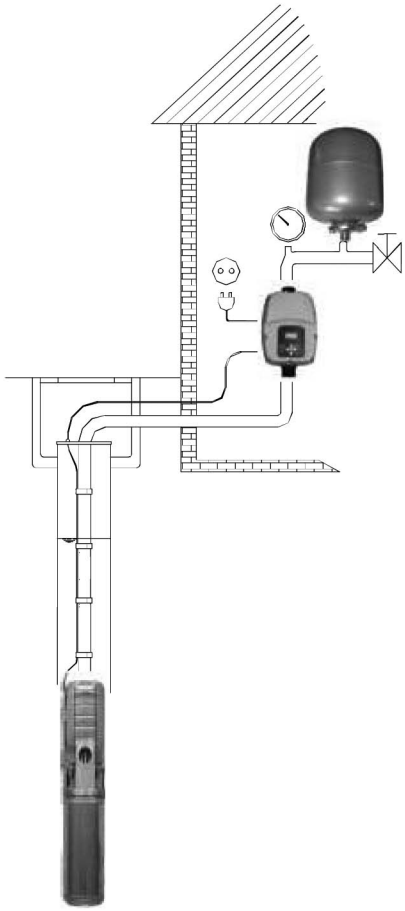
4"WPS® and 4"WPS®-CP pumps are constructed of stainless steel throughout and are suitable for both continuous and intermittent operation for a variety of applications:

- Domestic and general water supply
- Small waterworks and fountains
- Irrigation
- Tank applications
- Pressure boosting
- Heating pumps
- Dewatering, mining, hot springs
- Industrial applications



4"WPS®-CP

4"WPS®-CP pumps offer the following features:

- Pump entirely made out of stainless steel and fits in 4" or larger drilled wells
- Constant pressure with two set pressures possible
- Capacity from 0.2 to 8 m^3/h and a maximum head of 140m
- Motor rating up to 2kW, 90Hz
- Single phase supply to the controller
- Incorporated jam free check valve
- Dry-running protection
- High efficiency of pump and motor
- Excellent resistance to wear
- Soft start
- Overvoltage and undervoltage protection
- Overload protection
- Overtemperature protection.
- Variable speed
- Second set-pressure possible

The 4"WPS®-CP pump is fitted with a three phase 230V electric motor. The 4"WPS®-CP controller needs a single-phase supply and transforms it to a three-phase current to the motor. The controller is fitted with a frequency drive and performs a constant pressure of the flow through a variable speed of the pump. As a consequence, the pump can be set to operate in any duty point in the range between the pump min. and max. performance curves.
In case of a pump fault, an alarm will be indicated on the LCD screen of the 4"WPS®-CP controller.

The 4"WPS®-CP pump is sold as a kit and consists of the following elements:

- A 4" submersible pump WPS® entirely made of stainless steel.
- A WPS® high speed submersible motor able to run at variable frequencies up to 90Hz.
- A WPS®-CP constant pressure controller including a variable speed drive, a flow detection and a pressure sensor.
- A pressure vessel of 8 liter.

4"WPS®

4"WPS® pumps offer the following features:

- Pump entirely made out of stainless steel and fits in 4" or larger drilled wells
- Capacity from 0,5 to 15m³/h and a maximum head of 410m
- Motor rating up to 7,5kW, 50Hz
- Incorporated jam free check valve, designed for low loss of head
- Coupling with 4"Nema standard for motor assembly
- Generously dimensioned intermedite bearings located at each stage of the pump
- High efficiency of pump and motor
- Very strong construction and excellent resistance to wear
- Rugged cable guard
- Great ease of dismantling and assembly

Pump and motor range

4"WPS®-CP pump range consists of three flow models: 2, 4 and 6 m³/h. The 4"WPS® pump range consists of five flow models: 1.5, 2.5, 4, 7 and 12m³/h. The pump-end is entirely made out of Stainless Steel DIN 1.4301, AISI 304 or 1.4401, AISI 316. Seals and bearings are standard constructed out of NBR rubber but are also available in Viton® for special applications.
4"WPS®-CP motors are in Stainless Steel DIN 1.4301, AISI 304 and available in three motor powers: 1100W, 1500W and 2000W.
4"WPS® motors are in Stainless Steel DIN 1.4301, AISI 304 or DIN 1.4401, AISI 316 and available in single phase from 0,37kW up to 2,2kW and in three phase from 0,37kW up to 7,5kW.

Construction of the pump

Impeller

1 6 contact points with the shaft
2 6 welding points on each vane
3 5 different shapes and 8 flows
4 Stainless steel sheet whith a minimum thickness of 1mm

Diffusor

5 Stainless steel sheet whith a minimum thickness of 1mm
6 Generously dimensioned intermediate bearing in NBR (or Viton®) at each pump stage
7 Neck ring in NBR (or Viton®) with reinforced stainless steel ring

Top Bearing

8 Water-lubricated upper bearing in NBR (or Viton®) for each pump

Shaft

9 Hexagonal shaft in stainless steel
10 Pin to ensure motor power up to 7,5kW
11 High-quality coupling made of full stainless steel shaf

Pipe connection

All 4"WPS®-CP pump types have a treaded pipe connection Rp1 ½".
The 4"WPS® pumps have a Rp1 ½" connection for the models 4"WPS® 1,5 (NE), 4"WPS® 2,5 (NE) and 4"WPS® 4 (NE). The 4"WPS® 7 (NE) and 4"WPS® 12 (NE) pumps have a Rp 2" outlet.

Pump identification code

Example 4"WPS® - CP 2 - 75

- 4" pump
- Stainless Steel Submersible Pump
- Constant Pressure Pumping System
- Rated flow (in m3/h)
- Head at rated flow (in m)

4"WPS® 7 - 13 N

- 4" pump
- Stainless Steel Submersible Pump
- Rated flow (in m3/h)
- Number of stages
- Material Code (standard, N or NE)

Pumped liquids

4"WPS® and 4"WPS®-CP pumps are designed for pumping thin, clean, non-aggressive and non-explosive liquids, not containing solid particles.
4"WPS® and 4"WPS®-CP pumps are suitable for pumping liquids with a content of sand up to 50 g/m³. A higher content of sand will shorten pump life.
The maximum fluid temperature is 30°C.

Operating condition

4"WPS® and 4"WPS®-CP pumps can be installed in horizontal or vertical position. The maximum pumped liquid temperature is limited to 30°C with a minimum flow over the motor of 8 cm/sec and this to ensure the cooling of the motor.

Curve Conditions

- Curve tolerances according to ISO 9906, Annex A.
- The performance curves show pump performance at actual speed of the standard motor range.
- The measurements were made with airless water at a temperature of 20°C and a kinematic viscosity of 1 mm2/s (1 cSt). For pumping liquids with a higher density than clear water, motors must be used with correspondingly higher outputs.
- Q/H: The curves are inclusive of valve and inlet losses at the actual speed.
- Power curve: P_2 shows pump input power at the actual speed for each individual pump size.
- Efficiency curve: η shows pump stage efficiency.

Service

The pump and motor are very easy to maintain and repair. The modular pump and motor design facilitates installation and service. The cable and the plug are fitted to the pump with screws which enables replacement.

Features and benefits for 4"WPS®-CP

Dry-running protection
4"WPS®-CP pumps are protected against dry running. The 4"WPS®-CP controller is equipped with a flow sensor that at all times measures the pumped flow. As soon as this flow drops under a minimum value (Qmin is about 0,1m³/h), the pump will be stopped. Simultaneously, also the absorbed power of the motor is measured. A minimum value of this power ensures cut-out of the pump. Both these measurements ensure in case of lack of water in the borehole, a shutdown of the pump and thus preventing a burnout of the motor.

High pump efficiency and Wear resistance
The 4"WPS®-CP pumps are entirely made of stainless steel and ensure a high efficiency meaning low energy consumption and therefore low energy costs.
Due to its stainless steel construction in combination with the high performance NBR seals and bearings, the 4"WPS®-CP pumps ensure high wear resistance to sand for long product life.

Excellent starting capabilities
The integrated electronic unit of the 4"WPS®-CP controller features soft starting. A soft start reduces the starting current and gives the pump a smooth and steady acceleration.
A soft starter minimizes the risk of wear of the pump and prevents overloading of the supply during start-up.
The high starting reliability also applies in case of low voltage supply.

Overvoltage and undervoltage protection
Overvoltage and undervoltage may occur in case of unstable voltage supply.
The 4"WPS®-CP pump will be cut out if voltage falls below 185V or rises above 260V. The motor will restart automatically when the voltage is reestablished within the permissible voltage range.
Therefore no extra protection relay is needed.

