

SUBMERSIBLE WELL ELECTRIC PUMPS

50 Hz

EBARA Pumps Europe network

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EBARA Pumps Europe S.p.A. and the new EuP Directive 2009/125/CE

The European Directive 2009/125/CE (EuP), issued in July 2005, aims at protecting the environment and at the production of electrical appliances that are more Eco-compatible.

The goal of this Directive is to compel manufacturers and importers, by law, to only produce and distribute high energy efficiency products, and it concerns the following product categories:

- Electric motors
- Water pumps
- Circulator pumps for domestic heating

Electric motors

Commission Regulation (EC) 640/2009 introduces a new criterion for classifying the efficiency of electric motors. With effect from 16th June 2011, the regulation applies to three phase motors (2-poles and 4-poles) with 0.75kW to 375kW power output up to 100V, with the exception of permanently submerged motors. The motors will thus be classified with level IE2 energy efficiency. The regulation does not concern submerged, submersible, single phase motor-driven pumps and three phase motor-driven pumps with power output below 0.75kW, in addition to motor-driven pumps for explosive atmospheres (ATEX).

The successive stage of the regulation will come into force on 1st January 2015 and will concern motors with 7.5kW to 375kW power output. These motors must necessarily conform to the IE3 energy efficiency level, or level IE2 supported by inverters.

With effect from 2011, EBARA Pumps Europe S.p.A. has conformed to the regulation and has begun supplying three phase pumps complying with IE2 energy efficiency requirements, and is capable of supplying part of its motor-driven pump range according to IE3 energy efficiency requirements.

The EBARA motor-drive pumps affected by the regulation underwent some changes regarding the absorbed current, absorbed power, weight and - in some cases - dimensions (for further details, please consult the technical documentation on the website www.ebaraeurope.com).

Improved energy efficiency translates into reduced energy consumption and longer lifespan of the motors, due to lower heat dissipation, which - in turn - ensure financial advantages for the end user.

Water pumps

Commission Regulation (EU) 547/2012 concerns the energy efficiency of the hydraulic part of pumps for the purpose of further reducing energy wastage.

All pump constructors in the European Union must comply with the regulation and have a single aim: the drastic reduction of CO₂ emissions by 2020.

The following pump categories are involved:

- Horizontal standardised single-stage pump with base (ESOB)
- Close-coupled single-stage pumps (ESCC)
- Vertical multistage pumps (MS-V)
- Submersible multistage pumps (MSS) 4" and 6"
- Close-coupled inline pumps (ESCCi)

The regulation is aimed at diffusing efficient motor-driven pumps on the market according to a hydraulic efficiency index, the value of which is calculated and known to the end user by means of MEI (Minimum Efficiency Index); in other words, MEI defines a minimum limit below which all non-conforming products will be excluded from the market.

The regulation will come into force on the following dates:

- starting from 1st January 2013 MEI ≥ 0.1
- starting from 1st January 2015 MEI ≥ 0.4

EBARA Pumps Europe S.p.A. is already up-to-date with the new regulation and offers on the market a range of products complying with the necessary hydraulic efficiency requirements.

The on-going improvement of the energy efficiency of its products is a priority for the company: EBARA Pumps Europe S.p.A. fully complies with the EuP Directive.

Circulator pumps for domestic heating

Commission Regulation (EC) 641/2009 also applies to wet rotor circulator pumps for heating and air-conditioning systems (with the exception of circulator pumps for domestic hot water recirculation and dedicated circulator pumps for solar heating systems). The regulation defines stringent energy efficiency requirements for circulator pumps by means of a specific index, the so-called EEI (Energy Efficiency Index).

The following are the compliance dates:

- starting from 1st January 2013 only circulator pumps* with EEI ≤ 0.27 will be allowed
- starting from 1st August 2015 only circulator pumps with EEI ≤ 0.23 will be allowed

In this context, EBARA Pumps Europe S.p.A. launches a new range of variable-speed electronic circulator pumps with EEI index complying with the regulation, advanced functionality and excellent performance.

* For the so-called "integrated" circulator pumps, namely pumps specifically designed for being installed inside a machine (e.g. inside a boiler), the start date is postponed to 01/08/2015.



INDEX

SUBMERSIBLES

HIGH SPEED BOREHOLE PUMPS	3TP	2
3" BOREHOLE PUMPS	SB3	6
4" BOREHOLE PUMPS	WINNER 4N*	9
4" BOREHOLE PUMPS	4BHS	16
5" BOREHOLE PUMPS	IDROGO*	21
6" BOREHOLE PUMPS	6BHE(L)	25
8" BOREHOLE PUMPS	8BHE(L)	51
	CABLES DIMENSIONING	58

ELECTRIC CONTROL PANELS AND ACCESSORIES

ELECTRIC CONTROL PANELS	Q Series	60
	1EPBH Series	61
	HERTZ ONE - TWIN Series	63
ACCESSORIES	E-drive	64
	Presscomfort	65
	Press-o-Matic	66



*= TIFQ certified product in compliance to DM 174, pumps are fit for contact with water intended for human consumption.

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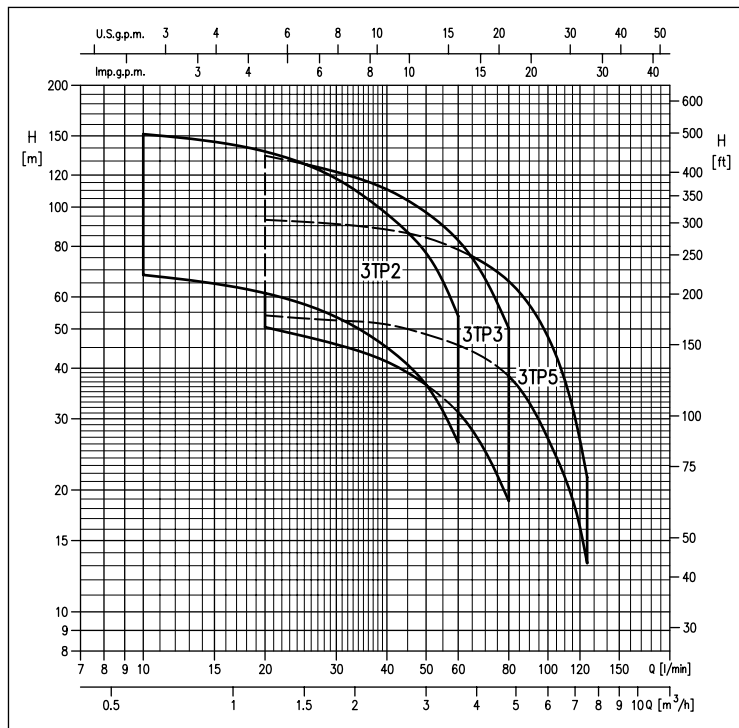
3TP

HIGH SPEED BOREHOLE PUMP

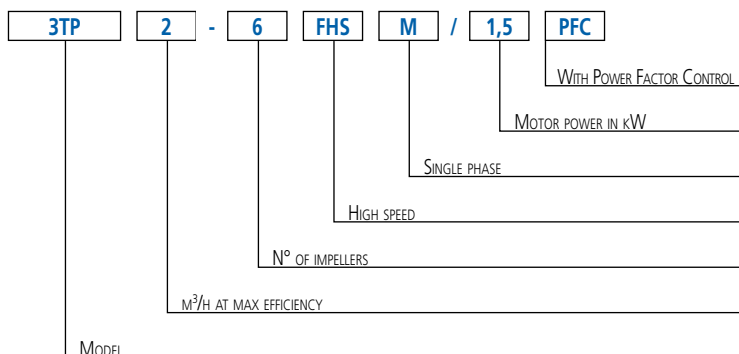
in AISI 304



PERFORMANCE RANGE (according to ISO 9906 Attachment A)



IDENTIFICATION CODE



High speed borehole pumps in AISI 304

APPLICATIONS

- Domestic water supply systems (manufactured accordingly to TIFQ, ACS, WRAS and all the European certification for domestic drinking water)
- Small waterworks
- Irrigation and water pumping in general
- Water transferring
- Pressure boosting of clear water for agriculture, domestic or industrial use
- Adapting old unusable 4" water wells

TECHNICAL DETAILS

- Plug & Play - friendly usage
- Easy to handle and install
- Compact and robust construction
- High efficiency pump and motor
- Energy saving
- Additional controls may be installed
- "Soft start"
- Fully protected:
 - Over temperature protection
 - Dry-running protection
 - Over load protection
 - High/low voltage protection
 - Phase failure protection
 - Surge voltage protection

PUMP TECHNICAL DATA

- Maximum immersion: 150 m
- Maximum temperature of the liquid: 35°C
- Maximum presence of sand: 50 ppm
- Discharge connection: G1 (3TP 2 - 3TP 3), G1¼ (3TP 5)

MOTOR TECHNICAL DATA

- Insulation class: F
- Protection degree: IP 68
- 230V ±10% 50/60Hz single phase voltage
- For cables dimensioning please see page 58 or our Data Book on the web site www.ebaraurope.com

MATERIALS

- Shaft in AISI 304
- Impeller, intermediate stage and diffuser in noryl (PPO GF30)
- Suction and discharge in stainless steel EN 1.4308 (ASTM CF8)

ACCESSORIES (on request)

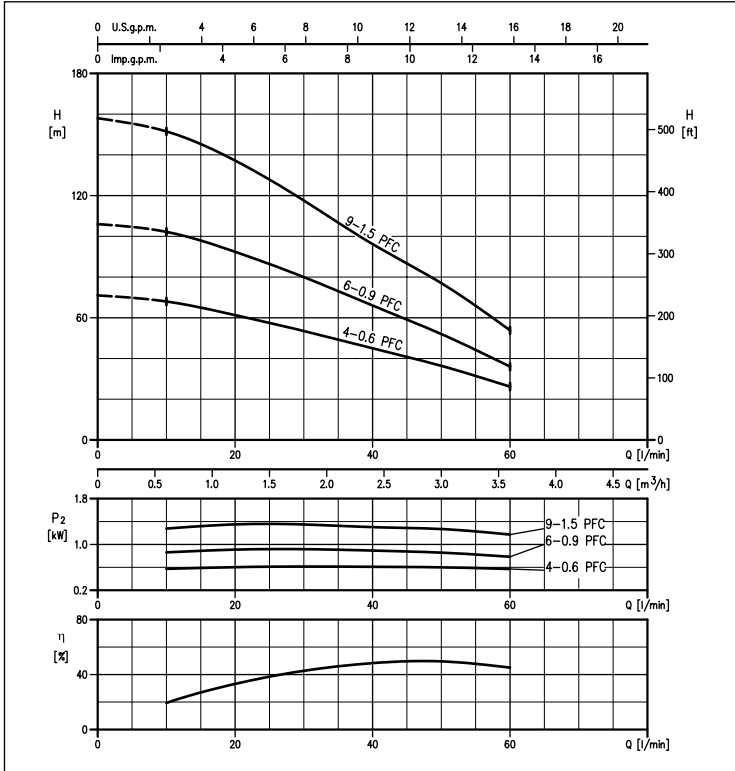
- Pressure switch



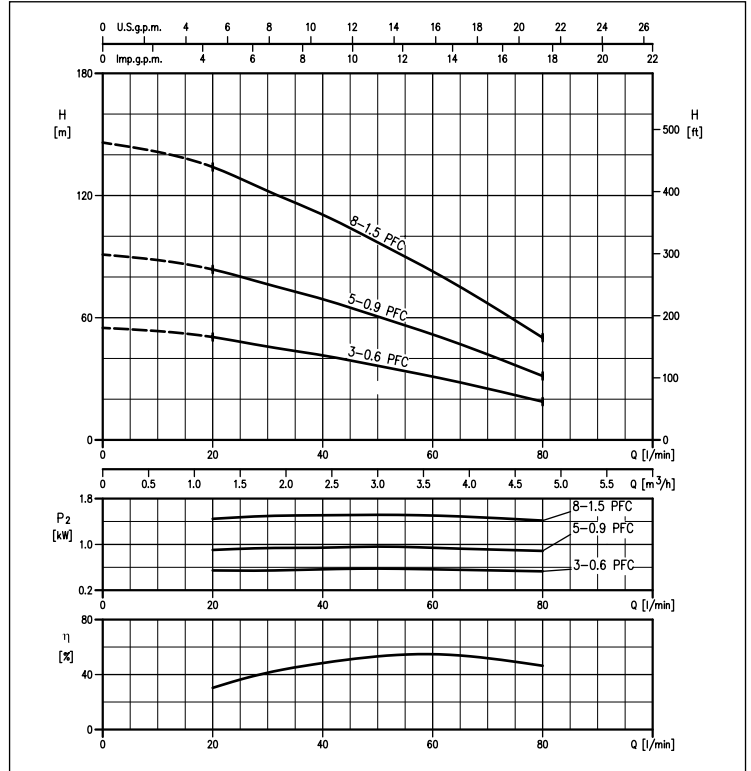
3TP

HIGH SPEED BOREHOLE PUMP in AISI 304

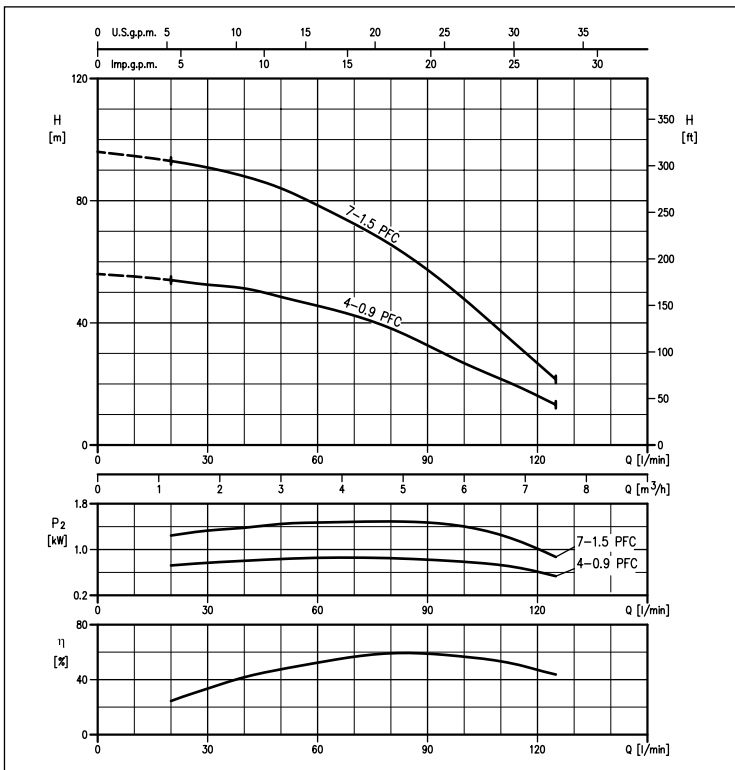
PERFORMANCE CURVES 3TP 2 series impeller diameter: 46 mm
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES 3TP 3 series impeller diameter: 46 mm
(according to ISO 9906 Attachment A)



PERFORMANCE CURVES 3TP 5 series impeller diameter: 42 mm
(according to ISO 9906 Attachment A)



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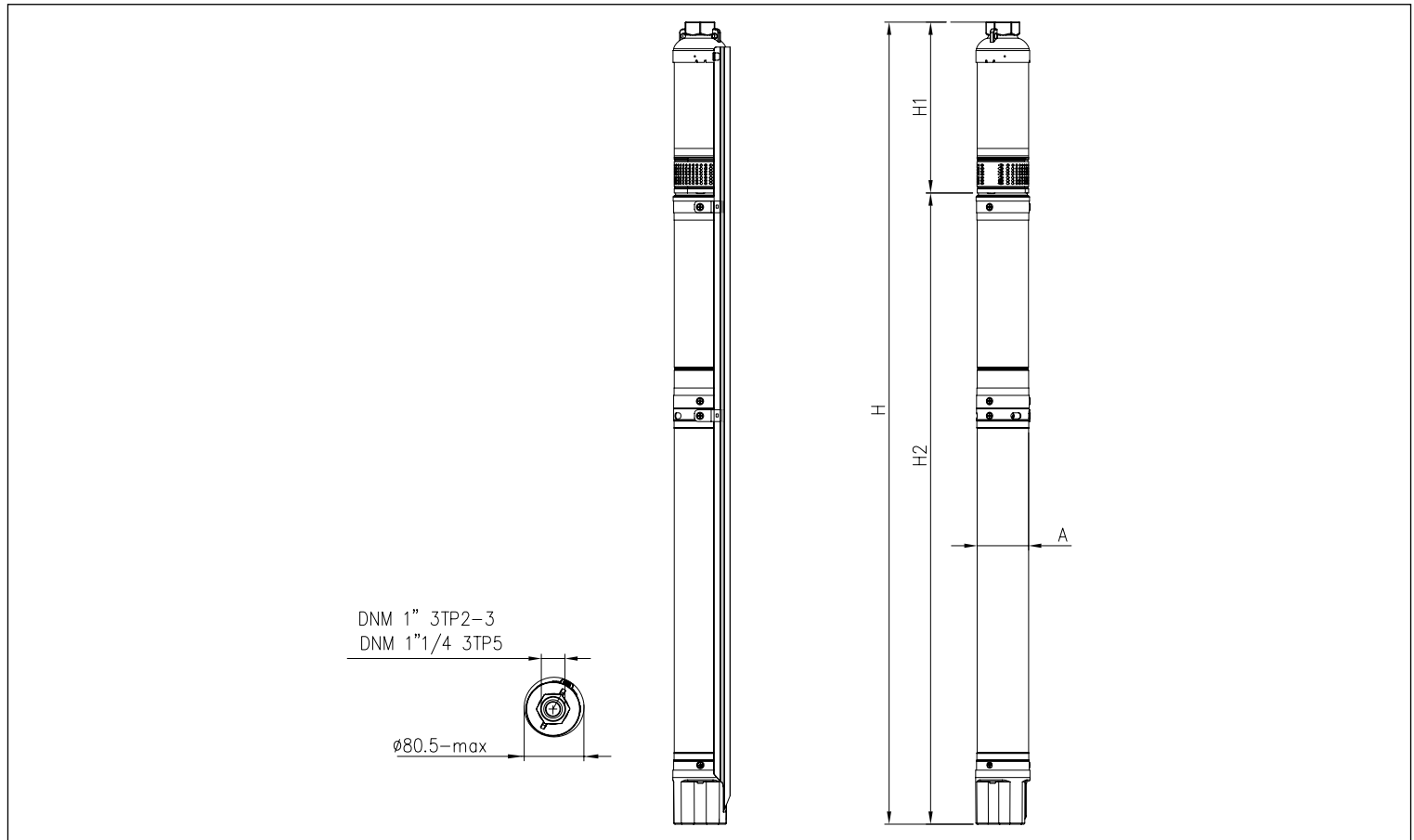
HIGH SPEED BOREHOLE PUMP

in AISI 304

PERFORMANCE TABLE

Model	P ₁		Q=Flow rate										
	[HP]	[kW]	l/min m ³ /h	10 0,6	20 1,2	30 1,8	40 2,4	50 3,0	60 3,6	80 4,8	100 6,0	115 6,9	125 7,5
			H=Head [m]										
3TP2 4 PFC	0,8	0,6	68,0	61,0	54,0	45,0	36,0	26,0	-	-	-	-	-
3TP2 6 PFC	1,2	0,9	102,0	92,0	80,0	66,0	52,0	36,0	-	-	-	-	-
3TP2 9 PFC	2	1,5	152,0	137,0	118,0	96,0	77,0	54,0	-	-	-	-	-
3TP3 3 PFC	0,8	0,6	-	51,0	46,0	42,0	36,0	31,0	19,0	-	-	-	-
3TP3 5 PFC	1,2	0,9	-	84,0	76,0	69,0	61,0	52,0	31,0	-	-	-	-
3TP3 8 PFC	2	1,5	-	134,0	122,0	111,0	97,0	83,0	50,0	-	-	-	-
3TP5 4 PFC	1,2	0,9	-	54,0	53,0	51,0	49,0	46,0	38,0	27,0	19,0	13,0	-
3TP5 7 PFC	2	1,5	-	93,0	91,0	88,0	84,0	79,0	66,0	48,0	32,0	22,0	-

DIMENSIONS



DIMENSIONAL TABLE

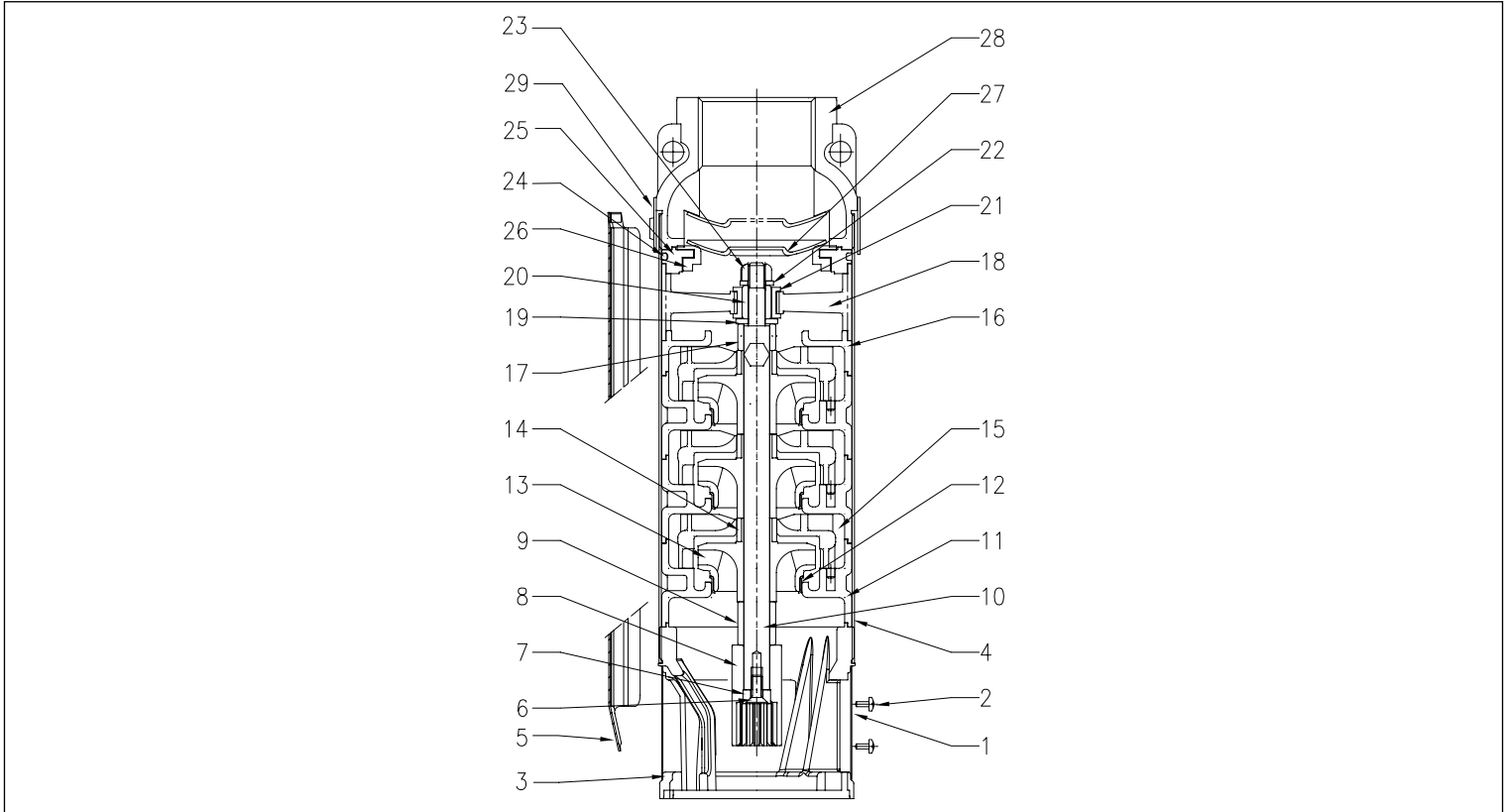
Model	P ₁		Pump without motor		A*	Pump + motor		Weight pump [kg]	Weight pump +motor [kg]
	[HP]	[kW]	H1 [mm]	DNM		H2 [mm]	H [mm]		
3TP2 4 PFC	0,8	0,6	255	G1	80	785	1040	1,4	10,3
3TP2 6 PFC	1,2	0,9	304	G1	80	815	1119	1,6	11,1
3TP2 9 PFC	2	1,5	377	G1	80	845	1222	1,9	12,1
3TP3 3 PFC	0,8	0,6	230	G1	80	785	1015	1,3	10,1
3TP3 5 PFC	1,2	0,9	279	G1	80	815	1094	1,5	11,0
3TP3 8 PFC	2	1,5	353	G1	80	845	1198	1,8	12,0
3TP5 4 PFC	1,2	0,9	277	G1¼	80	815	1092	1,5	11,0
3TP5 7 PFC	2	1,5	367	G1¼	80	845	1212	1,8	12,0

* Tolerance 0/+0,5mm

HIGH SPEED BOREHOLE PUMP

in AISI 304

SECTIONAL VIEW



MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
1	Strainer	AISI 304	16	Stage cover	Noryl GF30
2	Screw	AISI 304	17	Spacer	Noryl GF30
3	Pump bracket	AISI 304	18	Upper bracket	Noryl GF30
4	External casing	AISI 304	19	Bearing washer	AISI 303
5	Isolating cover	AISI 304	20	Shaft casing (bearing)	Alumina
6	Screw	AISI 304	21	Bearing	NBR
7	Washer	AISI 304	22	Washer	AISI 304
8	Coupling splined	AISI 304	23	Nut	AISI 304
9	Spacer	Noryl GF30	24	O-Ring	NBR
10	Shaft	AISI 304	25	Valve seat	Noryl GF30
11	Stage housing	Noryl GF30	26	Valve seal ring	NBR
12	Wear ring	AISI 304	27	Valve disc	AISI 304
13	Impeller	Noryl GF30	28	Discharge bracket	AISI 304
14	Wear ring	Alumina	29	Cable cover holder(kit)	AISI 304
15	Diffuser	Noryl GF30			

ELECTRIC DATA TABLE 3TP WITH OIL FILLED MOTOR

P ₁		P ₂	Voltage	I _n	Efficiency	Power factor
[HP]	[kW]	[kW]	[V]	[A]	[%]	
0,8	0,6	1,15	230V	5,9	52,2	0,9
1,2	0,9	1,49	230V	7,2	60,4	0,9
2	1,5	2,36	230V	11,4	63,6	0,9

3" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304



3" borehole centrifugal pumps in AISI 304.

APPLICATIONS

- Moving clear water in wells
- Pressure boosting of clean water for agricultural, domestic or industrial use
- Irrigation and moving water in general

TECHNICAL DETAILS

- Silent
- They can work horizontally

PUMP TECHNICAL DATA

- Maximum immersion: 60 m
- Maximum temperature of the liquid: 30°C
- Maximum presence of sand: 50 ppm
- Discharge connection: G1

MOTOR TECHNICAL DATA

- Insulation class: F
- Protection degree: IP 68
- 230V (+6 -10%) 50 Hz single phase voltage
- 400V (+6 -10%) 50 Hz three phase voltage
- Incorporated non-return valve
- For cables dimensioning please see page 58 or our Data Book on the web site www.ebaraeurope.com

MATERIALS

- Casing, discharge outlet and motor connection in AISI 304
- Diffuser in POM polyacetalic resin
- Impeller in PPO reinforced with fibreglass

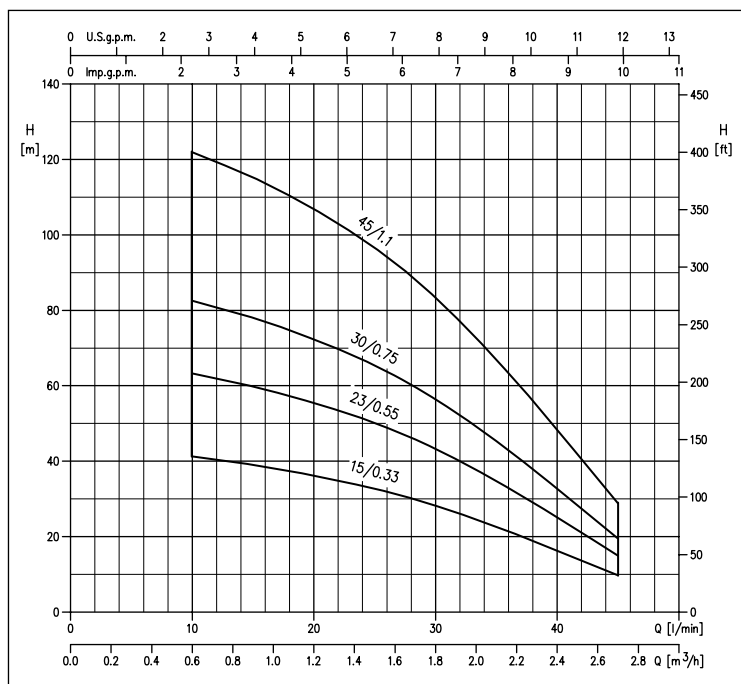
CONTROL PANELS

- Q Series
- 1EPBH

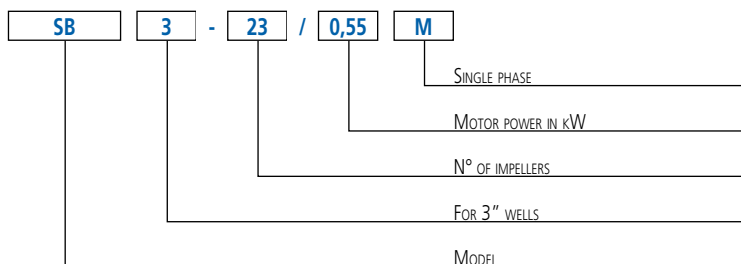
ACCESSORIES (on request)

- Junction for cable GPS-1 (for 4x1.5 and 4x2.5 cables)
- Casting resin cable junction 92A1 (section 1.5÷10 mm²)
- PVC 5 m key float with counter-weight
- PVC 10 m key float with counter-weight
- PVC 20 m key float with counter-weight
- Capacitor MF 16 450V L=150
- Capacitor MF 20,450V L=150
- Capacitor MF 25,450V L=150

PERFORMANCE RANGE (according to ISO 9906 Attachment A)



IDENTIFICATION CODE



3" BOREHOLE CENTRIFUGAL PUMPS

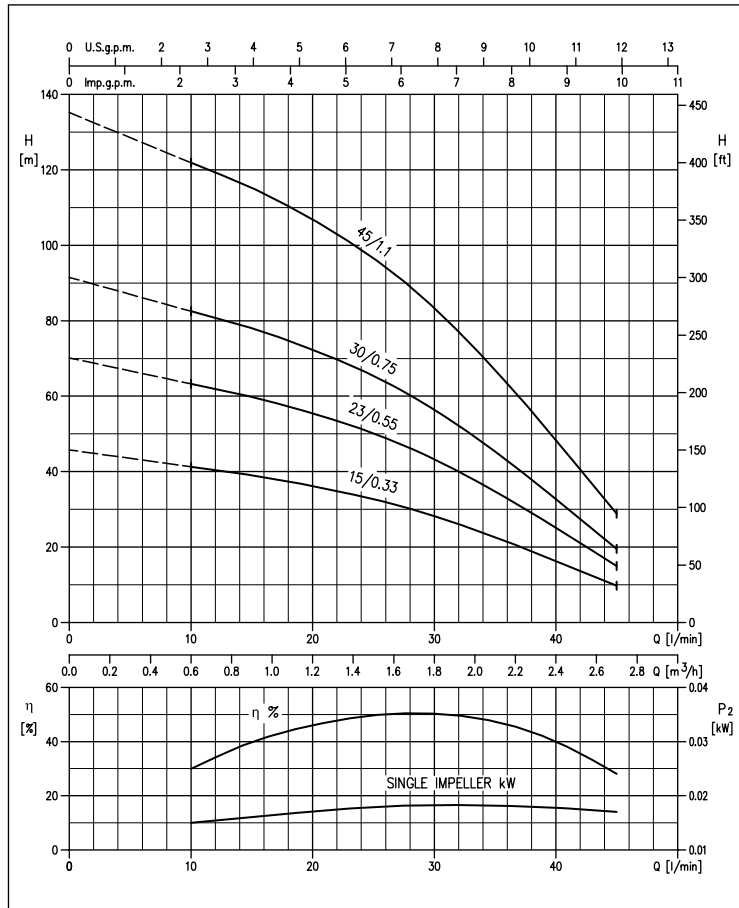
in AISI 304

PERFORMANCE TABLE

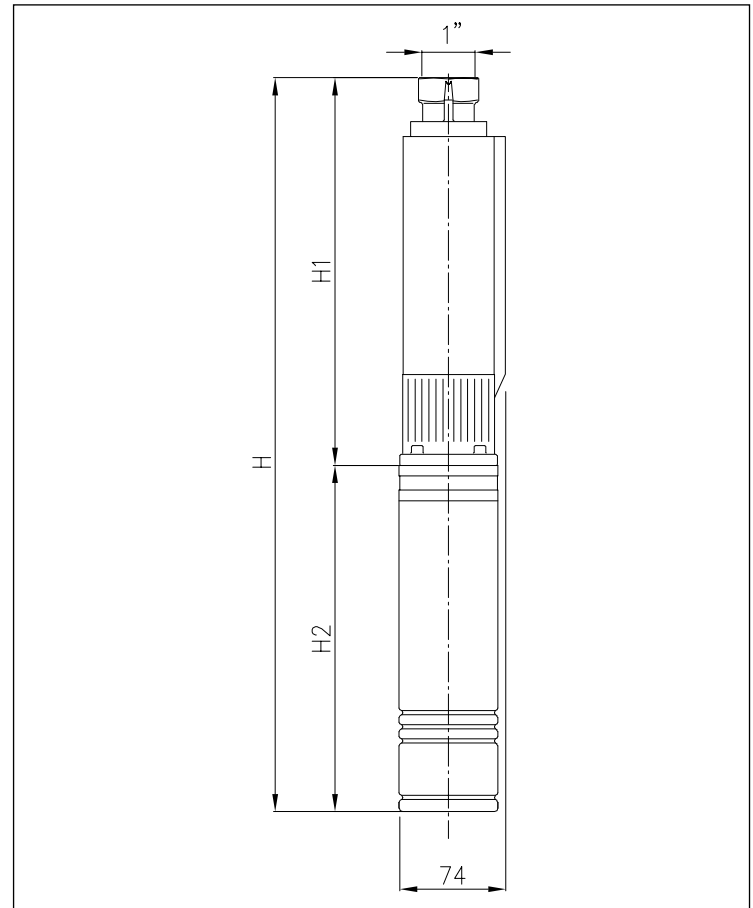
Model	Motor size	P ₂		Q=Flow rate								
		[HP]	[kW]	l/min m ³ /h	10 0,6	15 0,9	20 1,2	25 1,5	30 1,8	35 2,1	40 2,4	45 2,7
					H=Head [m]							
SB3-15	3"	0,5	0,37	41,5	39,0	36,2	32,7	28,2	22,7	16,5	9,8	
SB3-23	3"	0,75	0,55	63,5	60,0	55,5	50,0	43,5	34,7	25,1	15,0	
SB3-30	3"	1	0,75	82,5	78,0	72,5	65,5	56,5	45,5	32,7	19,5	
SB3-45	3"	1,5	1,1	122,0	115,0	107,0	96,5	83,5	67,0	48,5	28,8	

PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



DIMENSIONS



DIMENSIONAL TABLE

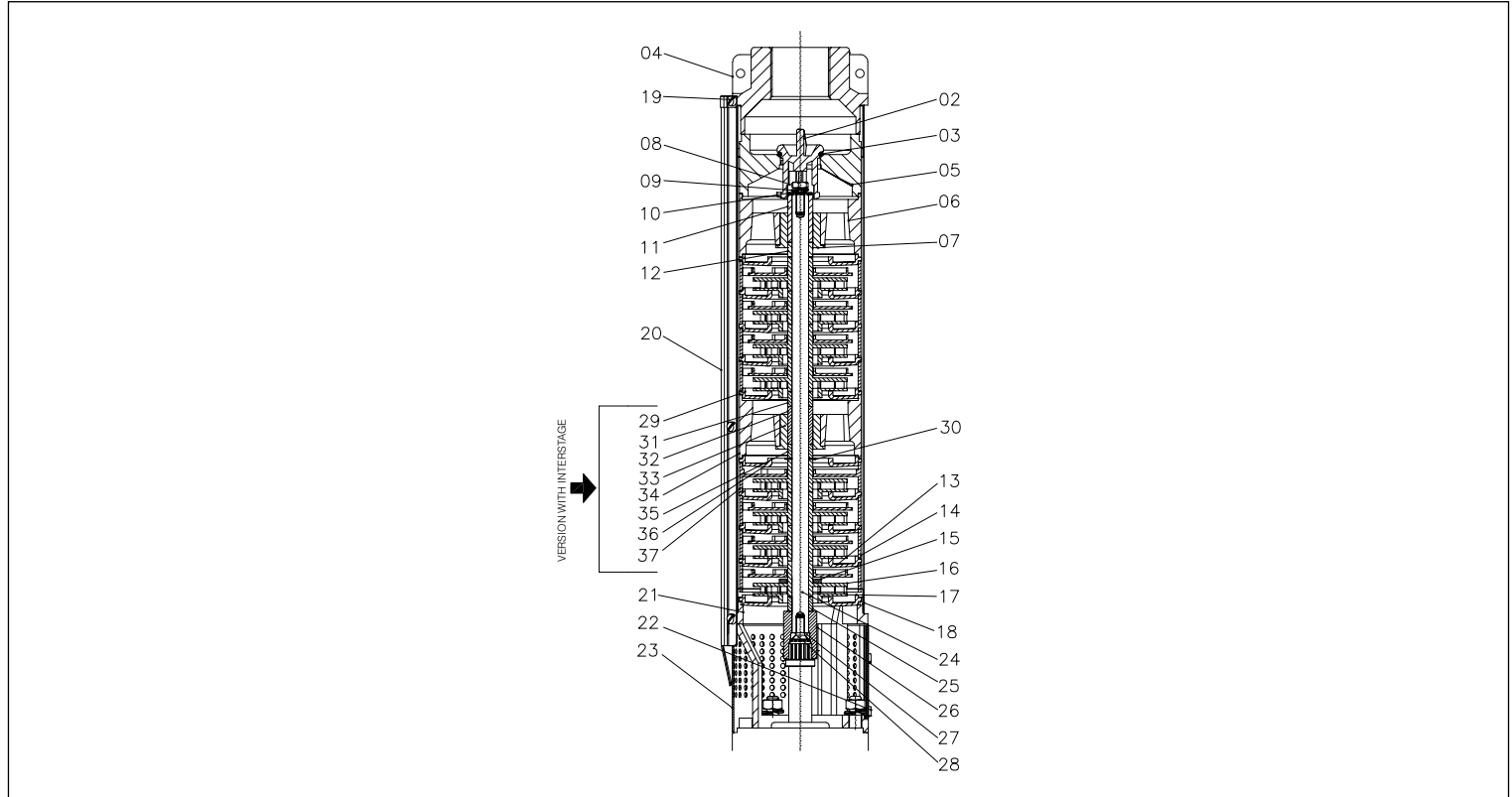
Model	P ₂		Pump without motor H1 [mm]	Pump + single phase motor		Pump + three phase motor		Weight pump [kg]	Weight pump+motor	
	[HP]	[kW]		H2 [mm]	H [mm]	H2 [mm]	H [mm]		Single phase [kg]	Three phase [kg]
SB3-15	0,5	0,37	580	377	957	377	957	3,3	9,3	9,3
SB3-23	0,75	0,55	780	397	1177	377	1157	4,4	10,8	10,5
SB3-30	1	0,75	1000	416	4116	397	1397	5,6	12,4	12,0
SB3-45	1,5	1,1	1380	-	-	416	1796	7,6	-	14,4

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3" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304

SECTIONAL VIEW



MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
2	Valve	POM Polyacetalic resin	21	Suction	EN 1.4301 (AISI 304)
3	O-Ring	NBR	22	Screw	EN 1.4301 (AISI 304)
4	Discharge	EN 1.4301 (AISI 304)	23	Filter	EN 1.4016 (AISI 430)
5	Valve seat	PPO mod. + G.F.	24	Shaft	EN 1.4105 (AISI 430F)
6	Bearing seat	PPO mod. + G.F.	25	Spacer	PPO mod. + G.F.
7	Bearing	PUR Polyurethane	26	Joint	EN 1.4401 (AISI 316)
8	Screw	EN 1.4301 (AISI 304)	27	Washer	EN 1.4401 (AISI 316)
9	Washer	EN 1.4301 (AISI 304)	28	Screw	EN 1.4301 (AISI 304)
10	Washer	EN 1.4401 (AISI 316)	29	Diffuser disc	POM Polyacetalic resin
11	Shaft casing (bearing)	EN 1.4401 (AISI 316)	30	Adjuster ring	EN 1.4301 (AISI 304)
12	Spacer	PPO mod. + G.F.	31	Spacer	PPO mod. + G.F.
13	Diffuser disc	POM Polyacetalic resin	32	Shaft casing (bearing)	EN 1.4401 (AISI 316)
14	Diffuser	POM Polyacetalic resin	33	Bearing	PUR Polyurethane
15	Washer	EN 1.4301 (AISI 304)	34	Bearing seat	PPO mod. + G.F.
16	Impeller	PPO mod. + G.F.	35	Spacer	PPO mod. + G.F.
17	Diffuser disc	POM Polyacetalic resin	36	Diffuser disc	POM Polyacetalic resin
18	External casing	EN 1.4301 (AISI 304)	37	Diffuser	POM Polyacetalic resin
19	Screw	EN 1.4301 (AISI 304)			

ELECTRIC DATA TABLE

Model	P ₂		P ₁	Voltage	I _n	I _s	Efficiency	Power factor	Ts/T _n	Capacitor Single phase
	[HP]	[kW]								
Single phase	0,5	0,37	0,72	230	3,75	8,8	51	0,96	0,58	16
	0,75	0,55	1	230	4,5	12,2	55	0,98	0,54	20
	1	0,75	1,31	230	5,85	14,5	57	0,98	0,55	25
Three phase	0,5	0,37	0,72	400	2	8	51	0,71	2,1	-
	0,75	0,55	0,98	400	2,1	9,1	56	0,75	2	-
	1	0,75	1,19	400	2,5	11,7	63	0,75	2	-
	1,5	1,1	1,75	400	3,2	14	63	0,75	2	-

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WINNER 4N

4" BOREHOLE CENTRIFUGAL ELECTRIC PUMPS

in AISI 304



4" borehole centrifugal electric pumps in AISI 304 with front wear ring impeller.

