SP/SPA
Stainless Steel Submersible pumps

Visions & Values

"It is the Vision of the Company to achieve our Corporate Mission by providing quality and innovative products and services that give our customers complete satisfaction, through well-motivated, high performing and well rewarded people.
We achieve this by developing a caring, enjoyable stimulating and challenging working environment, incorporating all our Values"

Sustainable Development

"Sustainable development is a key concept at Grundfos. It is vital that our products demonstrate respect for the environment, especially in terms of energy consumption and use of materials."

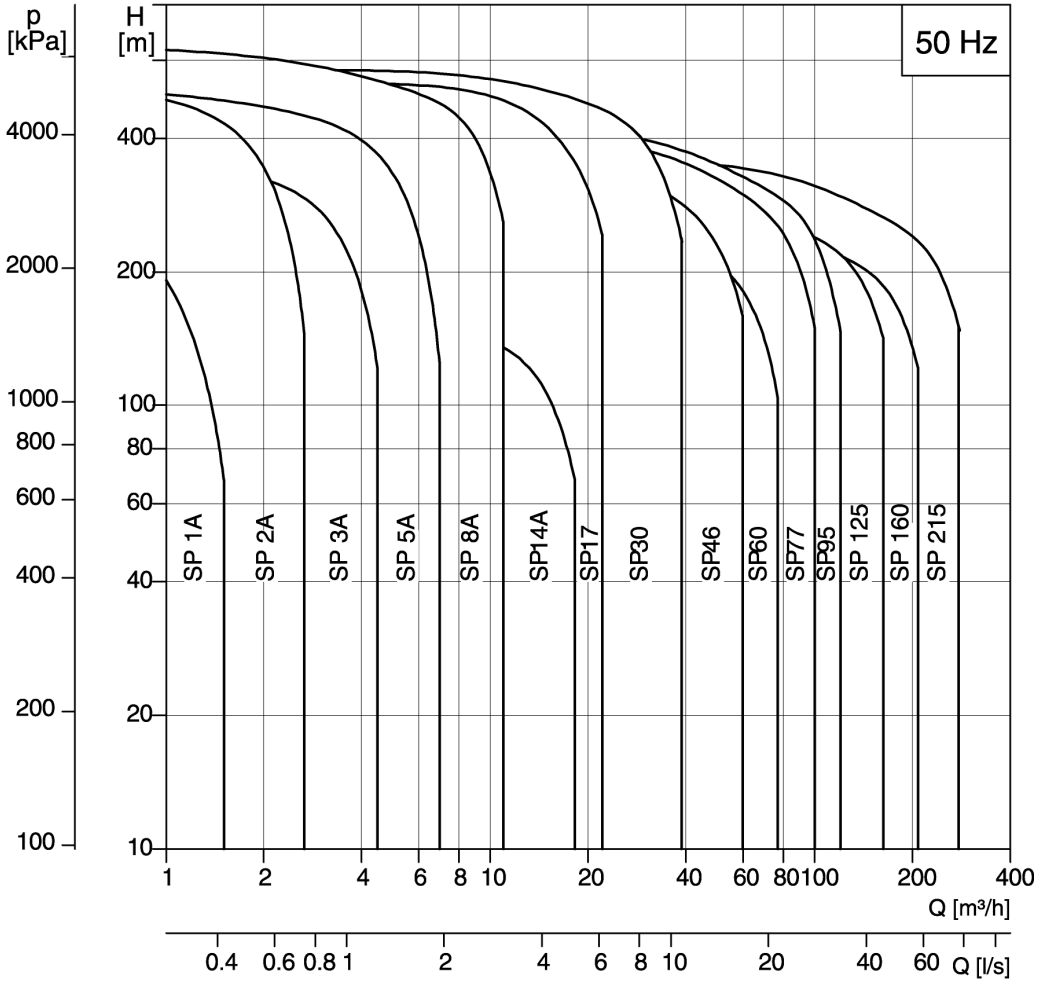
Stainless Steel Submersible Pumps SPA/SP