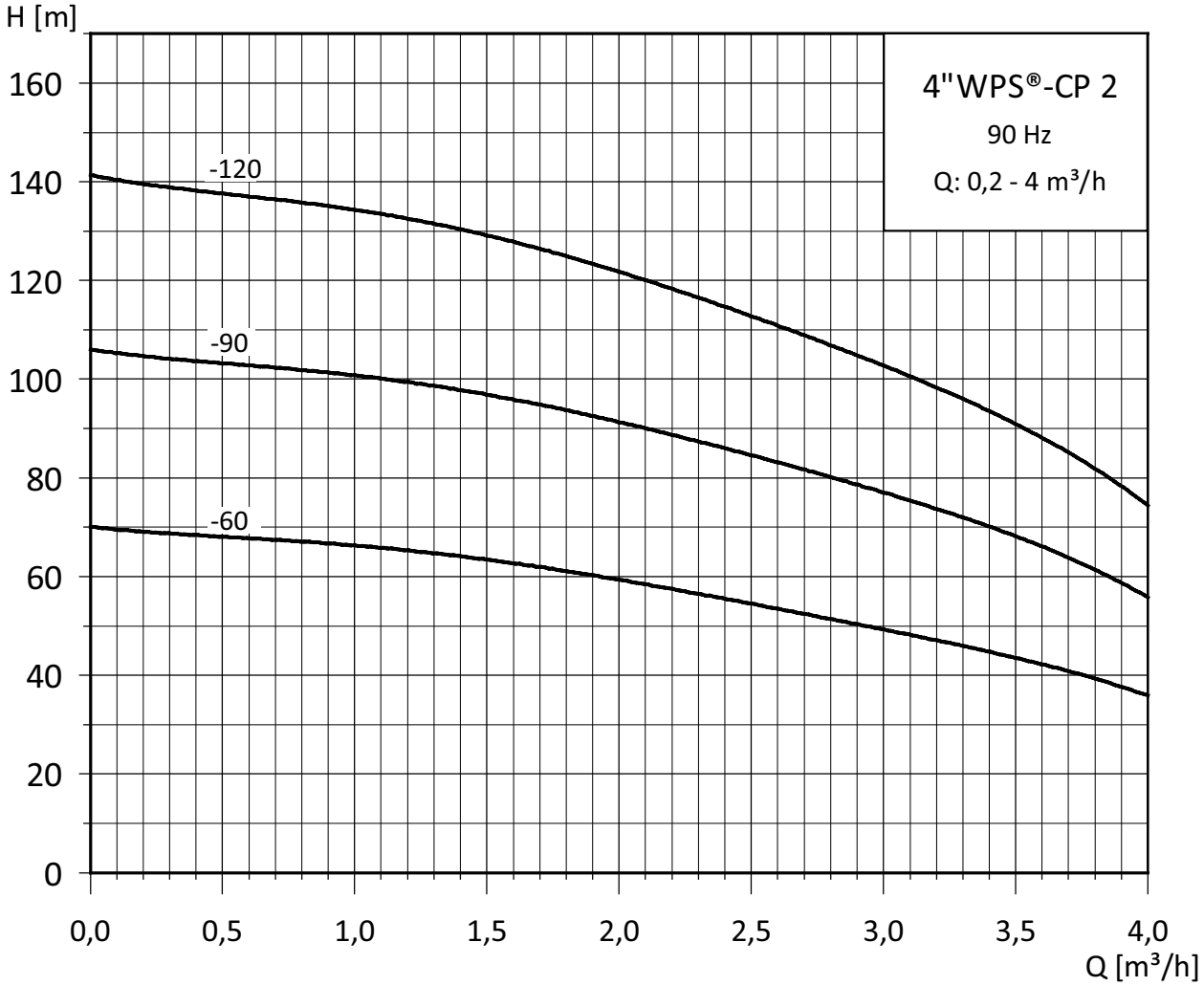
Overload protection
Exposure of the pump to heavy load causes the current consumption to rise. When the maximum allowed current is exceeded, the pump will be stopped.
Also a locked rotor will automatically be detected and the power supply cut out. Consequently, no extra motor protection is needed.

Overtemperature protection
The electronic unit of the 4"WPS®-CP controller has a built-in temperature sensor.
The 4"WPS®-CP controller will cut out the pump when the temperature of the fluid rises over its limit of 55°C.
The error code 'Inverter Error' will be mentioned on the display of the controller. When the temperature has dropped to 45°C, the motor is automatically restarted.

Variable speed
The 4"WPS®-CP controller enables continuously variable speed control within the 3000 and 5350 rpm. The pump can operate in any duty point in the range between the 3000 and 5350 rpm performance curves of the pump. Consequently, the pump performance can be adapted to any specific requirement.
On the basis of a required head the speed of the motor is calculated.

Auxiliary contact for Second set-pressure or Remote on/off switch
The 4"WPS-CP controller is standard equipped with an auxiliary contact that can be activated by changing a specific parameter in the programming of the 4"WPS®-CP controller. The auxiliary contact can be used as a remote on/off switch (f.e. only run the pump when the irrigation is running, extra protection of the pump against dry running in a tank or cistern with a float switch, …) or to create a second constant pressure level (f.e. higher pressure level when the irrigation system runs, lower pressure level to back-wash a water treatment system, …)

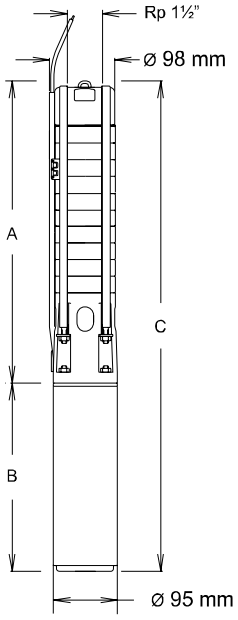
Performance Curves 4”WPS®-CP 2



Selection Chart 4”WPS®-CP 2

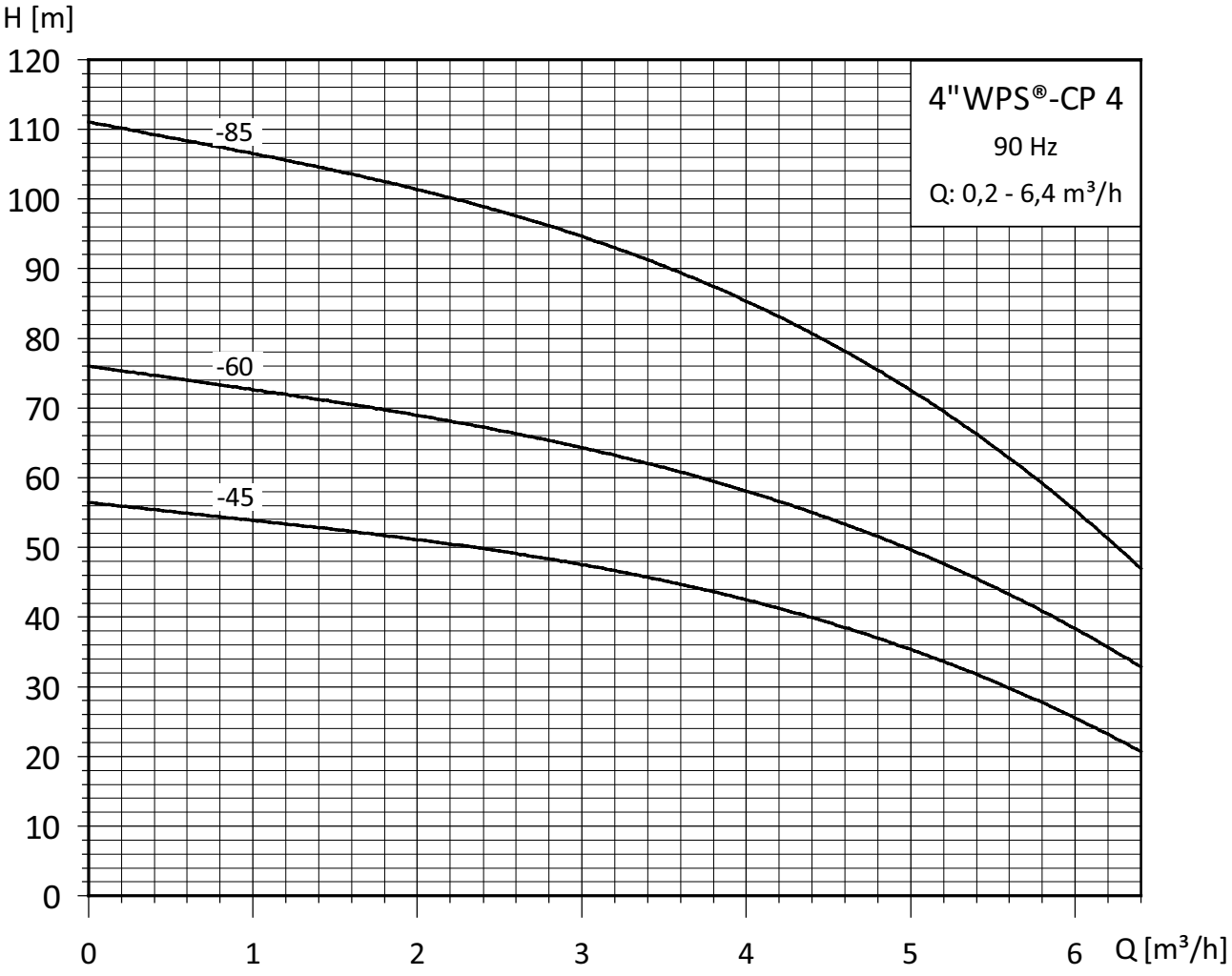
Pump Type	Flow [m³/h]					Max. Head [m]	Full load current	
	1	1,5	2	2,5	3	at 0 m³/h	Motor [A]	Supply [A]
4"WPS®-CP 2-60	67	63	59	55	49	70	4,8	8,3
4"WPS®-CP 2-90	101	98	92	84	77	107	7,1	12,3
4"WPS®-CP 2-120	134	129	122	113	103	142	9,3	16,1

Dimensions and Weights 4”WPS®-CP 2



Pump Type	Pump Power P_2		A	B	C	Weight [kg]	
	[kW]	[HP]	[mm]	[mm]	[mm]	Pump End	Electropump
4"WPS®-CP 2-60	1,1	1,5	300	295	595	3,2	14,1
4"WPS®-CP 2-90	1,5	2	349	340	689	3,8	15,2
4"WPS®-CP 2-120	2,0	2,7	397	375	772	4,4	18,6

