

8BHE(L)

CENTRIFUGAL BOREHOLE PUMPS, 8"

in AISI 304 and AISI 316



Semi-axial flow submersible electric pumps in AISI 304 (8BHE) and AISI 316 (8BHEL) for deep wells, 8" and greater.

This series of submersible pumps has been developed specifically for high flow rate pumping applications.

APPLICATIONS

- Water supply from deep wells
- Water distribution and pressurisation
- Irrigation systems
- Water treatment, filtering and reverse osmosis
- Industrial cooling systems
- Fountains
- Fire systems

TECHNICAL FEATURES

- Corrosion resistant
- Robust
- Reliable
- Compact
- Can also operate horizontally

PUMP TECHNICAL DATA

- Maximum operating pressure: 7 bar
- Maximum immersion:
 - 350 m (with motor in water bath)
 - 150 m (with motor in oil bath)
- Maximum amount of sand: 100 gr/m³
- Fluid temperature: -5°C to +60°C
- Adapter kit for mounting to 6" motors
- Delivery connection: Rp 5"

The pump and motor are supplied separately.

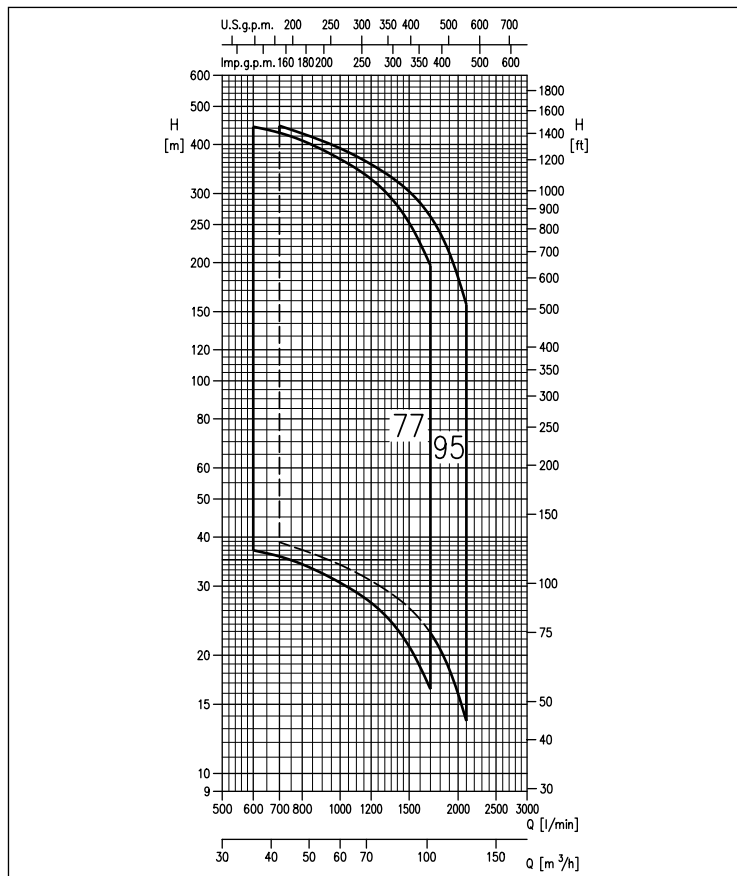
MOTOR TECHNICAL DATA

- 2 pole motor in oil bath (OY), or water bath (WY)
- Max. starts per hour: 30 (OY) - 20 (WY)
- Insulation class
 - F (6" version OY)
 - (8" version WY)
 - F (6" version WY)
- Protection degree IP58 (OY), IP68 (WY)
- Three phase voltage 380-415V (±10%) 50 Hz (OY),
- Three phase voltage 380-415V (-10%+6%) 50 Hz (WY)
- NEMA compliant coupling and motor flange
- For dimensioning the cables, see page 54 or refer to our Data Book on www.ebara.eu

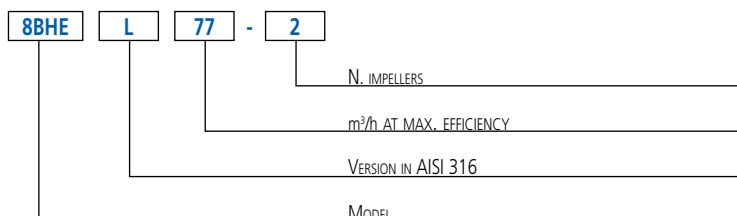
MATERIALS

- Delivery port, stages and mount in AISI 304 (8BHE) and AISI 316 (8BHEL)
- Shaft made of AISI 329 steel
- Impeller made of AISI 316 steel

PERFORMANCE RANGE (According ISO 9906 Annex 3B)