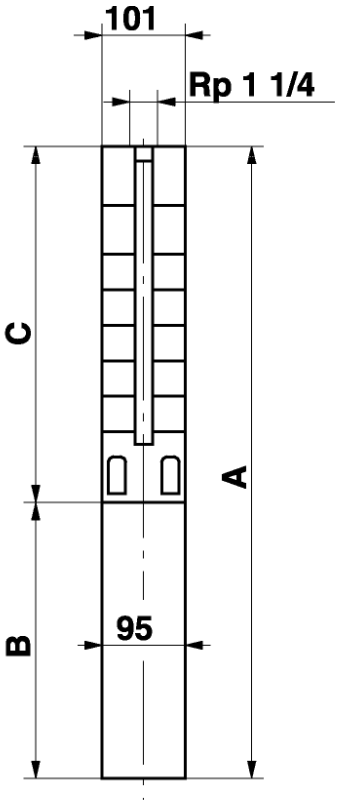
Built to the very highest standards, GRUNDFOS SP stainless steel submersible pumps offer users the high efficiency and long life the keys to cost-effective borehole water supply. Precision made fabricated stainless steel components - like impellers which provide a low rotating mass - coupled with high standards of engineering combine to ensure quiet, smooth and vibration-free running. Rubber is used for impeller neckrings and shaft bearings, providing high resistance to wear.
The standard range of SP pumps employs grade 304 stainless steel for most major components, but for applications requiring a higher degree of corrosion resistance the SP'N' version can be specified in which case the components are manufactured from 316 stainless steel.

Features:

- Flows from 0.20 to 280 m³h (0.9 to 1030gpm)
- Heads up to 620 metres (2132ft)
- Special higher head versions are available on request.
- Grade 304 stainless steel for most major components
- SP'N' version can be specified in 316 stainless steel.
- Single phase motors are supplied with a control box.
- All pumps are supplied complete with a cable joint kit.

Performance 50Hz





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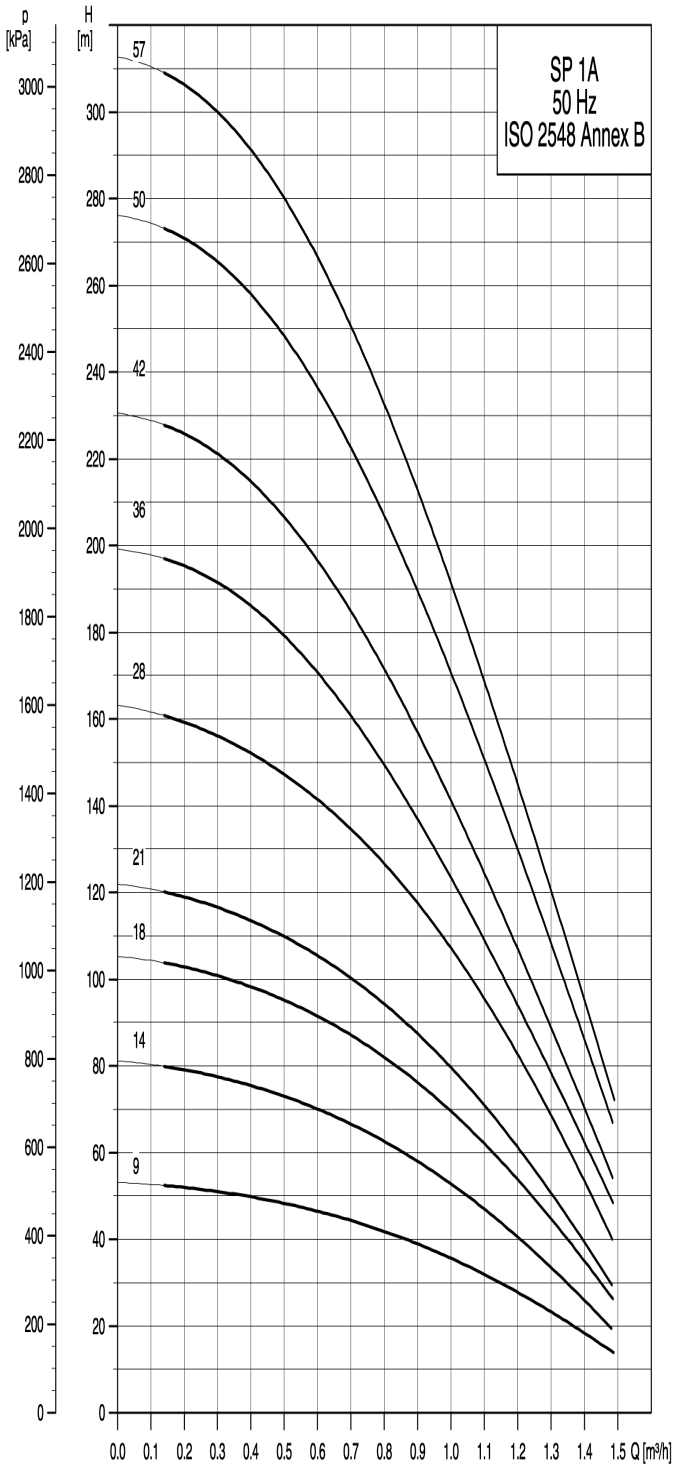
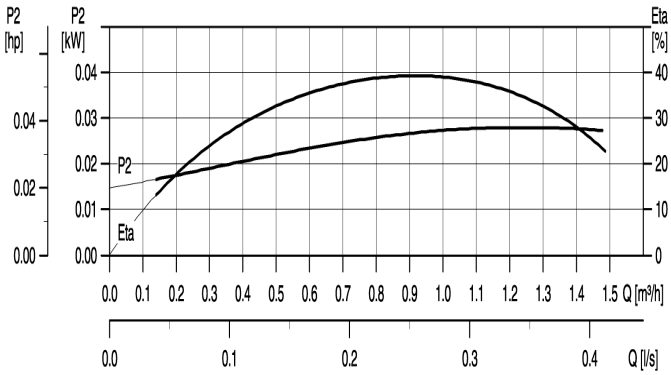
101 mm = Maximum diameter of pump inclusive of cable guard and motor.





