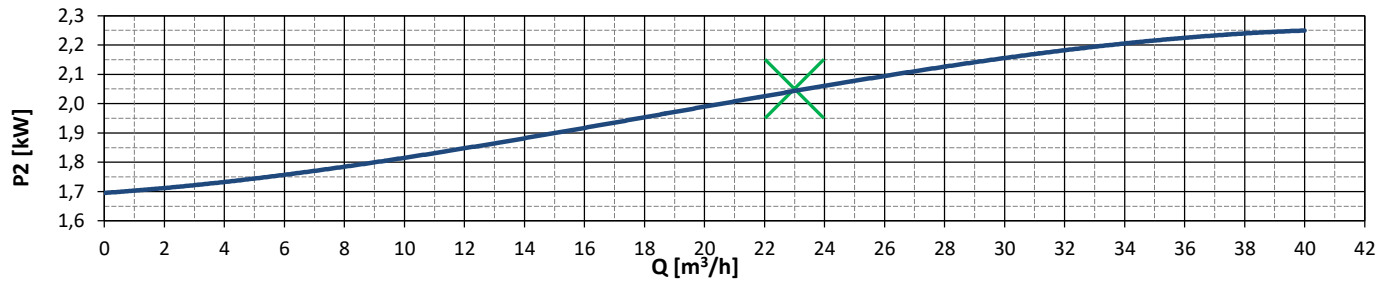
Girante Impeller **VORTEX**  
Mandata Discharge **DN 50 - G 2"**

Serie 1

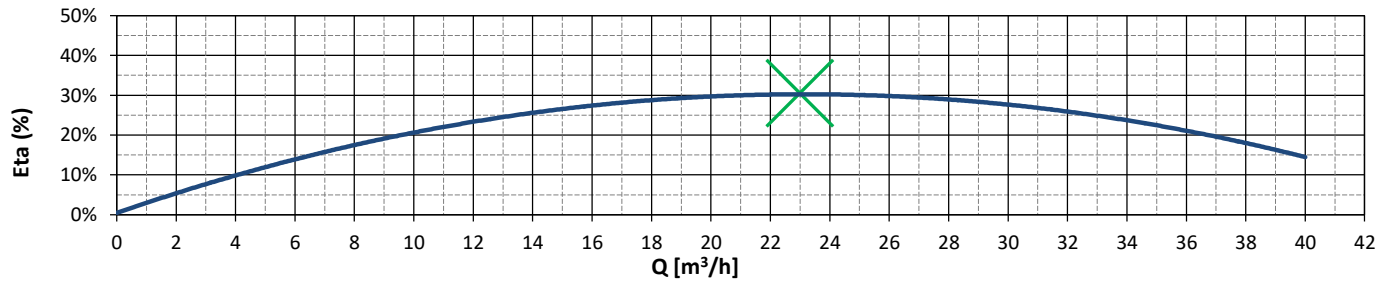
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |      |      |      |     |     |     |     |  |  |  |
|----------|-------|------|------|------|------|-----|-----|-----|-----|--|--|--|
| FLOW (Q) | l/min | 0    | 100  | 200  | 300  | 400 | 500 | 600 | 667 |  |  |  |
|          | l/s   | 0    | 2    | 3    | 5    | 7   | 8   | 10  | 11  |  |  |  |
|          | m³/h  | 0    | 6    | 12   | 18   | 24  | 30  | 36  | 40  |  |  |  |
| HEAD (H) | m     | 17,1 | 15,3 | 13,5 | 11,5 | 9,4 | 7,2 | 4,7 | 3,1 |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |            |
|------------------------------------|-------------------|------|------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>2,4</b> |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>2,2</b> |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>3,0</b> |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,8</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>5,5</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>24,2</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 48</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 162</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>36,0</b>  |

|  |  |                  |
|--|--|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>10m 4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>25</b>        |

In accordo con  
In accordance to

ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curves established for liquid with density 1 Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C

## Dimensioni d'ingombro - overall dimensions

**S** Installazione mobile - Installation mobile - Installation mobile - Instalación móvil

Dimensione imballo  
Packaging dimensions

Misure - Measures [mm]

| A   | B   | C   |
|-----|-----|-----|
| 600 | 240 | 290 |








**FC** Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento

8FC00002      KG: 7,5

|   |  |
|---|--|
| 1 | Supporto tubi guida da 3/4" / 3/4" guide rails bracket |
| 2 | Piede orizzontale 2" / Horizontal foot - 2"out         |
| 3 | Slitta completa / Sliding bracket complete             |
| 4 | Esclusi dalla fornitura / Not supplied                 |

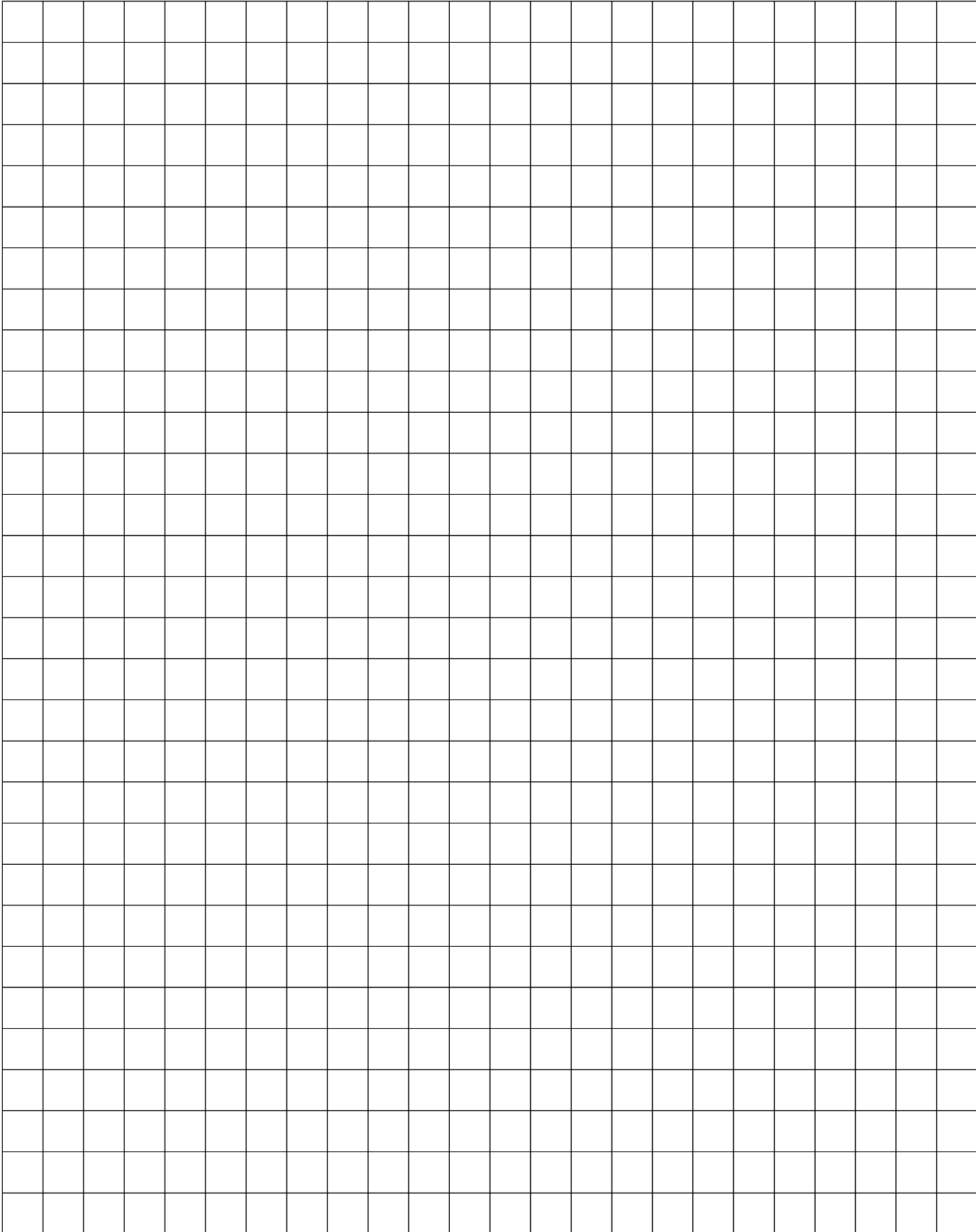
D      D 260mm  
E      E 175mm  
F      F 195mm

### ACCESSORI - ACCESSORIES - ACCESORIES - ACCESORIOS

| Descrizione - Description - Description - Descripción |   | Codice<br>Code    |
|---|---|-------------------|
| FC  |  <ul style="list-style-type: none"> <li>- Dispositivo di accoppiamento DN50 - uscita G 2"</li> <li>- DN50 Coupling device - outlet 2"</li> <li>- Dispositif de couplage DN50 - sortie G 2"</li> <li>- Dispositivo de acoplamiento DN50- salida G 2"</li> </ul>                                 | 8FC000002         |
|   |  <ul style="list-style-type: none"> <li>- Catena ferro zincato - galvanized Iron</li> <li>- Chain fer galvanisé - hierro galvanizado</li> </ul>  | 2SC000019         |
|   | <ul style="list-style-type: none"> <li>- Catena Acciaio - Stainless steel</li> <li>- Cadena acier inox - acero inox</li> </ul>  | 2SC000032         |
| TBV   |  <ul style="list-style-type: none"> <li>- Valvola di ritegno a palla filettata</li> <li>- Threaded valve</li> <li>- Vanne fileté</li> <li>- Válvula roscada</li> </ul>   | G 2" 4BV000003    |
| HF  |  <ul style="list-style-type: none"> <li>- Regolatore di livello per acque reflue</li> <li>- Level switch for sewage</li> <li>- Interrupteur de niveau pour eaux usées</li> <li>- Interruptor de nivel para aguas residuales</li> </ul>   | [10 mt] 3CS000007 |
| SHELL   |  <ul style="list-style-type: none"> <li>- Contrappeso SHELL per galleggiante</li> <li>- Counterweight SHELL for level switch</li> <li>- Cotrepoids SHELL pour interrupteur de niveau</li> <li>- Contrapeso para interruptor de nivel</li> </ul>  | 3CS000021         |
| TUTOR   |  <ul style="list-style-type: none"> <li>- Sistema di guida del galleggiante per spazi ristretti</li> <li>- Float guidance system for confined spaces</li> <li>- Système de guidage à flotteur pour espaces confinés</li> <li>- Sistema de guiado flotante para espacios reducidos.</li> </ul> | 3CS000020         |
| START BOX   |  <p>Cassetta portacondensatore per avviamento di 1 pompa monofase<br/>Capacitor box for 1 singlephase pump starting<br/>boîte de condensateur pour démarrage de 1 pompe monophasé<br/>Caja de condensadores para arranque de 1 bomba monofásica</p>  | M 5EC000001       |
|   |   | MA 5EC000002      |
|   | <p>M: Senza galleggiante - without float switch - sans interrupteur à flotteur - sin flotador<br/>MA: Con galleggiante - with float switch - avec interrupteur à flotteur - con flotador</p>  |                   |

### SELEZIONE QUADRO DI CONTROLLO - CONTROL PANEL SELECTION

| Pole | Pumps | Alim.<br>[V]     | P1<br>[KW] | In<br>[A] | Start.<br>Avviamento | - ECH -<br>ELECTROMECHANICAL |                       |                        |                       | - ECL -<br>ELECTRONIC  |                        |                        |                        |   |
|------|-------|------------------|------------|-----------|----------------------|------------------------------|-----------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|---|
|      |       |                  |            |           |                      | 1 Pump                       |                       | 2 Pumps                |                       | 1 Pump                 |                        | 2 Pumps                |                        |   |
|      |       |                  |            |           |                      | ECH1.M-14<br>5EC000008       | ECH1.T-7<br>5EC000005 | ECH2.M-14<br>5EC000032 | ECH2.T-7<br>5EC000029 | ECL1.M-16<br>5EC000081 | ECL1.T-15<br>5EC000083 | ECL2.M-16<br>5EC000082 | ECL2.T-15<br>5EC000084 |   |
| 125  | 4     | VS.50_11.4.T.125 | 3~400      | 1,1       | 3,8                  | DOL                          |                       | •                      |                       | •                      |                        |                        | •                      |   |
|      | 2     | VS.50_08.2.M.125 | 1~230      | 0,8       | 7,0                  | 30µF+30µF                    | •                     |                        |                       |                        | •                      |                        | •                      |   |
|      |       | VS.50_08.2.T.125 | 3~400      | 0,8       | 2,2                  | DOL                          |                       | •                      |                       | •                      |                        |                        |                        | • |
|      |       | VS.50_11.2.M.125 | 1~230      | 1,1       | 7,9                  | 30µF+30µF                    | •                     |                        | •                     |                        | •                      |                        | •                      |   |
|      |       | VS.50_11.2.T.125 | 3~400      | 1,1       | 2,7                  | DOL                          |                       | •                      |                       | •                      |                        |                        |                        | • |
|      |       | VS.50_18.2.T.125 | 3~400      | 1,8       | 4,8                  | DOL                          |                       | •                      |                       | •                      |                        |                        |                        | • |
|      |       | VS.50_22.2.T.125 | 3~400      | 2,2       | 5,5                  | DOL                          |                       | •                      |                       | •                      |                        |                        |                        | • |



**Poli - poles Modelli - models**

|          |                                |
|----------|--------------------------------|
| <b>4</b> | <b>VS.65_11/18/22.4.135</b>    |
| <b>2</b> | <b>VS.65_11/18/22/30.2.135</b> |

**IT**

Elettropompa sommersibile di robusta costruzione fabbricata completamente in ghisa. Camera olio interposta tra gruppo motore e gruppo pompa. Doppia tenuta meccanica, entrambe interne alla camera olio, non a diretto contatto con il liquido pompato e protette da un anello V-ring posizionato dietro alla girante.

**EN**

Robust construction submersible pump completely made in cast iron, with oil chamber interposed between motor unit and pump unit. Mechanical seals inside the oil chamber not in direct contact with the pumped liquid and protected by a V-Ring positioned on the back of the impeller.

**FR**

Pompe submersible de construction robuste entièrement en fonte, avec chambre à huile intercalée entre le moteur et le groupe pompe. Les garnitures mécaniques à l'intérieur de la chambre d'huile ne sont pas en contact direct avec le liquide pompé et sont protégées par un V-Ring placé à l'arrière de la roue.

**ES**

Bomba sumergible de construcción robusta completamente en hierro fundido, con cámara de aceite interpuesta entre la unidad del motor y la unidad de la bomba. Sellos mecánicos dentro la cámara de aceite que no están en contacto directo con el líquido bombeado y están protegidos por un V-Ring colocado en la parte posterior del impulsor.

**Poli - poles Modelli - models**

|          |                          |
|----------|--------------------------|
| <b>4</b> | <b>VS.65_30.4.173</b>    |
| <b>2</b> | <b>VS.65_37/55.2.173</b> |

**IT**

Elettropompa sommersibile di robusta costruzione fabbricata completamente in ghisa, con camera olio interposta tra gruppo motore e gruppo pompa. Tenute meccaniche in camera olio non a diretto contatto del liquido pompato e protette da un anello di tenuta radiale con bussola in AISI 316 posizionato dietro alla girante.

**EN**

Robust construction submersible pump completely made in cast iron, with oil chamber interposed between motor unit and pump unit. Mechanical seals inside the oil chamber not in direct contact with the pumped liquid and protected by a lip seal ring with AISI 316 sleeve, positioned on the back of the impeller.

**FR**

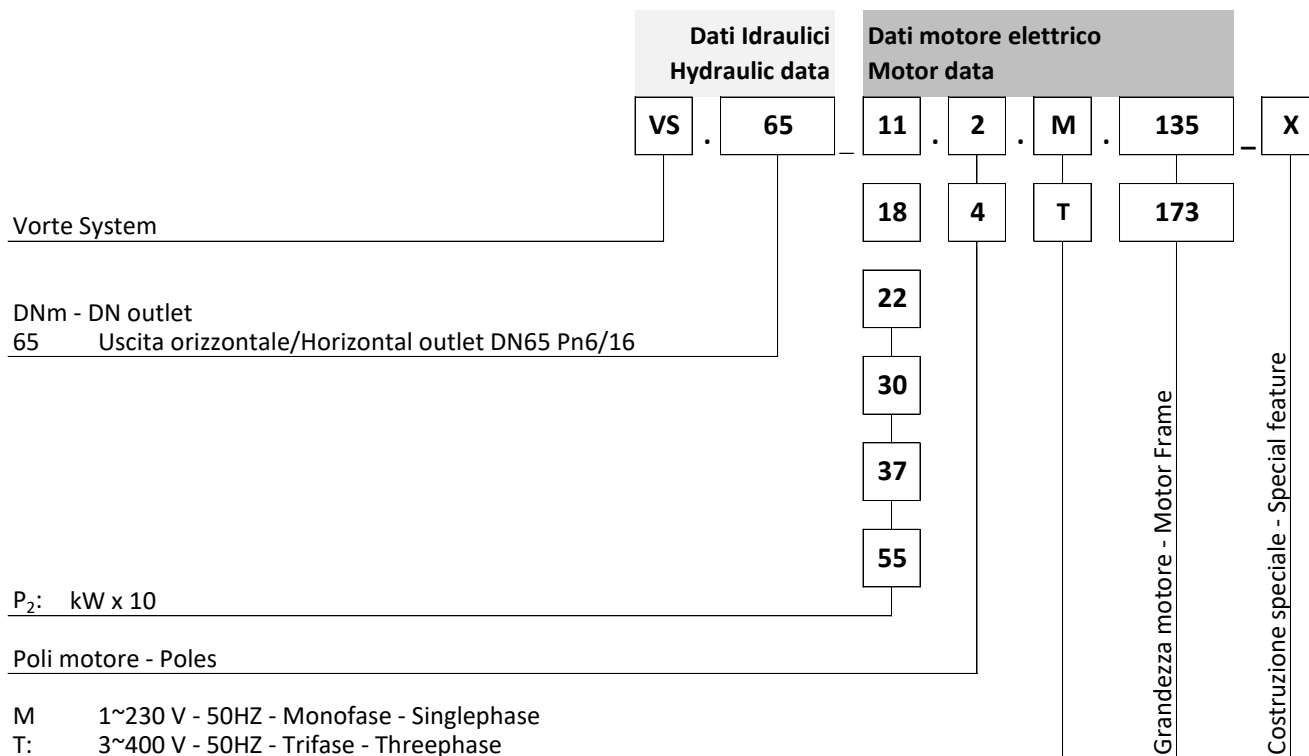
Pompe submersible de construction robuste entièrement en fonte, avec chambre à huile intercalée entre le groupe moteur et le groupe pompe. Des garnitures mécaniques isolées dans la chambre d'huile ne sont pas en contact direct avec le liquide pompé et protégées par un anneau d'étanchéité avec manchon AISI 316, positionnées à l'arrière de la roue.

**ES**

Bomba sumergible de construcción robusta completamente en hierro fundido, con cámara de aceite interpuesta entre la unidad del motor y la unidad de la bomba. Sellos mecánicos en la cámara de aceite que no están en contacto directo con el líquido bombeado y protegidos por un corteco con un casquillo hecho de AISI 316 colocado detrás del impulsor.


**VS.65\_135**

**VS.65\_173**

**IDENTIFICAZIONE - IDENTIFICATION**

**LISTA MODELLI - RANGE OF PRODUCTS**

| Grandezza Motore<br>Motor Frame | Poles | Alimentazione<br>Power supply | P <sub>2</sub><br>[kW] | Modelli<br>Models | Avviamento<br>Starting | Cavo alimentazione / segnali<br>Power / signals cable |                                  |                                |
|---------------------------------|-------|-------------------------------|------------------------|-------------------|------------------------|---|----------------------------------|--------------------------------|
|                                 |       |                               |                        |                   |                        | [m]   | Type                             |                                |
| 135                             | 4     | 3ph                           | 1,1                    | VS.65_11.4T.135   | D.O.L.                 | 10  | H07RN-F 4G1,5 / H07RN8-F 7G1,5   |                                |
|                                 |       |                               | 1,8                    | VS.65_18.4T.135   | D.O.L.                 | 10  | H07RN-F 4G1,5 / H07RN8-F 7G1,5   |                                |
|                                 |       |                               | 2,2                    | VS.65_22.4T.135   | D.O.L.                 | 10  | H07RN-F 4G1,5 / H07RN8-F 7G1,5   |                                |
|                                 | 2     | 3ph                           | 1ph                    | 1,1               | VS.65_11.2M.135        | D.O.L.  | 10                               | H07RN-F 4G1,5 / H07RN8-F 7G1,5 |
|                                 |       |                               | 1,1                    | VS.65_11.2T.135   | D.O.L.                 | 10  | H07RN-F 4G1,5 / H07RN8-F 7G1,5   |                                |
|                                 |       |                               | 1,8                    | VS.65_18.2T.135   | D.O.L.                 | 10  | H07RN-F 4G1,5 / H07RN8-F 7G1,5   |                                |
|                                 |       |                               | 2,2                    | VS.65_22.2T.135   | D.O.L.                 | 10  | H07RN-F 4G1,5 / H07RN8-F 7G1,5   |                                |
|                                 |       |                               | 3,0                    | VS.65_30.2T.135   | D.O.L.                 | 10  | H07RN-F 4G1,5 / H07RN8-F 7G1,5   |                                |
| 173                             | 4     | 3ph                           | 3,0                    | VS.65_30.4T.173   | D.O.L.                 | 10  | H07RN-F 4G2,5 / + H07RN-F 4G1,5  |                                |
|                                 |       |                               | 3,7                    | VS.65_37.2T.173   | D.O.L.                 | 10  | H07RN-F 4G2,5 / + H07RN-F 4G1,5  |                                |
|                                 | 2     | 3ph                           | 5,5                    | VS.65_55.2T.173   | D.O.L.                 | 10  | H07RN-F 4G2,5 / + H07RN-F 4G1,5  |                                |
|                                 |       |                               |                        |                   | S.D.                   | 10  | H07RN8-F 7G1,5 / + H07RN-F 4G1,5 |                                |

## Caratteristiche costruttive - construction features

### Anello per movimentazione pompa

Shackel to handle the pump  
 Manille pour lever la pompe  
 Grillete para levantar la bomba

### Pastiglia termica

Built in Thermal protector  
 Protecteur thermique intégré  
 Protector térmico incorporado

10 m - H07RN-F

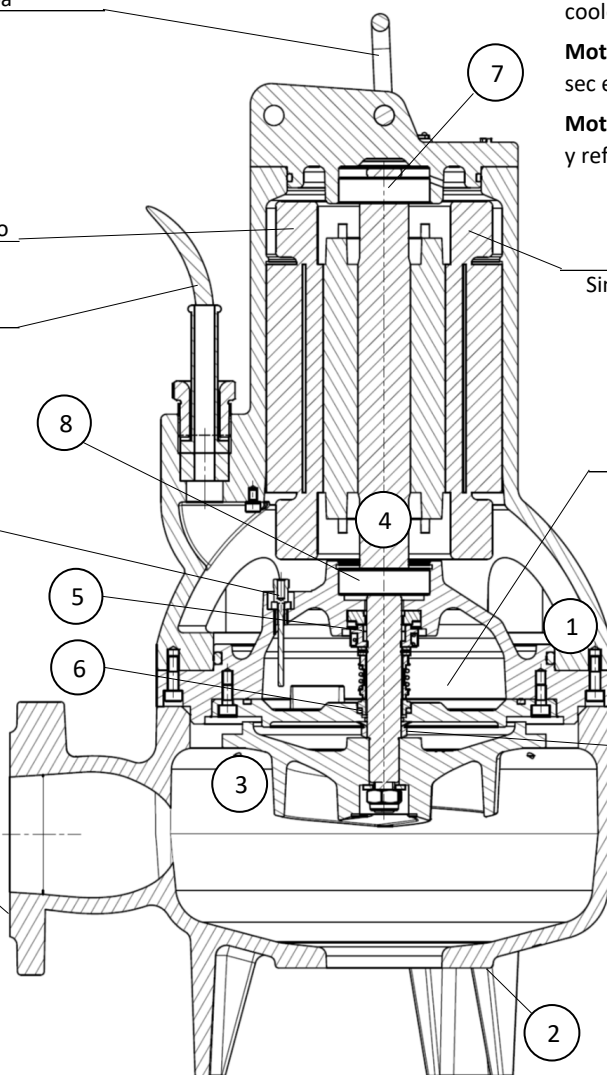
### OPTIONAL

Sonda Olio  
 Oil Probe  
 Sonde d'huile  
 Sonda de aceite

| Viti<br>Screws<br>Des vis<br>Empulgueras | Quality<br>A2 |
|--|---------------|
|--|---------------|

| O-RINGS | NBR |
|---------|-----|
|---------|-----|

DNm: DN65 PN6-PN16



**Motore asincrono** in classe di isolamento F (155°C), a secco e raffreddato dal liquido circostante;

**Asynchronous dry motor**, insulation class F(155°C), cooled by the surrounding liquid;

**Moteur asynchrone**, classe d'isolation F (155°C), sec et refroidi par le liquide environnant;

**Motor asíncrono**, aislamiento clase F (155 ° C), seco y refrigerado por el líquido que rodea.

### Motore monofase con protettore termico

Singlephase motor with built in thermal protector  
 Moteur monophasé avec protection thermique  
 Motor monofásico con protector térmico

**Camera olio** per il raffreddamento e la lubrificazione delle tenute meccaniche;

**Oil chamber** for cooling and lubrication of mechanical seals;

**Chambre d'huile** pour le refroidissement et la lubrification des garnitures

**Cámara de aceite** para la refrigeración y la lubricación de los sellos mecánicos.

| V-Ring | NBR<br>(Viton) |
|--------|----------------|
|--------|----------------|

**Girante arretrata** con ampio passaggio libero  
**Backward impeller** with large free passage

**Roue arrière** avec grand passage libre

**Impulsor hacia atrás** con gran paso libre.

| NR. | DESCRIPTION       | MATERIAL     |
|-----|-------------------|--------------|
| 1   | Gruppo motore     | Ghisa        |
|     | Motor group       | Cast iron    |
|     | Groupe moteur     | Fer de fonte |
|     | Unidad de motor   | Hierro       |
| 2   | Corpo idraulico   | Ghisa        |
|     | Pump Housing      | Cast iron    |
|     | Corps de la pompe | Fer de fonte |
|     | Cuerpo hidráulico | Hierro       |
| 3   | Girante           | Ghisa        |
|     | Impeller          | Cast iron    |
|     | Roue              | Fer de fonte |
|     | Impulsor          | Hierro       |
| 4   | Albero motore     | Acciaio      |
|     | Shaft             | Steel        |
|     | Arbre moteur      | Acier        |
|     | Eje del motor     | Acero        |

| NR. | DESCRIPTION             | MATERIAL                   |
|-----|-------------------------|----------------------------|
| 1   | Tenuta mecc. superiore  | Carbon graphite / Al-Oxide |
|     | Upper mech. seal        |                            |
| 5   | Haut garniture mécan.   | NBR                        |
|     | Sello mecánico superior |                            |
| 6   | Tenuta mecc. Inferiore  | SiC / SiC                  |
|     | Lower mech. seal        |                            |
| 6   | Haut garniture mécan.   | NBR                        |
|     | Sello mecánico inferior |                            |
| 7   | Cuscinetto superiore    |                            |
|     | Top bearing             | 6302 2RS1                  |
| 7   | Roulement supérieur     |                            |
|     | Cojinete superior       |                            |
| 8   | Cuscinetto inferiore    |                            |
|     | Lower bearing           | 6304 2RS1                  |
| 8   | Roulement inférieur     |                            |
|     | Cojinete inferior       |                            |



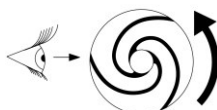
## Caratteristiche costruttive - construction data

|  |  |   |   |
|--|--|---|---|
| <b>Costruzione Motore - Motor Frame</b>                              | 135  |   |   |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |   |   |
| <b>Classe di Isolamento - Insulation Class</b>                       | F (155°C)                                      |   |   |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent                |   |   |
| <b>Avvolgimento statore - Stator winding</b>                         | 1~PH - Singlephase                             | 3~PH - Threephase   |   |
|  | [V]  | 1~230V  | Y / Δ<br>3~400/230                        |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> |  | Standard  | Optional                                  |
| <input type="radio"/> Bimetallico - Bimetal disc                     |  | <input checked="" type="checkbox"/>                                 | <input checked="" type="checkbox"/> 130°C |
| <input type="radio"/> Solo su richiesta - on request only            | PT100  | <input type="checkbox"/>  | <input type="checkbox"/>                  |
| <input type="radio"/> Solo su richiesta - on request only            | PTC  | <input type="checkbox"/>  | <input type="checkbox"/>                  |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid |   |   |
| <b>Camera olio - Oil chamber</b>                                     | Si - Yes                                       |   |   |
| <b>Protezione Tenuta - Leakage protection</b>                        | Optional                                       |   |   |
| <b>Tipo girante - Impeller</b>                                       | Vortex   |   |   |
| <b>DN mandata - Discharge</b>  | DN 65 Pn6/16                                   | Orizzontale - Horizontal  |   |
| <b>Controflangia filettata - Threaded counterflange</b>              | Si - Yes                                       | G 2"1/2   |   |
| <b>DN aspirazione / Suction</b>                                      | [mm]   | Ø 65  |   |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard                                       | Vernice all'acqua - Water paint / 30µm<br>Opaco Nero - Opaque Black |   |
|  | Optional                                       | Epossidica - Epoxy coating / 80µm<br>RAL 7015 - Grigio - Grey       |   |

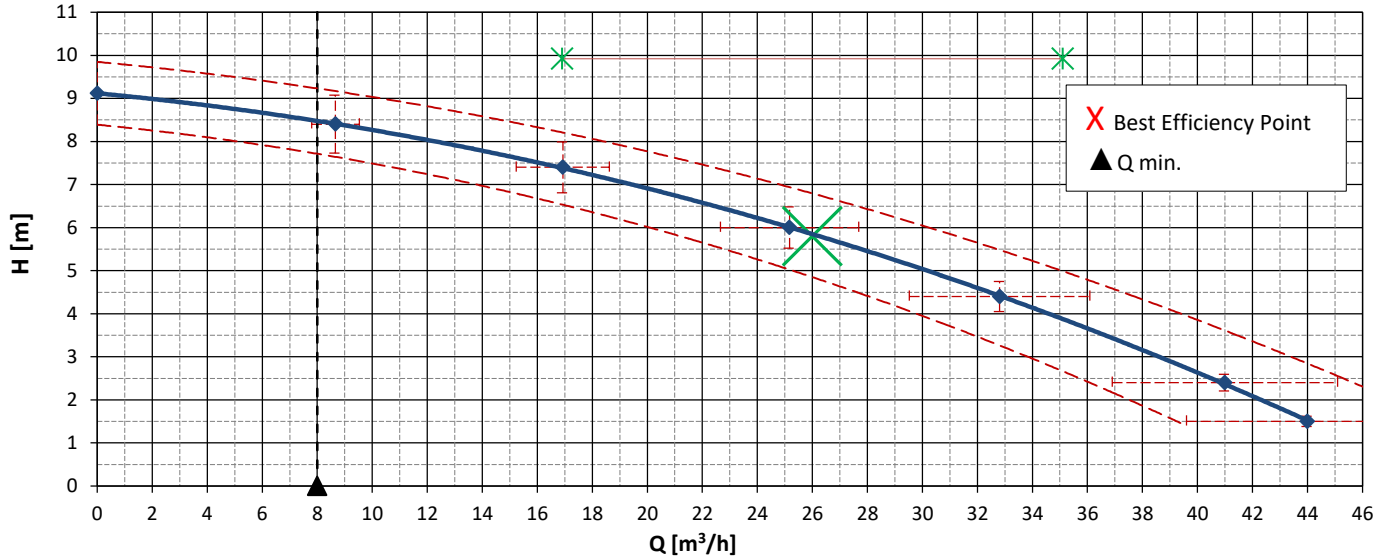
## Limiti di utilizzo - Operating Limits

|   |                       |        |
|---|-----------------------|--------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C]                  | ≤ 40   |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] | ~ 1    |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s]  | ~ 1    |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l]                | < 200  |
| <b>PH liquido pompato - PH value</b>                                |                       | 6 ÷ 12 |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m]                   | 20     |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l]                 | < 0,1  |

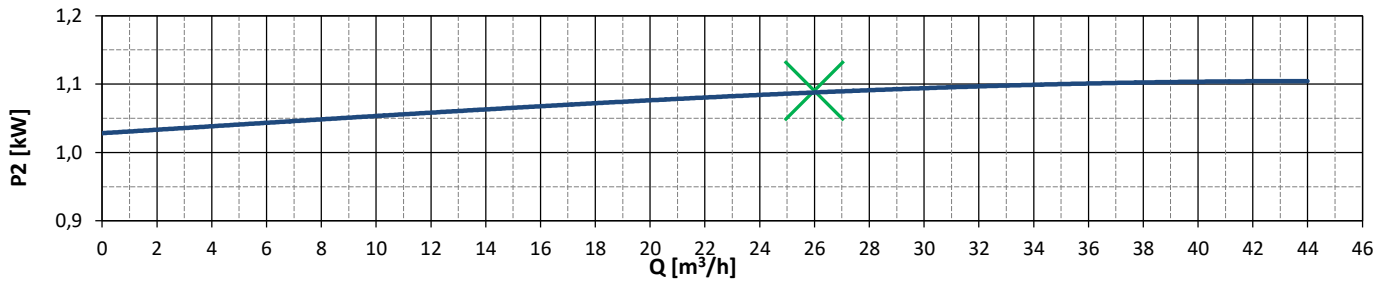
**Corretta rotazione della girante**  
**Rotation of the impeller**



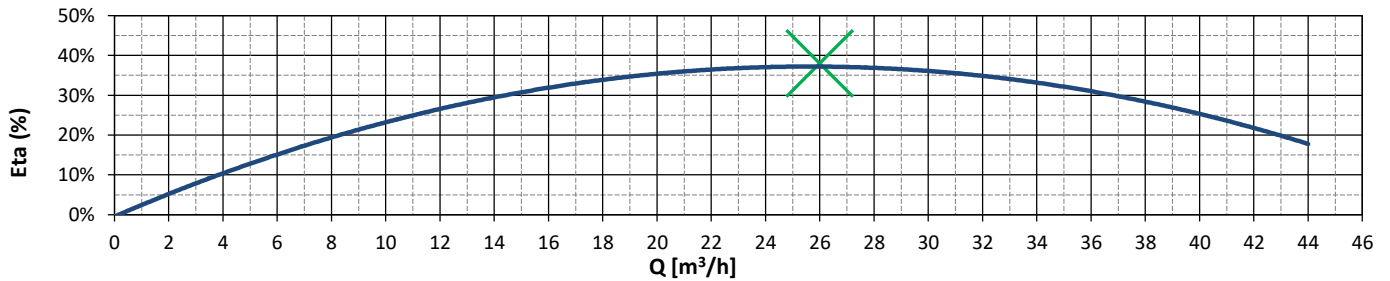
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |     |     |     |     |     |     |     |  |  |  |  |  |
|----------|-------|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|--|
| FLOW (Q) | l/min | 0   | 144 | 282 | 420 | 547 | 683 | 733 |  |  |  |  |  |
|          | l/s   | 0   | 2   | 5   | 7   | 9   | 11  | 12  |  |  |  |  |  |
|          | m³/h  | 0   | 9   | 17  | 25  | 33  | 41  | 44  |  |  |  |  |  |
| HEAD (H) | m     | 9,1 | 8,4 | 7,4 | 6,0 | 4,4 | 2,4 | 1,5 |  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>1,1</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>1,1</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>1,7</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,81</b> |

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>3,2</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>17,0</b>       |

**Model T**

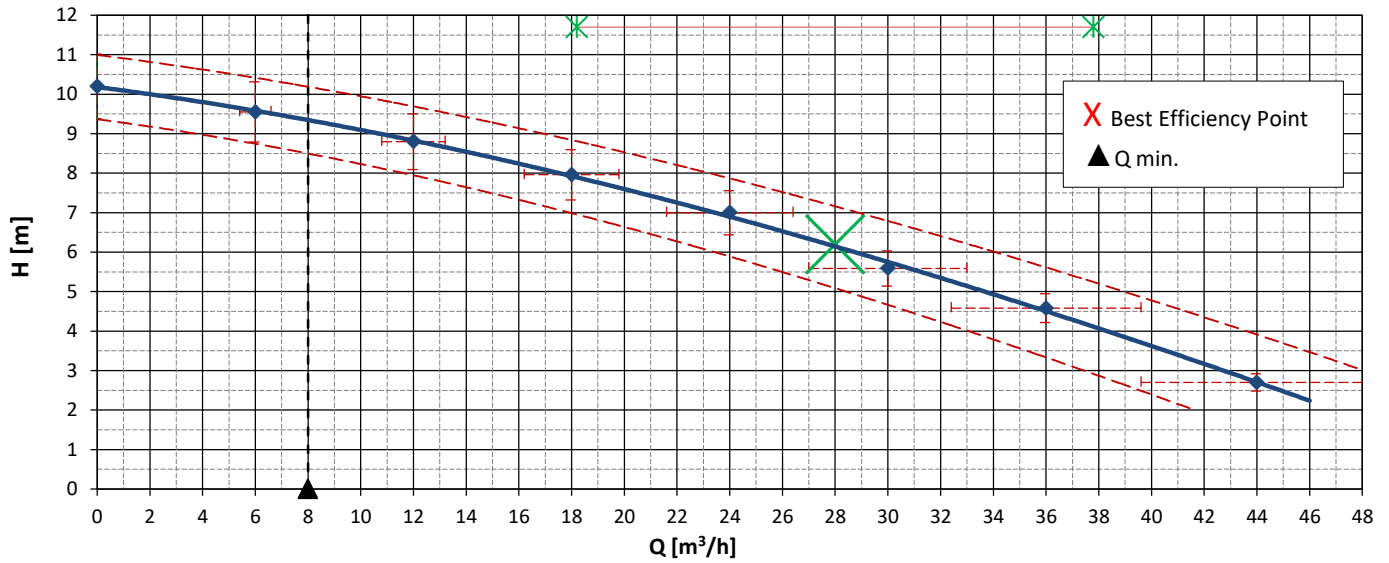
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 65</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 181</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>58,0</b>  |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>30</b>    |

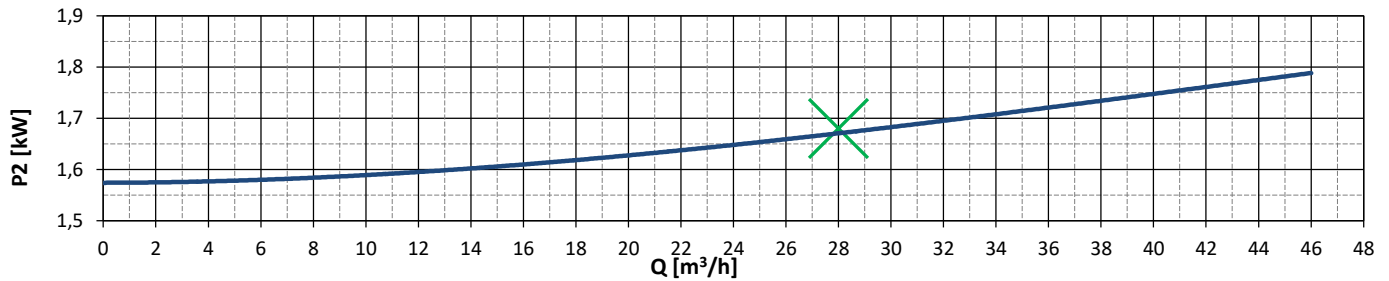
In accordo con / In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C

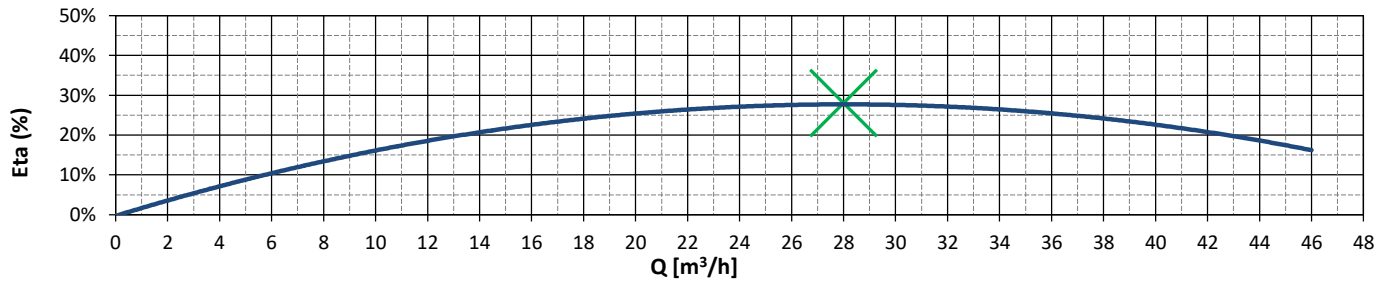
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |     |     |     |     |     |     |     |  |  |  |  |
|----------|-------|------|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|
| FLOW (Q) | l/min | 0    | 100 | 200 | 300 | 400 | 500 | 600 | 733 |  |  |  |  |
|          | l/s   | 0    | 2   | 3   | 5   | 7   | 8   | 10  | 12  |  |  |  |  |
|          | m³/h  | 0    | 6   | 12  | 18  | 24  | 30  | 36  | 44  |  |  |  |  |
| HEAD (H) | m     | 10,2 | 9,6 | 8,8 | 8,0 | 7,0 | 5,6 | 4,6 | 2,7 |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>1,8</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>1,8</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>2,2</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,82</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>4,4</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>21,0</b>       |

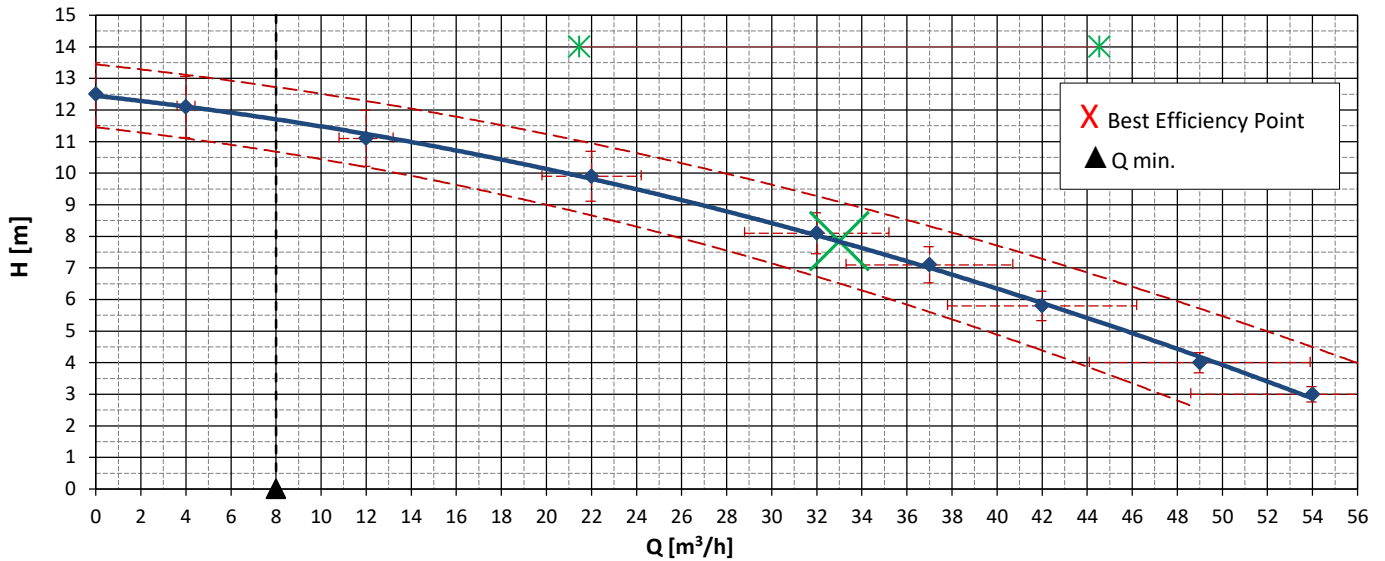
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 65</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 190</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>62,0</b>  |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>25</b>    |

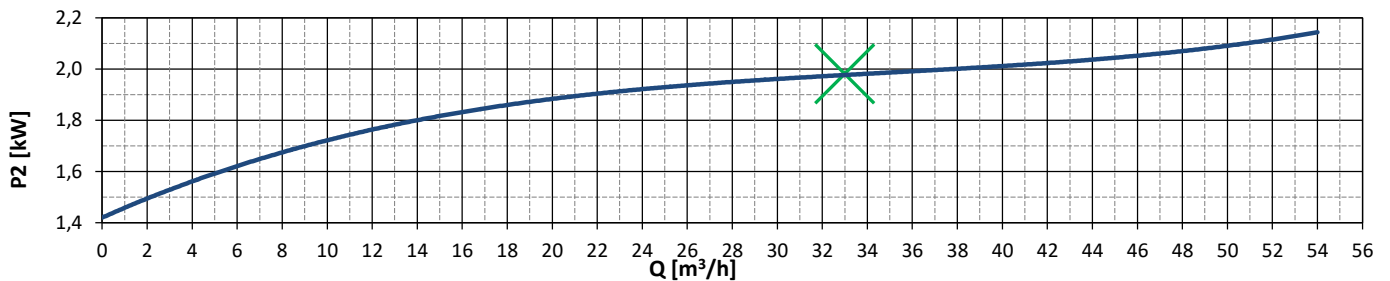
In accordo con / In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C

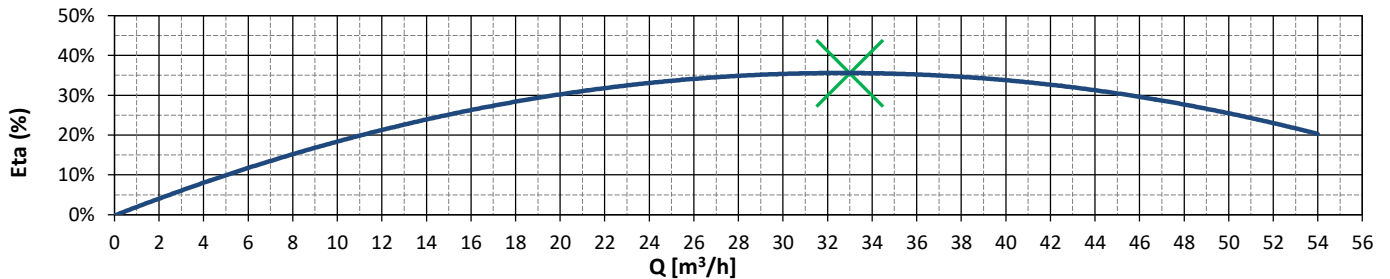
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |     |     |     |     |     |     |  |  |  |
|-----------------|--------------|------|------|------|-----|-----|-----|-----|-----|-----|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 67   | 200  | 367 | 533 | 617 | 700 | 817 | 900 |  |  |  |
|                 | <b>l/s</b>   | 0    | 1    | 3    | 6   | 9   | 10  | 12  | 14  | 15  |  |  |  |
|                 | <b>m³/h</b>  | 0    | 4    | 12   | 22  | 32  | 37  | 42  | 49  | 54  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 12,5 | 12,1 | 11,1 | 9,9 | 8,1 | 7,1 | 5,8 | 4,0 | 3,0 |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>2,2</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>2,1</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>2,8</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,82</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>5,4</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>28,0</b>       |

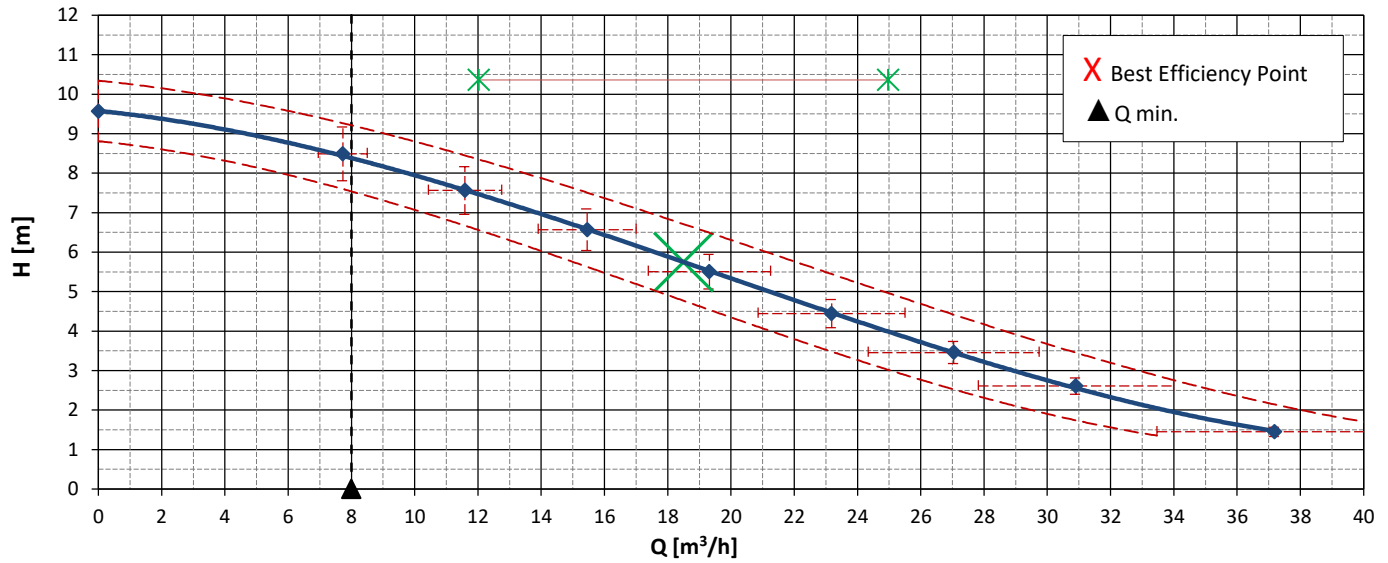
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 65</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 219</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>66,0</b>  |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>25</b>    |

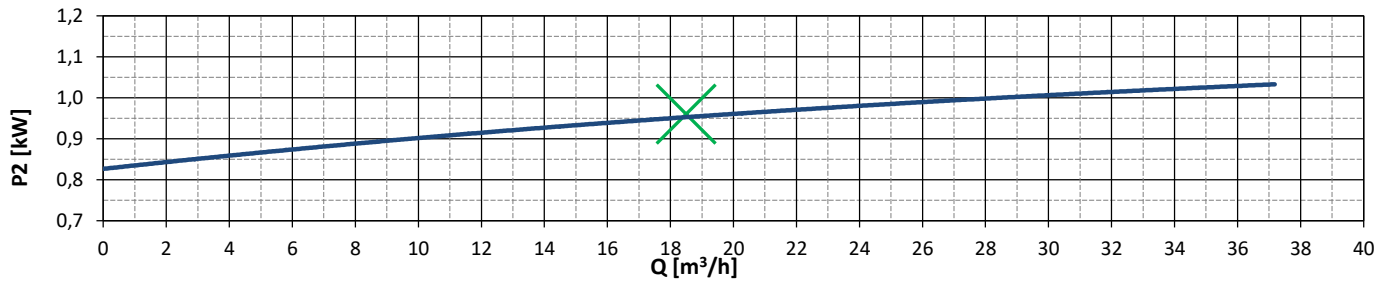
In accordo con  
In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C

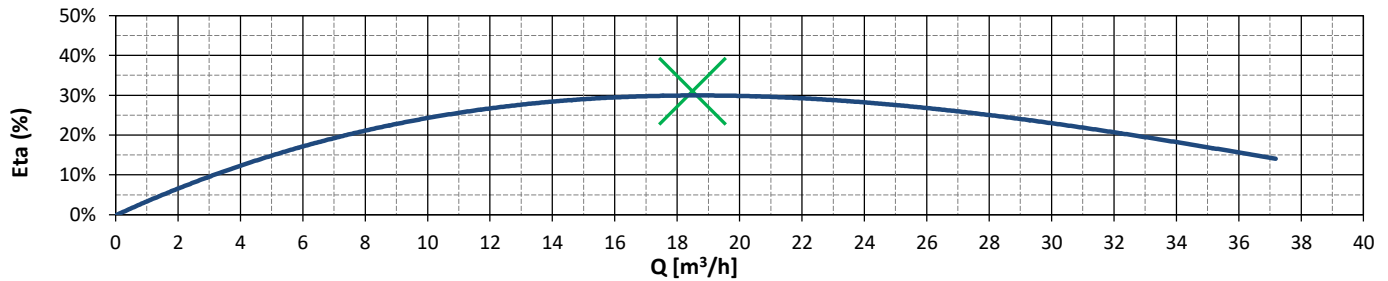
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |     |     |     |     |     |     |     |     |     |  |  |  |
|-----------------|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0   | 129 | 193 | 258 | 322 | 386 | 451 | 515 | 620 |  |  |  |
|                 | <b>l/s</b>   | 0   | 2   | 3   | 4   | 5   | 6   | 8   | 9   | 10  |  |  |  |
|                 | <b>m³/h</b>  | 0   | 8   | 12  | 15  | 19  | 23  | 27  | 31  | 37  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 9,6 | 8,5 | 7,6 | 6,6 | 5,5 | 4,4 | 3,5 | 2,6 | 1,4 |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>1,1</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>1,0</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>1,4</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,88</b> |

|  |     | <b>Model M</b>    | <b>Model T</b>    |
|--|-----|-------------------|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>1~230-50Hz</b> | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>30μF+30μF</b>  | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>7,3</b>        | <b>3,0</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>21,9</b>       | <b>17,0</b>       |

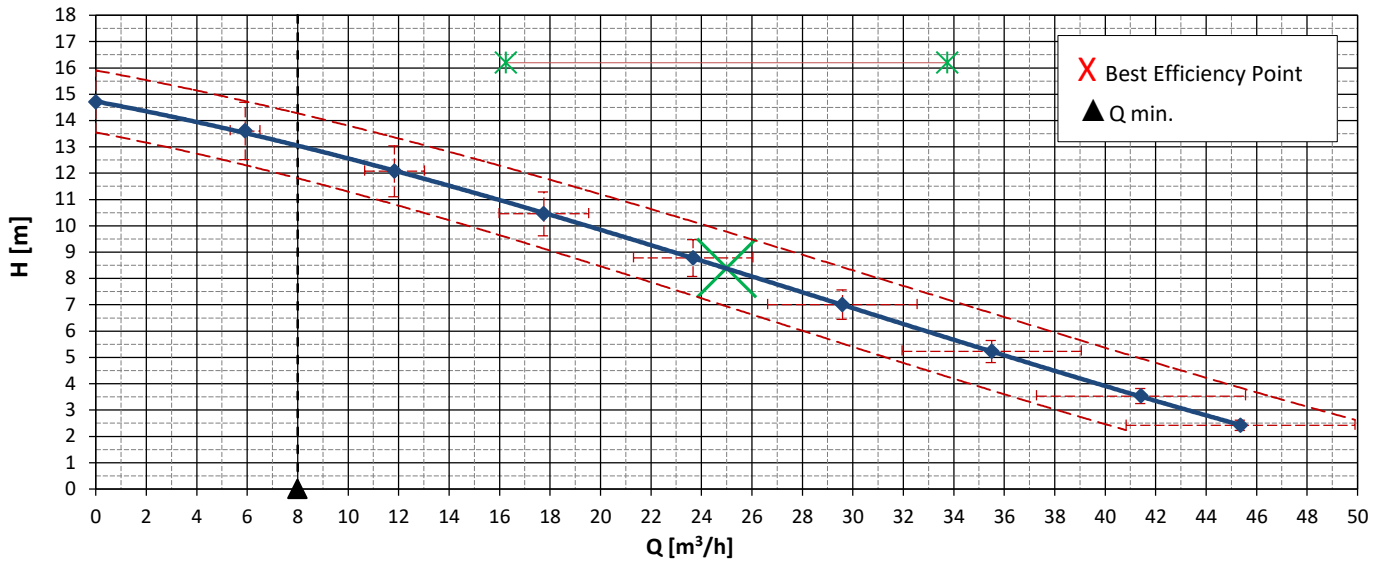
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 65</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 114</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>55,0</b>  |

|  |  |                  |                  |
|--|--|------------------|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>10m 4G1,5</b> | <b>10m 4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>30</b>        |                  |

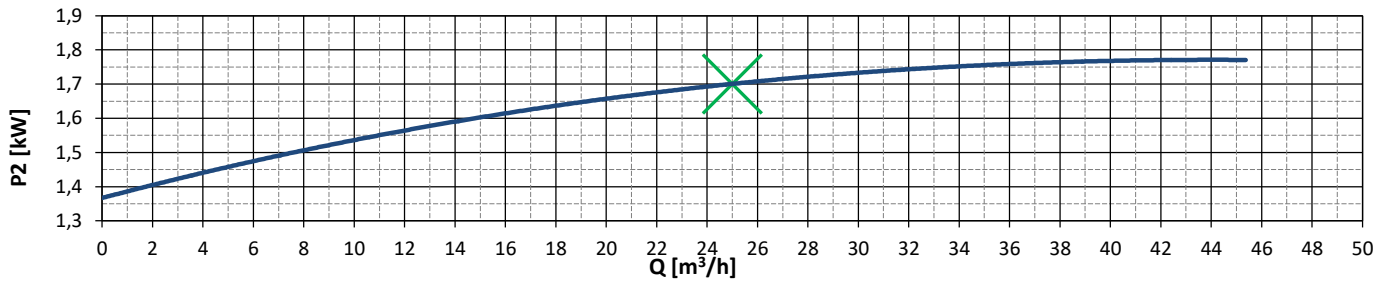
In accordo con  
In accordance to **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density 1  
Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C

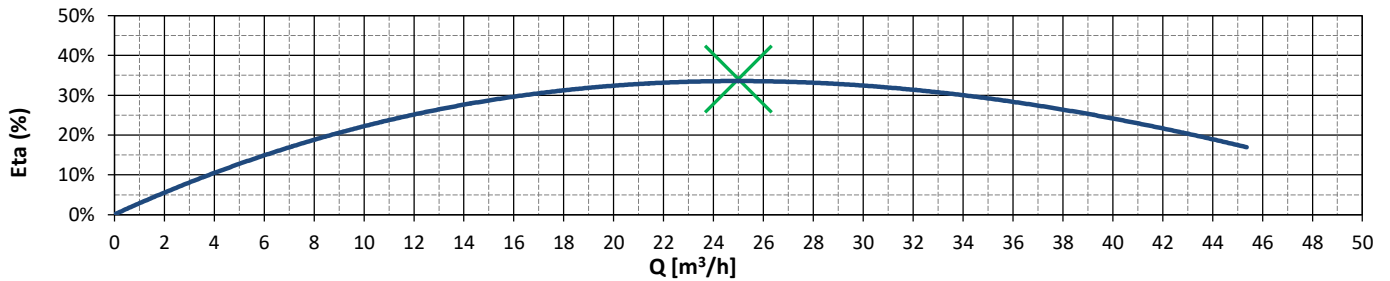
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |      |      |      |     |     |     |     |     |  |  |  |
|----------|-------|------|------|------|------|-----|-----|-----|-----|-----|--|--|--|
| FLOW (Q) | l/min | 0    | 99   | 197  | 296  | 395 | 493 | 592 | 690 | 756 |  |  |  |
|          | l/s   | 0    | 2    | 3    | 5    | 7   | 8   | 10  | 12  | 13  |  |  |  |
|          | m³/h  | 0    | 6    | 12   | 18   | 24  | 30  | 36  | 41  | 45  |  |  |  |
| HEAD (H) | m     | 14,7 | 13,6 | 12,1 | 10,5 | 8,8 | 7,0 | 5,2 | 3,5 | 2,4 |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>2,2</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>1,8</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>2,3</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,81</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>4,4</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>23,0</b>       |

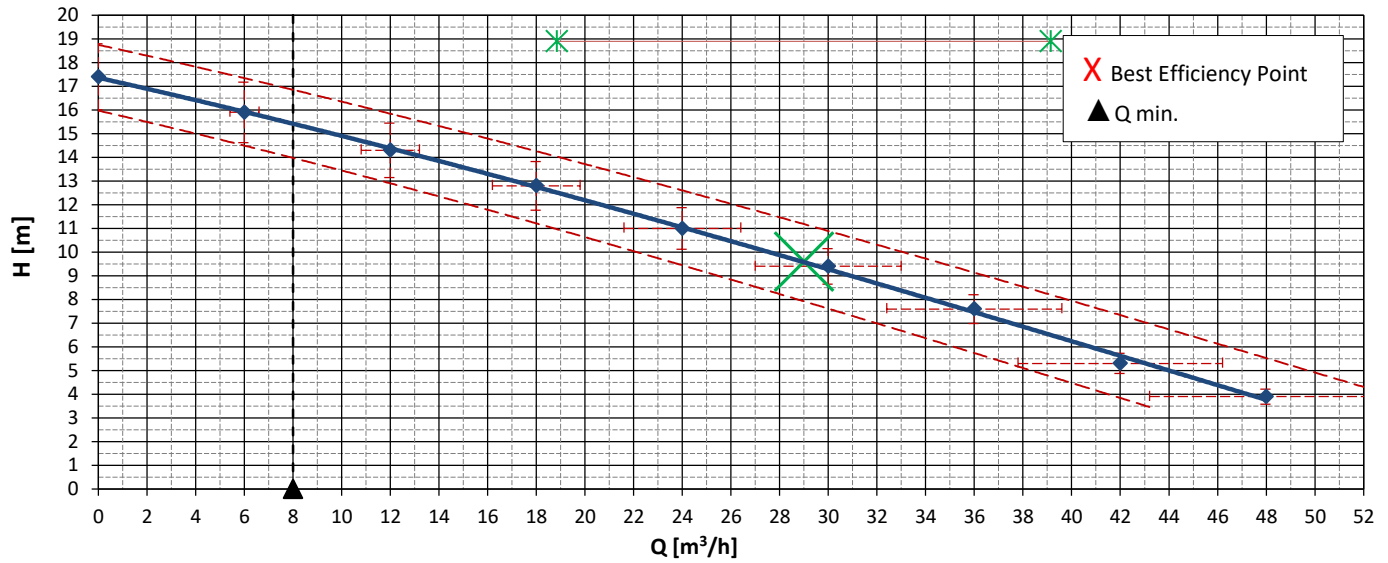
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 65</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 144</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>57,0</b>  |

|  |  |                  |
|--|--|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>10m 4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>25</b>        |

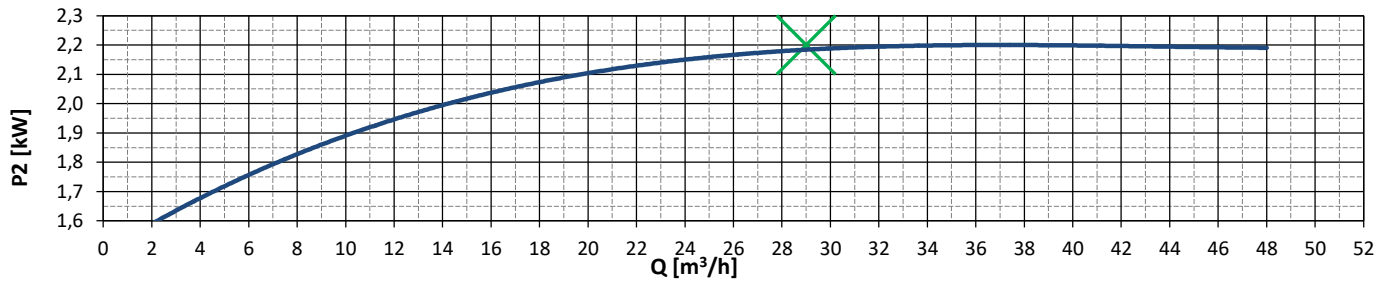
In accordo con / In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C

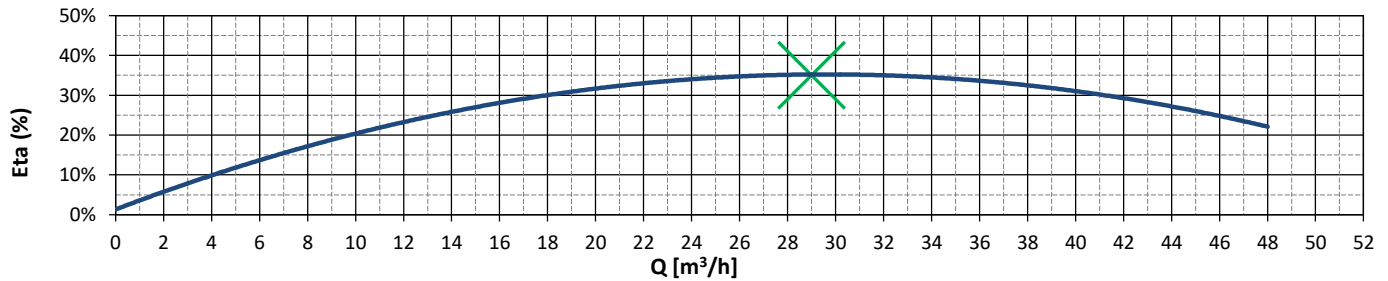
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |      |      |      |      |     |     |     |     |  |  |  |
|----------|-------|------|------|------|------|------|-----|-----|-----|-----|--|--|--|
| FLOW (Q) | l/min | 0    | 100  | 200  | 300  | 400  | 500 | 600 | 700 | 800 |  |  |  |
|          | l/s   | 0    | 2    | 3    | 5    | 7    | 8   | 10  | 12  | 13  |  |  |  |
|          | m³/h  | 0    | 6    | 12   | 18   | 24   | 30  | 36  | 42  | 48  |  |  |  |
| HEAD (H) | m     | 17,4 | 15,9 | 14,3 | 12,8 | 11,0 | 9,4 | 7,6 | 5,3 | 3,9 |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>2,4</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>2,2</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>3,0</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,82</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>5,5</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>27,0</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 65</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 162</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>58,0</b>  |

|  |  |                  |
|--|--|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>10m 4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>25</b>        |

In accordo con / In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C



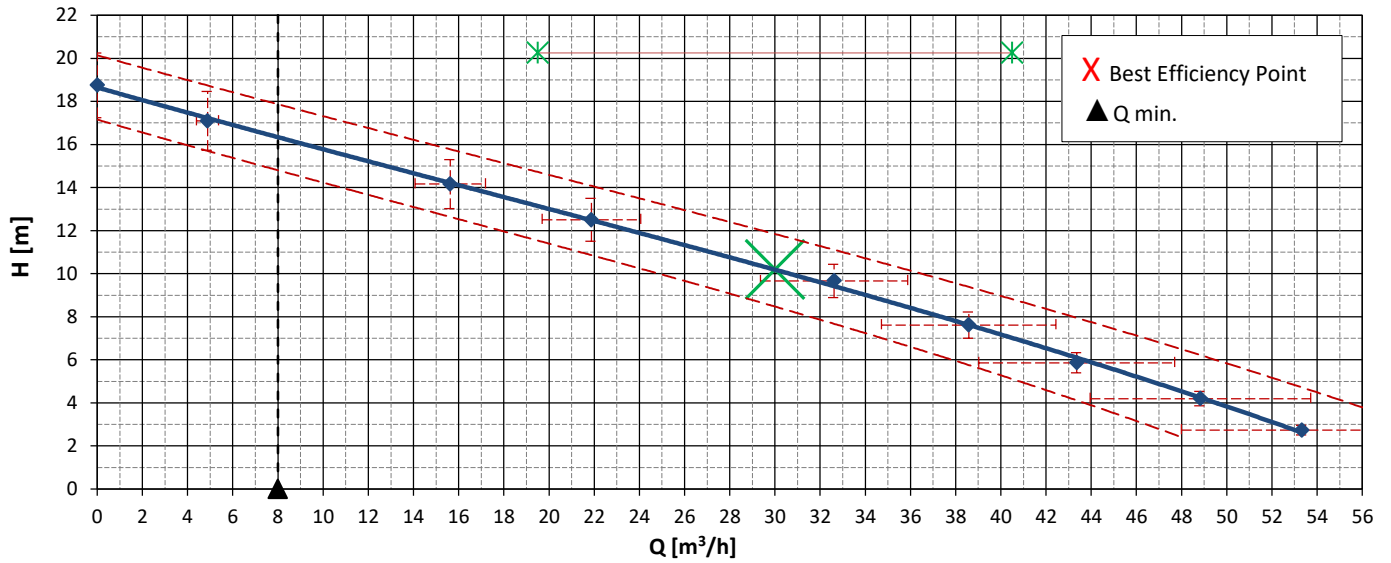
Tipo di pompa - Pump model  
**VS.65\_30.2.135**

**Poles: 2 Hz: 50**  
**r.p.m. 3000**

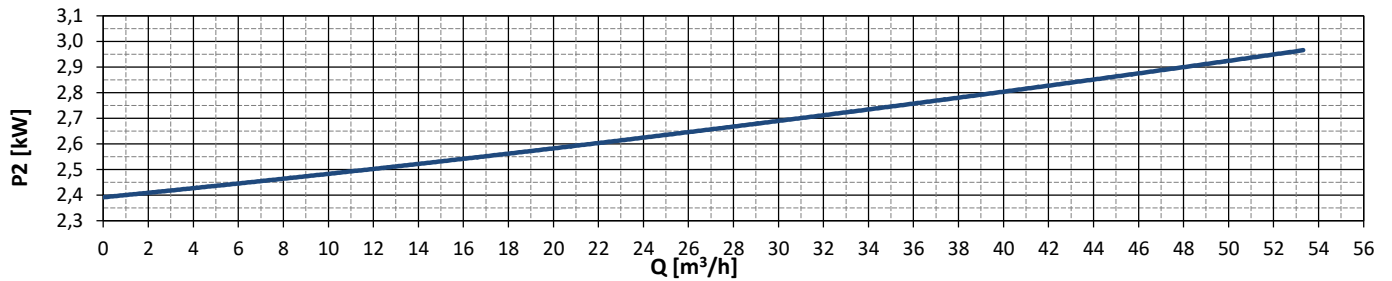
Girante Impeller  
Mandata Discharge  
**VORTEX DN 65 - G 2"1/2**

