

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.

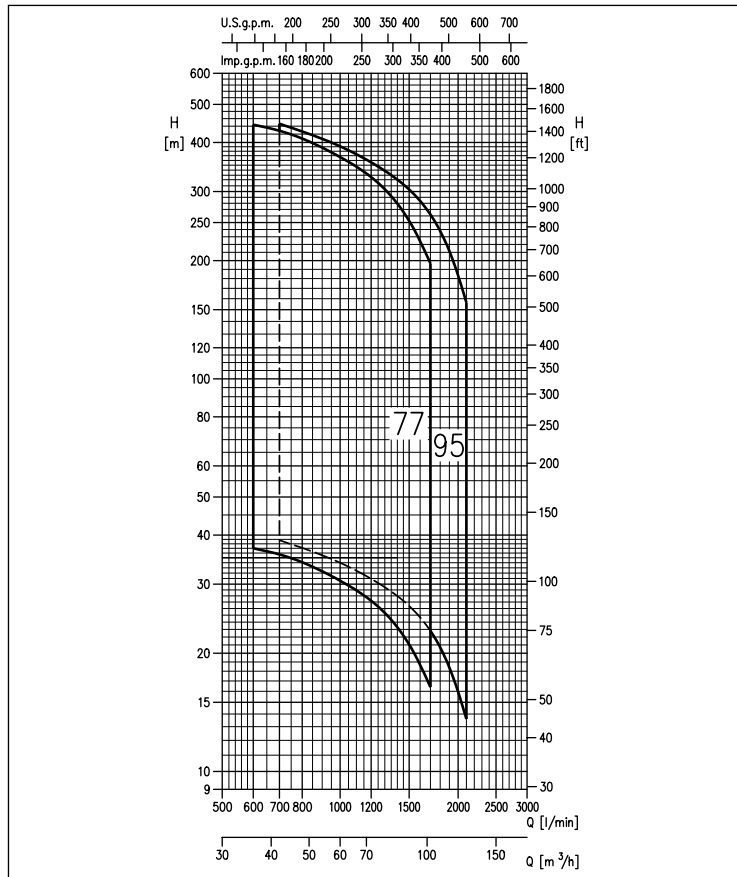
MOTOR TECHNICAL DATA

- 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