Pump type	Motor		Dimensions [mm]					Net weight [kg]	
	Type	Power [kW]	C	B		A			
				1x230V	3x230V 3x400V	1x230V	3x230V 3x400V	1x230V	3x230V 3x400V
SP 1A-9	MS 402	0.37	344	256	226	600	570	11	9
SP 1A-14	MS 402	0.37	449	256	226	705	675	12	10
SP 1A-18	MS 402	0.55	533	291	241	824	774	14	12
SP 1A-21	MS 402	0.55	596	291	241	887	837	14	12
SP 1A-28	MS 402	0.75	743	306	276	1049	1019	16	15
SP 1A-36	MS 402	1.1	956	346	306	1302	1262	25	23
SP 1A-42	MS 402	1.1	1082	346	306	1428	1388	27	25
SP 1A-50	MS 402	1.5	1250	346	346	1596	1596	30	29
SP 1A-57	MS 402	1.5	1397	346	346	1743	1743	32	32

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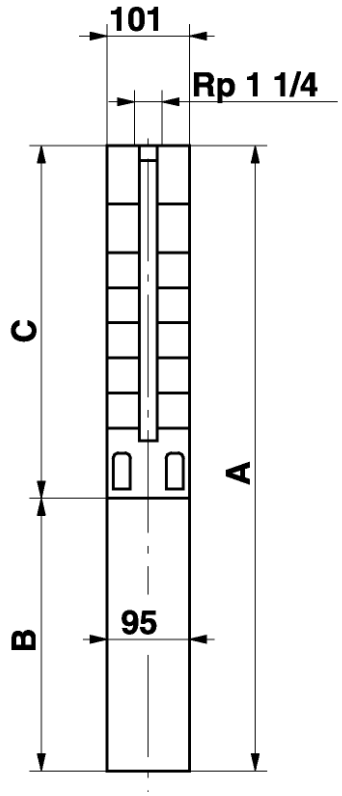

