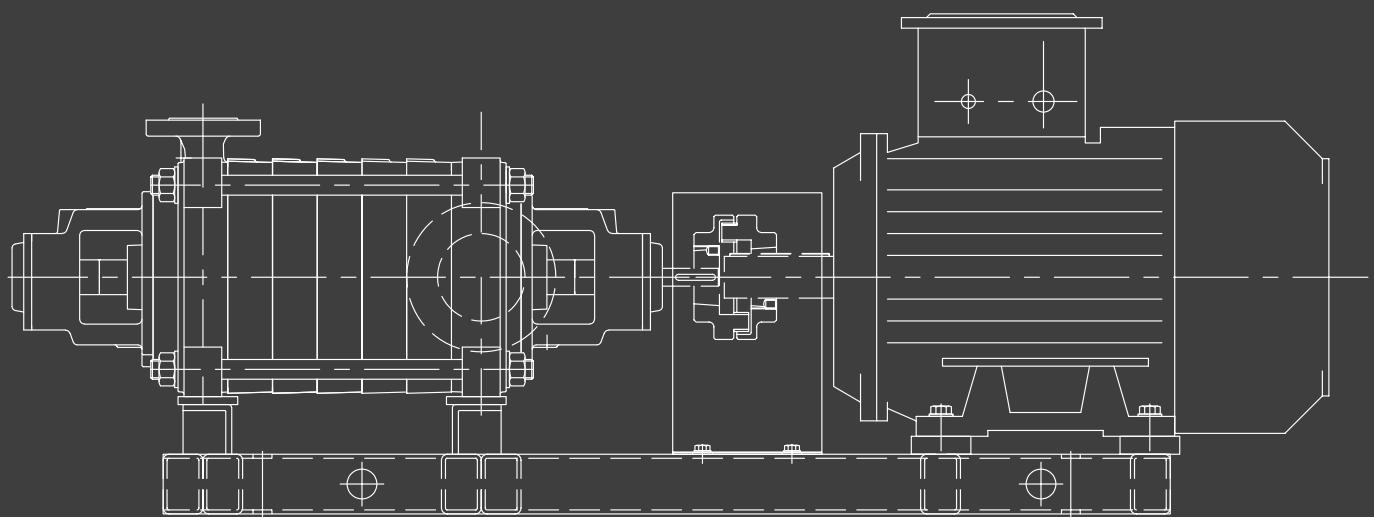




50Hz

HP - HV Technical Catalogue





ONLY FORAS TESTS 100% OF THE PUMPS, TWICE

All Foras solutions undergo **individual (not random)** functional, **electrical** and **hydraulic** tests, for fool-proof testing lines. Foras has created **two entirely automated rooms** equipped with technologically advanced equipment **to study and test** newly-designed prototypes. It subjects all devices to specific tests to evaluate their operation, also in highly-stressed situations.



FLEXIBILITY AND EXPERIENCE

play an important part in order to **constantly meet customer requirements**, thus strengthening relationships of trust with partners and suppliers. Each line is able to promptly and precisely manage the production process of any product.

A WIDE RANGE OF FORAS PRODUCTS, ONE FOR EVERY REQUIREMENT

The range of Foras products is **extremely vast** since it endeavours to **meet the most diverse demands** according to the sector of use and type of device: submersible, submersed, surface pumps etc., for all agricultural, civil, domestic and industrial sectors.



foras-pumps.it

INDICE / INDEX

1. Introduzione alla Linea HP <i>Introduction to the HP Line</i>	.....	p.	2
2. Le caratteristiche principali della linea HP <i>Main characteristics HP line</i>	.....	p.	4
3. Materiali ed esecuzioni disponibili <i>Materials and executions available</i>	.....	p.	8
4. Caratteristiche costruttive e dati d'impiego <i>Constructive features and operative data</i>	.....	p.	14
5. Chiave di denominazione HP <i>Legend HP</i>	.....	p.	20
6. Campi di prestazioni <i>Performance range</i>	.....	p.	21
7. Dimensioni di ingombro pompa <i>Pump overall dimensions</i>	.....	p.	66
8. Materiali dei componenti <i>Components materials</i>	.....	p.	121
9. Posizioni delle flange pompa disponibili <i>Available pump flange positions</i>	.....	p.	145
10. Dati tecnici e dimensioni motore elettrico <i>Motor Data and overall dimensions</i>	.....	p.	151
11. Appendice tecnica <i>Technical appendix</i>	.....	p.	159
12. Condizioni generali di vendita <i>General sales conditions</i>	.....	p.	168
13. Regolamento UE 547/2012 <i>Regulation UE 547/2012</i>	.....	p.	169

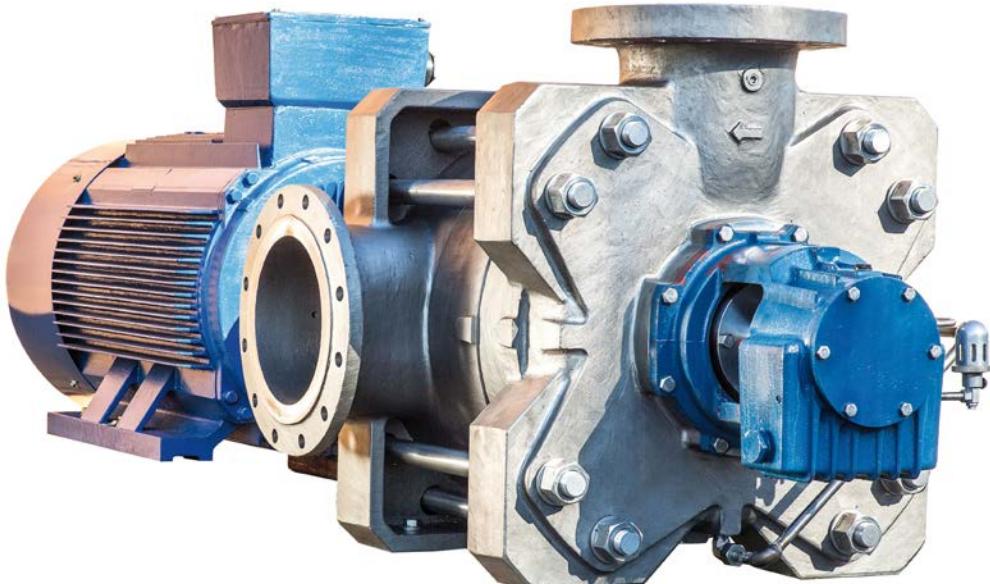
Introduzione alla linea HP

Questa famiglia di pompe è progettata per lavorare in applicazioni pesanti e a pressioni molto elevate (fino a 100 Bar per le versioni HPR) e con temperature fino a 180°C. La grande disponibilità di materiali, i diversi tipi di tenuta sull'albero e le varie soluzioni di lubrificazione dei cuscinetti della pompa, rendono questa linea molto versatile e ideale per molte applicazioni nei settori industriali, dell'energia e del trattamento acqua.

Le pompe centrifughe multistadio della serie HP sono del tipo a sezione radiale, per l'installazione orizzontale o verticale. Le bocche di aspirazione e mandata con flangiatura tipo EN o ANSI, possono avere esecuzione radiale e ruotabili di 90°, nei modelli HP, HPM e HPR, oppure bocca di aspirazione con posizione assiale nei modelli HPA e HPMA.

Introduction to the HP line

The multistage centrifugal pumps belonging to the HP series have a radial cross section, allowing an horizontal or vertical installation. The flanges of the suction and discharge ports are according to the EN or ANSI standards, these ports can operate radially and can be rotated 90°, in the HP, HPM and HPR models, or have an axial suction port for the HPA and HPMA models. This family of pumps is designed to operate in heavy duty conditions and with very high pressures (up to 100 Bar for the HPR versions) and with temperatures up to 180°C. The great choice of materials, the different kinds of sealing on the shaft and the various lubrication solutions for the pump's bearings, make this line very versatile and ideal for many uses in the industrial, energy and water processing fields.



Qualità

Foras è dotata di una struttura di controllo e di un piano di miglioramento costante dei processi produttivi che assicurano, per ogni prodotto, la conformità agli standard qualitativi più rigidi del settore. Tutte le pompe vengono collaudate con dei test di fine linea che assicurano il corretto funzionamento nell'installazione. Le prestazioni idrauliche sono controllate e garantite secondo la norma ISO 9906 grado 3B.

Quality

Foras is equipped with a control structure and a continuous improvement production process plan that provide, for each product, compliance with the most stringent quality standards in the industry. All pumps are end-of-line tested to ensure the correct operation of the installation. The hydraulic performance are controlled and guaranteed according to ISO 9906 grade 3B.



Su richiesta tutta la gamma HP è disponibile con certificazione Atex
On request the full HP range is available with Atex Certification



Le caratteristiche principali della linea HP

- Portate fino **1200 m³/h.**
- Pressioni fino a **1000 m.**
- Alta efficienza idraulica, fino a **80%**
- Tamburo di bilanciamento, posto sul corpo di mandata, compensa efficacemente la spinta assiale prodotta dalle giranti
- Sistema di tenuta versatile è disponibile nel tipo a Baderna, Meccanica Singola, oppure Meccanica Bilanciata, altri tipi speciali a richiesta.
- Cuscinetti della pompa sono disponibili con lubrificazione a grasso oppure ad olio per garantire una lunga vita di lavoro
- Anelli di usura fissi e su richiesta anche rotanti di vari materiali con trattamenti di indurimento

Dati di funzionamento generale:

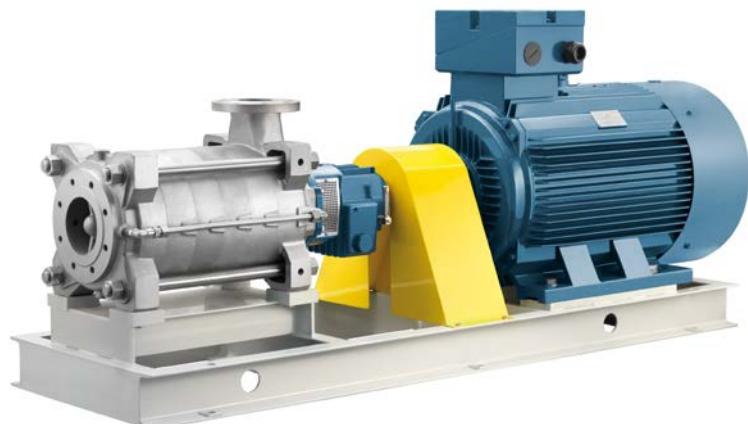
- Pressione fino a 100 bar
- Temperature da -20°C a +180°C
- Velocità di rotaz. fino a 3600 giri/min
- Flange standard: UNI/EN
- Bocca aspirante: DN 40-300 - PN 16-25
- Bocca premente: DN 25-250 - PN 64-100
- Tolleranza sulle prestazioni: ISO9906-3B

Main characteristics HP line

- Flow rates up to **1200 m³/h.**
- Pressure up to **1000 m.**
- High hydraulic efficiency, up to **80%**
- Balancing drum, placed on the discharge casing, which effectively compensates the axial thrust produced by the impellers
- Versatile sealing system: which is available as packing, single Mechanical or Balanced Mechanical, other special types upon request.
- The pumps' bearings are available with grease or oil lubrication in order to assure a long operating life
- Wear rings: they are available both fixed as well as rotating, in various materials, with hardening treatments.

General operating data:

- Pressure up to 100 bar
- Temperatures from -20°C to +180°C
- Rotational speed up to 3600 rpm.
- Standard flanges: UNI/EN
- Suction port: DN 40-300 - PN 16-25
- Discharge port: DN 25-250 - PN 64-100
- Performance tolerances: ISO9906-3B



Principali campi d'impiego

- Gruppi di Pressurizzazione in edilizia e settore delle costruzioni
- Gruppi Antincendio e applicazioni con motori diesel
- Miniere e applicazioni ATEX
- Impianti di servizio nei settori petrolchimico, Energia
- Impianti di Geotermia
- Alimentazione Caldaia
- Dissalazione acqua per Osmosi Inversa
- Impianti di filtrazione e Ultra-filtrazione
- Impianti di trattamento acqua



Main fields of application

- Pressure raising groups in the building and construction sector
- Firefighting and applications with diesel engines
- Mining and ATEX applications
- Service facilities in the petrochemical sectors, Energy
- Geothermal plants
- Boiler feed
- Water desalination by reverse Osmosis
- Filtration and ultrafiltration plants
- Water treatment plants



Principali aspetti tecnici e costruttivi

Le **giranti** ottenute per fusione e disponibili in vari metallurgie, sono del tipo radiale, chiuse, bloccate sull'albero per mezzo di chiavette. La girante di aspirazione, è progettata per ottenere valori di NPSH_r molto bassi. Per migliorare l'efficienza idraulica, contenere le usure meccaniche, ottimizzare manutenzione ordinaria, tutte le giranti sono dotate di anelli di rasamento. Disponibili su richiesta anelli di rasamento rotanti e sul mozzo.

*The **impellers** which are casted and available in various metals, are radial, closed and blocked to the shaft by keys. The suction impeller is designed to achieve very low NPSH_r values. To improve the hydraulic efficiency, limit the mechanical wear and optimise the routine maintenance, all the impellers are equipped with shims. Available upon request rotating shims and on the hub.*

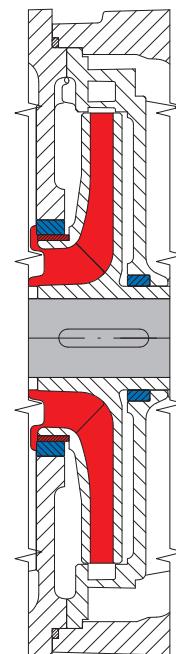
Per garantire una lunga vita di lavoro dei cuscinetti di spinta, nel corpo premente è alloggiato il tamburo di bilanciamento progettato per ridurre la spinta assiale generata dalle giranti.

Il tamburo, alimentato dalla tubazione di bilanciamento, è costruito in acciaio AISI 420 indurito in superficie ed è dotato di una camicia di usura disponibile in diversi materiali.

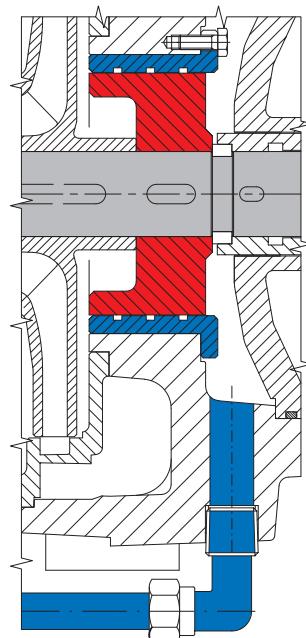
To assure a long operational life for the thrust bearings, a balancing drum is housed in the discharge casing, it is designed to reduce the impellers' axial thrust. The drum, which is fed by a balancing tubing, is made of AISI 420 steel, superficially hardened and provided with a wear sleeve which is available in different materials.

Main technical and constructional features

Girante radiale • Radial impeller



Tamburo di bilanciamento • Balancing drum



La **camera di tenuta** è idonea ad alloggiare sia la tenuta di tipo a baderna che quella meccanica. L'albero in prossimità della tenuta è protetto da apposite camicie d'albero in acciaio speciale che facilita la manutenzione. Le tenute meccaniche sono unificate secondo la norma EN 12756; e possono essere dei seguenti tipi:

- Tenuta meccanica bilanciata o semplice, raffreddata dal liquido pompato oppure flussata esternamente da apposito orifizio.
- Tenuta meccanica doppia o a cartuccia per applicazioni con liquidi particolarmente aggressivi e/o caldi.

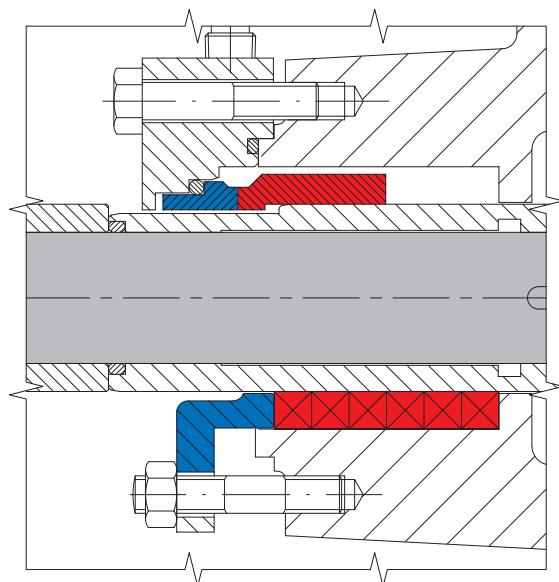
The seal chamber is suitable to house both a packing seal as well as a mechanical one. The shaft near the seal is protected by specific special steel shaft sleeves that facilitate the maintenance. The mechanical seals are standardised according to standard EN 12756; and can be of the following kinds:

- *Balanced or simple mechanical seal, cooled by the pumped liquid or externally flushed through a specific orifice.*
- *Double mechanical or cartridge seal to be used with liquids which are particularly aggressive and/or hot.*

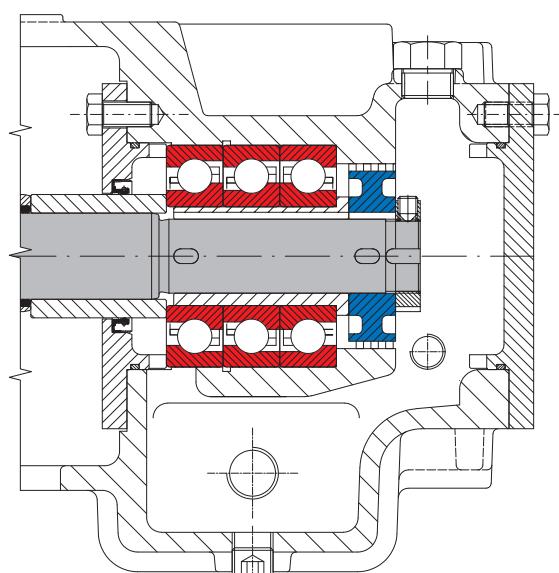
La pompa è dotata di una doppia (singola se versione HPA e HPMA) supportazione con cuscinetti a sfere e a rulli, progettata per sostenerne la spinta assiale residua prodotta dalle giranti. I cuscinetti possono essere lubrificati a grasso, oppure ad olio con apposita camera di lubrificazione. Nel lato "NDE" sono presenti 3 cuscinetti a sfere obliqui per compensare la spinta naturale delle giranti e l'eventuale contro-spinta. Nel lato "DE" è alloggiato un cuscinetto a rulli che permette eventuali dilatazioni assiali dell'albero.

The pump is equipped with a (single if the version is HPA and HPMA) ball or roller bearing double support, designed to support the residual axial thrust produced by the impellers. The bearings can be grease lubricated or with oil with a specific lubrication chamber. On the "NDE" side there are 3 oblique ball bearings to compensate the impeller's natural thrust and any counterthrust. On the "DE" side a roller bearing is housed that allows any axial expansion of the shaft.

Camera di tenuta • Seal housing



Supporti cuscinetti • Bearings housing



Materiali ed esecuzioni disponibili

Available materials and executions

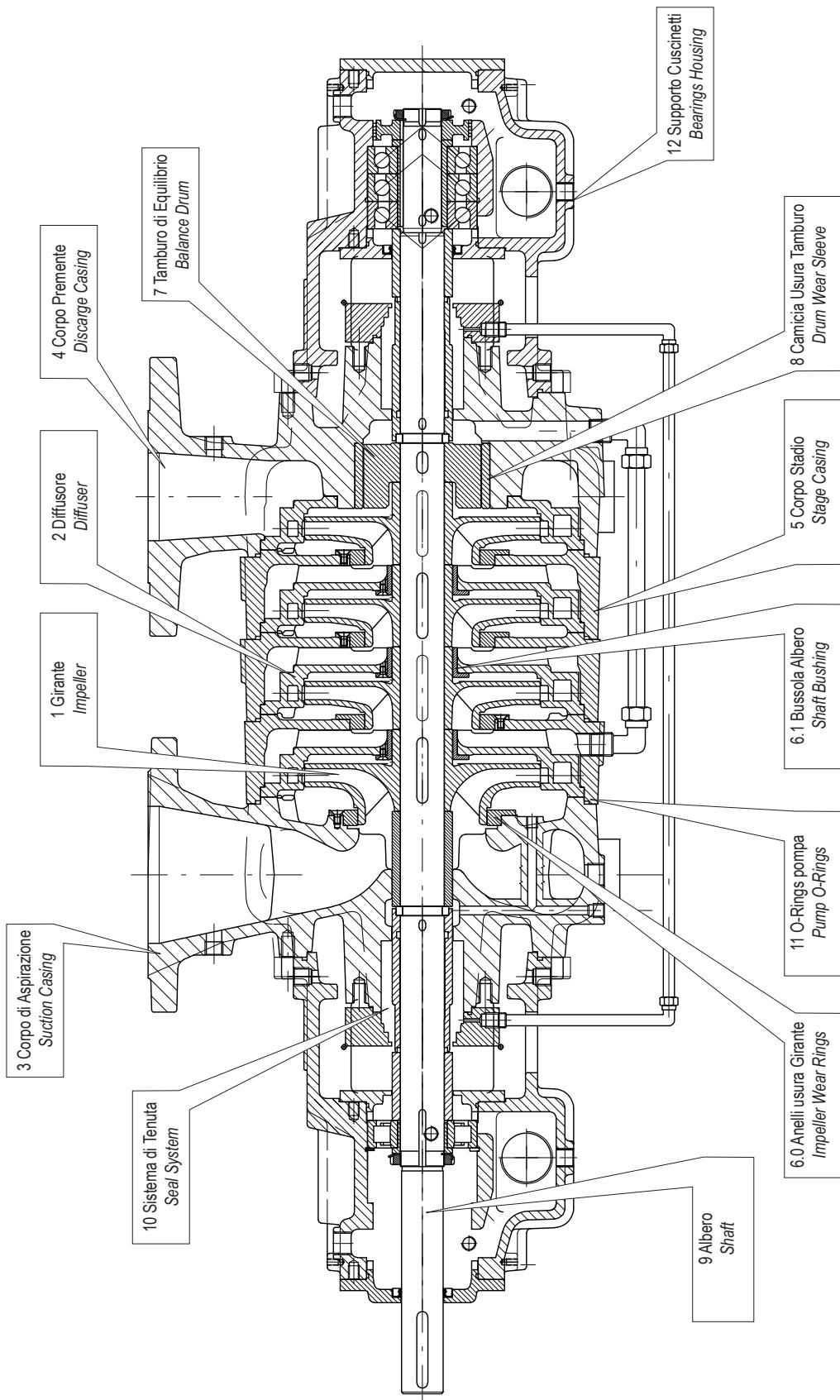
Materiali dei principali componenti - Main pump materials parts

Rif. Ref.	Descrizione parte Part description	Esecuzione materiali - Material Executions (**)						
		Ghisa / Cast Iron	S.S. AISI316	S.S. DUPLEX	S.S. SUPER DUPLEX			
1	Girante Impeller	(*) EN (G G25) ASTM (A48 : Nr.35)	EN (X2CrNiMo1712) 1.4404 ASTM (316L)	EN (X2CrNiMoN22.5.3) 1.4462 ASTM (S1803)	EN (X2CrNiMoN25.7.4) 1.4410 UNS S32750			
2	Diffusore Diffuser	(*) EN (G G25) ASTM (A48 : Nr.35)	EN (X2CrNiMo1712) 1.4404 ASTM (316L)	EN (X2CrNiMoN22.5.3) 1.4462 ASTM (S1803)	EN (X2CrNiMoN25.7.4) 1.4410 UNS S32750			
3	Corpo aspirante Suction casing	EN (G GG42) ASTM (A536 : Gr.65-A5-12)	EN (X2CrNiMo1712) 1.4404 ASTM (316L)	EN (X2CrNiMoN22.5.3) 1.4462 ASTM (S1803)	EN (X2CrNiMoN25.7.4) 1.4410 UNS S32750			
4	Corpo premente Discage casing	EN (G GG42) ASTM (A536 : Gr.65-A5-12)	EN (X2CrNiMo1712) 1.4404 ASTM (316L)	EN (X2CrNiMoN22.5.3) 1.4462 ASTM (S1803)	EN (X2CrNiMoN25.7.4) 1.4410 UNS S32750			
5	Corpo di stadio Stage casing	EN (G GG42) ASTM (A536 : Gr.65-A5-12)	EN (X2CrNiMo1712) 1.4404 ASTM (316L)	EN (X2CrNiMoN22.5.3) 1.4462 ASTM (S1803)	EN (X2CrNiMoN25.7.4) 1.4410 UNS S32750			
6.0	Anello di usura girante Impeller Wear ring	EN (G Cu Sn 12) ASTM (B427 : C90800)	Stabil Peek ST530					
6.1	Bussola Albero Shaft Bushing	Su richiesta On Request	Stabil Peek ST530					
7	Tamburo di equilibrio Balance drum	EN (X 30 Cr13) ASTM (420)	EN (X2CrNiMo1712) 1.4404 ASTM (316L)	EN (X2CrNiMoN22.5.3) 1.4462 ASTM (S1803)	EN (X2CrNiMoN25.7.4) 1.4410 UNS S32750			
8	Camicia d'usura Tamburo Drum Wear Sleeve	Non presente Absent	Stabil Peek ST530					
9	Albero Shaft	EN (X 30 Cr13) ASTM (420)		EN (X2CrNiMoN22.5.3) 1.4462 ASTM (S1803)	EN (X2CrNiMoN25.7.4) 1.4410 UNS S32750			
10	Sistema di Tenuta Seal System	Baderna Gland Packing	Tenuta Meccanica Mechanical Seal Carb./SIC/EPDM					
11	O-Rings Pompa Pump O-Rings	EPDM						
12	Supporto Cuscinetti Bearings housing	EN (G G25) ASTM (A48 : Nr.35)						

(*) Per queste parti sono disponibili su richiesta i materiali in Bronzo e acciaio AISI 316 / For these items Bronze and Stainless Steel AISI 316 materials are available on request. · (***) Materiali ed esecuzioni speciali sono disponibili su richiesta / Special Materials and executions are available on request.

Sezione delle principali parti

Sectional drawing of main pump parts



Materiali e tipi di tenuta

Le **tenute meccaniche** sono unificate secondo EN 12756 e disponibili nella versione "bilanciata" o "non bilanciata" secondo il tipo MG12 e H7N.

Tipo MG12 - bidirezionale non bilanciata
Materiali e diam. "d1" di H75N sono come MG12

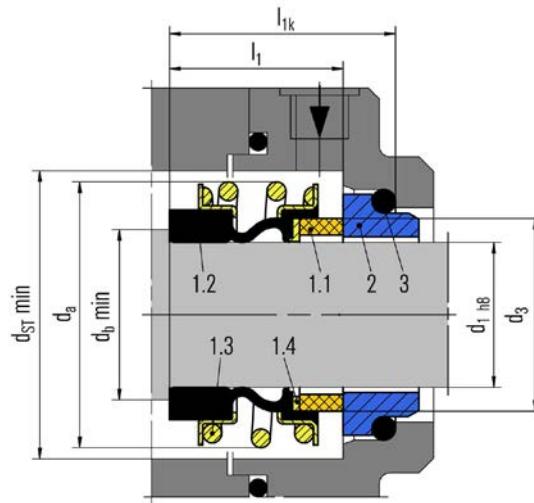
Tenuta meccanica Burgmann
tipo MG12 non bilanciata

Burgmann mechanical seal
type MG12 un-balanced

Seal materials and types

The **mechanical seals** are standardized according to EN 12756 and available on "balanced" and "un-balanced" types, with model codes MG12 e H7N.

Model MG12 un-balanced and bi-directional
Materials and diam. "d1" for H75N are as per MG12



eMG12

Item Description

- 1.1 Seal face
- 1.2 Bellows
- 1.3 Set of springs
- 1.4 PEEK-PTFE disk
- 2 Seat (G6)
- 3 O-Ring or cup rubber

Materiali delle tenute meccaniche / Mechanical seals materials

	POSIZIONE / POSITION 1.1 - 2	POSIZIONE / POSITION 1.2 - 3	POSIZIONE / POSITION 1.3
A	Carbone impregnato Antimonio <i>Antimony impregnated Carbon</i>	E : EPDM	G : AISI 316
Q1	Carburo di Silicio <i>Silicon Carbide</i>	V : FPM	

Combinazioni dei Materiali / Available Materials Combinations : MG12 – H7N

Tipo Type	POSIZIONE / POSITION					TEMPERATURA TEMPERATURE (°C)
	1.1	2	1.2 - 3	1.3	1.4	
	Parte Rotante <i>Rotating Part</i>	Parte fissa <i>Stationary Part</i>	Elastomeri <i>Elastomers</i>	Molla <i>Spring</i>	Altre Parti <i>Other Parts</i>	
TENUTA MECCANICA STANDARD / STANDARD MECHANICAL SEAL						
AQ1EGG	A	Q1	E	G	G	-30 +120
TENUTE MECCANICHE SU RICHIESTA / ON DEMAND MECHANICAL SEALS						
AQ1VGG	A	Q1	V	G	G	-10 +120
Q1Q1EGG	Q1	Q1	E	G	G	-30 +120
Q1Q1VGG	Q1	Q1	V	G	G	-10 +120

Dimensioni / Dimensions mm.

Taglio Pompa Pump size	d ₁	d ₃	d _a	d _b	d _m	d _s	d _{st}	I	I ₁	I _{lk}
HP 25	32	40.2	53.5	46.0	41	41	55	27.5	35.0	42.5
HP 32	40	48.8	62.0	55.0	55	49	64	30.0	36.0	45.0
HP 50	45	53.8	68.0	60.0	55	55	70	30.0	36.0	45.0
HP 80	50	58.8	74.0	65.0	60	60	77	30.5	38.0	47.5
HP 100	55	64.2	81.0	72.0	65	65	83	35.0	36.5	47.5
HP 125	70	80.0	99.5	90.0	82	82	103	40.0	48.7	60.0
HP 150 - 250	85	96.0	120.0	107.0	97	97	124	41.0	46.0	60.0

Materiali e tipi di tenuta

Seal materials and types

<p>Tipo H7N - bidirezionale bilanciata Materiali e diamensioni</p> <p>Tenuta meccanica Burgmann tipo H7N bilanciata</p> <p>Burgmann mechanical seal type H7N balanced</p>		<p>Model H7N balanced and bi-directional Materials and diamensions</p> <table border="1"> <thead> <tr> <th>Item</th> <th>Part no. to DIN 24250</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>1.1</td> <td>472</td> <td>Seal face</td> </tr> <tr> <td>1.2</td> <td>485</td> <td>Drive collar</td> </tr> <tr> <td>1.3</td> <td>474</td> <td>Thrust ring</td> </tr> <tr> <td>1.4</td> <td>412.1</td> <td>O-Ring</td> </tr> <tr> <td>1.5</td> <td>477</td> <td>Spring</td> </tr> <tr> <td>1.6</td> <td>904</td> <td>Set screw</td> </tr> <tr> <td>2</td> <td>475</td> <td>Seat (G9)</td> </tr> <tr> <td>3</td> <td>412.2</td> <td>O-Ring</td> </tr> </tbody> </table>	Item	Part no. to DIN 24250	Description	1.1	472	Seal face	1.2	485	Drive collar	1.3	474	Thrust ring	1.4	412.1	O-Ring	1.5	477	Spring	1.6	904	Set screw	2	475	Seat (G9)	3	412.2	O-Ring
Item	Part no. to DIN 24250	Description																											
1.1	472	Seal face																											
1.2	485	Drive collar																											
1.3	474	Thrust ring																											
1.4	412.1	O-Ring																											
1.5	477	Spring																											
1.6	904	Set screw																											
2	475	Seat (G9)																											
3	412.2	O-Ring																											

Materiali delle tenute meccaniche / Mechanical seals materials

	POSIZIONE / POSITION 1.1 - 2	POSIZIONE / POSITION 1.4 - 3	POSIZIONE / POSITION 1.2 - 1.3 - 1.5 - 1.6
A	Carbone impregnato Antimonio <i>Antimony impregnated Carbon</i>	E : EPDM	C : AISI 316
Q1	Carburo di Silicio <i>Silicon Carbide</i>	V : FPM	

Combinazioni dei Materiali / Available Materials Combinations : MG12 – H7N

Tipo Type	POSIZIONE / POSITION					TEMPERATURA TEMPERATURE (°C)
	1.1		2	1.4 - 3	1.5	
	Parte Rotante <i>Rotating Part</i>	Parte fissa <i>Stationary Part</i>	Elastomeri <i>Elastomers</i>	Molla <i>Spring</i>	Altre Parti <i>Other Parts</i>	
TENUTA MECCANICA STANDARD / STANDARD MECHANICAL SEAL						
AQ1EGG	A	Q1	E	G	G	-30 +120
TENUTE MECCANICHE SU RICHIESTA / ON DEMAND MECHANICAL SEALS						
AQ1VGG	A	Q1	V	G	G	-10 +120
Q1Q1EGG	Q1	Q1	E	G	G	-30 +120
Q1Q1VGG	Q1	Q1	V	G	G	-10 +120

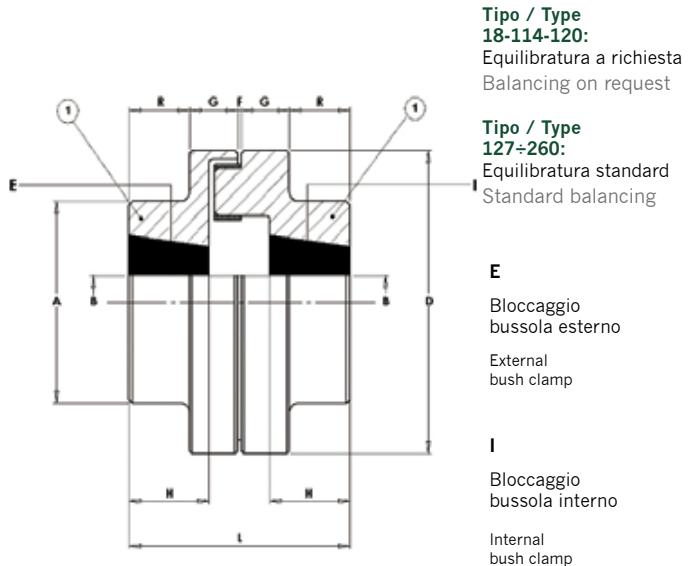
Dimensioni / Dimensions mm.

Taglio Pompa Pump size	d ₁	d ₂	d ₃	d ₆	d ₇	d ₈	d ₉	l _{1k}	l _{1N}	l ₂	l ₃	l ₅	l ₆	l ₇	l ₈	l ₉	l ₃₉	l ₄₀	A	b	e	f	h ₁	h ₂	k	m _x
HP 25	32	38	55	42.0	48.0	3	59	50.0	65	20	38.5	2.0	5	9.0	19.5	11.5	24.5	9.0	24.0	6	8.0	8.0	6.6	22.6	9	M6
HP 32	40	45	62	51.0	58.0	4	66	52.5	75	23	38.5	2.0	6	9.0	22.0	14.0	26.0	11.0	24.0	6	8.0	8.0	6.6	22.6	9	M6
HP 50	45	50	67	56.0	63.0	4	71	52.5	75	23	38.5	2.0	6	9.0	22.0	14.0	26.0	11.0	24.0	6	8.0	8.0	6.6	22.6	9	M6
HP 80	50	55	72	62.0	70.0	4	76	57.5	85	25	42.5	2.5	6	9.0	23.0	15.0	26.5	12.5	24.0	6	8.0	8.0	6.6	22.6	9	M6
HP 100	55	60	81	67.0	75.0	4	85	57.5	85	25	42.5	2.5	6	9.0	23.0	15.0	28.5	12.5	26.0	8	8.0	9.0	6.6	24.6	11	M8
HP 125	70	75	99	83.0	92.0	4	105	70.0	95	28	52.0	2.5	7	9.0	26.0	18.0	30.5	14.5	26.0	8	8.0	10.0	6.6	24.6	11	M8
HP 150-250	85	90	114	100.0	110.0	4	119	75.0	105	28	56.8	3.0	7	9.0	26.2	18.2	30.2	14.0	26.0	10	8.0	10.0	6.6	24.6	11	M8

Giunto flessibile tipo GTB



Flexible Coupling GTB type



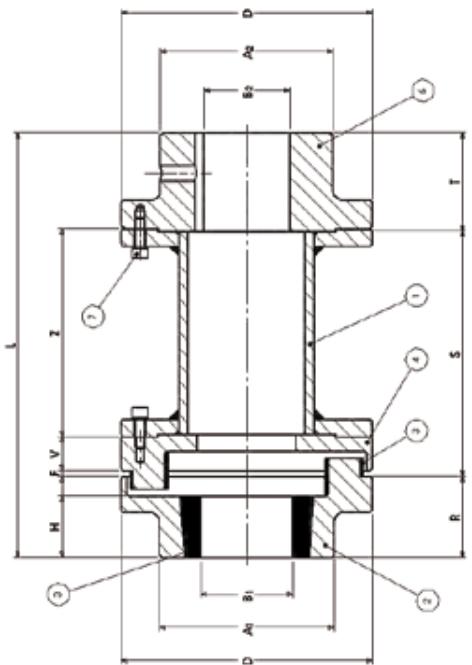
DATI TECNICI / Technical data

Tipo Type	Codice giunto Coupling code	Tk _n	Tk _{max}	Max rpm	A	B _{min}	B _{max}	D	F	G	H	L	R	1 Codice semigiunto Half coupling code	Elemento elastico Flexible element	Fori standard Standard bore	Tipo bussola Bush type		Peso Weight [kg]	
					[Nm]	[Nm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]							
18	1018B01 I+I 1018B02 E+E 1018B03 I+E	132	396	6000	56	12	26	85	2	20	20	72	15	I - 3018B01 E - 3018B02	3	4080003	12-14-15-16-18-19-20-22-24-25-26	B2820 11.08	6	1,4
114	1114B01 I+I 1114B02 E+E 1114B03 I+E	166	498	5000	70	12	32	100	3	20	25	83	20	I - 3114B01 E - 3114B02	4	4080003	12-14-15-16-18-19-20-22-24-25-26-28-30-32	B3025 12.10	20	2,3
114	1114B13	166	498	5000	70	12	32	100	3	20	25	83	20	I - 3114B01	4	4080003	12-14-15-16-18-19-20-22-24-25-26-28-30-32-35-38-40-42	B3025 12.10	20	2,5
					88		42							E - 3114B03			12-14-15-16-18-19-20-22-24-25-26-28-30-32-35-38-40-42	B4025 16.10		
120	1120B01 I+I 1120B02 E+E 1120B03 I+E	323	969	4800	82	12	42	125	3	20	25	83	20	I - 3120B01 E - 3120B02	5	4080003	12-14-15-16-18-19-20-22-24-25-26-28-30-32-35-38-40-42	B4025 16.10	20	2,8
120	1120B18	323	969	4800	82	12	42	125	3	20	25	88	20	I - 3120B01	5	4080003	12-14-15-16-18-19-20-22-24-25-26-28-30-32-35-38-40-42	B4025 16.10	20	3,5
					105	15	50				30		25	E - 3120B03			16-18-19-20-22-24-25-26-28-30-32-35-38-40-42-45-48-50	B5030 20.12		
127	1127B01 I+I 1127B02 E+E 1127B03 I+E	402	1206	4000	102	16	50	145	3	27	30	95	19	I - 3127B01 E - 3127B02	5	4080004	16-18-19-20-22-24-25-26-28-30-32-35-38-40-42-45-48-50	B5030 20.12	30	5,4
140	1140B01 I+I 1140B02 E+E 1140B03 I+E	546	1638	3000	112	18	65	165	3	27	45	125	34	I - 3140B01 E - 3140B02	6	4080004	18-19-20-22-24-25-26-28-30-32-35-38-40-42-45-48-50-55-60-65	B6545 25.17	50	7,6
170	1170B01 I+I 1170B02 E+E 1170B03 I+E	855	2565	2900	142	25	75	204	3	29	50	135	37	I - 3170B01 E - 3170B02	8	4080004	25-26-28-30-32-35-38-40-42-45-48-50-55-60-65-70-75	B7550 30.20	90	13
210	1210B01 I+I 1210B02 E+E 1210B03 I+E	1396	4188	2900	142	25	75	245	3	32	50	135	34	I - 3210B01 E - 3210B02	10	4080004	17,5			
260	1260B01 I+I 1260B02 E+E 1260B03 I+E	2100	6300	2200	172	45	90	284	3	34	90	215	72	I - 3260B01 E - 3260B02	12	4080004	45-48-50-55-60-65-70-75-80-85-90	B9090 35.35	110	34,5

In fase di ordine, specificare codice giunto, diametro "B", bloccaggio "I" o "E".

In placing an order, please specify the coupling code, the diameter "B", the clamp "I" or "E".

Giunto con spaziatore tipo GTBD Spacer Coupling GTBD type



DATI TECNICI / Technical data

Codice complessivo Overall code	Tipo Type	Tk _n [Nm]	Tk _{max} [Nm]	Max rpm	Dimensioni / Dimensions										Distanziale Spacer	Mozzo Hub	Bussola Bush	Flangia Flange	Tassello Insert	Mozzo lato Motore Motor side hub	Viti Screws	Coppia di serraggio Tightening torque [Nm]				
					D [mm]	A1 [mm]	A2 [mm]	B1max [mm]	B2max [mm]	F [mm]	V [mm]	H [mm]	R [mm]	S [mm]	T [mm]	L [mm]	Z [mm]									
1018B04					85	56	55	26	32	5	18.5	20	35	100	45	180	78	00000001	I-3018B01							
1018B05	18	132	396	6000	85	56	55	26	32	5	18.5	20	35	100	45	180	78	00000001	E-3018B02	B2820	0018001	4080003	3018003	N° 6 M8x22	26	
1018B06					85	56	55	26	32	5	18.5	20	35	140	45	220	118	00000002	I-3018B01							
1018B07					85	56	55	26	32	5	18.5	20	35	140	45	220	118	00000002	E-3018B02							
1114B04					100	70	70	32	42	5	18.5	25	25	40	100	45	185	78	00000001	I-3114B01						
1114B05	114	166	498	5000	100	70	70	32	42	5	18.5	25	25	40	100	45	185	78	00000003/1	F-3114B02	B3025	0114003	4080003	3114003	N° 8 M8x22	26
1114B06					100	70	70	32	42	5	18.5	25	25	40	140	45	255	118	0000004/1	I-3114B01						
1114B07					100	70	70	32	42	5	18.5	25	25	40	140	45	255	118	0000004/1	E-3114B02						
1120B04					125	82	90	42	55	5	18.5	25	25	40	100	50	190	78	0000005/1	I-3120B01						
1120B05					125	82	90	42	55	5	18.5	25	25	40	100	50	190	78	0000005/1	E-3120B02						
1120B06	120	323	969	4800	125	82	90	42	55	5	18.5	25	25	40	140	50	230	118	0000006/1	I-3120B01	B4025	0120004	4080003	3120004	N° 10 M8x22	26
1120B07					125	82	90	42	55	5	18.5	25	25	40	140	50	230	118	0000006/1	E-3120B02						
1120B08					125	82	90	42	55	5	18.5	25	25	40	180	50	270	158	0000007/1	I-3120B01						
1127B12					145	102	100	50	65	5	25.5	30	46	100	70	216	71	00000117	E-3127B01							
1127B13					145	102	100	50	65	5	25.5	30	46	100	70	216	71	00000117	E-3127B02							
1127B14					145	102	100	50	65	5	25.5	30	46	140	70	256	111	00000118	I-3127B01							
1127B15	127	402	1206	4000	145	102	100	50	65	5	25.5	30	46	140	70	256	111	00000118	E-3127B02	B5030	0127006	4080004	3127002	N° 10 M8x25	26	
1127B16					145	102	100	50	65	5	25.5	30	46	180	70	296	151	00000119	I-3127B01							
1127B17					145	102	100	50	65	5	25.5	30	46	180	70	296	151	00000119	E-3127B02							
1127B18					145	102	100	50	65	5	25.5	30	46	200	70	316	171	00000222	I-3127B01							
1140B14					165	112	110	65	65	5	25.5	45	61	100	65	226	71	0000009	I-3140B01							
1140B15	140	546	1638	3000	165	112	110	65	65	5	25.5	45	61	100	65	226	71	0000009	E-3140B02	B6545	0140007	4080004	3140005	N° 12 M8x25	26	
1140B16					165	112	110	65	65	5	25.5	45	61	140	65	266	111	00000110	I-3140B01							
1140B17					165	112	110	65	65	5	25.5	45	61	140	65	266	111	00000110	E-3140B02							
1170B12					204	142	140	75	85	5	27.5	50	66	140	80	286	109	00000113	I-3170B01							
1170B13					204	142	140	75	85	5	27.5	50	66	140	80	286	109	00000113	E-3170B02							
1170B14					204	142	140	75	85	5	27.5	50	66	200	80	346	169	00000114	I-3170B01	B7550	0170006	4080004	3170005	N° 16 M8x25	26	
1170B15	170	855	2565	2900	204	142	140	75	85	5	27.5	50	66	200	80	346	169	00000114	E-3170B02							
1170B16					204	142	140	75	85	5	27.5	50	66	200	80	346	169	00000114	I-3170B01							
1170B17					204	142	140	75	85	5	27.5	50	66	250	80	396	219	00000116	I-3210B01	B9090	0210004	4080004	3210006	N° 20 M8x30	26	
1210B08	210	1396	4188	2900	245	142	165	75	100	5	30.5	50	66	250	110	426	216	00000116	E-3210B02							
1210B09					245	142	165	75	100	5	30.5	50	66	250	110	426	216	00000116	E-3210B02							

Le caratteristiche e le dimensioni contenute in questo catalogo possono essere variate senza preavviso.

In caso di applicazioni particolari, Vi consigliamo di consultare il nostro ufficio tecnico.

I codici sono solo indicativi, in quanto viene assegnato un codice specifico ad ogni singola configurazione foro+cava.

Features and dimensions can be subjected to change without notice.

In case of particular applications, please contact our Engineering Department.

Codes shown are indicative only, as a specific code is assigned for each bore-keyway configuration.

Caratteristiche costruttive e dati d'impiego

Constructive feature
and operative data

HP - HPA

TAGLIA POMPA / PUMP SIZE	25.1 INOX	25.2 INOX	25.2 INOX	32.2 INOX	32.2 INOX	50.2	50.4	50.6	80.2	80.4	80.6	100.2	100.4	100.6	125.2	125.4	125.6	150.2	150.4	150.6	250.2	250.4
Pressione massima aspirazione Max suction pressure																						
Pressione massima mandata Max delivery pressure																						
Temperatura massima Max liquid temperature																						
Lubrificazione cuscinetti Ball bearing lubrication																						
Diametro sporgenza Shaft projection diameter	18	28		32		38		42		42		55		70		70		70		70		70
P/n (kW/1') - albero AISI 420 P/n (kW/1') - shaft AISI 420	0,0100	0,0475		0,0745		0,135		0,186		0,373		0,745		0,745		0,745		0,745		0,745		0,745
P/n (kW/1') - albero AISI 316 P/n (kW/1') - shaft AISI 316	0,0077	0,0365		0,0575		0,104		0,143		0,287		0,573		0,573		0,573		0,573		0,573		0,573
Cuscinetto lato accoppiamento Ball bearing side drive	NU 306	NU 307		NU 308		NU 309		NU 310		NU 314		NU 317		NU 317		NU 317		NU 317		NU 317		NU 317
Cuscinetto lato opp. accopp. Ball bearing side end drive	3306x2	7307x2		7308x2		7309x2		7310x2		7314x2		7317x2		7317x2		7317x2		7317x2		7317x2		7317x2
Diametro tenuta baderma (mm) Gland packing diameter (mm)	35	45		50		55		61		75		90		90		90		90		90		90
Sezione baderma Gland packing section	8x8	10x10		10x10		10x10		10x10		12x12		14x14		14x14		14x14		14x14		14x14		14x14
N° anelli baderma No. Gland packing rings	4	5		6		6		6		5		5		5		5		5		5		5
Tipo baderma fino a 25 bar Type Gland packing max 25 bar																						
Tipo baderma oltre 25 bar Type Gland packing > 25 bar																						
Diametro tenuta meccanica Mechanical seal diameter	32	40		45		50		55		70		85		85		85		85		85		85
Numeri max. stadi a 3000 /1' Max number stage 3000 r.p.m.	20	20	19	13	13	11	10	10	8	8	8	6	6	4	4	4	4	4	4	2	2	
Numeri max. stadi a 1500 /1' Max number stage 1500 r.p.m.	25	25	25	25	25	20	20	20	18	18	18	16	16	12	12	12	12	12	12	10	10	

HPM - HPMA

TAGLIA POMPA / PUMP SIZE	25.1 INOX	25.2 INOX	25.2 INOX	32.2 INOX	32.2 INOX	50.2 INOX	50.4 INOX	50.6 INOX	80.2 INOX	80.4 INOX	80.6 INOX	100.2 INOX	100.4 INOX	100.6 INOX	125.2 INOX	125.4 INOX	125.6 INOX	150.2 INOX	150.4 INOX	150.6 INOX	250.2 INOX	250.4 INOX
Pressione massima aspirazione Max suction pressure																						
Pressione massima mandata Max delivery pressure																						
Temperatura massima Max liquid temperature																						
Lubrificazione cuscinetti Ball bearing lubrication																						
Raffreddamento cuscinetti Ball bearing cooling																						
Diametro sporgenza Shaft projection diameter	20		28		32		38		42		46		55		55		70		70		70	
P/n (kW/1') - albero AISI 420 P/n (kW/1') - shaft AISI 420	0,0155		0,0475		0,0745		0,135		0,186		0,245		0,373		0,373		0,745		0,745		0,745	
P/n (kW/1') - albero AISI 316 P/n (kW/1') - shaft AISI 316	0,0120		0,0365		0,0575		0,104		0,143		0,207		0,287		0,287		0,573		0,573		0,573	
Cuscinetto lato accoppiamento Ball bearing side drive	NU 306		NU 307		NU 308		NU 309		NU 310		NU 311		NU 314		NU 314		NU 317		NU 317		NU 317	
Cuscinetto lato opp. accopp. Ball bearing side end drive	7306 x 2		7307 x 2		7308 x 2		7309 x 2		7310 x 2		7311 x 2		7312 x 2		7312 x 2		7317 x 2		7317 x 2		7317 x 2	
Diametro tenuta baderna Gland packing diameter	35		45		50		55		61		75		90		90		90		90		90	
Sezione baderna Gland packing section	8 x 8		10 x 10		10 x 10		10 x 10		12 x 12		14 x 14		16 x 16									
N° anelli baderna No. Gland packing rings	4		5		6		6		6		5		5		5		5		5		5	
Tipo baderna Type Gland packing																						
Diametro tenuta meccanica Mechanical seal diameter	32		40		45		50		55		60		70		70		85		85		85	
Numero max. stadi a 3000 /1' Max number stage 3000 r.p.m.	20	20	19	13	13	11	10	10	8	8	8	6	6	6	6	4	4	4	2	2	-	-
Numero max. stadi a 1500 /1' Max number stage 1500 r.p.m.	25	25	25	25	25	20	20	20	18	18	18	16	16	16	16	12	12	10	10	9	8	5

HPR

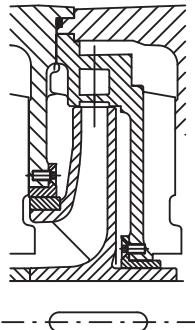
TIPO/TYPE	32.2	32.2 INOX	50.2	50.4	50.6	80.2	80.4	80.6	100.2	100.4	100.6	125.2	125.4	125.6	150.2	150.4	150.6
Pressione massima aspirazione Max suction pressure																	
Pressione massima manda Max delivery pressure																	
Temperatura massima Max liquid temperature																	
Lubrificazione cuscinetti Ball bearing lubrication																	
Raffreddamento cuscinetti Ball bearing cooling																	
Camera di raffreddamento Cooling casing																	
Diametro sporgenza Shaft projection diameter	28		32			38			42			55			70		
P/n (kW/1') - albero AISI 420 P/n (kW/1') - shaft AISI 420	0,0475		0,0745			0,135			0,186			0,373			0,745		
P/n (kW/1') - albero AISI 316 P/n (kW/1') - shaft AISI 316	0,0365		0,0575			0,104			0,143			0,287			0,573		
Cuscinetto lato accoppiamento Ball bearing side drive	NU 307		NU 308			NU 309			NU 310			NU 314			NU 317		
Cuscinetto lato opp. accopp. Ball bearing side end drive	7307 x 3		7308 x 3			7309 x 3			7310 x 3			7314 x 3			7317 x 2		
Diametro tenuta meccanica Mechanical seal diameter	40		45			50			55			70			85		
Numeri max. stadi a 3000 /1' Max number stage 3000 r.p.m.	20	20	17	16	14	13	12	10	10	8	5	5	4	4	3		
Numeri max. stadi a 1500 /1' Max number stage 1500 r.p.m.	25	25	20	20	20	18	18	16	16	12	12	11	11	11	10		

HV

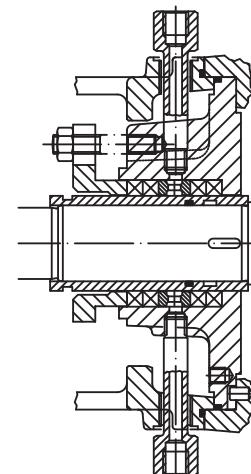
TIPO/TYPE	25.1 INOX	25.2 INOX	25.2 INOX	32.2 INOX	32.2 INOX	50.2	50.4	50.6	80.2	80.4	80.6	100.2	100.4	100.6	125.2	125.4	125.6	150.2	150.4	150.6	250.2	250.4
Pressione massima aspirazione Max suction pressure																						
Pressione massima manda Max delivery pressure																						
Temperatura massima Max liquid temperature																						
Lubrificazione cuscinetti Ball bearing lubrication																						
Diametro sporgenza Shaft projection diameter	18		22		28				32			38			52			65			65	
P/n (kW/1') - albero AISI 420 P/n (kW/1') - shaft AISI 420	0,0100		0,0220		0,0475				0,0745			0,135			0,305			0,542			0,542	
P/n (kW/1') - albero AISI 316 P/n (kW/1') - shaft AISI 316	0,0077		0,0169		0,0365				0,0575			0,104			0,235			0,417			0,417	
Cuscinetto lato accoppiamento Ball bearing side drive	3306x2		7307x2		7308x2				7309x2			7310x2			7314x2			7317x2			7317x2	
Cuscinetto lato opp. accopp. Ball bearing side end drive																						
Diametro tenuta baderma Gland packing diameter	35		45		50				55			61			75			90			90	
Sezione baderma Gland packing section	8x8		10x10		10x10				10x10			12x12			14x14			16x16			16x16	
N° anelli baderma No. Gland packing rings	4		5		6				6			5			5			5			5	
Tipo baderma fino a 25 bar Type Gland packing max 25 bar																						
Tipo baderma oltre 25 bar Type Gland packing > 25 bar																						
Diametro tenuta meccanica Mechanical seal diameter	32		40		45				50			55			70			70			85	
Numero max. stadi a 3000 /1' Max number stage 3000 r.p.m.	14	14	14	14	11	11	9	9	9	7	7	6	6	6	4	4	4	2	2	-	-	
Numero max. stadi a 1500 /1' Max number stage 1500 r.p.m.	14	14	14	14	11	11	10	10	10	8	8	6	6	6	5	5	5	4	4	2	2	

HP · HPM · HPR

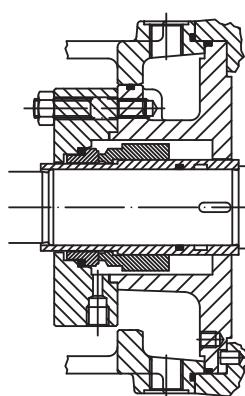
Varianti costruttive - Design variations



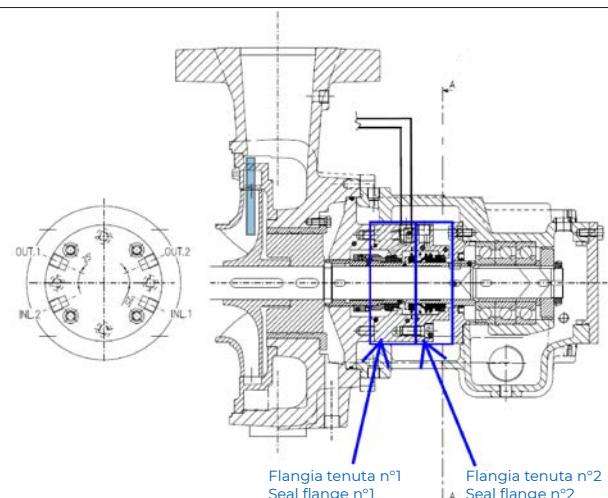
Anello di usura possibili:
singoli e doppi su corpi, giranti e diffusori
 Possible wear rings:
 single or double on casings, impellers and diffusers



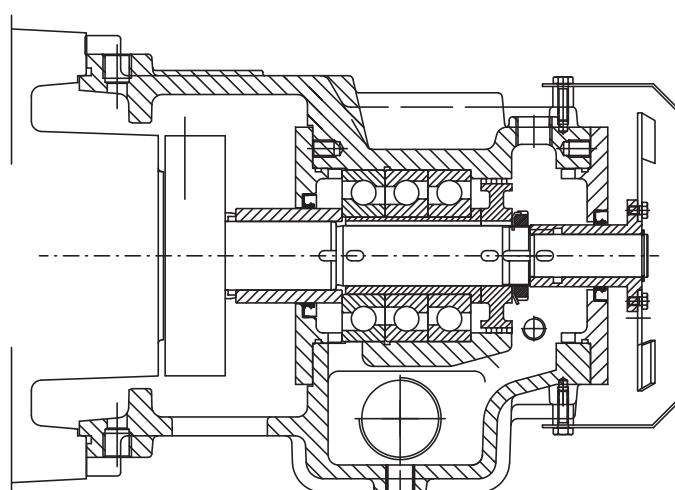
Flussaggio baderne
 Gland packing cooling



Tenuta meccanica con camera di raffreddamento
 Mechanical seal with coal chamber

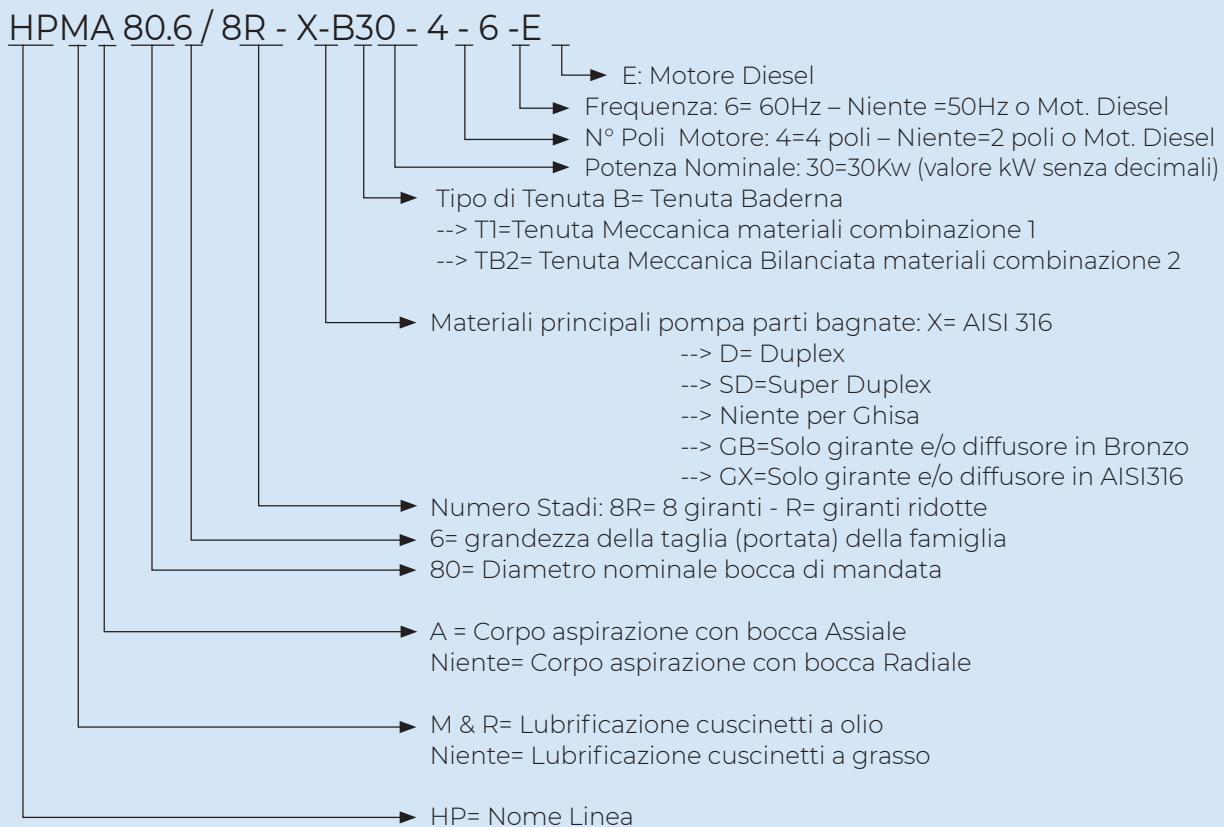


Sistema tenuta doppia come da Plan 55
 Double seal system as per Plan 55

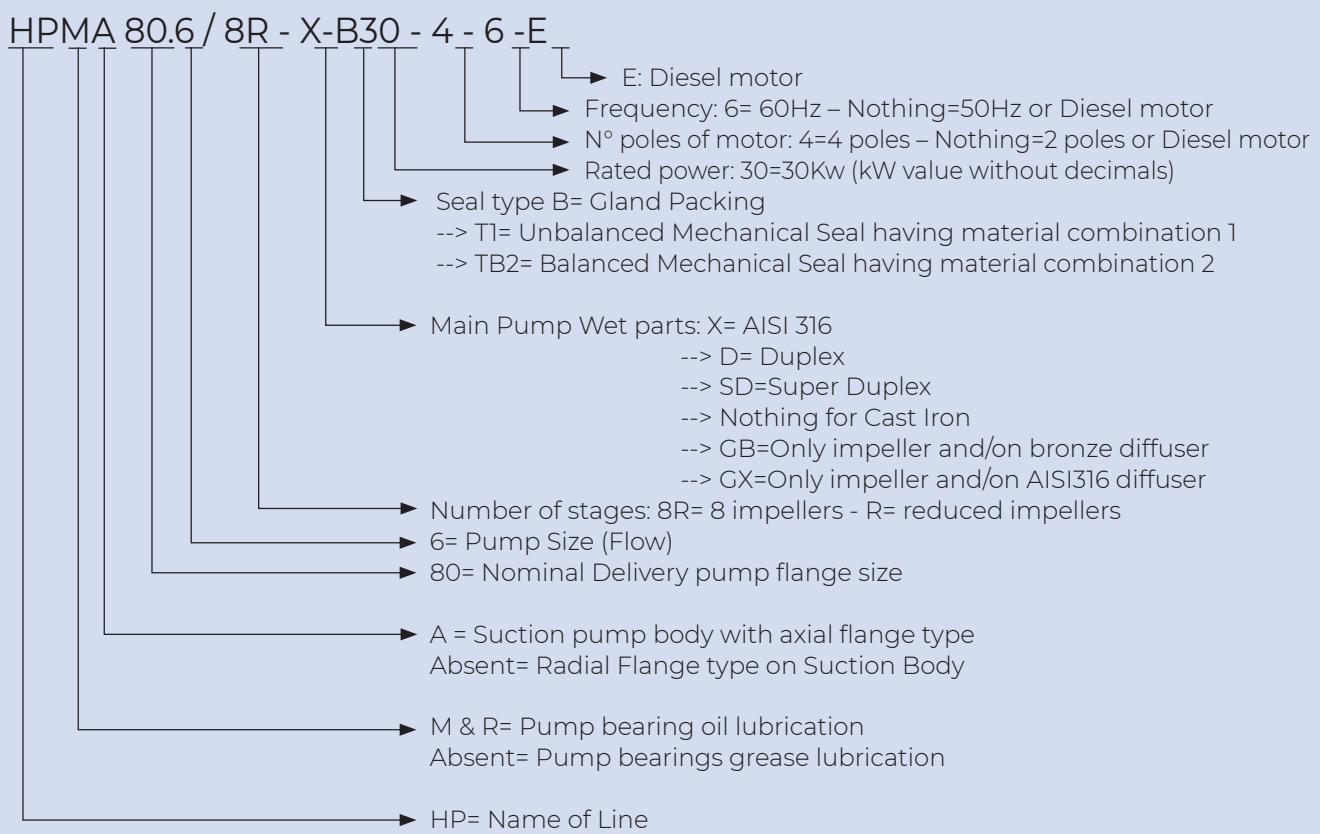


Raffreddamento supporto ad olio con aria
 Oil bearing fan cooling

Chiave di denominazione HP:

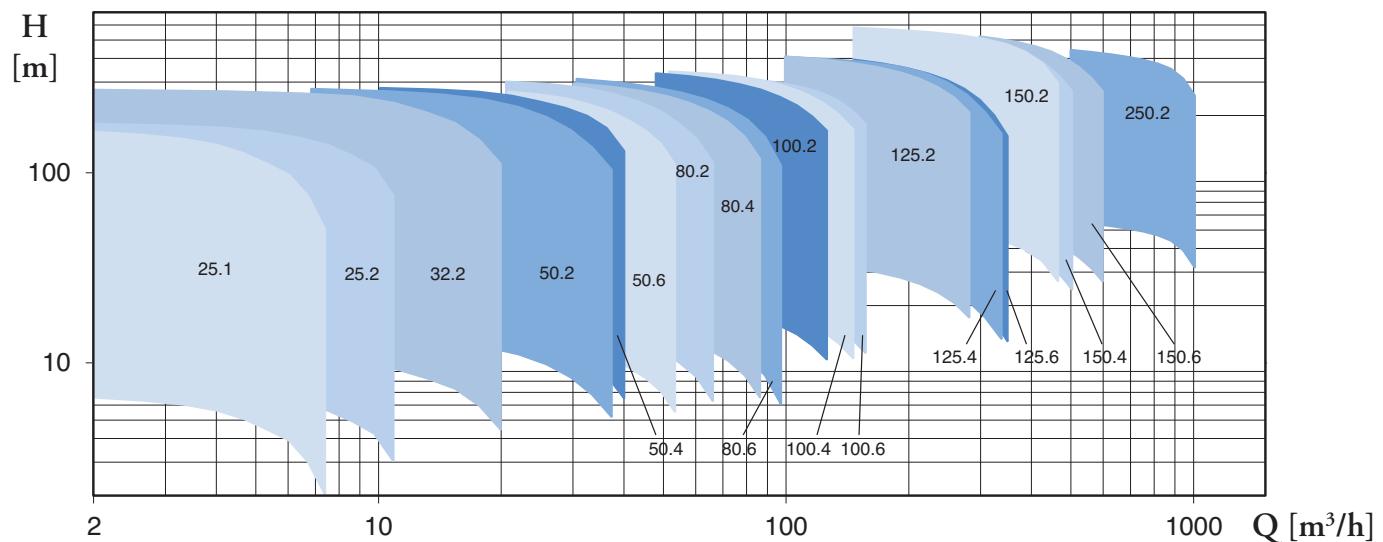


Legend HP:

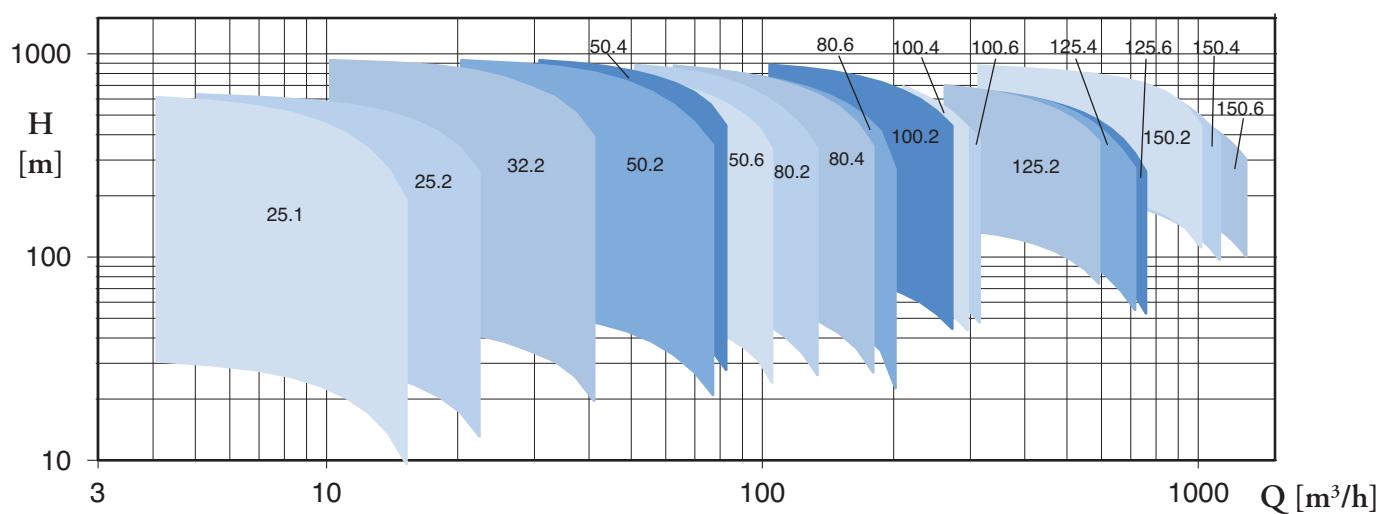


Campi di prestazioni / Performance range

1500 r.p.m.



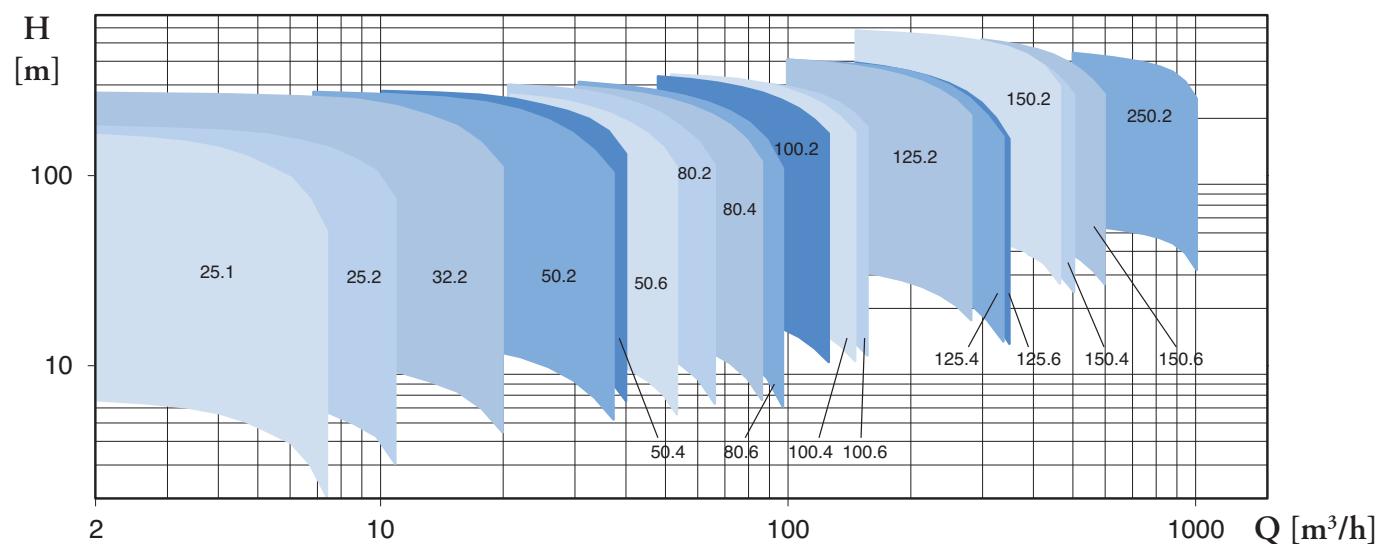
3000 r.p.m.



Curve prestazionali per linea di prodotto 1500 rpm

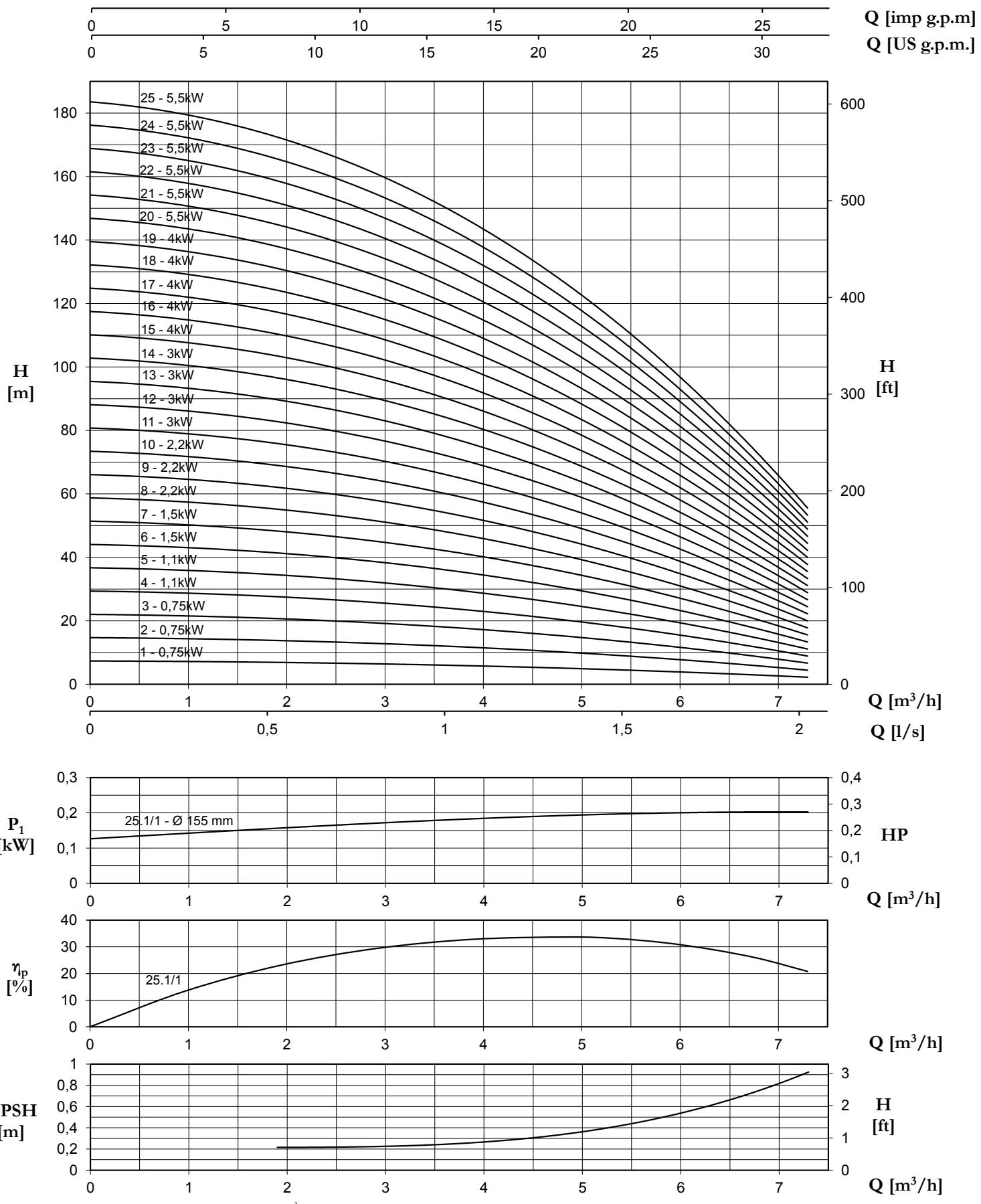
Performance curves for product line 1500 rpm

1500 r.p.m.



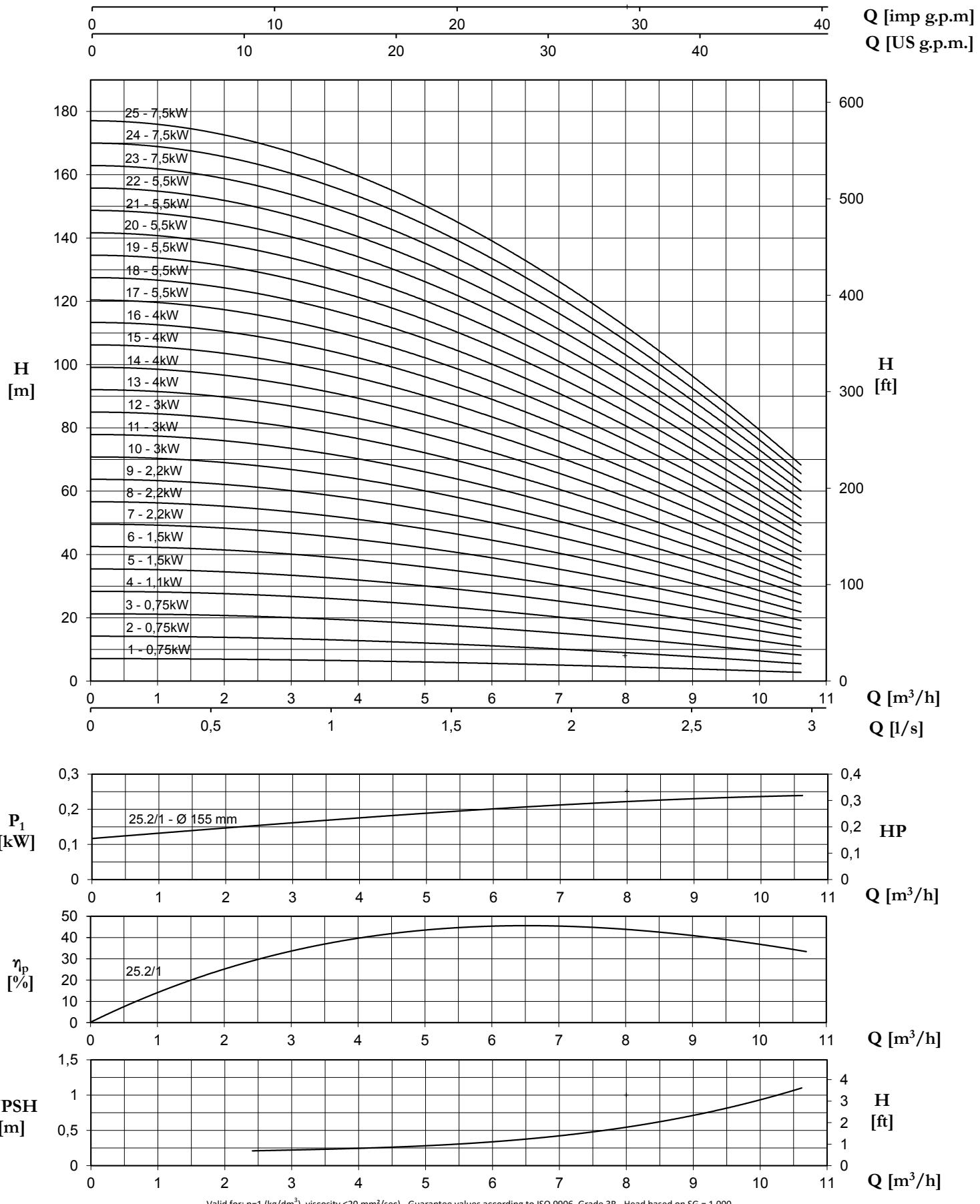
HP 25.1 INOX

1400 r.p.m.



HP 25.2

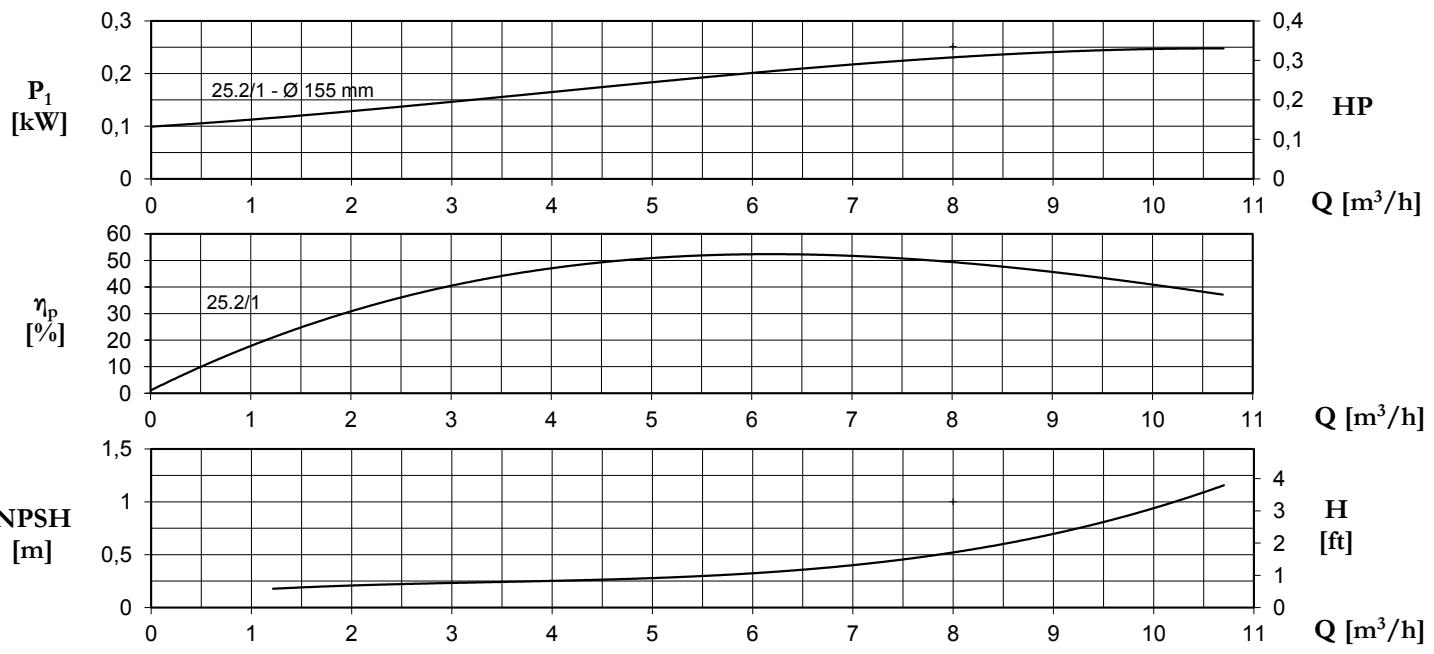
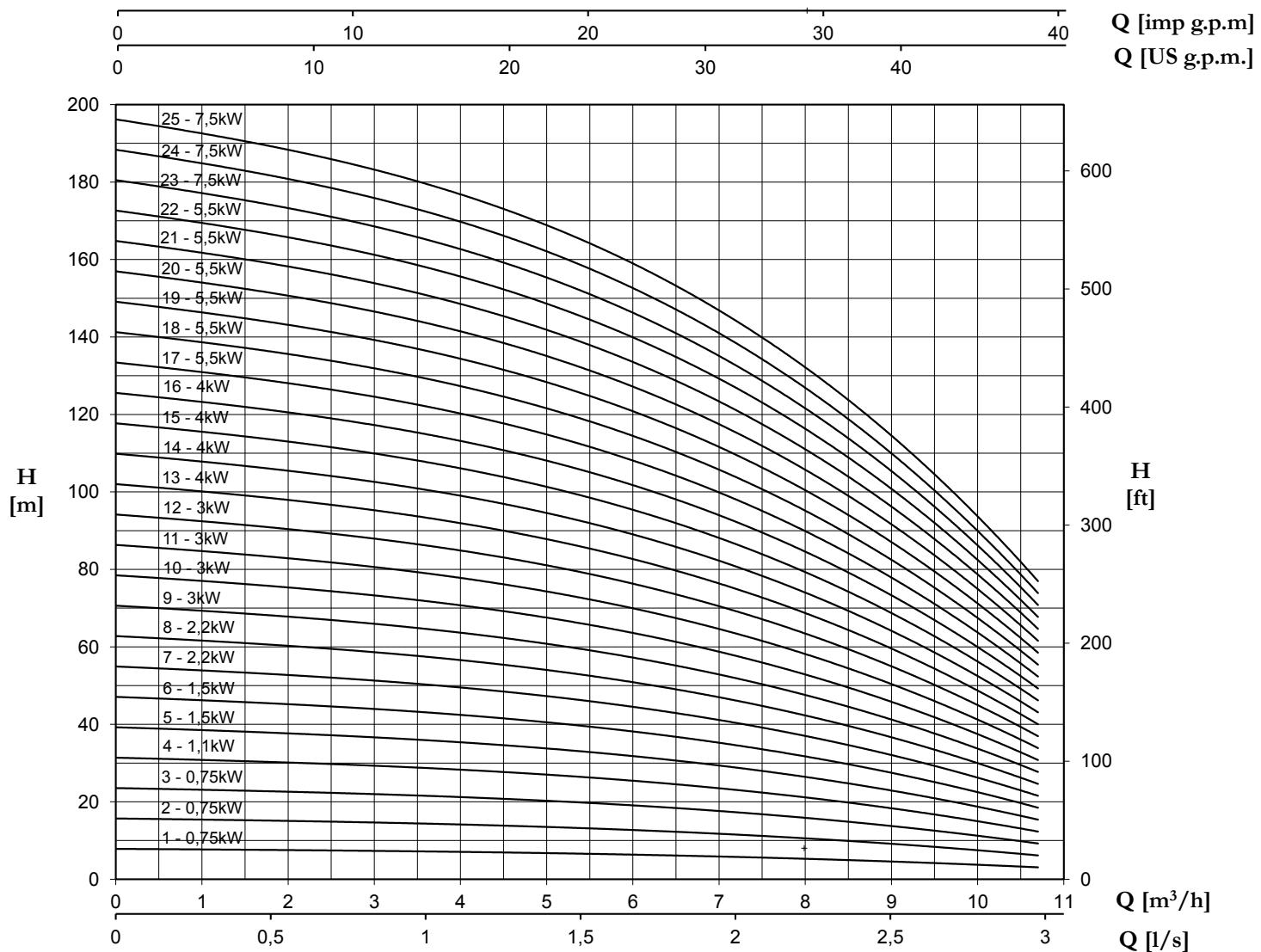
1400 r.p.m.