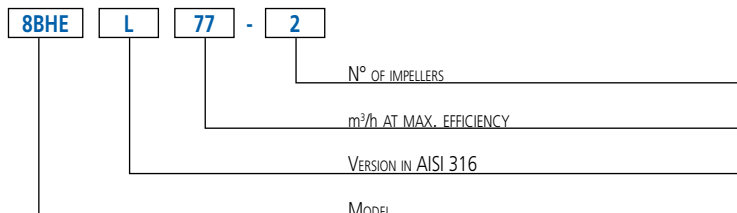
MATERIALS

- 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





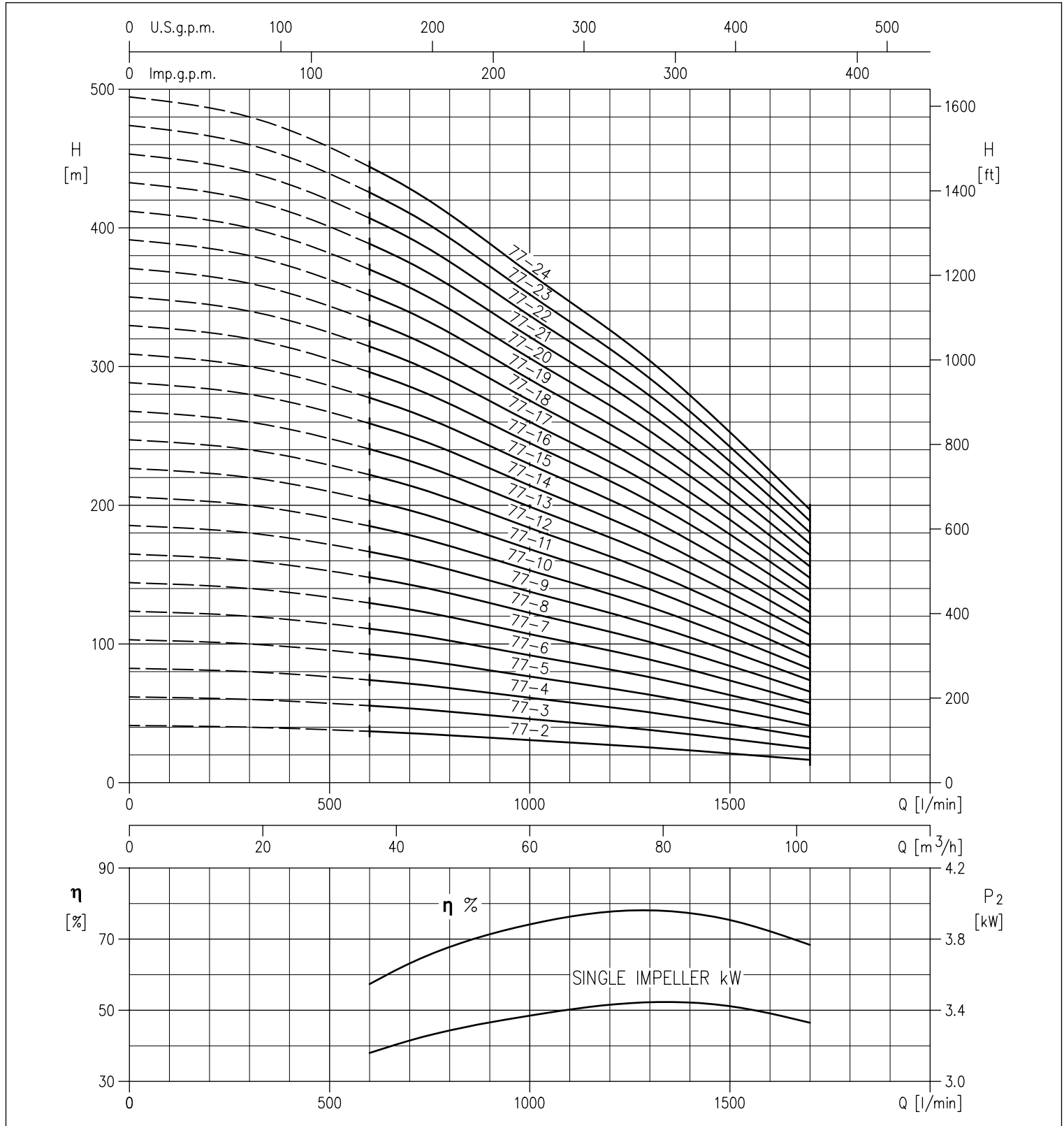
8BHE(L)