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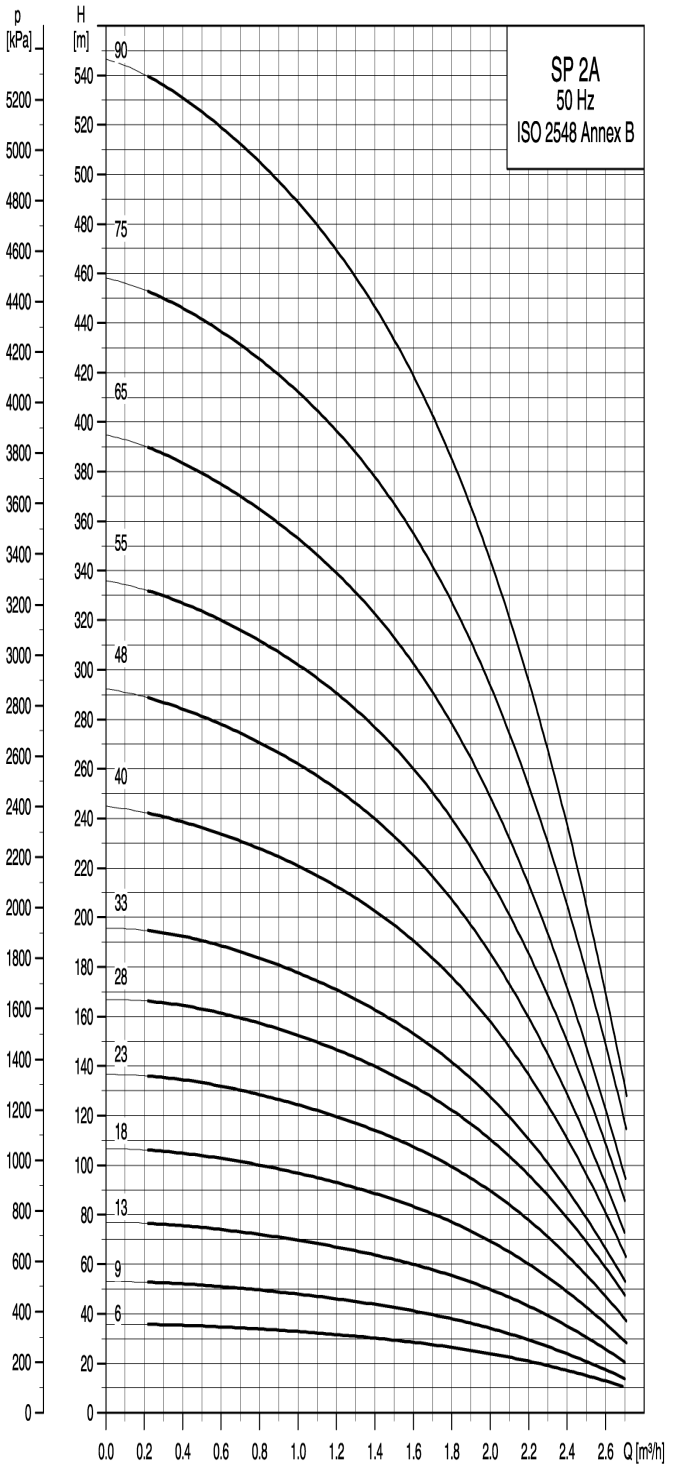
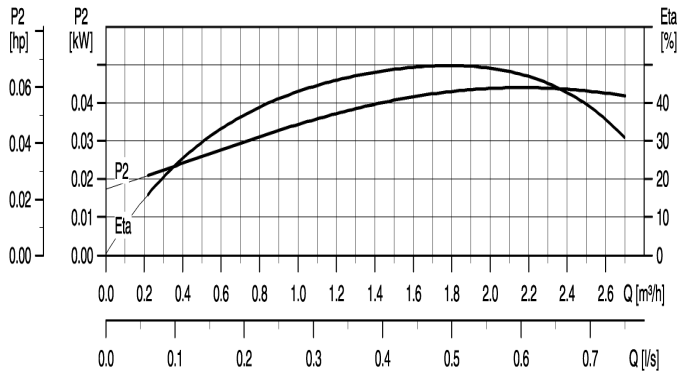
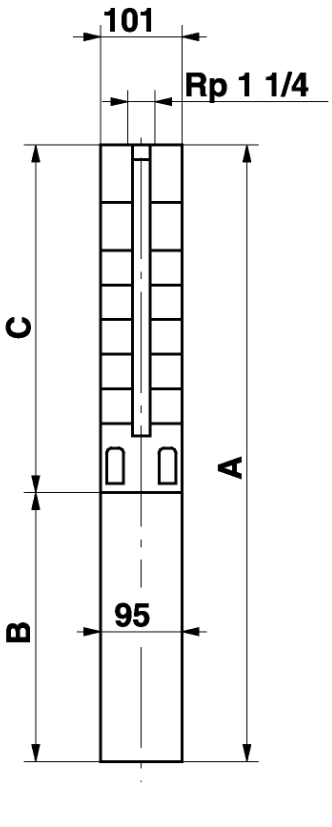
101 mm = Maximum diameter of pump inclusive of cable guard and motor.

SP 2A-75 and SP 2A-90 are mounted in sleeve for R 1¼ connection and with max. diameter 108 mm.