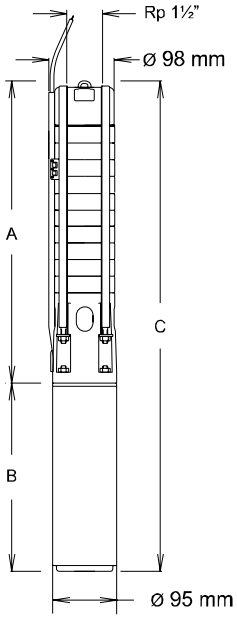
Performance Curves 4”WPS®-CP 4



Selection Chart 4”WPS®-CP 4

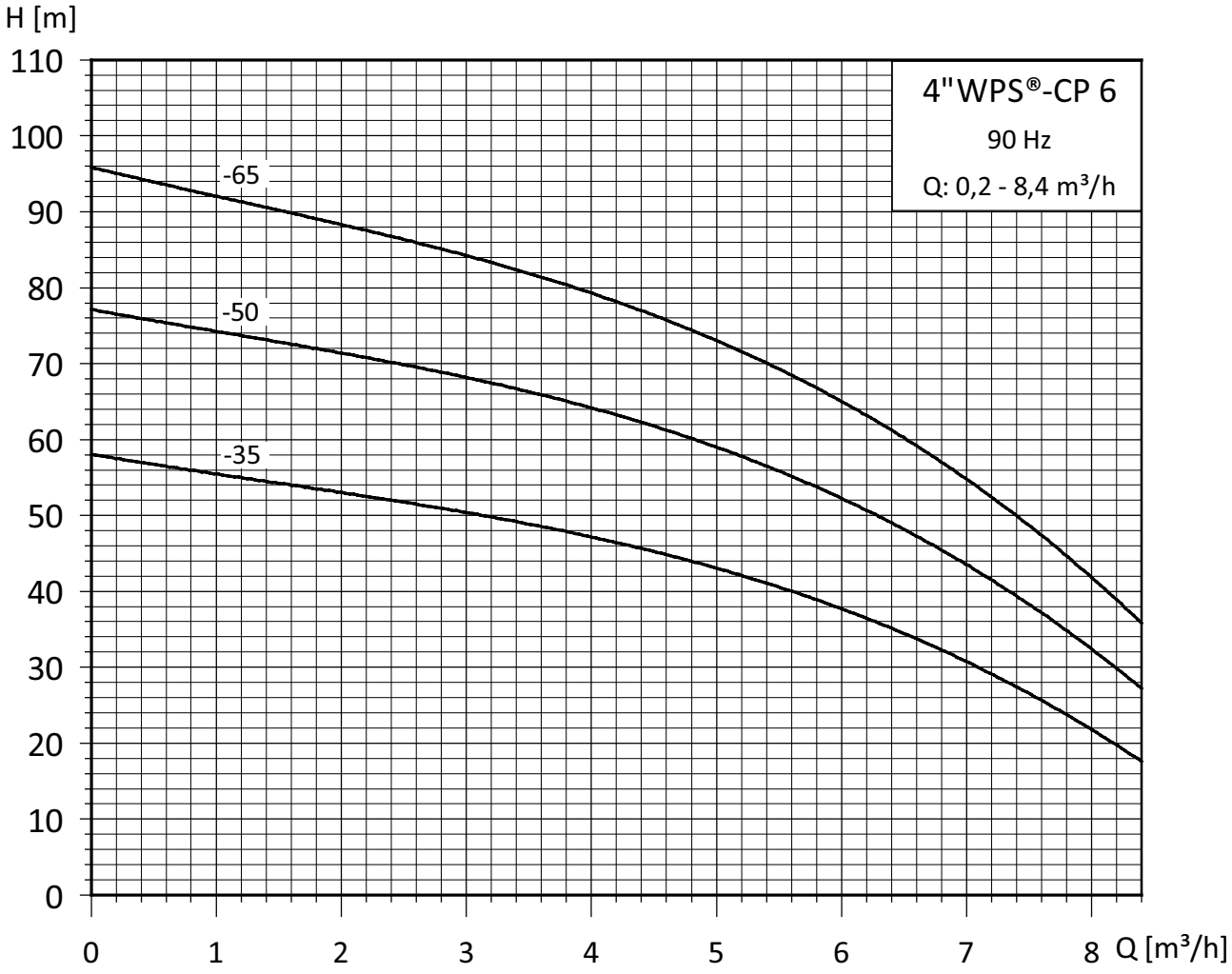
Pump Type	Flow [m³/h]					Max. Head [m]	Full load current	
	2	3	4	5	6	at 0 m³/h	Motor [A]	Supply [A]
4"WPS®-CP 4-45	51	47	43	35	25	56	4,8	8,3
4"WPS®-CP 4-60	69	64	58	50	38	76	7,1	12,3
4"WPS®-CP 4-85	101	95	85	72	55	111	9,3	16,1

Dimensions and Weights 4”WPS®-CP 4



Pump Type	Pump Power P_2		A	B	C	Weight [kg]	
	[kW]	[HP]	[mm]	[mm]	[mm]	Pump End	Electropump
4"WPS®-CP 4-45	1,1	1,5	276	295	571	2,9	13,8
4"WPS®-CP 4-60	1,5	2	300	340	640	3,2	14,6
4"WPS®-CP 4-85	2,0	2,7	349	375	724	3,9	18,1

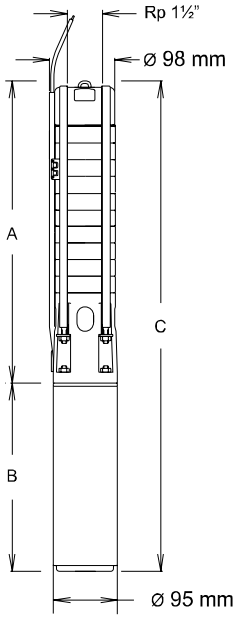
Performance Curves 4”WPS®-CP 6



Selection Chart 4”WPS®-CP 6

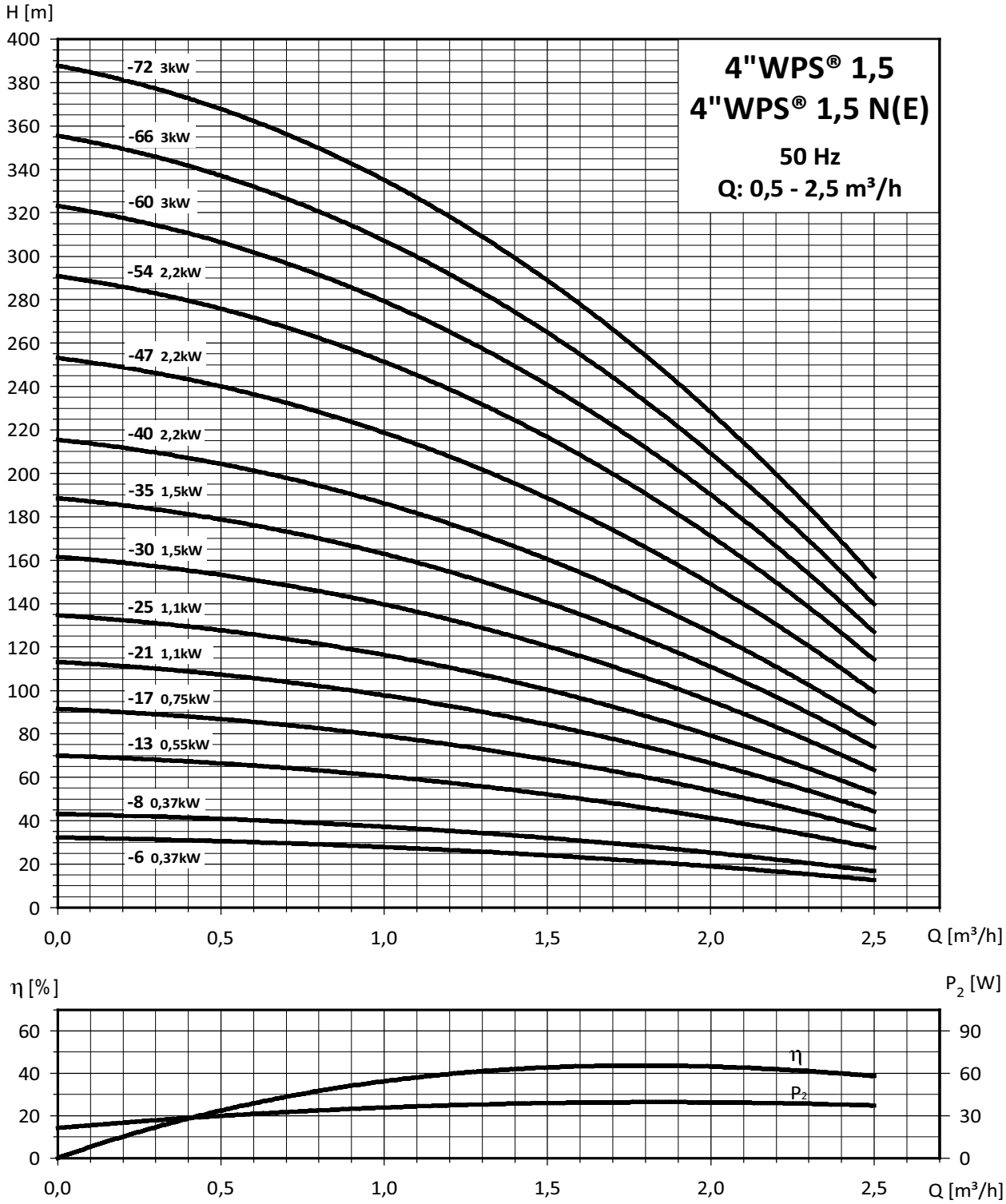
Pump Type	Flow [m³/h]					Max. Head [m]	Full load current	
	2	4	5	6	7	at 0 m³/h	Motor [A]	Supply [A]
4"WPS®-CP 6-35	53	47	43	37	31	58	4,8	8,3
4"WPS®-CP 6-50	71	64	59	52	43	77	7,1	12,3
4"WPS®-CP 6-65	88	79	73	65	54	96	9,3	16,1