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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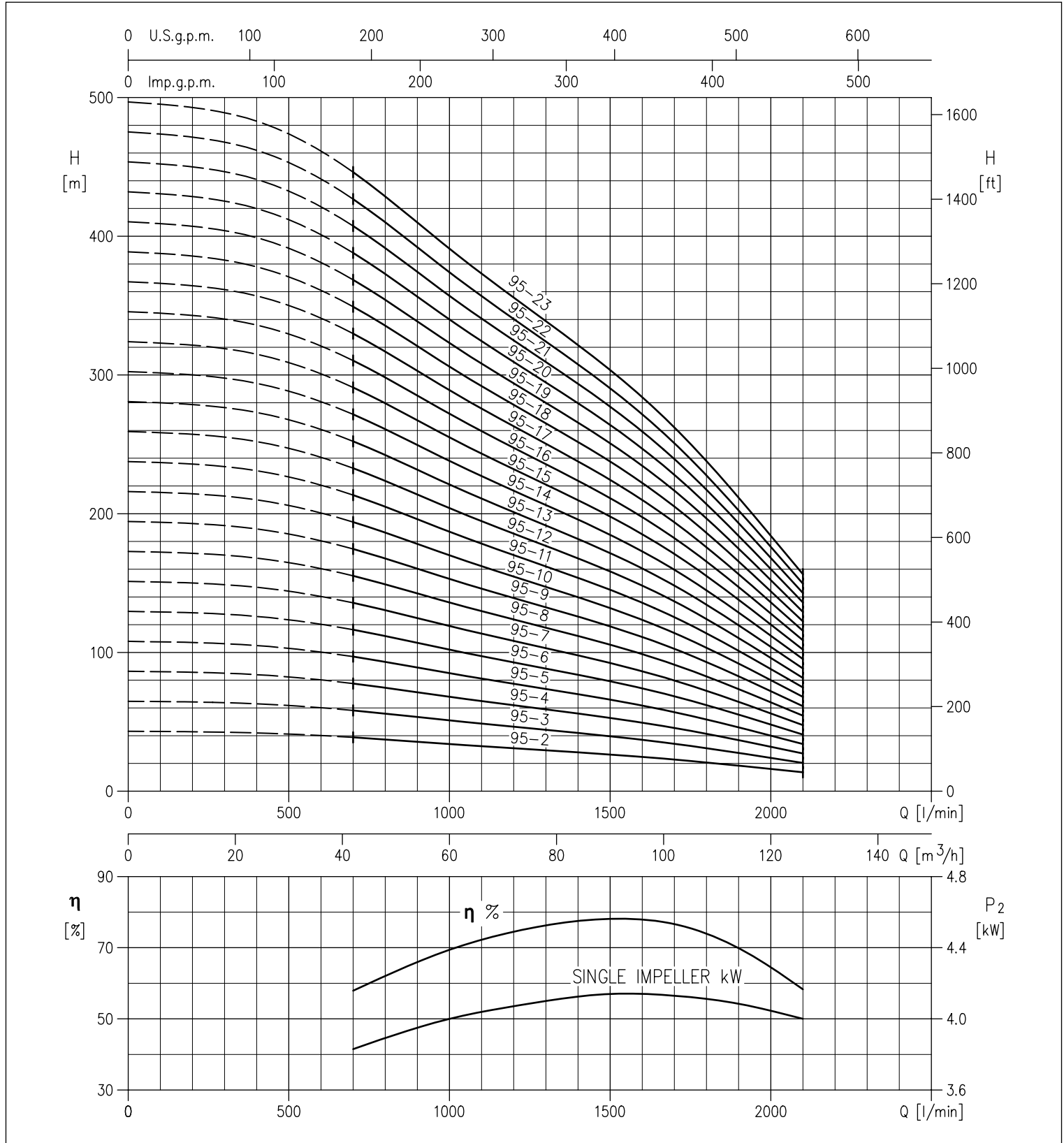
8BHE(L)

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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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	-

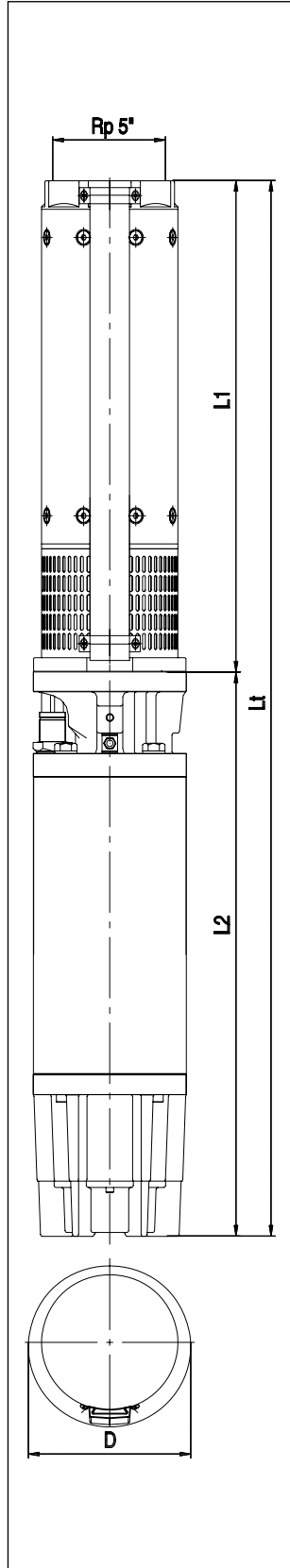
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DIMENSIONS 8BHE(L)