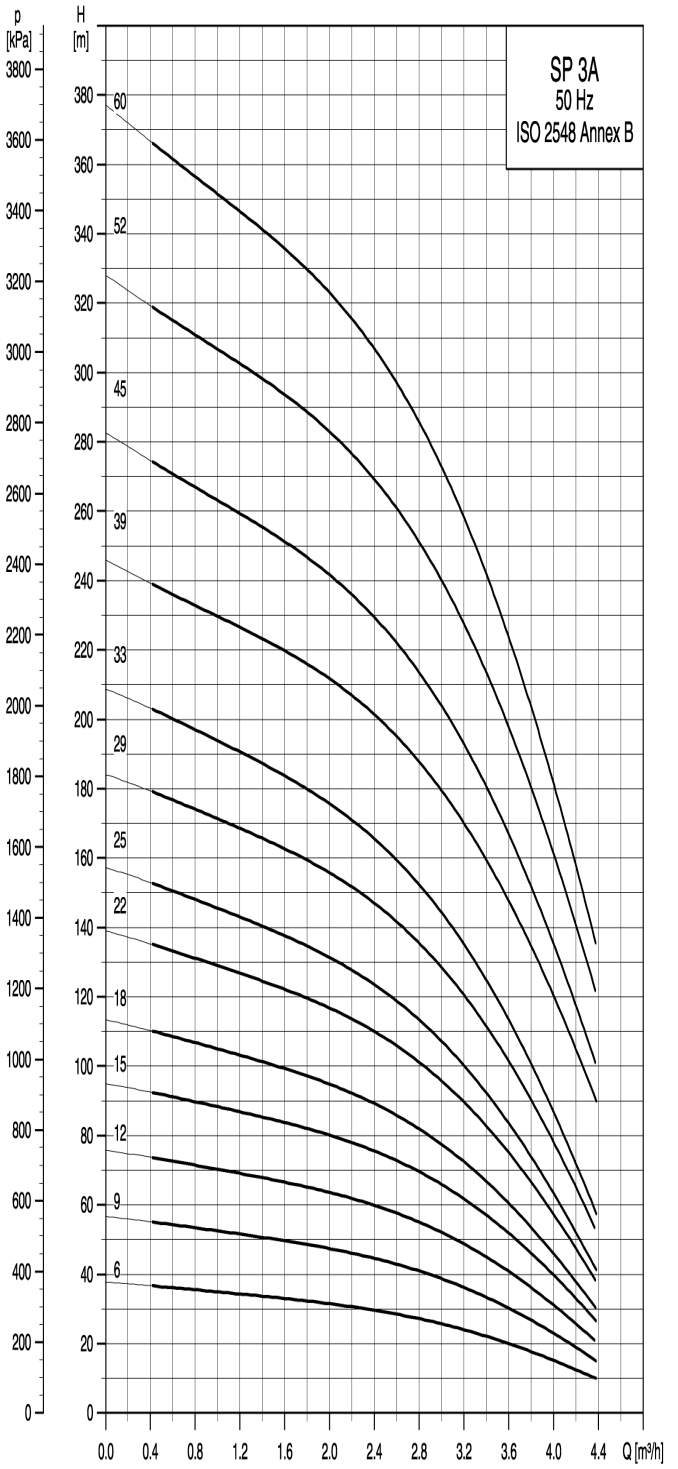


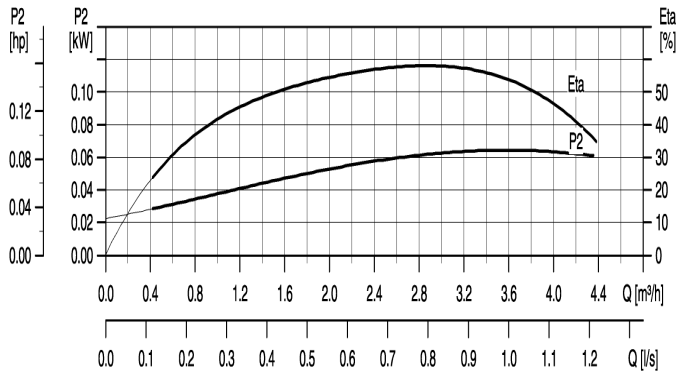
Pump type	Motor		Dimensions [mm]					Net weight [kg]	
	Type	Power [kW]	C	B		A			
				1x230V	3x230V 3x400V	1x230V	3x230V 3x400V	1x230V	3x230V 3x400V
SP 1A-9	MS 402	0.37	344	256	226	600	570	11	9
SP 1A-14	MS 402	0.37	449	256	226	705	675	12	10
SP 1A-18	MS 402	0.55	533	291	241	824	774	14	12
SP 1A-21	MS 402	0.55	596	291	241	887	837	14	12
SP 1A-28	MS 402	0.75	743	306	276	1049	1019	16	15
SP 1A-36	MS 402	1.1	956	346	306	1302	1262	25	23
SP 1A-42	MS 402	1.1	1082	346	306	1428	1388	27	25
SP 1A-50	MS 402	1.5	1250	346	346	1596	1596	30	29
SP 1A-57	MS 402	1.5	1397	346	346	1743	1743	32	32