Dimensions and Weights 4”WPS®-CP 6



Pump Type	Pump Power P_2		A	B	C	Weight [kg]	
	[kW]	[HP]	[mm]	[mm]	[mm]	Pump End	Electropump
4"WPS®-CP 6-35	1,1	1,5	276	295	571	2,9	13,8
4"WPS®-CP 6-50	1,5	2	300	340	640	3,2	14,6
4"WPS®-CP 6-65	2,0	2,7	325	375	700	3,6	17,8

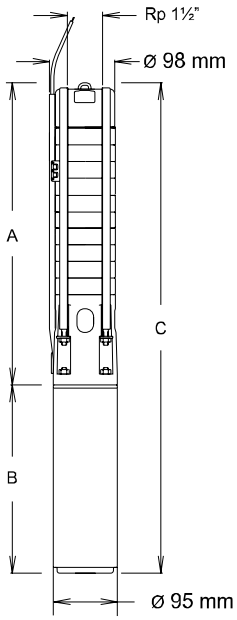
Performance Curves 4”WPS® 1,5, 4”WPS® 1,5 N(E)



Selection Chart 4”WPS® 1,5, 4”WPS® 1,5 N(E)

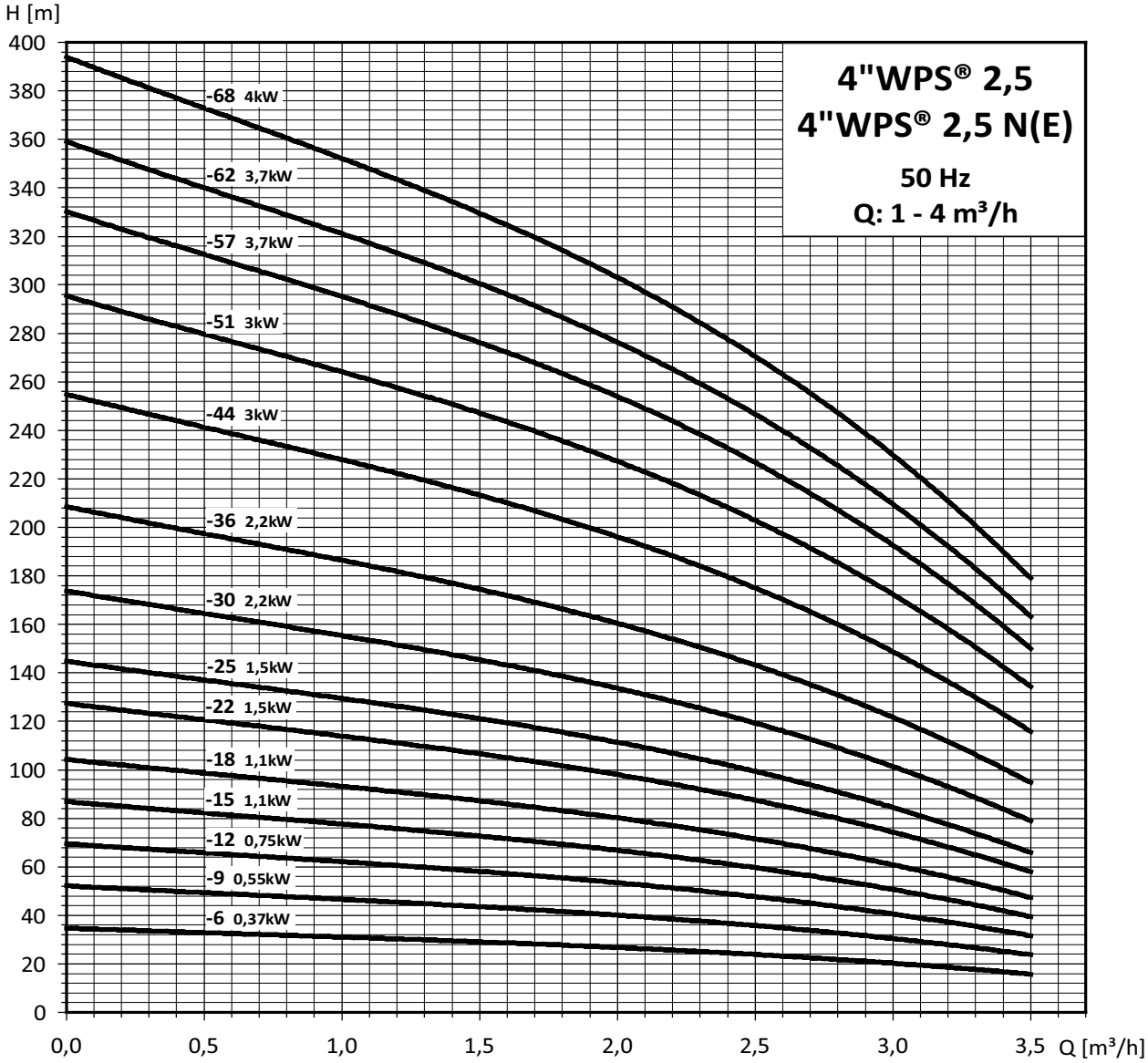
Pump Type	Flow [m³/h]					Max. Head [m]	Full load current	
	0,5	1	1,5	2	2,5	at 0 m³/h	1x230V	3x400V
4"WPS®1,5-6	31	28	24	19	12	32	3,2	0,9
4"WPS®1,5-8	41	37	32	25	16	43	3,6	1,1
4"WPS®1,5-13	66	60	52	40	26	70	5,7	1,5
4"WPS®1,5-17	86	79	68	52	34	91	6,9	2
4"WPS®1,5-21	107	97	83	65	42	113	8	2,8
4"WPS®1,5-25	127	116	99	77	50	134	8,9	3
4"WPS®1,5-30	153	139	119	93	60	161	9,5	3,3
4"WPS®1,5-35	178	162	139	108	70	188	11,1	3,8
4"WPS®1,5-40	203	185	159	123	81	215	12,1	5,1
4"WPS®1,5-47	239	217	187	145	95	253	14,5	5,4
4"WPS®1,5-54	275	250	215	167	109	290	15,9	5,6
4"WPS®1,5-60	305	278	238	185	121	323		6,8
4"WPS®1,5-66	336	305	262	204	133	355		7,2
4"WPS®1,5-72	366	333	286	222	145	387		7,5

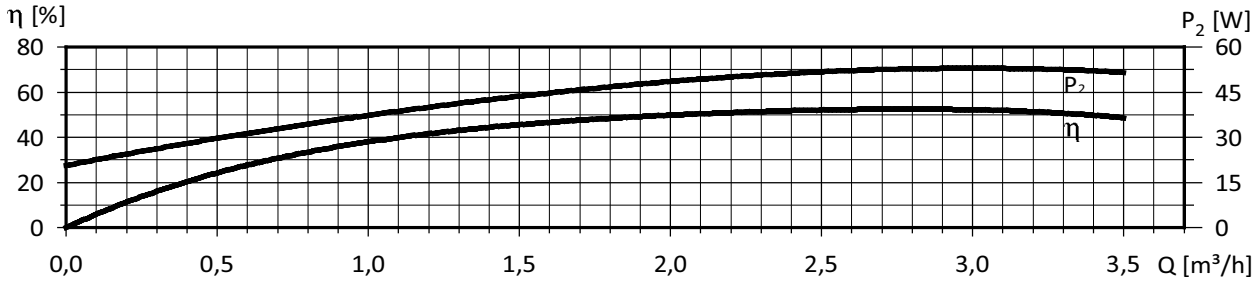
Dimensions and Weights 4”WPS® 1,5, 4”WPS® 1,5 N(E)



Pump Type	Pump Power P_2		A	B	C	Weight [kg]	
	[kW]	[HP]	[mm]	[mm]	[mm]	Pump End	Electropump
4"WPS® 1,5-6	0,37	0,5	349	223	572	3,8	11,1
4"WPS® 1,5-8	0,37	0,5	397	223	620	4,4	11,7
4"WPS® 1,5-13	0,55	0,75	517	242	759	6,0	14,3
4"WPS® 1,5-17	0,75	1	623	271	894	7,4	17,0
4"WPS® 1,5-21	1,1	1,5	711	299	1010	8,7	19,5
4"WPS® 1,5-25	1,1	1,5	807	299	1106	10,0	20,8
4"WPS® 1,5-30	1,5	2	928	327	1255	11,6	23,7
4"WPS® 1,5-35	1,5	2	1048	327	1375	13,3	25,4
4"WPS® 1,5-40	2,2	3	1169	356	1525	14,6	28,1
4"WPS® 1,5-47	2,2	3	1338	356	1694	16,9	29,5
4"WPS® 1,5-54	2,2	3	1506	356	1862	19,1	32,6
4"WPS® 1,5-60	3	4	1651	423	2074	21,0	37,0
4"WPS® 1,5-66	3	4	1796	423	2219	22,9	38,9
4"WPS® 1,5-72	3	4	1941	423	2364	24,9	40,9

Performance Curves 4”WPS® 2,5, 4”WPS® 2,5 N(E)

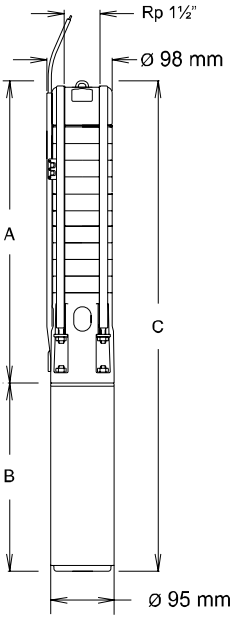




Selection Chart 4”WPS® 2,5, 4”WPS® 2,5 N(E)