Valid for: $p=1 \text{ (kg/dm}^3\text{)}$, viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

HP 25.2 INOX

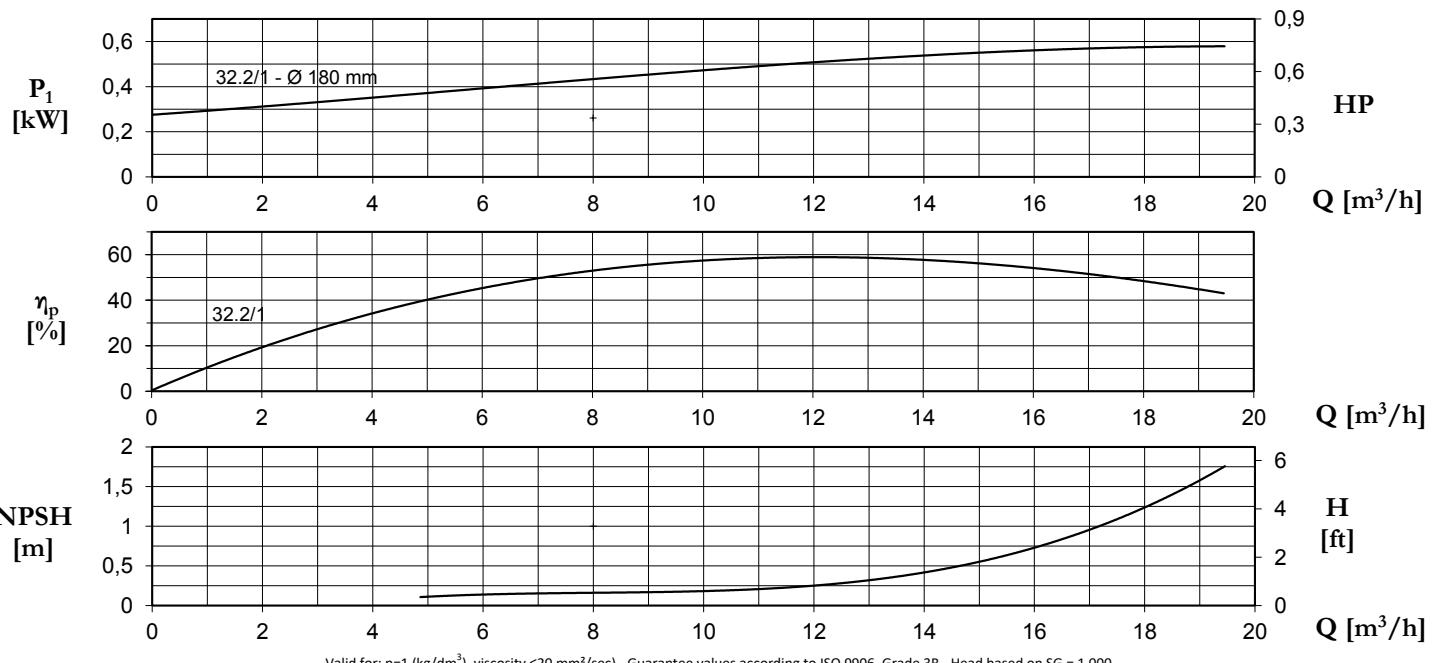
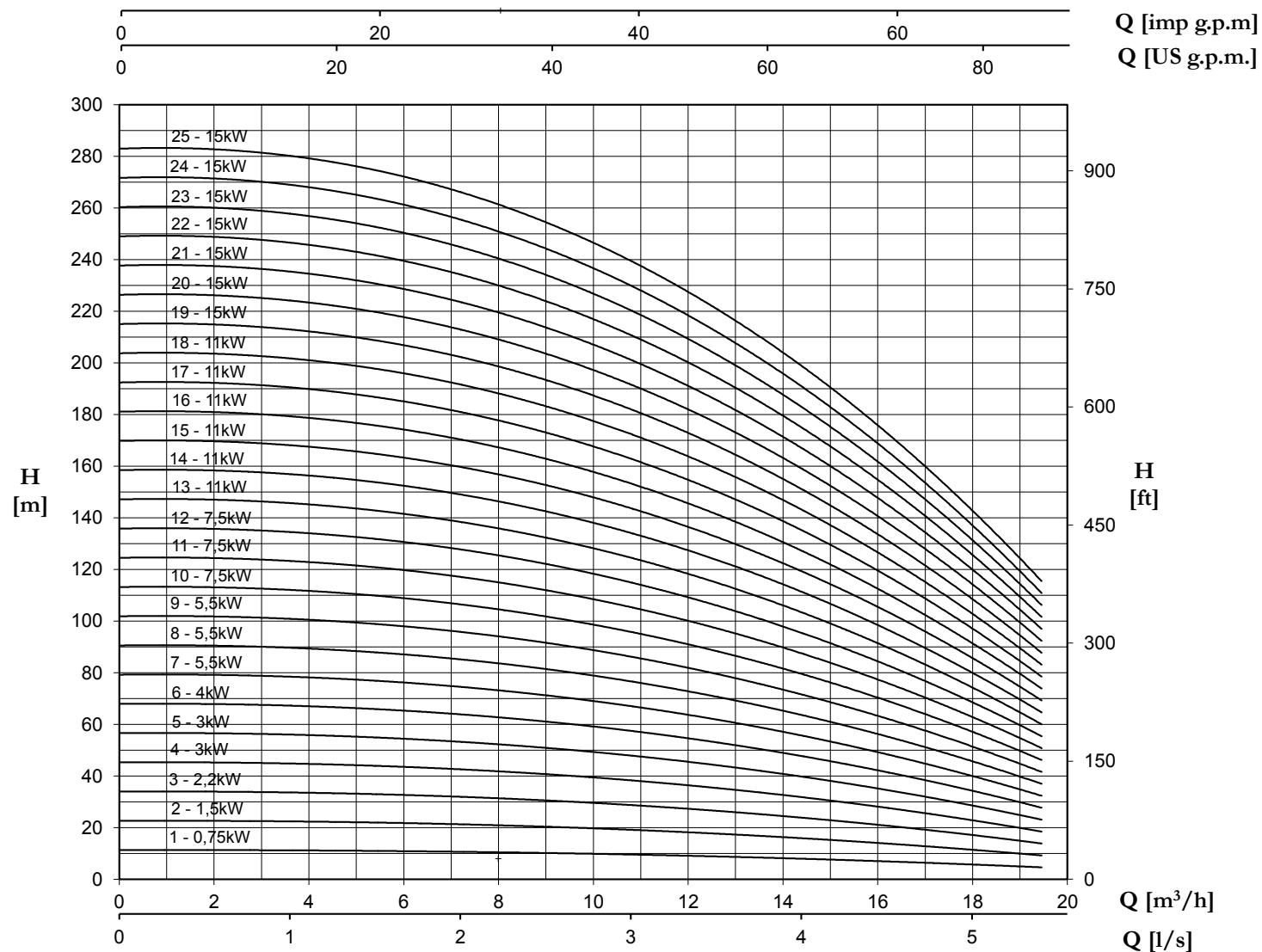
1400 r.p.m.



Valid for: p=1 (kg/dm^3), viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

HP 32.2

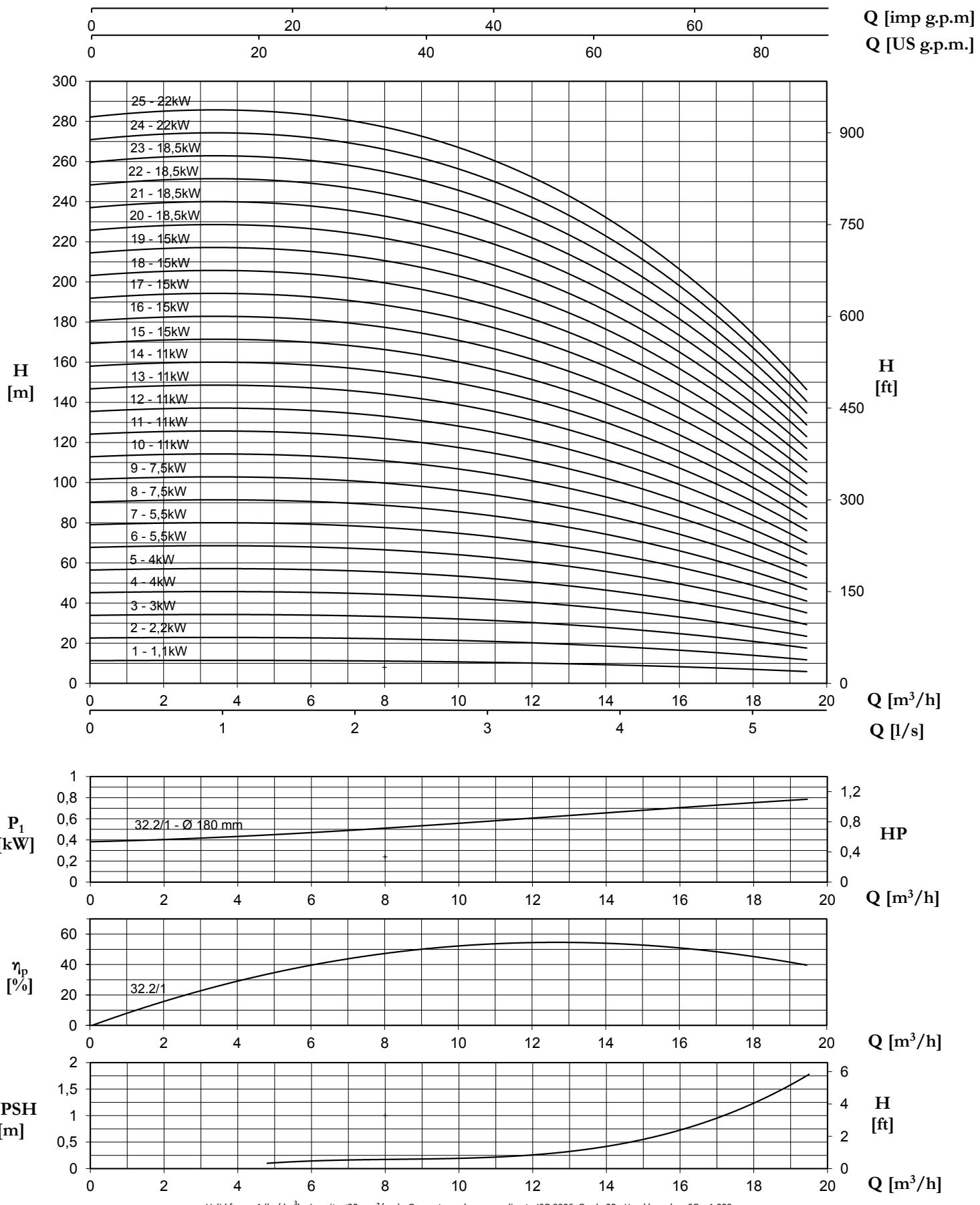
1430 r.p.m.



Valid for: $p=1$ (kg/dm^3), viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

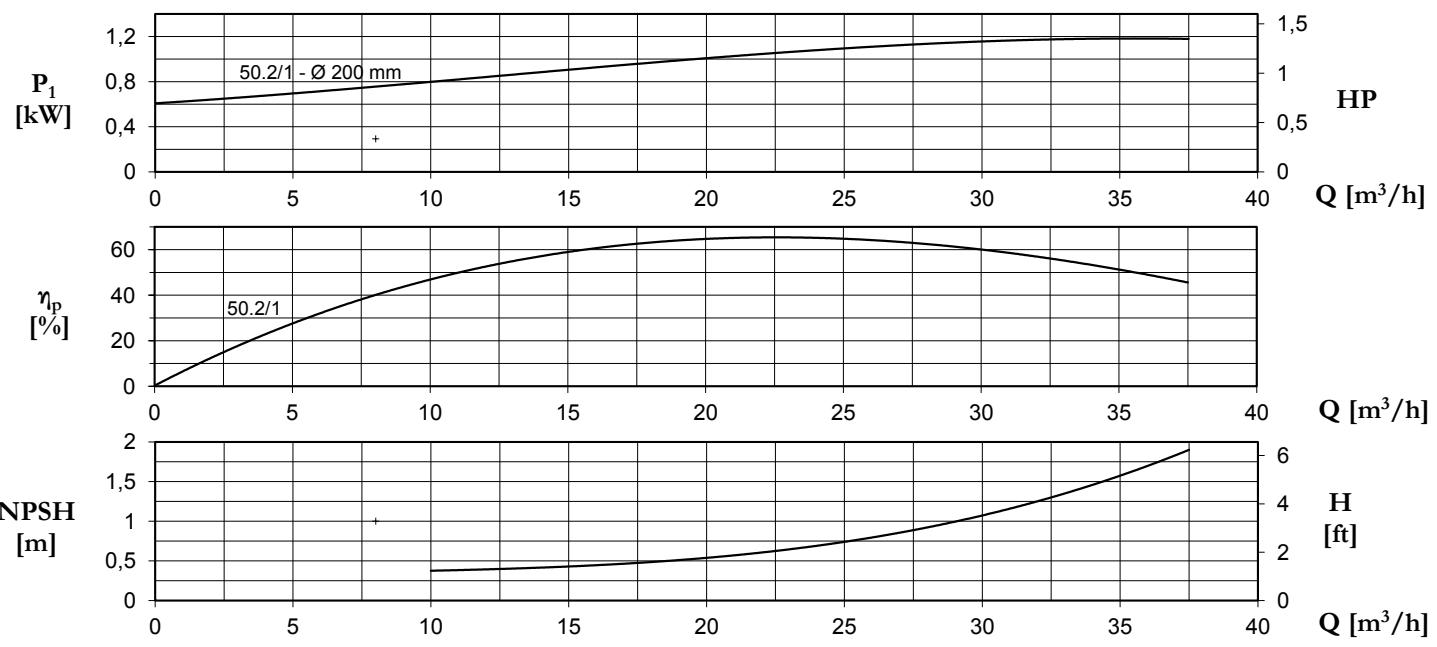
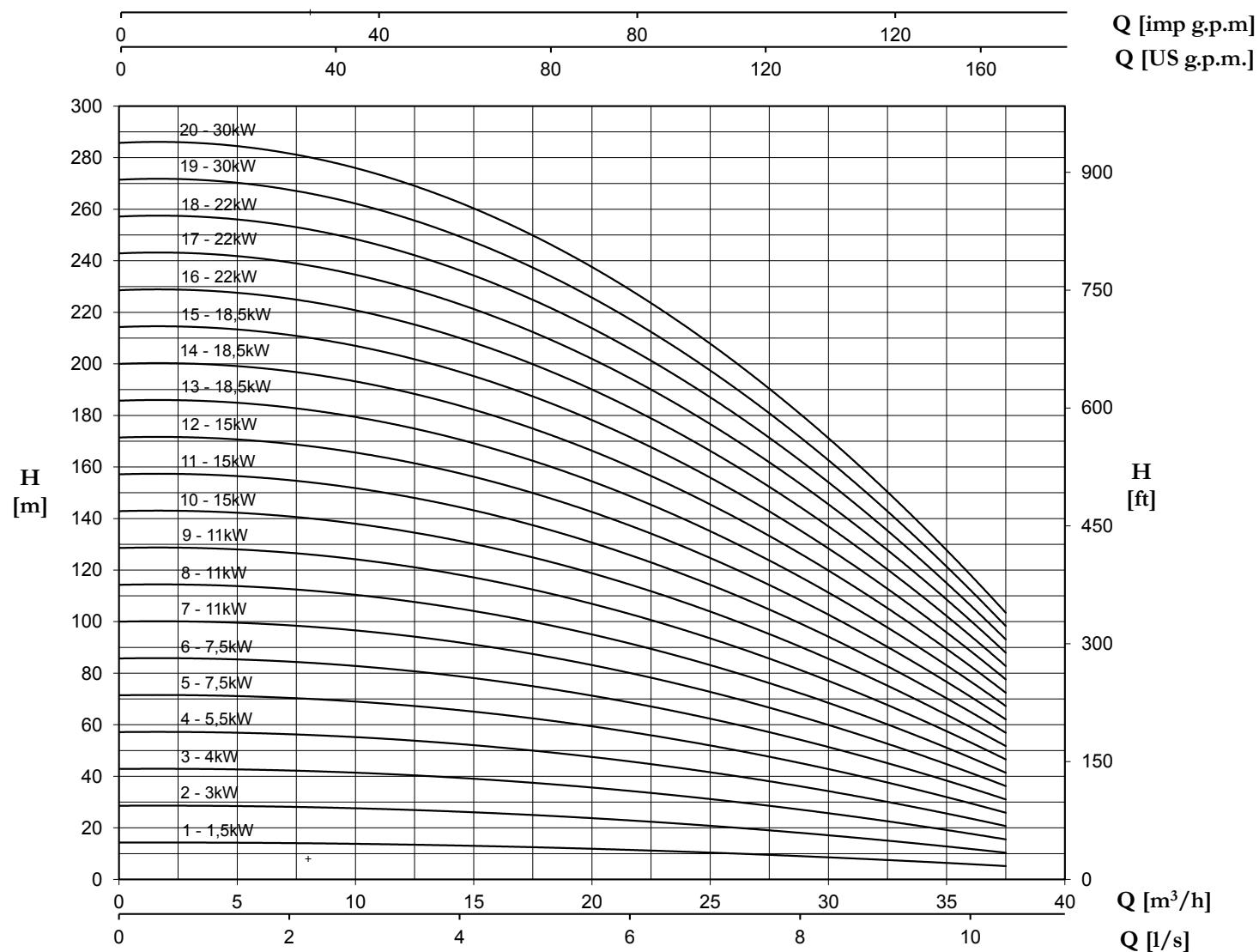
HP 32.2 INOX

1430 r.p.m.



HP 50.2

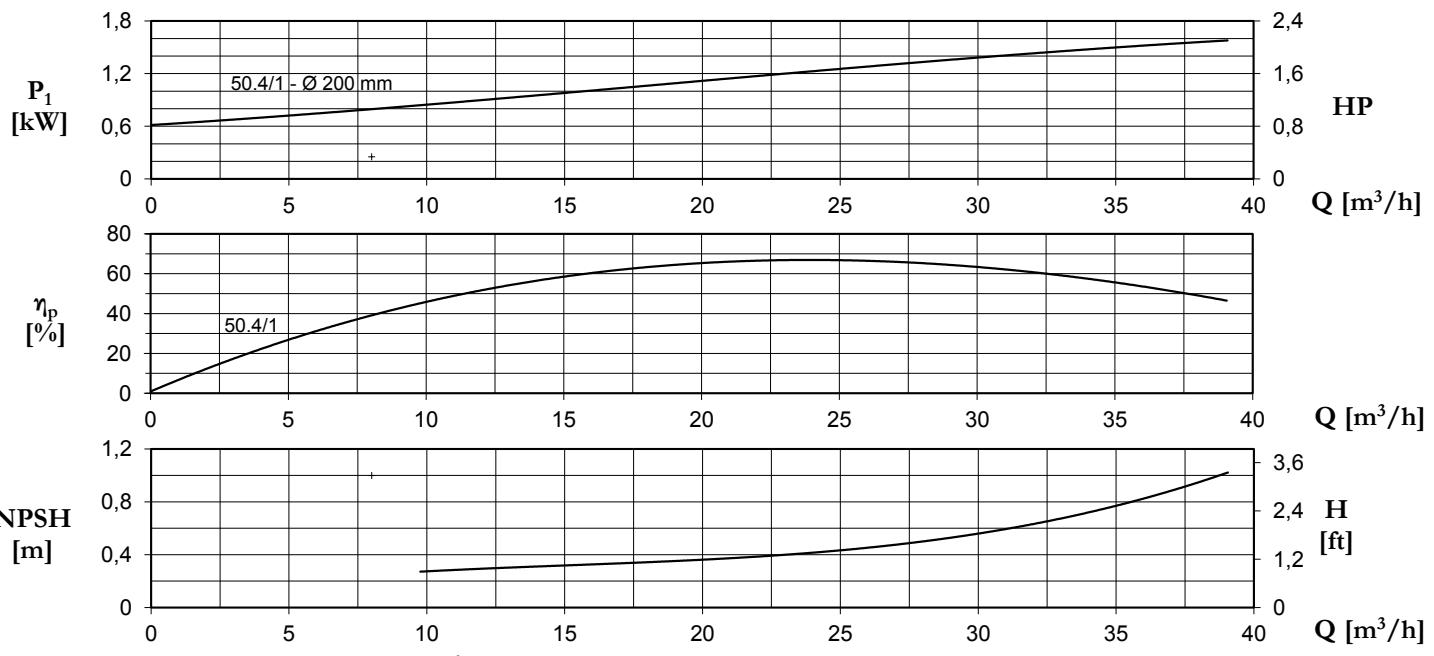
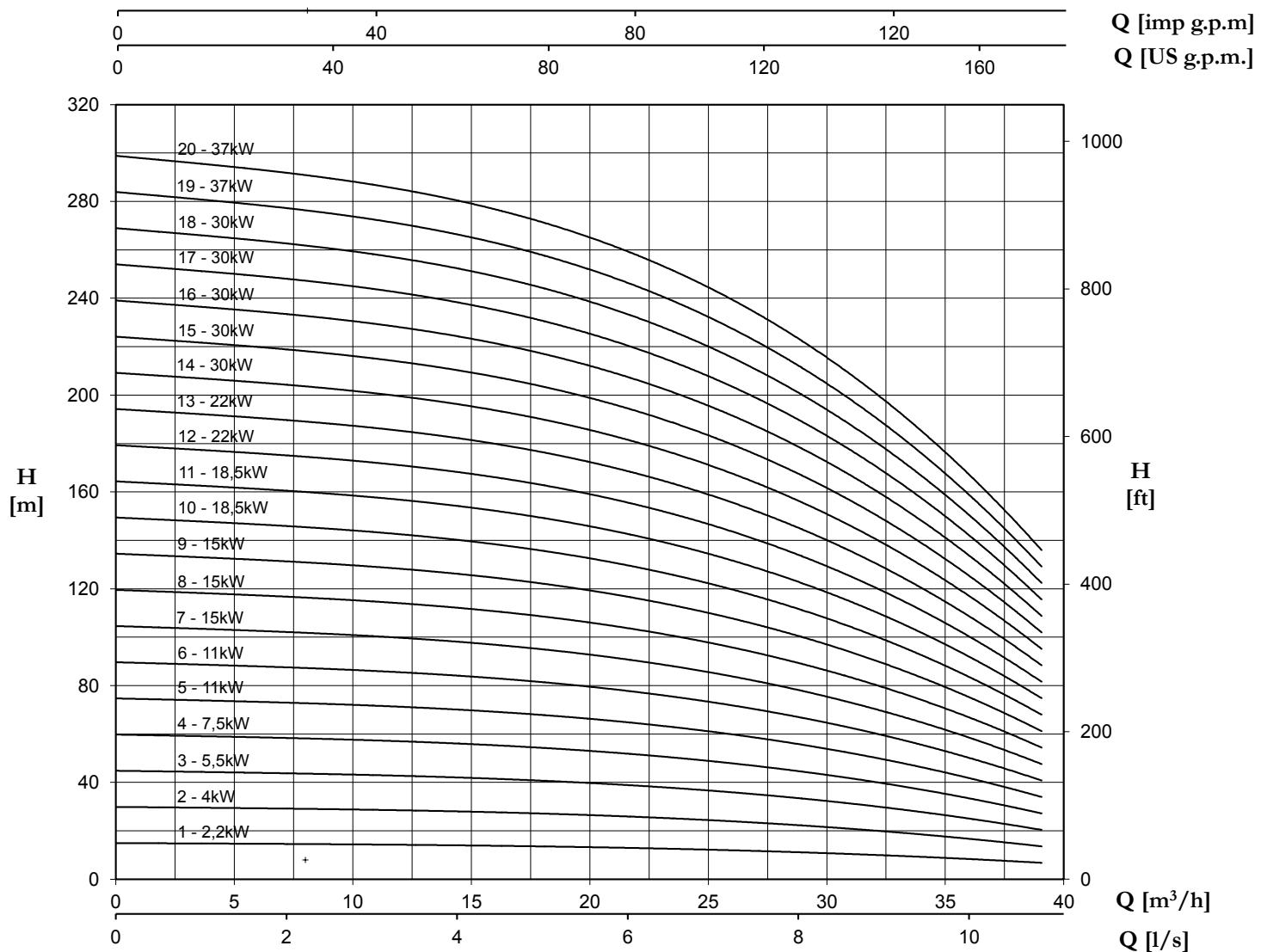
1480 r.p.m.



Valid for: $p=1 \text{ (kg/dm}^3\text{)}$, viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

HP 50.4

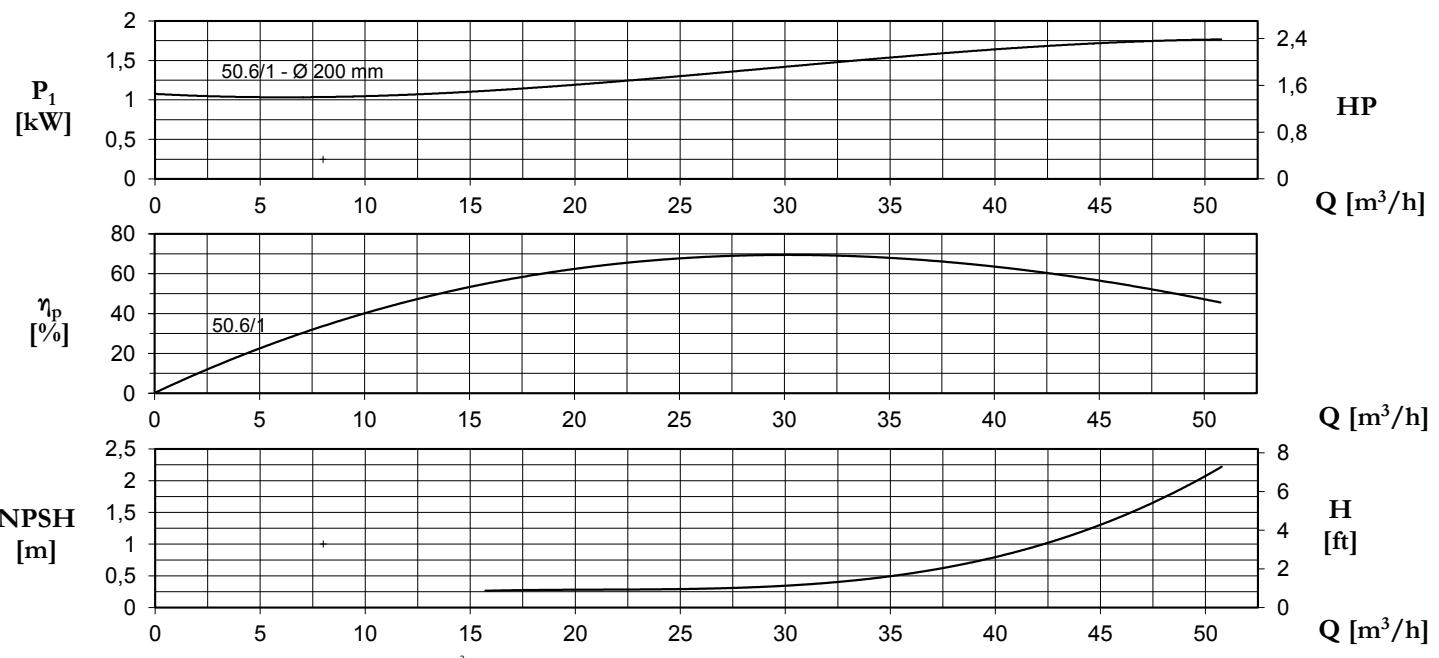
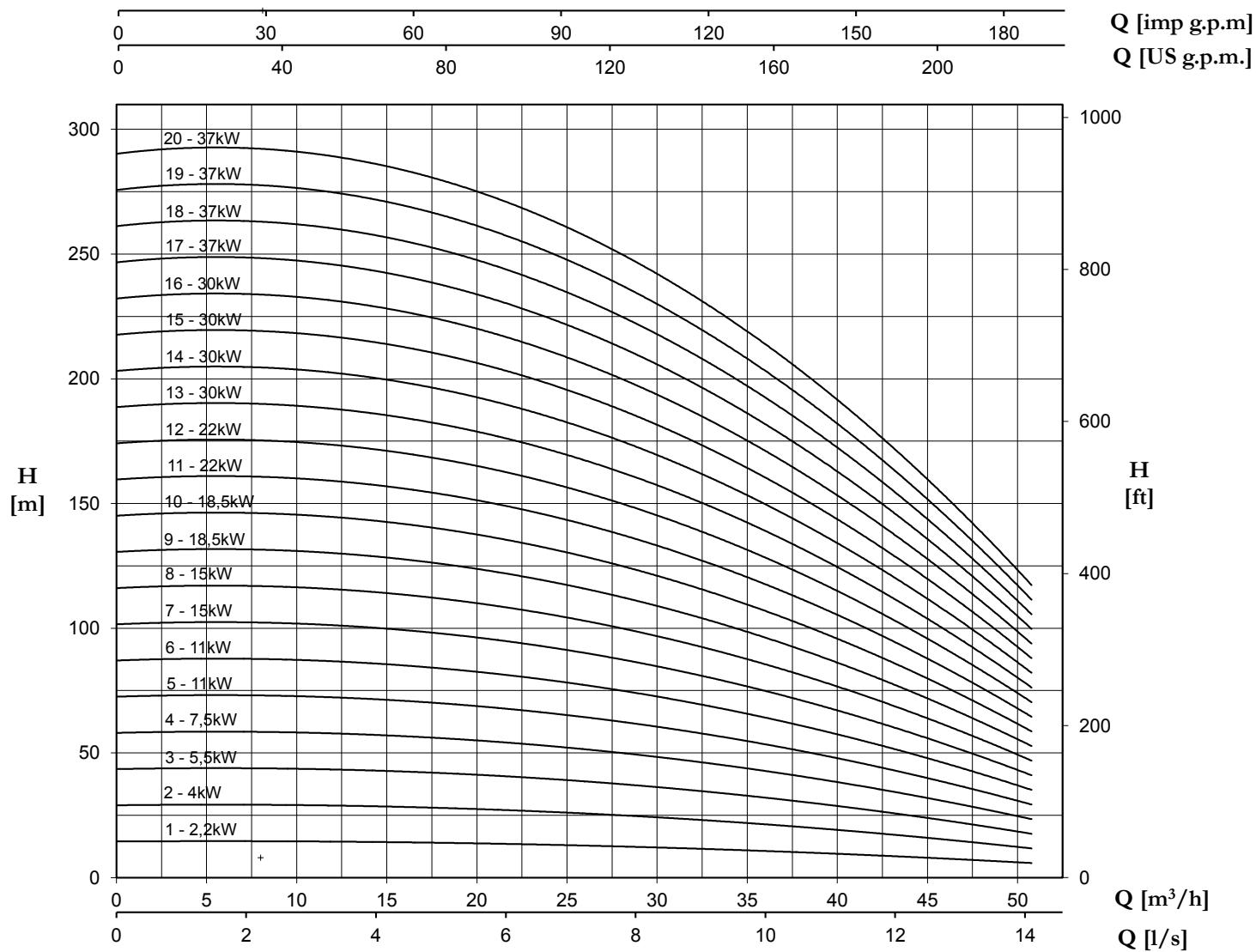
1450 r.p.m.



Valid for: $\rho = 1 \text{ (kg/dm}^3\text{)}$, viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

HP 50.6

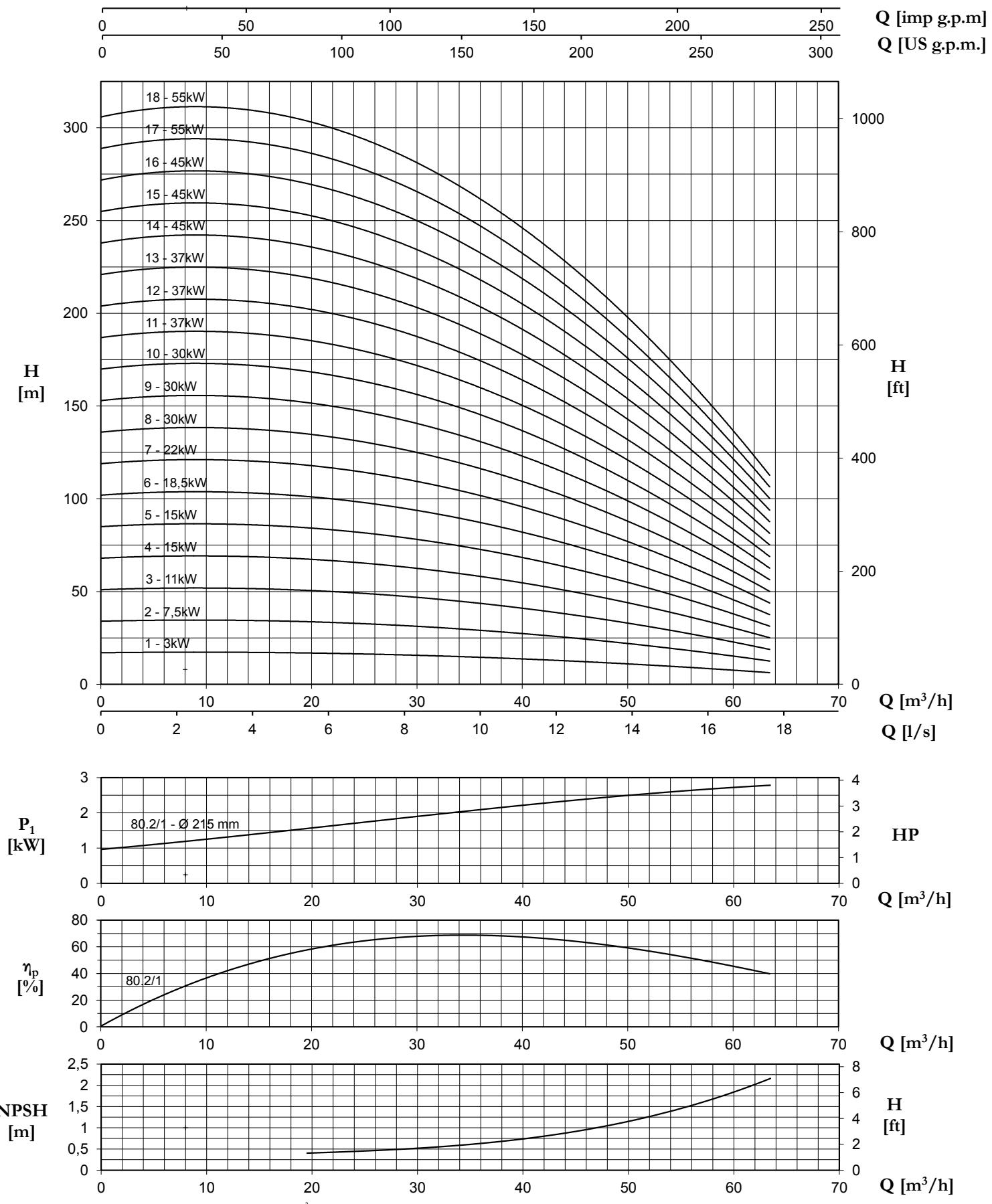
1450 r.p.m.



Valid for: $\rho = 1 \text{ (kg/dm}^3\text{)}$, viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

HP 80.2

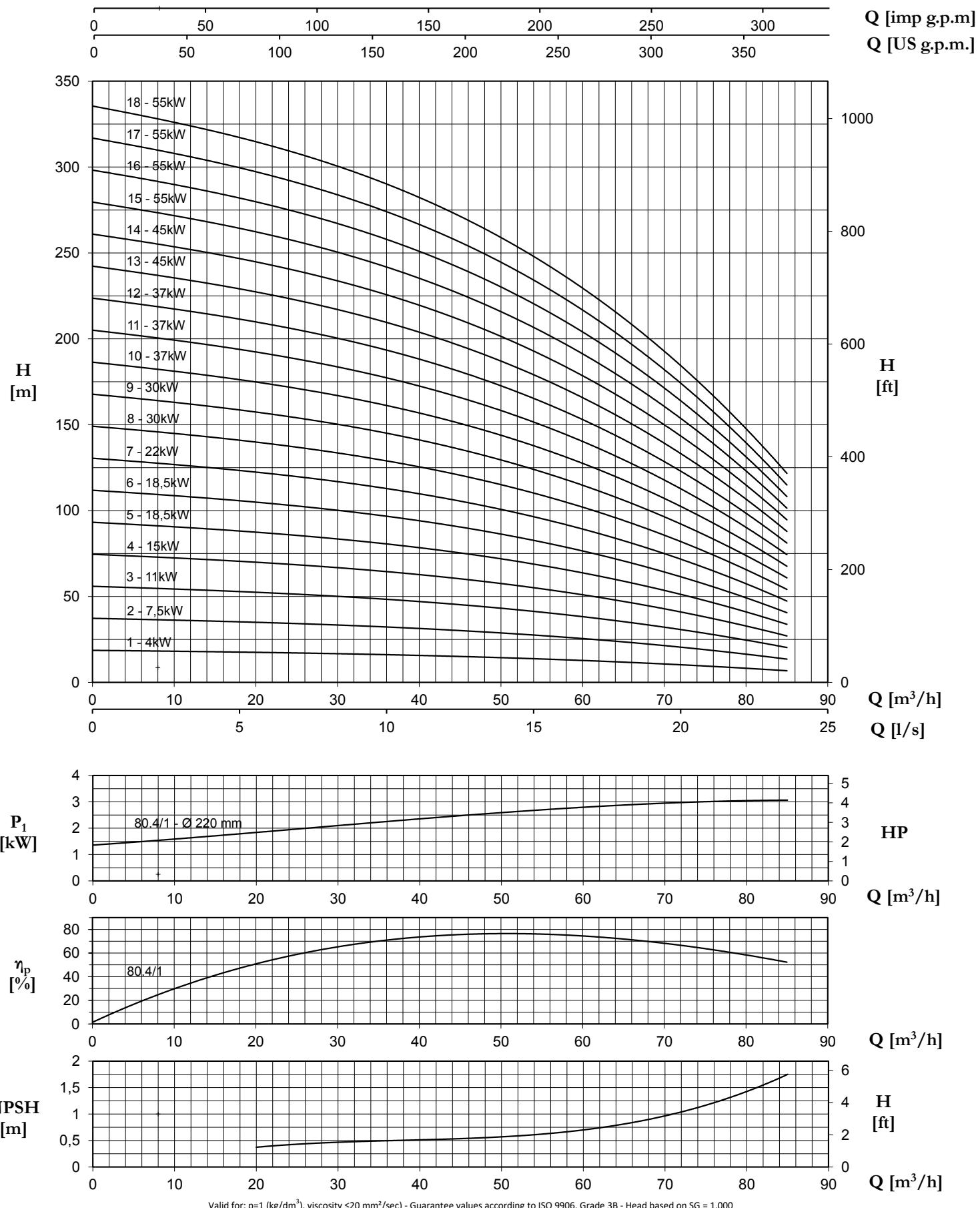
1450 r.p.m.



Valid for: $p=1$ (kg/dm³), viscosity ≤ 20 mm²/sec - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

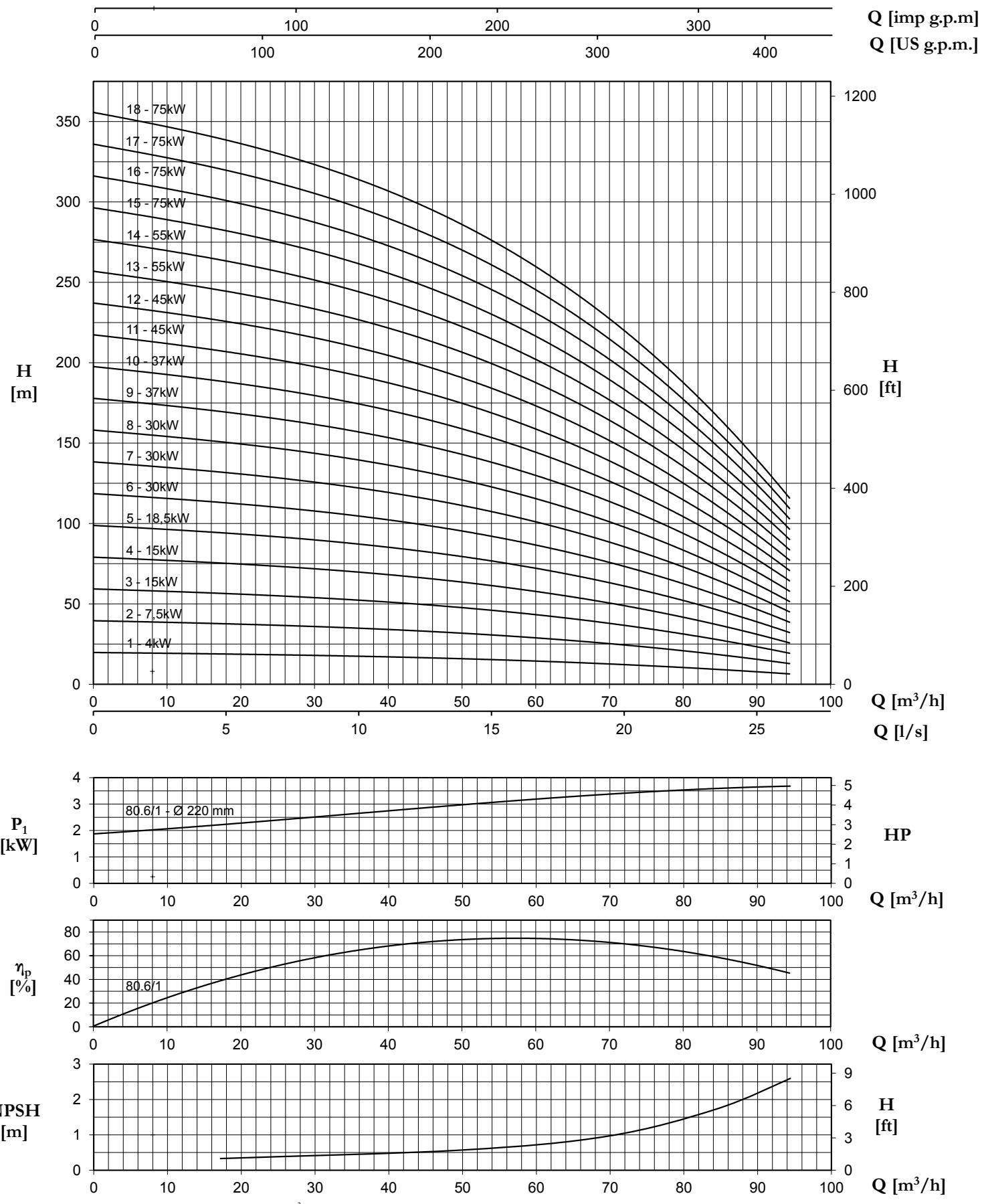
HP 80.4

1480 r.p.m.



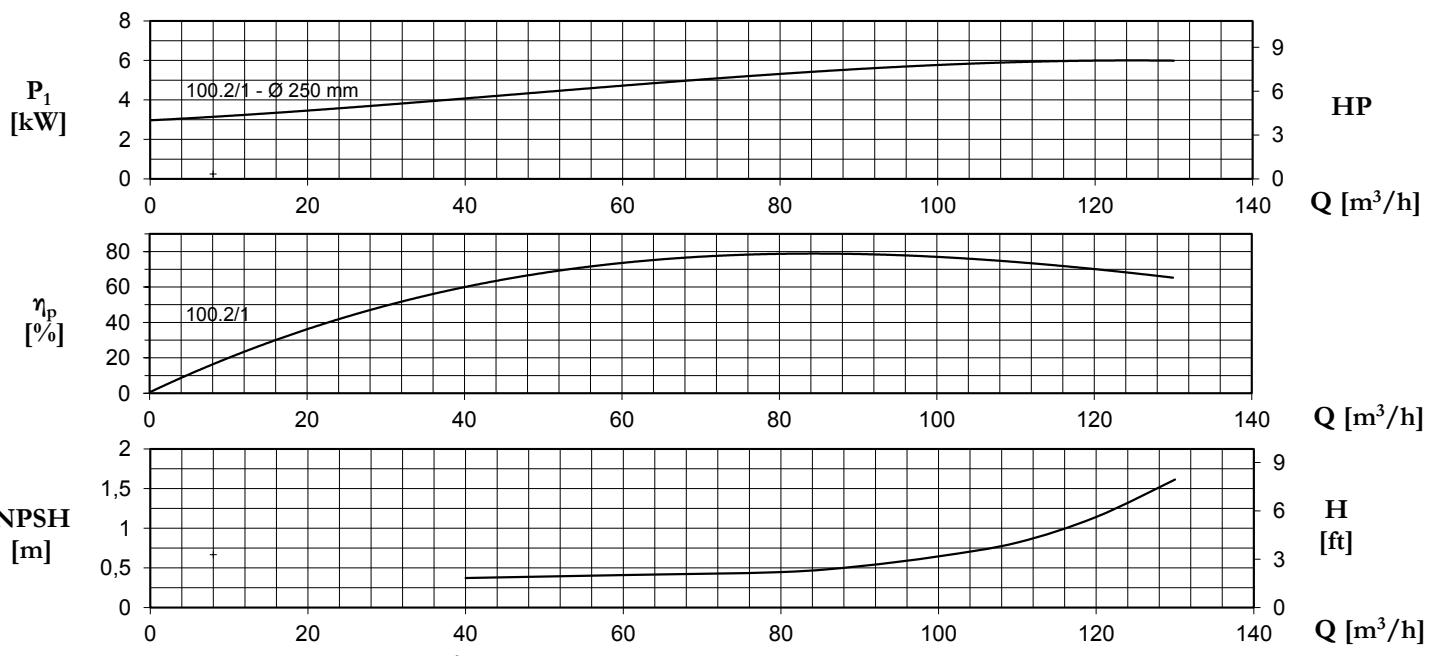
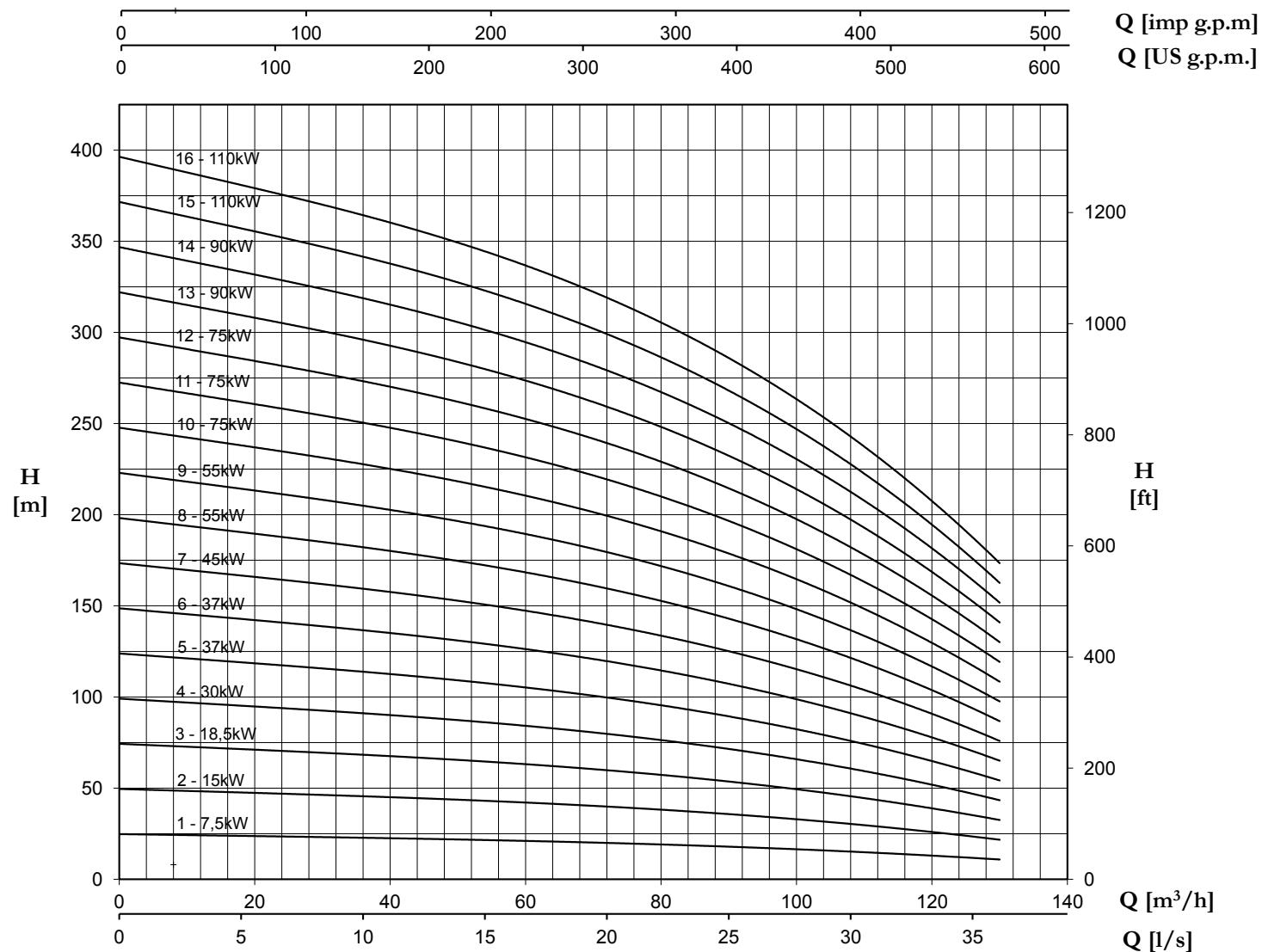
HP 80.6

1450 r.p.m.



HP 100.2

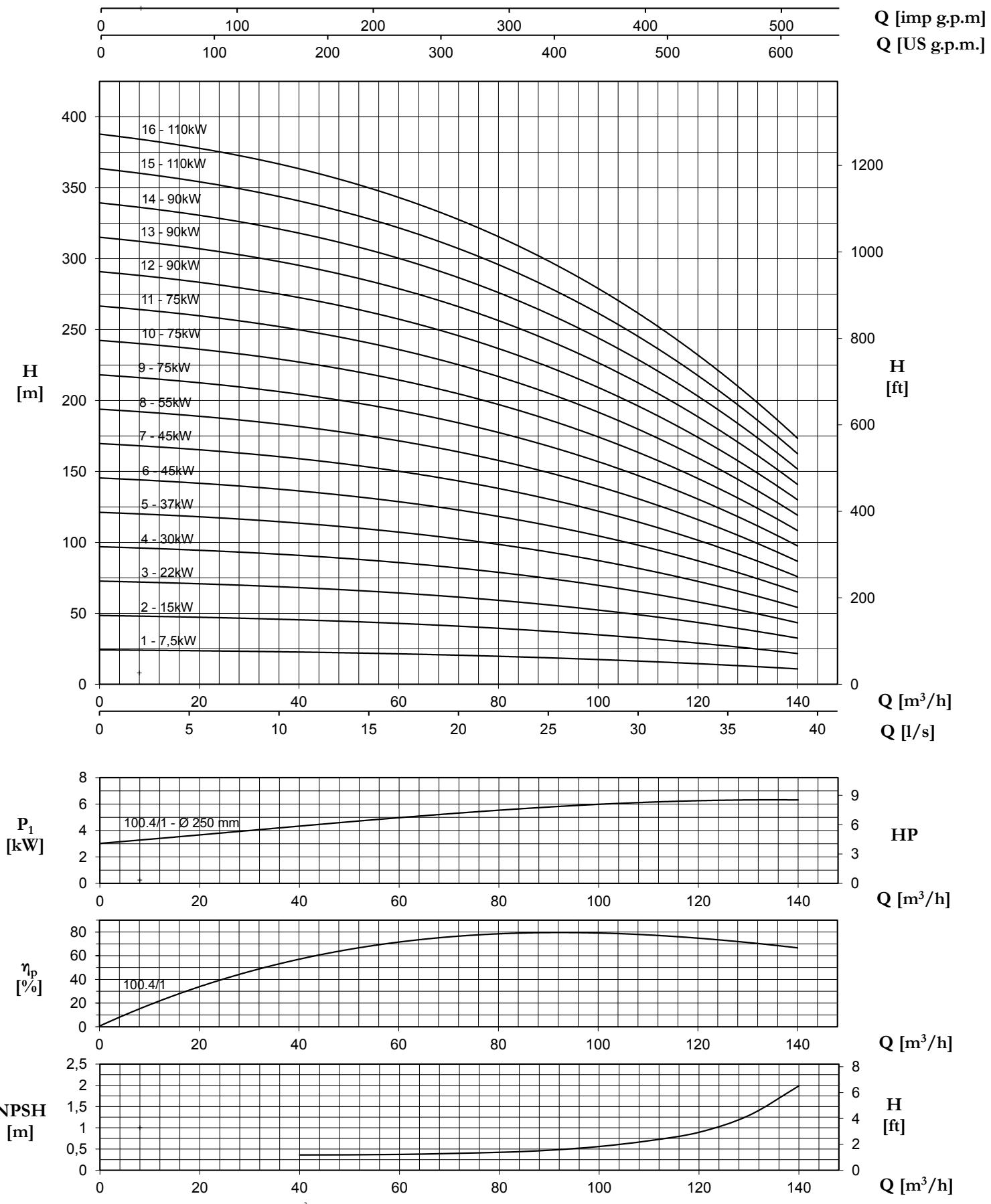
1480 r.p.m.



Valid for: $p=1$ (kg/dm³), viscosity ≤ 20 mm²/sec - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

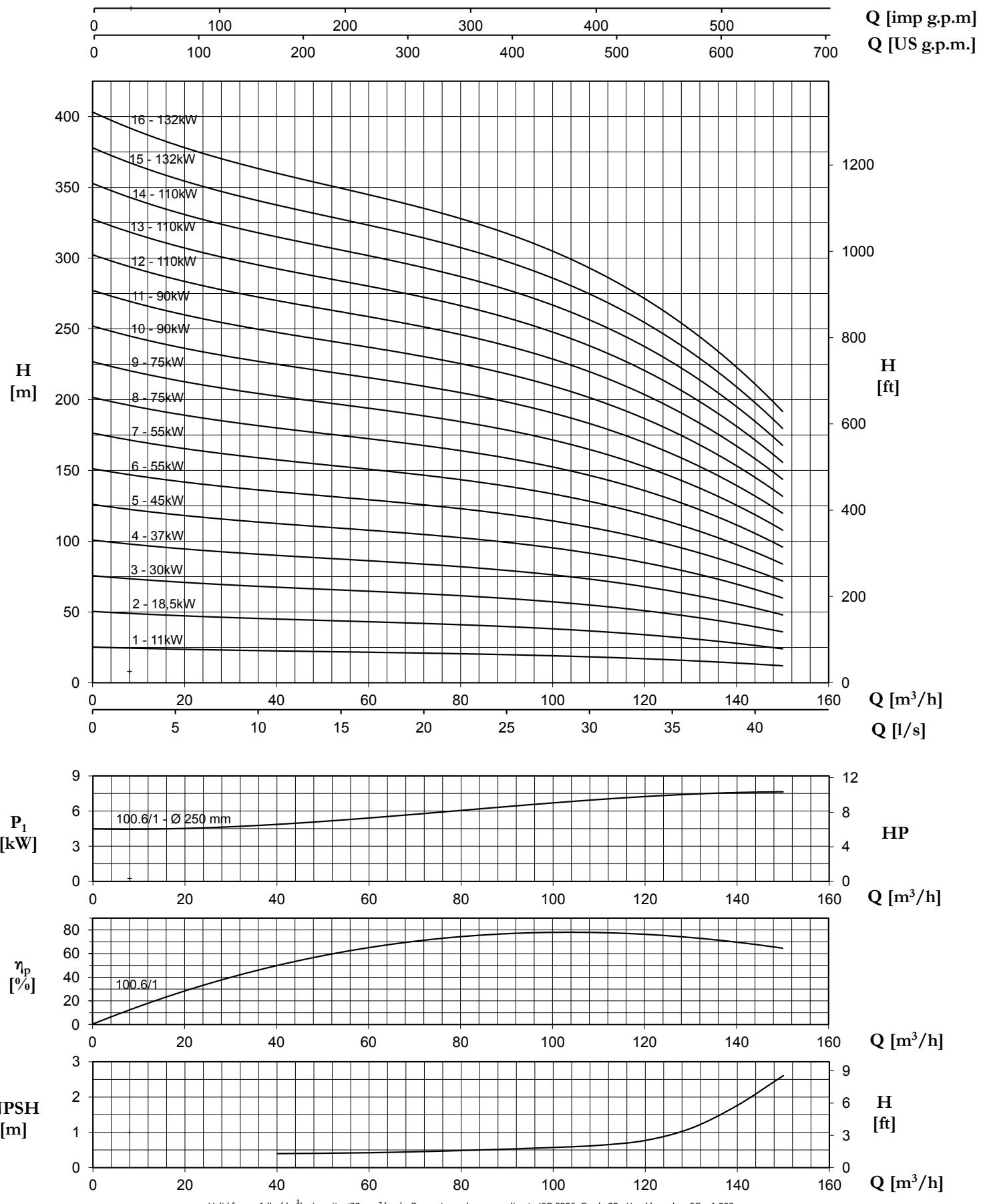
HP 100.4

1480 r.p.m.



HP 100.6

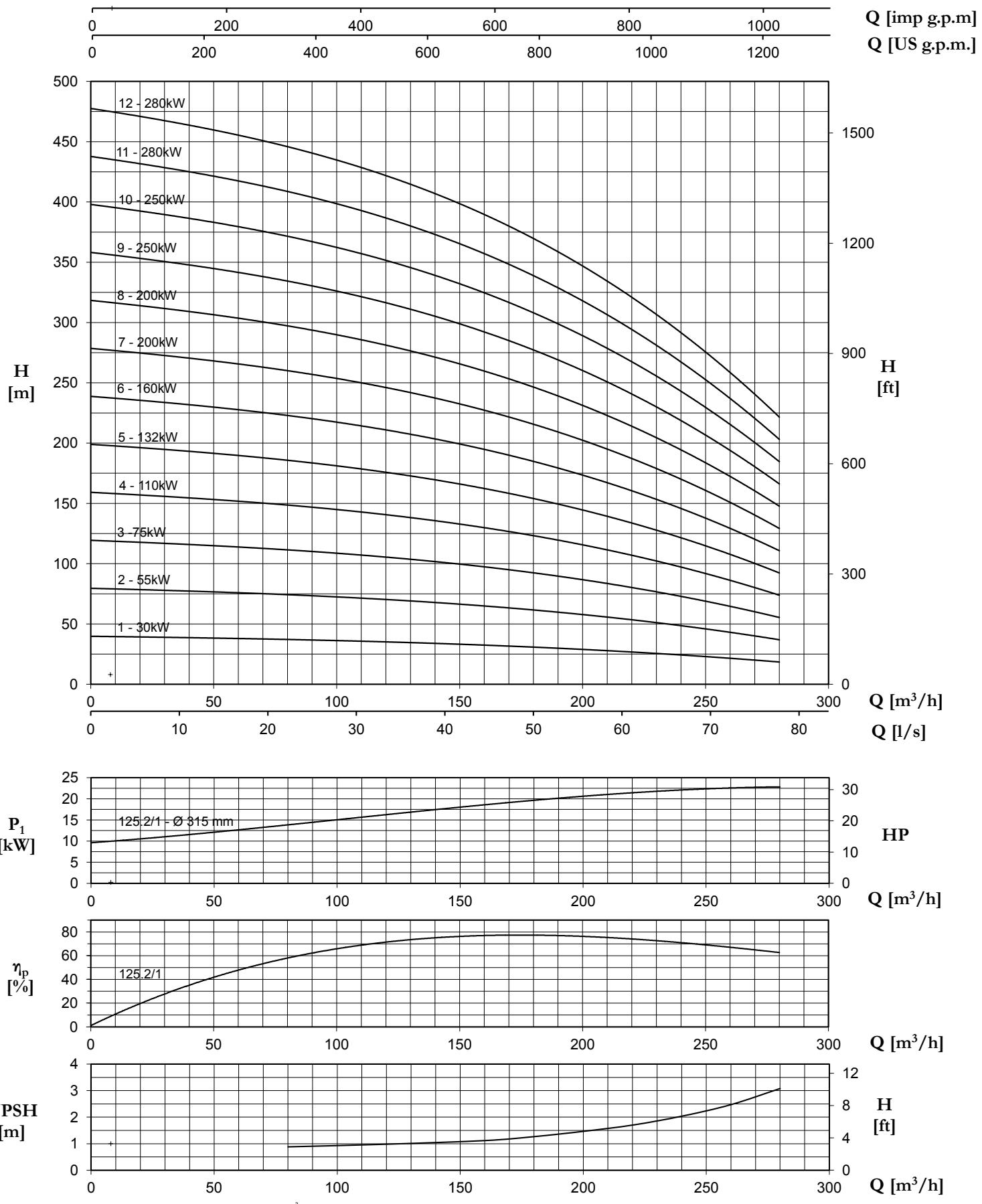
1480 r.p.m.



Valid for: $p=1 \text{ (kg/dm}^3\text{)}$, viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

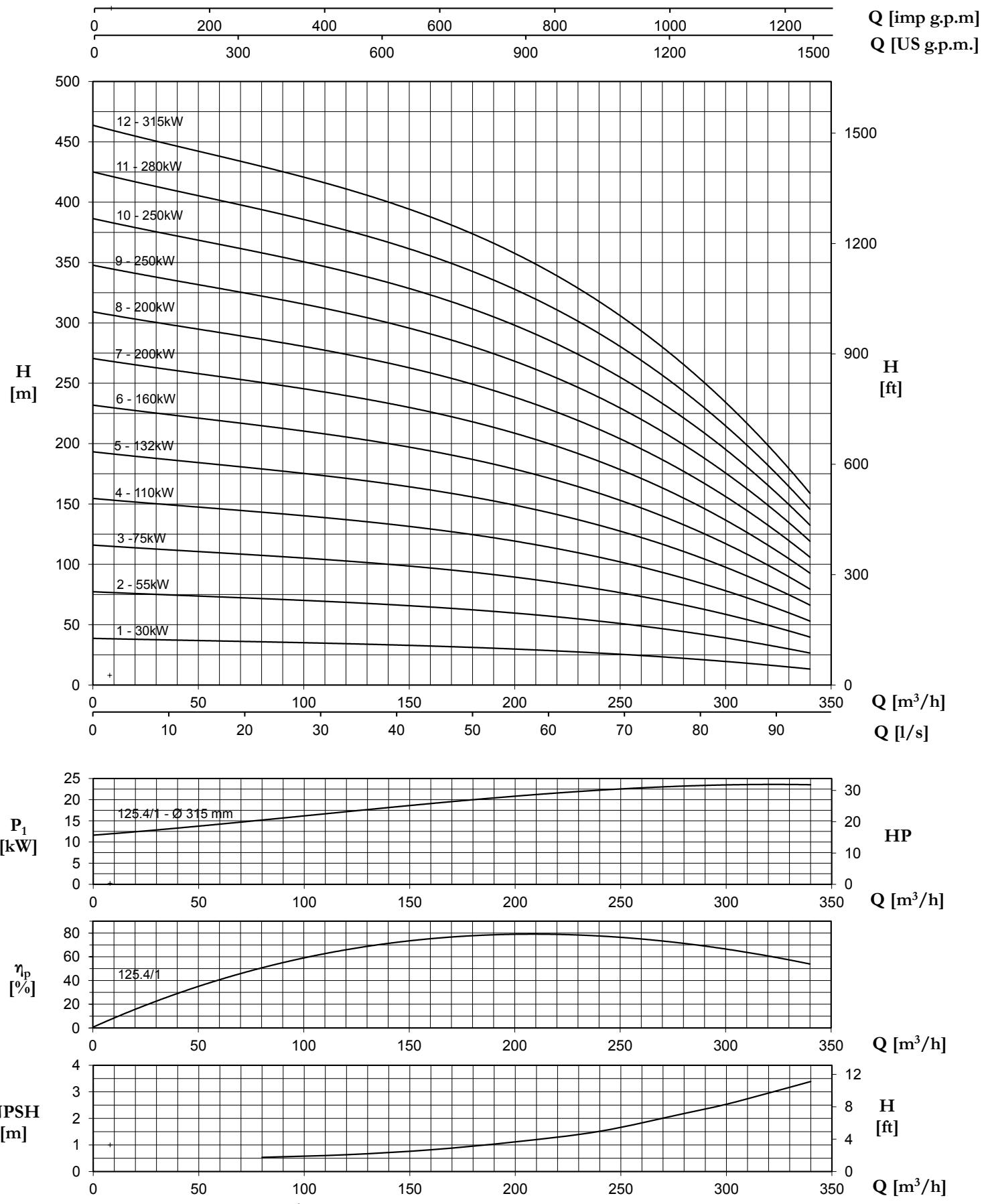
HP 125.2

1480 r.p.m.



HP 125.4

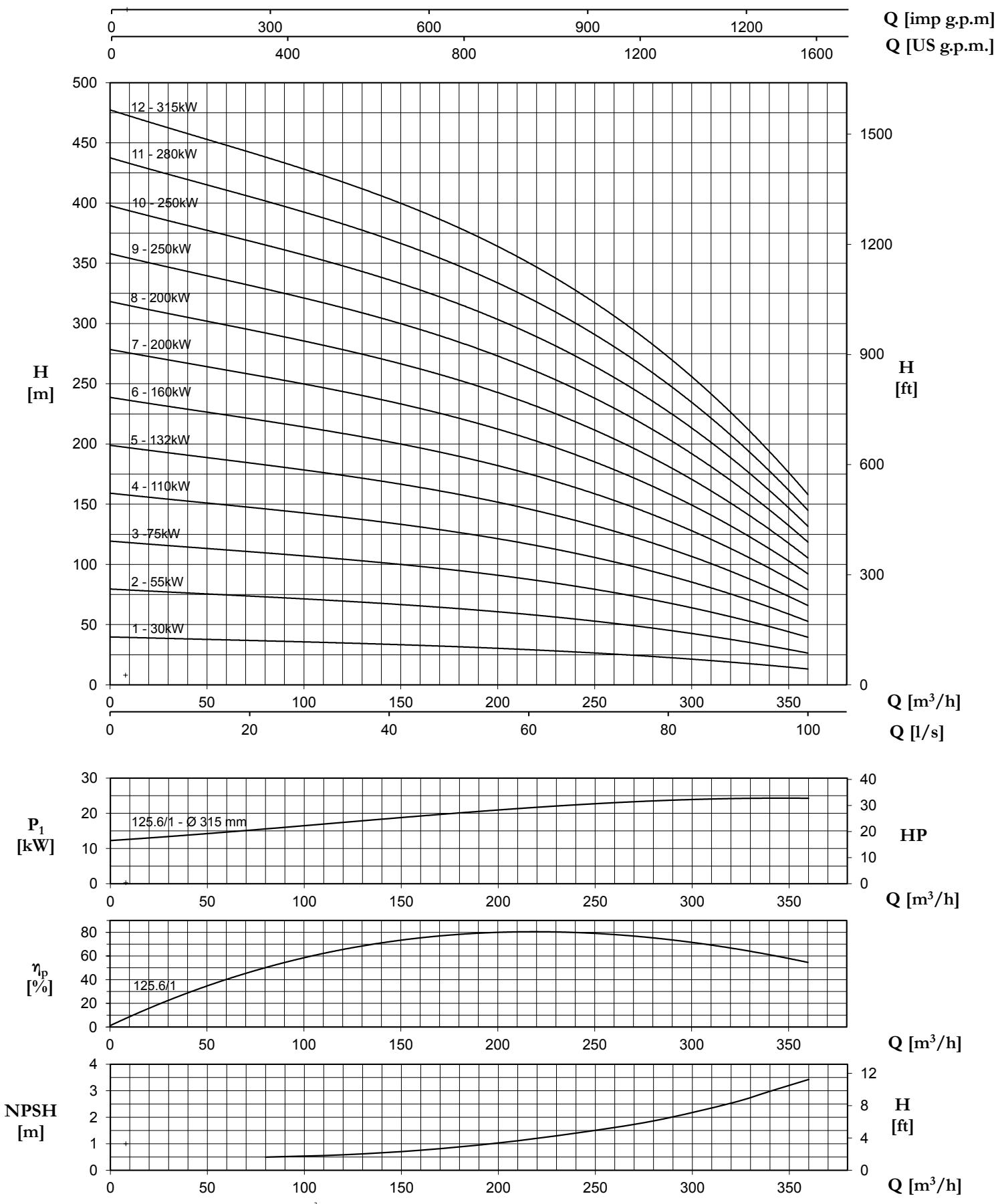
1480 r.p.m.



Valid for: $p=1 \text{ (kg/dm}^3\text{)}$, viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

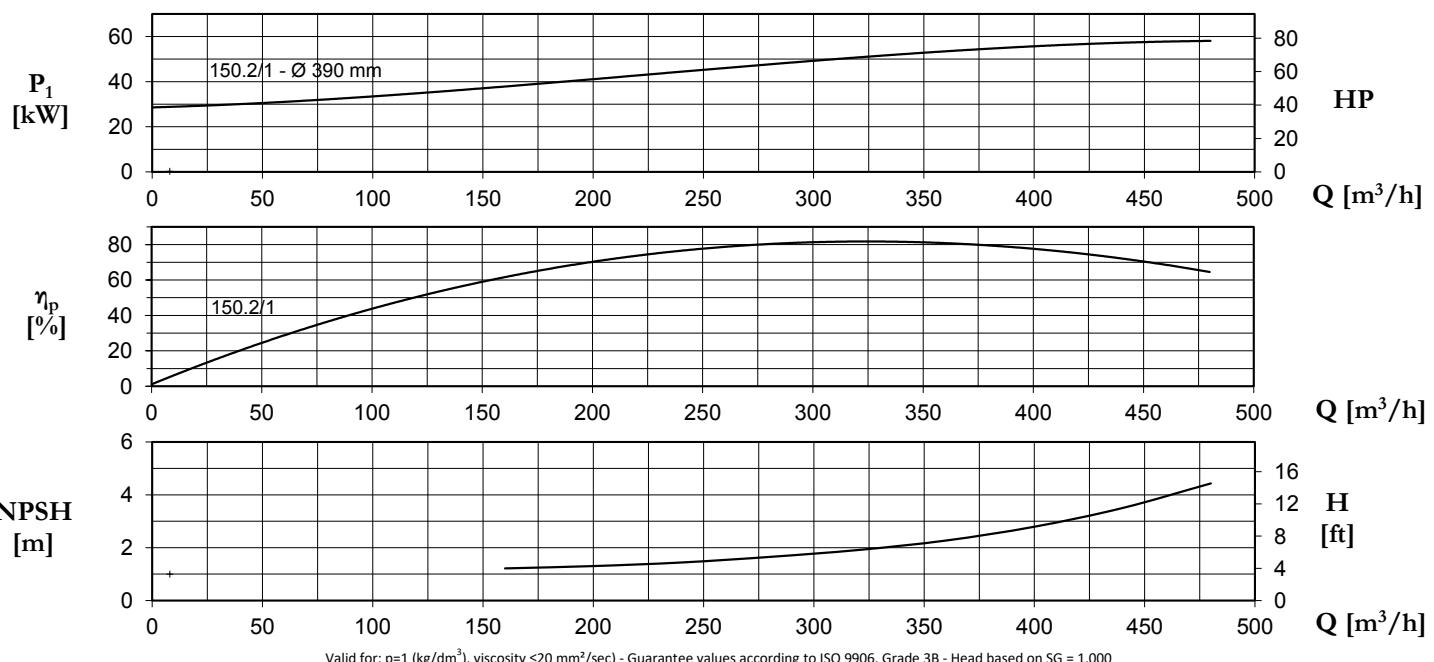
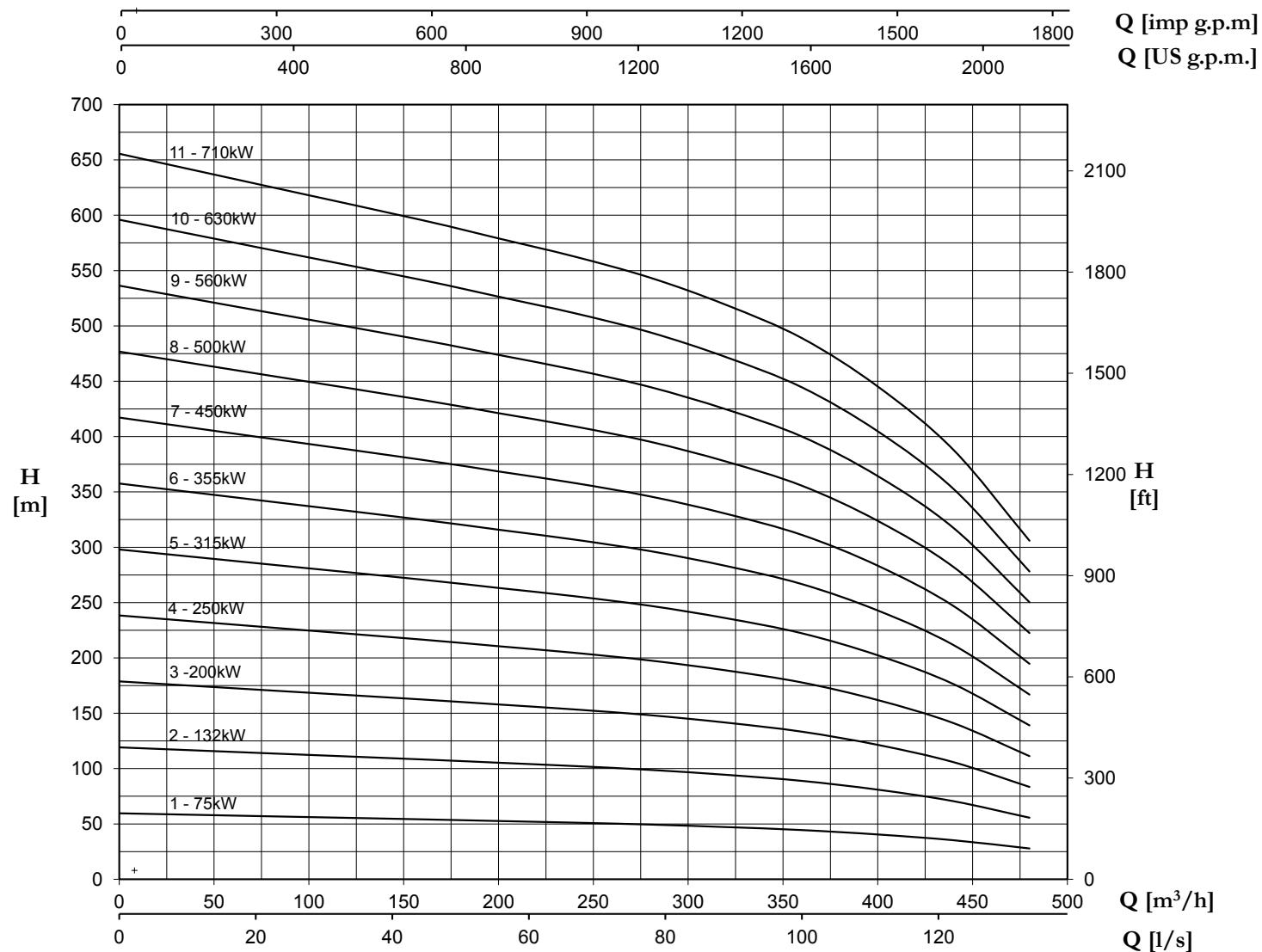
HP 125.6

1480 r.p.m.



HP 150.2

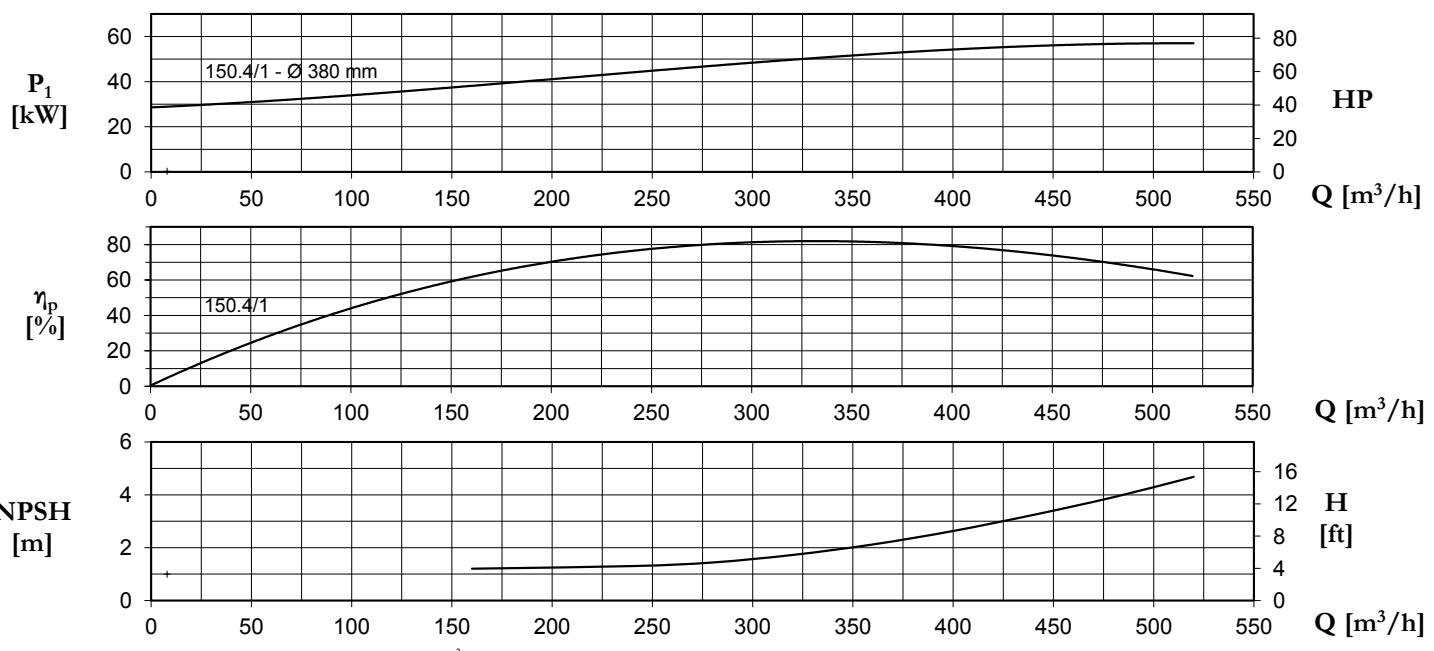
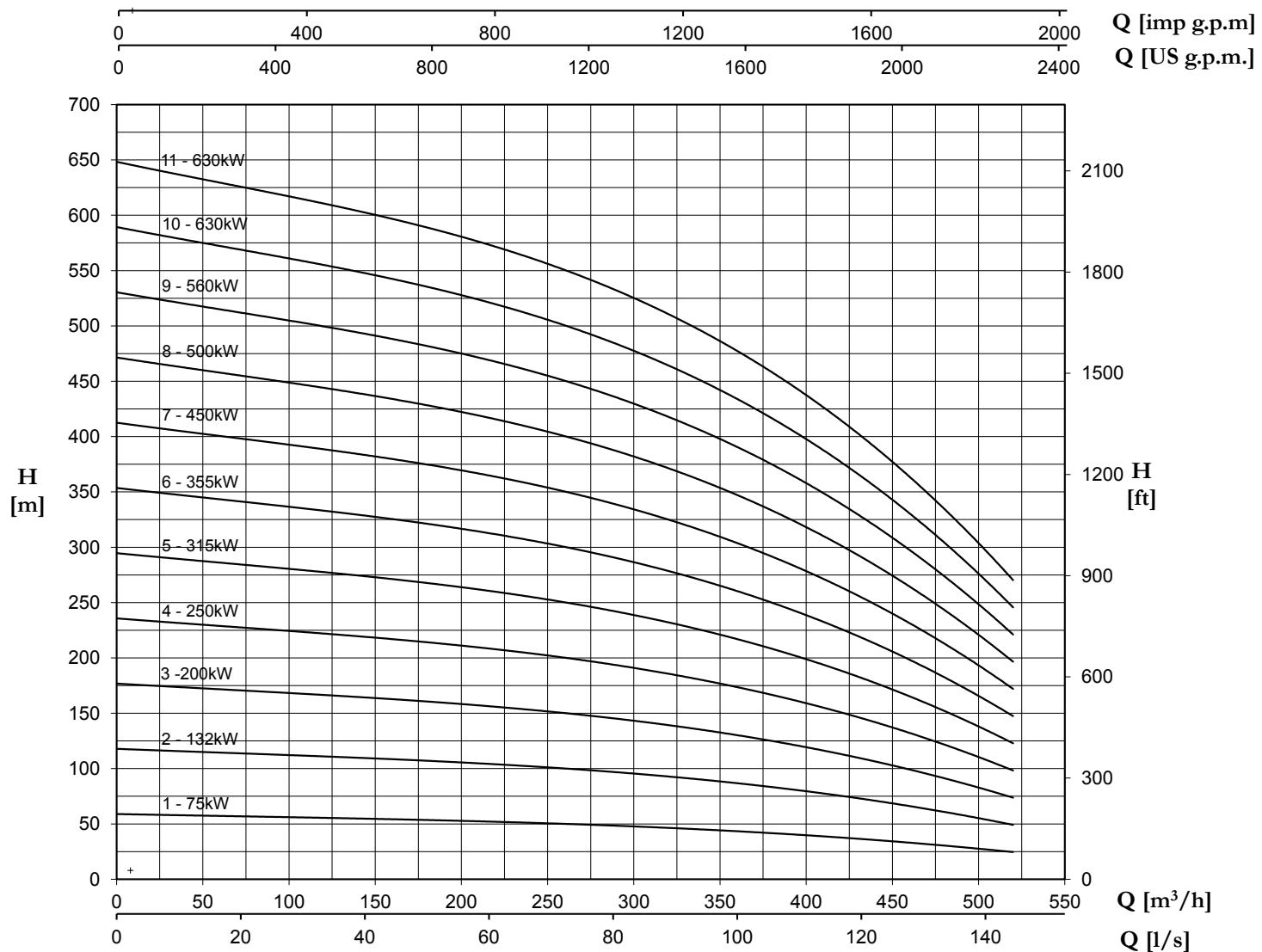
1480 r.p.m.