APPLICATIONS

- Moving clear water in wells
- Pressure boosting of clean water for agricultural, domestic or industrial use
- Irrigation
- Moving water in general

TECHNICAL DETAILS

- Easy to install
- Vertical or horizontal installation

PUMP TECHNICAL DATA

- Maximum immersion:
 - 350 m (with water filled motor)
 - 150 m (with oil filled motor)
 - Maximum temperature of the liquid: 40°C (depends on maximum motor temperature)
 - Maximum presence of sand: 50 ppm
 - Maximum chlorine ion density: 500 ppm
 - Discharge connection:
 - G1¼ for 4N1 - 4N2 - 4N4 models
 - G2 for 4N7 - 4N10 - 4N15 models
 - MEI > 0,1
- For further information please see our Data Book on the web site www.ebara-europe.com

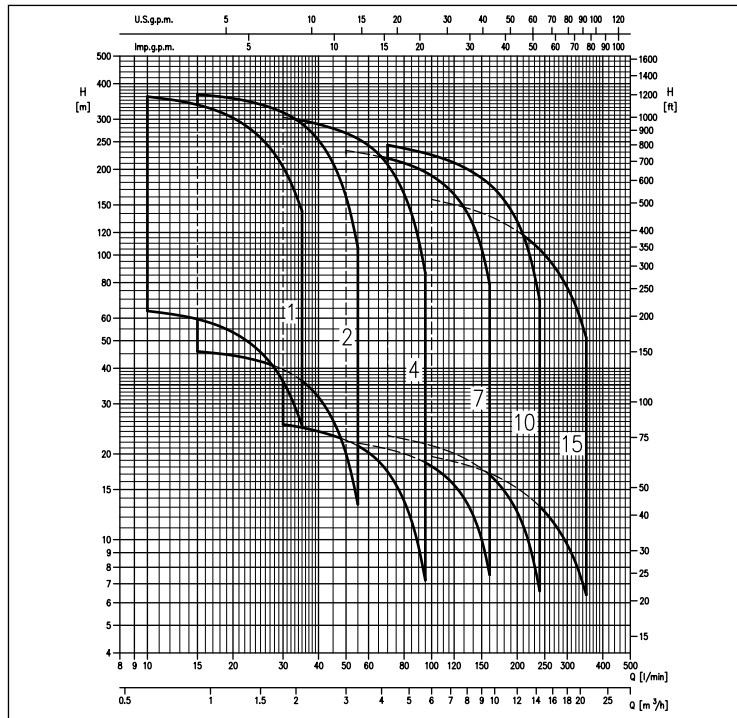
MOTOR TECHNICAL DATA

- 2 poles oil filled motor (OY) or water filled motor (WY)
- Max start-ups per hour: 30 (OY) - 20 (WY)
- Insulation class: F (OY) - B (WY)
- Protection degree: IP58 (OY) - IP68 (WY)
- 230V (±10%) 50Hz (OYM) single phase voltage, 380-415V (±10%) 50Hz (OY) three phase voltage
- 230V (-10%+6%) 50Hz (WYM) single phase voltage, 380-415V (-10%+6%) 50Hz (WY) three phase voltage
- For cables dimensioning please see page 58 or our Data Book on the web site www.ebara-europe.com

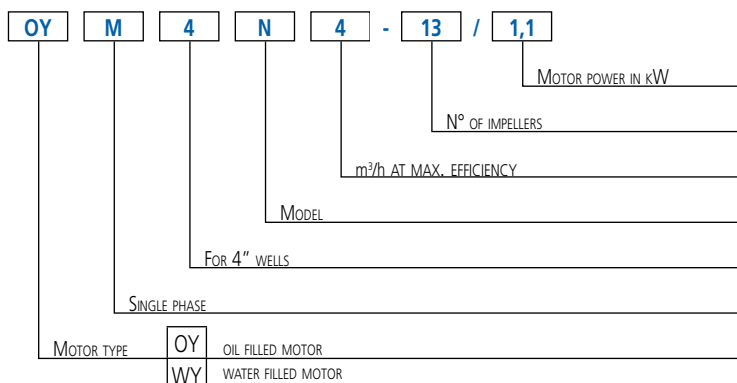
MATERIALS

- External casing, shaft and valve in EN 1.4301 (AISI 304)
- Discharge in EN 1.4308 (ASTM CF8)
- Impeller in Ixef®
- Diffuser in PPE+PS reinforced with fibreglass

PERFORMANCE RANGE (according to ISO 9906 Attachment A)



IDENTIFICATION CODE



WINNER 4N

4" BOREHOLE CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

PERFORMANCE TABLES

Model	P ₂		Q=Flow rate										
	[HP]	[kW]	l/min m ³ /h	10 0,6	15 0,9	20 1,2	25 1,5	30 1,8	35 2,1	45 2,7	55 3,3	75 4,5	95 5,7
			H=Head [m]										
WINNER 4N1-12	0,5	0,37		64,0	60,0	54,0	46,0	36,0	25,0	-	-	-	-
WINNER 4N1-18	0,7	0,55		95,0	89,0	80,0	68,0	54,0	38,0	-	-	-	-
WINNER 4N1-24	1	0,75		127,0	119,0	107,0	91,0	72,0	50,0	-	-	-	-
WINNER 4N1-34	1,5	1,1		180,0	169,0	152,0	129,0	102,0	71,0	-	-	-	-
WINNER 4N1-48	2	1,5		254,0	238,0	214,0	182,0	144,0	101,0	-	-	-	-
WINNER 4N1-68	3	2,2		360,0	337,0	303,0	258,0	204,0	143,0	-	-	-	-
WINNER 4N2-7	0,5	0,37		-	46,0	44,0	42,0	40,0	36,0	26,0	13,0	-	-
WINNER 4N2-10	0,7	0,55		-	66,0	63,0	60,0	57,0	52,0	38,0	19,0	-	-
WINNER 4N2-14	1	0,75		-	92,0	89,0	85,0	79,0	72,0	53,0	27,0	-	-
WINNER 4N2-20	1,5	1,1		-	131,0	127,0	121,0	113,0	103,0	75,0	38,0	-	-
WINNER 4N2-28	2	1,5		-	183,0	178,0	169,0	158,0	144,0	105,0	53,0	-	-
WINNER 4N2-40	3	2,2		-	262,0	254,0	242,0	226,0	206,0	150,0	76,0	-	-
WINNER 4N2-56	4	3		-	367,0	355,0	338,0	317,0	289,0	210,0	106,0	-	-
WINNER 4N4-4	0,5	0,37		-	-	-	-	25,0	25,0	23,0	21,0	16,0	7,0
WINNER 4N4-7	0,7	0,55		-	-	-	-	44,0	43,0	41,0	37,0	27,0	13,0
WINNER 4N4-9	1	0,75		-	-	-	-	57,0	56,0	52,0	48,0	35,0	16,0
WINNER 4N4-13	1,5	1,1		-	-	-	-	83,0	80,0	75,0	69,0	51,0	23,0
WINNER 4N4-18	2	1,5		-	-	-	-	114,0	111,0	104,0	96,0	70,0	32,0
WINNER 4N4-27	3	2,2		-	-	-	-	171,0	167,0	157,0	144,0	105,0	49,0
WINNER 4N4-36	4	3		-	-	-	-	229,0	223,0	209,0	192,0	140,0	65,0
WINNER 4N4-48	5,5	4		-	-	-	-	305,0	297,0	278,0	256,0	187,0	86,0

Model	P ₂		Q=Flow rate										
	[HP]	[kW]	l/min m ³ /h	50 3	70 4,2	100 6	130 7,8	160 9,6	200 12	240 14,4	280 16,8	320 19,2	350 21
			H=Head [m]										
WINNER 4N7-4	0,7	0,55		22,0	21,0	18,0	14,0	8,0	-	-	-	-	-
WINNER 4N7-6	1	0,75		33,0	31,0	27,0	21,0	11,0	-	-	-	-	-
WINNER 4N7-8	1,5	1,1		44,0	42,0	36,0	28,0	15,0	-	-	-	-	-
WINNER 4N7-12	2	1,5		67,0	62,0	54,0	42,0	23,0	-	-	-	-	-
WINNER 4N7-17	3	2,2		94,0	88,0	77,0	60,0	32,0	-	-	-	-	-
WINNER 4N7-23	4	3		128,0	120,0	104,0	81,0	43,0	-	-	-	-	-
WINNER 4N7-30	5,5	4		167,0	156,0	136,0	105,0	56,0	-	-	-	-	-
WINNER 4N7-42	7,5	5,5		233,0	219,0	190,0	147,0	79,0	-	-	-	-	-
WINNER 4N10-4	1	0,75		-	23,0	21,0	19,0	17,0	13,0	7,0	-	-	-
WINNER 4N10-6	1,5	1,1		-	35,0	32,0	29,0	25,0	19,0	10,0	-	-	-
WINNER 4N10-8	2	1,5		-	46,0	43,0	39,0	34,0	25,0	13,0	-	-	-
WINNER 4N10-12	3	2,2		-	70,0	64,0	58,0	51,0	38,0	20,0	-	-	-
WINNER 4N10-17	4	3		-	99,0	91,0	82,0	72,0	53,0	28,0	-	-	-
WINNER 4N10-23	5,5	4		-	133,0	123,0	111,0	97,0	72,0	38,0	-	-	-
WINNER 4N10-30	7,5	5,5		-	174,0	161,0	145,0	127,0	94,0	50,0	-	-	-
WINNER 4N10-42	10	7,5		-	244,0	225,0	203,0	177,0	131,0	69,0	-	-	-
WINNER 4N15-4	1,5	1,1		-	-	20,0	18,0	17,0	15,0	13,0	11,0	8,0	6,0
WINNER 4N15-6	2	1,5		-	-	29,0	28,0	26,0	23,0	20,0	16,0	13,0	10,0
WINNER 4N15-9	3	2,2		-	-	44,0	41,0	39,0	34,0	29,0	24,0	19,0	14,0
WINNER 4N15-13	4	3		-	-	64,0	60,0	56,0	49,0	43,0	35,0	27,0	21,0
WINNER 4N15-17	5,5	4		-	-	83,0	78,0	73,0	64,0	56,0	46,0	36,0	27,0
WINNER 4N15-24	7,5	5,5		-	-	118,0	110,0	103,0	91,0	78,0	65,0	50,0	38,0
WINNER 4N15-32	10	7,5		-	-	157,0	147,0	137,0	121,0	105,0	86,0	67,0	51,0

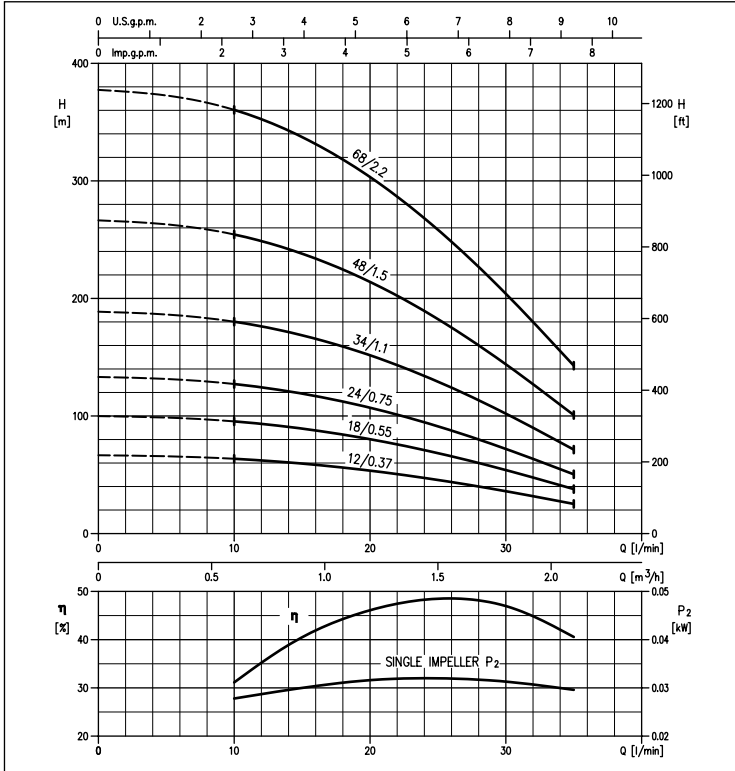
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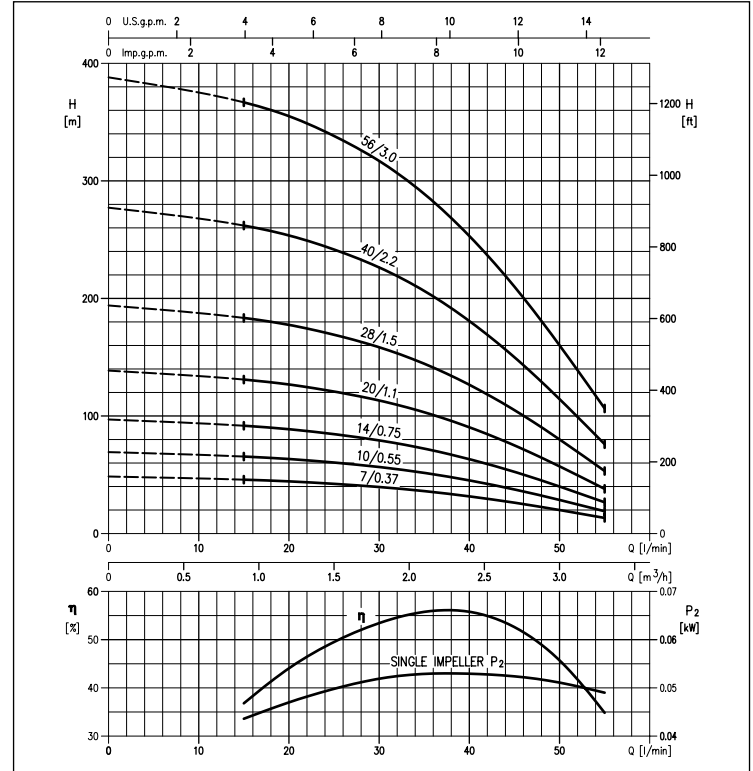
WINNER 4N

4" BOREHOLE CENTRIFUGAL ELECTRIC PUMPS in AISI 304

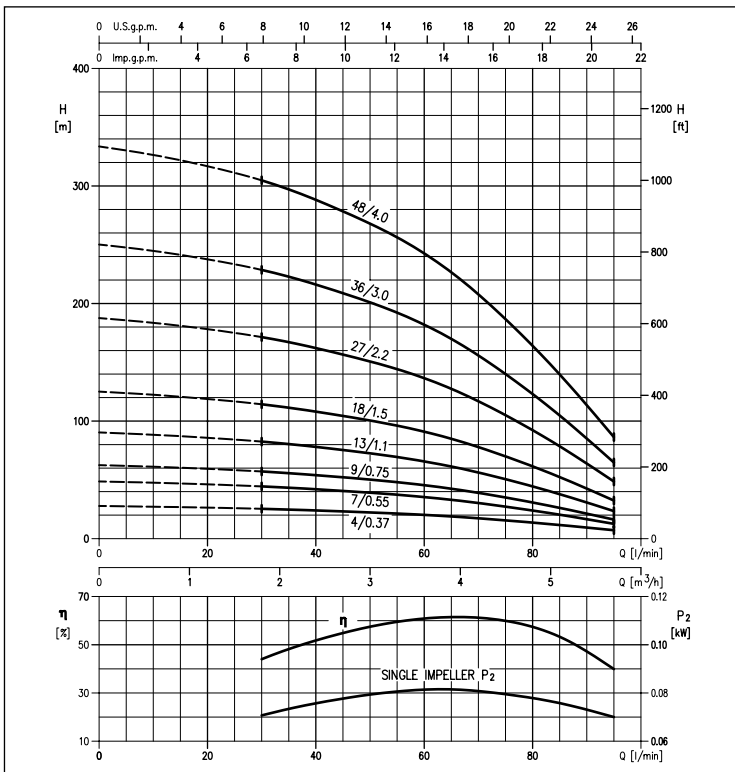
PERFORMANCE CURVES WINNER 4N1 series
(according to ISO 9906 Attachment A) - impeller diameter: 67,6 mm



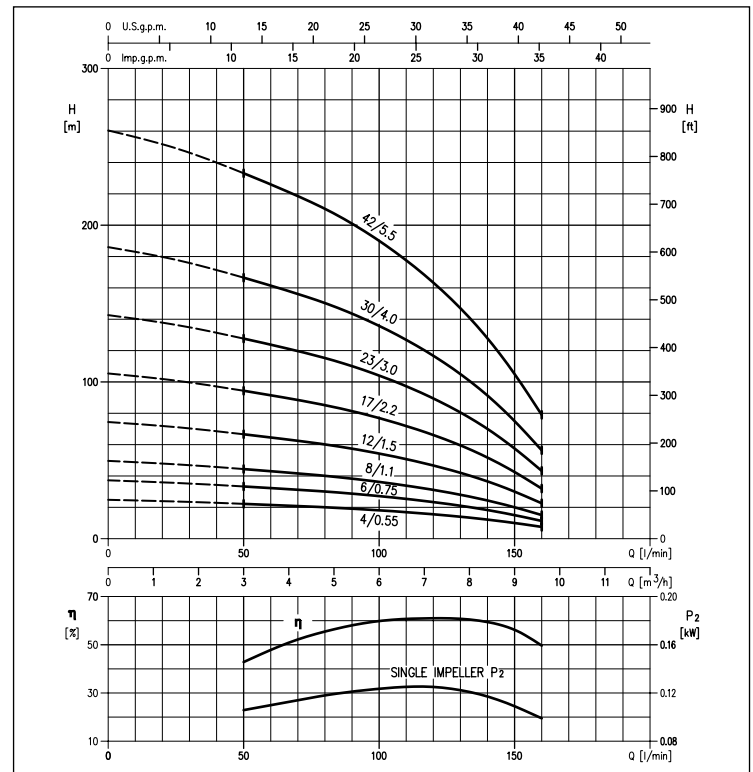
PERFORMANCE CURVES WINNER 4N2 series
(according to ISO 9906 Attachment A) - impeller diameter: 76 mm



PERFORMANCE CURVES WINNER 4N4 series
(according to ISO 9906 Attachment A) - impeller diameter: 76 mm



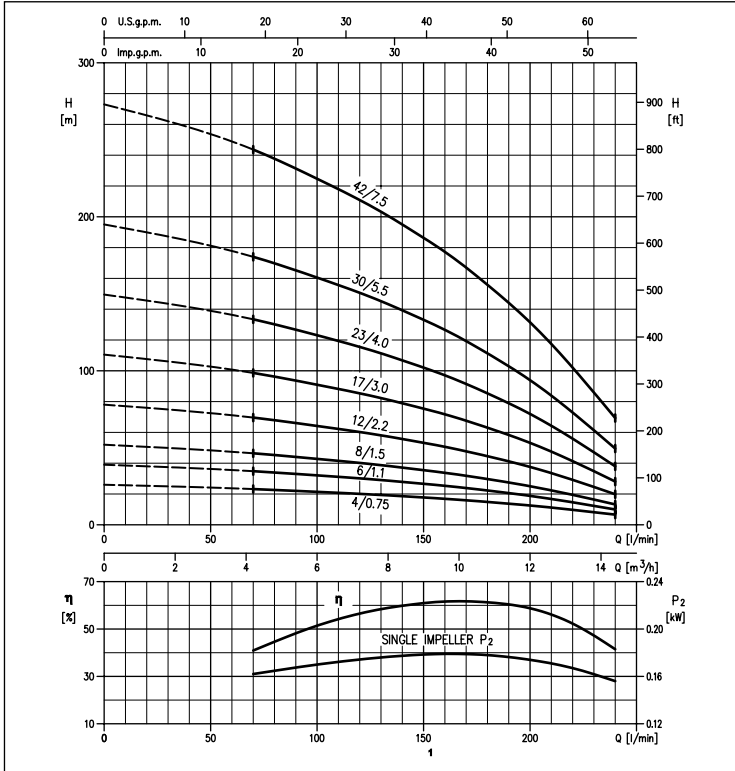
PERFORMANCE CURVES WINNER 4N7 series
(according to ISO 9906 Attachment A) - impeller diameter: 74,2 mm



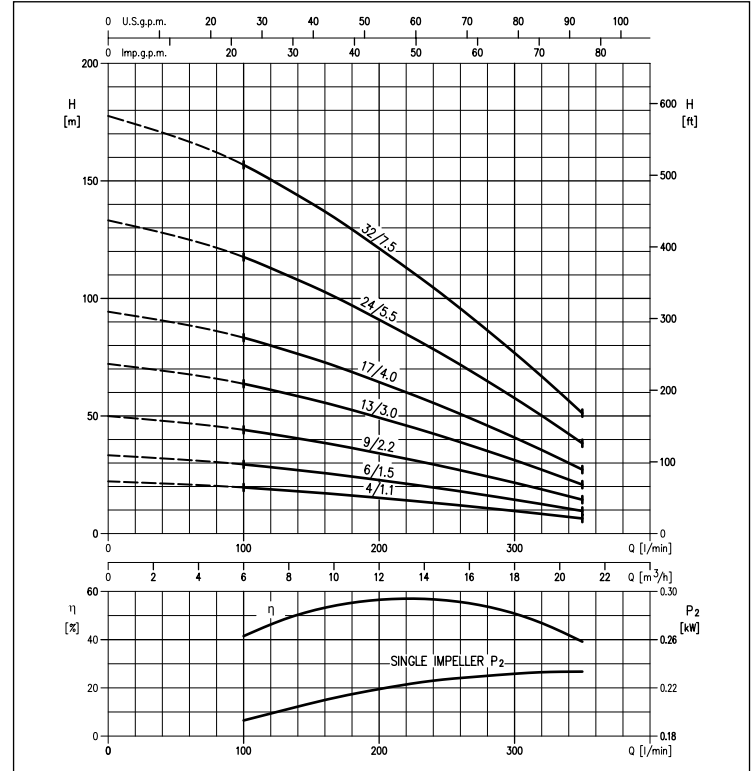
WINNER 4N

4" BOREHOLE CENTRIFUGAL ELECTRIC PUMPS in AISI 304

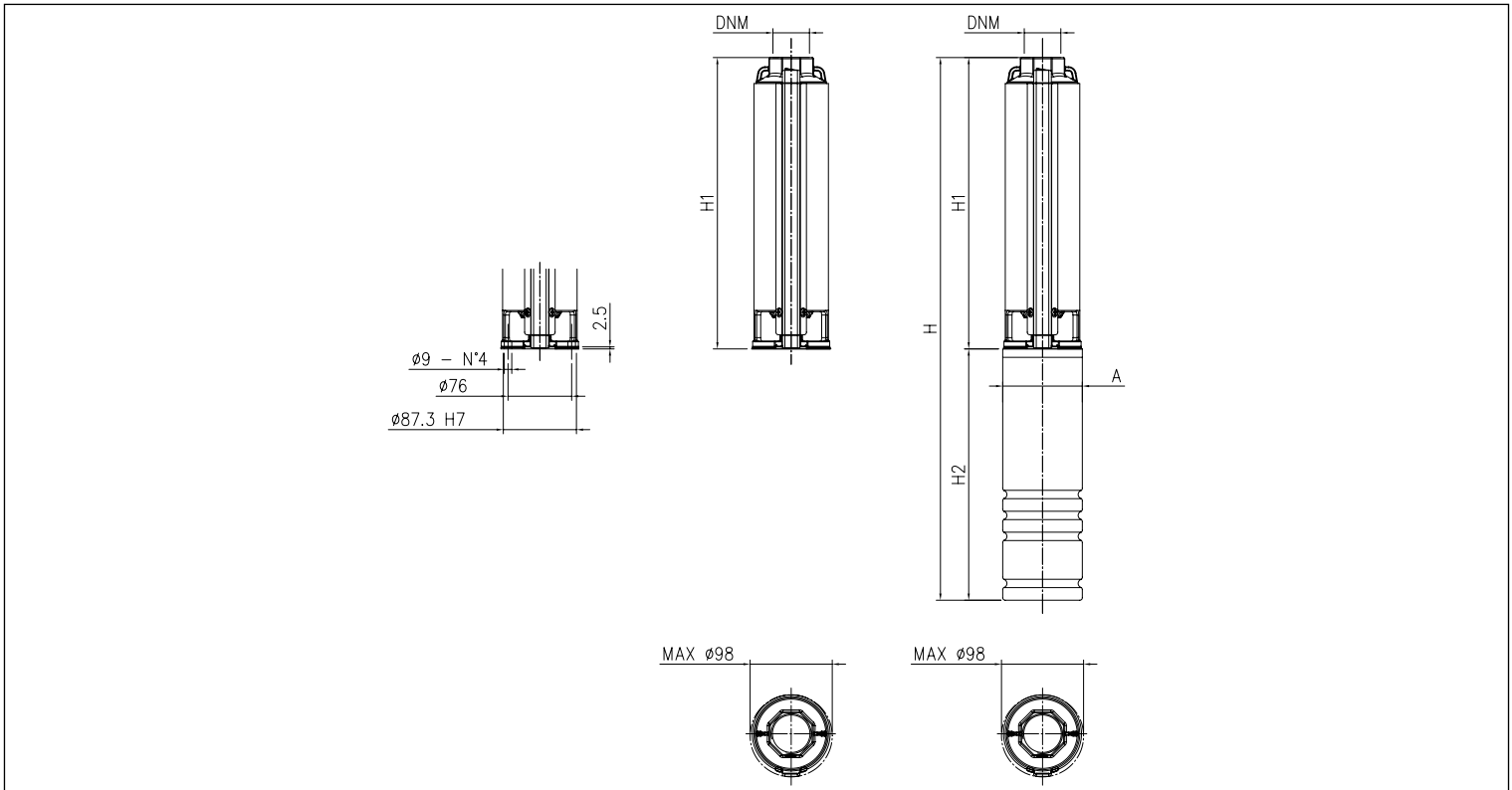
PERFORMANCE CURVES WINNER 4N10 series
(according to ISO 9906 Attachment A) - impeller diameter: 72 mm



PERFORMANCE CURVES WINNER 4N15 series
(according to ISO 9906 Attachment A) - impeller diameter: 75,5 mm



DIMENSIONS



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WINNER 4N

4" BOREHOLE CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

DIMENSIONAL TABLE

Model	P ₂		Pump without motor					Pump with oil filled motor								Pump with water filled motor							
	[HP]	[kW]	H1 [mm]	DNM	Weight [kg]	A [mm]	Single phase				Three phase				A [mm]	Single phase				Three phase			
							H2 [mm]	H [mm]	Weight [kg]	A [mm]	H2 [mm]	H [mm]	Weight [kg]	A [mm]		H2 [mm]	H [mm]	Weight [kg]	A [mm]	H2 [mm]	H [mm]	Weight [kg]	
WINNER 4N1-12	0,5	0,37	332	G1½	3,7	97	325	657	10,7	97	304	636	10,2	97	228	560	12,7	97	214	546	12,1		
WINNER 4N1-18	0,75	0,55	437	G1½	4,8	97	325	762	12,4	97	325	762	11,8	97	248	685	14,8	97	228	665	13,7		
WINNER 4N1-24	1	0,75	542	G1½	5,9	97	350	892	14,6	97	325	867	13,5	97	283	825	17,2	97	248	790	15,9		
WINNER 4N1-34	1,5	1,1	717	G1½	8,0	97	385	1102	18,3	97	350	1067	16,7	97	339	1056	21,9	97	283	1000	20,5		
WINNER 4N1-48	2	1,5	1028	G1½	11,8	97	420	1448	23,8	97	385	1413	22,2	97	350	1378	26,6	97	307	1335	25,3		
WINNER 4N1-68	3	2,2	1378	G1½	15,0	97	470	1848	29,2	97	420	1798	27,0	97	437	1815	33,7	97	339	1717	29,4		
WINNER 4N2-7	0,5	0,37	245	G1½	3,8	97	325	570	10,8	97	304	549	10,3	97	228	473	12,8	97	214	459	12,2		
WINNER 4N2-10	0,75	0,55	297	G1½	4,1	97	325	622	11,7	97	325	622	11,1	97	248	545	14,1	97	228	525	13,0		
WINNER 4N2-14	1	0,75	367	G1½	4,4	97	350	717	13,1	97	325	692	12,0	97	283	650	15,7	97	248	615	14,4		
WINNER 4N2-20	1,5	1,1	472	G1½	5,3	97	385	857	15,6	97	350	822	14,0	97	339	811	19,2	97	283	755	17,8		
WINNER 4N2-28	2	1,5	612	G1½	6,7	97	420	1032	18,7	97	385	997	17,1	97	350	962	21,5	97	307	919	20,2		
WINNER 4N2-40	3	2,2	888	G1½	10,0	97	470	1358	24,2	97	420	1308	22,0	97	437	1325	28,7	97	339	1227	24,4		
WINNER 4N2-56	4	3	1168	G1½	13,0	97	-	-	-	97	544	1712	25,8	97	-	-	-	97	394	1562	29,8		
WINNER 4N4-4	0,5	0,37	208	G1½	2,4	97	325	533	9,4	97	304	512	8,9	97	228	436	11,4	97	214	422	10,8		
WINNER 4N4-7	0,75	0,55	273	G1½	3,0	97	325	598	10,6	97	325	598	10,0	97	248	521	13,0	97	228	501	11,9		
WINNER 4N4-9	1	0,75	316	G1½	3,4	97	350	666	12,1	97	325	641	11,0	97	283	598	14,7	97	248	564	13,4		
WINNER 4N4-13	1,5	1,1	402	G1½	4,3	97	385	787	14,6	97	350	752	13,0	97	339	740	18,2	97	283	684	16,8		
WINNER 4N4-18	2	1,5	509	G1½	5,4	97	420	929	17,4	97	385	894	15,8	97	350	859	20,2	97	307	816	18,9		
WINNER 4N4-27	3	2,2	703	G1½	7,3	97	470	1173	21,5	97	420	1123	19,3	97	437	1139	26,0	97	339	1041	21,7		
WINNER 4N4-36	4	3	962	G1½	11,0	97	-	-	-	97	544	1506	23,8	97	-	-	-	97	394	1356	27,8		
WINNER 4N4-48	5,5	4	1220	G1½	14,0	97	-	-	-	97	574	1794	29,3	97	-	-	-	97	543	1763	35,8		
WINNER 4N7-4	0,75	0,55	262	G2	3,0	97	325	587	10,6	97	325	587	10,0	97	248	510	13,0	97	228	490	11,9		
WINNER 4N7-6	1	0,75	333	G2	3,5	97	350	683	12,2	97	325	658	11,1	97	283	616	14,8	97	248	581	13,5		
WINNER 4N7-8	1,5	1,1	404	G2	4,0	97	385	789	14,3	97	350	754	12,7	97	339	743	17,9	97	283	687	16,5		
WINNER 4N7-12	2	1,5	546	G2	5,5	97	420	966	17,5	97	385	931	15,9	97	350	896	20,3	97	307	853	19,0		
WINNER 4N7-17	3	2,2	724	G2	7,1	97	470	1194	21,3	97	420	1144	19,1	97	437	1160	25,8	97	339	1062	21,5		
WINNER 4N7-23	4	3	937	G2	9,0	97	-	-	-	97	544	1481	21,8	97	-	-	-	97	394	1330	25,8		
WINNER 4N7-30	5,5	4	1251	G2	12,8	97	-	-	-	97	574	1825	28,1	97	-	-	-	97	543	1794	34,6		
WINNER 4N7-42	7,5	5,5	1677	G2	16,5	97	-	-	-	97	644	2321	35,1	97	-	-	-	97	653	2330	45,2		
WINNER 4N10-4	1	0,75	262	G2	3,0	97	350	612	11,7	97	325	587	10,6	97	283	545	14,3	97	248	510	13,0		
WINNER 4N10-6	1,5	1,1	333	G2	3,6	97	385	718	13,9	97	350	683	12,3	97	339	672	17,5	97	283	616	16,1		
WINNER 4N10-8	2	1,5	404	G2	4,1	97	420	824	16,1	97	385	789	14,5	97	350	754	18,9	97	307	711	17,6		
WINNER 4N10-12	3	2,2	546	G2	5,5	97	470	1016	19,7	97	420	966	17,5	97	437	983	24,2	97	339	885	19,9		
WINNER 4N10-17	4	3	724	G2	7,3	97	-	-	-	97	544	1268	20,1	97	-	-	-	97	394	1117	24,1		
WINNER 4N10-23	5,5	4	937	G2	9,0	97	-	-	-	97	574	1511	24,3	97	-	-	-	97	543	1480	30,8		
WINNER 4N10-30	7,5	5,5	1251	G2	12,8	97	-	-	-	97	644	1895	31,4	97	-	-	-	97	653	1904	41,5		
WINNER 4N10-42	10	7,5	1677	G2	16,6	97	-	-	-	97	805	2482	43,6	97	-	-	-	97	731	2408	49,3		
WINNER 4N15-4	1,5	1,1	440	G2	4,5	97	385	825	14,8	97	350	790	13,2	97	339	779	18,4	97	283	723	17,0		
WINNER 4N15-6	2	1,5	600	G2	5,5	97	420	1020	17,5	97	385	985	15,9	97	350	950	20,3	97	307	907	19,0		
WINNER 4N15-9	3	2,2	840	G2	7,0	97	470	1310	21,2	97	420	1260	19,0	97	437	1277	25,7	97	339	1179	21,4		
WINNER 4N15-13	4	3	1160	G2	10,0	97	-	-	-	97	544	1704	22,8	97	-	-	-	97	394	1554	26,8		
WINNER 4N15-17	5,5	4	1480	G2	12,0	97	-	-	-	97	574	2054	27,3	97	-	-	-	97	543	2023	33,8		
WINNER 4N15-24	7,5	5,5	2106	G2	20,0	97	-	-	-	97	644	2750	38,6	97	-	-	-	97	653	2759	48,7		
WINNER 4N15-32	10	7,5	2746	G2	29,0	97	-	-	-	97	805	3551	56,0	97	-	-	-	97	731	3477	61,7		

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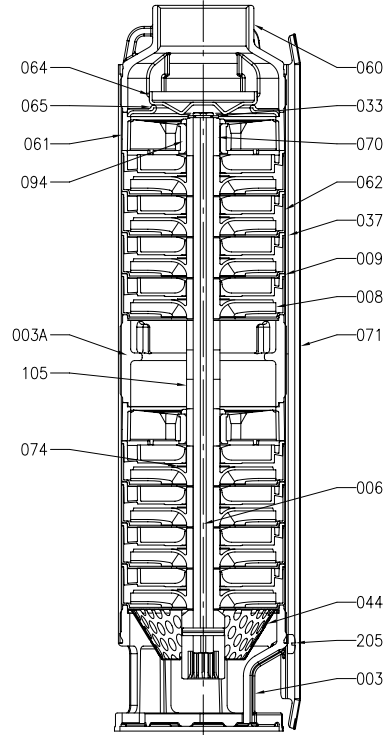
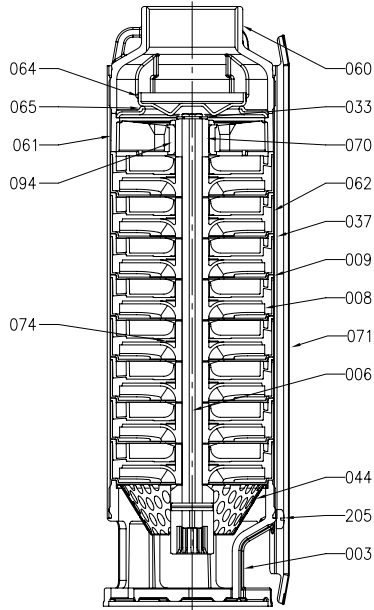
WINNER 4N

4" BOREHOLE CENTRIFUGAL ELECTRIC PUMPS in AISI 304

SECTIONAL VIEW WINNER 4N1-4N2-4N4

Single pump casing

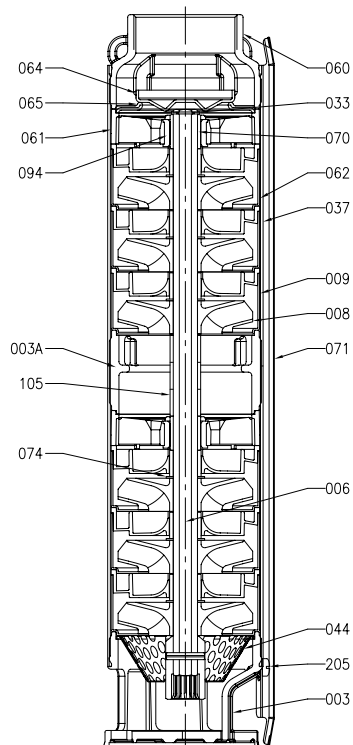
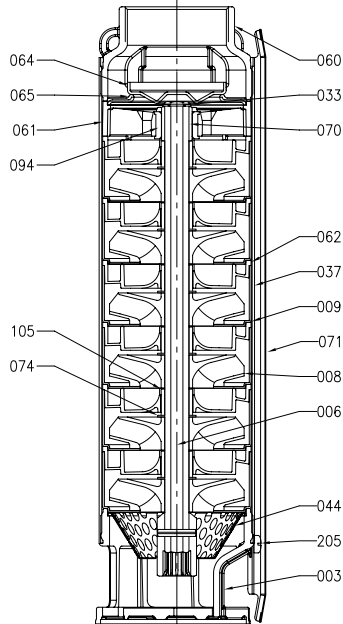
Double pump casing



SECTIONAL VIEW WINNER 4N7-4N10-4N15

Single pump casing

Double pump casing



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WINNER 4N

4" BOREHOLE CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
003	Bracket	EN 1.4308 (ASTM CF8)	062	Stage housing	EN 1.4301 (AISI 304)
003A	Join ring	EN 1.4308 (ASTM CF8)	064	Valve	EN 1.4301 (AISI 304)
006	Pump shaft with coupling	EN 1.4301 (AISI 304)	065	Valve seat	EN 1.4301 (AISI 304) + EPDM rubber
008	Impeller	Ixef®	070	Shaft sleeve bearing	Alumina (Ceramic)
009	Diffuser	PPE+PS reinforced with fibreglass	071	Cable guard	EN 1.4301 (AISI 304)
033	Seeger Ring	EN 1.4301 (AISI 304)	074	Thrust washer	EN 1.4301 (AISI 304)
037	External casing	EN 1.4301 (AISI 304)	094	Bearing	EPDM rubber
044	Strainer	EN 1.4301 (AISI 304)	105	Spacer	PPE+PS reinforced with fibreglass
060	Discharge casing	EN 1.4308 (ASTM CF8)	205	Screw (M4 x 6 UNI 7687)	EN 1.4301 (AISI 304)
061	Upper/Intermediate bracket	PPO reinforced with fibreglass			

ELECTRIC DATA TABLE WINNER 4N WITH OIL FILLED MOTOR

P ₁		Thrust [N]	Single phase 230V				Three phase 380V				Three phase 415V			
[HP]	[kW]		P ₁ [kW]	I _N [A]	I _A [A]	Power factor	P ₁ [kW]	I _N [A]	I _A [A]	Power factor	P ₁ [kW]	I _N [A]	I _A [A]	Power factor
0,5	0,37	1500	0,78	3,6	10,2	0,94	0,66	1,4	5,0	0,72	0,83	1,6	5,0	0,72
0,75	0,55	1500	0,97	4,5	13,6	0,94	0,94	1,9	7,0	0,75	1,08	2,0	7,0	0,75
1	0,75	1500	1,32	6,0	18,5	0,96	1,17	2,4	10,0	0,74	1,38	2,6	10,0	0,74
1,5	1,1	1500	1,83	8,2	26,0	0,97	1,56	3,2	14,0	0,74	1,81	3,4	14,0	0,74
2	1,5	1500	2,48	11,0	34,0	0,98	2,09	4,4	17,0	0,72	2,38	4,6	17,0	0,72
3	2,2	4400	3,27	14,8	48,0	0,96	-	-	-	-	-	-	-	-
3	2,2	1500	-	-	-	-	3,00	6,0	24,0	0,76	3,39	6,2	24,0	0,76
3	2,2	5000	-	-	-	-	3,02	5,6	23,0	0,82	3,42	5,8	23,0	0,82
4	3	5000	-	-	-	-	4,05	7,7	30,0	0,80	4,49	7,8	30,0	0,80
5,5	4	5000	-	-	-	-	5,24	9,7	45,0	0,82	5,78	9,8	45,0	0,82
7,5	5,5	5000	-	-	-	-	7,37	13,5	55,0	0,83	8,23	13,8	55,0	0,83
10	7,5	4400	-	-	-	-	9,75	19,0	72,0	0,78	10,93	19,5	72,0	0,78

ELECTRIC DATA TABLE WINNER 4N WITH WATER FILLED MOTOR

P ₁		Thrust [N]	Single phase 230V				Three phase 380V				Three phase 415V			
[HP]	[kW]		P ₁ [kW]	I _N [A]	I _A [A]	Power factor	P ₁ [kW]	I _N [A]	I _A [A]	Power factor	P ₁ [kW]	I _N [A]	I _A [A]	Power factor
0,5	0,37	3000	0,69	3,3	12,6	0,91	0,57	1,1	5,1	0,79	0,58	1,14	5,61	0,71
0,75	0,55	3000	0,93	4,3	17,7	0,94	0,83	1,6	7,0	0,79	0,86	1,7	7,7	0,7
1	0,75	3000	1,28	5,7	22,7	0,98	1,07	2,0	10,1	0,81	1,10	2,1	10,9	0,73
1,5	1,1	3000	1,78	8,4	33,9	0,92	1,51	2,8	15,3	0,82	1,54	2,9	16,7	0,74
2	1,5	3000	2,34	10,7	41,7	0,95	2,13	3,9	19,7	0,83	2,10	4,0	21,5	0,73
3	2,2	4000	3,28	14,7	61,8	0,97	2,91	5,4	28,3	0,82	3,00	5,8	30,9	0,72
4	3	4000	-	-	-	-	3,99	7,4	39,9	0,82	4,09	7,9	43,6	0,72
5,5	4	6500	-	-	-	-	5,24	9,7	54,1	0,82	5,38	10,4	59,1	0,72
7,5	5,5	6500	-	-	-	-	7,05	12,6	73,3	0,85	7,08	12,8	80,1	0,77
10	7,5	6500	-	-	-	-	9,74	17,2	94,3	0,86	9,74	17,6	103,0	0,77

The contents of this publication must not be regarded as binding. EBARA Pumps Europe S.p.A. reserves the right to effect any modifications without prior notice.