Serie 2

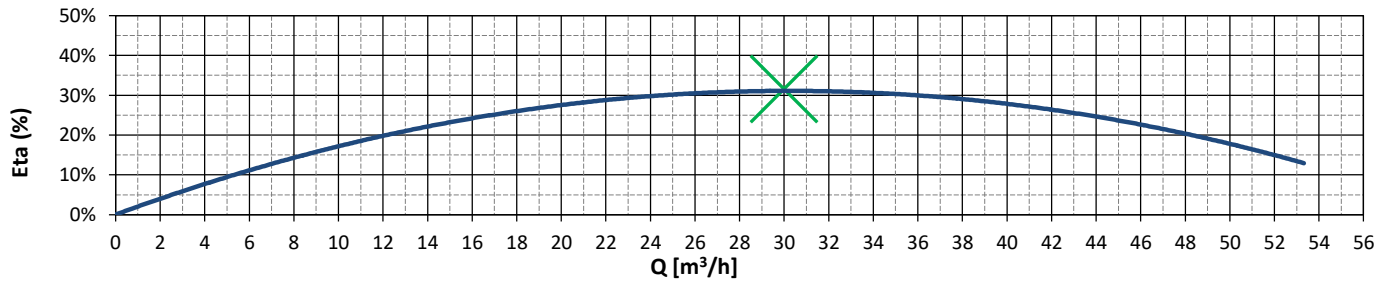
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |     |     |     |     |     |  |  |
|-----------------|--------------|------|------|------|------|-----|-----|-----|-----|-----|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 81   | 260  | 365  | 544 | 643 | 723 | 814 | 889 |  |  |
|                 | <b>l/s</b>   | 0    | 1    | 4    | 6    | 9   | 11  | 12  | 14  | 15  |  |  |
|                 | <b>m³/h</b>  | 0    | 5    | 16   | 22   | 33  | 39  | 43  | 49  | 53  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 18,8 | 17,1 | 14,2 | 12,5 | 9,7 | 7,6 | 5,9 | 4,2 | 2,7 |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>3,0</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>3,0</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>3,7</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,82</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>6,5</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>23,0</b>       |

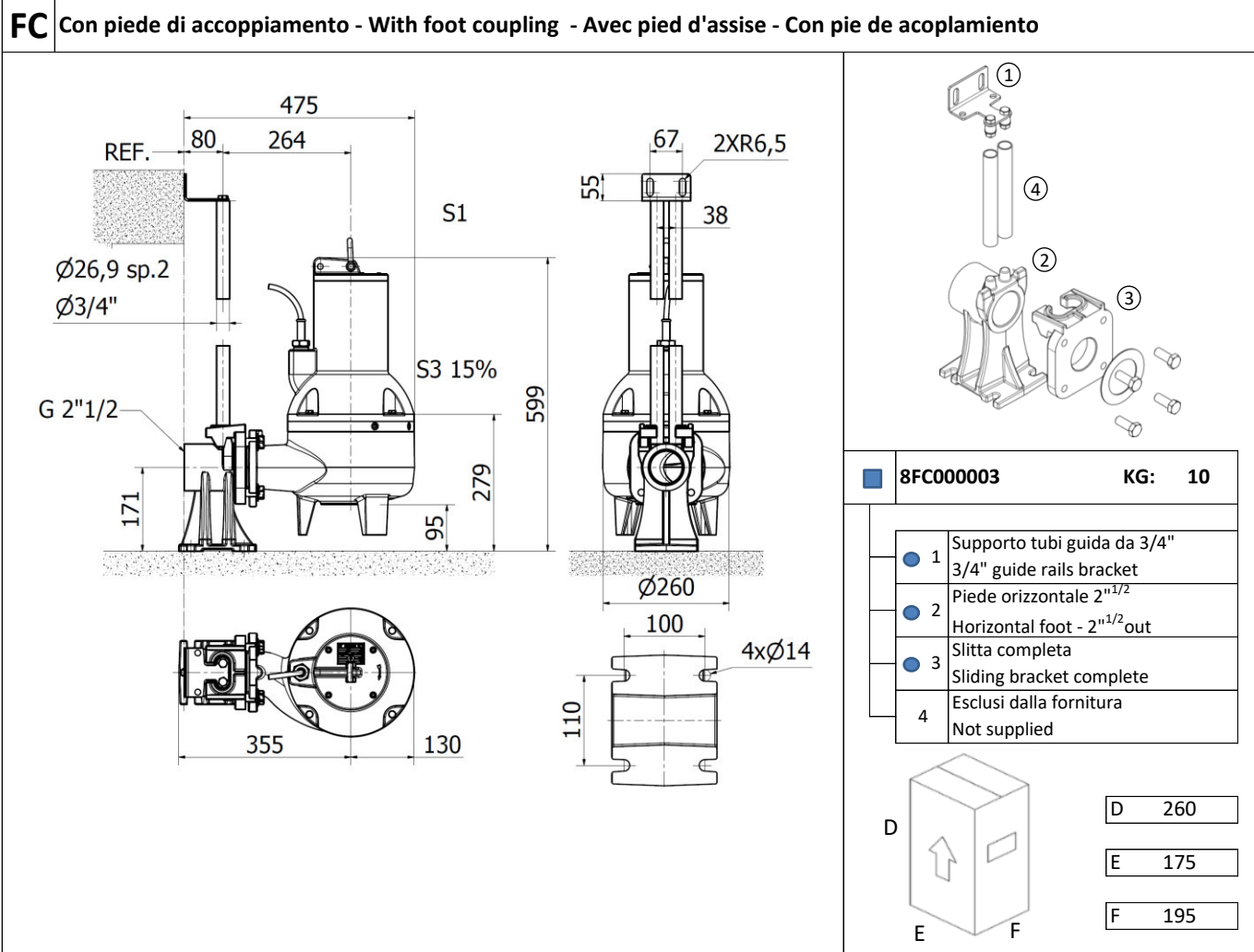
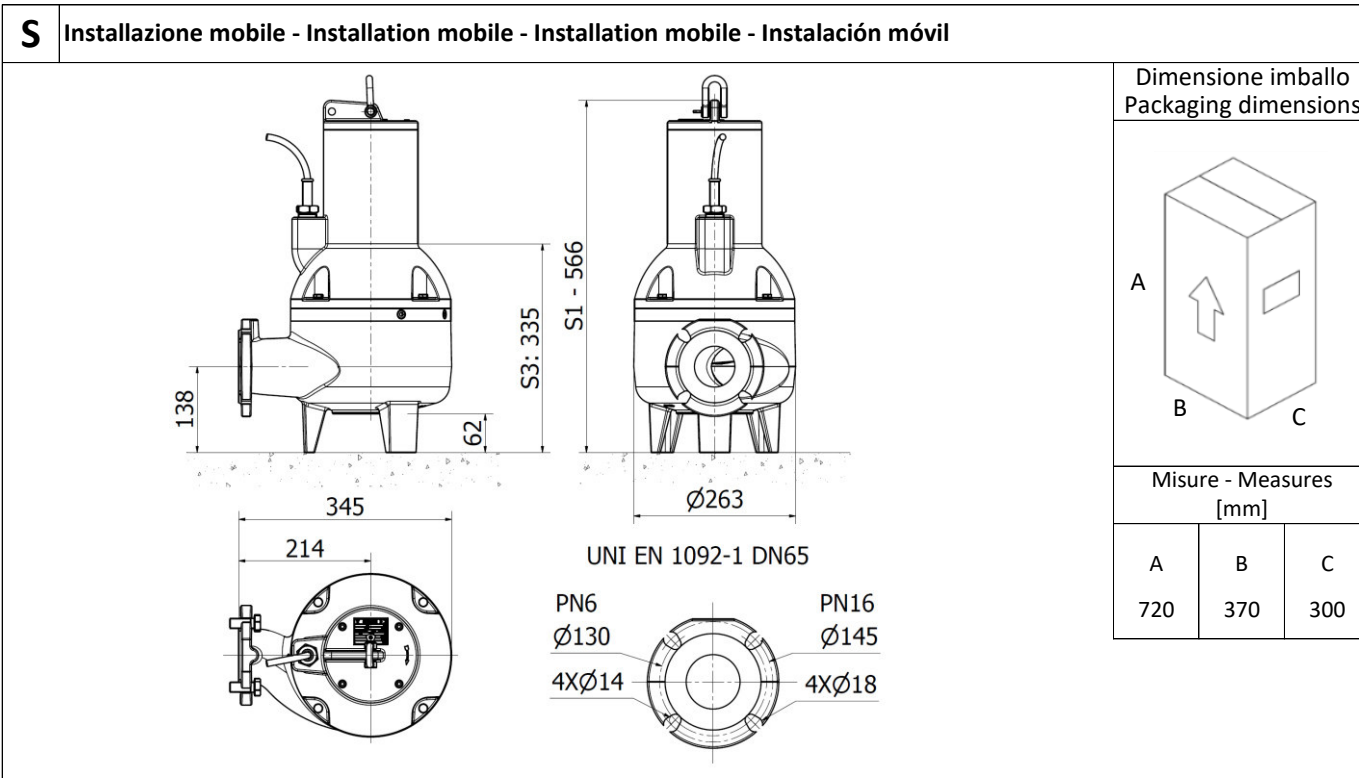
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 65</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 168</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>62,0</b>  |

|  |  |                  |
|--|--|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>10m 4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>25</b>        |

In accordo con / In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C



**Dimensioni d'ingombro - overall dimensions**


## Caratteristiche costruttive - construction features

Anello per movimentazione  
Shackel to handle the pump  
Manille pour lever la pompe  
Grillete para levantar la bomba

Pastiglia termica  
Built in Thermal protector  
Protecteur thermique intégré  
Protector térmico incorporado

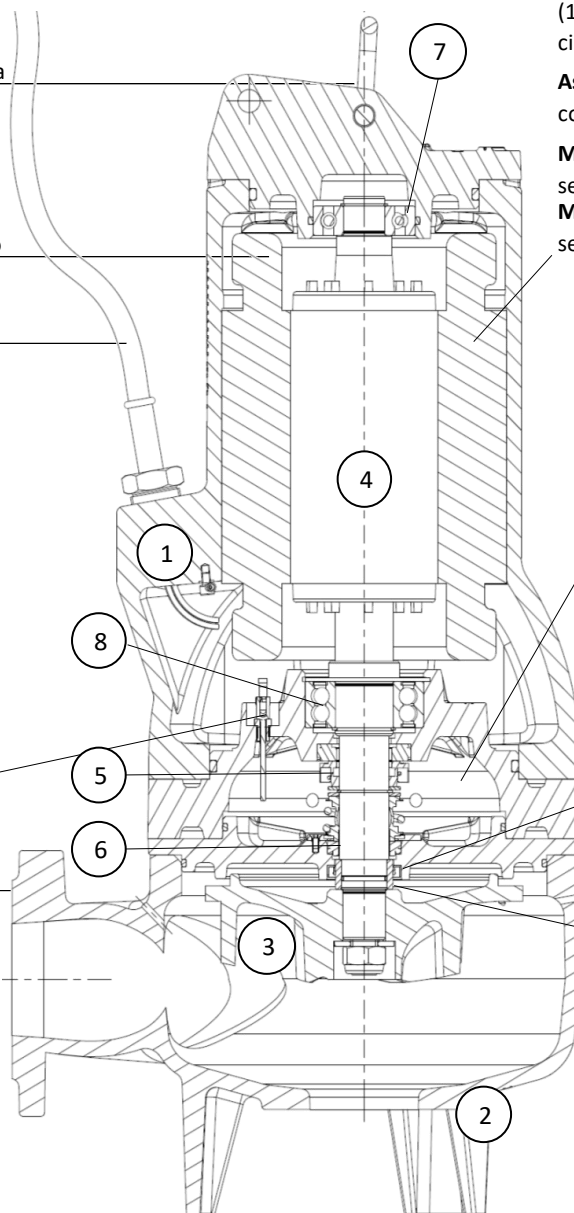
10 m - H07RN-F

| Viti<br>Screws<br>Des vis<br>Empulgueras | Quality<br>A2 |
|--|---------------|
|--|---------------|

|                |            |
|----------------|------------|
| <b>O-RINGS</b> | <b>NBR</b> |
|----------------|------------|

**OPTIONAL**  
Sonda Olio  
Oil Probe  
Sonde d'huile  
Sonda de aceite

DNm: DN65 PN6-PN16



**Motore asincrono** in classe di isolamento H (180°C), a secco e raffreddato dal liquido circostante;

**Asynchronous dry motor**, insulation class H(180°C), cooled by the surrounding liquid

**Moteur asynchrone**, classe d'isolation H (180°C), sec et refroidi par le liquide environnant;

**Motor asíncrono**, aislamiento clase H (180 ° C), seco y refrigerado por el líquido que rodea.

**Camera olio** per il raffreddamento e la lubrificazione delle tenute meccaniche;

**Oil chamber** for cooling and lubrication of mechanical seals;

**Chambre d'huile** pour le refroidissement et la lubrification des garnitures mécaniques;

**Cámara de aceite** para la refrigeración y la lubricación de los sellos mecánicos.

Anello tenuta radiale  
Radial lip seal ring  
Bague d'étanchéité radiale  
Anillo de sello radial

**NBR  
(Viton)**

Bussola protezione albero  
Shaft protection sleeve  
Chemise de protection d'arbre  
Camisa de protección del eje

**AISI  
316**

**Girante arretrata** con ampio passaggio libero  
**Backward impeller** with large free passage

**Roue arrière** avec grand passage libre

**Impulsor hacia atrás** con gran paso libre.

| NR. | DESCRIPTION       | MATERIAL     |
|-----|-------------------|--------------|
| 1   | Gruppo motore     | Ghisa        |
|     | Motor group       | Cast iron    |
|     | Groupe moteur     | Fer de fonte |
|     | Unidad de motor   | Hierro       |
| 2   | Corpo idraulico   | Ghisa        |
|     | Pump Housing      | Cast iron    |
|     | Corps de la pompe | Fer de fonte |
|     | Cuerpo hidráulico | Hierro       |
| 3   | Girante           | Ghisa        |
|     | Impeller          | Cast iron    |
|     | Roue              | Fer de fonte |
|     | Impulsor          | Hierro       |
| 4   | Albero motore     | Acciaio      |
|     | Shaft             | Steel        |
|     | Arbre moteur      | Acier        |
|     | Eje del motor     | Acero        |

| NR. | DESCRIPTION                                      | MATERIAL                   |
|-----|--|----------------------------|
| 5   | Tenuta mecc. superiore                           | Carbon graphite / Al-Oxide |
|     | Upper mech. seal                                 |                            |
|     | Haut garniture mécan.<br>Sello mecánico superior | NBR                        |
| 6   | Tenuta mecc. Inferiore                           | SiC / SiC                  |
|     | Lower mech. seal                                 |                            |
|     | Haut garniture mécan.<br>Sello mecánico inferior | NBR                        |
| 7   | Cuscinetto superiore                             |                            |
|     | Top bearing                                      |                            |
|     | Roulement supérieur<br>Cojinete superior         | 6305 2RS1                  |
| 8   | Cuscinetto inferiore                             |                            |
|     | Lower bearing                                    |                            |
|     | Roulement inférieur<br>Cojinete inferior         | 3207 2RS1                  |

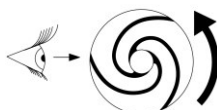
## Caratteristiche costruttive - construction data

|  |  |
|--|--|
| <b>Costruzione Motore - Motor Frame</b>                              | 173  |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |
| <b>Classe di Isolamento - Insulation Class</b>                       | H (180°C)  |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent  |
| <b>Avvolgimento statore - Stator winding</b>                         | 3~PH - Threephase<br>Δ / Y<br>[V] 3~400/690  |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> | Optional   |
| <input type="radio"/> Bimetallico - Bimetal disc                     | <input checked="" type="checkbox"/> 155°C  |
| <input type="radio"/> Solo su richiesta - on request only            | PT100 <input type="checkbox"/>   |
| <input type="radio"/> Solo su richiesta - on request only            | PTC <input type="checkbox"/>   |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid   |
| <b>Camera olio - Oil chamber</b>                                     | Si - Yes   |
| <b>Protezione Tenuta - Leakage protection</b>                        | Optional   |
| <b>Tipo girante - Impeller</b>                                       | Vortex   |
| <b>DN mandata - Discharge</b>  | DN 65 Pn6/16    Orizzontale - Horizontal   |
| <b>Controflangia filettata - Threaded counterflange</b>              | Si - Yes    G 2"1/2  |
| <b>DN aspirazione / Suction</b>                                      | [mm]    Ø 65   |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard Vernice all'acqua - Water paint / 30µm<br>Opaco Nero - Opaque Black<br>Optional Epossidica - Epoxy coating / 80µm<br>RAL 7015 - Grigio - Grey |

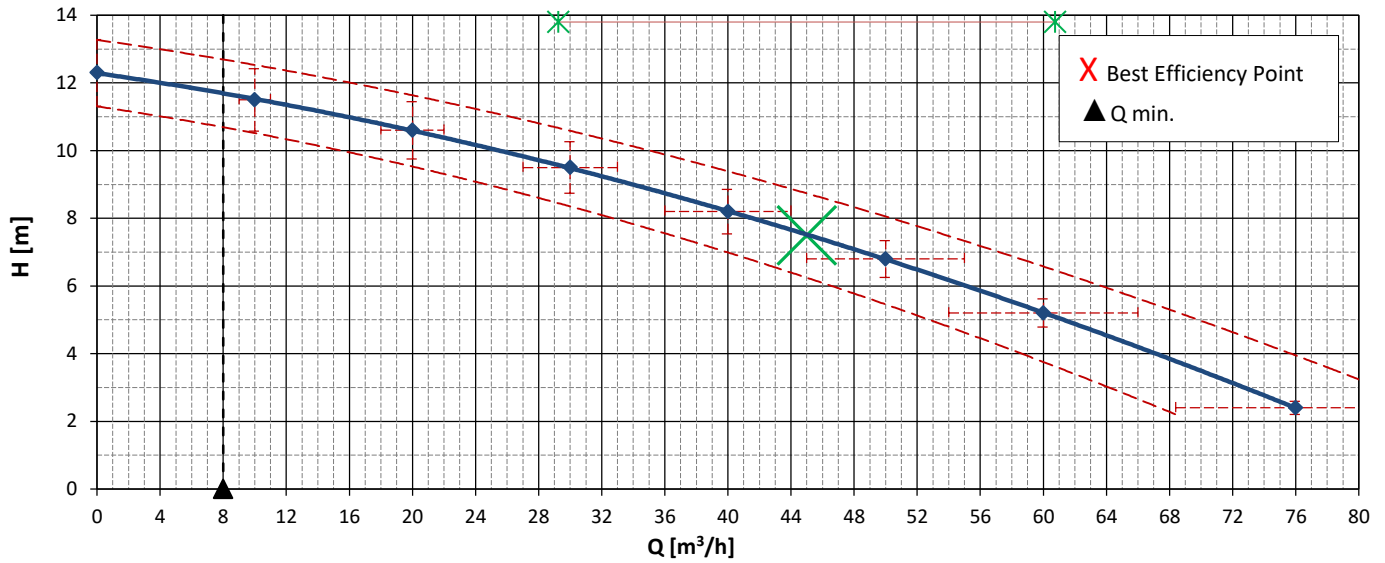
## Limiti di utilizzo - Operating Limits

|   |                           |
|---|---------------------------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C]    ≤ 40              |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] ~ 1 |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s] ~ 1  |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l]    < 200           |
| <b>PH liquido pompato - PH value</b>                                | 6 ÷ 12                    |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m]    20                 |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l]    < 1              |

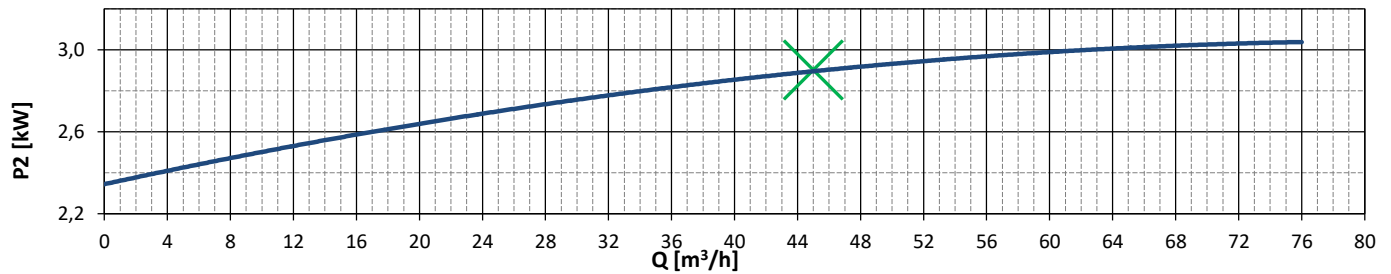
**Corretta rotazione della girante**  
**Rotation of the impeller**



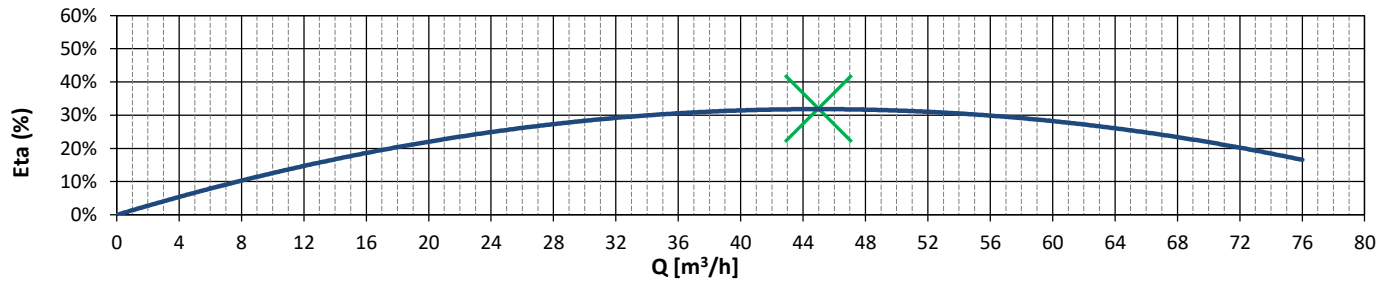
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |     |     |     |      |      |  |  |  |
|-----------------|--------------|------|------|------|-----|-----|-----|------|------|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 167  | 333  | 500 | 667 | 833 | 1000 | 1267 |  |  |  |
|                 | <b>l/s</b>   | 0    | 3    | 6    | 8   | 11  | 14  | 17   | 21   |  |  |  |
|                 | <b>m³/h</b>  | 0    | 10   | 20   | 30  | 40  | 50  | 60   | 76   |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 12,3 | 11,5 | 10,6 | 9,5 | 8,2 | 6,8 | 5,2  | 2,4  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>4,0</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>3,0</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>3,8</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,81</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>7,0</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>38,0</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 53</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 203</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>83,0</b>  |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G2,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>25</b>    |

In accordo con  
In accordance to **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C



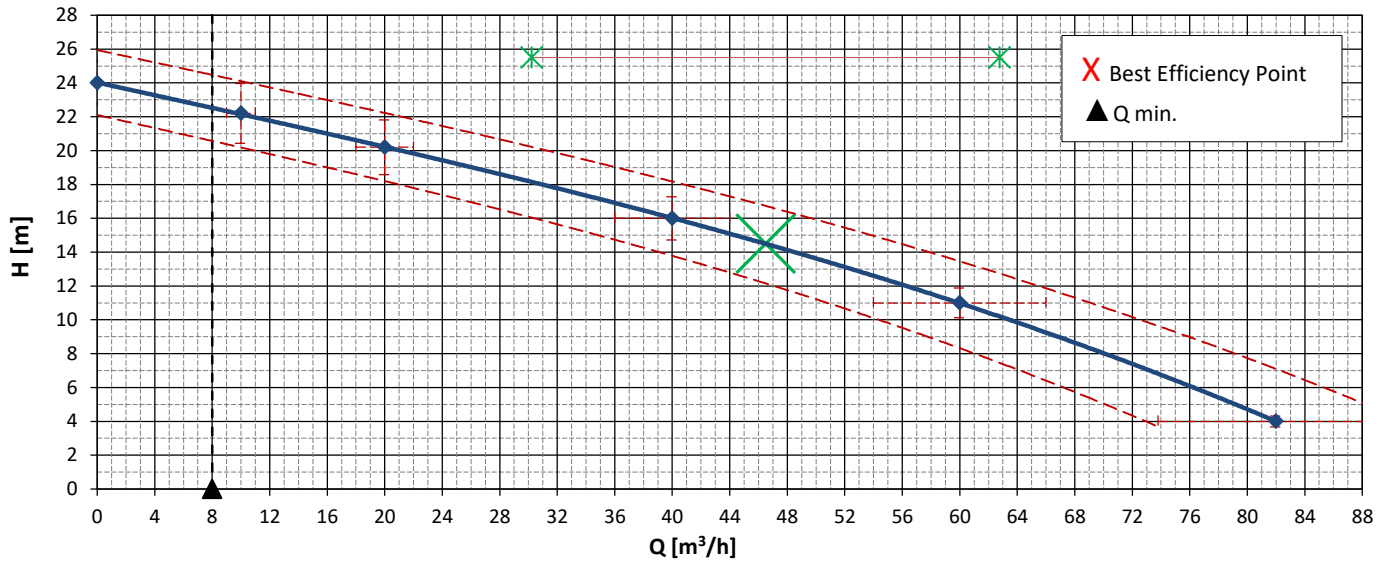
Tipo di pompa - Pump model  
**VS.65\_37.2.173**

**Poles: 2 Hz: 50**  
**r.p.m. 3000**

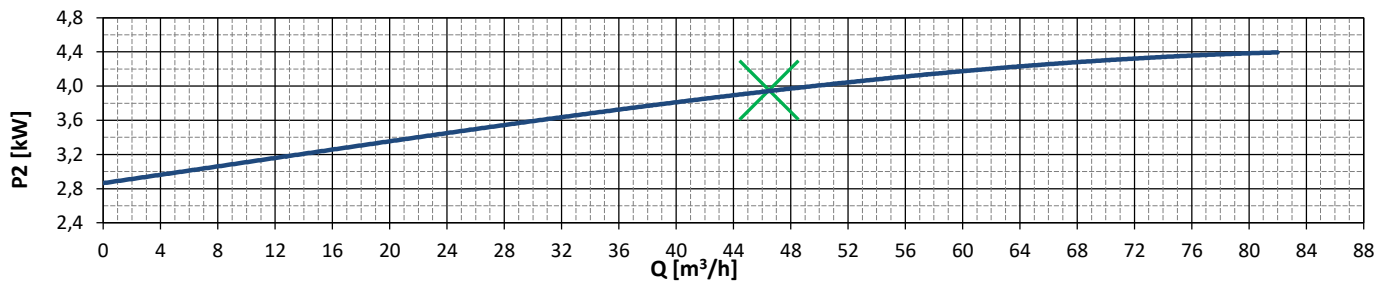
Girante Impeller  
Mandata Discharge  
**VORTEX DN 65 - G 2"<sup>1/2</sup>**

Serie 2

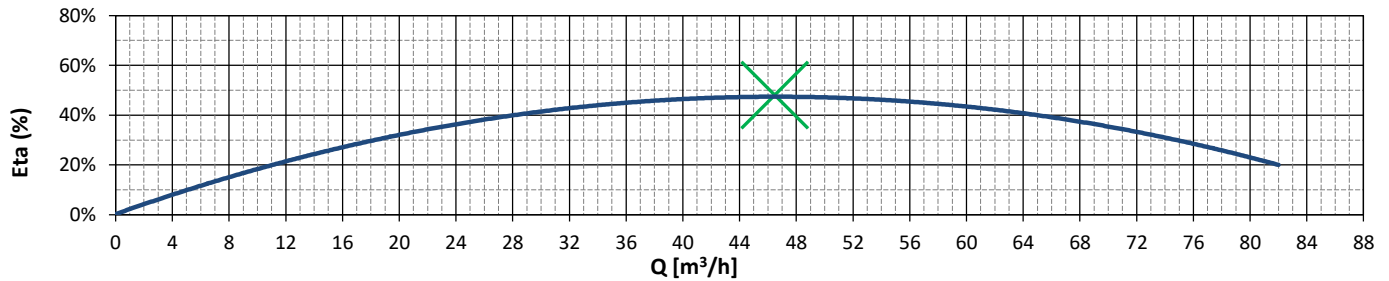
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |      |      |  |  |  |  |  |  |
|-----------------|--------------|------|------|------|------|------|------|--|--|--|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 167  | 333  | 667  | 1000 | 1367 |  |  |  |  |  |  |
|                 | <b>l/s</b>   | 0    | 3    | 6    | 11   | 17   | 23   |  |  |  |  |  |  |
|                 | <b>m³/h</b>  | 0    | 10   | 20   | 40   | 60   | 82   |  |  |  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 24,0 | 22,2 | 20,2 | 16,0 | 11,0 | 4,0  |  |  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>4,4</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>4,4</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>5,5</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,83</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>10,0</b>       |
| Corrente di spunto<br>Starting current | [A] | <b>33,0</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 60</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 161</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>80,0</b>  |

|  |  |                  |
|--|--|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>10m 4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>        |

In accordo con / In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C



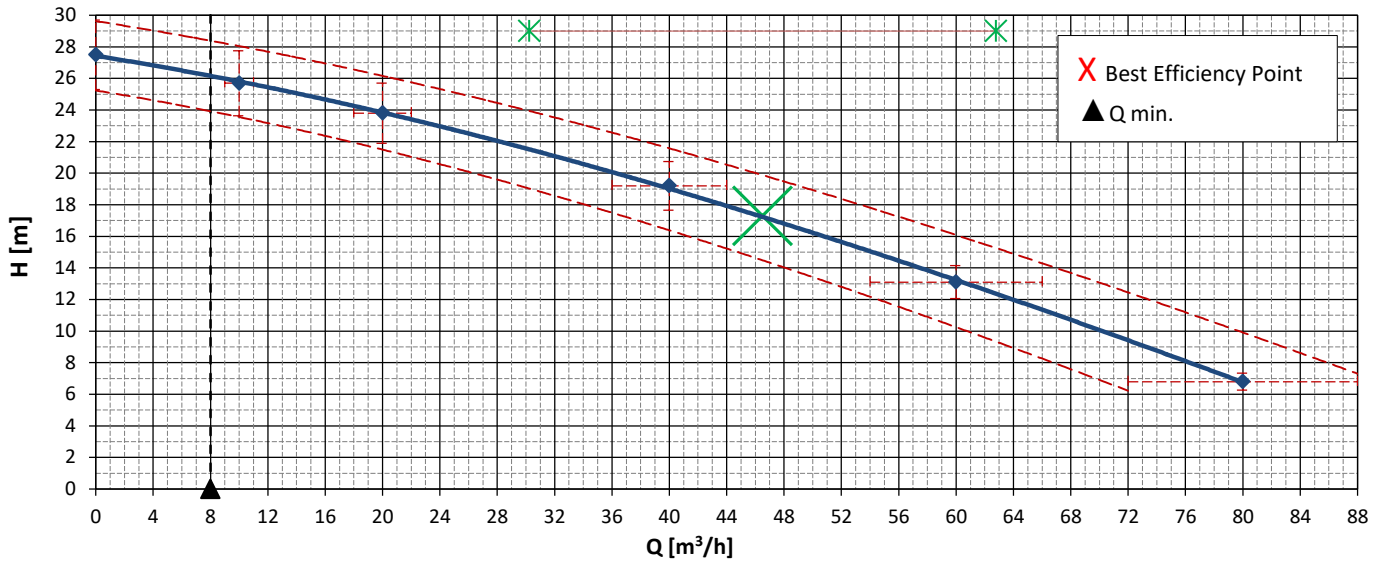
Tipo di pompa - Pump model  
**VS.65\_55.2.173**

**Poles: 2 Hz: 50**  
**r.p.m. 3000**

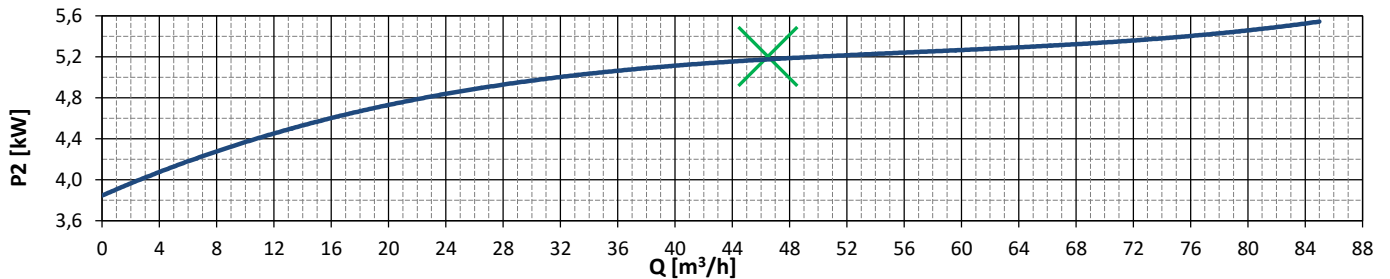
Girante Impeller  
Mandata Discharge  
**VORTEX DN 65 - G 2"1/2**

Serie 1

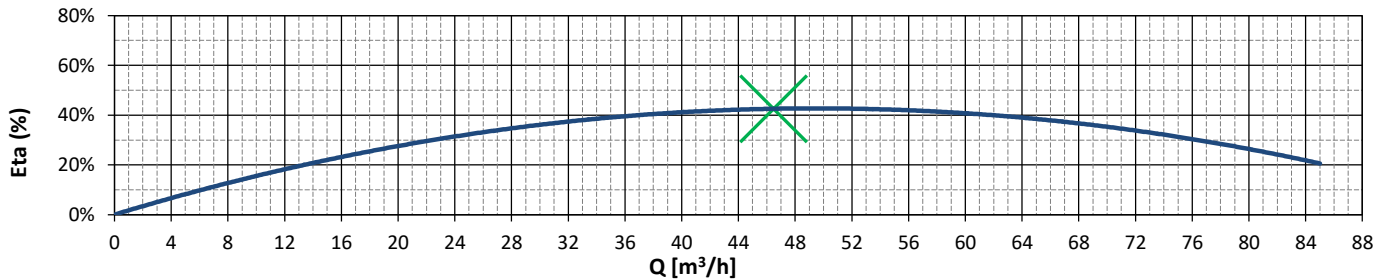
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |      |      |      |      |      |  |  |  |  |  |
|----------|-------|------|------|------|------|------|------|--|--|--|--|--|
| FLOW (Q) | l/min | 0    | 167  | 333  | 667  | 1000 | 1333 |  |  |  |  |  |
|          | l/s   | 0    | 3    | 6    | 11   | 17   | 22   |  |  |  |  |  |
|          | m³/h  | 0    | 10   | 20   | 40   | 60   | 80   |  |  |  |  |  |
| HEAD (H) | m     | 27,5 | 25,7 | 23,8 | 19,2 | 13,1 | 6,8  |  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>7,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>5,5</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>7,0</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,81</b> |

**Model T**

|  |     |                     |
|--|-----|---------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b>   |
| Avviamento<br>Starting                 |     | <b>D.O.L. - S/D</b> |
| Corrente Nominale<br>Rated current     | [A] | <b>12,5</b>         |
| Corrente di spunto<br>Starting current | [A] | <b>65,0</b>         |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 60</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 174</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>85,0</b>  |

|  |  |                      |
|--|--|----------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>            |
| Cavo<br>Cable                              |  | <b>4G2,5 - 7G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>            |

In accordo con / In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C

## Dimensioni d'ingombro - overall dimensions

**S** Installazione mobile - Installation mobile - Installation mobile - Instalación móvil

Dimensione imballo  
Packaging dimensions

Misure - Measures [mm]

| A   | B   | C   |
|-----|-----|-----|
| 720 | 370 | 300 |

**FC** Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento

**8FC00003** KG: 10

|   |  |
|---|--|
| 1 | Supporto tubi guida da 3/4" / 3/4" guide rails bracket |
| 2 | Piede orizzontale 2"1/2 / Horizontal foot - 2"1/2 out  |
| 3 | Slitta completa / Sliding bracket complete             |
| 4 | Esclusi dalla fornitura / Not supplied                 |

|   |     |
|---|-----|
| D | 260 |
| E | 175 |
| F | 195 |

**ACCESSORI - ACCESSORIES - ACCESORIES - ACCESORIOS**

|           |  |   |                   |
|-----------|--|---|-------------------|
| FC        |  | <ul style="list-style-type: none"> <li>- Dispositivo di accoppiamento DN 65 - uscita G 2"1/2</li> <li>- DN65 Coupling device - outlet 2"1/2</li> <li>- Dispositif de couplage DN65<sup>2</sup> - sortie G 2"1/2</li> <li>- Dispositivo de acoplamiento DN65 - salida G 2"1/2</li> </ul>               | 8FC000003         |
| AT 65     |  | <ul style="list-style-type: none"> <li>- Adattatore per dispositivo di accoppiamento della concorrenza</li> <li>- Adapter for competitors foot coupling devices</li> <li>- Adaptateur pour pied d'assise du concurrent</li> <li>- Adaptador para dispositivo de acoplamiento de competidor</li> </ul> | 2SB000006         |
|           |  | <ul style="list-style-type: none"> <li>- Catena ferro zincato - galvanized Iron</li> <li>- Chain fer galvanisé - hierro galvanizado</li> </ul>  | 2SC000019         |
|           |  | <ul style="list-style-type: none"> <li>- Chaîne Acciaio - Stainless steel</li> <li>- Cadena acier inox - acero inox</li> </ul>  | 2SC000032         |
| TBV       |  | <ul style="list-style-type: none"> <li>- Valvola di ritegno a palla filettata</li> <li>- Threaded valve</li> <li>- Vanne fileté</li> <li>- Válvula roscada</li> </ul>   | G 2"1/2 4BV000004 |
| HF        |  | <ul style="list-style-type: none"> <li>- Regolatore di livello per acque reflue</li> <li>- Level switch for sewage</li> <li>- Interrupteur de niveau pour eaux usées</li> <li>- Interruptor de nivel para aguas residuales</li> </ul>   | [10 mt] 3CS000007 |
| SHELL     |  | <ul style="list-style-type: none"> <li>- Contrappeso SHELL per galleggiante</li> <li>- Counterweight SHELL for level switch</li> <li>- Cotrepoids SHELL pour interrupteur de niveau</li> <li>- Contrapeso para interruptor de nivel</li> </ul>  | 3CS000021         |
| START BOX |  | Cassetta portacondensatore per avviamento di 1 pompa monofase<br>Capacitor box for 1 singlephase pump starting  | M 5EC000001       |
|           |  | boîte de condensateur pour démarrage de 1 pompe monophasé<br>Caja de condensadores para arranque de 1 bomba monofásica  | MA 5EC000002      |
|           |  | M: Senza galleggiante - without float switch - sans interrupteur à flotteur - sin flotador  |                   |
|           |  | MA: Con galleggiante - with float switch - avec interrupteur à flotteur - con flotador  |                   |

**SELEZIONE QUADRO DI CONTROLLO - CONTROL PANEL SELECTION**

|     | Pole | Pumps              | Alim. [V] | P <sub>2</sub> [KW] | In [A] | Avv. Start. |
|-----|------|--------------------|-----------|---------------------|--------|-------------|
| 135 | 4    | VS.65_11.4.T.135   | 1~230     | 1,1                 | 3,2    | DOL         |
|     |      | VS.65_18.4.T.135   | 3~400     | 1,8                 | 4,4    | DOL         |
|     |      | VS.65_22.4.T.135   | 3~400     | 2,2                 | 5,4    | DOL         |
|     | 2    | VS.65_11.2.M.135   | 1~230     | 1,1                 | 7,3    | 30+30       |
|     |      | VS.65_11.2.T.135   | 3~400     | 1,1                 | 3      | DOL         |
|     |      | VS.65_18.2.T.135   | 3~400     | 1,8                 | 4,4    | DOL         |
|     |      | VS.65_22.2.T.135   | 3~400     | 2,2                 | 5,5    | DOL         |
| 173 | 4    | VS.65_30.2.T.135   | 3~400     | 3,0                 | 6,5    | DOL         |
|     |      | VS.65_30.4.T_173   | 3~400     | 3,0                 | 7,0    | DOL         |
|     | 2    | VS.65_37.2.T.173   | 3~400     | 3,7                 | 10,0   | DOL         |
|     |      | VS.65_55.2.T.173_S | 3~400     | 5,5                 | 12,5   | S/D         |
|     |      | VS.65_55.2.T.173   | 3~400     | 5,5                 | 12,5   | DOL         |

**- ECH -**  
**ELECTROMECHANICAL**

|             |           | 1 PUMP |  | 2 PUMPS |   |
|-------------|-----------|--------|--|---------|---|
|             |           |        |  |         |   |
| ECH1.M-14   | 5EC000081 |        |  |         |   |
| ECH1.T-7    | 5EC000005 | •      |  |         |   |
| ECH1.T-14   | 5EC000007 |        |  |         |   |
| ECH1.S/D_14 | 5EC000105 |        |  |         |   |
| ECH2.M-14   | 5EC000032 |        |  | •       |   |
| ECH2.T-7    | 5EC000029 |        |  | •       |   |
| ECH2.T-14   | 5EC000031 |        |  | •       |   |
| ECH2.S/D_14 | 5EC000107 |        |  |         | • |

**- ECL -**  
**ELECTRONIC**

|           |           | 1 PUMP |  | 2 PUMPS |   |
|-----------|-----------|--------|--|---------|---|
|           |           |        |  |         |   |
| ECL1.M-16 | 5EC000081 |        |  |         |   |
| ECL1.T-15 | 5EC000083 | •      |  |         |   |
| ECL2.M-16 | 5EC000082 |        |  | •       |   |
| ECL2.T-15 | 5EC000084 |        |  |         | • |





**Poli - Poles Modelli - Models**

|          |                             |
|----------|-----------------------------|
| <b>4</b> | <b>VS.80_11/15/22.4.135</b> |
| <b>2</b> | <b>VS.80_22/30.135</b>      |

**IT**

Elettropompa sommersibile di robusta costruzione fabbricata completamente in ghisa. Camera olio interposta tra gruppo motore e gruppo pompa. Doppia tenuta meccanica, entrambe interne alla camera olio, non a diretto contatto con il liquido pompato e protette da un anello V-ring posizionato dietro alla girante.

**EN**

Robust construction submersible pump completely made in cast iron, with oil chamber interposed between motor unit and pump unit. Mechanical seals inside the oil chamber not in direct contact with the pumped liquid and protected by a V-Ring positioned on the back of the impeller.

**FR**

Pompe submersible de construction robuste entièrement en fonte, avec chambre à huile intercalée entre le moteur et le groupe pompe. Les garnitures mécaniques à l'intérieur de la chambre d'huile ne sont pas en contact direct avec le liquide pompé et sont protégées par un V-Ring placé à l'arrière de la roue.

**ES**

Bomba sumergible de construcción robusta completamente en hierro fundido, con cámara de aceite interpuesta entre la unidad del motor y la unidad de la bomba. Sellos mecánicos dentro de la cámara de aceite que no están en contacto directo con el líquido bombeado y están protegidos por un V-Ring colocado en la parte posterior del impulsor.

**Poli - Poles Modelli - Models**

|          |                             |
|----------|-----------------------------|
| <b>4</b> | <b>VS.80_30/40.4.173</b>    |
| <b>2</b> | <b>VS.80_37/55/75.2.173</b> |

**IT**

Elettropompa sommersibile di robusta costruzione fabbricata completamente in ghisa, con camera olio interposta tra gruppo motore e gruppo pompa. Tenute meccaniche in camera olio non a diretto contatto del liquido pompato e protette da un anello di tenuta radiale con bussola in AISI 316 posizionato dietro alla girante.

**EN**

Robust construction submersible pump completely made in cast iron, with oil chamber interposed between motor unit and pump unit. Mechanical seals inside the oil chamber not in direct contact with the pumped liquid and protected by a lip seal ring with AISI 316 sleeve, positioned on the back of the impeller.

**FR**

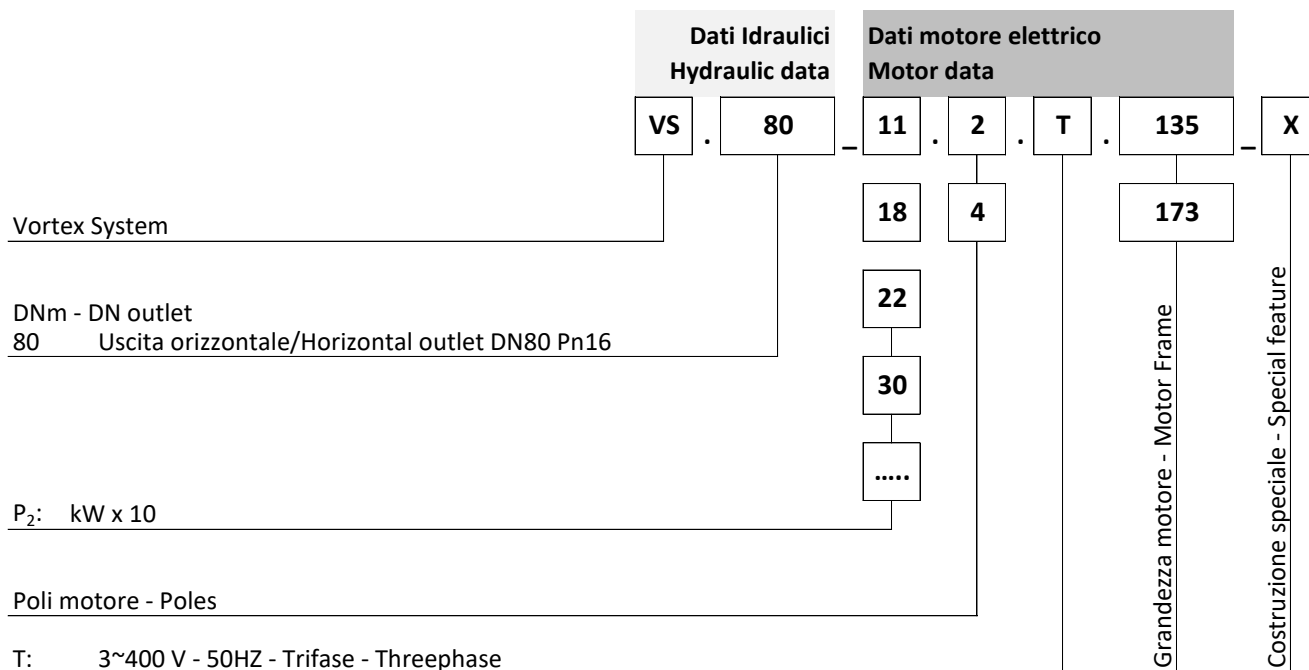
Pompe submersible de construction robuste entièrement en fonte, avec chambre à huile intercalée entre le groupe moteur et le groupe pompe. Des garnitures mécaniques isolées dans la chambre d'huile ne sont pas en contact direct avec le liquide pompé et protégées par un anneau d'étanchéité avec manchon AISI 316, positionnées à l'arrière de la roue.

**ES**

Bomba sumergible de construcción robusta completamente en hierro fundido, con cámara de aceite interpuesta entre la unidad del motor y la unidad de la bomba. Sellos mecánicos en la cámara de aceite que no están en contacto directo con el líquido bombeado y protegidos por un corteco con un casquillo hecho de AISI 316 colocado detrás del impulsor.


**VS.80\_135**

**VS.80\_173**

**IDENTIFICAZIONE - IDENTIFICATION**

**LISTA MODELLI - RANGE OF PRODUCTS**

| Grandezza Motore<br>Motor Frame | Poles | Alimentazione<br>Power supply    | P <sub>2</sub><br>[kW] | Modelli<br>Models | Avviamento<br>Starting | Cavo alimentazione / segnali<br>Power / signals cable |                                  |
|---------------------------------|-------|----------------------------------|------------------------|-------------------|------------------------|---|----------------------------------|
|                                 |       |                                  |                        |                   |                        | [m]   | Type                             |
| 135                             | 4     | 3ph                              | 1,1                    | VS.80_11.4T_135   | D.O.L.                 | 10  | H07RN-F 4G1,5 / H07RN8-F 7G1,5   |
|                                 |       |                                  | 1,5                    | VS.80_15.4T_135   | D.O.L.                 | 10  | H07RN-F 4G1,5 / H07RN8-F 7G1,5   |
|                                 |       |                                  | 2,2                    | VS.80_22.4T_135   | D.O.L.                 | 10  | H07RN-F 4G1,5 / H07RN8-F 7G1,5   |
|                                 | 2     |                                  | 2,2                    | VS.80_22.2T_135   | D.O.L.                 | 10  | H07RN-F 4G1,5 / H07RN8-F 7G1,5   |
|                                 |       |                                  | 3,0                    | VS.80_30.2T_135   | D.O.L.                 | 10  | H07RN-F 4G1,5 / H07RN8-F 7G1,5   |
| 173                             | 4     | 3ph                              | 3,0                    | VS.80_30.4T_173   | D.O.L.                 | 10  | H07RN-F 4G2,5 / + H07RN-F 4G1,5  |
|                                 |       |                                  | 4,0                    | VS.80_40.4T_173   | D.O.L.                 | 10  | H07RN-F 4G2,5 / + H07RN-F 4G1,5  |
|                                 | 2     | 3ph                              | 3,7                    | VS.80_37.2T_173   | D.O.L.                 | 10  | H07RN-F 4G2,5 / + H07RN-F 4G1,5  |
|                                 |       |                                  | 5,5                    | VS.80_55.2T_173   | D.O.L.                 | 10  | H07RN-F 4G2,5 / + H07RN-F 4G1,5  |
|                                 |       |                                  |                        |                   | S.D.                   | 10  | H07RN8-F 7G1,5 / + H07RN-F 4G1,5 |
|                                 |       |                                  | 7,5                    | VS.80_75.2T_173   | D.O.L.                 | 10  | H07RN-F 4G2,5 / + H07RN-F 4G1,5  |
| S.D.                            | 10    | H07RN8-F 7G1,5 / + H07RN-F 4G1,5 |                        |                   |                        |   |                                  |

## Caratteristiche costruttive - construction features

### Anello per movimentazione pompa

Shackel to handle the pump  
Manille pour lever la pompe  
Grillete para levantar la bomba

### Pastiglia termica

Built in Thermal protector  
Protecteur thermique intégré  
Protector térmico incorporado

10 m - H07RN-F

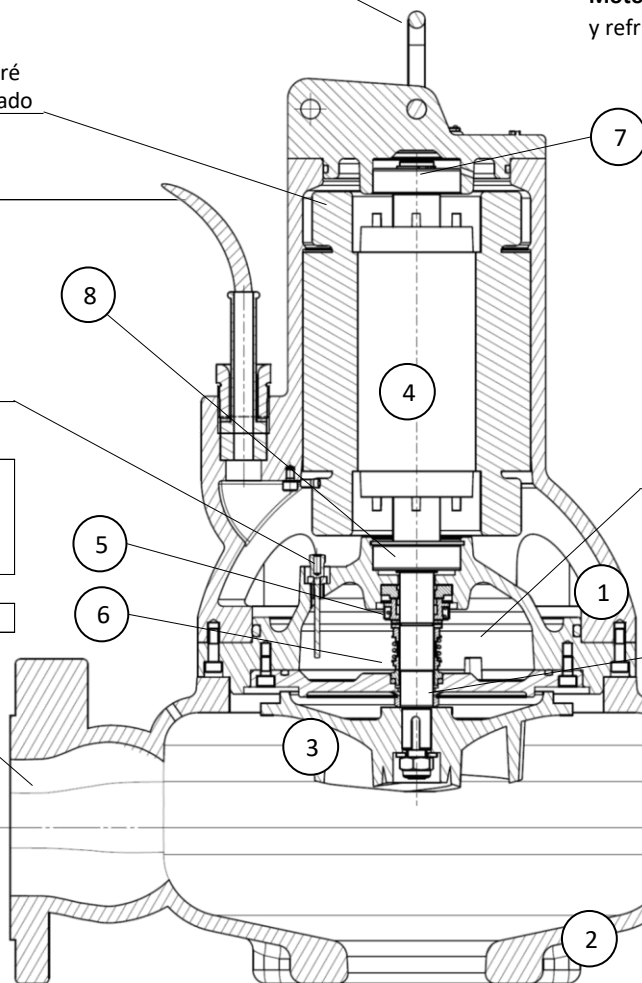
### OPTIONAL

Sonda Olio  
Oil Probe  
Sonde d'huile  
Sonda de aceite

| Viti<br>Screws<br>Des vis<br>Empulgueras | Quality<br>A2 |
|--|---------------|
|--|---------------|

| O-RINGS | NBR |
|---------|-----|
|---------|-----|

DNm: DN80 PN16



**Motore asincrono** in classe di isolamento F (155°C), a secco e raffreddato dal liquido circostante;

**Asynchronous dry motor**, insulation class F(155°C), cooled by the surrounding liquid;

**Moteur asynchrone**, classe d'isolation F (155°C), sec et refroidi par le liquide environnant;

**Motor asíncrono**, aislamiento clase F (155 ° C), seco y refrigerado por el líquido que rodea.

**Camera olio** per il raffreddamento e la lubrificazione delle tenute meccaniche;  
**Oil chamber** for cooling and lubrication of mechanical seals;  
**Chambre d'huile** pour le refroidissement et la lubrification des garnitures  
**Cámara de aceite** para la refrigeración y la lubricación de los sellos mecánicos.

| V-Ring | NBR<br>(Viton) |
|--------|----------------|
|--------|----------------|

**Girante arretrata** con ampio passaggio libero  
**Backward impeller** with large free passage

**Roue arrière** avec grand passage libre

**Impulsor hacia atrás** con gran paso libre.

| NR. | DESCRIPTION       | MATERIAL     |
|-----|-------------------|--------------|
| 1   | Gruppo motore     | Ghisa        |
|     | Motor group       | Cast iron    |
|     | Groupe moteur     | Fer de fonte |
|     | Unidad de motor   | Hierro       |
| 2   | Corpo idraulico   | Ghisa        |
|     | Pump Housing      | Cast iron    |
|     | Corps de la pompe | Fer de fonte |
|     | Cuerpo hidráulico | Hierro       |
| 3   | Girante           | Ghisa        |
|     | Impeller          | Cast iron    |
|     | Roue              | Fer de fonte |
|     | Impulsor          | Hierro       |
| 4   | Albero motore     | Acciaio      |
|     | Shaft             | Steel        |
|     | Arbre moteur      | Acier        |
|     | Eje del motor     | Acero        |

| NR. | DESCRIPTION             | MATERIAL                   |
|-----|-------------------------|----------------------------|
| 5   | Tenuta mecc. superiore  | Carbon graphite / Al-Oxide |
|     | Upper mech. seal        |                            |
| 6   | Haut garniture mécan.   | NBR                        |
|     | Sello mecánico superior |                            |
| 7   | Tenuta mecc. Inferiore  | SiC / SiC                  |
|     | Lower mech. seal        |                            |
| 8   | Haut garniture mécan.   | NBR                        |
|     | Sello mecánico inferior |                            |
| 7   | Cuscinetto superiore    |                            |
|     | Top bearing             | 6302 2RS1                  |
| 8   | Roulement supérieur     |                            |
|     | Cojinete superior       |                            |
| 7   | Cuscinetto inferiore    |                            |
|     | Lower bearing           | 6304 2RS1                  |
| 8   | Roulement inférieur     |                            |
|     | Cojinete inferior       |                            |

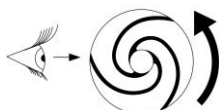
## Caratteristiche costruttive - construction data

|  |  |   |                          |
|--|--|---|--------------------------|
| <b>Costruzione Motore - Motor Frame</b>                              | 135  |   |                          |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |   |                          |
| <b>Classe di Isolamento - Insulation Class</b>                       | F (155°C)                                      |   |                          |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent                |   |                          |
| <b>Avvolgimento statore - Stator winding</b>                         | 3~PH - Threephase                              |   |                          |
|  |  | Y / Δ   |                          |
|  | [V]  | 3~400/230   |                          |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> | Optional                                       |   |                          |
| <input type="radio"/>  | Bimetallico - Bimetal disc                     | <input checked="" type="checkbox"/>                                 | 130°C                    |
| <input type="radio"/>  | Solo su richiesta - on request only            | PT100   | <input type="checkbox"/> |
| <input type="radio"/>  | Solo su richiesta - on request only            | PTC   | <input type="checkbox"/> |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid |   |                          |
| <b>Camera olio - Oil chamber</b>                                     | Si - Yes                                       |   |                          |
| <b>Protezione Tenuta - Leakage protection</b>                        | Optional                                       |   |                          |
| <b>Tipo girante - Impeller</b>                                       | Vortex   |   |                          |
| <b>DN mandata - Discharge</b>  | DN 80 Pn16                                     | Orizzontale - Horizontal  |                          |
| <b>Controflangia filettata - Threaded counterflange</b>              | Si - Yes                                       | G 3"  |                          |
| <b>DN aspirazione / Suction</b>                                      | [mm]   | DN 80   |                          |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard                                       | Vernice all'acqua - Water paint / 30μm<br>Opaco Nero - Opaque Black |                          |
|  | Optional                                       | Epossidica - Epoxy coating / 80μm<br>RAL 7015 - Grigio - Grey       |                          |

## Limiti di utilizzo - Operating Limits

|   |                       |        |
|---|-----------------------|--------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C]                  | ≤ 40   |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] | ~ 1    |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s]  | ~ 1    |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l]                | < 200  |
| <b>PH liquido pompato - PH value</b>                                |                       | 6 ÷ 12 |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m]                   | 20     |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l]                 | < 0,1  |

**Corretta rotazione della girante**  
**Rotation of the impeller**



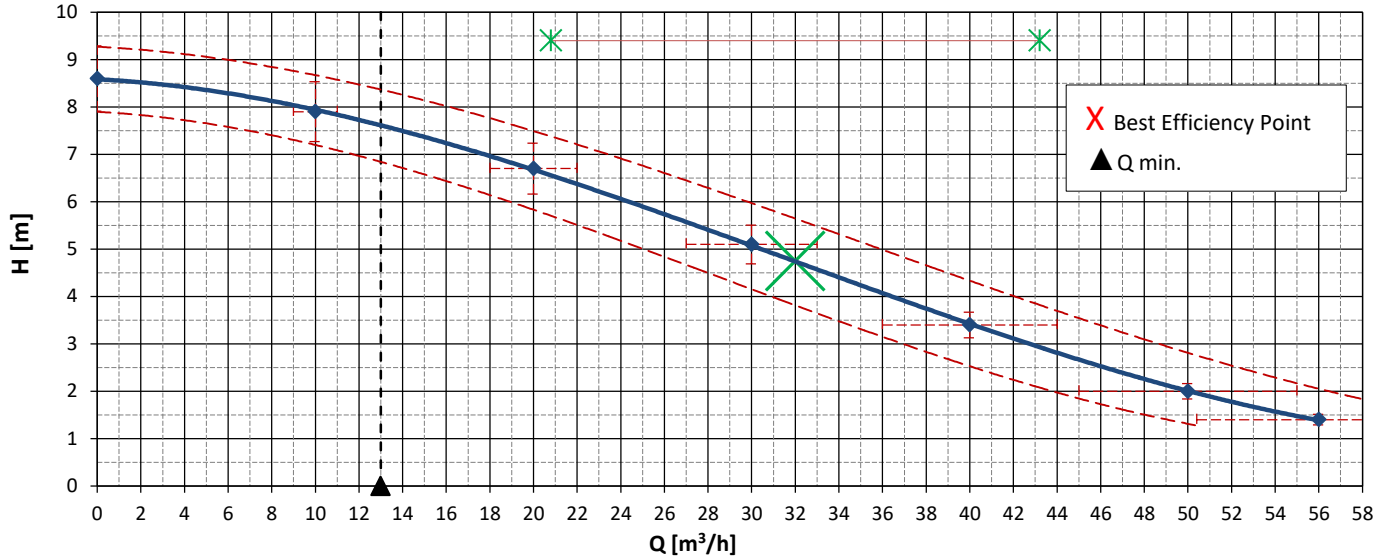


Tipo di pompa - Pump model  
**VS.80\_11.4.135**

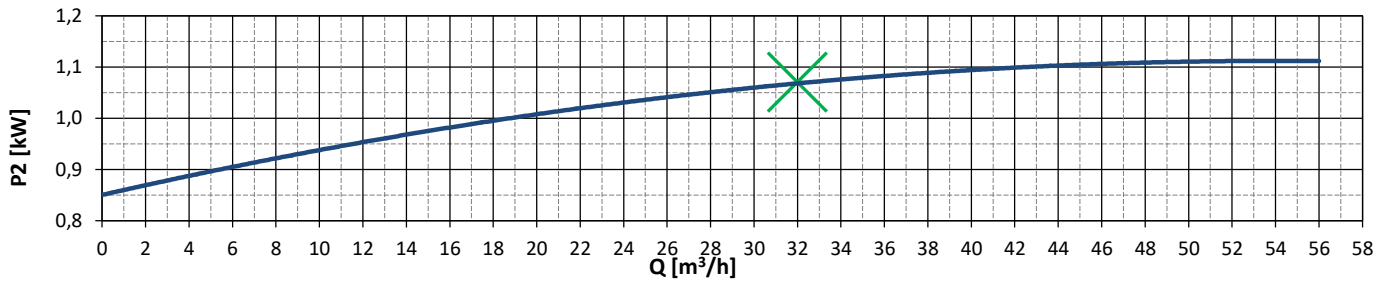
**Poles: 4 Hz: 50**  
**r.p.m. 1500**

Girante Impeller  
Mandata Discharge  
**VORTEX**  
**DN 80 - G 3"**  
Serie 1

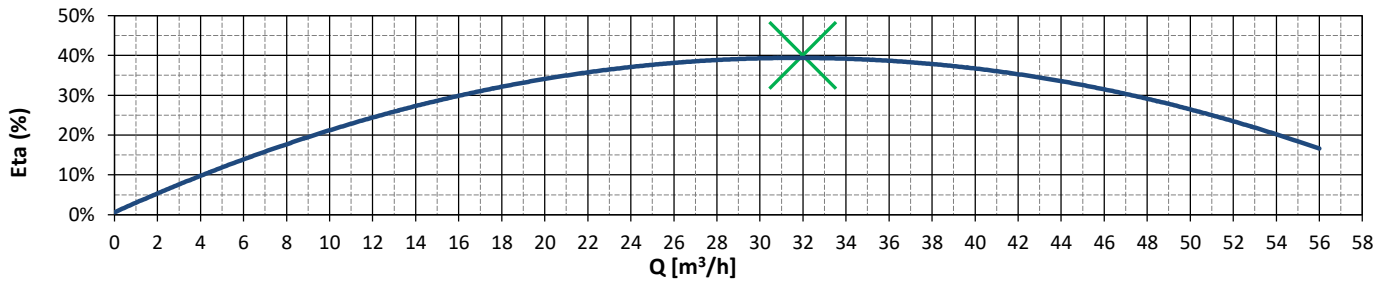
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |     |     |     |     |     |     |     |  |  |  |  |  |
|----------|-------|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|--|
| FLOW (Q) | l/min | 0   | 167 | 333 | 500 | 667 | 833 | 933 |  |  |  |  |  |
|          | l/s   | 0   | 3   | 6   | 8   | 11  | 14  | 16  |  |  |  |  |  |
|          | m³/h  | 0   | 10  | 20  | 30  | 40  | 50  | 56  |  |  |  |  |  |
| HEAD (H) | m     | 8,6 | 7,9 | 6,7 | 5,1 | 3,4 | 2,0 | 1,4 |  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>1,1</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>1,1</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>1,6</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,73</b> |

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>3,2</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>17,0</b>       |

**Model T**

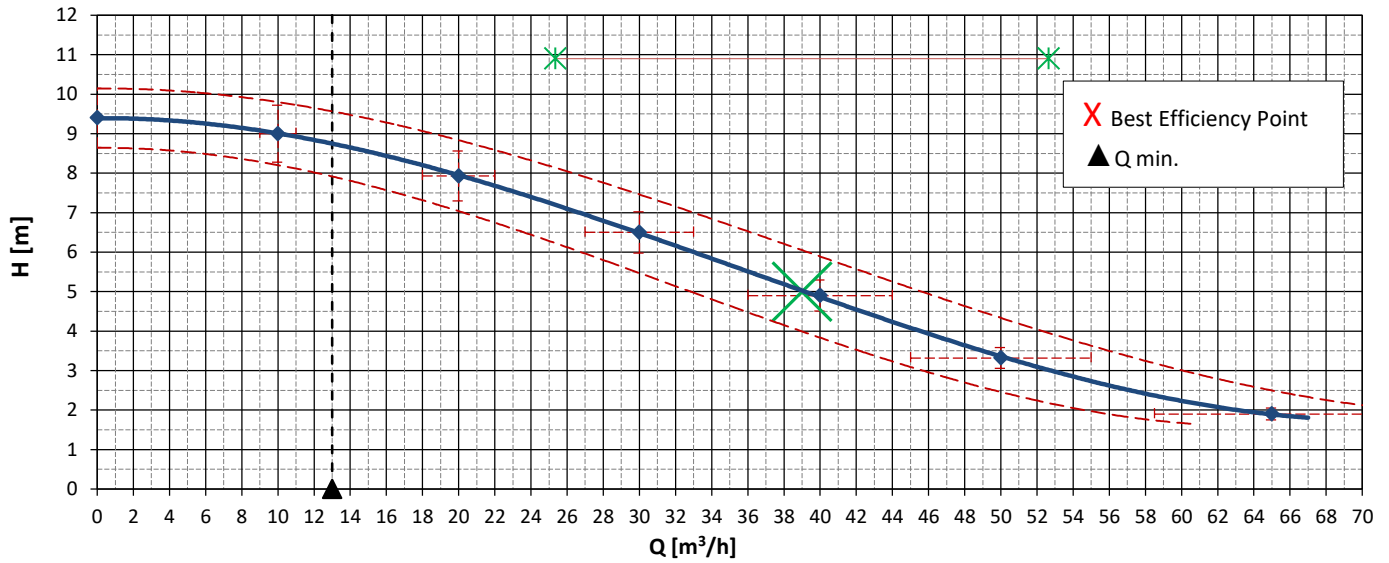
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 80</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 181</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>70,0</b>  |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>25</b>    |

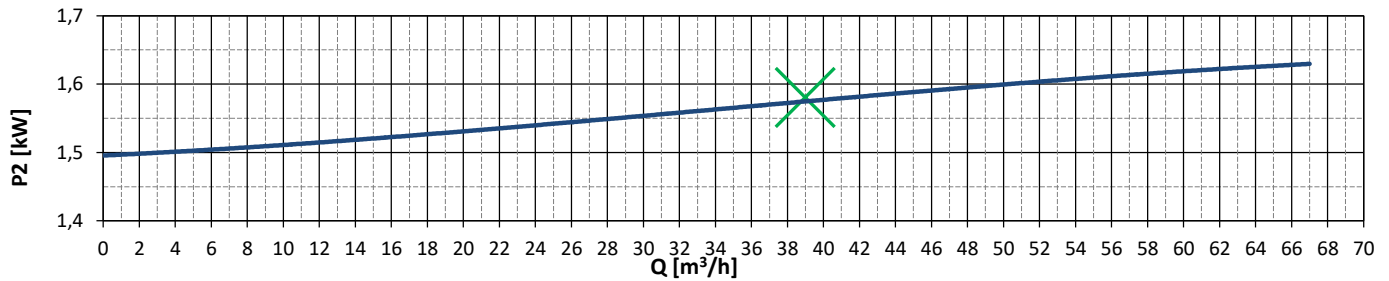
In accordo con / In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C

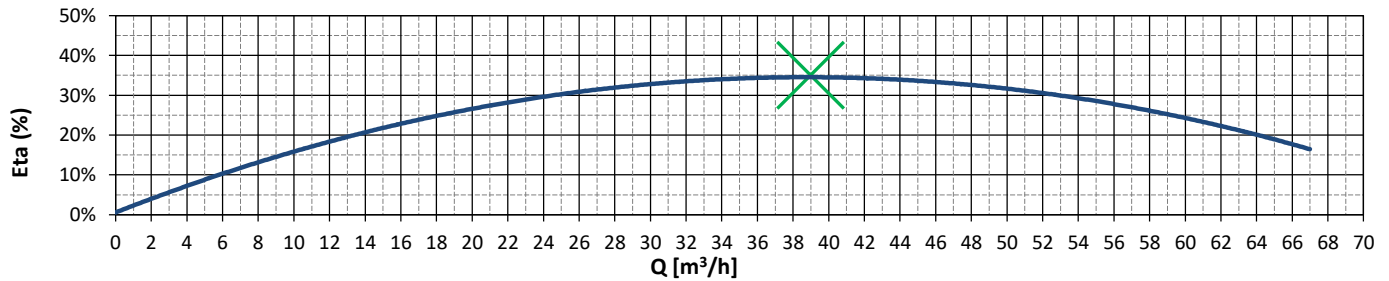
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |     |     |     |     |     |     |      |  |  |  |  |
|-----------------|--------------|-----|-----|-----|-----|-----|-----|------|--|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0   | 167 | 333 | 500 | 667 | 833 | 1083 |  |  |  |  |
|                 | <b>l/s</b>   | 0   | 3   | 6   | 8   | 11  | 14  | 18   |  |  |  |  |
|                 | <b>m³/h</b>  | 0   | 10  | 20  | 30  | 40  | 50  | 65   |  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 9,4 | 9,0 | 7,9 | 6,5 | 4,9 | 3,3 | 1,9  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>1,8</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>1,6</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>2,0</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,81</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>3,5</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>15,0</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 80</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 190</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>74,0</b>  |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>25</b>    |

In accordo con / In accordance to ISO 9906:2012 - Grade 3B (section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C



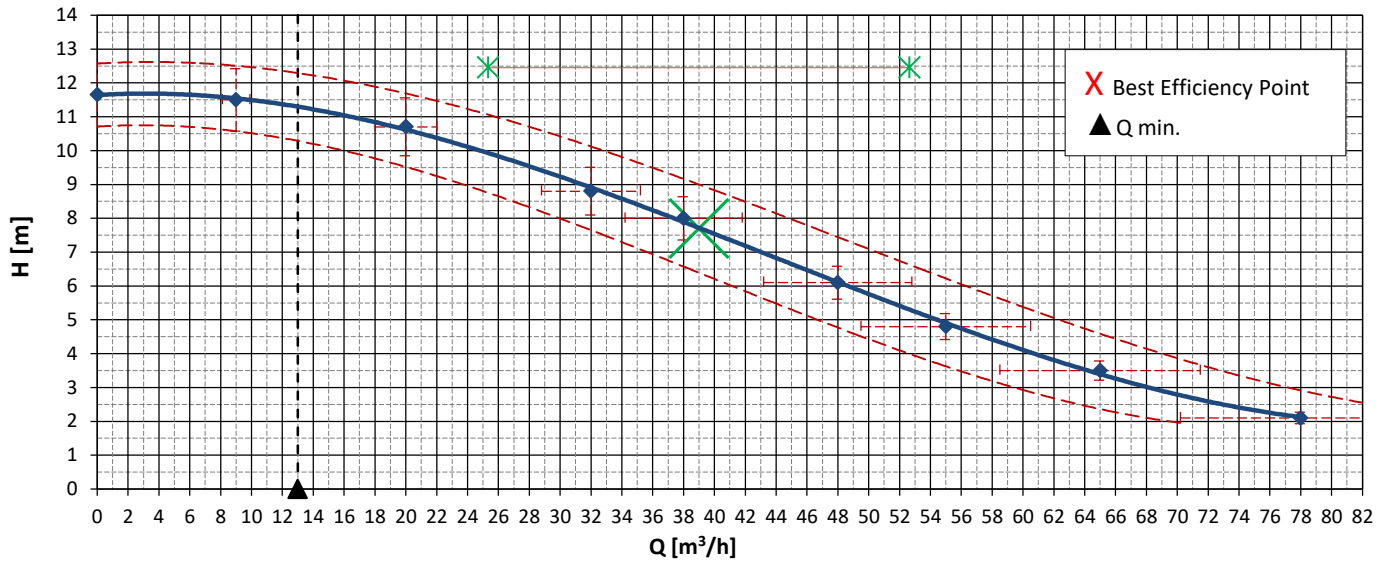
Tipo di pompa - Pump model  
**VS.80\_22.4.135**