Valid for: $p=1$ (kg/dm^3), viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

HP 150.4

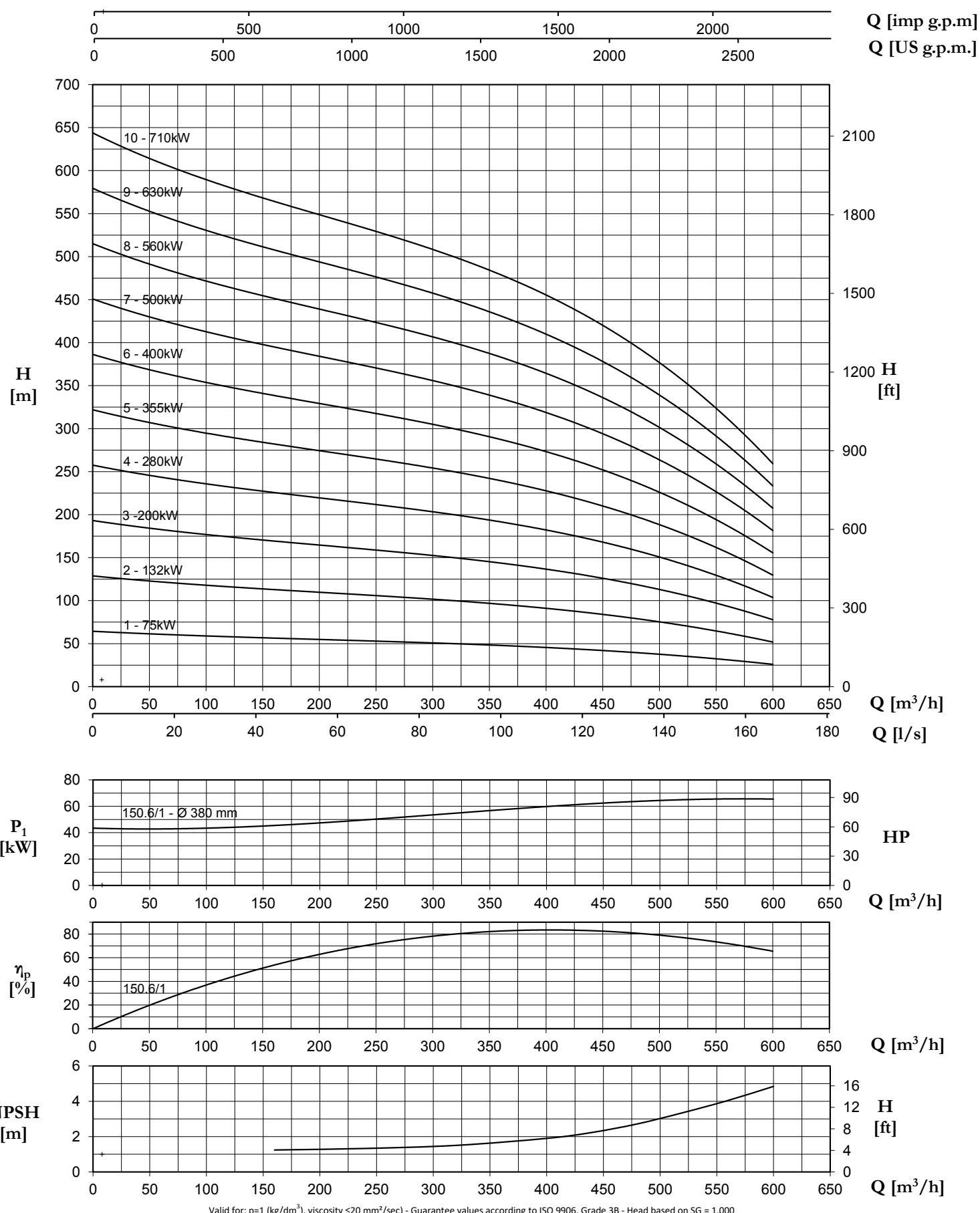
1480 r.p.m.



Valid for: $p=1 \text{ (kg/dm}^3\text{)}$, viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

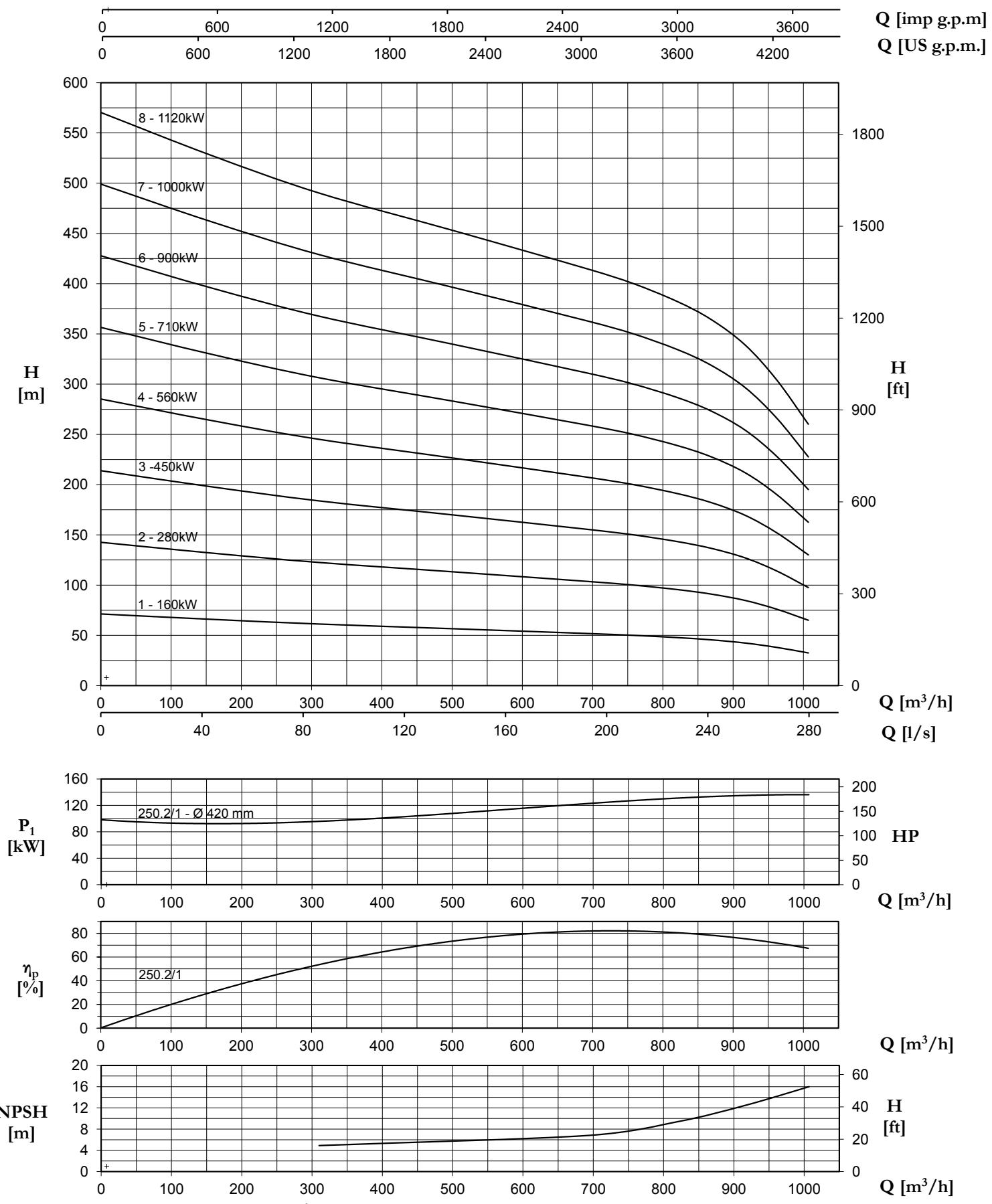
HP 150.6

1480 r.p.m.



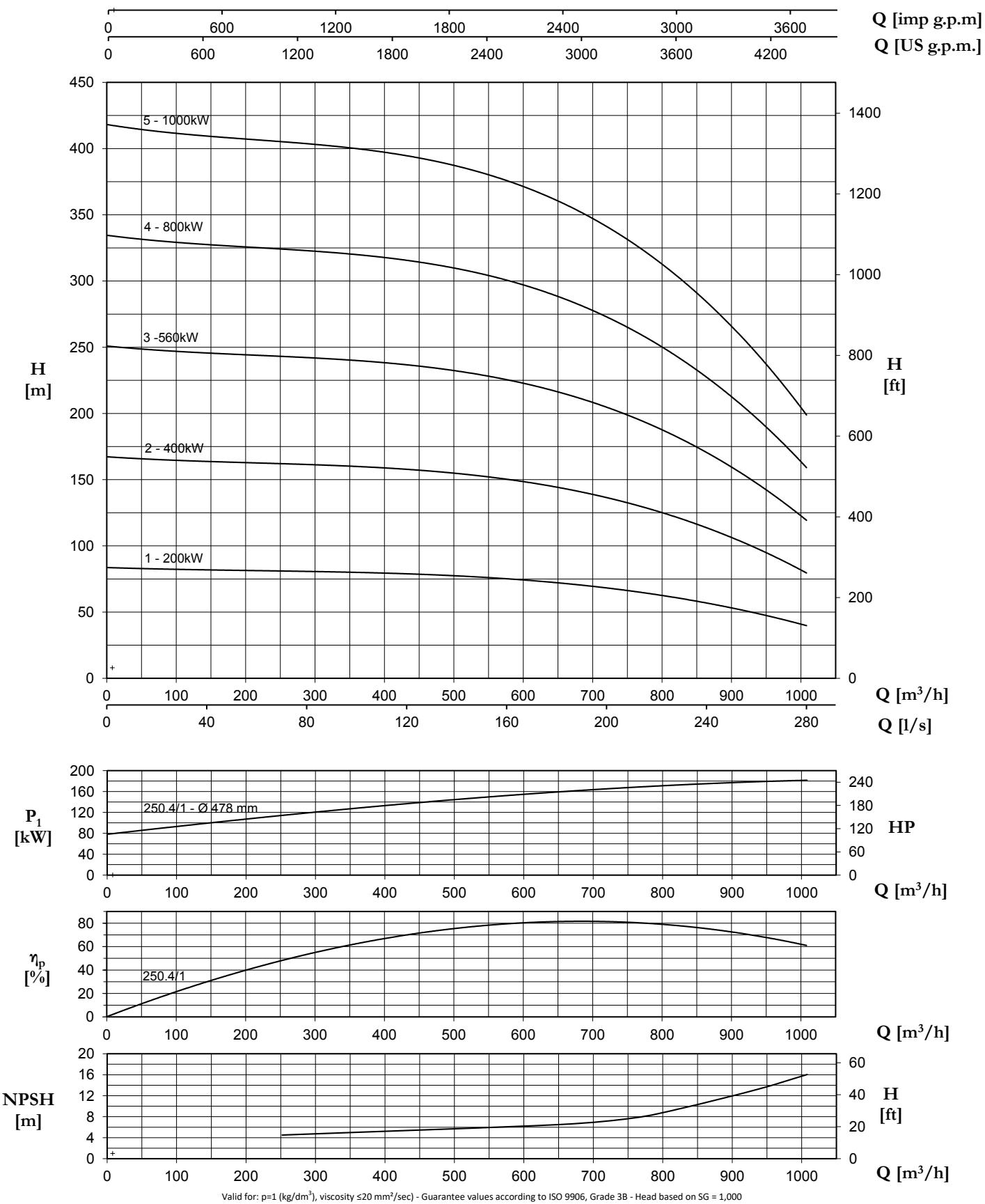
HP 250.2

1480 r.p.m.



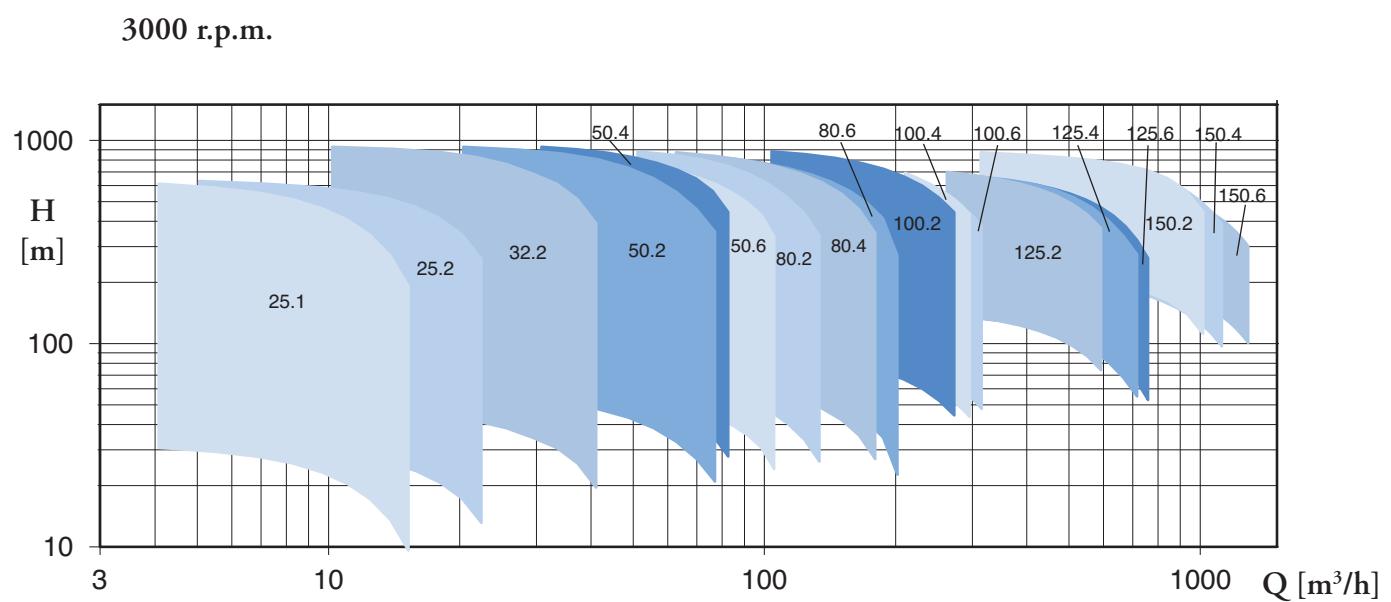
HP 250.4

1480 r.p.m.



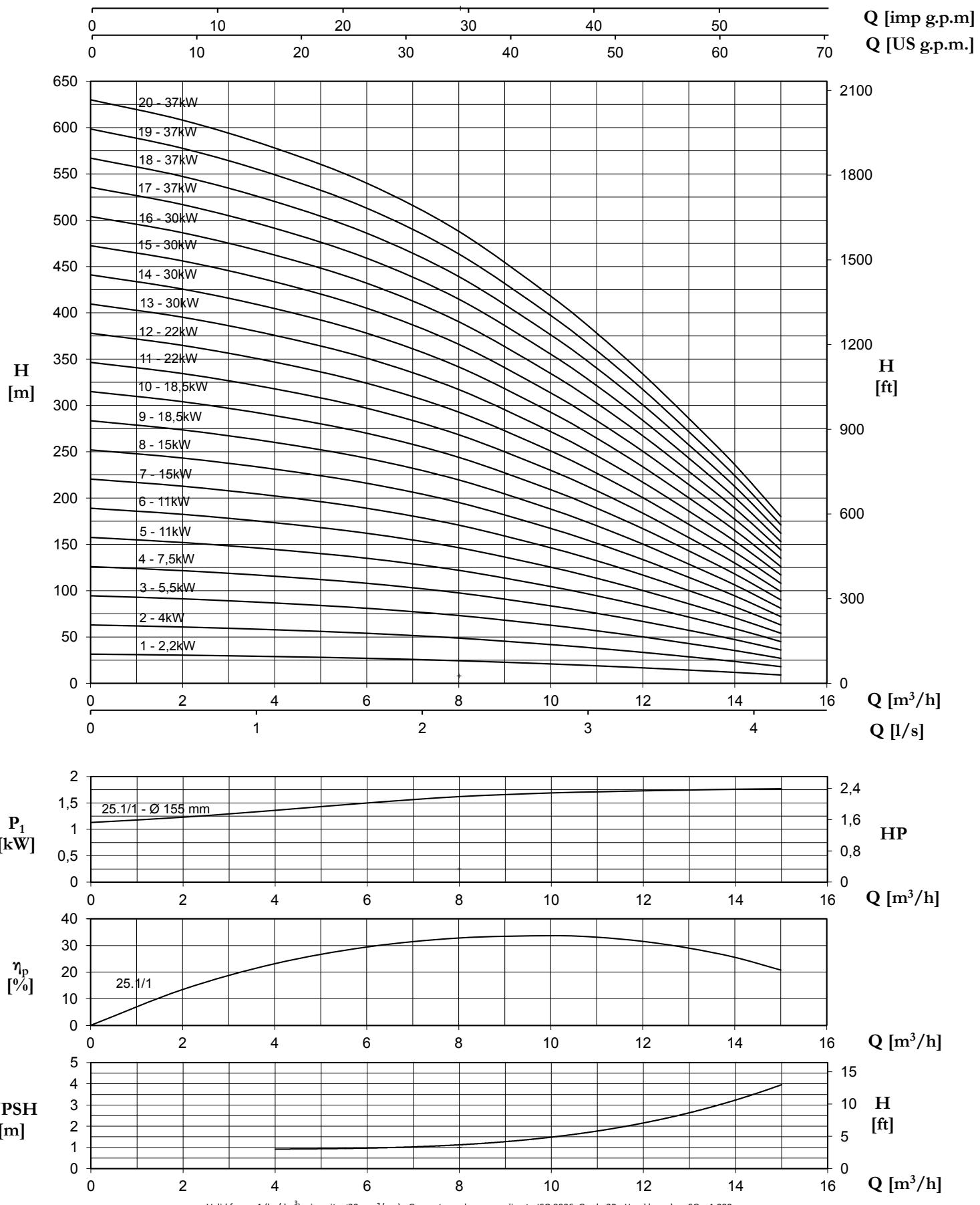
Curve prestazionali per linea di prodotto 3000 rpm

Performance curves for product line 3000 rpm



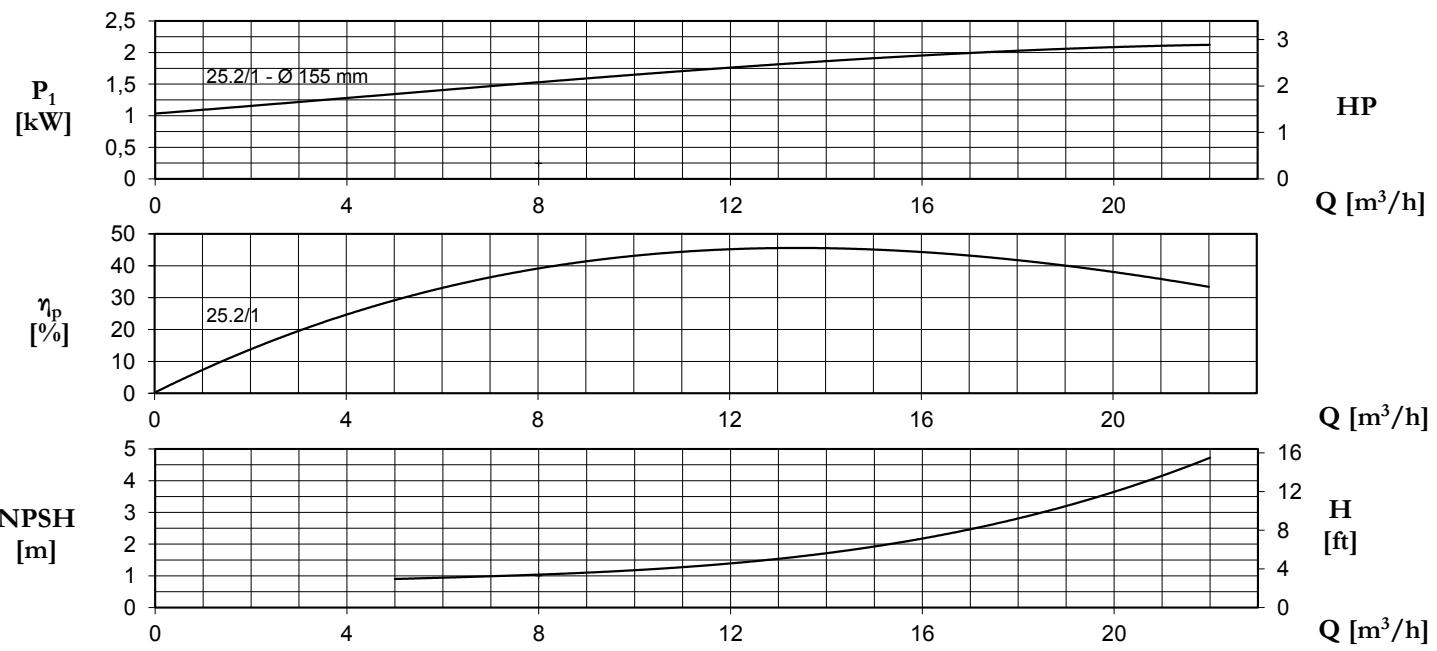
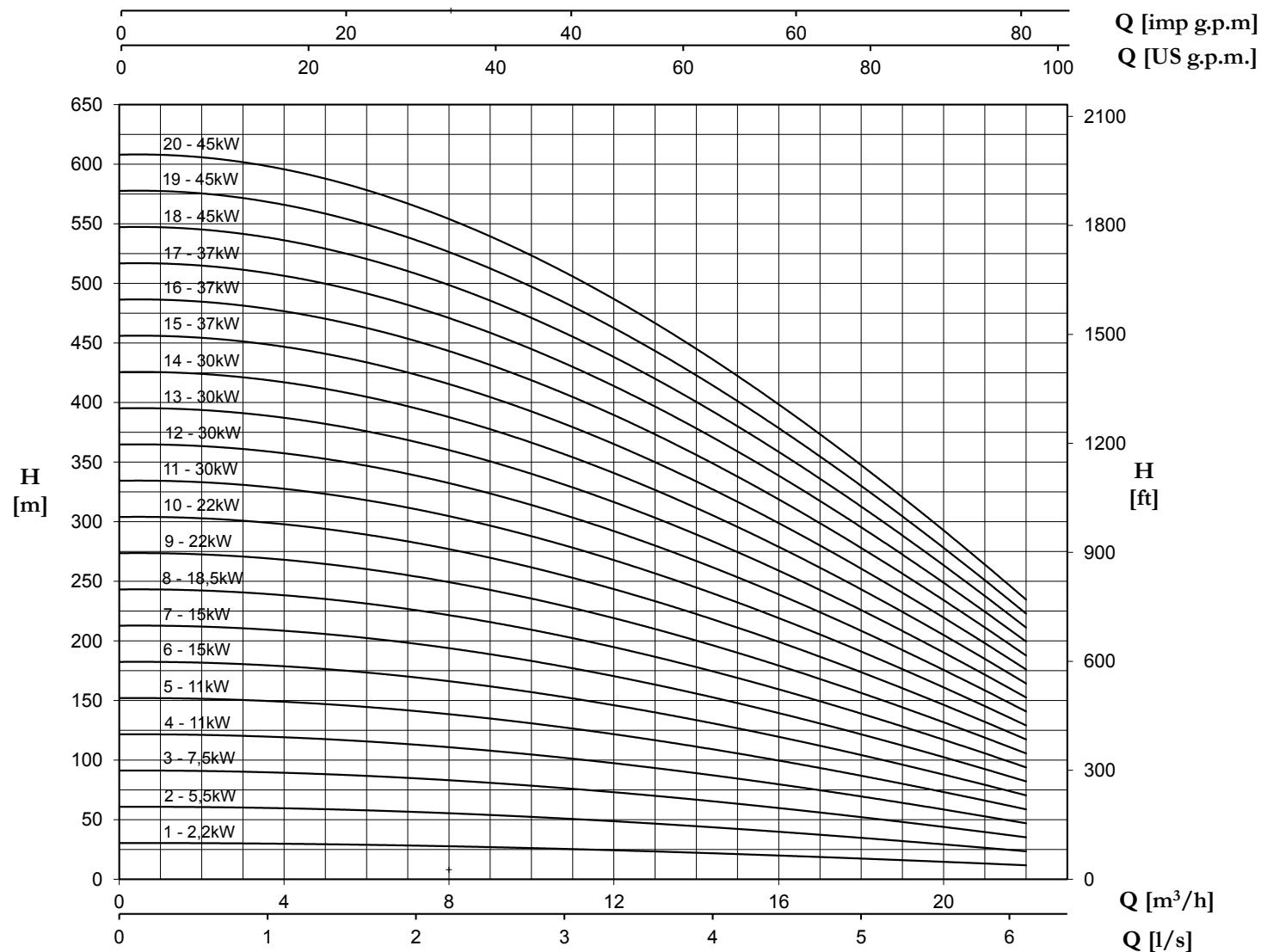
HP 25.1 INOX

2900 r.p.m.



HP 25.2

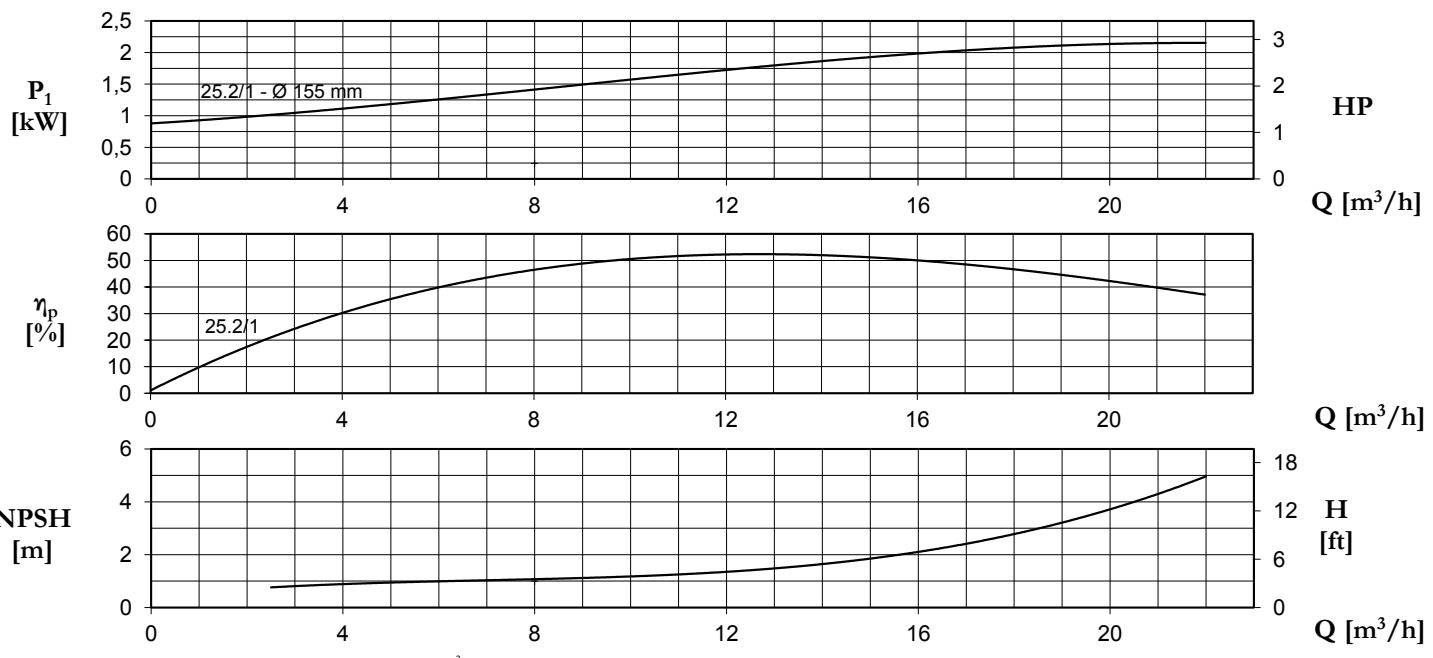
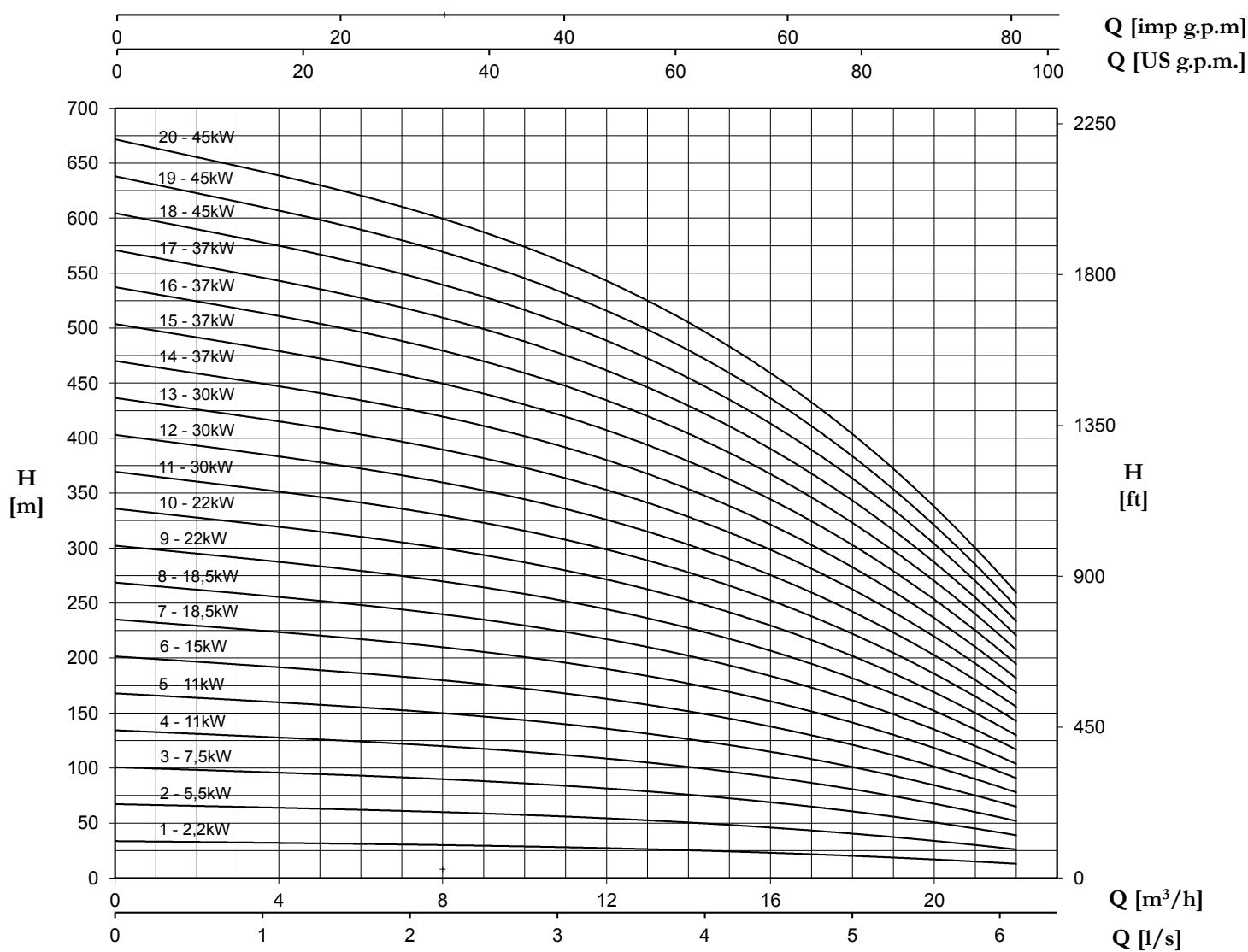
2900 r.p.m.



Valid for: $p=1$ (kg/dm^3), viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

HP 25.2 INOX

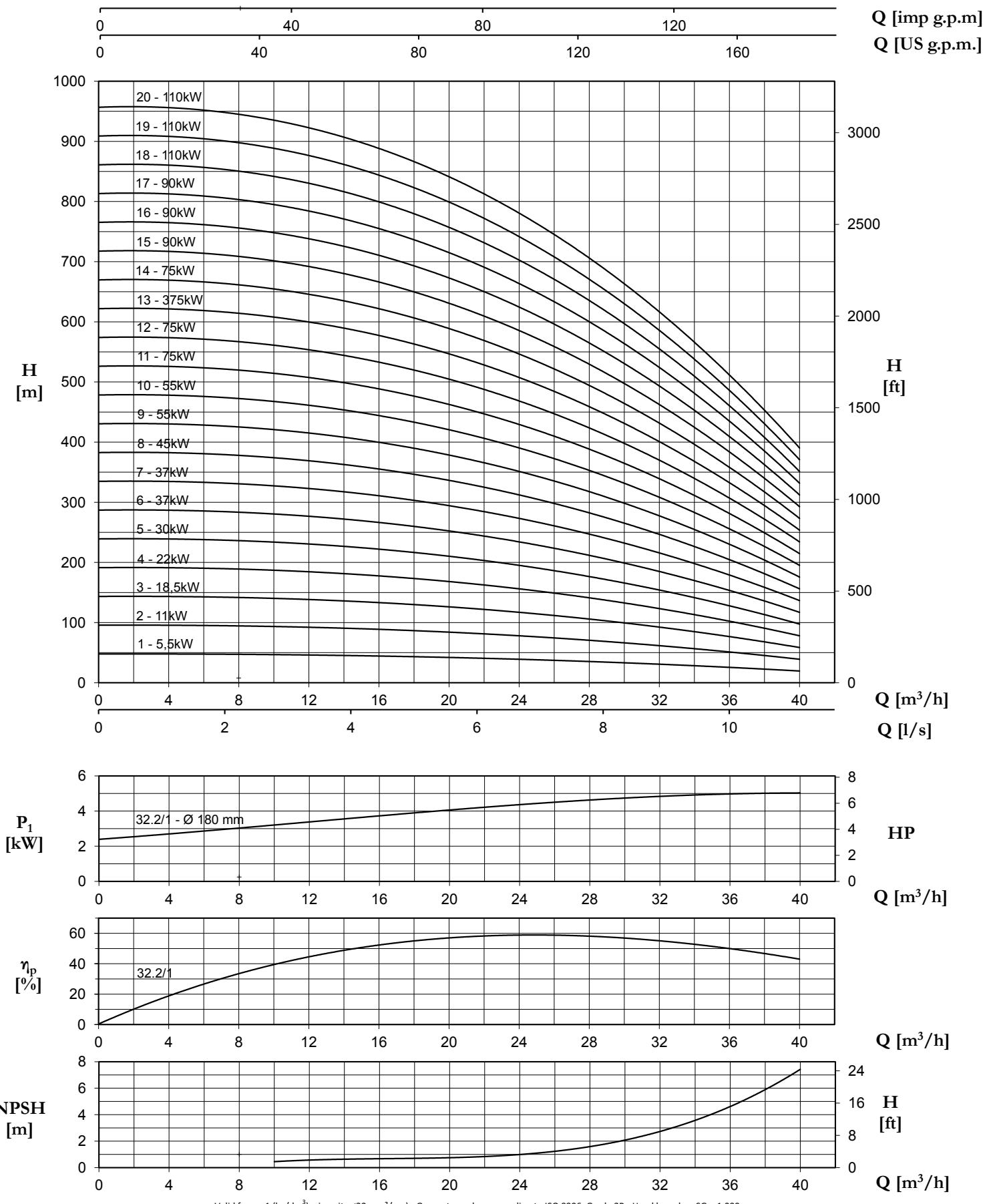
2900 r.p.m.



Valid for: $p=1 \text{ (kg/dm}^3\text{)}$, viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

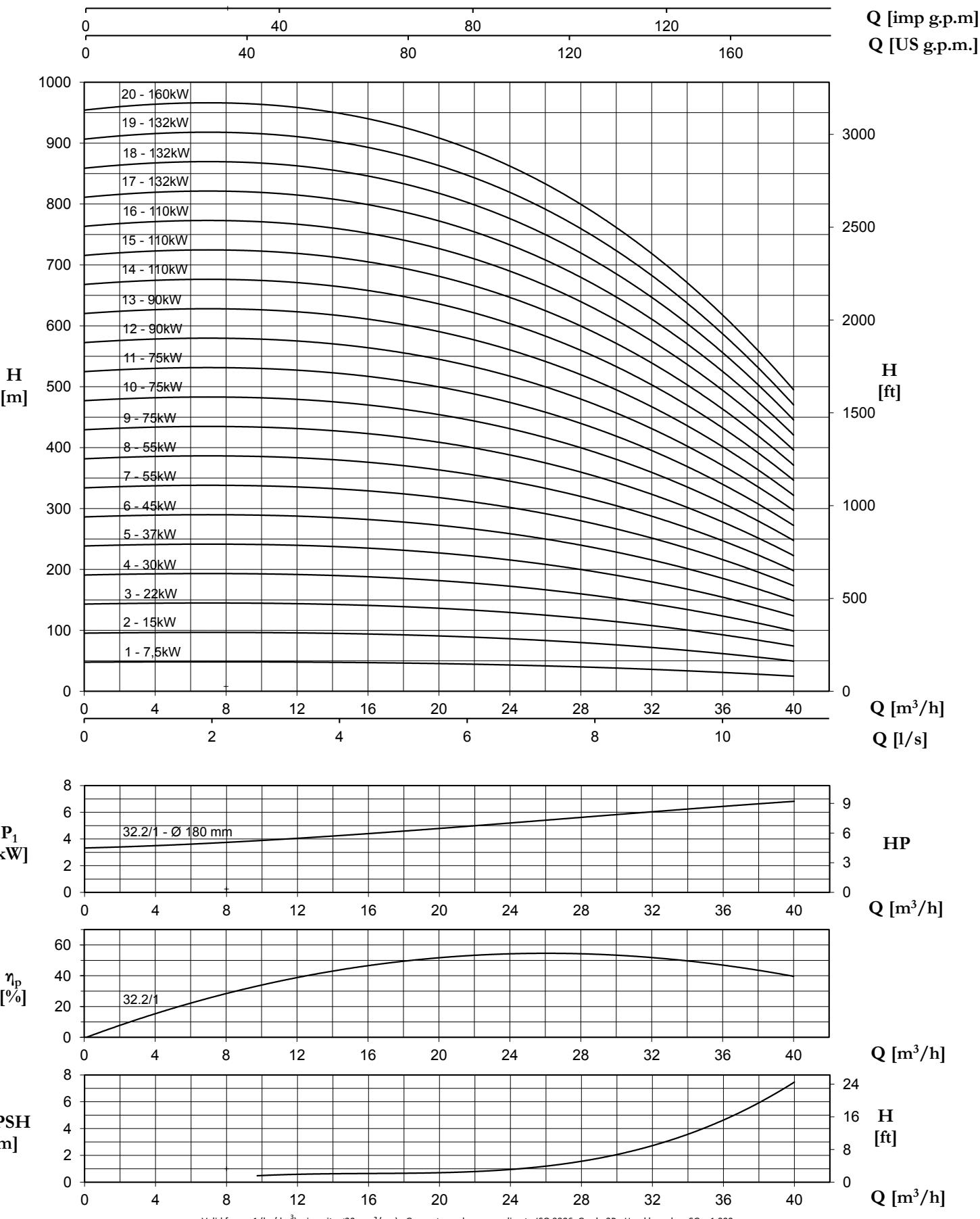
HP 32.2

2940 r.p.m.



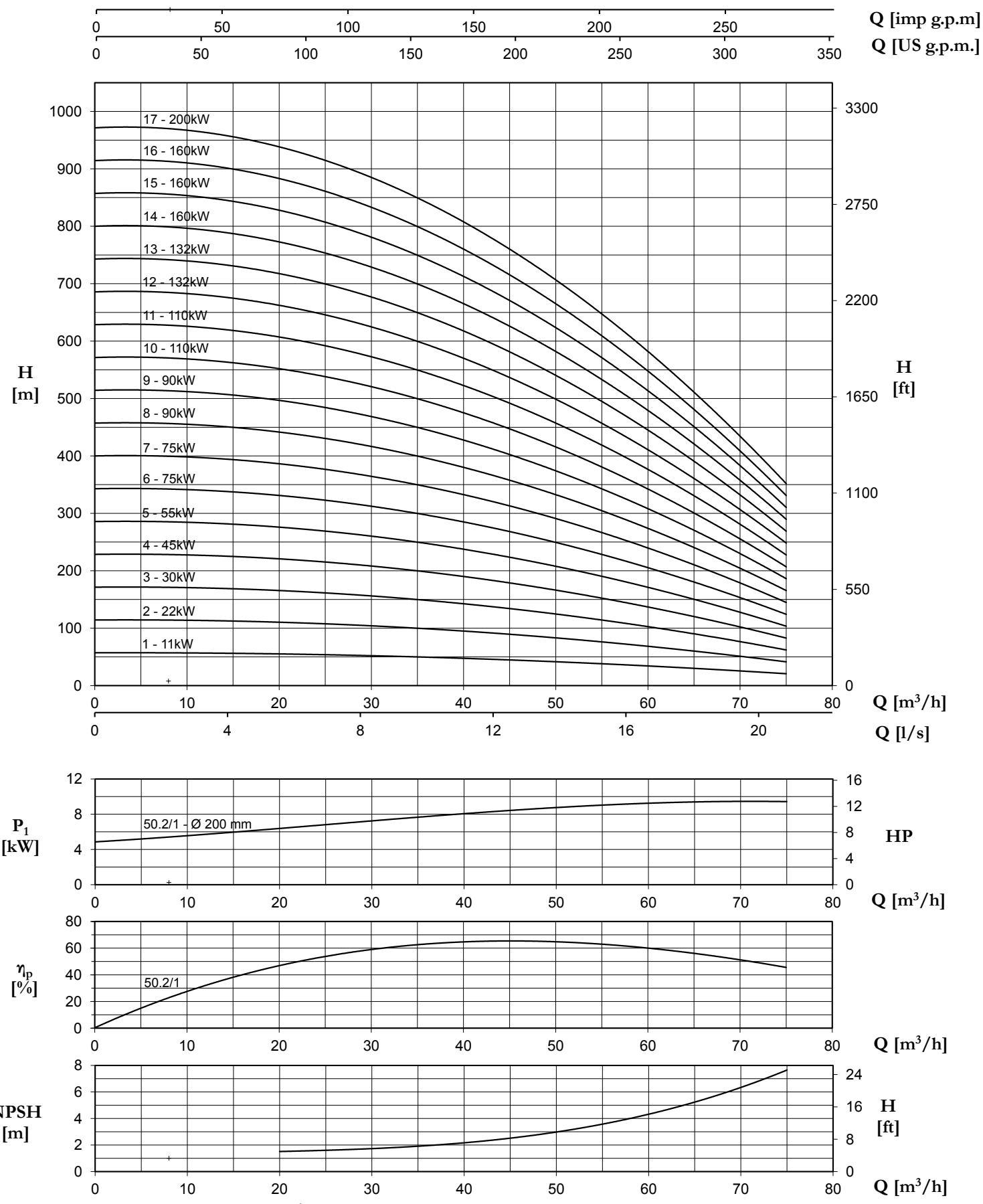
HP 32.2 INOX

2940 r.p.m.



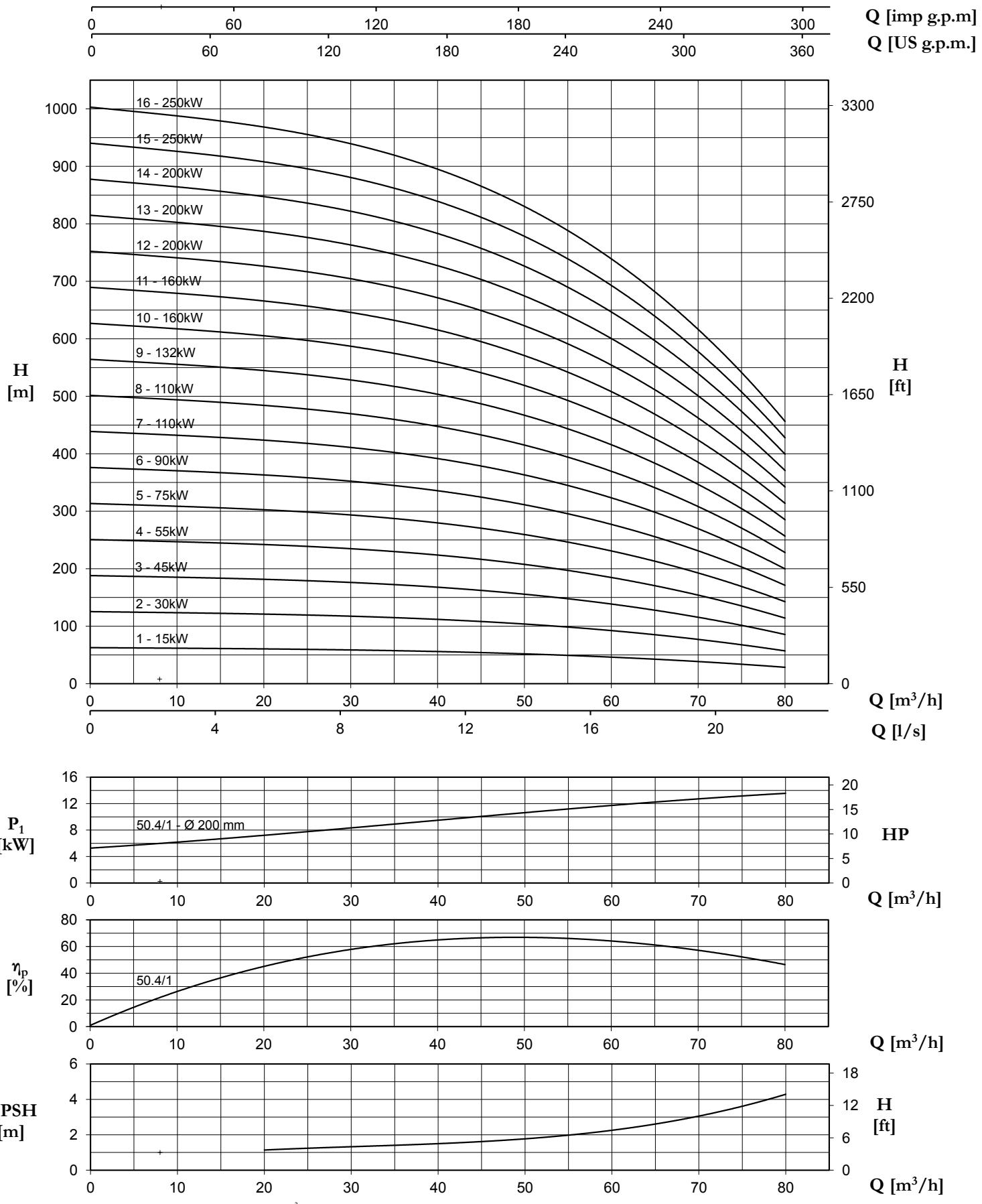
HP 50.2

2970 r.p.m.



HP 50.4

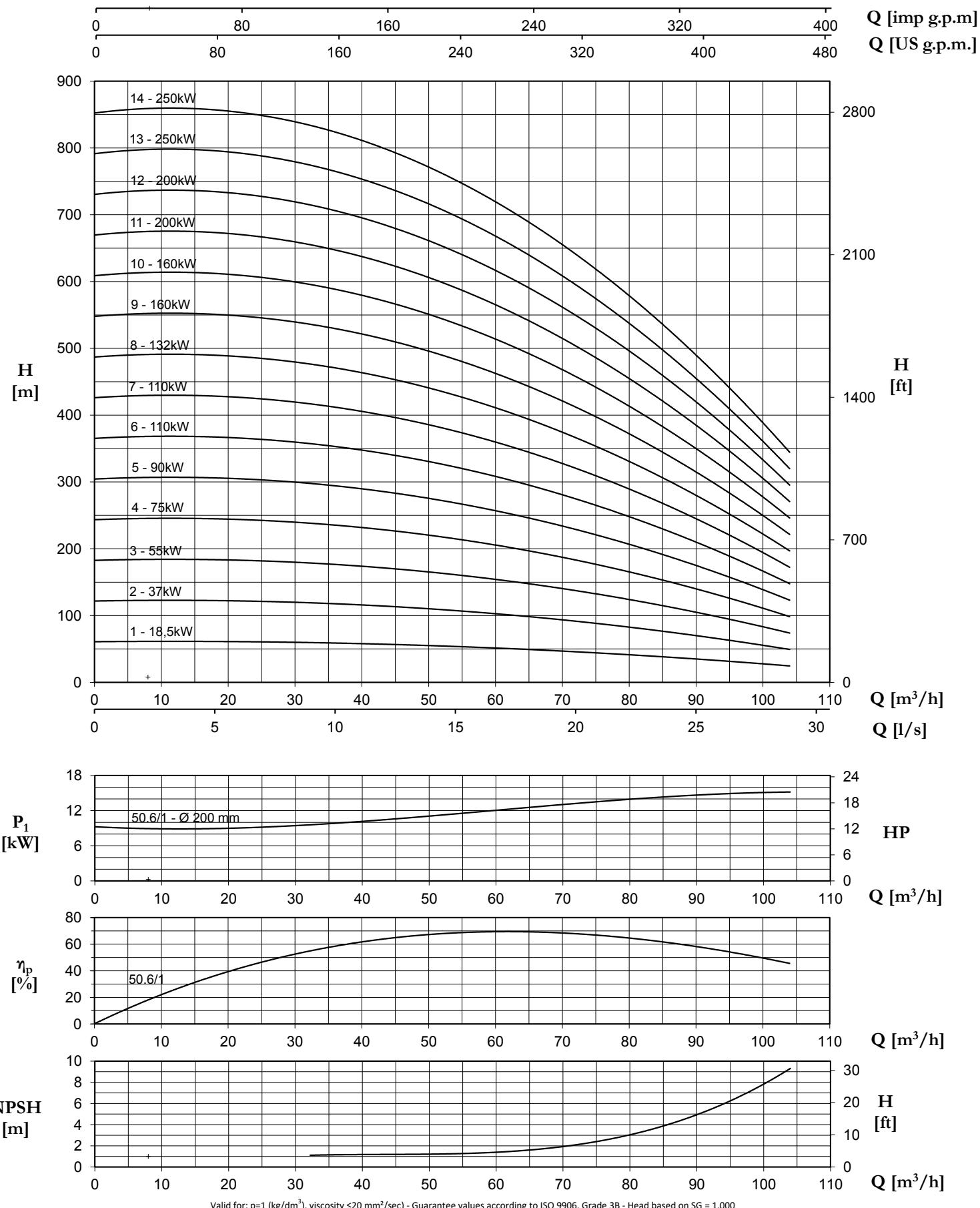
2970 r.p.m.



Valid for: $p=1 \text{ (kg/dm}^3\text{)}$, viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

HP 50.6

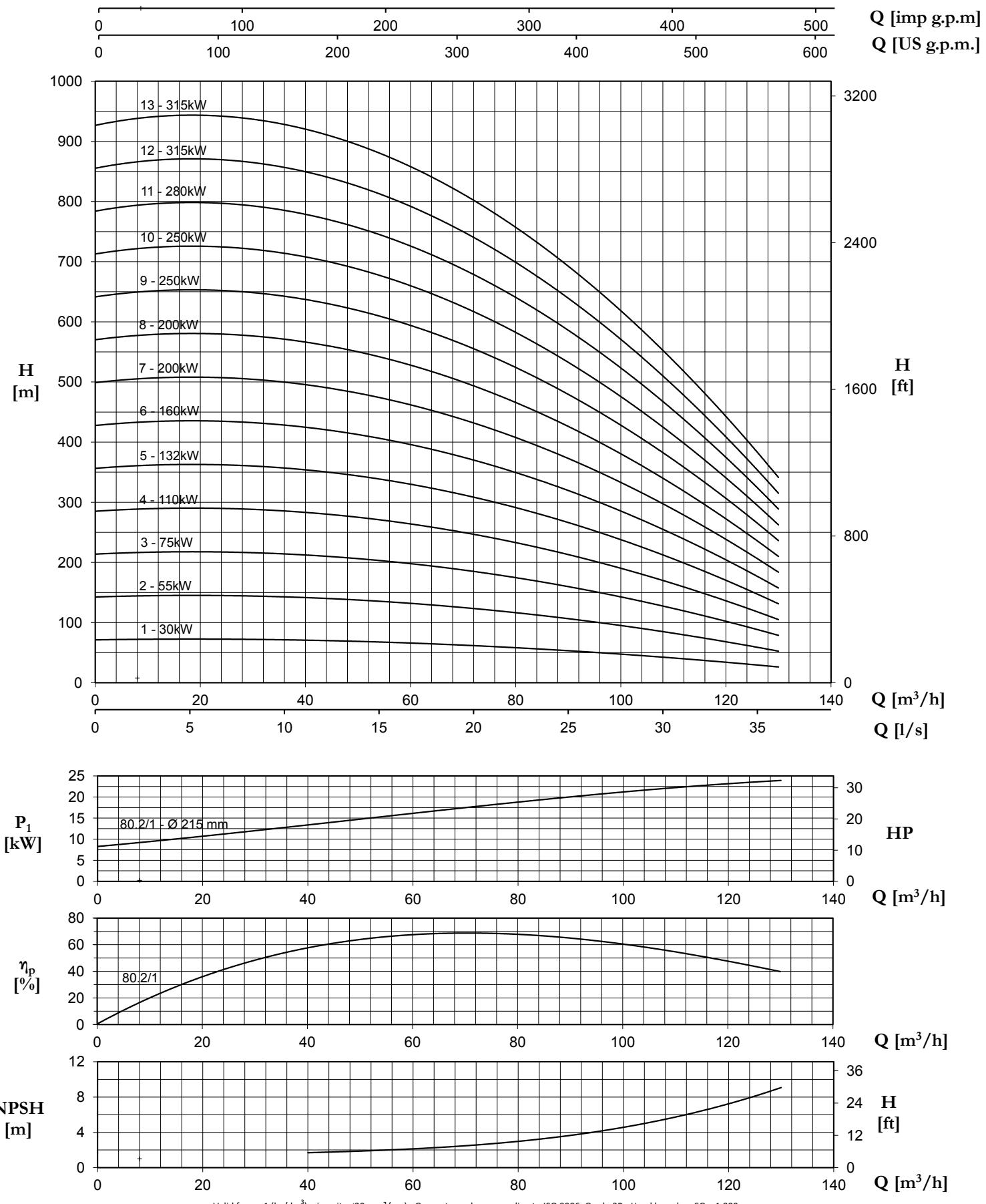
2970 r.p.m.



Valid for: $\rho = 1 \text{ (kg/dm}^3\text{)}$, viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

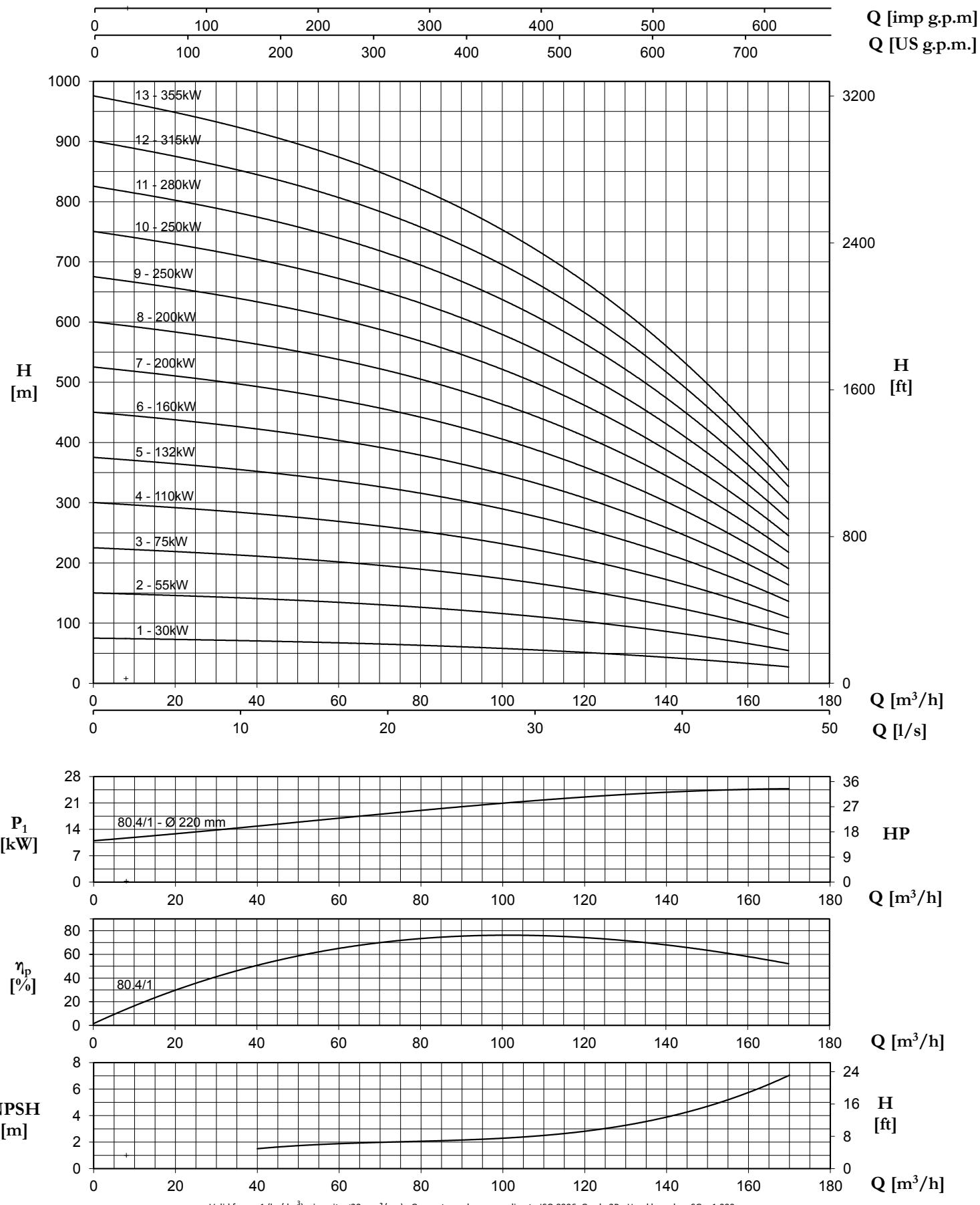
HP 80.2

2970 r.p.m.



HP 80.4

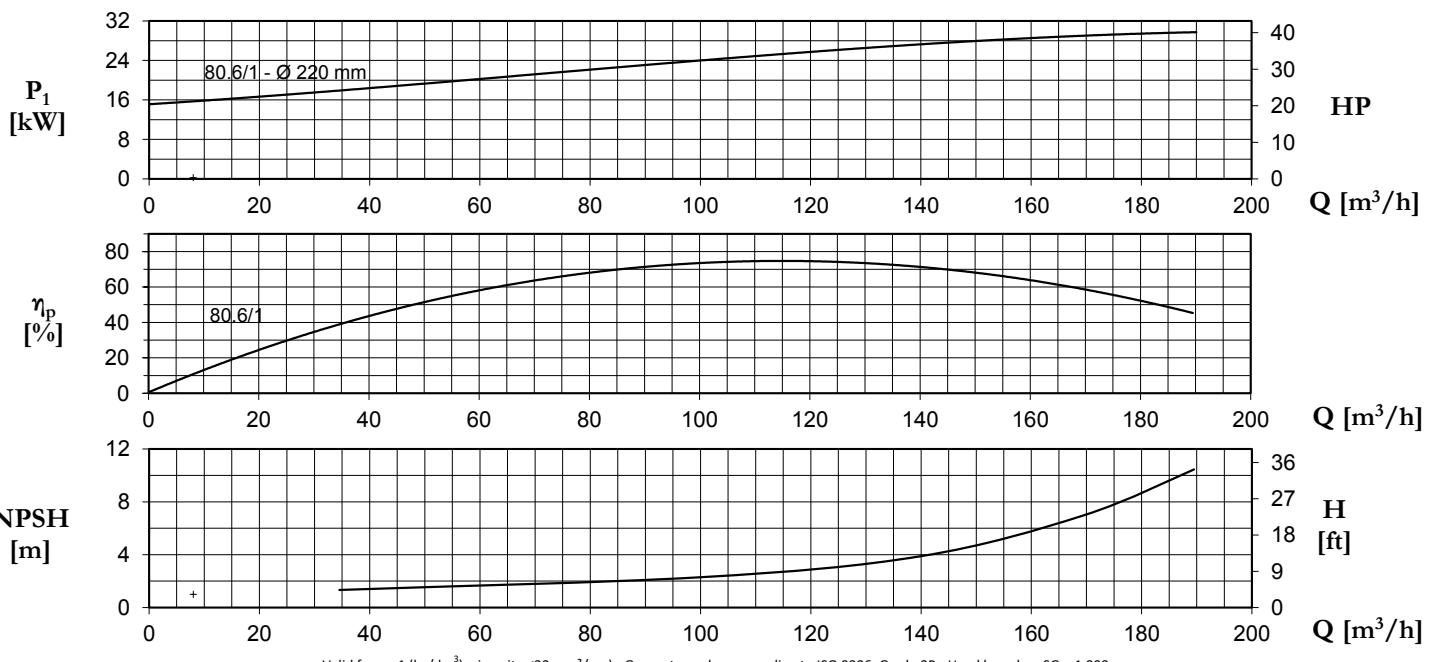
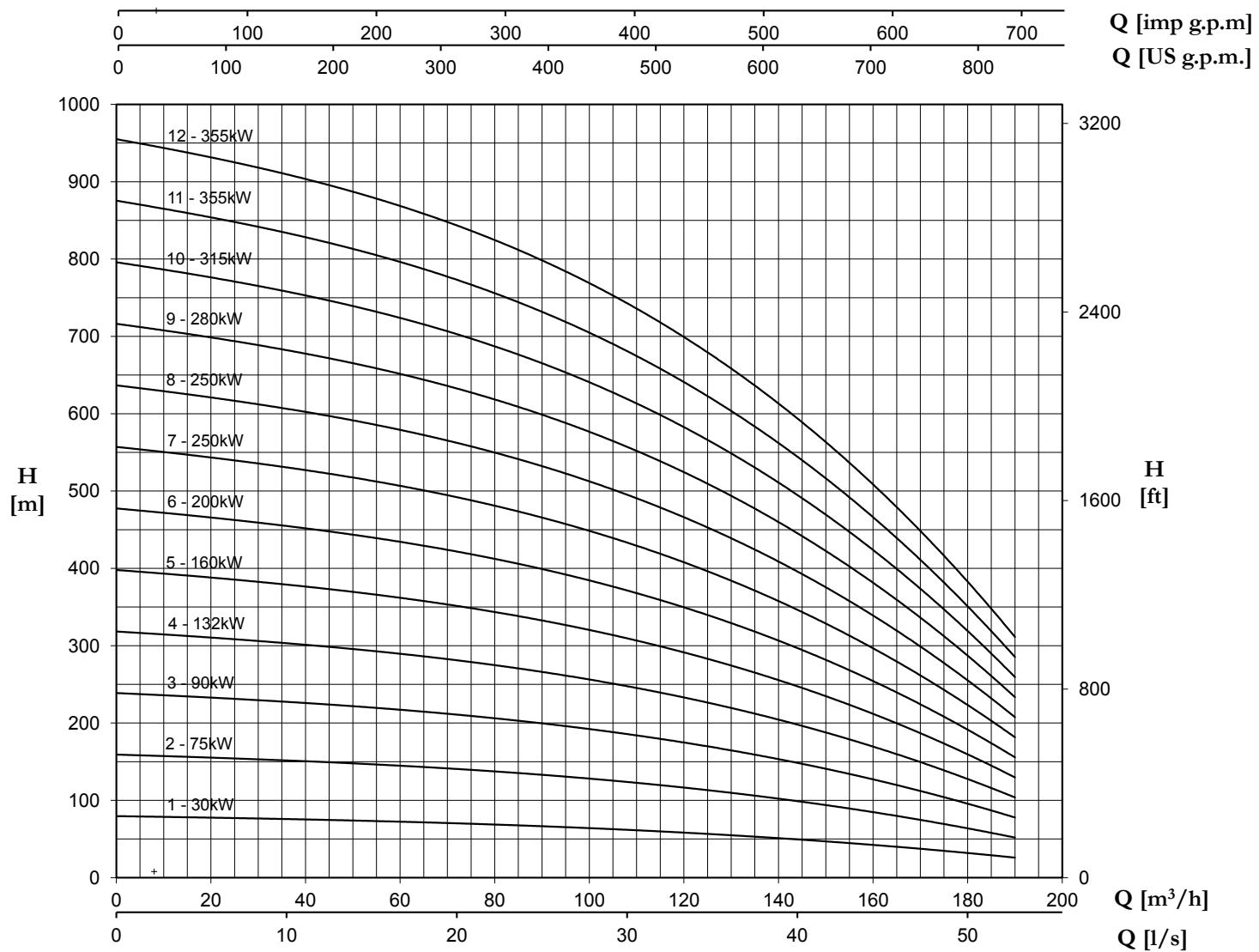
2970 r.p.m.



Valid for: $p=1$ (kg/dm³), viscosity ≤ 20 mm²/sec) - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

HP 80.6

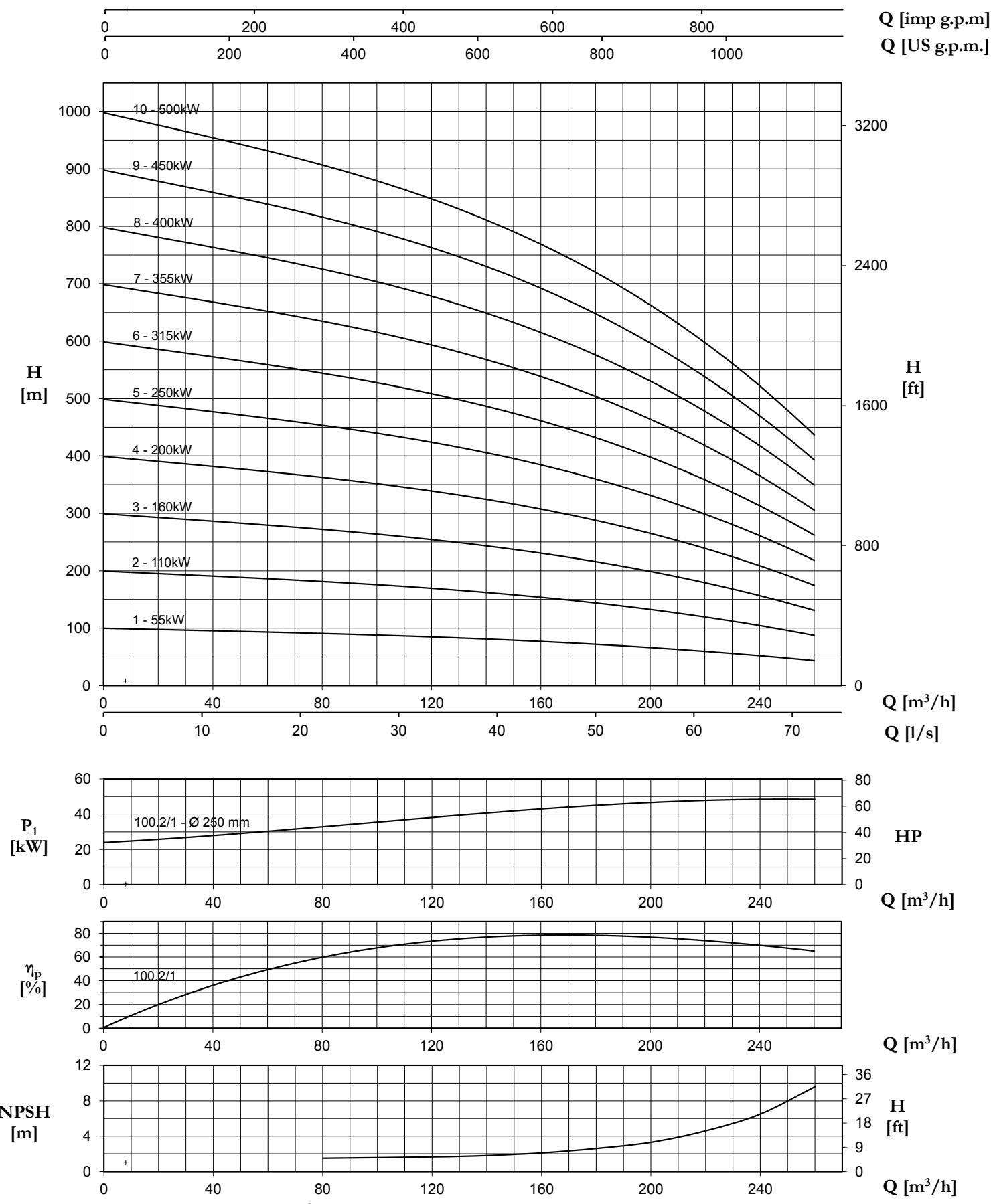
2970 r.p.m.



Valid for: $p=1$ (kg/dm^3), viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

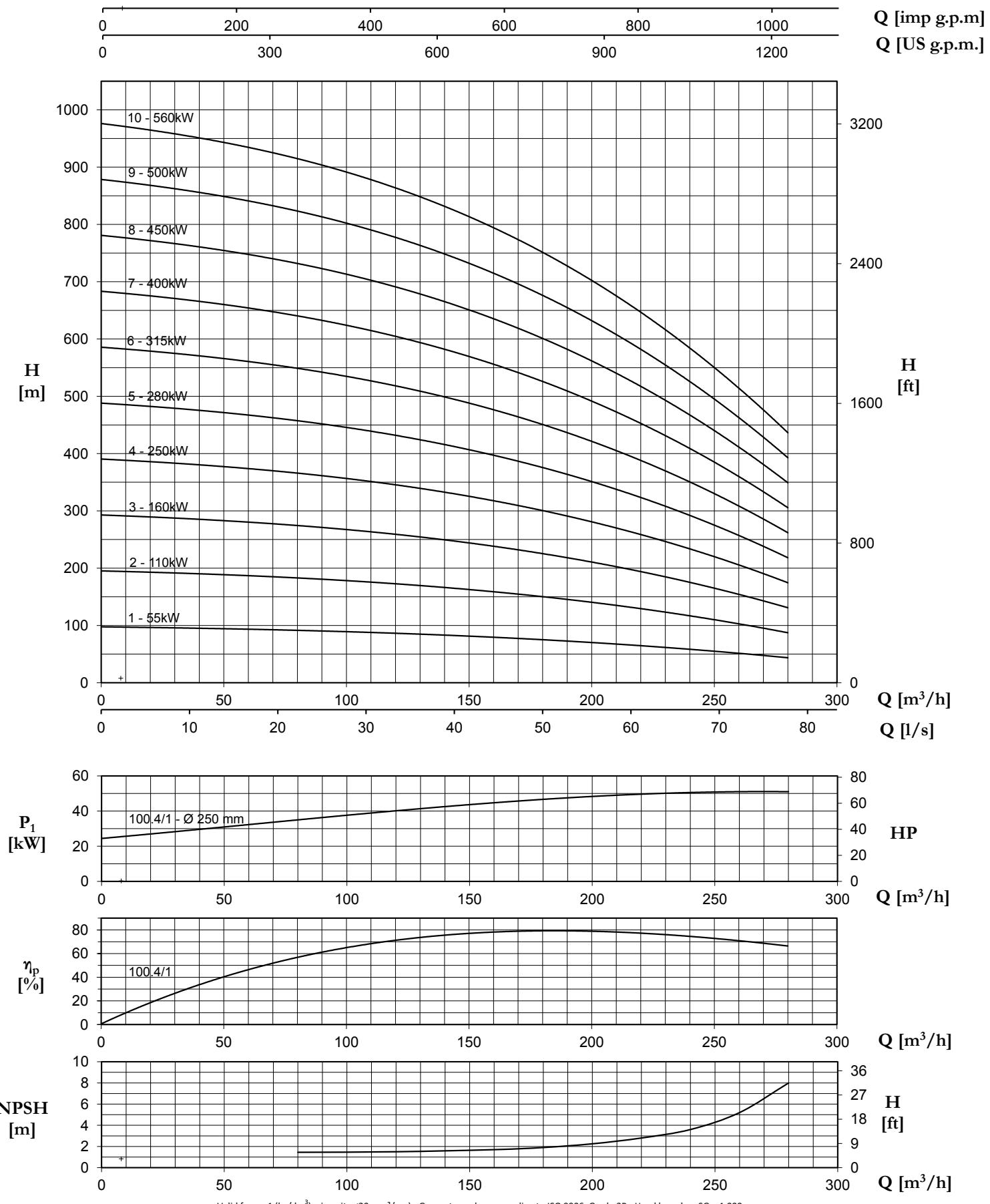
HP 100.2

2970 r.p.m.



HP 100.4

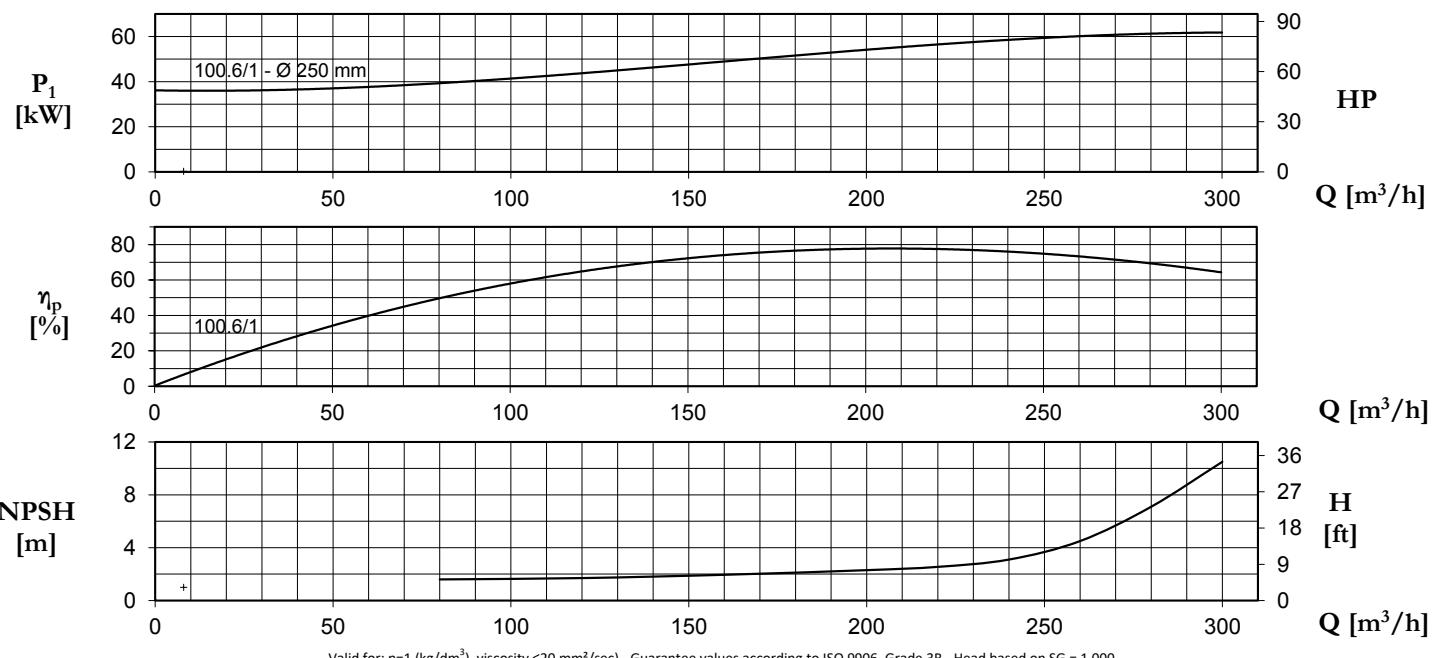
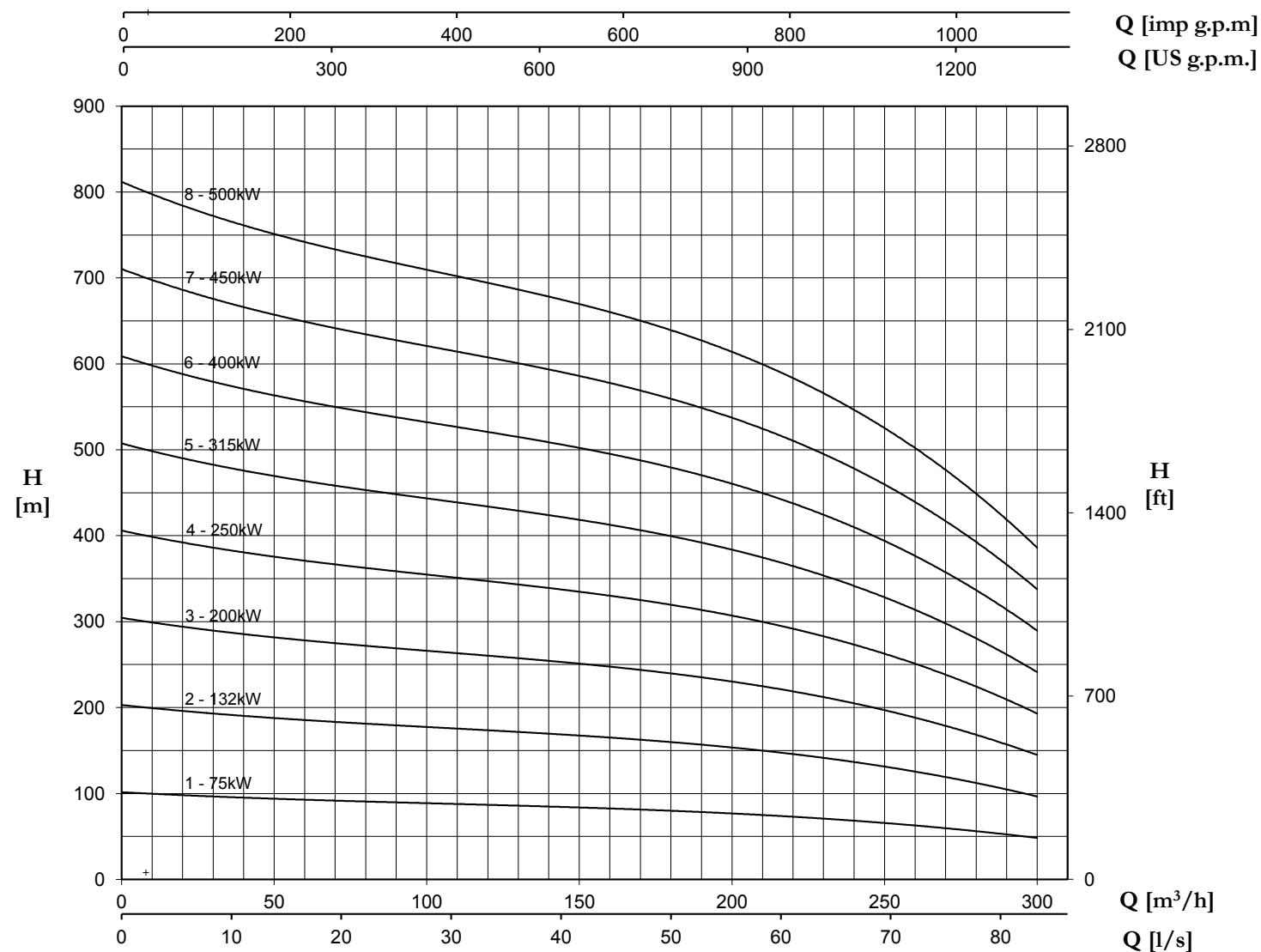
2970 r.p.m.



Valid for: p=1 (kg/dm³), viscosity ≤20 mm²/sec - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

HP 100.6

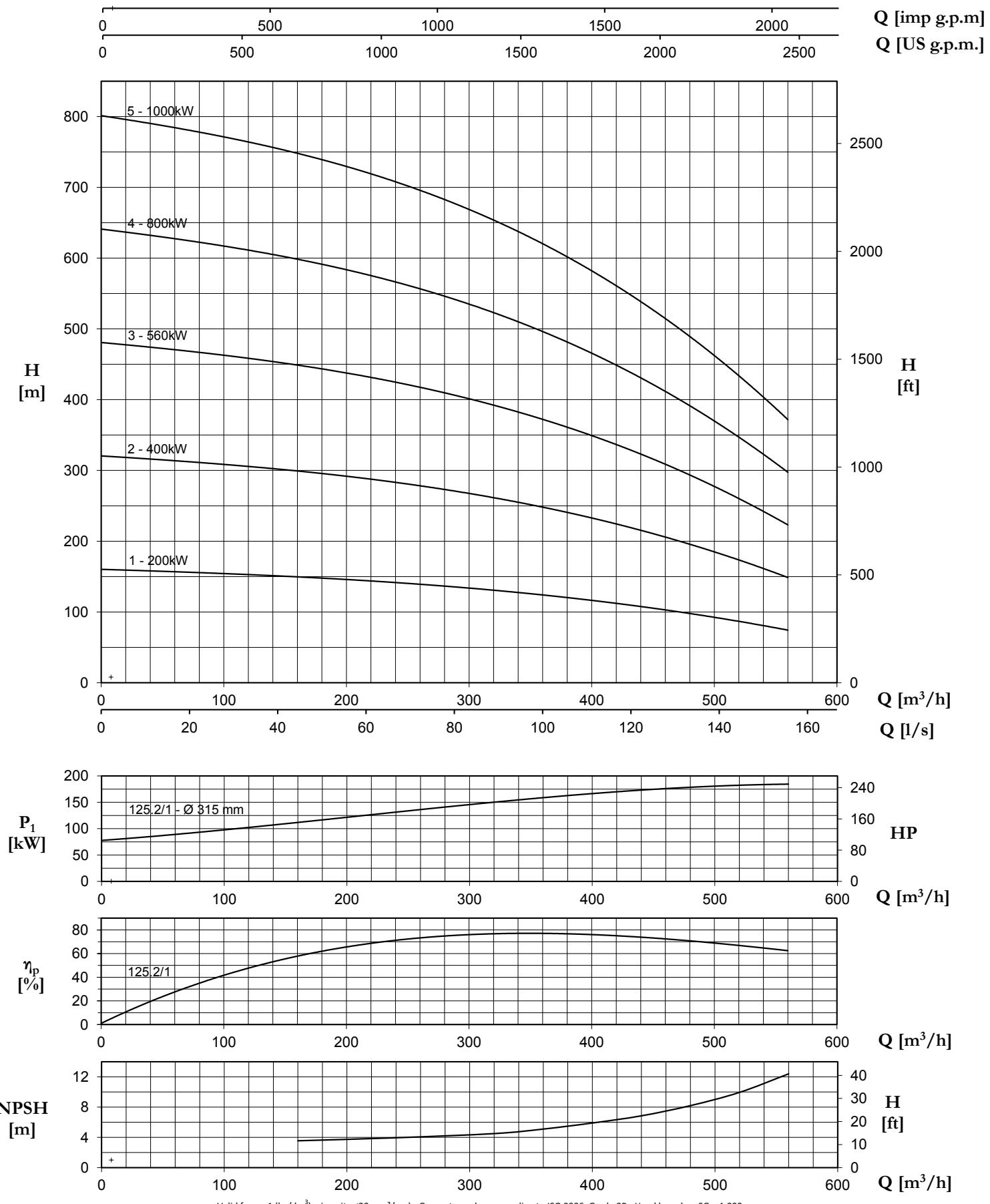
2970 r.p.m.