4BHS

4" BOREHOLE CENTRIFUGAL ELECTRIC PUMPS

in AISI 304



4" borehole centrifugal pumps built entirely in AISI 304 stainless steel. Suitable for coupling to 4" motors in compliance with NEMA Standards.

APPLICATIONS

- Domestic, agricultural and industrial water supply systems
- Pressure boosting, fire-fighting plants
- Irrigation
- Washing
- Moving clear water in general

TECHNICAL DETAILS

- Reliable and strong
- Corrosion-proof
- Exceptional efficiency due to the smooth surfaces of the impellers and nozzles

PUMP TECHNICAL DATA

- Maximum immersion
 - 350 m (with motor in waterbath)
 - 150 m (motor in bath of liquid refrigerant)
 - Maximum temperature of the liquid: 30°C
 - Maximum sand content: 50 ppm
 - Maximum Chlorine content: 500 ppm
 - Discharge connection: G1¼ (4BHS 2), G1½ (4BHS 4), G2 (4BHS 7-15)
 - The pumps can be supplied as follows:
 - 4BHS pump plus OY motor in bath of liquid refrigerant
 - 4BHS pump plus WY motor in waterbath
 - MEI > 0,4 (4BHS 2 - 4BHS 4 - 4BHS 7)
- For further information please check our Data Book on the web site www.ebaraurope.com

The pump and the motor are supplied separately.

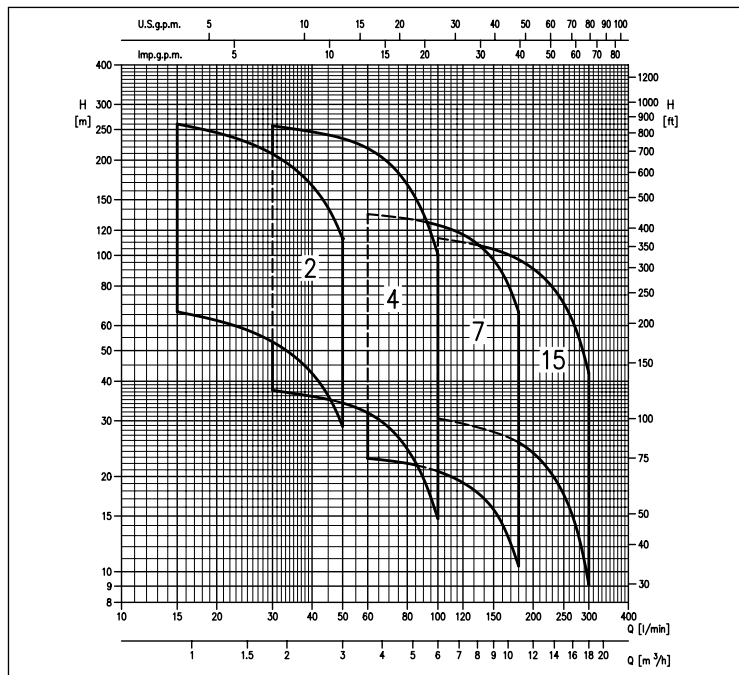
MOTOR TECHNICAL DATA

- 2 poles oil filled motor (OY) or water filled motor (WY)
- Max start-ups per hour: 30 (OY) - 20 (WY)
- Quick coupling for power supply cable
- Class of insulation F (OY) or B (WY)
- IP58 Protection degree (OY) - IP68 (WY)
- 230V (±10%) 50 Hz single phase voltage (OYM), 380-415V (±10%) 50 Hz three phase voltage (OY)
- 230V (-10%± 6%) 50 Hz single phase voltage (WYM), 380-415V (6%-10%) 50 Hz three phase voltage (WY)
- For cables dimensioning please see page 58 or our Data Book on the web site www.ebaraurope.com

MATERIALS

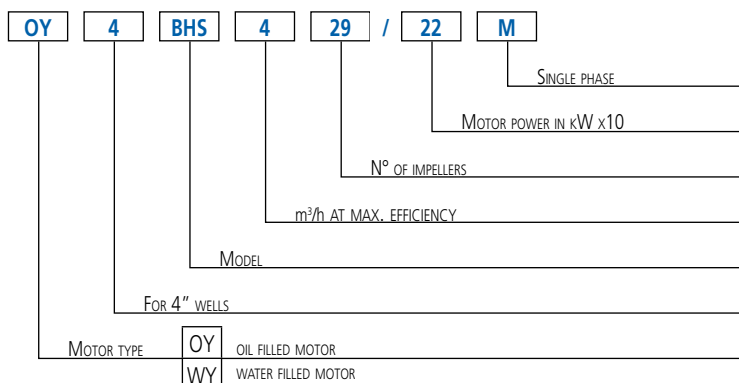
- Motor discharge and motor bracket in moulded stainless steel
- Bracket, inlets, joint, impeller, diffuser, valve, stages, tie-rod and isolating cover in EN 1.4301 (AISI 304)
- Wear rings in EPDM/EN 1.4301 (AISI 304)
- Shaft in EN 1.4401 (AISI 316)
- Radial bearings, axial bearings and friction ring in tungsten carbide

PERFORMANCE RANGE (according to ISO 9906 Attachment A)



Note: 4BHS 15 models are not available for European market

IDENTIFICATION CODE



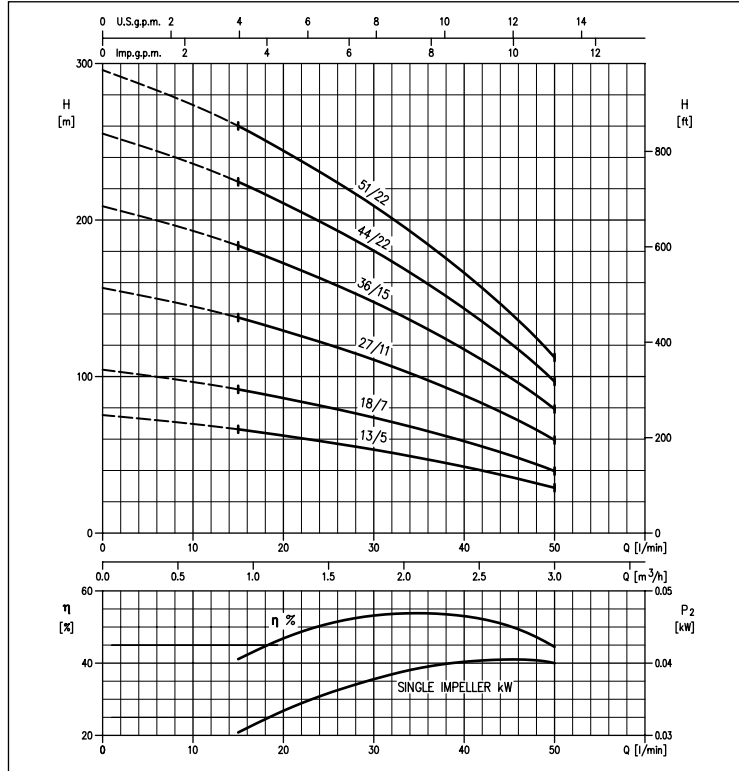
4BHS

4" BOREHOLE CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

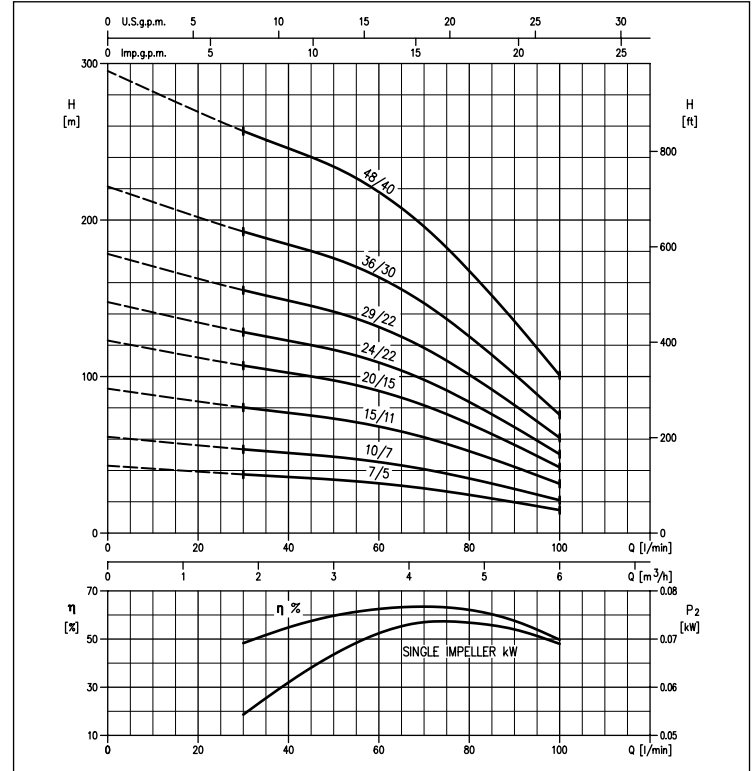
PERFORMANCE CURVES 4BHS 2 series

(according to ISO 9906 Attachment A) - impeller diameter: 70,5 mm



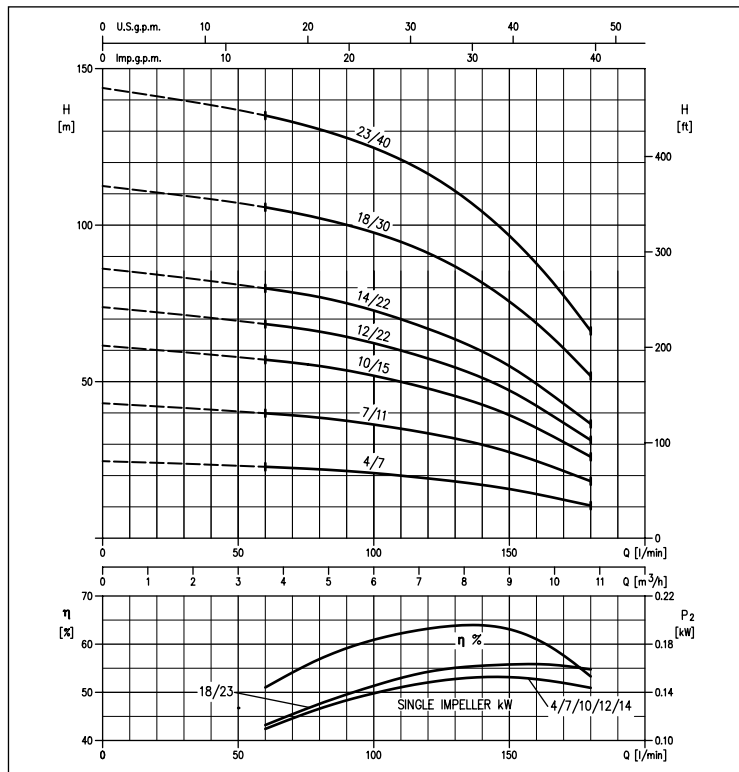
PERFORMANCE CURVES 4BHS 4 series

(according to ISO 9906 Attachment A) - impeller diameter: 72 mm



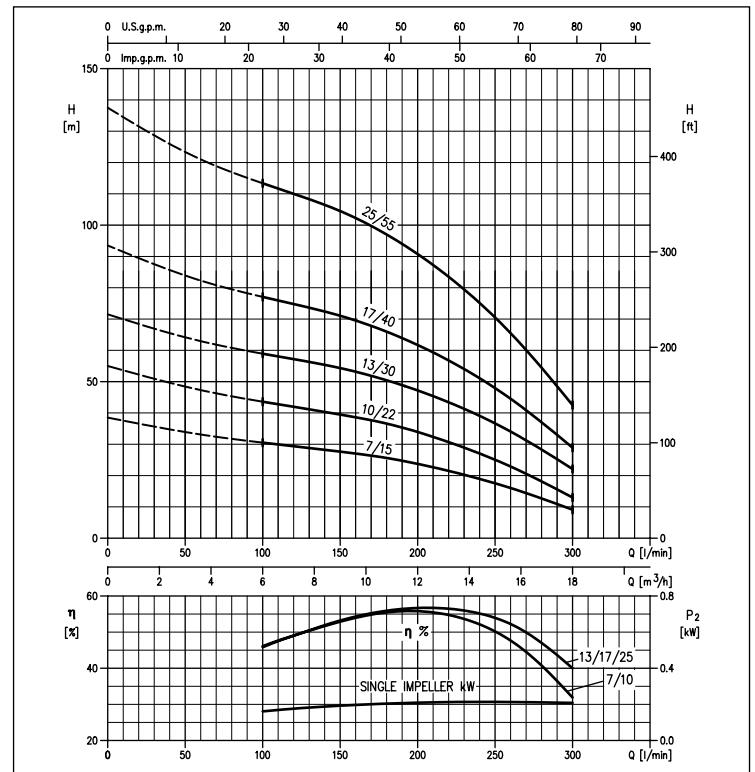
PERFORMANCE CURVES 4BHS 7 series

(according to ISO 9906 Attachment A) - impeller diameter: 74 mm



PERFORMANCE CURVES 4BHS 15 series

(according to ISO 9906 Attachment A) - impeller diameter: 72 mm



Note: 4BHS 15 models are not available for European market

4BHS

4" BOREHOLE CENTRIFUGAL ELECTRIC PUMPS

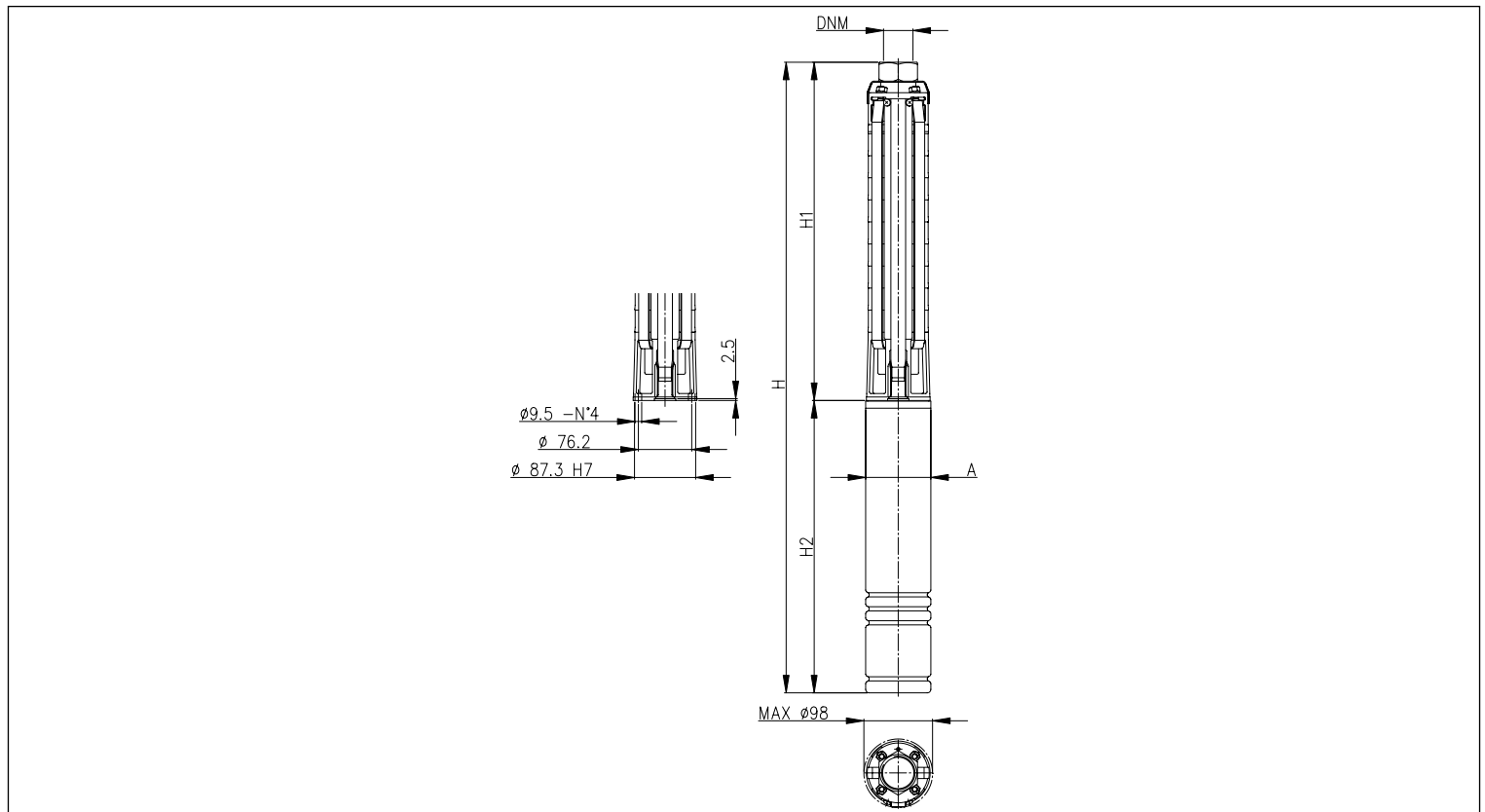
in AISI 304

PERFORMANCE TABLE

Single phase	Model Three phase	P ₁		Q=Flow rate															
		[HP]	[kW]	l/min	15	20	30	40	50	60	80	100	120	150	180	220	260	300	
				m ³ /h	0,9	1,2	1,8	2,4	3	3,6	4,8	6	7,2	9	10,8	13,2	15,6	18	
				H=Head [m]															
4BHS 2-13/5M	4BHS 2-13/5	0,75	0,55	66,5	62,5	53,5	42,5	28,6	-	-	-	-	-	-	-	-	-	-	-
4BHS 2-18/7M	4BHS 2-18/7	1,0	0,75	92,0	86,0	74,0	58,5	39,6	-	-	-	-	-	-	-	-	-	-	-
4BHS 2-27/11M	4BHS 2-27/11	1,5	1,1	138,0	129,0	111,0	88,0	59,5	-	-	-	-	-	-	-	-	-	-	-
4BHS 2-36/15M	4BHS 2-36/15	2,0	1,5	184,0	172,0	148,0	117,0	79,0	-	-	-	-	-	-	-	-	-	-	-
4BHS 2-44/22M	4BHS 2-44/22	3,0	2,2	224,0	211,0	180,0	143,0	97,0	-	-	-	-	-	-	-	-	-	-	-
4BHS 2-51/22M	4BHS 2-51/22	3,0	2,2	260,0	244,0	209,0	166,0	112,0	-	-	-	-	-	-	-	-	-	-	-
4BHS 4-7/5M	4BHS 4-7/5	0,75	0,55	-	-	37,5	35,8	34,2	31,8	24,4	14,7	-	-	-	-	-	-	-	-
4BHS 4-10/7M	4BHS 4-10/7	1,0	0,75	-	-	53,5	51,0	49,0	45,5	34,9	21,0	-	-	-	-	-	-	-	-
4BHS 4-15/11M	4BHS 4-15/11	1,5	1,1	-	-	80,5	77,0	73,0	68,0	52,5	31,5	-	-	-	-	-	-	-	-
4BHS 4-20/15M	4BHS 4-20/15	2,0	1,5	-	-	107,0	102,0	97,5	91,0	70,0	42,0	-	-	-	-	-	-	-	-
4BHS 4-24/22M	4BHS 4-24/22	3,0	2,2	-	-	128,0	123,0	117,0	109,0	84,0	50,5	-	-	-	-	-	-	-	-
4BHS 4-29/22M	4BHS 4-29/22	3,0	2,2	-	-	155,0	148,0	142,0	132,0	101,0	61,0	-	-	-	-	-	-	-	-
	4BHS 4-36/30	4,0	3,0	-	-	193,0	184,0	176,0	163,0	126,0	75,5	-	-	-	-	-	-	-	-
	4BHS 4-48/40	5,5	4,0	-	-	257,0	246,0	234,0	218,0	168,0	101,0	-	-	-	-	-	-	-	-
4BHS 7-4/7M	4BHS 7-4/7	1,0	0,75	-	-	-	-	-	22,8	22,0	20,8	19,1	15,7	10,4	-	-	-	-	-
4BHS 7-7/11M	4BHS 7-7/11	1,5	1,1	-	-	-	-	-	39,9	38,5	36,3	33,5	27,5	18,2	-	-	-	-	-
4BHS 7-10/15M	4BHS 7-10/15	2,0	1,5	-	-	-	-	-	57,0	55,0	52,0	48,0	39,3	26,0	-	-	-	-	-
4BHS 7-12/22M	4BHS 7-12/22	3,0	2,2	-	-	-	-	-	68,5	66,0	62,5	57,5	47,0	31,3	-	-	-	-	-
4BHS 7-14/22M	4BHS 7-14/22	3,0	2,2	-	-	-	-	-	80,0	77,0	72,5	67,0	55,0	36,5	-	-	-	-	-
	4BHS 7-18/30	4,0	3,0	-	-	-	-	-	106,0	102,0	97,5	91,0	75,5	52,0	-	-	-	-	-
	4BHS 7-23/40	5,5	4,0	-	-	-	-	-	135,0	131,0	125,0	116,0	96,5	66,0	-	-	-	-	-
4BHS 15-7/15M *	4BHS 15-7/15 *	2,0	1,5	-	-	-	-	-	-	-	30,5	29,3	27,7	25,6	21,5	16,0	9,1	-	-
4BHS 15-10/22M *	4BHS 15-10/22 *	3,0	2,2	-	-	-	-	-	-	-	43,5	42,0	39,5	36,6	30,7	22,9	13,0	-	-
	4BHS 15-13/30 *	4,0	3,0	-	-	-	-	-	-	-	59,0	57,5	54,5	50,5	43,5	34,1	22,1	-	-
	4BHS 15-17/40 *	5,5	4,0	-	-	-	-	-	-	-	77,0	75,0	71,0	66,0	57,0	44,5	28,9	-	-
	4BHS 15-25/55 *	7,5	5,5	-	-	-	-	-	-	-	114,0	110,0	105,0	97,0	83,5	65,5	42,5	-	-

* Product not available for European market

DIMENSIONS



4BHS

4" BOREHOLE CENTRIFUGAL ELECTRIC PUMPS

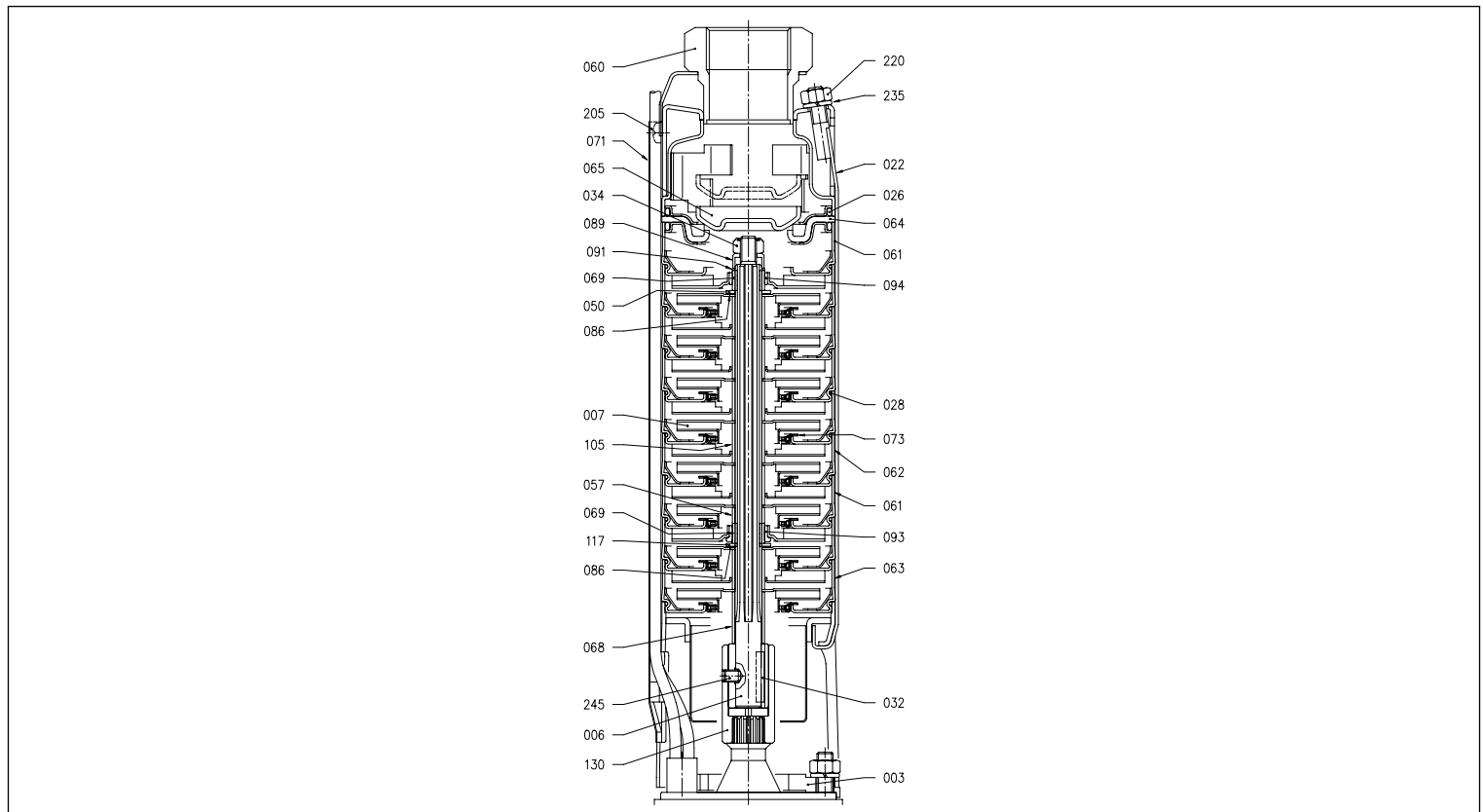
in AISI 304

DIMENSIONAL TABLE

Model	P:		Pump without motor					Pump with oil filled motor							Pump with water filled motor						
	[HP]	[kW]	H1 [mm]	DNM	Weight [kg]	Single phase			Three phase				Single phase			Three phase					
						A [mm]	H2 [mm]	H [mm]	Weight [kg]	A [mm]	H2 [mm]	H [mm]	Weight [kg]	A [mm]	H2 [mm]	H [mm]	Weight [kg]	A [mm]	H2 [mm]	H [mm]	Weight [kg]
4BHS 2-13/5	0,75	0,55	489	G1¼	6,6	97	325	814	14,2	97	325	814	13,6	91	248	737	15,1	91	228	717	14,4
4BHS 2-18/7	1,0	0,75	594	G1¼	8,3	97	350	944	17,0	97	325	919	15,9	91	283	877	18,3	91	248	842	16,9
4BHS 2-27/11	1,5	1,1	783	G1¼	11,0	97	385	1168	21,3	97	350	1133	19,7	91	339	1122	22,8	91	283	1066	20,5
4BHS 2-36/15	2,0	1,5	972	G1¼	13,8	97	420	1392	25,8	97	385	1357	24,2	91	350	1322	27,5	91	307	1279	24,9
4BHS 2-44/22	3,0	2,2	1140	G1¼	16,5	97	470	1610	32,0	97	420	1560	30,7	91	437	1577	32,9	91	339	1479	30,3
4BHS 2-51/22	3,0	2,2	1287	G1¼	18,7	97	470	1757	34,2	97	420	1707	32,9	91	437	1724	35,1	91	339	1626	32,5
4BHS 4-7/5	0,75	0,55	368	G1½	4,4	97	325	693	12,0	97	325	693	11,4	91	248	616	12,9	91	228	596	12,2
4BHS 4-10/7	1,0	0,75	431	G1½	5,5	97	350	781	14,2	97	325	756	13,1	91	283	714	15,5	91	248	679	14,1
4BHS 4-15/11	1,5	1,1	536	G1½	7,2	97	385	921	17,5	97	350	886	15,9	91	339	875	19,0	91	283	819	16,7
4BHS 4-20/15	2,0	1,5	641	G1½	8,3	97	420	1061	20,3	97	385	1026	18,7	91	350	991	22,0	91	307	948	19,4
4BHS 4-24/22	3,0	2,2	725	G1½	9,9	97	470	1195	25,4	97	420	1145	24,1	91	437	1162	26,3	91	339	1064	23,7
4BHS 4-29/22	3,0	2,2	830	G1½	11,5	97	470	1300	27,0	97	420	1250	25,7	91	437	1267	27,9	91	339	1169	25,3
4BHS 4-36/30	4,0	3,0	977	G1½	14,3	97	-	-	-	97	544	1521	33,3	91	-	-	-	91	394	1371	31,6
4BHS 4-48/40	5,5	4,0	1229	G1½	17,6	97	-	-	-	97	574	1803	37,6	91	-	-	-	91	543	1772	38,8
4BHS 7-4/7	1,0	0,75	373	G 2	4,2	97	350	723	12,9	97	325	698	11,8	91	283	656	14,2	91	248	621	12,8
4BHS 7-7/11	1,5	1,1	468	G 2	5,0	97	385	853	15,3	97	350	818	13,7	91	339	807	16,8	91	283	751	14,5
4BHS 7-10/15	2,0	1,5	562	G 2	6,6	97	420	982	18,6	97	385	947	17,0	91	350	912	20,3	91	307	869	17,7
4BHS 7-12/22	3,0	2,2	625	G 2	7,7	97	470	1095	23,2	97	420	1045	21,9	91	437	1062	24,1	91	339	964	21,5
4BHS 7-14/22	3,0	2,2	688	G 2	8,3	97	470	1158	23,8	97	420	1108	22,5	91	437	1125	24,7	91	339	1027	22,1
4BHS 7-18/30	4,0	3,0	814	G 2	9,9	97	-	-	-	97	544	1358	28,9	91	-	-	-	91	394	1208	27,2
4BHS 7-23/40	5,5	4,0	972	G 2	11,5	97	-	-	-	97	574	1546	31,5	91	-	-	-	91	543	1515	32,7
4BHS 15-7/15 *	2,0	1,5	552	G 2	5,8	97	420	972	17,8	97	385	937	16,2	91	350	902	19,5	91	307	859	16,9
4BHS 15-10/22 *	3,0	2,2	678	G 2	7,3	97	470	1148	22,8	97	420	1098	21,5	91	437	1115	23,7	91	339	1017	21,1
4BHS 15-13/30 *	4,0	3,0	804	G 2	8,7	97	-	-	-	97	544	1348	27,7	91	-	-	-	91	394	1198	26,0
4BHS 15-17/40 *	5,5	4,0	972	G 2	10,7	97	-	-	-	97	574	1546	30,7	91	-	-	-	91	543	1515	31,9
4BHS 15-25/55 *	7,5	5,5	1308	G 2	14,4	97	-	-	-	97	644	1952	36,8	91	-	-	-	91	653	1961	40,6

* Product not available for European market

SECTIONAL VIEW



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4" BOREHOLE CENTRIFUGAL ELECTRIC PUMPS in AISI 304

MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
003	Bracket	EN 1.4301 (AISI 304)	068	Spacer	EN 1.4301 (AISI 304)
006	Shaft	EN 1.4401 (AISI 316)	069	Shaft casing	Tungsten Carbide
007	Impeller	EN 1.4301 (AISI 304)	071	Isolating cover	EN 1.4301 (AISI 304)
022	Tie-rod	EN 1.4301 (AISI 304)	073	Wear ring	EN 1.4301 (AISI 304) + EPDM
026	O-Ring	NBR	086	Spacer	EN 1.4301 (AISI 304)
028	O-Ring	NBR	089	Shaft washer	EN 1.4301 (AISI 304)
032	Key	EN 1.4401 (AISI 316)	091	Spacer	EN 1.4301 (AISI 304)
034	Impeller nut	EN 1.4301 (AISI 304)	093	Axial bearing	Tungsten Carbide
050	Bearing washer	EN 1.4301 (AISI 304)	094	Radial bearing	Tungsten Carbide
057	Spacer	EN 1.4301 (AISI 304)	105	Spacer	EN 1.4301 (AISI 304)
060	Discharge	EN 1.4301 (AISI 304)	117	Anti-friction washer	Tungsten Carbide
061	Support stage	EN 1.4301 (AISI 304)	130	Joint	EN 1.4301 (AISI 304)
062	Intermediate stage	EN 1.4301 (AISI 304)	205	Screw	EN 1.4301 (AISI 304)
063	Suction stage	EN 1.4301 (AISI 304)	220	Nut	EN 1.4301 (AISI 304)
064	Valve seat	EN 1.4301 (AISI 304) + NBR	235	Washer grower	EN 1.4301 (AISI 304)
065	Valve	EN 1.4301 (AISI 304)	245	Set of screws	EN 1.4301 (AISI 304)

ELECTRIC DATA TABLE 4BHS WITH OIL FILLED MOTOR

P _i		Thrust [N]	P _i [kW]	Single phase 230V			P _i [kW]	Three phase 380V			P _i [kW]	Three phase 415V		
[HP]	[kW]			I _n [A]	I _a [A]	Power factor		I _n [A]	I _a [A]	Power factor		I _n [A]	I _a [A]	Power factor
0,75	0,55	1500	0,97	4,5	13,6	0,94	0,94	1,9	7,0	0,75	1,08	2,0	7,0	0,75
1	0,75	1500	1,32	6,0	18,5	0,96	1,17	2,4	10,0	0,74	1,38	2,6	10,0	0,74
1,5	1,1	1500	1,83	8,2	26,0	0,97	1,56	3,2	14,0	0,74	1,81	3,4	14,0	0,74
2	1,5	1500	2,48	11,0	34,0	0,98	2,09	4,4	17,0	0,72	2,38	4,6	17,0	0,72
3	2,2	4400	3,27	14,8	48,0	0,96	-	-	-	-	-	-	-	-
3	2,2	1500	-	-	-	-	3,00	6,0	24,0	0,76	3,39	6,2	24,0	0,76
3	2,2	5000	-	-	-	-	3,02	5,6	23,0	0,82	3,42	5,8	23,0	0,82
4	3	5000	-	-	-	-	4,05	7,7	30,0	0,80	4,49	7,8	30,0	0,80
5,5	4	5000	-	-	-	-	5,24	9,7	45,0	0,82	5,78	9,8	45,0	0,82
7,5	5,5	5000	-	-	-	-	7,37	13,5	55,0	0,83	8,23	13,8	55,0	0,83

ELECTRIC DATA TABLE 4BHS WITH WATER FILLED MOTOR

P _i		Thrust [N]	P _i [kW]	Single phase 230V			P _i [kW]	Three phase 380V			P _i [kW]	Three phase 415V		
[HP]	[kW]			I _n [A]	I _a [A]	Power factor		I _n [A]	I _a [A]	Power factor		I _n [A]	I _a [A]	Power factor
0,75	0,55	3000	0,93	4,3	17,7	0,94	0,83	1,6	7,0	0,79	0,86	1,7	7,7	0,7
1	0,75	3000	1,28	5,7	22,7	0,98	1,07	2,0	10,1	0,81	1,10	2,1	10,9	0,73
1,5	1,1	3000	1,78	8,4	33,9	0,92	1,51	2,8	15,3	0,82	1,54	2,9	16,7	0,74
2	1,5	3000	2,34	10,7	41,7	0,95	2,13	3,9	19,7	0,83	2,10	4,0	21,5	0,73
3	2,2	4000	3,28	14,7	61,8	0,97	2,91	5,4	28,3	0,82	3,00	5,8	30,9	0,72
4	3	4000	-	-	-	-	3,99	7,4	39,9	0,82	4,09	7,9	43,6	0,72
5,5	4	6500	-	-	-	-	5,24	9,7	54,1	0,82	5,38	10,4	59,1	0,72
7,5	5,5	6500	-	-	-	-	7,05	12,6	73,3	0,85	7,08	12,8	80,1	0,77

IDROGO

5" BOREHOLE CENTRIFUGAL ELECTRIC PUMPS

in AISI 304



AISI 304 5" borehole multistage centrifugal electric pumps.