**Poles: 4 Hz: 50**  
**r.p.m. 1500**

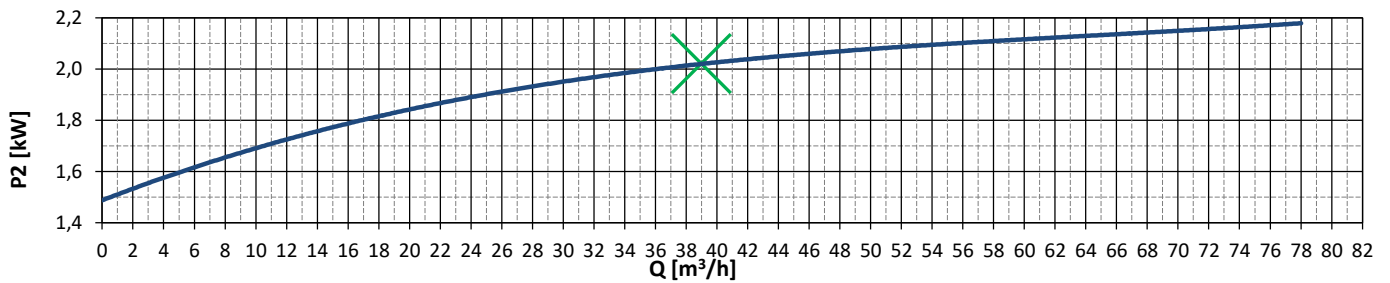
Girante Impeller  
Mandata Discharge  
**VORTEX**  
**DN 80 - G 3"**

Serie 1

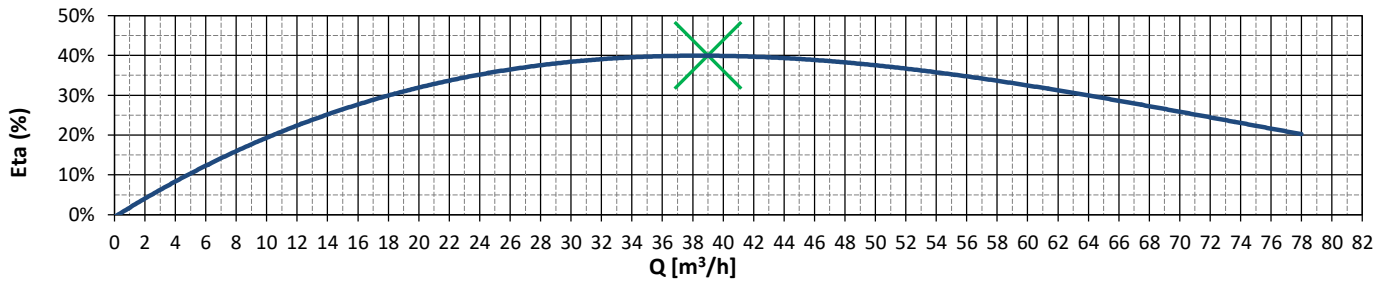
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |     |     |     |     |      |      |  |  |  |
|-----------------|--------------|------|------|------|-----|-----|-----|-----|------|------|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 150  | 333  | 533 | 633 | 800 | 917 | 1083 | 1300 |  |  |  |
|                 | <b>l/s</b>   | 0    | 3    | 6    | 9   | 11  | 13  | 15  | 18   | 22   |  |  |  |
|                 | <b>m³/h</b>  | 0    | 9    | 20   | 32  | 38  | 48  | 55  | 65   | 78   |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 11,7 | 11,5 | 10,7 | 8,8 | 8,0 | 6,1 | 4,8 | 3,5  | 2,1  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>2,2</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>2,2</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>2,9</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,81</b> |

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>5,2</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>27,0</b>       |

**Model T**

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 80</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 219</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>76,0</b>  |

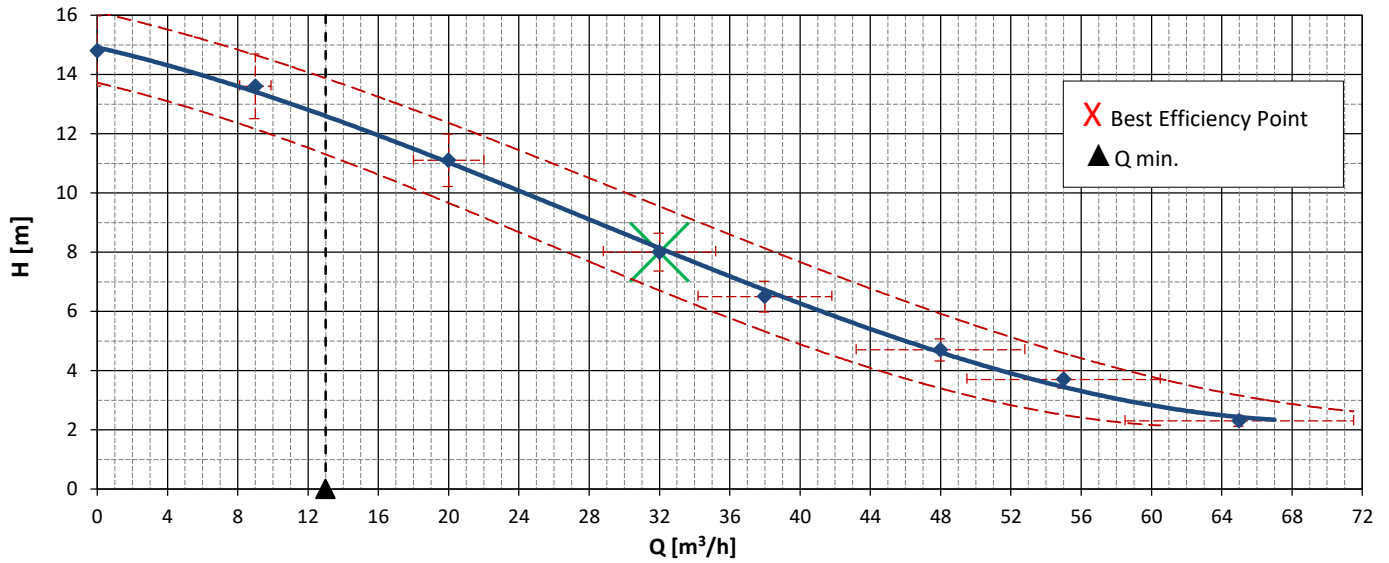
|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>    |

In accordo con  
In accordance to **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

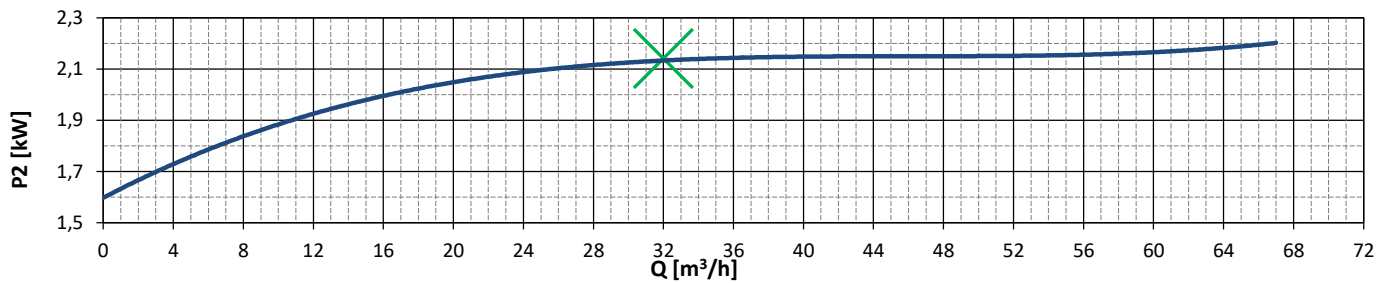
Curve per liquidi con densità/curve established for liquid with density 1  
Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C



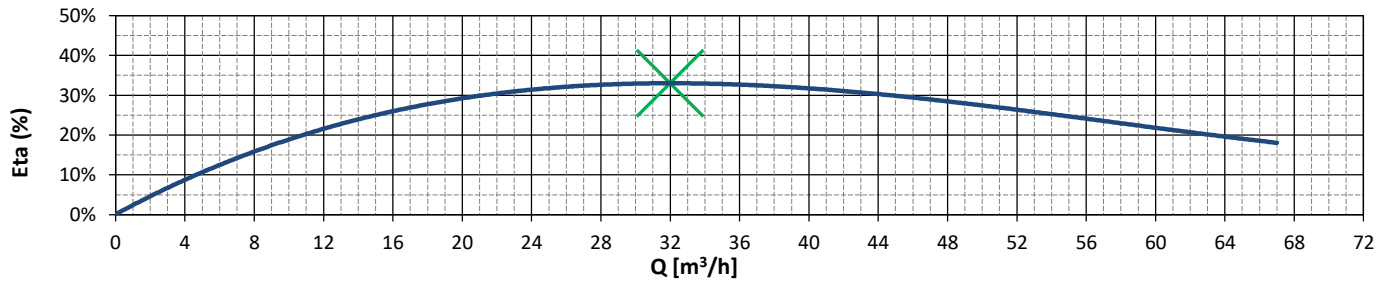
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |     |     |     |     |      |  |  |  |  |
|-----------------|--------------|------|------|------|-----|-----|-----|-----|------|--|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 150  | 333  | 533 | 633 | 800 | 917 | 1083 |  |  |  |  |
|                 | <b>l/s</b>   | 0    | 3    | 6    | 9   | 11  | 13  | 15  | 18   |  |  |  |  |
|                 | <b>m³/h</b>  | 0    | 9    | 20   | 32  | 38  | 48  | 55  | 65   |  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 14,8 | 13,6 | 11,1 | 8,0 | 6,5 | 4,7 | 3,7 | 2,3  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>2,2</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>2,2</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>2,9</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,81</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>5,3</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>26,0</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 80</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 162</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>71,0</b>  |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>    |

In accordo con  
In accordance to **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density 1  
Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C



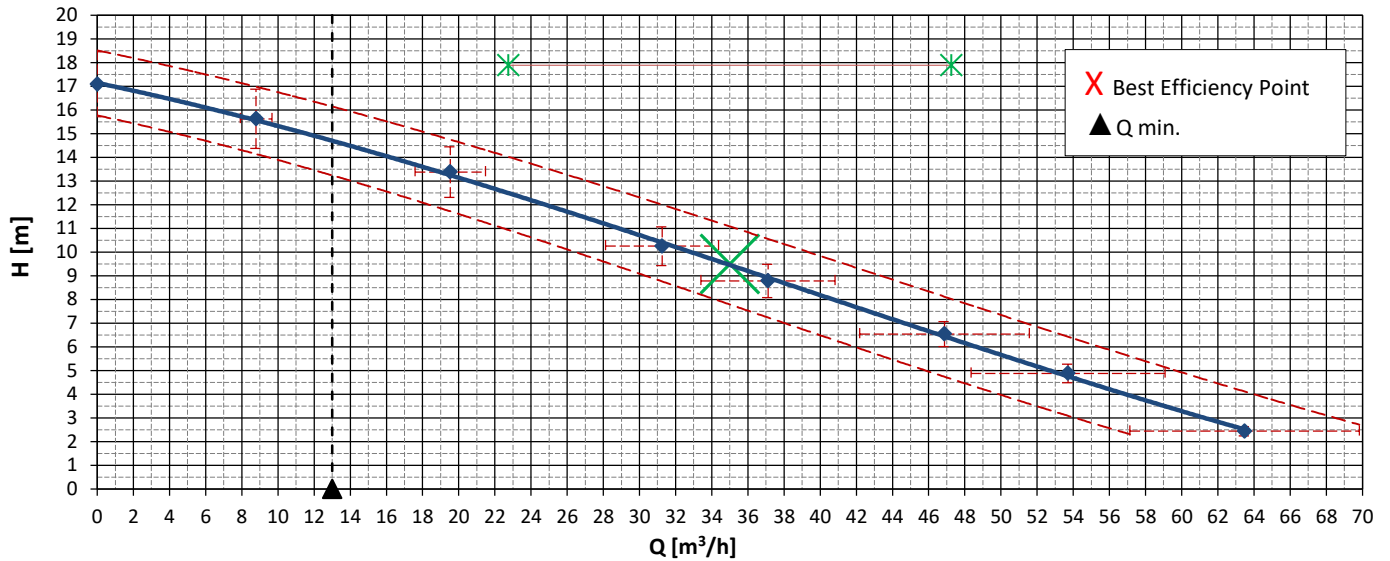
Tipo di pompa - Pump model  
**VS.80\_30.2.135**

**Poles: 2 Hz: 50**  
**r.p.m. 3000**

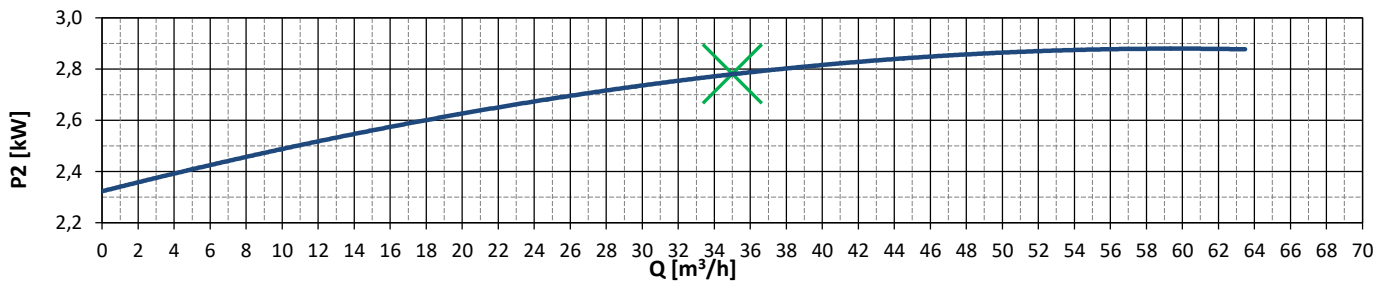
Girante Impeller  
Mandata Discharge  
**VORTEX**  
**DN 80 - G 3"**

Serie 2

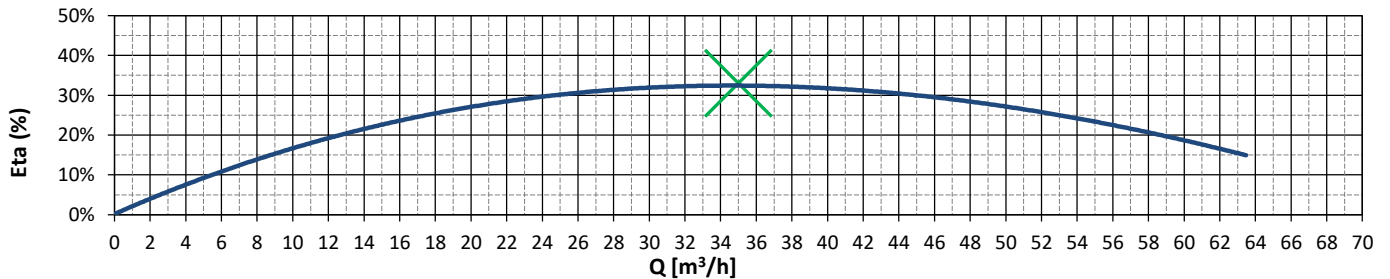
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |       |      |      |      |      |     |     |     |      |  |  |  |
|-----------------|-------|------|------|------|------|-----|-----|-----|------|--|--|--|
| <b>FLOW (Q)</b> | l/min | 0    | 146  | 326  | 521  | 619 | 781 | 895 | 1058 |  |  |  |
|                 | l/s   | 0    | 2    | 5    | 9    | 10  | 13  | 15  | 18   |  |  |  |
|                 | m³/h  | 0    | 9    | 20   | 31   | 37  | 47  | 54  | 63   |  |  |  |
| <b>HEAD (H)</b> | m     | 17,1 | 15,6 | 13,4 | 10,3 | 8,8 | 6,5 | 4,9 | 2,4  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>3,0</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>2,9</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>3,7</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,83</b> |

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>6,6</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>33,0</b>       |

**Model T**

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 80</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 168</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>75,0</b>  |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>    |

In accordo con / In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C

## Dimensioni d'ingombro - overall dimensions

**S** Installazione mobile - Installation mobile - Installation mobile - Instalación móvil

Technical drawings showing overall dimensions for the mobile installation:

- Top view: 241 (width), 203 (height), 110 (height), S3: 327 (height), S1: 647 (height)
- Front view: Ø321 (width), 411 (width), 337 (height)
- Bottom view: 411 (width), Ø337 (width), 12xØ18 (holes), R80 (radius)
- UNI EN 1092-1 DN80 PN10

Dimensione imballo  
Packaging dimensions

Misure - Measures [mm]

| A   | B   | C   |
|-----|-----|-----|
| 750 | 450 | 390 |

**FC** Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento

Technical drawings showing dimensions for the foot coupling installation:

- Top view: 564 (width), 322,5 (width), 81 (width), REF. (reference), 2xØ1"½ (holes), 171 (width), 345 (height), 108 (height), S3: 325 (height), S1: 644 (height), 756 (width)
- Front view: 2xR9 (radius), 180 (width), 95 (width), 55 (height)
- Bottom view: 66 (width), 94 (width), 321 (height), 4xØ18 (holes), R80 (radius)
- UNI EN 1092 DN80 PN10
- 220 (width), 160 (height), 327 (height)

Exploded view of the foot coupling components:

- Supporto tubi guida da 1"½
- Piede Verticale 3"
- Slitta completa
- Esclusi dalla fornitura

8FC00004      KG: 30

|   |                            |
|---|----------------------------|
| 1 | Supporto tubi guida da 1"½ |
| 2 | Piede Verticale 3"         |
| 3 | Slitta completa            |
| 4 | Esclusi dalla fornitura    |

3D diagram of the packaging box with dimensions D, E, and F:

|   |     |
|---|-----|
| D | 550 |
| E | 600 |
| F | 400 |

## Caratteristiche costruttive - construction features

Anello per movimentazione  
Shackel to handle the pump  
Manille pour lever la pompe  
Grillete para levantar la bomba

Pastiglia termica  
Built in Thermal protector  
Protecteur thermique intégré  
Protector térmico incorporado

10 m - H07RN-F

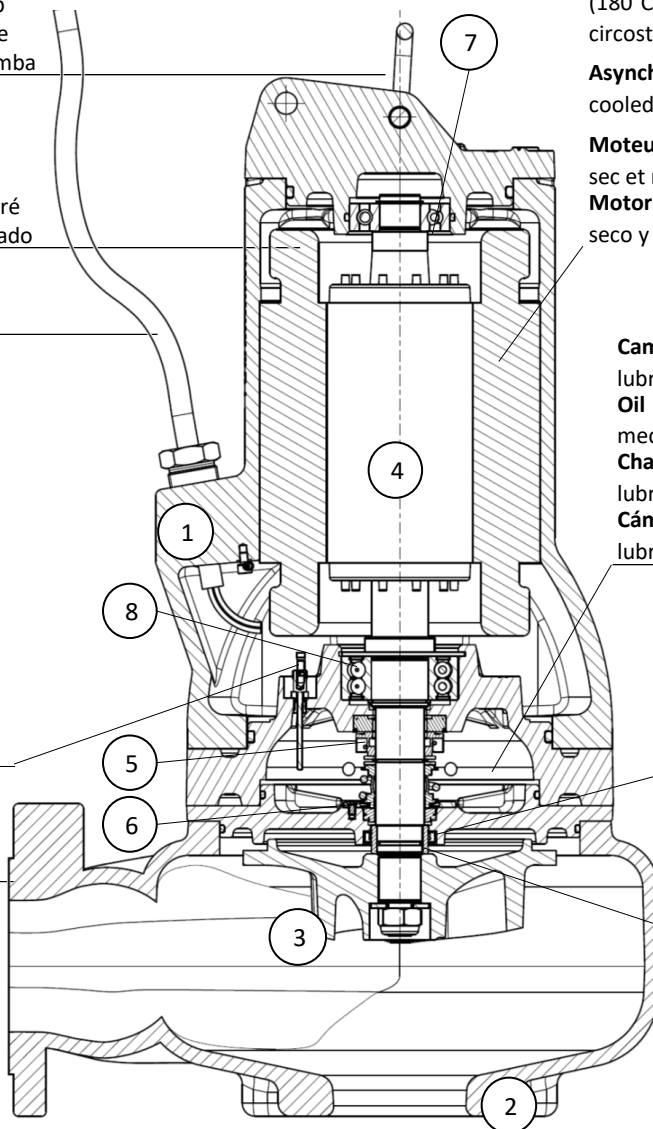
| Viti<br>Screws<br>Des vis<br>Empulgueras | Quality<br>A2 |
|--|---------------|
|--|---------------|

| O-RINGS | NBR |
|---------|-----|
|---------|-----|

### OPTIONAL

Sonda Olio  
Oil Probe  
Sonde d'huile  
Sonda de aceite

DNm: DN80 PN16



**Motore asincrono** in classe di isolamento H (180°C), a secco e raffreddato dal liquido circostante;

**Asynchronous dry motor**, insulation class H(180°C), cooled by the surrounding liquid

**Moteur asynchrone**, classe d'isolation H (180°C), sec et refroidi par le liquide environnant;

**Motor asíncrono**, aislamiento clase H (180 ° C), seco y refrigerado por el líquido que rodea.

**Camera olio** per il raffreddamento e la lubrificazione delle tenute meccaniche;

**Oil chamber** for cooling and lubrication of mechanical seals;

**Chambre d'huile** pour le refroidissement et la lubrification des garnitures mécaniques;

**Cámara de aceite** para la refrigeración y la lubricación de los sellos mecánicos.

Anello tenuta radiale

Radial lip seal ring

Bague d'étanchéité radiale

Anillo de sello radial

**NBR  
(Viton)**

Bussola protezione albero

Shaft protection sleeve

Chemise de protection d'arbre

Camisa de protección del eje

**AISI  
316**

**Girante arretrata** con ampio passaggio libero

**Backward impeller** with large free passage

**Roue arrière** avec grand passage libre

**Impulsor hacia atrás** con gran paso libre.

| NR. | DESCRIPTION       | MATERIAL     |
|-----|-------------------|--------------|
| 1   | Gruppo motore     | Ghisa        |
|     | Motor group       | Cast iron    |
|     | Groupe moteur     | Fer de fonte |
|     | Unidad de motor   | Hierro       |
| 2   | Corpo idraulico   | Ghisa        |
|     | Pump Housing      | Cast iron    |
|     | Corps de la pompe | Fer de fonte |
|     | Cuerpo hidráulico | Hierro       |
| 3   | Girante           | Ghisa        |
|     | Impeller          | Cast iron    |
|     | Roue              | Fer de fonte |
|     | Impulsor          | Hierro       |
| 4   | Albero motore     | Acciaio      |
|     | Shaft             | Steel        |
|     | Arbre moteur      | Acier        |
|     | Eje del motor     | Acero        |

| NR. | DESCRIPTION                                      | MATERIAL                   |
|-----|--|----------------------------|
| 5   | Tenuta mecc. superiore                           | Carbon graphite / Al-Oxide |
|     | Upper mech. seal                                 |                            |
|     | Haut garniture mécan.<br>Sello mecánico superior | NBR                        |
| 6   | Tenuta mecc. Inferiore                           | SiC / SiC                  |
|     | Lower mech. seal                                 |                            |
|     | Haut garniture mécan.<br>Sello mecánico inferior | NBR                        |
| 7   | Cuscinetto superiore                             |                            |
|     | Top bearing                                      |                            |
|     | Roulement supérieur<br>Cojinete superior         | 6305 2RS1                  |
| 8   | Cuscinetto inferiore                             |                            |
|     | Lower bearing                                    |                            |
|     | Roulement inférieur<br>Cojinete inferior         | 3207 2RS1                  |

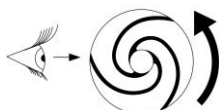
## Caratteristiche costruttive - construction data

|  |  |
|--|--|
| <b>Costruzione Motore - Motor Frame</b>                              | 173  |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |
| <b>Classe di Isolamento - Insulation Class</b>                       | H (180°C)  |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent  |
| <b>Avvolgimento statore - Stator winding</b>                         | 3~PH - Threephase<br>$\Delta / Y$<br>[V] 3~400/690   |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> | Optional   |
| <input type="radio"/> Bimetallico - Bimetal disc                     | <input checked="" type="checkbox"/> 155°C  |
| <input type="radio"/> Solo su richiesta - on request only            | PT100 <input type="checkbox"/>   |
| <input type="radio"/> Solo su richiesta - on request only            | PTC <input type="checkbox"/>   |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid   |
| <b>Camera olio - Oil chamber</b>                                     | Si - Yes   |
| <b>Protezione Tenuta - Leakage protection</b>                        | Optional   |
| <b>Tipo girante - Impeller</b>                                       | Vortex   |
| <b>DN mandata - Discharge</b>  | DN 80 Pn6/16    Orizzontale - Horizontal   |
| <b>Controflangia filettata - Threaded counterflange</b>              | Si - Yes    G 3"   |
| <b>DN aspirazione / Suction</b>                                      | [mm]    DN 80  |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard Vernice all'acqua - Water paint / 30µm<br>Opaco Nero - Opaque Black<br>Optional Epossidica - Epoxy coating / 80µm<br>RAL 7015 - Grigio - Grey |

## Limiti di utilizzo - Operating Limits

|   |                       |        |
|---|-----------------------|--------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C]                  | ≤ 40   |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] | ~ 1    |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s]  | ~ 1    |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l]                | < 200  |
| <b>PH liquido pompato - PH value</b>                                |                       | 6 ÷ 12 |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m]                   | 20     |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l]                 | < 1    |

**Corretta rotazione della girante**  
**Rotation of the impeller**





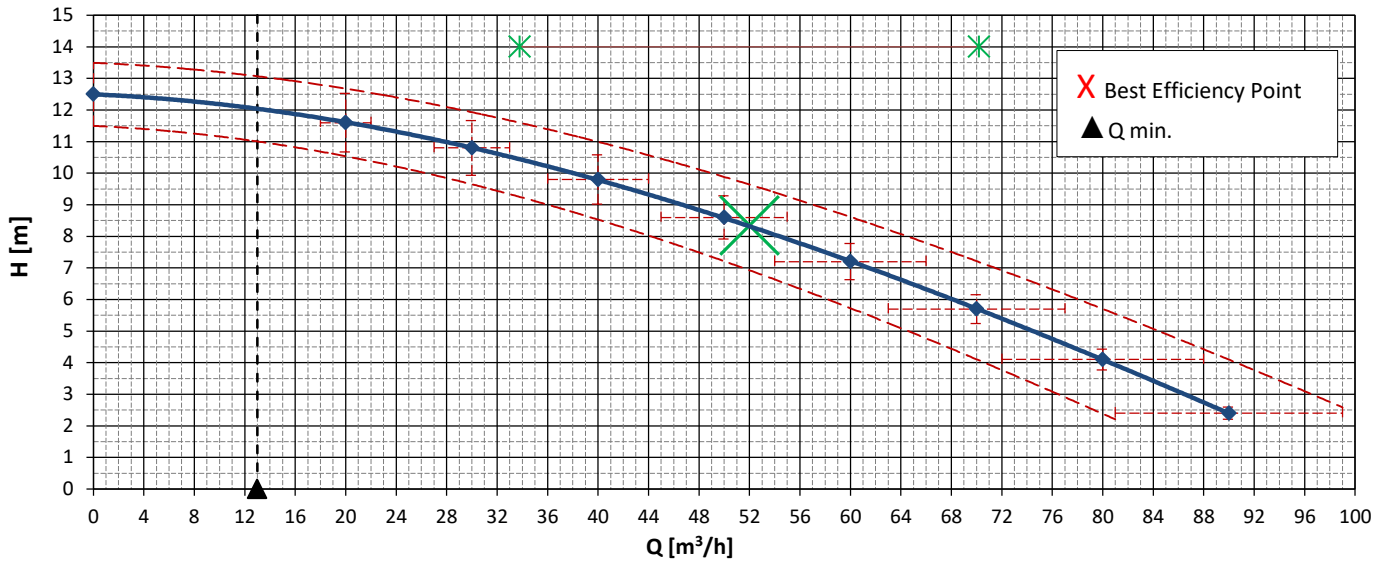
Tipo di pompa - Pump model  
**VS.80\_30.4.173**

**Poles: 4 Hz: 50**  
**r.p.m. 1500**

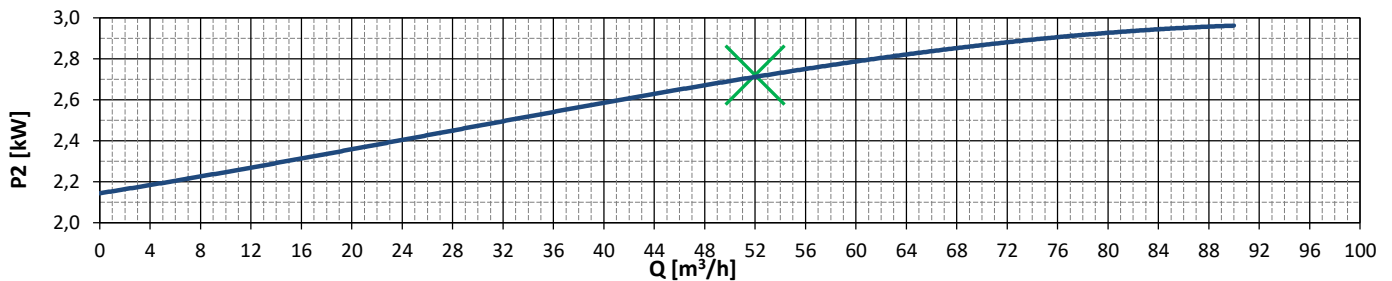
Girante Impeller  
Mandata Discharge  
**VORTEX**  
**DN 80 - G 3"**

Serie 1

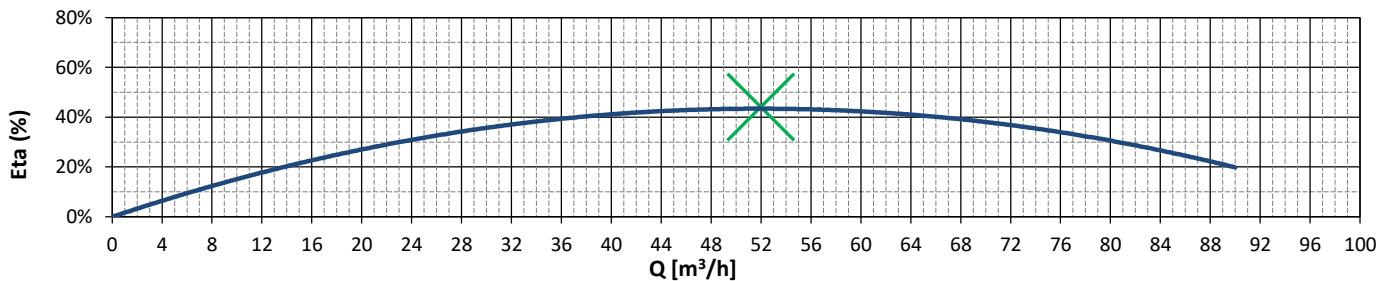
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |      |      |     |     |      |      |      |      |  |  |  |
|----------|-------|------|------|------|-----|-----|------|------|------|------|--|--|--|
| FLOW (Q) | l/min | 0    | 333  | 500  | 667 | 833 | 1000 | 1167 | 1333 | 1500 |  |  |  |
|          | l/s   | 0    | 6    | 8    | 11  | 14  | 17   | 19   | 22   | 25   |  |  |  |
|          | m³/h  | 0    | 20   | 30   | 40  | 50  | 60   | 70   | 80   | 90   |  |  |  |
| HEAD (H) | m     | 12,5 | 11,6 | 10,8 | 9,8 | 8,6 | 7,2  | 5,7  | 4,1  | 2,4  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>4,0</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>3,0</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>3,9</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,81</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>7,0</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>38,0</b>       |

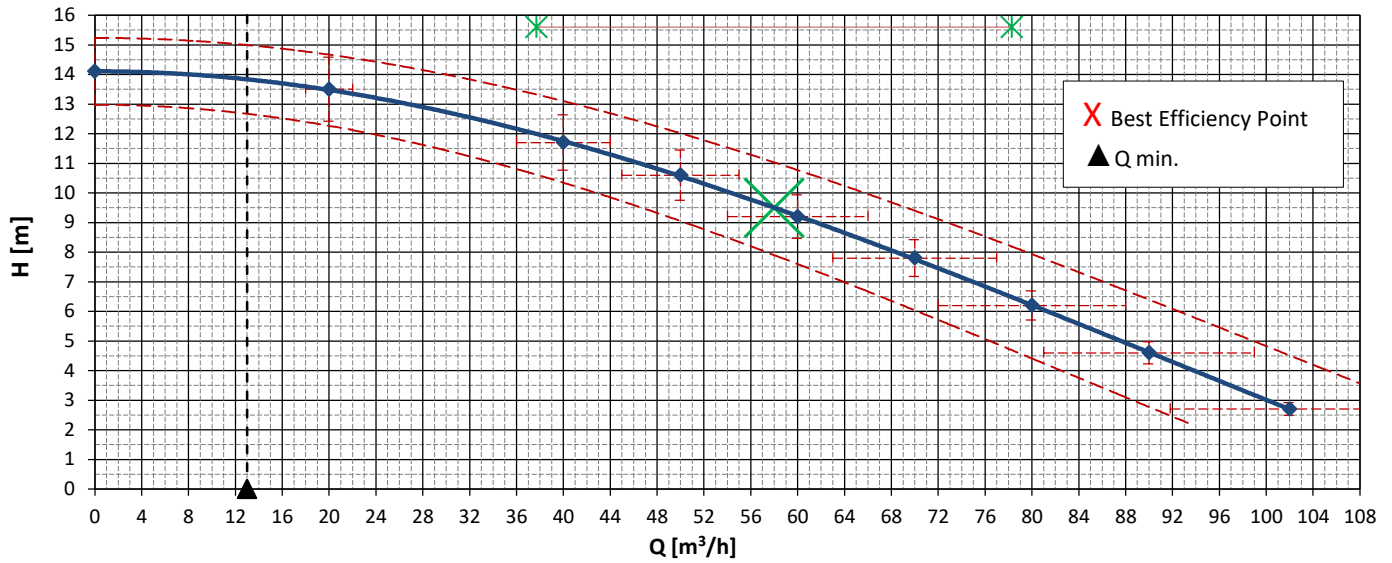
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 80</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 203</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>107,0</b> |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G2,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>25</b>    |

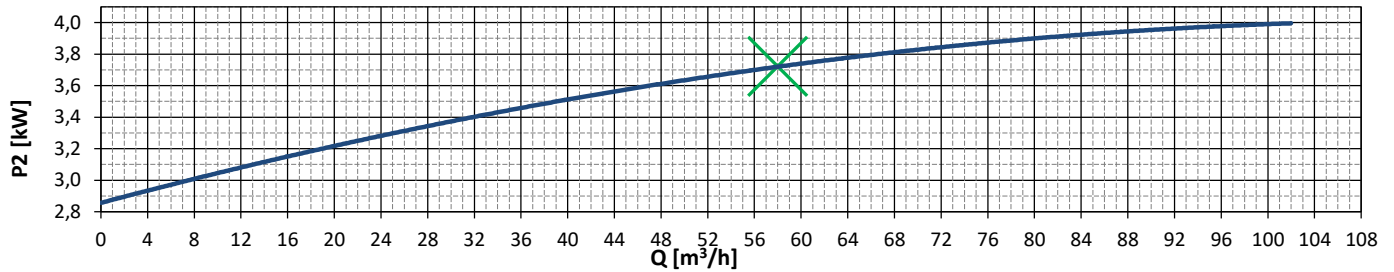
In accordo con / In accordance to  
ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C

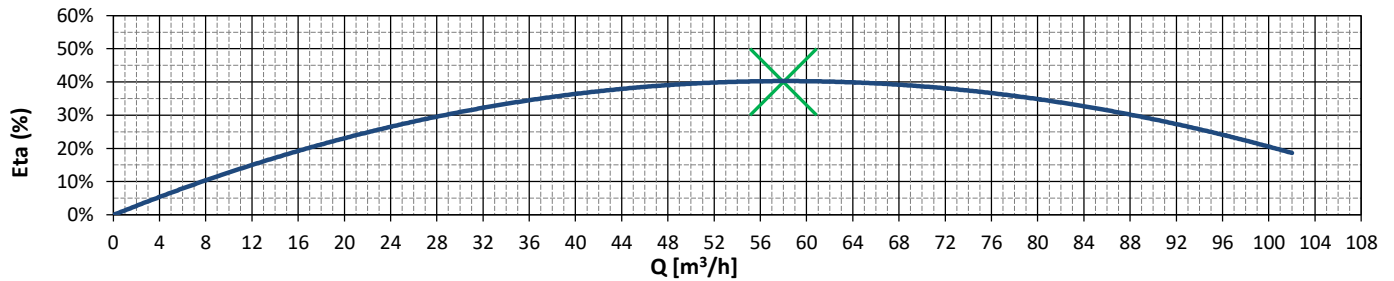
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |      |      |      |      |     |  |  |  |
|-----------------|--------------|------|------|------|------|------|------|------|------|-----|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 333  | 667  | 833  | 1000 | 1167 | 1333 | 1500 |     |  |  |  |
|                 | <b>l/s</b>   | 0    | 6    | 11   | 14   | 17   | 19   | 22   | 25   |     |  |  |  |
|                 | <b>m³/h</b>  | 0    | 20   | 40   | 50   | 60   | 70   | 80   | 90   | 102 |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 14,1 | 13,5 | 11,7 | 10,6 | 9,2  | 7,8  | 6,2  | 4,6  | 2,7 |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>4,0</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>4,0</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>4,9</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,87</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>8,1</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>44,5</b>       |

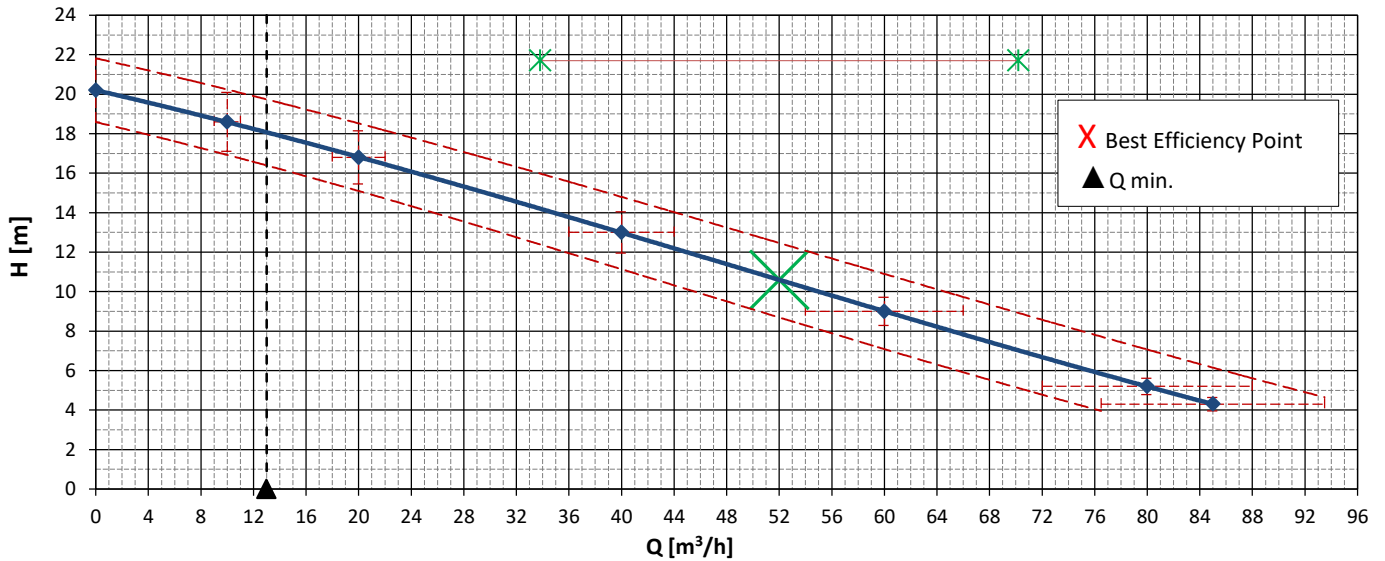
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 80</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 220</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>108,0</b> |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G2,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>    |

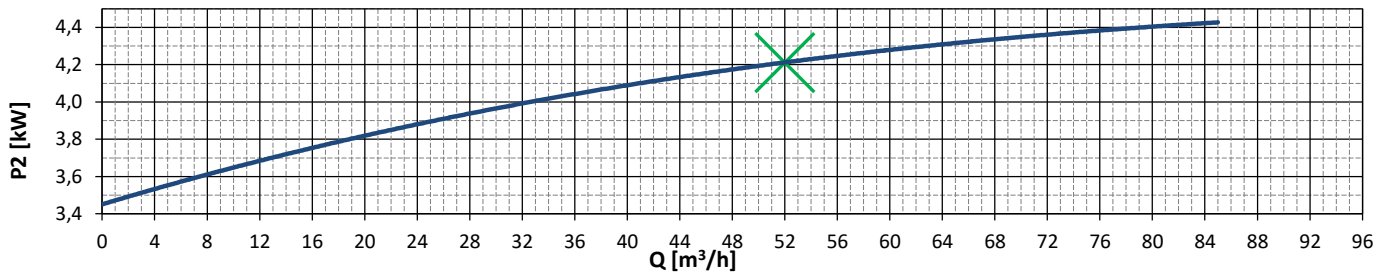
In accordo con / In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C

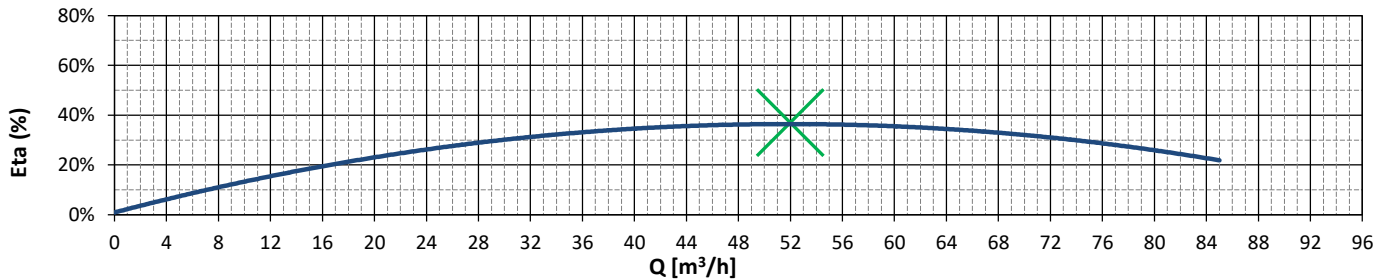
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |      |      |      |      |      |      |  |  |  |  |
|----------|-------|------|------|------|------|------|------|------|--|--|--|--|
| FLOW (Q) | l/min | 0    | 167  | 333  | 667  | 1000 | 1333 | 1417 |  |  |  |  |
|          | l/s   | 0    | 3    | 6    | 11   | 17   | 22   | 24   |  |  |  |  |
|          | m³/h  | 0    | 10   | 20   | 40   | 60   | 80   | 85   |  |  |  |  |
| HEAD (H) | m     | 20,2 | 18,6 | 16,8 | 13,0 | 9,0  | 5,2  | 4,3  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>4,4</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>4,4</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>5,5</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,82</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>10,0</b>       |
| Corrente di spunto<br>Starting current | [A] | <b>57,0</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 80</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 161</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>103,0</b> |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G2,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>    |

In accordo con / In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C





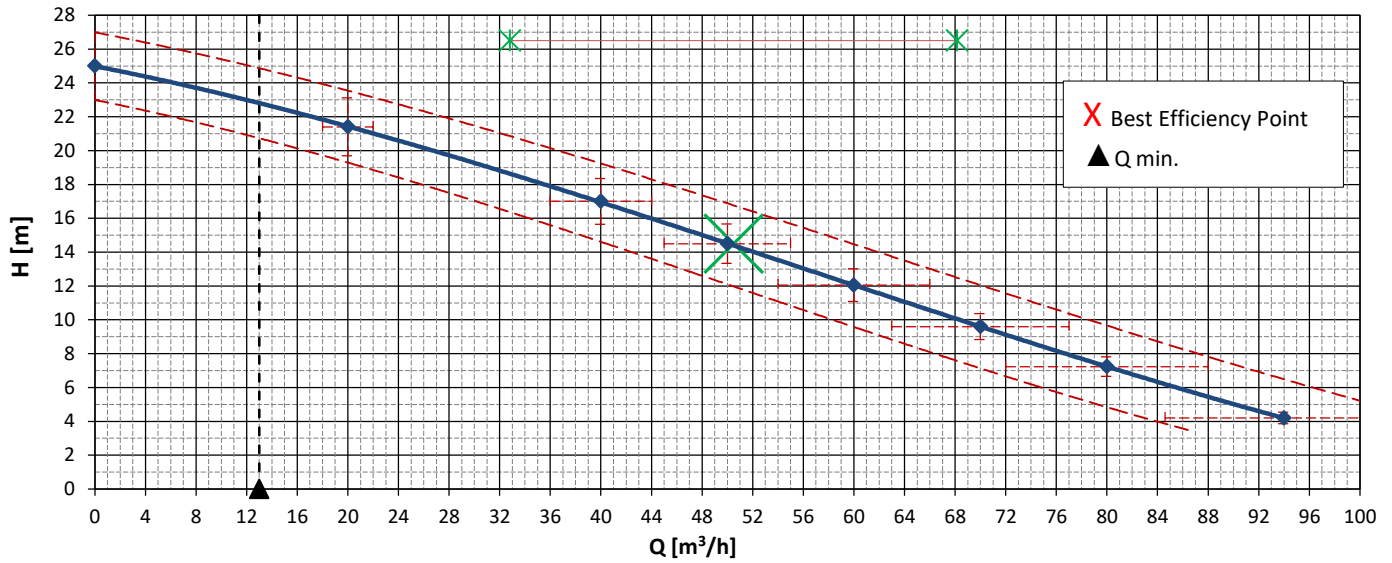
Tipo di pompa - Pump model  
**VS.80\_55.2.173**

**Poles: 2 Hz: 50**  
**r.p.m. 3000**

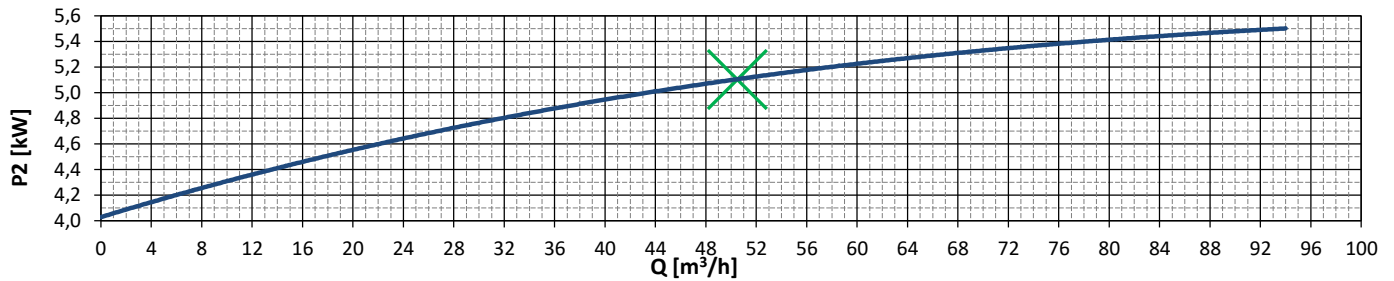
Girante Impeller  
Mandata Discharge  
**VORTEX**  
**DN 80 - G 3"**

Serie 1

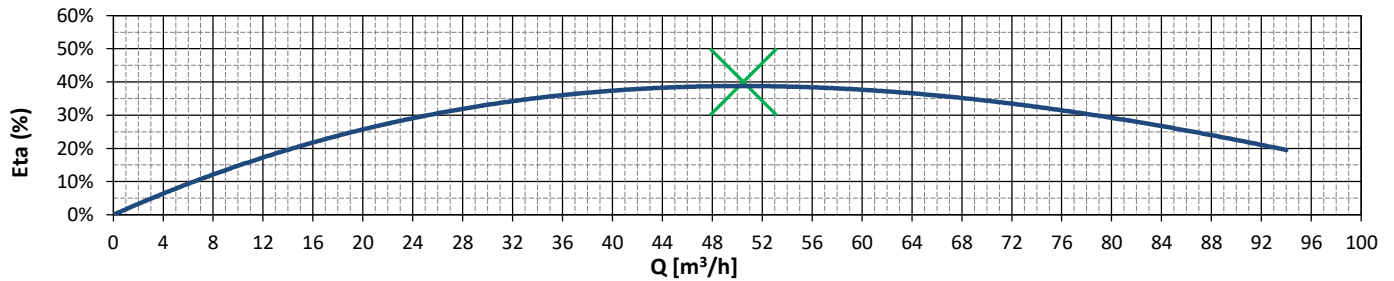
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |      |      |      |      |  |  |  |  |
|-----------------|--------------|------|------|------|------|------|------|------|------|--|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 333  | 667  | 833  | 1000 | 1167 | 1333 | 1567 |  |  |  |  |
|                 | <b>l/s</b>   | 0    | 6    | 11   | 14   | 17   | 19   | 22   | 26   |  |  |  |  |
|                 | <b>m³/h</b>  | 0    | 20   | 40   | 50   | 60   | 70   | 80   | 94   |  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 25,0 | 21,4 | 17,0 | 14,5 | 12,1 | 9,6  | 7,2  | 4,2  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>7,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>5,5</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>6,8</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,82</b> |

**Model T**

|  |     |                     |
|--|-----|---------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b>   |
| Avviamento<br>Starting                 |     | <b>D.O.L. - S/D</b> |
| Corrente Nominale<br>Rated current     | [A] | <b>12,4</b>         |
| Corrente di spunto<br>Starting current | [A] | <b>71,0 - 24,0</b>  |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 80</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 174</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>108,0</b> |

|  |  |                      |
|--|--|----------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>            |
| Cavo<br>Cable                              |  | <b>4G2,5 - 7G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>            |

In accordo con  
In accordance to **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density 1  
Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C



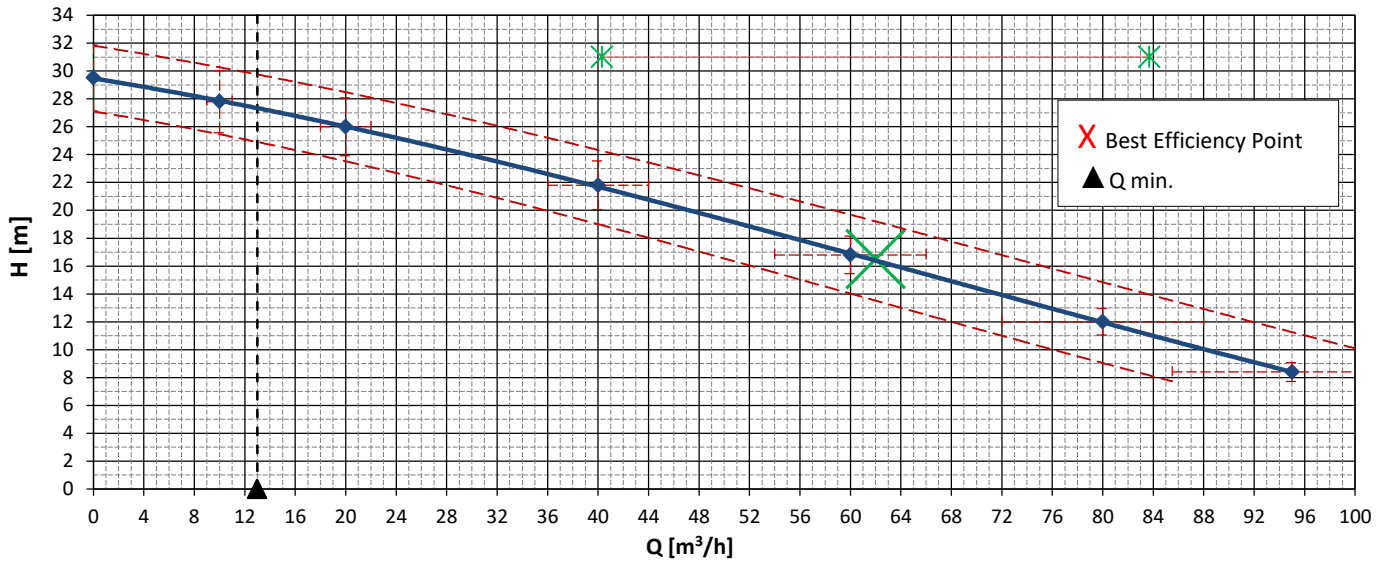
Tipo di pompa - Pump model  
**VS.80\_75.2.173**

**Poles: 2 Hz: 50**  
**r.p.m. 3000**

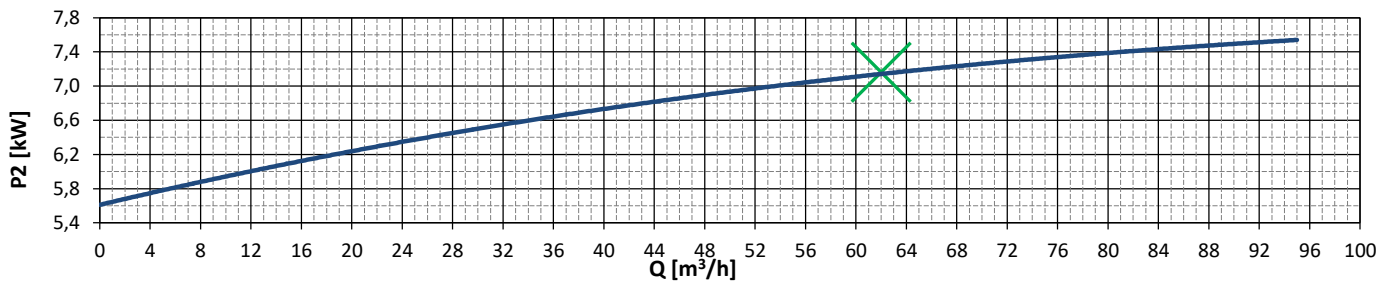
Girante Impeller  
Mandata Discharge  
**VORTEX**  
**DN 80 - G 3"**

Serie 1

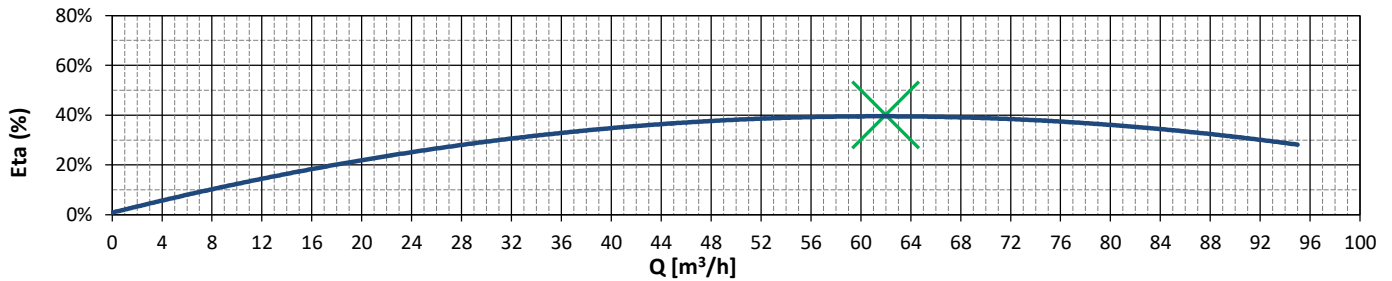
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |      |      |      |      |      |      |  |  |  |  |
|----------|-------|------|------|------|------|------|------|------|--|--|--|--|
| FLOW (Q) | l/min | 0    | 167  | 333  | 667  | 1000 | 1333 | 1583 |  |  |  |  |
|          | l/s   | 0    | 3    | 6    | 11   | 17   | 22   | 26   |  |  |  |  |
|          | m³/h  | 0    | 10   | 20   | 40   | 60   | 80   | 95   |  |  |  |  |
| HEAD (H) | m     | 29,5 | 27,8 | 26,0 | 21,8 | 16,8 | 12,0 | 8,4  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>7,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>7,5</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>9,3</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,82</b> |

**Model T**

|  |     |                     |
|--|-----|---------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b>   |
| Avviamento<br>Starting                 |     | <b>D.O.L. - S/D</b> |
| Corrente Nominale<br>Rated current     | [A] | <b>16,8</b>         |
| Corrente di spunto<br>Starting current | [A] | <b>88,0 - 30,0</b>  |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 80</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 189</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>110,0</b> |

|  |  |                      |
|--|--|----------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>            |
| Cavo<br>Cable                              |  | <b>4G2,5 - 7G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>15</b>            |

In accordo con / In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C

## Dimensioni d'ingombro - overall dimensions

**S** Installazione mobile - Installation mobile - Installation mobile - Instalación móvil

Dimensione imballo  
Packaging dimensions

Misure - Measures [mm]

| A   | B   | C   |
|-----|-----|-----|
| 750 | 450 | 390 |







**FC** Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento

**8FC00004** KG: 30

|   |   |
|---|---|
| 1 | Supporto tubi guida da 1"1/2<br>1"1/2 guide rails bracket |
| 2 | Piede Verticale 3"<br>Vertical foot - 3"out               |
| 3 | Slitta completa<br>Sliding bracket complete               |
| 4 | Esclusi dalla fornitura<br>Not supplied                   |


|   |     |
|---|-----|
| D | 550 |
| E | 600 |
| F | 400 |


**ACCESSORI - ACCESSORIES - ACCESORIES - ACCESORIOS**

| Descrizione - Description - Description - Descripción |   | Codice Code                |
|---|---|----------------------------|
| FC  |  <ul style="list-style-type: none"> <li>- Dispositivo di accoppiamento DN 80</li> <li>- DN 80 Coupling device</li> <li>- Dispositif de couplage DN 80</li> <li>- Dispositivo de acoplamiento DN 80</li> </ul>  | 8FC000004                  |
| STD   |  <ul style="list-style-type: none"> <li>- Cavalletto di sostegno in acciaio inox</li> <li>- Stainless steel support stand</li> <li>- Support en acier inoxydable</li> <li>- Soporte de acero inoxidable.</li> </ul>  | 8FC000005                  |
| AT 80   |  <ul style="list-style-type: none"> <li>- Adattatore per dispositivo di accoppiamento della concorrenza</li> <li>- Adapter for competitors foot coupling devices</li> <li>- Adaptateur pour pied d'assise du concurrent</li> <li>- Adaptador para dispositivo de acoplamiento de competidor</li> </ul> | 2SB000004                  |
|   |  <ul style="list-style-type: none"> <li>- Catena ferro zincato - galvanized Iron - fer galvanisé - hierro galvanizado</li> <li>- Chain</li> <li>- Chaîne</li> <li>- Cadena</li> </ul>  | 2SC000019                  |
|   | <ul style="list-style-type: none"> <li>- Catena Acciaio - Stainless steel - acier inox - acero inox</li> </ul>  | 2SC000032                  |
| FBV   | <ul style="list-style-type: none"> <li>- Valvola di ritegno a palla flangiata</li> <li>- Flanged valve</li> <li>- Vanne à bride</li> <li>- Válvula de bola de retención con bridas</li> </ul>   | DN 80<br>PN10<br>4BV000007 |
| HF  |  <ul style="list-style-type: none"> <li>- Regolatore di livello per acque reflue</li> <li>- Level switch for sewage</li> <li>- Interrupteur de niveau pour eaux usées</li> <li>- Interruptor de nivel para aguas residuales</li> </ul>  | [10 mt]<br>3CS000007       |
| SHELL   |  <ul style="list-style-type: none"> <li>- Contrappeso SHELL per galleggiante</li> <li>- Counterweight SHELL for level switch</li> <li>- Cotrepoids SHELL pour interrupteur de niveau</li> <li>- Contrapeso para interruptor de nivel</li> </ul>  | 3CS000021                  |

**SELEZIONE QUADRO DI CONTROLLO - CONTROL PANEL SELECTION**

|     | Pole | Pump               | Alim. [V] | P1 [KW] | In [A] | Avv. |
|-----|------|--------------------|-----------|---------|--------|------|
| 135 | 4    | VS.80_11.4T.135    | 3~400     | 1,1     | 3      | DOL  |
|     |      | VS.80_15.4T.135    | 3~400     | 1,5     | 3,5    | DOL  |
|     |      | VS.80_22.4T.135    | 3~400     | 2,2     | 5,2    | DOL  |
|     | 2    | VS.80_22.2T.135    | 3~400     | 2,2     | 5,3    | DOL  |
|     |      | VS.80_30.2T.135    | 3~400     | 3,0     | 6,8    | DOL  |
| 173 | 4    | VS.80_30.4T.173    | 3~400     | 3,0     | 7,0    | DOL  |
|     |      | VS.80_40.4T.173    | 3~400     | 4,0     | 8,1    | DOL  |
|     | 2    | VS.80_37.2T.173    | 3~400     | 3,7     | 10,0   | DOL  |
|     |      | VS.80_55.2T.173    | 3~400     | 5,5     | 12,5   | DOL  |
|     |      | VS.80_55.2T.173.SD | 3~400     | 5,5     | 12,5   | S/D  |
|     |      | VS.80_75.2T.173    | 3~400     | 7,5     | 16,8   | DOL  |
|     |      | VS.80_75.2T.173.SD | 3~400     | 7,5     | 16,8   | S/D  |

| <br>- ECH -<br>ELECTROMECHANICAL |                        |                            |                       |                         |                            |  |  |
|--|------------------------|----------------------------|-----------------------|-------------------------|----------------------------|--|--|
| 1 PUMP   |                        |                            |                       | 2 PUMPS                 |                            |  |  |
| ECH1.T-7<br>5EC000005  | ECH1.T-14<br>5EC000007 | ECH1.T.S/D_20<br>5EC000106 | ECH2.T-7<br>5EC000029 | ECH21.T-14<br>5EC000031 | ECH2.T.S/D_20<br>5EC000108 |  |  |
| •  |                        |                            | •                     |                         |                            |  |  |
| •  |                        |                            | •                     |                         |                            |  |  |
| •  |                        |                            | •                     |                         |                            |  |  |
| •  |                        |                            | •                     |                         |                            |  |  |
| •  |                        |                            | •                     |                         |                            |  |  |
|  | •                      |                            |                       | •                       |                            |  |  |
|  | •                      |                            |                       | •                       |                            |  |  |
|  | •                      |                            |                       | •                       |                            |  |  |
|  | •                      |                            |                       | •                       |                            |  |  |
|  |                        | •                          |                       |                         | •                          |  |  |
|  |                        | •                          |                       |                         | •                          |  |  |

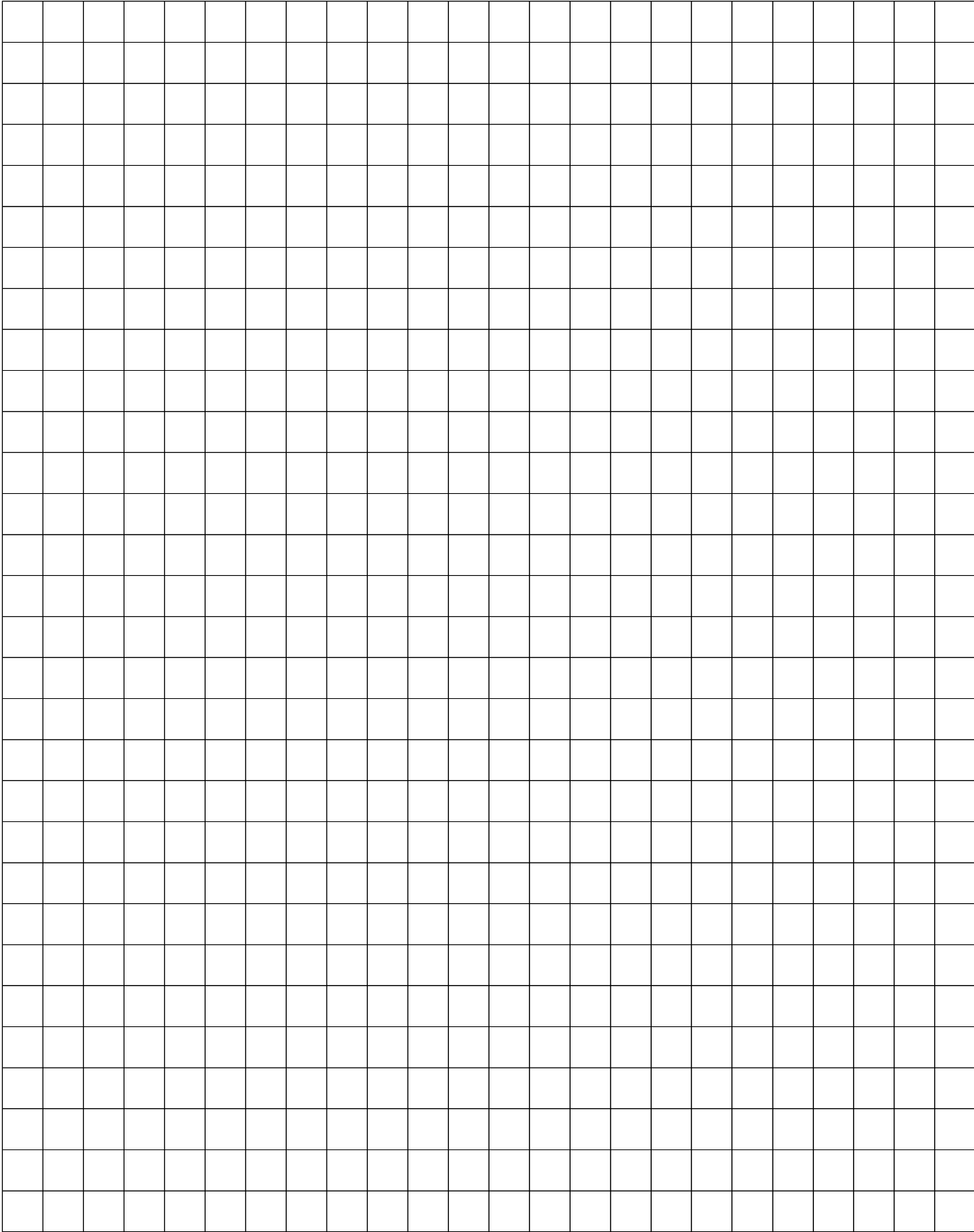
| <br>- ECL -<br>ELECTRONIC |                        |                        |                        |         |  |  |   |
|--|------------------------|------------------------|------------------------|---------|--|--|---|
| 1 PUMP   |                        |                        |                        | 2 PUMPS |  |  |   |
| ECH1.T-15<br>5EC000083   | ECH1.T-24<br>5EC000086 | ECL2.T-15<br>5EC000084 | ECH2.T-24<br>5EC000087 |         |  |  |   |
| •  |                        |                        |                        |         |  |  |   |
| •  |                        |                        |                        |         |  |  |   |
| •  |                        |                        |                        |         |  |  |   |
| •  |                        |                        |                        |         |  |  |   |
| •  |                        |                        |                        |         |  |  |   |
| •  |                        |                        |                        |         |  |  |   |
| •  |                        |                        |                        |         |  |  |   |
| •  |                        |                        |                        |         |  |  |   |
| •  |                        |                        |                        |         |  |  |   |
| •  |                        |                        |                        |         |  |  |   |
|  | •                      |                        |                        |         |  |  | • |
|  |                        |                        |                        |         |  |  |   |



**VS.80\_135 / VS.80\_173  
- VORTEX -**

Mandata - Outlet

**DN 80 - G 3"**



**Poli - Poles Modelli - models**

|          |                              |
|----------|------------------------------|
| <b>4</b> | <b>VS.100_30/40.4.173</b>    |
| <b>2</b> | <b>VS.100_37/55/75.2.173</b> |

**IT**

Elettropompa sommersibile di robusta costruzione fabbricata completamente in ghisa, con camera olio interposta tra gruppo motore e gruppo pompa. Tenute meccaniche in camera olio non a diretto contatto del liquido pompato e protette da un anello di tenuta radiale con bussola in AISI 316 posizionato dietro alla girante.

**EN**

Compact and solid construction submersible pump completely made in cast iron, with oil chamber interposed between motor unit and pump unit. Mechanical seals inside the oil chamber not in direct contact with the pumped liquid and protected by a lip seal ring with AISI 316 sleeve, positioned on the back of the impeller.

**FR**

Pompe submersible compacte entièrement réalisée en fonte, avec chambre à huile intercalée entre le groupe moteur et le groupe pompe. Des garnitures mécaniques isolées dans la chambre d'huile ne sont pas en contact direct avec le liquide pompé et protégées par un anneau d'étanchéité avec manchon AISI 316, positionnées à l'arrière de la roue.

**ES**

Bomba sumergible compacta hecha completamente de hierro fundido, con cámara de aceite interpuesta entre la unidad del motor y la unidad de la bomba. Sellos mecánicos en la cámara de aceite que no están en contacto directo con el líquido bombeado y protegidos por un corteo con un casquillo hecho de AISI 316 colocado detrás del impulsor.

**Poli - Poles Modelli - models**

|          |                           |
|----------|---------------------------|
| <b>4</b> | <b>VS.100_55/75.4.240</b> |
|----------|---------------------------|

**IT**

Elettropompa sommersibile di robusta costruzione fabbricata completamente in ghisa. Camera olio interposta tra gruppo motore e gruppo pompa. Doppia tenuta meccanica a cartuccia, interne alla camera olio, non a diretto contatto con il liquido pompato.

**EN**

Robust construction submersible pump completely made in cast iron, with oil chamber interposed between motor unit and pump unit. Double Cartridge Mechanical seals inside the oil chamber not in direct contact with the pumped liquid.