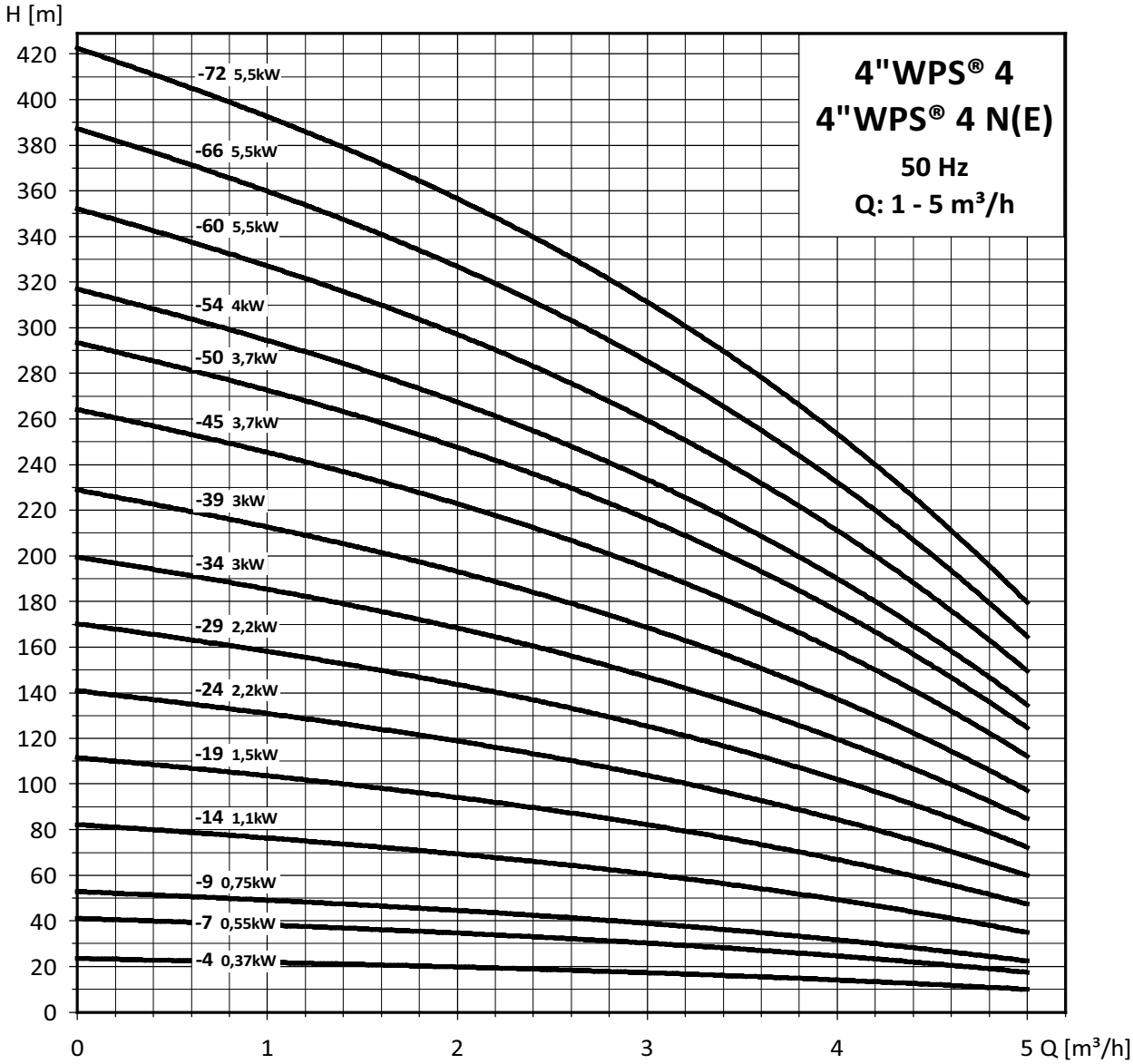
Pump Type	Flow [m³/h]							Max. Head [m]	Full load current [A]	
	0,5	1	1,5	2	2,5	3	3,5	at 0 m³/h	1x230V	3x400V
4"WPS® 2,5-6	33	31	29	26	24	20	15	35	3,6	1,1
4"WPS® 2,5-9	49	46	43	40	36	30	23	52	5,7	1,5
4"WPS® 2,5 -12	65	62	58	53	47	40	30	69	6,9	2
4"WPS® 2,5-15	82	77	72	66	59	50	38	86	8,7	2,9
4"WPS® 2,5-18	98	93	87	79	71	60	45	104	8,9	3
4"WPS® 2,5-22	120	114	106	97	87	73	55	127	8,9	3,6
4"WPS® 2,5-25	136	129	121	110	99	83	63	144	9,8	3,8
4"WPS® 2,5-30	164	155	145	132	119	100	75	173	11,1	5,2
4"WPS® 2,5-36	196	186	174	159	142	120	90	207	12,5	5,6
4"WPS® 2,5-44	240	227	212	194	174	146	110	253	15,9	7
4"WPS® 2,5-51	278	263	246	225	202	170	128	293		7,2
4"WPS® 2,5-57	311	294	275	251	225	189	143	328		8,8
4"WPS® 2,5-62	338	320	299	274	245	206	155	357		9,1
4"WPS® 2,5-68	371	351	328	300	269	226	170	391		10

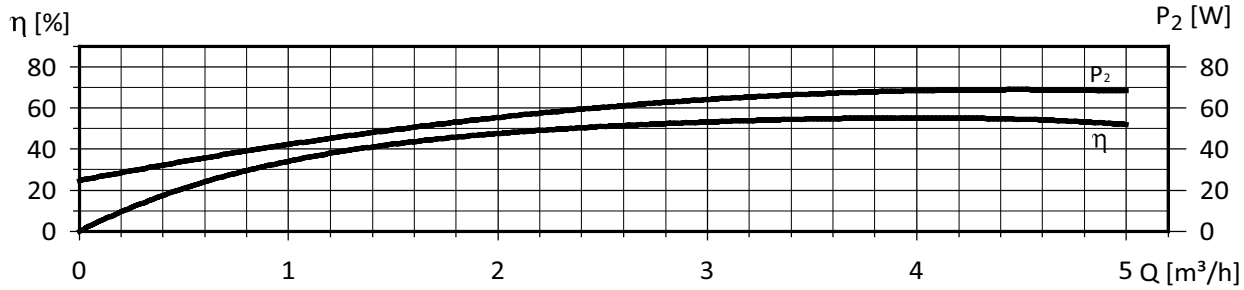
Dimensions and Weights 4”WPS® 2,5, 4”WPS® 2,5 N(E)



Pump Type	Pump Power P_2		A	B	C	Weight [kg]	
	[kW]	[HP]	[mm]	[mm]	[mm]	Pump End	Electropump
4"WPS® 2,5-6	0,37	0,5	349	223	572	3,8	11,1
4"WPS® 2,5-9	0,55	0,75	421	242	663	4,8	13,1
4"WPS® 2,5 -12	0,75	1	493	271	764	5,8	15,4
4"WPS® 2,5-15	1,1	1,5	566	299	865	6,3	17,1
4"WPS® 2,5-18	1,1	1,5	638	299	937	7,7	18,5
4"WPS® 2,5-22	1,5	2	734	327	1061	9,0	21,1
4"WPS® 2,5-25	1,5	2	807	327	1134	10,0	22,1
4"WPS® 2,5-30	2,2	3	928	356	1284	11,6	25,1
4"WPS® 2,5-36	2,2	3	1072	356	1428	13,7	27,2
4"WPS® 2,5-44	3	4	1265	423	1688	16,3	32,3
4"WPS® 2,5-51	3	4	1434	423	1857	18,7	34,7
4"WPS® 2,5-57	3,7	5	1579	545	2124	20,6	41,5
4"WPS® 2,5-62	3,7	5	1699	545	2244	22,3	43,2
4"WPS® 2,5-68	4	5,5	1844	583	2427	24,2	48,3

Performance Curves 4”WPS® 4, 4”WPS® 4 N(E)

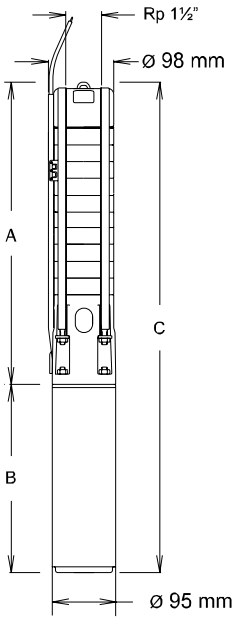




Selection Chart 4”WPS® 4, 4”WPS® 4 N(E)