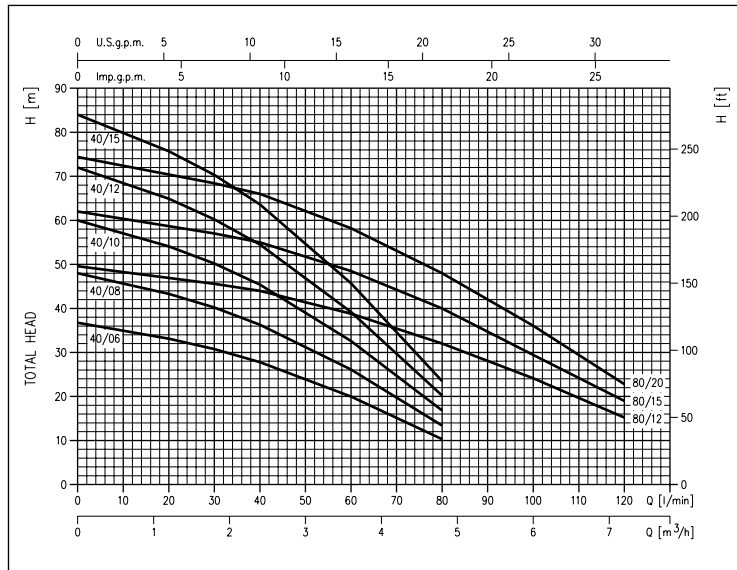
APPLICATIONS

- Moving clear water from wells, cisterns and primary collection reservoirs
- Pressure boosting domestic plants
- Small-sale irrigation
- Washing vehicles
- General pressure increases

TECHNICAL DETAILS

- Equipped with twin mechanical seal with interposed oil chamber
- Supplied with 20 m of H07RN-F power supply cable (5m for IDROGO 40/06 M model)
- Single phase version with float on request (version "A")
- Available in the 230V $\pm 10\%$ 50Hz three phase version
- Installation: in horizontal and vertical position

PERFORMANCE CURVES (according to ISO 9906 Attachment A)



PUMP TECHNICAL DATA

- Maximum working pressure: 10 bar
- Maximum temperature of the liquid: 40°C
- Maximum immersion: 20 m
- Maximum solid size passage: 2,5 mm
- G1¼ discharge connection

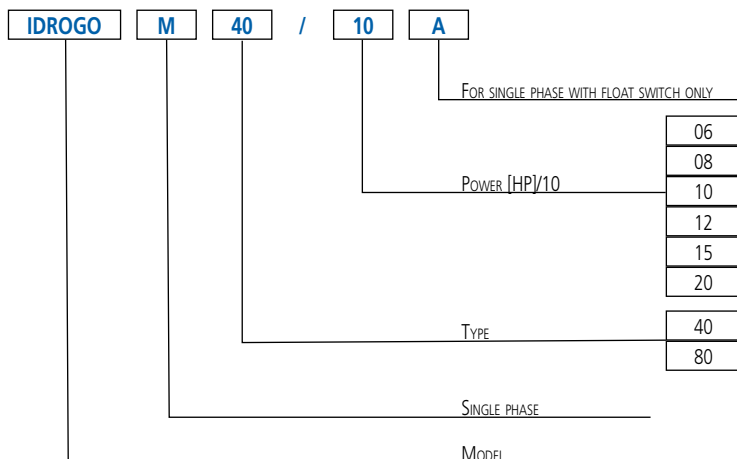
MOTOR TECHNICAL DATA

- 2 poles self-ventilated asynchronous motor cooled via the moving liquid
- Class of insulation F
- IP68 Protection degree
- 230V $\pm 10\%$, 50Hz single-phase voltage
- 400 $\pm 10\%$, 50Hz three-phase voltage
- Permanent capacitor inserted and thermo-amperometric protection with automatic reset incorporated for the single phase motor
- Protection under user's responsibility for the three phase version

MATERIALS

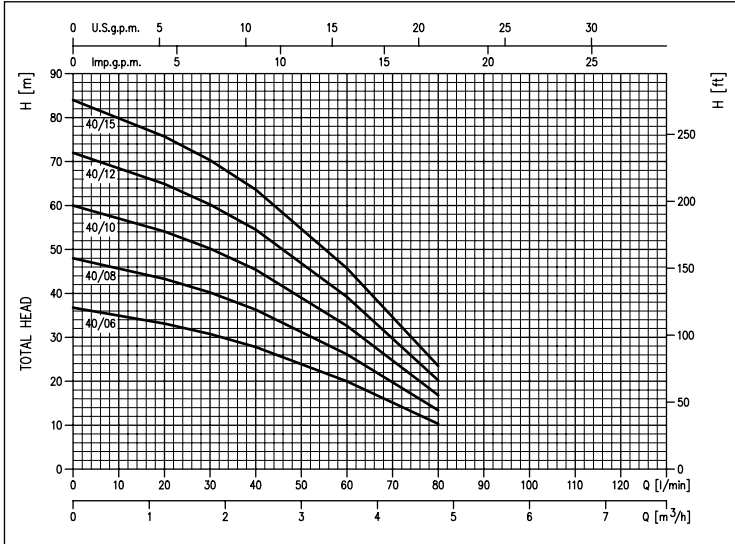
- External casing, motor cover, seal housing disc, filter and closing ring in AISI 304
- Impeller, diffuser and spacer in PPE+PS reinforced with fibreglass
- Shaft in AISI 431
- Upper mechanical seal (motor side) in Carbon/Ceramic/NBR and lower (pump side) in SiC/Carbon/NBR

IDENTIFICATION CODE

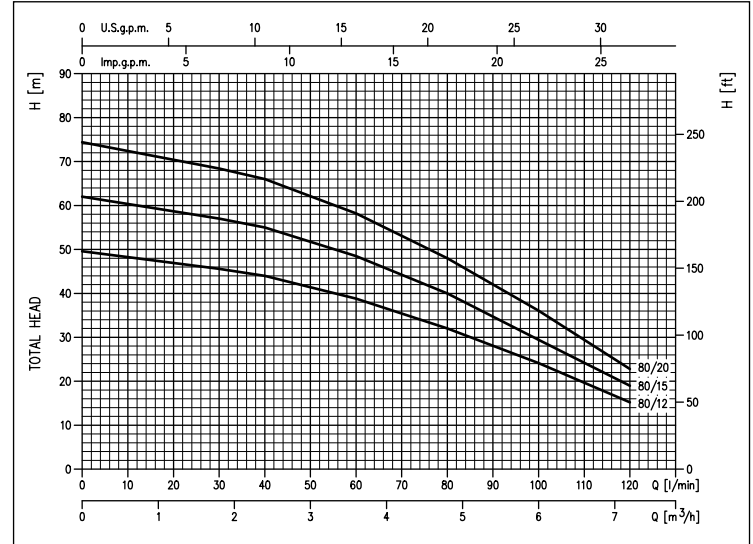


5" BOREHOLE CENTRIFUGAL ELECTRIC PUMPS in AISI 304

PERFORMANCE CURVES IDROGO 40 series
(according to ISO 9906 Attachment A) - impeller diameter: 104 mm



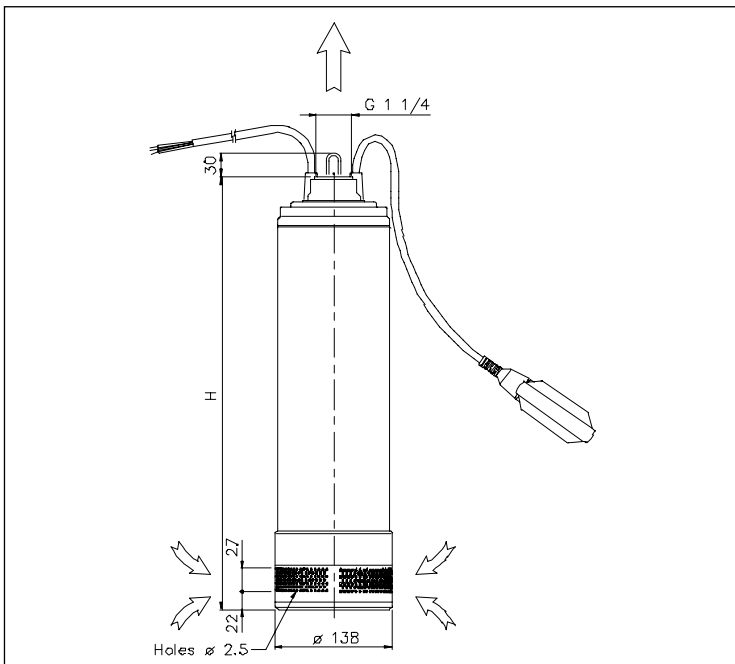
PERFORMANCE CURVES IDROGO 80 series
(according to ISO 9906 Attachment A) - impeller diameter: 102 mm



PERFORMANCE TABLE

Single phase 230V	Model	Three phase 230V - 400V	P ₂		Q=Flow rate									
			[HP]	[kW]	l/min m ³ /h	20 1,2	30 1,8	40 2,4	H=Head [m]		60 3,6	80 4,8	100 6	120 7,2
			0,6	0,44	33,1	30,8	27,8	20,0		10,3	-	-	-	-
	IDROGO 40/08	IDROGO 40/08	0,8	0,6	43,3	40,2	36,3	26,1		13,4	-	-	-	-
	IDROGO M 40/10	IDROGO 40/10	1	0,75	54,1	50,2	45,4	32,6		16,8	-	-	-	-
	IDROGO M 40/12	IDROGO 40/12	1,2	0,9	64,9	60,2	54,5	39,2		20,2	-	-	-	-
	IDROGO M 40/15	IDROGO 40/15	1,5	1,1	75,7	70,3	63,6	45,7		23,5	-	-	-	-
	IDROGO M 80/12	IDROGO 80/12	1,2	0,9	-	45,6	44,0	38,8		32,0	23,2	15,2	-	-
	IDROGO M 80/15	IDROGO 80/15	1,5	1,1	-	57,0	55,0	48,5		40,0	28,0	19,0	-	-
	-	IDROGO 80/20	2	1,5	-	68,4	66,0	58,2		48,0	34,8	22,8	-	-

DIMENSIONS

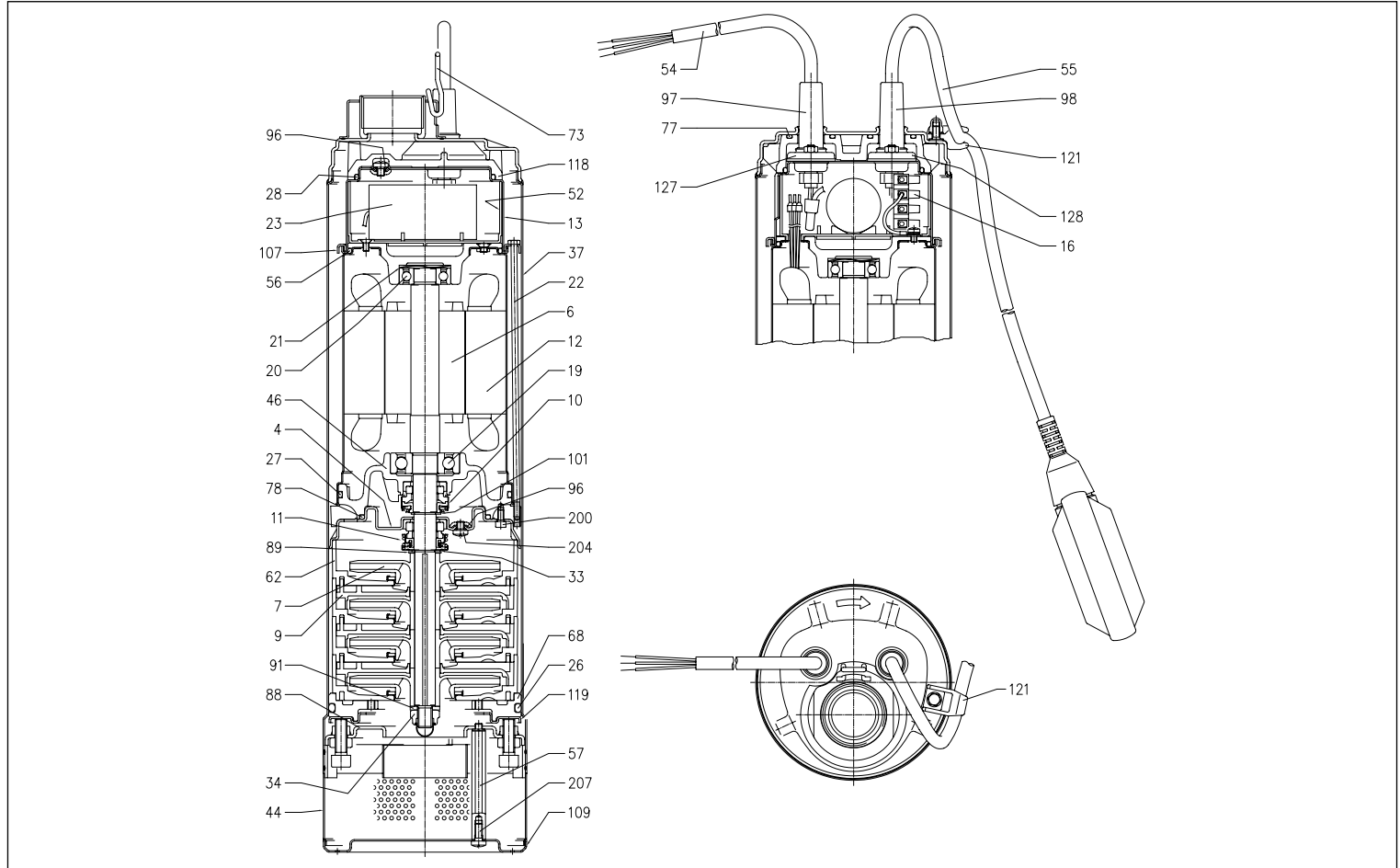


DIMENSIONAL TABLE

Model	H [mm]	Weight [kg]	
		Single phase	Three phase
IDROGO 40/06	513	13,0	-
IDROGO 40/08	513	14,6	14,8
IDROGO 40/10	539	16,0	16,1
IDROGO 40/12	590	17,2	17,4
IDROGO 40/15	616	18,3	18,3
IDROGO 80/12	540	16,5	16,4
IDROGO 80/15	564	17,7	17,4
IDROGO 80/20	590	-	18,0

5" BOREHOLE CENTRIFUGAL ELECTRIC PUMPS in AISI 304

SECTIONAL VIEW



MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
4	Casing cover	EN 1.4301 (AISI 304)	55	Float switch [2]	-
6	Shaft	EN 1.4057 (AISI 431)	56	O-Ring	NBR
7	Impeller	PPE+PS reinforced with fibreglass	57	Filter spacer	EN 1.4305 (AISI 303)
9	Diffusor	PPE+PS reinforced with fibreglass	62	Stage box	PPE+PS reinforced with fibreglass
10	Motor side mechanical seal	Carbon/Ceramic/NBR	68	Lower spacer	PPE+PS reinforced with fibreglass
11	Pump side mechanical seal	SiC/Carbon/NBR	73	Borehole hook	EN 1.4301 (AISI 304)
12	Motor case	-	77	O-Ring	NBR
13	Motor cover	EN 1.4301 (AISI 304)	78	O-Ring	NBR
16	Terminal box	-	88	Fixing flange	EN 1.4301 (AISI 304)
19	Bearing (pump side)	-	89	Washer	EN 1.4301 (AISI 304)
20	Bearing (motor side)	-	91	Washer	EN 1.4301 (AISI 304)
21	Adjusting ring	Steel C70	96	O-Ring	NBR
22	Tie-rod	EN 1.4305 (AISI 303)	97	Cable gland (power supply)	NBR
23	Capacitor [1]	-	98	Cable gland (float switch) [2]	NBR
26	O-Ring	NBR	101	Seeger ring	EN 1.4021 (AISI 420)
27	O-Ring	NBR	107	Lock ring	EN 1.4301 (AISI 304)
28	O-Ring	NBR	109	Filter base	EN 1.4301 (AISI 304)
33	Seeger ring	EN 1.4301 (AISI 304)	118	Upper spacer	PPE+PS reinforced with fibreglass
34	Impeller nut	EN 1.4301 (AISI 304)	119	Flange for lower spacer	EN 1.4301 (AISI 304)
37	Casing	EN 1.4301 (AISI 304)	121	Support for float switch [2]	PPE+PS reinforced with fibreglass
44	Filter	EN 1.4301 (AISI 304)	127	Cable gland connector (power supply)	EN 1.4301 (AISI 304)
46	Bearing holder support	Brass	128	Cable gland connector (float)	EN 1.4301 (AISI 304)
52	Capacitor-holder box	PA66 reinforced with fibreglass	200	Screw	Stainless steel A2 UNI 7323
54	Power supply cable	-	204-207	Screw	Stainless steel A2 UNI 7323

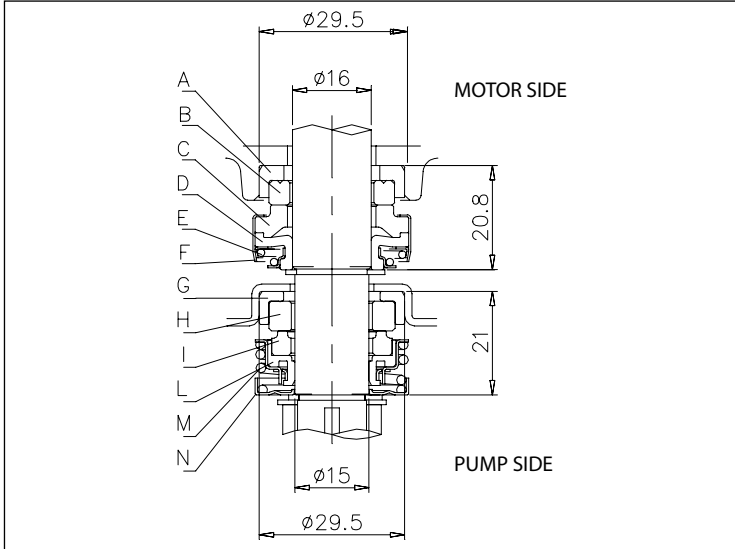
[1]= Single phase only
[2]= Single phase with float switch only

IDROGO

5" BOREHOLE CENTRIFUGAL ELECTRIC PUMPS

in AISI 304

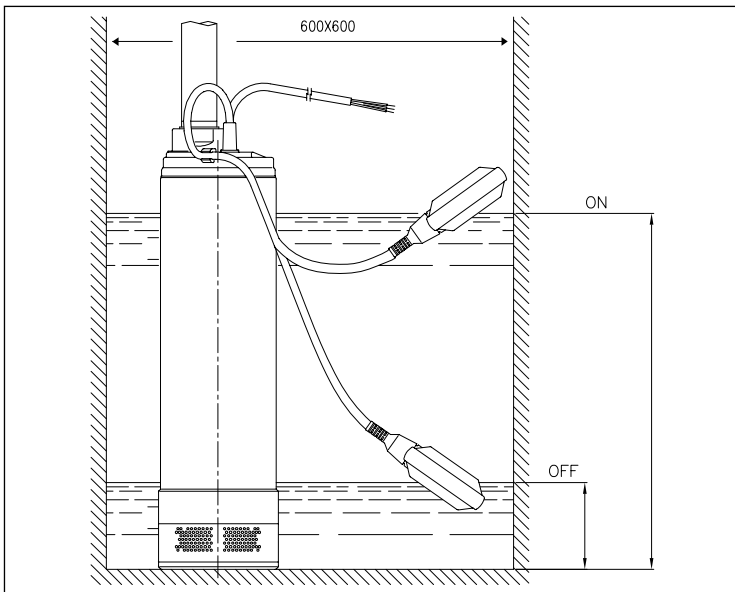
MECHANICAL SEAL



MATERIALS TABLE

Ref.	Name	Material
A	Fixed gasket	NBR
B	Fixed sealing ring	Ceramic
C	Rotating sealing ring	Carbon
D	Rotating gasket	NBR
E	Spring	AISI 304
F	Structure/frame	AISI 304
G	Fixed gasket	NBR
H	Fixed sealing ring	SiC
I	Rotating sealing ring	Carbon
L	Rotating gasket	NBR
M	Spring	AISI 304
N	Structure/frame	AISI 304

INSTALLATION



INSTALLATION TABLE

Model	Dimensions [mm]	
	ON	OFF
IDROGO 40/06	560	180
IDROGO 40/08	560	180
IDROGO 40/10	590	190
IDROGO 40/12	660	220
IDROGO 40/15	730	240
IDROGO 80/12	590	190
IDROGO 80/15	640	210

ELECTRIC DATA TABLE

Model	P ₂	Capacitor		P ₁		Absorbed Current [A]		
		Single phase	V _c	Single phase	Three phase	Single phase	Three phase	Three phase
Single phase 230V	[HP]	[kW]	μF	[kW]	[kW]	230V	230V	400V
IDROGO M 40/06	-	0,6	0,44	16	450	0,82	-	-
IDROGO M 40/08	IDROGO 40/08	0,8	0,6	16	450	1	0,95	4,3
IDROGO M 40/10	IDROGO 40/10	1	0,75	20	450	1,25	1,18	5,7
IDROGO M 40/12	IDROGO 40/12	1,2	0,9	20	450	1,42	1,33	6,8
IDROGO M 40/15	IDROGO 40/15	1,5	1,1	31,5	450	1,6	1,55	7,3
IDROGO M 80/12	IDROGO 80/12	1,2	0,9	20	450	1,33	1,22	6,4
IDROGO M 80/15	IDROGO 80/15	1,5	1,1	31,5	450	1,62	1,52	7,5
-	IDROGO 80/20	2	1,5	-	-	-	1,9	-

6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316



6" borehole centrifugal pumps for deep wells in AISI 304 (6BHE) and AISI 316 (6BHEL) stainless steel.

APPLICATIONS

- Water provisioning from deep wells
- Water supply and pressure boosting
- Irrigation systems
- Treating waters, filtering and reverse osmosis
- Industrial cooling systems
- Fountains and fire-fighting plants

TECHNICAL DETAILS

- High resistance to corrosion
- Reliable
- Compact
- Also suitable for horizontal functioning

PUMP TECHNICAL DATA

- Maximum working pressure: 7 bar
- Maximum immersion:
 - 350 m (with motor in water bath)
 - 150 m (with motor in bath of liquid refrigerant)
- Maximum sand content: 100 gr/m³
- Temperature of the liquid: from -5°C to +60°C
- Motor support for coupling to 4" motors
- Rp 2½ discharge connection 6BHE(L), Rp 3" 6BHE(L) 32-48-64
- MEI > 0,1

For further information please see our Data Book on the web site www.ebaraurope.com

The pump and the motor are supplied separately.

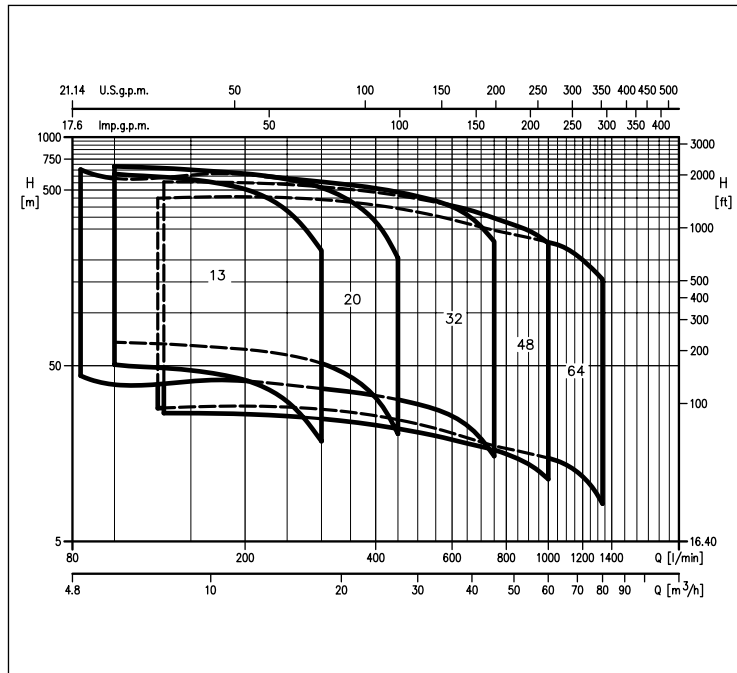
MOTOR TECHNICAL DATA

- 2 poles motor in bath of liquid refrigerant (OY) or in water bath (WY),
- Protection degree IP58 (OY), IP68 (WY)
- Class of insulation F (4" -6" OY version)
(6" -8" WY version)
B (4" WY version)
- 380-415V(±10%) 50Hz three phase voltage (OY)
380-415V(-10%+6%) 50Hz three phase voltage (WY)
- For cables dimensioning please see page 58 or our Data Book on the web site www.ebaraurope.com

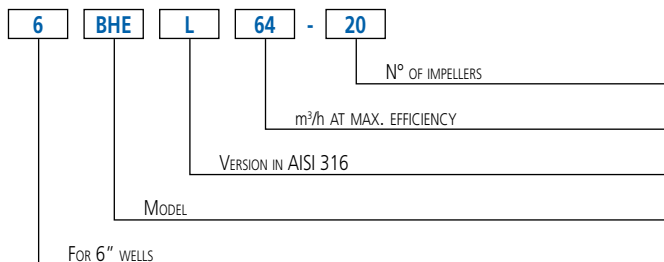
MATERIALS

- Discharge casing, impeller, stages, bracket and diffuser in AISI 304 (6BHE) and AISI 316 (6BHEL)
- Shaft in AISI 431 (6BHE) and AISI 316+AISI 329 (6BHEL)

PERFORMANCE RANGE (according to ISO 9906 Attachment A)



IDENTIFICATION CODE





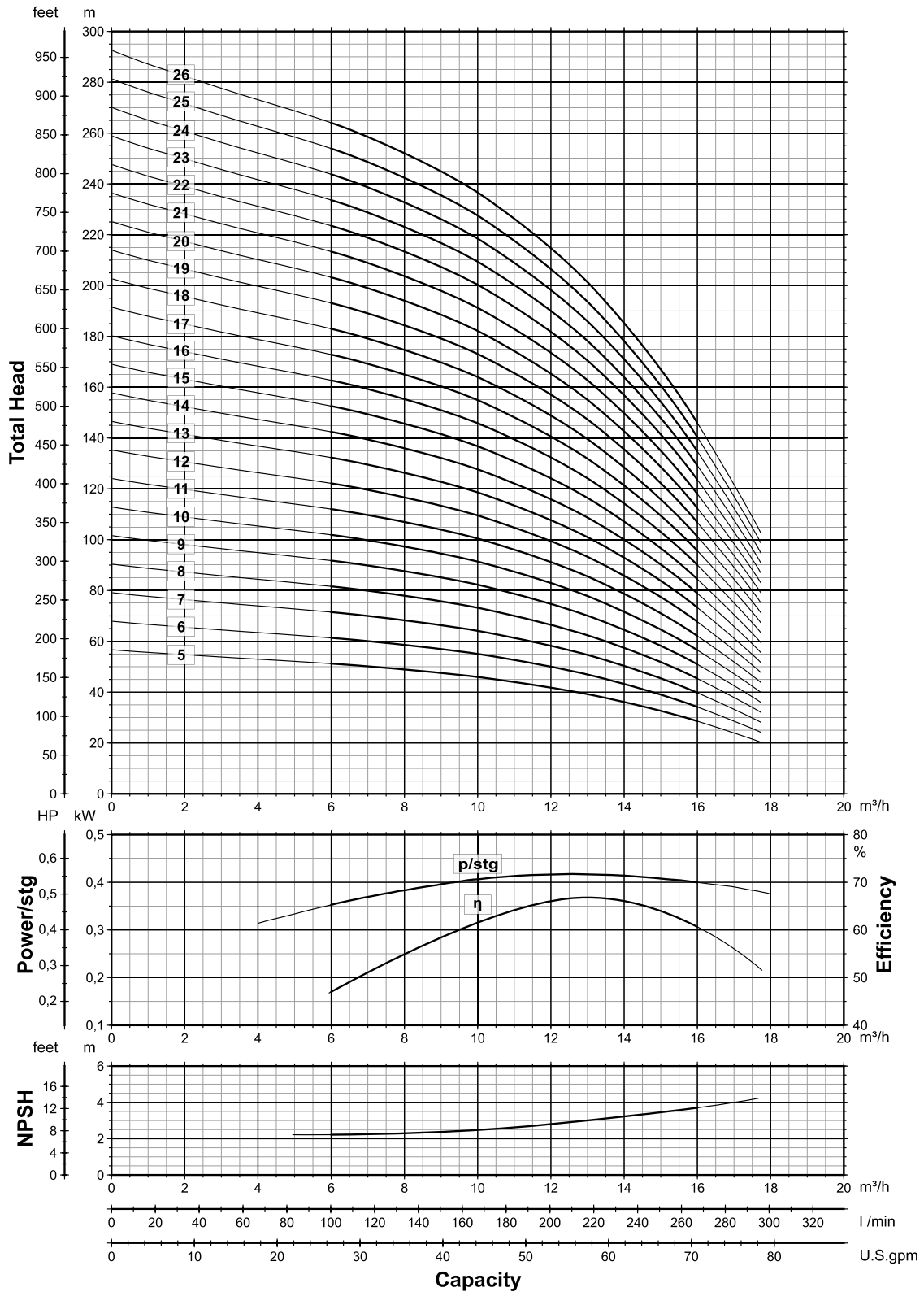
6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE CURVES 6BHE(L) 13 series

(according to ISO 9906 Attachment A)



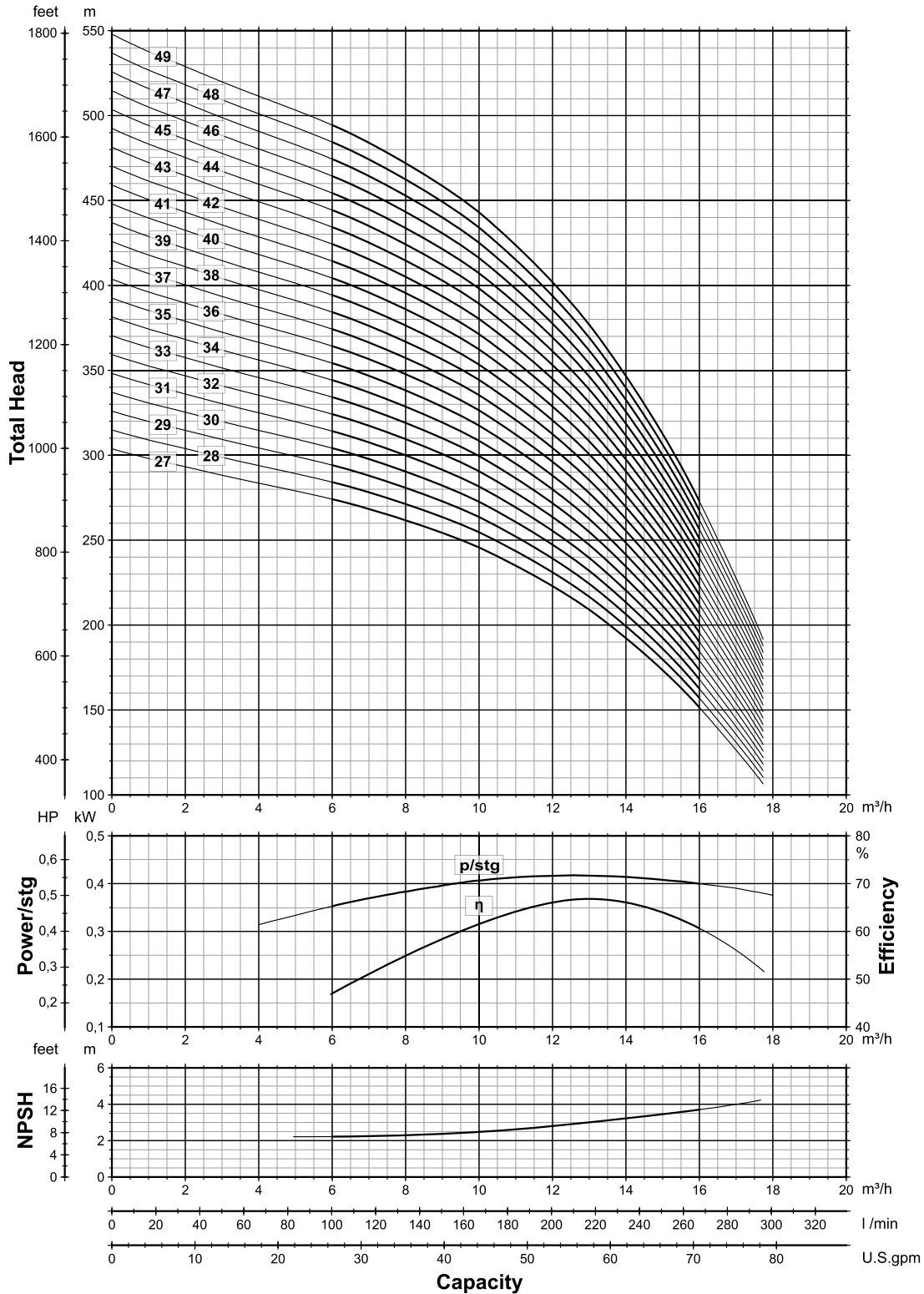
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6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS
in AISI 304 and AISI 316

PERFORMANCE CURVES 6BHE(L) 13 series
(according to ISO 9906 Attachment A)



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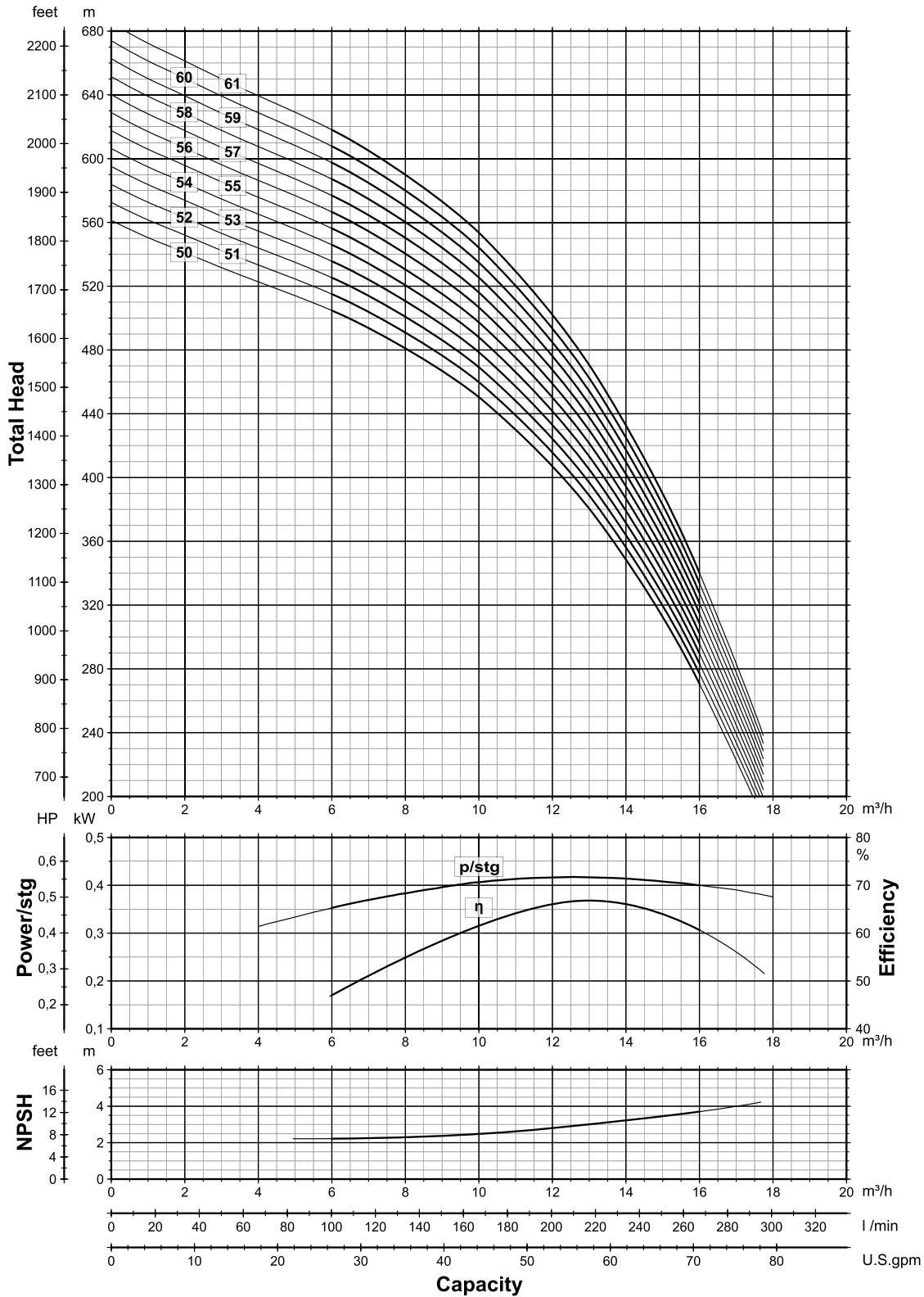
6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE CURVES 6BHE(L) 13 series

(according to ISO 9906 Attachment A)



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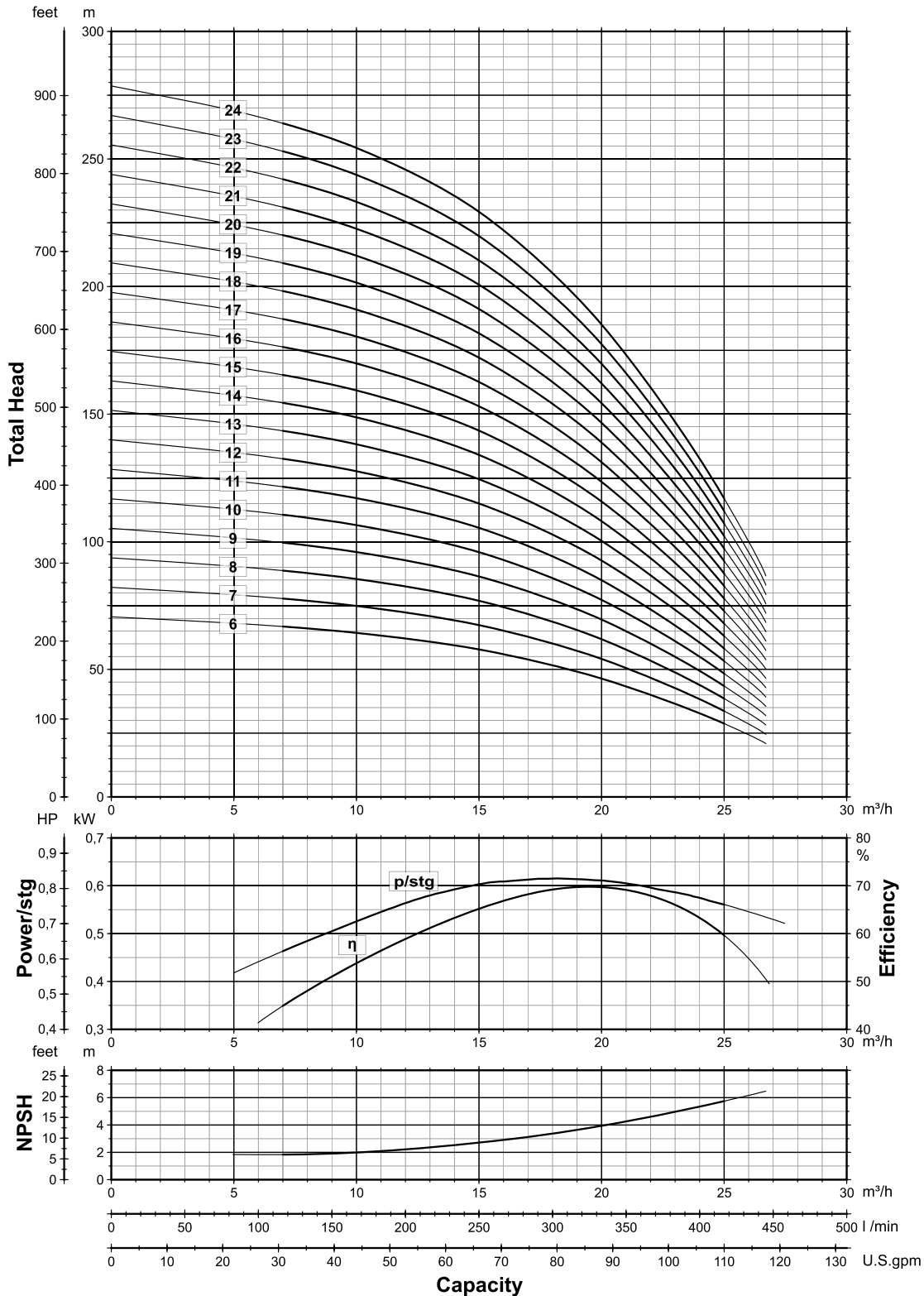
6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE CURVES 6BHE(L) 20 series

(according to ISO 9906 Attachment A)



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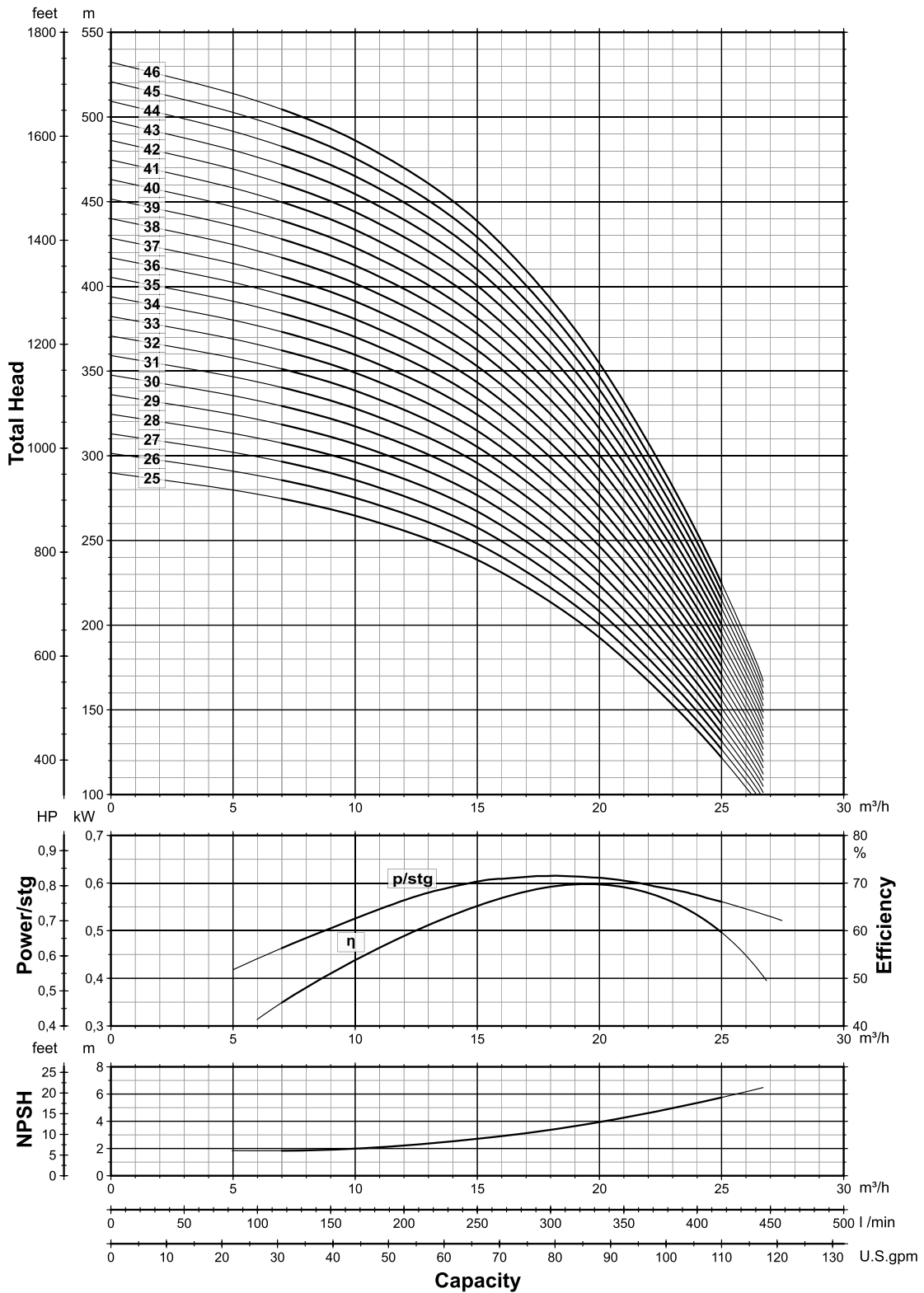
6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE CURVES 6BHE(L) 20 series

(according to ISO 9906 Attachment A)



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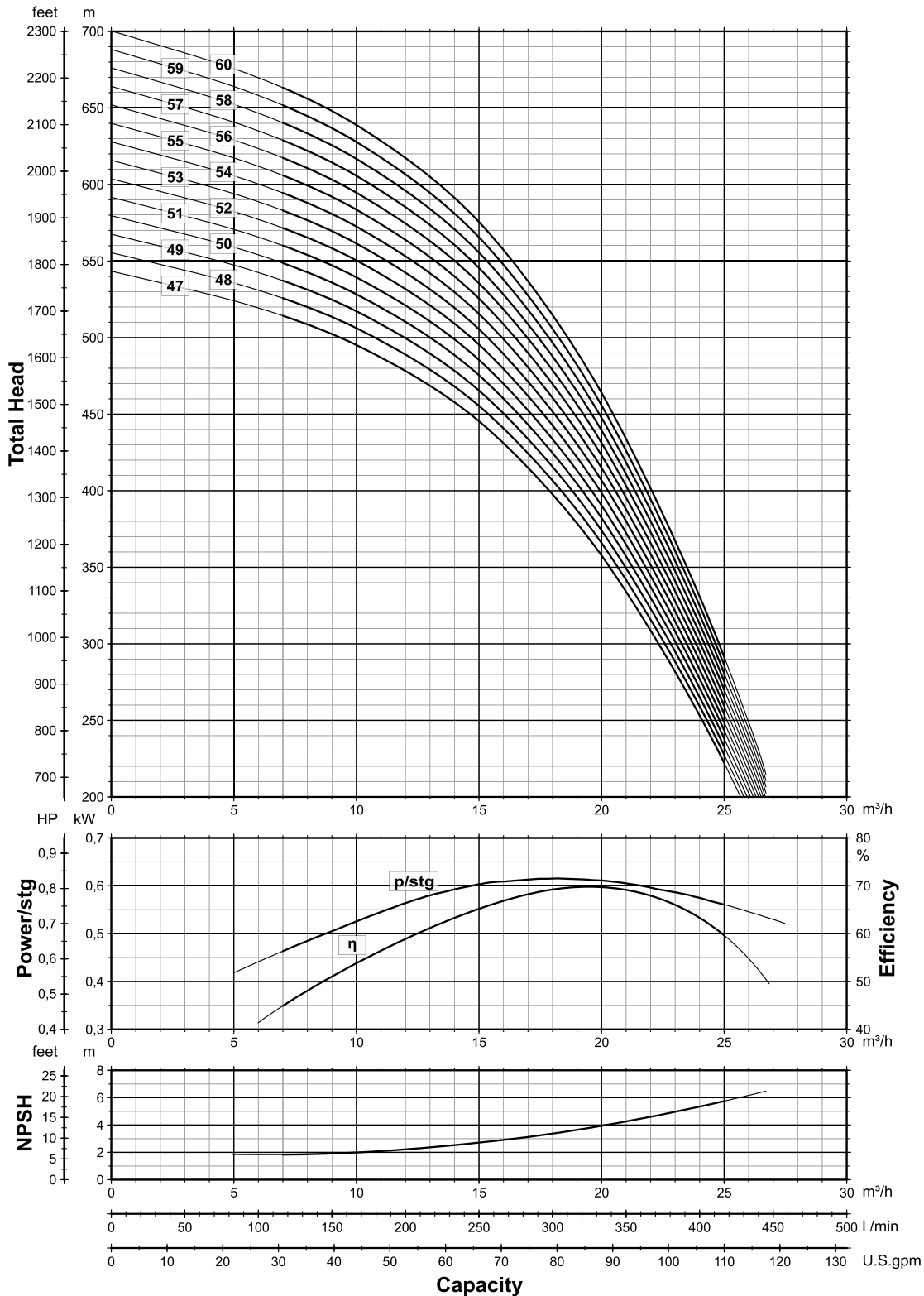
6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE CURVES 6BHE(L) 20 series