101 mm = Maximum diameter of pump inclusive of cable guard and motor.

Pump type	Motor		Dimensions [mm]					Net weight [kg]	
	Type	Power [kW]	C	B		A			
				1x230V	3x230V 3x400V	1x230V	3x230V 3x400V	1x230V	3x230V 3x400V
SP 3A-6	MS 402	0.37	281	256	226	537	507	10	9
SP 3A-6N	MS 4000R	2.2	326	573		899		26	
SP 3A-6N	MS 4000R	0.75	326		398		724		18
SP 3A-9	MS 402	0.55	344	291	241	635	585	12	10
SP 3A-9N	MS 4000R	2.2	389	573		962		27	
SP 3A-9N	MS 4000R	0.75	389		398		787		19
SP 3A-12	MS 402	0.75	407	306	276	713	683	13	12
SP 3A-12N	MS 4000R	2.2	452	573		1025		28	
SP 3A-12N	MS 4000R	0.75	452		398		850		20
SP 3A-15	MS 402	1.1	470	346	306	816	776	16	14
SP 3A-15N	MS 4000R	2.2	515	573		1088		29	
SP 3A-15N	MS 4000R	1.1	515		413		928		22
SP 3A-18	MS 402	1.1	533	346	306	879	839	16	15
SP 3A-18N	MS 4000R	2.2	578	573		1151		30	
SP 3A-18N	MS 4000R	1.1	578		413		991		23
SP 3A-22	MS 402	1.5	617	346	346	963	963	18	17
SP 3A-22N	MS 4000R	2.2	662	573		1235		31	
SP 3A-22N	MS 4000R	1.5	662		413		1075		24
SP 3A-25	MS 402	1.5	680	346	346	1026	1026	18	18
SP 3A-25N	MS 4000R	2.2	725	573		1298		32	
SP 3A-25N	MS 4000R	1.5	725		413		1138		25
SP 3A-29	MS 4000	2.2	764	573		1337		29	
SP 3A-29	MS 402	2.2	764		346		1110		20
SP 3A-29N	MS 4000R	2.2	809	573	453	1382	1262	33	28
SP 3A-33	MS 4000	2.2	848	573		1421		30	
SP 3A-33	MS 402	2.2	848		346		1194		21
SP 3A-33N	MS 4000R	2.2	893	573	453	1466	1346	34	29
SP 3A-39	MS 4000	3.0	1019		493		1512		32
SP 3A-39N	MS 4000R	3.0	1019		493		1512		32
SP 3A-45	MS 4000	3.0	1145		493		1638		34
SP 3A-45N	MS 4000R	3.0	1145		493		1638		34
SP 3A-52	MS 4000	4.0	1292		573		1865		41
SP 3A-52N	MS 4000R	4.0	1292		573		1865		41
SP 3A-60	MS 4000	4.0	1460		573		2033		43
SP 3A-60N	MS 4000R	4.0	1460		573		2033		43