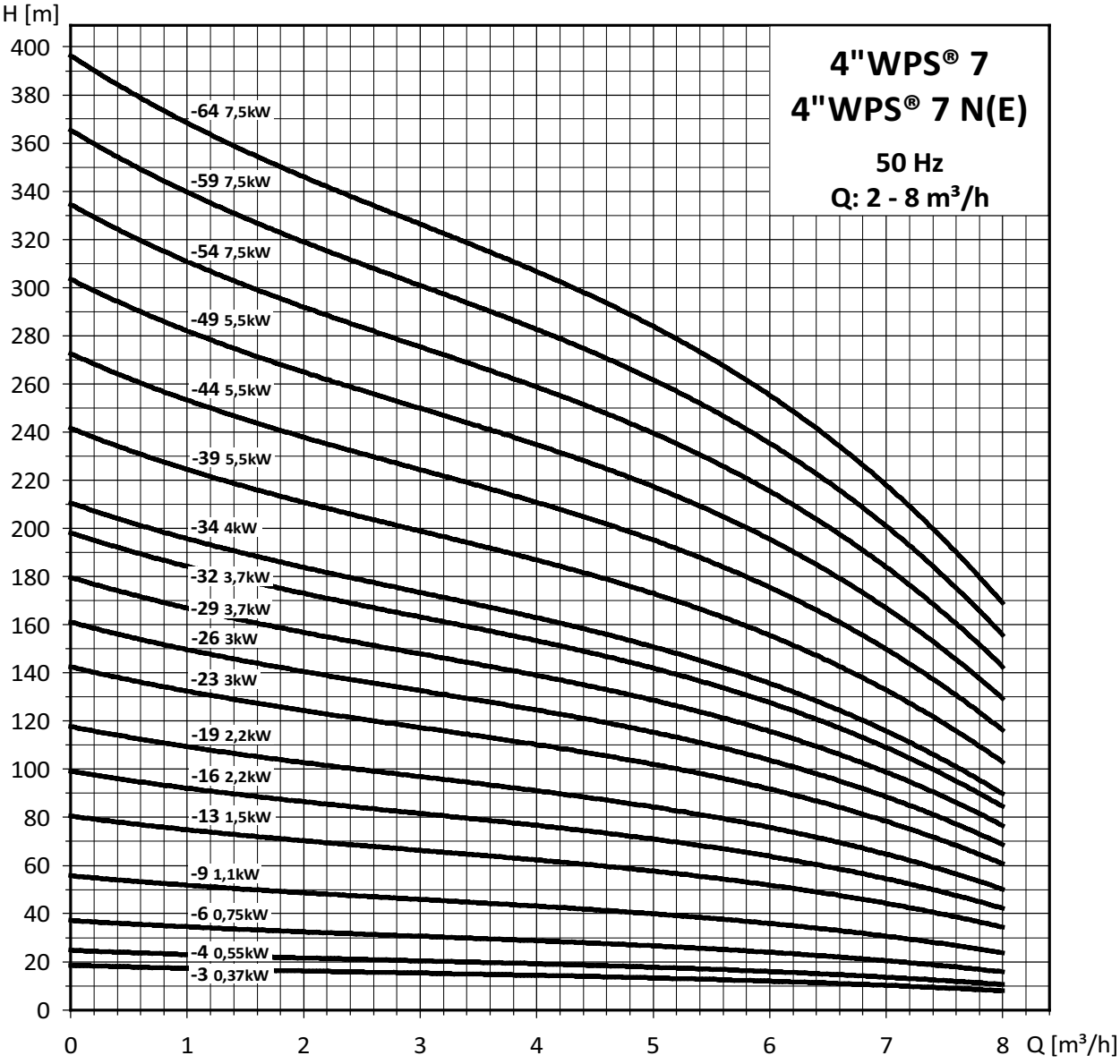
Pump Type	Flow [m³/h]								Max. Head [m]	Full load current	
	1	2	2,5	3	3,5	4	4,5	5	at 0 m³/h	1x230V	3x400V
4"WPS® 4-4	22	20	19	17	16	14	12	10	23	3,6	1,1
4"WPS® 4-7	38	35	33	30	27	24	21	17	41	5,7	1,5
4"WPS® 4-9	49	45	42	39	35	31	27	22	53	6,9	2
4"WPS® 4-14	76	69	65	60	55	48	42	33	82	8,9	3
4"WPS® 4-19	103	94	88	82	74	65	56	45	111	11,1	3,8
4"WPS® 4-24	130	119	112	103	94	83	71	57	141	12,8	5,3
4"WPS® 4-29	157	143	135	125	114	100	86	69	170	15,9	5,6
4"WPS® 4-34	185	168	158	146	133	117	101	81	199		7
4"WPS® 4-39	212	193	181	168	153	134	116	93	229		7,2
4"WPS® 4-45	244	223	209	194	176	155	134	108	264		8,8
4"WPS® 4-50	272	247	233	215	196	172	149	119	293		9,1
4"WPS® 4-54	293	267	251	233	212	186	161	129	317		10
4"WPS® 4-60	326	297	279	258	235	207	178	143	352		11,5
4"WPS® 4-66	358	326	307	284	259	227	196	158	387		12,5
4"WPS® 4-72	391	356	335	310	282	248	214	172	422		13,2

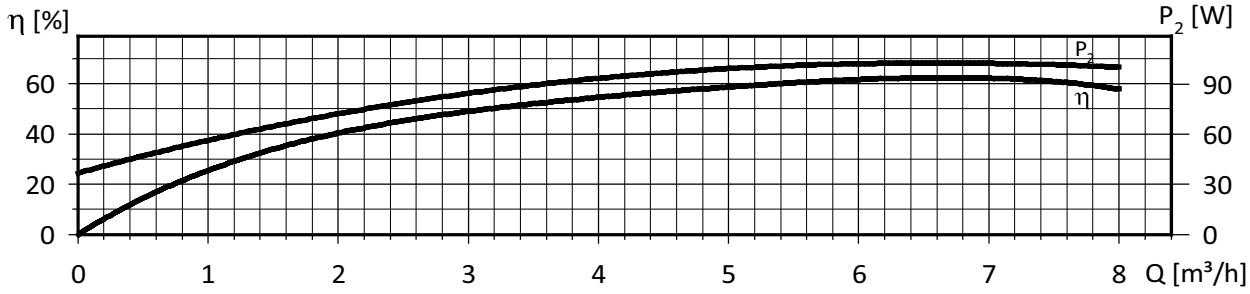
Dimensions and Weights 4”WPS® 4, 4”WPS® 4 N(E)



Pump Type	Pump Power P_2		A	B	C	Weight [kg]	
	[kW]	[HP]	[mm]	[mm]	[mm]	Pump End	Electropump
4"WPS® 4-4	0,37	0,5	300	223	523	3,2	10,5
4"WPS® 4-7	0,55	0,75	373	242	615	4,2	12,5
4"WPS® 4-9	0,75	1	421	271	692	4,9	14,5
4"WPS® 4-14	1,1	1,5	542	299	841	6,6	17,4
4"WPS® 4-19	1,5	2	662	327	989	8,3	20,4
4"WPS® 4-24	2,2	3	783	356	1139	10,0	23,5
4"WPS® 4-29	2,2	3	903	356	1259	11,7	25,2
4"WPS® 4-34	3,0	4	1024	423	1447	13,4	29,4
4"WPS® 4-39	3	4	1145	423	1568	15,1	31,1
4"WPS® 4-45	3,7	5	1289	545	1834	17,1	38,0
4"WPS® 4-50	3,7	5	1410	545	1955	18,8	39,7
4"WPS® 4-54	4	5,5	1506	583	2089	20,2	44,3
4"WPS® 4-60	5,5	7,5	1651	698	2349	22,2	51,6
4"WPS® 4-66	5,5	7,5	1796	698	2494	24,3	53,7
4"WPS® 4-72	5,5	7,5	1941	698	2639	26,3	55,7

Performance Curves 4”WPS® 7, 4”WPS® 7 N(E)

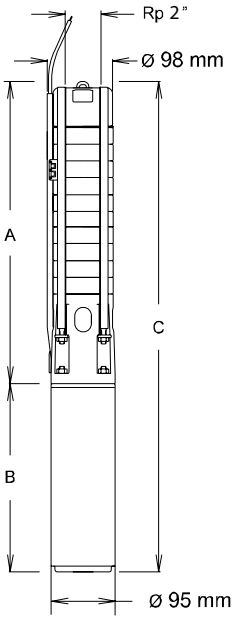




Selection Chart 4”WPS® 7, 4”WPS® 7 N(E)