**FR**

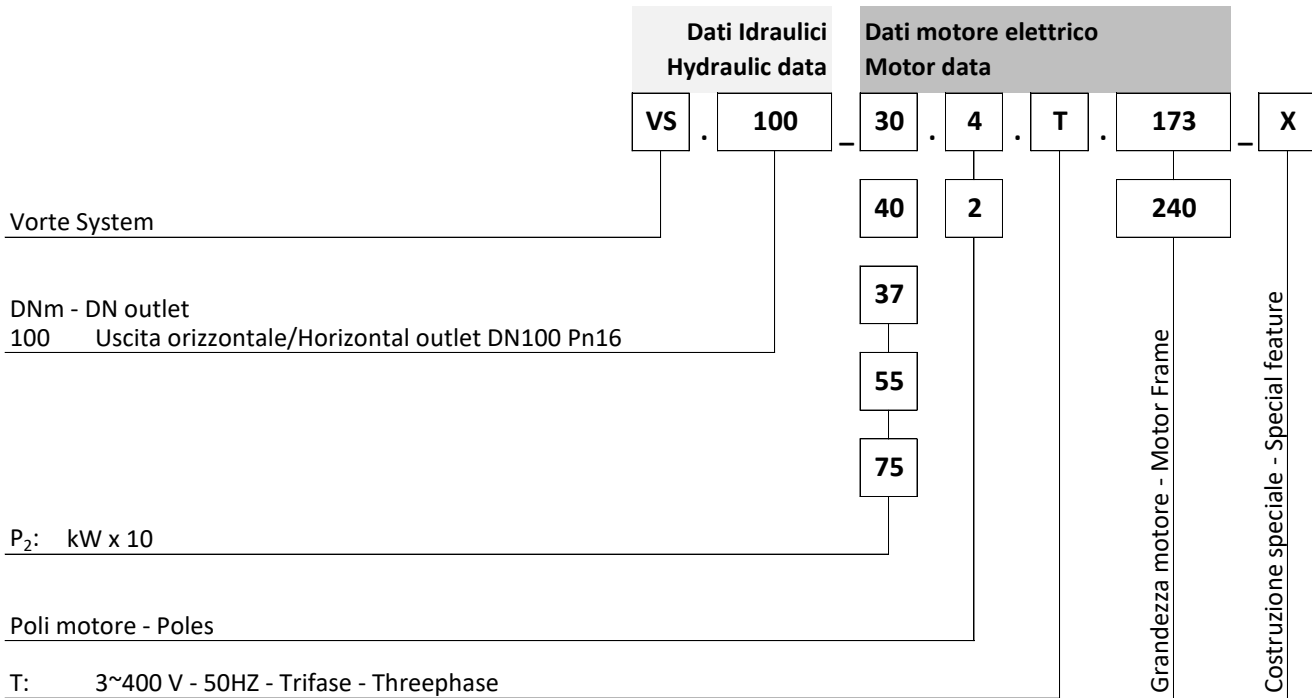
Pompe submersible de construction robuste entièrement en fonte, avec chambre à huile intercalée entre le moteur et le groupe pompe. Les garnitures mécaniques à l'intérieur de la chambre d'huile ne sont pas en contact direct avec le liquide pompé.

**ES**

Bomba sumergible de construcción robusta realizada completamente en hierro fundido, con cámara de aceite interpuesta entre la unidad del motor y la unidad de la bomba. Sellos mecánicos dentro de la cámara de aceite que no están en contacto directo con el líquido bombeado.

**VS.100\_173**

**VS.100\_240**


**IDENTIFICAZIONE - IDENTIFICATION**

**LISTA MODELLI - RANGE OF PRODUCTS**

| Grandezza Motore<br>Motor Frame | Poles | Alimentazione<br>Power supply    | P <sub>2</sub><br>[kW] | Modelli<br>Models | Avviamento<br>Starting | Cavo alimentazione / segnali<br>Power / signals cable |                                  |
|---------------------------------|-------|----------------------------------|------------------------|-------------------|------------------------|---|----------------------------------|
|                                 |       |                                  |                        |                   |                        | [m]   | Type                             |
| <b>173</b>                      | 4     | 3ph                              | 3,0                    | VS.100_30.4T_173  | D.O.L.                 | 10  | H07RN-F 4G2,5 / + H07RN-F 4G1,5  |
|                                 |       |                                  | 4,0                    | VS.100_40.4T_173  | D.O.L.                 | 10  | H07RN-F 4G2,5 / + H07RN-F 4G1,5  |
|                                 | 2     | 3ph                              | 3,7                    | VS.100_37.2T_173  | D.O.L.                 | 10  | H07RN-F 4G2,5 / + H07RN-F 4G1,5  |
|                                 |       |                                  | 5,5                    | VS.100_55.2T_173  | D.O.L.                 | 10  | H07RN-F 4G2,5 / + H07RN-F 4G1,5  |
|                                 |       |                                  |                        |                   | S.D.                   | 10  | H07RN8-F 7G1,5 / + H07RN-F 4G1,5 |
|                                 |       |                                  | 7,5                    | VS.100_75.2T_173  | D.O.L.                 | 10  | H07RN-F 4G2,5 / + H07RN-F 4G1,5  |
| S.D.                            | 10    | H07RN8-F 7G1,5 / + H07RN-F 4G1,5 |                        |                   |                        |   |                                  |
| <b>240</b>                      | 4     | 3ph                              | 3,0                    | VS.100_55.4T_173  | S.D.                   | 10  | H07RN8-F 7G2,5+3X1               |
|                                 |       |                                  | 4,0                    | VS.100_75.4T_173  | S.D.                   | 10  | H07RN8-F 7G2,5+3X1               |

## Caratteristiche costruttive - construction features

Anello per movimentazione  
Shackel to handle the pump  
Manille pour lever la pompe  
Grillete para levantar la bomba

Pastiglia termica  
Built in Thermal protector  
Protecteur thermique intégré  
Protector térmico incorporado

10 m - H07RN-F

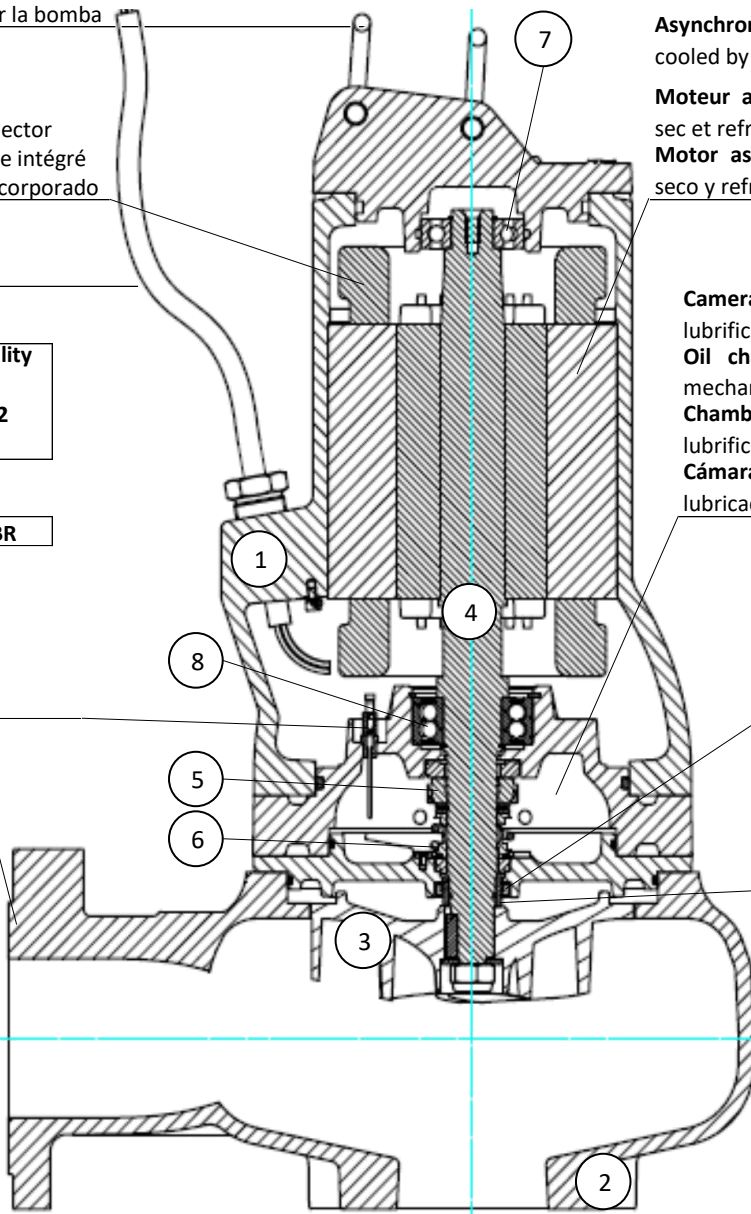
|   |                                 |
|---|---------------------------------|
| <b>Viti</b><br>Screws<br>Des vis<br>Empulgueras | <b>Quality</b><br><br><b>A2</b> |
|---|---------------------------------|

|                |            |
|----------------|------------|
| <b>O-RINGS</b> | <b>NBR</b> |
|----------------|------------|

**OPTIONAL**

Sonda Olio  
Oil Probe  
Sonde d'huile  
Sonda de aceite

DNm: DN100 PN16



**Motore asincrono** in classe di isolamento H (180°C), a secco e raffreddato dal liquido circostante;

**Asynchronous dry motor**, insulation class H(180°C), cooled by the surrounding liquid

**Moteur asynchrone**, classe d'isolation H (180°C), sec et refroidi par le liquide environnant;

**Motor asíncrono**, aislamiento clase H (180 ° C), seco y refrigerado por el líquido que rodea.

**Camera olio** per il raffreddamento e la lubrificazione delle tenute meccaniche;

**Oil chamber** for cooling and lubrication of mechanical seals;

**Chambre d'huile** pour le refroidissement et la lubrification des garnitures mécaniques;

**Cámara de aceite** para la refrigeración y la lubricación de los sellos mecánicos.

Anello tenuta radiale  
Radial lip seal ring  
Bague d'étanchéité radiale  
Anillo de sello radial

**NBR**  
**(Viton)**

Bussola protezione albero  
Shaft protection sleeve  
Chemise de protection d'arbre  
Camisa de protección del eje

**AISI**  
**316**

**Girante arretrata** con ampio passaggio libero  
**Backward impeller** with large free passage

**Roue arrière** avec grand passage libre

**Impulsor hacia atrás** con gran paso libre.

| NR. | DESCRIPTION       | MATERIAL     |
|-----|-------------------|--------------|
| 1   | Gruppo motore     | Ghisa        |
|     | Motor group       | Cast iron    |
|     | Groupe moteur     | Fer de fonte |
|     | Unidad de motor   | Hierro       |
| 2   | Corpo idraulico   | Ghisa        |
|     | Pump Housing      | Cast iron    |
|     | Corps de la pompe | Fer de fonte |
|     | Cuerpo hidráulico | Hierro       |
| 3   | Girante           | Ghisa        |
|     | Impeller          | Cast iron    |
|     | Roue              | Fer de fonte |
|     | Impulsor          | Hierro       |
| 4   | Albero motore     | Acciaio      |
|     | Shaft             | Steel        |
|     | Arbre moteur      | Acier        |
|     | Eje del motor     | Acero        |

| NR. | DESCRIPTION                                      | MATERIAL                   |
|-----|--|----------------------------|
| 5   | Tenuta mecc. superiore                           | Carbon graphite / Al-Oxide |
|     | Upper mech. seal                                 |                            |
|     | Haut garniture mécan.<br>Sello mecánico superior | NBR                        |
| 6   | Tenuta mecc. Inferiore                           | SiC / SiC                  |
|     | Lower mech. seal                                 |                            |
|     | Haut garniture mécan.<br>Sello mecánico inferior | NBR                        |
| 7   | Cuscinetto superiore                             |                            |
|     | Top bearing                                      |                            |
|     | Roulement supérieur<br>Cojinete superior         | 6305 2RS1                  |
| 8   | Cuscinetto inferiore                             |                            |
|     | Lower bearing                                    |                            |
|     | Roulement inférieur<br>Cojinete inferior         | 3207 2RS1                  |



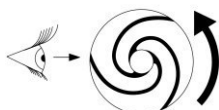
## Caratteristiche costruttive - construction data

|  |  |
|--|--|
| <b>Costruzione Motore - Motor Frame</b>                              | 173  |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |
| <b>Classe di Isolamento - Insulation Class</b>                       | H (180°C)  |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent  |
| <b>Avvolgimento statore - Stator winding</b>                         | 3~PH - Threephase<br>$\Delta / Y$<br>[V] 3~400/690   |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> | Optional   |
| <input type="radio"/> Bimetallico - Bimetal disc                     | <input checked="" type="checkbox"/> 155°C  |
| <input type="radio"/> Solo su richiesta - on request only            | PT100 <input type="checkbox"/>   |
| <input type="radio"/> Solo su richiesta - on request only            | PTC <input type="checkbox"/>   |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid   |
| <b>Camera olio - Oil chamber</b>                                     | Si - Yes   |
| <b>Protezione Tenuta - Leakage protection</b>                        | Optional   |
| <b>Tipo girante - Impeller</b>                                       | Vortex   |
| <b>DN mandata - Discharge</b>  | DN 100 Pn16      Orizzontale - Horizontal  |
| <b>Controflangia filettata - Threaded counterflange</b>              | Si - Yes      G 4"   |
| <b>DN aspirazione / Suction</b>                                      | [mm]      DN 100   |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard Vernice all'acqua - Water paint / 30µm<br>Opaco Nero - Opaque Black<br>Optional Epossidica - Epoxy coating / 80µm<br>RAL 7015 - Grigio - Grey |

## Limiti di utilizzo - Operating Limits

|   |                       |        |
|---|-----------------------|--------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C]                  | ≤ 40   |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] | ~ 1    |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s]  | ~ 1    |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l]                | < 200  |
| <b>PH liquido pompato - PH value</b>                                |                       | 6 ÷ 12 |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m]                   | 20     |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l]                 | < 1    |

**Corretta rotazione della girante**  
**Rotation of the impeller**





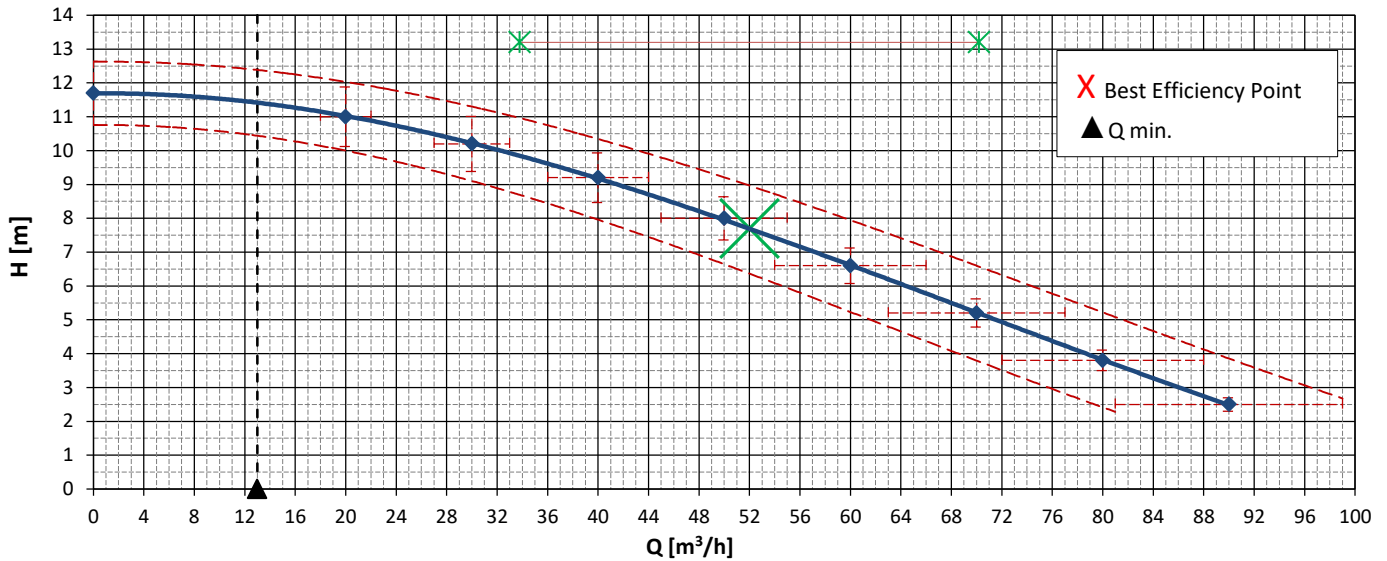
Tipo di pompa - Pump model  
**VS.100\_30.4.173**

**Poles: 4 Hz: 50**  
**r.p.m. 1500**

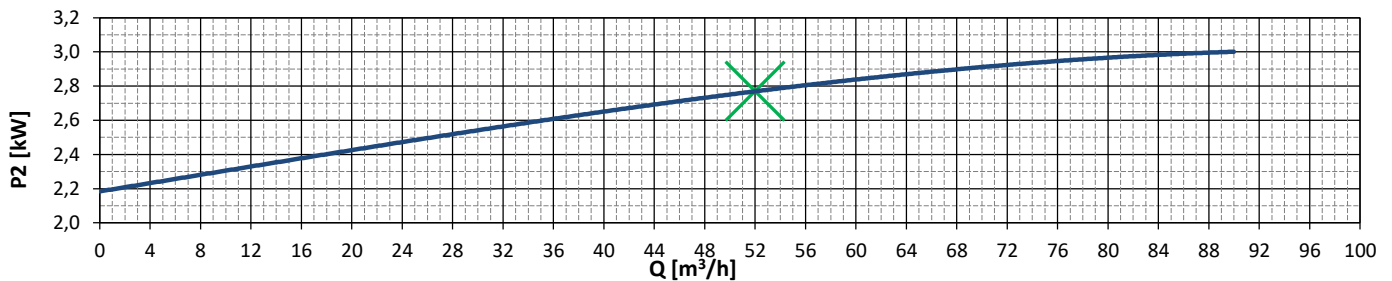
Girante Impeller  
Mandata Discharge  
**VORTEX DN 100 - G 4"**

Serie 1

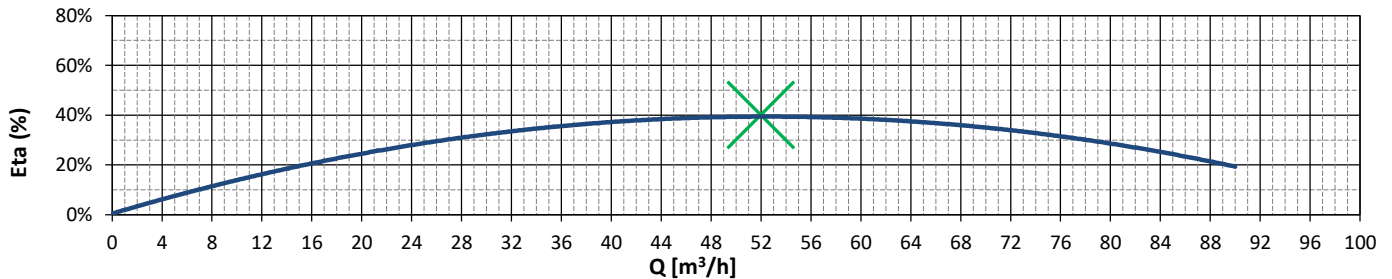
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |     |     |      |      |      |      |  |  |  |
|-----------------|--------------|------|------|------|-----|-----|------|------|------|------|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 333  | 500  | 667 | 833 | 1000 | 1167 | 1333 | 1500 |  |  |  |
|                 | <b>l/s</b>   | 0    | 6    | 8    | 11  | 14  | 17   | 19   | 22   | 25   |  |  |  |
|                 | <b>m³/h</b>  | 0    | 20   | 30   | 40  | 50  | 60   | 70   | 80   | 90   |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 11,7 | 11,0 | 10,2 | 9,2 | 8,0 | 6,6  | 5,2  | 3,8  | 2,5  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>4,0</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>3,0</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>3,9</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,81</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>7,0</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>38,0</b>       |

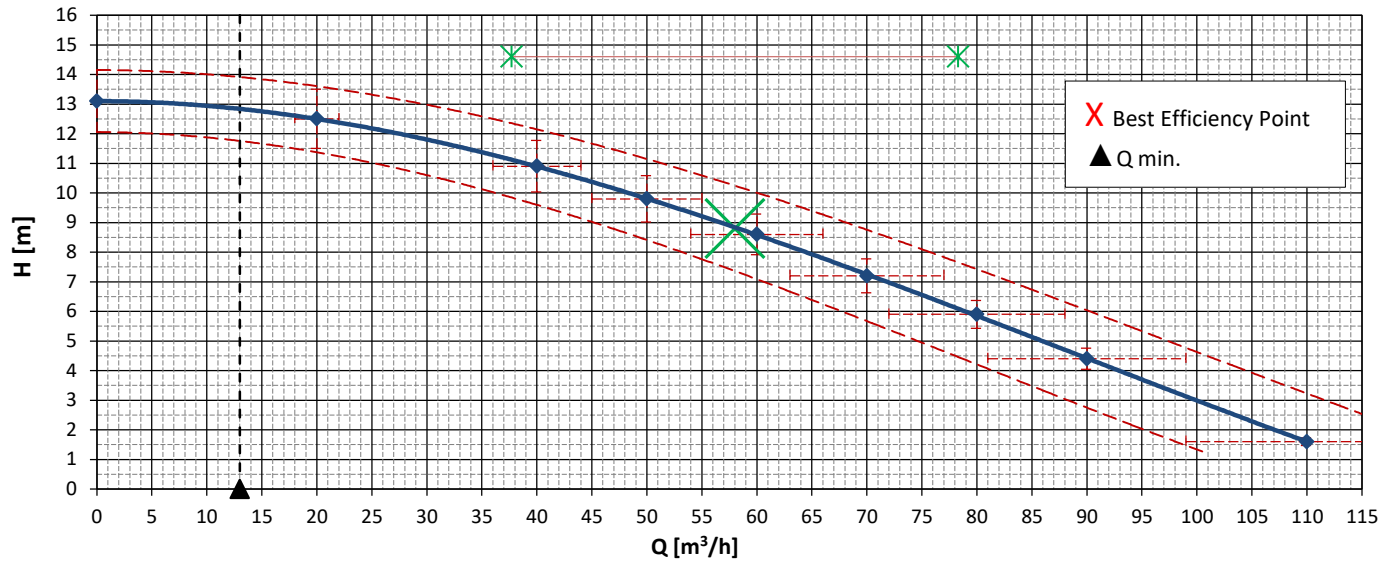
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 92</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 203</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>108,0</b> |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G2,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>25</b>    |

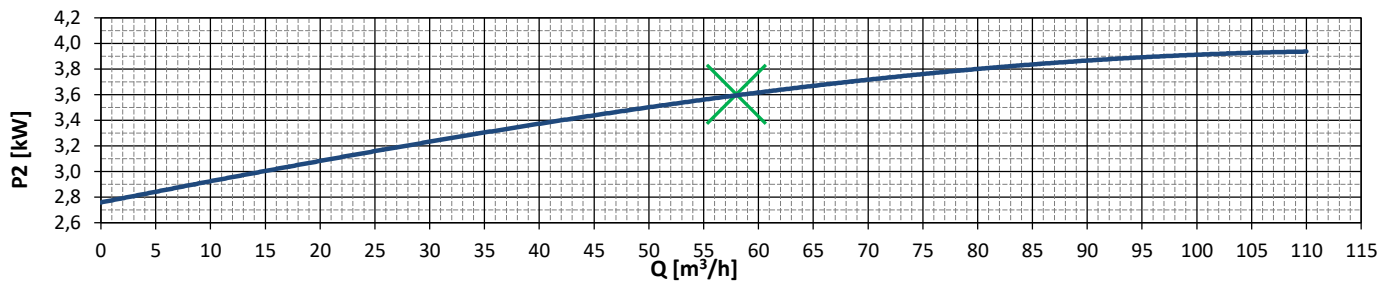
In accordo con  
In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C

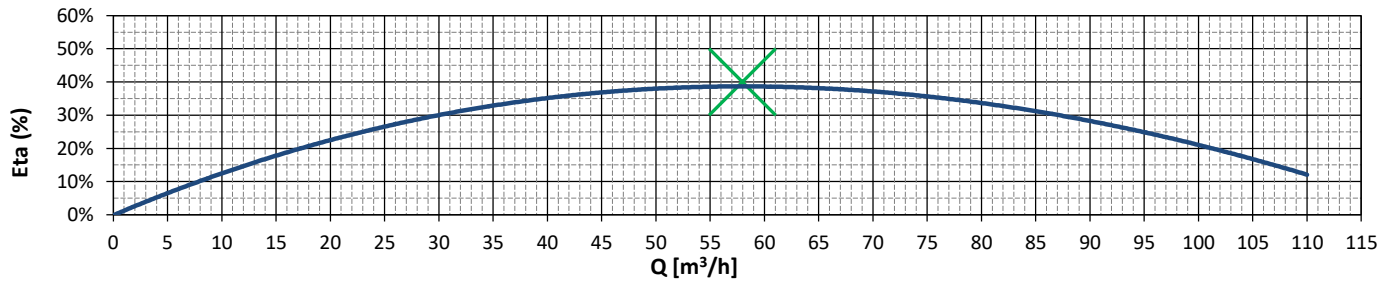
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |     |      |      |      |      |      |  |  |
|-----------------|--------------|------|------|------|-----|------|------|------|------|------|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 333  | 667  | 833 | 1000 | 1167 | 1333 | 1500 | 1833 |  |  |
|                 | <b>l/s</b>   | 0    | 6    | 11   | 14  | 17   | 19   | 22   | 25   | 31   |  |  |
|                 | <b>m³/h</b>  | 0    | 20   | 40   | 50  | 60   | 70   | 80   | 90   | 110  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 13,1 | 12,5 | 10,9 | 9,8 | 8,6  | 7,2  | 5,9  | 4,4  | 1,6  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>4,0</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>3,9</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>4,8</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,84</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>8,2</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>44,5</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 90</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 220</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>110,0</b> |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G2,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>    |

In accordo con  
In accordance to **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density 1  
Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C



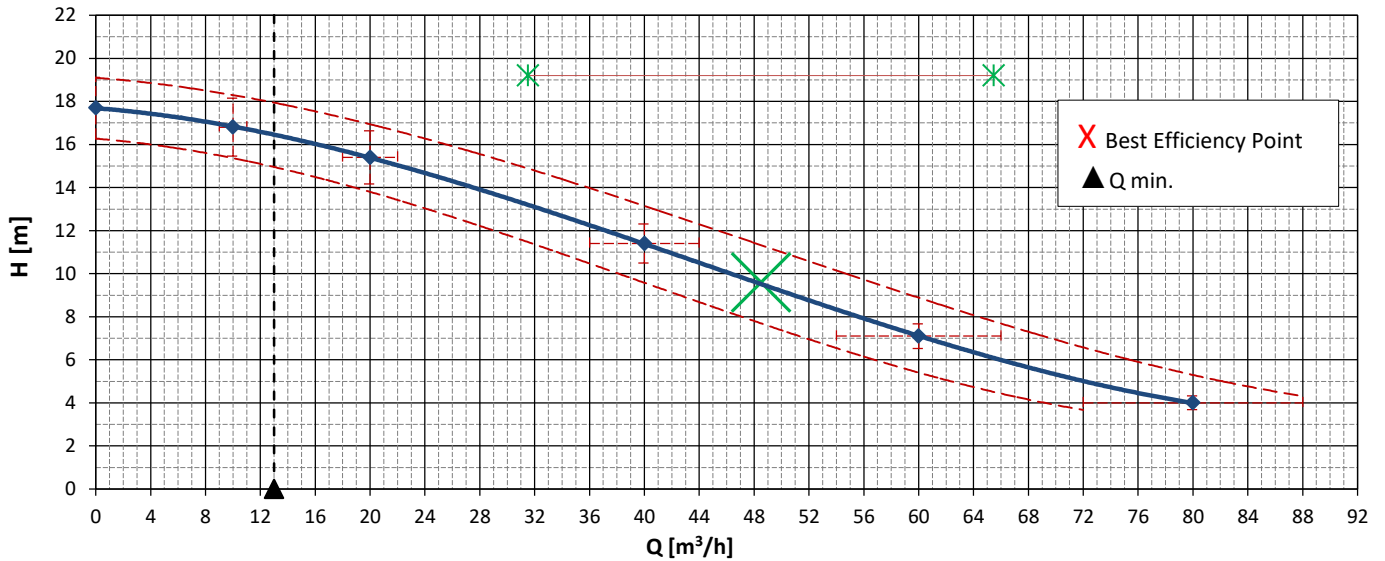
Tipo di pompa - Pump model  
**VS.100\_37.2.173**

**Poles: 2 Hz: 50**  
**r.p.m. 3000**

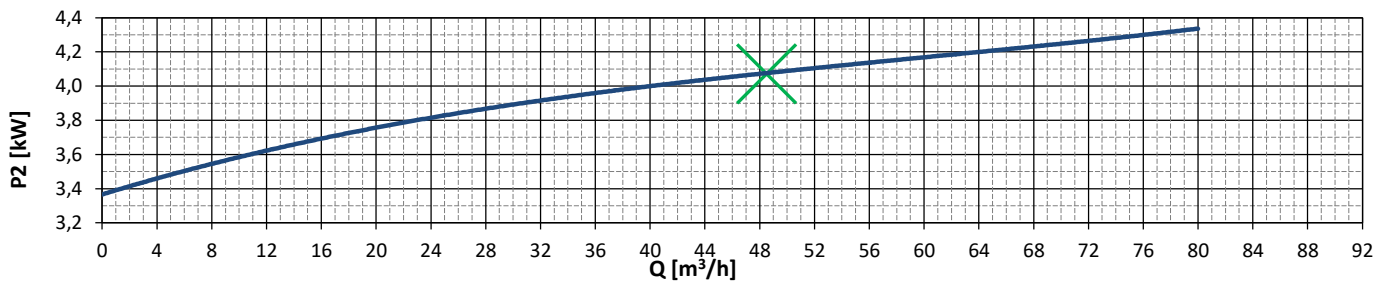
Girante Impeller **VORTEX**  
Mandata Discharge **DN 100 - G 4"**

Serie 1

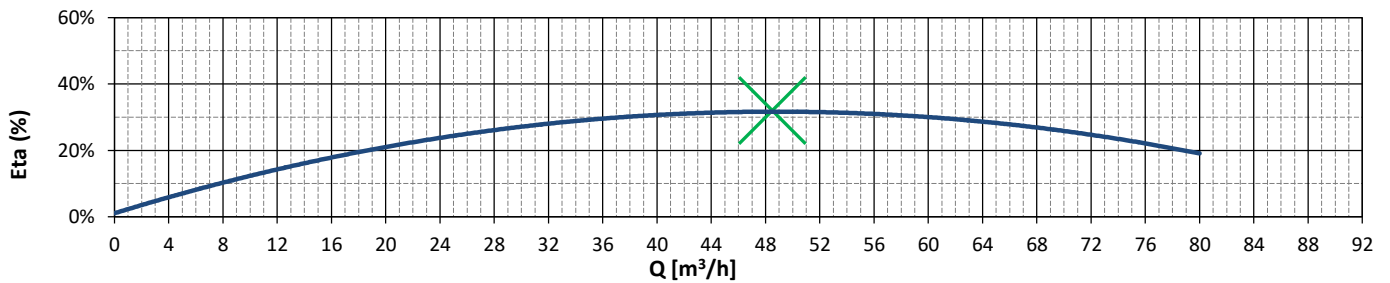
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |      |      |  |  |  |  |  |
|-----------------|--------------|------|------|------|------|------|------|--|--|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 167  | 333  | 667  | 1000 | 1333 |  |  |  |  |  |
|                 | <b>l/s</b>   | 0    | 3    | 6    | 11   | 17   | 22   |  |  |  |  |  |
|                 | <b>m³/h</b>  | 0    | 10   | 20   | 40   | 60   | 80   |  |  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 17,7 | 16,8 | 15,4 | 11,4 | 7,1  | 4,0  |  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>4,4</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>4,3</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>5,4</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,81</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>10,0</b>       |
| Corrente di spunto<br>Starting current | [A] | <b>57,0</b>       |

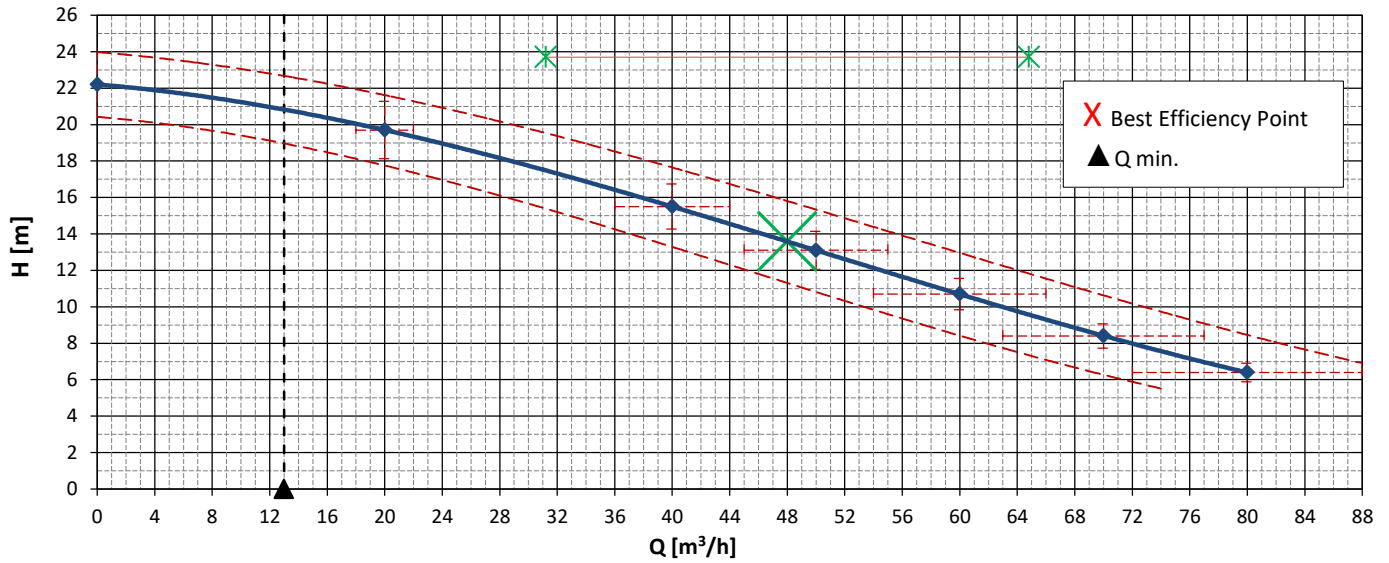
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 90</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 161</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>105,0</b> |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G2,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>    |

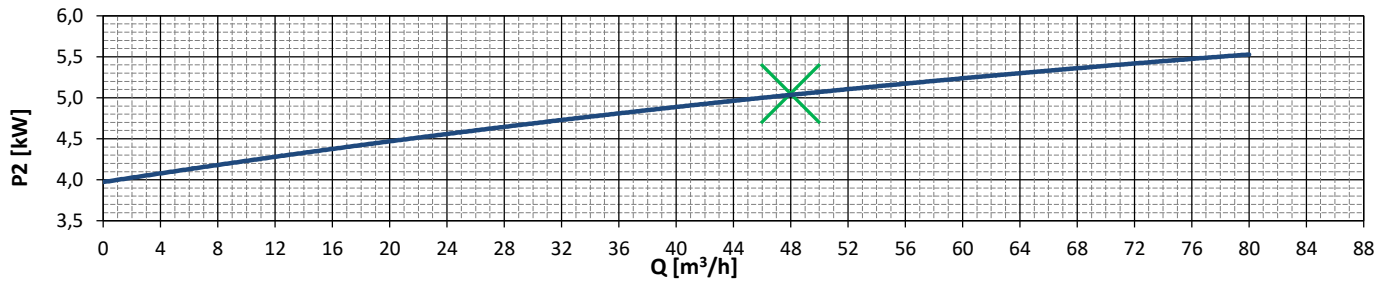
In accordo con / In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C

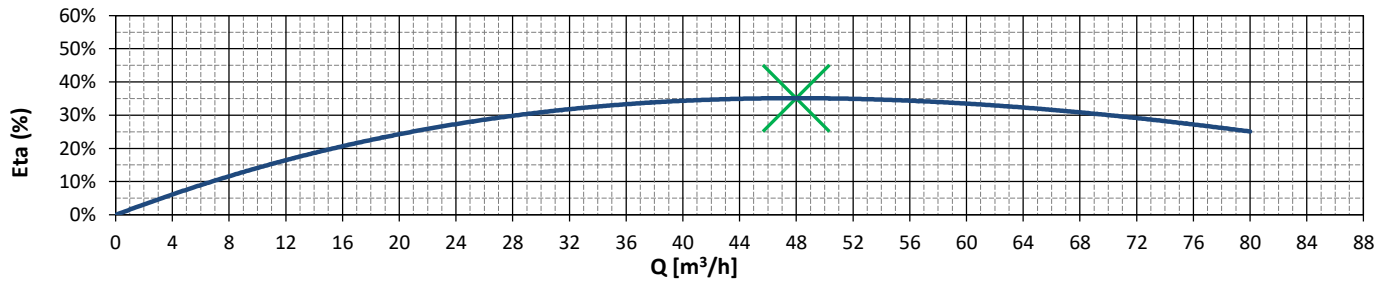
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |       |      |      |      |      |      |      |      |  |  |  |  |
|-----------------|-------|------|------|------|------|------|------|------|--|--|--|--|
| <b>FLOW (Q)</b> | l/min | 0    | 333  | 667  | 833  | 1000 | 1167 | 1333 |  |  |  |  |
|                 | l/s   | 0    | 6    | 11   | 14   | 17   | 19   | 22   |  |  |  |  |
|                 | m³/h  | 0    | 20   | 40   | 50   | 60   | 70   | 80   |  |  |  |  |
| <b>HEAD (H)</b> | m     | 22,2 | 19,7 | 15,5 | 13,1 | 10,7 | 8,4  | 6,4  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>7,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>5,5</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>7,0</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,81</b> |

**Model T**

|  |     |                     |
|--|-----|---------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b>   |
| Avviamento<br>Starting                 |     | <b>D.O.L. - S/D</b> |
| Corrente Nominale<br>Rated current     | [A] | <b>12,4</b>         |
| Corrente di spunto<br>Starting current | [A] | <b>71,0 - 24,0</b>  |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 90</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 174</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>108,0</b> |

|  |  |                      |
|--|--|----------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>            |
| Cavo<br>Cable                              |  | <b>4G2,5 - 7G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>            |

In accordo con / In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C



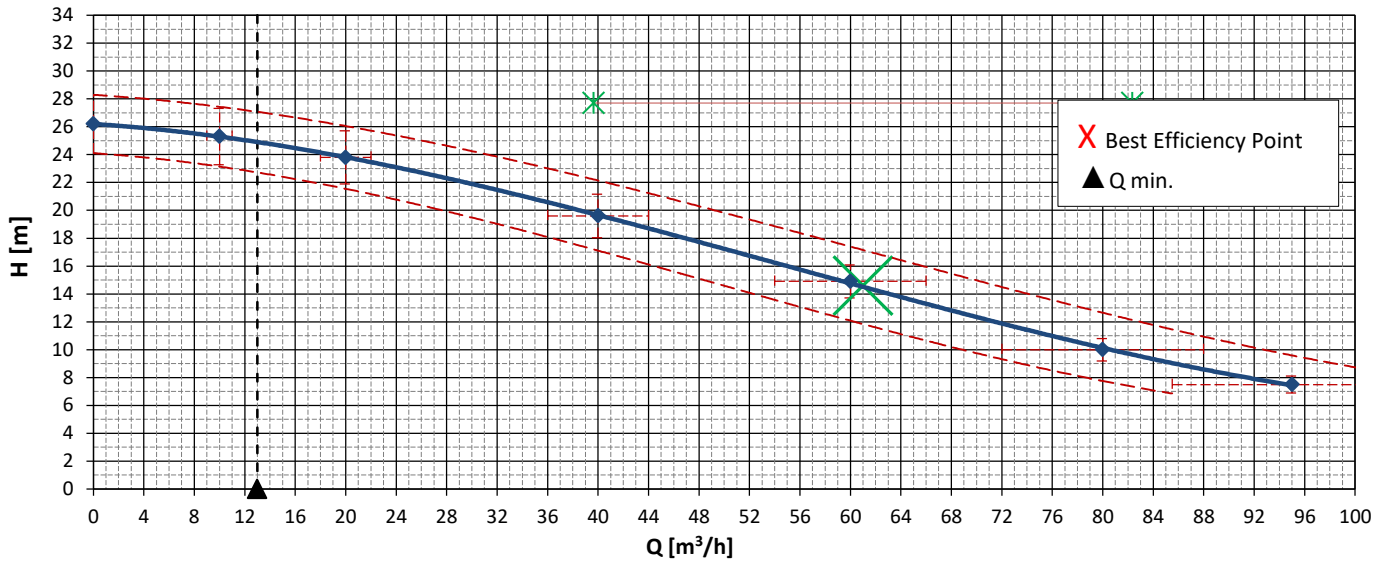
Tipo di pompa - Pump model  
**VS.100\_75.2.173**

**Poles: 2 Hz: 50**  
**r.p.m. 3000**

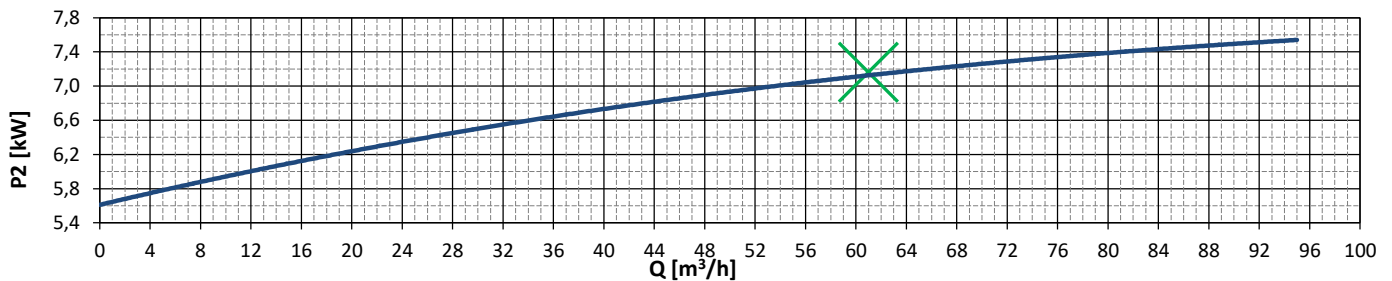
Girante Impeller  
Mandata Discharge  
**VORTEX**  
**DN 100 - G 4"**

Serie 1

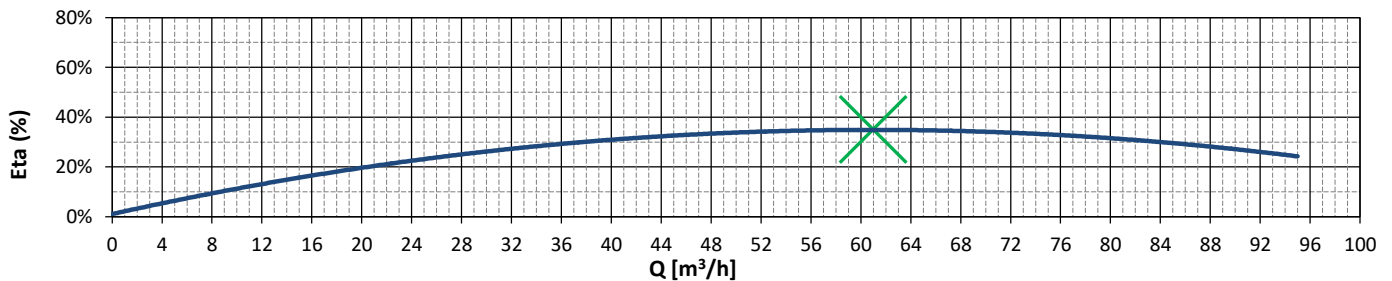
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |      |      |      |  |  |  |  |
|-----------------|--------------|------|------|------|------|------|------|------|--|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 167  | 333  | 667  | 1000 | 1333 | 1583 |  |  |  |  |
|                 | <b>l/s</b>   | 0    | 3    | 6    | 11   | 17   | 22   | 26   |  |  |  |  |
|                 | <b>m³/h</b>  | 0    | 10   | 20   | 40   | 60   | 80   | 95   |  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 26,2 | 25,3 | 23,8 | 19,6 | 14,9 | 10,0 | 7,5  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>7,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>7,5</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>9,3</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,82</b> |

**Model T**

|  |     |                     |
|--|-----|---------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b>   |
| Avviamento<br>Starting                 |     | <b>D.O.L. - S/D</b> |
| Corrente Nominale<br>Rated current     | [A] | <b>16,8</b>         |
| Corrente di spunto<br>Starting current | [A] | <b>88,0 - 30,0</b>  |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 90</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 189</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>112,0</b> |

|  |  |                      |
|--|--|----------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>            |
| Cavo<br>Cable                              |  | <b>4G2,5 - 7G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>15</b>            |

In accordo con  
In accordance to

ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1  
Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C

### Dimensioni d'ingombro - overall dimensions

**S** Installazione mobile - Installation mobile - Installation mobile - Instalación móvil

Dimensione imballo  
Packaging dimensions

Misure - Measures [mm]

| A   | B   | C   |
|-----|-----|-----|
| 750 | 450 | 390 |

**FC** Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento

8FC000006      KG: 60

|   |   |
|---|---|
| 1 | Supporto tubi guida da 2" 1"1/2 guide rails bracket |
| 2 | Piede Verticale 4" Vertical foot - 4"out            |
| 3 | Slitta completa Sliding bracket complete            |
| 4 | Esclusi dalla fornitura Not supplied                |

|   |     |
|---|-----|
| D | 550 |
| E | 600 |
| F | 400 |

## Caratteristiche costruttive - construction features

Maniglia per movimentazione pompa  
Handel to lift the pump  
Manille pour lever la pompe  
Grillete para levantar la bomba

Pastiglia termica  
Built in Thermal protector  
Protecteur thermique intégré  
Protector térmico incorporado

10 m - H07RN-F

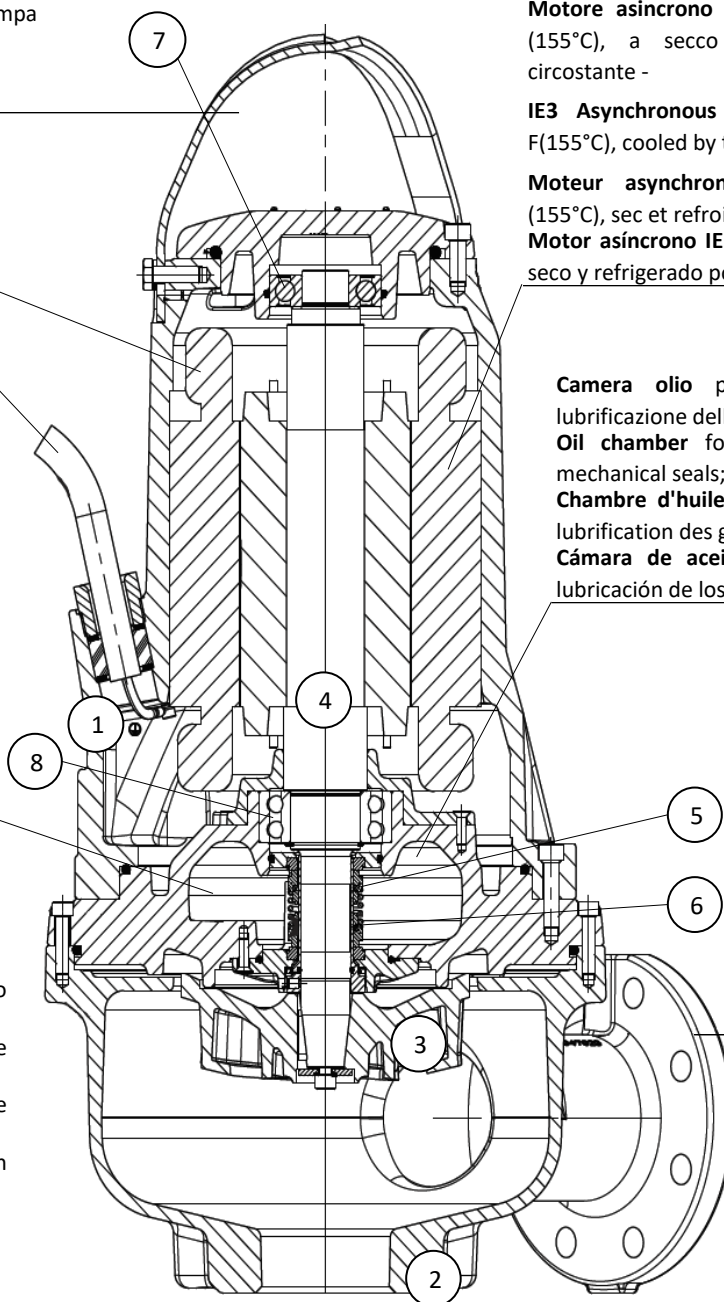
| Viti<br>Screws<br>Des vis<br>Empulgueras | Quality<br>A2 |
|--|---------------|
|--|---------------|

| O-RINGS | NBR |
|---------|-----|
|---------|-----|

**OPTIONAL**

Sonda Olio  
Oil Probe  
Sonde d'huile  
Sonda de aceite

Girante arretrata con ampio  
passaggio libero  
**Backward impeller with large free  
passage**  
**Roue arrière avec grand passage  
libre**  
**Impulsor hacia atrás con gran  
paso libre.**



**Motore asincrono IE3** in classe di isolamento F (155°C), a secco e raffreddato dal liquido circostante -

**IE3 Asynchronous dry motor**, insulation class F(155°C), cooled by the surrounding liquid

**Moteur asynchrone IE3**, classe d'isolation F (155°C), sec et refroidi par le liquide environnant;  
**Motor asíncrono IE3**, aislamiento clase F (155 °C), seco y refrigerado por el líquido que rodea.

**Camera olio** per il raffreddamento e la lubrificazione delle tenute meccaniche;  
**Oil chamber** for cooling and lubrication of mechanical seals;  
**Chambre d'huile** pour le refroidissement et la lubrification des garnitures mécaniques;  
**Cámara de aceite** para la refrigeración y la lubricación de los sellos mecánicos.

DNm: DN100 PN16

| NR. | DESCRIPTION       | MATERIAL     |
|-----|-------------------|--------------|
| 1   | Gruppo motore     | Ghisa        |
|     | Motor group       | Cast iron    |
|     | Groupe moteur     | Fer de fonte |
|     | Unidad de motor   | Hierro       |
| 2   | Corpo idraulico   | Ghisa        |
|     | Pump Housing      | Cast iron    |
|     | Corps de la pompe | Fer de fonte |
|     | Cuerpo hidráulico | Hierro       |
| 3   | Girante           | Ghisa        |
|     | Impeller          | Cast iron    |
|     | Roue              | Fer de fonte |
|     | Impulsor          | Hierro       |
| 4   | Albero motore     | Acciaio      |
|     | Shaft             | Steel        |
|     | Arbre moteur      | Acier        |
|     | Eje del motor     | Acero        |

| NR. | DESCRIPTION                                      | MATERIAL              |
|-----|--|-----------------------|
| 5   | Tenuta mecc. superiore                           | Cartridge mech. Seals |
|     | Upper mech. seal                                 |                       |
|     | Haut garniture mécan.<br>Sello mecánico superior |                       |
| 6   | Tenuta mecc. Inferiore                           | Cartridge mech. Seals |
|     | Lower mech. seal                                 |                       |
|     | Haut garniture mécan.<br>Sello mecánico inferior |                       |
| 7   | Cuscinetto superiore                             | 6306 2RS1             |
|     | Top bearing                                      |                       |
|     | Roulement supérieur<br>Cojinete superior         |                       |
| 8   | Cuscinetto inferiore                             | 3209 2RS1             |
|     | Lower bearing                                    |                       |
|     | Roulement inférieur<br>Cojinete inferior         |                       |



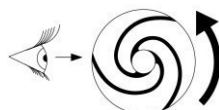
## Caratteristiche costruttive - construction data

|  |  |   |
|--|--|---|
| <b>Costruzione Motore - Motor Frame</b>                              | 240 - IE3                                      |   |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |   |
| <b>Classe di Isolamento - Insulation Class</b>                       | F (155°C)                                      |   |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent                |   |
| <b>Avvolgimento statore - Stator winding</b>                         | 3~PH - Threephase                              |   |
|  | Δ / Y  |   |
|  | [V]  | 3~400/690   |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> | Si - Yes                                       |   |
| <input type="radio"/>  | Bimetallico - Bimetal disc                     | <input checked="" type="checkbox"/> 130°C                           |
| <input type="radio"/>  | Solo su richiesta - on request only            | PT100 <input type="checkbox"/>                                      |
| <input type="radio"/>  | Solo su richiesta - on request only            | PTC <input type="checkbox"/>  |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid |   |
| <b>Camera olio - Oil chamber</b>                                     | Si - Yes                                       |   |
| <b>Protezione Tenuta - Leakage protection</b>                        | Optional                                       |   |
| <b>Tipo girante - Impeller</b>                                       | Vortex   |   |
| <b>DN mandata - Discharge</b>  | DN 100 Pn16                                    | Orizzontale - Horizontal  |
| <b>Controflangia filettata - Threaded counterflange</b>              | No   | -   |
| <b>DN aspirazione / Suction</b>                                      | [mm]   | DN 100  |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard                                       | Vernice all'acqua - Water paint / 30μm<br>Opaco Nero - Opaque Black |
|  | Optional                                       | Epossidica - Epoxy coating / 80μm<br>RAL 7015 - Grigio - Grey       |

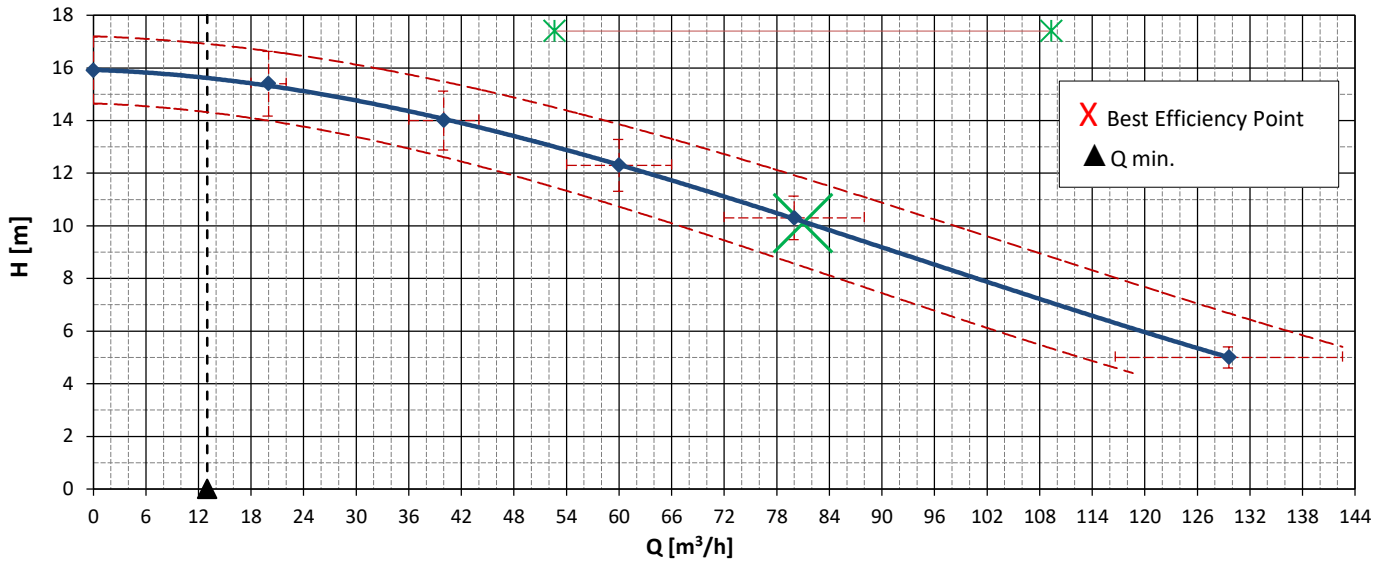
## Limiti di utilizzo - Operating Limits

|   |                       |          |
|---|-----------------------|----------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C]                  | ≤ 40     |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] | ~ 1      |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s]  | ~ 1      |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l]                | < 200    |
| <b>PH liquido pompato - PH value</b>                                |                       | 6,5 ÷ 12 |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m]                   | 20       |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l]                 | < 1      |

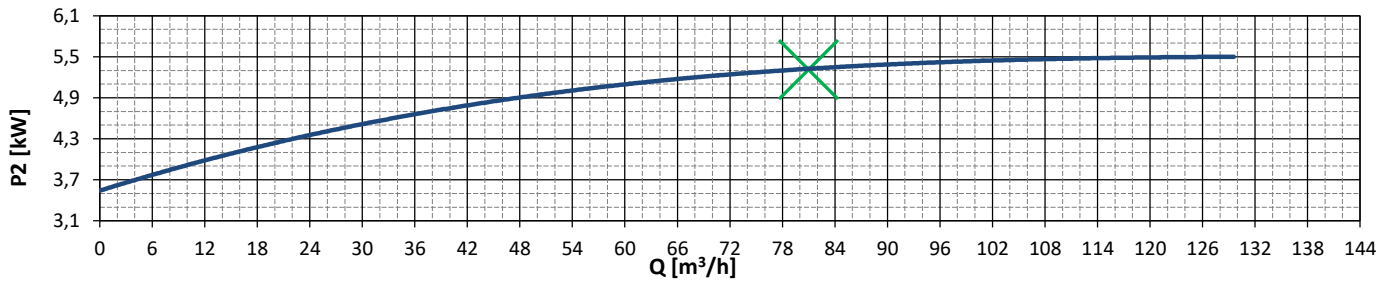
**Corretta rotazione della girante**  
**Rotation of the impeller**



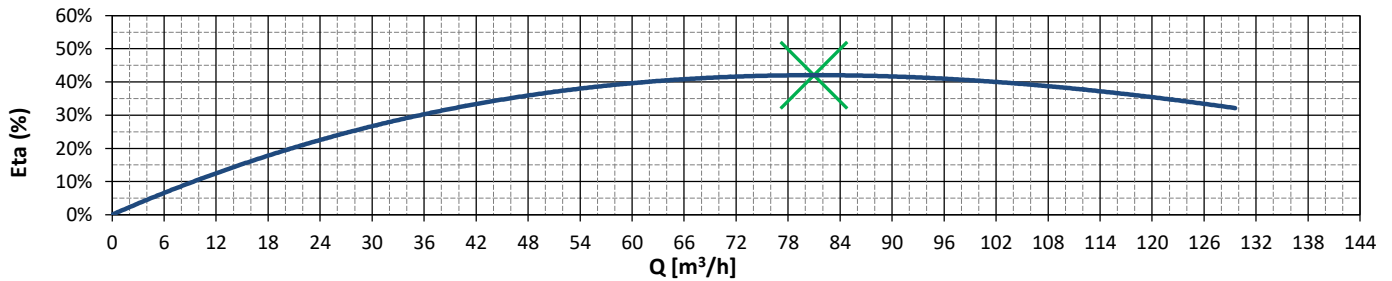
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |      |      |  |  |  |  |  |
|-----------------|--------------|------|------|------|------|------|------|--|--|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 333  | 667  | 1000 | 1333 | 2160 |  |  |  |  |  |
|                 | <b>l/s</b>   | 0    | 6    | 11   | 17   | 22   | 36   |  |  |  |  |  |
|                 | <b>m³/h</b>  | 0    | 20   | 40   | 60   | 80   | 130  |  |  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 15,9 | 15,4 | 14,0 | 12,3 | 10,3 | 5,0  |  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>5,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>5,5</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>6,1</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,79</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>S/D</b>        |
| Corrente Nominale<br>Rated current     | [A] | <b>11,3</b>       |
| Corrente di spunto<br>Starting current | [A] | <b>50,3</b>       |

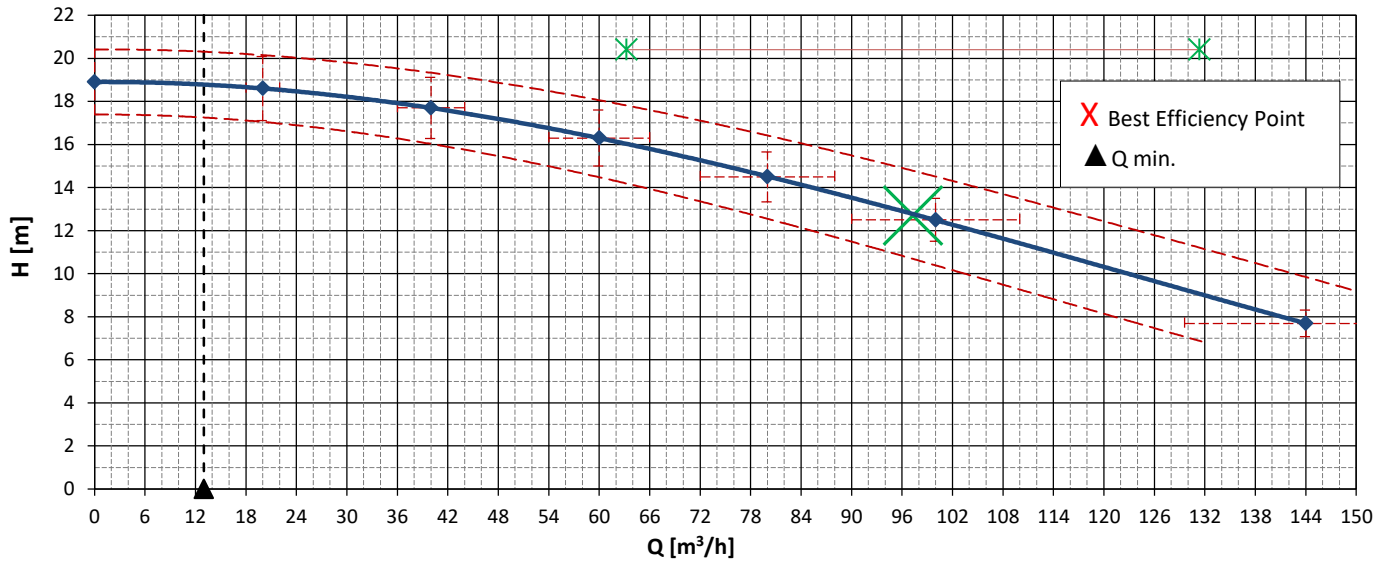
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 100</b> |
| Diametro girante<br>Impeller diameter | [mm] | <b>Ø 239</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>220,0</b> |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>7G2,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>    |

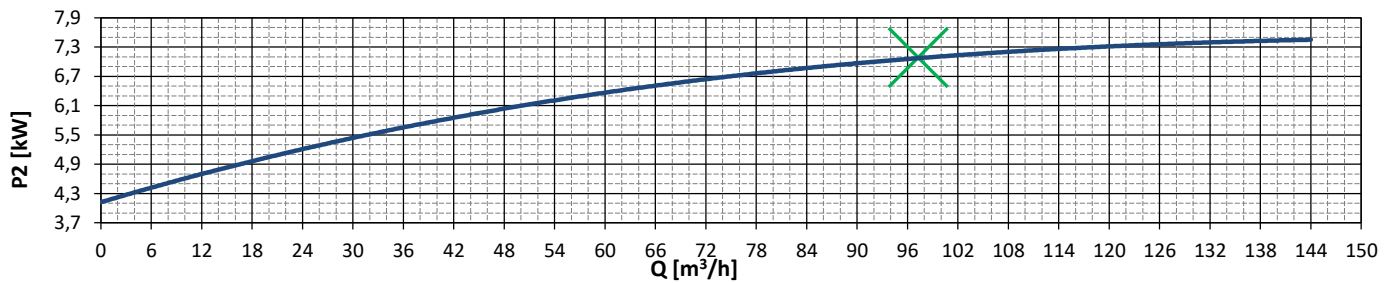
In accordo con / In accordance to ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C

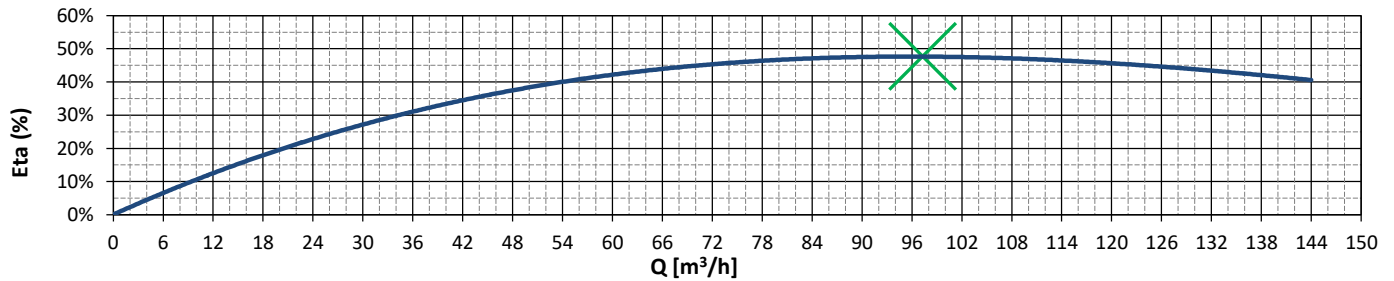
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |      |      |      |  |  |  |  |
|-----------------|--------------|------|------|------|------|------|------|------|--|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 333  | 667  | 1000 | 1333 | 1667 | 2400 |  |  |  |  |
|                 | <b>l/s</b>   | 0    | 6    | 11   | 17   | 22   | 28   | 40   |  |  |  |  |
|                 | <b>m³/h</b>  | 0    | 20   | 40   | 60   | 80   | 100  | 144  |  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 18,9 | 18,6 | 17,7 | 16,3 | 14,5 | 12,5 | 7,7  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>7,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>7,5</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>8,3</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,83</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>S/D</b>        |
| Corrente Nominale<br>Rated current     | [A] | <b>14,4</b>       |
| Corrente di spunto<br>Starting current | [A] | <b>44,5</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>∅ 100</b> |
| Diametro girante<br>Impeller diameter | [mm] | <b>∅ 258</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>220,0</b> |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>7G2,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>    |

In accordo con  
In accordance to **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density 1  
Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C

## Dimensioni d'ingombro - overall dimensions

**S** Installazione mobile - Installation mobile - Installation mobile - Instalación móvil

Dimensione imballo  
Packaging dimensions

Misure - Measures [mm]

| A    | B   | C   |
|------|-----|-----|
| 1030 | 580 | 480 |

**FC** Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento








**8FC000006** KG: 60

|   |   |
|---|---|
| 1 | Supporto tubi guida da 2" 1"1/2 guide rails bracket |
| 2 | Piede Verticale 4" Vertical foot - 4"out            |
| 3 | Slitta completa Sliding bracket complete            |
| 4 | Esclusi dalla fornitura Not supplied                |

D

|   |     |
|---|-----|
| D | 550 |
| E | 600 |
| F | 400 |

**ACCESSORI - ACCESSORIES - ACCESORIES - ACCESORIOS**

| Descrizione - Description - Description - Descripción |   | Codice<br>Code       |
|---|---|----------------------|
| FC  |  <ul style="list-style-type: none"> <li>- Dispositivo di accoppiamento DN 100</li> <li>- DN 100 Coupling device</li> <li>- Dispositif de couplage DN 100</li> <li>- Dispositivo de acoplamiento DN 100</li> </ul>  | 8FC000006            |
| STD   |  <ul style="list-style-type: none"> <li>- Cavalletto di sostegno in acciaio inox</li> <li>- Stainless steel support stand</li> <li>- Support en acier inoxydable</li> <li>- Soporte de acero inoxidable.</li> </ul>  | 8FC000005            |
| AT 100  |  <ul style="list-style-type: none"> <li>- Adattatore per dispositivo di accoppiamento della concorrenza</li> <li>- Adapter for competitors foot coupling devices</li> <li>- Adaptateur pour pied d'assise du concurrent</li> <li>- Adaptador para dispositivo de acoplamiento de competidor</li> </ul> | 2SB000007            |
|   |  <ul style="list-style-type: none"> <li>- Catena ferro zincato - galvanized Iron - fer galvanisé - hierro galvanizado</li> <li>- Chain</li> <li>- Chaîne</li> <li>- Cadena</li> </ul>  | 2SC000019            |
|   | <ul style="list-style-type: none"> <li>- Catena Acciaio - Stainless steel - acier inox - acero inox</li> </ul>  | 2SC000032            |
| FBV   |  <ul style="list-style-type: none"> <li>- Valvola di ritegno a palla Flangiata</li> <li>- Flanged valve</li> <li>- Vanne à bride</li> <li>- Válvula de brida</li> </ul>  | DN 100<br>4BV000008  |
| HF  |  <ul style="list-style-type: none"> <li>- Regolatore di livello per acque reflue</li> <li>- Level switch for sewage</li> <li>- Interrupteur de niveau pour eaux usées</li> <li>- Interruptor de nivel para aguas residuales</li> </ul>  | [10 mt]<br>3CS000007 |
| SHELL   |  <ul style="list-style-type: none"> <li>- Contrappeso SHELL per galleggiante</li> <li>- Counterweight SHELL for level switch</li> <li>- Cotrepoids SHELL pour interrupteur de niveau</li> <li>- Contrapeso para interruptor de nivel</li> </ul>  | 3CS000021            |

**SELEZIONE QUADRO DI CONTROLLO - CONTROL PANEL SELECTION**

|     | Pole | Pump                | Alim.<br>[V] | P1<br>[KW] | In<br>[A] | Avv. |
|-----|------|---------------------|--------------|------------|-----------|------|
| 173 | 4    | VS.100_30.4T.173    | 3~400        | 3,0        | 7,0       | DOL  |
|     |      | VS.100_40.4T.173    | 3~400        | 4,0        | 8,1       | DOL  |
|     |      | VS.100_37.2T.173    | 3~400        | 3,7        | 10,0      | DOL  |
|     | 2    | VS.100_55.2T.173    | 3~400        | 5,5        | 12,5      | DOL  |
|     |      | VS.100_55.2T.173.SD | 3~400        | 5,5        | 12,5      | S/D  |
|     |      | VS.100_75.2T.173    | 3~400        | 7,5        | 16,8      | DOL  |
| 240 | 4    | VS.100_75.2T.173.SD | 3~400        | 7,5        | 16,8      | S/D  |
|     |      | VS.100_55.4T.173.SD | 3~400        | 5,5        | 11,5      | S/D  |
|     |      | VS.100_75.4T.173.SD | 3~400        | 7,5        | 14,5      | S/D  |

| - ECH -<br>ELECTROMECHANICAL |           | 1 PUMP    |           | 2 PUMPS       |           |          |           |           |           |               |           |
|------------------------------|-----------|-----------|-----------|---------------|-----------|----------|-----------|-----------|-----------|---------------|-----------|
| ECH1.T-7                     | 5EC000005 | ECH1.T-14 | 5EC000007 | ECH1.T.S/D_20 | 5EC000106 | ECH2.T-7 | 5EC000029 | ECH2.T-14 | 5EC000031 | ECH2.T.S/D_20 | 5EC000108 |
|                              |           |           | •         |               |           |          |           |           | •         |               |           |
|                              |           |           | •         |               |           |          |           |           | •         |               |           |
|                              |           |           | •         |               |           |          |           |           | •         |               |           |
|                              |           |           | •         |               |           |          |           |           | •         |               |           |
|                              |           |           | •         |               |           |          |           |           | •         |               |           |
|                              |           |           | •         |               |           |          |           |           | •         |               |           |
|                              |           |           | •         |               |           |          |           |           | •         |               |           |
|                              |           |           | •         |               |           |          |           |           | •         |               |           |
|                              |           |           | •         |               |           |          |           |           | •         |               |           |

| - ECL -<br>ELECTRONIC |           | 1 PUMP    |           | 2 PUMPS   |           |           |           |
|-----------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| ECH1.T-15             | 5EC000083 | ECH1.T-24 | 5EC000086 | ECL2.T-15 | 5EC000084 | ECH2.T-24 | 5EC000087 |
|                       |           |           | •         |           |           |           |           |
|                       |           |           | •         |           |           |           |           |
|                       |           |           | •         |           |           |           |           |
|                       |           |           | •         |           |           |           |           |
|                       |           |           | •         |           |           |           |           |
|                       |           |           | •         |           |           |           |           |
|                       |           |           | •         |           |           |           |           |
|                       |           |           | •         |           |           |           |           |
|                       |           |           | •         |           |           |           |           |
|                       |           |           | •         |           |           |           |           |

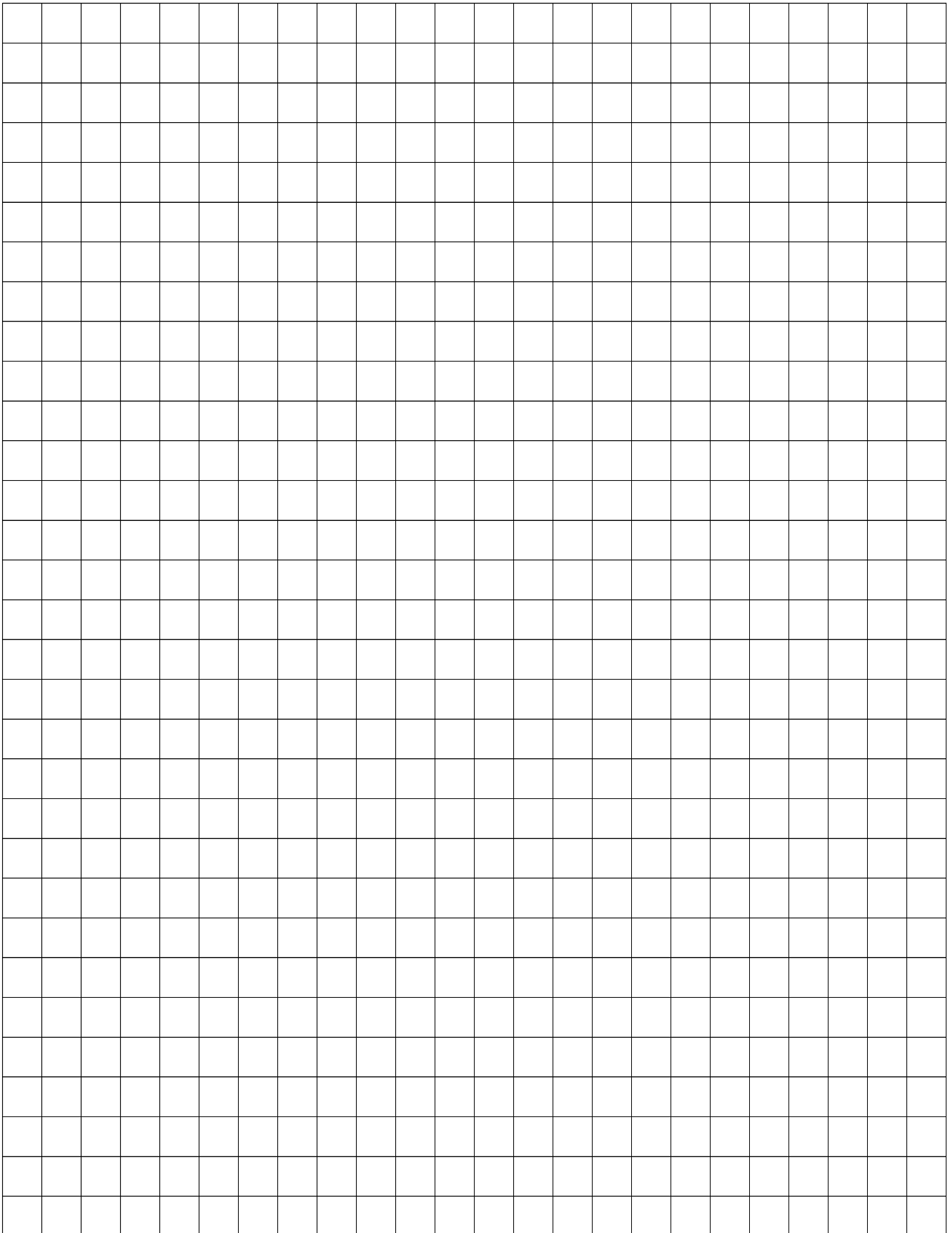


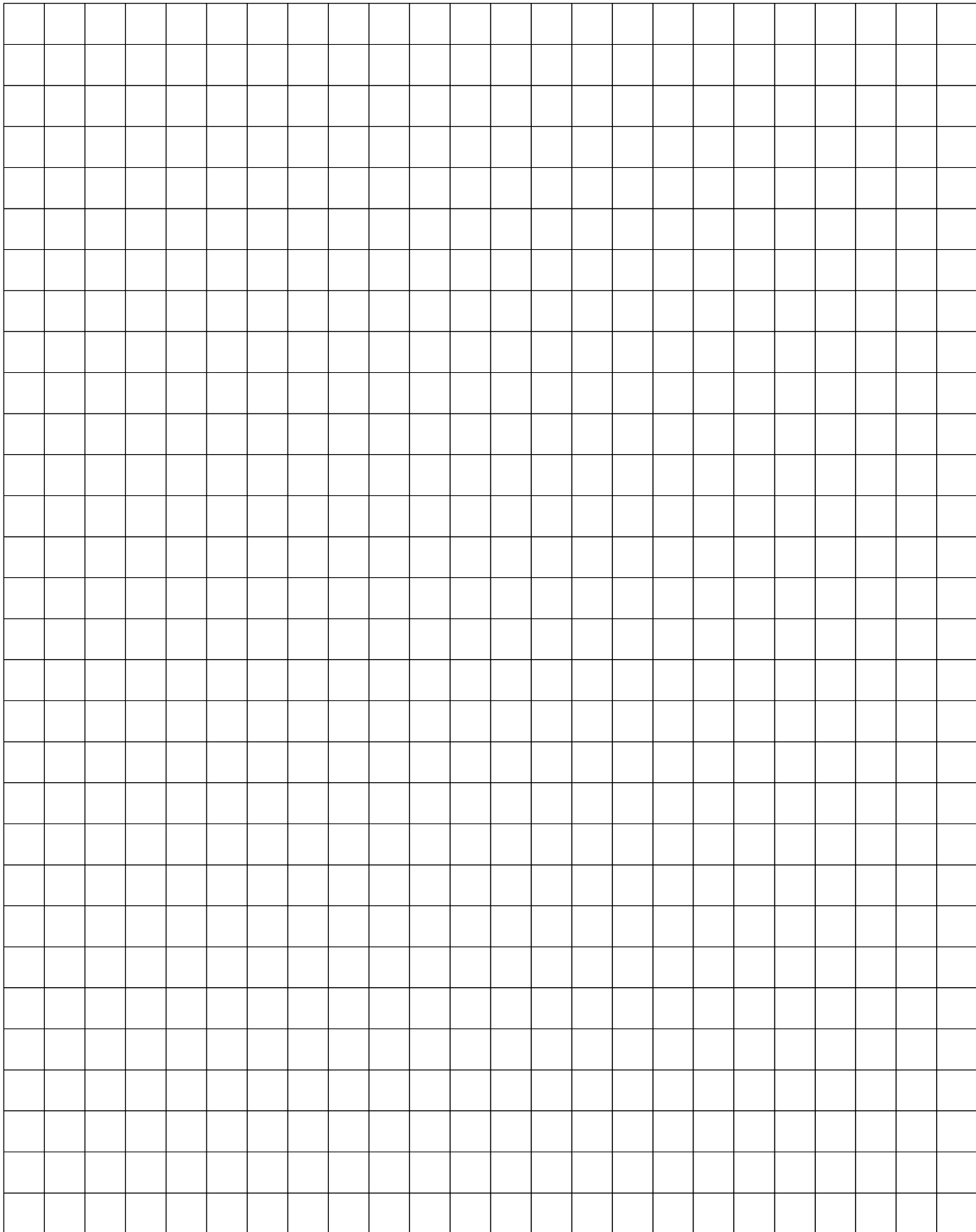
Tipo di pompa - Pump model

**VS.100\_173 / VS.100\_200**

Girante  
Impeller  
Mandata  
Discharge

**VORTEX**  
**DN 100**





# GRINDER RANGE

IT

Elettropompe sommergibili caratterizzate da una girante a rasamento. Sono equipaggiate di un coltello rotante e di un sistema tagliante fisso in grado di sminuzzare e strappare fibre tessili che possono essere presenti nelle acque di rifiuto. L'utilizzo di tali pompe viene consigliato ove la tubazione di mandata è di dimensione ridotta (da 32mm a 50mm) e per sistemi fognari in pressione. Soluzione indicata per il pompaggio di acque luride e reflui civili ed industriali contenenti fibre lunghe.