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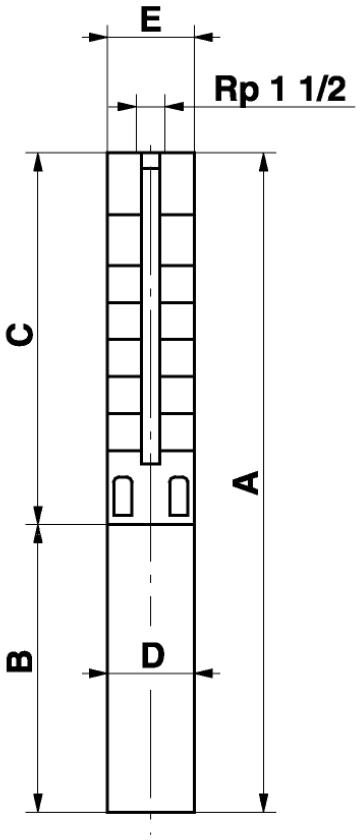
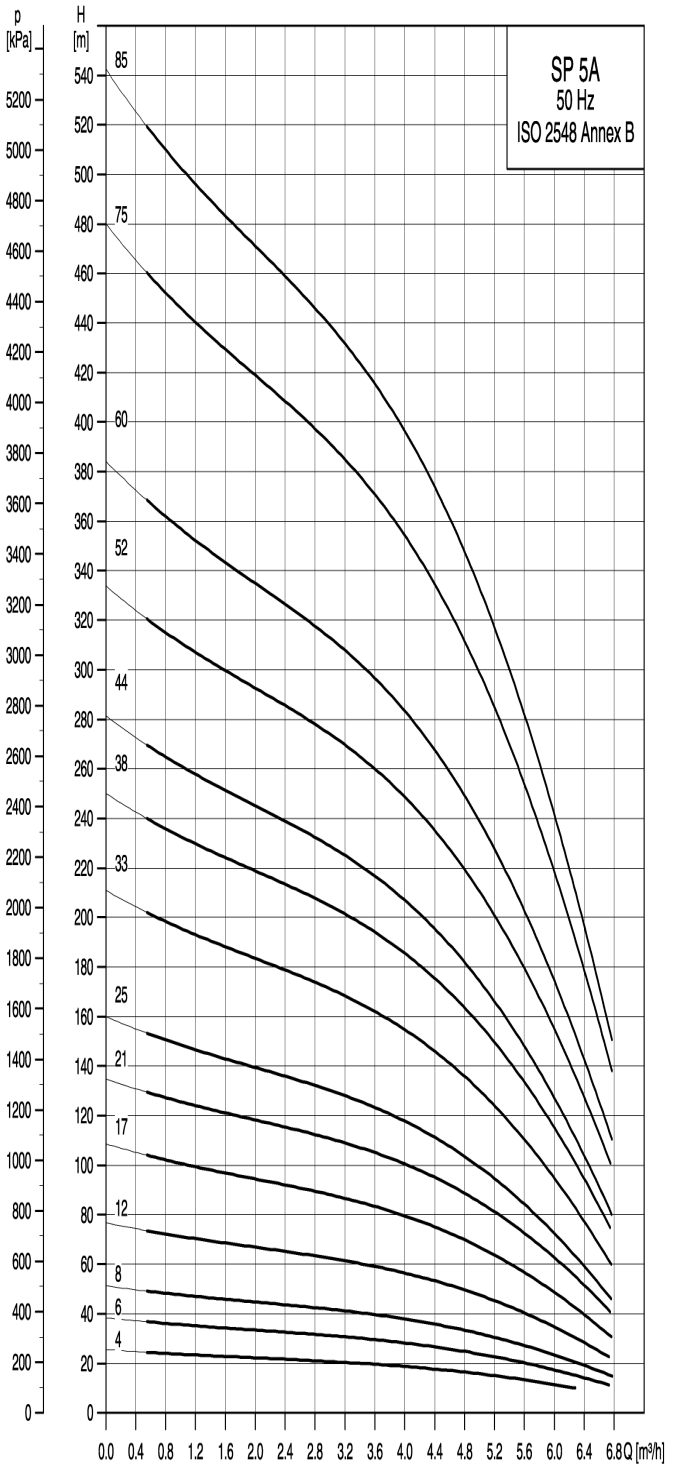
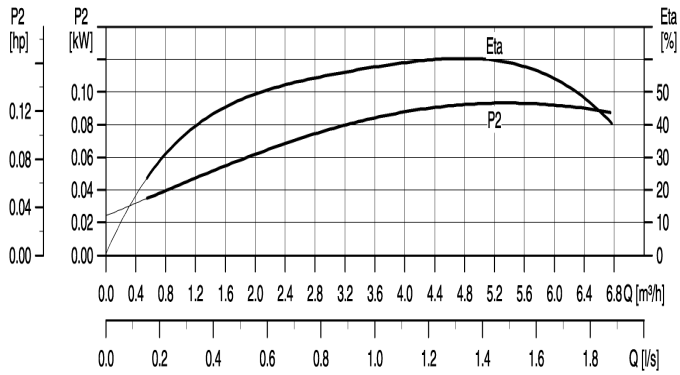


SP 5A-75 and SP 5A-85 are mounted in sleeve for R 1½ connection.