(according to ISO 9906 Attachment A)



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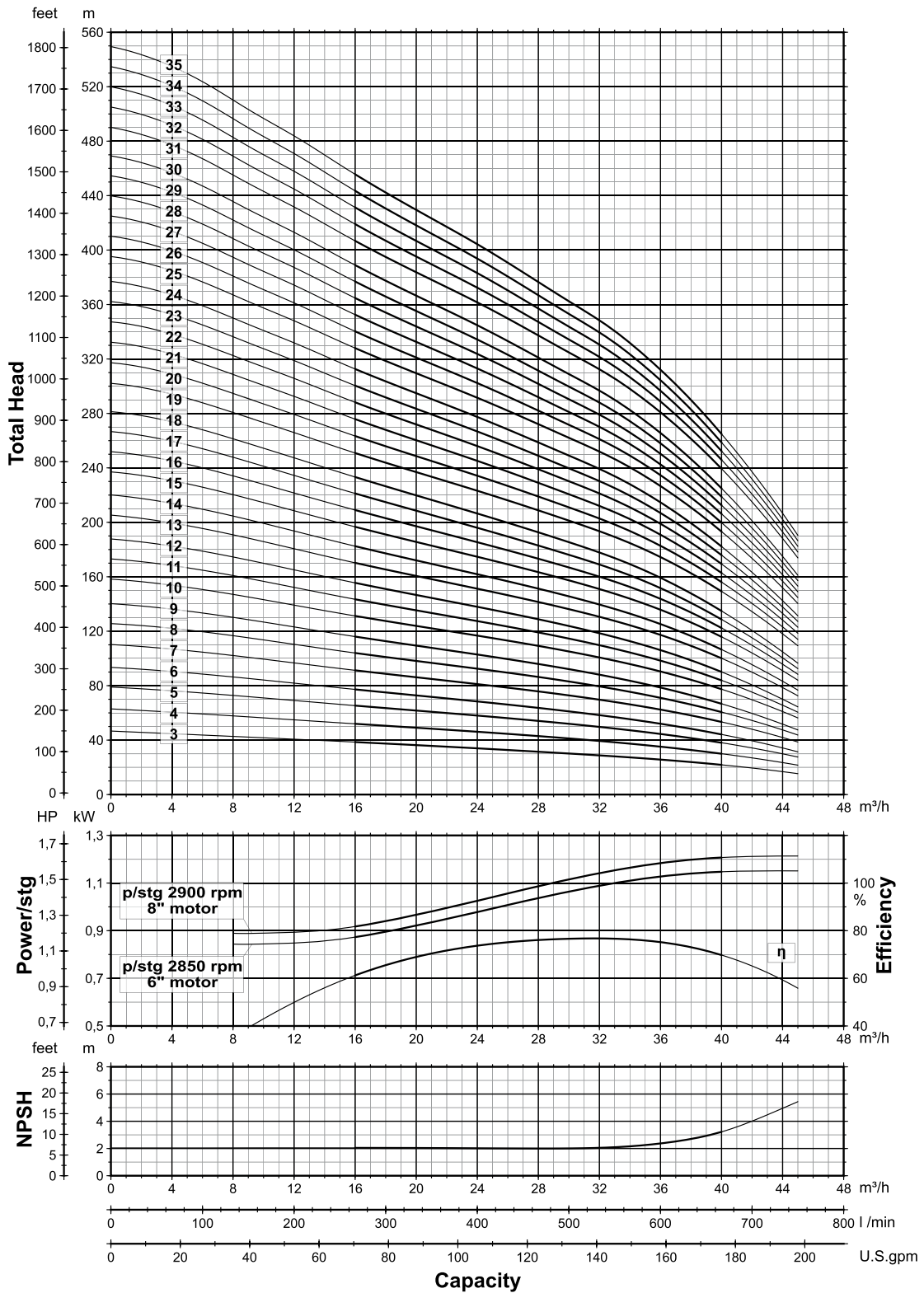
6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE CURVES 6BHE(L) 32 series

(according to ISO 9906 Attachment A)



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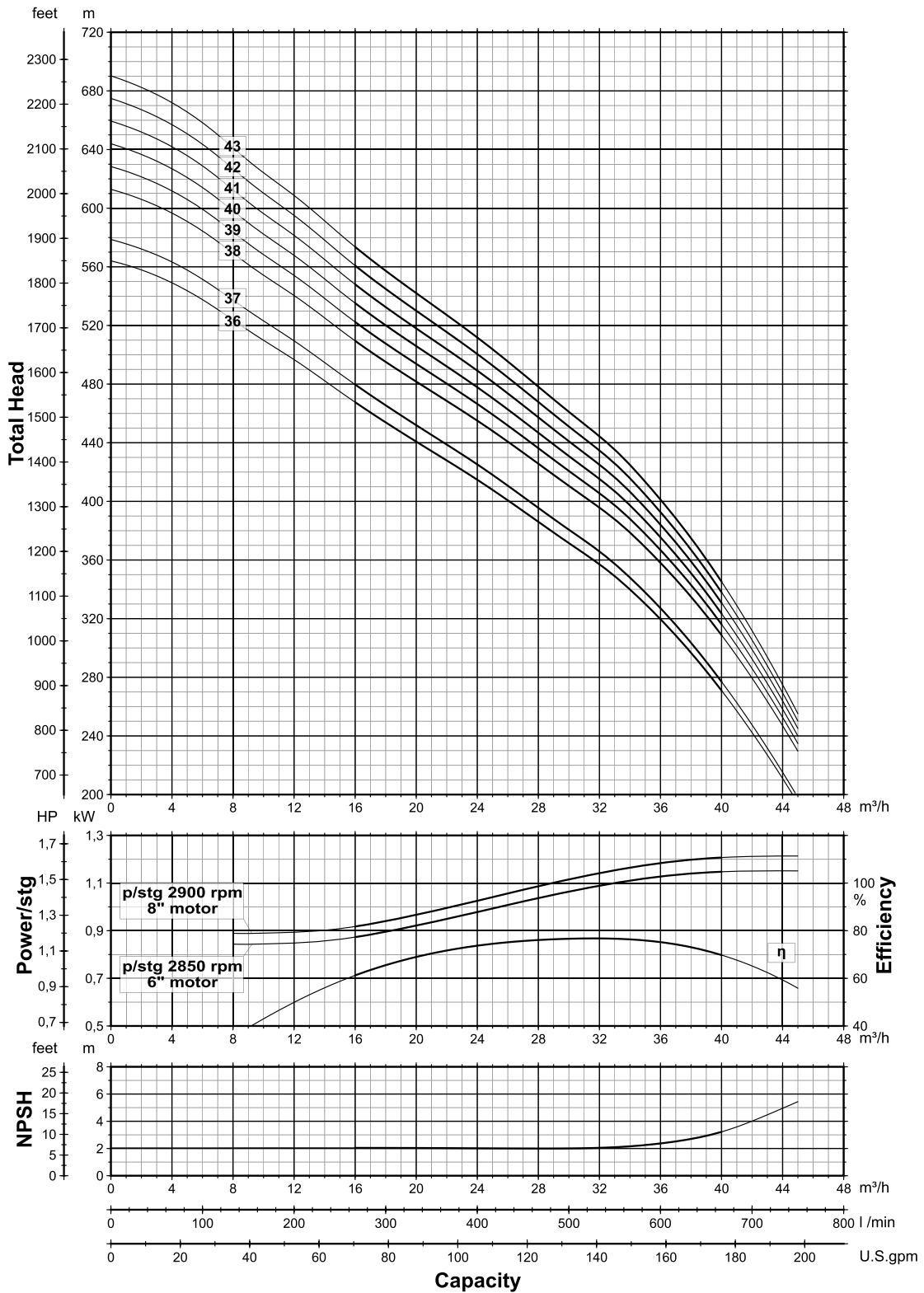
6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE CURVES 6BHE(L) 32 series

(according to ISO 9906 Attachment A)



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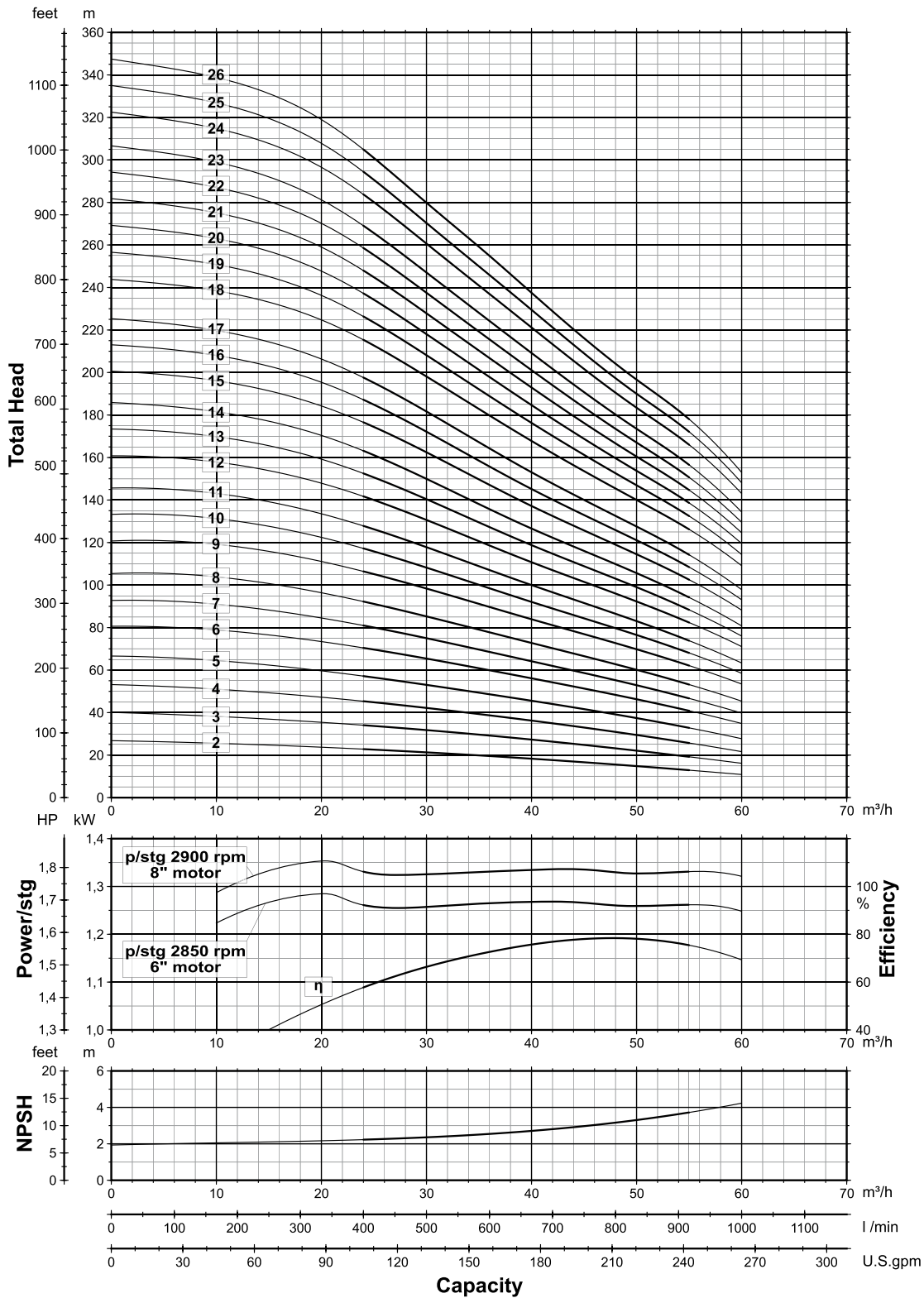


6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE CURVES 6BHE(L) 48 series (according to ISO 9906 Attachment A)



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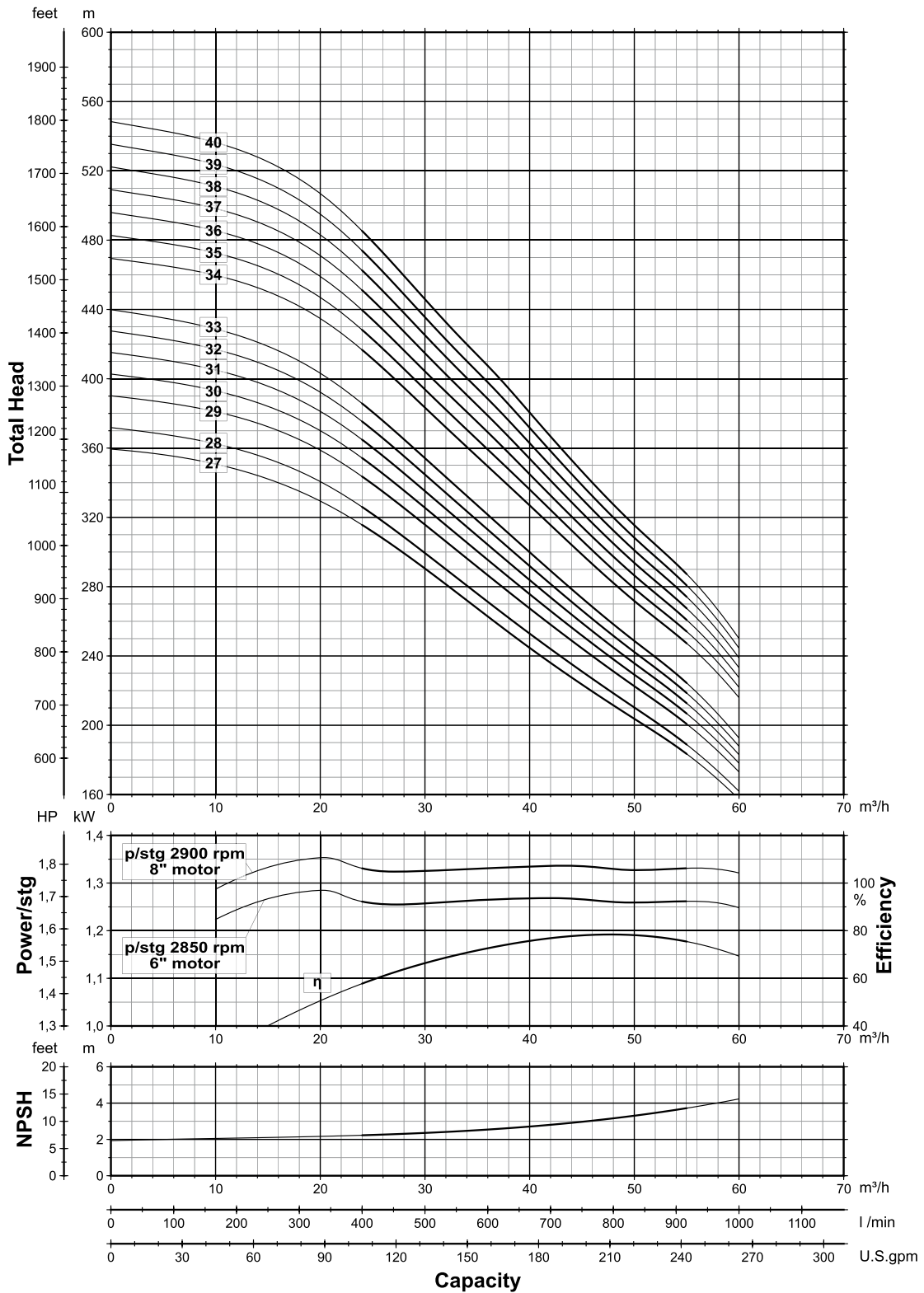
6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE CURVES 6BHE(L) 48 series

(according to ISO 9906 Attachment A)



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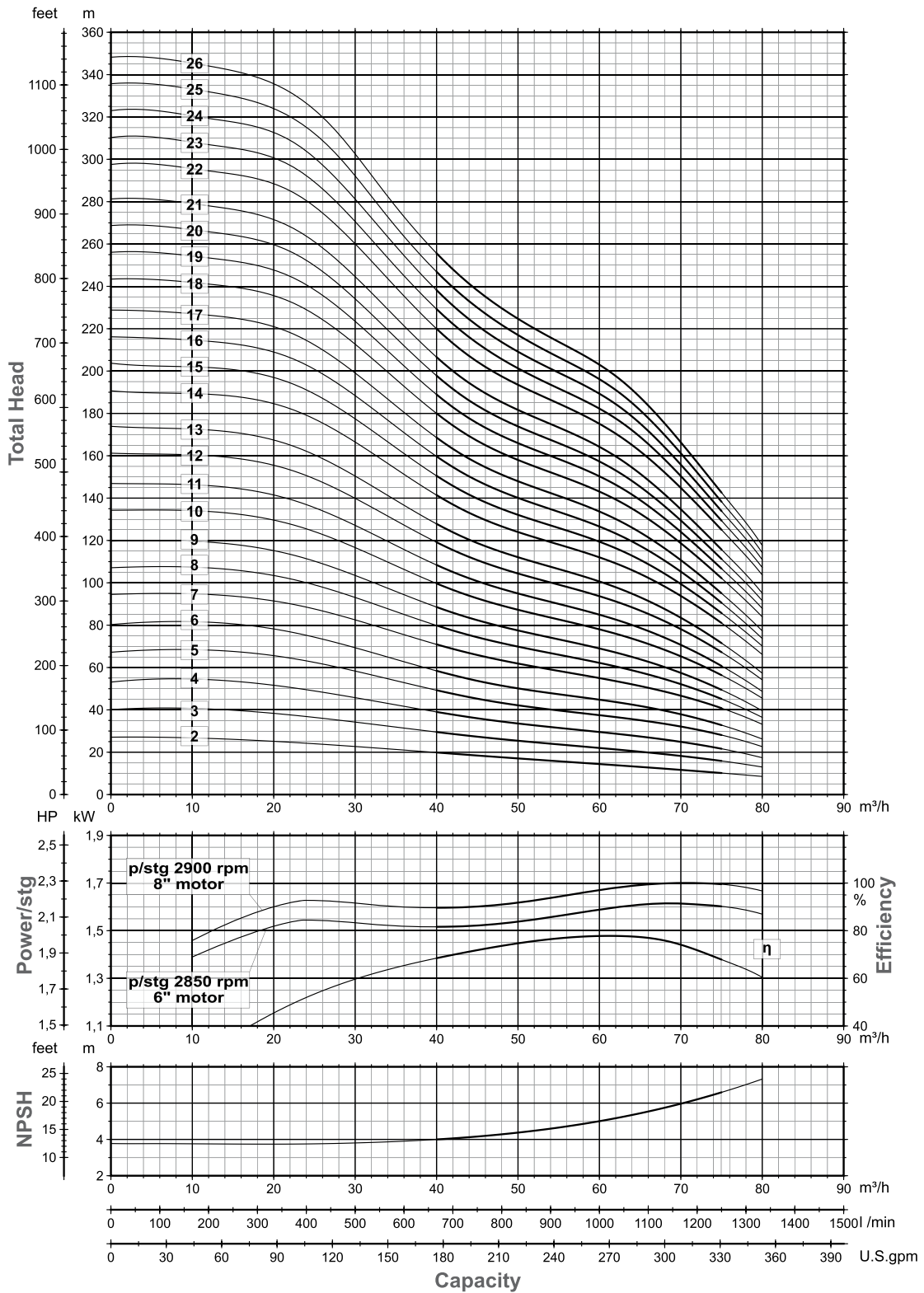


6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE CURVES 6BHE(L) 64 series (according to ISO 9906 Attachment A)



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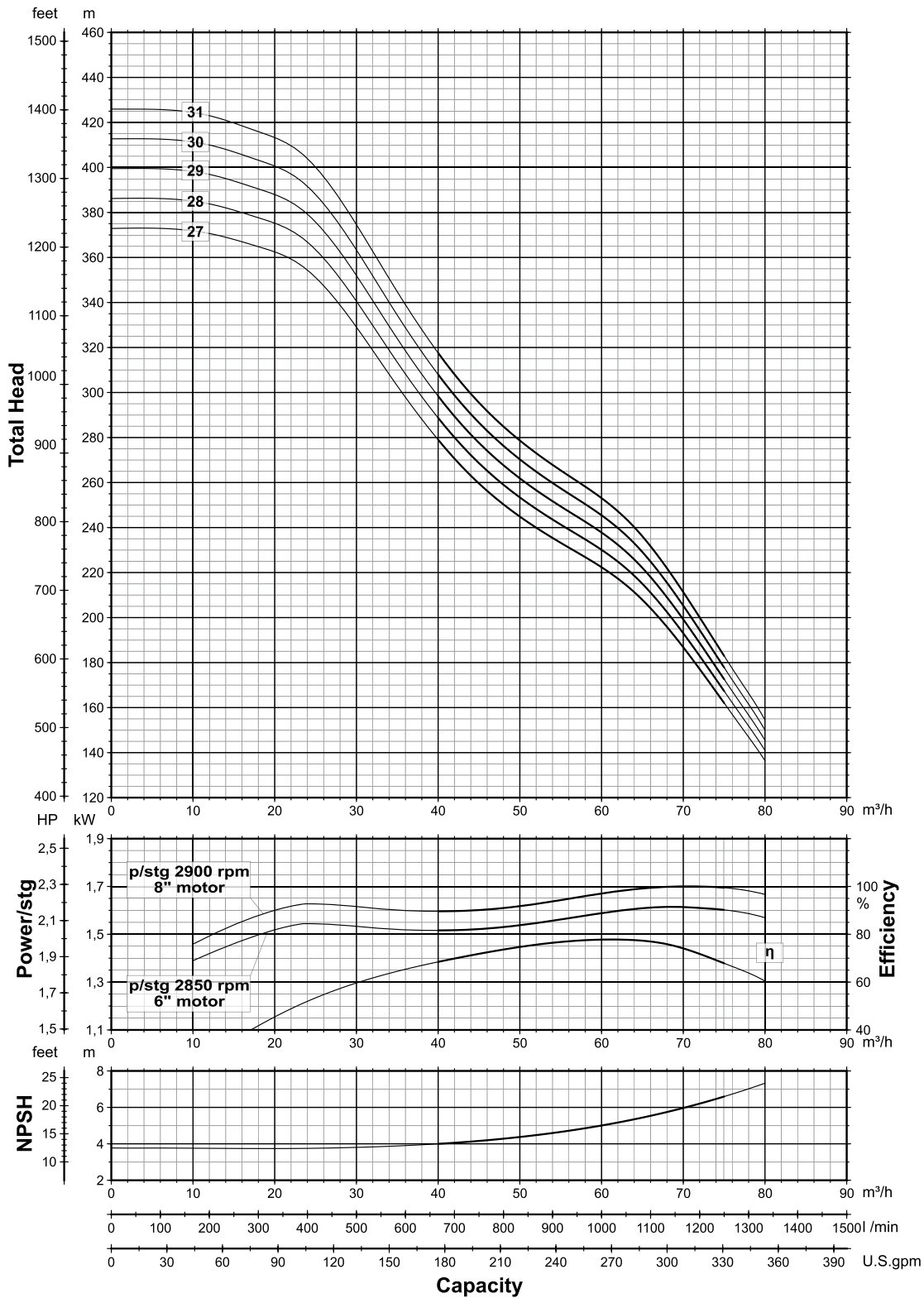
6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE CURVES 6BHE(L) 64 series

(according to ISO 9906 Attachment A)



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6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE TABLE 6BHE(L) 13

Model	Motor size	P.		l/min m ³ /h	Q=Flow rate					
		[HP]	[kW]		100 6	133 8	167 10	200 12	250 15	300 18
				H=Head [m]						
6BHE(L) 13-5 *	6"	5,5	4	50,7	48,4	45,4	41,4	31,3	18,6	
6BHE(L) 13-6 *	6"	5,5	4	60,8	58,1	54,5	49,7	37,5	22,3	
6BHE(L) 13-7 *	6"	5,5	4	71,0	67,8	63,6	58,0	43,8	26,0	
6BHE(L) 13-8 *	6"	5,5	4	81,1	77,5	72,7	66,3	50,0	29,7	
6BHE(L) 13-9 *	6"	7,5	5,5	91,2	87,2	81,8	74,6	56,3	33,4	
6BHE(L) 13-10 *	6"	7,5	5,5	101,4	96,9	90,9	82,9	62,5	37,1	
6BHE(L) 13-11 *	6"	7,5	5,5	111,5	106,6	100,0	91,2	68,8	40,8	
6BHE(L) 13-12 *	6"	7,5	5,5	121,7	116,3	109,1	99,5	75,0	44,6	
6BHE(L) 13-13 *	6"	7,5	5,5	131,8	125,9	118,1	107,7	81,3	48,3	
6BHE(L) 13-14 *	6"	10	7,5	141,9	135,6	127,2	116,0	87,5	52,0	
6BHE(L) 13-15 *	6"	10	7,5	152,1	145,3	136,3	124,3	93,8	55,7	
6BHE(L) 13-16 *	6"	10	7,5	162,2	155,0	145,4	132,6	100,0	59,4	
6BHE(L) 13-17 *	6"	10	7,5	172,3	164,7	154,5	140,9	106,3	63,1	
6BHE(L) 13-18	6"	12,5	9,3	182,5	174,4	163,6	149,2	112,5	66,8	
6BHE(L) 13-19	6"	12,5	9,3	192,6	184,1	172,7	157,5	118,8	70,5	
6BHE(L) 13-20	6"	12,5	9,3	202,8	193,8	181,8	165,8	125,0	74,3	
6BHE(L) 13-21	6"	12,5	9,3	212,9	203,4	190,8	174,0	131,3	78,0	
6BHE(L) 13-22	6"	12,5	9,3	223,0	213,1	199,9	182,3	137,5	81,7	
6BHE(L) 13-23	6"	15	11	233,2	222,8	209,0	190,6	143,8	85,4	
6BHE(L) 13-24	6"	15	11	243,3	232,5	218,1	198,9	150,0	89,1	
6BHE(L) 13-25	6"	15	11	253,4	242,2	227,2	207,2	156,3	92,8	
6BHE(L) 13-26	6"	15	11	263,6	251,9	236,3	215,5	162,5	96,5	
6BHE(L) 13-27	6"	20	15	273,7	261,6	245,4	223,8	168,8	100,2	
6BHE(L) 13-28	6"	20	15	283,9	271,3	254,5	232,1	175,0	104,0	
6BHE(L) 13-29	6"	20	15	294,0	280,9	263,5	240,3	181,3	107,7	
6BHE(L) 13-30	6"	20	15	304,1	290,6	272,6	248,6	187,5	111,4	
6BHE(L) 13-31	6"	20	15	314,3	300,3	281,7	256,9	193,8	115,1	
6BHE(L) 13-32	6"	20	15	324,4	310,0	290,8	265,2	200,0	118,8	
6BHE(L) 13-33	6"	20	15	334,5	319,7	299,9	273,5	206,3	122,5	
6BHE(L) 13-34	6"	20	15	344,7	329,4	309,0	281,8	212,5	126,2	
6BHE(L) 13-35	6"	20	15	354,8	339,1	318,1	290,1	218,8	129,9	
6BHE(L) 13-36	6"	20	15	365,0	348,8	327,2	298,4	225,0	133,7	
6BHE(L) 13-37	6"	25	18,5	375,1	358,4	336,2	306,6	231,3	137,4	
6BHE(L) 13-38	6"	25	18,5	385,2	368,1	345,3	314,9	237,5	141,1	
6BHE(L) 13-39	6"	25	18,5	395,4	377,8	354,4	323,2	243,8	144,8	
6BHE(L) 13-40	6"	25	18,5	405,5	387,5	363,5	331,5	250,0	148,5	
6BHE(L) 13-41	6"	25	18,5	415,6	397,2	372,6	339,8	256,3	152,2	
6BHE(L) 13-42	6"	25	18,5	425,8	406,9	381,7	348,1	262,5	155,9	
6BHE(L) 13-43	6"	25	18,5	435,9	416,6	390,8	356,4	268,8	159,6	
6BHE(L) 13-44	6"	25	18,5	446,1	426,3	399,9	364,7	275,0	163,4	
6BHE(L) 13-45	6"	30	22	456,2	435,9	408,9	372,9	281,3	167,1	
6BHE(L) 13-46	6"	30	22	466,3	445,6	418,0	381,2	287,5	170,8	
6BHE(L) 13-47	6"	30	22	476,5	455,3	427,1	389,5	293,8	174,5	
6BHE(L) 13-48	6"	30	22	486,6	465,0	436,2	397,8	300,0	178,2	
6BHE(L) 13-49	6"	30	22	496,7	474,7	445,3	406,1	306,3	181,9	
6BHE(L) 13-50	6"	30	22	506,9	484,4	454,4	414,4	312,5	185,6	
6BHE(L) 13-51	6"	30	22	517,0	494,1	463,5	422,7	318,8	189,3	
6BHE(L) 13-52	6"	30	22	527,2	503,8	472,6	431,0	325,0	193,1	
6BHE(L) 13-53	6"	40	30	537,3	513,4	481,6	439,2	331,3	196,8	
6BHE(L) 13-54	6"	40	30	547,4	523,1	490,7	447,5	337,5	200,5	
6BHE(L) 13-55	6"	40	30	557,6	532,8	499,8	455,8	343,8	204,2	
6BHE(L) 13-56	6"	40	30	567,7	542,5	508,9	464,1	350,0	207,9	
6BHE(L) 13-57	6"	40	30	577,8	552,2	518,0	472,4	356,3	211,6	
6BHE(L) 13-58	6"	40	30	588,0	561,9	527,1	480,7	362,5	215,3	
6BHE(L) 13-59	6"	40	30	598,1	571,6	536,2	489,0	368,8	219,0	
6BHE(L) 13-60	6"	40	30	608,3	581,3	545,3	497,3	375,0	222,8	
6BHE(L) 13-61	6"	40	30	618,4	590,9	554,3	505,5	381,3	226,5	

*= Adaptor kit available for models coupled with 4" motors

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6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE TABLE 6BHE(L) 20

Model	Motor size	P _e		l/min m ³ /h	Q=Flow rate								
		[HP]	[kW]		100 6	133 8	167 10	200 12	250 15	300 18	350 21	400 24	450 27
													H=Head [m]
6BHE(L) 20-6 *	6"	5,5	4	68,0	66,4	64,0	62,0	57,6	51,6	43,2	32,9	20,5	
6BHE(L) 20-7 *	6"	7,5	5,5	79,0	77,5	74,7	72,3	67,2	60,2	50,4	38,4	23,9	
6BHE(L) 20-8 *	6"	7,5	5,5	90,9	88,5	85,3	82,7	76,8	68,8	57,6	43,9	27,4	
6BHE(L) 20-9 *	6"	7,5	5,5	102,0	99,6	96,0	93,0	86,4	77,4	64,8	49,4	30,8	
6BHE(L) 20-10 *	6"	10	7,5	113,7	110,7	106,7	103,3	96,0	86,0	72,0	54,9	34,2	
6BHE(L) 20-11 *	6"	10	7,5	125,0	121,7	117,3	113,7	105,6	94,6	79,2	60,4	37,6	
6BHE(L) 20-12 *	6"	10	7,5	136,0	132,8	128,0	124,0	115,2	103,2	86,4	65,8	41,0	
6BHE(L) 20-13	6"	12,5	9,3	147,1	143,9	138,7	134,3	124,8	111,8	93,6	71,3	44,5	
6BHE(L) 20-14	6"	12,5	9,3	157,0	154,9	149,3	144,7	134,4	120,4	100,8	76,8	47,9	
6BHE(L) 20-15	6"	12,5	9,3	170,5	166,0	160,0	155,0	144,0	129,0	108,0	82,3	51,3	
6BHE(L) 20-16	6"	15	11	181,9	177,1	170,7	165,3	153,6	137,6	115,2	87,8	54,7	
6BHE(L) 20-17	6"	15	11	193,2	118,1	181,3	175,7	163,2	146,2	122,4	93,3	58,1	
6BHE(L) 20-18	6"	15	11	204,6	199,2	192,0	186,0	172,8	154,8	129,6	98,8	61,6	
6BHE(L) 20-19	6"	20	15	216,0	210,3	202,7	196,3	182,4	163,4	136,8	104,2	65,0	
6BHE(L) 20-20	6"	20	15	227,3	221,3	213,3	206,7	192,0	172,0	144,0	109,7	68,4	
6BHE(L) 20-21	6"	20	15	238,7	232,4	224,0	217,0	201,6	180,6	151,2	115,2	71,8	
6BHE(L) 20-22	6"	20	15	250,0	243,5	234,7	227,3	211,2	189,2	158,4	120,7	75,2	
6BHE(L) 20-23	6"	20	15	261,4	254,5	245,3	237,7	220,8	197,8	165,6	126,2	78,7	
6BHE(L) 20-24	6"	20	15	272,8	265,6	256,0	248,0	230,4	206,4	172,8	131,7	82,1	
6BHE(L) 20-25	6"	25	18,5	284,2	276,7	266,7	258,3	240,0	215,0	180,0	137,2	85,5	
6BHE(L) 20-26	6"	25	18,5	295,5	287,7	277,3	268,7	249,6	223,6	187,2	142,7	88,9	
6BHE(L) 20-27	6"	25	18,5	306,0	298,8	288,0	279,0	259,2	232,2	194,4	148,1	92,3	
6BHE(L) 20-28	6"	25	18,5	318,3	309,9	298,7	289,3	268,8	240,8	201,6	153,6	95,8	
6BHE(L) 20-29	6"	25	18,5	329,6	320,9	309,3	299,7	278,4	249,4	208,8	159,1	99,2	
6BHE(L) 20-30	6"	25	18,5	341,0	332,0	320,0	310,0	288,0	258,0	216,0	164,6	102,6	
6BHE(L) 20-31	6"	30	22	352,4	343,1	330,7	320,3	297,6	266,6	223,2	170,1	106,0	
6BHE(L) 20-32	6"	30	22	363,7	354,1	341,3	330,7	307,2	275,2	230,4	175,6	109,4	
6BHE(L) 20-33	6"	30	22	375,1	365,2	352,0	341,0	316,8	283,8	237,6	181,1	112,9	
6BHE(L) 20-34	6"	30	22	386,5	376,3	362,7	351,3	326,4	292,4	244,8	186,5	116,3	
6BHE(L) 20-35	6"	30	22	397,8	387,3	373,3	361,7	336,0	301,0	252,0	192,0	119,7	
6BHE(L) 20-36	6"	30	22	409,2	398,4	384,0	372,0	345,6	309,6	259,2	197,5	123,1	
6BHE(L) 20-37	6"	40	30	420,6	409,5	394,7	382,3	355,2	318,2	266,4	203,0	126,5	
6BHE(L) 20-38	6"	40	30	431,9	420,5	405,3	392,7	364,8	326,8	273,6	208,5	130,0	
6BHE(L) 20-39	6"	40	30	443,0	431,6	416,0	403,0	374,4	335,4	280,8	214,0	133,4	
6BHE(L) 20-40	6"	40	30	455,0	442,7	426,7	413,3	384,0	344,0	288,0	219,5	136,8	
6BHE(L) 20-41	6"	40	30	466,0	453,7	437,3	423,7	393,6	352,6	295,2	225,0	140,2	
6BHE(L) 20-42	6"	40	30	477,0	464,8	448,0	434,0	403,2	361,2	302,4	230,4	143,6	
6BHE(L) 20-43	6"	40	30	489,0	475,9	458,7	444,3	412,8	369,8	309,6	235,9	147,1	
6BHE(L) 20-44	6"	40	30	500,0	486,9	469,3	454,7	422,4	378,4	316,8	241,4	150,5	
6BHE(L) 20-45	6"	40	30	511,5	498,0	480,0	465,0	432,0	387,0	324,0	246,9	153,9	
6BHE(L) 20-46	6"	40	30	523,0	509,1	490,7	475,3	441,6	395,6	331,2	252,4	157,3	
6BHE(L) 20-47	6"	40	30	534,2	520,1	501,3	485,7	451,2	404,2	338,4	257,9	160,7	
6BHE(L) 20-48	6"	40	30	545,6	531,2	512,0	496,0	460,8	412,8	345,6	263,4	164,2	
6BHE(L) 20-49	6"	40	30	557,0	542,3	522,7	506,3	470,4	421,4	352,8	268,8	167,6	
6BHE(L) 20-50	6"	50	37	568,3	553,3	533,3	516,7	480,0	430,0	360,0	274,3	171,0	
6BHE(L) 20-51	6"	50	37	579,7	564,4	544,0	527,0	489,6	438,6	367,2	279,8	174,4	
6BHE(L) 20-52	6"	50	37	591,1	575,5	554,7	537,3	499,2	447,2	374,4	285,3	177,8	
6BHE(L) 20-53	6"	50	37	602,4	586,5	565,3	547,7	508,8	455,8	381,6	290,8	181,3	
6BHE(L) 20-54	6"	50	37	613,8	597,6	576,0	558,0	518,4	464,4	388,8	296,3	184,7	
6BHE(L) 20-55	6"	50	37	625,2	608,7	586,7	568,3	528,0	473,0	396,0	301,8	188,1	
6BHE(L) 20-56	6"	50	37	636,5	619,7	597,3	578,7	537,6	481,6	403,2	307,3	191,5	
6BHE(L) 20-57	6"	50	37	647,9	630,8	608,0	589,0	547,2	490,2	410,4	312,7	194,9	
6BHE(L) 20-58	6"	50	37	659,3	641,9	618,7	599,3	556,8	498,8	417,6	318,2	198,4	
6BHE(L) 20-59	6"	50	37	670,6	652,9	629,3	609,7	566,4	507,4	424,8	323,7	201,8	
6BHE(L) 20-60	6"	50	37	682,0	664,0	640,0	620,0	576,0	516,0	432,0	329,2	205,2	

*= Adaptor kit available for models coupled with 4" motors

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6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE TABLE 6BHE(L) 32

Model	Motor size	P _e		Q=Flow rate									
		[HP]	[kW]	l/min	83,5	166,5	250	333,5	416,5	500	583,5	666,5	750
				m ³ /h	5	10	15	20	25	30	35	40	45
				H=Head [m]									
6BHE(L) 32-3 *	6"	5	3,7	43,9	41,4	38,9	36,0	33,3	30,2	26,7	21,7	15,3	
6BHE(L) 32-4 *	6"	7,5	5,5	59,5	56,0	52,6	48,8	45,2	41,1	36,5	30,0	21,4	
6BHE(L) 32-5 *	6"	10	7,5	74,2	70,2	66,2	61,5	56,9	51,8	46,1	38,0	27,4	
6BHE(L) 32-6 *	6"	10	7,5	88,4	83,4	78,4	72,6	67,1	61,0	54,0	44,1	31,2	
6BHE(L) 32-7	6"	12,5	9,3	104,2	98,4	92,6	86,0	79,7	72,6	64,6	53,3	38,4	
6BHE(L) 32-8	6"	15	11	119,4	113,3	105,7	98,1	90,9	82,7	73,6	60,5	43,5	
6BHE(L) 32-9	6"	15	11	132,7	125,3	117,9	109,3	101,1	91,8	81,4	66,6	47,3	
6BHE(L) 32-10	6"	20	15	149,9	141,6	133,3	123,8	114,9	104,7	93,5	77,3	56,1	
6BHE(L) 32-11	6"	20	15	163,9	154,8	145,7	135,3	125,4	114,1	101,7	83,8	60,4	
6BHE(L) 32-12	6"	20	15	177,8	167,9	158,0	146,6	135,7	123,4	109,6	90,0	64,4	
6BHE(L) 32-13	6"	25	18,5	194,0	183,7	172,9	160,6	148,9	135,7	121,1	100,0	72,4	
6BHE(L) 32-14	6"	25	18,5	208,5	196,9	185,3	172,1	159,4	145,1	129,2	106,5	76,7	
6BHE(L) 32-15	6"	30	22	224,6	212,2	199,7	185,5	172,1	156,8	140,0	115,7	84,0	
6BHE(L) 32-16	6"	30	22	238,7	225,5	212,2	197,1	182,6	166,3	148,3	122,3	88,3	
6BHE(L) 32-17	6"	30	22	252,6	238,5	224,5	208,4	193,0	175,7	156,4	128,7	92,5	
6BHE(L) 32-18	6"	30	22	226,8	251,8	236,8	219,7	203,3	185,0	164,3	134,9	96,5	
6BHE(L) 32-19	6"	40	30	286,0	270,5	254,7	236,8	219,9	200,7	179,7	149,2	109,1	
6BHE(L) 32-20	6"	40	30	300,6	284,0	267,4	248,6	230,7	210,5	188,2	156,0	113,8	
6BHE(L) 32-21	6"	40	30	315,0	297,4	280,0	260,2	241,5	220,1	196,7	162,8	118,3	
6BHE(L) 32-22	6"	40	30	329,1	310,9	292,6	271,8	252,1	229,7	205,0	169,4	122,7	
6BHE(L) 32-23	6"	40	30	343,2	324,1	305,1	283,4	262,6	239,2	213,2	175,9	127,0	
6BHE(L) 32-24	6"	40	30	357,2	337,3	317,5	294,8	273,1	248,6	221,4	182,2	131,2	
6BHE(L) 32-25	6"	50	37	374,5	353,8	333,0	309,4	287,0	261,5	233,5	193,1	140,1	
6BHE(L) 32-26	6"	50	37	388,1	367,0	345,5	320,9	297,5	271,1	241,8	199,7	144,5	
6BHE(L) 32-27	6"	50	37	402,6	380,3	357,9	332,4	308,1	280,5	250,0	206,1	148,8	
6BHE(L) 32-28	6"	50	37	416,7	393,5	370,3	343,8	318,5	289,9	258,1	212,5	152,9	
6BHE(L) 32-29	6"	50	37	430,5	406,5	382,6	355,2	328,9	299,2	266,2	218,8	157,0	
6BHE(L) 32-30	6"	50	37	436,0	420,0	394,9	366,4	339,1	308,5	274,1	224,9	160,9	
6BHE(L) 32-31	6"	60	45	464,3	438,6	412,9	383,6	355,8	324,2	289,4	239,3	173,6	
6BHE(L) 32-32	6"	60	45	478,5	451,9	425,4	395,2	366,4	333,7	297,7	245,8	177,9	
6BHE(L) 32-33	6"	60	45	492,5	465,2	437,9	406,7	376,9	343,2	305,9	252,2	182,1	
6BHE(L) 32-34	6"	60	45	513,0	491,5	450,3	418,1	387,3	352,6	314,0	258,6	186,2	
6BHE(L) 32-35	6"	60	45	520,5	491,5	462,6	429,5	397,7	361,9	322,0	264,8	190,2	
6BHE(L) 32-36	6"	60	45	534,5	504,9	474,9	440,8	408,0	371,1	329,9	270,9	194,2	
6BHE(L) 32-37	6"	60	45	548,1	517,6	487,1	452,0	418,2	380,3	337,7	277,0	198,0	
6BHE(L) 32-38	6"	75	55	581,2	549,2	517,4	481,6	448,2	409,8	368,6	308,6	229,2	
6BHE(L) 32-39	6"	75	55	595,8	563,1	530,5	493,7	459,4	420,0	377,6	315,9	234,4	
6BHE(L) 32-40	6"	75	55	610,5	577,0	543,5	505,8	470,6	430,1	386,6	323,2	239,6	
6BHE(L) 32-41	6"	75	55	625,2	590,9	556,6	517,9	481,7	440,2	395,6	330,5	244,7	
6BHE(L) 32-42	6"	75	55	639,8	604,7	569,5	529,9	492,8	450,3	404,5	337,7	249,8	
6BHE(L) 32-43	6"	75	55	654,4	618,5	582,5	542,0	503,9	460,3	413,3	344,9	254,8	