EN

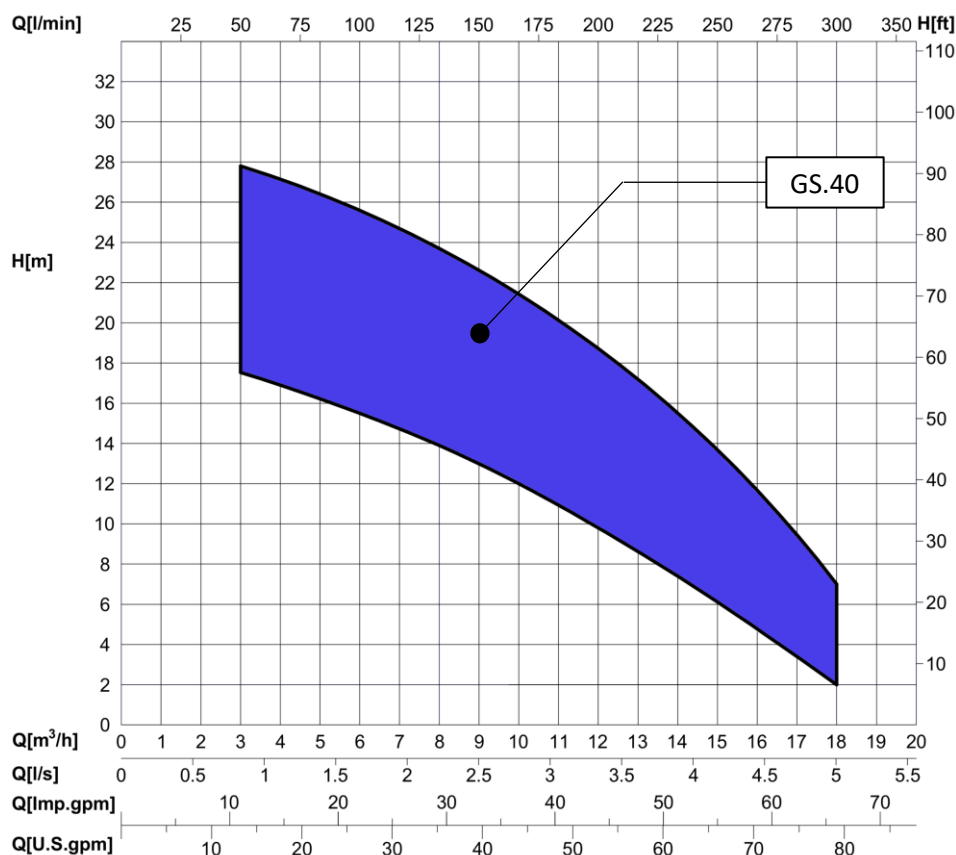
Submersible pumps characterized by a clearance open impeller. They are equipped with a rotating knife and a fixed cutting system capable of shredding and tearing textile fibers that can be in waste waters. These pumps are recommended where the delivery pipe has small size (from 32mm up to 50mm) and for sewer systems under pressure. Suitable to pump sewage and domestic/industrial waste waters containing long fibers.

FR

Pompes submersibles caractérisées par une roue à claire-voie ouverte. Ils sont équipés d'un couteau rotatif et d'un système de coupe fixe capable de déchiquetage et de déchirure des fibres textiles qui peuvent être présents dans les eaux usées. L'utilisation de ces pompes est recommandée lorsque le tuyau de refoulement est de petite taille (de 32mm à 50mm) et pour les systèmes d'égout sous pression. Convient au pompage d'eaux usées et d'eaux usées domestiques / industrielles contenant des fibres longues.

ES

Bombas sumergibles caracterizadas por un impulsor abierto. Están equipados con una cuchilla giratoria y un sistema de corte fijo capaz de triturar y desgarrar las fibras textiles que pueden estar presentes en las aguas residuales. Se recomienda el uso de este tipo de bombas en el que el tubo de suministro es de pequeño tamaño (de 32 mm a 50 mm) y para los sistemas de alcantarillado bajo presión. Adecuado para bombear aguas residuales y aguas residuales domésticas / industriales que contienen fibras largas.





# GRINDER RANGE

| Pipe outlet    | Range | Poles | Type           | kW  | Kg | Free passage | Outlet Flange                 | Pg. |
|----------------|-------|-------|----------------|-----|----|--------------|-------------------------------|-----|
| DN 40<br>DN 50 | GS.40 | 2     | GS.40_11.2.125 | 1,1 | 39 | -            | DN 40 PN10<br>DN50 PN6 - G 2" | 113 |
|                |       |       | GS.40_15.2.125 | 1,5 | 40 |              |                               |     |
|                |       |       | GS.40_22.2.125 | 2,2 | 41 |              |                               |     |

**Poli - Poles Modelli - models**

|          |                              |
|----------|------------------------------|
| <b>2</b> | <b>GS.40_11/15/22.2.125G</b> |
|----------|------------------------------|

**IT**

Elettropompa sommergibile di robusta costruzione fabbricata completamente in ghisa, con camera olio interposta tra gruppo motore e gruppo pompa e doppia tenuta meccanica: lato pompa posizionata sopra alla girante a diretto contatto del liquido pompato; tenuta meccanica lato motore interna alla camera olio.

**APPLICAZIONE:** l'elettropompa deve funzionare completamente immersa per garantire il raffreddamento da parte del liquido circostante. Sono idonee al pompaggio di acque derivate da reflui civili e industriali.

**EN**

Robust construction submersible pump completely made in cast iron, with oil chamber interposed between motor unit and pump unit with double mechanical seal: the pump side one positioned above the impeller in direct contact with the pumped liquid; the motor side one, inside the oil chamber.

**APPLICATION:** the pump must be completely submerged to ensure the cooling by the pumped liquid. They are suitable to pump civil or industrial waste waters.

**FR**

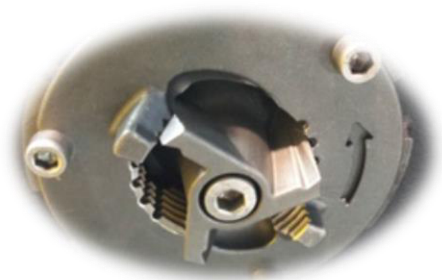
Pompe submersible de construction solide entièrement en fonte, avec chambre d'huile interposée entre le bloc moteur et le groupe pompe et double garniture mécanique: le côté pompe placé au-dessus de la roue en contact direct avec le liquide pompé; garniture mécanique côté moteur à l'intérieur de la chambre à huile.

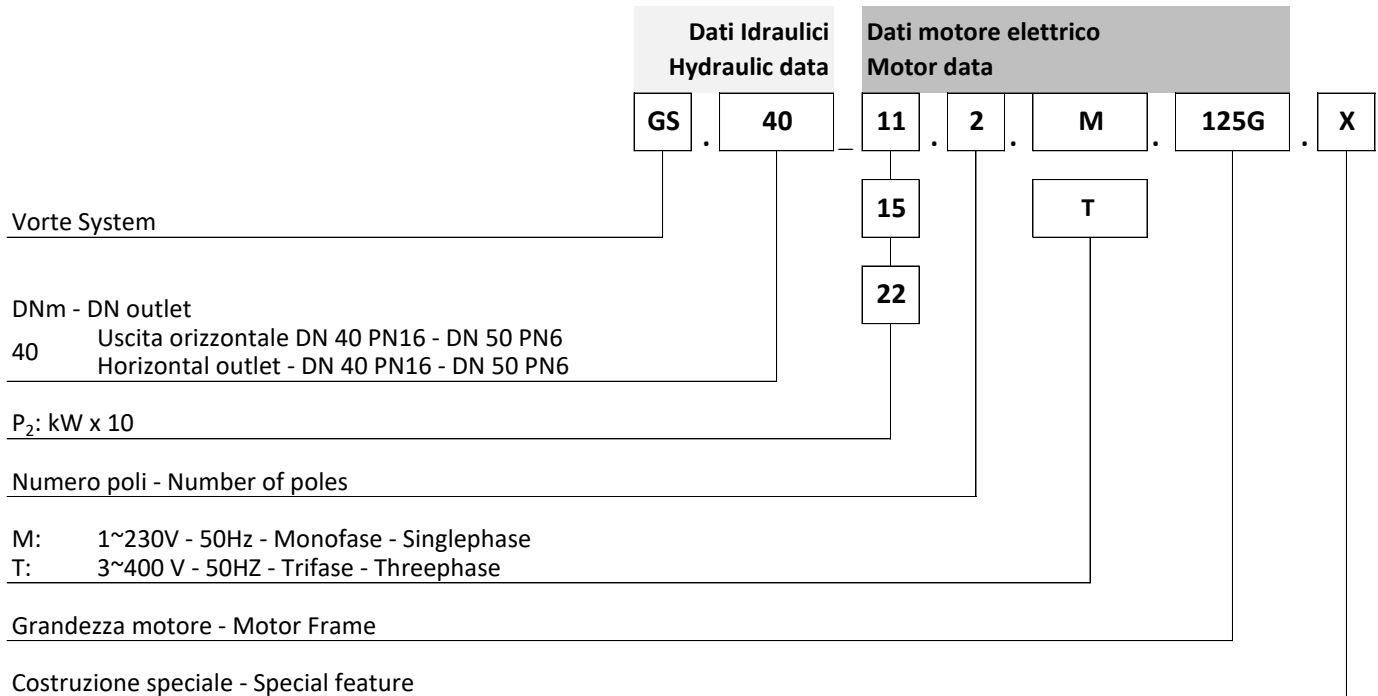
**APPLICATION:** la pompe doit être complètement immergée pour assurer le refroidissement du liquide pompé. Elles sont adaptées pour le pompage de l'eau provenant des eaux usées municipales et industrielles.

**ES**

Bomba sumergible de construcción sólida fabricada completamente de hierro fundido, con cámara de aceite interpuesta entre la unidad del motor y la unidad de la bomba y doble cierre mecánico: lado de la bomba colocado sobre el impulsor en contacto directo con el líquido bombeado; cierre mecánico en el lado del motor dentro de la cámara de aceite.

**APLICACION:** la bomba debe estar completamente sumergido para asegurar el enfriamiento del líquido bombeado. Son aptos para bombear aguas residuales civiles o industriales.



**IDENTIFICAZIONE - IDENTIFICATION**

**LISTA MODELLI - RANGE OF PRODUCTS**

| Grandezza Motore<br>Motor Frame | Poles | P <sub>2</sub><br>[kW] | Alimentazione<br>Power supply | Modelli<br>Models | Avviamento<br>Starting            | Cavo alimentazione / segnali<br>Power / signals cable<br>[m] Type | Camera olio<br>Oil Chamber |
|---------------------------------|-------|------------------------|-------------------------------|-------------------|-----------------------------------|---|----------------------------|
| <b>125G</b>                     | 2     | 1,1                    | 1ph                           | GS.40_11.2.M.125G | μF: 100+40                        | 10 H07RN-F 4G1,5 / H07RN8-F 7G1,5                                 | Si - Yes                   |
|                                 |       |                        | 3ph                           | GS.40_11.2.T.125G | D.O.L.                            | 10 H07RN-F 4G1,5 / H07RN8-F 7G1,5                                 |                            |
|                                 | 1,5   | 1ph                    | GS.40_15.2.M.125G             | μF: 100+40        | 10 H07RN-F 4G1,5 / H07RN8-F 7G1,5 |   |                            |
|                                 |       | 3ph                    | GS.40_15.2.T.125G             | D.O.L.            | 10 H07RN-F 4G1,5 / H07RN8-F 7G1,5 |   |                            |
|                                 | 2,2   | 3ph                    | GS.40.22.2.T.125G             | D.O.L.            | 10 H07RN-F 4G1,5 / H07RN8-F 7G1,5 |   |                            |

## Caratteristiche costruttive - construction features

Anello per movimentazione pompa  
Shackel to handle the pump  
Manille pour lever la pompe  
Grillete para levantar la bomba

**Pastiglia termica**  
Built in Thermal protector  
Protecteur thermique  
Protector térmico

**10 m - H07RN-F**

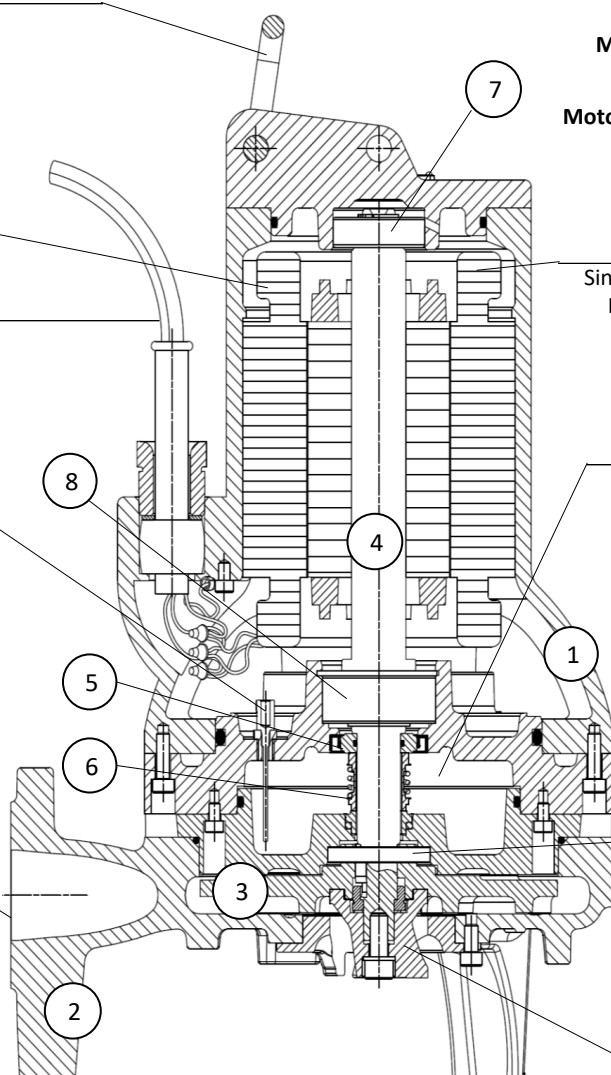
**OPTIONAL**

Sonda Olio  
Oil Probe  
Sonde d'huile  
Sonda de aceite

| Viti<br>Screws<br>Des vis<br>Empulgueras | Quality<br>A2 |
|--|---------------|
|--|---------------|

| O-RINGS | NBR |
|---------|-----|
|---------|-----|

**DNm:** DN40 PN10  
DN50 PN6



**Motore asincrono** in classe di isolamento F (155°C), a secco e raffreddato dal liquido circostante;

**Asynchronous dry motor**, insulation class F(155°C), cooled by the surrounding liquid;

**Moteur asynchrone**, classe d'isolation F (155°C), sec et refroidi par le liquide environnant;

**Motor asíncrono**, aislamiento clase F (155 ° C), seco y refrigerado por el líquido que rodea.

**Motore monofase con protettore termico**  
Singlephase motor with built in thermal protector  
Moteur monophasé avec protection thermique  
Motor monofásico con protector térmico

**Camera olio** per il raffreddamento e la lubrificazione delle tenute meccaniche;  
**Oil chamber** for cooling and lubrication of mechanical seals;  
**Chambre d'huile** pour le refroidissement et la lubrification des garnitures mécaniques;  
**Cámara de aceite** para la refrigeración y la lubricación de los sellos mecánicos.

Anello Tenta radiale:  
Lip Seal: NBR  
Garniture Radial:  
Corteco:

Sistema di triturazione:  
Grinder system: AISI 440C  
Dilacelatrice:  
Triturador:

| NR. | DESCRIPTION       | MATERIAL     |
|-----|-------------------|--------------|
| 1   | Gruppo motore     | Ghisa        |
|     | Motor group       | Cast iron    |
|     | Groupe moteur     | Fer de fonte |
|     | Unidad de motor   | Hierro       |
| 2   | Corpo idraulico   | Ghisa        |
|     | Pump Housing      | Cast iron    |
|     | Corps de la pompe | Fer de fonte |
|     | Cuerpo hidráulico | Hierro       |
| 3   | Girante           | Ghisa        |
|     | Impeller          | Cast iron    |
|     | Roue              | Fer de fonte |
|     | Impulsor          | Hierro       |
| 4   | Albero motore     | Acciaio      |
|     | Shaft             | Steel        |
|     | Arbre moteur      | Acier        |
|     | Eje del motor     | Acero        |

| NR. | DESCRIPTION             | MATERIAL                   |
|-----|-------------------------|----------------------------|
| 1   | Tenuta superiore        | Stainless steel AISI 316 + |
|     | Upper. seal             |                            |
| 5   | Haut garniture          | Lip seal - NBR             |
|     | Sello superior          |                            |
| 6   | Tenuta mecc. Inferiore  | SiC / SiC                  |
|     | Lower mech. seal        |                            |
| 6   | Haut garniture mécan.   | NBR                        |
|     | Sello mecánico inferior |                            |
| 7   | Cuscinetto superiore    | 6302 2RS1                  |
|     | Top bearing             |                            |
| 7   | Roulement supérieur     | 3205 2Z                    |
|     | Cojinete superior       |                            |
| 8   | Cuscinetto inferiore    | 3205 2Z                    |
|     | Lower bearing           |                            |
| 8   | Roulement inférieur     | 3205 2Z                    |
|     | Cojinete inferior       |                            |

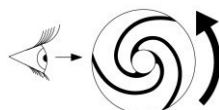
## Caratteristiche costruttive - construction data

|  |  |   |   |
|--|--|---|---|
| <b>Costruzione Motore - Motor Frame</b>                              | 125G   |   |   |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |   |   |
| <b>Classe di Isolamento - Insulation Class</b>                       | F (155°C)                                      |   |   |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent                |   |   |
| <b>Avvolgimento statore - Stator winding</b>                         | 1~PH - Singlephase                             | 3~PH - Threephase   |   |
|  | [V]  | 1~230V  | Y / Δ<br>3~400/230                        |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> |  | Standard  | Optional                                  |
| <input type="radio"/> Bimetallico - Bimetal disc                     |  | <input checked="" type="checkbox"/>                                 | <input checked="" type="checkbox"/> 130°C |
| <input type="radio"/> Solo su richiesta - on request only            | PT100  | <input type="checkbox"/>  | <input type="checkbox"/>                  |
| <input type="radio"/> Solo su richiesta - on request only            | PTC  | <input type="checkbox"/>  | <input type="checkbox"/>                  |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid |   |   |
| <b>Camera olio - Oil chamber</b>                                     | Si - Yes                                       |   |   |
| <b>Protezione Tenuta - Leakage protection</b>                        | Optional                                       |   |   |
| <b>Tipo girante - Impeller</b>                                       | GRINDER  |   |   |
| <b>DN mandata - Discharge</b>  | DN 40 PN16 - DN 50 PN6                         |   |   |
| <b>Controflangia filettata - Threaded counterflange</b>              | Si - Yes                                       | G 2"  |   |
| <b>DN aspirazione / Suction</b>                                      | [mm]   | -   |   |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard                                       | Vernice all'acqua - Water paint / 30μm<br>Opaco Nero - Opaque Black |   |
|  | Optional                                       | Epossidica - Epoxy coating / 80μm<br>RAL 7015 - Grigio - Grey       |   |

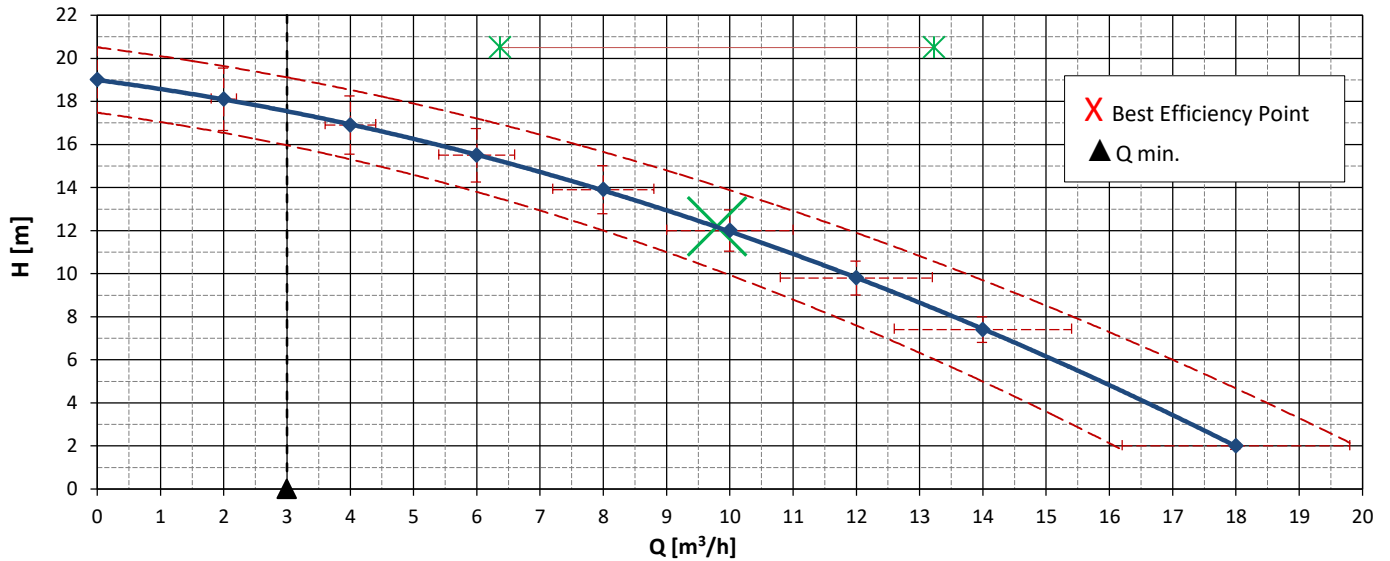
## Limiti di utilizzo - Operating Limits

|   |                       |        |
|---|-----------------------|--------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C]                  | < 40   |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] | ~ 1    |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s]  | ~ 1    |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l]                | < 200  |
| <b>PH liquido pompato - PH value</b>                                |                       | 6 ÷ 12 |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m]                   | 20     |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l]                 | 0      |

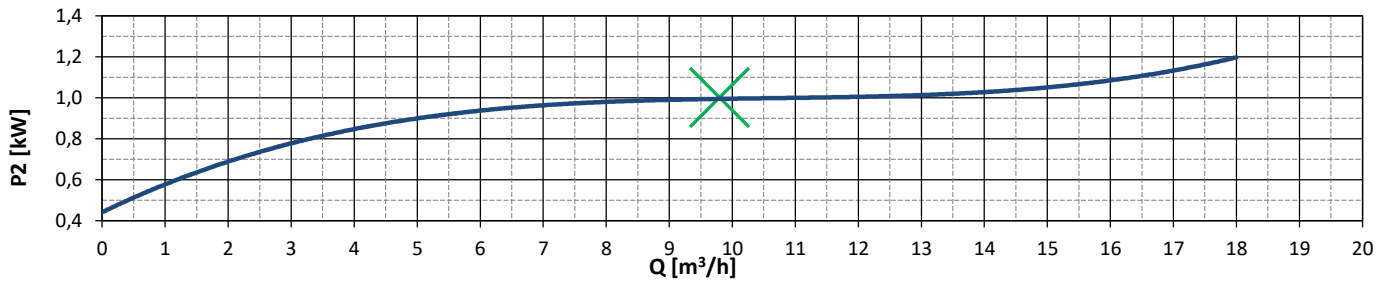
**Corretta rotazione della girante**  
**Rotation of the impeller**



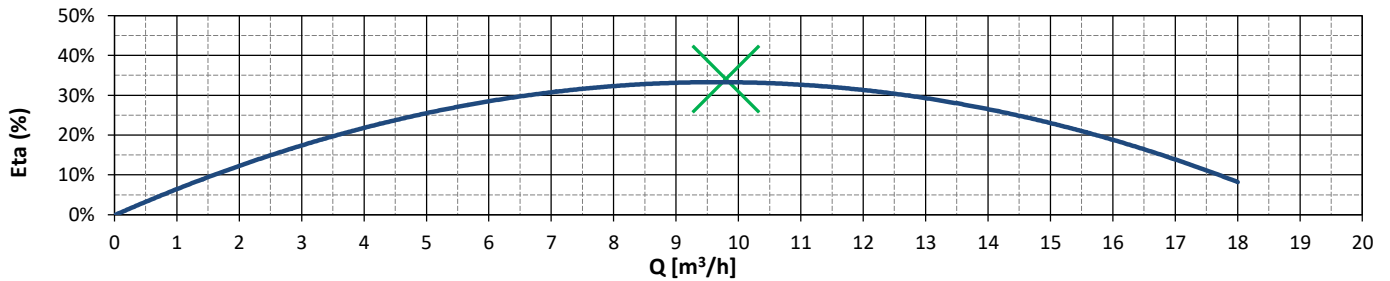
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |      |      |      |      |      |     |     |     |  |  |  |
|----------|-------|------|------|------|------|------|------|-----|-----|-----|--|--|--|
| FLOW (Q) | l/min | 0    | 33   | 67   | 100  | 133  | 167  | 200 | 233 | 300 |  |  |  |
|          | l/s   | 0    | 1    | 1    | 2    | 2    | 3    | 3   | 4   | 5   |  |  |  |
|          | m³/h  | 0    | 2    | 4    | 6    | 8    | 10   | 12  | 14  | 18  |  |  |  |
| HEAD (H) | m     | 19,0 | 18,1 | 16,9 | 15,5 | 13,9 | 12,0 | 9,8 | 7,4 | 2,0 |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>1,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>1,2</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>1,6</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,78</b> |

|  |     | Model M           | Model T           |
|--|-----|-------------------|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>1~230-50Hz</b> | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>100µF+40µF</b> | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>8,0</b>        | <b>3,0</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>24,0</b>       | <b>15,7</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>-</b>     |
| Diametro girante<br>Impeller diameter | [mm] | <b>∅ 124</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>39,0</b>  |

|  |  |                  |                  |
|--|--|------------------|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>10m 4G1,5</b> | <b>10m 4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>25</b>        |                  |

In accordo con / In accordance to **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C



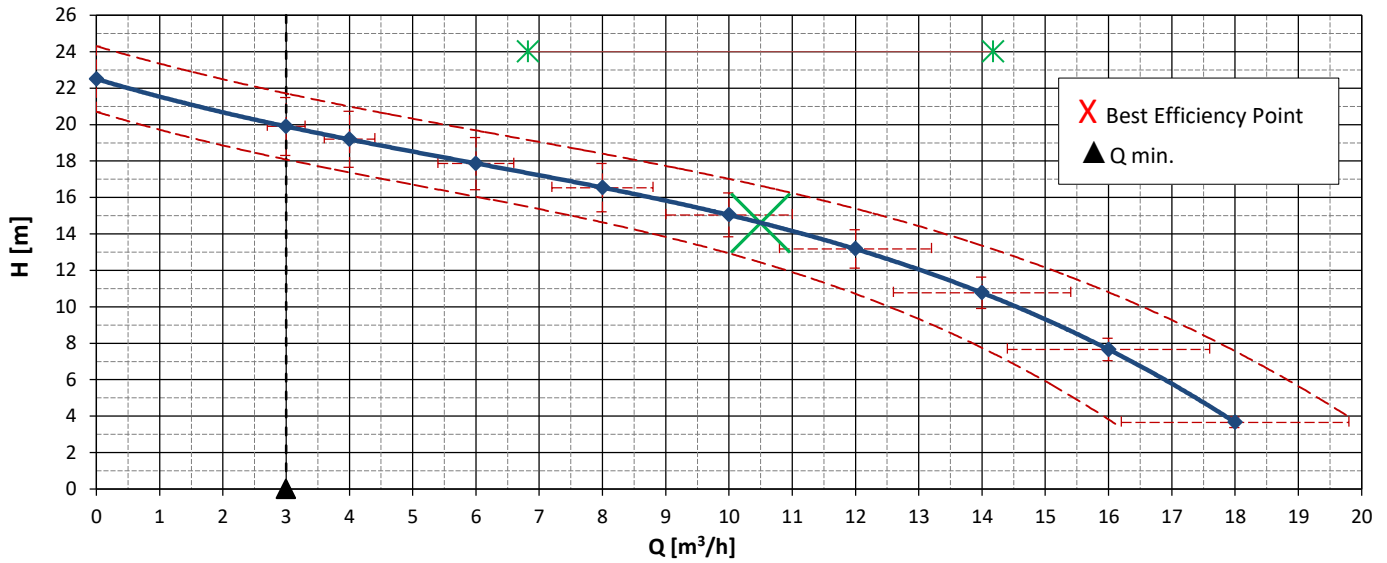
Tipo di pompa - Pump model  
**GS.40\_15.2.125G**

**Poles: 2 Hz: 50**  
**r.p.m. 3000**

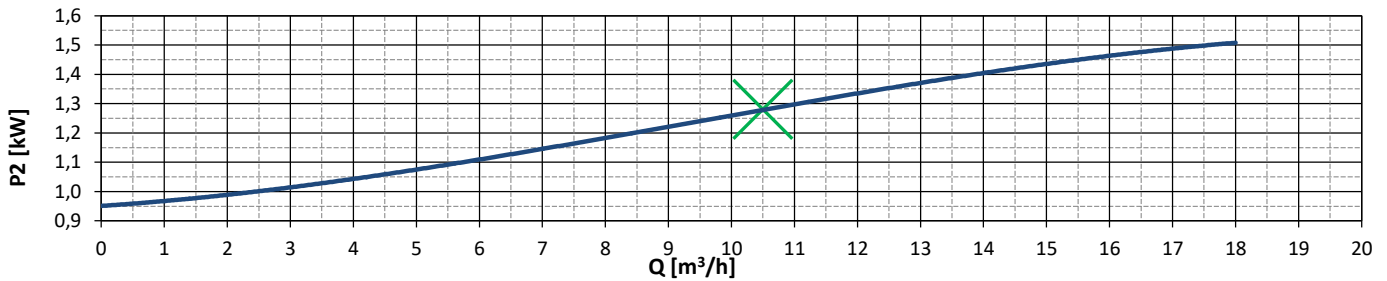
Girante Impeller **GRINDER**  
Mandata Discharge **DN 40/50 - G 2"**

Serie 1

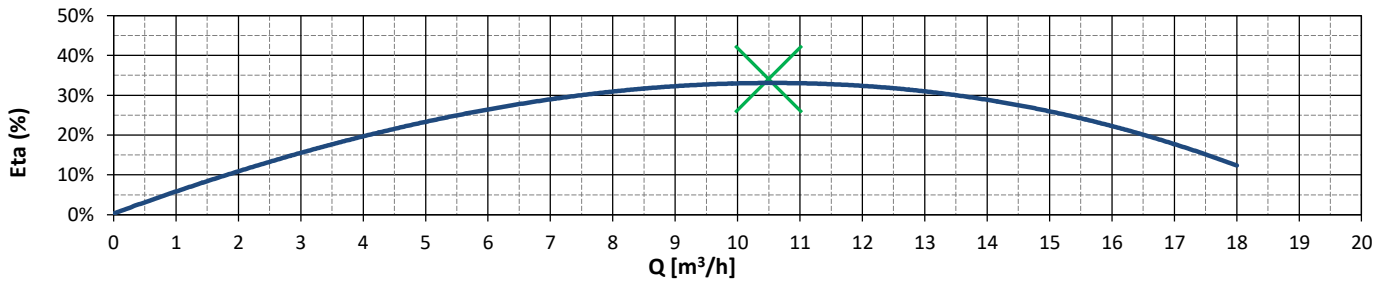
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |       |      |      |      |      |      |      |      |      |     |     |  |  |
|-----------------|-------|------|------|------|------|------|------|------|------|-----|-----|--|--|
| <b>FLOW (Q)</b> | l/min | 0    | 50   | 67   | 100  | 133  | 167  | 200  | 233  | 267 | 300 |  |  |
|                 | l/s   | 0    | 1    | 1    | 2    | 2    | 3    | 3    | 4    | 4   | 5   |  |  |
|                 | m³/h  | 0    | 3    | 4    | 6    | 8    | 10   | 12   | 14   | 16  | 18  |  |  |
| <b>HEAD (H)</b> | m     | 22,5 | 19,9 | 19,2 | 17,9 | 16,5 | 15,0 | 13,2 | 10,8 | 7,7 | 3,7 |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>1,8</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>1,5</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>1,9</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,90</b> |

|  |     | <b>Model M</b>    | <b>Model T</b>    |
|--|-----|-------------------|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>1~230-50Hz</b> | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>140µF+40µF</b> | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>10,0</b>       | <b>4,1</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>30,0</b>       | <b>22,0</b>       |

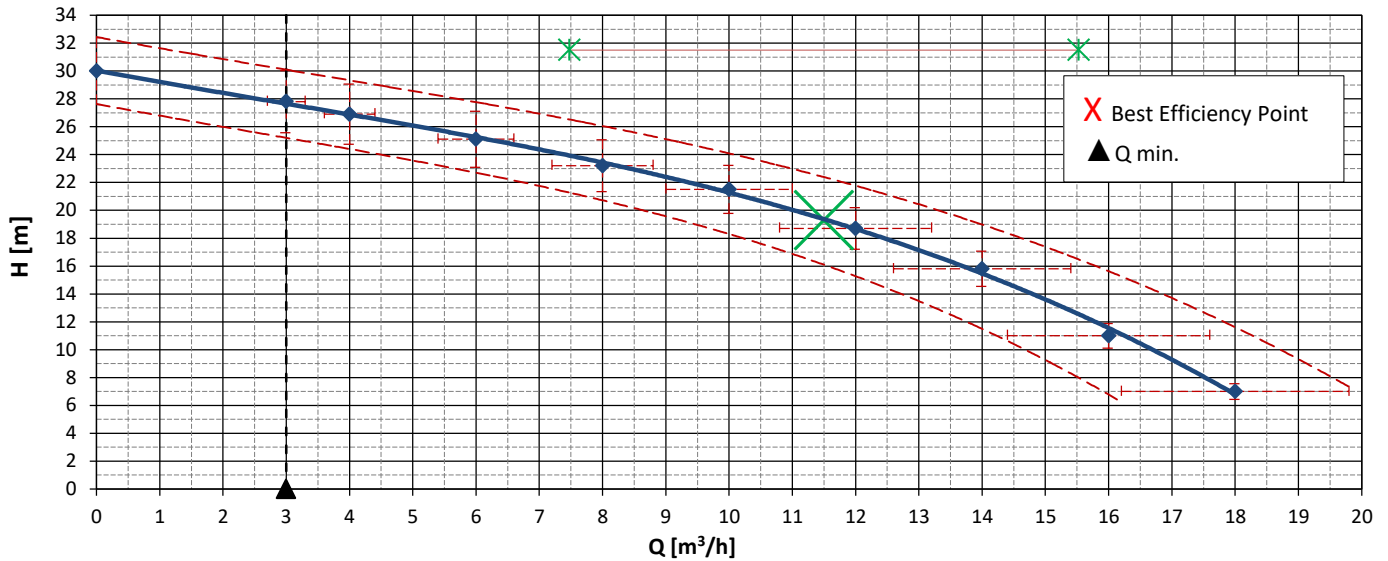
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | -            |
| Diametro girante<br>Impeller diameter | [mm] | <b>∅ 136</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>40,0</b>  |

|  |  |                  |                  |
|--|--|------------------|------------------|
| Galggiante<br>Float level switch           |  | -                | -                |
| Cavo<br>Cable                              |  | <b>10m 4G1,5</b> | <b>10m 4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>25</b>        |                  |

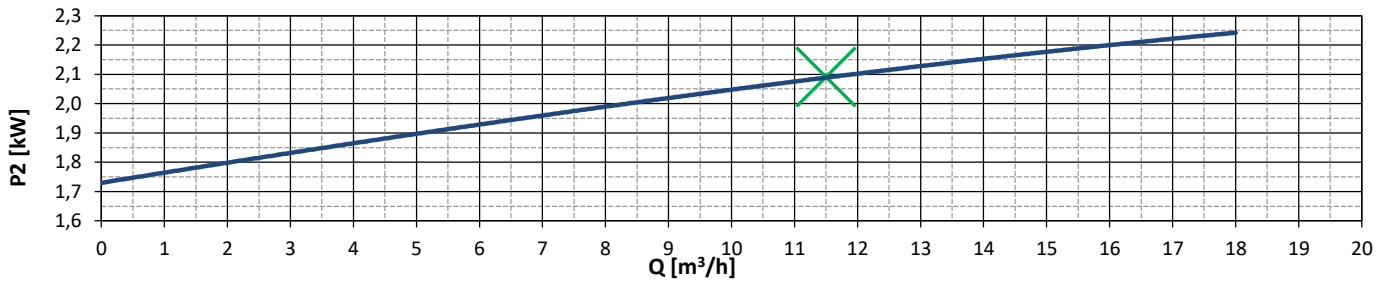
In accordo con / In accordance to **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density 1 Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C

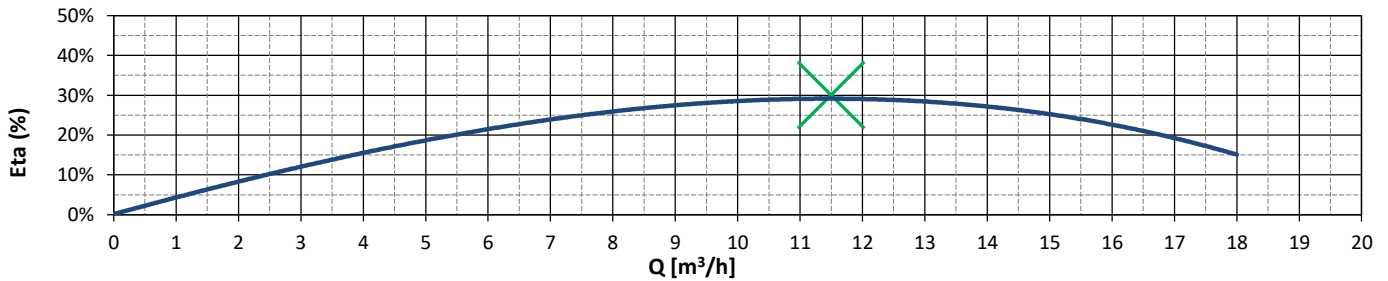
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |       |      |      |      |      |      |      |      |      |      |     |  |  |
|-----------------|-------|------|------|------|------|------|------|------|------|------|-----|--|--|
| <b>FLOW (Q)</b> | l/min | 0    | 50   | 67   | 100  | 133  | 167  | 200  | 233  | 267  | 300 |  |  |
|                 | l/s   | 0    | 1    | 1    | 2    | 2    | 3    | 3    | 4    | 4    | 5   |  |  |
|                 | m³/h  | 0    | 3    | 4    | 6    | 8    | 10   | 12   | 14   | 16   | 18  |  |  |
| <b>HEAD (H)</b> | m     | 30,0 | 27,8 | 26,9 | 25,1 | 23,2 | 21,5 | 18,7 | 15,8 | 11,0 | 7,0 |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>2,2</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>2,2</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>2,8</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,80</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>5,4</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>33,0</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | -            |
| Diametro girante<br>Impeller diameter | [mm] | <b>∅ 159</b> |
| Peso pompa<br>Weight                  | [Kg] | <b>41,0</b>  |

|  |  |                  |
|--|--|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>10m 4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>25</b>        |

In accordo con  
In accordance to

ISO 9906:2012 - Grade 3B ( section 4.4.2)

Curve per liquidi con densità/curves established for liquid with density 1 Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C



### Dimensioni d'ingombro - overall dimensions

**S** Installazione mobile - Installation mobile - Installation mobile - Instalación móvil

Dimensione imballo  
Packaging dimensions

Misure - Measures [mm]

| A   | B   | C   |
|-----|-----|-----|
| 600 | 240 | 290 |

**FC** Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento

8FC00002      KG: 7,5

|   |   |
|---|---|
| 1 | Supporto tubi guida da 3/4"<br>3/4" guide rails bracket |
| 2 | Piede orizzontale 2"<br>Horizontal foot - 2"out         |
| 3 | Slitta completa<br>Sliding bracket complete             |
| 4 | Esclusi dalla fornitura<br>Not supplied                 |

D

|   |       |
|---|-------|
| D | 260mm |
| E | 175mm |
| F | 195mm |

### ACCESSORI - ACCESSORIES - ACCESORIES - ACCESORIOS

**Descrizione - Description - Description - Descripción**

|       |  |  |   |          | <b>Codice - Code</b> |
|-------|--|--|---|----------|----------------------|
| FC    |  | - Dispositivo di accoppiamento DN50 - uscita G 2"<br>- DN50 Coupling device - outlet 2"<br>- Dispositif de couplage DN50 - sortie G 2"<br>- Dispositivo de acoplamiento DN50- salida G 2"                                |   |          | 8FC000002            |
|       |  | - Catena<br>- Chain<br>- Chaîn<br>- Cadena   | ferro zincato - galvanized Iron<br>fer galvanisé - hierro galvanizado |          | 2SC000019            |
|       |  |  | Acciaio - Stainless steel<br>acier inox - acero inox                  |          | 2SC000032            |
| TBV   |  | - Valvola di ritegno a palla filettata<br>- Threaded valve<br>- Vanne fileté<br>- Válvula roscada  |   | G 1" 1/2 | 4BV000002            |
|       |  |  |   | G 2"     | 4BV000003            |
| HF    |  | - Regolatore di livello per acque reflue<br>- Level switch for sewage<br>- Interrupteur de niveau pour eaux usées<br>- Interruptor de nivel para aguas residuales  |   | [10 mt]  | 3CS000007            |
| SHELL |  | - Contrappeso SHELL per galleggiante<br>- Counterweight SHELL for level switch<br>- Cotrepoids SHELL pour interrupteur de niveau<br>- Contrapeso para interruptor de nivel   |   |          | 3CS000021            |
| TUTOR |  | - Sistema di guida del galleggiante per spazi ristretti<br>- Float guidance system for confined spaces<br>- Système de guidage à flotteur pour espaces confinés<br>- Sistema de guiado flotante para espacios reducidos. |   |          | 3CS000020            |

### SELEZIONE QUADRO DI CONTROLLO - CONTROL PANEL SELECTION

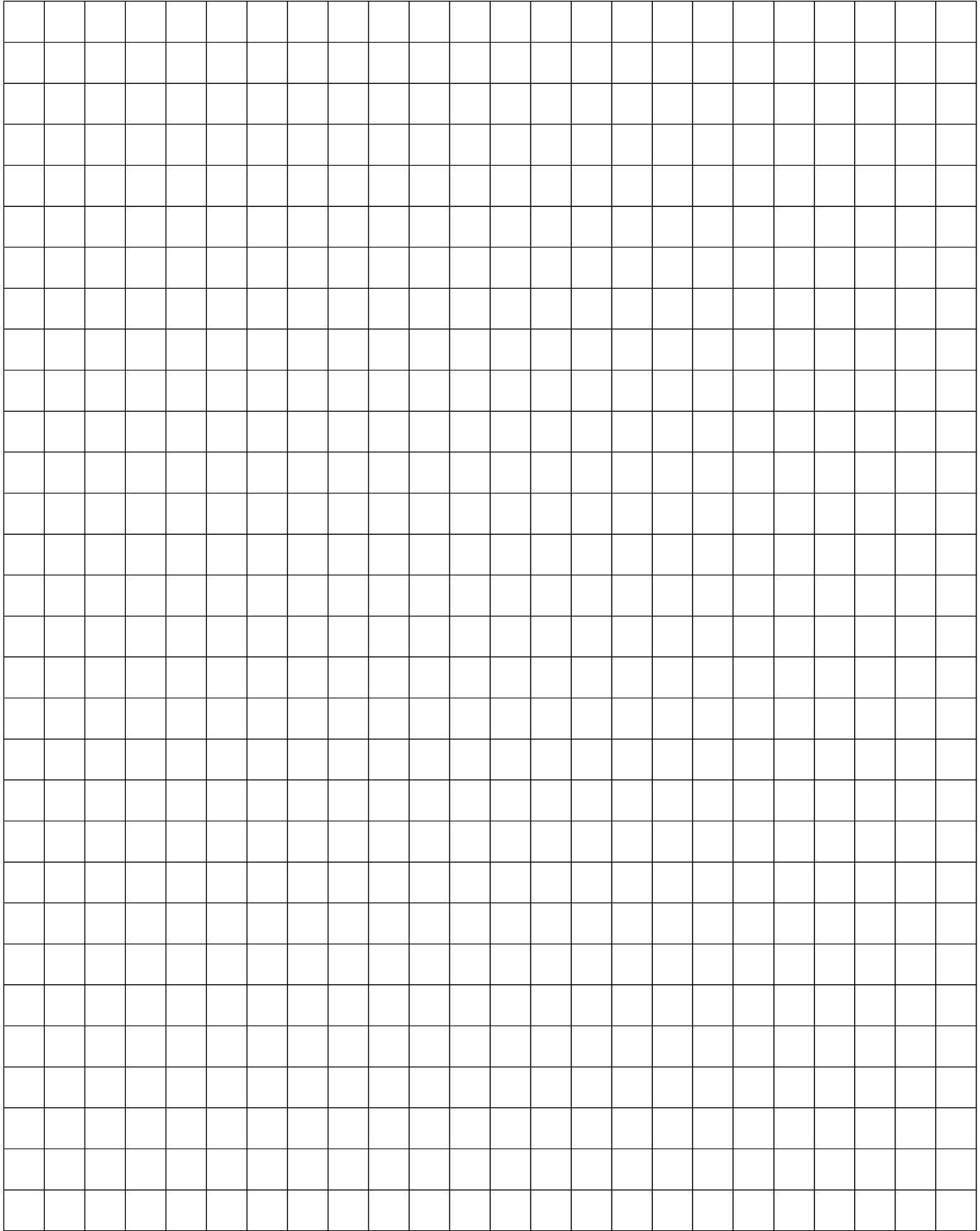
|              |  |  |    |           |
|--------------|--|--|----|-----------|
| START BOX GS |  | Cassetta portacondensatore per avviamento di 1 pompa monofase<br>Capacitor box for 1 singlephase pump starting<br>boîte de condensateur pour démarrage de 1 pompe monophasé<br>Caja de condensadores para arranque de 1 bomba monofásica | M  | 5EC000003 |
|              |  | M: Senza galleggiante - without float switch - sans interrupteur à flotteur - sin flotador<br>MA: Con galleggiante - with float switch - avec interrupteur à flotteur - con flotador   | MA | 5EC000091 |

| 125G | Pole              | Pumps | Alim.<br>[V] | P <sub>2</sub><br>[KW] | In<br>[A]  | Start.<br>Avviamento | - ECH -<br>ELECTROMECHANICAL |                       |                        |                       | - ECL -<br>ELECTRONIC  |                        |                        |                        |
|------|-------------------|-------|--------------|------------------------|------------|----------------------|------------------------------|-----------------------|------------------------|-----------------------|------------------------|------------------------|------------------------|------------------------|
|      |                   |       |              |                        |            |                      | 1 Pump                       |                       | 2 Pumps                |                       | 1 Pump                 |                        | 2 Pumps                |                        |
|      |                   |       |              |                        |            |                      | ECH1.M-14<br>5EC000008       | ECH1.T-7<br>5EC000005 | ECH2.M-14<br>5EC000032 | ECH2.T-7<br>5EC000029 | ECL1.M-16<br>5EC000081 | ECL1.T-15<br>5EC000083 | ECL2.M-16<br>5EC000099 | ECL2.T-15<br>5EC000084 |
| 2    | GS.50_11.2.M.125G | 1~230 | 1,1          | 8,0                    | 100µF+40µF | •                    |                              |                       |                        | •                     |                        |                        |                        |                        |
|      | GS.50_11.2.T.125G | 3~400 | 1,1          | 3,0                    | DOL        |                      | •                            |                       | •                      |                       | •                      |                        | •                      |                        |
|      | GS.50_15.2.M.125G | 1~230 | 1,5          | 10                     | 100µF+40µF | •                    |                              | •                     |                        | •                     |                        | •                      |                        |                        |
|      | GS.50_15.2.T.125G | 3~400 | 1,5          | 2,7                    | DOL        |                      | •                            |                       | •                      |                       | •                      |                        | •                      |                        |
|      | GS.50_18.2.T.125G | 3~400 | 1,8          | 4,8                    | DOL        |                      | •                            |                       | •                      |                       | •                      |                        | •                      |                        |
|      | VS.50_22.2.T.125G | 3~400 | 2,2          | 5,5                    | DOL        |                      | •                            |                       | •                      |                       | •                      |                        | •                      |                        |



**GS.40**  
**- GRINDER -**

Mandata - Outlet  
**DN 40 - DN 50 -**  
**G 2"**



# GIRANTE MONOCANALE - SINGLE CHANNEL

IT

Elettropompe sommergibili con girante chiusa a un canale. Soluzione idraulica che garantisce un discreto passaggio libero di corpi solidi e un elevato rendimento. Indicata per il pompaggio di acque chiare, luride e reflui civili ed industriali grigliate. Rendimento della pompa più elevato rispetto ad una VORTEX e per questo utilizzata nei depuratori e in tutte quelle applicazioni dove la pompa è in funzione per lunghi periodi di tempo.

EN

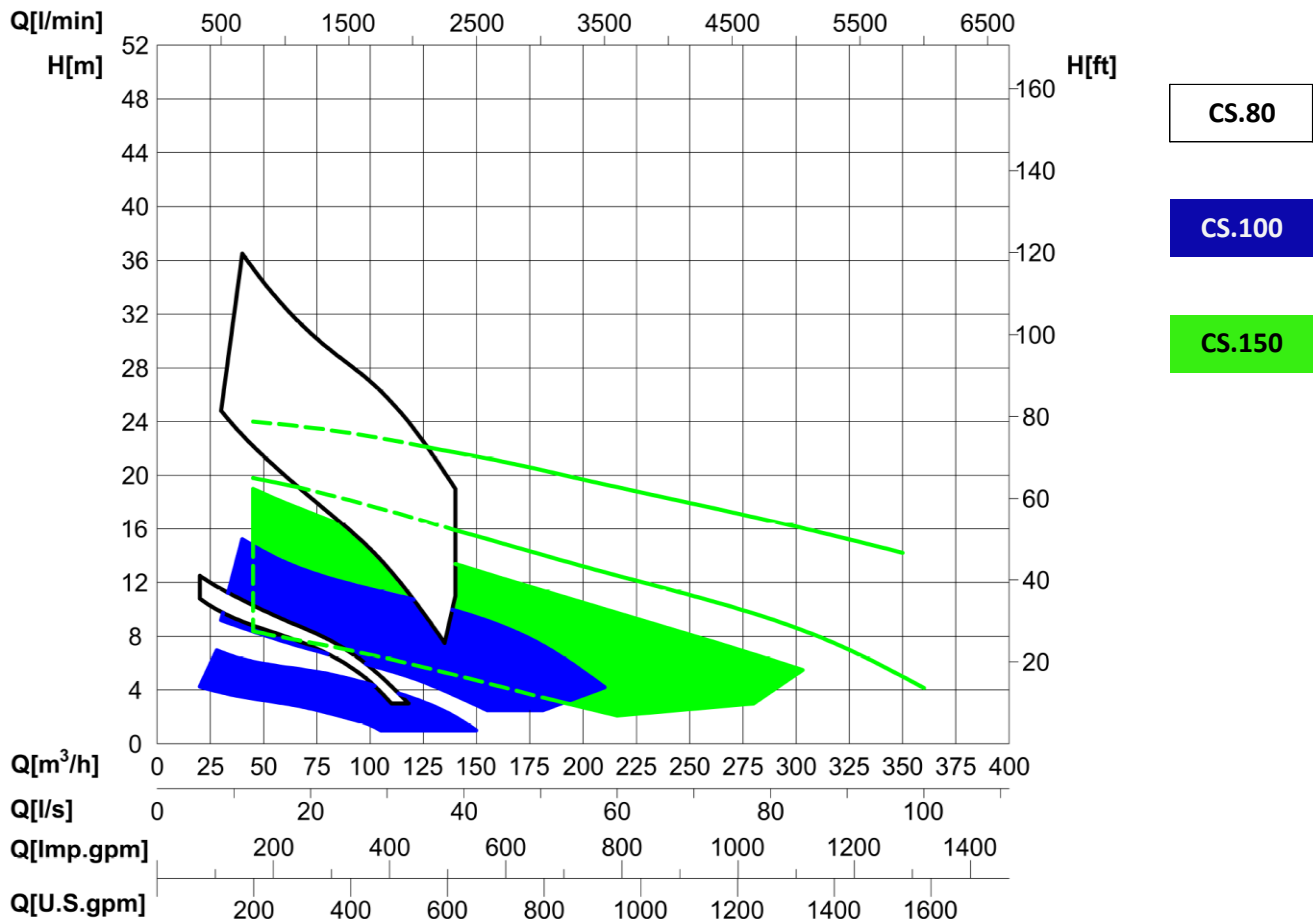
Submersible pumps with closed impeller with one channel. This is a hydraulic solution that ensures a good free passage of solid bodies and a high efficiency. Suitable to pump clean water, sewage and domestic/industrial waste waters. The efficiency of the CS pumps is higher than VORTEX and for this reason are used in the treatment plants and in all those applications where the pump is in operation for long periods of time.

FR

Pompes submersibles à roue fermée avec un canaux. C'est une solution hydraulique qui assure un bon passage libre des corps solides et un rendement élevé. Convient au pompage d'eau potable, d'eaux usées et d'eaux usées domestiques / industrielles. L'efficacité des pompes CS est supérieure à celle de VORTEX et, pour cette raison, est utilisée dans les stations de traitement et dans toutes les applications où la pompe est en service pendant de longues périodes.

ES

Bombas sumergibles con impulsor cerrado con un canal. Esta es una solución hidráulica que garantiza un buen paso libre de cuerpos sólidos y una alta eficiencia. Adecuado para bombear agua limpia, aguas residuales y aguas residuales domésticas / industriales. La eficiencia de las bombas CS es mayor que la de VORTEX y por esta razón se utilizan en las plantas de tratamiento y en todas aquellas aplicaciones donde la bomba está en funcionamiento durante largos períodos de tiempo.



# GIRANTE MONOCANALE - SINGLE CHANNEL

| Pipe outlet | Range            | Poles | Type             | kW   | Kg  | Free passage | Outlet Flange | Pg. |
|-------------|------------------|-------|------------------|------|-----|--------------|---------------|-----|
| DN 80       | CS.80_152        | 4     | CS.80_25.4T.152  | 2,5  | 89  | 76           | DN 80 PN16    | 125 |
|             |                  |       | CS.80_30.4T.152  | 3,0  | 93  |              |               |     |
|             | CS.80_200        | 2     | CS.80_75.2T.200  | 7,5  | 116 | 56           |               |     |
|             |                  |       | CS.80_85.2T.200  | 8,5  | 116 |              |               |     |
|             |                  |       | CS.80_95.2T.200  | 9,5  | 119 |              |               |     |
|             |                  |       | CS.80_115.2T.200 | 11,5 | 122 |              |               |     |
| DN 100      | CS.100_173       | 6     | CS.100_11.6T.173 | 1,1  | 93  | 80           | DN 100 PN16   | 139 |
|             |                  |       | CS.100_15.6T.173 | 1,5  | 94  |              |               |     |
|             |                  |       | CS.100_17.6T.173 | 1,7  | 106 |              |               |     |
|             |                  | 4     | CS.100_25.4T.173 | 2,5  | 93  |              |               |     |
|             |                  |       | CS.100_35.4T.173 | 3,5  | 105 |              |               |     |
|             |                  |       | CS.100_45.4T.173 | 4,5  | 108 |              |               |     |
|             |                  |       | CS.100_52.4T.173 | 5,2  | 109 |              |               |     |
| DN 150      | CS.150_200       | 4     | CS.150_30.4T.200 | 3    | 181 | 100          | DN 150 PN16   | 153 |
|             |                  |       | CS.150_40.4T.200 | 4    | 181 | 100          |               |     |
|             | CS.150_55.4T.240 |       | 5,5              | 235  | 100 |              |               |     |
|             | CS.150_75.4T.240 |       | 7,5              | 235  | 100 |              |               |     |
|             | CS.150_240A      |       | 15,0             | 226  | 95  |              |               |     |
| CS.150_270A | 18,5             | 330   | 108              |      |     |              |               |     |

**Poli - poles Modelli - models**

|          |                                      |
|----------|--------------------------------------|
| <b>4</b> | <b>CS.80_ 25/30 . 4 . 152</b>        |
| <b>2</b> | <b>CS.80_ 75/85/95/115 . 2 . 200</b> |

**IT**

Elettropompa sommergibile di robusta costruzione fabbricata completamente in ghisa, con camera olio interposta tra gruppo motore e gruppo pompa e doppia tenuta meccanica: lato pompa posizionata sopra alla girante a diretto contatto del liquido pompato; tenuta meccanica lato motore interna alla camera olio.

**APPLICAZIONE:** l'elettropompa deve funzionare completamente immersa per garantire il raffreddamento da parte del liquido circostante. Sono idonee al pompaggio di acque piovane, o di falda con basso contenuto di solidi abrasivi (< 1 g/l), acque derivate da reflui civili e industriali.

**EN**

Robust construction submersible pump completely made in cast iron, with oil chamber interposed between motor unit and pump unit with double mechanical seal: the pump side one positioned above the impeller in direct contact with the pumped liquid; the motor side one, inside the oil chamber.

**APPLICATION:** the pump must be completely submerged to ensure the cooling by the pumped liquid. They are suitable to pump rain water or ground water with low quantity of abrasive solids (<1g / l), civil or industrial waste waters.

**FR**

Pompe submersible de construction solide entièrement en fonte, avec chambre d'huile interposée entre le bloc moteur et le groupe pompe et double garniture mécanique: le côté pompe placé au-dessus de la roue en contact direct avec le liquide pompé; garniture mécanique côté moteur à l'intérieur de la chambre à huile.

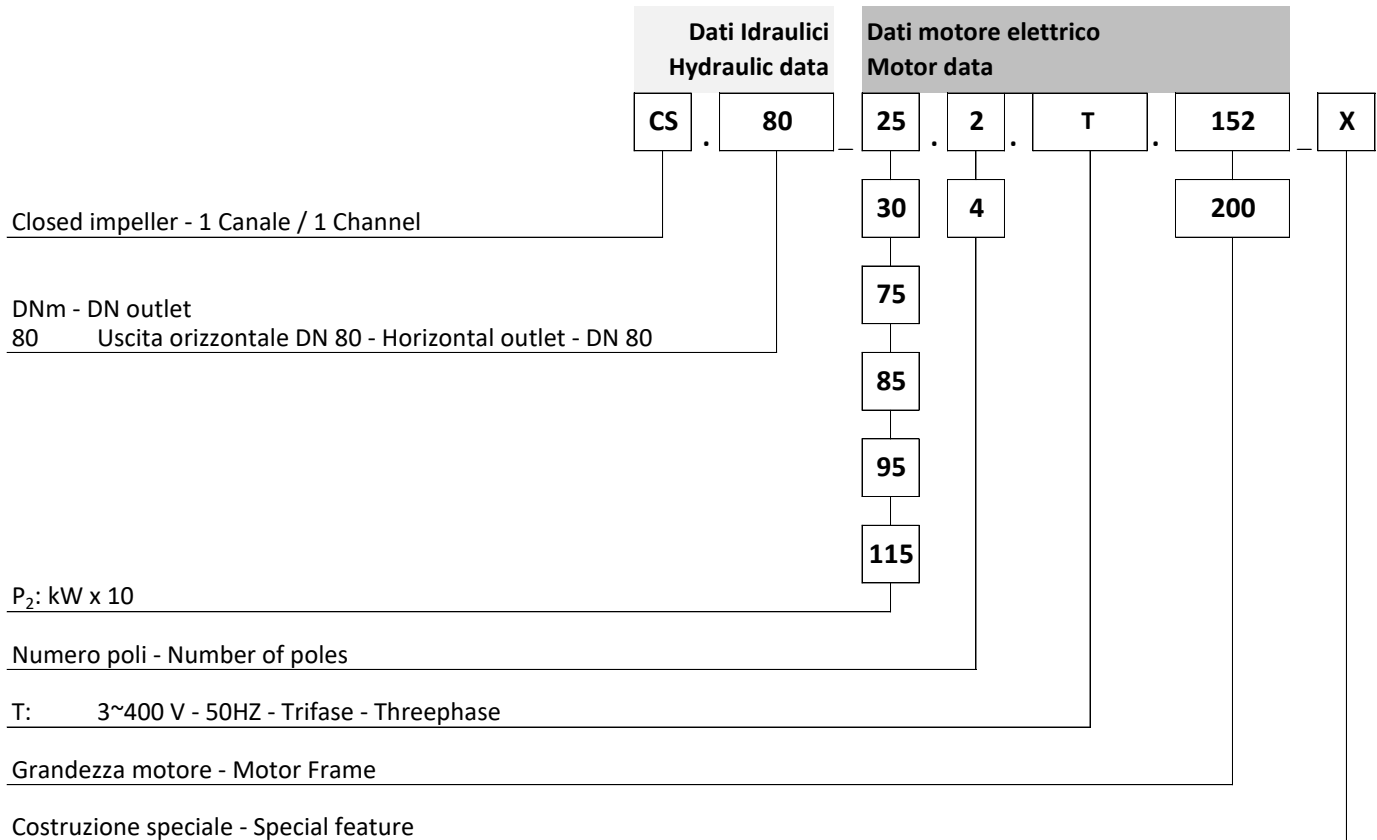
**APPLICATION:** la pompe doit être complètement immergée pour assurer le refroidissement du liquide pompé. Elles sont adaptées pour le pompage de l'eau de pluie ou des eaux souterraines avec de faibles particules abrasives (<1g/l), de l'eau provenant des eaux usées municipales et industrielles.

**ES**

Bomba sumergible de construcción sólida fabricada completamente de hierro fundido, con cámara de aceite interpuesta entre la unidad del motor y la unidad de la bomba y doble cierre mecánico: lado de la bomba colocado sobre el impulsor en contacto directo con el líquido bombeado; cierre mecánico en el lado del motor dentro de la cámara de aceite.