Valid for: $p=1 (\text{kg}/\text{dm}^3)$, viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

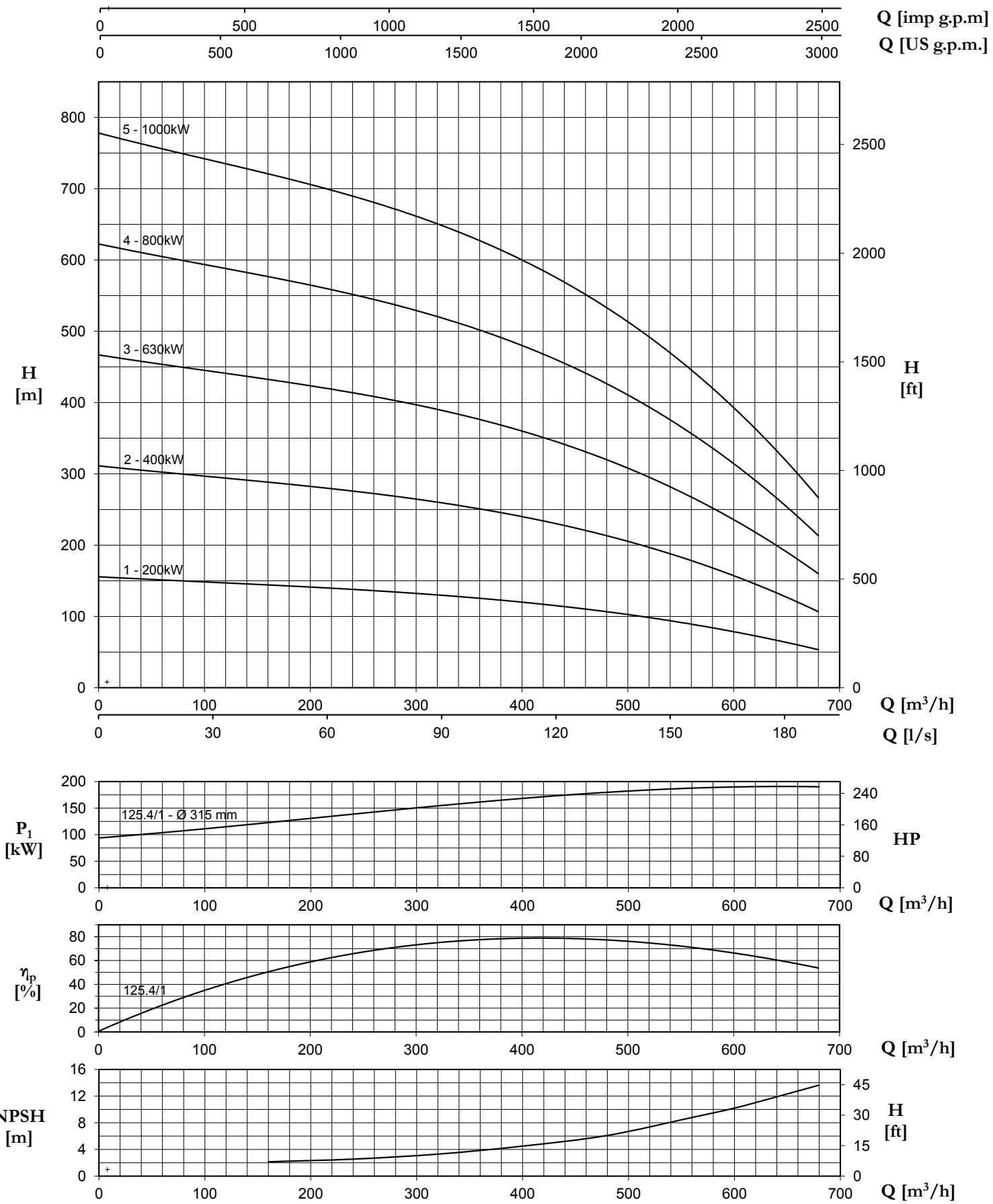
HP 125.2

2970 r.p.m.



HP 125.4

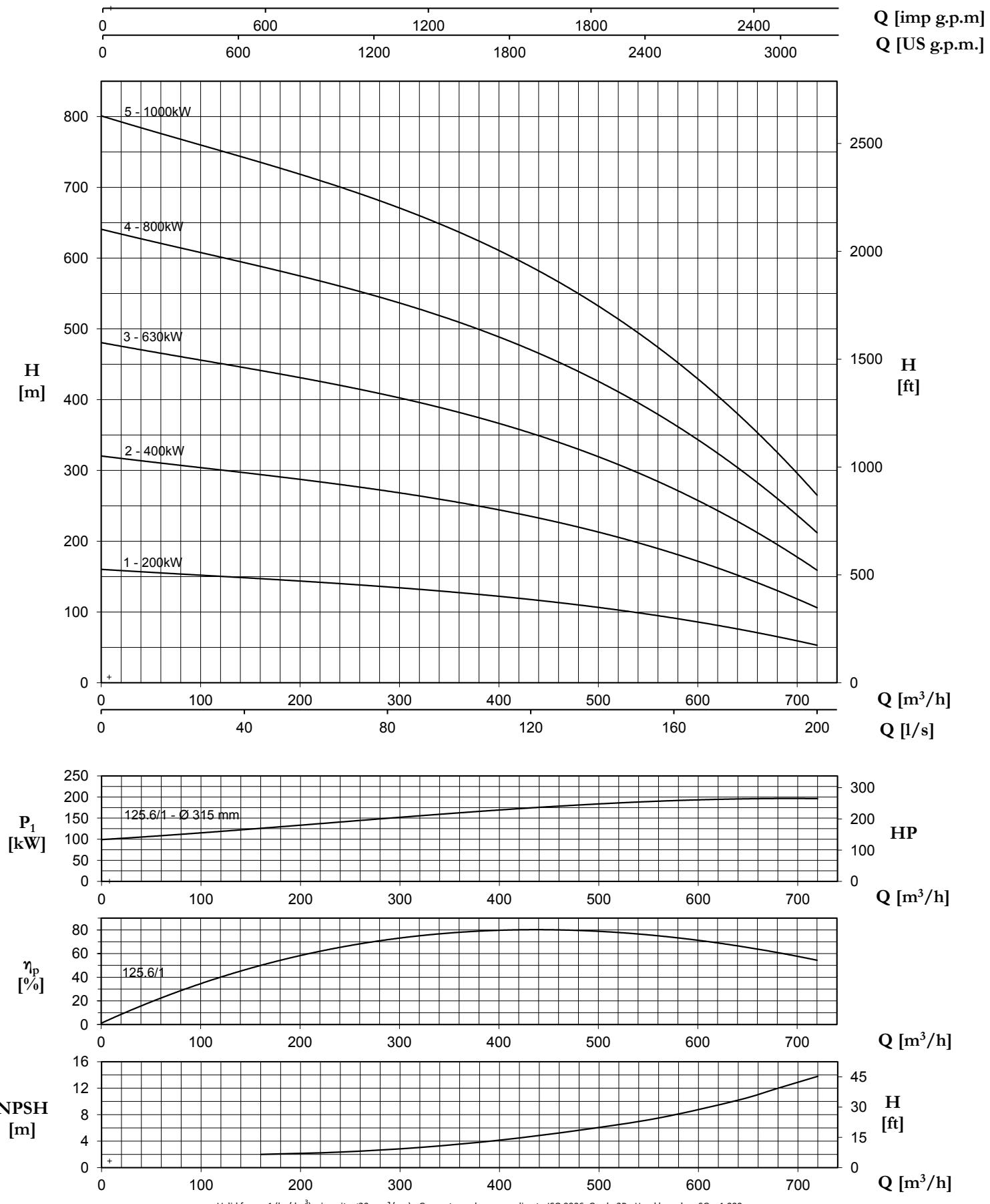
2970 r.p.m.



Valid for: $p=1 \text{ (kg/dm}^3\text{)}$, viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

HP 125.6

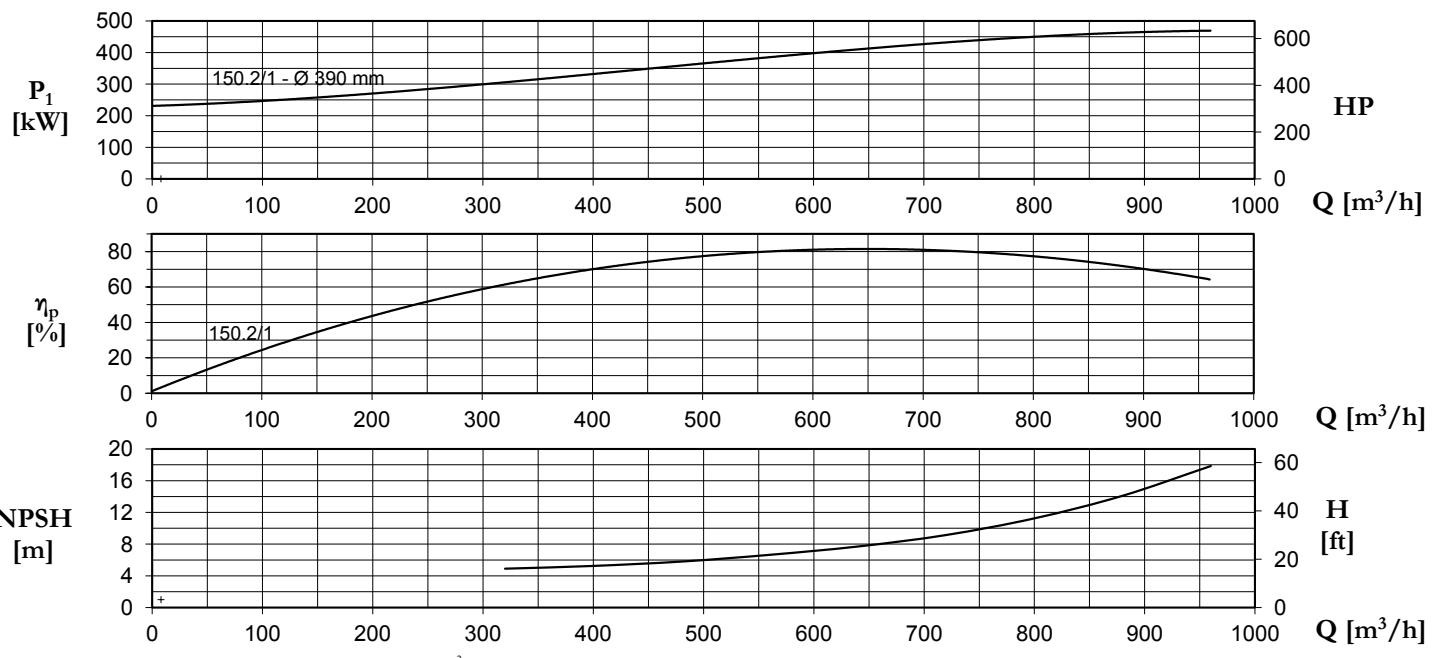
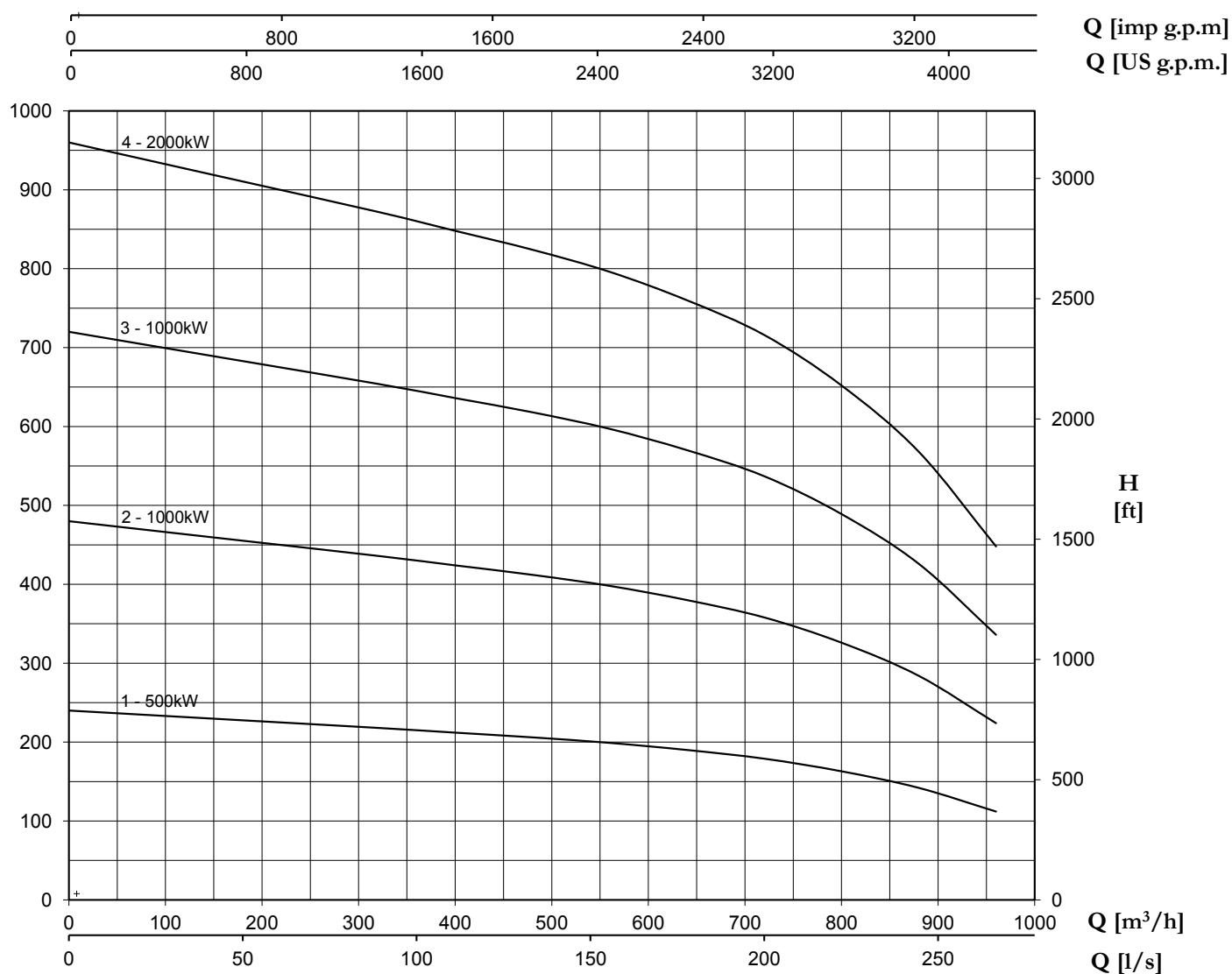
2970 r.p.m.



Valid for: $p=1$ (kg/dm³), viscosity ≤ 20 mm²/sec - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

HP 150.2

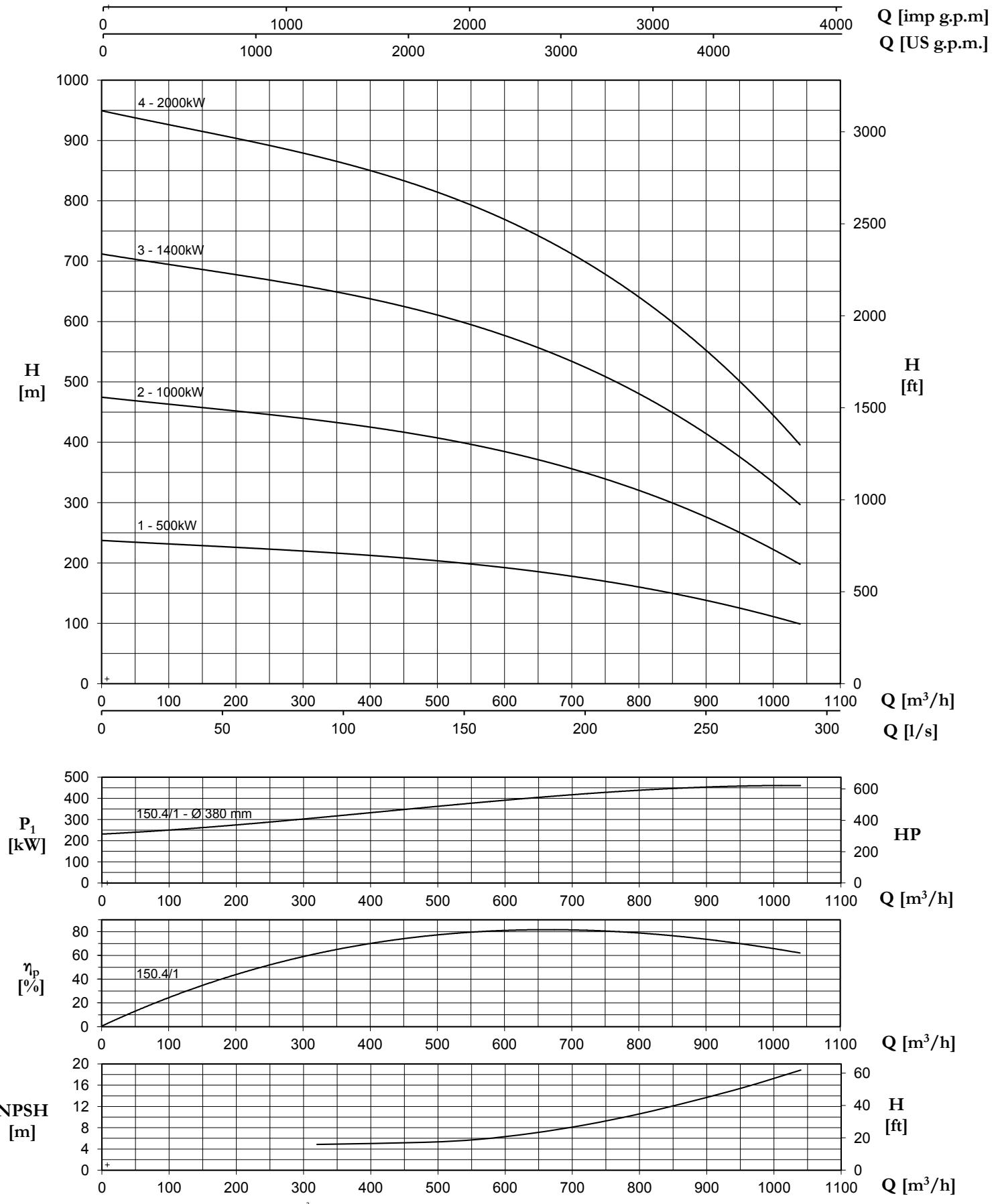
2970 r.p.m.



Valid for: $p=1$ (kg/dm^3), viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

HP 150.4

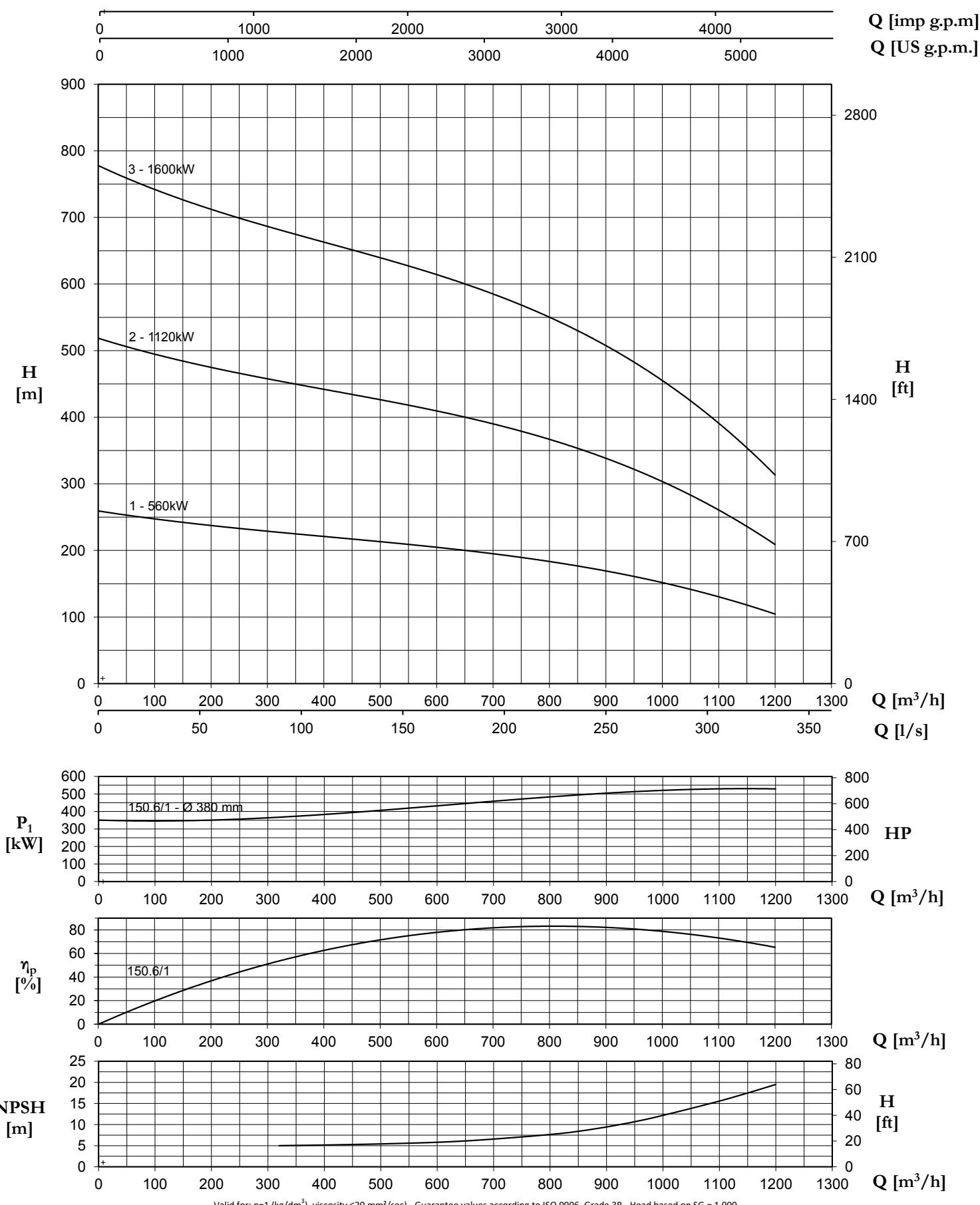
2970 r.p.m.



Valid for: $p=1 \text{ (kg/dm}^3\text{)}$, viscosity $\leq 20 \text{ mm}^2/\text{sec}$ - Guarantee values according to ISO 9906, Grade 3B - Head based on SG = 1,000

HP 150.6

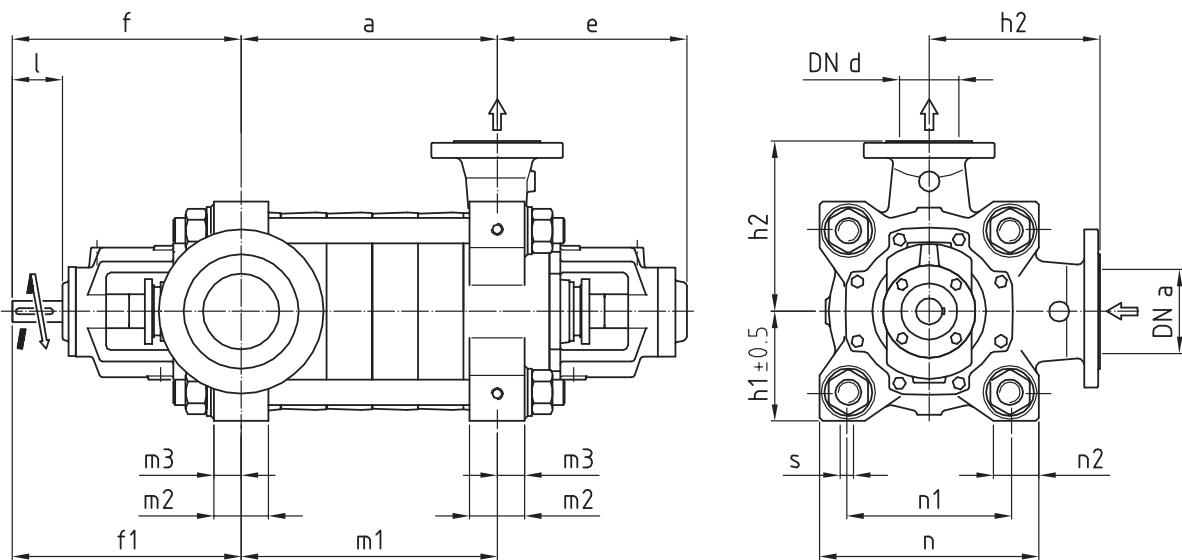
2970 r.p.m.



Dimensioni di ingombro pompa

Pump overall dimensions

HP LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION

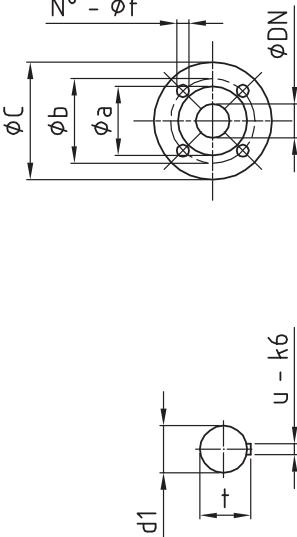


TIPO TYPE	Flangia aspirante UNI - DIN PN16 Suction flange UNI - DIN PN16						Flangia premente UNI - DIN PN64 Discharge flange UNI - DIN PN64					
	DN _a	a	b	C	N°	f	DN _p	a	b	C	N°	f
25	40	88	110	150	4	18	25	65	100	140	4	18
32	50	102	125	165	4	18	32	75	110	155	4	22
50	80	138	160	200	8	18	50	95	135	180	4	22
80	125	188	210	250	8	18	80	130	170	215	8	22
100	150	212	240	285	8	22	100	160	200	250	8	25
125	200	268	295	340	12	22	125	185	240	295	8	30
150	250	320	355	405	12	25	150	215	280	345	8	33
250	300	370	410	460	12	28	250	345	400	470	12	36

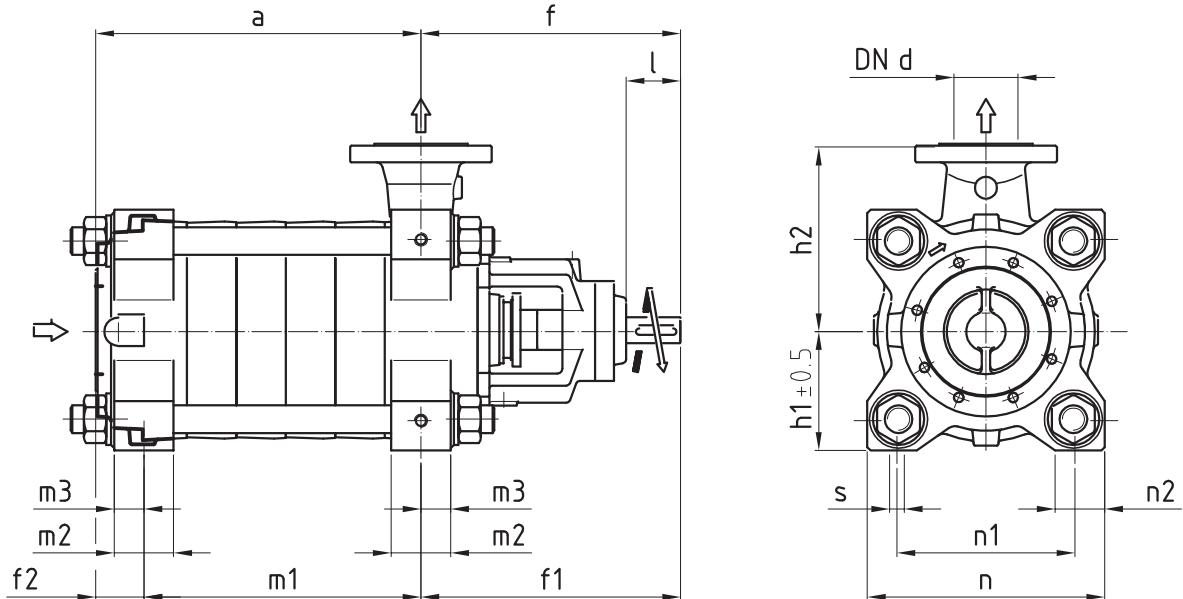
TIPO TYPE	Dimensioni pompa Pump dimensions					Dimensioni piedi Feet dimensions						Estremità d'albero Shaft end			
	e	f	f1	h1	h2	m2	m3	n	n1	n2	s	d1	l	t	u
25	192	239,5	239,5	120	160	38	19	240	186	50	M12	18	52	20,5	6
32	297	300	300	140	200	50	25	280	210	65	M16	28	60	31	8
50	323	340	340	155	225	55	27,5	301	240	65	M16	32	80	35	10
80	344	360	360	175	250	65	32,5	350	270	75	M20	38	80	41	10
100	373	410	410	205	315	75	37,5	410	300	90	M20	42	110	45	12
125	451	514,5	514,5	255	350	95	47,5	510	400	110	M24	55	130	59	16
150	515	552,5	552,5	305	420	120	60	610	460	140	M27	70	140	74,5	20
250	535	580	580	415	550	135	73/90	830	590	265	M42	70	155	74,5	20

TIPO TYPE	Numero di stadi - Number of stages																								
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
25 $\frac{a}{m_1}$	100	145	190	235	280	325	370	415	460	505	550	595	640	685	730	775	820	865	910	955	1000	1045	1090	1135	
32 $\frac{a}{m_1}$	125	180	235	290	345	400	455	510	565	620	675	730	785	840	895	950	1005	1060	1115	1170	1225	1280	1335	1390	
50 $\frac{a}{m_1}$	152	214	276	338	400	462	524	586	648	710	772	834	896	958	1020	1082	1144	1206	1268						
80 $\frac{a}{m_1}$	195	270	345	420	495	570	645	720	795	870	945	1020	1095	1170	1245	1320	1395								
100 $\frac{a}{m_1}$	235	325	415	505	595	685	775	865	955	1045	1135	1225	1315	1405	1495										
125 $\frac{a}{m_1}$	295	405	515	625	735	845	955	1065	1175	1285	1395														
150 $\frac{a}{m_1}$	370	505	640	775	910	1045	1180	1315	1450																
250 $\frac{a}{m_1}$	505	700	895	1090	1285	1480	1675																		

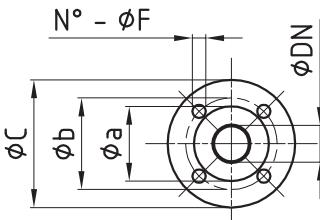
Dimensioni in mm - Dimensions in mm



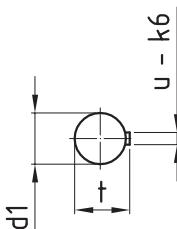
HPA LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION



TIPO TYPE	Flangia aspirante UNI - DIN PN16 Suction flange UNI - DIN PN16						Flangia premente UNI - DIN PN64 Discharge flange UNI - DIN PN64					
	DNa	a	b	C	N°	f	DNp	a	b	C	N°	f
25	50	102	125	165	4	M16	25	65	100	140	4	18
32	65	102	125	165	8	M16	32	75	110	155	4	22
50	100	158	180	220	8	M16	50	108	135	180	4	22
80	125	188	210	250	8	M16	80	142	170	215	8	22
100	150	212	240	285	8	M22	100	170	200	250	8	25
125	200	268	295	340	12	M22	125	205	240	295	8	29
150	250	320	355	405	12	M27	150	240	280	345	8	33



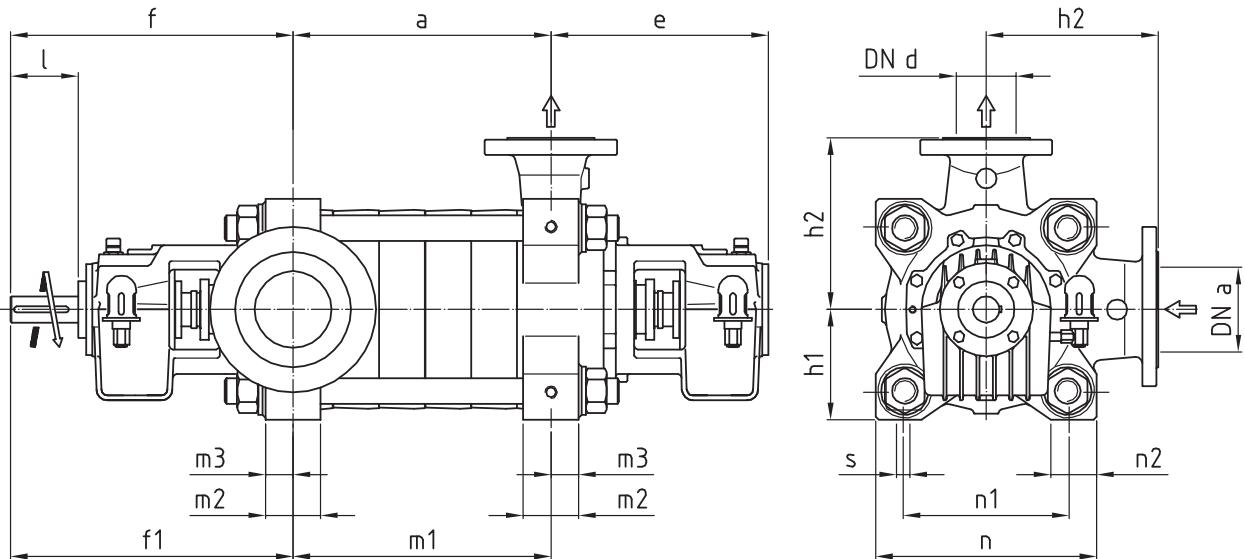
TIPO TYPE	Dimensioni pompa Pump dimensions					Dimensioni piedi Feet dimensions						Estremità d'albero Shaft end			
	f	f1	f2	h1	h2	m2	m3	n	n1	n2	s	d1	I	t	u
25	250	250	41	120	160	38	19	240	186	50	M12	18	52	20,5	6
32	360	360	70	140	200	50	25	280	210	65	M16	24	60	27	8
50	410	410	67	155	225	55	27,5	310	240	65	M16	28	80	31	8
80	460	460	65	175	250	65	32,5	350	270	75	M20	32	80	35	10
100	480	480	75	205	315	75	37,5	410	300	90	M20	38	110	41	10
125	590	590	85	255	350	95	47,5	510	400	110	M24	52	130	56	16
150	660	660	110	305	420	120	60	610	460	140	M27	65	140	69	18



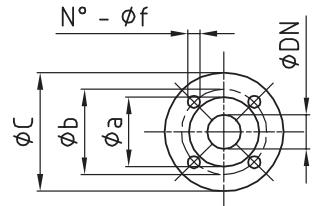
TIPO TYPE	Numero di stadi - Number of stages																			
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
25	a	160	205	250	295	340	385	430	475	520	565	610	655	700	745	790	835	880	925	970
	m1	100	145	190	235	280	325	370	415	460	505	550	595	640	685	730	775	820	865	910
32	a	195	250	305	360	405	470	525	580	635	690	745	800	855	910	965	1020	1075	1130	1185
	m1	125	180	235	290	345	400	455	510	565	620	675	730	785	840	895	950	1005	1060	1115
50	a	220	282	344	406	468	530	592	654	716	778	840	902	964	1026	1088	1150	1212		
	m1	152	214	276	338	400	462	524	586	648	710	772	834	896	958	1020	1082	1144		
80	a	260	335	410	485	560	635	710	785	860	935	1010	1085	1160	1235	1310				
	m1	195	270	345	420	495	570	645	720	795	870	945	1020	1095	1170	1245				
100	a	310	400	490	580	670	760	850	940	1030	1120	1210	1300	1390						
	m1	235	325	415	505	595	685	775	865	955	1045	1135	1225	1315						
125	a	350	460	570	680	790	900	1010	1120	1230	1340	1450								
	m1	265	375	485	595	710	815	925	1035	1145	1255	1365								
150	a	420	555	690	825	960	1095	1230	1365	1500										
	m1	310	445	580	715	850	985	1120	1255	1390										

Dimensioni in mm - Dimensions in mm

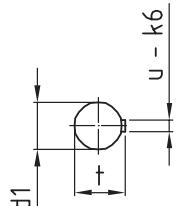
HPM LUBRIFICAZIONE A OLIO / OIL LUBRICATION



TIPO TYPE	Flangia aspirante UNI - DIN PN16 Suction flange UNI - DIN PN16						Flangia premente UNI - DIN PN64 Discharge flange UNI - DIN PN644					
	DN _a	a	b	C	N°	f	DN _p	a	b	C	N°	f
32	50	102	125	165	4	18	32	75	110	155	4	22
50	80	138	160	200	8	18	50	95	135	180	4	22
80	125	188	210	250	8	18	80	130	170	215	8	22
100	150	212	240	285	8	22	100	160	200	250	8	25
125	200	268	295	340	12	22	125	185	240	295	8	30
150	250	320	355	405	12	25	150	215	280	345	8	33
250	300	370	410	460	12	28	250	345	400	470	12	36



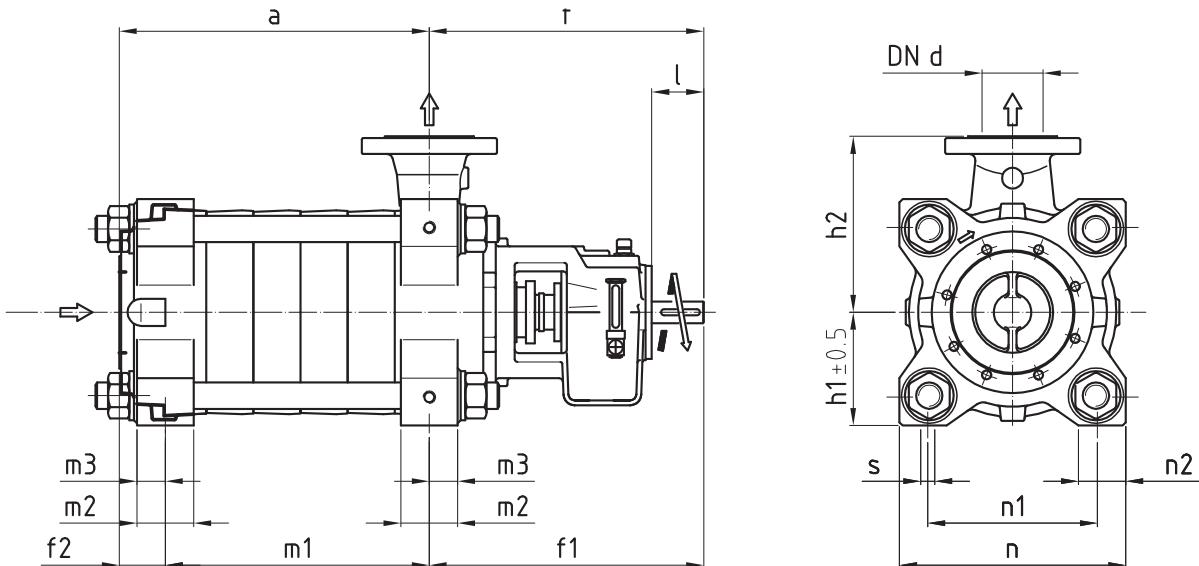
TIPO TYPE	Dimensioni pompa Pump dimensions					Dimensioni piedi Feet dimensions						Estremità d'albero Shaft end			
	e	f	f1	h1	h2	m2	m3	n	n1	n2	s	d1	l	t	u
25	223	270,5	270,5	120	160	38	19	240	186	50	M12	20	58	22,5	6
32	354	404	404	140	200	50	25	280	210	65	M16	28	60	31	8
50	379	449	449	155	225	55	27,5	310	240	65	M16	32	80	35	10
80	399	473	473	175	250	65	32,5	350	270	75	M20	38	80	41	10
100	428	528	528	205	315	75	37,5	410	300	90	M20	42	110	45	12
125	513	644	644	255	350	95	47,5	510	400	110	M24	55	130	59	16
150	508	629,5	629,5	305	420	120	60	610	460	140	M27	70	140	74,5	20
250	528	649,5	649,5	415	550	135	73/90	830	590	265	M42	70	151,5	74,5	20



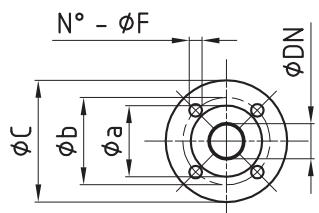
TIPO TYPE	Numero di stadi - Number of stages																								
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	
25 $\frac{a}{m_1}$	100	145	190	235	280	325	370	415	460	505	550	595	640	685	730	775	820	865	910	955	1000	1045	1090	1135	
32 $\frac{a}{m_1}$	125	180	235	290	345	400	455	510	565	620	675	730	785	840	895	950	1005	1060	1115	1170	1225	1280	1335	1390	
50 $\frac{a}{m_1}$	152	214	276	338	400	462	524	586	648	710	772	834	896	958	1020	1082	1144	1206	1268						
80 $\frac{a}{m_1}$	195	270	345	420	495	570	645	720	795	870	945	1020	1095	1170	1245	1320	1395								
100 $\frac{a}{m_1}$	235	325	415	505	595	685	775	865	955	1045	1135	1225	1315	1405	1495										
125 $\frac{a}{m_1}$	295	405	515	625	735	845	955	1065	1175	1285	1395														
150 $\frac{a}{m_1}$	370	505	640	775	910	1045	1180	1315	1450																
250 $\frac{a}{m_1}$	505	700	895	1090	1285	1480	1675																		

Dimensioni in mm - Dimensions in mm

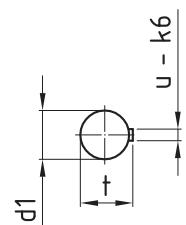
HPMA LUBRIFICAZIONE A OLIO / OIL LUBRICATION



TIPO TYPE	Flangia aspirante UNI - DIN PN16 Suction flange UNI - DIN PN16						Flangia premente UNI - DIN PN64 Discharge flange UNI - DIN PN64					
	DNa	a	b	C	N°	f	DNp	a	b	C	N°	f
25	50	102	125	165	4	M16	25	65	100	140	4	18
32	65	102	125	165	8	M16	32	75	110	155	4	22
50	100	158	180	220	8	M16	50	108	135	180	4	22
80	125	188	210	250	8	M16	80	142	170	215	8	22
100	150	212	240	285	8	M22	100	170	200	250	8	25
125	200	268	295	340	12	M22	125	205	240	295	8	29
150	250	320	355	405	12	M27	150	240	280	345	8	33



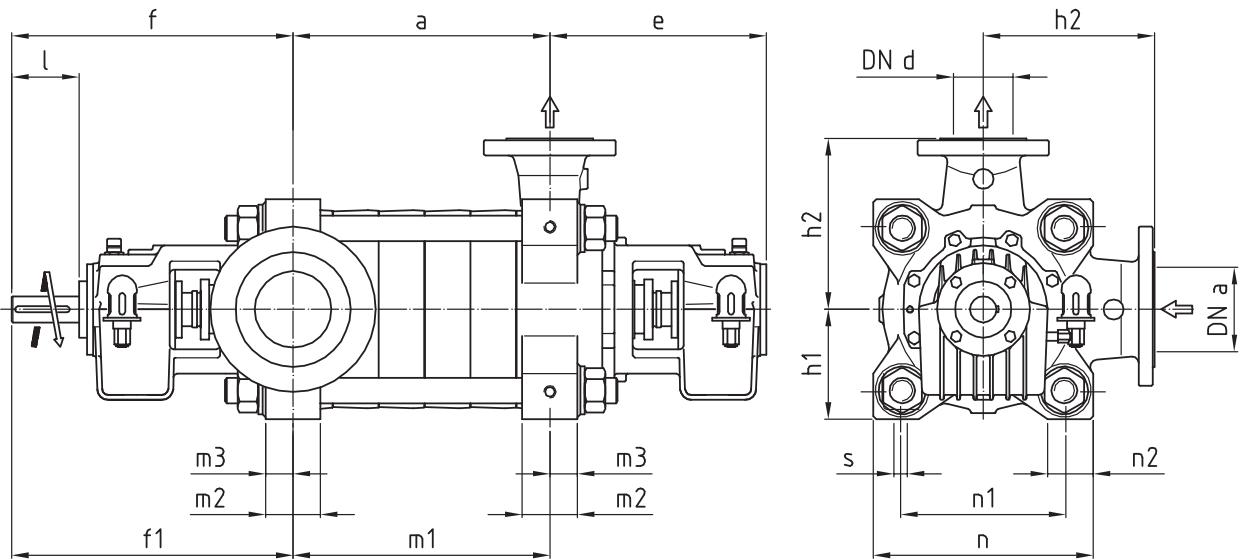
TIPO TYPE	Dimensioni pompa Pump dimensions					Dimensioni piedi Feet dimensions						Estremità d'albero Shaft end			
	f	f1	f2	h1	h2	m2	m3	n	n1	n2	s	d1	l	t	u
25	280	280	41	120	160	38	19	240	186	50	M12	18	52	20,5	6
32	395	395	70	140	200	50	25	280	210	65	M16	24	60	27	8
50	465	465	67	155	225	55	27,5	310	240	65	M16	28	80	31	8
80	485	486	65	175	250	65	32,5	350	270	75	M20	32	80	35	10
100	545	545	75	205	315	75	37,5	410	300	90	M20	38	110	41	10
125	650	650	85	255	350	95	47,5	510	400	110	M24	52	130	56	16
150	660	660	110	305	420	120	60	610	460	140	M27	65	140	69	18



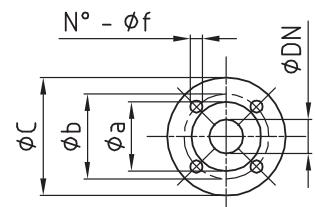
TIPO TYPE	Numero di stadi - Number of stages																			
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
25	a	160	205	250	295	340	385	430	475	520	565	610	655	700	745	790	835	880	925	970
	m1	100	145	190	235	280	325	370	415	460	505	550	595	640	685	730	775	820	865	910
32	a	195	250	305	360	405	470	525	580	635	690	745	800	855	910	965	1020	1075	1130	1185
	m1	125	180	235	290	345	400	455	510	565	620	675	730	785	840	895	950	1005	1060	1115
50	a	220	282	344	406	468	530	592	654	716	778	840	902	964	1026	1088	1150	1212		
	m1	152	214	276	338	400	462	524	586	648	710	772	834	896	958	1020	1082	1144		
80	a	260	335	410	485	560	635	710	785	860	935	1010	1085	1160	1235	1310				
	m1	195	270	345	420	495	570	645	720	795	870	945	1020	1095	1170	1245				
100	a	310	400	490	580	670	760	850	940	1030	1120	1210	1300	1390						
	m1	235	325	415	505	595	685	775	865	955	1045	1135	1225	1315						
125	a	350	460	570	680	790	900	1010	1120	1230	1340	1450								
	m1	265	375	485	595	710	815	925	1035	1145	1255	1365								
150	a	420	555	690	825	960	1095	1230	1365	1500										
	m1	310	445	580	715	850	985	1120	1255	1390										

Dimensioni in mm - Dimensions in mm

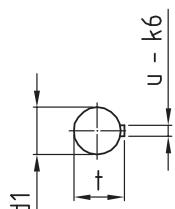
HPR LUBRIFICAZIONE A OLIO / OIL LUBRICATION



TIPO TYPE	Flangia aspirante UNI - DIN PN25 Suction flange UNI - DIN PN25						Flangia premente UNI - DIN PN100 Discharge flange UNI - DIN PN100					
	DN _a	a	b	C	N°	f	DN _p	a	b	C	N°	f
32	50	102	125	165	4	18	32	75	110	155	4	22
50	80	138	160	200	8	18	50	95	145	195	4	25
80	125	188	220	270	8	25	80	130	180	230	8	25
100	150	218	250	300	8	25	100	160	210	265	8	30
125	200	278	310	360	12	25	125	185	250	315	8	33
150	250	355	370	425	12	30	150	215	290	355	12	33



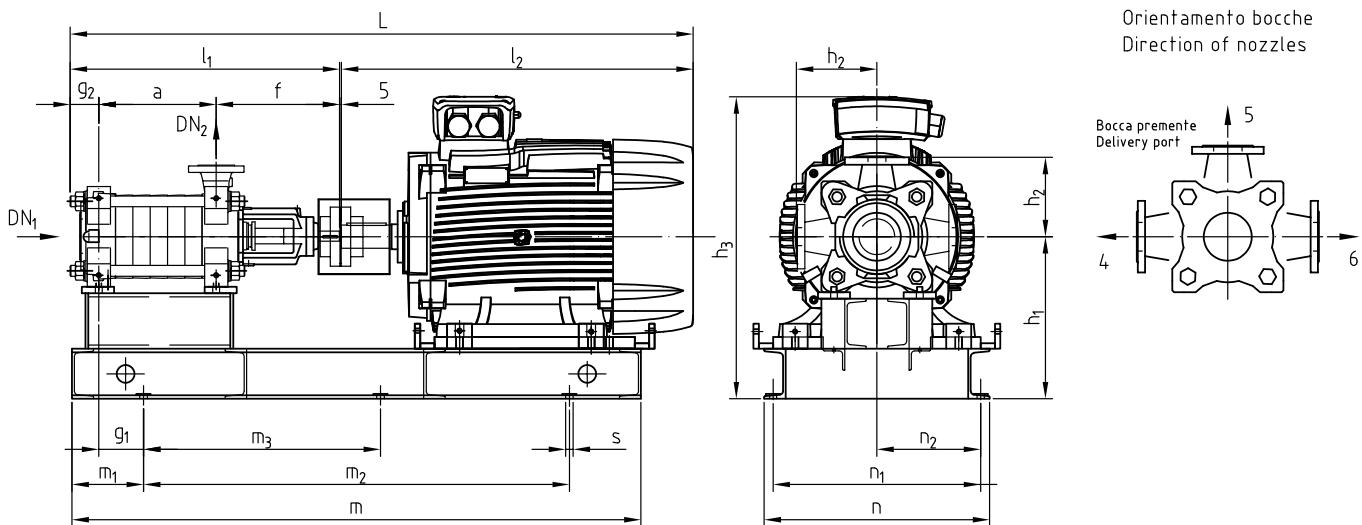
TIPO TYPE	Dimensioni pompa Pump dimensions					Dimensioni piedi Feet dimensions						Estremità d'albero Shaft end			
	e	f	f1	h1	h2	m2	m3	n	n1	n2	s	d1	l	t	u
32	354	404	404	140	200	50	25	280	210	65	M16	28	60	31	8
50	379	449	449	155	225	55	27,5	310	240	65	M16	32	80	35	10
80	399	473	473	175	250	65	32,5	350	270	75	M20	38	80	41	10
100	428	528	528	205	315	75	37,5	410	300	90	M20	42	110	45	12
125	513	644	644	255	350	95	47,5	510	400	110	M24	55	130	59	16
150	508	629,5	629,5	305	420	120	60	610	460	140	M27	70	140	74,5	20



TIPO TYPE	Numero di stadi - Number of stages																							
	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
32 $\frac{a}{m_1}$	125	180	235	290	345	400	455	510	565	620	675	730	785	840	895	950	1005	1060	1115	1170	1225	1280	1335	1390
50 $\frac{a}{m_1}$	152	214	276	338	400	462	524	586	648	710	772	834	896	958	1020	1082	1144	1206	1268					
80 $\frac{a}{m_1}$	195	270	345	420	495	570	645	720	795	870	945	1020	1095	1170	1245	1320	1395							
100 $\frac{a}{m_1}$	235	325	415	505	595	685	775	865	955	1045	1135	1225	1315	1405	1495									
125 $\frac{a}{m_1}$	295	405	515	625	735	845	955	1065	1175	1285	1395													
150 $\frac{a}{m_1}$	370	505	640	775	910	1045	1180	1315	1450	1585														

Dimensioni in mm - Dimensions in mm

HPA LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION



HPA 25 - 1450 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
25/1	0,75	28	12	80	50	25	55	250	160	634	100	41	263	393	346	283	600	150	300	-	310	275	137,5	4x17
25/2	0,75	37	12	90	50	25	100	250	160	679	100	41	263	393	391	283	640	150	340	-	310	275	137,5	4x17
25/3	0,75	46	12	100	50	25	145	250	160	724	100	41	263	393	436	283	700	150	400	-	310	275	137,5	4x17
25/4	1,1	55	25	122,1	50	25	190	250	160	769	100	41	263	413	481	283	740	150	440	-	310	275	137,5	4x17
25/5	1,1	64	25	137,1	50	25	235	250	160	814	100	41	283	413	526	283	780	150	480	-	320	280	140	4x19
	1,5	64	30	130	50	25	235	250	160	869	100	41	283	428	526	338	820	150	520	-	320	280	140	4x19
25/6	1,5	73	30	141	50	25	280	250	160	914	100	41	283	428	571	338	860	150	560	-	320	280	140	4x19
25/7	1,5	82	30	152	50	25	325	250	160	959	100	41	283	428	616	338	900	150	600	-	320	280	140	4x19
	2,2	82	36	160	50	25	325	250	160	994	100	41	283	440	616	373	940	150	640	-	320	280	140	4x19
25/8	2,2	91	36	171	50	25	370	250	160	1039	100	41	283	440	661	373	980	150	680	-	320	280	140	4x19
25/9	2,2	100	36	190	50	25	415	250	160	1084	100	41	303	460	706	373	1020	150	720	-	330	290	145	4x19
	3	100	40	192	50	25	415	250	160	1084	100	41	303	460	706	373	1020	150	720	-	330	290	145	4x19
25/10	2,2	109	36	202	50	25	460	250	160	1129	100	41	303	460	751	373	1080	150	780	-	330	290	145	4x19
	3	109	40	204	50	25	460	250	160	1129	100	41	303	460	751	373	1080	150	780	-	330	290	145	4x19
25/11	3	118	40	215	50	25	505	250	160	1174	100	41	303	460	796	373	1120	150	820	-	330	290	145	4x19
25/12	3	127	40	226	50	25	550	250	160	1219	100	41	303	460	841	373	1160	150	860	-	330	290	145	4x19
25/13	3	136	40	236	50	25	595	250	160	1264	100	41	303	460	886	373	1200	150	900	-	330	290	145	4x19
	4	136	46	239	50	25	595	250	160	1281	100	41	303	480	886	390	1220	150	920	-	360	320	160	4x19
25/14	3	145	40	248	50	25	640	250	160	1309	100	41	303	460	931	373	1260	150	960	-	330	290	145	4x19
	4	145	46	251	50	25	640	250	160	1326	100	41	303	480	931	390	1260	150	960	-	360	320	160	4x19
25/15	4	154	46	261	50	25	685	250	160	1371	100	41	303	480	976	390	1300	150	1000	-	360	320	160	4x19
25/16	4	163	46	272	50	25	730	250	160	1416	100	41	303	480	1021	390	1340	150	1040	-	360	320	160	4x19
25/17	4	172	46	284	50	25	775	250	160	1461	100	41	303	480	1066	390	1400	150	1100	-	360	320	160	4x19
	5,5	172	70	301	50	25	775	250	160	1531	100	41	303	500	1066	460	1480	150	1180	-	360	320	160	4x19
25/18	4	181	46	295	50	25	820	250	160	1506	100	41	303	480	1111	390	1440	150	1140	-	360	320	160	4x19
	5,5	181	70	312	50	25	820	250	160	1576	100	41	323	520	1111	460	1520	150	1220	610	360	320	160	6x21
25/19	4	190	46	305	50	25	865	250	160	1551	100	41	303	480	1156	390	1480	150	1180	-	360	320	160	4x19
	5,5	190	70	335	50	25	865	250	160	1621	100	41	323	520	1156	460	1560	150	1260	630	360	320	160	6x21
25/20	5,5	199	70	346	50	25	910	250	160	1666	100	41	323	520	1201	460	1600	150	1300	650	360	320	160	6x21

HPA 32 - 1450 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
32/1	0,75	50	12	105	65	32	70	360	200	783	90	70	283	433	500	283	740	150	440	-	310	275	137,5	4x17
	1,1	50	25	113	65	32	70	360	200	838	90	70	303	448	500	338	780	150	480	-	320	280	140	4x19
32/2	1,1	65	25	130	65	32	125	360	200	893	90	70	303	448	555	338	820	150	520	-	320	280	140	4x19
	1,5	65	30	132	65	32	125	360	200	893	90	70	303	448	555	338	820	150	520	-	320	280	140	4x19
32/3	2,2	65	36	134	65	32	125	360	200	928	90	70	303	460	555	373	860	150	560	-	320	280	140	4x19
	1,5	74	30	150	65	32	180	360	200	968	90	70	303	448	610	358	920	150	620	-	320	280	140	4x19
32/3	2,2	74	36	156	65	32	180	360	200	1003	90	70	303	460	610	393	920	150	620	-	320	280	140	4x19
32/3	3	74	40	160	65	32	180	360	200	1003	90	70	303	460	610	393	920	150	620	-	320	280	140	4x19

HPA LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION

HPA 32 - 1450 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
32/4	2,2	83	36	170	65	32	235	360	200	1058	90	70	303	460	665	393	960	150	660	-	320	280	140	4x19
	3	83	40	174	65	32	235	360	200	1058	90	70	303	460	665	393	960	150	660	-	320	280	140	4x19
	4	83	46	180	65	32	235	360	200	1075	90	70	303	480	665	410	980	150	680	-	320	280	140	4x19
32/5	2,2	92	36	195	65	32	290	360	200	1113	90	70	323	460	720	393	1020	150	720	-	320	280	140	4x19
	3	92	40	199	65	32	290	360	200	1113	90	70	323	460	720	393	1020	150	720	-	320	280	140	4x19
	4	92	46	205	65	32	290	360	200	1130	90	70	323	480	720	410	1040	150	740	-	320	280	140	4x19
32/6	3	101	40	211	65	32	345	360	200	1168	90	70	323	460	775	393	1080	150	780	-	320	280	140	4x19
	4	101	46	217	65	32	345	360	200	1185	90	70	323	480	775	410	1080	150	780	-	320	280	140	4x19
	5,5	101	70	241	65	32	345	360	200	1255	90	70	323	520	775	480	1160	150	860	-	320	280	140	4x19
32/7	4	110	46	235	65	32	400	360	200	1240	90	70	323	480	830	410	1220	150	920	-	320	280	140	4x19
	5,5	110	70	259	65	32	400	360	200	1310	90	70	323	520	830	480	1220	150	920	-	320	280	140	4x19
32/8	4	119	46	267	65	32	455	360	200	1295	90	70	323	480	885	410	1280	150	980	-	320	280	140	4x19
	5,5	119	70	291	65	32	455	360	200	1365	90	70	323	520	885	480	1280	150	980	-	320	280	140	4x19
32/9	5,5	128	70	282	65	32	510	360	200	1420	90	70	323	520	940	480	1320	150	1020	-	320	280	140	4x19
	7,5	128	57	294	65	32	510	360	200	1456	90	70	323	520	940	516	1320	150	1020	-	320	280	140	4x19
32/10	5,5	137	70	310	65	32	565	360	200	1475	90	70	323	520	995	480	1380	150	1080	-	320	280	140	4x19
	7,5	137	57	322	65	32	565	360	200	1511	90	70	323	520	995	516	1380	150	1080	-	320	280	140	4x19
	11	137	125	390	65	32	565	360	200	1610	90	70	323	578	995	615	1500	150	1200	-	360	320	160	4x19
32/11	5,5	146	70	338	65	32	620	360	200	1530	90	70	323	520	1050	480	1440	150	1140	-	320	320	160	4x19
	7,5	146	57	350	65	32	620	360	200	1566	90	70	323	520	1050	516	1440	150	1140	-	320	320	160	4x19
	11	146	125	418	65	32	620	360	200	1665	90	70	343	578	1050	615	1540	150	1240	620	360	380	160	6x21
32/12	5,5	155	70	355	65	32	675	360	200	1585	90	70	323	520	1105	480	1500	150	2000	-	320	280	140	4x19
	7,5	155	57	367	65	32	675	360	200	1621	90	70	323	520	1105	516	1500	150	2000	-	320	280	140	4x19
	11	155	125	435	65	32	675	360	200	1720	90	70	343	578	1105	615	1620	150	1320	630	360	310	155	6x21
32/13	7,5	164	57	386	65	32	730	360	200	1676	90	70	343	520	1160	516	1680	150	1380	690	360	310	155	6x21
	11	164	125	454	65	32	730	360	200	1775	90	70	343	578	1160	615	1680	150	1380	690	360	310	155	6x21
32/14	7,5	173	57	403	65	32	785	360	200	1731	90	70	343	520	1215	516	1720	150	1420	710	360	310	155	6x21
	11	173	125	471	65	32	785	360	200	1830	90	70	343	578	1215	615	1720	150	1420	710	360	310	155	6x21
32/15	7,5	287	57	410	65	32	840	360	200	1786	90	70	343	520	1270	516	1780	150	1480	740	360	310	155	6x21
	11	182	125	478	65	32	840	360	200	1885	90	70	343	578	1270	615	1780	150	1480	740	360	310	155	6x21
	15	182	150	503	65	32	840	360	200	1980	90	70	343	595	1270	710	1780	150	1480	740	360	310	155	6x21
32/16	11	191	125	506	65	32	895	360	200	1940	90	70	343	578	1325	615	1840	150	1540	770	360	310	155	6x21
	15	191	150	520	65	32	895	360	200	2035	90	70	343	595	1325	710	1840	150	1540	770	360	310	155	6x21
32/17	11	200	125	524	65	32	950	360	200	1995	90	70	343	578	1380	615	1900	150	1600	800	360	310	155	6x21
	15	200	150	538	65	32	950	360	200	2090	90	70	343	595	1380	710	1900	150	1600	800	360	310	155	6x21
32/18	11	209	125	541	65	32	1005	360	200	2050	90	70	343	578	1435	615	1940	150	1640	790	360	310	155	6x21
	15	209	150	555	65	32	1005	360	200	2145	90	70	343	595	1435	710	1940	150	1640	790	360	310	155	6x21
32/19	11	218	125	558	65	32	1060	360	200	2105	90	70	343	578	1490	615	2000	150	1700	850	360	310	155	6x21
	15	218	150	572	65	32	1060	360	200	2200	90	70	343	595	1490	710	2000	150	1700	850	360	310	155	6x21
32/20	11	227	125	598	65	32	1115	360	200	2160	90	70	363	578	1545	615	2060	150	1760	880	360	310	155	6x21
	15	227	150	612	65	32	1115	360	200	2255	90	70	363	595	1545	710	2060	150	1760	880	360	310	155	6x21
	18,5	227	171	651	65	32	1115	360	200	2275	90	70	363	633	1545	730	2140	150	1840	920	450	400	200	6x21

HPA 50 - 1450 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
50/1	1,1	62	25	378	100	50	90	410	225	965	90	67	318	463	635	330	860	150	560	-	360	320	160	4x19
	1,5	62	30	383	100	50	90	410	225	993	90	67	318	463	635	358	860	150	560	-	360	320	160	4x19
	2,2	62	36	389	100	50	90	410	225	1028	90	67	318	475	635	393	880	150	580	-	360	320	160	4x19
50/2	2,2	81	36	389	100	50	220	410	225	1090	90	67	318	475	697	393	1000	150	640	-	360	320	160	4x19
	3	81	40	393	100	50	220	410	225	1090	90	67</												

HPA LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION

HPA 50 - 1450 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
50/7	7,5	176	57	410	100	50	530	410	225	1523	90	67	358	535	1007	516	1520	150	1160	-	380	340	170	6x21
	11	176	125	478	100	50	530	410	225	1622	90	67	358	593	1007	615	1520	150	1160	-	380	340	170	6x21
	15	176	150	503	100	50	530	410	225	1717	90	67	358	610	1007	710	1520	150	1160	-	380	340	170	6x21
50/8	7,5	195	57	410	100	50	592	410	225	1585	90	67	358	535	1069	516	1580	150	1220	640	380	340	170	6x21
	11	195	125	478	100	50	592	410	225	1684	90	67	358	593	1069	615	1580	150	1220	640	380	340	170	6x21
	15	195	150	503	100	50	592	410	225	1779	90	67	358	610	1069	710	1580	150	1220	640	380	340	170	6x21
50/9	11	214	125	592	100	50	654	410	225	1746	90	67	358	593	1131	615	1640	150	1340	670	380	340	170	6x21
	15	214	150	617	100	50	654	410	225	1841	90	67	358	610	1131	710	1640	150	1340	670	380	340	170	6x21
	18,5	214	171	638	100	50	654	410	225	1861	90	67	358	628	1131	730	1720	150	1420	710	440	400	200	6x21
50/10	11	233	125	592	100	50	716	410	225	1808	90	67	358	613	1193	615	1700	150	1400	700	380	340	170	6x21
	15	233	150	617	100	50	716	410	225	1903	90	67	358	610	1193	710	1700	150	1400	700	380	340	170	6x21
	18,5	233	171	638	100	50	716	410	225	1923	90	67	358	628	1193	730	1780	150	1480	740	440	400	200	6x21
	22	233	190	657	100	50	716	410	225	1973	90	67	358	628	1193	780	1780	150	1480	740	440	400	200	6x21
50/11	11	252	125	592	100	50	778	410	225	1870	90	67	358	613	1255	615	1780	150	1480	740	380	340	170	6x21
	15	252	150	617	100	50	778	410	225	1965	90	67	358	610	1255	710	1780	150	1480	740	380	340	170	6x21
	18,5	252	171	638	100	50	778	410	225	1985	90	67	358	628	1255	730	1840	150	1540	770	440	400	200	6x21
	22	252	190	657	100	50	778	410	225	2035	90	67	358	628	1255	780	1840	150	1540	770	440	400	200	6x21
50/12	11	271	125	592	100	50	840	410	225	1932	90	67	358	613	1317	615	1840	150	1540	730	380	340	170	6x21
	15	271	150	617	100	50	840	410	225	2027	90	67	358	610	1317	710	1840	150	1540	730	380	340	170	6x21
	18,5	271	171	638	100	50	840	410	225	2047	90	67	358	628	1317	730	1900	150	1600	770	440	400	200	6x21
	22	271	190	657	100	50	840	410	225	2097	90	67	358	628	1317	780	1900	150	1600	770	440	400	200	6x21
50/13	15	290	150	617	100	50	902	410	225	2089	90	67	358	610	1379	710	1980	150	1680	800	440	400	200	6x21
	18,5	290	171	638	100	50	902	410	225	2109	90	67	358	628	1379	730	1980	150	1680	800	440	400	200	6x21
	22	290	190	657	100	50	902	410	225	2159	90	67	358	628	1379	780	1980	150	1680	800	440	400	200	6x21
	30	290	255	722	100	50	902	410	225	2150	90	67	378	681	1379	771	2020	150	1720	820	500	460	230	6x21
50/14	15	309	150	617	100	50	896	340	225	2269	90	67	358	610	1559	710	1900	150	1600	800	440	400	200	6x21
	18,5	309	171	638	100	50	896	340	225	2289	90	67	358	628	1559	730	1900	150	1600	800	440	400	200	6x21
	22	309	190	657	100	50	896	340	225	2339	90	67	358	628	1559	780	1900	150	1600	800	440	400	200	6x21
	30	309	255	722	100	50	896	340	225	2330	90	67	358	681	1559	771	1940	150	1640	820	480	440	220	6x21
50/15	15	328	150	638	100	50	958	340	225	2331	90	67	358	610	1621	710	1960	150	1660	830	440	400	200	6x21
	18,5	328	171	659	100	50	958	340	225	2351	90	67	358	628	1621	730	1960	150	1660	830	440	400	200	6x21
	22	328	190	678	100	50	958	340	225	2401	90	67	358	628	1621	780	1960	150	1660	830	440	400	200	6x21
	30	328	255	743	100	50	958	340	225	2392	90	67	358	681	1621	771	2000	150	1700	850	480	440	220	6x21
50/16	18,5	347	171	739	100	50	1020	340	225	2413	90	67	378	648	1683	730	2020	150	1720	860	460	420	210	6x21
	22	347	190	758	100	50	1020	340	225	2463	90	67	378	648	1683	780	2020	150	1720	860	460	420	210	6x21
	30	347	255	823	100	50	1020	340	225	2454	90	67	378	681	1683	771	2060	150	1760	880	480	440	220	6x21
50/17	18,5	366	171	739	100	50	1082	340	225	2475	90	67	378	648	1745	730	2080	150	1780	890	460	420	210	6x21
	22	366	190	758	100	50	1082	340	225	2525	90	67	378	648	1745	780	2080	150	1780	890	460	420	210	6x21
	30	366	255	823	100	50	1082	340	225	2516	90	67	378	681	1745	771	2120	150	1820	910	480	440	220	6x21
	37	366	269	837	100	50	1082	340	225	2560	90	67	408	720	1745	815	2180	150	1880	940	540	500	250	6x21
50/18	18,5	385	171	761	100	50	1144	340	225	2537	90	67	378	648	1807	730	2140	150	1840	920	460	420	210	6x21
	22	385	190	780	100	50	1144	340	225	2587	90	67	378	648	1807	780	2140	150	1840	920	460	420	210	6x21
	30	385	255	845	100	50	1144	340	225	2578	90	67	378	681	1807	771	2180	150	1880	940	480	440	220	6x21
	37	385	269	859	100	50	1144	340	225	2622	90	67	408	720	1807	815	2240	150	1940	970	540	500	250	6x21

HPA 80 - 1450 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
80/1	1,5	87	30	174	125	80	120	460	250	1003	80	65	338	483	645	358	960	150	660	-	420	380	190	4x19
	2,2	87	36	180	125	80	120	460	250	1038	80	65	338	495	645	393	960	150	660	-	420</td			

HPA LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION

HPA 80 - 1450 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
80/6	15	232	150	506	125	80	495	460	250	1730	80	65	378	610	1020	710	1620	150	1320	660	460	420	210	6x21
	18,5	232	171	527	125	80	495	460	250	1750	80	65	378	648	1020	730	1620	150	1320	660	460	420	210	6x21
	22	232	190	546	125	80	495	460	250	1800	80	65	378	648	1020	780	1620	150	1320	660	460	420	210	6x21
	30	232	255	611	125	80	495	460	250	1791	80	65	378	681	1020	771	1660	150	1360	680	500	460	230	6x21
80/7	15	261	150	539	125	80	570	460	250	1805	80	65	378	610	1095	710	1700	150	1400	700	460	420	210	6x21
	18,5	261	171	560	125	80	570	460	250	1825	80	65	378	648	1095	730	1700	150	1400	700	460	420	210	6x21
	22	261	190	579	125	80	570	460	250	1875	80	65	378	648	1095	780	1700	150	1400	700	460	420	210	6x21
	30	261	255	644	125	80	570	460	250	1866	80	65	378	681	1095	771	1740	150	1440	720	500	460	230	6x21
80/8	18,5	290	171	593	125	80	645	460	250	1900	80	65	378	648	1170	730	1820	150	1520	760	500	460	230	6x21
	22	290	190	612	125	80	645	460	250	1950	80	65	378	648	1170	780	1820	150	1520	760	500	460	230	6x21
	30	290	255	677	125	80	645	460	250	1941	80	65	378	681	1170	771	1820	150	1520	760	500	460	230	6x21
80/9	22	319	190	651	125	80	720	460	250	2025	80	65	378	648	1245	780	1900	150	1600	800	500	460	230	6x21
	30	319	255	716	125	80	720	460	250	2016	80	65	378	681	1245	771	1900	150	1600	800	500	460	230	6x21
	37	319	269	730	125	80	720	460	250	2060	80	65	383	695	1245	815	1940	150	1640	820	540	500	250	6x21
80/10	22	348	190	700	125	80	795	460	250	2100	80	65	378	648	1320	780	1960	150	1660	830	500	460	230	6x21
	30	348	255	765	125	80	795	460	250	2091	80	65	378	681	1320	771	1960	150	1660	830	500	460	230	6x21
	37	348	269	779	125	80	795	460	250	2135	80	65	403	695	1320	815	2020	150	1720	860	540	500	250	6x21
80/11	30	377	255	817	125	80	870	460	250	2166	80	65	403	681	1395	771	2100	150	1800	900	540	500	250	6x21
	37	377	269	831	125	80	870	460	250	2210	80	65	403	695	1395	815	2100	150	1800	900	540	500	250	6x21
	45	377	353	915	125	80	870	460	250	2215	80	65	403	715	1395	820	2100	150	1800	900	540	500	250	6x21
80/12	30	406	255	846	125	80	945	460	250	2241	80	65	403	681	1470	771	2160	150	1860	930	540	500	250	6x21
	37	406	269	860	125	80	945	460	250	2285	80	65	403	695	1470	815	2160	150	1860	930	540	500	250	6x21
	5,5	406	70	661	125	80	945	460	250	2290	80	65	403	715	1470	820	2160	150	1860	930	540	500	250	6x21
80/13	30	435	255	875	125	80	1020	460	250	2316	80	65	403	681	1545	771	2240	150	1940	970	540	500	250	6x21
	37	435	269	889	125	80	1020	460	250	2360	80	65	403	695	1545	815	2240	150	1940	970	540	500	250	6x21
	45	435	353	973	125	80	1020	460	250	2365	80	65	403	715	1545	820	2240	150	1940	970	540	500	250	6x21
	55	435	450	1070	125	80	1020	460	250	2455	80	65	433	788	1545	910	2320	150	2020	1010	600	560	280	6x21
80/14	37	464	269	924	125	80	1095	460	250	2435	80	65	403	695	1620	815	2320	150	2020	1010	540	500	250	6x21
	45	464	353	1008	125	80	1095	460	250	2440	80	65	403	715	1620	820	2320	150	2020	1010	540	500	250	6x21
	55	464	450	1105	125	80	1095	460	250	2530	80	65	433	788	1620	910	2400	150	2100	1050	600	560	280	6x21
80/15	37	493	269	953	125	80	1170	460	250	2510	80	65	403	695	1695	815	2400	150	2100	1050	540	500	250	6x21
	45	493	353	1037	125	80	1170	460	250	2515	80	65	403	715	1695	820	2400	150	2100	1050	540	500	250	6x21
	55	493	450	1134	125	80	1170	460	250	2605	80	65	433	788	1695	910	2460	150	2160	1080	600	560	280	6x21
	75	493	605	1289	125	80	1170	460	250	2680	80	65	493	891	1695	985	2550	150	2250	750	660	620	310	8x21
80/16	37	522	269	988	125	80	1245	460	250	2585	80	65	403	695	1770	815	2480	150	2180	1090	540	500	250	6x21
	45	522	353	1072	125	80	1245	460	250	2590	80	65	403	715	1770	820	2480	150	2180	1090	540	500	250	6x21
	55	522	450	1169	125	80	1245	460	250	2680	80	65	453	788	1770	910	2550	150	2250	750	600	560	280	8x21
	75	522	605	1324	125	80	1245	460	250	2755	80	65	493	891	1770	985	2640	150	2340	780	660	620	310	8x21

HPA 100 - 1450 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
100/1	5,5	174	70	319	150	100	145	480	315	1180	70	75	408	605	700	480	1100	150	800	-	480	440	220	4x19
	7,5	174	57	319	150	100	145	480	315	1216	70	75	408	605	700	516	1100	150	800	-	480	440	220	4x19
	11	174	125	396	150	100	145	480	315	1315	70	75	408	663	700	615	1220	150	920	-	480	440	220	4x19
	11	219	125	471	150	100	235	480	315	1405	70	75	408	663	790	615	1320	150	1020	-	480	440	220	4x19
100/2	15	219	150	496	150	100	235	480	315	1500	70	75	408	660	790	710	1320	150	1020	-	480	440	220	4x19
	18,5	219	171	517	150	100	235	480	315	1520	70	75	408	678	790	730	1380	150	1080	-	500	460	230	4x19
	15	264	150	563	150	100	325	480	315	1590	70	75	408	663	880	710	1460	150	1160	-	500	460	230	4x19
	18,5	264	171	584	150	100	325	480	315	1610	70	75	408	660	880	730	1460	150	1160	-				

HPA LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION

HPA 100 - 1450 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
100/7	37	444	269	903	150	100	685	480	315	2055	70	75	413	725	1240	815	1940	150	1640	820	520	480	240	6x21
	45	444	353	987	150	100	685	480	315	2060	70	75	413	725	1240	820	1940	150	1640	820	520	480	240	6x21
	55	444	450	1084	150	100	685	480	315	2150	70	75	413	725	1240	910	2000	150	1700	850	560	520	260	6x21
100/8	45	489	353	1040	150	100	775	480	315	2150	70	75	433	725	1330	820	2080	150	1780	890	580	540	270	6x21
	55	489	450	1137	150	100	775	480	315	2240	70	75	433	725	1330	910	2080	150	1780	890	580	540	270	6x21
	75	489	605	1292	150	100	775	480	315	2315	70	75	463	861	1330	985	2180	150	1880	940	640	600	300	6x21
100/9	45	534	353	1090	150	100	865	480	315	2240	70	75	433	725	1420	820	2180	150	1880	940	580	540	270	6x21
	55	534	450	1187	150	100	865	480	315	2330	70	75	433	725	1420	910	2180	150	1880	940	580	540	270	6x21
	75	534	605	1342	150	100	865	480	315	2405	70	75	463	861	1420	985	2260	150	1960	980	640	600	300	6x21
100/10	45	579	353	1140	150	100	955	480	315	2330	70	75	463	775	1510	820	2360	150	2060	1030	640	600	300	6x21
	55	579	450	1237	150	100	955	480	315	2420	70	75	463	818	1510	910	2360	150	2060	1030	640	600	300	6x21
	75	579	605	1392	150	100	955	480	315	2495	70	75	463	861	1510	985	2360	150	2060	1030	640	600	300	6x21
100/11	90	579	700	1487	150	100	955	480	315	2545	70	75	463	861	1510	1035	2360	150	2060	1030	640	600	300	6x21
	55	624	450	1287	150	100	1045	480	315	2510	70	75	463	818	1600	910	2440	150	2140	1070	640	600	300	6x21
	75	624	605	1442	150	100	1045	480	315	2585	70	75	463	861	1600	985	2440	150	2140	1070	640	600	300	6x21
100/12	90	624	700	1537	150	100	1045	480	315	2635	70	75	463	861	1600	1035	2440	150	2140	1070	640	600	300	6x21
	55	669	450	1342	150	100	1135	480	315	2600	70	75	483	818	1690	910	2550	150	2250	750	640	600	300	8x21
	75	669	605	1497	150	100	1135	480	315	2675	70	75	483	861	1690	985	2550	150	2250	750	640	600	300	8x21
100/13	90	669	700	1592	150	100	1135	480	315	2725	70	75	483	861	1690	1035	2550	150	2250	750	640	600	300	8x21
	110	669	925	1817	150	100	1135	480	315	2850	70	75	543	1073	1690	1160	2700	150	2400	800	740	700	350	8x21
	75	714	605	1554	150	100	1225	480	315	2765	70	75	483	881	1780	985	2640	150	2340	780	640	600	300	8x21
100/14	90	714	700	1649	150	100	1225	480	315	2815	70	75	483	881	1780	1035	2640	150	2340	780	640	600	300	8x21
	110	714	925	1874	150	100	1225	480	315	2940	70	75	543	1073	1780	1160	2790	150	2490	830	740	700	350	8x21
	75	759	605	1611	150	100	1315	480	315	2855	70	75	483	881	1870	985	2730	150	2430	810	640	600	300	8x21
100/14	90	759	700	1706	150	100	1315	480	315	2905	70	75	483	881	1870	1035	2730	150	2430	810	640	600	300	8x21
	110	759	925	1931	150	100	1315	480	315	3030	70	75	543	1073	1870	1160	2880	150	2580	860	740	700	350	8x21

HPA 125 - 1450 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
125/1	18,5	283	171	608	200	125	155	590	350	1560	50	85	498	768	830	730	1460	150	1160	-	600	560	280	4x19
	22	283	190	627	200	125	155	590	350	1610	50	85	498	768	830	780	1460	150	1160	-	600	560	280	4x19
	30	283	255	692	200	125	155	590	350	1601	50	85	498	801	830	771	1460	150	1160	-	600	560	280	4x19
125/2	37	364	269	787	200	125	265	590	350	1755	50	85	518	830	940	815	1700	150	1400	700	600	560	280	6x21
	45	364	353	871	200	125	265	590	350	1760	50	85	518	830	940	820	1700	150	1400	700	600	560	280	6x21
	55	364	450	968	200	125	265	590	350	1850	50	85	518	873	940	910	1700	150	1400	700	600	560	280	6x21
125/3	45	445	353	968	200	125	375	590	350	1870	50	85	518	830	1050	820	1900	150	1600	800	640	600	300	6x21
	55	445	450	1065	200	125	375	590	350	1960	50	85	518	873	1050	910	1900	150	1600	800	640	600	300	6x21
	75	445	605	1220	200	125	375	590	350	2035	50	85	518	916	1050	985	1900	150	1600	800	640	600	300	6x21
125/4	75	526	605	1316	200	125	485	590	350	2145	50	85	518	916	1160	985	2200	150	1900	950	720	680	340	6x21
	90	526	700	1411	200	125	485	590	350	2195	50	85	518	916	1160	1035	2200	150	1900	950	720	680	340	6x21
	110	526	925	1636	200	125	485	590	350	2320	50	85	518	1048	1160	1160	2200	150	1900	950	720	680	340	6x21
125/5	90	607	700	1492	200	125	595	590	350	2305	50	85	518	916	1270	1035	2300	150	2000	1000	720	680	340	6x21
	110	607	925	1717	200	125	595	590	350	2430	50	85	518	1048	1270	1160	2300	150	2000	1000	720	680	340	6x21
	132	607	1180	1972	200	125	595	590	350	2460	50	85	518	1048	1270	1190	2300	150	2000	1000	720	680	340	6x21
125/6	110	688	925	1814	200	125	705	590	350	2540	50	85	518	1048	1380	1160	2420	150	2120	1060	720	680	340	6x21
	132	688	1180	2069	200	125	705	590	350	2570	50	85	518	1048	1380	1190	2420	150	2120	1060	720	680	340	6x21
	160	688	1161	2050	200	125	705	590	350	2700	50	85	518	1048	1380	1200	2420	150	2120	1060	720	680	340	6x21
125/7	132	769	1180	2162	200	125	845	590	350	2710	50	85	538	1048	1520	1190	2520	150	2220	740	720	680	340	8x21

HPA LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION

HPA 150 - 1450 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
150/1	30	509	255	942	250	150	175	660	420	1716	40	110	533	836	945	771	1720	150	1420	710	720	680	340	6x21
	37	509	269	956	250	150	175	660	420	1760	40	110	533	845	945	815	1720	150	1420	710	720	680	340	6x21
	45	509	353	1040	250	150	175	660	420	1765	40	110	533	845	945	820	1720	150	1420	710	720	680	340	6x21
	55	509	450	1137	250	150	175	660	420	1855	40	110	533	888	945	910	1720	150	1420	710	720	680	340	6x21
	75	509	605	1292	250	150	175	660	420	1930	40	110	533	931	945	985	1720	150	1420	710	720	680	340	6x21
150/2	2,2	645	605	1439	250	150	310	660	420	2065	40	110	553	951	1080	985	2040	150	1740	870	720	680	340	6x21
	90	645	700	1534	250	150	310	660	420	2115	40	110	553	951	1080	1035	2040	150	1740	870	720	680	340	6x21
	110	645	925	1759	250	150	310	660	420	2240	40	110	553	1083	1080	1160	2040	150	1740	870	720	680	340	6x21
	132	645	1180	2014	250	150	310	660	420	2270	40	110	553	1083	1080	1190	2040	150	1740	870	720	680	340	6x21
150/3	90	781	700	1684	250	150	445	660	420	2250	40	110	553	951	1215	1035	2160	150	1860	930	720	680	340	6x21
	110	781	925	1909	250	150	445	660	420	2375	40	110	553	1083	1215	1160	2160	150	1860	930	720	680	340	6x21
	132	781	1180	2164	250	150	445	660	420	2405	40	110	553	1083	1215	1190	2160	150	1860	930	720	680	340	6x21
	160	781	1161	2145	250	150	445	660	420	2535	40	110	553	1083	1215	1320	2160	150	1860	930	720	680	340	6x21
	200	781	1241	2225	250	150	445	660	420	2535	40	110	553	1083	1215	1320	2160	150	1860	930	720	680	340	6x21
150/4	160	917	1161	2298	250	150	580	660	420	2670	40	110	573	1103	1350	1320	2490	150	2190	730	840	800	400	8x21
	200	917	1241	2378	250	150	580	660	420	2670	40	110	573	1103	1350	1320	2490	150	2190	730	840	800	400	8x21
	250	917	1870	3007	250	150	580	660	420	2850	40	110	573	1228	1350	1500	2490	150	2190	730	840	800	400	8x21
	315	917	2090	3227	250	150	580	660	420	2850	40	110	573	1228	1350	1500	2490	150	2190	730	840	800	400	8x21
150/5	200	1053	1241	2532	250	150	715	660	420	2805	40	110	573	1103	1485	1320	2610	150	2310	770	840	800	400	8x21
	250	1053	1870	3161	250	150	715	660	420	2985	40	110	573	1228	1485	1500	2610	150	2310	770	840	800	400	8x21
	315	1053	2090	3381	250	150	715	660	420	2985	40	110	573	1228	1485	1500	2610	150	2310	770	840	800	400	8x21
	365	1053	2050	3341	250	150	715	660	420	3295	40	110	573	1118	1485	1810	2610	150	2310	770	840	800	400	8x21
150/6	250	1189	1870	3314	250	150	850	660	420	3120	40	110	573	1228	1620	1500	2730	150	2430	810	840	800	400	8x21
	315	1189	2090	3534	250	150	850	660	420	3120	40	110	573	1228	1620	1500	2730	150	2430	810	840	800	400	8x21
	365	1189	2050	3494	250	150	850	660	420	3430	40	110	573	1118	1620	1810	2730	150	2430	810	840	800	400	8x21
	400	1189	2350	3794	250	150	850	660	420	3605	40	110	573	1148	1620	1985	2730	150	2430	810	840	800	400	8x21
150/7	315	1325	2090	3688	250	150	985	660	420	3255	40	110	573	1228	1755	1500	2880	150	2580	860	840	800	400	8x21
	365	1325	2050	3648	250	150	985	660	420	3565	40	110	573	1118	1755	1810	2880	150	2580	860	840	800	400	8x21
	400	1325	2350	3948	250	150	985	660	420	3740	40	110	573	1148	1755	1985	2880	150	2580	860	840	800	400	8x21
	470	1325	2550	4148	250	150	985	660	420	3740	40	110	573	1148	1755	1985	2880	150	2580	860	840	800	400	8x21
150/8	365	1461	2050	3798	250	150	1120	660	420	3700	40	110	593	1138	1890	1810	3030	150	2730	910	840	800	400	8x21
	400	1461	2350	4098	250	150	1120	660	420	3875	40	110	593	1168	1890	1985	3030	150	2730	910	840	800	400	8x21
	470	1461	2090	3838	250	150	1120	660	420	3875	40	110	593	1168	1890	1985	3030	150	2730	910	840	800	400	8x21
	560	1461	2050	3798	250	150	1120	660	420	3875	40	110	593	1168	1890	1985	3030	150	2730	910	840	800	400	8x21
150/9	600	1461	3400	5148	250	150	1120	660	420	4015	40	110	652	1262	1890	2125	3480	150	3180	1060	980	940	470	8x21
	400	1597	2350	4247	250	150	1255	660	420	4010	40	110	593	1168	2025	1985	3150	150	2850	950	840	800	400	8x21
	470	1597	2090	3987	250	150	1255	660	420	4010	40	110	593	1168	2025	1985	3150	150	2850	950	840	800	400	8x21
	560	1597	2050	3947	250	150	1255	660	420	4010	40	110	652	1227	2025	1985	3600	150	3300	1100	980	940	470	8x21
150/10	600	1597	3400	5297	250	150	1255	660	420	4150	40	110	652	1262	2025	2125	3600	150	3300	1100	980	940	470	8x21
	470	1733	2090	4145	250	150	1390	660	420	4145	40	110	593	1168	2160	1985	3270	150	2970	990	840	800	400	8x21
	560	1733	2050	4105	250	150	1390	660	420	4145	40	110	593	1168	2160	1985	3270	150	2970	990	840	800	400	8x21
	600	1733	3400	5455	250	150	1390	660	420	4285	40	110	652	1262	2160	2125	3720	150	3420	1140	980	940	470	8x21
	680	1733	3600	5655	250	150	1390	660	420	4285	40	110	652	1262	2160	2125	3720	150	3420	1140	980	940	470	8x21