IDENTIFICATION CODE

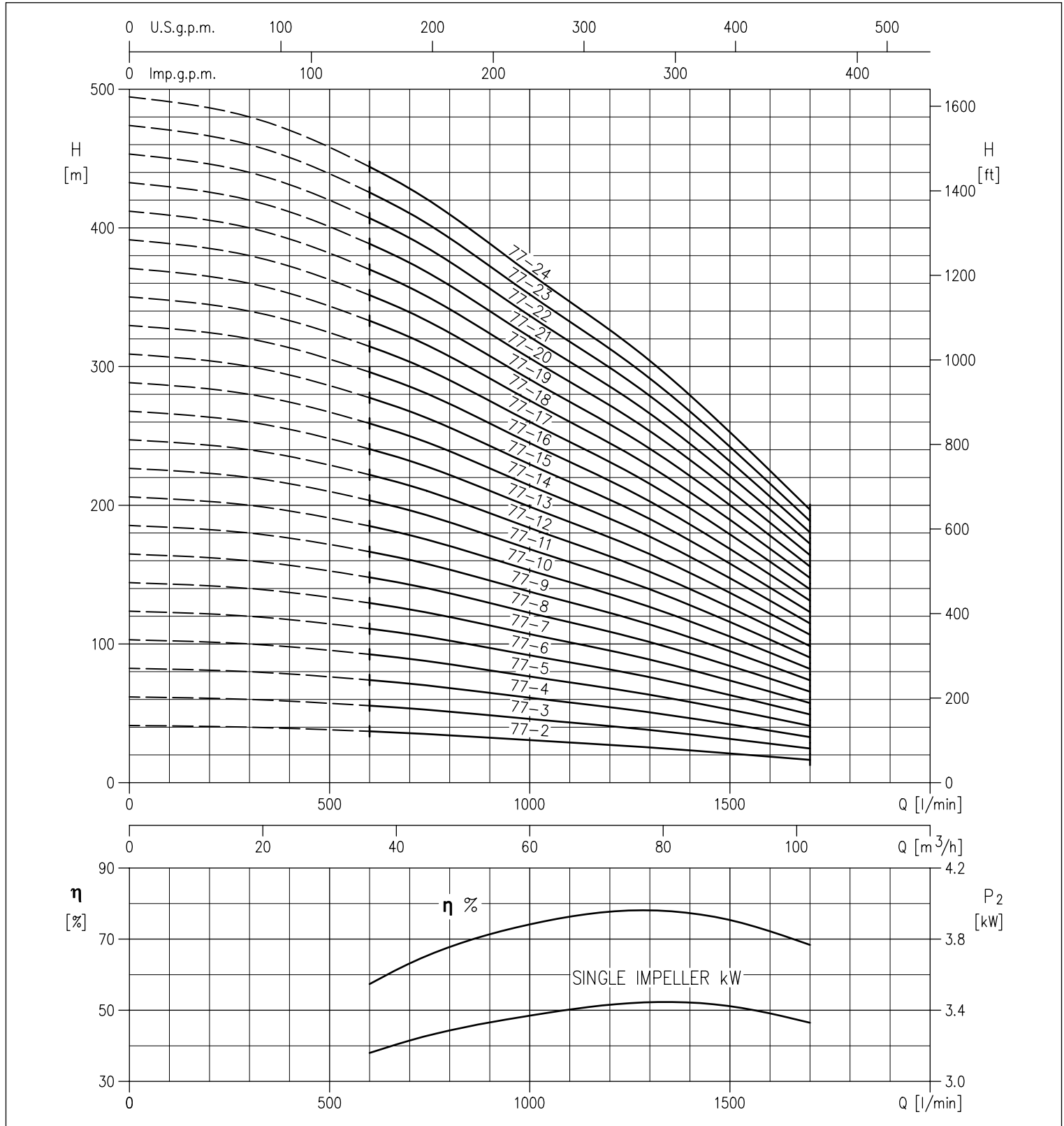




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CENTRIFUGAL BOREHOLE PUMPS, 8"
in AISI 304 and AISI 316

PERFORMANCE CURVES series 8BHE(L) 77
(According ISO 9906 Annex 3B)