**APLICACION:** la bomba debe estar completamente sumergido para asegurar el enfriamiento del líquido bombeado. Son adecuadas para el bombeo de agua de lluvia o aguas subterráneas con bajo contenido de sólidos abrasivos (<1 g / l), el agua derivada de las aguas residuales municipales y industriales.



**IDENTIFICAZIONE - IDENTIFICATION**

**LISTA MODELLI - RANGE OF PRODUCTS**

| Grandezza Motore<br>Motor Frame | Poles | P <sub>2</sub><br>[kW] | Alimentazione<br>Power supply | Modelli<br>Models | Avviamento<br>Starting | Cavo alimentazione / segnali<br>Power / signals cable<br><br>[m] Type | Camera olio<br>Oil Chamber |
|---------------------------------|-------|------------------------|-------------------------------|-------------------|------------------------|---|----------------------------|
| <b>152</b>                      | 4     | 2,5                    | 3ph                           | CS.80_25.4.T.152  | D.O.L.                 | 10    H07RN-F 7G1,5   | SI<br>YES                  |
|                                 |       | 3,0                    | 3ph                           | CS.80_35.4.T.152  | D.O.L.                 | 10    H07RN-F 7G1,5   | SI<br>YES                  |
| <b>200</b>                      | 2     | 7,5                    | 3ph                           | CS.80_75.2.T.200  | S.D.                   | 10    H07RN-F 7G1,5 / 10G1,5  | SI<br>YES                  |
|                                 |       | 8,5                    | 3ph                           | CS.80_85.2.T.200  | S.D.                   | 10    H07RN-F 7G1,5 / 10G1,5  |                            |
|                                 |       | 9,5                    | 3ph                           | CS.80_95.2.T.200  | S.D.                   | 10    H07RN-F 7G1,5 / 10G1,5  |                            |
|                                 |       | 11,5                   | 3ph                           | CS.80_115.2.T.200 | S.D.                   | 10    H07RN-F 7G1,5 / 10G1,5  |                            |

## Caratteristiche costruttive - construction features

**Motore asincrono** in classe di isolamento F (155°C), a secco e raffreddato dal liquido circostante;

**Asynchronous dry motor**, insulation class F(155°C), cooled by the surrounding liquid;

**Moteur asynchrone**, classe d'isolation F (155°C), sec et refroidi par le liquide environnant;

**Motor asíncrono**, aislamiento clase F (155 ° C), seco y refrigerado por el líquido que rodea.

### OPTIONAL

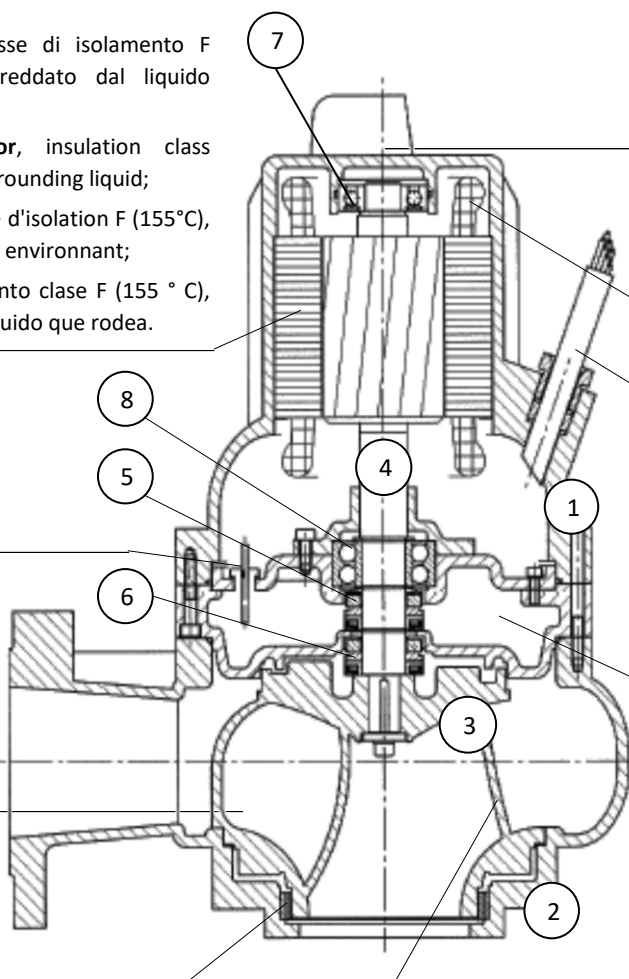
Sonda Olio  
Oil Probe  
Sonde d'huile  
Sonda de aceite

Girante chiusa  
monocanale  
Closed impeller  
single channel  
Roue fermée  
monocanal  
Impulsor cerrado  
monocanal

Anello d'usura  
Wear ring  
Bague d'usure  
Anillo de desgaste

Girante chiusa  
monocanale  
Closed impeller  
single channel

Roue fermée  
monocanal  
Impulsor cerrado  
monocanal



Anello per movimentazione pompa  
Shackel to handle the pump  
Manille pour lever la pompe  
Grillete para levantar la bomba

### OPTIONAL

Pastiglia termica  
Built in Thermal protector  
Protecteur thermique intégré  
Protector térmico incorporado

10 m - H07RN-F

Camera olio per il raffreddamento e la lubrificazione delle tenute meccaniche;  
**Oil chamber** for cooling and lubrication of mechanical seals;  
**Chambre d'huile** pour le refroidissement et la lubrification des **Cámara de aceite** para la refrigeración y la lubricación de los sellos mecánicos.

| Viti<br>Screws<br>Vis<br>Tornillos | Quality<br><br><br><br>A2 |
|------------------------------------|---------------------------|
|------------------------------------|---------------------------|

| O-RINGS | NBR |
|---------|-----|
|---------|-----|

| NR. | DESCRIPTION       | MATERIAL     |
|-----|-------------------|--------------|
| 1   | Gruppo motore     | Ghisa        |
|     | Motor group       | Cast iron    |
|     | Groupe moteur     | Fer de fonte |
|     | Unidad de motor   | Hierro       |
| 2   | Corpo idraulico   | Ghisa        |
|     | Pump Housing      | Cast iron    |
|     | Corps de la pompe | Fer de fonte |
|     | Cuerpo hidráulico | Hierro       |
| 3   | Girante           | Ghisa        |
|     | Impeller          | Cast iron    |
|     | Roue              | Fer de fonte |
|     | Impulsor          | Hierro       |
| 4   | Albero motore     | Acciaio      |
|     | Shaft             | Steel        |
|     | Arbre moteur      | Acier        |
|     | Eje del motor     | Acero        |

| NR. | DESCRIPTION             | MATERIAL                   |
|-----|-------------------------|----------------------------|
| 5   | Tenuta mecc. superiore  | Carbon graphite / Al-Oxide |
|     | Upper mech. seal        |                            |
|     | Haut garniture mécan.   | NBR                        |
| 6   | Tenuta mecc. Inferiore  | SiC / SiC                  |
|     | Lower mech. seal        |                            |
|     | Haut garniture mécan.   | NBR                        |
| 7   | Sello mecánico superior |                            |
|     | Cuscinetto superiore    |                            |
|     | Top bearing             | 6306-ZJ                    |
|     | Roulement supérieur     |                            |
| 8   | Cojinete superior       |                            |
|     | Cuscinetto inferiore    |                            |
|     | Lower bearing           | 3307                       |
|     | Roulement inférieur     |                            |
|     | Cojinete inferior       |                            |





Tipo di pompa - Pump model

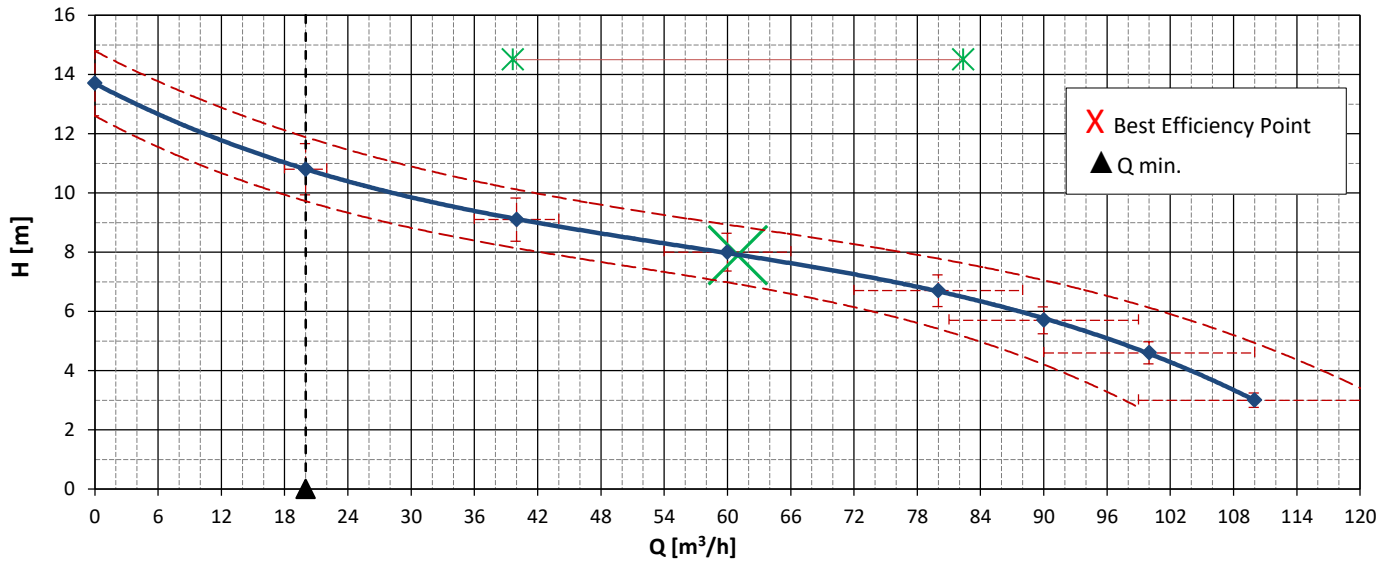
**CS.80\_152/200**Girante  
Impeller  
Mandata  
Discharge**1.CHANNEL****DN 80****Caratteristiche costruttive - construction data**

|  |  |   |
|--|--|---|
| <b>Costruzione Motore - Motor Frame</b>                              | 152 / 200  |   |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |   |
| <b>Classe di Isolamento - Insulation Class</b>                       | F (155°C)  |   |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent  |   |
| <b>Avvolgimento statore - Stator winding</b>                         | 3~PH - Threephase  |   |
|  | 152  | 200                                       |
|  | Y / Δ  | Δ / Y                                     |
|  | [V] 400 / 230  | 3~400/690                                 |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> | Optional   | Optional                                  |
| <input type="radio"/> Bimetallico - Bimetal disc                     | <input checked="" type="checkbox"/> 130°C                                    | <input checked="" type="checkbox"/> 130°C |
| <input type="radio"/> Solo su richiesta - on request only PT100      | <input type="checkbox"/>   | <input type="checkbox"/>                  |
| <input type="radio"/> Solo su richiesta - on request only PTC        | <input type="checkbox"/>   | <input type="checkbox"/>                  |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid                               |   |
| <b>Camera olio - Oil chamber</b>                                     | Si - Yes   |   |
| <b>Protezione Tenuta - Leakage protection</b>                        | Optional   |   |
| <b>Tipo girante - Impeller</b>                                       | CHIUSA MONOCANALE - CLOSED 1 CHANNEL   |   |
| <b>DN mandata - Discharge</b>  | DN 80 PN16   |   |
| <b>Controflangia filettata - Threaded counterflange</b>              | NO   |   |
| <b>DN aspirazione / Suction</b>                                      | [mm]   | Ø 80                                      |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard Vernice all'acqua - Water paint / 30µm<br>Opaco Nero - Opaque Black |   |

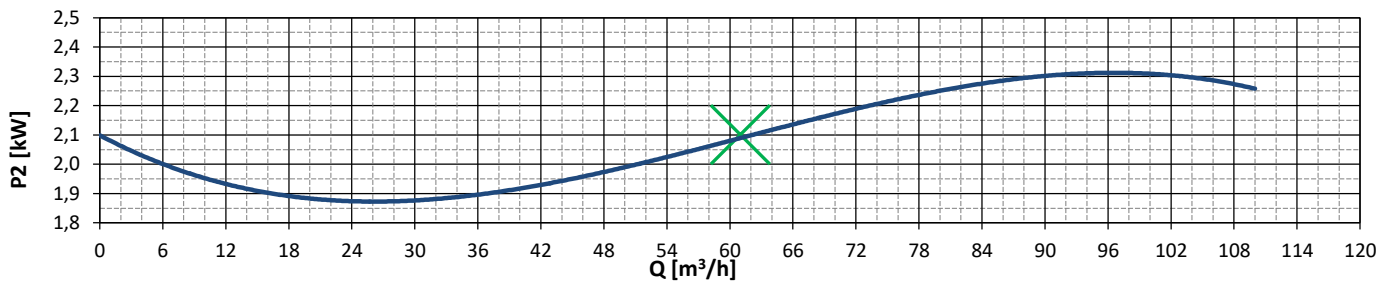
**Limiti di utilizzo - Operating Limits**

|   |                       |        |
|---|-----------------------|--------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C]                  | < 40   |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] | ~ 1    |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s]  | ~ 1    |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l]                | < 200  |
| <b>PH liquido pompato - PH value</b>                                |                       | 6 ÷ 12 |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m]                   | 20     |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l]                 | < 0,1  |

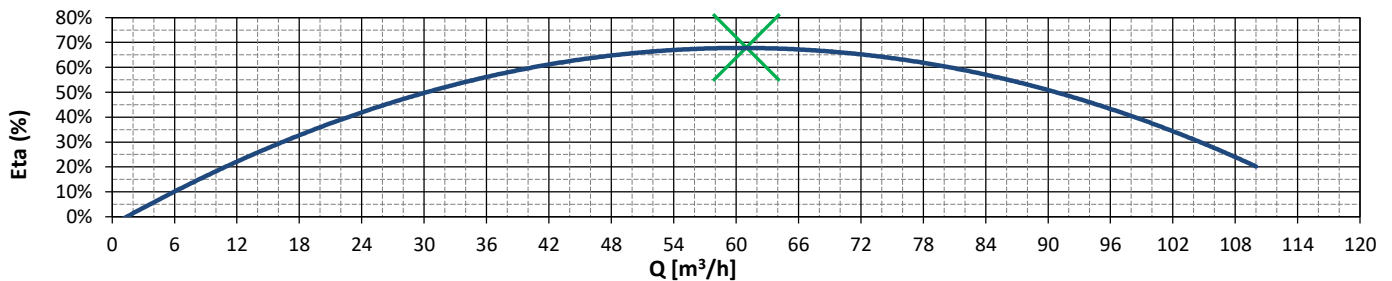
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |     |      |      |      |      |      |  |  |  |  |
|-----------------|--------------|------|------|-----|------|------|------|------|------|--|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 333  | 667 | 1000 | 1333 | 1500 | 1667 | 1833 |  |  |  |  |
|                 | <b>l/s</b>   | 0    | 6    | 11  | 17   | 22   | 25   | 28   | 31   |  |  |  |  |
|                 | <b>m³/h</b>  | 0    | 20   | 40  | 60   | 80   | 90   | 100  | 110  |  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 13,7 | 10,8 | 9,1 | 8,0  | 6,7  | 5,7  | 4,6  | 3,0  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>2,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>2,3</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>2,9</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,82</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>5,8</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>37,5</b>       |

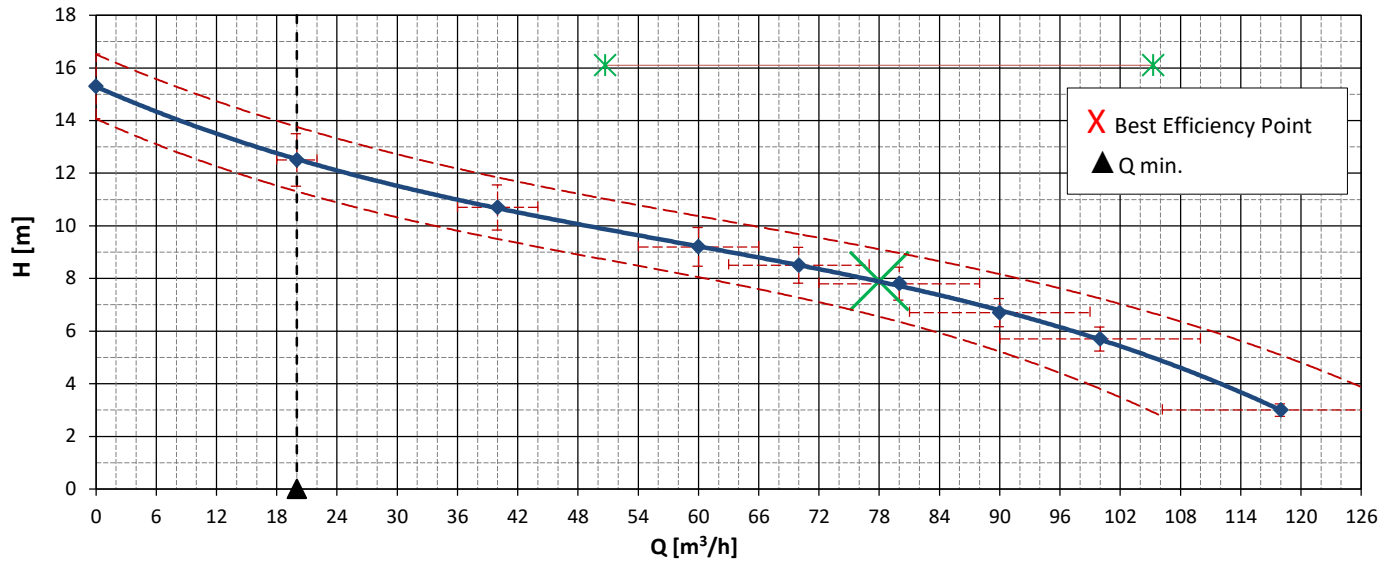
|                                       |      |             |
|---------------------------------------|------|-------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 76</b> |
| Diametro girante<br>Impeller diameter | [mm] | <b>-</b>    |
| Peso pompa<br>Weight                  | [Kg] | <b>89,0</b> |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>7G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>    |

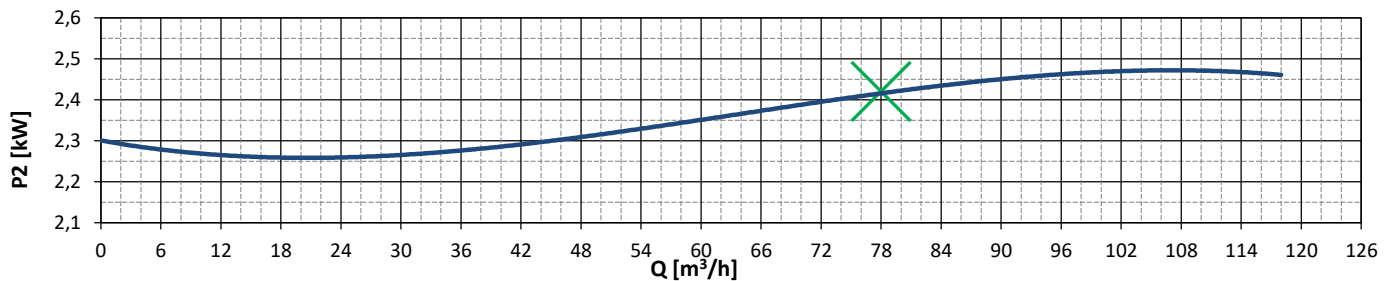
In accordo con: ISO 9906:2012 - Grade 3B ( section 4.4.2)  
In accordance to:

Curve per liquidi con densità/curve established for liquid with density  
1Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C

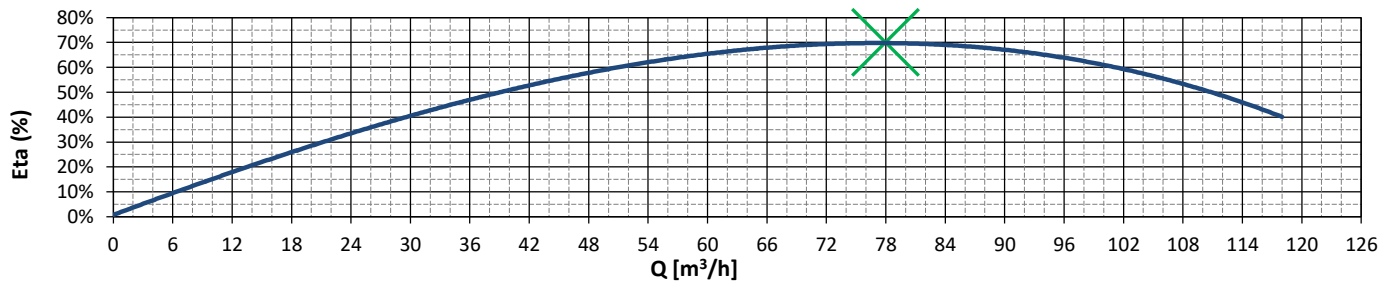
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |      |      |      |      |      |  |  |  |
|-----------------|--------------|------|------|------|------|------|------|------|------|------|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 333  | 667  | 1000 | 1167 | 1333 | 1500 | 1667 | 1967 |  |  |  |
|                 | <b>l/s</b>   | 0    | 6    | 11   | 17   | 19   | 22   | 25   | 28   | 33   |  |  |  |
|                 | <b>m³/h</b>  | 0    | 20   | 40   | 60   | 70   | 80   | 90   | 100  | 118  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 15,3 | 12,5 | 10,7 | 9,2  | 8,5  | 7,8  | 6,7  | 5,7  | 3,0  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>3,0</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>2,5</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>3,2</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,80</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>6,2</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>38,5</b>       |

|                                       |      |             |
|---------------------------------------|------|-------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 76</b> |
| Diametro girante<br>Impeller diameter | [mm] | -           |
| Peso pompa<br>Weight                  | [Kg] | <b>93,0</b> |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>7G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>    |

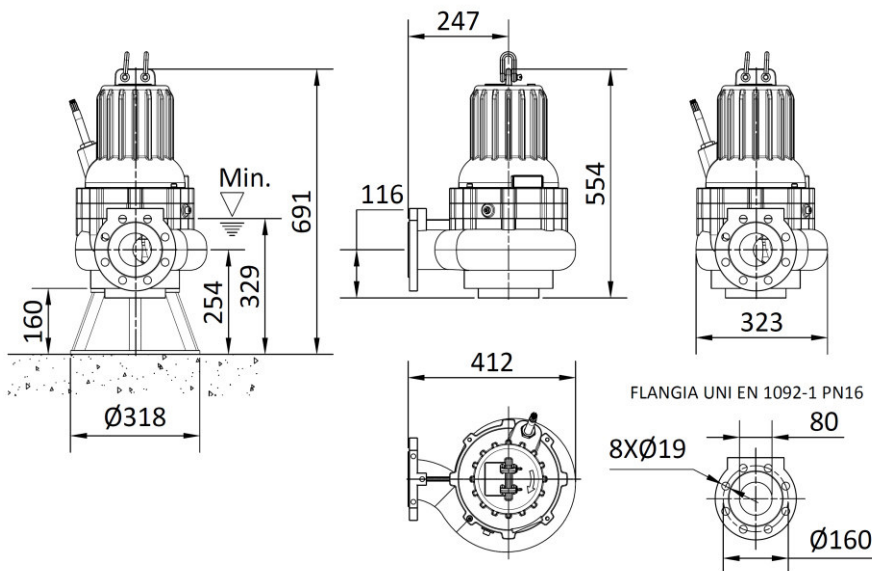
In accordo con: ISO 9906:2012 - Grade 3B ( section 4.4.2)  
In accordance to:

Curve per liquidi con densità/curve established for liquid with density 1Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C

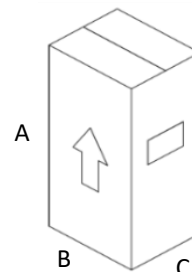
### Dimensioni d'ingombro - overall dimensions

#### S Installazione mobile - Installation mobile - Installation mobile - Instalación móvil

CS.80.25.4T.152 - CS.80.30.4T.152



Dimensione imballo  
Packaging dimensions

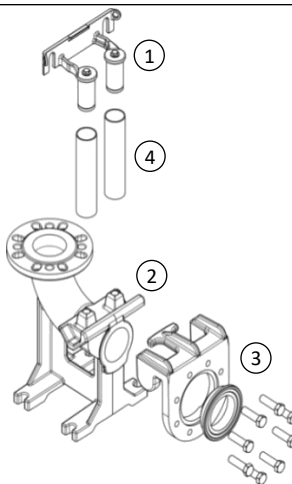
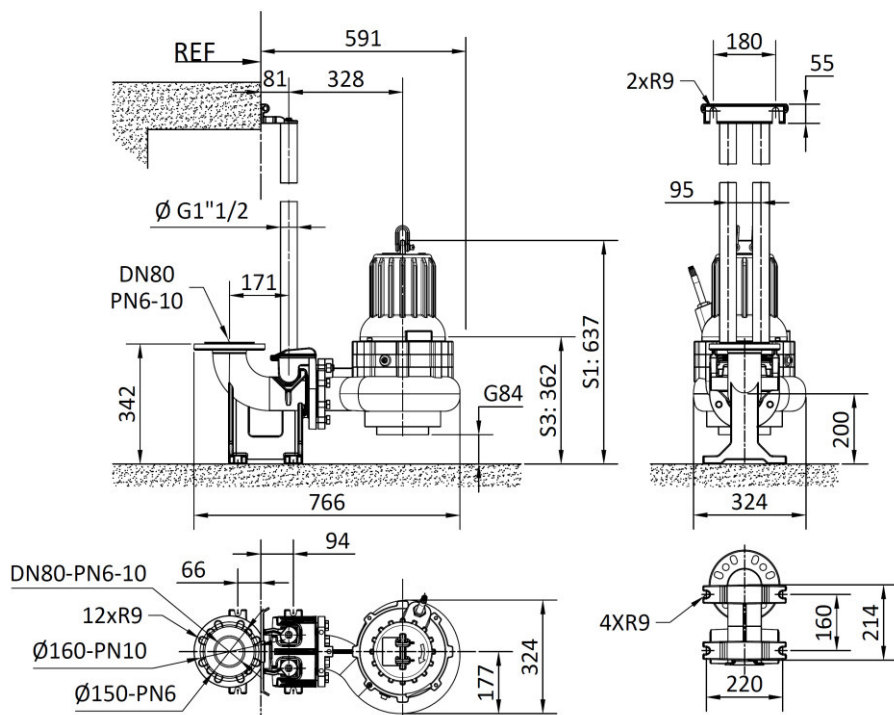


Misure - Measures  
[mm]

| A   | B   | C   |
|-----|-----|-----|
| 750 | 450 | 390 |

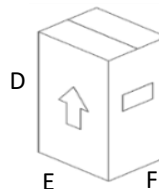
#### FC Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento

CS.80.25.4T.152 - CS.80.30.4T.152



■ 8FC00004 KG: 30

|   |   |
|---|---|
| 1 | Supporto tubi guida da 1 <sup>1/2</sup> |
| 1 | 1 <sup>1/2</sup> guide rails bracket    |
| 2 | Piede uscita verticale 3"               |
| 2 | Vertical foot - 3"out                   |
| 3 | Slitta completa                         |
| 3 | Sliding bracket complete                |
| 4 | Esclusi dalla fornitura                 |
| 4 | Not supplied                            |

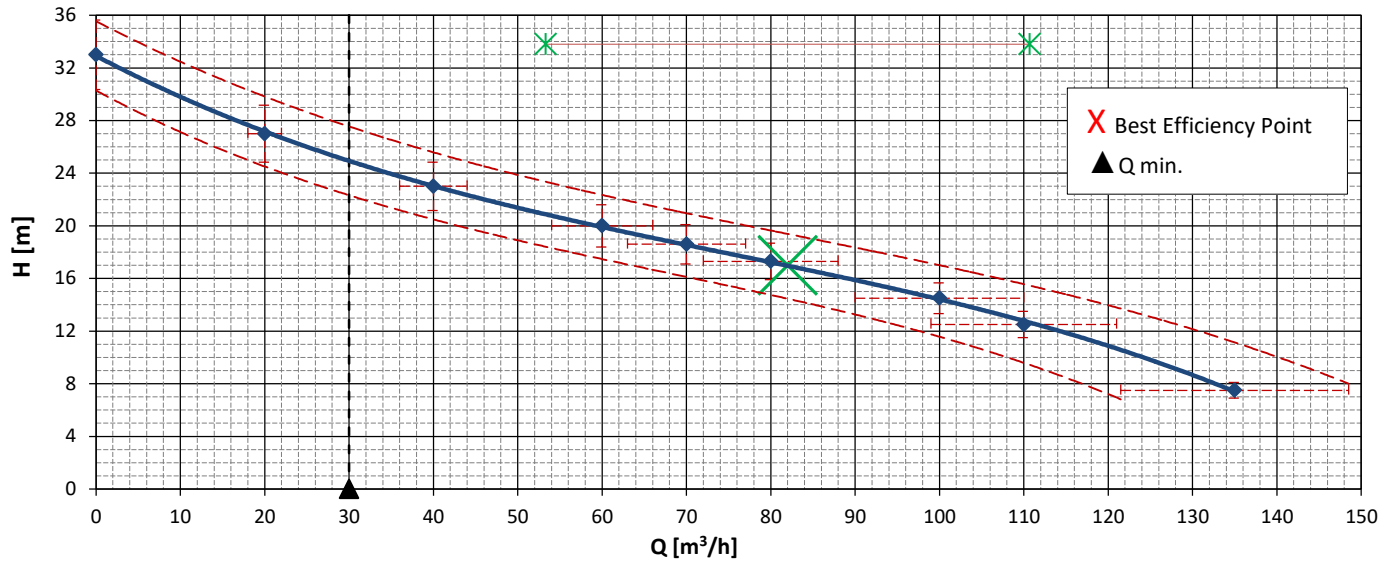


D 550

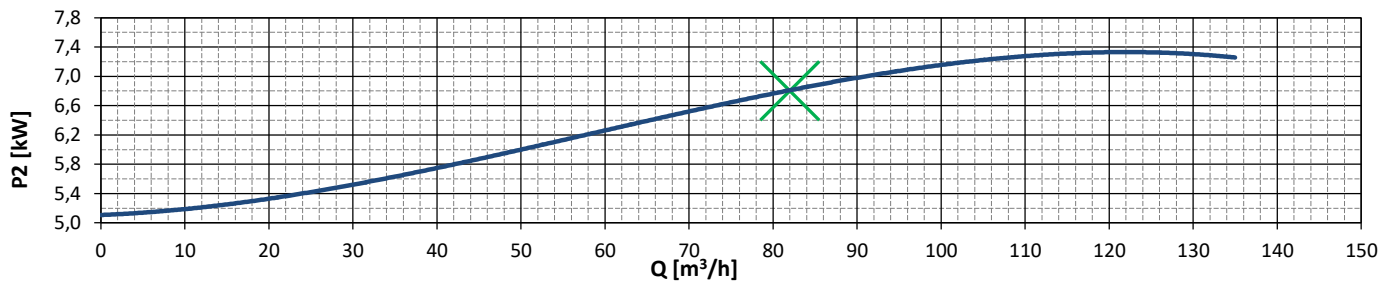
E 600

F 400

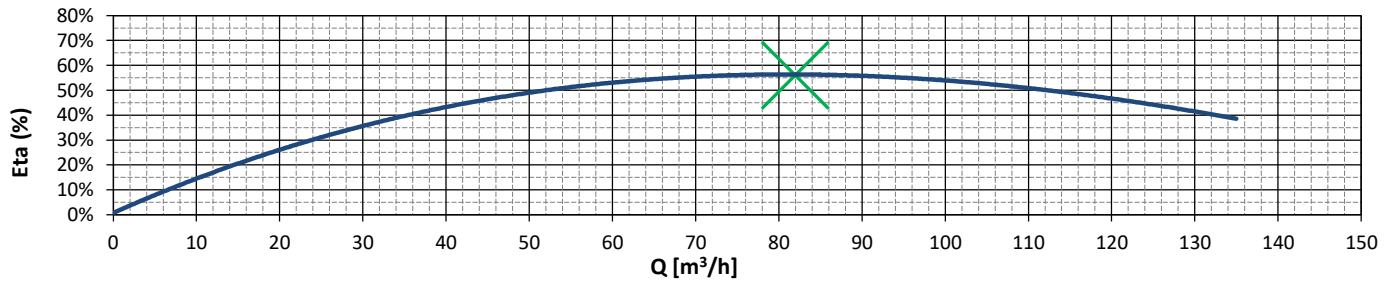
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |      |      |      |      |      |  |  |
|-----------------|--------------|------|------|------|------|------|------|------|------|------|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 333  | 667  | 1000 | 1167 | 1333 | 1667 | 1833 | 2250 |  |  |
|                 | <b>l/s</b>   | 0    | 6    | 11   | 17   | 19   | 22   | 28   | 31   | 38   |  |  |
|                 | <b>m³/h</b>  | 0    | 20   | 40   | 60   | 70   | 80   | 100  | 110  | 135  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 33,0 | 27,0 | 23,0 | 20,0 | 18,6 | 17,3 | 14,5 | 12,5 | 7,5  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>8,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>7,3</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>9,1</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,86</b> |

**Model T**

|  |     |                     |
|--|-----|---------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b>   |
| Avviamento<br>Starting                 |     | <b>D.O.L. - S/D</b> |
| Corrente Nominale<br>Rated current     | [A] | <b>15,3</b>         |
| Corrente di spunto<br>Starting current | [A] | <b>105,0 - 36,0</b> |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 56</b>  |
| Diametro girante<br>Impeller diameter | [mm] | -            |
| Peso pompa<br>Weight                  | [Kg] | <b>116,0</b> |

|  |  |               |
|--|--|---------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>     |
| Cavo<br>Cable                              |  | <b>10G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>15</b>     |

In accordo con: ISO 9906:2012 - Grade 3B ( section 4.4.2)  
In accordance to:

Curve per liquidi con densità/curve established for liquid with density  
1Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C



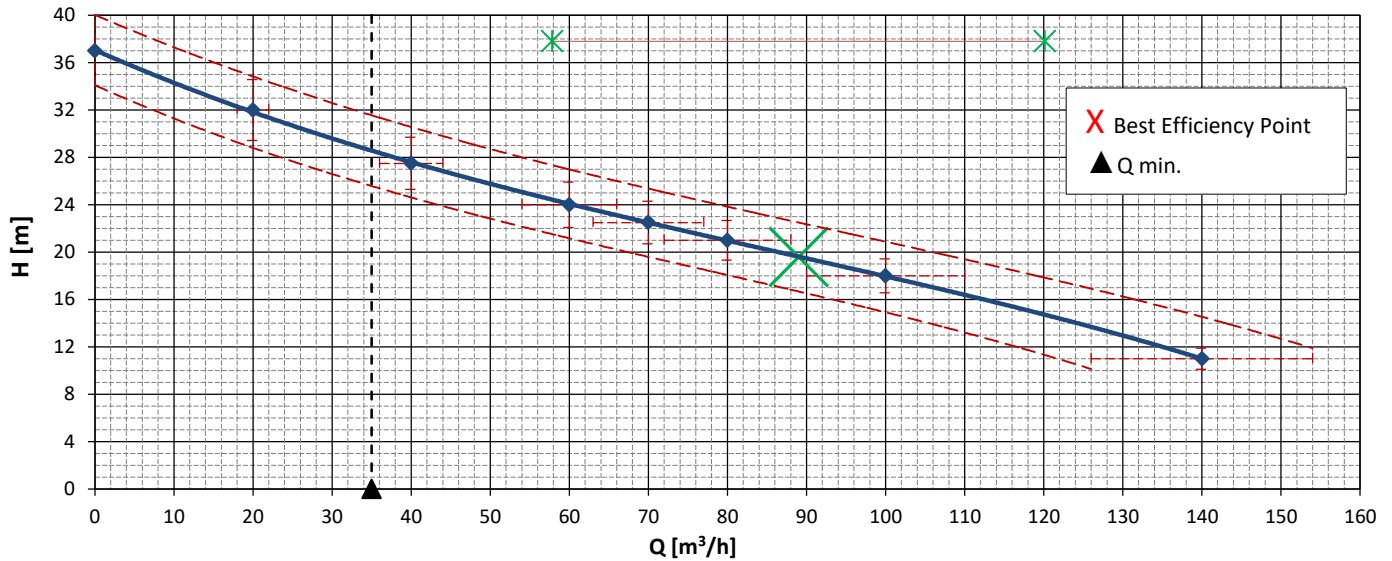
Tipo di pompa - Pump model  
**CS.80\_85.2.200**

Poles: 2 Hz: 50  
r.p.m. 3000

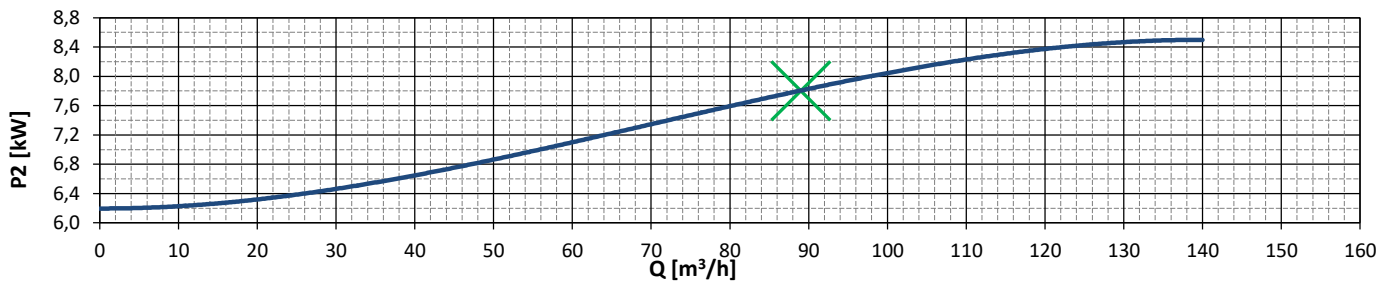
Girante Impeller  
Mandata Discharge  
**1.CHANNEL**  
**DN 80**

Serie 1

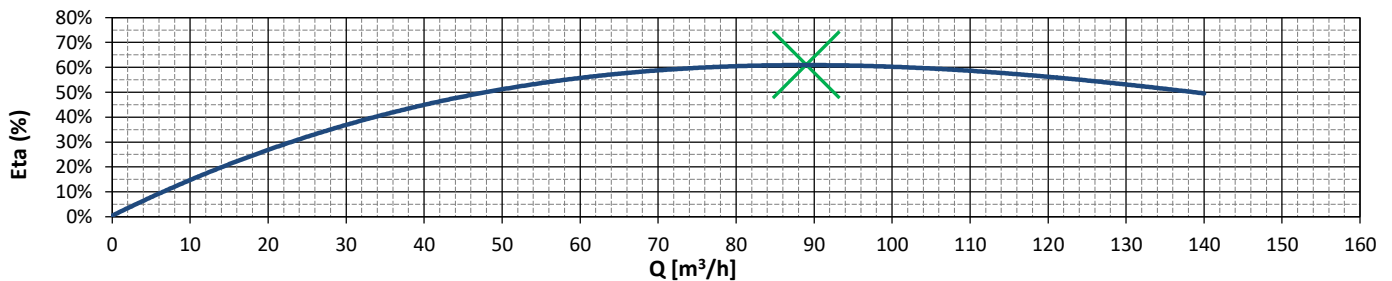
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |      |      |      |      |      |      |      |  |  |  |  |
|----------|-------|------|------|------|------|------|------|------|------|--|--|--|--|
| FLOW (Q) | l/min | 0    | 333  | 667  | 1000 | 1167 | 1333 | 1667 | 2333 |  |  |  |  |
|          | l/s   | 0    | 6    | 11   | 17   | 19   | 22   | 28   | 39   |  |  |  |  |
|          | m³/h  | 0    | 20   | 40   | 60   | 70   | 80   | 100  | 140  |  |  |  |  |
| HEAD (H) | m     | 37,0 | 32,0 | 27,5 | 24,0 | 22,5 | 21,0 | 18,0 | 11,0 |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>8,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>8,5</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>10,5</b> |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,87</b> |

**Model T**

|  |     |                     |
|--|-----|---------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b>   |
| Avviamento<br>Starting                 |     | <b>D.O.L. - S/D</b> |
| Corrente Nominale<br>Rated current     | [A] | <b>17,4</b>         |
| Corrente di spunto<br>Starting current | [A] | <b>116 - 67</b>     |

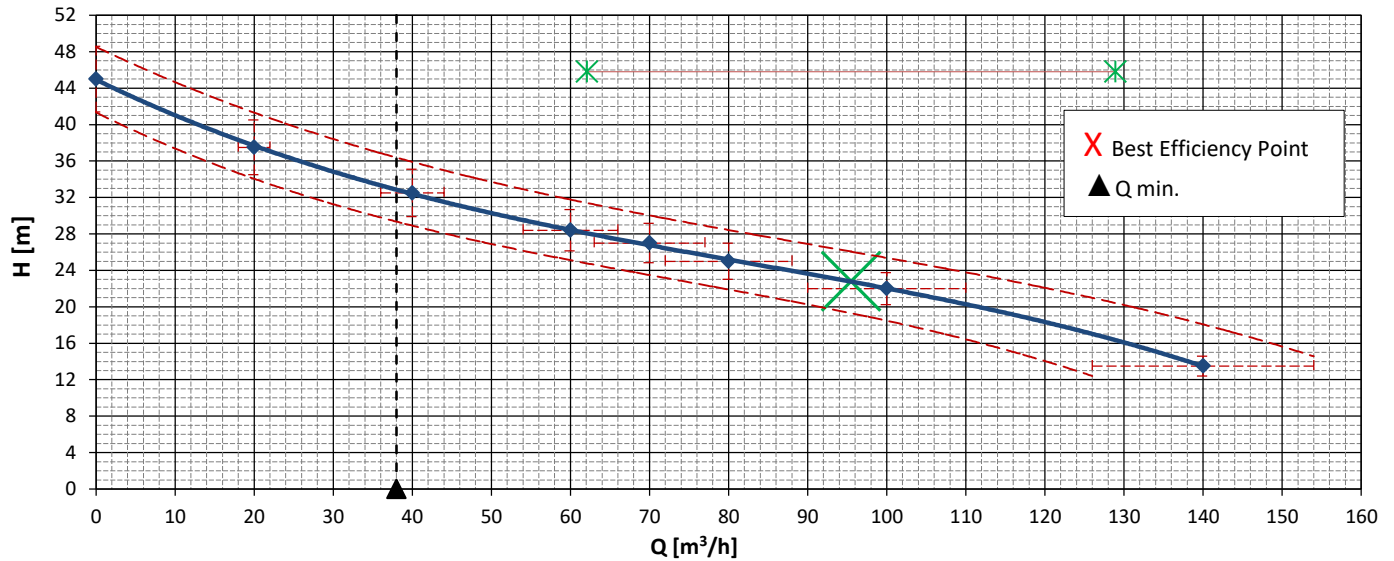
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 56</b>  |
| Diametro girante<br>Impeller diameter | [mm] | -            |
| Peso pompa<br>Weight                  | [Kg] | <b>116,0</b> |

|  |  |               |
|--|--|---------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>     |
| Cavo<br>Cable                              |  | <b>10G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>15</b>     |

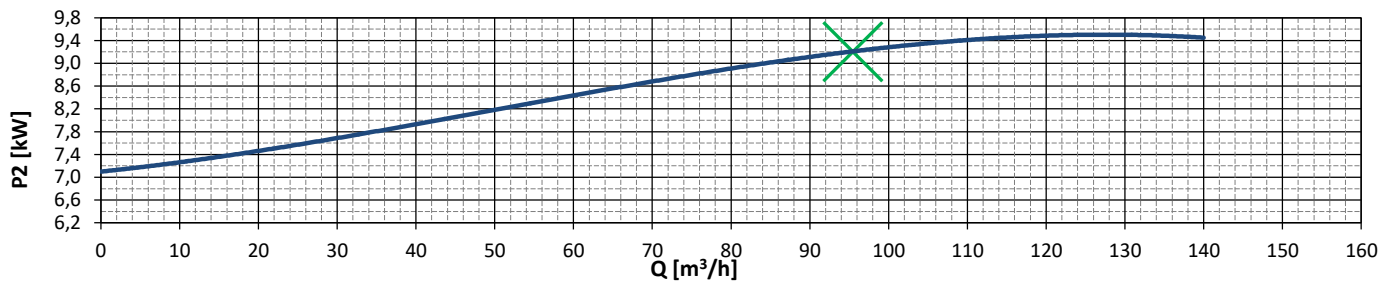
In accordo con: ISO 9906:2012 - Grade 3B ( section 4.4.2)  
In accordance to:

Curve per liquidi con densità/curve established for liquid with density  
1Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C

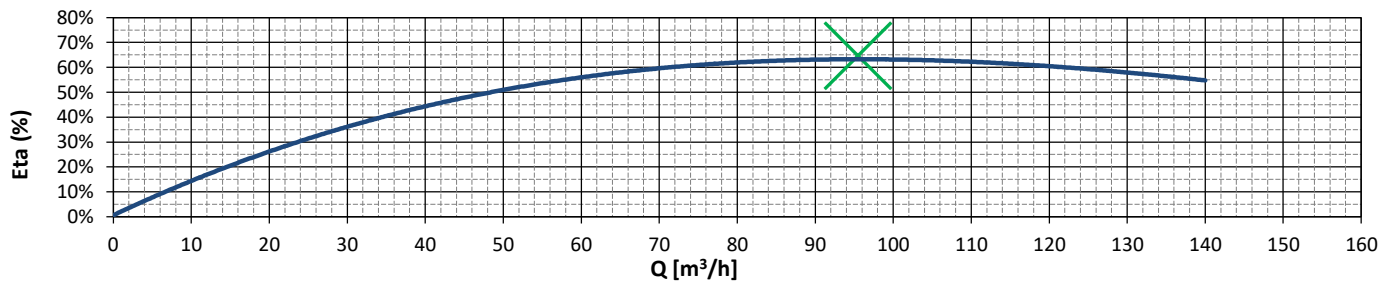
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |      |      |      |      |      |      |      |  |  |  |  |
|----------|-------|------|------|------|------|------|------|------|------|--|--|--|--|
| FLOW (Q) | l/min | 0    | 333  | 667  | 1000 | 1167 | 1333 | 1667 | 2333 |  |  |  |  |
|          | l/s   | 0    | 6    | 11   | 17   | 19   | 22   | 28   | 39   |  |  |  |  |
|          | m³/h  | 0    | 20   | 40   | 60   | 70   | 80   | 100  | 140  |  |  |  |  |
| HEAD (H) | m     | 45,0 | 37,5 | 32,5 | 28,4 | 27,0 | 25,0 | 22,0 | 13,5 |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>9,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>9,5</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>11,4</b> |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,86</b> |

**Model T**

|  |     |                     |
|--|-----|---------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b>   |
| Avviamento<br>Starting                 |     | <b>D.O.L. - S/D</b> |
| Corrente Nominale<br>Rated current     | [A] | <b>19,0</b>         |
| Corrente di spunto<br>Starting current | [A] | <b>133 - 77,0</b>   |

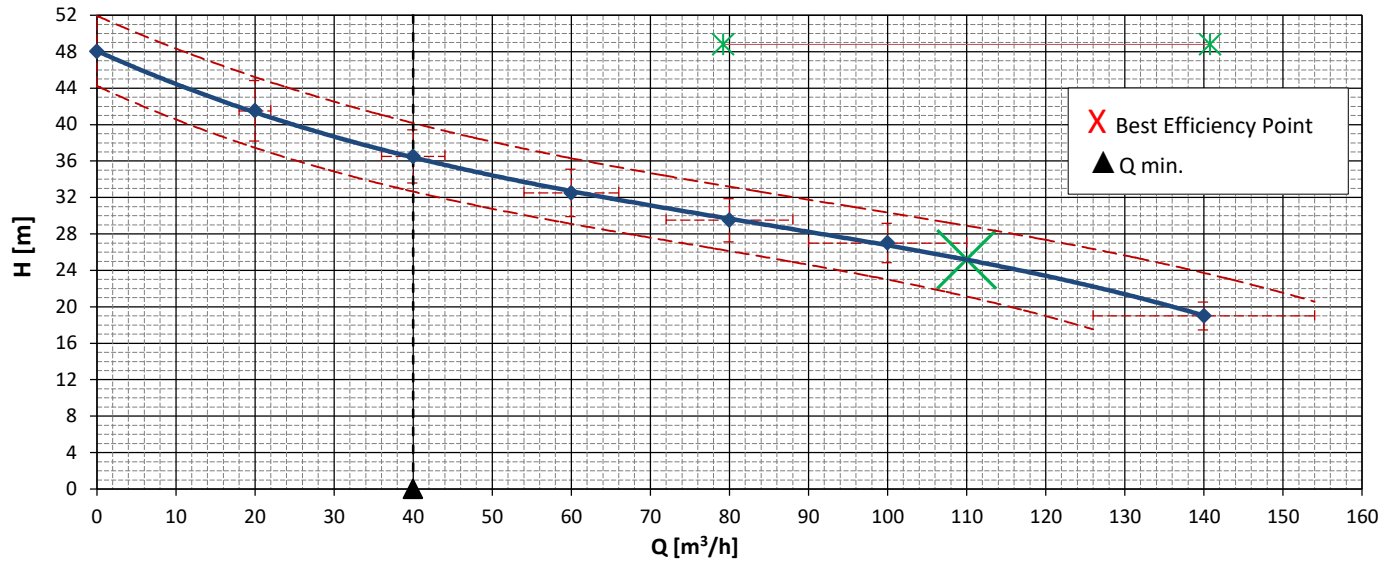
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 56</b>  |
| Diametro girante<br>Impeller diameter | [mm] | -            |
| Peso pompa<br>Weight                  | [Kg] | <b>119,0</b> |

|  |  |               |
|--|--|---------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>     |
| Cavo<br>Cable                              |  | <b>10G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>15</b>     |

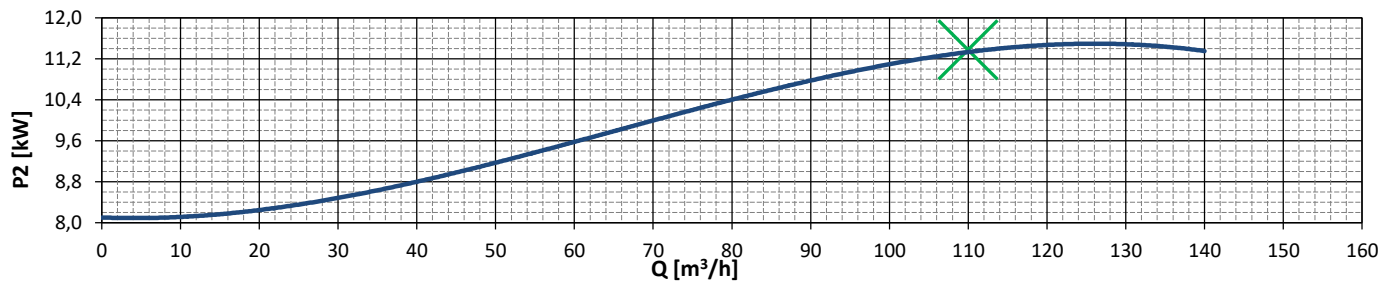
In accordo con: **ISO 9906:2012 - Grade 3B (section 4.4.2)**  
In accordance to:

Curve per liquidi con densità/curve established for liquid with density  
**1Kg/dm3 - viscosità/viscosity 1 mm2/s - temperature/temperature 20°C**

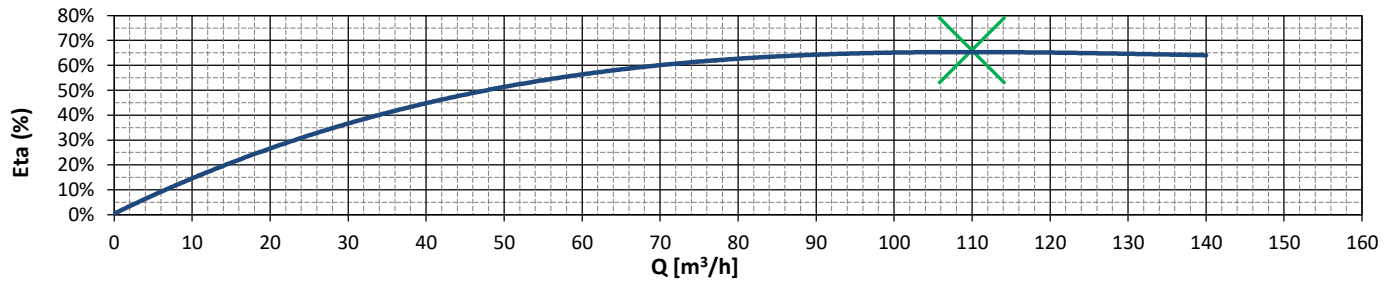
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |      |      |      |  |  |  |  |
|-----------------|--------------|------|------|------|------|------|------|------|--|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 333  | 667  | 1000 | 1333 | 1667 | 2333 |  |  |  |  |
|                 | <b>l/s</b>   | 0    | 6    | 11   | 17   | 22   | 28   | 39   |  |  |  |  |
|                 | <b>m³/h</b>  | 0    | 20   | 40   | 60   | 80   | 100  | 140  |  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 48,0 | 41,5 | 36,5 | 32,5 | 29,5 | 27,0 | 19,0 |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>11,5</b> |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>11,4</b> |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>13,8</b> |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,87</b> |

**Model T**

|  |     |                     |
|--|-----|---------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b>   |
| Avviamento<br>Starting                 |     | <b>D.O.L. - S/D</b> |
| Corrente Nominale<br>Rated current     | [A] | <b>23,0</b>         |
| Corrente di spunto<br>Starting current | [A] | <b>163 - 94</b>     |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 56</b>  |
| Diametro girante<br>Impeller diameter | [mm] | -            |
| Peso pompa<br>Weight                  | [Kg] | <b>122,0</b> |

|  |  |               |
|--|--|---------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>     |
| Cavo<br>Cable                              |  | <b>10G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>15</b>     |

In accordo con: ISO 9906:2012 - Grade 3B  
In accordance to:

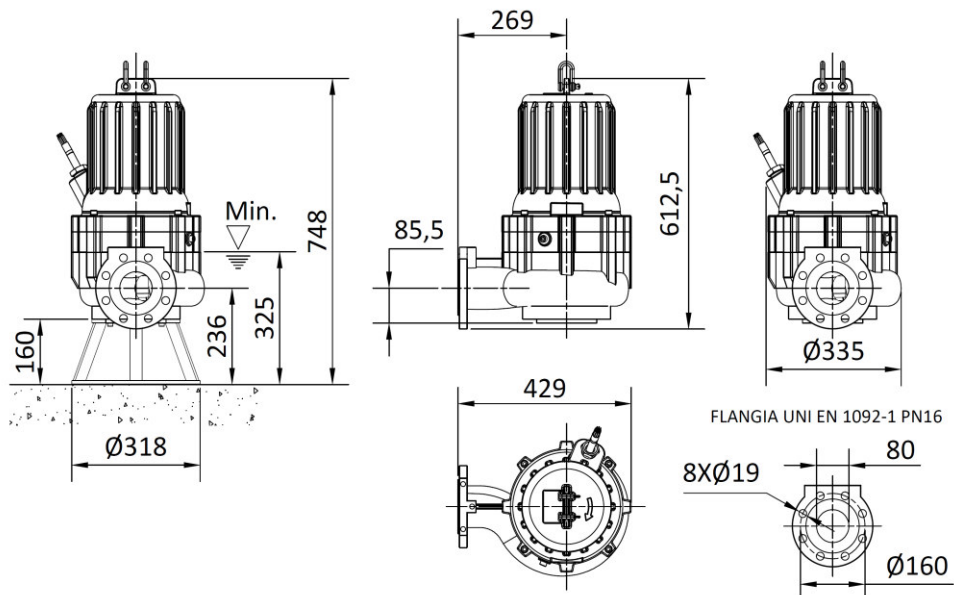
Curve per liquidi con densità/curve established for liquid with density  
1Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C



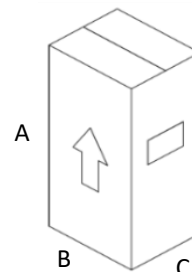
### Dimensioni d'ingombro - overall dimensions

#### S Installazione mobile - Installation mobile - Installation mobile - Instalación móvil

CS.80.75.2T.200 - CS.80.85.2T.200 - CS.80.95.2T.200 - CS.80.115.2T.200



Dimensione imballo  
Packaging dimensions

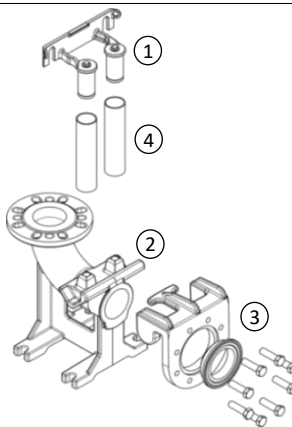
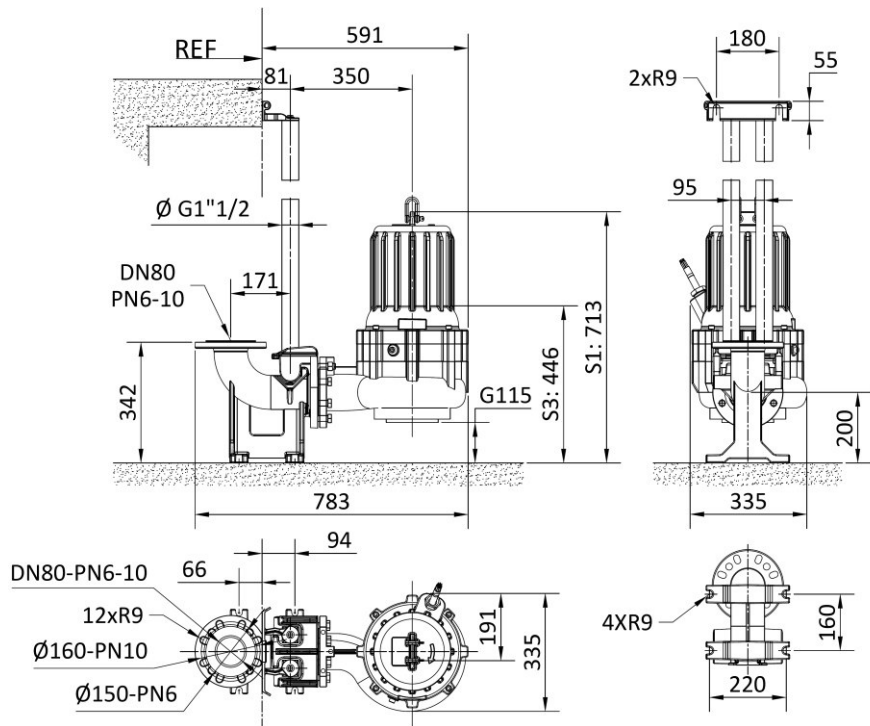


Misure - Measures  
[mm]

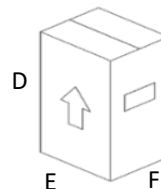
| A   | B   | C   |
|-----|-----|-----|
| 750 | 450 | 390 |

#### FC Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento

CS.80.75.2T.200 - CS.80.85.2T.200 - CS.80.95.2T.200 - CS.80.115.2T.200










|   |   |               |
|---|---|---------------|
|   | <b>8FC00004</b>   | <b>KG: 30</b> |
| 1 | Supporto tubi guida da 1 <sup>1/2</sup><br>1 <sup>1/2</sup> guide rails bracket |               |
| 2 | Piede uscita verticale 3"<br>Vertical foot - 3"out                              |               |
| 3 | Slitta completa<br>Sliding bracket complete                                     |               |
| 4 | Esclusi dalla fornitura<br>Not supplied   |               |




|   |     |
|---|-----|
| D | 550 |
| E | 600 |
| F | 400 |


**ACCESSORI - ACCESSORIES - ACCESORIES - ACCESORIOS**

| Descrizione - Description - Description - Descripción |   | Codice Code                |
|---|---|----------------------------|
| FC  |  <ul style="list-style-type: none"> <li>- Dispositivo di accoppiamento DN 80 - uscita G 3"</li> <li>- DN 80 Coupling device - outlet 3"</li> <li>- Dispositif de couplage DN 80- sortie G 3"</li> <li>- Dispositivo de acoplamiento DN 80 - salida G3"</li> </ul>                                      | 8FC000004                  |
| STD   |  <ul style="list-style-type: none"> <li>- Cavalletto di sostegno in acciaio inox</li> <li>- Stainless steel support stand</li> <li>- Support en acier inoxydable</li> <li>- Soporte de acero inoxidable.</li> </ul>  | 8FC000010                  |
| AT80  |  <ul style="list-style-type: none"> <li>- Adattatore per dispositivo di accoppiamento della concorrenza</li> <li>- Adapter for competitors foot coupling devices</li> <li>- Adaptateur pour pied d'assise du concurrent</li> <li>- Adaptador para dispositivo de acoplamiento de competidor</li> </ul> | 2SB000004                  |
|   |  <ul style="list-style-type: none"> <li>- Catena ferro zincato - galvanized Iron - fer galvanisé - hierro galvanizado</li> <li>- Chain</li> <li>- Chaîne</li> <li>- Cadena Acciaio - Stainless steel - acier inox -acero inox</li> </ul>   | 2SC000019<br>2SC000032     |
| FBV   |  <ul style="list-style-type: none"> <li>- Valvola di ritegno a palla Flangiata</li> <li>- Flanged valve</li> <li>- Vanne à bride</li> <li>- Válvula de brida</li> </ul>  | DN 80<br>PN10<br>4BV000007 |
| HF  |  <ul style="list-style-type: none"> <li>- Regolatore di livello per acque reflue</li> <li>- Level switch for sewage</li> <li>- Interrupteur de niveau pour eaux usées</li> <li>- Interruptor de nivel para aguas residuales</li> </ul>  | [10 mt] 3CS000007          |
| SHELL   |  <ul style="list-style-type: none"> <li>- Contrappeso SHELL per galleggiante</li> <li>- Counterweight SHELL for level switch</li> <li>- Cotrepoids SHELL pour interrupteur de niveau</li> <li>- Contrapeso para interruptor de nivel</li> </ul>  | 3CS000021                  |

**SELEZIONE QUADRO DI CONTROLLO - CONTROL PANEL SELECTION**

|                     | Pole | Pump               | P2 [KW] | In [A] | Avv. |
|---------------------|------|--------------------|---------|--------|------|
| 152                 | 4    | CS.80_25.4T.173    | 2,5     | 5,8    | DOL  |
|                     |      | CS.80_30.4T.173    | 3,0     | 6,2    | DOL  |
| 200                 | 2    | CS.80_75.2T.200    | 7,5     | 15,2   | DOL  |
|                     |      | CS.80_75.2T.200.SD |         |        | S/D  |
|                     |      | CS.80_85.2T.200    | 8,5     | 17,3   | DOL  |
|                     |      | CS.80_85.2T.200.SD |         |        | S/D  |
|                     |      | CS.80_95.2T.200    | 9,5     | 19,0   | DOL  |
|                     |      | CS.80_95.2T.200.SD |         |        | S/D  |
| CS.80_115.2T.200.SD | 11,5 | 23,0               | S/D     |        |      |

| <br><b>- ECH - ELECTROMECHANICAL</b> |                        |                            |                            |                       |                         |                            |                            |   |   |
|--|------------------------|----------------------------|----------------------------|-----------------------|-------------------------|----------------------------|----------------------------|---|---|
| 1 PUMP   |                        |                            |                            |                       | 2 PUMPS                 |                            |                            |   |   |
| ECH1.T-7<br>5EC000005  | ECH1.T-22<br>5EC000009 | ECH1.T.S/D_20<br>5EC000106 | ECH1.T.S/D_28<br>5EC000013 | ECH2.T-7<br>5EC000029 | ECH21.T-22<br>5EC000033 | ECH2.T.S/D_20<br>5EC000108 | ECH2.T.S/D_28<br>5EC000037 |   |   |
| •  |                        |                            |                            | •                     |                         |                            |                            |   |   |
| •  |                        |                            |                            | •                     |                         |                            |                            |   |   |
|  | •                      |                            |                            |                       | •                       |                            |                            |   |   |
|  |                        | •                          |                            |                       |                         | •                          |                            |   |   |
|  |                        |                            | •                          |                       |                         |                            | •                          |   |   |
|  |                        |                            |                            |                       |                         |                            |                            | • |   |
|  |                        |                            |                            |                       |                         |                            |                            |   | • |

| <br><b>- ECL - ELECTRONIC</b> |           |           |           |
|--|-----------|-----------|-----------|
| 1 PUMP   |           | 2 PUMPS   |           |
| 5EC000083  | 5EC000086 | 5EC000084 | 5EC000087 |
| •  |           | •         |           |
| •  |           | •         |           |
|  | •         |           | •         |
|  |           | •         |           |
|  | •         |           | •         |
|  |           | •         |           |
|  |           |           | •         |



**Poli - poles    Modelli - models**

|          |                                      |
|----------|--------------------------------------|
| <b>6</b> | <b>CS.100_ 11/15/17 . 6 . 173</b>    |
| <b>4</b> | <b>CS.100_ 25/35/45/52 . 4 . 173</b> |

**IT**

Elettropompa sommergibile di robusta costruzione fabbricata completamente in ghisa, con camera olio interposta tra gruppo motore e gruppo pompa e doppia tenuta meccanica: lato pompa posizionata sopra alla girante a diretto contatto del liquido pompato; tenuta meccanica lato motore interna alla camera olio.

**APPLICAZIONE:** l'elettropompa deve funzionare completamente immersa per garantire il raffreddamento da parte del liquido circostante. Sono idonee al pompaggio di acque piovane, o di falda con basso contenuto di solidi abrasivi (< 1 g/l), acque derivate da reflui civili e industriali.

**EN**

Robust construction submersible pump completely made in cast iron, with oil chamber interposed between motor unit and pump unit with double mechanical seal: the pump side one positioned above the impeller in direct contact with the pumped liquid; the motor side one, inside the oil chamber.

**APPLICATION:** the pump must be completely submerged to ensure the cooling by the pumped liquid. They are suitable to pump rain water or ground water with low quantity of abrasive solids (<1g / l), civil or industrial waste waters.

**FR**

Pompe submersible de construction solide entièrement en fonte, avec chambre d'huile interposée entre le bloc moteur et le groupe pompe et double garniture mécanique: le côté pompe placé au-dessus de la roue en contact direct avec le liquide pompé; garniture mécanique côté moteur à l'intérieur de la chambre à huile.

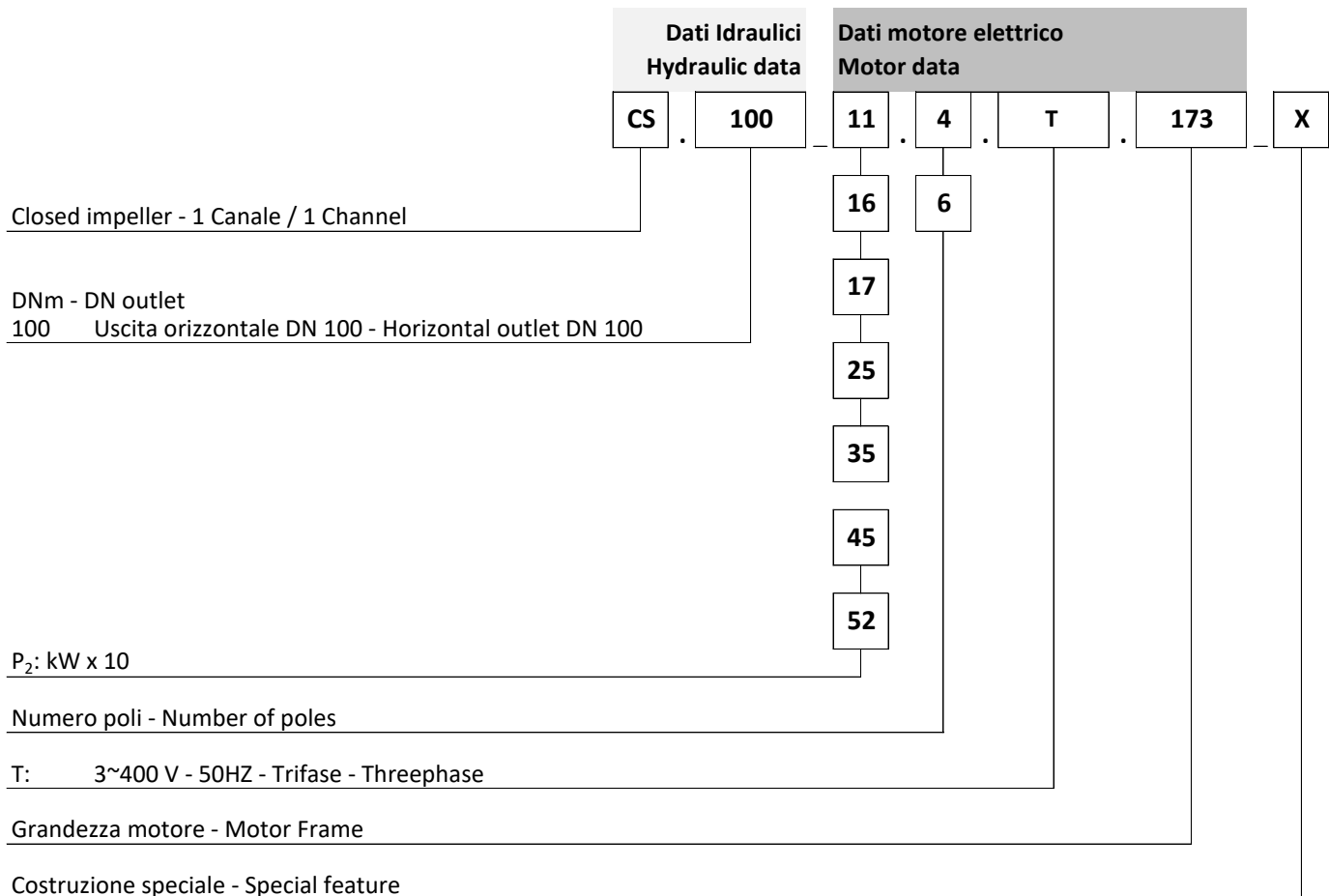
**APPLICATION:** la pompe doit être complètement immergée pour assurer le refroidissement du liquide pompé. Elles sont adaptées pour le pompage de l'eau de pluie ou des eaux souterraines avec de faibles particules abrasives (<1g/l), de l'eau provenant des eaux usées municipales et industrielles.

**ES**

Bomba sumergible de construcción sólida fabricada completamente de hierro fundido, con cámara de aceite interpuesta entre la unidad del motor y la unidad de la bomba y doble cierre mecánico: lado de la bomba colocado sobre el impulsor en contacto directo con el líquido bombeado; cierre mecánico en el lado del motor dentro de la cámara de aceite.

**APLICACION:** la bomba debe estar completamente sumergido para asegurar el enfriamiento del líquido bombeado. Son adecuadas para el bombeo de agua de lluvia o aguas subterráneas con bajo contenido de sólidos abrasivos (<1 g / l), el agua derivada de las aguas residuales municipales y industriales.