HPA LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION

HPA 25 - 2950 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
25/1	1,1	28	18	76	50	25	55	250	160	629	100	41	263	393	346	283	640	150	340	-	310	275	137,5	4x17
	1,5	28	23	81	50	25	55	250	160	676	100	41	263	408	346	330	640	150	340	-	310	275	137,5	4x17
	2,2	28	26	84	50	25	55	250	160	684	100	41	263	408	346	338	640	150	340	-	310	275	137,5	4x17
25/2	2,2	37	23	95	50	25	100	250	160	764	100	41	263	420	391	373	700	150	400	-	310	275	137,5	4x17
	3	37	26	98	50	25	100	250	160	764	100	41	263	420	391	373	700	150	400	-	310	275	137,5	4x17
	4	37	35	107	50	25	100	250	160	764	100	41	263	420	391	373	700	150	400	-	310	275	137,5	4x17
25/3	5,5	37	43	115	50	25	100	250	160	781	100	41	263	440	391	390	720	150	420	-	310	275	137,5	4x17
	4	46	35	123	50	25	145	250	160	809	100	41	283	420	436	373	760	150	460	-	320	280	140	4x19
	5,5	46	66	154	50	25	145	250	160	826	100	41	283	460	436	390	760	150	460	-	320	280	140	4x19
25/4	7,5	46	73	161	50	25	145	250	160	826	100	41	283	480	436	390	760	150	460	-	320	280	140	4x19
	11	55	120	217	50	25	190	250	160	977	100	41	283	480	481	390	800	150	500	-	320	280	140	4x19
	11	64	120	234	50	25	235	250	160	1022	100	41	283	480	526	496	920	150	620	-	320	280	140	4x19
25/6	11	73	120	243	50	25	280	250	160	1067	100	41	283	480	571	496	980	150	680	-	320	280	140	4x19
	15	73	132	255	50	25	280	250	160	1186	100	41	318	573	571	615	1100	150	800	-	400	360	180	4x19
25/7	15	82	132	264	50	25	325	250	160	1231	100	41	318	573	616	615	1140	150	840	-	400	360	180	4x19
	18,5	82	150	282	50	25	325	250	160	1326	100	41	318	570	616	710	1140	150	840	-	400	360	180	4x19
25/8	15	91	132	290	50	25	370	250	160	1276	100	41	318	573	661	615	1200	150	900	-	400	360	180	4x19
	18,5	91	150	308	50	25	370	250	160	1371	100	41	318	570	661	710	1200	150	900	-	400	360	180	4x19
25/9	18,5	100	150	317	50	25	415	250	160	1416	100	41	318	570	706	710	1240	150	940	-	400	360	180	4x19
	22	100	205	372	50	25	415	250	160	1436	100	41	318	588	706	730	1300	150	1000	-	420	380	190	4x19
25/10	18,5	109	150	343	50	25	460	250	160	1461	100	41	318	570	751	710	1280	150	980	-	400	360	180	4x19
	22	109	205	398	50	25	460	250	160	1481	100	41	318	588	751	730	1340	150	1040	-	420	380	190	4x19
25/11	22	118	205	407	50	25	505	250	160	1526	100	41	318	588	796	730	1400	150	1100	-	420	380	190	4x19
	30	118	250	452	50	25	505	250	160	1567	100	41	338	641	796	771	1440	150	1140	-	480	440	220	4x19
25/12	22	127	205	427	50	25	550	250	160	1571	100	41	318	588	841	730	1440	150	1140	-	420	380	190	4x19
	30	127	250	472	50	25	550	250	160	1612	100	41	338	641	841	771	1480	150	1180	-	480	440	220	4x19
25/13	30	136	250	481	50	25	595	250	160	1657	100	41	358	661	886	771	1520	150	1220	610	480	440	220	6x21
25/14	30	145	250	490	50	25	640	250	160	1702	100	41	358	661	931	771	1580	150	1280	640	480	440	220	6x21
25/15	30	154	250	512	50	25	685	250	160	1747	100	41	358	661	976	771	1620	150	1320	660	480	440	220	6x21
25/16	30	163	250	521	50	25	730	250	160	1792	100	41	358	661	1021	771	1660	150	1360	680	480	440	220	6x21
25/17	37	163	270	541	50	25	730	250	160	1792	100	41	358	661	1021	771	1660	150	1360	680	480	440	220	6x21
25/18	37	172	270	550	50	25	775	250	160	1837	100	41	358	661	1066	771	1700	150	1400	700	480	440	220	6x21
25/19	45	181	270	570	50	25	820	250	160	1882	100	41	358	661	1111	771	1760	150	1460	730	480	440	220	6x21
25/20	37	190	270	579	50	25	865	250	160	1927	100	41	358	661	1156	771	1800	150	1500	750	480	440	220	6x21
25/20	45	199	270	603	50	25	910	250	160	1972	100	41	358	661	1201	771	1840	150	1540	770	480	440	220	6x21
25/20	45	199	315	648	50	25	910	250	160	2051	100	41	383	695	1201	850	1860	150	1560	780	520	480	240	6x21

HPA 32 - 2950 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
32/1	2,2	50	26	93	50	32	70	300	200	1025	90	237	303	448	667	358	740	150	440	-	320	280	140	4x19
	3	50	26	102	50	32	70	300	200	1060	90	237	303	460	667	393	740	150	440	-	320	280	140	4x19
	4	50	35	110	50	32	70	300	200	1077	90	237	303	480	667	410	740	150	440	-	320	280	140	4x19
	5,5	50	43	133	50	32	70	360	200	910	90	70	323	480	500	410	800	150	500	-	320	280	140	4x19
	7,5	50	73	149	50	32	70	360	200	980	90	70	323	500	500	480	880	150	580	-	320	280	140	4x19
32/2	4	65	35	156	50	32	125	300	200	1132	90	237	303	480	722	410	880	150	580	-	320	280	140	4x19
	5,5	65	43	179	50	32	125	300	200	1132	90	237	303	480	722	410	880	150	580	-	320	280	140	4x19
	7,5	65	73	186	50	32	125	300	200	1202	90	237	303	500	722	480	880	150	580	-	320	280	140	4x19
	11	65	120	269	50	32	125	300	200	1337	90	237	303	558	722	615	1000	150	700	-	360	320	160	4x19
	15	65	132	269	50	32	125	300	200	1337	90	237	303	558	722	615	1000	150	700	-	360	320	160	4x19
32/3	11	74	120	280	50	32	180	300	200	1392	90	237	323	558	777	615	1060	150	760	-	360	320	160	4x19

HPA LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION

HPA 32 - 2950 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
32/6	30	101	250	465	50	32	345	300	200	1713	90	237	338	641	942	771	1340	150	1040	-	480	440	220	4x19
	37	101	270	485	50	32	345	300	200	1713	90	237	338	641	942	771	1340	150	1040	-	480	440	220	4x19
	45	101	315	569	50	32	345	300	200	1762	90	237	363	675	942	820	1360	150	1060	-	510	470	235	4x19
32/7	30	110	250	483	50	32	400	300	200	1768	90	237	338	641	997	771	1400	150	1100	-	480	440	220	4x19
	37	110	270	503	50	32	400	300	200	1768	90	237	338	641	997	771	1400	150	1100	-	480	440	220	4x19
	45	110	315	586	50	32	400	300	200	1817	90	237	363	641	997	820	1420	150	1120	-	510	470	235	4x19
32/8	55	110	420	675	50	32	400	300	200	1907	90	237	393	748	997	910	1500	150	1200	-	560	520	260	4x19
	37	119	270	559	50	32	455	300	200	1823	90	237	363	641	1052	771	1480	150	1180	-	510	470	235	4x19
	45	119	315	604	50	32	455	300	200	1872	90	237	363	641	1052	820	1480	150	1180	-	510	470	235	4x19
32/9	55	119	420	707	50	32	455	300	200	1962	90	237	413	748	1052	910	1560	150	1260	630	580	530	265	6x21
	45	128	315	621	50	32	510	300	200	1927	90	237	413	641	1107	820	1620	150	1320	660	580	530	265	6x21
	55	128	420	726	50	32	510	300	200	2017	90	237	413	748	1107	910	1620	150	1320	660	580	530	265	6x21
32/10	75	128	551	896	50	32	510	300	200	2092	90	237	443	841	1107	985	1720	150	1420	710	640	590	295	6x21
	45	137	315	640	50	32	565	300	200	2072	90	237	413	641	1162	910	1680	150	1380	690	580	530	265	6x21
	55	137	420	745	50	32	565	300	200	2072	90	237	413	748	1162	910	1680	150	1380	690	580	530	265	6x21
32/11	75	137	551	915	50	32	565	300	200	2147	90	237	443	841	1162	985	1780	150	1480	740	640	590	295	6x21
	45	146	315	697	50	32	620	300	200	2127	90	237	443	641	1217	910	1820	150	1520	760	640	590	295	6x21
	55	146	420	802	50	32	620	300	200	2127	90	237	443	748	1217	910	1820	150	1520	760	640	590	295	6x21
32/12	75	146	551	933	50	32	620	300	200	2202	90	237	443	841	1217	985	1880	150	1520	760	640	590	295	6x21
	55	155	420	821	50	32	675	300	200	2182	90	237	443	748	1272	910	1880	150	1580	790	640	590	295	6x21
	75	155	551	952	50	32	675	300	200	2257	90	237	443	841	1272	985	1880	150	1580	790	640	590	295	6x21
32/13	90	155	625	1002	50	32	675	300	200	2307	90	237	443	841	1272	1035	1880	150	1580	790	640	590	295	6x21
	55	164	420	840	50	32	730	300	200	2237	90	237	443	748	1327	910	1940	150	1640	820	640	590	295	6x21
	75	164	551	971	50	32	730	300	200	2312	90	237	443	841	1327	985	1940	150	1640	820	640	590	295	6x21
	90	164	625	1021	50	32	730	300	200	2362	90	237	443	841	1327	1035	1940	150	1640	820	640	590	295	6x21

HPA 50 - 2950 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
50/1	5,5	62	43	169	100	50	90	410	225	977	90	67	338	480	567	410	1080	150	780	-	440	400	200	4x19
	7,5	62	73	199	100	50	90	410	225	1047	90	67	338	500	567	480	1080	150	780	-	440	400	200	4x19
	11	62	120	246	100	50	90	410	225	1182	90	67	338	593	567	615	1080	150	780	-	440	400	200	4x19
	15	62	132	258	100	50	90	410	225	1182	90	67	338	593	567	615	1080	150	780	-	440	400	200	4x19
	18,5	62	150	276	100	50	90	410	225	1277	90	67	338	590	567	710	1080	150	780	-	440	400	200	4x19
50/2	11	81	120	271	100	50	220	410	225	705	90	67	338	593	90	615	338	150	980	-	440	400	200	4x19
	15	81	132	283	100	50	220	410	225	705	90	67	338	593	90	615	338	150	980	-	440	400	200	4x19
	18,5	81	150	301	100	50	220	410	225	800	90	67	338	590	90	710	338	150	980	-	440	400	200	4x19
	22	81	205	356	100	50	220	410	225	157	90	67	338	608	90	67	338	150	980	-	440	400	200	4x19
	30	81	250	401	100	50	220	410	225	1468	90	67	338	641	697	771	1320	150	1020	-	480	440	220	4x19
50/3	37	81	270	421	100	50	220	410	225	1468	90	67	338	641	697	771	1320	150	1020	-	480	440	220	4x19
	22	100	205	389	100	50	282	410	225	1489	90	67	338	608	759	730	1380	150	1080	-	480	440	220	4x19
	30	100	250	434	100	50	282	410	225	1530	90	67	338	641	759	771	1380	150	1080	-	480	440	220	4x19
	37	100	270	454	100	50	282	410	225	1530	90	67	338	641	759	771	1380	150	1080	-	480	440	220	4x19
	45	100	315	499	100	50	282	410	225	1579	90	67	368	680	759	820	1400	150	1100	-	520	480	240	4x19
50/4	30	119	250	470	100	50	344	410	225	1592	90	67	368	671	821	771	1460	150	1160	-	520	480	240	4x19
	37	119	270	490	100	50	344	410	225	1592	90	67	368	671	821	771	1460	150	1160	-	520	480	240	4x19
	45	119	315	535	100	50	344	410	225	1641	90	67	368	680	821	820	1460	150	1160	-	520	480	240	4x19
	55	119	420	640	100	50	344	410	225	1641	90	67	368	680	821	820	1460	150	1160	-	520	480	240	4x19
	75	119	551	771	100	50	344	410	225	1731	90	67	428	783	821	910	1560	150	1260	630	580	540	270	6x21
50/5	90	119	625	845	100	50	344	410	225	1806	90	67	448	846	821	985	1660	150	1360	680	640	600	300	6x21
	37	138	270	525	100	50	406	410	225	1654	90	67	428	711	883									

HPA LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION

HPA 50 - 2950 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
50/8	75	195	551	909	100	50	592	410	225	2054	90	67	448	846	1069	985	1900	150	1600	800	640	600	300	6x21
	90	195	625	983	100	50	592	410	225	2104	90	67	448	846	1069	1035	1900	150	1600	800	640	600	300	6x21
	110	195	968	1326	100	50	592	410	225	2229	90	67	508	1038	1069	1160	2040	150	1740	870	700	660	330	6x21
	132	195	1100	1458	100	50	592	410	225	2259	90	67	508	1038	1069	1190	2040	150	1740	870	700	660	330	6x21
50/9	75	214	551	939	100	50	654	410	225	2116	90	67	448	846	1131	985	1960	150	1660	830	640	600	300	6x21
	90	214	625	1013	100	50	654	410	225	2166	90	67	448	846	1131	1035	1960	150	1660	830	640	600	300	6x21
	110	214	968	1356	100	50	654	410	225	2291	90	67	508	1038	1131	1160	2100	150	1800	900	700	660	330	6x21
	132	214	1100	1488	100	50	654	410	225	2321	90	67	508	1038	1131	1190	2100	150	1800	900	700	660	330	6x21
	160	214	1161	1549	100	50	654	410	225	2451	90	67	508	1038	1131	1320	2100	150	1800	900	700	660	330	6x21
50/10	90	233	625	1048	100	50	716	410	225	2228	90	67	508	906	1193	1035	2160	150	1860	930	700	660	330	6x21
	110	233	968	1391	100	50	716	410	225	2353	90	67	508	1038	1193	1160	2160	150	1860	930	700	660	330	6x21
	132	233	1100	1523	100	50	716	410	225	2383	90	67	508	1038	1193	1190	2160	150	1860	930	700	660	330	6x21
	160	233	1161	1584	100	50	716	410	225	2513	90	67	508	1038	1193	1320	2160	150	1860	930	700	660	330	6x21
50/11	90	252	625	1088	100	50	778	410	225	2290	90	67	508	906	1255	1035	2240	150	1940	970	700	660	330	6x21
	110	252	968	1431	100	50	778	410	225	2415	90	67	508	1038	1255	1160	2240	150	1940	970	700	660	330	6x21
	132	252	1100	1563	100	50	778	410	225	2445	90	67	508	1038	1255	1190	2240	150	1940	970	700	660	330	6x21
	160	252	1161	1624	100	50	778	410	225	2575	90	67	508	1038	1255	1320	2240	150	1940	970	700	660	330	6x21
	200	252	1221	1684	100	50	778	410	225	2575	90	67	508	1038	1255	1320	2240	150	1940	970	700	660	330	6x21

HPA 80 - 2950 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
80/1	11	87	120	286	125	80	120	460	250	1260	80	65	553	618	645	615	1280	150	980	-	480	440	220	4x19
	15	87	132	298	125	80	120	460	250	1260	80	65	553	618	645	615	1280	150	980	-	480	440	220	4x19
	18,5	87	150	316	125	80	120	460	250	1355	80	65	553	615	645	710	1280	150	980	-	480	440	220	4x19
	22	87	205	371	125	80	120	460	250	1260	80	65	553	633	645	615	1280	150	980	-	480	440	220	4x19
	30	87	250	416	125	80	120	460	250	1416	80	65	553	666	645	771	1280	150	980	-	480	440	220	4x19
80/2	22	116	205	416	125	80	195	460	250	1335	80	65	393	663	720	615	1480	150	1180	-	580	540	270	4x19
	30	116	250	461	125	80	195	460	250	1491	80	65	393	696	720	771	1480	150	1180	-	580	540	270	4x19
	37	116	270	481	125	80	195	460	250	1491	80	65	393	696	720	771	1480	150	1180	-	580	540	270	4x19
	45	116	315	526	125	80	195	460	250	1540	80	65	393	705	720	820	1480	150	1180	-	580	540	270	4x19
	55	116	420	631	125	80	195	460	250	1630	80	65	393	748	720	910	1480	150	1180	-	580	540	270	4x19
80/3	75	116	551	762	125	80	195	460	250	1705	80	65	453	851	720	985	1580	150	1280	640	600	300	6x21	
	45	145	315	573	125	80	270	460	250	1615	80	65	453	765	795	820	1660	150	1360	680	640	300	6x21	
	55	145	420	678	125	80	270	460	250	1705	80	65	453	765	795	910	1660	150	1360	680	640	300	6x21	
	75	145	551	809	125	80	270	460	250	1780	80	65	453	851	795	985	1660	150	1360	680	640	300	6x21	
	90	145	625	883	125	80	270	460	250	1830	80	65	453	851	795	1035	1660	150	1360	680	640	300	6x21	
80/4	75	174	551	854	125	80	345	460	250	1855	80	65	493	848	870	985	1860	150	1560	780	700	660	330	6x21
	90	174	625	928	125	80	345	460	250	1905	80	65	493	891	870	1035	1860	150	1560	780	700	660	330	6x21
	110	174	968	1271	125	80	345	460	250	2030	80	65	493	1023	870	1160	1860	150	1560	780	700	660	330	6x21
	132	174	1100	1403	125	80	345	460	250	2060	80	65	493	1023	870	1190	1860	150	1560	780	700	660	330	6x21
	90	203	625	976	125	80	420	460	250	1980	80	65	493	891	945	1035	1940	150	1640	820	700	660	330	6x21
80/5	110	203	968	1319	125	80	420	460	250	2105	80	65	493	1023	945	1160	2020	150	1640	820	700	660	330	6x21
	132	203	1100	1451	125	80	420	460	250	2135	80	65	493	1023	945	1190	2040	150	1640	820	700	660	330	6x21
	160	203	1161	1512	125	80	420	460	250	2265	80	65	493	1023	945	1320	2040	150	1640	820	700	660	330	6x21
	110	232	968	1370	125	80	495	460	250	2180	80	65	513	1023	1020	1160	2020	150	1720	860	720	680	340	6x21
80/6	132	232	1100	1502	125	80	495	460	250	2210	80	65	513	1023	1020	1190	2020	150	1720	860	720	680	340	6x21
	160	232	1161	1563	125	80	495	460	250	2340	80	65	513	1043	1020	1320	2020	150	1720	860	720	680	340	6x21
	200	232	1221	1623	125	80	495	460	250	2340	80	65	513	1043	1020	1320	2020	150	1720	860	720	680	340	6x21
	132	261	1100	1557	125	80	570	460	250	2285	80	65	513	1023	1095	1190	2100	150	1800	900	720	680	340	6x21

HPA LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION

HPA 100 - 2950 rpm

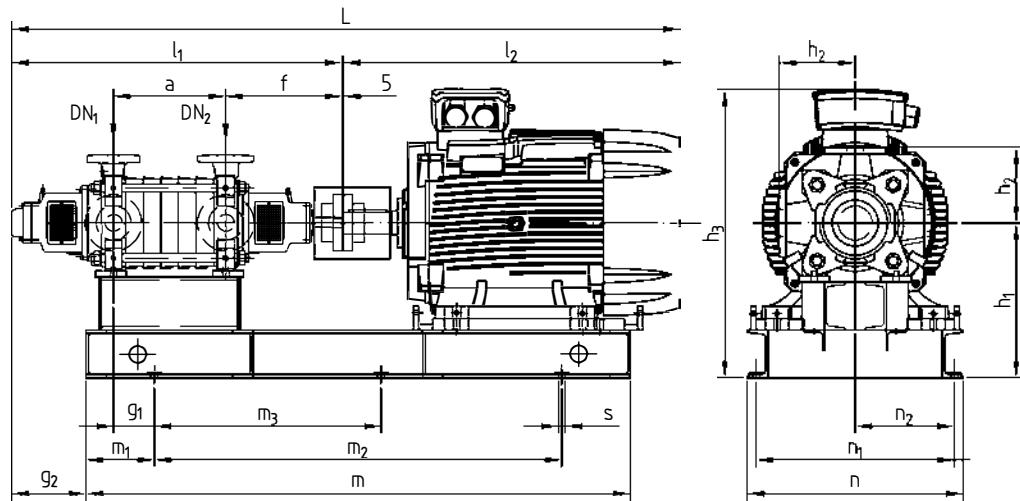
Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	I ₁	I ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
100/1	22	174	205	490	150	100	145	480	315	1315	70	75	443	663	700	615	1560	150	1260	630	640	600	300	6x21
	30	174	250	535	150	100	145	480	315	1471	70	75	443	696	700	771	1560	150	1260	630	640	600	300	6x21
	37	174	270	555	150	100	145	480	315	1471	70	75	443	696	700	771	1560	150	1260	630	640	600	300	6x21
	45	174	315	600	150	100	145	480	315	1520	70	75	443	705	700	820	1560	150	1260	630	640	600	300	6x21
	55	174	420	705	150	100	145	480	315	1610	70	75	443	748	700	910	1560	150	1260	630	640	600	300	6x21
100/2	75	174	551	836	150	100	145	480	315	1685	70	75	443	841	700	985	1560	150	1260	630	640	600	300	6x21
	55	219	420	787	150	100	235	480	315	1610	70	75	503	815	790	820	1780	150	1480	740	740	700	350	6x21
	75	219	551	918	150	100	235	480	315	1700	70	75	503	858	790	910	1780	150	1480	740	740	700	350	6x21
	90	219	625	992	150	100	235	480	315	1775	70	75	503	901	790	985	1780	150	1480	740	740	700	350	6x21
	110	219	968	1335	150	100	235	480	315	1950	70	75	503	1033	790	1160	1780	150	1480	740	740	700	350	6x21
100/3	132	219	1100	1467	150	100	235	480	315	1980	70	75	503	1033	790	1190	1780	150	1480	740	740	700	350	6x21
	90	264	625	1066	150	100	325	480	315	1865	70	75	503	901	880	985	1880	150	1580	790	740	700	350	6x21
	110	264	968	1409	150	100	325	480	315	2040	70	75	503	1033	880	1160	1880	150	1580	790	740	700	350	6x21
	132	264	1100	1541	150	100	325	480	315	2070	70	75	503	1033	880	1190	1880	150	1580	790	740	700	350	6x21
	160	264	1161	1602	150	100	325	480	315	2200	70	75	503	1033	880	1320	1880	150	1580	790	740	700	350	6x21
100/4	200	309	1221	1674	150	100	415	480	315	2200	70	75	503	1033	970	1320	1960	150	1660	830	740	700	350	6x21
	200	309	1221	1674	150	100	415	480	315	2470	70	75	563	1218	970	1500	2140	150	1840	920	820	780	390	6x21
	250	309	2090	2513	150	100	415	480	315	2560	70	75	563	1218	1060	1500	2220	150	1920	960	820	780	390	6x21
100/5	160	354	1161	3184	150	100	505	480	315	2380	70	75	563	1093	1060	1320	2220	150	1920	960	820	780	390	6x21
	200	354	1221	3184	150	100	505	480	315	2380	70	75	563	1093	1060	1320	2220	150	1920	960	820	780	390	6x21
	250	354	2090	2665	150	100	505	480	315	2560	70	75	563	1218	1060	1500	2220	150	1920	960	820	780	390	6x21
	315	354	2530	2965	150	100	505	480	315	2560	70	75	563	1218	1060	1500	2220	150	1920	960	820	780	390	6x21
100/6	250	399	2090	3184	150	100	595	480	315	2650	70	75	563	1218	1150	1500	2320	150	2020	1010	820	780	390	6x21
	315	399	2530	3017	150	100	595	480	315	2650	70	75	563	1218	1150	1500	2320	150	2020	1010	820	780	390	6x21
	355	399	2000	2467	150	100	595	480	315	2940	70	75	563	1167	1150	1790	2320	150	2020	1010	820	780	390	6x21
	400	399	2300	150	100	595	480	315	1930	70	75	563	1117	1150	1930	2320	150	2020	1010	820	780	390	6x21	

HPA 125 - 2950 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	I ₁	I ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
125/1	90	283	625	1096	200	125	155	590	350	1815	50	85	482	880	830	985	1820	150	1520	760	740	700	350	6x21
	110	283	968	1439	200	125	155	590	350	1990	50	85	482	1012	830	1160	1820	150	1520	760	740	700	350	6x21
	132	283	1100	1571	200	125	155	590	350	2020	50	85	482	1012	830	1190	1820	150	1520	760	740	700	350	6x21
	160	283	1161	1632	200	125	155	590	350	2150	50	85	482	1012	830	1320	1820	150	1520	760	740	700	350	6x21
	200	283	1221	1692	200	125	155	590	350	2150	50	85	482	1012	830	1320	1820	150	1520	760	740	700	350	6x21
125/2	160	364	1161	1739	200	125	265	590	350	2260	50	85	542	1072	940	1320	2120	150	1820	910	820	780	390	6x21
	200	364	1221	1799	200	125	265	590	350	2260	50	85	542	1072	940	1320	2120	150	1820	910	820	780	390	6x21
	250	364	2090	2668	200	125	265	590	350	2440	50	85	542	1197	940	1500	2120	150	1820	910	820	780	390	6x21
	315	364	2530	3108	200	125	265	590	350	2440	50	85	542	1197	940	1500	2120	150	1820	910	820	780	390	6x21
	355	364	2000	2578	200	125	265	590	350	2730	50	85	542	1087	940	1790	2120	150	1820	910	820	780	390	6x21
125/3	400	445	2300	3217	200	125	375	590	350	2550	50	85	542	1197	1050	1500	2220	150	1920	960	820	780	390	6x21
	355	445	2000	2687	200	125	375	590	350	2840	50	85	542	1087	1050	1790	2220	150	1920	960	820	780	390	6x21
	400	445	2300	2987	200	125	375	590	350	2980	50	85	542	1117	1050	1930	2220	150	1920	960	820	780	390	6x21
	450	445	2400	3087	200	125	375	590	350	2980	50	85	542	1117	1050	1930	2220	150	1920	960	820	780	390	6x21
	510	445	2550	3237	200	125	375	590	350	2980	50	85	542	1117	1050	1930	2220	150	1920	960	820	780	390	6x21
125/4	560	445	3150	3837	200	125	375	590	350	3145	50	85	542	1152	1050	2095	2220	150	1920	960	820	780	390	6x21
	450	526	2400	3198	200	125	485	590	350	3090	50	85	612	1117	1160	1930	2760	150	2460	820	980	940	470	8x21
	510	526	2550	3348	200	125	485	590	350	3090	50	85	612	1117	1160	1930	2760	150	2460	820	980	940	470	8x21
	560	526	3150	3948	200	125	485	590	350	3255	50	85	612	1152	1160	2095	2760	150	2460	820	980	940	470	8x21
	650	526	3300	409																				

HP LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION



HP 25 - 1450 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
25/1	0,75	39	12	91	40	25	55	239,5	160	774,5	100	142	263	393	486,5	283	600	150	300	-	310	275	137,5	4x17
25/2	0,75	48	12	101	40	25	100	239,5	160	819,5	100	142	263	393	531,5	283	640	150	340	-	310	275	137,5	4x17
25/3	0,75	57	12	111	40	25	145	239,5	160	864,5	100	142	263	393	576,5	283	680	150	380	-	310	275	137,5	4x17
25/4	1,1	66	25	122,1	40	25	190	239,5	160	909,5	100	142	263	413	621,5	283	720	150	420	-	310	275	137,5	4x17
25/5	1,1	75	25	137,1	40	25	235	239,5	160	954,5	100	142	283	413	666,5	283	780	150	480	-	320	280	140	4x19
	1,5	75	30	141	40	25	235	239,5	160	1009,5	100	142	283	428	666,5	338	800	150	500	-	320	280	140	4x19
25/6	1,5	84	30	152	40	25	280	239,5	160	1054,5	100	142	283	428	711,5	338	840	150	540	-	320	280	140	4x19
25/7	1,5	93	30	163	40	25	325	239,5	160	1099,5	100	142	283	428	756,5	338	900	150	600	-	320	280	140	4x19
	2,2	111	36	171	40	25	325	239,5	160	1134,5	100	142	283	440	756,5	373	920	150	620	-	320	280	140	4x19
25/8	2,2	102	36	182	40	25	370	239,5	160	1179,5	100	142	283	440	801,5	373	980	150	680	-	320	280	140	4x19
25/9	2,2	111	36	201	40	25	415	239,5	160	1224,5	100	142	303	460	846,5	373	1020	150	720	-	330	290	145	4x19
	3	111	40	203	40	25	415	239,5	160	1224,5	100	142	303	460	846,5	373	1020	150	720	-	330	290	145	4x19
25/10	2,2	120	36	212	40	25	460	239,5	160	1269,5	100	142	303	460	891,5	373	1060	150	760	-	330	290	145	4x19
	3	120	40	214	40	25	460	239,5	160	1269,5	100	142	303	460	891,5	373	1060	150	760	-	330	290	145	4x19
25/11	3	129	40	225	40	25	505	239,5	160	1314,5	100	142	303	460	936,5	373	1100	150	800	-	330	290	145	4x19
25/12	3	138	40	236	40	25	550	239,5	160	1359,5	100	142	303	460	981,5	373	1140	150	840	-	330	290	145	4x19
25/13	3	147	40	247	40	25	595	239,5	160	1404,5	100	142	303	460	1026,5	373	1200	150	900	-	330	290	145	4x19
	4	147	46	250	40	25	595	239,5	160	1421,5	100	142	303	480	1026,5	390	1200	150	900	-	360	320	160	4x19
25/14	3	156	40	258	40	25	640	239,5	160	1449,5	100	142	303	460	1071,5	373	1240	150	940	-	330	290	145	4x19
25/15	4	156	46	261	40	25	640	239,5	160	1466,5	100	142	303	480	1071,5	390	1240	150	940	-	360	320	160	4x19
25/16	4	165	46	272	40	25	685	239,5	160	1511,5	100	142	303	480	1116,5	390	1300	150	1000	-	360	320	160	4x19
25/17	4	174	46	283	40	25	730	239,5	160	1556,5	100	142	303	480	1161,5	390	1340	150	1040	-	360	320	160	4x19
25/18	4	183	46	294	40	25	775	239,5	160	1601,5	100	142	303	480	1206,5	390	1380	150	1080	-	360	320	160	4x19
	5,5	183	70	311	40	25	775	239,5	160	1671,5	100	142	303	500	1206,5	460	1460	150	1160	-	360	320	160	4x19
25/19	4	192	46	305	40	25	820	239,5	160	1646,5	100	142	303	480	1251,5	390	1420	150	1120	-	360	320	160	4x19
	5,5	192	70	322	40	25	820	239,5	160	1716,5	100	142	303	520	1251,5	460	1500	150	1200	-	360	320	160	4x19
25/20	4	201	46	316	40	25	865	239,5	160	1691,5	100	142	303	480	1296,5	390	1480	150	1180	-	360	320	160	6x21
25/21	5,5	210	70	357	40	25	910	239,5	160	1806,5	100	142	323	520	1341,5	460	1600	150	1300	650	360	320	160	6x21
25/22	5,5	219	70	368	40	25	955	239,5	160	1851,5	100	142	323	520	1386,5	460	1640	150	1340	670	360	320	160	6x21
25/23	5,5	228	70	379	40	25	1000	239,5	160	1896,5	100	142	323	520	1431,5	460	1680	150	1380	690	360	320	160	6x21
	7,5	237	70	390	40	25	1045	239,5	160	1941,5	100	142	323	520	1476,5	460	1740	150	1440	720	360	320	160	6x21
25/24	5,5	246	70	401	40	25	1090	239,5	160	1986,5	100	142	323	520	1521,5	460	1780	150	1480	740	360	320	160	6x21
	7,5	246	57	403	40	25	1090	239,5	160	2022,5	100	142	323	520	1521,5	496	1780	150	1480	740	360	320	160	6x21
25/25	5,5	255	70	412	40	25	1135	239,5	160	2031,5	100	142	323	520	1566,5	460	1820	150	1520	760	360	320	160	6x21
	7,5	255	57	414	40	25	1135	239,5	160	2067,5	100	142	323	520	1566,5	496	1820	150	1520	760	360	320	160	6x21

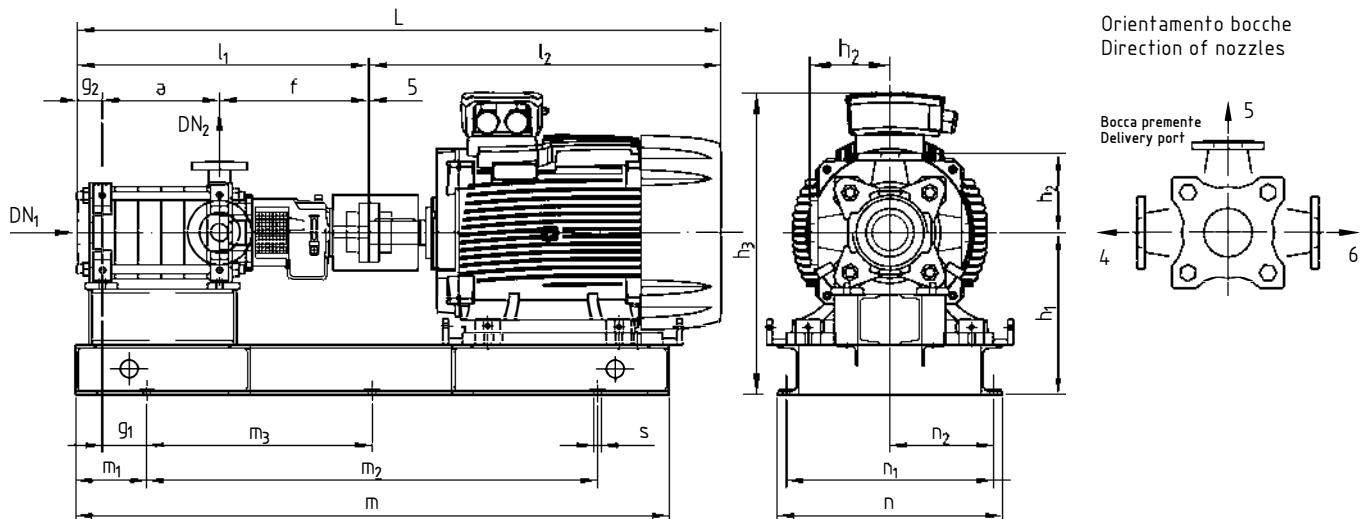
HP LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION

HP 150 - 2950 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
150/1	200	720	1221	2169	250	150	235	552.5	420	1325	40	405	553	1083	1302,5	1320	2060	150	1760	880	840	800	400	6x21
	250	720	2090	3038	250	150	235	552.5	420	1505	40	405	553	1208	1302,5	1500	2060	150	1760	880	840	800	400	6x21
	315	720	2530	3478	250	150	235	552.5	420	1505	40	405	553	1208	1302,5	1500	2060	150	1760	880	840	800	400	6x21
	355	720	2000	2948	250	150	235	552.5	420	1795	40	405	553	1098	1302,5	1790	2060	150	1760	880	840	800	400	6x21
	400	720	2300	3248	250	150	235	552.5	420	1935	40	405	553	1128	1302,5	1930	2060	150	1760	880	840	800	400	6x21
	450	720	2400	3348	250	150	235	552.5	420	1935	40	405	553	1128	1302,5	1930	2060	150	1760	880	840	800	400	6x21
	510	720	2550	3498	250	150	235	552.5	420	3237,5	40	405	553	1128	1302,5	1930	2060	150	1760	880	840	800	400	6x21
150/2	400	856	2300	3419	250	150	370	552.5	420	1795	40	405	682	1257	1437,5	1790	2970	150	2670	890	1080	1040	520	8x21
	450	856	2400	3519	250	150	370	552.5	420	1935	40	405	682	1257	1437,5	1930	2970	150	2670	890	1080	1040	520	8x21
	510	856	2550	3669	250	150	370	552.5	420	1935	40	405	682	1257	1437,5	1930	2970	150	2670	890	1080	1040	520	8x21
	560	856	3150	4269	250	150	370	552.5	420	2100	40	405	682	1292	1437,5	2095	2970	150	2670	890	1080	1040	520	8x21
	650	856	3300	4419	250	150	370	552.5	420	2100	40	405	682	1292	1437,5	2095	2970	150	2670	890	1080	1040	520	8x21
	750	856	3550	4669	250	150	370	552.5	420	2100	40	405	682	1292	1437,5	2095	2970	150	2670	890	1080	1040	520	8x21
	820	856	4600	5719	250	150	370	552.5	420	2325	40	405	682	1332	1437,5	2320	2970	150	2670	890	1080	1040	520	8x21
	940	856	4900	6019	250	150	370	552.5	420	2325	40	405	682	1332	1437,5	2320	2970	150	2670	890	1080	1040	520	8x21
	1030	856	5200	6319	250	150	370	552.5	420	3762,5	40	405	682	1332	1437,5	2320	2970	150	2670	890	1080	1040	520	8x21
	1200	856	6100	7219	250	150	370	552.5	420	4117,5	40	405	732	1432	1437,5	2675	3480	150	3180	1060	1220	1180	590	8x21
150/3	650	992	3300	4583	250	150	505	552.5	420	2100	40	405	682	1292	1572,5	2095	3090	150	2790	930	1080	1040	520	8x21
	750	992	3550	4833	250	150	505	552.5	420	2100	40	405	682	1292	1572,5	2095	3090	150	2790	930	1080	1040	520	8x21
	820	992	4600	5883	250	150	505	552.5	420	2325	40	405	682	1332	1572,5	2320	3090	150	2790	930	1080	1040	520	8x21
	940	992	4900	6183	250	150	505	552.5	420	2325	40	405	682	1332	1572,5	2320	3090	150	2790	930	1080	1040	520	8x21
	1030	992	5200	6483	250	150	505	552.5	420	3897,5	40	405	682	1332	1572,5	2320	3090	150	2790	930	1080	1040	520	8x21
	1200	992	6100	7383	250	150	505	552.5	420	2680	40	405	752	1452	1572,5	2675	3600	150	3300	1100	1220	1180	590	8x21
	1300	992	6300	7583	250	150	505	552.5	420	2680	40	405	752	1452	1572,5	2675	3600	150	3300	1100	1220	1180	590	8x21
150/4	1420	992	6700	7983	250	150	505	552.5	420	4252,5	40	405	752	1452	1572,5	2675	3600	150	3300	1100	1220	1180	590	8x21
	1680	992	8200	9483	250	150	505	552.5	420	4442,5	40	405	792	1562	1572,5	2865	3480	150	3180	1060	1400	1360	680	8x21
	1030	1128	5200	6656	250	150	640	552.5	420	2325	40	405	812	1462	1707,5	2320	3600	150	3300	1100	1400	1360	680	8x21
	1200	1128	6100	7556	250	150	640	552.5	420	2680	40	405	812	1512	1707,5	2675	3600	150	3300	1100	1400	1360	680	8x21
	1300	1128	6300	7756	250	150	640	552.5	420	2680	40	405	812	1512	1707,5	2675	3600	150	3300	1100	1400	1360	680	8x21

HPMA LUBRIFICAZIONE A OLIO / OIL LUBRICATION



HPMA 25 - 1450 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	I ₁	I ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
25/1	0,75	33	12	87	50	25	55	280	160	664	100	41	263	393	376	283	640	150	340	-	310	275	137,5	4x17
25/2	0,75	42	12	96	50	25	100	280	160	709	100	41	263	393	421	283	680	150	380	-	310	275	137,5	4x17
25/3	0,75	51	12	106	50	25	145	280	160	754	100	41	263	393	466	283	720	150	420	-	310	275	137,5	4x17
25/4	1,1	60	25	122,1	50	25	190	280	160	799	100	41	283	413	511	283	760	150	460	-	320	280	140	4x19
25/5	1,1	69	25	137,1	50	25	235	280	160	844	100	41	283	413	556	283	820	150	520	-	320	280	140	4x19
	1,5	69	30	136	50	25	235	280	160	899	100	41	283	428	556	338	840	150	540	-	320	280	140	4x19
25/6	1,5	78	30	147	50	25	280	280	160	944	100	41	283	428	601	338	880	150	580	-	320	280	140	4x19
25/7	1,5	87	30	159	50	25	325	280	160	989	100	41	283	428	646	338	940	150	640	-	320	280	140	4x19
	2,2	87	36	167	50	25	325	280	160	1024	100	41	283	440	646	373	960	150	660	-	320	280	140	4x19
25/8	2,2	96	36	177	50	25	370	280	160	1069	100	41	283	440	691	373	1000	150	700	-	320	280	140	4x19
25/9	2,2	105	36	197	50	25	415	280	160	1114	100	41	303	460	736	373	1060	150	760	-	330	290	145	4x19
	3	105	40	199	50	25	415	280	160	1114	100	41	303	460	736	373	1060	150	760	-	330	290	145	4x19
25/10	2,2	114	36	208	50	25	460	280	160	1159	100	41	303	460	781	373	1100	150	800	-	330	290	145	4x19
	3	114	40	210	50	25	460	280	160	1159	100	41	303	460	781	373	1100	150	800	-	330	290	145	4x19
25/11	3	123	40	221	50	25	505	280	160	1204	100	41	303	460	826	373	1140	150	840	-	330	290	145	4x19
25/12	3	132	40	232	50	25	550	280	160	1249	100	41	303	460	871	373	1200	150	900	-	330	290	145	4x19
25/13	3	141	40	242	50	25	595	280	160	1294	100	41	303	460	916	373	1240	150	940	-	330	290	145	4x19
	4	141	46	245	50	25	595	280	160	1311	100	41	303	480	916	390	1240	150	940	-	360	320	160	4x19
25/14	3	150	40	254	50	25	640	280	160	1339	100	41	303	460	961	373	1280	150	980	-	330	290	145	4x19
	4	150	46	257	50	25	640	280	160	1356	100	41	303	480	961	390	1280	150	980	-	360	320	160	4x19
25/15	4	159	46	268	50	25	685	280	160	1401	100	41	303	480	1006	390	1340	150	1040	-	360	320	160	4x19
25/16	4	168	46	279	50	25	730	280	160	1446	100	41	303	480	1051	390	1380	150	1080	-	360	320	160	4x19
25/17	4	177	46	289	50	25	775	280	160	1491	100	41	303	480	1096	390	1420	150	1120	-	360	320	160	4x19
	5,5	177	70	306	50	25	775	280	160	1561	100	41	303	500	1096	460	1500	150	1200	-	360	320	160	4x19
25/18	4	186	46	300	50	25	820	280	160	1536	100	41	303	480	1141	390	1460	150	1160	-	360	320	160	4x19
	5,5	186	70	317	50	25	820	280	160	1606	100	41	323	520	1141	460	1560	150	1260	630	360	320	160	6x21
25/19	4	195	46	321	50	25	865	280	160	1581	100	41	323	480	1186	390	1520	150	1220	610	360	320	160	6x21
	5,5	195	70	342	50	25	865	280	160	1651	100	41	323	520	1186	460	1600	150	1300	650	360	320	160	6x21
25/20	5,5	204	70	353	50	25	910	280	160	1696	100	41	323	520	1231	460	1640	150	1340	670	360	320	160	6x21

HPMA 32 - 1450 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	I ₁	I ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
32/1	0,75	61	12	121	65	32	70	420	200	843	90	70	283	433	560	283	800	150	500	-	320	280	140	4x19
	1,1	61	25	127	65	32	70	420	200	898	90	70	323	448	560	338	840	150	540	-	320	280	140	4x19
32/2	1,1	76	25	143	65	32	125	420	200	953	90	70	303	448	615	338	880	150	580	-	320	280	140	4x19
	1,5	76	30	145	65	32	125	420	200	953	90	70	303	448	615	338	880	150	580	-	320	280	140	4x19
32/3	2,2	76	36	146	65	32	125	420	200	988	90	70	303	460	615	373	920	150	620	-	320	280	140	4x19
	1,5	91	30	162	65	32	180	420	200	1028	90	70	303	448	670	358	980	150	680	-	320	280	140	4x19
	2,2	91	36	168	65	32	180	420	200	1063	90	70	303	460	670	393	980	150	680	-	320	280	140	4x19
3	91	40	172	65	32	180	420	200	1063	90	70	303	460	670	393	980	150	680	-	320	280	140	4x19	

HPMA LUBRIFICAZIONE A OLIO / OIL LUBRICATION

HPMA 50 - 1450 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
50/7	7,5	190	57	424	100	50	530	465	225	1578	90	67	353	535	1062	516	1580	150	1280	640	380	340	170	6x21
	11	190	125	492	100	50	530	465	225	1677	90	67	353	593	1062	615	1580	150	1280	640	380	340	170	6x21
	15	190	150	517	100	50	530	465	225	1772	90	67	588	840	1062	710	1580	150	1280	640	380	340	170	6x21
50/8	7,5	209	57	424	100	50	592	465	225	1640	90	67	353	535	1124	516	1640	150	1340	640	380	340	170	6x21
	11	209	125	492	100	50	592	465	225	1739	90	67	353	593	1124	615	1640	150	1340	640	380	340	170	6x21
	15	209	150	517	100	50	592	465	225	1834	90	67	588	840	1124	710	1640	150	1340	670	380	340	170	6x21
50/9	11	228	125	643	100	50	654	465	225	1801	90	67	358	593	1186	615	1700	150	1400	700	380	340	170	6x21
	15	228	150	668	100	50	654	465	225	1896	90	67	358	840	1186	710	1700	150	1400	700	380	340	170	6x21
	18,5	228	171	689	100	50	654	465	225	1916	90	67	358	628	1186	730	1780	150	1480	740	440	400	200	6x21
50/10	11	247	125	643	100	50	716	465	225	1863	90	67	358	613	1248	615	1760	150	1460	730	380	340	170	6x21
	15	247	150	668	100	50	716	465	225	1958	90	67	358	610	1248	710	1760	150	1460	730	380	340	170	6x21
	18,5	247	171	689	100	50	716	465	225	1978	90	67	358	628	1248	730	1840	150	1540	770	440	400	200	6x21
	22	247	190	708	100	50	716	465	225	2028	90	67	358	628	1248	780	1840	150	1540	770	440	400	200	6x21
50/11	11	266	125	643	100	50	778	465	225	1925	90	67	358	613	1310	615	1840	150	1540	770	380	340	170	6x21
	15	266	150	668	100	50	778	465	225	2020	90	67	358	610	1310	710	1840	150	1540	770	380	340	170	6x21
	18,5	266	171	689	100	50	778	465	225	2040	90	67	358	628	1310	730	1900	150	1600	800	440	400	200	6x21
	22	266	190	708	100	50	778	465	225	2090	90	67	358	628	1310	780	1900	150	1600	800	440	400	200	6x21
50/12	11	285	125	643	100	50	840	465	225	1987	90	67	358	613	1372	615	1900	150	1600	800	380	340	170	6x21
	15	285	150	668	100	50	840	465	225	2082	90	67	358	610	1372	710	1900	150	1600	800	380	340	170	6x21
	18,5	285	171	689	100	50	840	465	225	2102	90	67	358	628	1372	730	1960	150	1660	830	440	400	200	6x21
	22	285	190	708	100	50	840	465	225	2152	90	67	358	628	1372	780	1960	150	1660	830	440	400	200	6x21
50/13	15	304	150	668	100	50	902	465	225	2144	90	67	358	610	1434	710	2040	150	1740	870	460	420	210	6x21
	18,5	304	171	689	100	50	902	465	225	2164	90	67	358	628	1434	730	2040	150	1740	870	460	420	210	6x21
	22	304	190	708	100	50	902	465	225	2214	90	67	358	628	1434	780	2040	150	1740	870	460	420	210	6x21
	30	304	255	773	100	50	902	465	225	2205	90	67	358	661	1434	771	2080	150	1780	890	500	460	230	6x21
50/14	15	323	150	668	80	50	896	449	225	2434	90	67	358	610	1724	710	2000	150	1700	850	440	400	200	6x21
	18,5	323	171	689	80	50	896	449	225	2454	90	67	358	628	1724	730	2000	150	1700	850	440	400	200	6x21
	22	323	190	708	80	50	896	449	225	2504	90	67	358	628	1724	780	2000	150	1700	850	440	400	200	6x21
	30	323	255	773	80	50	896	449	225	2495	90	67	378	661	1724	771	2040	150	1740	870	500	460	230	6x21
50/15	15	342	150	691	80	50	958	449	225	2496	90	67	378	610	1786	710	2080	150	1780	890	440	400	200	6x21
	18,5	342	171	712	80	50	958	449	225	2516	90	67	378	628	1786	730	2080	150	1780	890	440	400	200	6x21
	22	342	190	731	80	50	958	449	225	2566	90	67	378	628	1786	780	2080	150	1780	890	440	400	200	6x21
	30	342	255	796	80	50	958	449	225	2557	90	67	378	661	1786	771	2120	150	1820	910	500	460	260	6x21
50/16	18,5	361	171	773	80	50	1020	449	225	2578	90	67	378	648	1848	730	2140	150	1840	920	460	420	210	6x21
	22	361	190	792	80	50	1020	449	225	2628	90	67	378	648	1848	780	2140	150	1840	920	460	420	210	6x21
	30	361	255	857	80	50	1020	449	225	2619	90	67	378	681	1848	771	2180	150	1880	640	500	460	230	6x21
50/17	18,5	380	171	773	80	50	1082	449	225	2640	90	67	378	648	1910	730	2200	150	1900	950	460	420	210	6x21
	22	380	190	792	80	50	1082	449	225	2690	90	67	378	648	1910	780	2200	150	1900	950	460	420	210	6x21
	30	380	255	857	80	50	1082	449	225	2681	90	67	378	681	1910	771	2240	150	1940	970	500	460	230	6x21
	37	380	269	871	80	50	1082	449	225	2725	90	67	408	720	1910	815	2280	150	1980	990	540	500	250	6x21
50/18	18,5	399	171	795	80	50	1144	449	225	2702	90	67	378	648	1972	730	2260	150	1960	980	460	420	210	6x21
	22	399	190	814	80	50	1144	449	225	2752	90	67	378	648	1972	780	2260	150	1960	980	460	420	210	6x21
	30	399	255	879	80	50	1144	449	225	2743	90	67	378	681	1972	771	2300	150	2000	1000	500	460	230	6x21
	37	399	269	893	80	50	1144	449	225	2787	90	67	408	720	1972	815	2340	150	2040	1020	540	500	250	6x21

HPMA 80 - 1450 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
80/1	1,5	120	30	209	125	80	120	485	250	1328	80	65	338	483	970	358	980	150	680	-	420	380	190	4x19
	2,2	120	36	215	125	80	120	485	250	1363	80	65	338	495	970	393	980	150	680	-	420	380		

HPMA LUBRIFICAZIONE A OLIO / OIL LUBRICATION

HPMA 80 - 1450 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
80/6	15	265	150	539	125	80	495	485	250	1755	80	65	378	610	1045	710	1660	150	1360	680	460	420	210	6x21
	18,5	265	171	560	125	80	495	485	250	1775	80	65	378	648	1045	730	1660	150	1360	680	460	420	210	6x21
	22	265	190	579	125	80	495	485	250	1825	80	65	378	648	1045	780	1660	150	1360	680	460	420	210	6x21
	30	265	255	644	125	80	495	485	250	1816	80	65	378	681	1045	771	1680	150	1380	690	500	460	230	6x21
80/7	15	294	150	572	125	80	570	485	250	1830	80	65	378	610	1120	710	1720	150	1420	710	460	420	210	6x21
	18,5	294	171	593	125	80	570	485	250	1850	80	65	378	648	1120	730	1720	150	1420	710	460	420	210	6x21
	22	294	190	612	125	80	570	485	250	1900	80	65	378	648	1120	780	1720	150	1420	710	460	420	210	6x21
	30	294	255	677	125	80	570	485	250	1891	80	65	378	681	1120	771	1760	150	1460	730	500	460	230	6x21
80/8	18,5	323	171	627	125	80	645	485	250	1925	80	65	378	648	1195	730	1840	150	1540	770	500	460	230	6x21
	22	323	190	646	125	80	645	485	250	1975	80	65	378	648	1195	780	1840	150	1540	770	500	460	230	6x21
	30	323	255	711	125	80	645	485	250	1966	80	65	378	681	1195	771	1840	150	1540	770	500	460	230	6x21
80/9	22	352	190	684	125	80	720	485	250	2050	80	65	378	648	1270	780	1920	150	1620	810	500	460	230	6x21
	30	352	255	749	125	80	720	485	250	2041	80	65	378	681	1270	771	1920	150	1620	810	500	460	230	6x21
	37	352	269	763	125	80	720	485	250	2085	80	65	383	695	1270	815	1960	150	1660	830	540	500	250	6x21
80/10	22	381	190	733	125	80	795	485	250	2125	80	65	378	648	1345	780	1980	150	1680	840	500	460	230	6x21
	30	381	255	798	125	80	795	485	250	2116	80	65	378	681	1345	771	1980	150	1680	840	500	460	230	6x21
	37	381	269	812	125	80	795	485	250	2160	80	65	403	695	1345	815	2040	150	1740	870	540	500	250	6x21
80/11	30	410	255	850	125	80	870	485	250	2191	80	65	403	681	1420	771	2120	150	1820	910	540	500	250	6x21
	37	410	269	864	125	80	870	485	250	2235	80	65	403	695	1420	815	2120	150	1820	910	540	500	250	6x21
	45	410	353	948	125	80	870	485	250	2240	80	65	403	715	1420	820	2120	150	1820	910	540	500	250	6x21
80/12	30	439	255	879	125	80	945	485	250	2266	80	65	403	681	1495	771	2200	150	1900	950	540	500	250	6x21
	37	439	269	893	125	80	945	485	250	2310	80	65	403	695	1495	815	2200	150	1900	950	540	500	250	6x21
	5,5	439	70	694	125	80	945	485	250	2315	80	65	403	715	1495	820	2200	150	1900	950	540	500	250	6x21
80/13	30	468	255	908	125	80	1020	485	250	2341	80	65	403	681	1570	771	2260	150	1960	980	540	500	250	6x21
	37	468	269	922	125	80	1020	485	250	2385	80	65	403	695	1570	815	2260	150	1960	980	540	500	250	6x21
	45	468	353	1006	125	80	1020	485	250	2390	80	65	403	715	1570	820	2260	150	1960	980	540	500	250	6x21
	55	468	450	1103	125	80	1020	485	250	2480	80	65	433	788	1570	910	2340	150	2040	1020	600	560	280	6x21
80/14	37	497	269	957	125	80	1095	485	250	2460	80	65	403	695	1645	815	2340	150	2040	1020	540	500	250	6x21
	45	497	353	1041	125	80	1095	485	250	2465	80	65	403	715	1645	820	2340	150	2040	1020	540	500	250	6x21
	55	497	450	1138	125	80	1095	485	250	2555	80	65	433	788	1645	910	2420	150	2120	1060	600	560	280	6x21
80/15	37	526	269	986	125	80	1170	485	250	2535	80	65	403	695	1720	815	2420	150	2120	1060	540	500	250	6x21
	45	526	353	1070	125	80	1170	485	250	2540	80	65	403	715	1720	820	2420	150	2120	1060	540	500	250	6x21
	55	526	450	1167	125	80	1170	485	250	2630	80	65	433	788	1720	910	2480	150	2180	1090	600	560	280	6x21
	75	526	605	1322	125	80	1170	485	250	2705	80	65	493	891	1720	985	2580	150	2280	1140	660	620	310	Bx21
80/16	37	555	269	1021	125	80	1245	485	250	2610	80	65	403	695	1795	815	2500	150	2200	1100	540	500	250	6x21
	45	555	353	1105	125	80	1245	485	250	2615	80	65	403	715	1795	820	2500	150	2200	1100	540	500	250	6x21
	55	555	450	1202	125	80	1245	485	250	2705	80	65	453	788	1795	910	2550	150	2250	1125	620	580	290	Bx21
	75	555	605	1357	125	80	1245	485	250	2780	80	65	493	891	1795	985	2640	150	2340	1170	660	620	310	8x21

HPMA 100 - 1450 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
100/1	5,5	197	70	369	150	100	145	545	315	1245	70	75	408	605	765	480	1160	150	860	-	480	440	220	4x19
	7,5	197	57	356	150	100	145	545	315	1281	70	75	408	605	765	516	1160	150	860	-	480	440	220	4x19
	11	197	125	424	150	100	145	545	315	1380	70	75	408	663	765	615	1280	150	980	-	480	440	220	4x19
	11	242	125	494	150	100	235	545	315	1470	70	75	408	663	855	615	1380	150	1080	-	480	440	220	4x19
100/2	15	242	150	519	150	100	235	545	315	1565	70	75	408	660	855	710	1380	150	1080	-	480	440	220	4x19
	18,5	242	171	540	150	100	235	545	315	1585	70	75	408	678	855	730	1440	150	1140	-	500	460	230	4x19
100/3	15	287	150	586	150	100	325	545	315	1655	70	75	428	663	945	710	1520	150	1220	610	500	460	230	6x21
	18,5	287	171	607	150	100	325	545	315	1675	70	75	428	660	945	730	1520	1						

HPMA LUBRIFICAZIONE A OLIO / OIL LUBRICATION

HPMA 100 - 1450 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
100/8	45	512	353	1063	150	100	775	545	315	2215	70	75	433	725	1395	820	2160	150	1860	930	580	540	270	6x21
	55	512	450	1160	150	100	775	545	315	2305	70	75	433	725	1395	910	2160	150	1860	930	580	540	270	6x21
	75	512	605	1315	150	100	775	545	315	2380	70	75	463	861	1395	985	2240	150	1940	970	640	600	300	6x21
100/9	45	557	353	1113	150	100	865	545	315	2305	70	75	433	725	1485	820	2240	150	1940	970	580	540	270	6x21
	55	557	450	1210	150	100	865	545	315	2395	70	75	433	725	1485	910	2240	150	1940	970	580	540	270	6x21
	75	557	605	1365	150	100	865	545	315	2470	70	75	463	861	1485	985	2340	150	2040	1020	640	600	300	6x21
100/10	45	602	353	1163	150	100	955	545	315	2395	70	75	463	775	1575	820	2420	150	2120	1060	640	600	300	6x21
	55	602	450	1260	150	100	955	545	315	2485	70	75	463	818	1575	910	2420	150	2120	1060	640	600	300	6x21
	75	602	605	1415	150	100	955	545	315	2560	70	75	463	861	1575	985	2420	150	2120	1060	640	600	300	6x21
100/11	90	602	700	1510	150	100	955	545	315	2610	70	75	463	861	1575	1035	2420	150	2120	1060	640	600	300	6x21
	55	647	450	1310	150	100	1045	545	315	2575	70	75	483	818	1665	910	2520	150	2220	1110	640	600	300	8x21
	75	647	605	1465	150	100	1045	545	315	2650	70	75	483	861	1665	985	2520	150	2220	1110	640	600	300	8x21
100/12	90	647	700	1560	150	100	1045	545	315	2700	70	75	483	861	1665	1035	2520	150	2220	1110	640	600	300	8x21
	55	692	450	1365	150	100	1135	545	315	2665	70	75	483	818	1755	910	2610	150	2310	770	640	600	300	8x21
	75	692	605	1520	150	100	1135	545	315	2740	70	75	483	861	1755	985	2610	150	2310	770	640	600	300	8x21
100/13	90	692	700	1615	150	100	1135	545	315	2790	70	75	483	861	1755	1035	2610	150	2310	770	640	600	300	8x21
	110	692	925	1840	150	100	1135	545	315	2915	70	75	543	1073	1755	1160	2790	150	2490	830	740	700	350	8x21
	75	737	605	1577	150	100	1225	545	315	2830	70	75	483	881	1845	985	2700	150	2400	800	640	600	300	8x21
100/14	90	737	700	1672	150	100	1225	545	315	2880	70	75	483	881	1845	1035	2700	150	2400	800	640	600	300	8x21
	110	737	925	1897	150	100	1225	545	315	3005	70	75	543	1073	1845	1160	2880	150	2580	860	740	700	350	8x21
	75	782	605	1634	150	100	1315	545	315	2920	70	75	483	881	1935	985	2790	150	2490	830	640	600	300	8x21
	90	782	700	1729	150	100	1315	545	315	2970	70	75	483	881	1935	1035	2790	150	2490	830	640	600	300	8x21
	110	782	925	1954	150	100	1315	545	315	3095	70	75	543	1073	1935	1160	2970	150	2670	890	740	700	350	8x21

HPMA 125 - 1450 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
125/1	18,5	343	171	668	200	125	155	650	350	730	50	85	518	788	890	730	1520	150	1220	610	600	560	280	6x21
	22	343	190	687	200	125	155	650	350	780	50	85	518	788	890	780	1520	150	1220	610	600	560	280	6x21
	30	343	255	752	200	125	155	650	350	771	50	85	518	821	890	771	1520	150	1220	610	600	560	280	6x21
125/2	37	424	269	847	200	125	265	650	350	815	50	85	518	830	1000	815	1760	150	1460	730	600	560	280	6x21
	45	424	353	931	200	125	265	650	350	820	50	85	518	830	1000	820	1760	150	1460	730	600	560	280	6x21
	55	424	450	1028	200	125	265	650	350	910	50	85	518	873	1000	910	1760	150	1460	730	600	560	280	6x21
125/3	45	505	353	1028	200	125	375	650	350	820	50	85	518	830	1110	820	1960	150	1660	830	640	600	300	6x21
	55	505	450	1125	200	125	375	650	350	910	50	85	518	873	1110	910	1960	150	1660	830	640	600	300	6x21
	75	505	605	1280	200	125	375	650	350	985	50	85	518	916	1110	985	1960	150	1660	830	640	600	300	6x21
125/4	75	586	605	1376	200	125	485	650	350	985	50	85	518	916	1220	985	2260	150	1960	980	720	680	340	6x21
	90	586	700	1471	200	125	485	650	350	1035	50	85	518	916	1220	1035	2260	150	1960	980	720	680	340	6x21
	110	586	925	1696	200	125	485	650	350	1160	50	85	518	1048	1220	1160	2260	150	1960	980	720	680	340	6x21
125/5	90	667	700	1552	200	125	595	650	350	1035	50	85	518	916	1330	1035	2360	150	2060	1030	720	680	340	6x21
	110	667	925	1777	200	125	595	650	350	1160	50	85	518	1048	1330	1160	2360	150	2060	1030	720	680	340	6x21
	132	667	1180	2032	200	125	595	650	350	1190	50	85	518	1048	1330	1190	2360	150	2060	1030	720	680	340	6x21
125/6	110	748	925	1874	200	125	705	650	350	1160	50	85	518	1048	1440	1160	2480	150	2180	1090	720	680	340	6x21
	132	748	1180	2129	200	125	705	650	350	1190	50	85	518	1048	1440	1190	2480	150	2180	1090	720	680	340	6x21
	160	748	1161	2110	200	125	705	650	350	1320	50	85	518	1048	1440	1320	2480	150	2180	1090	720	680	340	6x21
125/7	132	829	1180	2222	200	125	815	650	350	1190	50	85	538	1048	1550	1190	2580	150	2280	760	720	680	340	8x21
	160	829	1161	2203	200	125	815	650	350	1320	50	85	538	1048	1550	1320	2580	150	2280	760	720	680	340	8x21
	200	829	1241	2283	200	125	815	650	350	1320	50	85	538	1048	1550	1320	2580	150	2280	760	720	680	340	8x21
125/8	132	910	1180	2313	200	125	925	650	350	1190	50	85	538	1048	1660	1190	2700	150	2400	800	720	680		

HPMA LUBRIFICAZIONE A OLIO / OIL LUBRICATION

HPMA 150 - 1450 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
150/1	30	727	255	1160	250	150	175	660	420	1716	40	110	533	836	945	771	1780	150	1480	740	720	680	340	6x21
	37	727	269	1174	250	150	175	660	420	1760	40	110	533	845	945	815	1780	150	1480	740	720	680	340	6x21
	45	727	353	1258	250	150	175	660	420	1765	40	110	533	845	945	820	1780	150	1480	740	720	680	340	6x21
	55	727	450	1355	250	150	175	660	420	1855	40	110	533	888	945	910	1780	150	1480	740	720	680	340	6x21
	75	727	605	1510	250	150	175	660	420	1930	40	110	533	931	945	985	1780	150	1480	740	720	680	340	6x21
150/2	2,2	863	605	1657	250	150	310	660	420	2065	40	110	553	951	1080	985	2100	150	1800	900	720	680	340	6x21
	90	863	700	1752	250	150	310	660	420	2115	40	110	553	951	1080	1035	2100	150	1800	900	720	680	340	6x21
	110	863	925	1977	250	150	310	660	420	2240	40	110	553	1083	1080	1160	2100	150	1800	900	720	680	340	6x21
	132	863	1180	2232	250	150	310	660	420	2270	40	110	553	1083	1080	1190	2100	150	1800	900	720	680	340	6x21
150/3	90	999	700	1902	250	150	445	660	420	2250	40	110	553	951	1215	1035	2240	150	1940	960	720	680	340	6x21
	110	999	925	2127	250	150	445	660	420	2375	40	110	553	1083	1215	1160	2240	150	1940	960	720	680	340	6x21
	132	999	1180	2382	250	150	445	660	420	2405	40	110	553	1083	1215	1190	2240	150	1940	960	720	680	340	6x21
	160	999	1161	2363	250	150	445	660	420	2535	40	110	553	1083	1215	1320	2240	150	1940	960	720	680	340	6x21
	200	999	1241	2443	250	150	445	660	420	2535	40	110	553	1083	1215	1320	2240	150	1940	960	720	680	340	6x21
150/4	160	1135	1161	2516	250	150	580	660	420	2670	40	110	573	1103	1350	1320	2550	150	2250	750	840	800	400	8x21
	200	1135	1241	2596	250	150	580	660	420	2670	40	110	573	1103	1350	1320	2550	150	2250	750	840	800	400	8x21
	250	1135	1870	3225	250	150	580	660	420	2850	40	110	573	1228	1350	1500	2550	150	2250	750	840	800	400	8x21
	315	1135	2090	3445	250	150	580	660	420	2850	40	110	573	1228	1350	1500	2550	150	2250	750	840	800	400	8x21
150/5	200	1271	1241	2750	250	150	715	660	420	2805	40	110	573	1103	1485	1320	2670	150	2370	990	840	800	400	8x21
	250	1271	1870	3379	250	150	715	660	420	2985	40	110	573	1228	1485	1500	2670	150	2370	990	840	800	400	8x21
	315	1271	2090	3599	250	150	715	660	420	2985	40	110	573	1228	1485	1500	2670	150	2370	990	840	800	400	8x21
	365	1271	2050	3559	250	150	715	660	420	3295	40	110	573	1118	1485	1810	2670	150	2370	990	840	800	400	8x21
150/6	250	1407	1870	3532	250	150	850	660	420	3120	40	110	573	1228	1620	1500	2820	150	2520	840	840	800	400	8x21
	315	1407	2090	3752	250	150	850	660	420	3120	40	110	573	1228	1620	1500	2820	150	2520	840	840	800	400	8x21
	365	1407	2050	3712	250	150	850	660	420	3430	40	110	573	1118	1620	1810	2820	150	2520	840	840	800	400	8x21
	400	1407	2350	4012	250	150	850	660	420	3605	40	110	573	1148	1620	1985	2820	150	2520	840	840	800	400	8x21
150/7	315	1543	2090	3906	250	150	985	660	420	3255	40	110	573	1228	1755	1500	2940	150	2640	880	840	800	400	8x21
	365	1543	2050	3866	250	150	985	660	420	3565	40	110	573	1118	1755	1810	2940	150	2640	880	840	800	400	8x21
	400	1543	2350	4166	250	150	985	660	420	3740	40	110	573	1148	1755	1985	2940	150	2640	880	840	800	400	8x21
	470	1543	2550	4366	250	150	985	660	420	3740	40	110	573	1148	1755	1985	2940	150	2640	880	840	800	400	8x21
	560	1543	2750	4566	250	150	985	660	420	3740	40	110	573	1148	1755	1985	2940	150	2640	880	840	800	400	8x21
150/8	365	1679	2050	4016	250	150	1120	660	420	3700	40	110	593	1138	1890	1810	3090	150	2790	930	840	800	400	8x21
	400	1679	2350	4316	250	150	1120	660	420	3875	40	110	593	1168	1890	1985	3090	150	2790	930	840	800	400	8x21
	470	1679	2090	4056	250	150	1120	660	420	3875	40	110	593	1168	1890	1985	3090	150	2790	930	840	800	400	8x21
	560	1679	2050	4016	250	150	1120	660	420	3875	40	110	593	1168	1890	1985	3090	150	2790	930	840	800	400	8x21
	600	1679	3400	5366	250	150	1120	660	420	4015	40	110	652	1262	1890	2125	3540	150	3240	1080	980	940	470	8x21
150/9	400	1815	2350	4465	250	150	1255	660	420	4010	40	110	593	1168	2025	1985	3210	150	2910	970	840	800	400	8x21
	470	1815	2090	4205	250	150	1255	660	420	4010	40	110	593	1168	2025	1985	3210	150	2910	970	840	800	400	8x21
	560	1815	2050	4165	250	150	1255	660	420	4010	40	110	652	1227	2025	1985	3210	150	3360	1120	980	940	470	8x21
	600	1815	3400	5515	250	150	1255	660	420	4150	40	110	652	1262	2025	2125	3660	150	3360	1120	980	940	470	8x21
150/10	470	1951	2090	4363	250	150	1390	660	420	4145	40	110	593	1168	2160	1985	3360	150	3060	1020	840	800	400	8x21
	560	1951	2050	4323	250	150	1390	660	420	4145	40	110	593	1168	2160	1985	3360	150	3060	1020	840	800	400	8x21
	600	1951	3400	5673	250	150	1390	660	420	4285	40	110	652	1262	2160	2125	3810	150	3510	1170	980	940	470	8x21
	680	1951	3600	5873	250	150	1390	660	420	4285	40	110	652	1262	2160	2125	3810	150	3510	1170	980	940	470	8x21

HPMA LUBRIFICAZIONE A OLIO / OIL LUBRICATION

HPMA 25 - 2950 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
25/1	1,1	33	18	82	50	25	55	280	160	839	100	41	263	393	556	283	660	150	360	-	310	275	137,5	4x17
	1,5	33	23	87	50	25	55	280	160	886	100	41	263	408	556	330	660	150	360	-	310	275	137,5	4x17
	2,2	33	26	90	50	25	55	280	160	894	100	41	263	408	556	338	660	150	360	-	310	275	137,5	4x17
25/2	2,2	42	23	101	50	25	100	280	160	794	100	41	263	420	421	373	740	150	440	-	310	275	137,5	4x17
	3	42	26	104	50	25	100	280	160	794	100	41	263	420	421	373	740	150	440	-	310	275	137,5	4x17
	4	42	35	113	50	25	100	280	160	794	100	41	263	420	421	373	740	150	440	-	310	275	137,5	4x17
	5,5	42	43	121	50	25	100	280	160	811	100	41	263	440	421	390	740	150	440	-	310	275	137,5	4x17
25/3	4	51	35	129	50	25	145	280	160	839	100	41	283	420	466	373	800	150	500	-	320	280	140	4x19
	5,5	51	66	160	50	25	145	280	160	856	100	41	283	460	466	390	800	150	500	-	320	280	140	4x19
	7,5	51	73	167	50	25	145	280	160	926	100	41	283	480	466	460	860	150	860	-	320	280	140	4x19
25/4	7,5	60	73	176	50	25	190	280	160	971	100	41	283	480	511	460	920	150	620	-	320	280	140	4x19
	11	60	120	223	50	25	190	280	160	1007	100	41	283	480	511	496	920	150	620	-	320	280	140	4x19
25/5	11	69	120	240	50	25	235	280	160	1052	100	41	283	480	556	496	960	150	660	-	320	280	140	4x19
25/6	11	78	120	249	50	25	280	280	160	1097	100	41	283	480	601	496	1000	150	700	-	320	280	140	4x19
	15	78	132	261	50	25	280	280	160	1216	100	41	318	573	601	615	1140	150	840	-	400	360	180	4x19
25/7	15	87	132	270	50	25	325	280	160	1261	100	41	318	573	646	615	1180	150	880	-	400	360	180	4x19
	18,5	87	150	288	50	25	325	280	160	1356	100	41	318	570	646	710	1180	150	880	-	400	360	180	4x19
25/8	15	96	132	296	50	25	370	280	160	1306	100	41	318	573	691	615	1220	150	920	-	400	360	180	4x19
	18,5	96	150	314	50	25	370	280	160	1401	100	41	318	570	736	710	1220	150	920	-	400	360	180	4x19
25/9	18,5	105	150	323	50	25	415	280	160	1446	100	41	318	570	736	710	1260	150	960	-	400	360	180	4x19
	22	105	205	378	50	25	415	280	160	1466	100	41	318	588	736	730	1340	150	1040	-	420	380	190	4x19
25/10	18,5	114	150	349	50	25	460	280	160	1491	100	41	318	570	781	710	1320	150	1020	-	400	360	180	4x19
	22	114	205	404	50	25	460	280	160	1511	100	41	318	588	781	730	1380	150	1080	-	420	380	190	4x19
25/11	22	123	205	413	50	25	505	280	160	1556	100	41	318	588	826	730	1420	150	1120	-	420	380	190	4x19
	30	123	250	458	50	25	505	280	160	1597	100	41	338	641	826	771	1460	150	1160	-	480	440	220	4x19
25/12	22	132	205	433	50	25	550	280	160	1601	100	41	318	588	871	730	1460	150	1160	-	420	380	190	4x19
	30	132	250	478	50	25	550	280	160	1642	100	41	338	641	871	771	1500	150	1200	-	480	440	220	4x19
25/13	30	141	250	487	50	25	595	280	160	1687	100	41	358	661	916	771	1560	150	1260	630	480	440	220	6x21
25/14	30	150	250	496	50	25	640	280	160	1732	100	41	358	661	961	771	1600	150	1300	650	480	440	220	6x21
25/15	30	159	250	518	50	25	685	280	160	1777	100	41	358	661	1006	771	1640	150	1340	670	480	440	220	6x21
	37	159	270	538	50	25	685	280	160	1777	100	41	358	661	1006	771	1640	150	1340	670	480	440	220	6x21
25/16	30	168	250	527	50	25	730	280	160	1822	100	41	358	661	1051	771	1700	150	1400	700	480	440	220	6x21
	37	168	270	547	50	25	730	280	160	1822	100	41	358	661	1051	771	1700	150	1400	700	480	440	220	6x21
25/17	37	177	270	556	50	25	775	280	160	1867	100	41	358	661	1096	771	1740	150	1440	720	480	440	220	6x21
25/18	37	186	270	576	50	25	820	280	160	1912	100	41	358	661	1141	771	1780	150	1480	740	480	440	220	6x21
	45	186	315	621	50	25	820	280	160	1991	100	41	383	695	1141	850	1800	150	1500	750	520	480	240	6x21
25/19	37	195	270	585	50	25	865	280	160	1957	100	41	358	661	1186	771	1820	150	1520	760	480	440	220	6x21
	45	195	315	630	50	25	865	280	160	2036	100	41	383	695	1186	850	1860	150	1560	780	520	480	240	6x21
25/20	37	204	270	609	50	25	910	280	160	2081	100	41	383	695	1231	850	1900	150	1600	800	520	480	240	6x21
	45	204	315	654	50	25	910	280	160	2081	100	41	383	695	1231	850	1900	150	1600	800	520	480	240	6x21

HPMA 32 - 2950 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
32/1	2,2	61	26	115	50	32	70	300	200	1025	90	237	303	448	667	358	740	150	440	-	320	280	140	4x19
	3	61	26	115	50	32	70	300	200	1060	90	237	303	460	667	393	740	150	440	-	320	280	140	4x19
	4	61	35	124	50	32	70	300	200	1077	90	237	303	480	667	410	740	150	440	-	320	280	140	4x19
	5,5	61	43	132	50	32	70	420	200	970	90	70	303	480	560	410	860	150	560	-	320	280	140	4x19
	7,5	61	73	162	50	32	70	420	200	1040	90	70	303	500	560	480	940	150	640	-	320	280	140	4x19
32/2	4	76	35	172	50	32	125	300	200	1072	90	237	303	480	662	410	880	150	580	-	320	280	140	4x19
	5,5	76	43	180	50	32	125	300	200	1072	90	237	303	480	662	410	88							

HPMA LUBRIFICAZIONE A OLIO / OIL LUBRICATION

HPMA 32 - 2950 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
32/6	30	136	250	504	50	32	345	300	200	1713	90	237	338	641	882	771	1340	150	1040	-	480	440	220	4x19
	37	136	270	524	50	32	345	300	200	1713	90	237	338	641	882	771	1340	150	1040	-	480	440	220	4x19
	45	136	315	569	50	32	345	300	200	1762	90	237	363	675	882	820	1360	150	1060	-	510	470	235	4x19
32/7	30	151	250	505	50	32	400	300	200	1768	90	237	338	641	937	771	1400	150	1100	-	480	440	220	4x19
	37	151	270	525	50	32	400	300	200	1768	90	237	338	641	937	771	1400	150	1100	-	480	440	220	4x19
	45	151	315	570	50	32	400	300	200	1817	90	237	363	641	937	820	1420	150	1120	-	510	470	235	4x19
32/8	55	151	420	675	50	32	400	300	200	1907	90	237	393	748	937	910	1500	150	1200	-	560	520	260	4x19
	37	166	270	557	50	32	455	300	200	1823	90	237	363	641	992	771	1480	150	1180	-	510	470	235	4x19
	45	166	315	602	50	32	455	300	200	1872	90	237	363	641	992	820	1480	150	1180	-	510	470	235	4x19
32/9	55	166	420	707	50	32	455	300	200	1962	90	237	413	748	992	910	1560	150	1260	630	580	530	265	6x21
	45	181	315	660	50	32	510	300	200	1927	90	237	413	641	1047	820	1620	150	1320	660	580	530	265	6x21
	55	181	420	765	50	32	510	300	200	2017	90	237	413	748	1047	910	1620	150	1320	660	580	530	265	6x21
32/10	75	181	551	896	50	32	510	300	200	2092	90	237	443	841	1047	985	1720	150	1420	710	640	590	295	6x21
	45	196	315	679	50	32	565	300	200	2072	90	237	413	641	1102	910	1680	150	1380	690	580	530	265	6x21
	55	196	420	784	50	32	565	300	200	2072	90	237	413	748	1102	910	1680	150	1380	690	580	530	265	6x21
32/11	75	196	551	915	50	32	565	300	200	2147	90	237	443	841	1102	985	1780	150	1480	740	640	590	295	6x21
	45	211	315	697	50	32	620	300	200	2127	90	237	443	641	1157	910	1820	150	1520	760	640	590	295	6x21
	55	211	420	802	50	32	620	300	200	2127	90	237	443	748	1157	910	1820	150	1520	760	640	590	295	6x21
32/12	75	211	551	933	50	32	620	300	200	2202	90	237	443	841	1157	985	1820	150	1520	760	640	590	295	6x21
	55	226	420	797	50	32	675	300	200	2182	90	237	443	748	1212	910	1880	150	1580	790	640	590	295	6x21
	75	226	551	928	50	32	675	300	200	2257	90	237	443	841	1212	985	1880	150	1580	790	640	590	295	6x21
32/13	90	226	625	1002	50	32	675	300	200	2307	90	237	443	841	1212	1035	1880	150	1580	790	640	590	295	6x21
	55	241	420	816	50	32	730	300	200	2237	90	237	443	748	1267	910	1940	150	1640	820	640	590	295	6x21
	75	241	551	947	50	32	730	300	200	2312	90	237	443	841	1267	985	1940	150	1640	820	640	590	295	6x21
	90	241	625	1021	50	32	730	300	200	2362	90	237	443	841	1267	1035	1940	150	1640	820	640	590	295	6x21