*= Adaptor kit available for models coupled with 4" motors

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6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE TABLE 6BHE(L) 48

Model	Motor size	P.		Q=Flow rate							
		[HP]	[kW]	l/min	500	583,5	666,5	750	833,5	916,5	1000
				m ³ /h	30	35	40	45	50	55	60
				H=Head [m]							
6BHE(L) 48-2 *	6"	4	3	22,6	20,9	19,3	17,8	16,6	15,1	13,4	11,3
6BHE(L) 48-3 *	6"	5,5	4	33,8	31,2	28,8	26,6	24,7	22,5	19,9	16,8
6BHE(L) 48-4 *	6"	7,5	5,5	45,0	41,5	38,3	35,5	32,9	29,9	26,5	22,3
6BHE(L) 48-5 *	6"	10	7,5	56,8	52,3	48,3	44,7	41,5	37,8	33,6	28,4
6BHE(L) 48-6	6"	12,5	9,3	70,0	65,2	60,4	55,5	50,3	46,0	41,6	35,7
6BHE(L) 48-7	6"	12,5	9,3	80,4	74,8	69,3	63,5	57,6	52,7	47,5	40,5
6BHE(L) 48-8	6"	15	11	91,6	85,1	78,9	72,2	65,5	59,9	54,0	46,0
6BHE(L) 48-9	6"	20	15	105,5	98,2	91,0	83,7	75,9	69,5	62,9	54,1
6BHE(L) 48-10	6"	20	15	116,1	108	100,1	91,9	83,3	76,2	68,9	59,0
6BHE(L) 48-11	6"	20	15	126,5	117,6	109,0	99,9	90,5	82,8	74,7	63,7
6BHE(L) 48-12	6"	25	18,5	140,0	130,3	120,8	110,9	100,6	92,0	83,3	71,4
6BHE(L) 48-13	6"	25	18,5	150,5	140,0	129,8	119,0	107,9	98,7	89,2	76,3
6BHE(L) 48-14	6"	25	18,5	160,9	149,5	138,7	127,0	115,1	105,3	95,0	81,0
6BHE(L) 48-15	6"	30	22	174,1	161,9	150,1	137,7	124,9	114,3	103,3	88,4
6BHE(L) 48-16	6"	30	22	184,5	171,5	159,1	145,8	132,2	120,9	109,1	93,2
6BHE(L) 48-17	6"	30	22	194,7	181,0	167,8	153,6	139,3	127,3	114,8	97,8
6BHE(L) 48-18	6"	40	30	212,3	197,6	183,1	168,6	152,9	139,9	126,8	109,2
6BHE(L) 48-19	6"	40	30	223,1	207,7	192,5	177,0	160,5	146,9	133,0	114,4
6BHE(L) 48-20	6"	40	30	233,8	217,6	201,7	185,3	168,1	153,7	139,1	119,5
6BHE(L) 48-21	6"	40	30	244,4	227,4	210,8	193,5	175,5	160,5	145,2	124,4
6BHE(L) 48-22	6"	40	30	254,9	237,0	219,8	201,6	182,8	167,2	151,1	129,3
6BHE(L) 48-23	6"	40	30	265,2	246,6	228,6	209,5	190,0	173,8	156,9	134,0
6BHE(L) 48-24	6"	50	37	279,8	260,3	241,3	221,6	200,9	183,8	166,3	142,6
6BHE(L) 48-25	6"	50	37	290,3	270,0	250,3	229,7	208,3	190,6	172,2	147,5
6BHE(L) 48-26	6"	50	37	300,7	279,6	259,3	237,8	215,6	197,2	178,1	152,3
6BHE(L) 48-27	6"	50	37	311,1	289,2	268,2	245,7	222,8	203,7	183,9	157,0
6BHE(L) 48-28	6"	50	37	321,3	298,6	276,9	253,6	229,9	210,2	189,6	161,7
6BHE(L) 48-29	6"	60	45	338,7	315,1	292,1	268,3	243,3	222,6	201,4	172,9
6BHE(L) 48-30	6"	60	45	349,2	324,9	301,1	276,5	250,7	229,4	207,4	177,8
6BHE(L) 48-31	6"	60	45	359,6	334,5	310,1	284,5	258,0	236,0	213,3	182,6
6BHE(L) 48-32	6"	60	45	370,0	344,1	319,0	292,5	265,2	242,6	219,1	187,4
6BHE(L) 48-33	6"	60	45	380,3	353,5	327,8	300,4	272,3	249,1	224,8	192,0
6BHE(L) 48-34	8"	75	55	410,9	383,1	354,8	328,0	297,6	271,9	248,1	215,7
6BHE(L) 48-35	8"	75	55	422,3	393,7	364,6	337,0	305,8	279,4	254,8	221,4
6BHE(L) 48-36	8"	75	55	433,7	404,3	374,4	345,9	313,9	286,8	261,4	227,0
6BHE(L) 48-37	8"	75	55	445,0	414,8	384,1	354,8	321,9	294,2	268,1	233,6
6BHE(L) 48-38	8"	75	55	456,3	425,3	393,8	363,7	330,0	301,6	274,7	238,2
6BHE(L) 48-39	8"	75	55	467,5	435,7	403,5	372,5	337,9	308,9	281,2	243,8
6BHE(L) 48-40	8"	75	55	478,7	446,1	413,1	381,3	345,9	316,2	287,8	249,3

*= Adaptor kit available for models coupled with 4" motors

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6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE TABLE 6BHE(L) 64

Model	Motor size	P:		Q=Flow rate								
		[HP]	[kW]	l/min	666,5	750	833,5	916,5	1000	1083,5	1166,5	1250
				m ³ /h	40	45	50	55	60	65	70	75
				H=Head [m]								
6BHE(L) 64-2 *	6"	5	3,7	21,1	19,0	17,3	16,5	15,7	14,9	13,9	12,4	
6BHE(L) 64-3 *	6"	7,5	5,5	31,8	28,8	26,2	24,9	23,7	22,5	21,0	18,9	
6BHE(L) 64-4 *	6"	10	7,5	42,5	38,4	35,0	33,2	31,6	30,1	28,0	25,2	
6BHE(L) 64-5	6"	12,5	9,3	53,8	48,7	44,3	41,9	40,1	38,2	35,6	32,2	
6BHE(L) 64-6	6"	15	11	64,0	57,9	52,7	50,0	47,7	45,3	42,3	38,1	
6BHE(L) 64-7	6"	20	15	76,2	70,1	65,2	61,7	58,6	55,7	52,1	46,1	
6BHE(L) 64-8	6"	20	15	86,0	79,1	73,5	69,7	66,1	62,8	58,5	51,6	
6BHE(L) 64-9	6"	20	15	95,5	87,8	81,5	77,4	73,4	69,6	64,6	56,8	
6BHE(L) 64-10	6"	25	18,5	107,6	99,0	91,9	87,2	82,7	78,5	73,2	64,6	
6BHE(L) 64-11	6"	25	18,5	117,2	107,8	100,1	95,0	90,0	85,4	79,4	69,8	
6BHE(L) 64-12	6"	30	22	128,9	118,5	110,1	104,4	99,1	94,1	87,6	77,3	
6BHE(L) 64-13	6"	30	22	138,5	127,3	118,2	112,2	106,4	101,0	93,8	82,5	
6BHE(L) 64-14	6"	40	30	153,3	141,0	131,1	124,0	118,0	112,0	104,9	93,0	
6BHE(L) 64-15	6"	40	30	163,4	150,2	139,6	132,2	125,7	119,3	111,5	98,7	
6BHE(L) 64-16	6"	40	30	173,3	159,3	148,0	140,3	133,2	126,5	118,1	104,3	
6BHE(L) 64-17	6"	40	30	183,0	168,3	156,3	148,2	140,7	133,5	124,4	109,8	
6BHE(L) 64-18	6"	50	37	195,5	179,8	167,0	158,2	150,3	142,7	133,3	117,9	
6BHE(L) 64-19	6"	50	37	205,3	188,8	175,4	166,2	157,9	149,9	139,8	123,5	
6BHE(L) 64-20	6"	50	37	215,0	197,7	183,7	174,1	165,3	156,9	146,2	128,9	
6BHE(L) 64-21	6"	50	37	224,6	206,5	191,8	182,0	172,6	163,8	152,4	134,2	
6BHE(L) 64-22	6"	60	45	239,2	219,9	204,4	193,6	183,9	174,6	163,2	144,3	
6BHE(L) 64-23	6"	60	45	249,0	229,0	212,7	201,6	191,4	181,7	169,6	149,8	
6BHE(L) 64-24	6"	60	45	258,7	237,9	221,0	209,5	198,9	188,8	176,0	155,3	
6BHE(L) 64-25	6"	60	45	268,4	246,7	229,2	217,3	206,2	195,7	182,2	160,6	
6BHE(L) 64-26	6"	60	45	277,9	255,5	237,3	225,1	213,5	202,5	188,3	165,8	
6BHE(L) 64-27	8"	75	55	303,0	278,8	259,3	244,7	233,4	221,6	208,5	186,4	
6BHE(L) 64-28	8"	75	55	313,5	288,5	268,3	253,3	241,5	229,3	215,7	192,6	
6BHE(L) 64-29	8"	75	55	324,0	298,1	277,2	261,8	249,5	237,0	222,8	198,8	
6BHE(L) 64-30	8"	75	55	334,5	307,7	286,1	270,3	257,6	244,6	229,8	204,9	
6BHE(L) 64-31	8"	75	55	344,9	317,3	295,0	278,7	265,5	252,2	236,8	211,0	

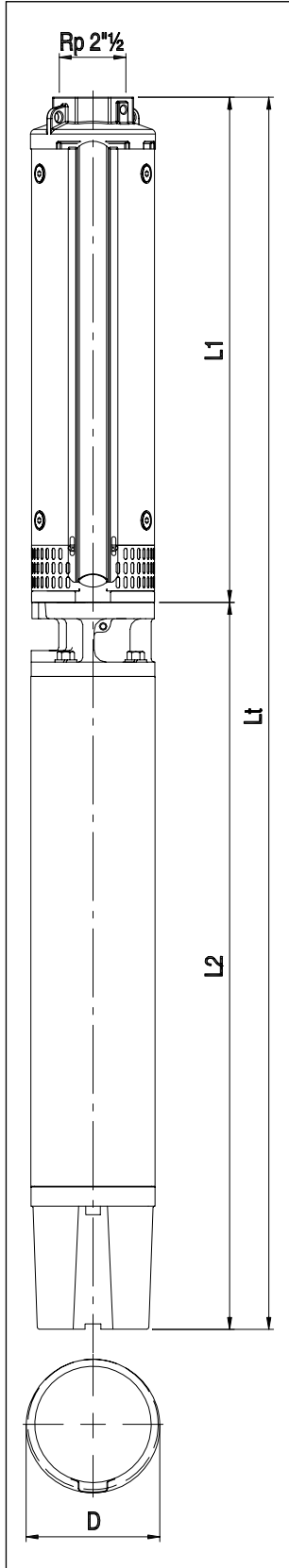
*= Adaptor kit available for models coupled with 4" motors

6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

DIMENSIONS 6BHE(L) 13



DIMENSIONAL TABLE

Model	Motor size	P ₂		Dimensions [mm]					Weight [kg]
		[HP]	[kW]	L1	L2	Lt	D	1 cable	
6BHE(L) 13-5	4"	3	2,2	413,5	422	835,5	142,5	-	26,5
6BHE(L) 13-6	4"	5	3,7	443,5	520	963,5	142,5	-	32,0
6BHE(L) 13-7	4"	5	3,7	473,5	520	993,5	142,5	-	32,0
6BHE(L) 13-8	4"	5	3,7	503,5	520	1023,5	142,5	-	33,0
6BHE(L) 13-9	4"	7,5	5,5	533,5	652,5	1186	142,5	-	41,0
6BHE(L) 13-10	4"	7,5	5,5	563,5	652,5	1216	142,5	-	41,5
6BHE(L) 13-11	4"	7,5	5,5	593,5	652,5	1246	142,5	-	42,5
6BHE(L) 13-12	4"	7,5	5,5	623,5	652,5	1276	142,5	-	43,5
6BHE(L) 13-13	4"	7,5	5,5	653,5	652,5	1306	142,5	-	44,0
6BHE(L) 13-14	4"	10	7,5	683,5	730,5	1414	142,5	-	49,0
6BHE(L) 13-15	4"	10	7,5	713,5	730,5	1444	142,5	-	49,5
6BHE(L) 13-16	4"	10	7,5	743,5	730,5	1474	142,5	-	50,5
6BHE(L) 13-17	4"	10	7,5	773,5	730,5	1504	142,5	-	51,0
6BHE(L) 13-5	6"	5,5	4	411	581	992	143	144,5	49,0
6BHE(L) 13-6	6"	5,5	4	441	581	1022	143	144,5	50,0
6BHE(L) 13-7	6"	5,5	4	471	581	1052	143	144,5	50,5
6BHE(L) 13-8	6"	5,5	4	501	581	1082	143	144,5	51,5
6BHE(L) 13-9	6"	7,5	5,5	531	614,5	1145,5	143	144,5	55,5
6BHE(L) 13-10	6"	7,5	5,5	561	614,5	1175,5	143	144,5	56,0
6BHE(L) 13-11	6"	7,5	5,5	591	614,5	1205,5	143	144,5	57,0
6BHE(L) 13-12	6"	7,5	5,5	621	614,5	1235,5	143	144,5	58,0
6BHE(L) 13-13	6"	7,5	5,5	651	614,5	1265,5	143	144,5	58,5
6BHE(L) 13-14	6"	10	7,5	681	646,0	1327	143	144,5	63,5
6BHE(L) 13-15	6"	10	7,5	711	646,0	1357	143	144,5	64,0
6BHE(L) 13-16	6"	10	7,5	741	646,0	1387	143	144,5	65,0
6BHE(L) 13-17	6"	10	7,5	771	646,0	1417	143	144,5	65,5
6BHE(L) 13-18	4"	12,5	9,3	801	678,5	1479,5	143	144,5	69,0
6BHE(L) 13-19	4"	12,5	9,3	831	678,5	1509,5	143	144,5	69,5
6BHE(L) 13-20	6"	12,5	9,3	861	678,5	1539,5	143	144,5	70,5
6BHE(L) 13-21	4"	12,5	9,3	891	678,5	1569,5	143	144,5	71,0
6BHE(L) 13-22	6"	12,5	9,3	921	678,5	1599,5	143	144,5	71,5
6BHE(L) 13-23	6"	15	11	951	711	1662	143	144,5	76,0
6BHE(L) 13-24	6"	15	11	981	711	1692	143	144,5	76,5
6BHE(L) 13-25	6"	15	11	1011	711	1722	143	144,5	77,5
6BHE(L) 13-26	6"	15	11	1041	711	1752	143	144,5	78,0
6BHE(L) 13-27	6"	20	15	1071	776	1847	143	144,5	85,5
6BHE(L) 13-28	6"	20	15	1101	776	1877	143	144,5	85,5
6BHE(L) 13-29	6"	20	15	1131	776	1907	143	144,5	87,0
6BHE(L) 13-30	6"	20	15	1161	776	1937	143	144,5	87,5
6BHE(L) 13-31	6"	20	15	1191	776	1967	143	144,5	87,5
6BHE(L) 13-32	4"	20	15	1220,5	776	1996,5	143	144,5	88,0
6BHE(L) 13-33	4"	20	15	1250,5	776	2026,5	143	144,5	89,0
6BHE(L) 13-34	6"	20	15	1280,5	776	2056,5	143	144,5	90,0
6BHE(L) 13-35	6"	20	15	1310,5	776	2086,5	143	144,5	90,5
6BHE(L) 13-36	6"	20	15	1340,5	776	2116,5	143	144,5	91,0
6BHE(L) 13-37	6"	25	18,5	1370,5	841,5	2212	143	144,5	99,0
6BHE(L) 13-38	6"	25	18,5	1400,5	841,5	2242	143	144,5	99,5
6BHE(L) 13-39	6"	25	18,5	1430,5	841,5	2272	143	144,5	101,0
6BHE(L) 13-40	6"	25	18,5	1460,5	841,5	2302	143	144,5	102,0
6BHE(L) 13-41	6"	25	18,5	1490,5	841,5	2332	143	144,5	102,5
6BHE(L) 13-42	6"	25	18,5	1520,5	841,5	2362	143	144,5	102,5
6BHE(L) 13-43	6"	25	18,5	1550,5	841,5	2392	143	144,5	103,5
6BHE(L) 13-44	6"	25	18,5	1580,5	841,5	2422	143	144,5	104,0
6BHE(L) 13-45	4"	30	22	1610,5	906,5	2517	143	144,5	111,0
6BHE(L) 13-46	4"	30	22	1640,5	906,5	2547	143	144,5	111,5
6BHE(L) 13-47	6"	30	22	1670,5	906,5	2947	143	144,5	112,5
6BHE(L) 13-48	6"	30	22	1700,0	906,5	2606,5	143	144,5	113,5
6BHE(L) 13-49	6"	30	22	1730,5	906,5	2637	143	144,5	114,5
6BHE(L) 13-50	6"	30	22	1760,5	906,5	2667	145	146,5	115,5
6BHE(L) 13-51	6"	30	22	1790,5	906,5	2697	145	146,5	116,5
6BHE(L) 13-52	6"	30	22	1820,5	906,5	2727	145	146,5	117,5
6BHE(L) 13-53	6"	40	30	1850,5	1036,5	2887	145	146,5	133,0
6BHE(L) 13-54	6"	40	30	1880,5	1036,5	2917	145	146,5	133,5
6BHE(L) 13-55	6"	40	30	1910,5	1036,5	2947	145	146,5	134,5
6BHE(L) 13-56	6"	40	30	1940,5	1036,5	2977	145	146,5	135,5
6BHE(L) 13-57	6"	40	30	1970,5	1036,5	3007	145	146,5	136,0
6BHE(L) 13-58	6"	40	30	2000	1036,5	3036,5	145	146,5	137,0
6BHE(L) 13-59	6"	40	30	2030	1036,5	3066,5	145	146,5	138,0
6BHE(L) 13-60	6"	40	30	2060	1036,5	3096,5	145	146,5	139,0
6BHE(L) 13-61	6"	40	30	2090	1036,5	3126,5	145	146,5	140,0

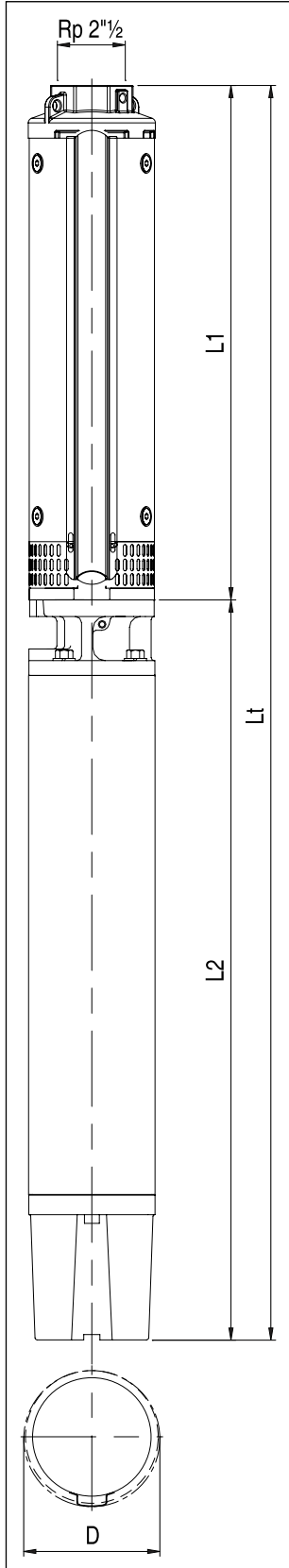
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6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

DIMENSIONS 6BHE(L) 20



DIMENSIONAL TABLE

Model	Motor size	P ₁		Dimensions [mm]					Weight [kg]
		[HP]	[kW]	L1	L2	Lt	D		
							1 cable	2 cables	
6BHE(L) 20-6	4"	5	3,7	497,5	520	1017,5	142,5	-	31,5
6BHE(L) 20-7	4"	7,5	5,5	535	652,5	1187,5	142,5	-	40,0
6BHE(L) 20-8	4"	7,5	5,5	572,5	652,5	1225	142,5	-	41,0
6BHE(L) 20-9	4"	7,5	5,5	610	652,5	1262,5	142,5	-	41,5
6BHE(L) 20-10	4"	10	7,5	647,5	730,5	1378	142,5	-	46,5
6BHE(L) 20-11	4"	10	7,5	685	730,5	1415,5	142,5	-	47,5
6BHE(L) 20-12	4"	10	7,5	722,5	730,5	1453	142,5	-	48,0
6BHE(L) 20-6	6"	5,5	4	495	581	1076	143	144,5	50,0
6BHE(L) 20-7	6"	7,5	5,5	532,5	614,5	1147	143	144,5	54,5
6BHE(L) 20-8	6"	7,5	5,5	570	614,5	1184,5	143	144,5	55,5
6BHE(L) 20-9	6"	7,5	5,5	607,5	614,5	1222	143	144,5	56,0
6BHE(L) 20-10	6"	10	7,5	645	646	1291	143	144,5	61,0
6BHE(L) 20-11	6"	10	7,5	682,5	646	1328,5	143	144,5	62,0
6BHE(L) 20-12	6"	10	7,5	720	646	1366	143	144,5	62,5
6BHE(L) 20-13	6"	12,5	9,3	757,5	678,5	1436	143	144,5	66,0
6BHE(L) 20-14	6"	12,5	9,3	795	678,5	1473,5	143	144,5	67,0
6BHE(L) 20-15	6"	12,5	9,3	832,5	678,5	1511	143	144,5	67,5
6BHE(L) 20-16	6"	15	11	870	711	1581	143	144,5	72,0
6BHE(L) 20-17	6"	15	11	907,5	711	1618,5	143	144,5	73,0
6BHE(L) 20-18	6"	15	11	945	711	1656	143	144,5	73,5
6BHE(L) 20-19	6"	20	15	982,5	776	1758,5	143	144,5	80,0
6BHE(L) 20-20	6"	20	15	1020	776	1796	143	144,5	80,5
6BHE(L) 20-21	6"	20	15	1057,5	776	1833,5	143	144,5	81,5
6BHE(L) 20-22	6"	20	15	1095	776	1871	143	144,5	82,5
6BHE(L) 20-23	6"	20	15	1132,5	776	1908,5	143	144,5	83,0
6BHE(L) 20-24	6"	20	15	1170	776	1946	143	144,5	84,0
6BHE(L) 20-25	6"	25	18,5	1207,5	841,5	2049	143	144,5	92,0
6BHE(L) 20-26	6"	25	18,5	1245	841,5	2086,5	143	144,5	92,5
6BHE(L) 20-27	6"	25	18,5	1282,5	841,5	2124	143	144,5	94,5
6BHE(L) 20-28	6"	25	18,5	1319,5	841,5	2161	143	144,5	94,5
6BHE(L) 20-29	6"	25	18,5	1357	841,5	2198,5	143	144,5	95,0
6BHE(L) 20-30	6"	25	18,5	1394,5	841,5	2236	143	144,5	96,0
6BHE(L) 20-31	6"	30	22	1432	906,5	2338,5	143	144,5	103,0
6BHE(L) 20-32	6"	30	22	1469,5	906,5	2376	143	144,5	103,5
6BHE(L) 20-33	6"	30	22	1507	906,5	2413,5	143	144,5	104,5
6BHE(L) 20-34	6"	30	22	1544,5	906,5	2451	143	144,5	105,0
6BHE(L) 20-35	6"	30	22	1582	906,5	2488,5	143	144,5	106,0
6BHE(L) 20-36	6"	30	22	1619,5	906,5	2526	143	144,5	106,5
6BHE(L) 20-37	6"	40	30	1657	1036,5	2693,5	143	144,5	122,5
6BHE(L) 20-38	6"	40	30	1694,5	1036,5	2731	143	144,5	124,0
6BHE(L) 20-39	6"	40	30	1732	1036,5	2768,5	143	144,5	124,0
6BHE(L) 20-40	6"	40	30	1769,5	1036,5	2806	143	144,5	124,5
6BHE(L) 20-41	6"	40	30	1807	1036,5	2843,5	143	144,5	126,0
6BHE(L) 20-42	6"	40	30	1844,5	1036,5	2881	143	144,5	127,0
6BHE(L) 20-43	6"	40	30	1882	1036,5	2918,5	143	144,5	128,0
6BHE(L) 20-44	6"	40	30	1919,5	1036,5	2956	143	144,5	129,0
6BHE(L) 20-45	6"	40	30	1957	1036,5	2993,5	143	144,5	130,0
6BHE(L) 20-46	6"	40	30	1994	1036,5	3030,5	143	144,5	131,0
6BHE(L) 20-47	6"	40	30	2031,5	1036,5	3068	145	146,5	131,5
6BHE(L) 20-48	6"	40	30	2069	1036,5	3105,5	145	146,5	132,0
6BHE(L) 20-49	6"	40	30	2106,5	1036,5	3143	145	146,5	134,0
6BHE(L) 20-50	6"	50	37	2144	1421,5	3565,5	145	146,5	189,0
6BHE(L) 20-51	6"	50	37	2181,5	1421,5	3603	145	146,5	190,0
6BHE(L) 20-52	6"	50	37	2219	1421,5	3640,5	145	146,5	191,0
6BHE(L) 20-53	6"	50	37	2256,5	1421,5	3678	145	146,5	192,0
6BHE(L) 20-54	6"	50	37	2294	1421,5	3715,5	145	146,5	193,0
6BHE(L) 20-55	6"	50	37	2331,5	1421,5	3753	145	146,5	194,0
6BHE(L) 20-56	6"	50	37	2369	1421,5	3790,5	145	146,5	195,0
6BHE(L) 20-57	6"	50	37	2406,5	1421,5	3828	145	146,5	196,0
6BHE(L) 20-58	6"	50	37	2444	1421,5	3865,5	145	146,5	197,0
6BHE(L) 20-59	6"	50	37	2481,5	1421,5	3903	145	146,5	198,0
6BHE(L) 20-60	6"	50	37	2519	1421,5	3940,5	145	146,5	199,0

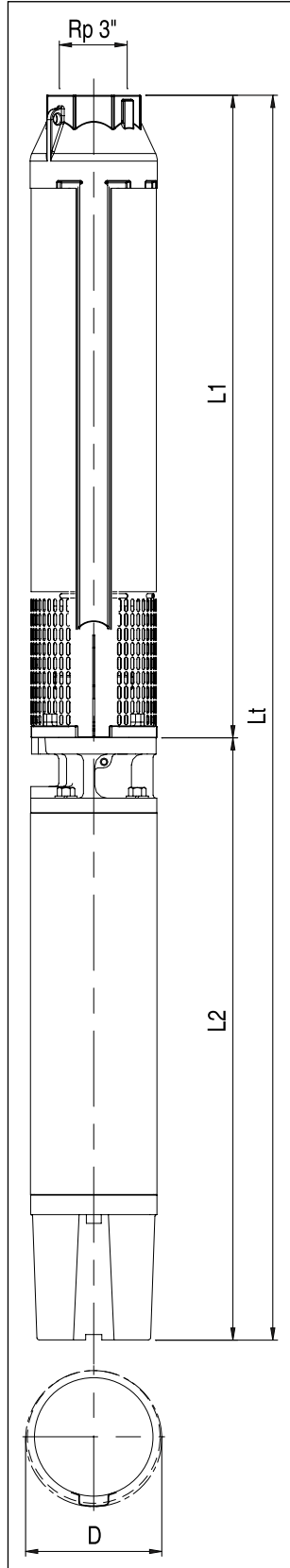
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6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

DIMENSIONS 6BHE(L) 32



DIMENSIONAL TABLE

Model	Motor size	P ₂		Dimensions [mm]					Weight [kg]
		[HP]	[kW]	L1	L2	Lt	D		
							1 cable	2 cables	
6BHE(L) 32-3	4"	5	3,7	622	520	1142	142,5	-	34,0
6BHE(L) 32-4	4"	7,5	5,5	707,5	652,5	1360	142,5	-	43,5
6BHE(L) 32-5	4"	10	7,5	793	730,5	1523,5	142,5	-	50,0
6BHE(L) 32-6	4"	10	7,5	878,5	730,5	1609	142,5	-	52,0
6BHE(L) 32-3	6"	5,5	4	620	581	1201	143	144,5	52,0
6BHE(L) 32-4	6"	7,5	5,5	705,5	614,5	1320	143	144,5	58,0
6BHE(L) 32-5	6"	10	7,5	790,5	646	1436,5	143	144,5	64,0
6BHE(L) 32-6	6"	10	7,5	876	646	1522	143	144,5	66,0
6BHE(L) 32-7	6"	12,5	9,3	961,5	678,5	1640	143	144,5	70,5
6BHE(L) 32-8	6"	15	11	1047	711	1758	143	144,5	76,5
6BHE(L) 32-9	6"	15	11	1132,5	711	1843,5	143	144,5	78,5
6BHE(L) 32-10	6"	20	15	1218	776	1994	143	144,5	86,0
6BHE(L) 32-11	6"	20	15	1303,5	776	2079,5	143	144,5	88,0
6BHE(L) 32-12	6"	20	15	1389	776	2165	143	144,5	90,0
6BHE(L) 32-13	6"	25	18,5	1474,5	841,5	2316	143	144,5	99,0
6BHE(L) 32-14	6"	25	18,5	1560	841,5	2401,5	143	144,5	101,5
6BHE(L) 32-15	6"	30	22	1645,5	906,5	2552	143	144,5	109,5
6BHE(L) 32-16	6"	30	22	1730,5	906,5	2637	143	144,5	111,5
6BHE(L) 32-17	6"	30	22	1816	906,5	2722,5	143	144,5	113,5
6BHE(L) 32-18	6"	30	22	1901,5	906,5	2808	143	144,5	115,5
6BHE(L) 32-19	6"	40	30	1987	1036,5	3023,5	143	144,5	132,0
6BHE(L) 32-20	6"	40	30	2072,5	1036,5	3109	143	144,5	134,5
6BHE(L) 32-21	6"	40	30	2157,5	1036,5	3194	143	144,5	136,5
6BHE(L) 32-22	6"	40	30	2243	1036,5	3279,5	143	144,5	138,5
6BHE(L) 32-23	6"	40	30	2328,5	1036,5	3365	143	144,5	140,5
6BHE(L) 32-24	6"	40	30	2414	1036,5	3450,5	143	144,5	142,5
6BHE(L) 32-25	6"	50	37	2499	1421,5	3920,5	143	144,5	199,0
6BHE(L) 32-26	6"	50	37	2584,5	1421,5	4006	143	144,5	201,0
6BHE(L) 32-27	6"	50	37	2670	1421,5	4091,5	143	144,5	203,0
6BHE(L) 32-28	6"	50	37	2755	1421,5	4176,5	143	144,5	205,0
6BHE(L) 32-29	6"	50	37	2840,5	1421,5	4262	143	144,5	207,0
6BHE(L) 32-30	6"	50	37	2926	1421,5	4347,5	143	144,5	209,5
6BHE(L) 32-31	6"	60	45	3011	1574	4585	143	144,5	224,5
6BHE(L) 32-32	6"	60	45	3096,5	1574	4670,5	143	144,5	227,5
6BHE(L) 32-33	6"	60	45	3182	1574	4756	143	144,5	229,5
6BHE(L) 32-34	6"	60	45	3267,5	1574	4841,5	143	144,5	231,5
6BHE(L) 32-35	6"	60	45	3352,5	1574	4926,5	143	144,5	234,0
6BHE(L) 32-36	6"	60	45	3438	1574	5012	145	146,5	237,0
6BHE(L) 32-37	6"	60	45	3523,5	1574	5097,5	145	146,5	239,0
6BHE(L) 32-38	8"	75	55	3709	1204	4913	190,5	190,5	270,5
6BHE(L) 32-39	8"	75	55	3794	1204	4998	190,5	190,5	272,5
6BHE(L) 32-40	8"	75	55	3879,5	1204	5083,5	190,5	190,5	275,0
6BHE(L) 32-41	8"	75	55	3965	1204	5169	190,5	190,5	276,0
6BHE(L) 32-42	8"	75	55	4050,5	1204	5254,5	190,5	190,5	277,0
6BHE(L) 32-43	8"	75	55	4135,5	1204	5339,5	190,5	190,5	278,0

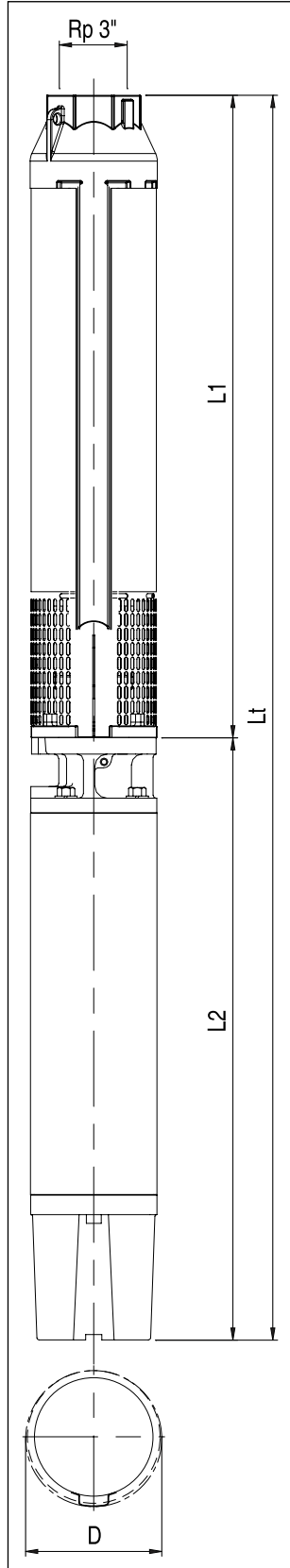
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6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

DIMENSIONS 6BHE(L) 48



DIMENSIONAL TABLE

Model	Motor size	P ₂		L1	L2	Dimensions [mm]			Weight [kg]
		[HP]	[kW]			Lt	D	1 cable	
6BHE(L) 48-2	4"	4	3	593,5	477	1070,5	142,5	-	31,0
6BHE(L) 48-3	4"	5,5	4	707,5	543	1250,5	142,5	-	36,5
6BHE(L) 48-4	4"	7,5	5,5	821,5	652,5	1474	142,5	-	45,5
6BHE(L) 48-5	4"	10	7,5	935,5	730,5	1666	142,5	-	52,5
6BHE(L) 48-2	6"	5,5	4	591,5	581	1172,5	143	144,5	51,0
6BHE(L) 48-3	6"	5,5	4	705,5	581	1286,5	143	144,5	53,5
6BHE(L) 48-4	6"	7,5	5,5	819,5	614,5	1434	143	144,5	60,0
6BHE(L) 48-5	6"	10	7,5	933,5	646	1579,5	143	144,5	66,5
6BHE(L) 48-6	6"	12,5	9,3	1047	678,5	1725,5	143	144,5	71,5
6BHE(L) 48-7	6"	12,5	9,3	1161	678,5	1839,5	143	144,5	74,0
6BHE(L) 48-8	6"	15	11	1275	711	1986	143	144,5	80,0
6BHE(L) 48-9	6"	20	15	1389	776	2165	143	144,5	88,5
6BHE(L) 48-10	6"	20	15	1503	776	2279	143	144,5	91,0
6BHE(L) 48-11	6"	20	15	1617	776	2393	143	144,5	93,5
6BHE(L) 48-12	6"	25	18,5	1730,5	841,5	2572	143	144,5	103,0
6BHE(L) 48-13	6"	25	18,5	1844,5	841,5	2686	143	144,5	105,5
6BHE(L) 48-14	6"	25	18,5	1958,5	841,5	2800	143	144,5	108,5
6BHE(L) 48-15	6"	30	22	2072,5	906,5	2979	143	144,5	117,0
6BHE(L) 48-16	6"	30	22	2186	906,5	3092,5	143	144,5	119,5
6BHE(L) 48-17	6"	30	22	2300	906,5	3206,5	143	144,5	122,0
6BHE(L) 48-18	6"	40	30	2414	1036,5	3450,5	143	144,5	139,5
6BHE(L) 48-19	6"	40	30	2527,5	1036,5	3564	143	144,5	142,0
6BHE(L) 48-20	6"	40	30	2641,5	1036,5	3678	143	144,5	144,5
6BHE(L) 48-21	6"	40	30	2755	1036,5	3791,5	143	144,5	147,0
6BHE(L) 48-22	6"	40	30	2869	1036,5	3905,5	143	144,5	149,5
6BHE(L) 48-23	6"	40	30	2983	1036,5	4019,5	143	144,5	152,5
6BHE(L) 48-24	6"	50	37	3096,5	1421,5	4518	143	144,5	209,0
6BHE(L) 48-25	6"	50	37	3210,5	1421,5	4632	143	144,5	211,5
6BHE(L) 48-26	6"	50	37	3324	1421,5	4745,5	143	144,5	214,0
6BHE(L) 48-27	6"	50	37	3438	1421,5	4859,5	145	146,5	217,5
6BHE(L) 48-28	6"	50	37	3552	1421,5	4973,5	145	146,5	220,0
6BHE(L) 48-29	6"	60	45	3665,5	1574	5239,5	145	146,5	236,5
6BHE(L) 48-30	6"	60	45	3779,5	1574	5353,5	145	146,5	239,0
6BHE(L) 48-31	6"	60	45	3893,5	1574	5467,5	145	146,5	242,0
6BHE(L) 48-32	6"	60	45	4007	1574	5581	145	146,5	244,5
6BHE(L) 48-33	6"	60	45	4121	1574	5695	145	146,5	247,0
6BHE(L) 48-34	8"	75	55	4335	1204	5539	190,5	190,5	279,0
6BHE(L) 48-35	8"	75	55	4449	1204	5653	190,5	190,5	281,5
6BHE(L) 48-36	8"	75	55	4562,5	1204	5766,5	190,5	190,5	284,5
6BHE(L) 48-37	8"	75	55	4676,5	1204	5880,5	190,5	190,5	287,0
6BHE(L) 48-38	8"	75	55	4790,5	1204	5994,5	190,5	190,5	289,5
6BHE(L) 48-39	8"	75	55	4904,5	1204	6108,5	190,5	190,5	292,0
6BHE(L) 48-40	8"	75	55	5018,5	1204	6222,5	190,5	190,5	295,0

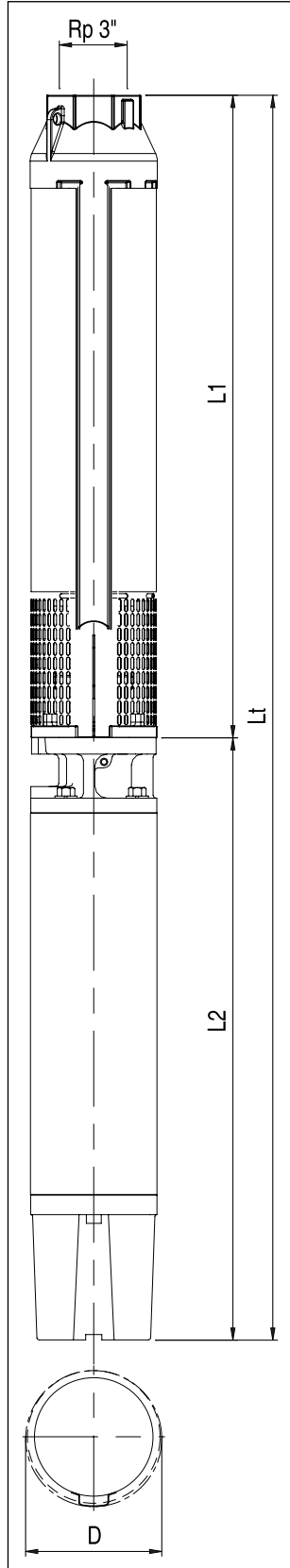
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6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