**IDENTIFICAZIONE - IDENTIFICATION**

**LISTA MODELLI - RANGE OF PRODUCTS**

| Grandezza Motore<br>Motor Frame | Poles | P <sub>2</sub><br>[kW] | Alimentazione<br>Power supply | Modelli<br>Models | Avviamento<br>Starting | Cavo alimentazione / segnali<br>Power / signals cable |                       | Camera olio<br>Oil Chamber |
|---------------------------------|-------|------------------------|-------------------------------|-------------------|------------------------|---|-----------------------|----------------------------|
|                                 |       |                        |                               |                   |                        | [m]   | Type                  |                            |
| <b>173</b>                      | 6     | 1,1                    | 3ph                           | CS.100_11.6.T.173 | D.O.L.                 | 10  | H07RN-F 4G1,5 / 7G1,5 | SI<br>YES                  |
|                                 |       | 1,5                    | 3ph                           | CS.100_15.6.T.173 | D.O.L.                 | 10  | H07RN-F 4G1,5 / 7G1,5 |                            |
|                                 |       | 1,7                    | 3ph                           | CS.100_17.6.T.173 | D.O.L.                 | 10  | H07RN-F 4G1,5 / 7G1,5 |                            |
|                                 | 4     | 2,5                    | 3ph                           | CS.100_25.4.T.173 | D.O.L.                 | 10  | H07RN-F 4G1,5 / 7G1,5 | SI<br>YES                  |
|                                 |       | 3,5                    | 3ph                           | CS.100_35.4.T.173 | D.O.L.                 | 10  | H07RN-F 4G1,5 / 7G1,5 |                            |
|                                 |       | 4,5                    | 3ph                           | CS.100_45.4.T.173 | D.O.L.                 | 10  | H07RN-F 4G1,5 / 7G1,5 |                            |
|                                 |       | 5,2                    | 3ph                           | CS.100_52.4.T.173 | D.O.L.                 | 10  | H07RN-F 4G1,5 / 7G1,5 |                            |

## Caratteristiche costruttive - construction features

**Motore asincrono** in classe di isolamento F (155°C), a secco e raffreddato dal liquido circostante;

**Asynchronous dry motor**, insulation class F(155°C), cooled by the surrounding liquid;

**Moteur asynchrone**, classe d'isolation F (155°C), sec et refroidi par le liquide environnant;

**Motor asíncrono**, aislamiento clase F (155 ° C), seco y refrigerado por el líquido que rodea.

### OPTIONAL

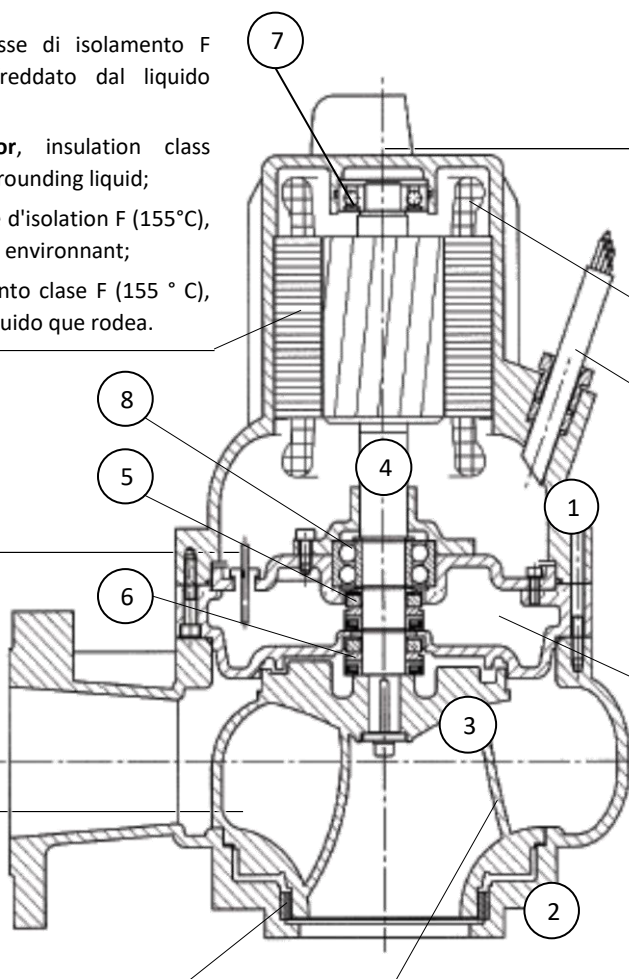
Sonda Olio  
Oil Probe  
Sonde d'huile  
Sonda de aceite

Girante chiusa  
monocanale  
Closed impeller  
single channel  
Roue fermée  
monocanal  
Impulsor cerrado  
monocanal

Anello d'usura  
Wear ring  
Bague d'usure  
Anillo de desgaste

Girante chiusa  
monocanale  
Closed impeller  
single channel

Roue fermée  
monocanal  
Impulsor cerrado  
monocanal



Anello per movimentazione pompa  
Shackle to handle the pump  
Manille pour lever la pompe  
Grillete para levantar la bomba

### OPTIONAL

Pastiglia termica  
Built in Thermal protector  
Protecteur thermique intégré  
Protector térmico incorporado

10 m - H07RN-F

Camera olio per il raffreddamento e la lubrificazione delle tenute meccaniche;  
**Oil chamber** for cooling and lubrication of mechanical seals;  
**Chambre d'huile** pour le refroidissement et la lubrification des **Cámara de aceite** para la refrigeración y la lubricación de los sellos mecánicos.

| Viti<br>Screws<br>Vis<br>Tornillos | Quality<br><br><br><br>A2 |
|------------------------------------|---------------------------|
|------------------------------------|---------------------------|

| O-RINGS | NBR |
|---------|-----|
|---------|-----|

| NR. | DESCRIPTION       | MATERIAL     |
|-----|-------------------|--------------|
| 1   | Gruppo motore     | Ghisa        |
|     | Motor group       | Cast iron    |
|     | Groupe moteur     | Fer de fonte |
|     | Unidad de motor   | Hierro       |
| 2   | Corpo idraulico   | Ghisa        |
|     | Pump Housing      | Cast iron    |
|     | Corps de la pompe | Fer de fonte |
|     | Cuerpo hidráulico | Hierro       |
| 3   | Girante           | Ghisa        |
|     | Impeller          | Cast iron    |
|     | Roue              | Fer de fonte |
|     | Impulsor          | Hierro       |
| 4   | Albero motore     | Acciaio      |
|     | Shaft             | Steel        |
|     | Arbre moteur      | Acier        |
|     | Eje del motor     | Acero        |

| NR. | DESCRIPTION             | MATERIAL                   |
|-----|-------------------------|----------------------------|
| 5   | Tenuta mecc. superiore  | Carbon graphite / Al-Oxide |
|     | Upper mech. seal        |                            |
|     | Haut garniture mécan.   | NBR                        |
| 6   | Tenuta mecc. Inferiore  | SiC / SiC                  |
|     | Lower mech. seal        |                            |
|     | Haut garniture mécan.   | NBR                        |
| 7   | Sello mecánico superior |                            |
|     | Cuscinetto superiore    |                            |
|     | Top bearing             | 6305 ZJ                    |
|     | Roulement supérieur     |                            |
| 8   | Cojinete superior       |                            |
|     | Cuscinetto inferiore    |                            |
|     | Lower bearing           | 3306                       |
|     | Roulement inférieur     |                            |
|     | Cojinete inferior       |                            |



Tipo di pompa - Pump model

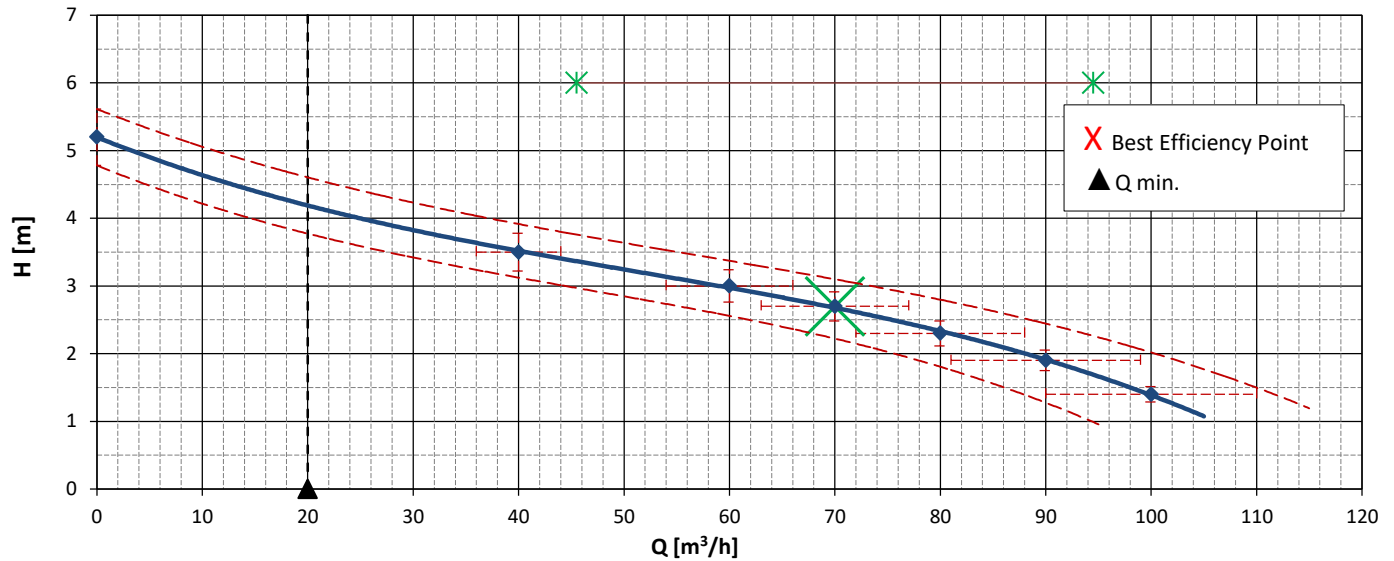
**CS.100\_173**Girante  
Impeller  
Mandata  
Discharge**1.CHANNEL****DN 100****Caratteristiche costruttive - construction data**

|  |  |
|--|--|
| <b>Costruzione Motore - Motor Frame</b>                              | 173  |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |
| <b>Classe di Isolamento - Insulation Class</b>                       | F (155°C)  |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent  |
| <b>Avvolgimento statore - Stator winding</b>                         | 3~PH - Threephase<br>Y / Δ<br>[V] 400 / 230                                  |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> | Optional   |
| <input type="radio"/> Bimetallico - Bimetal disc                     | <input checked="" type="checkbox"/> 130°C                                    |
| <input type="radio"/> Solo su richiesta - on request only PT100      | <input type="checkbox"/>   |
| <input type="radio"/> Solo su richiesta - on request only PTC        | <input type="checkbox"/>   |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid                               |
| <b>Camera olio - Oil chamber</b>                                     | Si - Yes   |
| <b>Protezione Tenuta - Leakage protection</b>                        | Optional   |
| <b>Tipo girante - Impeller</b>                                       | CHIUSA MONOCANALE - CLOSED 1 CHANNEL   |
| <b>DN mandata - Discharge</b>  | DN 100 PN16  |
| <b>Controflangia filettata - Threaded counterflange</b>              | NO   |
| <b>DN aspirazione / Suction</b>                                      | [mm] Ø 100   |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard Vernice all'acqua - Water paint / 30µm<br>Opaco Nero - Opaque Black |

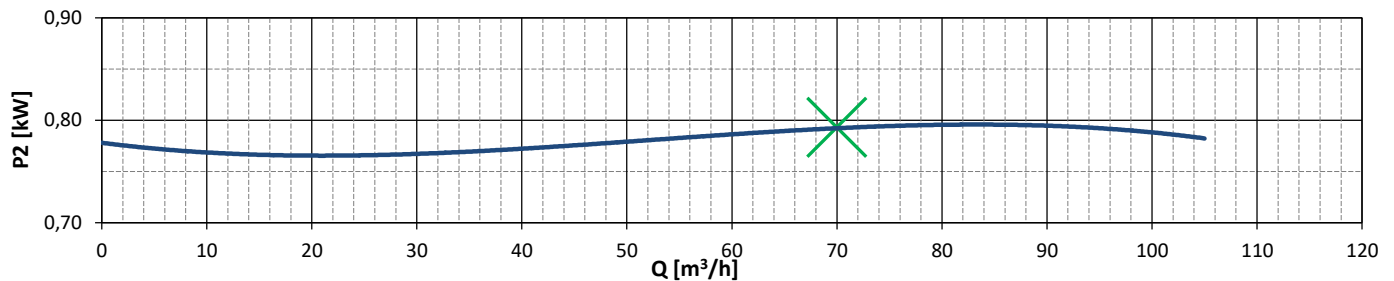
**Limiti di utilizzo - Operating Limits**

|   |                           |
|---|---------------------------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C] < 40                 |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] ~ 1 |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s] ~ 1  |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l] < 200              |
| <b>PH liquido pompato - PH value</b>                                | 6 ÷ 12                    |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m] 20                    |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l] < 0,1               |

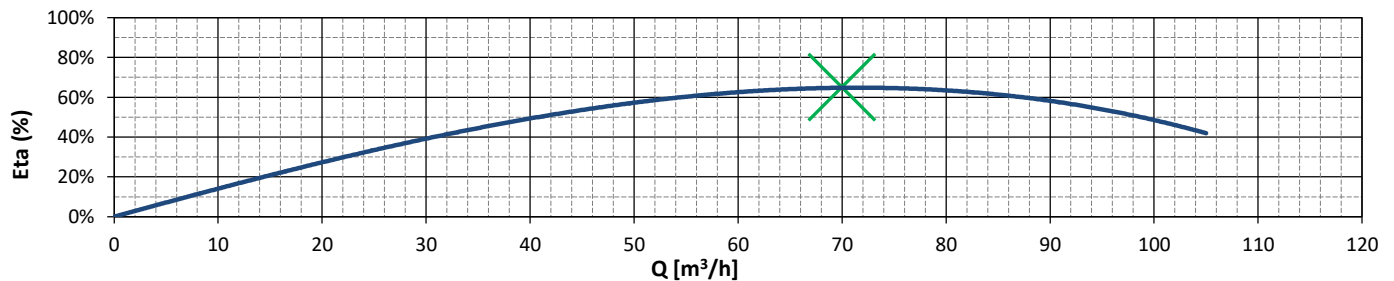
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |     |     |      |      |      |      |      |  |  |  |  |
|----------|-------|-----|-----|------|------|------|------|------|--|--|--|--|
| FLOW (Q) | l/min | 0   | 667 | 1000 | 1167 | 1333 | 1500 | 1667 |  |  |  |  |
|          | l/s   | 0   | 11  | 17   | 19   | 22   | 25   | 28   |  |  |  |  |
|          | m³/h  | 0   | 40  | 60   | 70   | 80   | 90   | 100  |  |  |  |  |
| HEAD (H) | m     | 5,2 | 3,5 | 3,0  | 2,7  | 2,3  | 1,9  | 1,4  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>1,8</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>0,8</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>1,6</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,76</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>3,3</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>13,8</b>       |

|                                       |      |             |
|---------------------------------------|------|-------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 80</b> |
| Diametro girante<br>Impeller diameter | [mm] | -           |
| Peso pompa<br>Weight                  | [Kg] | <b>93,0</b> |

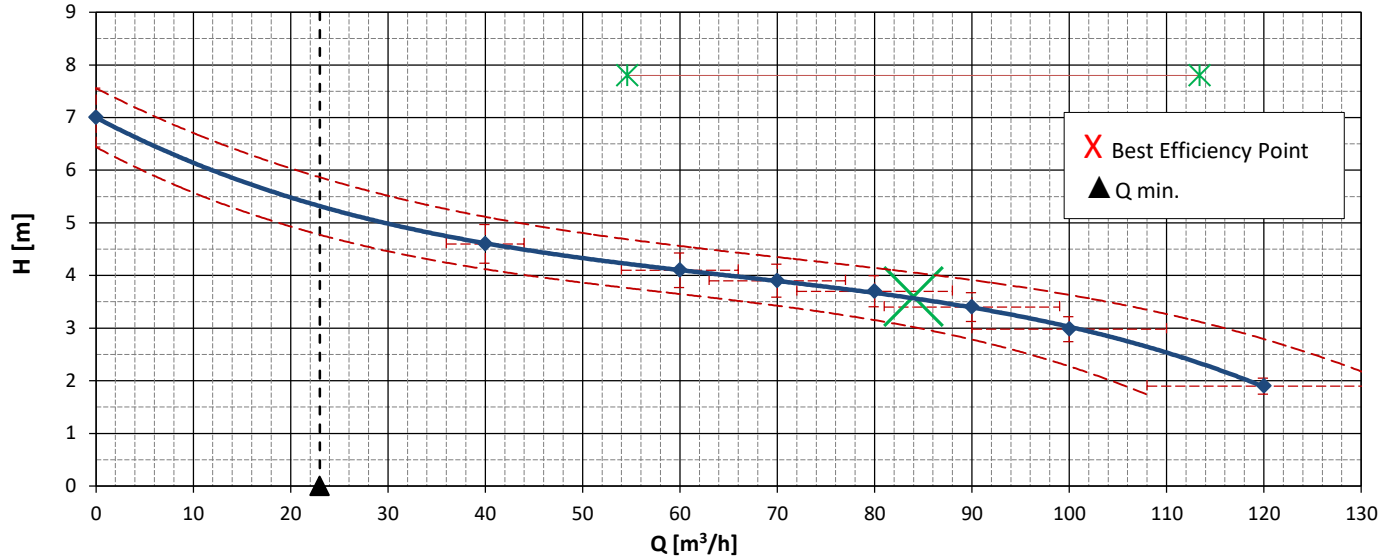
|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>30</b>    |

In accordo con: ISO 9906:2012 - Grade 3B ( section 4.4.2)  
In accordance to:

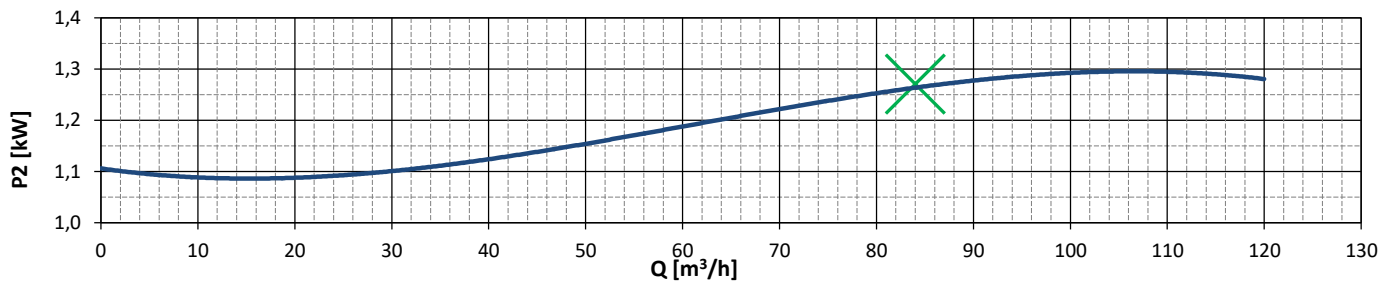
Curve per liquidi con densità/curve established for liquid with density  
1Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C



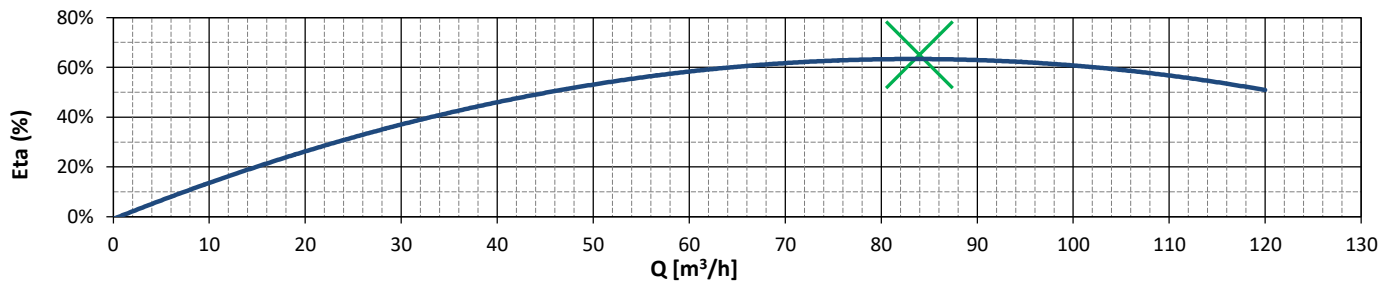
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |     |     |      |      |      |      |      |      |  |  |  |
|----------|-------|-----|-----|------|------|------|------|------|------|--|--|--|
| FLOW (Q) | l/min | 0   | 667 | 1000 | 1167 | 1333 | 1500 | 1667 | 2000 |  |  |  |
|          | l/s   | 0   | 11  | 17   | 19   | 22   | 25   | 28   | 33   |  |  |  |
|          | m³/h  | 0   | 40  | 60   | 70   | 80   | 90   | 100  | 120  |  |  |  |
| HEAD (H) | m     | 7,0 | 4,6 | 4,1  | 3,9  | 3,7  | 3,4  | 3,0  | 1,9  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>1,8</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>1,3</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>2,0</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,76</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>4,0</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>18,0</b>       |

|                                       |      |             |
|---------------------------------------|------|-------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 80</b> |
| Diametro girante<br>Impeller diameter | [mm] | -           |
| Peso pompa<br>Weight                  | [Kg] | <b>94,0</b> |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>30</b>    |

In accordo con: ISO 9906:2012 - Grade 3B ( section 4.4.2)  
In accordance to:

Curve per liquidi con densità/curve established for liquid with density  
1Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C



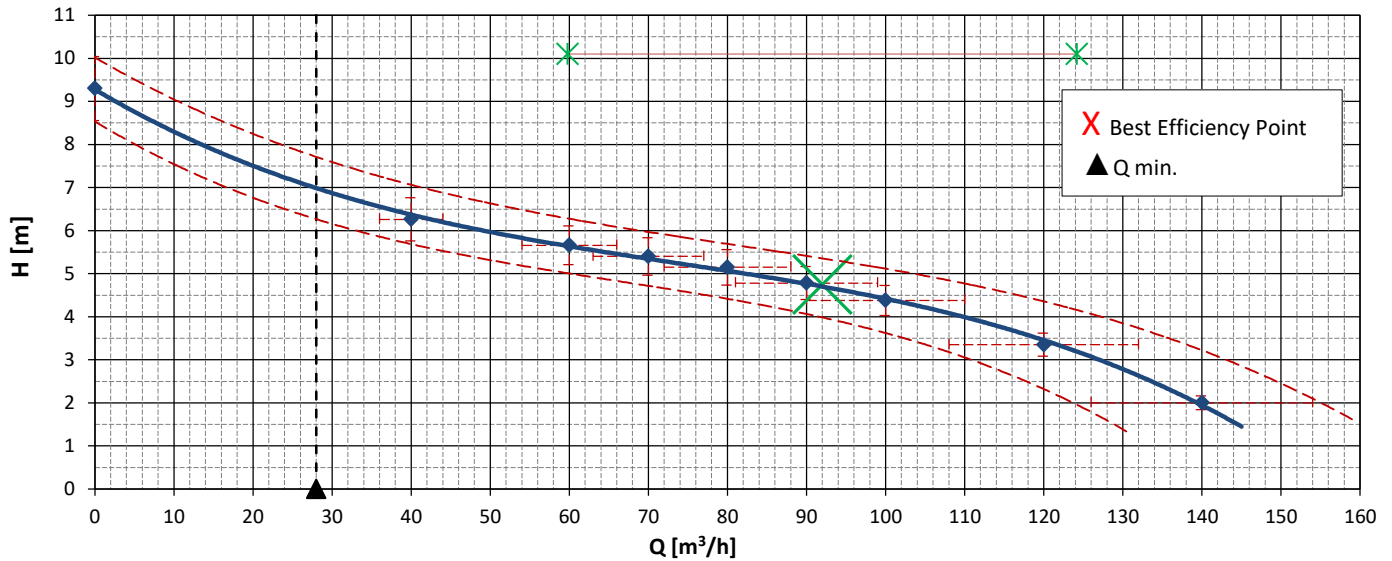
Tipo di pompa - Pump model  
**CS.100\_17.6.173**

**Poles: 6 Hz: 50**  
**r.p.m. 1000**

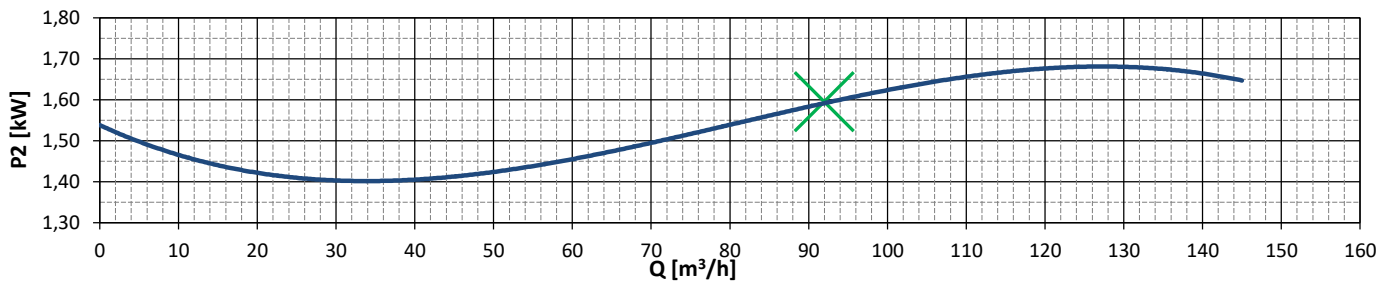
Girante Impeller  
Mandata Discharge  
**1.CHANNEL**  
**DN 100**

Serie 1

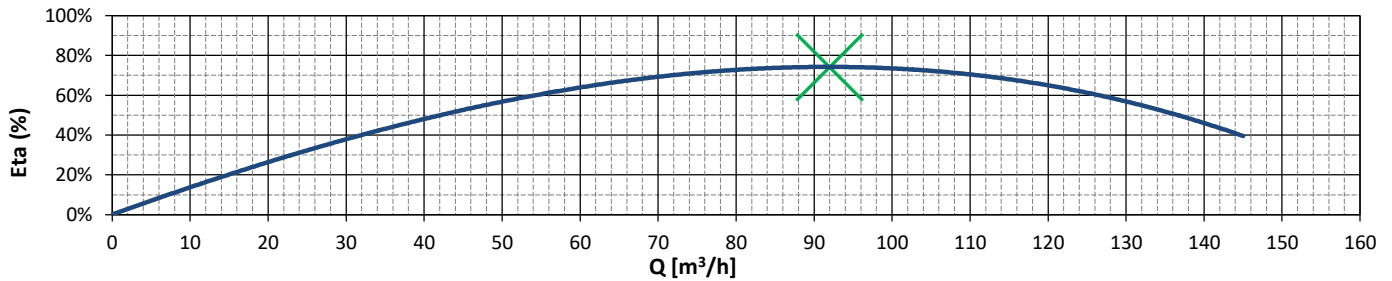
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |     |     |      |      |      |      |      |      |      |  |  |  |
|----------|-------|-----|-----|------|------|------|------|------|------|------|--|--|--|
| FLOW (Q) | l/min | 0   | 667 | 1000 | 1167 | 1333 | 1500 | 1667 | 2000 | 2333 |  |  |  |
|          | l/s   | 0   | 11  | 17   | 19   | 22   | 25   | 28   | 33   | 39   |  |  |  |
|          | m³/h  | 0   | 40  | 60   | 70   | 80   | 90   | 100  | 120  | 140  |  |  |  |
| HEAD (H) | m     | 9,3 | 6,3 | 5,7  | 5,4  | 5,2  | 4,8  | 4,4  | 3,4  | 2,0  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>1,8</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>1,7</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>2,3</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,75</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>4,4</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>22,5</b>       |

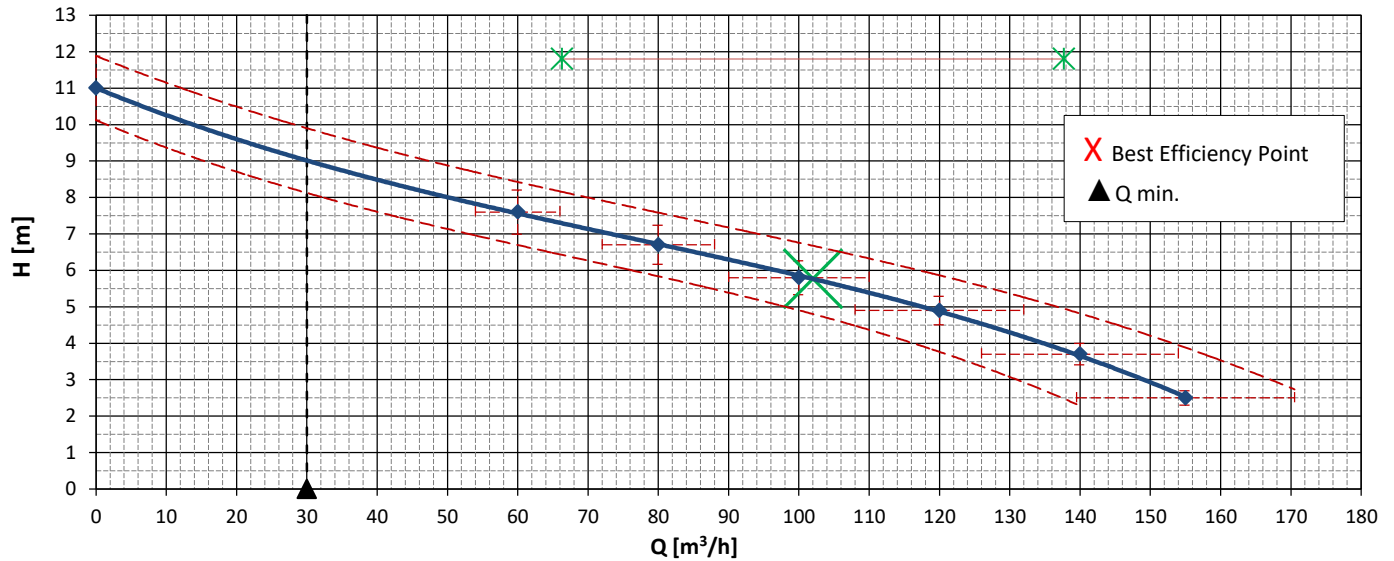
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 80</b>  |
| Diametro girante<br>Impeller diameter | [mm] | -            |
| Peso pompa<br>Weight                  | [Kg] | <b>106,0</b> |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>30</b>    |

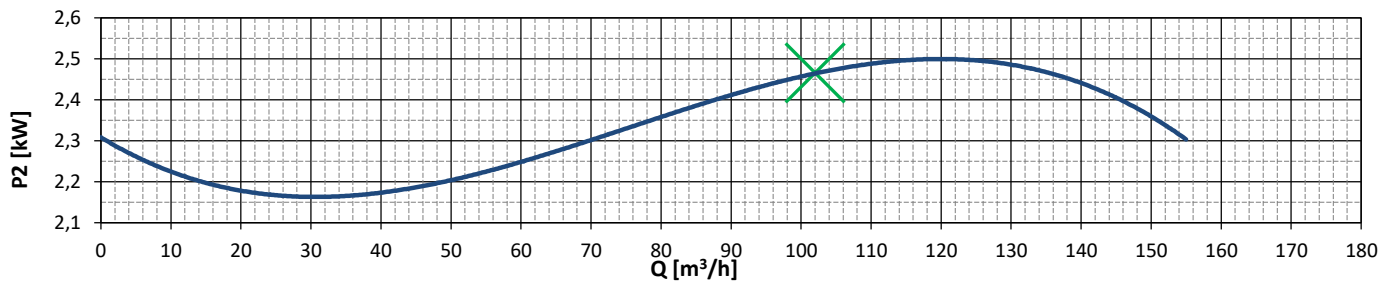
In accordo con: ISO 9906:2012 - Grade 3B ( section 4.4.2)  
In accordance to:

Curve per liquidi con densità/curve established for liquid with density  
1Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C

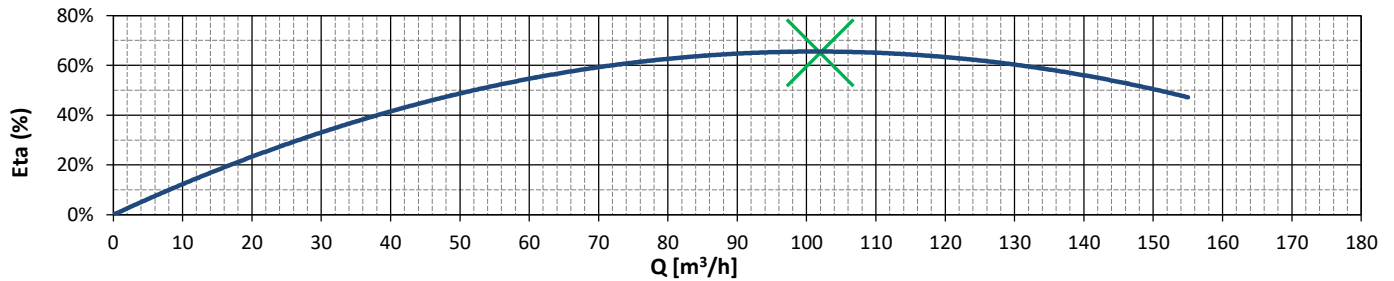
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |      |      |      |      |      |      |  |  |  |  |
|----------|-------|------|------|------|------|------|------|------|--|--|--|--|
| FLOW (Q) | l/min | 0    | 1000 | 1333 | 1667 | 2000 | 2333 | 2583 |  |  |  |  |
|          | l/s   | 0    | 17   | 22   | 28   | 33   | 39   | 43   |  |  |  |  |
|          | m³/h  | 0    | 60   | 80   | 100  | 120  | 140  | 155  |  |  |  |  |
| HEAD (H) | m     | 11,0 | 7,6  | 6,7  | 5,8  | 4,9  | 3,7  | 2,5  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>5,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>2,5</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>3,4</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,80</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>6,1</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>37,8</b>       |

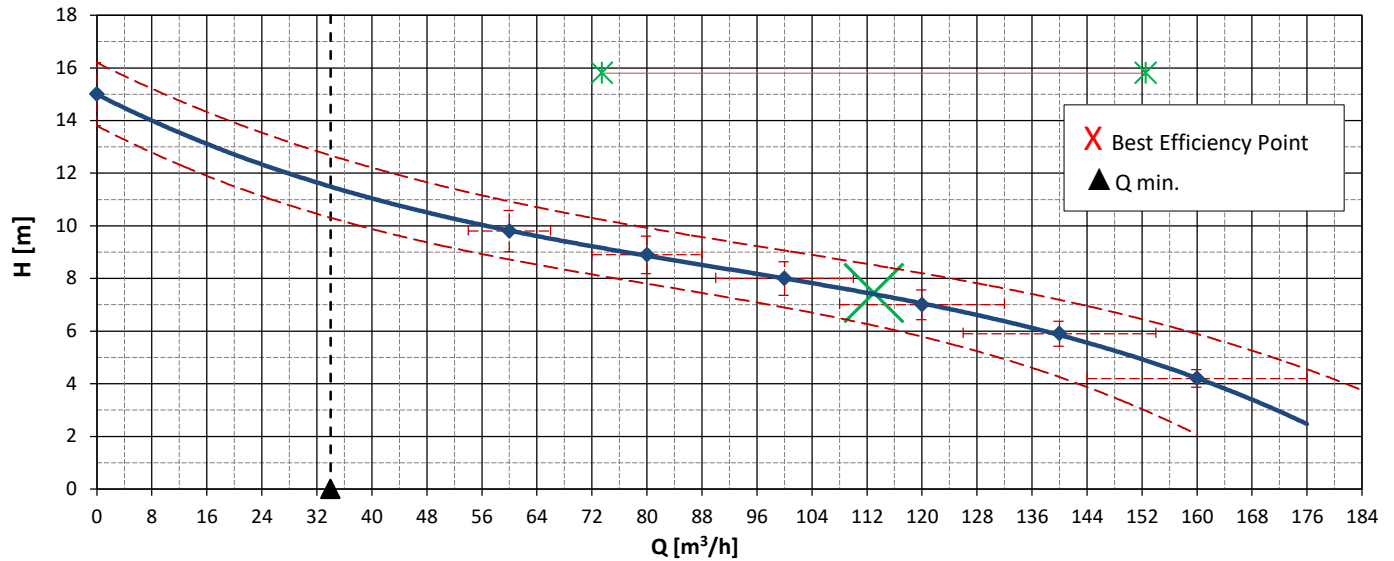
|                                       |      |             |
|---------------------------------------|------|-------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 80</b> |
| Diametro girante<br>Impeller diameter | [mm] | -           |
| Peso pompa<br>Weight                  | [Kg] | <b>93,0</b> |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>25</b>    |

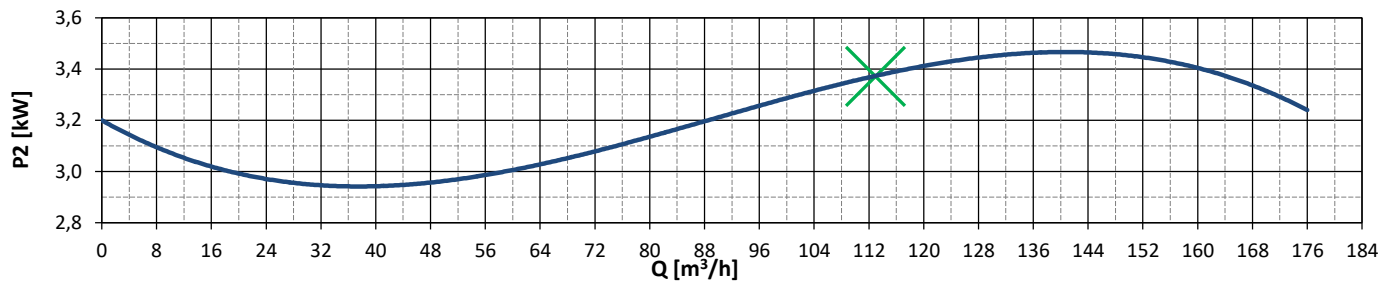
In accordo con: ISO 9906:2012 - Grade 3B ( section 4.4.2)  
In accordance to:

Curve per liquidi con densità/curve established for liquid with density  
1Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C

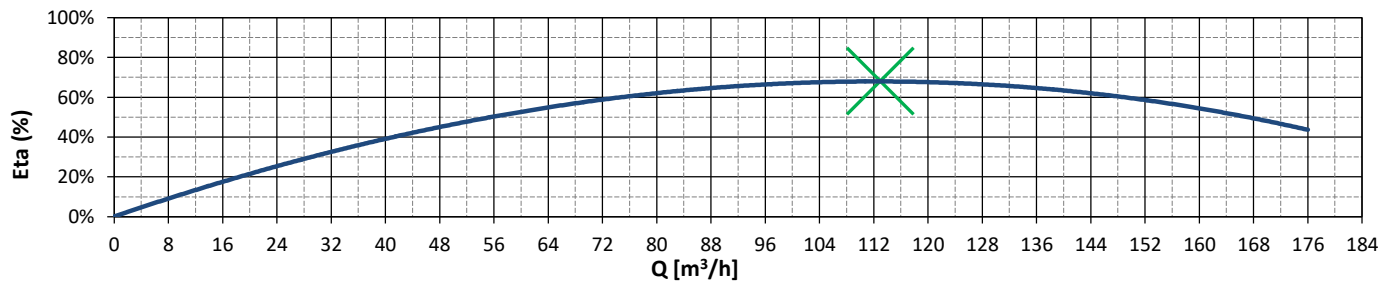
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|          |       |      |      |      |      |      |      |      |  |  |  |  |
|----------|-------|------|------|------|------|------|------|------|--|--|--|--|
| FLOW (Q) | l/min | 0    | 1000 | 1333 | 1667 | 2000 | 2333 | 2667 |  |  |  |  |
|          | l/s   | 0    | 17   | 22   | 28   | 33   | 39   | 44   |  |  |  |  |
|          | m³/h  | 0    | 60   | 80   | 100  | 120  | 140  | 160  |  |  |  |  |
| HEAD (H) | m     | 15,0 | 9,8  | 8,9  | 8,0  | 7,0  | 5,9  | 4,2  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>5,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>3,5</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>4,4</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,82</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>7,6</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>53,2</b>       |

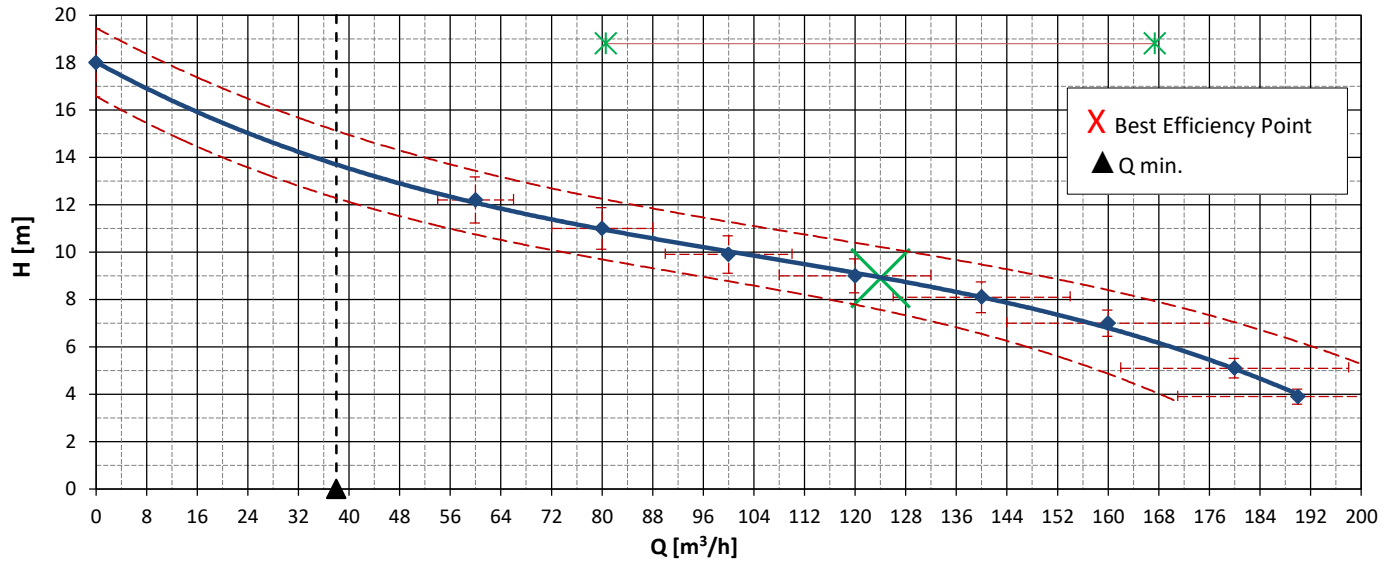
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>∅ 80</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>-</b>     |
| Peso pompa<br>Weight                  | [Kg] | <b>105,0</b> |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>    |

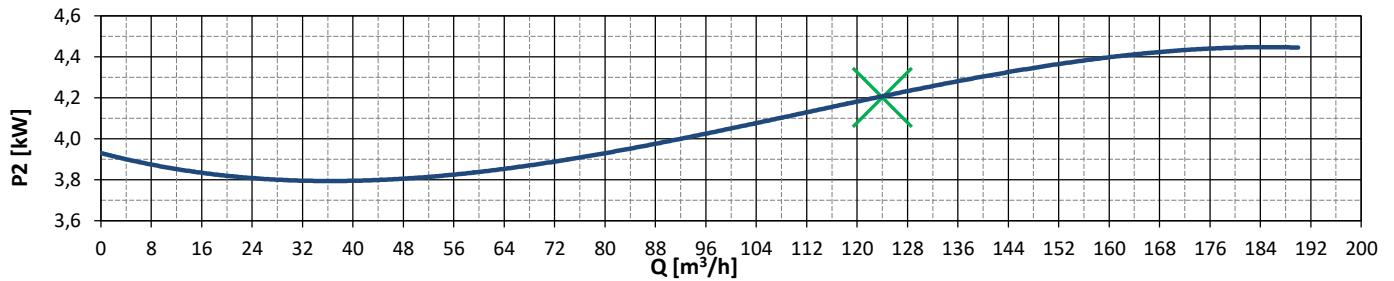
In accordo con: ISO 9906:2012 - Grade 3B ( section 4.4.2)  
In accordance to:

Curve per liquidi con densità/curve established for liquid with density  
1Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C

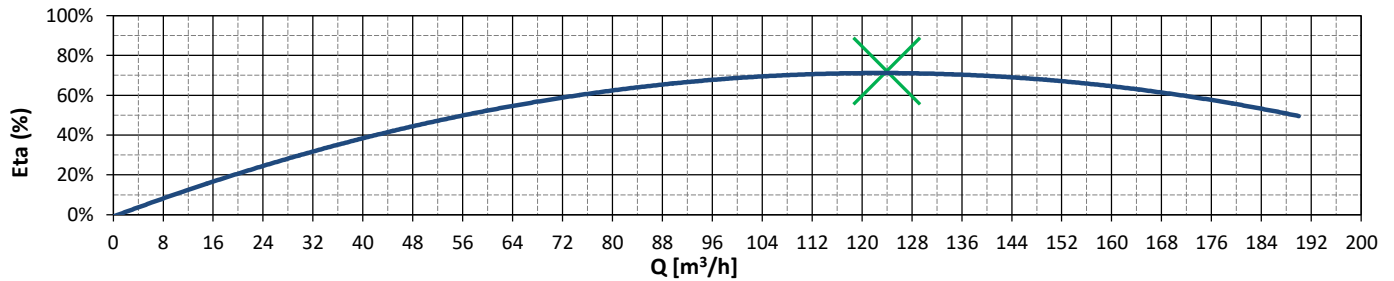
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |      |      |      |      |      |  |  |  |
|-----------------|--------------|------|------|------|------|------|------|------|------|------|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 1000 | 1333 | 1667 | 2000 | 2333 | 2667 | 3000 | 3167 |  |  |  |
|                 | <b>l/s</b>   | 0    | 17   | 22   | 28   | 33   | 39   | 44   | 50   | 53   |  |  |  |
|                 | <b>m³/h</b>  | 0    | 60   | 80   | 100  | 120  | 140  | 160  | 180  | 190  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 18,0 | 12,2 | 11,0 | 9,9  | 9,0  | 8,1  | 7,0  | 5,1  | 3,9  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>5,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>4,5</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>5,4</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,81</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>9,4</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>63,0</b>       |

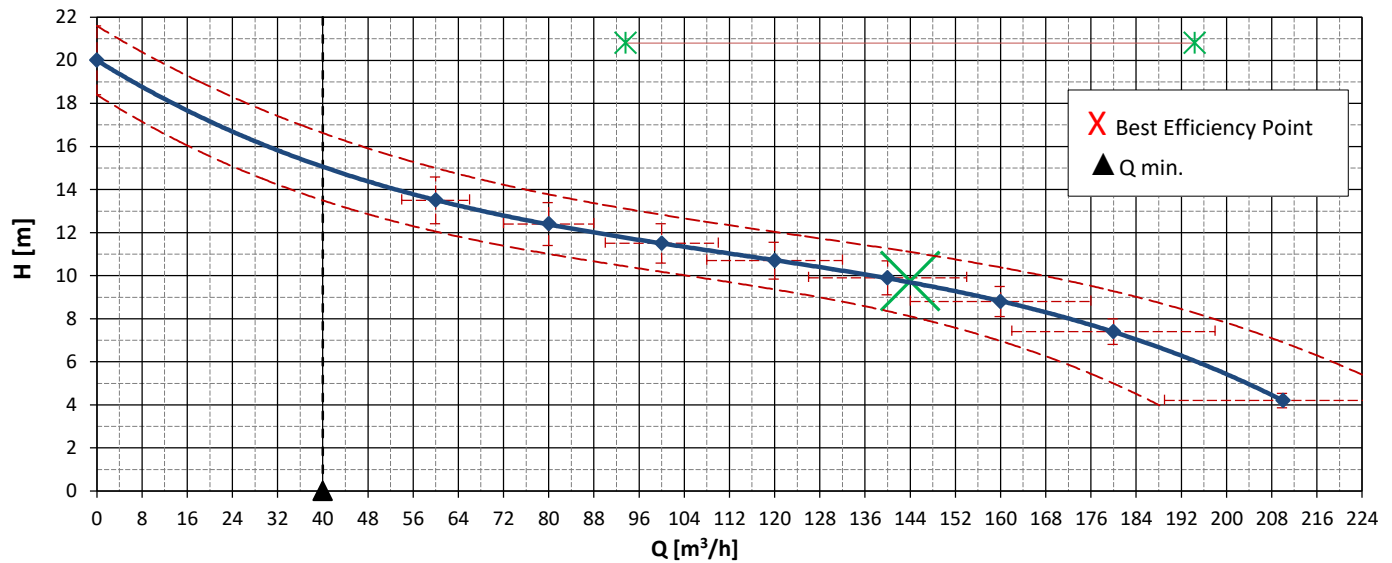
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 80</b>  |
| Diametro girante<br>Impeller diameter | [mm] | -            |
| Peso pompa<br>Weight                  | [Kg] | <b>108,0</b> |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>    |

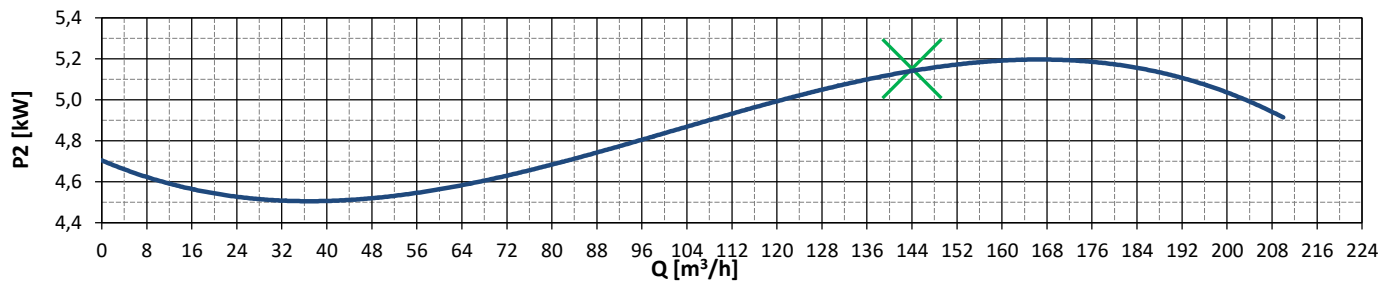
In accordo con: ISO 9906:2012 - Grade 3B ( section 4.4.2)  
In accordance to:

Curve per liquidi con densità/curve established for liquid with density  
1Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C

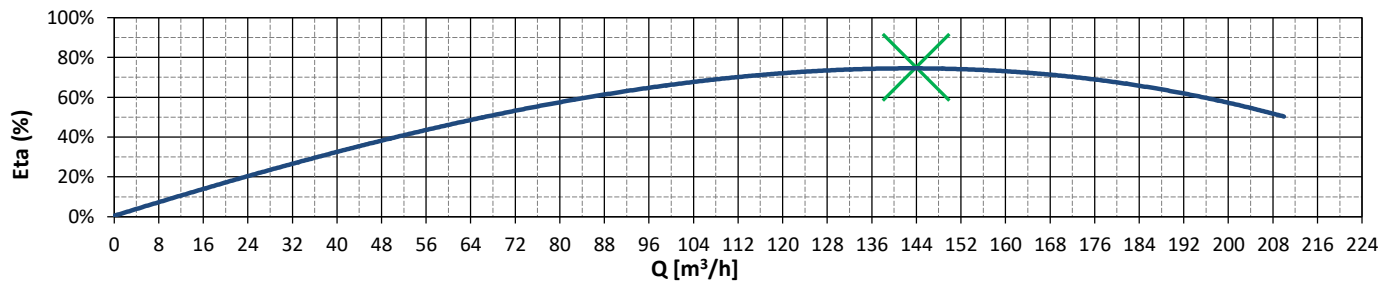
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |      |      |      |      |      |  |  |  |
|-----------------|--------------|------|------|------|------|------|------|------|------|------|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 1000 | 1333 | 1667 | 2000 | 2333 | 2667 | 3000 | 3500 |  |  |  |
|                 | <b>l/s</b>   | 0    | 17   | 22   | 28   | 33   | 39   | 44   | 50   | 58   |  |  |  |
|                 | <b>m³/h</b>  | 0    | 60   | 80   | 100  | 120  | 140  | 160  | 180  | 210  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 20,0 | 13,5 | 12,4 | 11,5 | 10,7 | 9,9  | 8,8  | 7,4  | 4,2  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>5,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>5,2</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>6,4</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,84</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>11,0</b>       |
| Corrente di spunto<br>Starting current | [A] | <b>74,8</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 80</b>  |
| Diametro girante<br>Impeller diameter | [mm] | <b>-</b>     |
| Peso pompa<br>Weight                  | [Kg] | <b>109,0</b> |

|  |  |              |
|--|--|--------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>    |
| Cavo<br>Cable                              |  | <b>4G1,5</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>    |

In accordo con: ISO 9906:2012 - Grade 3B ( section 4.4.2)  
In accordance to:

Curve per liquidi con densità/curve established for liquid with density  
1Kg/dm3 - viscosità/viscosity 1 mm2/s - temperatura/temperature 20°C

### Dimensioni d'ingombro - overall dimensions

**S** Installazione mobile - Installation mobile - Installation mobile - Instalación móvil

Dimensione imballo  
Packaging dimensions

Misure - Measures [mm]

| A   | B   | C   |
|-----|-----|-----|
| 750 | 450 | 390 |

**FC** Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento

|                 |               |
|-----------------|---------------|
| <b>8FC00006</b> | <b>KG: 60</b> |
|-----------------|---------------|

|   |   |
|---|---|
| 1 | Supporto tubi guida da 2" 2"uide rails bracket          |
| 2 | Piede uscita verticale DN100 Vertical foot - DN 100 out |
| 3 | Slitta completa Sliding bracket complete                |
| 4 | Esclusi dalla fornitura (Ø2") Not supplied (Ø2")        |

D

|   |     |
|---|-----|
| D | 550 |
| E | 600 |
| F | 400 |

**ACCESSORI - ACCESSORIES - ACCESORIES - ACCESORIOS**

| Descrizione - Description - Description - Descripción |  |   | Codice<br>Code              |
|---|--|---|-----------------------------|
| FC 100  |  | - Dispositivo di accoppiamento DN 100<br>- DN 100 Coupling device<br>- Dispositif de couplage DN 100<br>- Dispositivo de acoplamiento DN 100  | 8FC000006                   |
| STD 100   |  | - Cavalletto di sostegno in ferro zincato<br>- Galvanized steel support stand<br>- Support en acier galvanisé<br>- Soporte de acero galvanizado   | 8FC000007                   |
| AT100   |  | - Adattatore per dispositivo di accoppiamento della concorrenza<br>- Adapter for competitors foot coupling devices<br>- Adaptateur pour pied d'assise du concurrent<br>- Adaptador para dispositivo de acoplamiento de competidor | 2SB000007                   |
|   |  | - Catena ferro zincato - galvanized Iron - fer galvanisé - hierro galvanizado<br>- Chain<br>- Chaîne<br>- Cadena  | 2SC000019                   |
|   |  | - Acciaio - Stainless steel - acier inox - acero inox   | 2SC000032                   |
| FBV 100   |  | - Valvola di ritegno a palla Flangiata<br>- Flanged valve<br>- Vanne à bride<br>- Válvula de brida  | DN 100<br>PN10<br>4BV000008 |
| HF  |  | - Regolatore di livello per acque reflue<br>- Level switch for sewage<br>- Interrupteur de niveau pour eaux usées<br>- Interruptor de nivel para aguas residuales   | [10 mt] 3CS000007           |
| SHELL   |  | - Contrappeso SHELL per galleggiante<br>- Counterweight SHELL for level switch<br>- Cotrepoids SHELL pour interrupteur de niveau<br>- Contrapeso para interruptor de nivel  | 3CS000021                   |

**SELEZIONE QUADRO DI CONTROLLO - CONTROL PANEL SELECTION**

|     | Pole | Pump             | P2 [KW] | In [A] | Avv.   |
|-----|------|------------------|---------|--------|--------|
| 173 | 6    | CS.100_11.6T.173 | 1,1     | 3,3    | D.O.L. |
|     |      | CS.100_15.6T.173 | 1,5     | 4,0    | D.O.L. |
|     |      | CS.100_17.6T.173 | 1,7     | 4,4    | D.O.L. |
|     | 4    | CS.100_25.4T.173 | 2,5     | 6,1    | D.O.L. |
|     |      | CS.100_35.4T.173 | 3,5     | 7,6    | D.O.L. |
|     |      | CS.100_45.4T.173 | 4,5     | 9,4    | D.O.L. |
|     |      | CS.100_52.4T.173 | 5,2     | 11,0   | D.O.L. |

| <br>- ECH -<br>ELECTROMECHANICAL |                        |                       |                         |
|----------------------------------|------------------------|-----------------------|-------------------------|
| 1 PUMP                           |                        | 2 PUMPS               |                         |
| ECH1.T-7<br>5EC000005            | ECH1.T-14<br>5EC000007 | ECH2.T-7<br>5EC000029 | ECH21.T-14<br>5EC000031 |
| •                                |                        | •                     |                         |
| •                                |                        | •                     |                         |
| •                                |                        | •                     |                         |
| •                                |                        | •                     | •                       |
|                                  | •                      |                       | •                       |
|                                  | •                      |                       | •                       |
|                                  | •                      |                       | •                       |

| <br>- ECL -<br>ELECTRONIC |           |
|---------------------------|-----------|
| 1 PUMP                    | 2 PUMPS   |
| 5EC000083                 | 5EC000084 |
| •                         | •         |
| •                         | •         |
| •                         | •         |
| •                         | •         |
| •                         | •         |
| •                         | •         |
| •                         | •         |





**Poli - poles    Modelli - models**

|          |                               |
|----------|-------------------------------|
| <b>4</b> | <b>CS.150_30/40 . 4 . 200</b> |
| <b>4</b> | <b>CS.150_55/75 . 4 . 240</b> |
| <b>4</b> | <b>CS.150_150 . 4 . 240A</b>  |
| <b>4</b> | <b>CS.150_185 . 4 . 270A</b>  |

**IT**

Elettropompa sommergibile di robusta costruzione fabbricata completamente in ghisa, con camera olio interposta tra gruppo motore e gruppo pompa e doppia tenuta meccanica.

**APPLICAZIONE:** l'elettropompa deve funzionare completamente immersa per garantire il raffreddamento da parte del liquido circostante. Sono idonee al pompaggio di acque piovane, o di falda con basso contenuto di solidi abrasivi (< 1 g/l), acque derivate da reflui civili e industriali.

**EN**

Robust construction submersible pump completely made in cast iron, with oil chamber interposed between motor unit and pump unit with double mechanical seal.

**APPLICATION:** the pump must be completely submerged to ensure the cooling by the pumped liquid. They are suitable to pump rain water or ground water with low quantity of abrasive solids (<1g / l), civil or industrial waste waters.

**FR**

Pompe submersible de construction solide entièrement en fonte, avec chambre d'huile interposée entre le bloc moteur et le groupe pompe et avec double garniture mécanique.

**APPLICATION:** la pompe doit être complètement immergée pour assurer le refroidissement du liquide pompé. Elles sont adaptées pour le pompage de l'eau de pluie ou des eaux souterraines avec de faibles particules abrasives (<1g/l), de l'eau provenant des eaux usées municipales et industrielles.

**ES**

Bomba sumergible de construcción sólida fabricada completamente de hierro fundido, con cámara de aceite interpuesta entre la unidad del motor y la unidad de la bomba y doble cierre mecánico.

**APLICACION:** la bomba debe estar completamente sumergido para asegurar el enfriamiento del líquido bombeado. Son adecuadas para el bombeo de agua de lluvia o aguas subterráneas con bajo contenido de sólidos abrasivos (<1 g / l), el agua derivada de las aguas residuales municipales y industriales.

CS.150\_200  
CS.150\_240

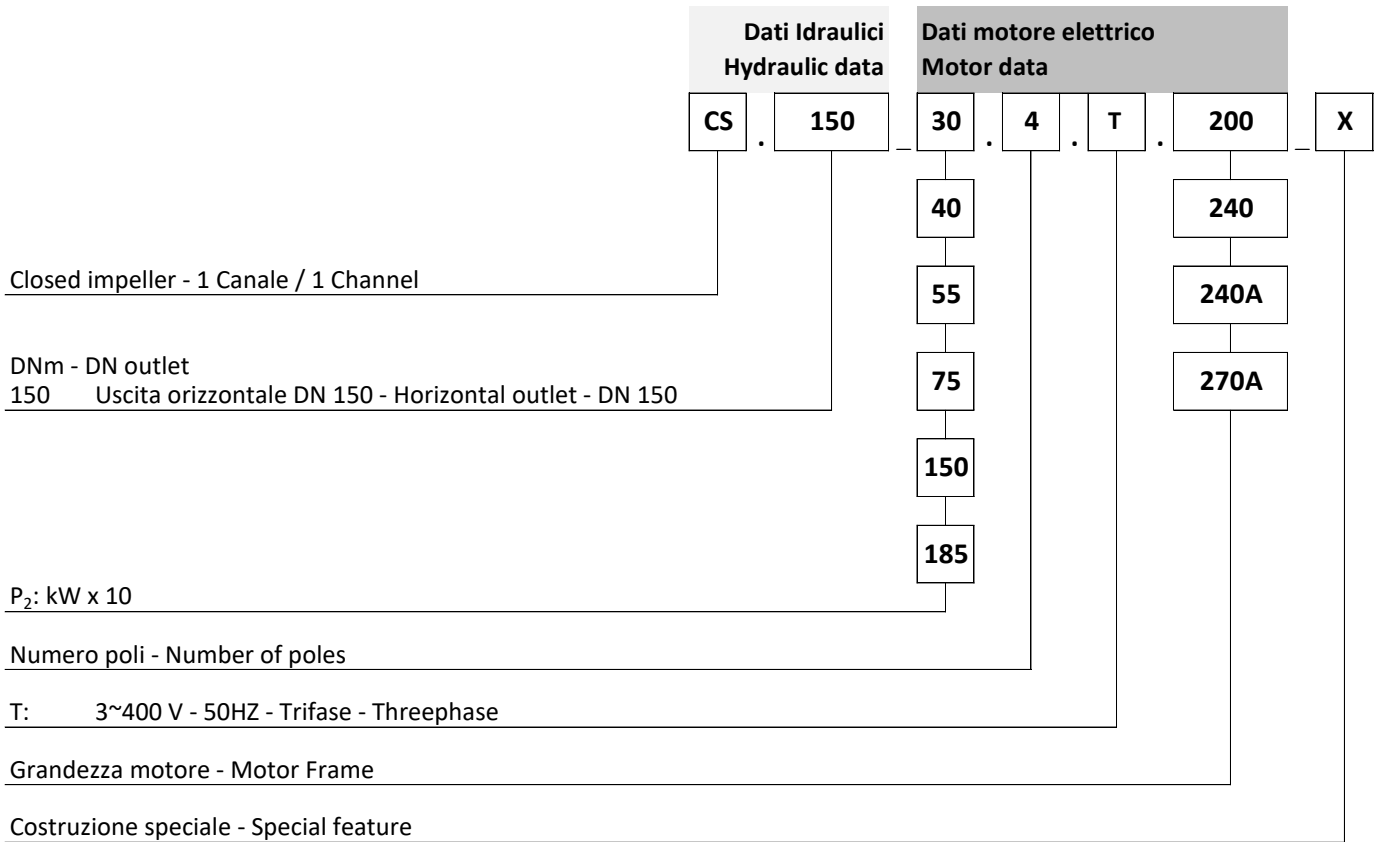


CS.150\_240A



CS.150\_270A



**IDENTIFICAZIONE - IDENTIFICATION**

**LISTA MODELLI - RANGE OF PRODUCTS**

| Grandezza Motore<br>Motor Frame | Poles | P <sub>2</sub><br>[kW] | Alimentazione<br>Power supply | Modelli<br>Models   | Avviamento<br>Starting | Cavo alimentazione / segnali<br>Power / signals cable |                             | Camera olio<br>Oil Chamber |
|---------------------------------|-------|------------------------|-------------------------------|---------------------|------------------------|---|-----------------------------|----------------------------|
|                                 |       |                        |                               |                     |                        | [m]   | Type                        |                            |
| <b>200</b>                      | 4     | 3                      | 3ph                           | CS.150_30.4.T.200   | D.O.L.                 | 10  | H07RN-F 7G1,5 + 3x1         | SI<br>YES                  |
|                                 |       | 4,0                    | 3ph                           | CS.150_40.T.200     | D.O.L.                 | 10  | H07RN-F 7G1,5 + 3x1         |                            |
| <b>240</b>                      | 4     | 5,5                    | 3ph                           | CS.150_55.4.T.240   | S.D.                   | 10  | H07RN-F 7G2,5 + 3x1         |                            |
|                                 |       | 7,5                    | 3ph                           | CS.150_75.4.T.240   | S.D.                   | 10  | H07RN-F 7G2,5 + 3x1         |                            |
| <b>240A</b>                     | 4     | 15                     | 3ph                           | CS.150_150.4.T.240A | S.D.                   | 10  | 2XH07RN-F 4G4 + H07RN-F 4G1 |                            |
| <b>270A</b>                     | 4     | 18,5                   | 3ph                           | CS.150_185.4.T.270A | S.D.                   | 10  | 2XH07RN-F 4G4 + H07RN-F 4G1 |                            |

## Caratteristiche costruttive - construction features

Anello per movimentazione pompa  
Shackel to handle the pump  
Manille pour lever la pompe  
Grillete para levantar la bomba

Pastiglia termica  
Built in Thermal protector  
Protecteur thermique intégré  
Protector térmico incorporado

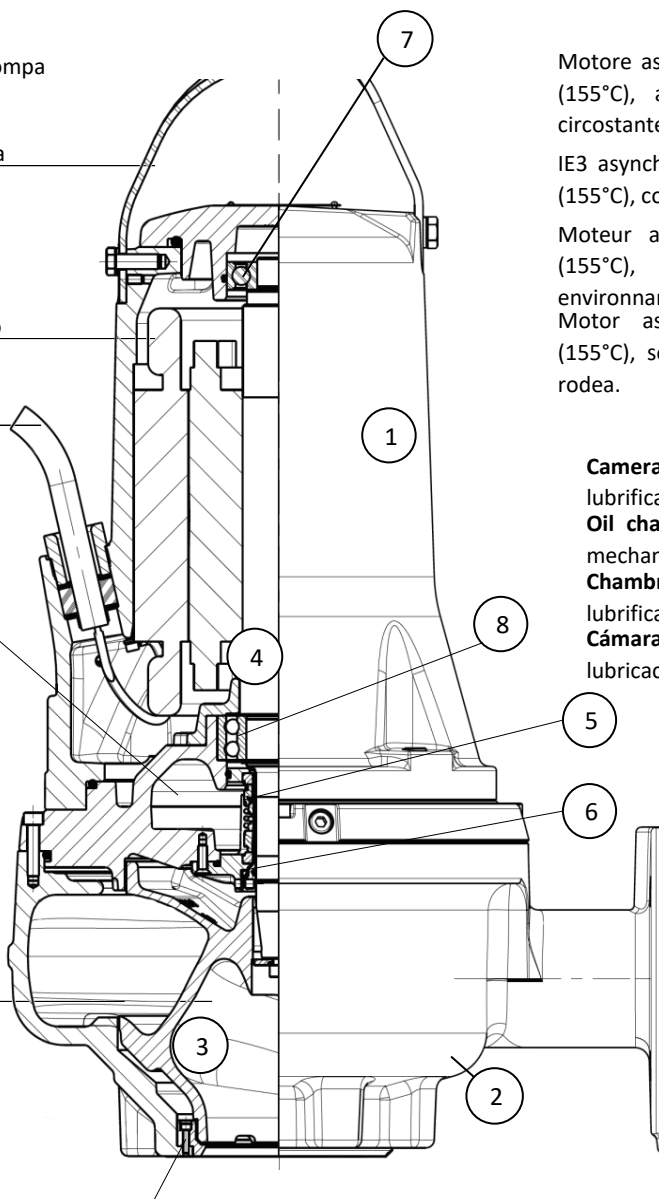
**10 m - H07RN-F**

**OPTIONAL**

Sonda Olio  
Oil Probe  
Sonde d'huile  
Sonda de aceite

Girante chiusa  
monocanale  
Closed impeller  
single channel  
Roue fermée  
monocanal  
Impulsor cerrado  
monocanal

Anello d'usura  
Wear ring  
Bague d'usure  
Anillo de desgaste



Motore asincrono IE3 in classe di isolamento F (155°C), a secco e raffreddato dal liquido circostante;

IE3 asynchronous dry motor, insulation class F (155°C), cooled by the surrounding liquid;

Moteur asynchrone IE3, classe d'isolation F (155°C), sec et refroidi par le liquide environnant;

Motor asíncrono IE3, aislamiento clase F (155°C), seco y refrigerado por el líquido que rodea.