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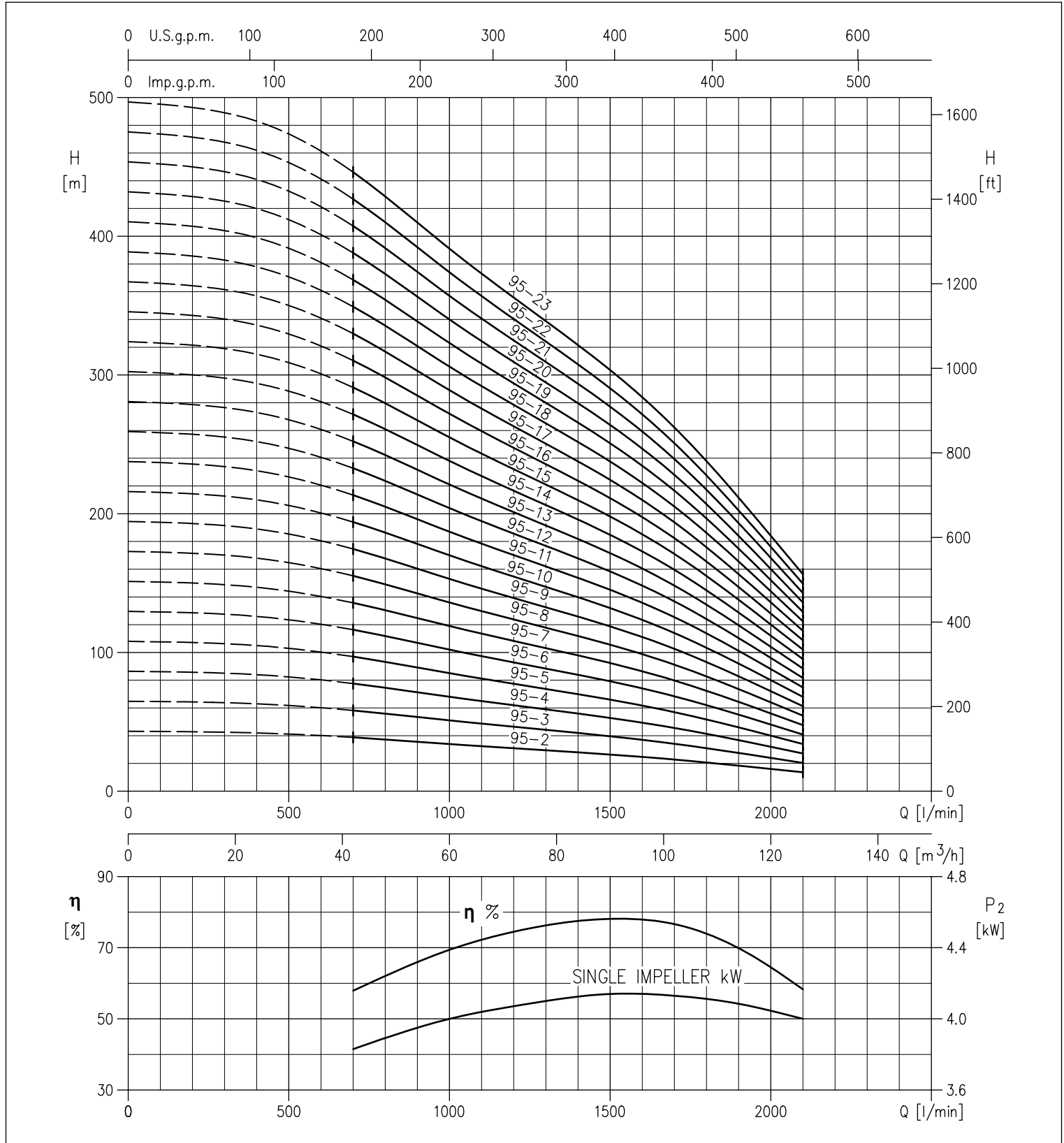
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CENTRIFUGAL BOREHOLE PUMPS, 8"

in AISI 304 and AISI 316

PERFORMANCE CURVES series 8BHE(L) 95

(According ISO 9906 Annex 3B)



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CENTRIFUGAL BOREHOLE PUMPS, 8"

in AISI 304 and AISI 316

PERFORMANCE TABLE

Model	Motor size	P ₂		Q=Flow rate							
		[HP]	[kW]	l/min m ³ /h	600 36	700 42	1000 60	1250 75	1500 90	1700 102	1900 114
				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

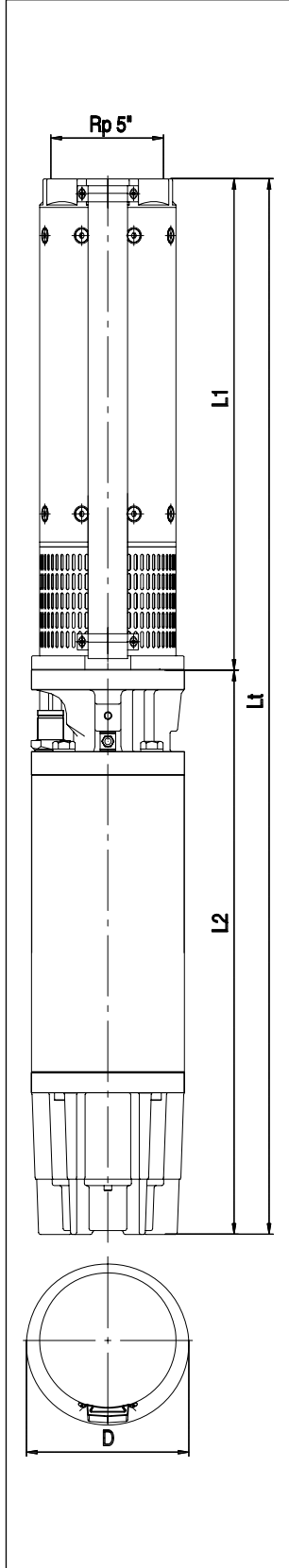
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DIMENSIONS 8BHE(L)