DIMENSIONS 6BHE(L) 64



DIMENSIONAL TABLE

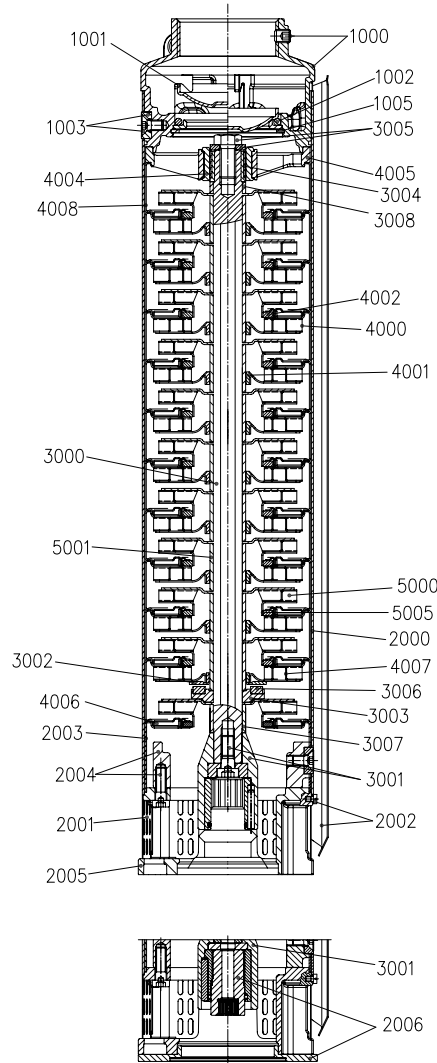
Model	Motor size	P ₂		L1	L2	Dimensions [mm]			Weight [kg]
		[HP]	[kW]			Lt	D		
							1 cable	2 cables	
6BHE(L) 64-2	4"	5	3,7	593,5	520	1113,5	142,5	-	33,0
6BHE(L) 64-3	4"	7,5	5,5	707,5	652,5	1360	142,5	-	43,0
6BHE(L) 64-4	4"	10	7,5	821,5	730,5	1552	142,5	-	49,5
6BHE(L) 64-2	6"	5,5	4	591,5	581	1172,5	143	144,5	51,0
6BHE(L) 64-3	6"	7,5	5,5	705,5	614,5	1320	143	144,5	57,0
6BHE(L) 64-4	6"	10	7,5	819,5	646	1465,5	143	144,5	64,0
6BHE(L) 64-5	6"	12,5	9,3	933,5	678,5	1612	143	144,5	69,0
6BHE(L) 64-6	6"	15	11	1047	711	1758	143	144,5	75,0
6BHE(L) 64-7	6"	20	15	1161	776	1937	143	144,5	83,0
6BHE(L) 64-8	6"	20	15	1275	776	2051	143	144,5	86,0
6BHE(L) 64-9	6"	20	15	1389	776	2165	143	144,5	88,5
6BHE(L) 64-10	6"	25	18,5	1503	841,5	2344,5	143	144,5	98,0
6BHE(L) 64-11	6"	25	18,5	1617	841,5	2458,5	143	144,5	100,5
6BHE(L) 64-12	6"	30	22	1730,5	906,5	2637	143	144,5	109,0
6BHE(L) 64-13	6"	30	22	1844,5	906,5	2751	143	144,5	112,0
6BHE(L) 64-14	6"	40	30	1958,5	1036,5	2995	143	144,5	129,0
6BHE(L) 64-15	6"	40	30	2072,5	1036,5	3109	143	144,5	131,5
6BHE(L) 64-16	6"	40	30	2186	1036,5	3222,5	143	144,5	134,0
6BHE(L) 64-17	6"	40	30	2300	1036,5	3336,5	143	144,5	137,0
6BHE(L) 64-18	6"	50	37	2414	1421,5	3835,5	143	144,5	193,5
6BHE(L) 64-19	6"	50	37	2527,5	1421,5	3949	143	144,5	196,0
6BHE(L) 64-20	6"	50	37	2641,5	1421,5	4063	143	144,5	198,5
6BHE(L) 64-21	6"	50	37	2755	1421,5	4176,5	143	144,5	201,5
6BHE(L) 64-22	6"	60	45	2869	1574	4443	143	144,5	218,0
6BHE(L) 64-23	6"	60	45	2983	1574	4557	143	144,5	220,5
6BHE(L) 64-24	6"	60	45	3096,5	1574	4670,5	143	144,5	223,0
6BHE(L) 64-25	6"	60	45	3210,5	1574	4784,5	143	144,5	225,5
6BHE(L) 64-26	6"	60	45	3324	1574	4898	143	144,5	228,5
6BHE(L) 64-27	8"	75	55	3538	1204	4742	190,5	190,5	261,0
6BHE(L) 64-28	8"	75	55	3652	1204	4856	190,5	190,5	263,5
6BHE(L) 64-29	8"	75	55	3765,5	1204	4969,5	190,5	190,5	266,0
6BHE(L) 64-30	8"	75	55	3879,5	1204	5083,5	190,5	190,5	268,5
6BHE(L) 64-31	8"	75	55	3993,5	1204	5197,5	190,5	190,5	271,5

6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

SECTIONAL VIEW 6BHE(L) 13-20



MATERIALS TABLE

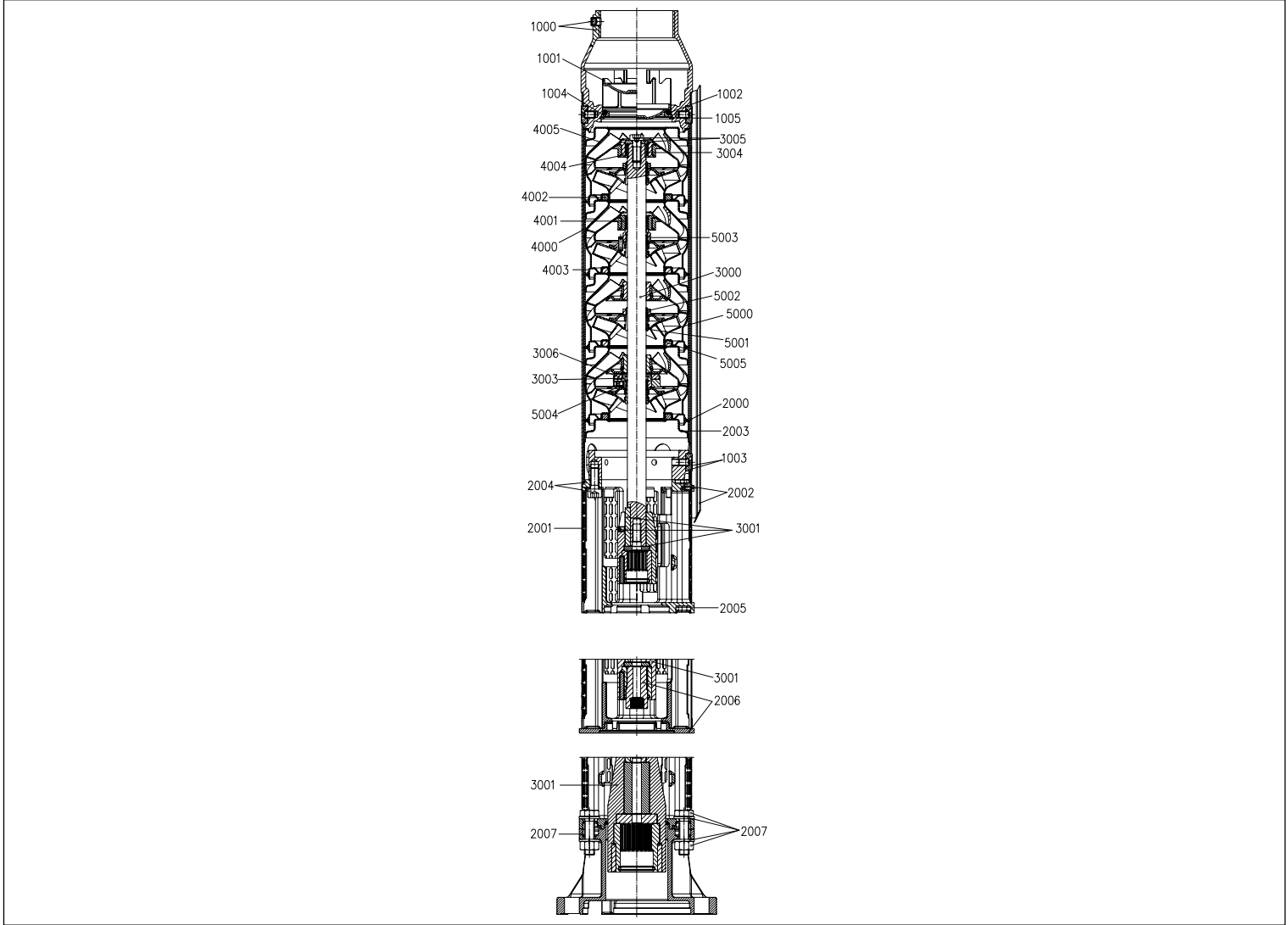
Ref.	Name	Material		Ref.	Name	Material	
		6BHE	6BHEL			6BHE	6BHEL
1000	Discharge head and screw	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)	3004	Upper journal sleeve	EN 1.4460 (AISI 329) with ceramic coating	
1001	Valve	EN 1.4401 (AISI 316)		3005	Screw and washer	EN 1.4401 (AISI 316)	
1002	O-ring	Nitrile rubber (NBR)		3006	Up-thrust ring	PTFE	
1003	Screws and outer case locking nuts	EN 1.4401 (AISI 316)		3007	Lower spacer	EN 1.4401 (AISI 316)	
1004	Valve support	EN 1.4401 (AISI 316)		3008	Upper spacer	EN 1.4401 (AISI 316)	
1005	Seeger ring	EN 1.4401 (AISI 316)		4000	Diffusers	EN 1.4301 (AISI 304) EN 1.4401 (AISI 316)	
2000	Outer case	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)	4001	Secondary bearing bush	Nitrile rubber (NBR)	
2001	Suction strainer	EN 1.4401 (AISI 316)		4002	Floating neck ring	PTFE	
2002	Cable guard and screws	EN 1.4401 (AISI 316)		4004	Bearing bush	Nitrile rubber (NBR)	
2003	Initial spacer	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)	4005	Upper bearing guide	EN 1.4401 (AISI 316)	
2004	Flange and bolts	EN 1.4301 (AISI 304)		4006	First diffuser	EN 1.4401 (AISI 316)	
2005	Motor adapter	EN 1.4301 (AISI 304)		4007	Diffuser with upper up-thrust washer	EN 1.4401 (AISI 316)	
2006	4" motor flange/coupling adapter	-		4008	Last diffuser	EN 1.4401 (AISI 316)	
3000	Pump shaft	EN 1.4057 (AISI 431)	EN 1.4401 (AISI 316)+ EN 1.4460 (AISI 329)	5000	Impeller	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)
3001	Coupling	EN 1.4057 (AISI 431)+ EN 1.4460 (AISI 329)	EN 1.4401 (AISI 316)+ EN 1.4460 (AISI 329)	5001	Secondary journal sleeve	EN 1.4401 (AISI 316)	
3002	Upper up-thrust washer	EN 1.4401 (AISI 316)		5005	Wear ring	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)
3003	Lower up-thrust washer	EN 1.4401 (AISI 316)					

6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

SECTIONAL VIEW 6BHE(L) 32-45-64



MATERIALS TABLE

Ref.	Name	Material		Ref.	Name	Material	
		6BHE	6BHEL			6BHE	6BHEL
1000	Discharge head and screw	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)	3003	Lower up-thrust washer	EN 1.4401 (AISI 316)	
1001	Valve	EN 1.4401 (AISI 316)		3004	Upper journal sleeve	EN 1.4460 (AISI 329) with ceramic coating	
1002	O-ring	Nitrile rubber (NBR)		3005	Screw and washer	EN 1.4401 (AISI 316)	
1003	Screws and outer case locking nuts	EN 1.4401 (AISI 316)		3006	Up-thrust ring	PTFE	
1004	Valve support	EN 1.4401 (AISI 316)		4000	Diffusers	EN 1.4301 (AISI 304) EN 1.4401 (AISI 316)	
1005	Seeger ring	EN 1.4401 (AISI 316)		4001	Secondary bearing bush	Nitrile rubber (NBR)	
2000	Outer case	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)	4002	Floating neck ring	PTFE	
2001	Suction strainer	EN 1.4401 (AISI 316)		4003	Flange clamping neck ring		
2002	Cable guard and screws	EN 1.4401 (AISI 316)		4004	Bearing bush	Nitrile rubber (NBR)	
2003	Initial spacer	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)	4005	Last/intermediate diffuser	EN 1.4401 (AISI 316)	
2004	Flange and bolts	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)	5000	Impeller	EN 1.4301 (AISI 304) EN 1.4401 (AISI 316)	
2005	Motor adapter	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)	5001	Split cone	EN 1.4401 (AISI 316)	
2006	4" motor flange/coupling adapter	-		5002	Split cone nut	EN 1.4401 (AISI 316)	
2007	8" Motor adapter/bolts and washer	EN 1.4057 (AISI 431)		5003	Intermediate split cone nut	EN 1.4401 (AISI 316)	
3000	Pump shaft	EN 1.4057 (AISI 431)	EN 1.4401 (AISI 316)+ EN 1.4460 (AISI 329)	5004	Up-thrust split cone nut	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)
3001	Coupling	EN 1.4057 (AISI 431)+ EN 1.4460 (AISI 329)	EN 1.4401 (AISI 316)+ EN 1.4460 (AISI 329)	5005	Wear ring	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)

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6BHE(L)

6" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

ELECTRIC DATA TABLE 6BHE(L) WITH OIL FILLED MOTOR

Motor size	Motor P ₂		Thrust [N]	P ₁ [kW]	Three phase 380V		Power factor	P ₁ [kW]	Three phase 415V		Power factor
	[HP]	[kW]			I _n [A]	I _Δ [A]			I _n [A]	I _Δ [A]	
4"	3	2,2	1500	3,0	6,0	24,0	0,76	3,39	6,2	24,0	0,76
	3	2,2	5000	3,02	5,6	23,0	0,82	3,42	5,8	23,0	0,82
	4	3	5000	4,05	7,7	30,0	0,80	4,49	7,8	30,0	0,80
	5,5	4	5000	5,24	9,7	45,0	0,82	5,78	9,8	45,0	0,82
	7,5	5,5	5000	7,37	13,5	55,0	0,83	8,23	13,8	55,0	0,83
	10	7,5	4400	9,75	19,0	72,0	0,78	10,93	19,5	72,0	0,78
6"	5,5	4	5000/10000	4,81	8,7	45,0	0,84	5,12	8,9	45,0	0,8
	7,5	5,5	5000/10000	6,97	12,6	64,0	0,84	7,13	12,4	64,0	0,8
	10	7,5	10000	9,62	17,2	78,0	0,85	9,73	16,5	78,0	0,82
	15	11	10000	13,32	24,1	121,0	0,84	13,74	23,9	121,0	0,8
	20	15	10000	17,77	31,4	160,0	0,86	17,93	29,7	160,0	0,84
	25	18,5	10000	23,49	41,5	225,0	0,86	21,57	36,6	225,0	0,82
	30	22	10000	26,32	46,5	250,0	0,86	26,87	44,5	250,0	0,84
	40	30	20000	34,83	63,0	330,0	0,84	36,69	58,0	330,0	0,88

ELECTRIC DATA TABLE 6BHE(L) WITH WATER FILLED MOTOR

Motor size	Motor P ₂		Thrust [N]	P ₁ [kW]	Three phase 380V		Power factor	P ₁ [kW]	Three phase 415V		Power factor
	[HP]	[kW]			I _n [A]	I _Δ [A]			I _n [A]	I _Δ [A]	
4"	3	2,2	4000	2,91	5,4	28,3	0,82	3,00	5,8	30,9	0,72
	4	3	4000	3,99	7,4	39,9	0,82	4,09	7,9	43,6	0,72
	5,5	4	6500	5,24	9,7	54,1	0,82	5,38	10,4	59,1	0,72
	7,5	5,5	6500	7,05	12,6	73,3	0,85	7,08	12,8	80,1	0,77
	10	7,5	6500	9,74	17,2	94,3	0,86	9,74	17,6	103,0	0,77
6"	5,5	4	15500	5,31	9,5	42,0	0,85	5,21	9,3	46,0	0,78
	7,5	5,5	15500	7,16	12,8	60,0	0,85	7,18	12,8	66,0	0,78
	10	7,5	15500	9,33	16,3	83,0	0,87	9,43	16,2	91,0	0,81
	15	11	15500	13,74	24,0	126,0	0,87	14,03	24,1	136,0	0,81
	20	15	15500	18,11	32,0	164,0	0,86	18,49	31,0	179,0	0,83
	25	18,5	15500	22,9	40,0	220,0	0,87	23,0	38,5	240,0	0,83
	30	22	15500	27,22	47,0	255,0	0,88	27,17	45,0	278,0	0,84
	40	30	27500	35,86	64,1	373,0	0,85	37,55	64,5	407,0	0,81
	50	37	27500	45,87	80,1	387,0	0,87	45,92	77,9	423,0	0,82
8"	75	55	45000	65,02	111,0	819,0	0,89	65,21	108,0	895,0	0,84

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8BHE(L)

8" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316



8" borehole centrifugal pump with semi-axial discharge in AISI 304 (8BHE) and AISI 316 stainless steel (8BHEL) for deep wells.

This range of borehole pumps has been developed specifically for high flow rate pumping requirements.

APPLICATIONS

- Water provisioning from deep wells
- Water supply and pressure boosting
- Irrigation systems
- Treating waters, filtering and reverse osmosis
- Industrial cooling systems
- Fountains
- Fire-fighting systems

TECHNICAL DETAILS

- Corrosion-proof
- Strong
- Reliable
- Compact
- Also suitable for horizontal functioning

PUMP TECHNICAL DATA

- Maximum working pressure: 7 bar
- Maximum immersion:
 - 350 m (with motor in water bath)
 - 150 m (with motor in bath of liquid refrigerant)
- Maximum sand content: 100 gr/m³
- Temperature of the liquid: from -5°C to +60°C
- Motor support for coupling to 6" motors
- Rp 5" discharge connection

The pump and the motor are supplied separately.

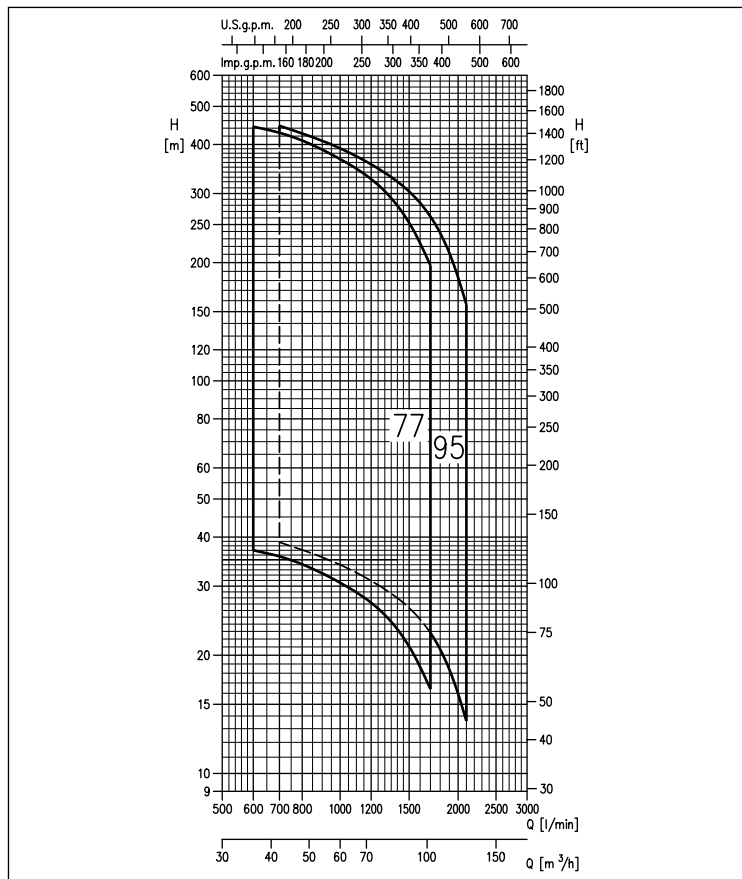
MOTOR TECHNICAL DATA

- 2 poles motor in bath of liquid refrigerant (OY) or in water bath (WY),
- Maximum start per hour: 30 (OY) - 20 (WY)
- Protection degree IP58 (OY), IP68 (WY)
- Class of insulation F (6" OY version)
 - (8" WY version)
 - F (6" WY version)
- 380-415V(±10%) 50 Hz three phase voltage (OY)
- 380-415V(-10%+6%) 50 Hz three phase voltage (WY)
- Motor joint and coupling flange in compliance with NEMA Standards
- For cables dimensioning please see page 58 or our Data Book on the web site www.ebara-europe.com

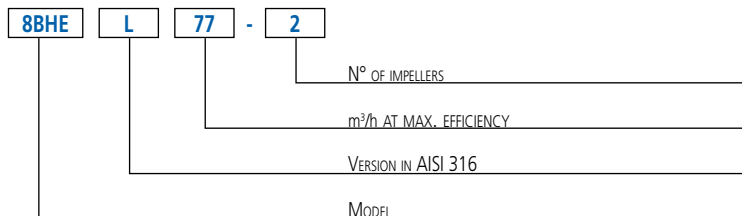
MATERIALS

- Discharge casing, stages, bracket in AISI 304 (8BHE) and AISI 316 (8BHEL)
- Shaft in AISI 329
- Impeller in AISI 316

PERFORMANCE RANGE (according to ISO 9906 Attachment A)



IDENTIFICATION CODE





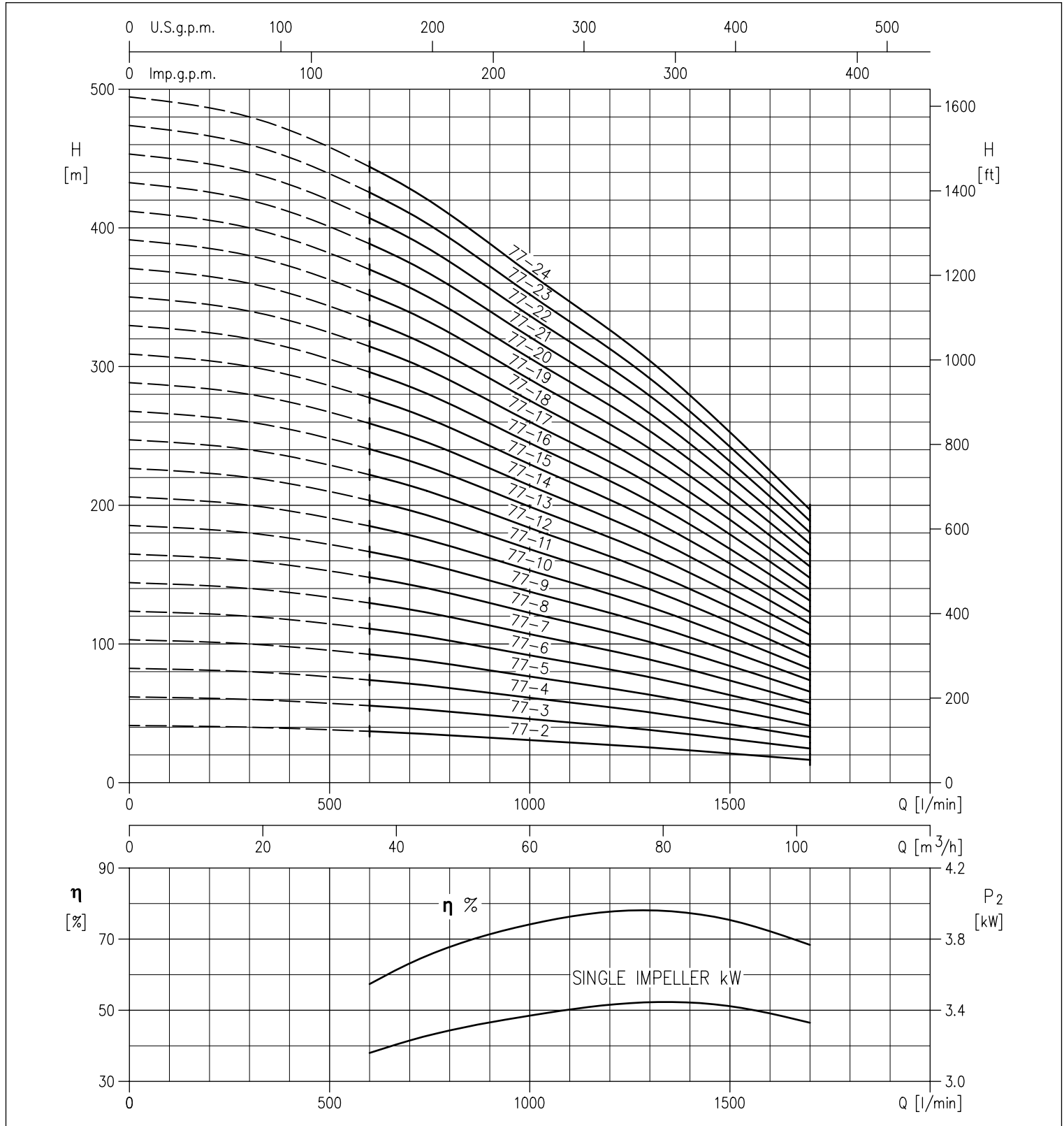
8BHE(L)

8" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE CURVES 8BHE(L) 77 series

(according to ISO 9906 Attachment A)



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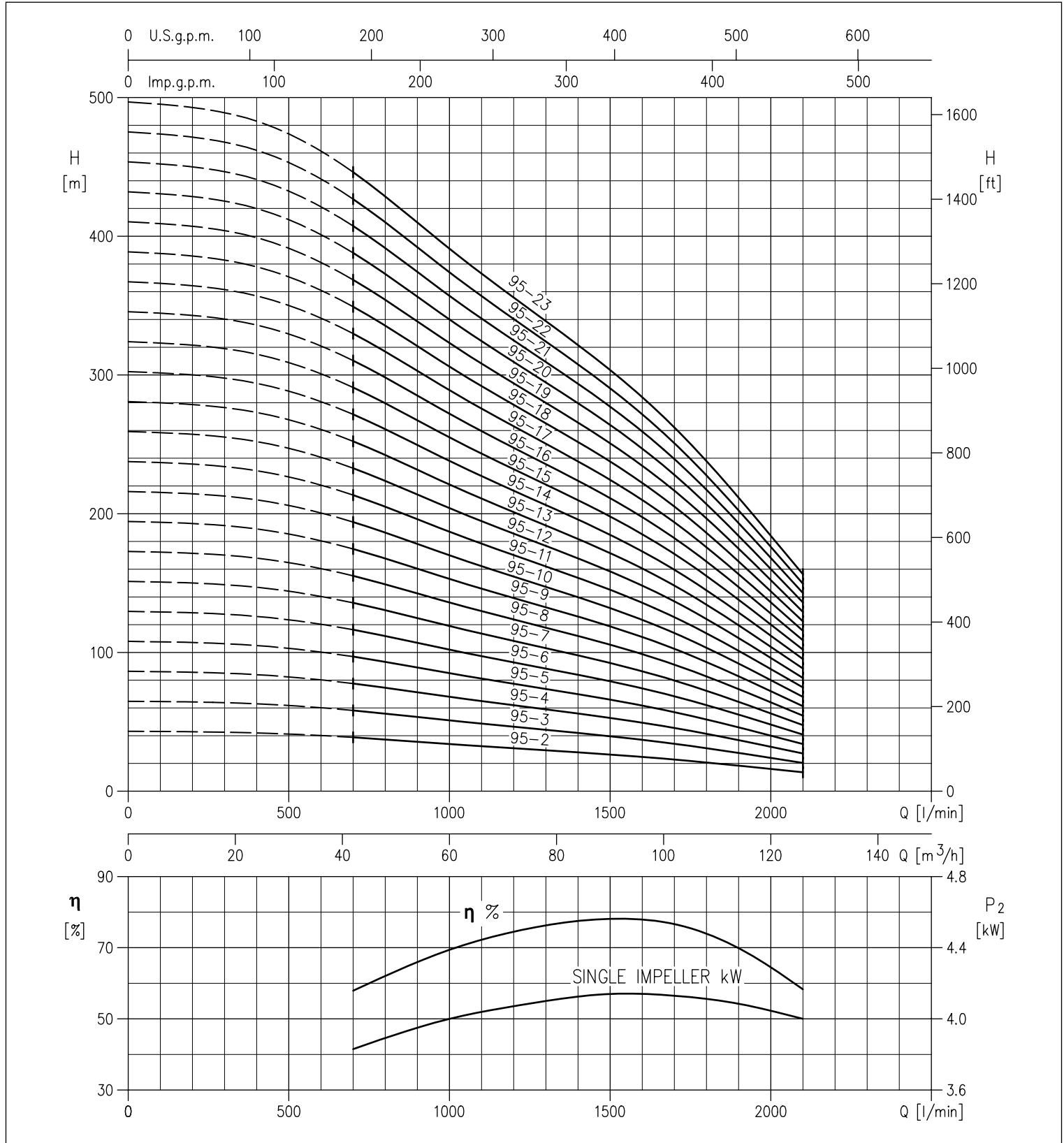
8BHE(L)

8" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE CURVES 8BHE(L) 95 series

(according to ISO 9906 Attachment A)



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8BHE(L)

8" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

PERFORMANCE TABLE

Model	Motor size	P ₂		Q=Flow rate								
		[HP]	[kW]	l/min	600	700	1000	1250	1500	1700	1900	2100
				m ³ /h	36	42	60	75	90	102	114	126
				H=Head [m]								
86BHE(L) 77-2	6"	10	7,5	37,0	35,7	30,6	26,3	21,1	16,4	-	-	-
86BHE(L) 77-3	6"	15	11	55,5	53,5	46,0	39,5	31,6	24,6	-	-	-
86BHE(L) 77-4	6"	20	15	74,0	71,5	61,0	52,5	42,0	32,8	-	-	-
86BHE(L) 77-5	6"	25	18,5	92,5	89,5	76,5	66,0	52,5	41,0	-	-	-
86BHE(L) 77-6	6"	30	22	111,0	107,0	92,0	79,0	63,0	49,0	-	-	-
86BHE(L) 77-7	6"	40	30	130,0	125,0	107,0	92,0	73,5	57,5	-	-	-
86BHE(L) 77-8	6"	40	30	148,0	143,0	122,0	105,0	84,0	65,5	-	-	-
86BHE(L) 77-9	6"	40	30	167,0	161,0	138,0	118,0	95,0	74,0	-	-	-
86BHE(L) 77-10	6"	50	37	185,0	179,0	153,0	132,0	105,0	82,0	-	-	-
86BHE(L) 77-11	6"	50	37	204,0	196,0	168,0	145,0	116,0	90,0	-	-	-
8BHE(L) 77-12	8"	60	45	222,0	214,0	184,0	158,0	126,0	98,5	-	-	-
8BHE(L) 77-13	8"	75	55	241,0	232,0	199,0	171,0	137,0	107,0	-	-	-
8BHE(L) 77-14	8"	75	55	259,0	250,0	214,0	184,0	147,0	115,0	-	-	-
8BHE(L) 77-15	8"	75	55	278,0	268,0	230,0	197,0	158,0	123,0	-	-	-
8BHE(L) 77-16	8"	100	75	296,0	286,0	245,0	210,0	168,0	131,0	-	-	-
8BHE(L) 77-17	8"	100	75	315,0	303,0	260,0	224,0	179,0	139,0	-	-	-
8BHE(L) 77-18	8"	100	75	333,0	321,0	275,0	237,0	190,0	148,0	-	-	-
8BHE(L) 77-19	8"	100	75	352,0	339,0	291,0	250,0	200,0	156,0	-	-	-
8BHE(L) 77-20	8"	100	75	370,0	357,0	306,0	263,0	211,0	164,0	-	-	-
8BHE(L) 77-21	8"	100	75	389,0	375,0	321,0	276,0	221,0	172,0	-	-	-
8BHE(L) 77-22	8"	125	93	407,0	393,0	337,0	289,0	232,0	180,0	-	-	-
8BHE(L) 77-23	8"	125	93	426,0	411,0	352,0	302,0	242,0	189,0	-	-	-
8BHE(L) 77-24	8"	125	93	444,0	428,0	367,0	316,0	253,0	197,0	-	-	-
86BHE(L) 95-2	6"	12,5	9,2	-	38,8	34,0	30,2	26,4	22,8	18,4	13,6	-
86BHE(L) 95-3	6"	20	15	-	58,0	51,0	45,5	39,6	34,2	27,6	20,4	-
86BHE(L) 95-4	6"	25	18,5	-	77,5	68,0	60,5	53,0	45,5	36,8	27,2	-
86BHE(L) 95-5	6"	30	22	-	97,0	85,0	75,5	66,0	57,0	46,0	34,0	-
86BHE(L) 95-6	6"	40	30	-	116,0	102,0	90,5	79,0	68,5	55,0	41,0	-
86BHE(L) 95-7	6"	40	30	-	136,0	119,0	106,0	92,5	80,0	64,5	47,5	-
86BHE(L) 95-8	6"	50	37	-	155,0	136,0	121,0	106,0	91,0	73,5	54,5	-
86BHE(L) 95-9	6"	50	37	-	175,0	153,0	136,0	119,0	103,0	83,0	61,0	-
8BHE(L) 95-10	8"	60	45	-	194,0	170,0	151,0	132,0	114,0	92,0	68,0	-
8BHE(L) 95-11	8"	75	55	-	213,0	187,0	166,0	145,0	125,0	101,0	75,0	-
8BHE(L) 95-12	8"	75	55	-	233,0	204,0	181,0	158,0	137,0	110,0	81,5	-
8BHE(L) 95-13	8"	75	55	-	252,0	221,0	196,0	172,0	148,0	120,0	88,5	-
8BHE(L) 95-14	8"	100	75	-	272,0	238,0	211,0	185,0	160,0	129,0	95,0	-
8BHE(L) 95-15	8"	100	75	-	291,0	255,0	227,0	198,0	171,0	138,0	102,0	-
8BHE(L) 95-16	8"	100	75	-	310,4	272,0	242,0	211,0	182,0	147,0	109,0	-
8BHE(L) 95-17	8"	100	75	-	330,0	289,0	257,0	224,0	194,0	156,0	116,0	-
8BHE(L) 95-18	8"	125	93	-	349,0	306,0	272,0	238,0	205,0	166,0	122,0	-
8BHE(L) 95-19	8"	125	93	-	369,0	323,0	287,0	251,0	217,0	175,0	129,0	-
8BHE(L) 95-20	8"	125	93	-	388,0	340,0	302,0	264,0	228,0	184,0	136,0	-
8BHE(L) 95-21	8"	125	93	-	407,0	357,0	317,0	277,0	239,0	193,0	143,0	-
8BHE(L) 95-22	8"	150	110	-	427,0	374,0	332,0	290,0	251,0	202,0	150,0	-
8BHE(L) 95-23	8"	150	110	-	446,0	391,0	347,0	304,0	262,0	212,0	156,0	-

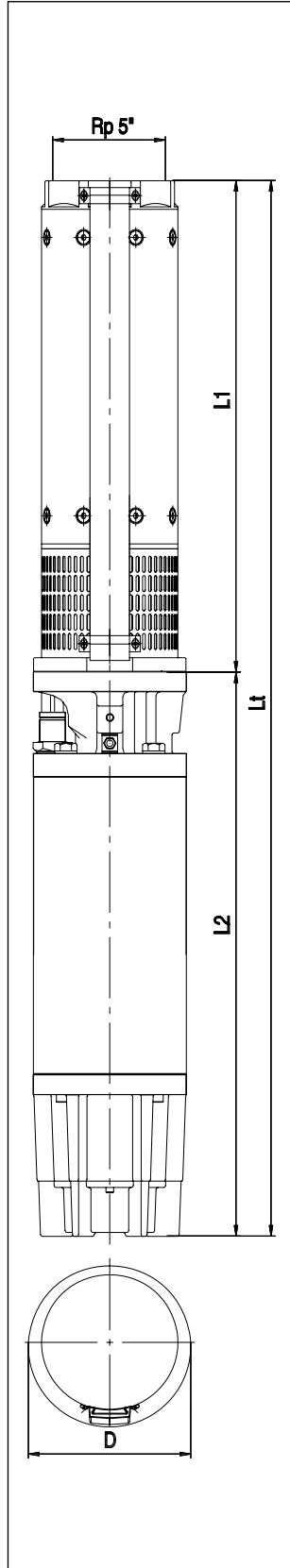
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8BHE(L)

8" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

DIMENSIONS 8BHE(L)



DIMENSIONAL TABLE

Model	Motor size	P ₂		L1	L2	Dimensions [mm]		Weight [kg]	
		[HP]	[kW]			Lt	D		
86BHE(L) 77-2	6"	10	7,5	644	646	1290	188	194	77,0
86BHE(L) 77-3	6"	15	11	770	711	1481	188	194	87,0
86BHE(L) 77-4	6"	20	15	896	776	1672	188	194	57,0
86BHE(L) 77-5	6"	25	18,5	1022	841,5	1863,5	188	194	109,0
86BHE(L) 77-6	6"	30	22	1148	906,5	2054,5	188	194	120,0
86BHE(L) 77-7	6"	40	30	1274	1036,5	2310,5	188	194	140,0
86BHE(L) 77-8	6"	40	30	1400	1036,5	2436,5	188	194	145,0
86BHE(L) 77-9	6"	40	30	1526	1036,5	2562,5	188	194	150,0
86BHE(L) 77-10	6"	50	37	1652	1405	3057	188	194	206,0
86BHE(L) 77-11	6"	50	37	1778	1405	3183	188	194	211,0
8BHE(L) 77-12	8"	60	45	1909	1077	2986	200	202	254,0
8BHE(L) 77-13	8"	75	55	2035	1394	3429	200	202	259,0
8BHE(L) 77-14	8"	75	55	2161	1394	3555	200	202	294,0
8BHE(L) 77-15	8"	75	55	2287	1394	3681	200	202	299,0
8BHE(L) 77-16	8"	100	75	2413	1496	3909	200	202	342,0
8BHE(L) 77-17	8"	100	75	2539	1496	4035	200	202	347,0
8BHE(L) 77-18	8"	100	75	2665	1496	4161	200	202	352,0
8BHE(L) 77-19	8"	100	75	2791	1496	4287	200	202	357,0
8BHE(L) 77-20	8"	100	75	2917	1496	4413	200	202	361,0
8BHE(L) 77-21	8"	100	75	3043	1496	4539	200	202	366,0
8BHE(L) 77-22	8"	125	93	3169	1748	4917	200	202	449,0
8BHE(L) 77-23	8"	125	93	3295	1748	5043	200	202	454,0
8BHE(L) 77-24	8"	125	93	3421	1748	5169	200	202	459,0
86BHE(L) 95-2	6"	12,5	9,2	644	678,5	1322,5	188	194	79,0
86BHE(L) 95-3	6"	20	15	770	776	1546	188	194	93,0
86BHE(L) 95-4	6"	25	18,5	896	841,5	1737,5	188	194	105,0
86BHE(L) 95-5	6"	30	22	1022	906,5	1928,5	188	194	115,5
86BHE(L) 95-6	6"	40	30	1148	1036,5	2184,5	188	194	135,0
86BHE(L) 95-7	6"	40	30	1274	1036,5	2310,5	188	194	140,0
86BHE(L) 95-8	6"	50	37	1400	1405	2805	188	194	196,0
86BHE(L) 95-9	6"	50	37	1526	1405	2931	188	194	201,0
8BHE(L) 95-10	8"	60	45	1657	1077	2734	200	202	244,0
8BHE(L) 95-11	8"	75	55	1783	1394	3177	200	202	279,0
8BHE(L) 95-12	8"	75	55	1909	1394	3303	200	202	284,0
8BHE(L) 95-13	8"	75	55	2035	1394	3429	200	202	289,0
8BHE(L) 95-14	8"	100	75	2161	1496	3657	200	202	332,0
8BHE(L) 95-15	8"	100	75	2287	1496	3783	200	202	337,0
8BHE(L) 95-16	8"	100	75	2413	1496	3909	200	202	342,0
8BHE(L) 95-17	8"	100	75	2539	1496	4035	200	202	346,5
8BHE(L) 95-18	8"	125	93	2665	1748	4413	200	202	429,5
8BHE(L) 95-19	8"	125	93	2791	1748	4539	200	202	434,5
8BHE(L) 95-20	8"	125	93	2917	1748	4665	200	202	439,0
8BHE(L) 95-21	8"	125	93	3043	1748	4791	200	202	444,0
8BHE(L) 95-22	8"	150	110	3169	1976	5145	200	202	512,0
8BHE(L) 95-23	8"	150	110	3295	1976	5271	200	202	517,0

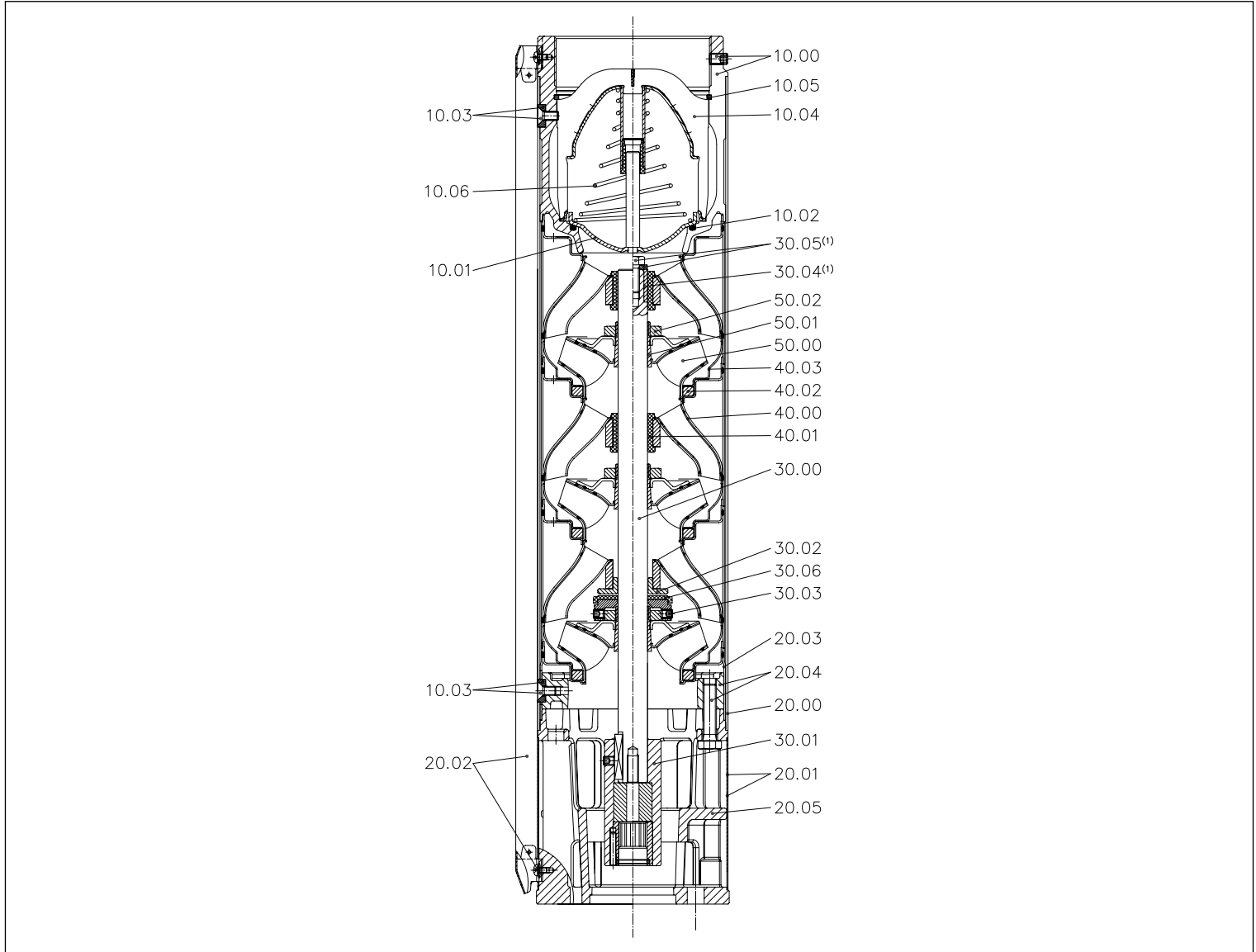
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8BHE(L)

8" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

SECTIONAL VIEW



MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
10.00	Discharge head 5"	EN 1.4301 (AISI 304) EN 1.4401 (AISI 316)	30.01	Motor coupling	EN 1.4057 (AISI 431)+ EN 1.4401 (AISI 316)+ EN 1.4460 (AISI 329) EN 1.4460 (AISI 329)
10.01	Valve	EN 1.4401 (AISI 316)	30.02	Upper Up-thrust washer	EN 1.4460 (AISI 329)
10.02	O-Ring	Nitrile rubber (NBR)	30.03	Lower Up-thrust washer	EN 1.4460 (AISI 329)
10.03	Screw and inserts locking outer case	EN 1.4401 (AISI 316)	30.04	Upper shaft sleeve (1)	Stainless steel with ceramic casting
10.04	Valve seat	EN 1.4401 (AISI 316)	30.05	Screw and washer (1)	EN 1.4401 (AISI 316)
10.05	Seeger Ring	EN 1.4401 (AISI 316)	30.06	Up-thrust disc	PTFE
10.06	Spring	EN 1.4401 (AISI 316)	40.00	Stage	EN 1.4301 (AISI 304) EN 1.4401 (AISI 316)
20.00	Outer casing	EN 1.4301 (AISI 304) EN 1.4401 (AISI 316)	40.01	Intermediate bearing bush	Nitrile rubber (NBR)
20.01	Strainer	EN 1.4401 (AISI 316)	40.02	Liner ring	PTFE
20.02	Cable cover	EN 1.4401 (AISI 316)	40.03	Flange	EN 1.4401 (AISI 316)
20.03	Spacer	EN 1.4401 (AISI 316)	50.00	Impeller	EN 1.4401 (AISI 316)
20.04	Flange and bolt	EN 1.4301 (AISI 304) EN 1.4401 (AISI 316)	50.01	Split cone	EN 1.4401 (AISI 316)
20.05	Motor bracket	EN 1.4301 (AISI 304) EN 1.4401 (AISI 316)	50.02	Split cone nut	EN 1.4401 (AISI 316)
30.00	Shaft	EN 1.4460 (AISI 329)			

[1]= Only for models with more than 8 stages

8BHE(L)

8" BOREHOLE CENTRIFUGAL PUMPS

in AISI 304 and AISI 316

ELECTRIC DATA TABLE 8BHE(L) WITH OIL FILLED MOTOR

Motor size	Motor P ₂		Thrust [N]	P ₁ [kW]	Three phase 380V		Power factor	P ₁ [kW]	Three phase 415V		Power factor
	[HP]	[kW]			I _n [A]	I _A [A]			I _n [A]	I _A [A]	
6"	10	7,5	10000	9,62	17,2	78,0	0,85	9,73	16,5	78,0	0,82
	15	11	10000	13,32	24,1	121,0	0,84	13,74	23,9	121,0	0,8
	20	15	10000	17,77	31,4	160,0	0,86	17,93	29,7	160,0	0,84
	25	18,5	10000	23,49	41,5	225,0	0,86	21,57	36,6	225,0	0,82
	30	22	10000	26,32	46,5	250,0	0,86	26,87	44,5	250,0	0,84
	40	30	20000	34,83	63,0	330,0	0,84	36,69	58,0	330,0	0,88

ELECTRIC DATA TABLE 8BHE(L) WITH WATER FILLED MOTOR

Motor size	Motor P ₂		Thrust [N]	P ₁ [kW]	Three phase 380V		Power factor	P ₁ [kW]	Three phase 415V		Power factor
	[HP]	[kW]			I _n [A]	I _A [A]			I _n [A]	I _A [A]	
6"	10	7,5	15500	9,33	16,3	83,0	0,87	9,43	16,2	91,0	0,81
	15	11	15500	13,74	24,0	126,0	0,87	14,03	24,1	136,0	0,81
	20	15	15500	18,11	32,0	164,0	0,86	18,49	31,0	179,0	0,83
	25	18,5	15500	22,9	40,0	220,0	0,87	23,0	38,5	240,0	0,83
	30	22	15500	27,22	47,0	255,0	0,88	27,17	45,0	278,0	0,84
	40	30	27500	35,86	64,1	373,0	0,85	37,55	64,5	407,0	0,81
	50	37	27500	45,87	80,1	387,0	0,87	45,92	77,9	423,0	0,82
8"	60	45	45000	52,13	89,0	612,0	0,89	52,46	89,0	669,0	0,82
	75	55	45000	65,02	111,0	819,0	0,89	65,21	108,0	895,0	0,84
	100	75	45000	86,7	148,0	1099,0	0,89	87,55	145,0	1200,0	0,84
	125	93	45000	109,81	194,0	1265,0	0,86	109,83	191,0	1382,0	0,8
	150	110	45000	129,41	226,0	1517,0	0,87	129,84	223,0	1657,0	0,81

CABLES DIMENSIONING FOR 3" MOTORS (OIL FILLED)

CABLE SELECTION

example: Motor 0,75 kW - 230V single phase - cable length 70 m 4x2,5 mm²

Motor	HP	kW	Type of cable								
			3x1,5	3x2,5	3x4	3x6	4x1	4x1,5	4x2,5	4x4	4x6
3" type Single phase 230V - 50 Hz	0,5	0,37	-	-	-	-	50	75	125	-	-
	0,75	0,55	-	-	-	-	38	57	95	152	-
	0,8	0,6	70	120	180	270	-	-	-	-	-
	1	0,75	-	-	-	-	30	45	75	120	174
	1,2	0,9	60	85	125	190	-	-	-	-	-
3" type Three phase 400V - 50 Hz	2,0	1,5	55	75	90	140	-	-	-	-	-
	0,5	0,37	-	-	-	-	240	-	-	-	-
	0,75	0,55	-	-	-	-	164	246	-	-	-
	1	0,75	-	-	-	-	133	200	233	-	-
	1,5	1,1	-	-	-	-	97	146	244	390	-

CABLES DIMENSIONING FOR 4" - 6" MOTORS (OIL-WATER FILLED) - 6" (OIL FILLED)

CABLE SELECTION

example: Motor 1,1 kW - 230V single phase - cable length 50 m 4x2,5 mm²

Motor	HP	kW	Type of cable								
			4x1	4x1,5	4x2,5	4x4	4x6	4x10	4x16	4x25	4x35
4" type Single phase 230V - 50 Hz	0,5	0,37	50	75	128	-	-	-	-	-	-
	0,75	0,55	38	57	95	152	-	-	-	-	-
	1	0,75	30	45	75	120	174	-	-	-	-
	1,5	1,1	22	33	53	85	127	210	-	-	-
	2	1,5	-	23	38	63	92	154	246	-	-
4" type Three phase 400V - 50 Hz	3	2,2	-	-	28	45	67	112	180	-	-
	0,5	0,37	240	-	-	-	-	-	-	-	-
	0,75	0,55	164	246	-	-	-	-	-	-	-
	1	0,75	133	200	333	-	-	-	-	-	-
	1,5	1,1	97	146	244	390	-	-	-	-	-
	2	1,5	72	109	180	290	435	-	-	-	-
	3	2,2	51	78	130	207	310	516	-	-	-
	4	3	41	62	104	167	250	416	-	-	-
	5,5	4	31	46	77	124	186	310	496	-	-
6" type Three phase 400V - 50 Hz	7,5	5,5	-	33	56	90	135	225	360	-	-
	10	7,5	-	-	-	66	100	165	270	-	-
	5,5	4	-	-	110	160	250	400	-	-	-
	7,5	5,5	-	-	68	108	161	265	415	-	-
	10	7,5	-	-	53	84	126	207	325	-	-
	12,5	9,2	-	-	44	70	104	171	267	413	-
	15	11	-	-	-	59	87	144	223	347	548
	20	15	-	-	-	-	65	107	167	258	350
25	18,5	-	-	-	-	-	87	136	210	295	
30	22	-	-	-	-	-	75	117	181	246	
40	30	-	-	-	-	-	-	110	180	235	

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CABLES DIMENSIONING FOR 6" - 8" MOTORS (WATER FILLED)

CABLE SELECTION

example: Motor 7,5 kW - 400V three phase - cable length 90 m 4x4 mm²

Motor	HP	kW	Type of cable																	
			4x1	4x1,5	4x2,5	4x4	4x6	4x10	4x16	4x25	4x35	4x50	4x70	4x95	4x120	4x150	4x185	4x240	4x300	4x400
6" type Three phase 400V - 50Hz	5,5	4	40	60	100	161	242	404	646	-	-	-	-	-	-	-	-	-	-	-
	7,5	5,5	-	45	75	120	180	300	481	-	-	-	-	-	-	-	-	-	-	-
	10	7,5	-	-	60	96	138	228	354	-	-	-	-	-	-	-	-	-	-	-
	12,5	9,2	-	-	48	77	120	192	306	468	-	-	-	-	-	-	-	-	-	-
	15	11	-	-	-	66	102	162	258	396	525	-	-	-	-	-	-	-	-	-
	20	15	-	-	-	-	72	126	192	294	402	546	-	-	-	-	-	-	-	-
	25	18,5	-	-	-	-	60	102	156	240	330	438	576	-	-	-	-	-	-	-
	30	22	-	-	-	-	-	84	132	204	276	372	489	-	-	-	-	-	-	-
	40	30	-	-	-	-	-	-	102	156	210	288	380	490	580	-	-	-	-	-
50	37	-	-	-	-	-	-	-	123	169	230	310	390	460	550	890	-	-	-	
8" type Three phase 400V - 50Hz	60	45	-	-	-	-	-	-	-	105	142	200	255	330	387	453	516	800	-	-
	75	55	-	-	-	-	-	-	-	-	117	164	229	270	324	380	435	510	573	-
	100	75	-	-	-	-	-	-	-	-	-	-	160	205	240	290	324	381	429	600
	125	93	-	-	-	-	-	-	-	-	-	-	-	160	190	225	255	300	330	380
	150	110	-	-	-	-	-	-	-	-	-	-	-	-	160	180	183	240	270	400

ELECTRIC CONTROL PANELS FOR SUBMERSED ELECTRIC PUMPS



The protection and control board for a submersed single phase electric pump.

The control panel is composed of a box in ABS with IP54 protection rating and allows to control an electric motor with single phase power supply.

Thanks to the presence of a circuit breaker protection, it ensures the interruption of motor functioning in the case of overcurrents.

TECHNICAL DETAILS

- Controlling the electric pump via the luminous bi-polar switch
- Motor protection via thermal cut-out with manual reset
- Housing inside the capacitor for motor start-up.

ELECTRIC DATA TABLE

Model Single phase 230V +10-15% - 50Hz	[HP]	[kW]	[A] max	Built in capacitor	
				[μF]	[V]
Q 0,50 M 16	0,5	0,37	4	16	450
Q 0,50 M 20	0,5	0,37	4	20	450
Q 0,75 M 20	0,75	0,55	6	20	450
Q 0,75 M 25	0,75	0,55	6	25	450
Q 1,00 M 35	1	0,75	7	35	450
Q 1,50 M 40	1,5	1,1	9	40	450
Q 2,00 M 50	2	1,5	12	50	450
Q 2,00 M 60	2	1,5	12	60	450
Q 3,00 M 70	3	2,2	18	70	450
Q 3,00 M 80	3	2,2	18	80	450

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1EPBH

ELECTRIC CONTROL PANELS FOR SUBMERSED AND SURFACE ELECTRIC PUMPS



Protection and control panels for a submersed or surface electric pump with direct start-up. The control panel can manually and automatically control an electric pump.

In the automatic function, the electric pump is controlled by the pressure switch, the float or signals that come from the electric probes or from the floats.

TECHNICAL DETAILS

- Protection against dry running (control using an electric probe) with automatic reset and water return
- Reservoir filling level control with two electric probes or floats
- Reservoir emptying level control with two electric probes or floats
- Cosφ module, optional for controlling against dry running without the use of the electric probes
- Motor protection against overloads and an automatic reset phase for three interventions, manual at the fourth
- Pump protection against excessive start-ups
- Overload and board protection, against short circuits, with fuses
- Remote displaying with NC-NO potential free contact of the present fault or alarm float
- Clamps for connecting any single phase motor starter capacitor
- Clamps for connecting a pressure switch
- Clamps for connecting an alarm float

TECHNICAL DATA

- 230V +10-15% 50/60 Hz power supply (single phase)
400V +10-15% 50/60 Hz (three phase + N)
- Temperature of the liquid: from -10°C to +40°C
- IP55 Protection rating
- Reference Standards: EN 60204-1, EN 60439-1, EN 61000-6-2, EN 61000-6-4 (for domestic and light industry application)

ELECTRIC DATA TABLE 4" SINGLE PHASE BOREHOLE MOTORS

Model Single phase 230V ±10-15% - 50Hz	[HP]	[kW]	[A] max		Recommended capacitor		
			[OY]	[WY]	[OY]	[WY]	[V]
1EPBH 0,37 M	0,5	0,37	3,6	4	20	16	450
1EPBH 0,55 M	0,75	0,55	4,5	5,9	25	20	450
1EPBH 0,75 M	1	0,75	6	7,3	35	35	450
1EPBH 1,1 M	1,5	1,1	8,2	8,6	40	40	450
1EPBH 1,5 M	2	1,5	11	10,4	60	50	450
1EPBH 2,2 M	3	2,2	14,8	15,3	80	70	450

Control panels supplied without capacitor

ELECTRIC DATA TABLE 4" THREE PHASE BOREHOLE MOTORS

Model Three phase 400V ±10-15% - 50Hz	[HP]	[kW]	[A] max	
			[OY]	[WY]
1EPBH 0,37÷1,1 T	0,5÷1,5	0,37÷1,1	1,6÷3,4	1,03÷2,8
1EPBH 1,5 T	2	1,5	4,6	3,9
1EPBH 2,2 T	3	2,2	6,2	5,5
1EPBH 3 T	4	3	8	7,5
1EPBH 4 T	5,5	4	10,2	9,9
1EPBH 5,5 T	7,5	5,5	14,4	12,6
1EPBH 7,5 T	10	7,5	19,5	17,1



1EPBH

ELECTRIC CONTROL PANELS FOR SUBMERSED AND SURFACE ELECTRIC PUMPS

ELECTRIC DATA TABLE 6" THREE PHASE BOREHOLE MOTORS

Model Three phase 400V +10-15% - 50Hz	[HP]	[kW]	[OY]	[A] max [WY]
1EPBH 4 T	5,5	4	8,9	9,3
1EPBH 5,5 T	7,5	5,5	12,4	12,5
1EPBH 7,5 T	10	7,5	17,2	16
1EPBH 9,2÷11 T AVSE 2E*	12,5÷15	9,2÷11	22÷23,9	20,7÷23,3
1EPBH 15 T AVSE 2E*	20	15	31,4	31,3
1EPBH 18,5 T AVSE 2E*	25	18,5	41,5	38,5
1EPBH 22 T AVSE 2E*	30	22	46,5	45,3
1EPBH 30 T AVSE 2E*	40	30	63	63,5
1EPBH 37 T AVSE 2E*	50	37	79,2	73
1EPBH 45 T AVSE 2E*	60	45	-	89,5

*= Start with reactance -2 isolators

ELECTRIC DATA TABLE 8" THREE PHASE BOREHOLE MOTORS

Model Three phase 400V +10-15% - 50Hz	[HP]	[kW]	[A] max [WY]
1EPBH 30 T AVSE 2E*	40	30	61
1EPBH 37 T AVSE 2E*	50	37	74
1EPBH 45 T AVSE 2E*	60	45	89
1EPBH 55 T AVSE 2E*	75	55	108
1EPBH 75 T AVSE 2E*	100	75	145
1EPBH 93 T AVSE 2E*	125	93	190
1EPBH 110 T AVSE 2E*	150	110	222

*= Start with reactance -2 isolators

HERTZ ONE - TWIN

ELECTRIC CONTROL PANEL WITH INVERTER



HERTZ ONE



HERTZ TWIN

The HERTZ ONE control panel is an automatic control and protection system for one (HERTZ ONE) or two (HERTZ TWIN) electric centrifugal pumps equipped with three phase induction motors.

The control panel power supply can be three phase or single phase.

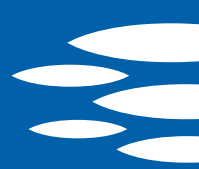
The HERTZ ONE and HERTZ TWIN control panels include a pump control software and allow regulation of motor speed via an electronic frequency changer (INVERTER) that powers the pump motor. On varying the rotation speed, the pump performance varies in terms of flow rate and head, allowing optimal use in every condition and saving energy.

TECHNICAL DETAILS

- Energy saving: the controller modulates the pump according to the hydraulic energy request of the plant with respect to a direct connection in the network
- Quicker and improved regulation
- Hammering reduced thanks to gradual start-up and stop
- Improved comfort in the heating, air conditioning and pressure boosting systems
- Reduced peak current
- Exchange at every powered pump re-start (HERTZ TWIN)
- Speed modulation on both pumps for excellent regulation (HERTZ TWIN)

TECHNICAL DATA

- Current limits for 60 seconds 1.6 times the current set for 60 seconds. Automatic restore for three times, manual restore on the fourth intervention
- Limits of use (environment temperature): from -10°C to +40°C
- IP55 Protection rating (IP44 TWIN TT 2x3, 3x4)
- Conformity to the CE mark, EN 60204-1; Security electrical equipment. - EN 60439-1; Switchgear and controlgear assemblies. EMC standards applied:
 - CEI EN 61000-6-1; immunity for residential, commercial, and light-industrial environments.
 - CEI EN 61000-6-2; industrial immunity.
 - CEI EN 61000-6-3; emission for residential, commercial and light-industrial environments.
 - CEI EN 61000-6-4; industrial emission.
 - CEI EN 61000-3-2; harmonic current emission $\leq 16A$ (use XL.L line inductance to be installed on request, see ref. 8.1, 8.2). Emissions: conformity for residential environments. Immunity: conformity for industrial environments.
- Recommended minimum output frequency: 30 Hz
- Power supply voltage (single phase version): 230V +10% -15%
- Power supply voltage (three phase version): 400V +10% -15%
- Number of pumps that can be connected: 1 (HERTZ ONE), 2 (HERTZ TWIN)
- Motor power: from 0.25 kW to 4 kW



E-drive

FREQUENCY INVERTER FOR THE CONTROL OF ELECTRIC PUMPS



The E-drive is a device for the control and protection of pumping systems based on frequency variations in the power supply of the pump.

The E-drive can be connected to any pump on the market, it manages operation to maintain set physical quantities constant (pressure, flow or temperature of fluid or more) depending on the conditions of use. In this way the pump is operated only as and when needed without wasting energy and as such extending its life.

APPLICATIONS

- Domestic and industrial water supply
- Irrigation
- Heating and air conditioning
- Filtering and pressure washing

TECHNICAL FEATURES

- Energy and financial savings
- Easy system installation and at a lower cost
- Longer system life
- Increased reliability

GENERAL FEATURES

- Power supply frequency: 50 - 60 Hz (+/- 2%)
- Max. working ambient temperature under a nominal load: 40°C (104 °F)
- Max. altitude under a nominal load: 1000 m
- Degree of protection: IP55 (NEMA 4)
- Configurable digital outputs NO or NC:
 1. running motor signal
 2. alarm
 3. pump control DOL 1
 4. pump control DOL 2
- Analogue inputs, (10 or 15 Vdc):
 1. 4-20 mA
 2. 4-20 mA
 3. 4-20 mA / 0 - 10 Vdc (configurable)
 4. 4-20 mA / 0 - 10 Vdc (configurable)
- 4 Digital inputs, configurable NO or NC, to start and stop motor
- Serial RS485

ELECTRIC DATA TABLE

Model	V _{in} +/- 15% [V]	Max. V _{out} [V]	I _{out} [A]	P ₂ Typical motor [kW]
E-drive 1500	1 x 230	1 x 230	9	1,1
		3 x 230	7	1,5
E-drive 3000	1 x 230	1 x 230	9	1,1
		3 x 230	11	3
E-drive 2200	3 x 400	3 x 400	6	2,2
E-drive 4000	3 x 400	3 x 400	9	4
E-drive 5500	3 x 400	3 x 400	14	5,5
E-drive 7500	3 x 400	3 x 400	18	7,5
E-drive 11000	3 x 400	3 x 400	25	11
E-drive 15000	3 x 400	3 x 400	30	15

PRESSCOMFORT

PRESSURE REGULATOR



PRESSCOMFORT is an automatic electronic appliance, destined to regulate functioning of the electric pumps without using booster reservoirs.

This unit manages the automatic start and stop of the pump when opening or closing any tap or valve of the installation.

When the pump starts, it keeps running while it exists any tap opened in the system, giving flow and pressure to the hydraulic net while there is demand.

If there is no suction air, the pump stops automatically.

PRESSCOMFORT allows:

- manual restore (RESET key)
- automatic restore after 1, 6, 12 or 24 hours.

If on suction the water returns to a pressure exceeding the fixed value for pump start-up, PRESSCOMFORT is restored automatically.

TECHNICAL DETAILS

- The PRESSCOMFORT is replacing the traditional expansion tank, pressure switch, check valves, level switch
- Version with or without cables
- Automatic regulation
- Adjustable start-up pressure
- Incorporated non-return valve
- Plate with functioning indicator
- Connection cable on the pump terminal box (for wired version only)
- Power supply cable (1.5 m) with standard socket (for wired version only)

TECHNICAL DATA

- Maximum temperature of the water: 60° C
- Maximum flow rate: 10,000 l/h
- Start-up pressure: 1.5 - 2.5 bar
- Maximum use pressure: 10 bar
- Power supply voltage: 220 ±10% - 50/60 Hz
- Maximum current intensity: 10A
- IP65 Protection rating
- G1 connections (pump and outlet side)
- Weight: 0,6kg

INVERTER FOR CONTROLLING THE ELECTRIC PUMPS



Electronic device for controlling the electric pumps based on inverter technology. Controls start-up and stop of the electric pump and modulates the motor revs. depending on the withdrawal of water from the plant.

TECHNICAL DETAILS

- Constant pressure thanks to the regulation of the electric pump revs.
- Energy saving
- Gradual pump start-up and stop that reduce hammering and eliminate peak current on ignition
- Protection against dry running if there is no suction air
- Reset automatic in the case of stopping due to dry running
- Effective leak control (protection of the pump in the case of continuous re-starts)
- Indication of the pressure on the display
- Amperometric motor control
- Indication of the various functioning/error states via luminous indicators and messages on the display
- Functioning in twin units alternately
- Double set-point that can be commanded at a distance
- Electric pump remote start and stop
- Rotation direction inversion via software
- Removable electric clamps to easy wiring
- The use of an expansion vessel is recommended

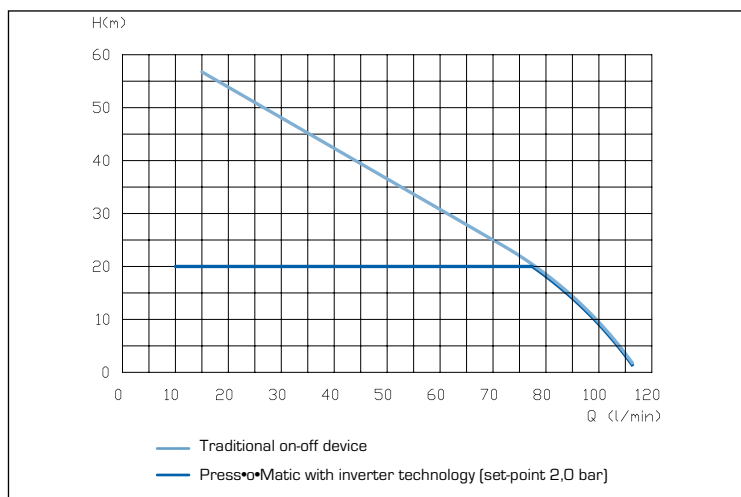
TECHNICAL DATA

- Mains power supply: single phase 230V \pm 10%, 50Hz
- Motor supply: three phase 220V
- Maximum motor power: 2200W - 3HP
- Maximum motor current: 9,7A
- Maximum line absorption: 16A at 230V
- Maximum pressure accepted: 8 bar
- Maximum temperature of the liquid: 50°C
- Pressure drop: 0.1 bar at 150 l/min
- Set-point regulation range: 1.5÷7 bar
- Start pressure regulation range: 1÷6.7 bar
- Hydraulic connection: G1¼ male-male
- Frequency modulation range: 25÷50 Hz
- Protection rating: IP 65

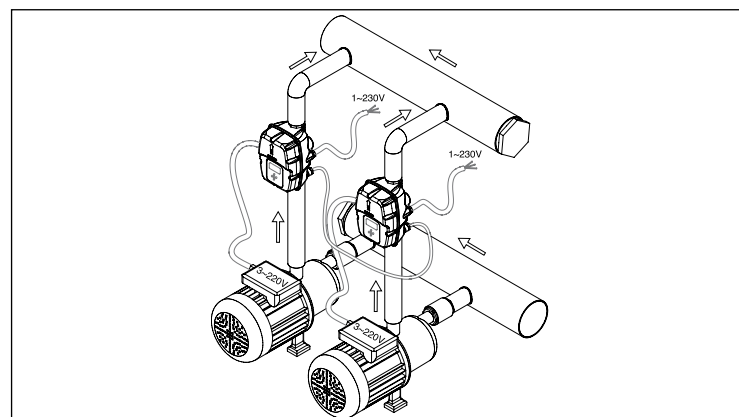
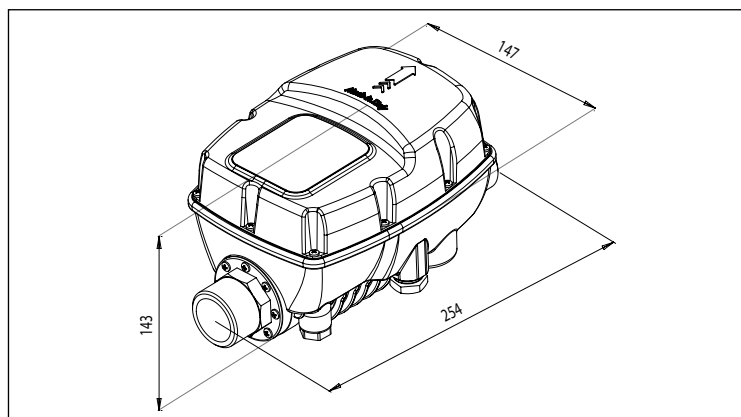
SPECIAL VERSIONS

- Frequency modulation range 30÷60 Hz
- Connection cable for functioning in pairs 4x0.5 mm² 100 cm (SR-CBL4X05-100)

PRESSURE-FLOW RATE GRAPHICS (ELECTRIC PUMP 1,5 HP)



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PRESSURE LOSS TABLE

Pressure drop (Pc) in metres of column of water for every one hundred metres of new cast iron pipe. Speed of the liquid in the pipe in metres/second.

Flow rate [m³/h]		Internal diameter [mm]																									
		25	32	40	50	60	70	80	90	100	125	150	175	200	225	250	275	300	350	400	450	500	600	700	800	900	1000
3	Pc % Vm/s	17 1,70	6 1,03	1,6 0,67	0,54 0,43	0,25 0,22	0,13 0,11	0,06 0,13	0,03 0,10	0,02 0,10																	
6	Pc % Vm/s		24 2,06	6 1,34	2 0,85	0,9 0,58	0,43 0,44	0,21 0,32	0,13 0,26	0,08 0,20	0,026 0,13																
9	Pc % Vm/s			12,5 2,08	4,3 1,32	1,8 0,89	0,9 0,65	0,46 0,5	0,25 0,39	0,15 0,32	0,06 0,20																
12	Pc % Vm/s			20 2,76	7 1,76	3,2 1,19	1,5 0,88	0,75 0,67	0,44 0,53	0,25 0,43	0,09 0,18	0,03 0,18															
15	Pc % Vm/s				12 2,2	5,2 1,49	2,4 1,1	1,25 0,87	0,7 0,66	0,42 0,54	0,15 0,34	0,06 0,24															
18	Pc % Vm/s				17 2,64	7 1,78	3,5 1,3	1,7 1	1 0,78	0,6 0,64	0,2 0,4	0,08 0,28															
21	Pc % Vm/s				22 3,35	8,8 2,08	4,2 1,54	2,2 1,17	1,3 0,93	0,75 0,75	0,26 0,48	0,1 0,32	0,05 0,24														
24	Pc % Vm/s				12 2,38	5,7 1,76	3 1,34	1,7 1,06	1 0,86	1 0,86	0,36 0,54	0,14 0,36	0,07 0,28														
27	Pc % Vm/s				14 2,7	7 1,97	3,5 1,45	2 1,17	1,25 0,96	0,42 0,6	0,17 0,42	0,08 0,31															
30	Pc % Vm/s				17 2,98	8,2 2,2	4,2 1,74	2,5 1,32	1,5 1,08	0,5 0,68	0,2 0,48	0,09 0,34															
36	Pc % Vm/s				25 3,58	12 2,63	6,3 2	3,5 1,58	2 1,28	0,75 0,82	0,3 0,57	0,14 0,42	0,07 0,32														
42	Pc % Vm/s				16 3,07	8,5 2,34	4,5 1,85	2,7 1,5	1,5 1,5	0,85 0,96	0,33 0,66	0,18 0,48	0,08 0,37														
48	Pc % Vm/s				21 3,51	10 2,68	6 2,12	3,6 1,72	2 1,72	0,75 1,08	0,3 0,72	0,14 0,34	0,06 0,34														
54	Pc % Vm/s				25 3,94	13,5 3,94	7,6 3	4,5 2,34	1,92	1,5 1,2	0,55 0,84	0,28 0,63	0,14 0,38	0,08 0,38													
60	Pc % Vm/s				16 3,32	9 2,64	5,5 2,16	2,6 1,36	1,8 1,36	0,7 0,96	0,33 0,68	0,17 0,42	0,1 0,42														
75	Pc % Vm/s				24 4,17	14 3,31	8 2,68	2,7 1,72	1 1,18	0,49 0,87	0,24 0,67	0,14 0,53	0,08 0,43														
90	Pc % Vm/s				20 3,97	12,5 3,24	6,3 2,04	3,5 1,44	2 1,02	0,75 1,02	0,3 0,8	0,14 0,63	0,08 0,51	0,08 0,42													
105	Pc % Vm/s				26 4,6	16,5 3,74	9,5 3,74	5,3 2,41	1,95 1,66	0,9 1,22	0,47 0,93	0,27 0,74	0,16 0,59	0,1 0,49													
120	Pc % Vm/s				21,5 4,31	6,9 2,6	2,6 1,2	1,2 0,61	0,36 0,36	0,2 0,68	0,14 0,68	0,08 0,47	0,08 0,53														
135	Pc % Vm/s				26 4,81	9 3,07	3,3 2,13	1,5 1,56	0,76 1,56	0,45 0,95	0,25 0,76	0,17 0,53	0,1 0,53														
150	Pc % Vm/s				11 3,44	4 2,36	1,9 1,74	0,95 1,34	0,55 1,05	0,3 0,86	0,21 0,70	0,12 0,59	0,06 0,43														
165	Pc % Vm/s				13 3,75	4,7 2,61	2,2 1,91	1,13 1,46	0,65 1,15	0,37 0,94	0,24 0,77	0,15 0,65	0,08 0,48														
180	Pc % Vm/s				15,2 4,09	5,5 2,83	2,6 2,08	1,3 1,59	0,76 1,26	0,43 1,02	0,29 0,84	0,18 0,71	0,09 0,52														
210	Pc % Vm/s				21 4,70	7,4 3,32	3,5 2,43	1,8 1,86	1,1 1,49	0,6 1,19	0,37 0,98	0,24 0,82	0,12 0,61	0,06 0,47													
240	Pc % Vm/s				9,4 3,78	4,3 2,77	2,3 2,12	1,3 1,68	0,75 1,36	0,48 1,12	0,3 0,95	0,15 0,69	0,08 0,53														
270	Pc % Vm/s				12 4,26	5,5 3,13	2,8 2,39	1,62 1,90	0,9 1,53	0,58 1,26	0,35 1,07	0,18 0,78	0,09 0,59														
300	Pc % Vm/s				14 4,75	7,5 3,47	3,4 2,66	2 1,71	1,1 1,40	0,74 1,40	0,46 1,18	0,22 0,86	0,11 0,67	0,07 0,53													
360	Pc % Vm/s				9 4,15	4,7 3,17	2,8 2,53	1,6 2,04	1 1,68	0,65 1,41	0,32 1,04	0,16 0,63	0,09 0,51	0,05 0,51													
420	Pc % Vm/s				11,6 4,86	6,2 3,72	3,5 2,94	2 2,37	1,3 1,96	0,82 1,64	0,41 1,22	0,21 0,94	0,12 0,76	0,07 0,59	0,03 0,41												
480	Pc % Vm/s					8,5 4,24	4,9 3,36	2,9 2,72	1,9 2,24	1,2 1,90	0,6 1,38	0,3 1,06	0,17 0,69	0,09 0,47	0,04 0,47												
540	Pc % Vm/s					11 4,78	6,5 3,80	3,7 3,06	2,35 2,52	1,52 2,13	0,75 1,56	0,38 1,19	0,22 0,94	0,12 0,76	0,05 0,53												
600	Pc % Vm/s					12,2 5,30	7,4 4,20	4,3 3,40	2,7 2,81	1,7 2,36	0,9 1,73	0,45 1,34	0,25 0,86	0,13 0,61	0,055 0,44	0,024											
660	Pc % Vm/s					9 4,61	5,2 3,76	3,3 3,07	2,1 2,59	1,1 1,89	0,74 1,46	0,46 1,15	0,22 0,93	0,11 0,65	0,06 0,48	0,03											
720	Pc % Vm/s					10 5,05	6 4,08	3,8 3,37	2,5 2,84	1,3 2,08	0,52 1,65	0,35 1,26	0,19 1,02	0,075 0,71	0,035 0,52												
780	Pc % Vm/s					7,3 4,43	4,5 3,65	3 3,08	1,5 2,26	0,75 1,73	0,42 1,36	0,23 1,11	0,08 0,77	0,04 0,56													
840	Pc % Vm/s					8 4,76	5,4 3,95	3,4 3,31	1,7 2,43	0,85 1,86	0,48 1,47	0,26 1,19	0,1 0,83	0,047 0,61													
900	Pc % Vm/s					9 5,1	5,8 4,22	3,75 3,54	1,9 2,60	0,96 2,00	0,53 1,57	0,29 1,27	0,11 0,88	0,053 0,65													
960	Pc % Vm/s					6,5 4,49	4,3 3,29	2,1 2,94	1,1 1,99	0,6 1,65	0,32 1,19	0,12 0,83	0,06 0,70	0,06 0,52													
1020	Pc % Vm/s					7,2 4,76	4,6 4,01	2,45 2,94	1,2 1,78	0,67 1,44	0,35 1,14	0,14 0,77	0,065 0,54	0,033 0,54													
1080	Pc % Vm/s					5,4 4,26	2,8 3,12	1,4 2,38	0,78 1,86	0,43 1,53	0,16 0,61	0,073 0,57	0,037 0,57														
1140	Pc % Vm/s					6 4,49	3,2 3,29	1,53 2,94	0,86 1,99	0,46 1,65	0,175 0,84	0,08 0,61	0,043 0,52	0,037 0,52													
1200	Pc % Vm/s					6,5 4,72	3,4 3,45	1,7 2,68	0,93 2,12	0,5 1,72	0,19 1,23	0,09 0,88	0,046 0,63	0,04 0,54	0,025												

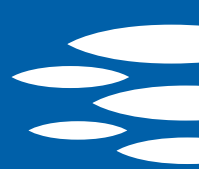
It is possible to estimate the pressure drops caused by accessories with the following comparisons:

- Foot valve: like 15 m of piping
- Non-return valve: like 10 m of piping
- Gate: like 5 m of piping
- Bends and elbows: like 5 m of piping

For piping different to the new cast iron ones, multiply the table data for the following coefficients:

- stainless steel 0,8
- PVC 0,7
- gres 1,17
- rolled steel 0,8
- galvanised steel 0,8
- slightly rusty pipes 1,25
- rust pipes with a lot of deposits 2,1

Recommended discharge diameter
 Recommended suction diameter



SPECIFIC PERFORMANCE

The specifications below qualify the curves shown in our catalogues and Data Book (see www.ebaraurope.com). All the performance curves are calculated according to ISO 9906 Attachment A.

Tolerance according to ISO 9906 Attachment A. The curves refer to an effective speed of the 50 Hz asynchronous motors. The measurements are made with water temperature of 20°C and cinematic viscosity of $\nu = 1 \text{ mm}^2/\text{s}$ (1 cSt). During the pump selection, consider to get a safety margin of at least 0.5 m. The continuous curves indicate the recommended working range. The dotted curve is only a guide. In order to prevent the risk of overheating, the pumps must not be used at a flow rate below 10% of the maximum efficiency flow rate.

During selection of the pumps, there is a safety margin of at least 1 m.

Symbols:

- Q = Volume flow rate [m^3/h]
- H = Total head [m]
- P_1 = Power absorbed by the electric line
- P_2 = Pump power input (shaft power)
- η = Pump efficiency
- NPSH = Net positive suction head required by the pump
- MEI = Minimum Efficiency Index

The minimum efficiency index (MEI) is a measure of the quality of a pump size in respect to its mean efficiency. The minimum efficiency index is based on the hydraulic efficiency and on the head at the best efficiency point.

The efficiency of a pump with 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 these water pumps 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.



DNV BUSINESS ASSURANCE

MANAGEMENT SYSTEM CERTIFICATE

Certificato No. / Certificate No. CERT-17819-2006-AQ-VEN-SINCERT

Si attesta che / This is to certify that

EBARA PUMPS EUROPE S.p.A.

Sede e Stabilimento di Brendola: Via Pacinotti, 32 - 36040 Brendola (VI) - Italy
Stabilimento di Cles: Via Campo Sportivo, 30 - 38023 Cles (TN) - Italy
Filiale di Palermo: Via Don Luigi Sturzo, 181183 - Z.I. - 90040 Carini (PA) - Italy
Filiale di Cagliari: Via del Fangario, 29 - 09122 Cagliari (CA) - Italy

è conforme ai requisiti della norma per i sistemi di gestione:
has been found to conform to the management system standard:

UNI EN ISO 9001:2008 (ISO 9001:2008)

Questa Certificazione è valida per il seguente campo applicativo:
This Certificate is valid for the following product or service ranges:

Progettazione, produzione, vendita e commercializzazione di pompe e sistemi di pompaggio
(Settore EA : 18 - 17)

Design, manufacture, sales and trade of pumps and pumping systems
(Sector EA : 18 - 17)

<p><i>Data Prima Emissione/Initial Certification Date:</i> 2006-10-13</p> <p><i>Il Certificato è valido fino al:</i> <i>This Certificate is valid until:</i> 2015-10-10</p> <p><i>L'audit è stato eseguito sotto la supervisione di:</i> <i>The audit has been performed under the supervision of:</i></p> <p>Michele Gaiba <i>Lead Auditor</i></p>	<p><i>Luogo e Data/Place and Date:</i> Agrate Brianza (MB), 2012-10-02</p> <p><i>Per l'Organismo di Certificazione:</i> <i>For the Accredited Unit:</i></p>  Zeno Beltrami <i>Management Representative</i>
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ACCREDIA
LEVEL 1/2/3/4/5/6/7/8/9/10/11/12/13/14/15/16/17/18/19/20/21/22/23/24/25/26/27/28/29/30/31/32/33/34/35/36/37/38/39/40/41/42/43/44/45/46/47/48/49/50/51/52/53/54/55/56/57/58/59/60/61/62/63/64/65/66/67/68/69/70/71/72/73/74/75/76/77/78/79/80/81/82/83/84/85/86/87/88/89/90/91/92/93/94/95/96/97/98/99/100

Modello di Mod. EA per gli standard di accreditamento ISO 9001, ISO 9002, ISO 9004, ISO 14001, ISO 14004, ISO 14050, ISO 15000, ISO 15001, ISO 15002, ISO 15003, ISO 15004, ISO 15005, ISO 15006, ISO 15007, ISO 15008, ISO 15009, ISO 15010, ISO 15011, ISO 15012, ISO 15013, ISO 15014, ISO 15015, ISO 15016, ISO 15017, ISO 15018, ISO 15019, ISO 15020, ISO 15021, ISO 15022, ISO 15023, ISO 15024, ISO 15025, ISO 15026, ISO 15027, ISO 15028, ISO 15029, ISO 15030, ISO 15031, ISO 15032, ISO 15033, ISO 15034, ISO 15035, ISO 15036, ISO 15037, ISO 15038, ISO 15039, ISO 15040, ISO 15041, ISO 15042, ISO 15043, ISO 15044, ISO 15045, ISO 15046, ISO 15047, ISO 15048, ISO 15049, ISO 15050, ISO 15051, ISO 15052, ISO 15053, ISO 15054, ISO 15055, ISO 15056, ISO 15057, ISO 15058, ISO 15059, ISO 15060, ISO 15061, ISO 15062, ISO 15063, ISO 15064, ISO 15065, ISO 15066, ISO 15067, ISO 15068, ISO 15069, ISO 15070, ISO 15071, ISO 15072, ISO 15073, ISO 15074, ISO 15075, ISO 15076, ISO 15077, ISO 15078, ISO 15079, ISO 15080, ISO 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16264, ISO 16265, ISO 16266, ISO 16267, ISO 16268, ISO 16269, ISO 16270, ISO 16271, ISO 16272, ISO 16273, ISO 16274, ISO 16275, ISO 16276, ISO 16277, ISO 162