HPMA 50 - 2950 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
50/1	5,5	76	43	183	100	50	90	465	225	1032	90	67	318	455	622	410	1140	150	840	-	440	400	200	4x19
	7,5	76	73	213	100	50	90	465	225	1102	90	67	318	535	622	480	1140	150	840	-	440	400	200	4x19
	11	76	120	260	100	50	90	465	225	1237	90	67	318	593	622	615	1140	150	840	-	440	400	200	4x19
	15	76	132	272	100	50	90	465	225	1237	90	67	318	593	622	615	1140	150	840	-	440	400	200	4x19
	18,5	76	150	290	100	50	90	465	225	1332	90	67	318	590	622	710	1140	150	840	-	440	400	200	4x19
50/2	11	95	120	285	100	50	220	465	225	705	90	67	338	593	90	615	338	150	1040	-	440	400	200	4x19
	15	95	132	297	100	50	220	465	225	705	90	67	338	593	90	615	338	150	1040	-	440	400	200	4x19
	18,5	95	150	315	100	50	220	465	225	800	90	67	338	590	90	710	338	150	1040	-	440	400	200	4x19
	22	95	205	370	100	50	220	465	225	157	90	67	338	608	90	67	338	150	1040	-	440	400	200	4x19
	30	95	250	415	100	50	220	465	225	1523	90	67	338	641	752	771	1380	150	1060	-	480	440	220	4x19
50/3	37	95	270	435	100	50	220	465	225	1523	90	67	338	641	752	771	1380	150	1060	-	480	440	220	4x19
	22	114	205	403	100	50	282	465	225	1544	90	67	338	608	814	730	1440	150	1140	-	480	440	220	4x19
	30	114	250	448	100	50	282	465	225	1585	90	67	338	641	814	771	1440	150	1140	-	480	440	220	4x19
	37	114	270	468	100	50	282	465	225	1585	90	67	338	641	814	771	1440	150	1140	-	480	440	220	4x19
	45	114	315	513	100	50	282	465	225	1634	90	67	368	680	814	820	1460	150	1160	-	520	480	240	4x19
50/4	30	133	250	484	100	50	344	465	225	1647	90	67	388	671	876	771	1520	150	1220	610	520	480	240	6x21
	37	133	270	504	100	50	344	465	225	1647	90	67	388	671	876	771	1520	150	1220	610	520	480	240	6x21
	45	133	315	549	100	50	344	465	225	1696	90	67	388	680	876	820	1520	150	1220	610	520	480	240	6x21
	55	133	420	654	100	50	344	465	225	1696	90	67	388	680	876	820	1520	150	1220	610	520	480	240	6x21
	75	133	551	785	100	50	344	465	225	1786	90	67	428	783	876	910	1620	150	1320	660	580	540	270	6x21
50/5	90	133	625	894	100	50	406	465	225	1861	90	67	448	846	876	985	1780	150	1420	710	640	600	300	6x21
	37	152	270	539	100	50	406	465	225	1709	90	67	428	71										

HPMA LUBRIFICAZIONE A OLIO / OIL LUBRICATION

HPMA 50 - 2950 rpm

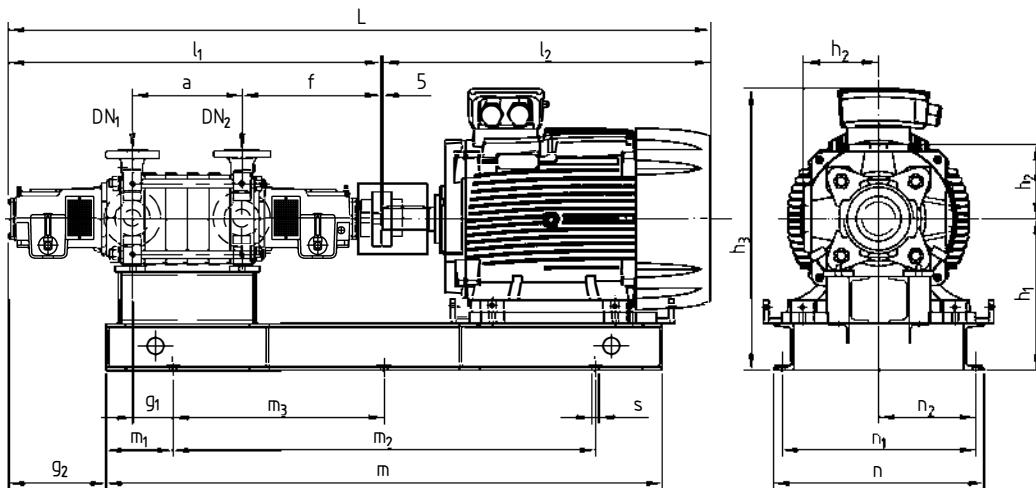
Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
50/9	75	228	551	953	100	50	654	465	225	2171	90	67	468	846	1186	985	2040	150	1740	870	640	600	300	6x21
	90	228	625	1027	100	50	654	465	225	2221	90	67	468	846	1186	1035	2040	150	1740	870	640	600	300	6x21
	110	228	968	1370	100	50	654	465	225	2346	90	67	508	1038	1186	1160	2160	150	1860	930	700	660	330	6x21
	132	228	1100	1502	100	50	654	465	225	2376	90	67	508	1038	1186	1190	2160	150	1860	930	700	660	330	6x21
	160	228	1161	1563	100	50	654	465	225	2506	90	67	508	1038	1186	1320	2160	150	1860	930	700	660	330	6x21
50/10	90	247	625	1062	100	50	716	465	225	2283	90	67	508	906	1248	1035	2220	150	1920	960	700	660	330	6x21
	110	247	968	1405	100	50	716	465	225	2408	90	67	508	1038	1248	1160	2220	150	1920	960	700	660	330	6x21
	132	247	1100	1537	100	50	716	465	225	2438	90	67	508	1038	1248	1190	2220	150	1920	960	700	660	330	6x21
	160	247	1161	1598	100	50	716	465	225	2568	90	67	508	1038	1248	1320	2220	150	1920	960	700	660	330	6x21
50/11	90	266	625	1102	100	50	778	465	225	2345	90	67	508	906	1310	1035	2300	150	2000	1000	700	660	330	6x21
	110	266	968	1445	100	50	778	465	225	2470	90	67	508	1038	1310	1160	2300	150	2000	1000	700	660	330	6x21
	132	266	1100	1577	100	50	778	465	225	2500	90	67	508	1038	1310	1190	2300	150	2000	1000	700	660	330	6x21
	160	266	1161	1638	100	50	778	465	225	2630	90	67	508	1038	1310	1320	2300	150	2000	1000	700	660	330	6x21
	200	266	1221	1698	100	50	778	465	225	2630	90	67	508	1038	1310	1320	2300	150	2000	1000	700	660	330	6x21

HPMA 80 - 2950 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
80/1	11	120	120	319	125	80	120	485	250	1285	80	65	363	618	670	615	1300	150	1000	-	480	440	220	4x19
	15	120	132	331	125	80	120	485	250	1285	80	65	363	618	670	615	1300	150	1000	-	480	440	220	4x19
	18,5	120	150	349	125	80	120	485	250	1380	80	65	363	615	670	710	1300	150	1000	-	480	440	220	4x19
	22	120	205	404	125	80	120	485	250	1285	80	65	363	633	670	615	1300	150	1000	-	480	440	220	4x19
	30	120	250	449	125	80	120	485	250	1441	80	65	363	666	670	771	1300	150	1000	-	480	440	220	4x19
80/2	22	149	205	449	125	80	195	485	250	1360	80	65	393	663	745	615	1500	150	1200	-	580	540	270	4x19
	30	149	250	494	125	80	195	485	250	1516	80	65	393	696	745	771	1500	150	1200	-	580	540	270	4x19
	37	149	270	514	125	80	195	485	250	1516	80	65	393	696	745	771	1500	150	1200	-	580	540	270	4x19
	45	149	315	559	125	80	195	485	250	1565	80	65	393	705	745	820	1500	150	1200	-	580	540	270	4x19
	55	149	420	664	125	80	195	485	250	1655	80	65	393	748	745	910	1500	150	1200	-	580	540	270	4x19
80/3	75	149	551	795	125	80	195	485	250	1730	80	65	453	851	745	985	1600	150	1300	650	640	600	300	6x21
	45	178	315	606	125	80	270	485	250	1640	80	65	453	765	820	820	1680	150	1380	690	640	600	300	6x21
	55	178	420	711	125	80	270	485	250	1730	80	65	453	765	820	910	1680	150	1380	690	640	600	300	6x21
	75	178	551	842	125	80	270	485	250	1805	80	65	453	851	820	985	1680	150	1380	690	640	600	300	6x21
	90	178	625	916	125	80	270	485	250	1855	80	65	453	851	820	1035	1680	150	1380	690	640	600	300	6x21
80/4	75	207	551	887	125	80	345	485	250	1880	80	65	493	848	895	985	1900	150	1600	800	700	660	330	6x21
	90	207	625	961	125	80	345	485	250	1930	80	65	493	891	895	1035	1900	150	1600	800	700	660	330	6x21
	110	207	968	1304	125	80	345	485	250	2055	80	65	493	1023	895	1160	1900	150	1600	800	700	660	330	6x21
	132	207	1100	1436	125	80	345	485	250	2085	80	65	493	1023	895	1190	1900	150	1600	800	700	660	330	6x21
80/5	90	236	625	1009	125	80	420	485	250	2005	80	65	493	891	970	1035	1960	150	1660	830	700	660	330	6x21
	110	236	968	1352	125	80	420	485	250	2130	80	65	493	1023	970	1160	1960	150	1660	830	700	660	330	6x21
	132	236	1100	1484	125	80	420	485	250	2160	80	65	493	1023	970	1190	1960	150	1660	830	700	660	330	6x21
	160	236	1161	1545	125	80	420	485	250	2290	80	65	493	1023	970	1320	1960	150	1660	830	700	660	330	6x21
80/6	110	265	968	1403	125	80	495	485	250	2205	80	65	513	1023	1045	1160	2040	150	1740	870	720	680	340	6x21
	132	265	1100	1535	125	80	495	485	250	2235	80	65	513	1023	1045	1190	2040	150	1740	870	720	680	340	6x21
	160	265	1161	1596	125	80	495	485	250	2365	80	65	513	1043	1045	1320	2040	150	1740	870	720	680	340	6x21
	200	265	1221	1656	125	80	495	485	250	2365	80	65	513	1043	1045	1420	2040	150	1740	870	720	680	340	6x21
	132	294	1100	1590	125	80	570	485	250	2310	80	65	513	1023	1120	1190	2120	150	1820	910	720	680	340	6x21
80/7	160	294	1161	1651	125	80	570	485	250	2440	80	65	513	1043	1120	1320	2120	150	1820	910	720	680	340	6x21
	200	294	1221	1711	125	80	570	485	250	2440	80	65	513	1043	1120	1320	2120	150	1820	910	720	680	340	6x21
	250	294	2090	2580	125	80	570	485	250	2620	80	65	553	1208	1120	1500	2300	150	2000	1000	820	780	390	6x21
	160	323	1161	1709	125	80	645	485	250	2515	80	65	513	1043	1195	1320	2200							

HPM/HPR LUBRIFICAZIONE A OLIO / OIL LUBRICATION



HPM 25 - 1450 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
25/1	0,75	44	12	97	40	25	55	270,5	160	836,5	100	173	263	393	548,5	283	620	150	320	-	310	275	137,5	4x17
25/2	0,75	53	12	107	40	25	100	270,5	160	881,5	100	173	263	393	593,5	283	660	150	360	-	310	275	137,5	4x17
25/3	0,75	62	12	117	40	25	145	270,5	160	926,5	100	173	263	393	638,5	283	720	150	420	-	310	275	137,5	4x17
25/4	1,1	71	25	122,1	40	25	190	270,5	160	971,5	100	173	283	413	683,5	283	760	150	460	-	320	280	140	4x19
25/5	1,1	80	25	137,1	40	25	235	270,5	160	1016,5	100	173	283	413	728,5	283	800	150	500	-	320	280	140	4x19
	1,5	80	30	147	40	25	235	270,5	160	1071,5	100	173	283	428	728,5	338	840	150	540	-	320	280	140	4x19
25/6	1,5	89	30	158	40	25	280	270,5	160	1116,5	100	173	283	428	773,5	338	880	150	580	-	320	280	140	4x19
25/7	1,5	98	30	168	40	25	325	270,5	160	1161,5	100	173	283	428	818,5	338	920	150	620	-	320	280	140	4x19
	2,2	98	36	178	40	25	325	270,5	160	1196,5	100	173	283	440	818,5	373	960	150	660	-	320	280	140	4x19
25/8	2,2	107	36	188	40	25	370	270,5	160	1241,5	100	173	283	440	863,5	373	1000	150	700	-	320	280	140	4x19
25/9	2,2	116	36	207	40	25	415	270,5	160	1286,5	100	173	303	460	908,5	373	1040	150	740	-	330	290	145	4x19
	3	116	40	209	40	25	415	270,5	160	1286,5	100	173	303	460	908,5	373	1040	150	740	-	330	290	145	4x19
25/10	2,2	125	36	219	40	25	460	270,5	160	1331,5	100	173	303	460	953,5	373	1100	150	800	-	330	290	145	4x19
	3	125	40	221	40	25	460	270,5	160	1331,5	100	173	303	460	953,5	373	1100	150	800	-	330	290	145	4x19
25/11	3	134	40	232	40	25	505	270,5	160	1376,5	100	173	303	460	998,5	373	1140	150	840	-	330	290	145	4x19
25/12	3	143	40	243	40	25	550	270,5	160	1421,5	100	173	303	460	1043,5	373	1180	150	880	-	330	290	145	4x19
25/13	3	152	40	253	40	25	595	270,5	160	1466,5	100	173	303	460	1088,5	373	1220	150	920	-	330	290	145	4x19
	4	152	46	255	40	25	595	270,5	160	1483,5	100	173	303	480	1088,5	390	1240	150	940	-	360	320	160	4x19
25/14	3	161	40	265	40	25	640	270,5	160	1511,5	100	173	303	460	1133,5	373	1280	150	980	-	330	290	145	4x19
4	161	46	268	40	25	640	270,5	160	1528,5	100	173	303	480	1133,5	390	1280	150	980	-	360	320	160	4x19	
25/15	4	170	46	278	40	25	685	270,5	160	1573,5	100	173	303	480	1178,5	390	1320	150	1020	-	360	320	160	4x19
25/16	4	179	46	289	40	25	730	270,5	160	1618,5	100	173	303	480	1223,5	390	1360	150	1060	-	360	320	160	4x19
25/17	4	188	46	300	40	25	775	270,5	160	1663,5	100	173	303	480	1268,5	390	1420	150	1120	-	360	320	160	4x19
	5,5	188	70	317	40	25	775	270,5	160	1733,5	100	173	303	500	1268,5	460	1500	150	1200	-	360	320	160	4x19
25/18	4	197	46	311	40	25	820	270,5	160	1708,5	100	173	303	480	1313,5	390	1460	150	1160	-	360	320	160	4x19
	5,5	197	70	328	40	25	820	270,5	160	1778,5	100	173	323	520	1313,5	460	1540	150	1240	620	360	320	160	6x21
25/19	4	206	46	322	40	25	865	270,5	160	1753,5	100	173	303	480	1358,5	390	1500	150	1200	-	360	320	160	4x19
25/20	5,5	215	70	363	40	25	910	270,5	160	1868,5	100	173	323	520	1403,5	460	1620	150	1320	660	360	320	160	6x21
25/21	5,5	224	70	375	40	25	955	270,5	160	1913,5	100	173	323	520	1448,5	460	1680	150	1380	690	360	320	160	6x21
25/22	5,5	233	70	386	40	25	1000	270,5	160	1958,5	100	173	323	520	1493,5	460	1720	150	1420	710	360	320	160	6x21
25/23	5,5	242	70	396	40	25	1045	270,5	160	2003,5	100	173	323	520	1538,5	460	1760	150	1460	730	360	320	160	6x21
	7,5	242	57	398	40	25	1045	270,5	160	2039,5	100	173	323	520	1538,5	496	1760	150	1460	730	360	320	160	6x21
25/24	5,5	251	70	407	40	25	1090	270,5	160	2048,5	100	173	323	520	1583,5	460	1800	150	1500	750	360	320	160	6x21
	7,5	251	57	409	40	25	1090	270,5	160	2084,5	100	173	323	520	1583,5	496	1800	150	1500	750	360	320	160	6x21
25/25	5,5	260	70	419	40	25	1135	270,5	160	2093,5	100	173	323	520	1628,5	460	1860	150	1560	780	360	320	160	6x21
	7,5	260	57	421	40	25	1135	270,5	160	2129,5	100	173	323	520	1628,5	496	1860	150	1560	780	360	320	160	6x21

HPM/HPR LUBRIFICAZIONE A OLIO / OIL LUBRICATION

HPM 50 - 1450 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
50/1	1,1	104	25	201	80	50	90	449	225	1248	90	319	318	463	918	330	900	150	600	-	360	320	160	4x19
	1,5	104	30	206	80	50	90	449	225	1276	90	319	318	463	918	358	900	150	600	-	360	320	160	4x19
	2,2	104	36	212	80	50	90	449	225	1311	90	319	318	475	918	393	900	150	600	-	360	320	160	4x19
50/2	2,2	123	36	223	80	50	152	449	225	1373	90	319	318	475	980	393	960	150	660	-	360	320	160	4x19
	3	123	40	227	80	50	152	449	225	1373	90	319	318	475	980	393	960	150	660	-	360	320	160	4x19
	4	123	46	233	80	50	152	449	225	1390	90	319	318	495	980	410	980	150	680	-	360	320	160	4x19
50/3	3	142	40	257	80	50	214	449	225	1435	90	319	338	475	1042	393	1040	150	740	-	360	320	160	4x19
	4	142	46	263	80	50	214	449	225	1452	90	319	338	495	1042	410	1040	150	740	-	360	320	160	4x19
	5,5	142	70	287	80	50	214	449	225	1522	90	319	338	535	1042	480	1120	150	820	-	380	340	170	4x19
50/4	4	161	46	299	80	50	276	449	225	1514	90	319	338	515	1104	410	1180	150	880	-	380	340	170	4x19
	5,5	161	70	323	80	50	276	449	225	1584	90	319	338	535	1104	480	1180	150	880	-	380	340	170	4x19
	7,5	161	57	310	80	50	276	449	225	1620	90	319	338	535	1104	516	1180	150	880	-	380	340	170	4x19
50/5	5,5	180	70	355	80	50	338	449	225	1646	90	319	338	535	1166	480	1240	150	940	-	380	340	170	4x19
	7,5	180	57	342	80	50	338	449	225	1682	90	319	338	535	1166	516	1240	150	940	-	380	340	170	4x19
	11	180	125	410	80	50	338	449	225	1781	90	319	338	593	1166	615	1380	150	1080	-	380	340	170	4x19
50/6	5,5	199	70	376	80	50	400	449	225	1708	90	319	338	535	1228	480	1300	150	1000	-	380	340	170	4x19
	7,5	199	57	363	80	50	400	449	225	1744	90	319	338	535	1228	516	1300	150	1000	-	380	340	170	4x19
	11	199	125	431	80	50	400	449	225	1843	90	319	338	593	1228	615	1440	150	1140	-	380	340	170	4x19
50/7	7,5	218	57	373	80	50	462	449	225	1806	90	319	338	535	1290	516	1500	150	1200	-	380	340	170	4x19
	11	218	125	441	80	50	462	449	225	1905	90	319	338	593	1290	615	1500	150	1200	-	380	340	170	4x19
	15	218	150	466	80	50	462	449	225	2000	90	319	338	590	1290	710	1500	150	1200	-	380	340	170	4x19
50/8	7,5	237	57	407	80	50	524	449	225	1868	90	319	358	535	1352	516	1560	150	1260	630	380	340	170	6x21
	11	237	125	475	80	50	524	449	225	1967	90	319	358	593	1352	615	1560	150	1260	630	380	340	170	6x21
	15	237	150	500	80	50	524	449	225	2062	90	319	358	590	1352	710	1560	150	1260	630	380	340	170	6x21
50/9	11	256	125	524	80	50	586	449	225	2029	90	319	358	593	1414	615	1620	150	1320	660	380	340	170	6x21
	15	256	150	549	80	50	586	449	225	2124	90	319	358	590	1414	710	1620	150	1320	660	380	340	170	6x21
	18,5	256	171	570	80	50	586	449	225	2144	90	319	358	628	1414	730	1700	150	1400	700	440	400	200	6x21
50/10	11	275	125	544	80	50	648	449	225	2091	90	319	358	613	1476	615	1680	150	1380	690	380	340	170	6x21
	15	275	150	569	80	50	648	449	225	2186	90	319	358	610	1476	710	1680	150	1380	690	380	340	170	6x21
	18,5	275	171	590	80	50	648	449	225	2206	90	319	358	628	1476	730	1760	150	1460	730	440	400	200	6x21
	22	275	190	609	80	50	648	449	225	2256	90	319	358	628	1476	780	1760	150	1460	730	440	400	200	6x21
50/11	11	294	125	565	80	50	710	449	225	2153	90	319	358	613	1538	615	1740	150	1440	720	380	340	170	6x21
	15	294	150	590	80	50	710	449	225	2248	90	319	358	610	1538	710	1740	150	1440	720	380	340	170	6x21
	18,5	294	171	611	80	50	710	449	225	2268	90	319	358	628	1538	730	1820	150	1520	760	440	400	200	6x21
	22	294	190	630	80	50	710	449	225	2318	90	319	358	628	1538	780	1820	150	1520	760	440	400	200	6x21
50/12	11	313	125	587	80	50	772	449	225	2215	90	319	358	613	1600	615	1800	150	1500	750	380	340	170	6x21
	15	313	150	612	80	50	772	449	225	2310	90	319	358	610	1600	710	1800	150	1500	750	380	340	170	6x21
	18,5	313	171	633	80	50	772	449	225	2330	90	319	358	628	1600	730	1880	150	1580	790	440	400	200	6x21
	22	313	190	652	80	50	772	449	225	2380	90	319	358	628	1600	780	1880	150	1580	790	440	400	200	6x21
50/13	15	332	150	629	80	50	834	449	225	2372	90	319	358	610	1662	710	1940	150	1640	820	440	400	200	6x21
	18,5	332	171	650	80	50	834	449	225	2392	90	319	358	628	1662	730	1940	150	1640	820	440	400	200	6x21
	22	332	190	669	80	50	834	449	225	2442	90	319	358	628	1662	780	1940	150	1640	820	440	400	200	6x21
	30	332	255	734	80	50	834	449	225	2433	90	319	358	661	1662	771	1980	150	1680	840	480	440	220	6x21
50/14	15	351	150	668	80	50	896	449	225	2434	90	319	358	610	1724	710	2080	150	1700	850	440	400	200	6x21
	18,5	351	171	689	80	50	896	449	225	2454	90	319	358	628	1724	730	2080	150	1700	850	440	400	200	6x21
	22	351	190	708	80	50	896	449	225	2504	90	319	358	628	1724	780	2080	150	1700	850	440	400	200	6x21
	30	351	255	773	80	50	896	449	225	2495	90	319	378	661	1724	771	2040	150	1740	870	500	460	230	6x21
50/15	15	370	150	691	80	50	958	449	225	2496	90	319	378	610	1786	710	2080	150	1780	890	440	400	200	6x21
	18,5	370	171	712	80	50	958	449	225	2516	90	319	378	628	1786	730	2080	150	1780	890	440	400	200	6x21
	22	370	190	731	80	50	958	449	225	2566	90	319	378	628	1786	780	2080	150	1780					

HPM/HPR LUBRIFICAZIONE A OLIO / OIL LUBRICATION

HPM 80 - 1450 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
80/1	1,5	142	30	279	125	80	120	473	250	1350	80	329	358	503	992	358	980	150	680	-	420	380	190	4x19
	2,2	142	36	285	125	80	120	473	250	1385	80	329	358	515	992	393	980	150	680	-	420	380	190	4x19
	3	142	40	289	125	80	120	473	250	1385	80	329	358	515	992	393	980	150	680	-	420	380	190	4x19
	4	142	46	295	125	80	120	473	250	1402	80	329	358	535	992	410	980	150	680	-	420	380	190	4x19
80/2	3	201	40	329	125	80	195	473	250	1460	80	329	358	515	1067	393	1140	150	840	-	420	380	190	4x19
	4	201	46	335	125	80	195	473	250	1477	80	329	358	535	1067	410	1140	150	840	-	420	380	190	4x19
	5,5	201	70	359	125	80	195	473	250	1547	80	329	358	555	1067	480	1140	150	840	-	420	380	190	4x19
	7,5	201	57	346	125	80	195	473	250	1583	80	329	358	555	1067	516	1140	150	840	-	420	380	190	4x19
80/3	5,5	230	70	390	125	80	270	473	250	1622	80	329	358	555	1142	480	1320	150	1020	-	420	380	190	4x19
	7,5	230	57	377	125	80	270	473	250	1658	80	329	358	555	1142	516	1320	150	1020	-	420	380	190	4x19
	11	230	125	445	125	80	270	473	250	1757	80	329	358	613	1142	615	1320	150	1020	-	420	380	190	4x19
	15	230	150	470	125	80	270	473	250	1852	80	329	358	610	1142	710	1320	150	1020	-	420	380	190	4x19
80/4	7,5	257	57	410	125	80	345	473	250	1733	80	329	358	555	1217	516	1400	150	1100	-	420	380	190	4x19
	11	257	125	478	125	80	345	473	250	1832	80	329	358	613	1217	615	1400	150	1100	-	420	380	190	4x19
	15	257	150	503	125	80	345	473	250	1927	80	329	358	610	1217	710	1400	150	1100	-	420	380	190	4x19
80/5	11	286	125	557	125	80	420	413	250	1907	80	329	358	613	1292	615	1480	150	1180	-	420	380	190	4x19
	15	286	150	582	125	80	420	413	250	2002	80	329	358	610	1292	710	1480	150	1180	-	420	380	190	4x19
	18,5	286	171	603	125	80	420	413	250	2022	80	329	378	648	1292	730	1560	150	1260	630	460	420	210	6x21
80/6	15	315	150	620	125	80	495	473	250	2077	80	329	378	610	1367	710	1640	150	1340	610	460	420	210	6x21
	18,5	315	171	641	125	80	495	473	250	2097	80	329	378	648	1367	730	1640	150	1340	610	460	420	210	6x21
	22	315	190	660	125	80	495	473	250	2147	80	329	378	648	1367	780	1640	150	1340	670	460	420	210	6x21
	30	315	255	715	125	80	495	473	250	2138	80	329	378	681	1367	771	1760	150	1380	690	500	460	230	6x21
80/7	15	344	150	653	125	80	510	413	250	2152	80	329	378	610	1442	710	1720	150	1420	710	460	420	210	6x21
	18,5	344	171	674	125	80	510	413	250	2172	80	329	378	648	1442	730	1720	150	1420	710	460	420	210	6x21
	22	344	190	693	125	80	510	413	250	2222	80	329	378	648	1442	780	1720	150	1420	710	460	420	210	6x21
	30	344	255	748	125	80	510	413	250	2213	80	329	378	681	1442	771	1760	150	1460	730	500	460	230	6x21
80/8	18,5	374	171	707	125	80	645	473	250	2247	80	329	378	648	1517	730	1820	150	1520	760	500	460	230	6x21
	22	374	190	726	125	80	645	473	250	2297	80	329	378	648	1517	780	1820	150	1520	760	500	460	230	6x21
	30	374	255	781	125	80	645	473	250	2288	80	329	378	681	1517	771	1820	150	1520	760	500	460	230	6x21
80/9	22	403	190	755	125	80	720	413	250	2372	80	329	318	648	1592	780	1900	150	1600	800	500	460	230	6x21
	30	403	255	810	125	80	720	413	250	2363	80	329	318	681	1592	771	1900	150	1600	800	500	460	230	6x21
	37	403	269	834	125	80	720	413	250	2407	80	329	383	695	1592	815	1960	150	1660	830	540	500	250	6x21
80/10	22	432	190	804	125	80	795	473	250	2447	80	329	378	648	1667	780	1980	150	1680	840	500	460	230	6x21
	30	432	255	859	125	80	795	473	250	2438	80	329	378	681	1667	771	1980	150	1680	840	500	460	230	6x21
	37	432	269	883	125	80	795	473	250	2482	80	329	403	695	1667	815	2040	150	1740	870	540	500	250	6x21
80/11	30	461	255	840	125	80	870	473	250	2513	80	329	403	681	1742	771	2120	150	1820	910	540	500	250	6x21
	37	461	269	864	125	80	870	473	250	2557	80	329	403	695	1742	815	2120	150	1820	910	540	500	250	6x21
	45	461	353	948	125	80	870	473	250	2562	80	329	403	715	1742	820	2120	150	1820	910	540	500	250	6x21
80/12	30	490	255	873	125	80	945	473	250	2588	80	329	403	681	1817	771	2180	150	1880	940	540	500	250	6x21
	37	490	269	897	125	80	945	473	250	2632	80	329	403	695	1817	815	2180	150	1880	940	540	500	250	6x21
	45	490	353	981	125	80	945	473	250	2637	80	329	403	715	1817	820	2180	150	1880	940	540	500	250	6x21
80/13	30	520	255	914	125	80	1020	473	250	2663	80	329	403	681	1892	771	2260	150	1960	980	540	500	250	6x21
	37	520	269	938	125	80	1020	473	250	2707	80	329	403	695	1892	815	2260	150	1960	980	540	500	250	6x21
	45	520	353	1022	125	80	1020	473	250	2712	80	329	403	715	1892	820	2260	150	1960	980	540	500	250	6x21
	55	520	450	1119	125	80	1020	473	250	2802	80	329	433	788	1892	910	2340	150	2040	1020	600	560	280	6x21
80/14	37	549	269	971	125	80	1095	473	250	2782	80	329	403	695	1967	815	2340	150	2040	1020	540	500	250	6x21
	45	549	353	1055	125	80	1095	473	250	2787	80	329	403	715	1967	820	2340	150	2040	1020	540	500	250	6x21
	55	549	450	1152	125	80	1095	473	250	2877	80	329	433	788	1967	910	2420	150	2120	1060	600	560	280	6x21
80/15	37	578	269	1034	125	80	1170	473	250	2857	80	329	403	695	2042	815	2420	150	2120	1060	540	500	250	6x21
	45	578	353	1118	125	80	1170	473	250	2862														

HPM/HPR LUBRIFICAZIONE A OLIO / OIL LUBRICATION

HPM 125 - 1450 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
125/3	45	568	353	1198	200	125	405	644	350	820	50	463	518	830	1562	820	1980	150	1680	840	640	600	300	6x21
	55	568	450	1295	200	125	405	644	350	910	50	463	518	873	1562	910	1980	150	1680	840	640	600	300	6x21
	75	568	605	1450	200	125	405	644	350	985	50	463	518	916	1562	985	1980	150	1680	840	640	600	300	6x21
125/4	75	649	605	1582	200	125	515	644	350	985	50	463	518	916	1672	985	2280	150	1980	980	720	680	340	6x21
	90	649	700	1677	200	125	515	644	350	1035	50	463	518	916	1672	1035	2280	150	1980	980	720	680	340	6x21
	110	649	925	1902	200	125	515	644	350	1160	50	463	518	1048	1672	1160	2280	150	1980	980	720	680	340	6x21
125/5	90	730	700	1596	200	125	625	644	350	1035	50	463	518	916	1782	1035	2400	150	2100	1050	720	680	340	6x21
	110	730	925	1821	200	125	625	644	350	1160	50	463	518	1048	1782	1160	2400	150	2100	1050	720	680	340	6x21
	132	730	1180	2076	200	125	625	644	350	1190	50	463	518	1048	1782	1190	2400	150	2100	1050	720	680	340	6x21
125/6	110	811	925	1981	200	125	735	644	350	1160	50	463	518	1048	1892	1160	2500	150	2200	1100	720	680	340	6x21
	132	811	1180	2236	200	125	735	644	350	1190	50	463	518	1048	1892	1190	2500	150	2200	1100	720	680	340	6x21
	160	811	1161	2217	200	125	735	644	350	1320	50	463	518	1048	1892	1320	2500	150	2200	1100	720	680	340	6x21
125/7	132	892	1180	2237	200	125	845	644	350	1190	50	463	538	1048	2002	1190	2610	150	2310	770	720	680	340	8x21
	160	892	1161	2218	200	125	845	644	350	1320	50	463	538	1048	2002	1320	2610	150	2310	770	720	680	340	8x21
	200	892	1241	2298	200	125	845	644	350	1320	50	463	538	1048	2002	1320	2610	150	2310	770	720	680	340	8x21
125/8	132	973	1180	2534	200	125	955	644	350	1190	50	463	538	1048	2112	1190	2730	150	2430	810	720	680	340	8x21
	160	973	1161	2515	200	125	955	644	350	1320	50	463	538	1048	2112	1320	2730	150	2430	810	720	680	340	8x21
	200	973	1241	2595	200	125	955	644	350	1320	50	463	538	1048	2112	1320	2730	150	2430	810	720	680	340	8x21
125/9	160	1054	1161	2508	200	125	1065	644	350	1320	50	463	538	1048	2222	1320	2820	150	2520	840	720	680	340	8x21
	200	1054	1241	2581	200	125	1065	644	350	1320	50	463	538	1048	2222	1320	2820	150	2520	840	720	680	340	8x21
	250	1054	1870	3171	200	125	1065	644	350	1500	50	463	562	1217	2222	1500	3000	150	2700	900	840	800	400	8x21
125/10	200	1135	1241	2671	200	125	1175	644	350	1320	50	463	538	1048	2332	1320	2940	150	2640	880	720	680	340	8x21
	250	1135	1870	3285	200	125	1175	644	350	1500	50	463	582	1217	2332	1500	3120	150	2820	940	840	800	400	8x21
125/11	200	1216	1241	2856	200	125	1285	644	350	1320	50	463	582	1048	2442	1320	3240	150	2940	980	840	800	400	8x21
	250	1216	1870	3485	200	125	1285	644	350	1500	50	463	582	1217	2442	1500	3240	150	2940	980	840	800	400	8x21
	315	1216	2090	3705	200	125	1285	644	350	1500	50	463	582	1217	2442	1500	3240	150	2940	980	840	800	400	8x21
125/12	250	1297	1870	3566	200	125	1395	644	350	1500	50	463	582	1217	2552	1500	3330	150	3030	1010	840	800	400	8x21
	315	1297	2090	3786	200	125	1395	644	350	1500	50	463	582	1217	2552	1500	3330	150	3030	1010	840	800	400	8x21

HPM 150 - 1450 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
150/1	30	725	255	3798	250	150	235	629,5	420	4637,5	40	398	533	836	1372,5	771	1820	150	1520	760	720	680	340	6x21
	37	725	269	3798	250	150	235	629,5	420	4637,5	40	398	533	845	1372,5	815	1820	150	1520	760	720	680	340	6x21
	45	725	353	3798	250	150	235	629,5	420	4637,5	40	398	533	845	1372,5	820	1820	150	1520	760	720	680	340	6x21
	55	725	450	3798	250	150	235	629,5	420	4637,5	40	398	533	888	1372,5	910	1820	150	1520	760	720	680	340	6x21
	75	725	605	1669	250	150	235	629,5	420	4637,5	40	398	533	931	1372,5	985	1820	150	1520	760	720	680	340	6x21
150/2	75	861	605	3798	250	150	370	629,5	420	4637,5	40	398	553	951	1507,5	985	2120	150	1820	910	720	680	340	6x21
	90	861	700	3798	250	150	370	629,5	420	4637,5	40	398	553	951	1507,5	1035	2120	150	1820	910	720	680	340	6x21
	110	861	925	3798	250	150	370	629,5	420	4637,5	40	398	553	1083	1507,5	1160	2120	150	1820	910	720	680	340	6x21
	132	861	1180	2421	250	150	370	629,5	420	4637,5	40	398	553	1083	1507,5	1190	2120	150	1820	910	720	680	340	6x21
150/3	90	997	700	3798	250	150	505	629,5	420	4637,5	40	398	553	951	1642,5	1035	2260	150	1960	980	720	680	340	6x21
	110	997	925	3798	250	150	505	629,5	420	4637,5	40	398	553	1083	1642,5	1160	2260	150	1960	980	720	680	340	6x21
	132	997	1180	3798	250	150	505	629,5	420	4637,5	40	398	553	1083	1642,5	1190	2260	150	1960	980	720	680	340	6x21
	160	997	1161	3798	250	150	505	629,5	420	4637,5	40	398	553	1083	1642,5	1320	2260	150	1960	980	720	680	340	6x21
	200	997	1241	3999	250	150	640	629,5	420	4637,5	40	398	573	1228	1777,5	1500	2580	150	2280	760	840	800	400	8x21
150/4	160	1133	1161	3798	250	150	640	629,5	420	4637,5	40	398	573	1103	1777,5	1320	2580	150	2280	760	840	800	400	8x21
	200	1133	1241	3798	250	150	640	629,5	420	4637,5	40	398	573	1103	1777,5	1320	2580	150	2280	760	840	800</		

HPM/HPR LUBRIFICAZIONE A OLIO / OIL LUBRICATION

HPM 150 - 1450 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	I ₁	I ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
150/8	365	1677	2050	4538	250	150	1180	629,5	420	4637,5	40	398	593	1138	2317,5	1810	3120	150	2820	940	840	800	400	8x21
	400	1677	2350	4838	250	150	1180	629,5	420	4637,5	40	398	593	1168	2317,5	1985	3120	150	2820	940	840	800	400	8x21
	470	1677	2550	5038	250	150	1180	629,5	420	4637,5	40	398	593	1168	2317,5	1985	3120	150	2820	940	840	800	400	8x21
	560	1677	2750	5238	250	150	1180	629,5	420	4637,5	40	398	593	1168	2317,5	1985	3120	150	2820	940	840	800	400	8x21
	600	1677	3400	5888	250	150	1180	629,5	420	4637,5	40	398	632	1242	2317,5	2125	3570	150	3270	1090	980	940	470	8x21
150/9	400	1813	2350	4984	250	150	1315	629,5	420	4637,5	40	398	593	1168	2452,5	1985	3240	150	2940	980	840	800	400	8x21
	470	1813	2550	5184	250	150	1315	629,5	420	4637,5	40	398	593	1168	2452,5	1985	3240	150	2940	980	840	800	400	8x21
	560	1813	2750	5384	250	150	1315	629,5	420	4637,5	40	398	652	1227	2452,5	1985	3690	150	3390	1130	980	940	470	8x21
	600	1813	3400	6034	250	150	1315	629,5	420	4637,5	40	398	652	1262	2452,5	2125	3690	150	3390	1130	980	940	470	8x21
150/10	470	1949	2550	5330	250	150	1450	629,5	420	4637,5	40	398	593	1168	2587,5	1985	3390	150	3090	1030	840	800	400	8x21
	560	1949	2750	5530	250	150	1450	629,5	420	4637,5	40	398	593	1168	2587,5	1985	3390	150	3090	1030	840	800	400	8x21
	600	1949	3400	6180	250	150	1450	629,5	420	4637,5	40	398	652	1262	2587,5	2125	3840	150	3540	1180	980	940	470	8x21
150/11	680	1949	3600	6380	250	150	1450	629,5	420	4637,5	40	398	652	1262	2587,5	2125	3840	150	3540	1180	980	940	470	8x21
	470	2085	2550	5466	250	150	1585	629,5	420	4637,5	40	405	593	1168	2722,5	1985	3450	150	3150	1050	840	800	400	8x21
	560	2085	2750	5666	250	150	1585	629,5	420	4637,5	40	405	593	1168	2722,5	1985	3450	150	3150	1050	840	800	400	8x21
	600	2085	3400	6316	250	150	1585	629,5	420	4777,5	40	405	593	1203	2722,5	2125	3450	150	3150	1050	840	800	400	8x21
	680	2085	3600	6516	250	150	1585	629,5	420	4777,5	40	405	593	1203	2722,5	2125	3450	150	3150	1050	840	800	400	8x21
	750	2085	3800	6716	250	150	1585	629,5	420	4777,5	40	405	593	1203	2722,5	2125	3450	150	3150	1050	840	800	400	8x21
	900	2085	4700	7616	250	150	1585	629,5	420	5042,5	40	405	593	1243	2722,5	2390	3450	150	3150	1050	840	800	400	8x21

HPM 250 - 1450 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	I ₁	I ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
250/1	90	1252	700	2164	300	250	310	649,5	550	2472,5	-	378	682	1080	1487,5	985	2120	150	1820	910	920	880	440	6x21
	110	1252	925	2389	300	250	310	649,5	550	2647,5	-	378	682	1212	1487,5	1160	2120	150	1820	910	920	880	440	6x21
	132	1252	1180	2644	300	250	310	649,5	550	2787,5	-	378	682	1212	1487,5	1300	2120	150	1820	910	920	880	440	6x21
	160	1252	1161	2625	300	250	310	649,5	550	2837,5	-	378	682	1212	1487,5	1350	2120	150	1820	910	920	880	440	6x21
	200	1252	1241	2698	300	250	310	649,5	550	2837,5	-	378	682	1212	1487,5	1350	2120	150	1820	910	920	880	440	6x21
250/2	160	1568	1161	2885	300	250	505	649,5	550	3032,5	-	378	682	1212	1682,5	1350	2480	150	2180	1090	920	880	440	6x21
	200	1568	1241	2965	300	250	505	649,5	550	3032,5	-	378	682	1212	1682,5	1350	2480	150	2180	1090	920	880	440	6x21
	250	1568	1870	3594	300	250	505	649,5	550	3212,5	-	378	682	1337	1682,5	1530	2480	150	2180	1090	920	880	440	6x21
	315	1568	2090	3814	300	250	505	649,5	550	3212,5	-	378	682	1337	1682,5	1530	2480	150	2180	1090	920	880	440	6x21
250/3	365	1568	2050	3864	300	250	505	649,5	550	3492,5	-	378	682	1247	1682,5	1810	2480	150	2180	1090	920	880	440	6x21
	400	1884	1870	4040	300	250	700	649,5	550	3407,5	-	378	702	1337	1877,5	1530	2700	150	2400	800	920	880	440	8x21
	315	1884	2090	4260	300	250	700	649,5	550	3407,5	-	378	702	1337	1877,5	1530	2700	150	2400	800	920	880	440	8x21
	365	1884	2050	4220	300	250	700	649,5	550	3687,5	-	378	702	1247	1877,5	1810	2700	150	2400	800	920	880	440	8x21
	400	1884	2350	4520	300	250	700	649,5	550	3862,5	-	378	702	1277	1877,5	1985	2700	150	2400	800	920	880	440	8x21
250/4	560	2200	2050	4556	300	250	895	649,5	550	3882,5	-	378	722	1267	2072,5	1810	3330	150	3030	1010	980	940	470	8x21
	400	2200	2350	4856	300	250	895	649,5	550	4057,5	-	378	722	1297	2072,5	1985	3330	150	3030	1010	980	940	470	8x21
	470	2200	2550	5056	300	250	895	649,5	550	4057,5	-	378	722	1297	2072,5	1985	3330	150	3030	1010	980	940	470	8x21
	560	2200	2750	5256	300	250	895	649,5	550	4057,5	-	378	722	1297	2072,5	1985	3330	150	3030	1010	980	940	470	8x21
	600	2200	3400	5906	300	250	895	649,5	550	4197,5	-	378	722	1332	2072,5	2125	3660	150	3360	1120	1080	1040	570	8x21
	680	2200	3600	6106	300	250	895	649,5	550	4197,5	-	378	722	1332	2072,5	2125	3660	150	3360	1120	1080	1040	570	8x21
250/5	750	2200	3800	6306	300	250	895	649,5	550	4197,5	-	378	722	1332	2072,5	2125	3660	150	3360	1120	1080	1040	570	8x21
	470	2516	2550	5387	300	250	1090	649,5	550	4252,5	-	378	742	1317	2267,5	1985	3510	150	3210	1070	980	940	470	8x21
	560	2516	2750	5587	300	250	1090	649,5	550	4252,5	-	378	742	1317	2267,5	1985	3510	150	3210	1070	980	940	470	8x21
	600	2516	3400	6237	300	250	1090	649,5	550	4392,5	-	378	742	1352	2267,5	2125	3510	150	3210	1070	980	940	470	8x21
	680</td																							

HPM/HPR LUBRIFICAZIONE A OLIO / OIL LUBRICATION

HPM 32 - 2950 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
32/6	30	168	250	489	50	32	345	404	200	1874	90	237	338	641	1103	771	1440	150	1140	-	480	440	220	4x19
	37	168	270	509	50	32	345	404	200	1874	90	237	338	641	1103	771	1440	150	1140	-	480	440	220	4x19
	45	168	315	592	50	32	345	404	200	1923	90	237	363	675	1103	820	1460	150	1160	-	510	470	235	4x19
32/7	30	183	250	506	50	32	400	404	200	1929	90	237	338	641	1158	771	1500	150	1200	-	480	440	220	6x21
	37	183	270	526	50	32	400	404	200	1929	90	237	338	641	1158	771	1500	150	1200	-	480	440	220	6x21
	45	183	315	622	50	32	400	404	200	1978	90	237	383	641	1158	820	1520	150	1220	-	510	460	230	6x21
32/8	55	183	420	713	50	32	400	404	200	2068	90	237	413	748	1158	910	1620	150	1320	-	580	530	260	6x21
	37	198	270	596	50	32	455	404	200	1984	90	237	383	641	1213	771	1580	150	1280	-	510	470	235	6x21
	45	198	315	641	50	32	455	404	200	2033	90	237	383	641	1213	820	1580	150	1280	-	510	470	235	6x21
32/9	55	198	420	731	50	32	455	404	200	2123	90	237	413	748	1213	910	1660	150	1360	680	580	530	265	6x21
	45	213	315	646	50	32	510	404	200	2088	90	237	413	641	1268	820	1720	150	1420	710	580	530	265	6x21
	55	213	420	751	50	32	510	404	200	2178	90	237	413	748	1268	910	1720	150	1420	710	580	530	265	6x21
32/10	75	213	551	921	50	32	510	404	200	2253	90	237	443	841	1268	985	1820	150	1520	760	640	590	295	6x21
	45	228	315	669	50	32	565	404	200	2233	90	237	413	641	1323	910	1880	150	1380	690	580	530	265	6x21
	55	228	420	774	50	32	565	404	200	2233	90	237	413	748	1323	910	1880	150	1380	690	580	530	265	6x21
32/11	75	228	551	940	50	32	565	404	200	2308	90	237	443	841	1323	985	1780	150	1480	740	640	590	295	6x21
	45	243	315	722	50	32	620	404	200	2288	90	237	443	641	1378	910	1920	150	1620	810	640	590	295	6x21
	55	243	420	827	50	32	620	404	200	2288	90	237	443	748	1378	910	1920	150	1620	810	640	590	295	6x21
32/12	75	243	551	958	50	32	620	404	200	2363	90	237	443	841	1378	985	1920	150	1620	810	640	590	295	6x21
	55	258	420	845	50	32	675	404	200	2343	90	237	443	748	1433	910	1980	150	1680	840	640	590	295	6x21
	90	258	625	1078	50	32	675	404	200	2468	90	237	443	841	1433	1035	1980	150	1680	840	640	590	295	6x21
32/13	55	273	420	845	50	32	730	404	200	2398	90	237	463	748	1488	910	2040	150	1740	870	640	590	295	6x21
	75	273	551	976	50	32	730	404	200	2473	90	237	463	841	1488	985	2040	150	1740	870	640	590	295	6x21
	90	273	625	1078	50	32	730	404	200	2523	90	237	463	841	1488	1035	2040	150	1740	870	640	590	295	6x21
32/14	75	288	551	1043	50	32	785	404	200	2528	90	237	463	841	1543	985	2100	150	1800	900	640	590	295	6x21
	90	288	625	1080	50	32	785	404	200	2578	90	237	463	841	1543	1035	2100	150	1800	900	640	590	295	6x21
	110	288	968	1412	50	32	785	404	200	2703	90	237	502	1032	1543	1160	2220	150	1920	960	710	660	330	6x21
32/15	75	303	551	1028	50	32	840	404	200	2583	90	237	463	841	1598	985	2160	150	1860	930	650	600	300	6x21
	90	303	625	1102	50	32	840	404	200	2633	90	237	463	861	1598	1035	2160	150	1860	930	650	600	300	6x21
	100	303	968	1432	50	32	840	404	200	2758	90	237	502	1032	1598	1160	2260	150	1960	980	710	660	330	6x21
32/16	75	318	551	1046	50	32	895	404	200	2638	90	237	463	841	1653	985	2200	150	1900	950	650	600	300	6x21
	90	318	625	1120	50	32	895	404	200	2688	90	237	463	861	1653	1035	2200	150	1900	950	650	600	300	6x21
	110	318	968	1451	50	32	895	404	200	2813	90	237	502	1032	1653	1160	2340	150	2040	1020	710	660	330	6x21
32/17	90	333	625	1158	50	32	950	404	200	2743	90	237	463	861	1708	1035	2260	150	1960	980	650	600	300	6x21
	110	333	968	1474	50	32	950	404	200	2868	90	237	502	1032	1708	1160	2400	150	2100	1050	710	660	330	6x21
	132	333	1100	1594	50	32	950	404	200	2898	90	237	502	1032	1708	1190	2400	150	2100	1050	710	660	330	6x21
32/18	90	348	625	1158	50	32	1005	404	200	2798	90	237	463	861	1763	1035	2320	150	2020	1010	650	600	300	6x21
	110	348	968	1491	50	32	1005	404	200	2923	90	237	502	1032	1763	1160	2440	150	2140	1070	710	660	330	6x21
	132	348	1100	1611	50	32	1005	404	200	2953	90	237	502	1032	1763	1190	2440	150	2140	1070	710	660	330	6x21
32/19	90	363	625	1167	50	32	1060	404	200	2853	90	237	502	861	1818	1035	2500	150	2200	1100	710	660	330	6x21
	110	363	968	1510	50	32	1060	404	200	2978	90	237	502	1032	1818	1160	2500	150	2200	1100	710	660	330	6x21
	132	363	1100	1630	50	32	1060	404	200	3008	90	237	502	1032	1818	1190	2500	150	2200	1100	710	660	330	6x21
32/20	110	378	968	1540	50	32	1115	404	200	3033	90	237	522	1052	1873	1160	2550	150	2250	750	710	660	330	8x21
	132	378	1100	1660	50	32	1115	404	200	3063	90	237	522	1052	1873	1190	2550	150	2250	750	710	660	330	8x21
	160	378	1161	1715	50	32	1115	404	200	3193	90	237	522	1052	1873	1320	2550	150	2250	750	710	660	330	8x21

HPM 50 - 2950 rpm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
50/1	5,5	129	43	311	80	50	90	449	225	1390</														

HPM/HPR LUBRIFICAZIONE A OLIO / OIL LUBRICATION

HPM 50 - 2950 rpm

Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h _z	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
50/4	30	186	250	532	80	50	276	449	225	1875	90	319	368	671	1104	771	1440	150	1140	-	520	480	240	4x19
	37	186	270	552	80	50	276	449	225	1875	90	319	368	671	1104	771	1440	150	1140	-	520	480	240	4x19
	45	186	315	597	80	50	276	449	225	1924	90	319	368	680	1104	820	1440	150	1140	-	520	480	240	4x19
	55	186	420	702	80	50	276	449	225	1924	90	319	368	680	1104	820	1440	150	1140	-	520	480	240	4x19
	75	186	551	833	80	50	276	449	225	2014	90	319	428	783	1104	910	1540	150	1240	620	560	520	260	6x21
	90	186	625	907	80	50	276	449	225	2089	90	319	448	846	1104	985	1640	150	1340	670	640	600	300	6x21
50/5	37	205	270	597	80	50	338	449	225	1937	90	319	428	711	1166	771	1600	150	1300	650	570	530	265	6x21
	45	205	315	642	80	50	338	449	225	1986	90	319	428	720	1166	820	1600	150	1300	650	570	530	265	6x21
	55	205	420	747	80	50	338	449	225	2076	90	319	428	783	1166	910	1600	150	1300	650	570	530	265	6x21
	75	205	551	909	80	50	338	449	225	2151	90	319	448	846	1166	985	1700	150	1400	700	640	600	300	6x21
	90	205	625	959	80	50	338	449	225	2201	90	319	468	846	1166	1035	1700	150	1400	700	640	600	300	6x21
50/6	45	224	315	696	80	50	400	449	225	2048	90	319	448	760	1228	820	1760	150	1460	730	640	600	300	6x21
	55	224	420	801	80	50	400	449	225	2138	90	319	448	803	1228	910	1760	150	1460	730	640	600	300	6x21
	75	224	551	932	80	50	400	449	225	2213	90	319	448	846	1228	985	1760	150	1460	730	640	600	300	6x21
	90	224	625	982	80	50	400	449	225	2263	90	319	448	846	1228	1035	1760	150	1460	730	640	600	300	6x21
	110	224	968	1310	80	50	400	449	225	2388	90	319	488	1018	1228	1160	1880	150	1580	790	680	640	320	6x21
50/7	55	243	420	826	80	50	462	449	225	2200	90	319	448	803	1290	910	1820	150	1520	760	640	600	300	6x21
	75	243	551	957	80	50	462	449	225	2275	90	319	448	846	1290	985	1820	150	1520	760	640	600	300	6x21
	90	243	625	1007	80	50	462	449	225	2325	90	319	448	846	1290	1035	1820	150	1520	760	640	600	300	6x21
	110	243	968	1334	80	50	462	449	225	2450	90	319	488	1018	1290	1160	1960	150	1660	830	680	640	320	6x21
50/8	75	262	551	953	80	50	524	449	225	2337	90	319	448	846	1352	985	1880	150	1580	790	640	600	300	6x21
	90	262	625	1027	80	50	524	449	225	2387	90	319	448	846	1352	1035	1880	150	1580	790	640	600	300	6x21
	110	262	968	1377	80	50	524	449	225	2512	90	319	508	1038	1352	1160	2020	150	1720	860	700	660	330	6x21
	132	262	1100	1502	80	50	524	449	225	2542	90	319	508	1038	1352	1190	2020	150	1720	860	700	660	330	6x21
50/9	75	281	551	976	80	50	586	449	225	2399	90	319	448	846	1414	985	1940	150	1640	820	640	600	300	6x21
	90	281	625	1050	80	50	586	449	225	2449	90	319	448	846	1414	1035	1940	150	1640	820	640	600	300	6x21
	110	281	968	1405	80	50	586	449	225	2574	90	319	508	1038	1414	1160	2080	150	1780	890	700	660	330	6x21
	132	281	1100	1525	80	50	586	449	225	2604	90	319	508	1038	1414	1190	2080	150	1780	890	700	660	330	6x21
50/10	90	300	625	1085	80	50	648	449	225	2511	90	319	508	906	1476	1035	2140	150	1840	920	700	660	330	6x21
	110	300	968	1428	80	50	648	449	225	2636	90	319	508	1038	1476	1160	2140	150	1840	920	700	660	330	6x21
	132	300	1100	1548	80	50	648	449	225	2666	90	319	508	1038	1476	1190	2140	150	1840	920	700	660	330	6x21
	160	300	1161	1603	80	50	648	449	225	2796	90	319	508	1038	1476	1320	2080	150	1780	890	700	660	330	6x21
50/11	90	319	625	1108	80	50	710	449	225	2573	90	319	508	906	1538	1035	2220	150	1920	960	700	660	330	6x21
	110	319	968	1451	80	50	710	449	225	2698	90	319	508	1038	1538	1160	2220	150	1920	960	700	660	330	6x21
	132	319	1100	1571	80	50	710	449	225	2728	90	319	508	1038	1538	1190	2220	150	1920	960	700	660	330	6x21
	160	319	1161	1626	80	50	710	449	225	2858	90	319	508	1038	1538	1320	2220	150	1920	960	700	660	330	6x21
50/12	200	319	1221	1681	80	50	710	449	225	2858	90	319	508	1038	1538	1320	2220	150	1920	960	700	660	330	6x21
	110	338	968	1462	80	50	772	449	225	2760	90	319	508	1038	1600	1160	2280	150	1980	990	700	660	330	6x21
	132	338	1100	1594	80	50	772	449	225	2795	90	319	508	1038	1600	1190	2280	150	1980	990	700	660	330	6x21
	160	338	1161	1649	80	50	772	449	225	2925	90	319	508	1038	1600	1320	2280	150	1980	990	700	660	330	6x21
50/13	200	357	1221	1728	80	50	834	449	225	2987	90	319	508	1038	1662	1320	2340	150	2040	1020	700	660	330	6x21
	250	357	2090	2612	80	50	834	449	225	3167	90	319	542	1197	1662	1500	2500	150	2200	1100	800	760	380	6x21
	110	357	968	1486	80	50	834	449	225	2822	90	319	508	1038	1662	1160	2340	150	2040	1020	700	660	330	6x21
	132	357	1100	1618	80	50	834	449	225	2857	90	319	508	1038	1662	1190	2340	150	2040	1020	700	660	330	6x21
	160	357	1161	1673	80	50	834	449	225	2987	90	319	508	1038	1662	1320	2340	150	2040	1020	700	660	330	6x21
50/14	200	357	1221	1728	80	50	896	449	225	2987	90	319	508	1038	1724	1320	2400	150	2100	1050	700	660	330	6x21
	250	376	2090	2602	80	50	896	449	225	3229	90	319	562	1217	1724	1500	2580	150	2280	1140	820	780	390	8x21
	132	395	1100	1659	80	50	958	449	225	2976	90	319	508	1038	1786	1190	2460	150	2160	1080	700	660	330	6x21
	160	395	1161	1720	80	50	958	449	225	3111	90	319	508	1038	1786	1320	2460	150	2160	1080	700	660	330	6x21

HPM/HPR LUBRIFICAZIONE A OLIO / OIL LUBRICATION

HPM 150 - 2950 rpm

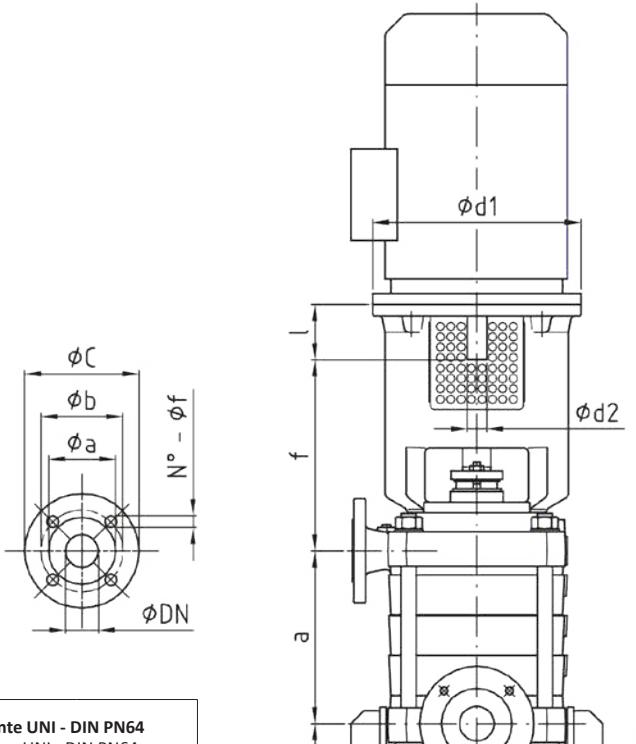
Quote / dimensions in mm

Model	kW	kg P.	kg M.	kg Tot.	Dn ₁	Dn ₂	a	f	h ₂	L	g ₁	g ₂	h ₁	h ₃	l ₁	l ₂	m	m ₁	m ₂	m ₃	n	n ₁	n ₂	s
150/1	200	969	1221	2418	250	150	235	629,5	420	2692,5	40	398	553	1083	1372,5	1320	2140	150	1840	920	840	800	400	6x21
	250	969	2090	3287	250	150	235	629,5	420	2872,5	40	398	553	1208	1372,5	1500	2140	150	1840	920	840	800	400	6x21
	315	969	2530	3727	250	150	235	629,5	420	2872,5	40	398	553	1208	1372,5	1500	2140	150	1840	920	840	800	400	6x21
	355	969	2000	3197	250	150	235	629,5	420	3162,5	40	398	553	1098	1372,5	1790	2140	150	1840	920	840	800	400	6x21
	400	969	2300	3497	250	150	235	629,5	420	3302,5	40	398	553	1128	1372,5	1930	2140	150	1840	920	840	800	400	6x21
	450	969	2400	3597	250	150	235	629,5	420	3302,5	40	398	553	1128	1372,5	1930	2140	150	1840	920	840	800	400	6x21
	510	969	2550	3747	250	150	235	629,5	420	3302,5	40	398	553	1128	1372,5	1930	2140	150	1840	920	840	800	400	6x21
150/2	400	1105	2300	3668	250	150	370	629,5	420	3297,5	40	398	682	1257	1507,5	1790	3030	150	2730	910	1080	1040	520	8x21
	450	1105	2400	3768	250	150	370	629,5	420	3437,5	40	398	682	1257	1507,5	1930	3030	150	2730	910	1080	1040	520	8x21
	510	1105	2550	3918	250	150	370	629,5	420	3437,5	40	398	682	1257	1507,5	1930	3030	150	2730	910	1080	1040	520	8x21
	560	1105	3150	4518	250	150	370	629,5	420	3602,5	40	398	682	1292	1507,5	2095	3030	150	2730	910	1080	1040	520	8x21
	650	1105	3300	4668	250	150	370	629,5	420	3602,5	40	398	682	1292	1507,5	2095	3030	150	2730	910	1080	1040	520	8x21
	750	1105	3550	4918	250	150	370	629,5	420	3602,5	40	398	682	1292	1507,5	2095	3030	150	2730	910	1080	1040	520	8x21
	820	1105	4600	5968	250	150	370	629,5	420	3827,5	40	398	682	1332	1507,5	2320	3030	150	2730	910	1080	1040	520	8x21
	940	1105	4900	6268	250	150	370	629,5	420	3827,5	40	398	682	1332	1507,5	2320	3030	150	2730	910	1080	1040	520	8x21
	1030	1105	5200	6568	250	150	370	629,5	420	3827,5	40	398	682	1332	1507,5	2320	3030	150	2730	910	1080	1040	520	8x21
	1200	1105	6100	7468	250	150	370	629,5	420	4182,5	40	398	752	1432	1507,5	2675	3540	150	3240	1080	1220	1180	590	8x21
150/3	650	1241	3300	4832	250	150	505	629,5	420	3737,5	40	398	682	1292	1642,5	2095	3150	150	2850	950	1080	1040	520	8x21
	750	1241	3550	5082	250	150	505	629,5	420	3737,5	40	398	682	1292	1642,5	2095	3150	150	2850	950	1080	1040	520	8x21
	820	1241	4600	6132	250	150	505	629,5	420	3962,5	40	398	682	1332	1642,5	2320	3150	150	2850	950	1080	1040	520	8x21
	940	1241	4900	6432	250	150	505	629,5	420	3962,5	40	398	682	1332	1642,5	2320	3150	150	2850	950	1080	1040	520	8x21
	1030	1241	5200	6732	250	150	505	629,5	420	3962,5	40	398	682	1332	1642,5	2320	3150	150	2850	950	1080	1040	520	8x21
	1200	1241	6100	7632	250	150	505	629,5	420	4317,5	40	398	752	1452	1642,5	2675	3690	150	3390	1130	1220	1180	590	8x21
	1300	1241	6300	7832	250	150	505	629,5	420	4317,5	40	398	752	1452	1642,5	2675	3690	150	3390	1130	1220	1180	590	8x21
150/4	1420	1241	6700	8232	250	150	505	629,5	420	4317,5	40	398	752	1452	1642,5	2675	3690	150	3390	1130	1220	1180	590	8x21
	1680	1241	8200	9905	250	150	640	629,5	420	4642,5	40	398	812	1562	1777,5	2865	3690	150	3390	1130	1400	1360	680	8x21
	1900	1241	8600	10305	250	150	640	629,5	420	4642,5	40	398	812	1562	1777,5	2865	3690	150	3390	1130	1400	1360	680	8x21

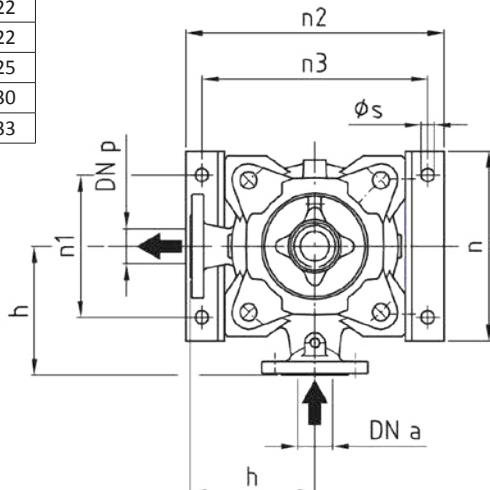
HV LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION

H = dimensione totale - H = Total dimensions

TIPO MOTORE MOTOR TYPE		DIMENSIONI MOTORE MOTOR DIMENSIONS		
Gr.-Size	Poli-Poles	ϕd_1	ϕd_2	I
100	2...8	250	28	60
112	2...8	250	28	60
132	2...8	300	38	80
160	2...8	350	42	110
180	2...8	350	48	110
200	2...8	400	55	110
225	2	450	55	110
	4...8		60	140
250	2	550	60	140
	4...8		65	
280	2	550	65	140
	4...8		75	
315	2	660	65	140
	4...8		80	170
355	2	800	75	140
	4...8		100	210



TIPO TYPE	Flangia aspirante UNI - DIN PN16 Suction flange UNI - DIN PN16						Flangia premente UNI - DIN PN64 Discharge flange UNI - DIN PN64					
	DNa	a	b	C	N°	f	DNp	a	b	C	N°	f
25	40	88	110	150	4	18	25	65	100	140	4	18
32	50	102	125	165	4	18	32	75	110	155	4	22
50	80	138	160	200	8	18	50	95	135	180	4	22
80	125	188	210	250	8	18	80	130	170	215	8	22
100	150	212	240	285	8	22	100	160	200	250	8	25
125	200	268	295	340	12	22	125	185	240	295	8	30
150	250	320	355	405	12	25	150	215	280	345	8	33



TIPO TYPE	Dimensioni pompa Pump dimensions			Dimensioni piedi Feet dimensions						
	e	f	h	g	n	n1	n2	n3	s	
25	190	250	160	6	260	210	360	310	17	
32	150	365	200	6	300	250	400	350	17	
50	160	400	225	6	350	300	550	500	20	
80	190	420	250	10	400	340	600	440	23	
100	180	470	315	10	450	390	600	540	23	
125	250	590	350	10	600	480	810	730	27	
150	270	665	420	10	650	580	850	780	27	

TIPO TYPE	Numero di stadi - Number of stages												
	2	3	4	5	6	7	8	9	10	11	12	13	14
25 a	100	145	190	235	280	325	370	415	460	505	550	595	640
32 a	125	180	235	290	345	400	455	510	565	620			
50 a	152	214	276	338	400	462	524	586	648				
80 a	195	270	345	420	495	570	645						
100 a	235	325	415	505	595								
125 a	295	405	515	625									
150 a	370	505	640										

Dimensioni in mm - Dimensions in mm

HP - HPM - HPR - HV

PESI SOLO POMPA / BARE-SHAFT PUMP WEIGHTS

TIPO TYPE	PESO WEIGHT	Numero di stadi - Number of stages																								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
HP 25	Lubrificazione a grasso / Grease lubrication kg	39	48	57	66	75	84	93	102	111	120	129	138	147	156	165	174	183	192	201	210	219	228	237	246	255
HP 32		72	87	102	117	132	147	162	177	192	207	222	237	252	267	282	297	312	327	342	357	372	387	402	417	432
HP 50		99	118	137	156	175	194	213	232	251	270	289	308	327	346	365	384	403	422	441	460					
HP 80		137	196	225	252	281	310	339	369	398	427	456	485	515	544	573	602	631	660							
HP 100		241	286	331	376	421	466	511	556	601	646	691	736	781	826	871	916									
HP 125		401	482	563	644	725	806	887	968	1049	1130	1211	1292													
HP 150		720	856	992	1128	1264	1400	1536	1672	1808	1944															
HP 250		1247	1563	1879	2195	2511	2827	3143	3459	3775	4091	4407	4723													

TIPO TYPE	PESO WEIGHT	Numero di stadi - Number of stages																								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
HPM / HPR 25	Lubrificazione a olio / Oil lubrication kg	44	53	62	71	80	89	98	107	116	125	134	143	152	161	170	179	188	197	206	215	224	233	242	251	260
HPM / HPR 32		93	108	123	138	153	168	183	198	213	228	243	258	273	288	303	318	333	348	363	378	393	408	423	438	453
HPM / HPR 50		129	148	167	186	205	224	243	262	281	300	319	338	357	376	395	414	433	452	471	490					
HPM / HPR 80		191	220	249	278	307	336	365	394	423	452	481	510	539	568	597	626	655	684							
HPM / HPR 100		281	326	371	416	461	506	551	596	641	686	731	776	821	866	911	956									
HPM / HPR 125		486	567	648	729	810	891	972	1053	1134	1215	1296	1377													
HPM / HPR 150		969	1105	1241	1377	1513	1649	1785	1921	2057	2193	2329														
HPM 250		1249	1565	1881	2197	2513	2829	3145	3461	3777	4093	4409	4725													

TIPO TYPE	PESO WEIGHT	Numero di stadi - Number of stages																								
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
HV 25	kg	42	51	60	69	78	87	96	105	114	123	132	141	150	159											
HV 32		108	123	138	153	168	183	198	213	228	243	258														
HV 50		151	170	189	208	227	246	265	284	303	322															
HV 80		158	187	216	245	274	303	332	361																	
HV 100		332	377	422	467	512	557																			
HV 125		514	595	676	757	838																				
HV 150		918	1054	1190	1326																					
HV 250		1447	1763																							

PESI SOLO POMPA / BARE-SHAFT PUMP WEIGHTS

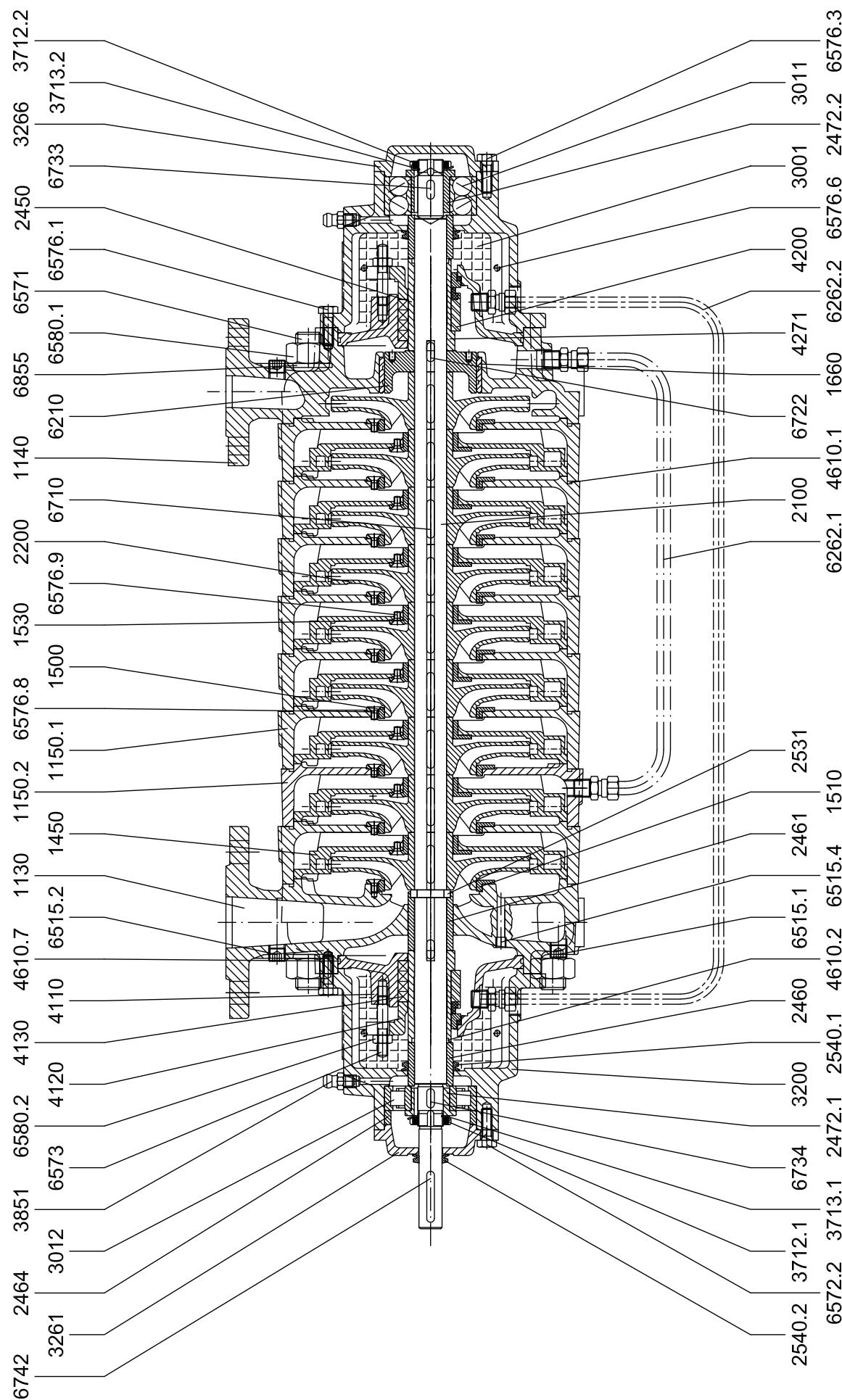
TIPO TYPE	PESO WEIGHT	Numero di stadi - Number of stages																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HPA 25	Lubrificazione a grasso / Grease lubrication kg	28	37	46	55	64	73	82	91	100	109	118	127	136	145	154	163	172	181	190	199
HPA 32		50	65	74	83	92	101	110	119	128	137	146	155	164	173	182	191	200	209	218	227
HPA 50		62	81	100	119	138	157	176	195	214	233	252	271	290	309	328	347	366	385		
HPA 80		87	116	145	174	203	232	261	290	319	348	377	406	435	464	493	522				
HPA 100		174	219	264	309	354	399	444	489	534	579	624	669	714	759						
HPA 125		283	364	445	526	607	688	769	850	931	1012	1093	1174								
HPA 150		509	645	781	917	1053	1189	1325	1461	1597	1733										

TIPO TYPE	PESO WEIGHT	Numero di stadi - Number of stages																			
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
HPMA 25	Lubrificazione a olio / Oil lubrication kg	33	42	51	60	69	78	87	96	105	114	123	132	141	150	159	168	177	186	195	204
HPMA 32		61	76	91	106	121	136	151	166	181	196	211	226	241	256	271	286	301	316	331	346
HPMA 50		76	95	114	133	152	171	190	209	228	247	266	285	304	323	342	361	380	399		
HPMA 80		120	149	178	207	236	265	294	323	352	381	410	439	468	497	526	555				
HPMA 100		197	242	287	332	377	422	467	512	557	602	647	692	737	782						
HPMA 125		343	424	505	586	667	748	829	910	991	1072	1153	1234								
HPMA 150		727	863	999	1135	1271	1407	1543	1679	1815	1951										

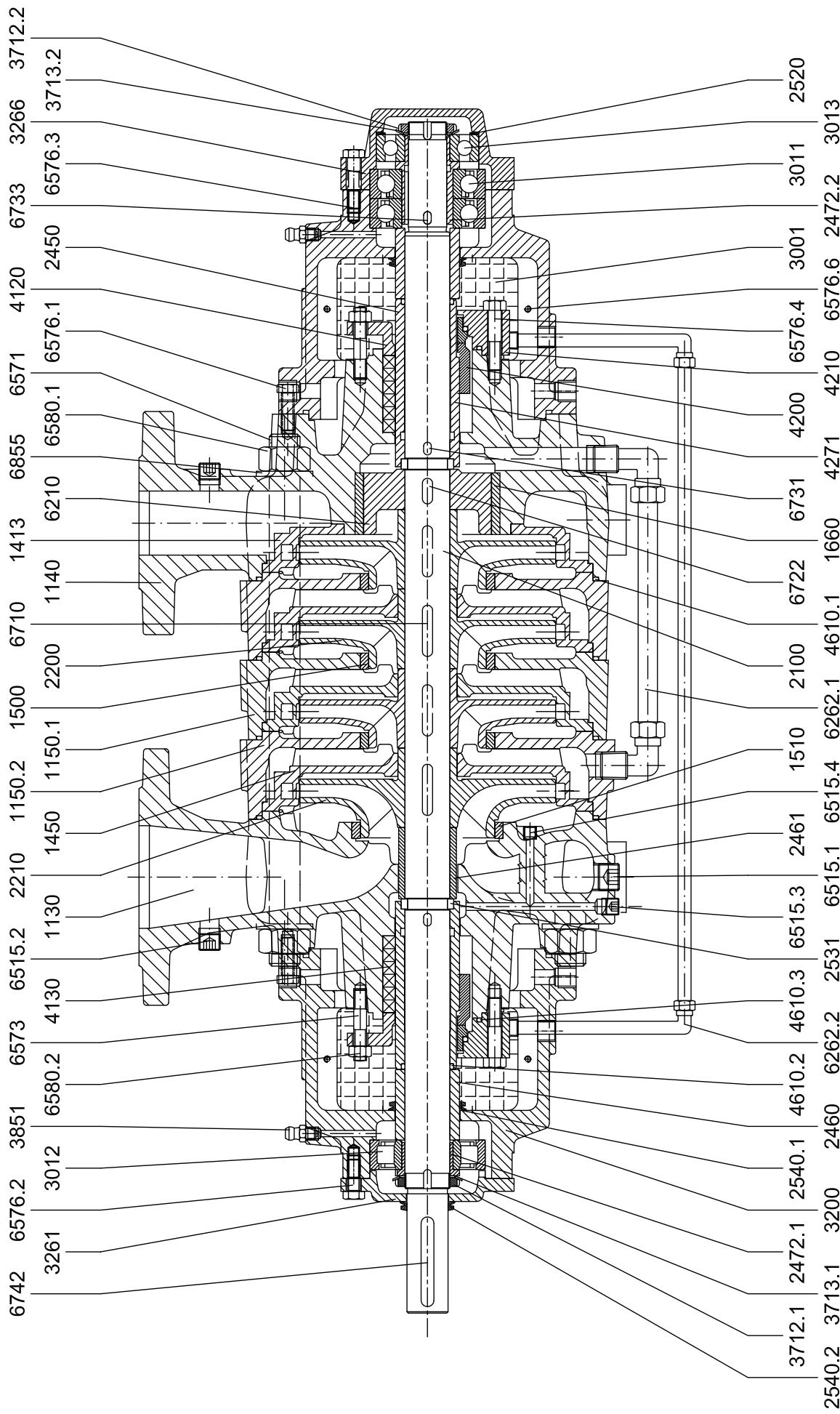
Materiali dei componenti Parti di ricambio e codici di riferimento

Components materials
Spare parts and reference codes

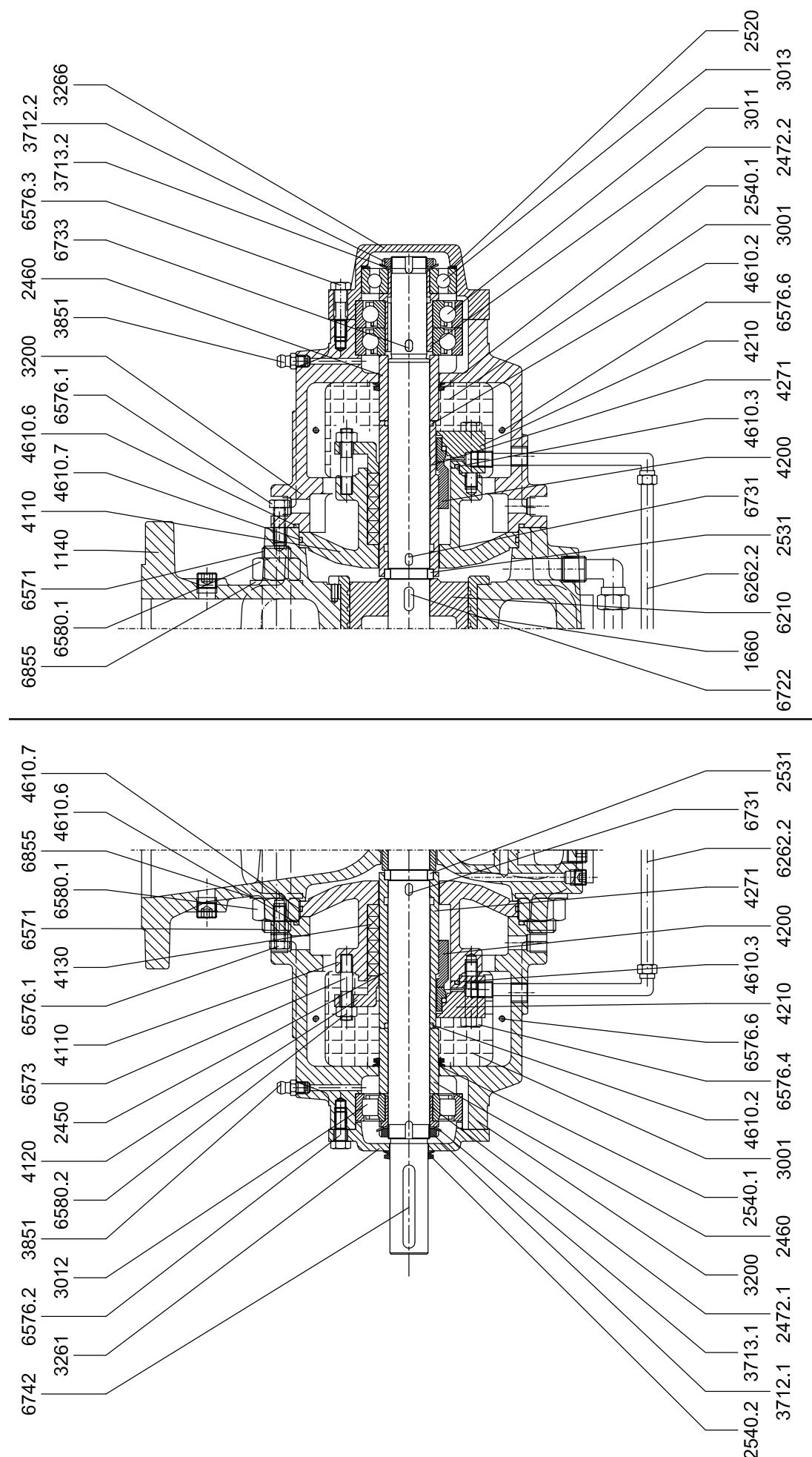
HP 25 LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION



HP 32-50-80-100-125-150 LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION



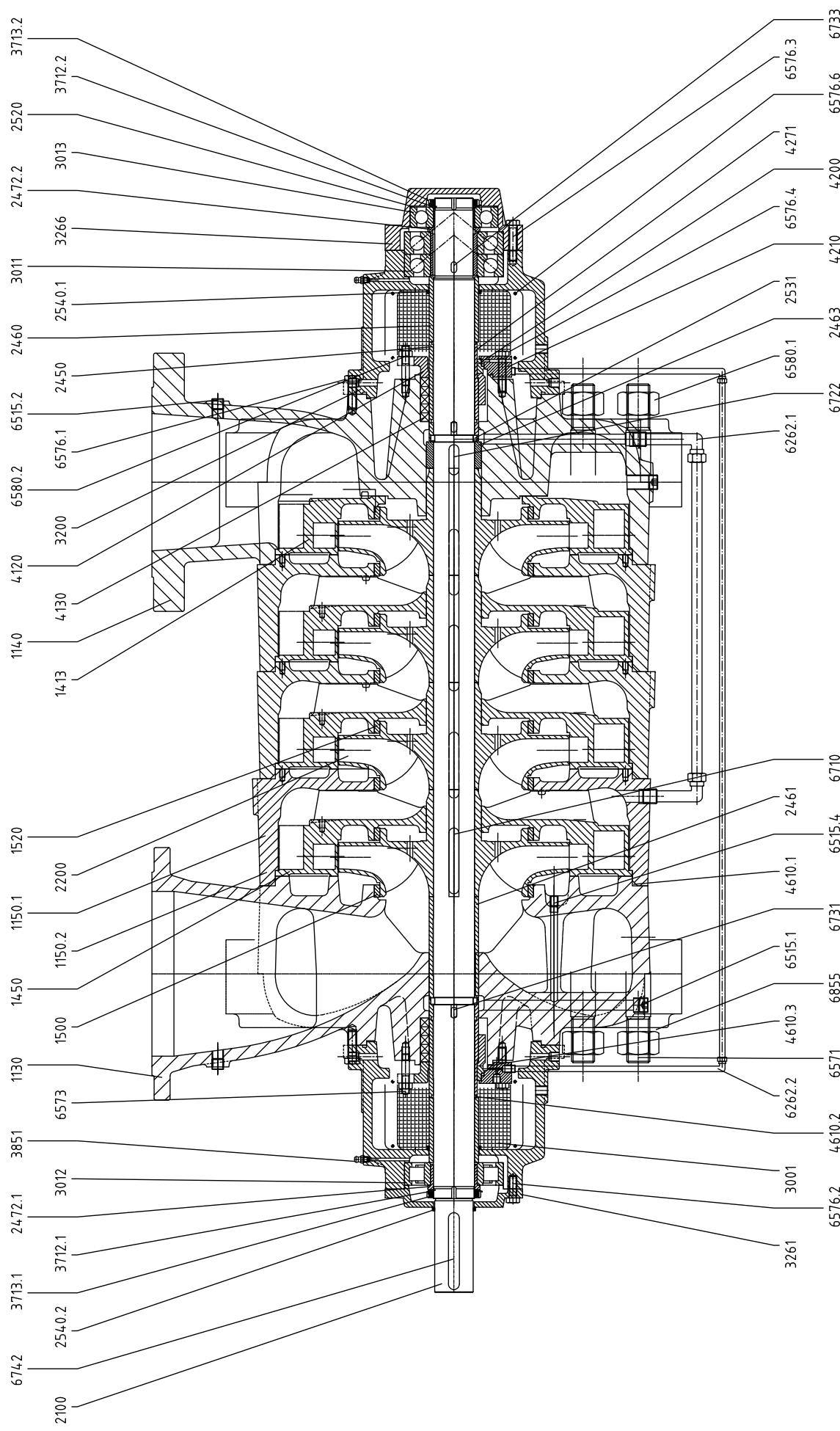
HP 125-150 LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION



HP 25-32-50-80-100-125-150 LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION

RIF. REF.	Descrizione parte	Part Description	Ricambio consigliato / Recomended spare part	Q.tà / Q.ty
1130	Corpo aspirante	<i>Suction casing</i>		
1140	Corpo premente	<i>Discharge casing</i>		
1150.1	Corpo di stadio	<i>Stage casing</i>		
1150.2	Corpo di stadio	<i>Stage casing</i>		
1413	Diffusore ultimo stadio	<i>Diffuser last stage</i>		
1450	Diffusore	<i>Diffuser</i>		
1500	Kit anelli di usura girante	<i>Kit Wear rings impeller</i>	Si / Yes	1
1660	Boccola c. premente	<i>Discharge casing bush</i>	Si / Yes	1
2100	Albero	<i>Shaft</i>		
2200	Girante	<i>Impeller</i>		
2210	Girante di aspirazione	<i>Impeller suction stage</i>		
2520	Molla a tazza	<i>Shoulder ring</i>	Si / Yes	1
2450	Camicia per baderna	<i>Shaft sleeve</i>	Si / Yes	1
2460	Kit Bussole distanziatrice	<i>Kit Space sleeve</i>	Si / Yes	1
2472.1	Kit Bussole cuscinetti	<i>Kit Shaft sleeve bearing</i>	Si / Yes	1
2531	Anello in due metà	<i>Retaing Split ring</i>		
2540.1	Kit Deflettori	<i>Kit Trower</i>	Si / Yes	1
3001	Rete protezione	<i>Safety net</i>		
3011	Kit Cuscinetti a sfere e rulli	<i>Kit Ball and Roller bearings</i>	Si / Yes	1
3200	Supporto	<i>Bearing housing</i>		
3261	Coperchietto l. comando	<i>Bearing cover drive size</i>		
3266	Coperchietto cieco	<i>Bearing end cover</i>		
3712.1	Kit Ghiere del cuscinetto e Rosetta	<i>Kit Bearing nut and lockwasher</i>	Si / Yes	1
3851	Ingrassatore	<i>Grease cup</i>		
4110	Cassa stoppa	<i>Seal box</i>		
4120	Premitrecchia	<i>Gland</i>		
4130	Guarnizione a treccia	<i>Gland packing</i>	Si / Yes	1
4200	Tenuta meccanica	<i>Mechanical seal</i>	Si / Yes	1
4210	Flangia tenuta mecc.	<i>Flange mechanical seal</i>		
4271	Camicia tenuta mecc.	<i>Shaft sleeve m. seal</i>	Si / Yes	1
4610.1	Kit Guarnizioni OR	<i>Kit O-Rings</i>	Si / Yes	1
6210	Tamburo di equilibrio	<i>Balance disc</i>		
6262.1	Tubo di alimentazione Tamburo	<i>Drum feeding pipe</i>		
6262.2	Tubo flussaggio per tenuta meccanica	<i>Mechanical seal flushing pipe</i>		
6515.1	Kit tappi	<i>Kit Plugs</i>		
6571	Tirante	<i>Tie bolt</i>		
6573	Prigioniero	<i>Gland tie</i>		
6576.1-9	Kit viti	<i>Kit Screw</i>		
6580.1-2	Kit dadi	<i>Kit Nut</i>		
6710	Kit chiavette	<i>Kit Keys</i>	Si / Yes	1
6855	Rondella	<i>Washer</i>		

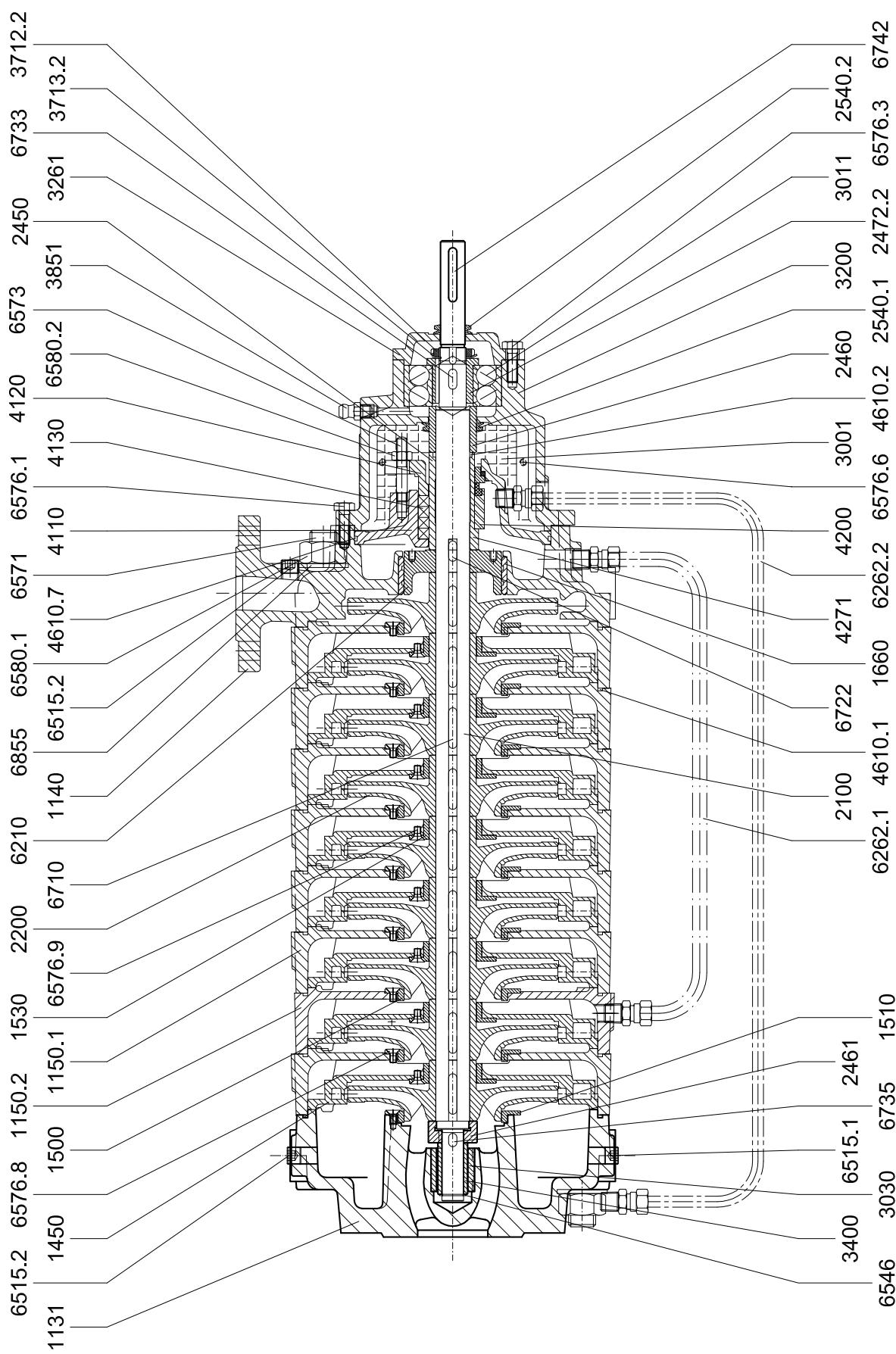
HP 250 LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION



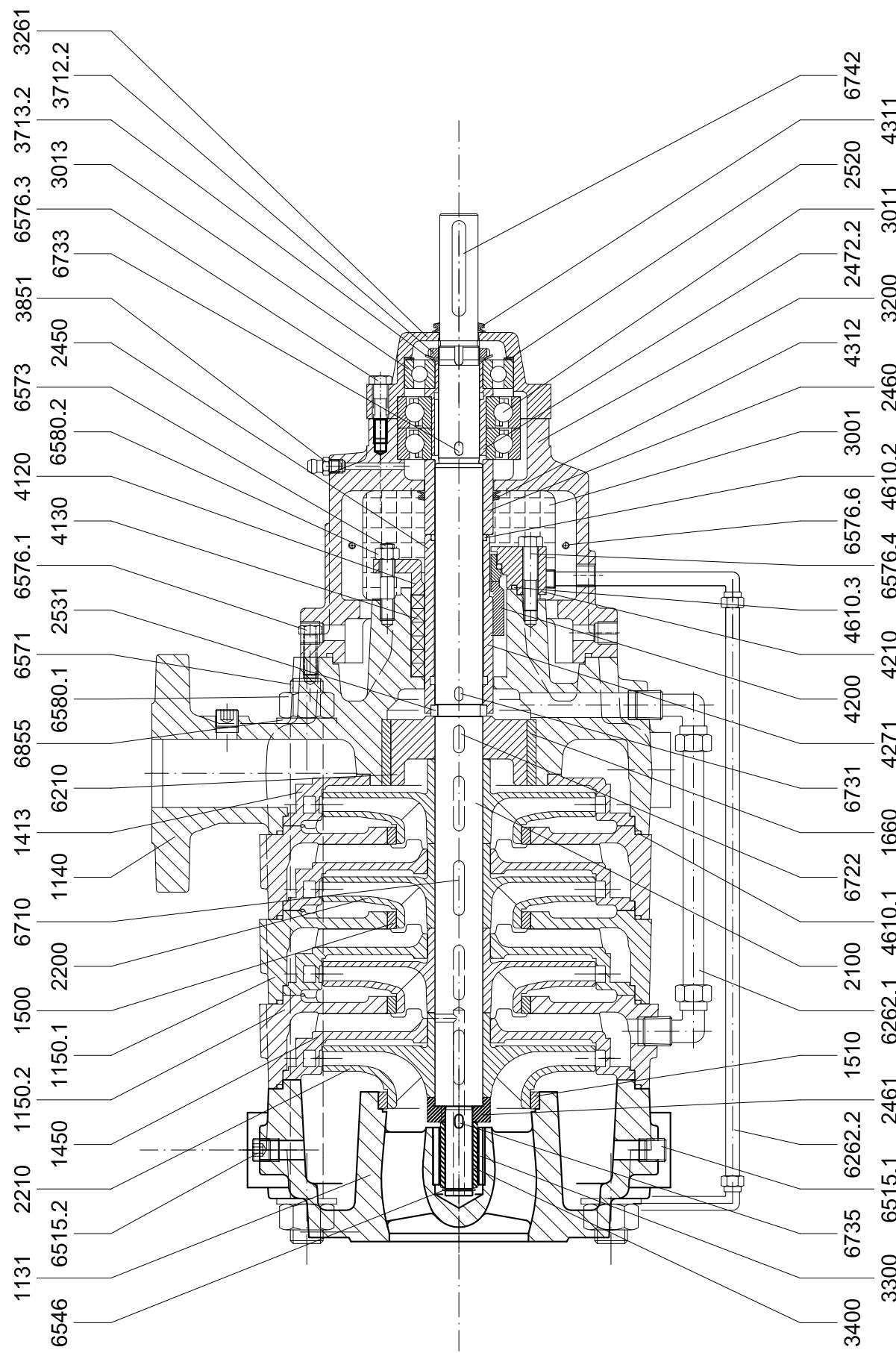
HP 250 LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION

RIF. REF.	Descrizione parte	Part Description	Ricambio consigliato / Recomended spare part	Q.tà / Q.ty
1130	Corpo aspirante	<i>Suction casing</i>		
1140	Corpo premente	<i>Discharge casing</i>		
1150.1	Corpo di stadio	<i>Stage casing</i>		
1150.2	Corpo di stadio	<i>Stage casing</i>		
1413	Diffusore ultimo stadio	<i>Diffuser last stage</i>		
1450	Diffusore	<i>Diffuser</i>		
1500	Kit Anelli di usura giranti	<i>Kit Wear rings impellers</i>	Sì / Yes	1
1660	Boccola c. premente	<i>Discharge casing bush</i>	Sì / Yes	1
2100	Albero	<i>Shaft</i>		
2200	Girante	<i>Impeller</i>		
2450	Camicia per baderna	<i>Shaft sleeve</i>		
2460	Kit Bussole distanz. e Cuscinetti	<i>Kit Spacer and Bear. sleeves</i>	Sì / Yes	1
2520	Molla a tazza	<i>Shoulder ring</i>	Sì / Yes	1
2531	Anello in due metà	<i>Split ring</i>	Sì / Yes	1
2540.1	Kit Deflettori	<i>Kit Trower</i>	Sì / Yes	1
3001	Rete protezione	<i>Safety net</i>		
3011	Kit Cuscinetti sfere e rulli	<i>Kit Ball and Roller bearings</i>	Sì / Yes	1
3200	Supporto cuscinetti	<i>Bearing housing</i>		
3261	Coperchietto l.comando	<i>Bearing cover drive size</i>		
3266	Coperchietto cieco	<i>Bearing end cover</i>		
3712.1	Kit Ghiere	<i>Kit nuts</i>	Sì / Yes	1
3851	Ingrassatore	<i>Grease cup</i>		
4120	Premitreccia	<i>Gland</i>		
4130	Guarnizione a treccia	<i>Gland packing</i>	Sì / Yes	1
4200	Tenuta meccanica	<i>Mechanical seal</i>	Sì / Yes	1
4210	Flangia tenuta mecc.	<i>Flange mechanical seal</i>		
4271	Camicia tenuta mecc.	<i>Shaft sleeve m. seal</i>		
4610.1	Kit Guarnizioni OR	<i>Kit O-Rings</i>	Sì / Yes	1
6262.1	Tubo di equilibrio	<i>Balance Pressure Pipe</i>		
6262.2	Tubo per tenuta meccanica	<i>Mechanical seal pipe</i>		
6515.1	Kit Tappi	<i>Kit Plugs</i>		
6571	Tirante	<i>Tie bolt</i>		
6573	Prigioniero	<i>Gland tie</i>		
6576.1-6	Kit Viti	<i>Kit Screws</i>		
6580.1	Kit Dadi	<i>Kit Nuts</i>		
6710	Kit Chiavette	<i>Kit Keys</i>	Sì / Yes	1
6855	Rondella	<i>Washer</i>		

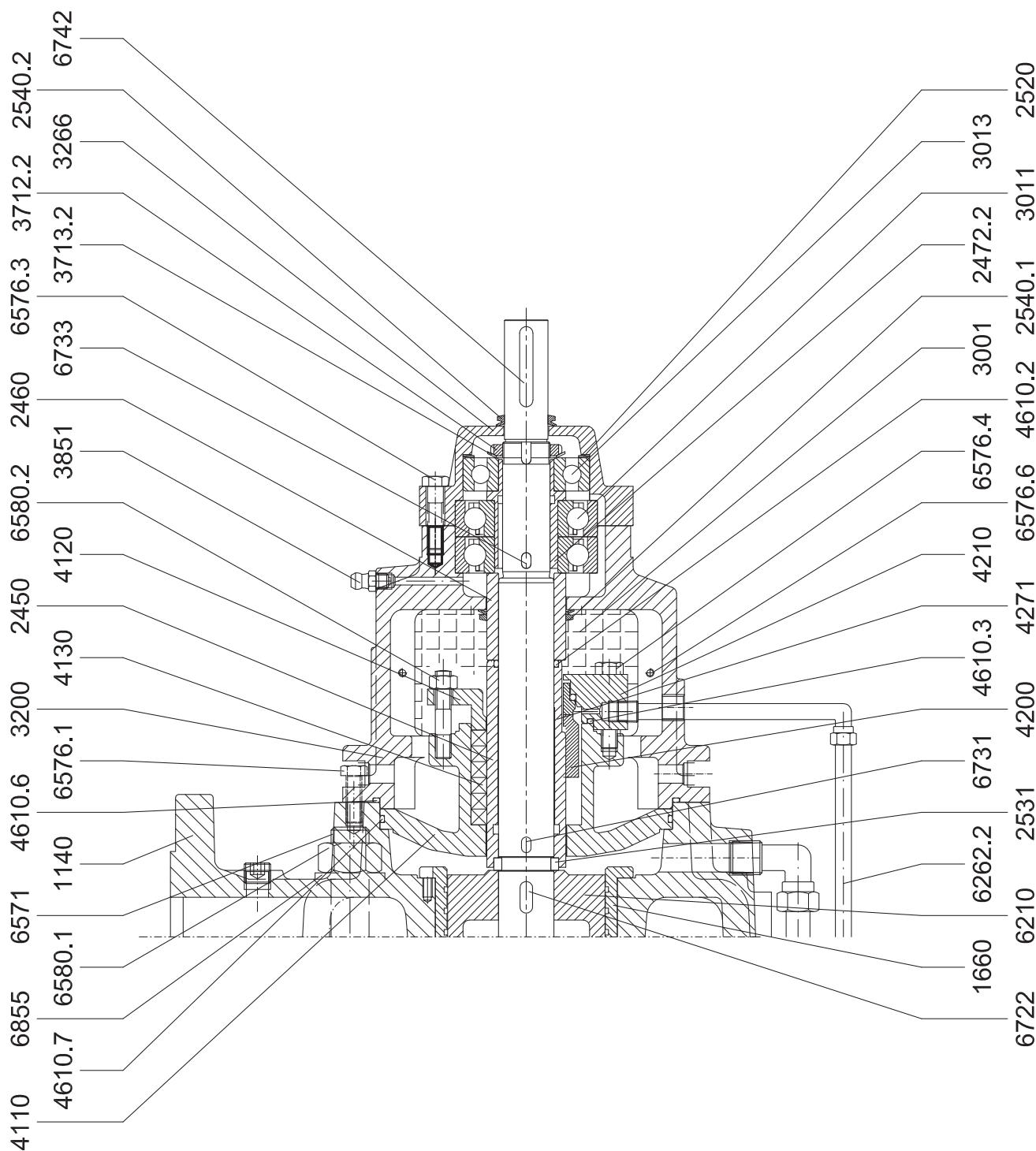
HPA 25 LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION



HPA 32-50-80-100-125-150 LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION



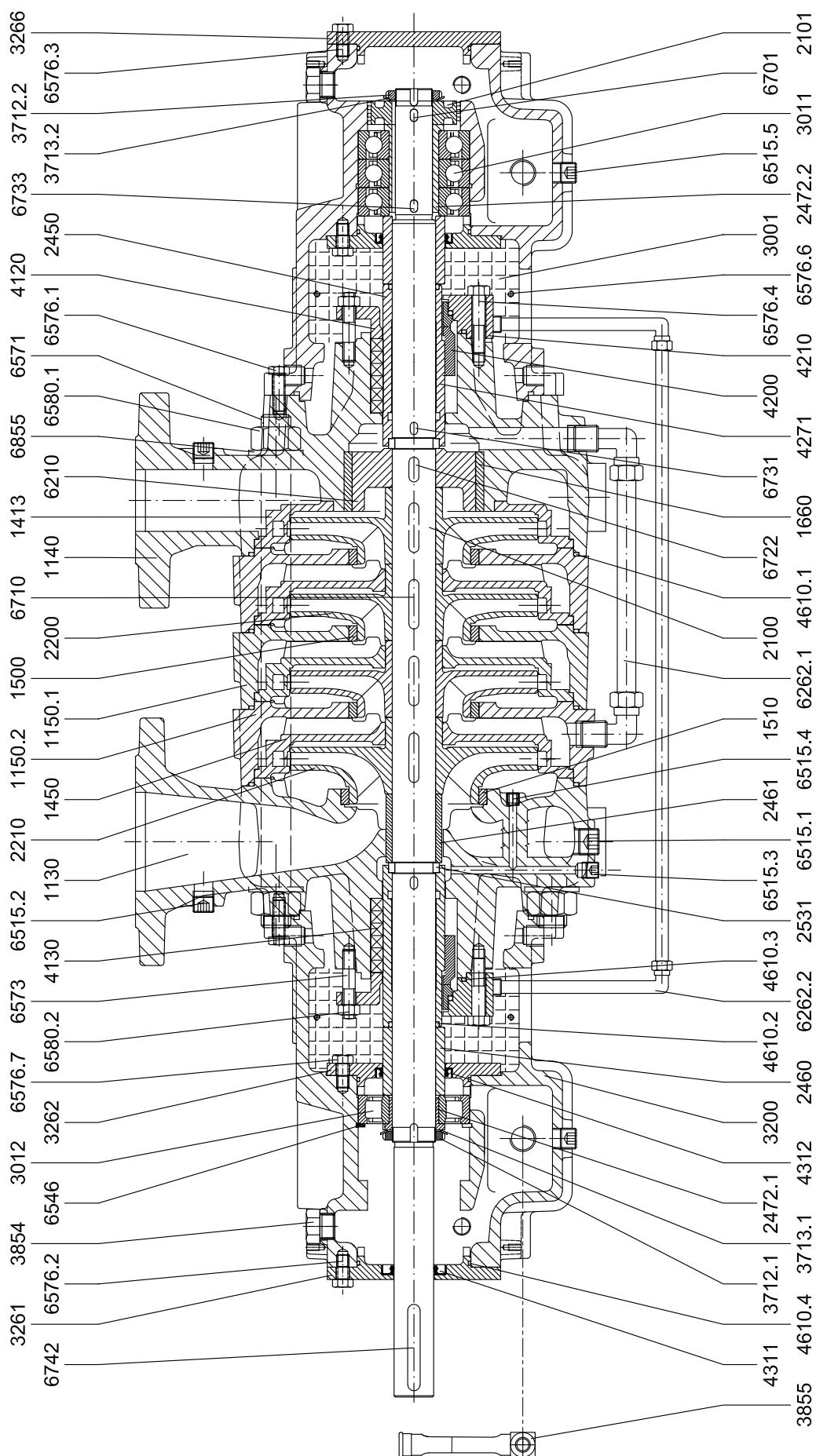
HPA 125-150 LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION



HPA 25-32-50-80-100-125-150 LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION

RIF. REF.	Descrizione parte	Part Description	Ricambio consigliato / Recomended spare part	Q.tà / Q.ty
1131	Corpo aspirante	<i>Suction casing for axial execution</i>		
1140	Corpo premente	<i>Discharge casing</i>		
1150.1	Corpo di stadio	<i>Stage casing</i>		
1150.2	Corpo di stadio	<i>Stage casing</i>		
1413	Diffusore ultimo stadio	<i>Diffuser last stage</i>		
1530	Kit Anelli di usura diffusore	<i>KIT diffusers Wear rings</i>	Sì / Yes	1
1450	Diffusore	<i>Diffuser</i>		
1500/10	KIT Anelli di usura giranti	<i>KIT Wear ring impeller</i>	Sì / Yes	1
1660	Boccola corpo premente	<i>Discharge casing bush</i>	Sì / Yes	1
2100	Albero	<i>Shaft</i>		
2101	Circolatore olio	<i>Oil circulator</i>		
2200	Girante	<i>Impeller</i>		
2210	Girante di aspirazione	<i>Impeller suction stage</i>		
2450	Camicia per baderna	<i>Gland packing Shaft sleeve</i>	Sì / Yes	1
2460/1	KIT Bussole distanziatrice	<i>KIT Space sleeves</i>	Sì / Yes	1
2472.2	Bussola cuscinetto	<i>Shaft sleeve bearing</i>	Sì / Yes	1
2520	Molla a tazza	<i>Shoulder ring</i>		
2540.1-2	KIT Deflettori	<i>KT Trowers</i>	Sì / Yes	1
2531	Anello in due metà	<i>Retaing ring aplit</i>		
3001	Rete protezione	<i>Safety net</i>		
3011/13	KIT Cuscinetti a sfere	<i>KIT Radial ball bearings</i>	Sì / Yes	1
3200	Supporto Cuscinetti	<i>Bearing housing</i>		
3261	Coperchietto l.comando	<i>Bearing cover drive size</i>		
3262	Coperchietto l.pompa	<i>Bearing cover pump size</i>		
3300	Cuscinetto a boccola	<i>Bearing Bushing</i>	Sì / Yes	1
3400	Camicia d'albero per il supporto cuscinetti	<i>Shaft-Sleeve Bearings</i>	Sì / Yes	1
3712.2	Ghiera del cuscinetto	<i>Bearings Lockwasher</i>		
3713.2	Rosetta di sicurezza	<i>Washer</i>	Sì / Yes	1
3851	Ingrassatore	<i>Greaser</i>		
3854	Tappo di riempimento	<i>Oil plug</i>		
4110	Corpo Cassa stoppa	<i>Seal Housing</i>		
4120	Premitreccia	<i>Gland</i>		
4130	Guarnizione a treccia	<i>Gland packing</i>	Sì / Yes	1
4200	Tenuta meccanica	<i>Mechanical seal</i>	Sì / Yes	1
4210	Flangia tenuta mecc.	<i>Flange mechanical seal</i>		
4271	Camicia tenuta mecc.	<i>Shaft sleeve mechanical seal</i>	Sì / Yes	1
4311-2	KIT Anelli di tenuta sull'albero	<i>KIT Radial shaft seal</i>	Sì / Yes	1
4610.1-7	KIT Guarnizione OR	<i>KIT O-Ring</i>	Sì / Yes	1
6210	Tamburo di equilibrio	<i>Balance Drum</i>		
6262.1	Tubo di equilibrio	<i>Balance drum pipe</i>		
6262.2	Tubo per tenuta meccanica	<i>Mechanical seal pipe</i>		
6515.1-5	KIT Tappi	<i>KIT Plugs</i>	Sì / Yes	1
6546	Seeger	<i>Seeger</i>	Sì / Yes	1
6571	Tirante	<i>Tie rods</i>		
6573	Prigioniero	<i>Tie bolt</i>		
6576.1-9	KIT Viti T.E.	<i>KIT screws</i>		
6580.1-2	KIT Dadi	<i>KIT Nuts</i>		
6701-42	KIT Chiavette	<i>KIT Keys</i>	Sì / Yes	1
6855	Rondella	<i>Washer</i>		

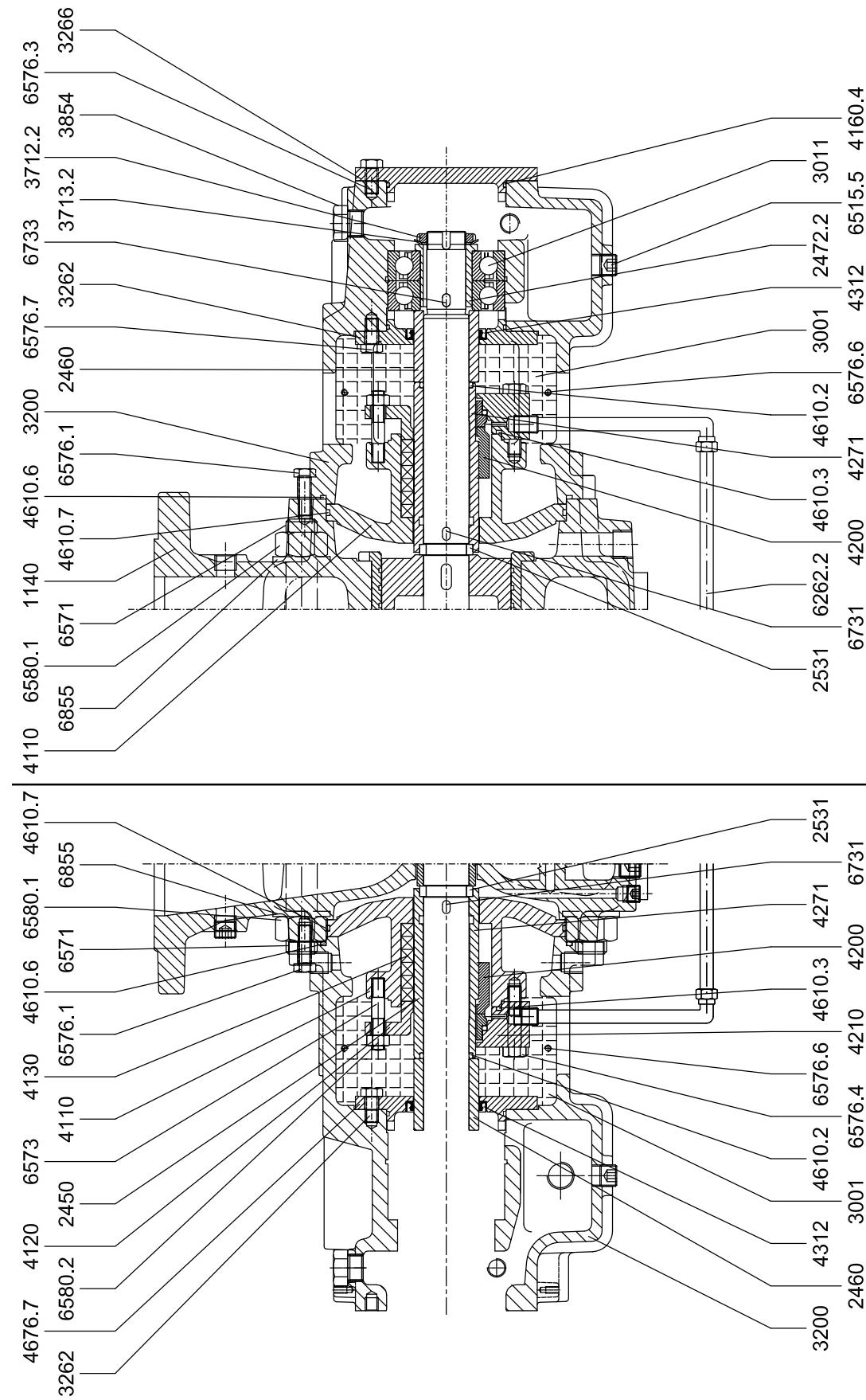
HPM 25-32-50-80-100-125-150 LUBRIFICAZIONE A OLIO / OIL LUBRICATION



HPM 125-150 LUBRIFICAZIONE A OLIO / OIL LUBRICATION

HPM 125 - SUCTION AND PRESSURE SIDE
HPM 150 - NOT THRUST BEARING SIDE

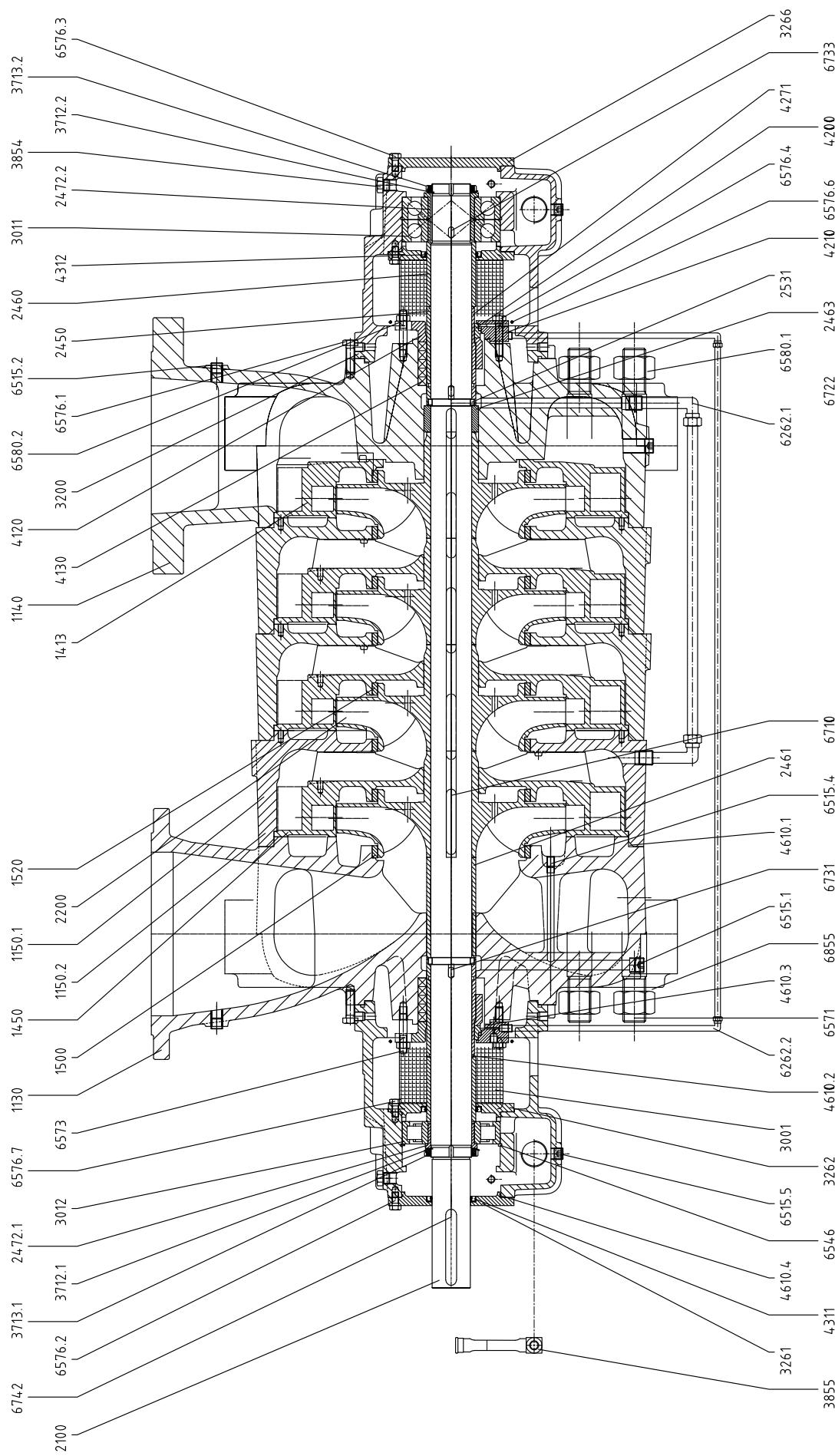
HPM 150
THRUST BEARING SIDE



HPM 25-32-50-80-100-125-150 LUBRIFICAZIONE A OLIO / OIL LUBRICATION

RIF. REF.	Descrizione parte	Part Description	Ricambio consigliato / Recomended spare part	Q.tà / Q.ty
1130	Corpo aspirante	<i>Suction casing</i>		
1140	Corpo premente	<i>Discharge casing</i>		
1150.1	Corpo di stadio	<i>Stage casing</i>		
1150.2	Corpo di stadio	<i>Stage casing</i>		
1413	Diffusore ultimo stadio	<i>Diffuser last stage</i>		
1450	Diffusore	<i>Diffuser</i>		
1500	Kit Anelli di usura giranti	<i>Kit Wear rings impellers</i>	Sì / Yes	1
1660	Boccola c. premente	<i>Discharge casing bush</i>	Sì / Yes	1
2100	Albero	<i>Shaft</i>		
2101	Circolatore olio	<i>Oil circulator</i>		
2200	Girante	<i>Impeller</i>		
2210	Girante di aspirazione	<i>Impeller suction stage</i>		
2450	Camicia per baderna	<i>Gland packing Shaft sleeve</i>	Sì / Yes	1
2460-72	Kit Bussole distanz. e cuscinetti	<i>Kit Spacers and Bearings sleeves</i>	Sì / Yes	1
2531	Anello in due metà	<i>Split ring</i>		
3001	Rete protezione	<i>Safety net</i>		
3011	Kit Cuscinetti a sfere e Rulli	<i>Kit Ball and Roller bearings</i>	Sì / Yes	1
3200	Supporto Cuscinetti	<i>Bearings housing</i>		
3261	Kit Coperchietti cuscinetti	<i>Kit Bearings covers</i>		
3712.1	Kit Ghiere dei cuscinetti	<i>Kit Bearings nuts</i>	Sì / Yes	1
3713.1	Kit Rosette	<i>Kit Lockwashers</i>	Sì / Yes	1
3854	Tappo di riempimento	<i>Oil filler plug</i>		
3855	Oliatore	<i>Oil lever</i>		
4110	Cassa stoppa	<i>Seal box</i>		
4120	Premitreccia	<i>Gland</i>		
4130	Guarnizione a treccia	<i>Gland packing</i>	Sì / Yes	1
4200	Tenuta meccanica	<i>Mechanical seal</i>	Sì / Yes	1
4210	Flangia tenuta mecc.	<i>Flange mechanical seal</i>		
4271	Camicia tenuta mecc.	<i>Shaft sleeve m. seal</i>	Sì / Yes	1
4311	Kit Anelli di tenuta sull'albero	<i>Kit Shaft seal rings</i>	Sì / Yes	1
4610.1-7	Kit Guarnizioni OR	<i>Kit O-Rings</i>	Sì / Yes	1
6210	Tamburo di equilibrio	<i>Balance Drum</i>		
6262.1	Tubo di equilibrio per Tamburo	<i>Drum feeding pipe</i>		
6262.2	Tubo per tenuta meccanica	<i>Mechanical seal pipe</i>		
6515.1	Kit Tappi	<i>Kit Plugs</i>		
6546	Seeger	<i>Seeger</i>		
6571	Tirante	<i>Tie bolt</i>		
6573	Prigioniero	<i>Gland tie</i>		
6576.1-7	Kit Viti	<i>Kit Screws</i>		
6580.1	Kit Dadi	<i>Kit Nuts</i>		
6701	Kit Chiavette	<i>Kit Keys</i>	Sì / Yes	1
6855	Rondella	<i>Washer</i>		

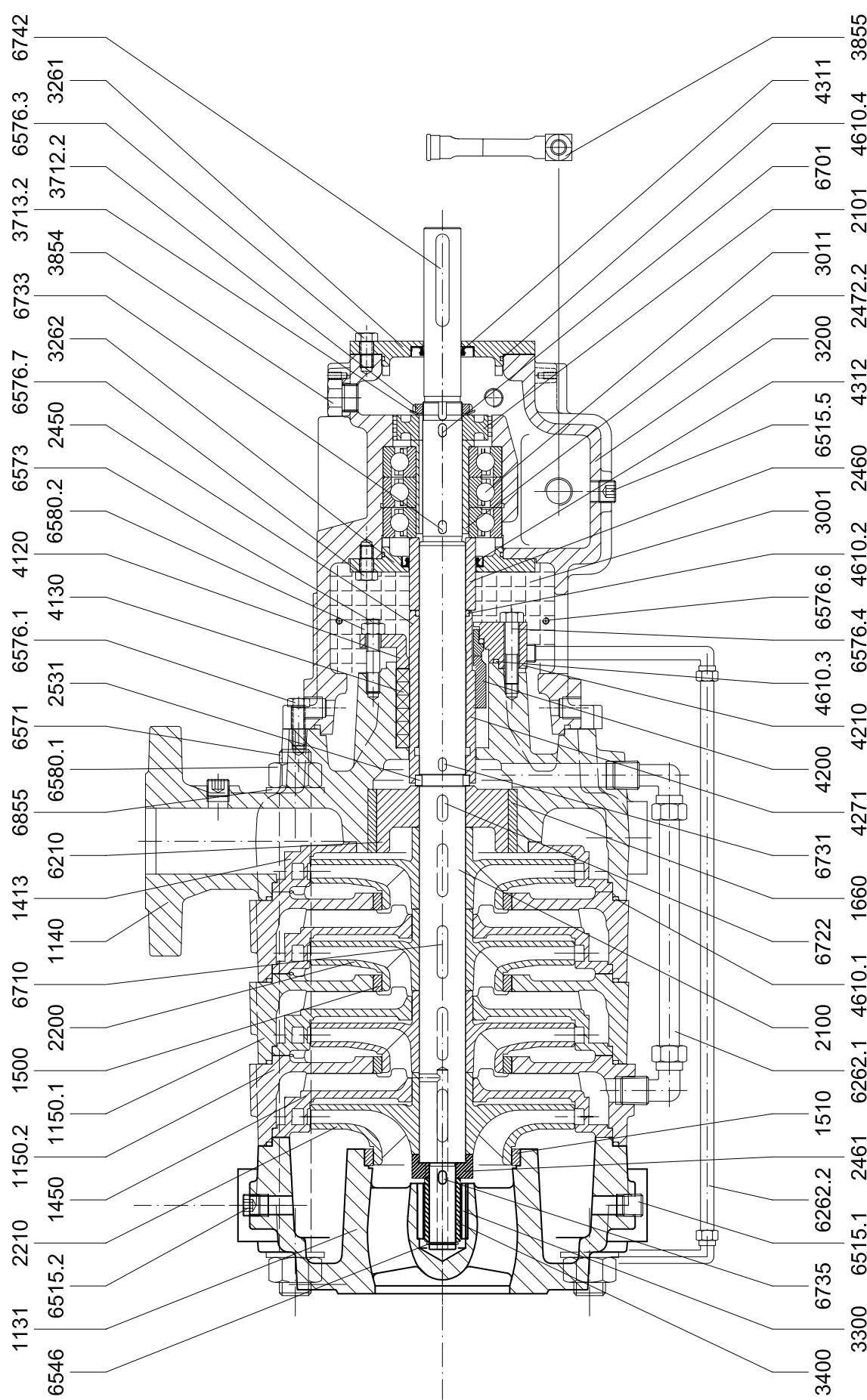
HPM 250 LUBRIFICAZIONE A OLIO / OIL LUBRICATION



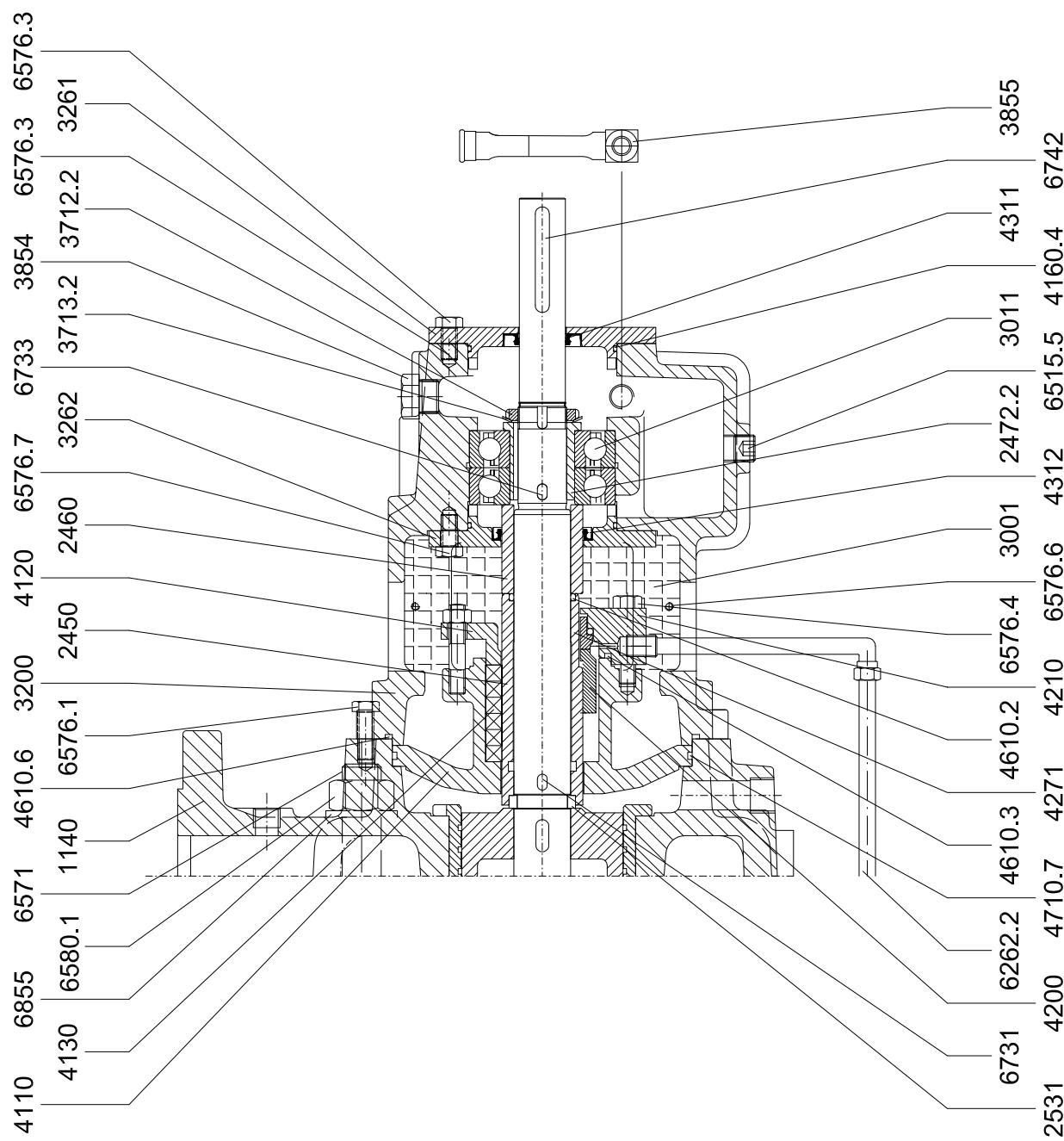
HPM 250 LUBRIFICAZIONE A OLIO / OIL LUBRICATION

RIF. REF.	Descrizione parte	Part Description	Ricambio consigliato / Recomended spare part	Q.tà / Q.ty
1130	Corpo aspirante	<i>Suction casing</i>		
1140	Corpo premente	<i>Discharge casing</i>		
1150.1	Corpo di stadio	<i>Stage casing</i>		
1150.2	Corpo di stadio	<i>Stage casing</i>		
1413	Diffusore ultimo stadio	<i>Diffuser last stage</i>		
1450	Diffusore	<i>Diffuser</i>		
1500	Kit Anelli di usura giranti	<i>Kit Wear rings impellers</i>	Si / Yes	1
2100	Albero	<i>Shaft</i>	Si / Yes	1
2200	Girante	<i>Impeller</i>		
2450	Camicia per baderna	<i>Shaft sleeve</i>	Si / Yes	1
2460	Kit Bussole distanz. e Cuscinetti	<i>Kit Spacers and sleeves</i>	Si / Yes	1
2531	Anello in due metà	<i>Split Ring</i>	Si / Yes	1
3001	Rete protezione	<i>Safety net</i>		
3011	Kit Cuscinetti Sfere e Rulli	<i>Kit Ball and Roller bearings</i>	Si / Yes	1
3200	Supporto Cuscinetti	<i>Bearing housing</i>		
3261	Kit Coperchietti cuscinetti	<i>Kit Bearing covers</i>	Si / Yes	1
3266	Coperchietto cieco	<i>Bearing end cover</i>	Si / Yes	1
3712.1	Kit Ghiere	<i>Kit nuts</i>	Si / Yes	1
3854	Tappo di riempimento	<i>Oil filler plug</i>		
3855	Oliatore	<i>Oil lever</i>		
4110	Cassa stoppa	<i>Seal box</i>		
4120	Premitreccia	<i>Gland</i>		
4130	Guarnizione a treccia	<i>Gland packing</i>	Si / Yes	1
4200	Tenuta meccanica	<i>Mechanical seal</i>	Si / Yes	1
4210	Flangia tenuta mecc.	<i>Flange mechanical seal</i>		
4271	Camicia tenuta mecc.	<i>Shaft sleeve m. seal</i>	Si / Yes	1
4311	Kit Anelli di tenuta sull'albero	<i>Kit shaft seal Rings</i>	Si / Yes	1
4610.1	Kit Guarnizioni OR	<i>Kit O-Rings</i>	Si / Yes	1
6262.1	Tubo di equilibrio	<i>Balance Pressure Pipe</i>		
6262.2	Tubo per tenuta meccanica	<i>Mechanical seal pipe</i>		
6515.1	Kit Tappi	<i>Kit Plugs</i>		
6546	Seeger	<i>Seeger</i>	Si / Yes	1
6571	Tirante	<i>Tie bolt</i>		
6573	Prigioniero	<i>Gland tie</i>		
6576.1-6	Kit Viti	<i>Kit Screws</i>		
6580.1	Kit Dadi	<i>Kit Nuts</i>		
6710	Kit Chiavette	<i>Kit Keys</i>	Si / Yes	1
6855	Rondella	<i>Washer</i>	Si / Yes	1

HPMA 25-32-50-80-100-125-150 LUBRIFICAZIONE A OLIO / O/L LUBRICATION



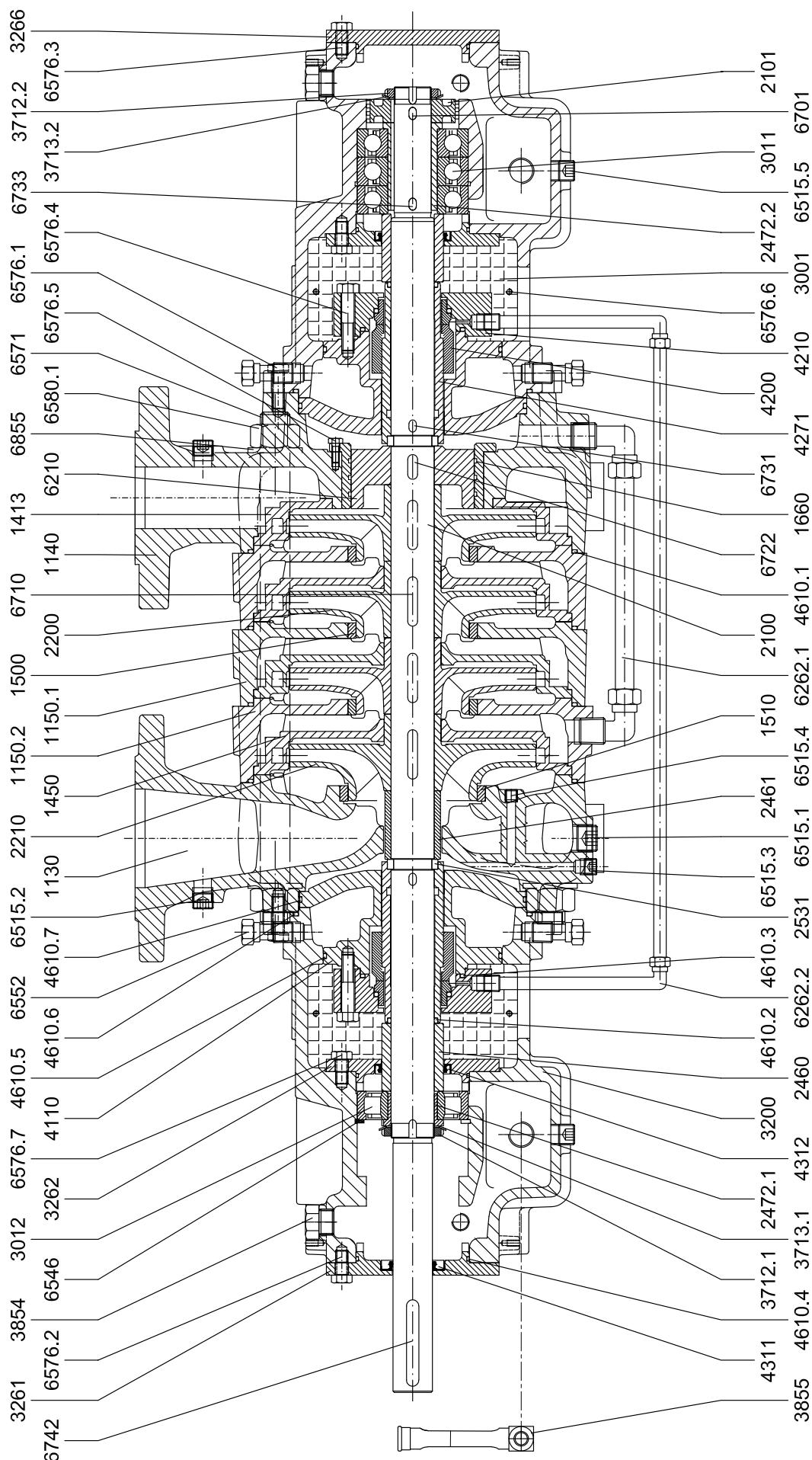
HPMA 125-150 LUBRIFICAZIONE A OLIO / OIL LUBRICATION



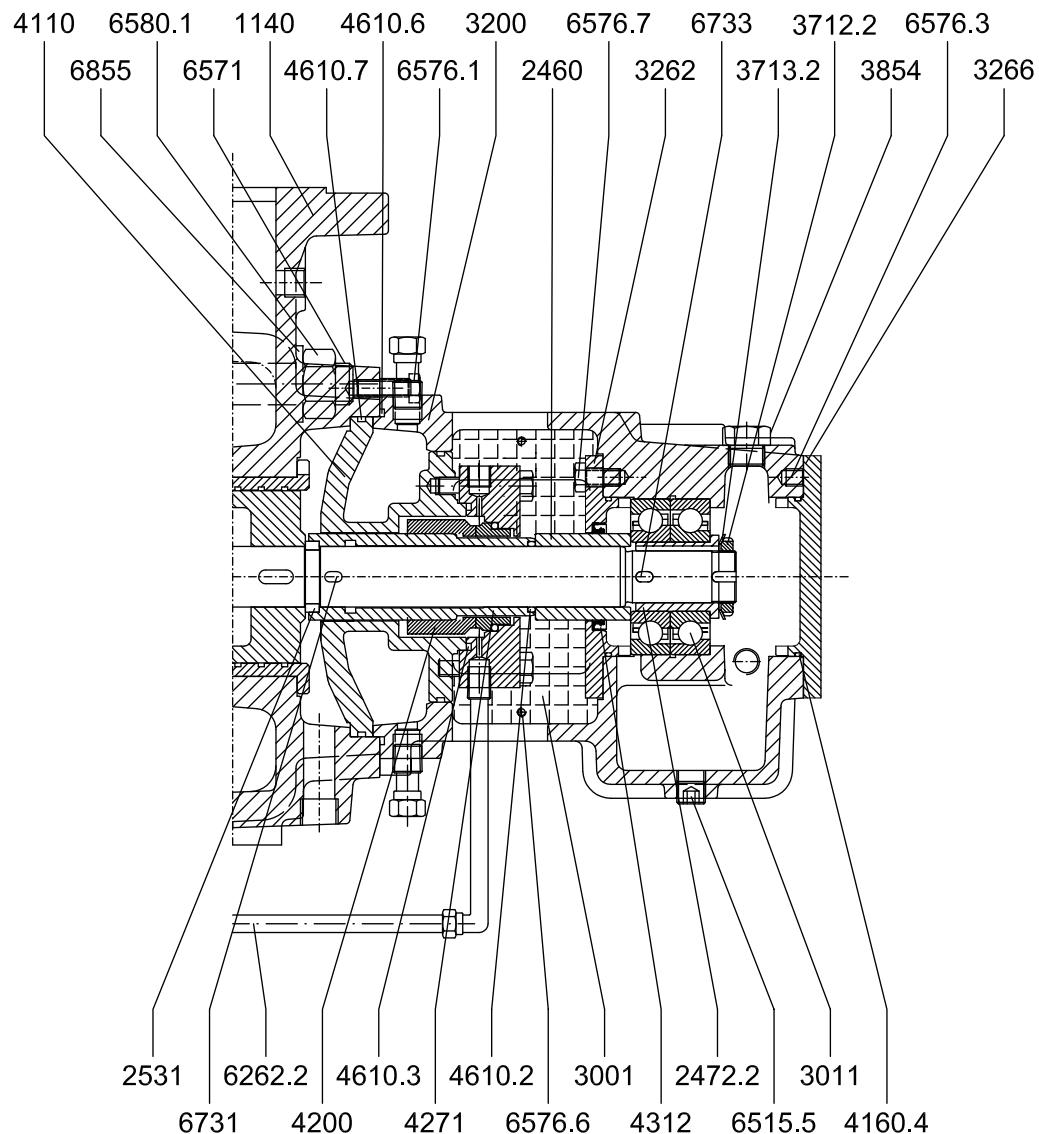
HPMA 25-32-50-80-100-125-150 LUBRIFICAZIONE A OLIO / OIL LUBRICATION

RIF. REF.	Descrizione parte	Part Description	Ricambio consigliato / Recomended spare part	Q.tà / Q.ty
1131	Corpo aspirante	<i>Suction casing for axial execution</i>		
1140	Corpo premente	<i>Discharge casing</i>		
1150.1	Corpo di stadio	<i>Stage casing</i>		
1150.2	Corpo di stadio	<i>Stage casing</i>		
1413	Diffusore ultimo stadio	<i>Diffuser last stage</i>		
1530	Kit Anelli di usura diffusore	<i>KIT diffusers Wear rings</i>	SI / Yes	1
1450	Diffusore	<i>Diffuser</i>		
1500/10	KIT Anelli di usura giranti	<i>KIT Wear ring impeller</i>	SI / Yes	1
1660	Boccola corpo premente	<i>Discharge casing bush</i>	SI / Yes	1
2100	Albero	<i>Shaft</i>		
2101	Circolatore olio	<i>Oil circulator</i>		
2200	Girante	<i>Impeller</i>		
2210	Girante di aspirazione	<i>Impeller suction stage</i>		
2450	Camicia per baderna	<i>Gland packing Shaft sleeve</i>	SI / Yes	1
2460/1	KIT Bussole distanziatrice	<i>KIT Space sleeves</i>	SI / Yes	1
2472.2	Bussola cuscinetto	<i>Shaft sleeve bearing</i>	SI / Yes	1
2520	Molla a tazza	<i>Shoulder ring</i>		
2540.1-2	KIT Deflettori	<i>KT Trowers</i>	SI / Yes	1
2531	Anello in due metà	<i>Split ring</i>		
3001	Rete protezione	<i>Safety net</i>		
3011/13	KIT Cuscinetti a sfere	<i>KIT Radial ball bearings</i>	SI / Yes	1
3200	Supporto Cuscinetti	<i>Bearing housing</i>		
3261	Coperchietto l.comando	<i>Bearing cover drive size</i>		
3262	Coperchietto l.pompa	<i>Bearing cover pump size</i>		
3300	Cuscinetto a boccola	<i>Bearing Bushing</i>	SI / Yes	1
3400	Camicia d'albero per il supporto cuscinetti	<i>Shaft-Sleeve Bearings</i>	SI / Yes	1
3712.2	Ghiera del cuscinetto	<i>Bearings Lockwasher</i>		
3713.2	Rosetta di sicurezza	<i>Washer</i>	SI / Yes	1
3851	Ingrassatore	<i>Greaser</i>		
3854	Tappo di riempimento	<i>Oil plug</i>		
3855	Oliatore livello costante	<i>Costant oil lever</i>		
4110	Corpo Cassa stoppa	<i>Seal Housing</i>		
4120	Premitreccia	<i>Gland packing</i>		
4130	Guarnizione a treccia	<i>Gland</i>	SI / Yes	1
4200	Tenuta meccanica	<i>Mechanical seal</i>	SI / Yes	1
4210	Flangia tenuta mecc.	<i>Flange mechanical seal</i>		
4271	Camicia tenuta mecc.	<i>Shaft sleeve mechanical seal</i>	SI / Yes	1
4311-2	KIT Anelli di tenuta sull'albero	<i>KIT Radial shaft seal</i>	SI / Yes	1
4610.1-7	KIT Guarnizione OR	<i>KIT O-Ring</i>	SI / Yes	1
6210	Tamburo di equilibrio	<i>Balance Drum</i>		
6262.1	Tubo di equilibrio	<i>Balance drum pipe</i>		
6262.2	Tubo per tenuta meccanica	<i>Mechanical seal pipe</i>		
6515.1-5	KIT Tappi	<i>KIT Plugs</i>	SI / Yes	1
6546	Seeger	<i>Seeger</i>	SI / Yes	1
6571	Tirante	<i>Tie rods</i>		
6573	Prigioniero	<i>Tie bolt</i>		
6576.1-9	KIT Viti T.E.	<i>KIT screws</i>		
6580.1-2	KIT Dadi	<i>KIT Nuts</i>		
6701-42	KIT Chiavette	<i>KIT Keys</i>	SI / Yes	1
6855	Rondella	<i>Washer</i>		

HPR 25-32-50-80-100-125-150 LUBRIFICAZIONE A OLIO / OIL LUBRICATION



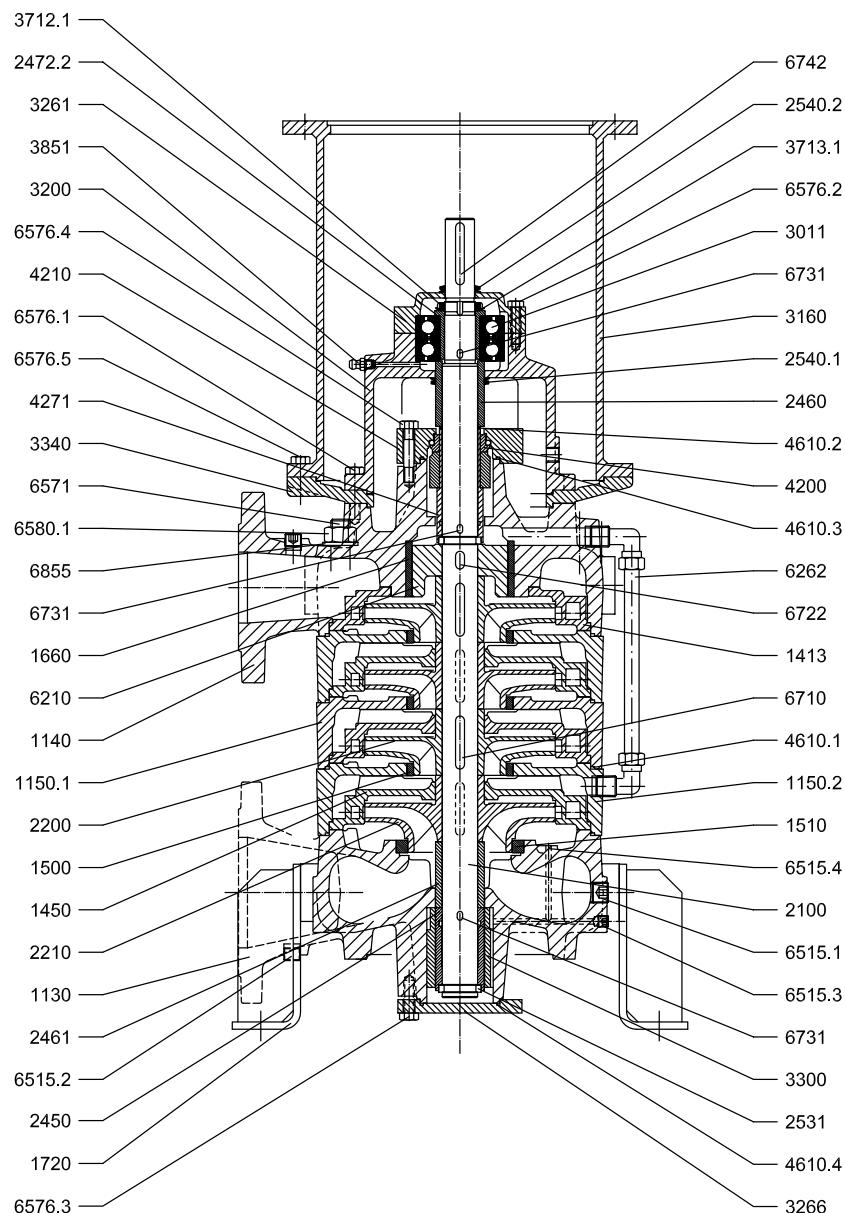
HPR 150 LUBRIFICAZIONE A OLIO / OIL LUBRICATION

HPR 150
THRUST BEARING SIDE

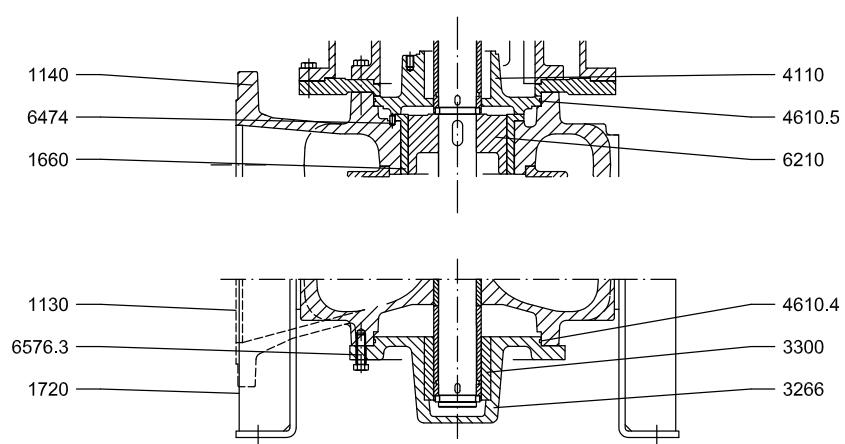
HPR 25-32-50-80-100-125-150 LUBRIFICAZIONE A OLIO / OIL LUBRICATION

RIF. REF.	Descrizione parte	Part Description	Ricambio consigliato / Recomended spare part	Q.tà / Q.ty
1130	Corpo aspirante	<i>Suction casing</i>		
1140	Corpo premente	<i>Discharge casing</i>		
1150.1	Corpo di stadio	<i>Stage casing</i>		
1150.2	Corpo di stadio	<i>Stage casing</i>		
1413	Diffusore ultimo stadio	<i>Diffuser last stage</i>		
1450	Diffusore	<i>Diffuser</i>		
1500	Kit Anelli di usura girante	<i>Kit Wear rings impellers</i>	Sì / Yes	1
1660	Boccola c. premente	<i>Discharge casing bush</i>	Sì / Yes	1
2100	Albero	<i>Shaft</i>		
2101	Circolatore olio	<i>Oil circulator</i>		
2200	Girante	<i>Impeller</i>		
2210	Girante di aspirazione	<i>Impeller suction stage</i>		
2460-72	Kit Bussole distanz. e cuscinetti	<i>Kit Spacers and Bearings sleeves</i>	Sì / Yes	1
2531	Anello in due metà	<i>Split ring</i>	Sì / Yes	1
3001	Rete protezione	<i>Safety net</i>		
3011	Kit Cuscinetti a sfere e Rulli	<i>Kit Radial Ball and Roller bearings</i>	Sì / Yes	1
3200	Supporto cuscinetti	<i>Bearing housing</i>		
3261	Kit Coperchietti cuscinetti	<i>Kit Bearing covers</i>		
3712.1	Kit Ghiere dei cuscinetti	<i>Kit Bearing nuts</i>		
3713.1	Kit Rosette	<i>Kit Lockwasher</i>	Sì / Yes	1
3854	Tappo di riempimento	<i>Oil liller plug</i>		
3855	Oliatore	<i>Oil lever</i>		
4110	Scatola tenuta meccanica	<i>Seal housing</i>		
4200	Tenuta meccanica	<i>Mechanical seal</i>	Sì / Yes	1
4210	Flangia tenuta mecc.	<i>Flange mechanical seal</i>		
4271	Camicia tenuta mecc.	<i>Kit Shaft seal Rings</i>	Sì / Yes	1
4311	Kit Anelli di tenuta sull'albero	<i>Radial shaft seal</i>	Sì / Yes	1
4610.1-7	Kit Guarnizioni OR	<i>Kit O-Rings</i>	Sì / Yes	1
6210	Tamburo di equilibrio	<i>Balance disc</i>		
6262.1	Tubo di equilibrio per Tamburo	<i>Drum feeding pipe</i>		
6262.2	Tubo per tenuta meccanica	<i>Mechanical seal pipe</i>		
6515.1	Kit Tappi	<i>Kit Plugs</i>		
6546	Seeger	<i>Seeger</i>		
6571	Tirante	<i>Tie bolt</i>		
6573	Prigioniero	<i>Gland tie</i>		
6576.1-7	Kit Viti	<i>Kit Screws</i>		
6580.1	Kit Dadi	<i>Kit Nuts</i>		
6701	Kit Chiavette	<i>Kit Keys</i>	Sì / Yes	1
6855	Rondella	<i>Washer</i>		

HV 25-32-50-80-100-250 LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION



HV 125-150 LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION



HV 25-32-50-80-100-125-150-250 LUBRIFICAZIONE A GRASSO / GREASE LUBRICATION

RIF. REF.	Descrizione parte	Part Description	Ricambio consigliato / Recomended spare part	Q.tà / Q.ty
1130	Corpo aspirante	<i>Suction casing</i>		
1140	Corpo premente	<i>Discharge casing</i>		
1150.1	Corpo di stadio	<i>Stage casing</i>		
1150.2	Corpo di stadio	<i>Stage casing</i>		
1413	Diffusore ultimo stadio	<i>Diffuser last stage</i>		
1450	Diffusore	<i>Diffuser</i>		
1500	Kit Anelli di usura girante	<i>Kit Wear rings impeller</i>	Sì / Yes	1
1660	Boccola c. premente	<i>Discharge casing bush</i>	Sì / Yes	1
1720	Piede supporto pompa	<i>Pump foot</i>		
2100	Albero	<i>Shaft</i>		
2200	Girante	<i>Impeller</i>		
2210	Girante di aspirazione	<i>Impeller suction stage</i>		
2520	Molla a tazza	<i>Shoulder ring</i>	Sì / Yes	1
2450	Camicia per baderna	<i>Space sleeve</i>	Sì / Yes	1
2460	Kit Bussole distanziatrice	<i>Kit Space sleeve</i>	Sì / Yes	1
2472.1	Kit Bussole cuscinetti	<i>Kit Shaft sleeve bearing</i>	Sì / Yes	1
2531	Anello in due metà	<i>Split ring</i>		
2540.1	Kit Deflettori	<i>Kit Trower</i>	Sì / Yes	1
3011	Kit Cuscinetti a sfere	<i>Kit Ball bearings</i>	Sì / Yes	1
3160	Lanterna motore	<i>Motor Braket</i>		
3200	Supporto cuscinetto	<i>Bearing housing</i>		
3261	Coperchietto l.comando	<i>Bearing cover drive size</i>		
3266	Coperchietto cieco	<i>Bearing end cover</i>		
3300	Cuscinetto a boccola	<i>Bearing bush</i>		
3340	Disco di accoppiamento	<i>Driving plate</i>		
3712.1	Kit Ghiere del cuscinetto	<i>Kit Bearing nut</i>	Sì / Yes	1
3851	Ingrassatore	<i>Grease cup</i>		
4110	Cassa stoppa	<i>Seal box</i>		
4200	Tenuta meccanica	<i>Mechanical seal</i>	Sì / Yes	1
4210	Flangia tenuta mecc.	<i>Flange mechanical seal</i>		
4271	Camicia tenuta mecc.	<i>Shaft sleeve m. seal</i>	Sì / Yes	1
4610.1	Kit Guarnizioni OR	<i>Kit O-Rings</i>	Sì / Yes	1
6210	Tamburo di equilibrio	<i>Balance disc</i>		
6262.1	Tubo di alimentazione Tamburo	<i>Drum feeding pipe</i>		
6474	Spina	<i>Pin</i>	Sì / Yes	1
6515.1	Kit Tappi	<i>Kit Plugs</i>		
6571	Tirante	<i>Tie bolt</i>		
6576.1-9	Kit Viti	<i>Kit Screw</i>		
6580.1	Dado	<i>Nut</i>		
6710	Kit Chiavette	<i>Kit Keys</i>	Sì / Yes	1
6855	Rondella	<i>Washer</i>		

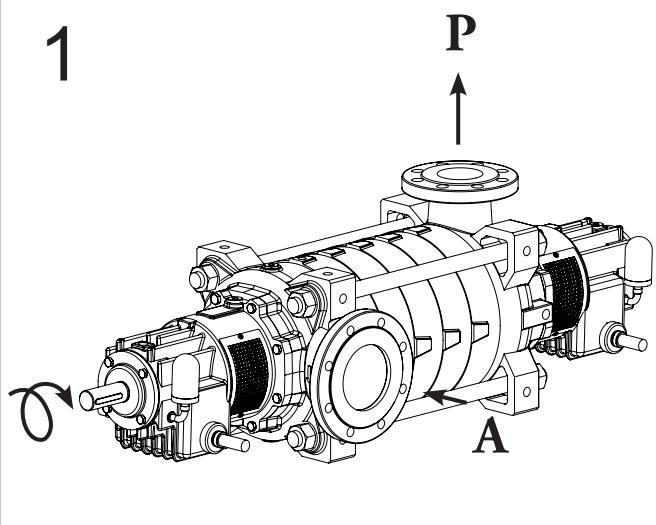
Posizioni delle flange pompa disponibili

Available pump flange positions

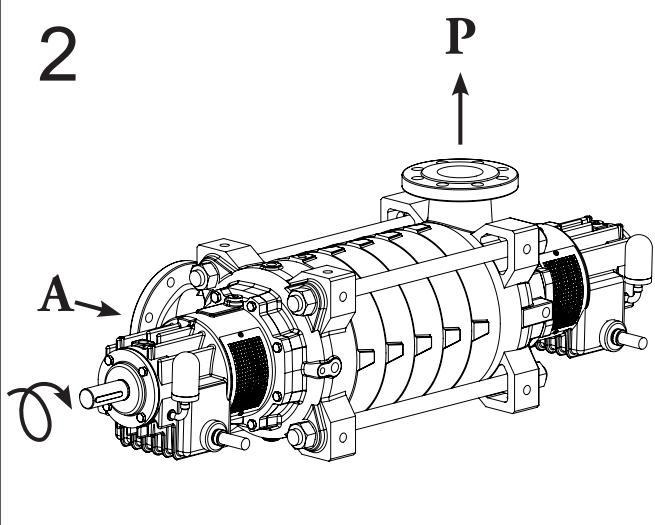
ORIENTAMENTO BOCCHE POMPE ORIZZONTALI / DIRECTION OF FLANGES HORIZONTAL PUMPS

P: bocca premente - delivery port
 A: bocca aspirante - suction port

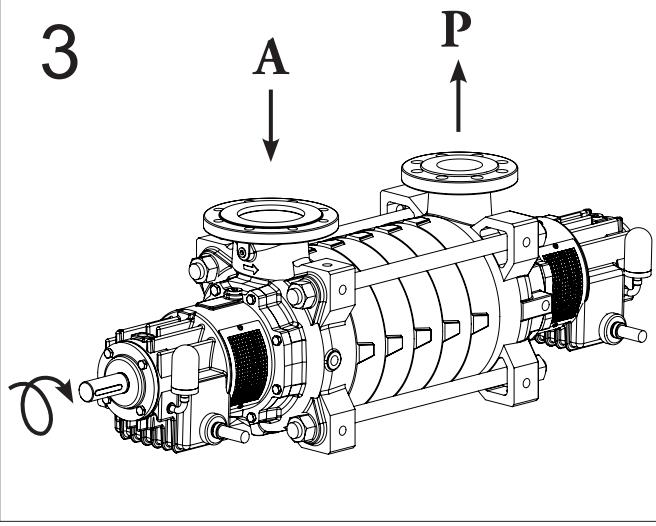
1



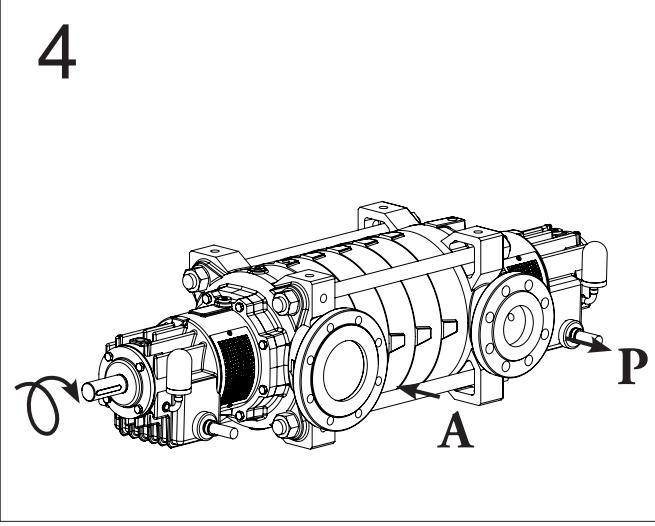
2



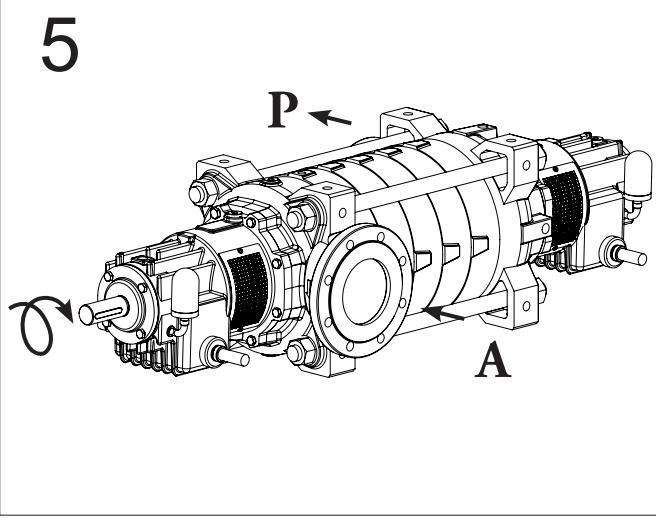
3



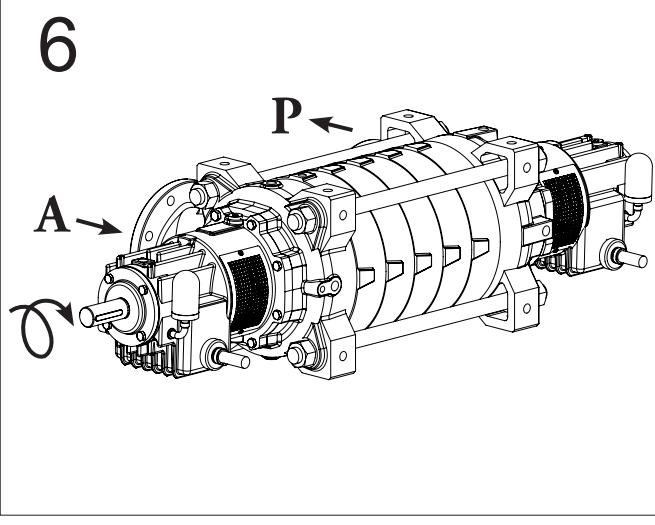
4



5

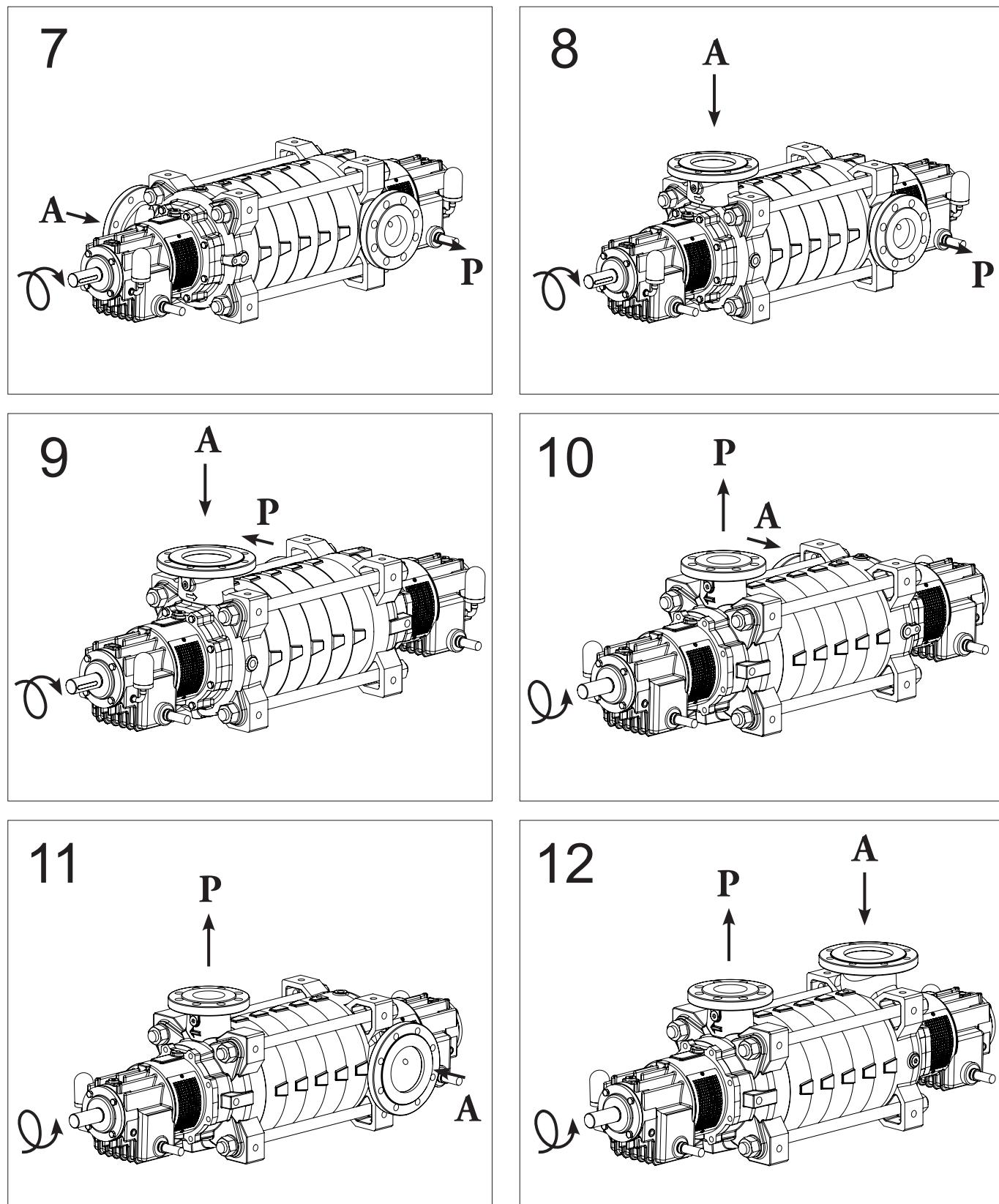


6



ORIENTAMENTO BOCCHE POMPE ORIZZONTALI / DIRECTION OF FLANGES HORIZONTAL PUMPS

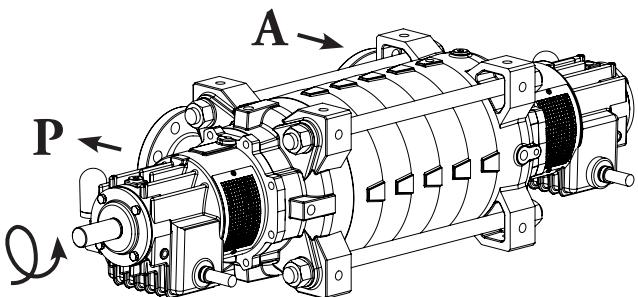
P: bocca premente - delivery port
 A: bocca aspirante - suction port



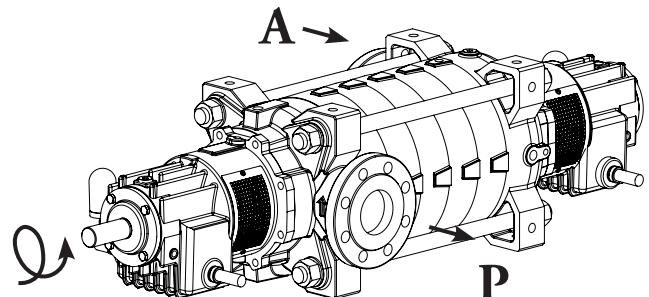
ORIENTAMENTO BOCCHE POMPE ORIZZONTALI / DIRECTION OF FLANGES HORIZONTAL PUMPS

P: bocca premente - delivery port
 A: bocca aspirante - suction port

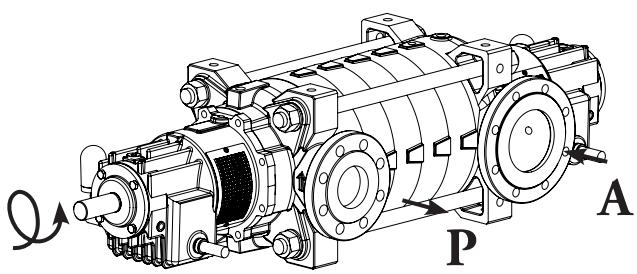
13



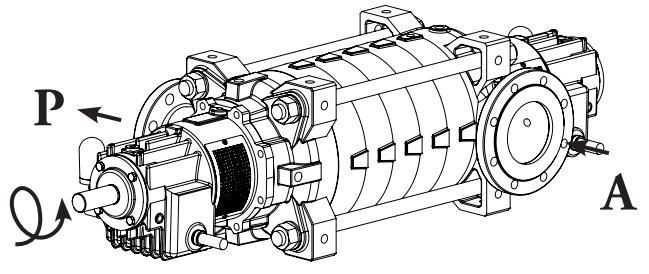
14



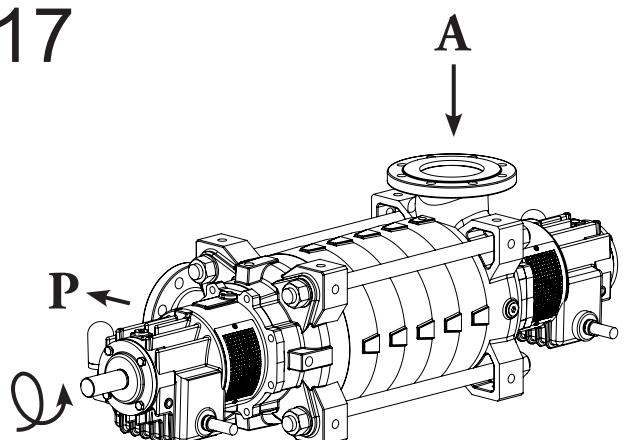
15



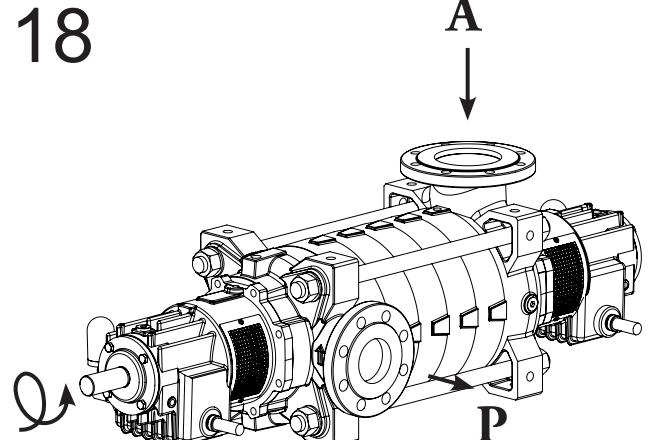
16



17

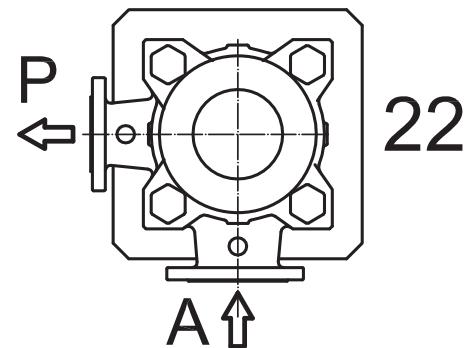
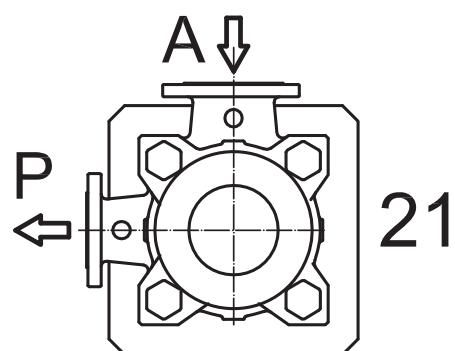
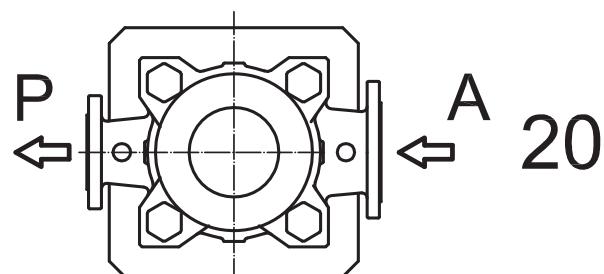
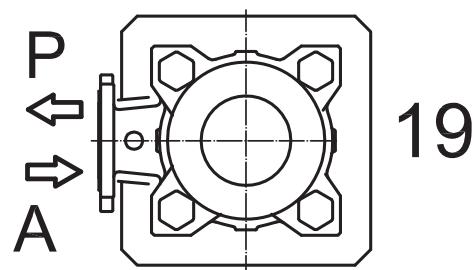


18



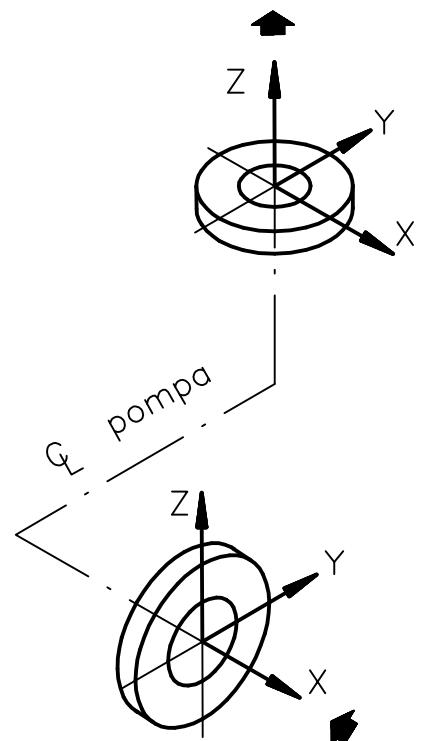
ORIENTAMENTO BOCCHE POMPE VERTICALI /
DIRECTION OF NOZZLES VERTICAL PUMPS

P: bocca premente - delivery port
A: bocca aspirante - suction port



Forze e momenti sulle flange in accordo con API 610 8th ed.
 Forces and torques to be applied on the flanges in accordance to API 610 8th ed.