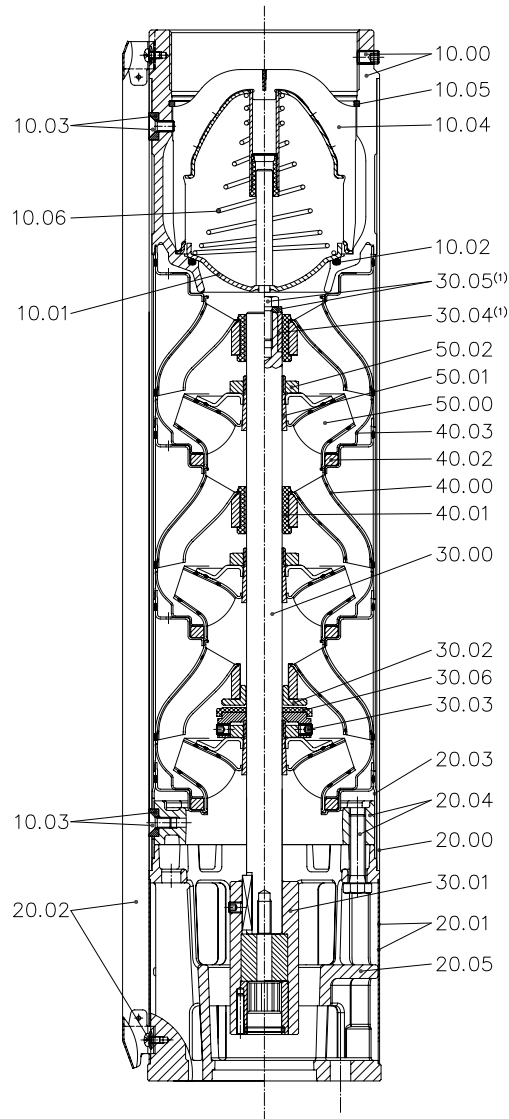
DIMENSIONAL TABLE

Model	Motor size	P ₁		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

8BHE(L)

CENTRIFUGAL BOREHOLE PUMPS, 8"
in AISI 304 and AISI 316

SECTIONAL VIEW



MATERIALS TABLE

Ref.	Name	Material	Ref.	Name	Material
10.00	Delivery connection 5"	EN 1.4301 (AISI 304) EN 1.4401 (AISI 316)	30.01	Motor coupling	EN 1.4057 (AISI 431)+ EN 1.4460 (AISI 329) EN 1.4401 (AISI 316)+ EN 1.4460 (AISI 329)
10.01	Valve	EN 1.4401 (AISI 316)	30.02	Upper thrust washer	EN 1.4460 (AISI 329)
10.02	O-ring	Nitrile rubber (NBR)	30.03	Lower thrust washer	EN 1.4460 (AISI 329)
10.03	Bracket and screws	EN 1.4401 (AISI 316)	30.04	Upper bearing [1]	Stainless steel with ceramic coating
10.04	Valve seat	EN 1.4401 (AISI 316)	30.05	Screw and washer [1]	EN 1.4401 (AISI 316)
10.05	Circlip	EN 1.4401 (AISI 316)	30.06	Thrust bearing	PTFE
10.06	Spring	EN 1.4401 (AISI 316)	40.00	Stage	EN 1.4301 (AISI 304) EN 1.4401 (AISI 316)
20.00	External casing	EN 1.4301 (AISI 304) EN 1.4401 (AISI 316)	40.01	Intermediate bushing	Nitrile rubber (NBR)
20.01	Filter	EN 1.4401 (AISI 316)	40.02	Clearance 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 screw	EN 1.4301 (AISI 304) EN 1.4401 (AISI 316)	50.01	Taper ring	EN 1.4401 (AISI 316)
20.05	Motor mount	EN 1.4301 (AISI 304) EN 1.4401 (AISI 316)	50.02	Mounting ring	EN 1.4401 (AISI 316)
30.00	Shaft	EN 1.4460 (AISI 329)			

[1]= Models with more than 8 stages only

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CENTRIFUGAL BOREHOLE PUMPS, 8"

in AISI 304 and AISI 316

ELECTRICAL DATA TABLE 8BHE(L) WITH MOTOR IN OIL BATH

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

ELECTRICAL DATA TABLE 8BHE(L) WITH MOTOR IN WATER BATH

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