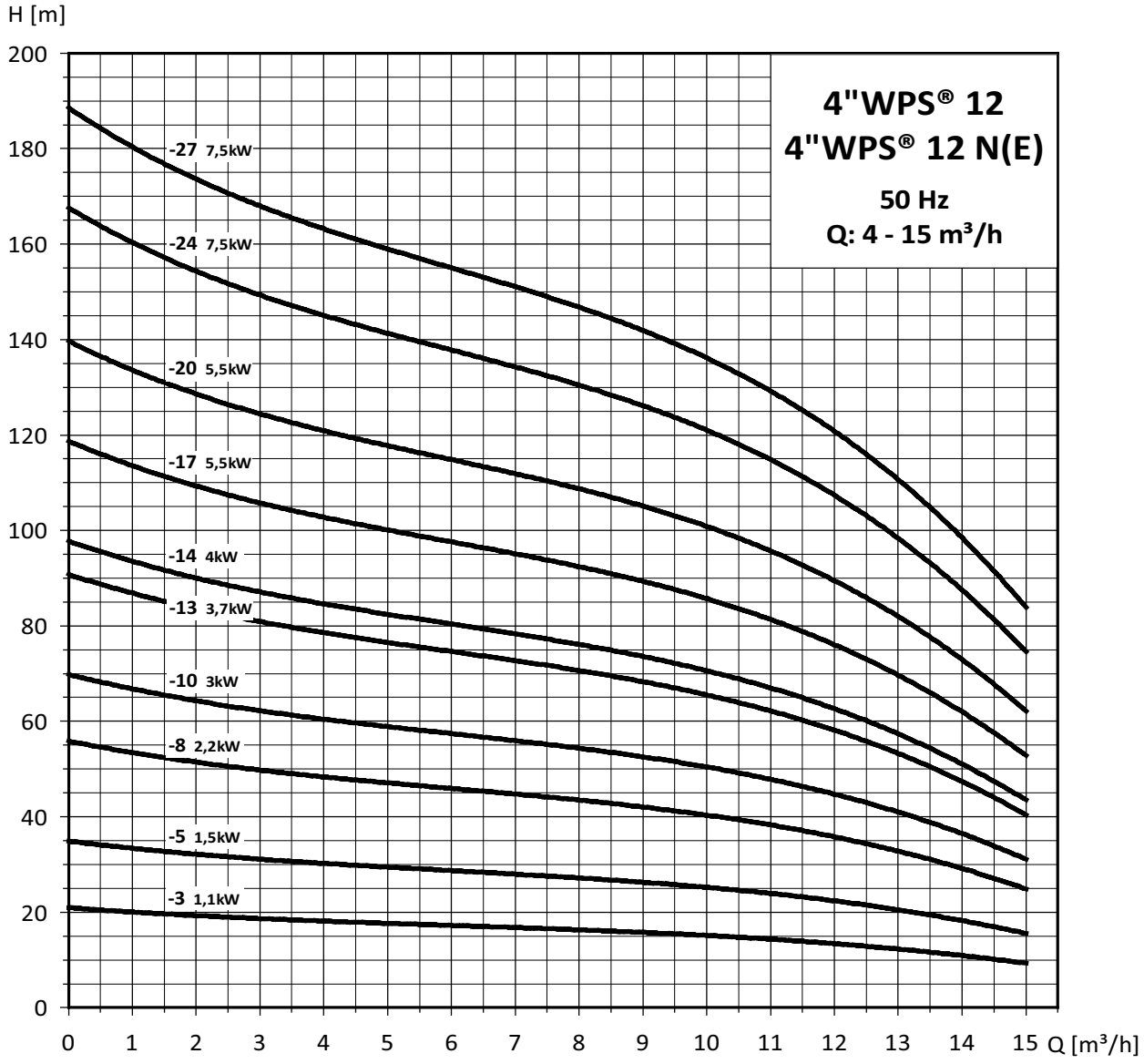
Pump Type	Flow [m³/h]								Max. Head [m]	Full load current	
	1	2	3	4	5	6	7	8	at 0 m³/h	1x230V	3x400V
4"WPS® 7-3	17	16	15	14	13	12	10	8	19	3,6	1,1
4"WPS® 7-4	23	22	20	19	18	16	14	10	25	5,7	1,5
4"WPS® 7-6	35	33	30	28	26	24	21	15	37	6,9	2
4"WPS® 7-9	52	49	46	43	39	36	31	23	56	8,9	3
4"WPS® 7-13	75	70	66	62	57	52	45	33	80	11,1	3,8
4"WPS® 7-16	93	87	81	76	70	64	55	41	99	12,8	5,2
4"WPS® 7-19	110	103	96	90	83	76	66	49	117	15,9	5,6
4"WPS® 7-23	133	125	117	109	101	92	69	59	142		6,6
4"WPS® 7-26	150	141	132	123	114	104	90	67	160		7,2
4"WPS® 7-29	168	157	147	137	127	116	100	74	179		8,3
4"WPS® 7-32	185	174	163	152	140	128	111	82	198		9,1
4"WPS® 7-34	197	184	173	161	149	136	117	87	210		10
4"WPS® 7-39	225	211	198	185	171	156	135	100	241		11,5
4"WPS® 7-44	254	239	223	208	193	176	152	113	272		12,5
4"WPS® 7-49	283	266	249	232	214	196	169	126	302		13,2
4"WPS® 7-54	312	293	274	256	236	216	186	138	333		17,5
4"WPS® 7-59	341	320	300	279	258	236	204	151	364		18,3
4"WPS® 7-64	370	347	325	303	280	256	221	164	395		19,1

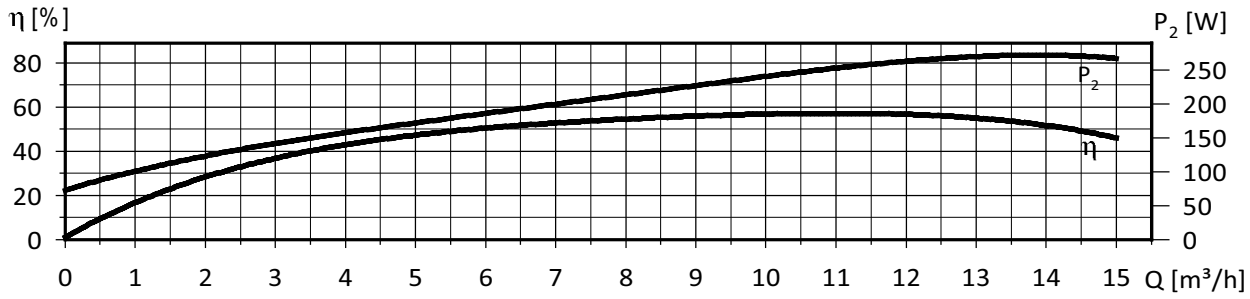
Dimensions and Weights 4”WPS® 7, 4”WPS® 7 N(E)



Pump Type	Pump Power P_2		A	B	C	Weight [kg]	
	[kW]	[HP]	[mm]	[mm]	[mm]	Pump End	Electropump
4"WPS® 7-3	0,37	0,5	276	223	500	2,9	10,2
4"WPS® 7-4	0,55	0,75	300	242	542	3,2	11,5
4"WPS® 7-6	0,75	1	349	271	620	3,9	13,5
4"WPS® 7-9	1,1	1,5	421	299	720	5,0	15,8
4"WPS® 7-13	1,5	2	517	327	844	6,4	18,5
4"WPS® 7-16	2,2	3	590	356	946	7,5	21,0
4"WPS® 7-19	2,2	3	662	356	1118	8,5	22,0
4"WPS® 7-23	3	4	759	423	1182	9,9	25,9
4"WPS® 7-26	3	4	831	423	1254	11,0	27,0
4"WPS® 7-29	3,7	5	903	545	1448	12,1	33,0
4"WPS® 7-32	3,7	5	976	545	1521	13,1	34,0
4"WPS® 7-34	4	5,5	1024	583	1607	13,8	37,9
4"WPS® 7-39	5,5	7,5	1145	698	1843	15,6	45,0
4"WPS® 7-44	5,5	7,5	1266	698	1964	17,4	46,8
4"WPS® 7-49	5,5	7,5	1386	698	2084	19,2	48,6
4"WPS® 7-54	7,5	10	1506	774	2280	20,9	53,9
4"WPS® 7-59	7,5	10	1628	774	2402	22,7	55,7
4"WPS® 7-64	7,5	10	1748	774	2522	24,5	59,5

Performance Curves 4”WPS® 12, 4”WPS® 12 N(E)

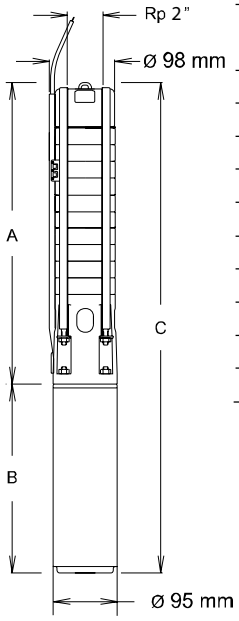




Selection Chart 4”WPS® 12, 4”WPS® 12 N(E)

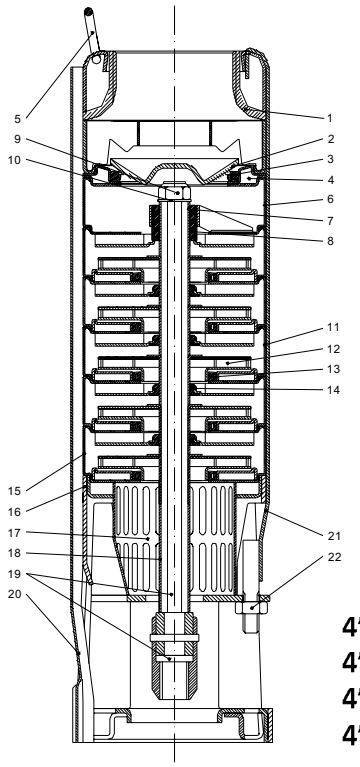
Pump Type	Flow [m³/h]								Max. Head [m]	Full load current	
	2,0	4,0	6,0	8,0	10,0	12,0	14,0	15,0	at 0 m³/h	1x230V	3x400V
4"WPS® 12-3	20	18	17	16	15	13	11	9	21	8,9	3
4"WPS® 12-5	33	30	28	27	25	22	18	14	34	11,1	3,8
4"WPS® 12-8	52	48	45	43	40	36	28	23	55	15,9	5,6
4"WPS® 12-10	65	60	56	53	50	44	36	29	69		7,2
4"WPS® 12-13	85	78	73	69	65	58	46	38	90		9,1
4"WPS® 12-14	91	85	79	75	70	62	50	40	96		10
4"WPS® 12-17	111	103	96	91	85	76	60	49	117		12,5
4"WPS® 12-20	130	121	113	107	100	89	71	58	138		13,2
4"WPS® 12-24	156	145	135	128	120	107	85	69	165		18,3
4"WPS® 12-27	176	163	152	144	135	120	97	78	186		19,1

Dimensions and Weights 4”WPS® 12, 4”WPS® 12 N(E)

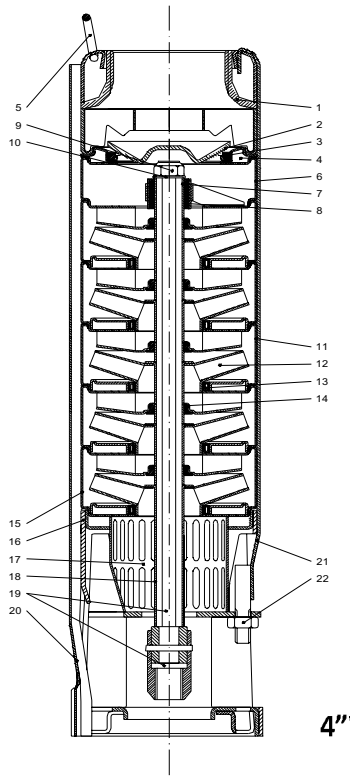


Pump Type	Pump power P_2		A	B	C	Weight [kg]	
	[kW]	[HP]	[mm]	[mm]	[mm]	Pump End	Electropump
4"WPS® 12-3	1,1	1,5	327	299	626	3,1	13,9
4"WPS® 12-5	1,5	2	405	327	732	3,9	16,0
4"WPS® 12-8	2,2	3	522	356	878	5,2	18,7
4"WPS® 12-10	3	4	600	423	1023	6,1	22,1
4"WPS® 12-13	3,7	5	717	545	1265	7,4	28,4
4"WPS® 12-14	4	5,5	756	583	1339	7,8	29,6
4"WPS® 12-17	5,5	7,5	873	698	1571	9,1	36,4
4"WPS® 12-20	5,5	7,5	990	698	1688	10,4	37,7
4"WPS® 12-24	7,5	10	1146	774	1920	12,1	44,1
4"WPS® 12-27	7,5	10	1263	774	2037	13,4	45,4