FLANGE FLANGES		FORZE / FORCES daN				MOMENTI / TORQUES daN x m			
		Fx	Fy	Fz	Fr	Mx	My	Mz	Mr
ASPIRAZIONE / SUCTION	Dia.nom. ≤2"	89	71	58	128	46	23	35	62
	Dia.nom. 3"	133	107	89	193	95	47	72	128
	Dia.nom. 4"	178	142	116	256	133	68	100	180
	Dia.nom. 5"	244	190	330	344	175	90	128	256
	Dia.nom. 6"	311	249	205	448	230	118	176	313
	Dia.nom. 8"	489	378	311	692	593	176	258	471
	Dia.nom. 10"	667	534	445	963	502	244	380	675
	Dia.nom. 12"	800	667	534	1170	610	298	461	821
MANDATA / DELIVERY	Dia.nom. ≤2"	71	58	89	128	46	23	35	62
	Dia.nom. 3"	107	89	133	193	95	47	72	128
	Dia.nom. 4"	142	116	178	256	133	68	100	180
	Dia.nom. 5"	165	156	244	344	175	90	128	256
	Dia.nom. 6"	249	205	311	448	230	118	176	313
	Dia.nom. 8"	378	311	489	692	353	176	258	471
	Dia.nom. 10"	534	445	667	963	502	244	380	675



Il corpo pompa è in grado di sopportare il doppio dei valori di forze e momenti indicati in tabella applicati contemporaneamente sulle bocche, sovrapposti alla pressione interna, senza causare deformazioni che danneggino il funzionamento della pompa e della tenuta.

The pump body can stand the double of the torque and forces values above listed for the two flanges, plus the internal pump pressure, without causing deformations which could effect the pump functioning and sealing.

Dati tecnici e dimensioni Motore elettrico

Motor Data and overall dimensions





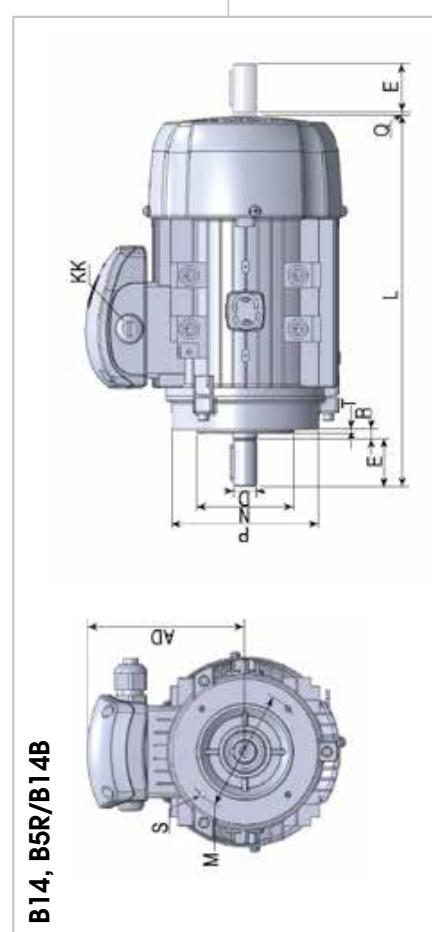
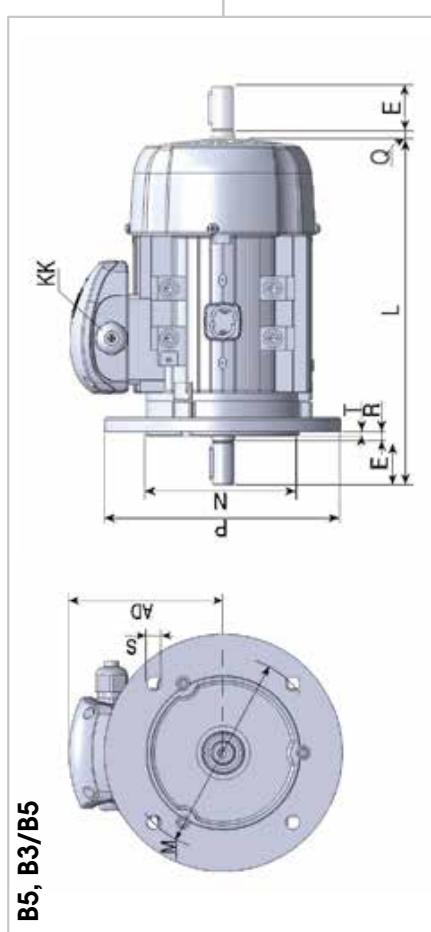
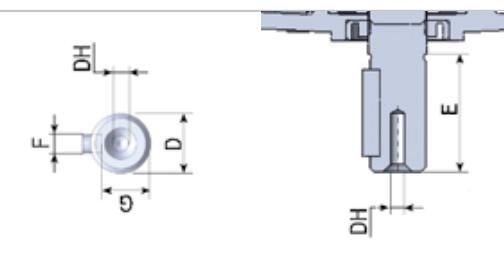
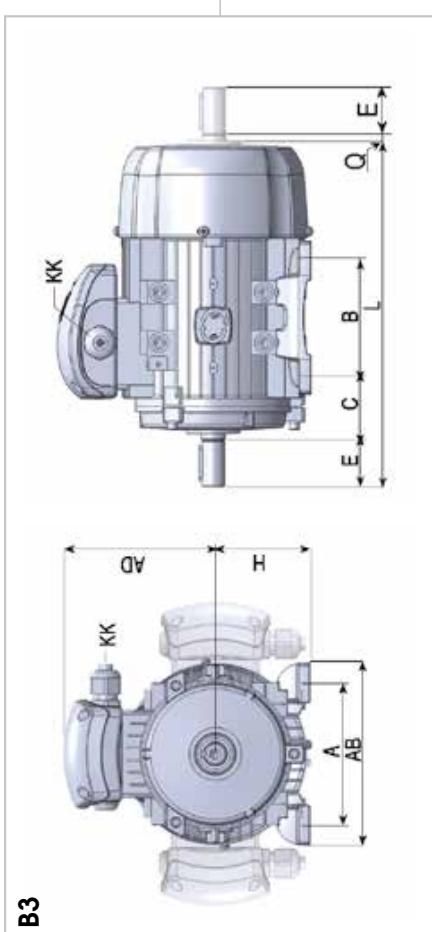
MOTOR CONFIGURATIONS AND INSTALLATION POSITIONS (IEC 34-7)

MOTORS WITH FEET B3	FLANGE-MOUNTED MOTORS B5	FLANGE-MOUNTED MOTORS B14
IM1051 [M B6]	IM3001 [M B5]	IM3601 [M B14]
IM1061 [M B7]	IM1011 [M V5]	IM3011 [M V18]
IM1071 [M B8]	IM1031 [M V6]	IM3031 [M V3]
B3/B5	B3/B14	V1/V6
IM2001 [M B35]	IM2101 [M B34]	IM2031 [M V15]
		IM2031 [M V36]



no ATDC/ATTD		ATDC/ATTD		IE2		IE3		B3								B5								B14								B5R / B14B							
Type	Poles	AD	AD	H	KK	L	L	D	DH	E	Q	F	G	A	AB	B	C	K	M	N	P	R	S	T	M	N	P	R	S	T	M	N	P	R	S	T			
56	2-8	102	-	56	M16	198	-	9	M4x12	20	3	3	7,2	90	111	71	36	5,8	100	80	120	0	7x4	3	65	50	80	0	M5	2,5	-	-	-	-	-	-			
63	2-8	107	116	63	M20	215	-	11	M4x12	23	3	4	8,5	100	123	80	40	7	115	95	140	0	10x4	3	75	60	90	0	M5	2,5	100	80	120	0	M6	2,5			
71	2-8	119	124	71	M20	244	-	14	M5X12	30	3	5	11,0	112	138	90	45	7	130	110	160	0	10x4	3,5	85	70	105	0	M6	2,5	115	95	140	0	M8	3,0			
80	2-8	130	139	80	M20	283	283	19	M6X16	40	3	6	15,5	125	157	100	50	10	165	130	200	0	12x4	3,5	100	80	120	0	M6	3,0	130	110	160	0	M8	3,5			
90S	2-8	145	146	90	M20	310	330	24	M8X19	50	5	8	20,0	140	173	100	56	10	165	130	200	0	12x4	3,5	115	95	140	0	M8	3,0	130	110	160	0	M8	3,5			
90L	2-8	145	146	90	M20	338	358	24	M8X19	50	5	8	20,0	140	173	125	56	10	165	130	200	0	12x4	3,5	115	95	140	0	M8	3,0	130	110	160	0	M8	3,5			
100	2-8	157	161	100	M20	373	393	28	M10X22	60	5	8	24,0	160	196	140	63	12	215	180	250	0	15x4	4	130	110	160	0	M8	3,5	165	130	200	0	M10	3,5			
112M	2-8	177	177	112	M25	390	410	28	M10X22	60	5	8	24,0	190	227	140	70	12	215	180	250	0	15x4	4	130	110	160	0	M8	3,5	165	130	200	0	M10	3,5			
132S	2-8	197	195	132	M32	460	480	38	M12X28	80	5	10	33,0	216	262	140	89	12	265	230	300	0	15x4	4	165	130	200	0	M10	3,5	215	180	250	0	M10	4,0			
132M	2-8	197	195	132	M32	496	516	38	M12X28	80	5	10	33,0	216	262	178	89	12	265	230	300	0	15x4	4	165	130	200	0	M10	3,5	215	180	250	0	M10	4,0			
160M	2-8	255	255	160	2xM40	615	615	42	M16X36	110	5	12	37,0	254	320	210	108	15	300	250	350	0	19x4	5	215	180	250	0	M12	4,0									
160L	2-8	252	252	160	2xM40	710	710	42	M16X36	110	5	12	37,0	254	320	254	108	15	300	250	350	0	19x4	5	215	180	250	0	M12	4,0									
180M	2-8	270	270	180	2xM40	730	730	48	M16X36	110	8	14	42,5	279	355	241	121	15	300	250	350	0	19x4	5															
180L	2-8	270	270	180	2xM40	780	780	48	M16X36	110	8	14	42,5	279	355	279	121	15	300	250	350	0	19x4	5															
200L	2-8	303	303	200	2xM50	771	771	55	M20X42	110	12	16	49,0	318	395	305	133	19	350	300	400	0	19x4	5															
225S	2-8	312	312	225	2xM50	811	815	60	M20X42	140	12	18	53,0	356	435	286	149	19	400	350	450	0	19x8	5															
225M	2	312	312	225	2xM50	820	820	55	M20X42	110	12	16	49,0	356	435	311	149	19	400	350	450	0	19x8	5															
225M	4-8	312	312	225	2xM50	850	850	60	M20X42	140	12	18	53,0	406	490	349	168	24	500	450	550	0	19x8	5															
250M	2	355	355	250	2xM63	910	910	60	M20X42	140	12	18	58,0	406	490	349	168	24	500	450	550	0	19x8	5															
250M	4-8	355	355	250	2xM63	910	910	65	M20X42	140	12	18	58,0	406	490	349	168	24	500	450	550	0	19x8	5															
280S	2	398	398	280	2xM63	985	985	65	M20X42	140	12	20	67,5	457	550	368	190	24	500	450	550	0	19x8	5															
280S	4-8	398	398	280	2xM63	985	985	75	M20X42	140	12	20	67,5	457	550	368	190	24	500	450	550	0	19x8	5															
280M	2	398	398	280	2xM63	1035	1035	65	M20X42	140	12	18	58,0	457	550	419	190	24	500	450	550	0	19x8	5															
280M	4-8	398	398	280	2xM63	1035	1035	75	M20X42	140	12	20	67,5	457	550	419	190	24	500	450	550	0	19x8	5															
315S	2	530	-	315	2xM63	1160	1160	65	M20X42	140	15	18	58,0	508	630	406	216	28	600	550	660	0	24x8	6															
315S	4-8	530	-	315	2xM63	1270	1270	80	M20X42	170	15	22	71,0	508	630	406	216	28	600	550	660	0	24x8	6															
315M	2	530	-	315	2xM63	1190	1190	65	M20X42	140	15	20	67,5	610	730	560	630	254	28	740	680	800	0	24x8	6														
315M	4-8	530	-	315	2xM63	1300	1300	80	M20X42	170	15	22	71,0	508	630	457	216	28	600	550	660	0	24x8	6															
315L	2	530	-	315	2xM63	1320	1320	65	M20X42	140	15	18	58,0	508	630	508	216	28	600	550	660	0	24x8	6															
315L	4-8	530	-	315	2xM63	1350	1350	80	M20X42	170	15	22	71,0	508	630	508	216	28	600	550	660	0	24x8	6															
355M	2	655	-	355	2xM63	1500	1500	75	M20X42	140	15	20	67,5	610	730	560	630	254	28	740	680	800	0	24x8	6														
355M	4-8	655	-	355	2xM63	1530	1530	95	M20X42	140	15	20	67,5	610	730	560	630	254	28	740	680	800	0	24x8	6														
355L	2	655	-	355	2xM63	1530	1530	95	M20X42	170	15	25	86,0	610	730	560	630	254	28	740	680	800	0	24x8	6														
355L	4-8	655	-	355	2xM63	1530	1530	95	M20X42	170	15	25	86,0	610	730	560	630	254	28	740	680	800	0	24x8	6														

For the dimensional data of delfire series, ask to our commercial office.



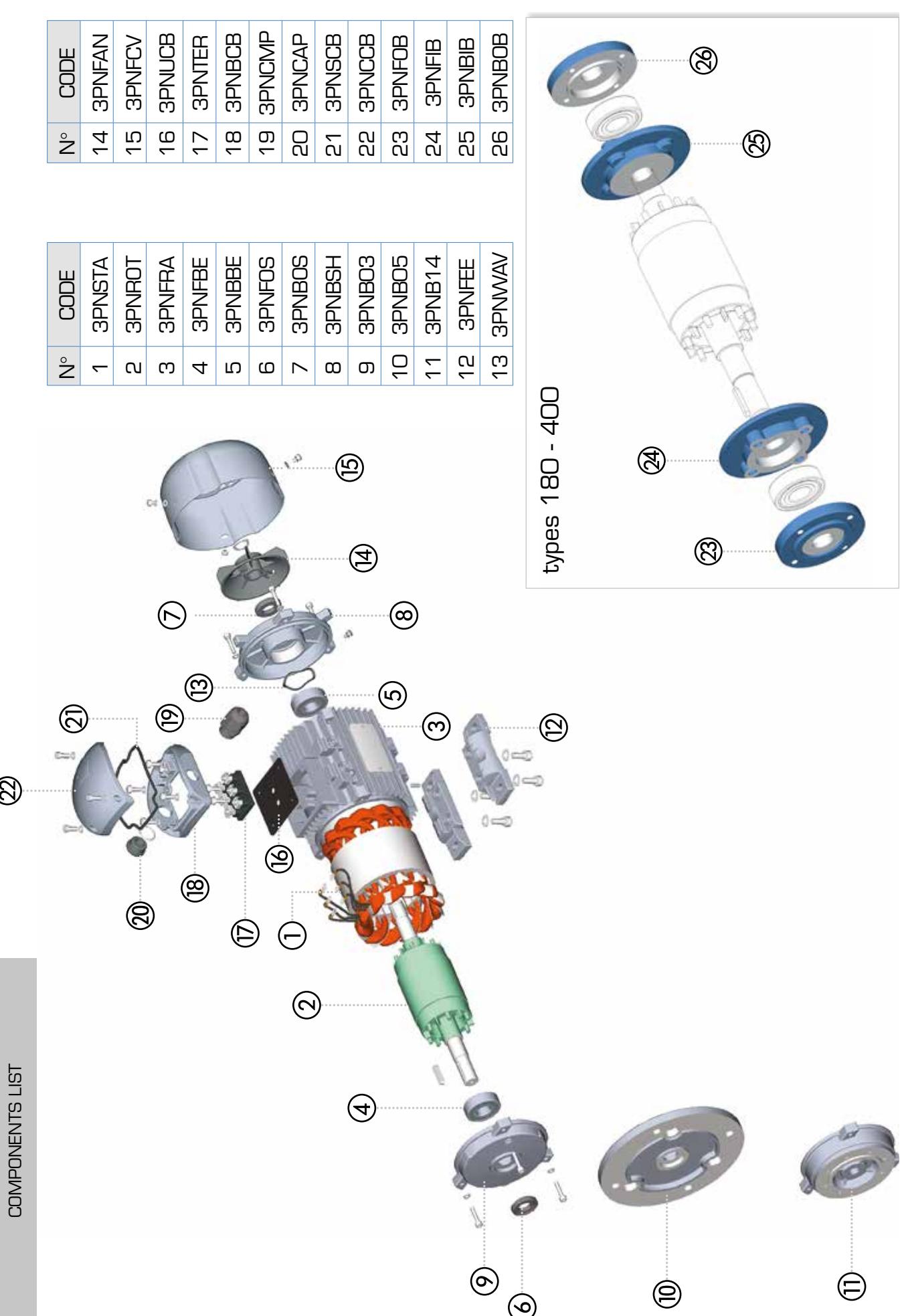
TYPE	POLES	SV IE2		SV IE3		ATDC AT24		ATDC+SV AT24+SV		ATTD		ATTG+SV	
		L	L	L	L	L	L	L	L	L	L	L	L
56	28	-	-	-	-	-	-	-	-	-	-	-	-
63	28	301	-	-	276	401	321	438	497	560	577	591	602
71	28	341	-	-	300	442	365	497	560	621	647	668	693
80	28	388	-	-	340	509	417	566	625	688	714	739	764
90S	28	420	440	-	385	566	465	577	635	700	726	751	776
90L	28	445	465	-	410	591	490	602	660	725	751	776	791
100	28	483	503	-	450	621	520	636	695	760	786	811	836
112M	28	525	545	-	475	668	563	693	754	819	845	870	895
132S	28	590	610	-	557	765	640	795	854	919	944	969	994
132M	28	625	645	-	590	803	677	832	892	957	982	1007	1032
160M	28	765	765	-	720	1009	820	929	988	1053	1078	1103	1128
160L	28	860	860	-	771	1104	882	1033	1100	1165	1190	1215	1240
180M	28	860	860	-	847	990	995	1140	1204	1269	1294	1319	1344
180L	28	910	910	-	896	1038	1044	1188	1252	1317	1342	1367	1392
200L	28	973	973	-	890	1013	1050	1178	1227	1292	1317	1342	1367
225S	28	955	955	-	935	1090	1115	1125	1184	1249	1274	1299	1324
225M	2	955	955	-	935	1090	1115	1125	1184	1249	1274	1299	1324
225M	48	985	985	-	965	1120	1145	1255	1324	1399	1424	1449	1474
250M	2	1045	1045	-	1075	1211	1285	1466	1534	1609	1634	1669	1694
250M	48	1045	1045	-	1075	1211	1285	1466	1534	1609	1634	1669	1694
280S	2	1105	1105	-	1175	1274	1355	1444	1513	1588	1613	1638	1663
280S	48	1105	1105	-	1175	1274	1355	1444	1513	1588	1613	1638	1663
280M	2	1160	1160	-	1230	1329	1410	1499	1568	1643	1668	1693	1718
280M	48	1160	1160	-	1230	1329	1410	1499	1568	1643	1668	1693	1718
315S	2	1400	1400	-	-	-	-	-	-	-	-	-	-
315S	48	1430	1430	-	-	-	-	-	-	-	-	-	-
315M	2	1500	1500	-	-	-	-	-	-	-	-	-	-
315M	48	1530	1530	-	-	-	-	-	-	-	-	-	-
315L	2	1500	1500	-	-	-	-	-	-	-	-	-	-
315L	48	1530	1530	-	-	-	-	-	-	-	-	-	-
355M	2	1740	1740	-	-	-	-	-	-	-	-	-	-
355M	48	1770	1770	-	-	-	-	-	-	-	-	-	-
355L	2	1740	1740	-	-	-	-	-	-	-	-	-	-
355L	48	1770	1770	-	-	-	-	-	-	-	-	-	-

IE3, premium efficiency class IE 60034-30-1

data at 400V 50Hz

KW	Hp	Type	rpm	In [A]	Is [A]	Cn [Nm]	Cs [Nm]	Cm [Nm]	Cmax — Cn (Nm)	η %			min IE3	Pwr. fact. cosφ	ΔT [°C]	LwA (dB)	J Kgm²	kg	
										100%	IE	75%							
0.75	1	80A-2	2892	1.74	11.84	6.8	2.48	8.60	3.5	9.18	3.7	80.9	IE3	79.6	76.4	0.770	0.566	35	0.00158
1.1	1.5	80B-2	2885	2.26	16.74	7.4	3.64	10.90	3.0	12.74	3.5	84.5	IE3	84.7	82.8	0.770	0.652	41	0.00185
1.5	2	90S-2	2894	3.22	23.78	7.4	4.95	20.10	4.1	18.78	3.8	85.3	IE3	85.2	83.7	0.788	0.588	37	0.00363
2.2	3	90L-2	2891	4.58	35.20	7.7	7.27	30.30	4.2	30.83	4.2	86.2	IE3	86.4	84.7	0.710	0.610	43	0.00726
3	4	100L-2	2898	5.80	44.87	7.7	9.89	30.80	3.1	35.98	3.6	87.1	IE3	87.7	86.8	0.810	0.710	51	0.01439
4	5.5	112M-2	2894	7.48	59.55	7.0	13.20	33.05	2.8	37.02	3.5	89.6	IE3	90.5	90.2	0.862	0.810	52	0.01663
5.5	7.5	132SA-2	2940	10.14	70.59	7.0	17.87	37.70	2.1	35.79	2.0	91.0	IE3	89.7	87.4	0.860	0.840	48	0.03300
7.5	10	132SB-2	2925	13.35	95.00	7.1	24.49	53.50	2.2	78.50	3.2	91.6	IE3	92.4	92.9	0.885	0.850	60	0.03960
11	15	160MA-2	2937	19.72	123.05	6.2	35.77	73.32	2.1	100.15	2.8	91.4	IE3	91.2	89.7	0.881	0.864	49	0.04976
15	20	160MB-2	2938	26.29	150.23	5.7	48.76	95.08	2.0	121.89	2.5	92.6	IE3	91.8	89.5	0.877	0.841	61	0.06387
18.5	25	160L-2	2942	32.15	192.92	6.0	60.05	124.31	2.1	179.00	2.1	93.0	IE3	93.7	92.4	0.893	0.875	58	0.07260
22	30	180M-2	2950	37.53	304.03	8.1	71.22	163.81	2.3	220.80	3.1	94.0	IE3	93.9	92.7	0.900	0.880	41	0.08990
30	40	200LA-2	2940	51.51	386.34	7.5	97.45	224.13	2.3	223.37	2.3	93.4	IE3	94.4	90.7	0.900	0.881	65	0.16368
37	50	200LB-2	2960	63.26	474.46	7.5	119.38	274.56	2.3	275.49	2.3	93.8	IE3	93.6	90.2	0.900	0.887	65	0.27000
45	60	225M-2	2960	76.69	582.87	7.6	145.19	333.93	2.3	332.80	2.3	94.1	IE3	93.9	90.7	0.900	0.878	65	0.30756
55	75	250M-2	2970	94.39	707.92	7.5	176.85	406.76	2.3	406.76	2.3	94.5	IE3	92.6	88.5	0.890	0.872	65	0.41184
75	100	280S-2	2970	127.01	876.39	6.9	241.16	530.56	2.2	554.67	2.3	94.7	IE3	92.8	88.7	0.896	0.875	59	0.76488
90	125	280M-2	2970	151.93	1078.73	7.1	289.39	636.67	2.2	665.61	2.3	95.0	IE3	94.9	92.9	0.900	0.894	65	0.89100
110	150	315S-2	2970	185.31	1315.68	7.1	353.70	707.41	2.0	778.15	2.2	95.2	IE3	95.1	93.1	0.900	0.894	65	0.96800
132	180	315MA-2	2970	221.67	1573.86	7.1	424.44	848.89	2.0	933.78	2.2	95.5	IE3	95.4	93.4	0.900	0.894	65	0.240240
160	215	315LA-2	2970	265.46	1884.77	7.1	514.48	1028.96	2.0	1131.85	2.2	95.6	IE3	95.5	93.5	0.904	0.867	65	0.274560
200	270	315LB-2	2970	330.79	2348.59	7.1	643.10	1286.20	2.0	1414.81	2.2	95.9	IE3	95.8	93.8	0.910	0.904	65	0.314160
250	335	355M-2	2980	413.48	2935.74	7.1	801.17	1602.35	2.0	1762.58	2.2	95.9	IE3	95.8	93.8	0.910	0.904	65	0.39600
315	423	355L-2	2980	520.99	3699.03	7.1	1009.48	2018.96	2.0	2220.86	2.2	95.9	IE3	95.8	93.8	0.910	0.904	65	0.29000
KW	Hp	Type	rpm	In [A]	Is [A]	Cn [Nm]	Cs [Nm]	Cm [Nm]	Cmax — Cn (Nm)	η %			min IE3	Pwr. fact. cosφ	ΔT [°C]	LwA (dB)	J Kgm²	kg	
										100%	IE	75%							
0.75	1	80B-4	1430	1.87	11.24	6.0	5.01	16.90	3.4	12.90	2.6	82.9	IE3	82.6	82.5	0.700	0.600	451	38
1.1	1.5	90S-4	1431	2.54	15.83	6.2	7.34	25.60	3.5	24.50	3.3	84.8	IE3	86.2	85.5	0.738	0.660	44	0.00304
1.5	2	90L-4	1438	3.38	19.62	5.8	9.96	32.11	3.2	34.90	3.5	85.9	IE3	86.3	85.1	0.747	0.658	47	0.00356
2.2	3	100LA-4	1425	4.35	34.15	7.8	14.74	41.27	2.8	41.27	2.8	86.7	IE3	86.9	86.0	0.841	0.782	53	0.00713
3	4	100LB-4	1450	6.07	46.83	7.7	19.76	54.30	2.7	56.31	2.8	89.0	IE3	89.3	88.0	0.877	0.801	57	0.00893
4	5.5	112M-4	1442	7.95	54.51	6.9	26.49	74.03	2.9	74.22	3.3	89.1	IE3	90.3	88.6	0.915	0.760	53	0.1267
5.5	7.5	132S-4	1454	10.64	68.01	6.4	36.12	75.86	2.1	101.15	2.8	89.9	IE3	92.1	92.4	0.880	0.770	61	0.02853
7.5	10	132M-4	1460	14.39	94.37	6.6	49.06	91.80	1.9	132.46	2.7	90.5	IE3	90.8	89.9	0.881	0.790	46	0.03946
11	15	160M-4	1468	20.76	121.31	5.8	71.56	121.50	1.7	193.21	2.7	91.8	IE3	91.7	90.4	0.833	0.790	52	0.08133
15	20	160L-4	1460	28.19	140.97	5.0	98.12	166.60	1.7	255.10	2.6	92.3	IE3	93.1	92.3	0.832	0.780	61	0.12229
18.5	25	180M-4	1477	33.53	206.45	6.2	120.94	202.50	1.7	384.23	3.2	92.6	IE3	92.1	90.2	0.870	0.817	40	0.18531
22	30	180L-4	1470	39.62	297.13	7.5	142.93	314.44	2.2	328.73	2.3	93.2	IE3	91.7	91.0	0.860	0.832	80	0.21055
30	40	200L-4	1480	53.48	385.07	7.2	193.58	425.88	2.2	445.24	2.3	93.6	IE3	93.8	92.8	0.865	0.818	80	0.34930
37	50	225S-4	1480	65.37	490.30	7.5	238.75	525.25	2.2	549.13	2.3	93.9	IE3	92.7	92.0	0.870	0.839	75	0.54128
45	60	225M-4	1480	77.39	588.17	7.6	290.37	638.82	2.2	667.85	2.3	94.3	IE3	93.3	92.8	0.890	0.872	80	0.62527
55	75	250M-4	1480	93.89	713.58	7.6	354.90	780.78	2.2	816.27	2.3	95.0	IE3	94.2	93.5	0.862	0.860	75	0.87981
75	100	280S-4	1480	127.90	882.51	6.9	483.95	1064.70	2.2	1113.09	2.3	95.1	IE3	93.5	91.0	0.890	0.843	70	0.17160
90	120	280M-4	1485	155.06	1085.43	7.0	578.79	1273.33	2.2	1331.21	2.3	95.2	IE3	93.5	92.3	0.880	0.872	83.8	0.96680
110	150	315S-4	1480	188.92	1303.57	6.9	709.80	1561.55	2.2	1632.53	2.3	95.5	IE3	93.8	92.3	0.894	0.880	65	0.413160
132	180	315M-4	1480	226.23	1561.02	6.9	851.76	1873.86	2.2	1959.04	2.3	95.7	IE3	94.0	92.5	0.880	0.872	83.8	1.1800
160	220	315LA-4	1480	273.65	1888.20	6.9	1032.43	2271.35	2.2	2374.59	2.3	95.9	IE3	94.2	92.7	0.880	0.872	83.8	0.542784
200	270	315LB-4	1480	341.71	2357.79	6.9	1290.54	2839.19	2.2	2968.24	2.3	96.0	IE3	94.3	92.8	0.880	0.872	80	0.634920
250	335	355M-4	1490	417.21	2878.74	6.9	1602.35	3525.17	2.2	3685.40	2.3	96.1	IE3	94.4	92.9	0.900	0.892	75	0.861960
315	423	355L-4	1490	526.23	3630.99	6.9	2018.96	4441.71	2.2	4643.61	2.3	96.0	IE3	94.3	92.8	0.900	0.892	70	0.1087680
																		20900	

kW	hp	Type	rpm	In [A]	Is [A]	Cn (Nm)	Cs (Nm)	Cs [Nm]	Cmax [Nm]	Cmax [Nm]	η %			Pwr. fact. cosφ	ΔT [°C]	LwA [dB]	J Kgm²	
											IE	75%	50%					
0.75	1	90S6	941	1.96	8.60	4.4	7.61	18.20	2.4	19.03	2.5	79.1	79.2	75.9	0.699	0.570	0.482	40
1.1	1.5	90L6	936	2.86	12.10	4.2	11.22	27.40	2.4	29.18	2.6	81.1	81.2	77.7	0.685	0.570	0.438	53
1.5	2	100L6	949	3.53	17.03	4.8	15.09	32.90	2.2	37.74	2.5	83.0	83.8	82.5	0.738	0.650	0.526	52
2.2	3	112M6	955	5.28	25.56	4.8	22.00	47.60	2.2	57.20	2.6	84.8	85.6	84.3	0.709	0.630	0.498	59
3	4	132S6	971	6.99	38.51	5.5	29.51	58.10	2.0	76.71	2.6	87.6	88.0	86.7	0.707	0.611	0.511	59
4	5	132MA6	974	9.34	58.39	6.3	39.22	90.90	2.3	125.50	3.2	88.2	88.0	86.1	0.701	0.610	0.484	51
5.5	7.5	132MB6	972	12.46	72.99	5.9	54.04	124.29	2.3	156.71	2.9	90.0	90.1	89.2	0.708	0.606	0.492	63
7.5	10	160M6	970	15.56	104.25	6.7	73.84	155.06	2.1	162.45	2.2	89.2	89.3	88.4	0.780	0.668	0.542	70
11	15	160L6	970	22.26	153.57	6.9	108.30	227.43	2.1	238.26	2.2	90.3	90.4	89.5	0.790	0.676	0.549	70
15	20	180L6	980	29.28	210.79	7.2	146.17	292.35	2.0	306.96	2.1	91.3	91.4	90.5	0.810	0.693	0.563	70
18.5	25	200LA6	980	35.95	258.84	7.2	180.28	378.59	2.1	396.62	2.2	91.7	91.8	90.9	0.810	0.693	0.563	70
22	30	200LB6	980	41.96	306.27	7.3	214.39	450.21	2.1	471.65	2.2	92.3	92.4	91.5	0.820	0.702	0.570	70
30	40	225M6	980	56.78	403.15	7.1	292.35	584.69	2.0	613.93	2.1	93.1	93.1	92.2	0.820	0.702	0.570	70
37	50	250M6	980	68.07	483.30	7.1	360.56	757.18	2.1	793.23	2.2	93.4	93.5	92.6	0.840	0.719	0.584	70
45	60	280S6	980	80.52	579.73	7.2	438.52	920.89	2.1	964.74	2.2	93.8	93.9	93.0	0.860	0.736	0.598	70
55	75	280M6	980	97.99	705.55	7.2	535.97	1125.54	2.1	1179.13	2.2	94.2	94.3	93.4	0.860	0.736	0.598	70
75	100	315S6	980	134.48	901.05	6.7	730.87	1461.73	2.0	1534.82	2.1	94.7	94.8	93.9	0.850	0.728	0.591	70
90	125	315MA6	980	162.79	1090.67	6.7	877.04	1754.08	2.0	1841.79	2.1	95.0	95.1	94.2	0.840	0.719	0.584	70
110	150	315LA6	980	196.21	1314.59	6.7	1071.94	2143.88	2.0	2251.07	2.1	95.2	95.3	94.4	0.850	0.728	0.591	70
132	180	315LB6	980	231.98	1554.27	6.7	1286.33	2572.65	2.0	2701.29	2.1	95.5	95.6	94.7	0.860	0.736	0.598	70
160	220	355MA6	980	277.38	1858.42	6.7	1559.18	3118.37	2.0	3274.29	2.1	95.7	95.8	94.8	0.870	0.745	0.605	70
200	270	355MB6	980	346.00	2318.18	6.7	1948.98	3897.96	2.0	4092.86	2.1	95.9	96.0	95.0	0.870	0.745	0.605	70
250	335	355L6	980	432.50	2897.72	6.7	2436.22	4872.45	2.0	5116.07	2.1	95.9	96.0	95.0	0.870	0.745	0.605	70



RUBBER SEAL RINGS AND BEARINGS

FRAME SIZE	POLES NUMBER	RUBBER SEAL RING ⑥	RUBBER SEAL RING ⑦	BEARINGS ④	BEARINGS ⑤
56	2 - 8	12x24x7	12x24x7	6201 ZZ-C3	6201 ZZ-C3
63	2 - 8	12x24x7	12x24x7	6201 ZZ-C3	6201 ZZ-C3
71	2 - 8	15x30x7	15x26x7	6202 ZZ-C3	6202 ZZ-C3
80	2 - 8	20x35x7	20x35x7	6204 ZZ-C3	6204 ZZ-C3
90	2 - 8	25x40x7	25x40x7	6205 ZZ-C3	6205 ZZ-C3
100	2 - 8	30x47x7	30x47x7	6206 ZZ-C3	6206 ZZ-C3
112	2 - 8	30x47x7	30x47x7	6206 ZZ-C3	6206 ZZ-C3
132	2 - 8	40x62x8	40x62x8	6208 ZZ-C3	6208 ZZ-C3
160	2 - 8	45x62x8	45x62x8	6309 ZZ-C3	6309 ZZ-C3
180	2 - 8	55x72x8	55x72x8	6311 ZZ-C3	6311 ZZ-C3
200	2 - 8	60x80x8	60x80x8	6312 ZZ-C3	6312 ZZ-C3
225	2 - 8	65x80x10	65x80x10	6313 ZZ-C3	6313 ZZ-C3
250	2 - 8	70x90x10	70x90x10	6314 ZZ-C3	6314 ZZ-C3
280	2	70x90x10	70x90x10	6314 ZZ-C3	6314 ZZ-C3
280	4 - 8	85x100x12	85x100x12	6317 ZZ-C3	6317 ZZ-C3
315	2	85x110x12	85x110x12	6317-C3	6317-C3
315	4 - 8	95x120x12	95x120x12	NU 319-C3	6319-C3
355	2	95x120x12	95x120x12	6319-C3	6319-C3
355	4 - 8	110x130x12	110x130x12	NU 322-C3	6322-C3
400	4 - 8	130x160x12	130x160x12	NU 326-C3	6326-C3

⑤ ⑦

⑥ ④



"bearing lubrication devices" are an optional.

Appendice tecnica

Technical appendix

**PERDITE DI CARICO IN METRI OGNI 100 METRI DI TUBAZIONE DRITTA IN ACCIAIO /
HEAD LOSSES IN METRES FOR EVERY 100 METRES OF STRAIGHT PIPING**

V Q h	DIAMETRO DEI TUBI IN mm - DIAMETER OF THE PIPES IN mm												
	20	25	30	40	50	65	80	100	125	150	175	200	250
0,5	Q 9,4	14,7	21,2	37,7	59	115	151	235	369	530	723	940	1480
	h 2,4	1,9	1,5	1	0,8	0,56	0,46	0,36	0,28	0,23	0,19	0,16	0,13
0,6	Q 11,3	17,7	25,4	45,3	70,7	138	181	282	442	636	887	1130	1770
	h 3,3	2,6	2,1	1,5	1,12	0,78	0,65	0,5	0,39	0,32	0,27	0,23	0,18
0,7	Q 13,2	20,6	29,7	52,9	82,5	161	211	329	516	742	1010	1315	2070
	h 4,4	3,4	2,7	1,9	1,5	1	0,86	0,67	0,52	0,43	0,36	0,31	0,24
0,8	Q 15,05	23,6	33,9	60,4	94,5	184	241	377	590	848	1155	1505	2360
	h 5,6	4,3	3,4	2,5	1,9	1,3	1,1	0,86	0,67	0,55	0,46	0,4	0,31
0,9	Q 16,95	26,5	38,2	68	106	207	272	423	664	955	1300	1695	2660
	h 6,9	5,3	4,3	3	2,4	1,7	1,4	1,1	0,84	0,69	0,58	0,5	0,39
1	Q 18,8	29,5	42,4	75,5	117,7	230	302	471	737	1060	1445	1880	2950
	h 8,3	6,4	5,1	3,7	2,9	2,1	1,7	1,3	1	0,84	0,71	0,61	0,48
1,1	Q 20,7	32,4	46,6	83	129,5	252	332	518	811	1165	1585	2070	3250
	h 9,9	7,6	6,2	4,4	3,4	2,4	2	1,6	1,2	1	0,85	0,74	0,58
1,2	Q 22,6	35,4	50,9	90,6	141	276	362	565	885	1272	1730	2260	3550
	h 11,7	9	7,2	5,2	4	2,9	2,4	1,9	1,5	1,2	1	0,87	0,69
1,3	Q 24,5	38,3	55	98	153	299	392	612	960	1378	1875	2450	3840
	h 13,5	10,4	8,4	6	4,7	3,3	2,8	2,2	1,71	1,4	1,15	1	0,8
1,4	Q 26,35	41,3	59,3	105,5	165	302	422	660	1032	1473	2020	2635	4140
	h 15,4	11,9	9,6	6,9	5,4	3,8	3,2	2,5	2	1,6	1,3	1,17	0,92
1,5	Q 28,25	44,2	63,6	113	176,5	345	452	707	1106	1590	2165	2825	4430
	h 17,4	13,5	10,9	7,8	6,1	4,4	3,6	2,8	2,25	1,82	1,5	1,34	1,05
1,6	Q 30,1	47,1	67,8	121	188,5	368	483	753	1180	1695	2310	3010	4730
	h 19,6	15,3	12,4	8,9	6,9	4,9	4,1	3,2	2,55	2,05	1,7	1,53	1,18
1,7	Q 32	50,1	72	128	200	392	513	800	1253	1802	2455	3200	5020
	h 21,9	17,2	13,9	10	7,8	5,4	4,6	3,6	2,85	2,3	1,95	1,7	1,33
1,8	Q 33,9	53	76,3	136	212	415	543	848	1327	1905	2600	3390	5320
	h 24,2	19,1	15,4	11,1	8,7	6	5,1	4	3,15	2,6	2,2	1,9	1,48
1,9	Q 35,8	56	80,5	143,5	224	438	573	895	1400	2015	2740	3580	5610
	h 26,8	21	17	12,3	9,6	6,8	5,6	4,4	3,45	2,85	2,45	2,1	1,64
2	Q 37,7	59	84,8	151	235,5	461	603	943	1475	2120	2885	3765	5910
	h 29,6	23	18,6	13,4	10,5	7,5	6,2	4,9	3,8	3,17	2,7	2,33	1,8
2,1	Q 39,5	62	89	158,5	247,5	484	633	990	1548	2225	3030	3955	6200
	h 33,2	25,1	20,4	14,8	11,5	8,2	6,8	5,4	4,2	3,5	2,95	2,55	2
2,2	Q 41,5	64,9	93,2	176	259	507	663	1036	1620	2330	3175	4145	6500
	h 35	27,3	22,3	16,2	12,5	9,1	7,4	5,9	4,6	3,85	3,25	2,8	2,2
2,3	Q 43,3	67,9	97,5	173,5	271	530	694	1082	1695	2440	3320	4330	6800
	h 38	29,7	24,2	17,7	13,6	9,8	8,1	6,4	5	4,15	3,5	3,05	2,4
2,4	Q 45,2	70,8	101,5	181	282,5	553	724	1130	1770	2545	3460	4520	7090
	h 42,1	32,1	26,2	19,1	14,7	10,6	8,8	6,9	5,45	4,55	3,8	3,3	2,62
2,5	Q 47,1	73,7	105,8	189	294,5	576	755	1178	1843	2650	3610	4710	7390
	h 45	34,7	28,3	20,5	16	11,4	9,6	7,5	5,9	4,9	4,1	3,58	2,84
2,6	Q 49	76,6	110	196	306	599	785	1225	1915	2755	3755	4900	7680
	h 48,3	37,3	30,4	22,2	17,2	12,3	10,4	8,1	6,35	5,25	4,4	3,85	3,07
2,7	Q 50,9	79,6	114,3	204	318	622	815	1271	1990	2860	3900	5090	7980
	h 51,7	40	32,5	23,8	18,5	13,2	11,2	8,7	6,85	5,65	4,75	4,15	3,3
2,8	Q 52,7	82,6	118,5	211,5	330	645	845	1320	2060	2970	4040	5280	8270
	h 55,2	42,5	34,8	25,5	19,9	14	12	9,3	7,35	6,05	5,10	4,45	3,56
2,9	Q 54,6	85,5	123	219	342	668	875	1365	2140	3075	4190	5460	8560
	h 58,7	45,1	37,1	27,1	21,3	15,2	12,8	10	7,85	6,45	5,5	4,75	3,82
3	Q 56,5	88,5	127	226,5	354	691	905	1414	2210	3180	4330	5650	8850
	h 62,9	47,9	39,6	28,8	22,6	16,3	13,6	10,7	8,4	6,9	5,9	5,1	4,1

Q = portata in litri al min
capacity in litre per min

V = velocità dell'acqua in m/sec
water velocity in m/sec

d = diametro del tubo in mm
pipe diameter in mm

h = perdita di carico in m di colonna di acqua ogni 100 m di tubazione dritta
head loss in m of water for every 100 m of straight piping

Note: i valori sopra indicati s'intendono per tubi internamente lisci in ghisa. per una valutazione di massima le perdite di carico devono essere moltiplicate per:

- 0,8 tubi acciaio laminati nuovi
- 1,25 tubi acciaio leggermente arrugginiti
- 0,7 tubi di alluminio
- 0,65 tubi in PVC
- 1,25 tubi in fibra di cemento

Note: above data are relevant to completely smooth and cast-iron piping.

For a general estimation, multiply the head losses data by:

- 0,8 flat-rolled new steel piping
- 1,25 slightly rusty steel piping
- 0,7 piping in aluminium
- 0,65 piping in PVC
- 1,25 piping in concrete fibre

PERDITE DI CARICO IN cm DI COLONNA D'ACQUA /
CHARGE LOSSES IN cm OF WATER COLUMN

VELOCITÀ DELL'ACQUA IN m/s WATER SPEED IN m/s	CURVE AD ANGOLO VIVO OBTUSE ANGLE CURVES					CURVE NORMALI NORMAL CURVES					SARACINESCHE NORMALI NORMAL SLUICE GATES				
	= 30°	= 40°	= 60°	= 80°	= 90°	$\frac{d}{R} = 0,4$	$\frac{d}{R} = 0,6$	$\frac{d}{R} = 0,8$	$\frac{d}{R} = 1$	$\frac{d}{R} = 1,5$	VALVOLE DI RITEGNO NON RETURN VALVE				
0,1	0,03	0,04	0,05	0,07	0,08	0,007	0,008	0,01	0,015	0,027	0,03	30	30	0,05	
0,15	0,06	0,73	0,1	0,14	0,17	0,016	0,019	0,024	0,033	0,06	0,033	31	31	0,12	
0,2	0,11	0,13	0,18	0,26	0,31	0,028	0,033	0,04	0,058	0,11	0,058	31	31	0,21	
0,25	0,17	0,21	0,28	0,4	0,48	0,044	0,052	0,063	0,091	0,17	0,09	31	31	0,32	
0,3	0,25	0,3	0,41	0,6	0,7	0,063	0,074	0,09	0,13	0,25	0,13	31	31	0,46	
0,35	0,33	0,4	0,54	0,8	0,93	0,085	0,1	0,12	0,18	0,33	0,18	31	31	0,62	
0,4	0,43	0,52	0,71	1	1,2	0,11	0,13	0,16	0,23	0,43	0,23	32	31	0,82	
0,5	0,67	0,91	1,1	1,6	1,9	0,18	0,21	0,26	0,37	0,67	0,37	33	32	1,27	
0,6	0,97	1,2	1,6	2,3	2,8	0,25	0,29	0,36	0,52	0,97	0,52	34	32	1,84	
0,7	1,35	1,65	2,2	3,2	3,9	0,34	0,4	0,48	0,7	1,35	0,7	35	32	2,5	
0,8	1,7	2,1	2,8	4	4,8	0,45	0,53	0,64	0,93	1,7	0,95	36	33	3,3	
0,9	2,2	2,7	3,6	5,2	6,2	0,57	0,67	0,82	1,18	2,2	1,2	37	34	4,2	
1	2,7	3,3	4,5	6,4	7,6	0,7	0,82	1	1,45	2,7	1,45	38	35	5,1	
1,5	6	7,3	10	14	17	1,6	1,9	2,3	3,3	6	3,3	47	40	11,5	
2	11	14	18	26	31	2,8	3,3	4	5,8	11	5,8	61	48	20,4	
2,5	17	21	28	40	48	4,4	5,2	6,3	9,1	17	9,1	78	58	32	
3	25	30	41	60	70	6,3	7,4	9	13	25	13	100	71	46	
3,5	33	40	55	78	93	8,5	10	12	18	33	18	123	85	62	
4	43	52	70	100	120	11	13	16	23	42	23	150	100	82	
4,5	55	67	90	130	160	14	21	26	37	55	37	190	120	103	
5	67	82	110	160	190	18	29	36	52	67	52	220	140	127	

1) La perdita di carico nelle curve è soltanto quella dovuta alla contrazione dei filetti liquidi per cambiamento di direzione: lo sviluppo delle curve deve quindi essere compreso nella lunghezza della tubazione.

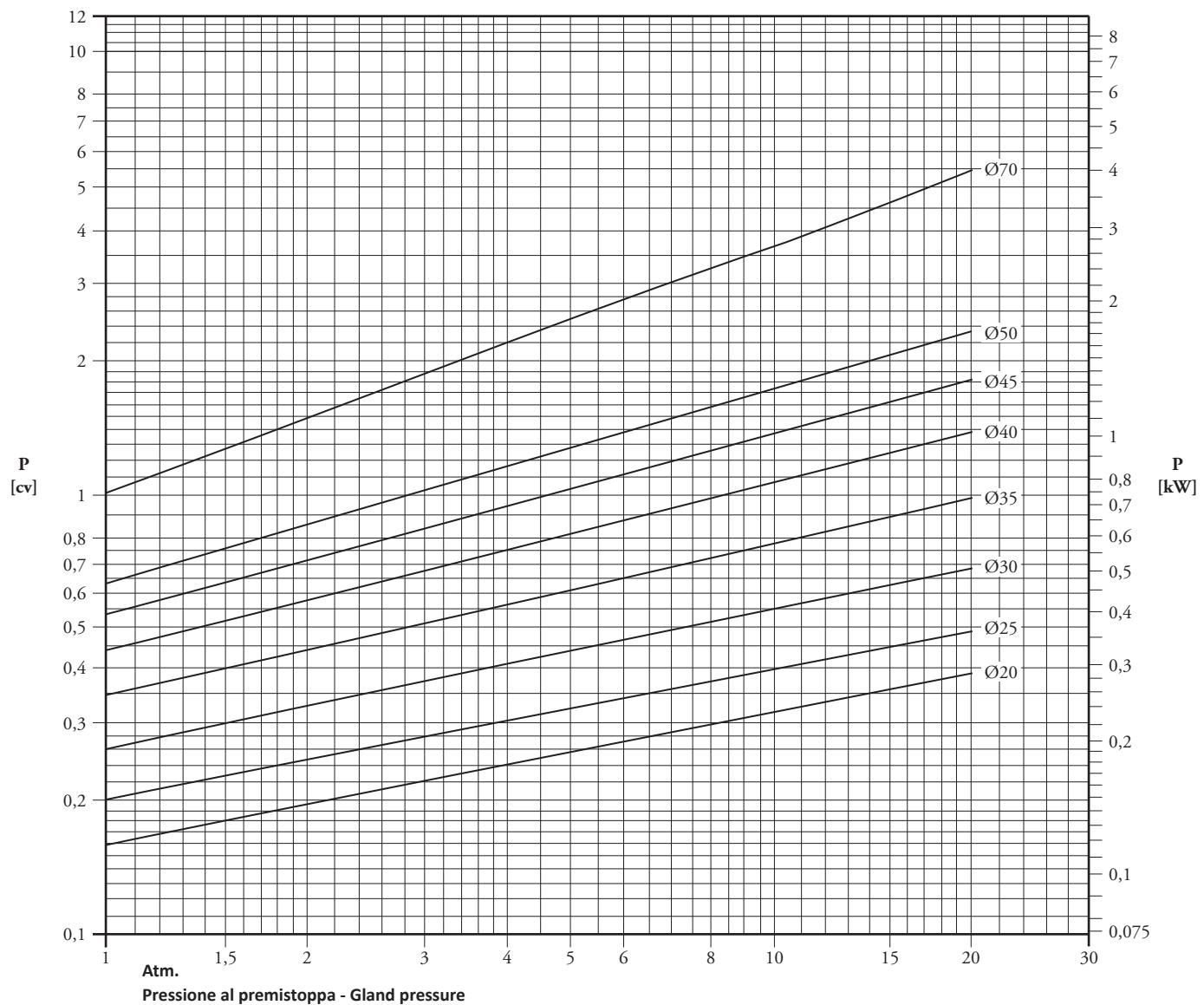
2) La perdita di carico nelle valvole e saracinesche è stata determinata in base a prove pratiche.

1) The charge loss in the curves is only the one due to the reduction of the liquid threads for the changing of direction: the curves development has to be included in the length of the pipeline.

2) The charge loss in the valves and sluice-gates has been calculated according to practical tests.

POTENZA ASSORBITA DAL PREMISTOPPA / POWER ABSORBED BY THE GLAND

DIAGRAMMA RILEVATO ALLA VELOCITÀ DI 1450 Giri/min.
SHOWN IN THE DIAGRAM HAVING A SPEED 1450 R.P.M.



PER DIFFERENTI VELOCITÀ DI ROTAZIONE (n) CALCOLARE LA POTENZA (Px) CON:
FOR DIFFERENTS R.P.M. (n) THE LOSS (Px) CAN BE CALCULATED WITH:

$$Px = \frac{P}{1450} \times n$$

COMPARAZIONE UNITÀ DI MISURA / MEASUREMENT COMPARISON IN UNIT

Comparazione unità di misura - Measurement comparison in unit

	CV	HP	kW	kgm/s
CV	1	0,9863	0,7355	75
HP	1,0139	1	0,7457	76,05
kW	1,36	1,341	1	101,98

Pressione - Pressure

UNITÀ - UNIT	RAGGUAGLIO - COMPARISON
$1 \text{ kg/cm}^2 = 9,81 \cdot \frac{\text{N}}{\text{cm}^2} = 0,981 \text{ bar} = 98100 \text{ Pa}$	$1 \text{ Pa} = 1 \cdot \frac{\text{N}}{\text{cm}^2} = 1 \text{ Pascal}$
$1 \text{ kg/cm}^2 = 1 \text{ at} = 10000 \text{ kg/m}^2 = \text{atm tecnica} = 10 \text{ m col. d'acqua a } 4^\circ\text{C} = 735,56 \text{ Torr (mm Hg a } 0^\circ\text{C)}$ $1 \text{ kg/cm}^2 = 1 \text{ at} = 10000 \text{ kg/m}^2 = \text{techn. atmosphere} = 10 \text{ m water col at } 4^\circ\text{C} = 735,56 \text{ Torr (mm Hg at } 0^\circ\text{C)}$	
$1 \text{ lb per pollice quadro} = 1 \text{ psi} = 0,0703 \text{ kg/cm}^2$ 1 lb per square inch = 1 psi = 0,0703 kg/cm ²	$1 \text{ kg/cm}^2 = 14,2 \text{ psi}$

MISURE DI CAPACITÀ COMPARATE AL LITRO - CAPACITY MEASURES COMPARED AT LITRE				
UNITÀ - UNIT	RAGGUAGLIO - COMPARISON	UNITÀ - UNIT	RAGGUAGLIO - COMPARISON	
Oncia inglese per liquidi..... (Imperial fluid once)	0,0284 litri - litre	litri - litre	35,2	Imp. fl. oz.
Oncia americana per liquidi (U.S. fluid once)	0,0295 litri - litre	litri - litre	33,81	U.S. fl. oz.
Pinta inglese (Imperial pint)	0,568 litri - litre	litri - litre	1,76	Imp. pinte
Gallone americano..... (U.S. gallon)	3,785 litri - litre	litri - litre	0,2642	U.S. gal.
Gallone inglese (Imperial gallon)	4,546 litri - litre	litri - litre	0,22	Imp. gal.
Staio americano (U.S. bushel)	35,24 litri - litre	litri - litre	0,0284	U.S. bu.
Staio inglese (Imperial bushel)	36,35 litri - litre	litri - litre	0,0275	Imp. bu
Barile americano (U.S. barrel)	119,22 litri - litre	litri - litre	0,0083	U.S. bbl.
Barile inglese (Imperial barrel)	163,65 litri - litre	litri - litre	0,00611	Imp. bbl.

APPENDICE TECNICA / TECHNICAL APPENDIX

CENNI SULLE POMPE CENTRIFUGHE NOTICES ON CENTRIFUGAL PUMPS

Calcolo della potenza assorbita

P_a

(noti):

Q - portata in l/s

H - prevalenza man.totale in m

h - rendimento

g - densità in Kg/dm³

Absorbed power calculation P_a

(known):

Q - capacity l/s

H - total head in m

h - efficiency

g - density in Kg/dm³

$$P_a = \gamma \cdot \frac{Q \cdot H}{102 \cdot h} \text{ [kW]}$$

Calcolo del rendimento (noti):

Q - portata in l/s

H - prevalenza man.totale in m

P_a - potenza assorbita in kW

g - densità in Kg/dm³

Efficiency calculation (known):

Q - capacity l/s

H - total head in m

P_a - absorbed power in kW

g - density in Kg/dm³

$$h = \gamma \cdot \frac{Q \cdot H}{102 \cdot P_a} \text{ [kW]}$$

Curve di funzionamento

Fra le curve di funzionamento di una pompa centrifuga a varie velocità, purchè non intervengano fenomeni di cavitazione, sussiste la legge di affinità che possiamo così praticamente esprimere:

Working curves

Between the working curves of a centrifugal pump at different speed, is in force the affinity law, provided that there aren't cavitation effects, and that could be like this:

le curve Q-H e Q-Pa a n. giri si cambiano in Q'-H' e Q'-Pa' a n' giri.

Secondo:

curves Q-H and Q-Pa at n. rounds are changed in Q'-H' and Q'-Pa' at n' rounds.

According to:

$$Q' = \left(\frac{n'}{n} \right) \cdot Q \quad H' = \left(\frac{n'}{n} \right)^2 \cdot H \quad P_{a'} = \left(\frac{n'}{n} \right)^3 \cdot P_a$$

APPENDICE TECNICA / TECHNICAL APPENDIX

TABELLA INDICATIVA DELLE POTENZE IN KW ED IN KVA DEI GENERATORI DA ACCOPPIARE AI MOTORI

INDICATING TABLE OF POWERS IN KW AND KVA
OF THE GENERATORS TO COUPLE WITH MOTORS

POTENZA DEL MOTORE MOTOR POWER		POTENZA DEL GENERATORE GENERATOR POWER	
		AVVIAMENTO DIRETTO DIRECT STARTING	
kW	HP	kW	kVA
2,2	3	6	7,5
3	4	8	10
4	5,5	10	12,5
5,5	7,5	12,5	15,6
7,5	10	15	18,8
9,2	12,5	18,8	23,5
11	15	22,5	28
13	17,5	26,4	33
15	20	30	38
18,5	25	40	50
22	30	45	57
26	35	52	65
30	40	60	75
37	50	75	94
45	60	90	112
51,5	70	105	131
55	75	120	150
66	90	135	170
75	100	150	190
92	125	185	230
110	150	210	260
132	180	260	323
147	200	280	360
165	225	325	404
185	250	365	454
200	275	390	485
220	300	430	535
240	330	470	584
265	360	520	646
300	400	580	720

POTENZA DEL MOTORE MOTOR POWER		POTENZA DEL GENERATORE GENERATOR POWER	
		AVVIAMENTO STELLA -TRIANGOLO STAR-DELTA-STARTING	
kW	Hp	kW	kVA
-	-	-	-
3	4	8	7,5
4	5,5	8	10
5,5	7,5	10,8	13,5
7,5	10	14	17,5
9,2	12,5	17,2	21,5
11	15	20,5	25,5
13	17,5	23,6	29,5
15	20	27	34
18,5	25	33	42
22	30	40	50
26	35	45	57
30	40	52	65
37	50	65	81
45	60	77	97
51,5	70	90	112
55	75	102	128
66	90	115	144
75	100	128	160
90	125	158	198
110	150	190	237
132	180	228	284
147	200	254	316
165	225	285	354
185	250	320	398
200	275	345	429
220	300	380	472
240	330	415	516
265	360	458	569
300	400	510	634

APPENDICE TECNICA / TECHNICAL APPENDIX

MISURE ELETTRICHE ELECTRIC MEASURES

Grandezza Size	Corrente alternata trifase Three-phase alternating current
$P_a = \text{Potenza assorbita in kW}$ absorbed power in kW	$P_a = \frac{1,73 \times U \times I \times \cos \varphi}{1000}$
$P_r = \text{Potenza resa in kW}$ returned power in kW	$P_r = \frac{1,73 \times U \times I \times \cos \varphi \times \eta_m}{1000}$
$I = \text{Corrente assorbita in Amp.}$ absorbed current in Amp.	$I = \frac{P_r \times 1000}{1,73 \times U \times \cos \varphi \times \eta_m}$
$\cos \varphi = \text{Fattore di potenza}$ power factor	$\cos \varphi = \frac{P_a \times 1000}{1,73 \times U \times I}$
$\eta_m \% = \text{Rendimento motore}$ motor efficiency	$\eta_m \% = \frac{P_r}{P_a} \times 100$
$S \% = \text{Scorrimento}$ slip	$S \% = \frac{n_s - n}{n_s} \times 100$
$n_s = \text{Velocità di sincronismo}$ speed of synchronism	$n_s = \frac{F \times 120}{P}$

Scorrimento: si definisce scorrimento la differenza tra la velocità di sincronismo e la velocità effettiva.

U = **Tensione nominale**
Nominal voltage

Slip: slip is defined as the difference between the speed of synchronism and the effective speed.

F = **Frequenza in Hz**
Frequency in Hz

n = **Velocità di rotazione in Giri/min.**
Speed of rotation in R.P.M.

P = **Numero poli**
Number of poles

**PROPRIETÀ DELL'ACQUA SATURATA (LIQUIDO-VAPORE): TABELLA DI TEMPERATURE
PROPERTIES OF SATURATED WATER (LIQUID-VAPOR): TEMPERATURE TABLE**

Proprietà
without previous notice.

Temp. °C	Press. bar	Specific Volume m³/kg		Internal Energy kJ/kg		Enthalpy kJ/kg		Entropy kJ/kg · K		Temp. °C
		Sat. Liquid v _f × 10³	Sat. Vapor v _g	Sat. Liquid u _f	Sat. Vapor u _g	Sat. Liquid h _f	Evap. h _{fg}	Sat. Vapor h _g	Sat. Liquid s _f	
0.01	0.00611	1.0002	206.136	0.00	2375.3	0.01	2501.3	2501.4	0.0000	9.1562
4	0.00813	1.0001	157.232	16.77	2380.9	16.78	2491.9	2508.7	0.0610	9.0514
5	0.00872	1.0001	147.120	20.97	2382.3	20.98	2489.6	2510.6	0.0761	9.0257
6	0.00935	1.0001	137.734	25.19	2383.6	25.20	2487.2	2512.4	0.0912	9.0003
8	0.01072	1.0002	120.917	33.59	2386.4	33.60	482.5	2516.1	0.1212	8.9501
10	0.01228	1.0004	106.379	42.00	2389.2	42.01	2477.7	2519.8	0.1510	8.9008
11	0.01312	1.0004	99.857	46.20	2390.5	46.20	2475.4	2521.6	0.1658	8.8765
12	0.01402	1.0005	93.784	50.41	2391.9	50.41	2473.0	2523.4	0.1806	8.8524
13	0.01497	1.0007	88.124	54.60	2393.3	54.60	2470.7	2523.3	0.1953	8.8285
14	0.01598	1.0008	82.848	58.79	2394.7	58.80	2468.3	2527.1	0.2099	8.8048
15	0.01705	1.0009	77.926	62.99	2396.1	62.99	2465.9	2528.9	0.2245	8.7814
16	0.01818	1.0011	73.333	67.18	2397.4	67.19	2463.6	2530.8	0.2390	8.7582
17	0.01938	1.0012	69.044	71.38	2398.8	71.38	2461.2	2532.6	0.2535	8.7351
18	0.02064	1.0014	65.038	75.57	2400.2	75.58	2458.8	2534.4	0.2679	8.7123
19	0.02198	1.0016	61.293	79.76	2401.6	79.77	2456.5	2536.2	0.2823	8.6897
20	0.02339	1.0018	57.791	83.95	2402.9	83.96	2454.1	2538.1	0.2966	8.6672
21	0.02487	1.0020	54.514	88.14	2404.3	88.14	2451.8	2539.9	0.3109	8.6450
22	0.02645	1.0022	51.447	92.32	2405.7	92.33	2449.4	2541.7	0.3251	8.6229
23	0.02810	1.0024	48.574	96.51	2407.0	96.52	2447.0	2543.5	0.3393	8.6011
24	0.02985	1.0027	45.883	100.70	2408.4	100.70	2444.7	2545.4	0.3534	8.5794
25	0.03169	1.0029	43.360	104.88	2409.8	104.89	2442.3	2547.2	0.3674	8.5580
26	0.03363	1.0032	40.994	109.06	2411.1	109.07	2439.9	2549.0	0.3814	8.5367
27	0.03567	1.0035	38.774	113.25	2412.5	113.25	2437.6	2550.8	0.3954	8.5156
28	0.03782	1.0037	36.690	117.42	2413.9	117.43	2435.2	2552.6	0.4093	8.4946
29	0.04008	1.0040	34.733	121.60	2415.2	121.61	2432.8	2554.5	0.4231	8.4739
30	0.04246	1.0043	32.894	125.78	2416.6	125.79	2430.5	2556.3	0.4369	8.4533
31	0.04496	1.0046	31.165	129.96	2418.0	129.97	2428.1	2558.1	0.4507	8.4329
32	0.04759	1.0050	29.540	134.14	2419.3	134.15	2425.7	2559.9	0.4644	8.4127
33	0.05034	1.0053	28.011	138.32	2420.7	138.33	2423.4	2561.7	0.4781	8.3927
34	0.05324	1.0056	26.571	142.50	2422.0	142.50	2421.0	2563.5	0.4917	8.3728
35	0.05628	1.0060	25.216	146.67	2423.4	146.68	2418.6	2565.3	0.5053	8.3531
36	0.05947	1.0063	23.940	150.85	2424.7	150.86	2416.2	2567.1	0.5188	8.3336
38	0.06632	1.0071	21.602	159.20	2427.4	159.21	2411.5	2570.7	0.5458	8.2950
40	0.07384	1.0078	19.523	167.56	2430.1	167.57	2406.7	2574.3	0.5725	8.2570
45	0.09593	1.0099	15.258	188.44	2436.8	188.45	2394.8	2583.2	0.6387	8.1648
50	0.1235	1.0121	12.032	209.32	2443.5	209.33	2382.7	2592.1	0.7038	8.0763
55	0.1576	1.0146	9.568	230.21	2450.1	230.23	2370.7	2600.9	0.7679	7.9913
60	0.1994	1.0172	7.671	251.11	2456.6	251.13	2358.5	2609.6	0.8312	7.9096
65	0.2503	1.0199	6.197	272.02	2463.1	272.06	2346.2	2618.3	0.8935	7.8310
70	0.3119	1.0228	5.042	292.95	2469.6	292.98	2333.8	2626.8	0.9549	7.7553
75	0.3858	1.0259	4.131	313.90	2475.9	313.93	2321.4	2635.3	1.0155	7.6824
80	0.4739	1.0291	3.407	334.86	2482.2	334.91	2308.8	2643.7	1.0753	7.6122
85	0.5783	1.0325	2.828	355.84	2488.4	355.90	2296.0	2651.9	1.1343	7.5445
90	0.7014	1.0360	2.361	376.85	2494.5	376.92	2283.2	2660.1	1.1925	7.4791
95	0.8455	1.0397	1.982	397.88	2500.6	397.96	2270.2	2668.1	1.2500	7.4159
100	1.014	1.0435	1.673	418.94	2506.5	419.04	2257.0	2676.1	1.3069	7.3549
110	1.433	1.0516	1.210	461.14	2518.1	461.30	2230.2	2691.5	1.4185	7.2387
120	1.985	1.0603	0.8919	503.50	2529.3	503.71	2202.6	2706.3	1.5276	7.1296
130	2.701	1.0697	0.6685	546.02	2539.9	546.31	2174.2	2720.5	1.6344	7.0269
140	3.613	1.0797	0.5089	588.74	2550.0	589.13	2144.7	2733.9	1.7391	6.9299
150	4.758	1.0905	0.3928	631.68	2559.5	632.20	2114.3	2746.5	1.8418	6.8379
160	6.178	1.1020	0.3071	674.86	2568.4	675.55	2082.6	2758.1	1.9427	6.7502
170	7.917	1.1143	0.2428	718.33	2576.5	719.21	2049.5	2768.7	2.0419	6.6663
180	10.02	1.1274	0.1941	762.09	2583.7	763.22	2015.0	2778.2	2.1396	6.5857
190	12.54	1.1414	0.1565	806.19	2590.0	807.62	1978.8	2786.4	2.2359	6.5079



1) ORDINI: Qualsiasi ordinazione trasmessaci, sia a mezzo di ns/agenti che a mezzo lettera, telefono o fax, si intende definita soltanto dopo ns/rogolare accettazione scritta. 2) CONSEGNA: I termini indicati per la consegna non sono impegnativi ma subordinati alle possibilità di fabbricazione o a causa di forza maggiore (agitazioni sindacali, guasti a macchinari, ritardata consegna da parte dei fornitori, situazioni generali di irreperibilità di materie prime, incendi, inondazioni od altre cause di forza maggiore). Un eventuale ritardo non può dar luogo da parte dell'acquirente ad annullamento dell'ordine né a pretesa di rifusione di danni. 3) SPEDIZIONE: La merce viaggia a rischio e pericolo del committente anche se il prezzo è stabilito franco destino. Non si risponde di alcun reclamo per mancanza di peso od avarie di viaggio essendo di ciò responsabile solo ed esclusivamente il vettore al quale il destinatario deve prontamente elevare riserva prima di ritirare la merce e di ciò dare comunicazione scritta anche al cessionario per conoscenza. Trascorsi comunque 8 giorni dalla data di ricevimento della merce non sono più ammessi reclami. 4) PREZZI: I prezzi si intendono al netto degli oneri fiscali, possono essere variati senza obbligo di preavviso. 5) RISERVA DI PROPRIETÀ: La proprietà dei beni consegnati permane al costruttore e non trapassa al cliente se non dopo l'integrale pagamento del prezzo, degli interessi e delle spese dovute. In caso di inadempienza la merce andrà, su expressa richiesta del costruttore, prontamente riconsegnata presso i depositi dal costruttore indicati in porto franco. Il costruttore si riserva comunque la facoltà di addebitare al cliente le spese sostenute per la rigenerazione e messa a nuovo del materiale reso. 6) PAGAMENTI: I pagamenti devono essere effettuati alla scadenza e nei modi convenuti alla ns/sede. Non sono riconosciuti i pagamenti effettuati ad agenti, rappresentanti od altri anche se a mezzo effetti, salvo expressa autorizzazione scritta del costruttore. In caso di pagamento dilazionato, il mancato pagamento anche di una sola rata consente al costruttore di esigere il saldo immediato del rimanente credito aumentato degli interessi maturati al tasso medio in vigore nel periodo. 7) DIVIETO DI AZIONE: Il cliente non può, per nessuna ragione, ritardare o sospendere i pagamenti dovuti a qualunque titolo, anche se fossero inseriti reclami o contestazioni, né può promuovere o proseguire azioni giudiziarie di alcun genere se prima non abbia provveduto al pagamento nei termini e nei modi pattuiti. 8) CARATTERISTICHE TECNICHE: I dati e le caratteristiche tecniche citati in tutte le pubblicazioni ufficiali del costruttore fanno riferimento a valori nominali indicativi. Per specifiche necessità e su esplicita richiesta, il costruttore può mettere a disposizione schede tecniche di prodotto più dettagliate da cui si possono altresì dedurre i criteri di accettabilità interna dei prodotti. Il costruttore si riserva il diritto di apportare qualsiasi modifica senza preavviso; pertanto pesi, misure, prestazioni e quanto altro indicato non sono vincolanti ma solo indicativi. 9) GARANZIA: Il costruttore presta le garanzie di legge. La garanzia copre ogni difetto di costruzione del solo materiale prodotto dal costruttore, essa inoltre si limita alla riparazione o sostituzione dell'elettropompa o del pezzo riconosciuti difettosi presso gli stabilimenti del costruttore o quant'altro dallo stesso autorizzati. In nessun caso comunque la garanzia implica la possibilità di richiesta di indennità e si declina ogni responsabilità per danni materiali e corporali che venissero causati dalle macchine prodotte dal costruttore, sia diretti che indiretti. La garanzia decade: - Se la macchina è stata riparata, smontata o manomessa da persone non autorizzate dal costruttore. - Se il guasto è stato provocato da errori di collegamento elettrico od idraulico, da mancata o non adeguata protezione. - Se l'impianto o l'installazione delle macchine non è stato eseguito correttamente. - Se la macchina è stata assoggettata a sovraccarichi oltre i limiti di targa. - Se i materiali sono stati guastati a seguito del contatto con liquidi abrasivi o corrosivi comunque non compatibili con i materiali impiegati nella costruzione delle pompe. - Se i materiali sono avviliti a seguito del naturale logoramento. La macchina difettosa dovrà pervenire presso gli stabilimenti del costruttore in porto franco. Il costruttore si riserva l'insindacabile giudizio sulla causa del difetto e se lo stesso rientra nei casi previsti dalla garanzia. A riparazione avvenuta, la macchina sarà restituita in porto assegnato al cliente. 10) FORO COMPETENTE: Per eventuali controversie il foro competente sarà quello di Verona anche se il pagamento è convenuto a mezzo tratta. 11) RICHIAMO AD ALTRE NORME: Per quanto non espressamente stabilito nei punti precedenti, varranno le disposizioni di legge e le norme usuali e consuetudinarie del luogo in cui ha sede il costruttore e vigenti in materia.

Il costruttore non si assume alcuna responsabilità per errori ed omissioni e si riserva il diritto di modifiche senza obbligo di preavviso.

GENERAL SALES CONDITIONS



1) ORDERS: Any order sent to us, whether by our representatives or by letter, telephone or fax, will be considered definite only after our regular acceptance in writing. 2) DELIVERY: The terms indicated for delivery are not binding but subject to manufacturing factors and unforeseeable circumstances (trade unions unrest, breakdown of machinery, late delivery by our suppliers, general unavailability of raw materials, fire, flood or other forces majeures). Any delay which might occur will not give rise on the part of the purchaser of the right to annul the order or to claim damages. 3) TRANSPORT: Goods travel at the customer's risk even if the price is stated as carriage free. The vendor will not be liable for the underweight goods or damage caused during transit as the carrier is exclusively liable in such cases and it is to him that the receiving party must promptly address a right informative notice in writing to this to the dealer. After 8 days have passed from receipt of the goods, no claims are in any case admissible. 4) PRICES: The prices are to be understood as net of tax duties and may be changed without notice. 5) RIGHT OF PROPERTY: The goods property belongs to the manufacturer and it is not acquired by the customer until the complete payment is made for the goods, and for any interest and costs involved. In case of payment not honoured, goods will, on the manufacturer's express request, be promptly sent back to the stores in free port indicated by the manufacturer. In any case the manufacturer reserves the right to charge the customer with the cost of restoration and renewal of returned goods. 6) PAYMENTS: Payments must be effected at due dates and in the terms agreed at our Headquarters. Payments made to agents, representatives or others are not recognized even by bills unless there is an express written authority by the manufacturer. In case of payment by instalments the failure to pay even one instalment allows the manufacturer to require the balance immediately plus the interest accrued at the average rate in force for the period. 7) BLOCKAGE OF CLAIMS: The customer may not, for any reason, delay or suspend payments owed on any account even if claims or disputes have arisen, nor may he start or take legal action of any kind if he has not first paid by the terms and in the terms agreed. 8) TECHNICAL CHARACTERISTICS: The technical data and characteristics stated in all the manufacturer's official publications refer to indicative nominal values. For specific needs and on explicit demand, the manufacturer can provide detailed technical sheets from which the internal acceptance criteria of the product can be deduced. The manufacturer reserves the right to make any modification without prior notice. Therefore weights, dimensions, performances and any other stated issues are indicative only and not binding. 9) GUARANTEE: The manufacturer gives the guarantees provided by the Law. The guarantee covers every manufacturing defect only for the components/parts produced by the manufacturer: the Company also limits itself to the repair or replacement of the electric pump, or of the part recognized as being faulty, at the manufacturer's premises or other authorized premises. In no case however does the guarantee imply the possibility of claiming an indemnity and any liability is denied for damage to things or to the person caused by the manufacturer machines, whether directly or indirectly. The guarantee does not apply: - If the machine has been repaired, dismantled or tampered by persons not authorized by the manufacturer. - If the breakdown has been caused by errors in connecting the electrical or hydraulic systems, or by the failure to provide protection or the provision of inadequate protection. - If the setting up of the machine or its electrical or hydraulic systems has not been correctly carried out. - If the machine has been subject to loads exceeding the ones within the label specifications. - If materials have been damaged due to contact with abrasive or corrosive liquids or which are in any way incompatible with the materials used in the manufacture of the pumps. - If the materials have deteriorated due to natural wear. The defective machine must be taken to the manufacturer's premises in free port. The manufacturer reserves the indisputable right to impute the cause of the defect and to ascertain whether it falls within the warrant cases at his full expences. When the machine has been repaired it will be returned to the customer. 10) COMPETENT COURT: In case of any dispute the competent Court will be the one of Verona even if the payment is by Bill of Exchange. 11) RE COURSE TO OTHER NORMS: As regard to other matters not expressly stated in the above points, the laws, norms and commercial customs in force at the place, where the manufacturer has its premises, will be applied.

The manufacturer assumes no responsibility for errors and omissions and reserves the right of changes without notice.

 **GAZZETTA UFFICIALE DELL'UNIONE EUROPEA**

Regolamento UE 547/2012

**ALLEGATO II**

«L'efficienza di una pompa con girante tornita è generalmente inferiore a quella di una pompa con diametro di girante pieno. La tornitura della girante adegua la pompa a un punto di lavoro fisso, con un conseguente minore consumo di energia. L'indice di efficienza minima (MEI) è basato sul diametro massimo della girante».

«Il funzionamento della presente pompa per acqua con punti di funzionamento variabili può essere più efficiente ed economico se controllato, ad esempio, tramite un motore a velocità variabile che adegua il funzionamento della pompa al sistema».

Le informazioni sull'efficienza di riferimento sono disponibili all'indirizzo:
www.europump.org/efficiencycharts.

 **OFFICIAL JOURNAL OF THE EUROPEAN UNION**

Regulation UE 547/2012

ANNEX II

«The efficiency of a pump with a trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter».

«The operation of this water pump with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system».

Information on benchmark efficiency is available at:
www.europump.org/efficiencycharts.

 **DIARIO OFICIAL DE LA UNIÓN EUROPEA**

Reglamento (UE) no 547/2012

ANEXO II

«La eficiencia de una bomba con un impulsor ajustado suele ser inferior a la de una bomba con el impulsor de diámetro completo. El ajuste del impulsor adapta la bomba a un punto de trabajo fijado, que da lugar a un menor consumo energético. El índice de eficiencia mínima (MEI) se basa en el impulsor de diámetro completo».

«El funcionamiento de esta bomba hidráulica con puntos de trabajo variables puede resultar más eficiente y económico si se controla, por ejemplo, mediante el uso de un mando de regulación de velocidad que ajuste el trabajo de la bomba al sistema».

La información sobre los criterios de referencia de la eficiencia puede consultarse en:
www.europump.org/efficiencycharts.

 **JOURNAL OFFICIEL DE L'UNION EUROPÉENNE**

Reglemento (UE) no 547/2012

ANNEXE II

«Le rendement d'une pompe équipée d'une roue ajustée est généralement inférieur à celui d'une pompe dont la roue est à son diamètre maximal. Le rognage de la roue permet d'adapter le diamètre de la pompe jusqu'à un point de fonctionnement spécifié et, ainsi, de réduire la consommation d'énergie. L'indice de rendement minimal (MEI) est fondé sur le diamètre maximal de la roue».

«L'utilisation de la présente pompe à eau avec des points de fonctionnement variables peut s'avérer plus efficace et plus économique si un dispositif de contrôle, tel qu'un variateur de vitesse, permet d'ajuster le point de fonctionnement de la pompe au regard du système».

Informations sur l'efficacité de référence sont disponibles sur:
www.europump.org/efficiencycharts.

50Hz

HP - HV Technical Catalogue



FORAS WATER PUMPS

Viale dell'Industria, 1

37040 Veronella (VR) - Italy

Tel. +39 0442 489550 - Fax +39 0442 489560

www.foras-pumps.it

com@foras-pumps.it