Camera olio per il raffreddamento e la lubrificazione delle tenute meccaniche;  
**Oil chamber** for cooling and lubrication of mechanical seals;

**Chambre d'huile** pour le refroidissement et la lubrification des garnitures mécaniques;  
**Cámara de aceite** para la refrigeración y la lubricación de los sellos mecánicos.

|                    |                |
|--------------------|----------------|
| <b>Viti</b>        | <b>Quality</b> |
| <b>Screws</b>      | <b>A2</b>      |
| <b>Des vis</b>     |                |
| <b>Empulgueras</b> |                |

|                |            |
|----------------|------------|
| <b>O-RINGS</b> | <b>NBR</b> |
|----------------|------------|

**DNm: DN150 PN16**

| NR. | DESCRIPTION       | MATERIAL     |
|-----|-------------------|--------------|
| 1   | Gruppo motore     | Ghisa        |
|     | Motor group       | Cast iron    |
|     | Groupe moteur     | Fer de fonte |
|     | Unidad de motor   | Hierro       |
| 2   | Corpo idraulico   | Ghisa        |
|     | Pump Housing      | Cast iron    |
|     | Corps de la pompe | Fer de fonte |
|     | Cuerpo hidráulico | Hierro       |
| 3   | Girante           | Ghisa        |
|     | Impeller          | Cast iron    |
|     | Roue              | Fer de fonte |
|     | Impulsor          | Hierro       |
| 4   | Albero motore     | Acciaio      |
|     | Shaft             | Steel        |
|     | Arbre moteur      | Acier        |
|     | Eje del motor     | Acero        |

| NR. | DESCRIPTION             | MATERIAL     |
|-----|-------------------------|--------------|
| 5   | Tenuta mecc. superiore  | SiC / Carbon |
|     | Upper mech. seal        |              |
|     | Haut garniture mécan.   |              |
| 6   | Sello mecánico superior | SiC / SiC    |
|     | Tenuta mecc. Inferiore  |              |
|     | Lower mech. seal        |              |
| 7   | Haut garniture mécan.   | NBR          |
|     | Sello mecánico inferior |              |
|     | Cuscinetto superiore    |              |
| 8   | Top bearing             | 6306 2RS1    |
|     | Roulement supérieur     |              |
|     | Cojinete superior       |              |
| 8   | Cuscinetto inferiore    | 3209 2RS1    |
|     | Lower bearing           |              |
|     | Roulement inférieur     |              |
|     | Cojinete inferior       |              |



Tipo di pompa - Pump model

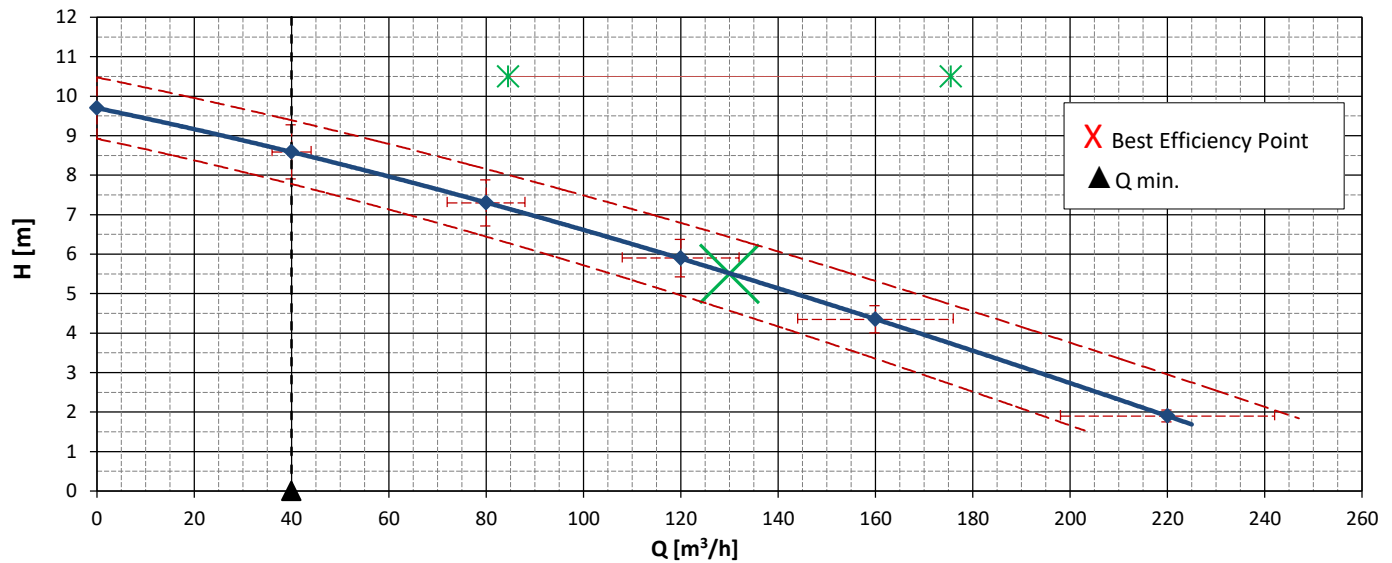
**CS.150\_200/240**Girante  
Impeller  
Mandata  
Discharge**1.CHANNEL****DN 150****Caratteristiche costruttive - construction data**

|  |  |   |
|--|--|---|
| <b>Costruzione Motore - Motor Frame</b>                              | 200 / 240  |   |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |   |
| <b>Classe di Isolamento - Insulation Class</b>                       | F (155°C)  |   |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent  |   |
| <b>Avvolgimento statore - Stator winding</b>                         | 3~PH - Threephase  |   |
|  | 200<br>Y / Δ   | 240<br>Δ / Y                              |
|  | [V] 3~400 / 230  | 3~400/690                                 |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> | Si - Yes   |   |
| <input type="radio"/> Bimetallico - Bimetal disc                     | <input checked="" type="checkbox"/> 130°C                                    | <input checked="" type="checkbox"/> 130°C |
| <input type="radio"/> Solo su richiesta - on request only PT100      | <input type="checkbox"/>   | <input type="checkbox"/>                  |
| <input type="radio"/> Solo su richiesta - on request only PTC        | <input type="checkbox"/>   | <input type="checkbox"/>                  |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid                               |   |
| <b>Camera olio - Oil chamber</b>                                     | Si - Yes   |   |
| <b>Protezione Tenuta - Leakage protection</b>                        | Optional   |   |
| <b>Tipo girante - Impeller</b>                                       | CHIUSA MONOCANALE - CLOSED 1 CHANNEL   |   |
| <b>DN mandata - Discharge</b>  | DN 150 PN16  |   |
| <b>Controflangia filettata - Threaded counterflange</b>              | NO   |   |
| <b>DN aspirazione / Suction</b>                                      | [mm]   | Ø 150                                     |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard Vernice all'acqua - Water paint / 30µm<br>Opaco Nero - Opaque Black |   |

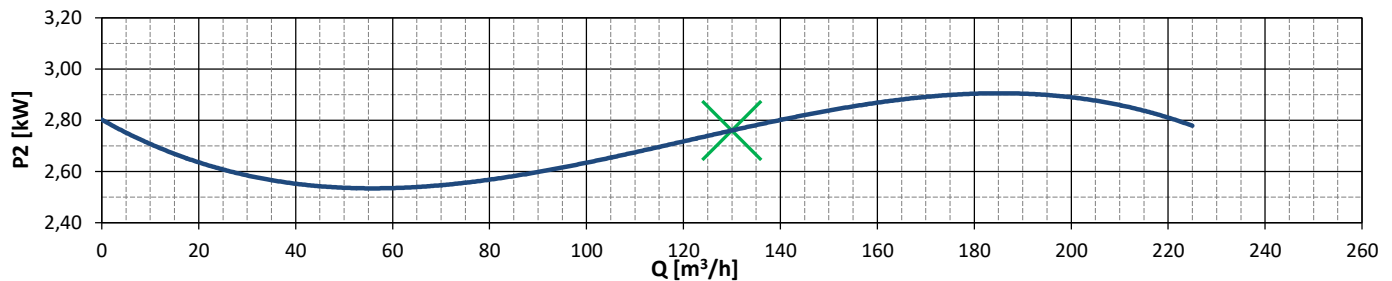
**Limiti di utilizzo - Operating Limits**

|   |                       |        |
|---|-----------------------|--------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C]                  | < 40   |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] | ~ 1    |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s]  | ~ 1    |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l]                | < 200  |
| <b>PH liquido pompato - PH value</b>                                |                       | 6 ÷ 12 |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m]                   | 20     |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l]                 | < 0,1  |

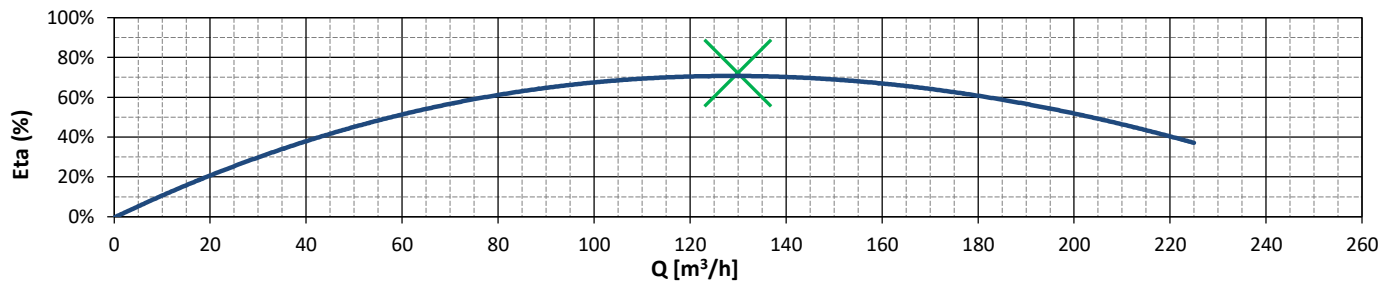
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |     |     |      |      |      |      |  |  |  |  |  |  |
|-----------------|--------------|-----|-----|------|------|------|------|--|--|--|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0   | 667 | 1333 | 2000 | 2667 | 3667 |  |  |  |  |  |  |
|                 | <b>l/s</b>   | 0   | 11  | 22   | 33   | 44   | 61   |  |  |  |  |  |  |
|                 | <b>m³/h</b>  | 0   | 40  | 80   | 120  | 160  | 220  |  |  |  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 9,7 | 8,6 | 7,3  | 5,9  | 4,4  | 1,9  |  |  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>3,0</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>2,9</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>3,3</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,61</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>3,3</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>20,0</b>       |

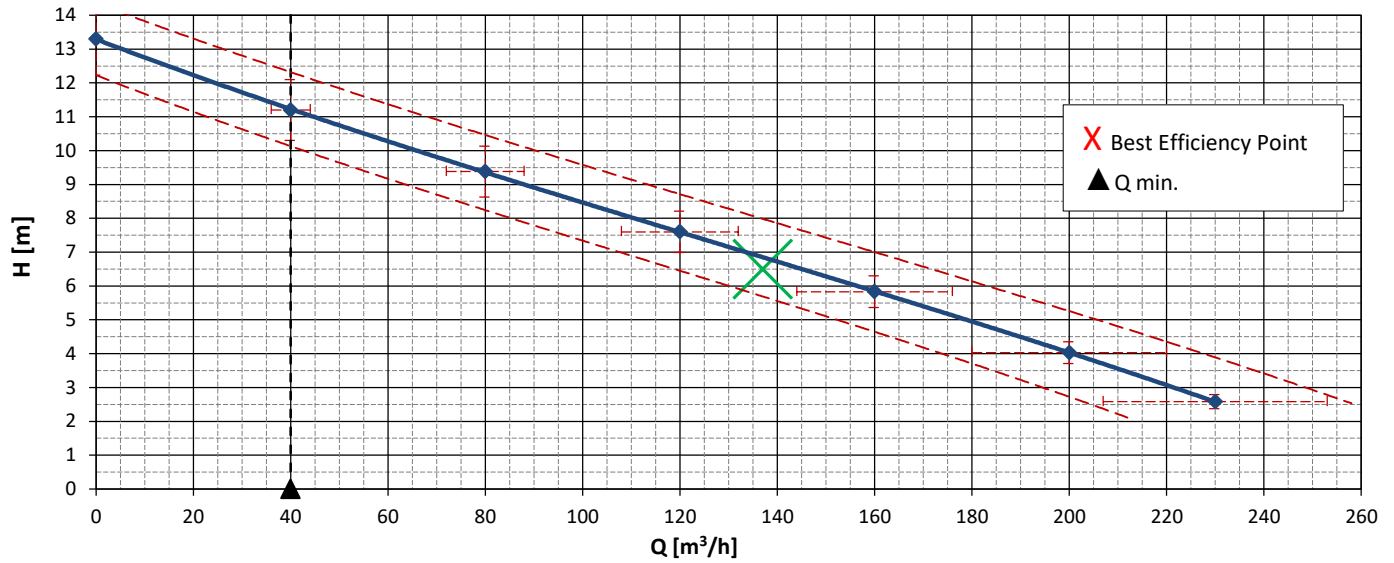
|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>∅ 100</b> |
| Diametro girante<br>Impeller diameter | [mm] | <b>-</b>     |
| Peso pompa<br>Weight                  | [Kg] | <b>173,0</b> |

|  |  |                  |
|--|--|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>4G1,5+3x1</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>        |

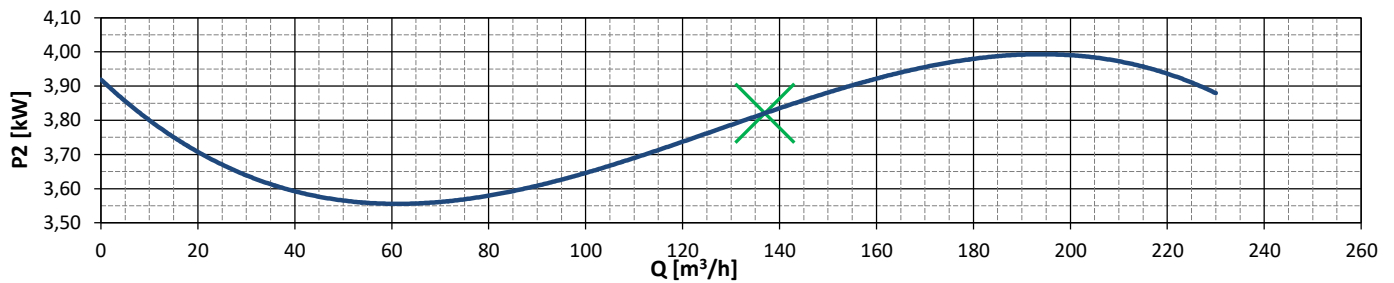
In accordo con:  
In accordance to: **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density  
**1Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperatura/temperature 20°C**

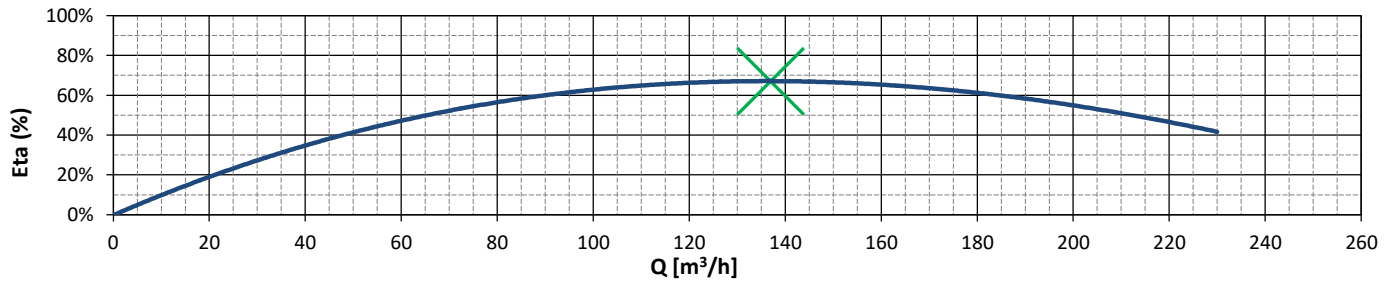
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |      |      |      |  |  |  |  |
|-----------------|--------------|------|------|------|------|------|------|------|--|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 667  | 1333 | 2000 | 2667 | 3333 | 3833 |  |  |  |  |
|                 | <b>l/s</b>   | 0    | 11   | 22   | 33   | 44   | 56   | 64   |  |  |  |  |
|                 | <b>m³/h</b>  | 0    | 40   | 80   | 120  | 160  | 200  | 230  |  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 13,3 | 11,2 | 9,4  | 7,6  | 5,8  | 4,0  | 2,6  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>4,0</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>4,0</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>4,5</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,75</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>D.O.L.</b>     |
| Corrente Nominale<br>Rated current     | [A] | <b>8,7</b>        |
| Corrente di spunto<br>Starting current | [A] | <b>20,0</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>∅ 100</b> |
| Diametro girante<br>Impeller diameter | [mm] | -            |
| Peso pompa<br>Weight                  | [Kg] | <b>173,0</b> |

|  |  |                  |
|--|--|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>4G1,5+3x1</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>        |

In accordo con:  
In accordance to: **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density  
**1Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperature/temperature 20°C**



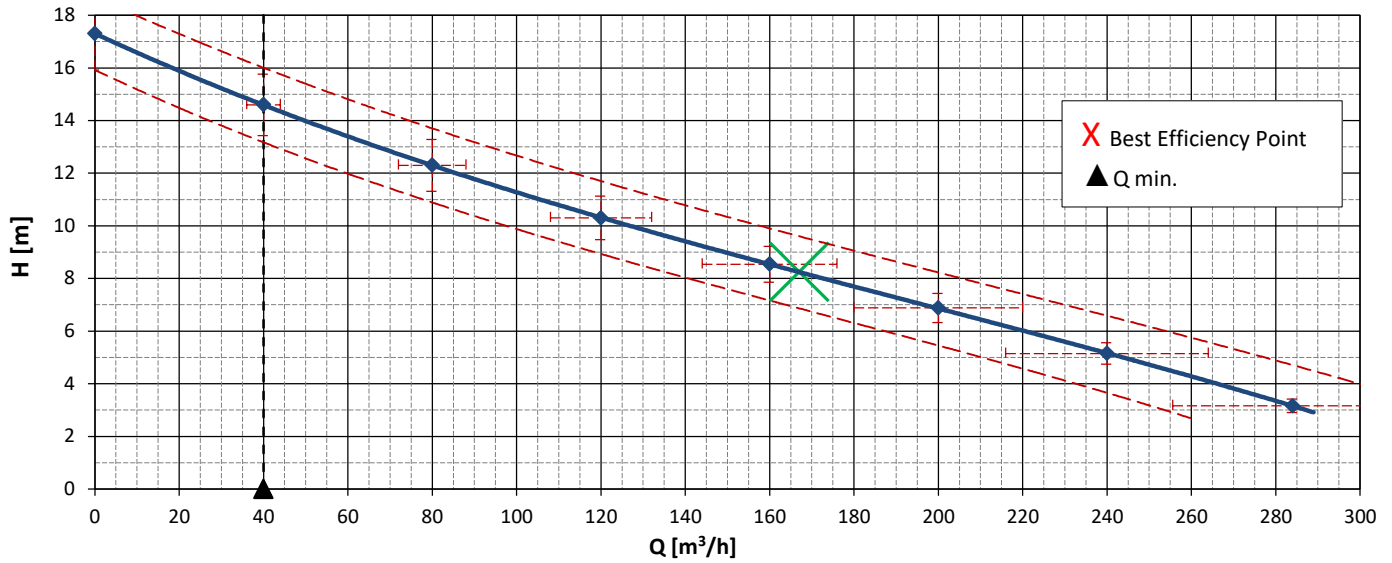
Tipo di pompa - Pump model  
**CS.150\_55.4.240**

**Poles: 4 Hz: 50**  
**r.p.m. 1500**

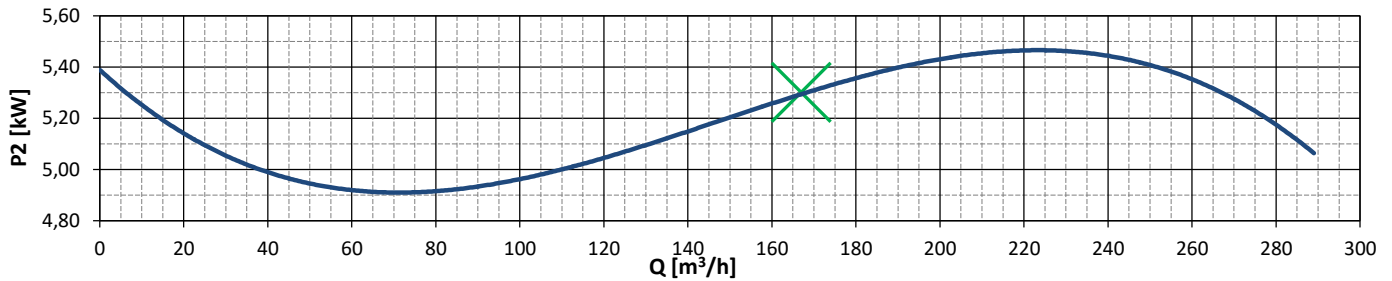
Girante Impeller  
Mandata Discharge  
**1.CHANNEL**  
**DN 150**

Serie 1

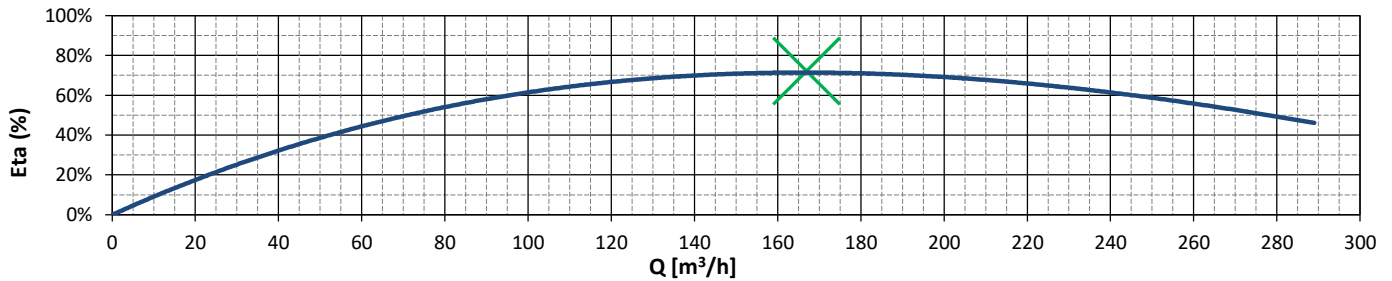
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |      |      |      |      |  |  |  |  |
|-----------------|--------------|------|------|------|------|------|------|------|------|--|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 667  | 1333 | 2000 | 2667 | 3333 | 4000 | 4733 |  |  |  |  |
|                 | <b>l/s</b>   | 0    | 11   | 22   | 33   | 44   | 56   | 67   | 79   |  |  |  |  |
|                 | <b>m³/h</b>  | 0    | 40   | 80   | 120  | 160  | 200  | 240  | 284  |  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 17,3 | 14,6 | 12,3 | 10,3 | 8,5  | 6,9  | 5,2  | 3,2  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>5,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>5,4</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>6,0</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,77</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>S/D</b>        |
| Corrente Nominale<br>Rated current     | [A] | <b>11,3</b>       |
| Corrente di spunto<br>Starting current | [A] | <b>50,3</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>∅ 100</b> |
| Diametro girante<br>Impeller diameter | [mm] | -            |
| Peso pompa<br>Weight                  | [Kg] | <b>223,0</b> |

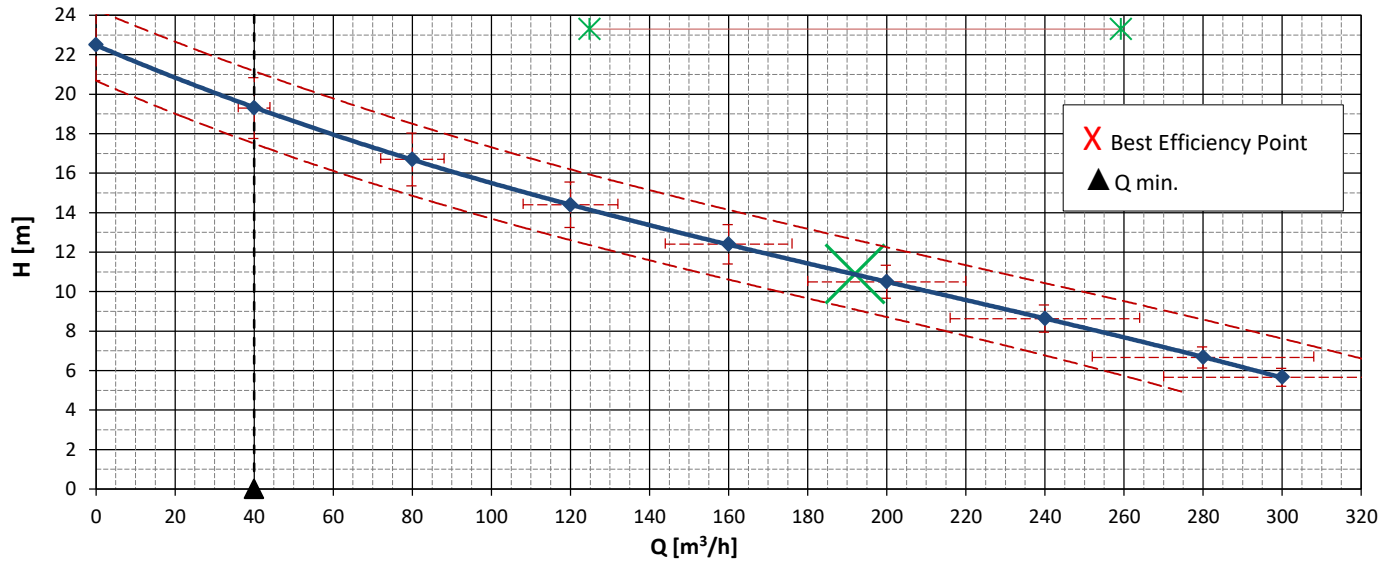
|  |  |                  |
|--|--|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>7G2,5+3x1</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>        |

In accordo con:  
In accordance to: **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

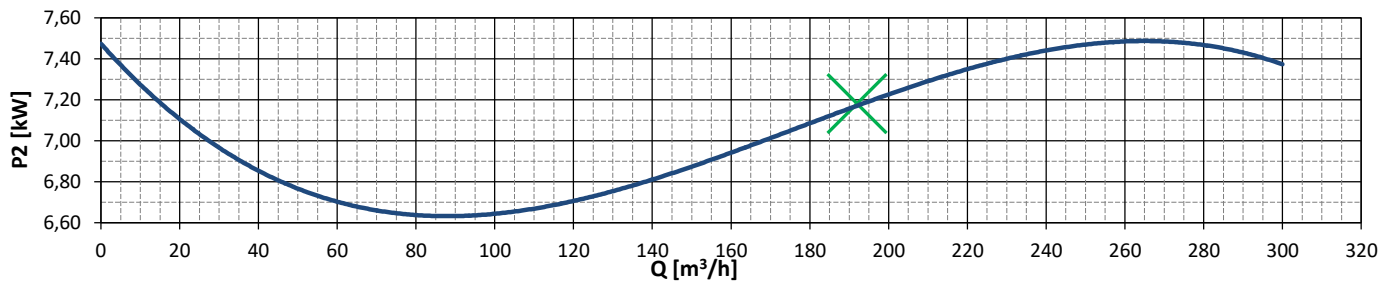
Curve per liquidi con densità/curve established for liquid with density  
**1Kg/dm<sup>3</sup> - viscosità/viscosity 1mm<sup>2</sup>/s - temperatura/temperature 20°C**



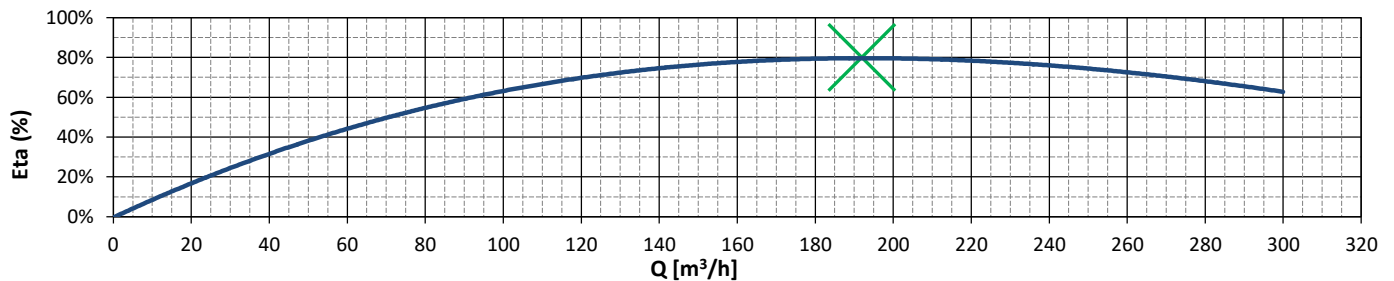
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |      |      |      |      |      |  |  |  |
|-----------------|--------------|------|------|------|------|------|------|------|------|------|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 667  | 1333 | 2000 | 2667 | 3333 | 4000 | 4667 | 5000 |  |  |  |
|                 | <b>l/s</b>   | 0    | 11   | 22   | 33   | 44   | 56   | 67   | 78   | 83   |  |  |  |
|                 | <b>m³/h</b>  | 0    | 40   | 80   | 120  | 160  | 200  | 240  | 280  | 300  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 22,5 | 19,3 | 16,7 | 14,4 | 12,4 | 10,5 | 8,6  | 6,7  | 5,7  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (Pn)              | [KW] | <b>7,5</b>  |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>7,5</b>  |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>8,2</b>  |
| Fattore di potenza<br>Power Factor | Cosφ              |      | <b>0,81</b> |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>S/D</b>        |
| Corrente Nominale<br>Rated current     | [A] | <b>14,7</b>       |
| Corrente di spunto<br>Starting current | [A] | <b>44,5</b>       |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>∅ 100</b> |
| Diametro girante<br>Impeller diameter | [mm] | -            |
| Peso pompa<br>Weight                  | [Kg] | <b>228,0</b> |

|  |  |                  |
|--|--|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>7G2,5+3x1</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>20</b>        |

In accordo con:  
In accordance to: **ISO 9906:2012 - Grade 3B ( section 4.4.2)**

Curve per liquidi con densità/curve established for liquid with density  
**1Kg/dm<sup>3</sup> - viscosità/viscosity 1 mm<sup>2</sup>/s - temperature/temperature 20°C**

## Dimensioni d'ingombro - overall dimensions

**S** Installazione mobile - Installation mobile - Installation mobile - Instalación móvil

CS.150.30.4T.200 - CS.150.40.4T.200 - CS.150.55.4T.240 - CS.150.75.4T.240

|    | CS.150_30.4T.200 | CS.150_40.4T.200 | CS.150_55.4T.240 | CS.150_75.4T.240 |
|----|------------------|------------------|------------------|------------------|
| A  | 789              | 917              |                  |                  |
| B  | 687              | 779              |                  |                  |
| C  | 193              | 203,5            |                  |                  |
| D  | 240              | 254,6            |                  |                  |
| E  | 324              | 309              |                  |                  |
| S1 | 823              | 917              |                  |                  |

Dimensione imballo  
Packaging dimensions

Misure - Measures [mm]

|  | H | P | L |
|--|---|---|---|
|  | - | - | - |

**FC** Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento

CS.150.30.4T.200 - CS.150.40.4T.200 - CS.150.55.4T.240 - CS.150.75.4T.240

| A    | B   | C   | D   | S1  |                                     |
|------|-----|-----|-----|-----|-------------------------------------|
| 922  | 562 | 193 | 240 | 817 | CS.150_30.4T.200 / CS.150_40.4T.200 |
| 1034 | 549 | 204 | 255 | 911 | CS.150_55.4T.240 / CS.150_75.4T.240 |

8FC00008      Peso Weight      kg

|   |  |
|---|--|
| 1 | Supporto tubi guida da 2" 2" guide rails bracket       |
| 2 | Piede uscita verticale DN150 Vertical foot - DN150 out |
| 3 | Slitta completa Sliding bracket complete               |
| 4 | Esclusi dalla fornitura Not supplied                   |

## Caratteristiche costruttive - construction features

Anello per movimentazione  
Shackel to handle the pump  
Manille pour lever la pompe  
Grillete para levantar la bomba

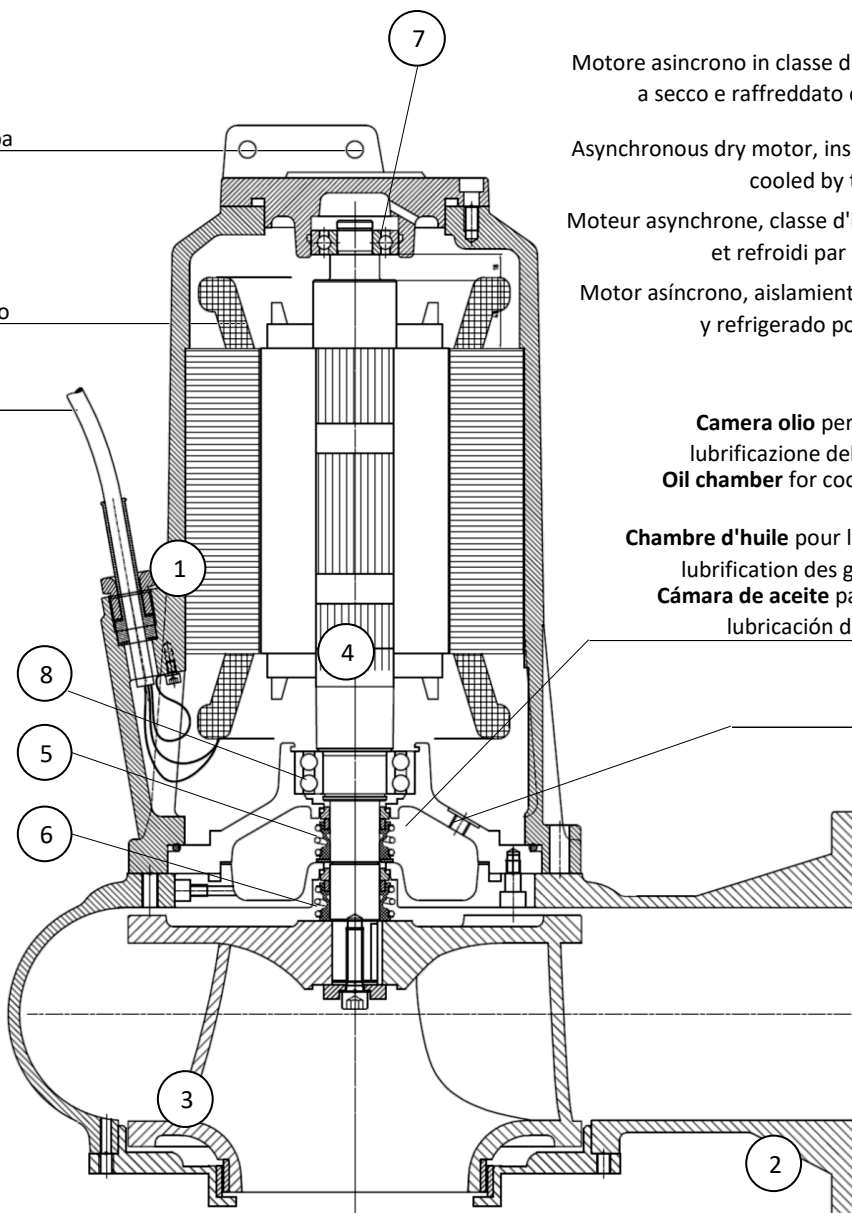
Pastiglia termica  
Built in Thermal protector  
Protecteur thermique intégré  
Protector térmico incorporado

10 m - H07RN-F

| Viti<br>Screws<br>Des vis<br>Empulgueras | Quality<br>A2 |
|--|---------------|
|--|---------------|

| O-RINGS | NBR |
|---------|-----|
|---------|-----|

Girante chiusa monocanale  
Closed impeller  
single channel  
Roue fermée monocal  
Impulsor cerrado  
monocal



Motore asincrono in classe di isolamento F (155°C),  
a secco e raffreddato dal liquido circostante;

Asynchronous dry motor, insulation class F (155°C),  
cooled by the surrounding liquid;

Moteur asynchrone, classe d'isolation F (155°C), sec  
et refroidi par le liquide environnant;

Motor asíncrono, aislamiento clase F (155°C), seco  
y refrigerado por el líquido que rodea.

**Camera olio** per il raffreddamento e la  
lubrificazione delle tenute meccaniche;  
**Oil chamber** for cooling and lubrication of  
mechanical seals;  
**Chambre d'huile** pour le refroidissement et la  
lubrification des garnitures mécaniques;  
**Cámara de aceite** para la refrigeración y la  
lubricación de los sellos mecánicos.

**Sonda Olio**  
Oil Probe  
Sonde d'huile  
Sonda de aceite

**DNm: DN150 PN16**

| NR. | DESCRIPTION       | MATERIAL     |
|-----|-------------------|--------------|
| 1   | Gruppo motore     | Ghisa        |
|     | Motor group       | Cast iron    |
|     | Groupe moteur     | Fer de fonte |
|     | Unidad de motor   | Hierro       |
| 2   | Corpo idraulico   | Ghisa        |
|     | Pump Housing      | Cast iron    |
|     | Corps de la pompe | Fer de fonte |
|     | Cuerpo hidráulico | Hierro       |
| 3   | Girante           | Ghisa        |
|     | Impeller          | Cast iron    |
|     | Roue              | Fer de fonte |
|     | Impulsor          | Hierro       |
| 4   | Albero motore     | Acciaio      |
|     | Shaft             | Steel        |
|     | Arbre moteur      | Acier        |
|     | Eje del motor     | Acero        |

| NR. | DESCRIPTION                                      | MATERIAL       |
|-----|--|----------------|
| 5   | Tenuta mecc. superiore                           | Steel / Carbon |
|     | Upper mech. seal                                 |                |
|     | Haut garniture mécan.<br>Sello mecánico superior | NBR            |
| 6   | Tenuta mecc. Inferiore                           | SiC / SiC      |
|     | Lower mech. seal                                 |                |
|     | Haut garniture mécan.<br>Sello mecánico inferior | NBR            |
| 7   | Cuscinetto superiore                             |                |
|     | Top bearing                                      |                |
|     | Roulement supérieur<br>Cojinete superior         | 6305 2RS       |
| 8   | Cuscinetto inferiore                             |                |
|     | Lower bearing                                    |                |
|     | Roulement inférieur<br>Cojinete inferior         | 3209 2RS       |



Tipo di pompa - Pump model

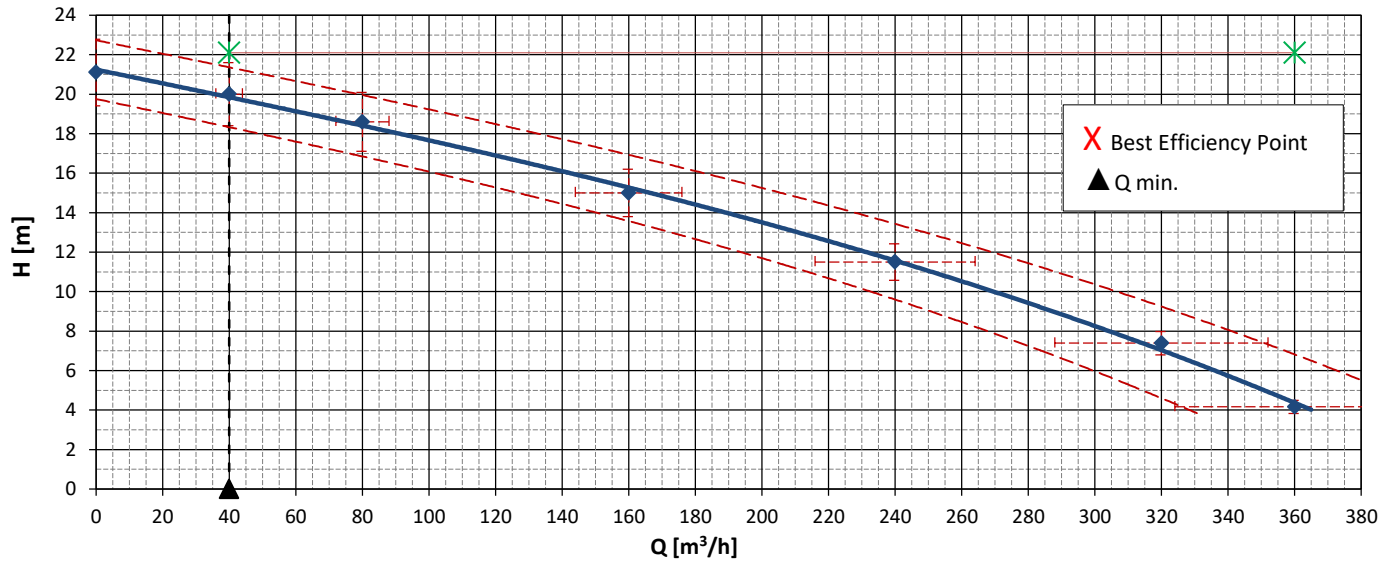
**CS.150\_240A**Girante  
Impeller  
Mandata  
Discharge**1.CHANNEL****DN 150****Caratteristiche costruttive - construction data**

|  |  |
|--|--|
| <b>Costruzione Motore - Motor Frame</b>                              | 240 A  |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |
| <b>Classe di Isolamento - Insulation Class</b>                       | F (155°C)  |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent  |
| <b>Avvolgimento statore - Stator winding</b>                         | 3~PH - Threephase<br>Δ / Y   |
|  | [V] 3~400/690  |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> | Si - Yes   |
| <input type="radio"/> Bimetallico - Bimetal disc                     | <input checked="" type="checkbox"/> 130°C                                    |
| <input type="radio"/> Solo su richiesta - on request only PT100      | <input type="checkbox"/>   |
| <input type="radio"/> Solo su richiesta - on request only PTC        | <input type="checkbox"/>   |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid                               |
| <b>Camera olio - Oil chamber</b>                                     | Si - Yes   |
| <b>Protezione Tenuta - Leakage protection</b>                        | Optional   |
| <b>Tipo girante - Impeller</b>                                       | CHIUSA MONOCANALE - CLOSED 1 CHANNEL   |
| <b>DN mandata - Discharge</b>  | DN 150 PN16  |
| <b>Controflangia filettata - Threaded counterflange</b>              | NO   |
| <b>DN aspirazione / Suction</b>                                      | [mm] Ø 150   |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard Vernice all'acqua - Water paint / 30µm<br>Opaco Nero - Opaque Black |

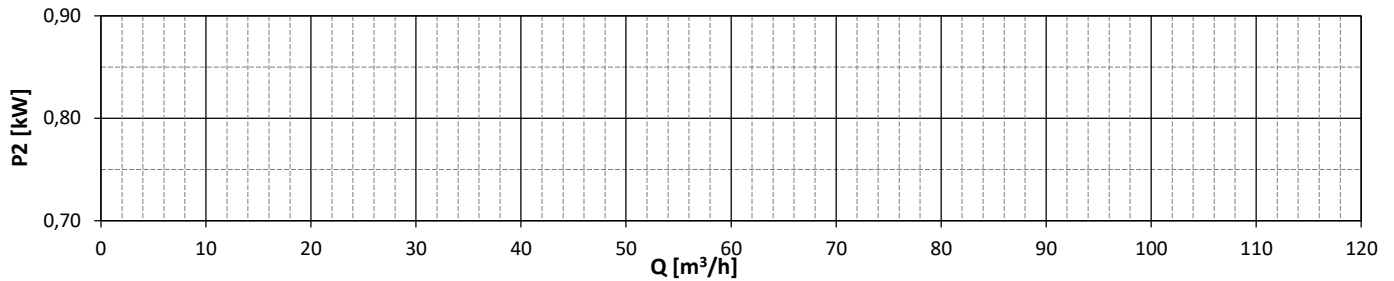
**Limiti di utilizzo - Operating Limits**

|   |                           |
|---|---------------------------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C] < 40                 |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] ~ 1 |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s] ~ 1  |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l] < 200              |
| <b>PH liquido pompato - PH value</b>                                | 6 ÷ 12                    |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m] 20                    |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l] < 0,1               |

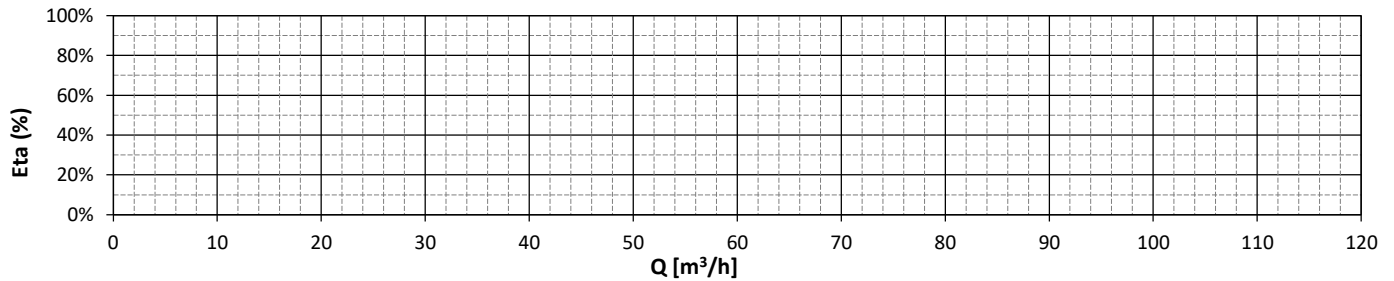
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |      |      |      |  |  |  |  |
|-----------------|--------------|------|------|------|------|------|------|------|--|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 667  | 1333 | 2667 | 4000 | 5333 | 6000 |  |  |  |  |
|                 | <b>l/s</b>   | 0    | 11   | 22   | 44   | 67   | 89   | 100  |  |  |  |  |
|                 | <b>m³/h</b>  | 0    | 40   | 80   | 160  | 240  | 320  | 360  |  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 21,1 | 20,0 | 18,6 | 15,0 | 11,5 | 7,4  | 4,2  |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>15,0</b> |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>14,9</b> |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>15,8</b> |
| Fattore di potenza<br>Power Factor | Cosφ              |      | -           |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>S/D</b>        |
| Corrente Nominale<br>Rated current     | [A] | <b>30,0</b>       |
| Corrente di spunto<br>Starting current | [A] | -                 |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>Ø 95</b>  |
| Diametro girante<br>Impeller diameter | [mm] | -            |
| Peso pompa<br>Weight                  | [Kg] | <b>226,0</b> |

|  |  |                  |
|--|--|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>2x4G4+4G1</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>15</b>        |

In accordo con: ISO 9906:2012 - Grade 3B  
In accordance to:

Curve per liquidi con densità/curve established for liquid with density 1Kg/dm<sup>3</sup> -  
viscosità/viscosity 1 mm<sup>2</sup> /s - temperature/temperature 20°C

### Dimensioni d'ingombro - overall dimensions

**S** Installazione mobile - Installation mobile - Installation mobile - Instalación móvil

CS.150.150.4T.240A

Dimensione imballo  
Packaging dimensions

Misure - Measures [mm]

| A | B | C |
|---|---|---|
| - | - | - |

**FC** Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento

CS.150.150.4T.240A

8FC00008 Peso Weight kg

|   |  |
|---|--|
| 1 | Supporto tubi guida da 2" 2" guide rails bracket       |
| 2 | Piede uscita verticale DN150 Vertical foot - DN150 out |
| 3 | Slitta completa Sliding bracket complete               |
| 4 | Esclusi dalla fornitura Not supplied                   |

D E F

## Caratteristiche costruttive - construction features

Anello per movimentazione  
Shackel to handle the pump  
Manille pour lever la pompe  
Grillete para levantar la bomba

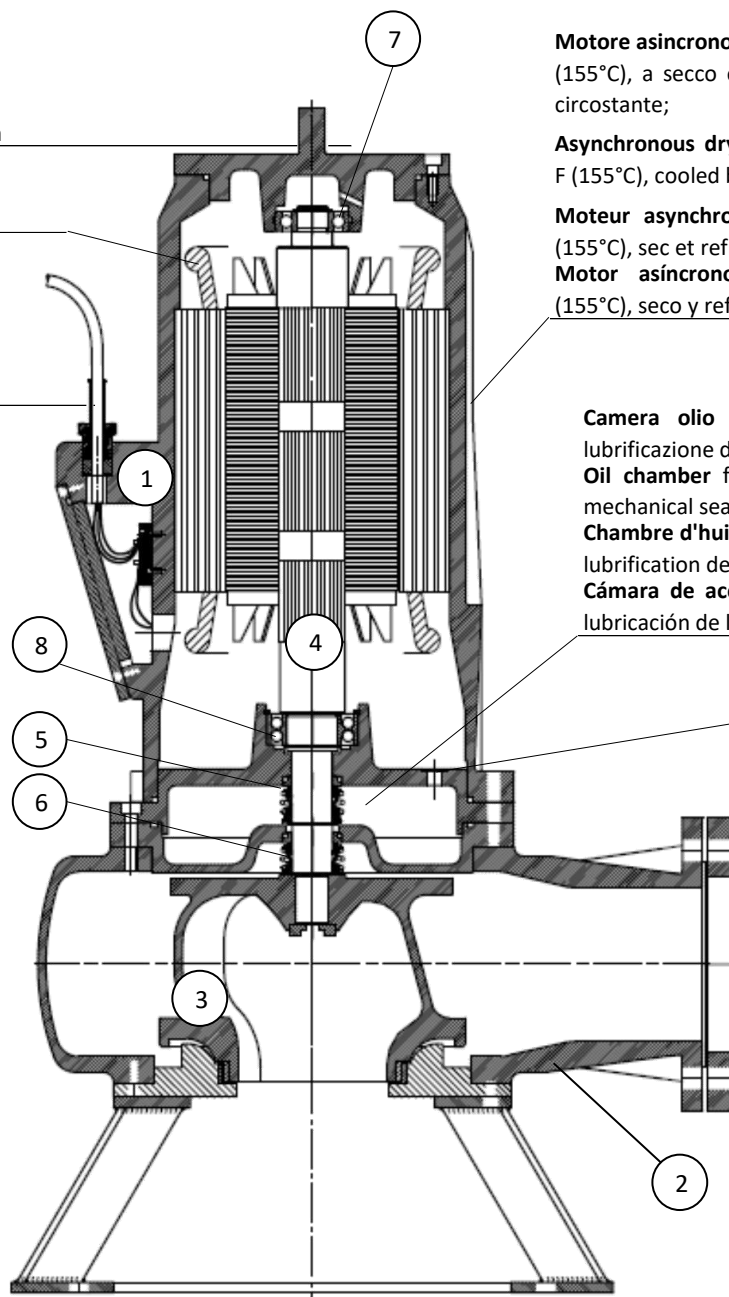
Pastiglia termica  
Built in Thermal protector  
Protecteur thermique intégré  
Protector térmico incorporado

10 m - H07RN-F

| Viti<br>Screws<br>Des vis<br>Empulgueras | Quality<br>A2 |
|--|---------------|
|--|---------------|

| O-RINGS | NBR |
|---------|-----|
|---------|-----|

Girante chiusa monocanale  
Closed impeller  
single channel  
Roue fermée monocal  
Impulsor cerrado  
monocanal



**Motore asincrono** in classe di isolamento F (155°C), a secco e raffreddato dal liquido circostante;

**Asynchronous dry motor**, insulation class F (155°C), cooled by the surrounding liquid

**Moteur asynchrone**, classe d'isolation F (155°C), sec et refroidi par le liquide

**Motor asíncrono**, aislamiento clase F (155°C), seco y refrigerado por el líquido

**Camera olio** per il raffreddamento e la lubrificazione delle tenute meccaniche;  
**Oil chamber** for cooling and lubrication of mechanical seals;  
**Chambre d'huile** pour le refroidissement et la lubrification des garnitures mécaniques;  
**Cámara de aceite** para la refrigeración y la lubricación de los sellos mecánicos.

**Sonda Olio**  
Oil Probe  
Sonde d'huile  
Sonda de aceite

**DNm: DN150 PN16**

| NR. | DESCRIPTION   | MATERIAL  |
|-----|---|---|
| 1   | Gruppo motore<br>Motor group<br>Groupe moteur<br>Unidad de motor          | Ghisa<br>Cast iron<br>Fer de fonte<br>Hierro<br>ENGJL 200 |
| 2   | Corpo idraulico<br>Pump Housing<br>Corps de la pompe<br>Cuerpo hidráulico | Ghisa<br>Cast iron<br>Fer de fonte<br>Hierro<br>ENGJL 200 |
| 3   | Girante<br>Impeller<br>Roue<br>Impulsor                                   | Ghisa<br>Cast iron<br>Fer de fonte<br>Hierro<br>ENGJL 250 |
| 4   | Albero motore<br>Shaft<br>Arbre moteur<br>Eje del motor                   | Acciaio<br>Steel<br>Acier<br>Acero<br>AISI 420            |

| NR. | DESCRIPTION  | MATERIAL              |
|-----|--|-----------------------|
| 5   | Tenuta mecc. superiore<br>Upper mech. seal<br>Haut garniture mécan.<br>Sello mecánico superior | Steel / Carbon<br>NBR |
| 6   | Tenuta mecc. Inferiore<br>Lower mech. seal<br>Haut garniture mécan.<br>Sello mecánico inferior | SiC / SiC<br>NBR      |
| 7   | Cuscinetto superiore<br>Top bearing<br>Roulement supérieur<br>Cojinete superior                | 6306 2RS              |
| 8   | Cuscinetto inferiore<br>Lower bearing<br>Roulement inférieur<br>Cojinete inferior              | 3210 2RS              |



Tipo di pompa - Pump model

**CS.150\_270A**Girante  
Impeller  
Mandata  
Discharge**1.CHANNEL****DN 150****Caratteristiche costruttive - construction data**

|  |  |
|--|--|
| <b>Costruzione Motore - Motor Frame</b>                              | 240 A  |
| <b>Grado di protezione IP - IP protection</b>                        | IP x8  |
| <b>Classe di Isolamento - Insulation Class</b>                       | F (155°C)  |
| <b>Tipo di servizio - Service type</b>                               | S1 Continuous / S3 Intermittent  |
| <b>Avvolgimento statore - Stator winding</b>                         | 3~PH - Threephase<br>Δ / Y   |
|  | [V] 3~400/690  |
| <input type="checkbox"/> <b>Protezione motore - Motor Protection</b> | Si - Yes   |
| <input type="radio"/> Bimetallico - Bimetal disc                     | <input checked="" type="checkbox"/> 130°C                                    |
| <input type="radio"/> Solo su richiesta - on request only PT100      | <input type="checkbox"/>   |
| <input type="radio"/> Solo su richiesta - on request only PTC        | <input type="checkbox"/>   |
| <b>Raffreddamento - Cooling</b>                                      | Dal liquido circostante - By surrounding fluid                               |
| <b>Camera olio - Oil chamber</b>                                     | Si - Yes   |
| <b>Protezione Tenuta - Leakage protection</b>                        | Optional   |
| <b>Tipo girante - Impeller</b>                                       | CHIUSA MONOCANALE - CLOSED 1 CHANNEL   |
| <b>DN mandata - Discharge</b>  | DN 150 PN16  |
| <b>Controflangia filettata - Threaded counterflange</b>              | NO   |
| <b>DN aspirazione / Suction</b>                                      | [mm] Ø 150   |
| <b>Tipo di vernice e spessore - Paint type and thickness</b>         | Standard Vernice all'acqua - Water paint / 30µm<br>Opaco Nero - Opaque Black |

**Limiti di utilizzo - Operating Limits**

|   |                           |
|---|---------------------------|
| <b>Temperatura massima liquido - Pumped fluid max temperature</b>   | [°C] < 40                 |
| <b>Densità liquido - Density</b>                                    | [Kg/dm <sup>3</sup> ] ~ 1 |
| <b>Viscosità - Viscosity</b>  | [mm <sup>2</sup> /s] ~ 1  |
| <b>Contenuto di cloruri - Chlorides content</b>                     | [mg/l] < 200              |
| <b>PH liquido pompato - PH value</b>                                | 6 ÷ 12                    |
| <b>Max. prof. Immersione - Max. Immersion depth</b>                 | [m] 20                    |
| <b>Max. contenuto solidi abrasivi - Max. abrasive solid content</b> | [g/l] < 0,1               |





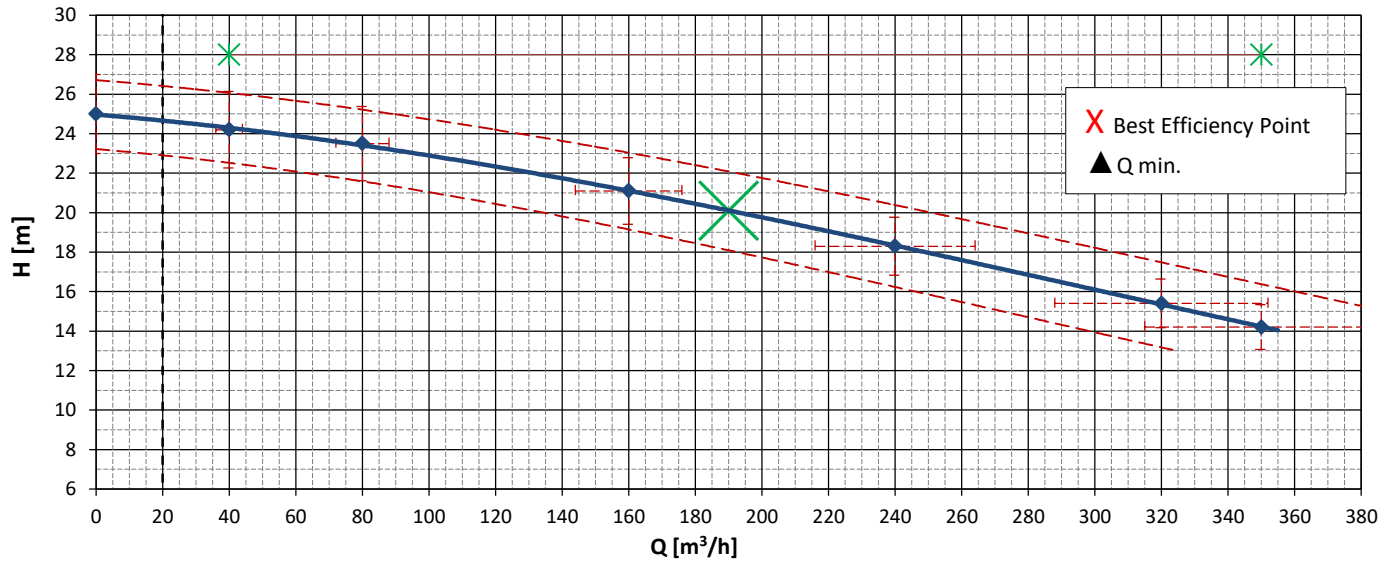
Tipo di pompa - Pump model  
**CS.150\_185.4.270A**

**Poles: 4 Hz: 50**  
**r.p.m. 1500**

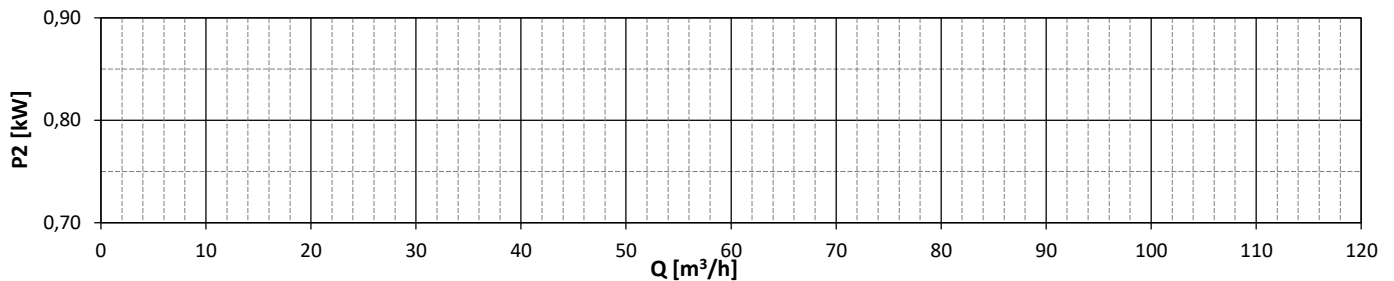
Girante Impeller  
Mandata Discharge  
**1.CHANNEL**  
**DN 150**

Serie 1

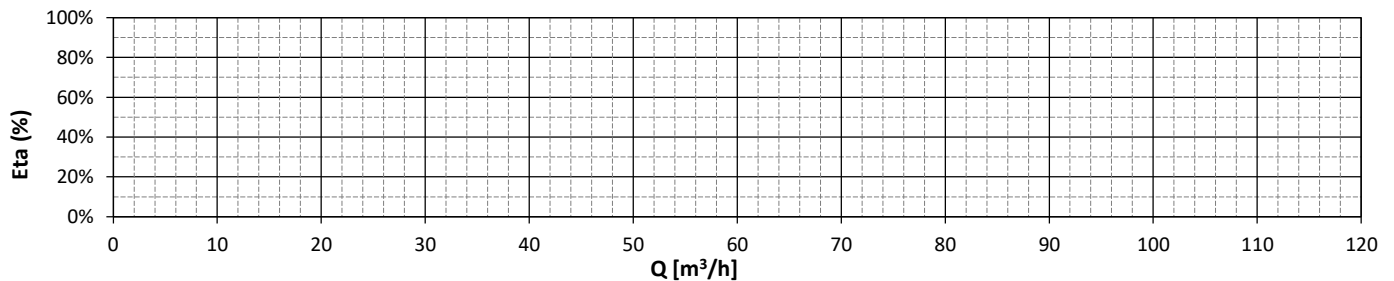
**CURVA CARATTERISTICA - PERFORMANCE CURVE**



**POTENZA ALL'ALBERO - SHAFT POWER**



**RENDIMENTO IDRAULICO - HYDRAULIC EFFICIENCY**



|                 |              |      |      |      |      |      |      |      |  |  |  |  |
|-----------------|--------------|------|------|------|------|------|------|------|--|--|--|--|
| <b>FLOW (Q)</b> | <b>l/min</b> | 0    | 667  | 1333 | 2667 | 4000 | 5333 | 5833 |  |  |  |  |
|                 | <b>l/s</b>   | 0    | 11   | 22   | 44   | 67   | 89   | 97   |  |  |  |  |
|                 | <b>m³/h</b>  | 0    | 40   | 80   | 160  | 240  | 320  | 350  |  |  |  |  |
| <b>HEAD (H)</b> | <b>m</b>     | 25,0 | 24,2 | 23,5 | 21,1 | 18,3 | 15,4 | 14,2 |  |  |  |  |

**Dati pompa / Pump data**

|                                    |                   |      |             |
|------------------------------------|-------------------|------|-------------|
| Potenza nominale<br>Nominal power  | (P <sub>n</sub> ) | [KW] | <b>18,5</b> |
| Potenza all'albero<br>Shaft power  | (P <sub>2</sub> ) | [KW] | <b>18,5</b> |
| Potenza assorbita<br>Supply Power  | (P <sub>1</sub> ) | [KW] | <b>24,0</b> |
| Fattore di potenza<br>Power Factor | Cosφ              |      | -           |

**Model T**

|  |     |                   |
|--|-----|-------------------|
| Alimentazione<br>Power supply          | [V] | <b>3~400-50Hz</b> |
| Avviamento<br>Starting                 |     | <b>S/D</b>        |
| Corrente Nominale<br>Rated current     | [A] | <b>40,0</b>       |
| Corrente di spunto<br>Starting current | [A] | -                 |

|                                       |      |              |
|---------------------------------------|------|--------------|
| Passaggio libero<br>Free Passage      | [mm] | <b>∅ 108</b> |
| Diametro girante<br>Impeller diameter | [mm] | -            |
| Peso pompa<br>Weight                  | [Kg] | <b>330,0</b> |

|  |  |                  |
|--|--|------------------|
| Galleggiante<br>Float level switch         |  | <b>No</b>        |
| Cavo<br>Cable                              |  | <b>2x4G4+4G1</b> |
| Nr. Avviamenti / ora<br>Nr. Start per hour |  | <b>15</b>        |

In accordo con: *ISO 9906:2012 - Grade 3B*      Curve per liquidi con densità/curve established for liquid with density *1Kg/dm³ - viscosità/viscosity 1 mm²/s - temperature/temperature 20°C*

### Dimensioni d'ingombro - overall dimensions

| <b>S</b>  | <b>Installazione mobile - Installation mobile - Installation mobile - Instalación móvil</b> |   |  |   |   |   |   |   |   |
|---|---|---|--|---|---|---|---|---|---|
| CS.150.185.4T.270A  |   |   |  |   |   |   |   |   |   |
|   |   |   | <p>Dimensione imballo<br/>Packaging dimensions</p> |   |   |   |   |   |   |
| <p>Misure - Measures [mm]</p> <table border="1"> <thead> <tr> <th>A</th> <th>B</th> <th>C</th> </tr> </thead> <tbody> <tr> <td>-</td> <td>-</td> <td>-</td> </tr> </tbody> </table> |   |   |  | A | B | C | - | - | - |
| A   | B   | C |  |   |   |   |   |   |   |
| -   | -   | - |  |   |   |   |   |   |   |

| <b>FC</b>          | <b>Con piede di accoppiamento - With foot coupling - Avec pied d'assise - Con pie de acoplamiento</b> |                |   |          |   |                |    |   |   |  |  |   |   |  |  |   |   |  |  |   |   |  |  |
|--------------------|---|----------------|---|----------|---|----------------|----|---|---|--|--|---|---|--|--|---|---|--|--|---|---|--|--|
| CS.150.185.4T.270A |   |                |   |          |   |                |    |   |   |  |  |   |   |  |  |   |   |  |  |   |   |  |  |
|                    |   |                |   |          |   |                |    |   |   |  |  |   |   |  |  |   |   |  |  |   |   |  |  |
|                    |   |                | <table border="1"> <thead> <tr> <th colspan="2">8FC00008</th> <th>Peso<br/>Weight</th> <th>kg</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Supporto tubi guida da 2"<br/>2" guide rails bracket</td> <td></td> <td></td> </tr> <tr> <td>2</td> <td>Piede uscita verticale DN150<br/>Vertical foot - DN150 out</td> <td></td> <td></td> </tr> <tr> <td>3</td> <td>Slitta completa<br/>Sliding bracket complete</td> <td></td> <td></td> </tr> <tr> <td>4</td> <td>Esclusi dalla fornitura<br/>Not supplied</td> <td></td> <td></td> </tr> </tbody> </table> | 8FC00008 |   | Peso<br>Weight | kg | 1 | Supporto tubi guida da 2"<br>2" guide rails bracket |  |  | 2 | Piede uscita verticale DN150<br>Vertical foot - DN150 out |  |  | 3 | Slitta completa<br>Sliding bracket complete |  |  | 4 | Esclusi dalla fornitura<br>Not supplied |  |  |
| 8FC00008           |   | Peso<br>Weight | kg  |          |   |                |    |   |   |  |  |   |   |  |  |   |   |  |  |   |   |  |  |
| 1                  | Supporto tubi guida da 2"<br>2" guide rails bracket   |                |   |          |   |                |    |   |   |  |  |   |   |  |  |   |   |  |  |   |   |  |  |
| 2                  | Piede uscita verticale DN150<br>Vertical foot - DN150 out   |                |   |          |   |                |    |   |   |  |  |   |   |  |  |   |   |  |  |   |   |  |  |
| 3                  | Slitta completa<br>Sliding bracket complete   |                |   |          |   |                |    |   |   |  |  |   |   |  |  |   |   |  |  |   |   |  |  |
| 4                  | Esclusi dalla fornitura<br>Not supplied   |                |   |          |   |                |    |   |   |  |  |   |   |  |  |   |   |  |  |   |   |  |  |
|                    |   |                | <table border="1"> <tr> <td>D</td> <td>-</td> </tr> <tr> <td>E</td> <td>-</td> </tr> <tr> <td>F</td> <td>-</td> </tr> </table>  | D        | - | E              | -  | F | -   |  |  |   |   |  |  |   |   |  |  |   |   |  |  |
| D                  | -   |                |   |          |   |                |    |   |   |  |  |   |   |  |  |   |   |  |  |   |   |  |  |
| E                  | -   |                |   |          |   |                |    |   |   |  |  |   |   |  |  |   |   |  |  |   |   |  |  |
| F                  | -   |                |   |          |   |                |    |   |   |  |  |   |   |  |  |   |   |  |  |   |   |  |  |

**ACCESSORI - ACCESSORIES - ACCESORIES - ACCESORIOS**

| Descrizione - Description - Description - Descripción |  |   | Codice<br>Code              |
|---|--|---|-----------------------------|
| FC 150  |  | - Dispositivo di accoppiamento DN 150<br>- DN 150 Coupling device<br>- Dispositif de couplage DN 150<br>- Dispositivo de acoplamiento DN 150  | 8FC000008                   |
| STD 150   |  | - Cavalletto di sostegno in ferro zincato<br>- Galvanized steel support stand<br>- Support en acier galvanisé<br>- Soporte de acero galvanizado   | 8FC000011                   |
| AT 150  |  | - Adattatore per dispositivo di accoppiamento della concorrenza<br>- Adapter for competitors foot coupling devices<br>- Adaptateur pour pied d'assise du concurrent<br>- Adaptador para dispositivo de acoplamiento de competidor | 2SB000009                   |
|   |  | - Catena ferro zincato - galvanized Iron - fer galvanisé - hierro galvanizado<br>- Chain<br>- Chaîne<br>- Cadena Acciaio - Stainless steel - acier inox - acero inox  | 2SC000019<br>2SC000032      |
| FBV 150   |  | - Valvola di ritegno a palla Flangiata<br>- Flanged valve<br>- Vanne à bride<br>- Válvula de brida  | DN 150<br>PN10<br>4BV000009 |
| HF  |  | - Regolatore di livello per acque reflue<br>- Level switch for sewage<br>- Interrupteur de niveau pour eaux usées<br>- Interruptor de nivel para aguas residuales   | [10 mt] 3CS000007           |
| SHELL   |  | - Contrappeso SHELL per galleggiante<br>- Counterweight SHELL for level switch<br>- Cotrepoids SHELL pour interrupteur de niveau<br>- Contrapeso para interruptor de nivel  | 3CS000021                   |

**SELEZIONE QUADRO DI CONTROLLO - CONTROL PANEL SELECTION**

|      | Pole | Pump                | P2<br>[KW] | In<br>[A] | Avv.<br>Start. | - ECH -<br>ELECTROMECHANICAL |                             |                             |                             |                             |                        |                             |                             |                             |                             | - ECL -<br>ELECTRONIC |           |
|------|------|---------------------|------------|-----------|----------------|------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------|-----------|
|      |      |                     |            |           |                | 1 PUMP                       |                             |                             |                             |                             | 2 PUMPS                |                             |                             |                             |                             | 1 PUMP                | 2 PUMPS   |
|      |      |                     |            |           |                | ECH1.T-14<br>SEC000008       | ECH1.S.D.10-14<br>SEC000105 | ECH1.S.D.15-20<br>SEC000106 | ECH1.S.D.28-35<br>SEC000014 | ECH1.S.D.43-50<br>SEC000015 | ECH2.T-14<br>SEC000031 | ECH2.S.D.10-14<br>SEC000107 | ECH2.S.D.15-20<br>SEC000108 | ECH2.S.D.28-35<br>SEC000038 | ECH2.S.D.43-50<br>SEC000040 | 5EC000083             | 5EC000084 |
| 200  | 4    | CS.150_30.4.T.200   | 3,0        | 7,8       | D.O.L.         | •                            |                             |                             |                             |                             | •                      |                             |                             |                             |                             | •                     | •         |
|      |      | CS.150_40.4.T.200   | 4,0        | 8,7       | D.O.L.         | •                            |                             |                             |                             |                             | •                      |                             |                             |                             |                             | •                     | •         |
| 240  | 4    | CS.150_55.4.T.240   | 5,5        | 11,3      | S.D.           |                              | •                           |                             |                             |                             |                        | •                           |                             |                             |                             |                       |           |
|      |      | CS.150_75.4.T.240   | 7,5        | 14,7      | S.D.           |                              |                             | •                           |                             |                             |                        |                             | •                           |                             |                             |                       |           |
| 240A | 4    | CS.150_150.4.T.240A | 15,0       | 31,0      | S.D.           |                              |                             |                             | •                           |                             |                        |                             |                             |                             | •                           |                       |           |
| 270A | 4    | CS.150_185.4.T.270A | 18,5       | 43,0      | S.D.           |                              |                             |                             |                             | •                           |                        |                             |                             |                             |                             |                       | •         |