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

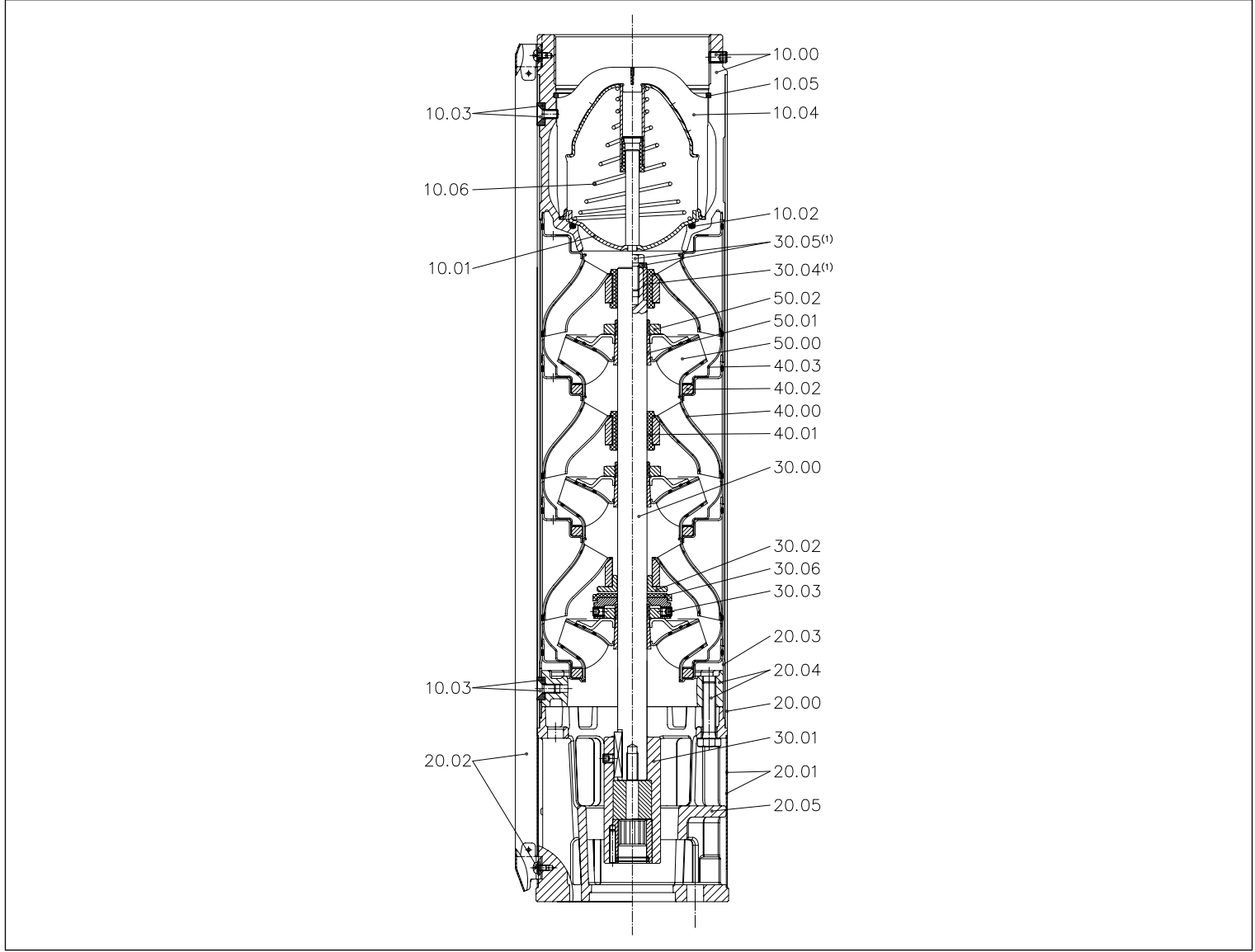
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SECTIONAL VIEW



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

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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