Material specification



4”WPS® 1,5
4”WPS® 2,5
4”WPS® 4
4”WPS® 7



4”WPS® 12

Pos.	Component	Material	4"WPS Material Code	4"WPS N Material Code	4"WPS NE Material Code
1	Discharge Chamber	Stainless Steel	AISI 304 - 1.4301	AISI 316 - 1.4401	AISI 316 - 1.4401
2	Valve Cone	Stainless Steel	AISI 304 - 1.4301	AISI 316 - 1.4401	AISI 316 - 1.4401
3	Valve Seat	Stainless Steel/Rubber	AISI 316 -1.4401 / NBR	AISI 316 -1.4401 / NBR	AISI 316 -1.4401 / FKM
4	Retainer for Valve Seat	Stainless Steel	AISI 304 - 1.4301	AISI 316 - 1.4401	AISI 316 - 1.4401
5	Hook	Stainless Steel	AISI 304 - 1.4301	AISI 316 - 1.4401	AISI 316 - 1.4401
6	Top Diffusor	Stainless Steel	AISI 304 - 1.4301	AISI 316 - 1.4401	AISI 316 - 1.4401
7	Top Spacer	Stainless Steel	AISI 304 - 1.4301	AISI 316 - 1.4401	AISI 316 - 1.4401
8	Top Bearing	Stainless Steel/Rubber	AISI 316 -1.4401 / NBR	AISI 316 -1.4401 / NBR	AISI 316 -1.4401 / FKM
9	Nut M8	Stainless Steel	AISI 316-1.4401	AISI 316 - 1.4401	AISI 316 - 1.4401
10	Washer	Stainless Steel	AISI 304 - 1.4301	AISI 316 - 1.4401	AISI 316 - 1.4401
11	Diffusor	Stainless Steel	AISI 304 - 1.4301	AISI 316 - 1.4401	AISI 316 - 1.4401
12	Impeller	Stainless Steel	AISI 304 - 1.4301	AISI 316 - 1.4401	AISI 316 - 1.4401
13	Neck Ring	Stainless Steel/Rubber	AISI 316 -1.4401 / NBR	AISI 316 -1.4401 / NBR	AISI 316 -1.4401 / FKM
14	Indermediate Bearing	Rubber	NBR	NBR	FKM
15	Bottom Diffusor	Stainless Steel	AISI 304 - 1.4301	AISI 316 - 1.4401	AISI 316 - 1.4401
16	Suction Interconnector	Stainless Steel	AISI 304 - 1.4301	AISI 316 - 1.4401	AISI 316 - 1.4401
17	Strainer	Stainless Steel	AISI 304 - 1.4301	AISI 316 - 1.4401	AISI 316 - 1.4401
18	Bottom Spacer	Stainless Steel	AISI 304 - 1.4301	AISI 316 - 1.4401	AISI 316 - 1.4401
19	Shaft with NEMA coupling	Stainless Steel	AISI 304 - 1.4301	AISI 316 - 1.4401	AISI 316 - 1.4401
20	Cable Guard	Stainless Steel	AISI 304 - 1.4301	AISI 316 - 1.4401	AISI 316 - 1.4401
21	Strap	Stainless Steel	AISI 304 - 1.4301	AISI 316 - 1.4401	AISI 316 - 1.4401
22	Nut M8-M10	Stainless Steel	AISI 316 - 1.4401	AISI 316 - 1.4401	AISI 316 - 1.4401

Cable selection for 4”WPS®-CP

Submersible drop cable to the motor
The table below shows the maximum length of the submersible drop cable between the controller and the motor for the different cable sizes and motor powers.
The cross-sections of the cable are calculated according to a 3% voltage drop (IEC 60364:2001).
The pump will cut out if the supply voltage falls below 185 V.

Motor size	4G1,5 mm²	4G2,5 mm²	4G4 mm²	4G6 mm²
1100 W	65 m	110 m	170 m*	260 m*
1500 W	45 m	75 m	120 m*	170 m*
2000 W	20 m	35 m	60 m	85 m

*extra filter required

In case the total length of the electrical power cable between controller and motor exceeds 120m, an extra filter to protect the motor from burning is required. See accessories.

Supply cable to the controller
In case you want a longer electrical cable, you must check the cable section following the table below.
Maximal cable length for specific cable sections:

Motor Power	1,5 mm²	2,,5 mm²	4 mm²	6 mm²
1100 W	50 m	80 m	130 m	190 m
1500 W	35 m	60 m	90 m	140 m
2000 W	25 m	45 m	70 m	100 m

Accessories

Submersible drop cable to the motor (drinking water quality)

4-core submersible cable including earth conductor (for three phase motor). This blue cable is approved for drinking water applications (KTW approval). When ordering please state length [m].

	Cross Section of leads	Reference
Submersible cable 4G2.5	2.5 mm²	003505
Submersible cable 4G4	4 mm²	003506
Submersible cable 4G6	6 mm²	003507

3-core submersible cable including earth conductor (for single phase motor). This blue cable is approved for drinking water applications (KTW approval). When ordering please state length [m].

Description	Cross Section of leads	Reference
Submersible cable 3G2.5	2.5 mm²	003535
Submersible cable 3G4	4 mm²	003536
Submersible cable 3G6	6 mm²	003537

Submersible cable joint kit

For watertight shrink-joining of motor cable and submersible drop cable (round or flat cable). The joint is ready for use after a few minutes and requires no long hardening time as do resin joints.

Description	Cross Section of leads	Reference
Submersible cable joint kit 1,5-2,5	1.5 – 2.5 mm²	001042
Cable joint 1,5–2,5mm² fitted to the drop cable	1.5 – 2.5 mm²	001059
Submersible cable joint kit 4-6	4 – 6 mm²	001043
Cable joint 4–6mm² fitted to the drop cable	4 – 6 mm²	001060

Straining Wire

The stainless steel wire retains the submersible pump. Special openings are made in the discharge chamber to fix the wire to the pump. When ordering please state the requested length [m].

Material	Diameter	Reference
Stainless steel DIN W.-Nr. 1.4401, AISI 316	Ø 3mm	001098

Wire clamps

Two units are needed per loop. This means per installation 4 wire clamps are recommended.

Material	Diameter	Reference
Stainless steel DIN W.-Nr. 1.4401, AISI 316	Ø 3mm	001099

Filters (only for 4"WPS®-CP)

1. Motor side (only for 4"WPS®-CP): When the drop cable between the controller and the pump exceeds more than 120m, an extra filter to protect the motor from burning is required.

Description	Max. Cable length	Reference
WPS® 200MF Filter	200 m	001007
WPS® 400MF Filter	400 m	001008

2. Supply side (only for 4"WPS®-CP pumps) : Radio frequency interference is the radiation or conduction of radio frequency energy (or electronic noise) produced by electrical and electronic devices at levels that interfere with the operation of adjacent equipment. In case you experience phenomena, please install the WPS® RFI Power Line Filter.

Description	Reference
WPS® RFI Power Line Filter	001009

Cooling Shrouds

The cooling shrouds are designed to ensure a sufficient flow velocity past the motor in order to provide sufficient cooling. For the following cases a cooling shroud is recommended:

- horizontal or vertical installation in a tank
- installation of the pump in the screen from the well
- installation in big sized well not ensuring enough cooling velocity. See table.

Minimum flow required for motor cooling in water up to 30°C.	
Casing or sleeve I.D. [mm (inches)]	4" motor, cooling flow 8 cm/sec [m³/h]
102 (4")	0,3
127 (5")	1,6
152 (6")	3,0
203 (8")	6,9
254 (10")	11,4
305 (12")	18,2

To the shroud itself, a screen can be added. In case of horizontal installation a set of supports are available.

Description	Material	Fits to pump type	Reference
Shroud Φ 115 x 400 mm	1.4301-AISI 304	4"WPS® 1,5-6 ... -17 4"WPS® 2,5-6 ... -12 4"WPS® 4-4 ... -9 4"WPS® 7-3 ... -6	001010
Shroud Φ 115 x 500 mm	1.4301-AISI 304	4"WPS® 1,5-21 ... -35 4"WPS® 2,5-15 ... -25 4"WPS® 4-14 ... -19 4"WPS® 7-9 ... -13 4"WPS® 12-3 ... -5 4"WPS®-CP models	001011
Shroud Φ 115 x 625 mm	1.4301-AISI 304	4"WPS® 1,5-40 ... -72 4"WPS® 2,5-30 ... -51 4"WPS® 4-24 ... -39 4"WPS® 7-16 ... -26 4"WPS® 12-8 ... -10	001012
Shroud Φ 115 x 800 mm	1.4301-AISI 304	4"WPS® 2,5-57 ... -68 4"WPS® 4-45 ... -72 4"WPS® 7-29 ... -49 4"WPS® 12-13 ... -20	001013
Shroud Φ 115 x 1000 mm	1.4301-AISI 304	4"WPS® 7-54 ... -64 4"WPS® 12-24 ... -27	001014

Screen Φ 115 x 117 mm	1.4301-AISI 304	For all models	001029

Set of supports for shroud with length 400 or 500 mm	1.4301-AISI 304	Fits to reference 001010 and 001011	001031
Set of supports for shroud with length 625 to 1000 mm	1.4301-AISI 304	Fits to reference 001012, 001013 and 001014	001031