Pump type	Motor		Dimensions [mm]							Net weight [kg]	
	Type	Power [kW]	C	B		A		D	E		
				1x230V	3x230V 3x400V	1x230V	3x230V 3x400V			1x230V	3x230V 3x400V
SP 5A-4	MS 402	0.37	240	256	226	496	466	95	101	10	8
SP 5A-4N	MS 4000R	2.2	284	573		857		95	101	25	
SP 5A-4N	MS 4000R	0.75	284		398		682	95	101		17
SP 5A-6	MS 402	0.55	282	291	241	573	523	95	101	11	10
SP 5A-6N	MS 4000R	2.2	326	573		899		95	101	26	
SP 5A-6N	MS 4000R	0.75	326		398		724	95	101		18
SP 5A-8	MS 402	0.75	324	306	276	630	600	95	101	13	11
SP 5A-8N	MS 4000R	2.2	368	573		941		95	101	27	
SP 5A-8N	MS 4000R	0.75	368		398		766	95	101		19
SP 5A-12	MS 402	1.1	408	346	306	754	714	95	101	15	13
SP 5A-12N	MS 4000R	2.2	452	573		1025		95	101	28	
SP 5A-12N	MS 4000R	1.1	452		413		865	95	101		21
SP 5A-17	MS 402	1.5	513	346	346	859	859	95	101	17	16
SP 5A-17N	MS 4000R	2.2	557	573		1130		95	101	29	
SP 5A-17N	MS 4000R	1.5	557		413		970	95	101		22
SP 5A-21	MS 4000	2.2	597	573		1170		95	101	27	
SP 5A-21	MS 402	2.2	597		346		943	95	101		18
SP 5A-21N	MS 4000R	2.2	641	573	453	1214	1094	95	101	30	25
SP 5A-25	MS 4000	2.2	681	573		1254		95	101	28	
SP 5A-25	MS 402	2.2	681		346		1027	95	101		19
SP 5A-25N	MS 4000R	2.2	725	573	453	1298	1178	95	101	32	27
SP 5A-33	MS 4000	3.0	849		493		1342	95	101		26
SP 5A-33N	MS 4000R	3.0	893		493		1386	95	101		30
SP 5A-38	MS 4000	4.0	998		573		1571	95	101		36
SP 5A-38N	MS 4000R	4.0	998		573		1571	95	101		36
SP 5A-44	MS 4000	4.0	1124		573		1697	95	101		38
SP 5A-44N	MS 4000R	4.0	1124		573		1697	95	101		38
SP 5A-52	MS 4000	5.5	1292		673		1965	95	101		46
SP 5A-52N	MS 4000R	5.5	1292		673		1965	95	101		46
SP 5A-60	MS 4000	5.5	1460		673		2133	95	101		48
SP 5A-60N	MS 4000R	5.5	1460		673		2133	95	101		48
SP 5A-52	MS 6000	5.5	1354		541		1895	138	138		60
SP 5A-52N	MS 6000R	5.5	1354		541		1895	138	138		60
SP 5A-60	MS 6000	5.5	1522		541		2063	138	138		63
SP 5A-60N	MS 6000R	5.5	1522		541		2063	138	138		63
SP 5A-75	MS 6000	7.5	2146		571		2717	138	140		86
SP 5A-85	MS 6000	7.5	2356		571		2927	138	140		92

E = Maximum diameter of pump inclusive of cable guard and motor.





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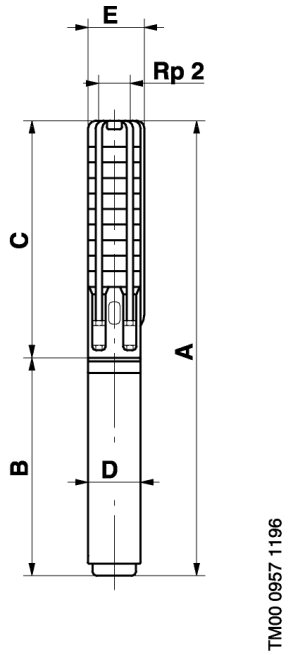
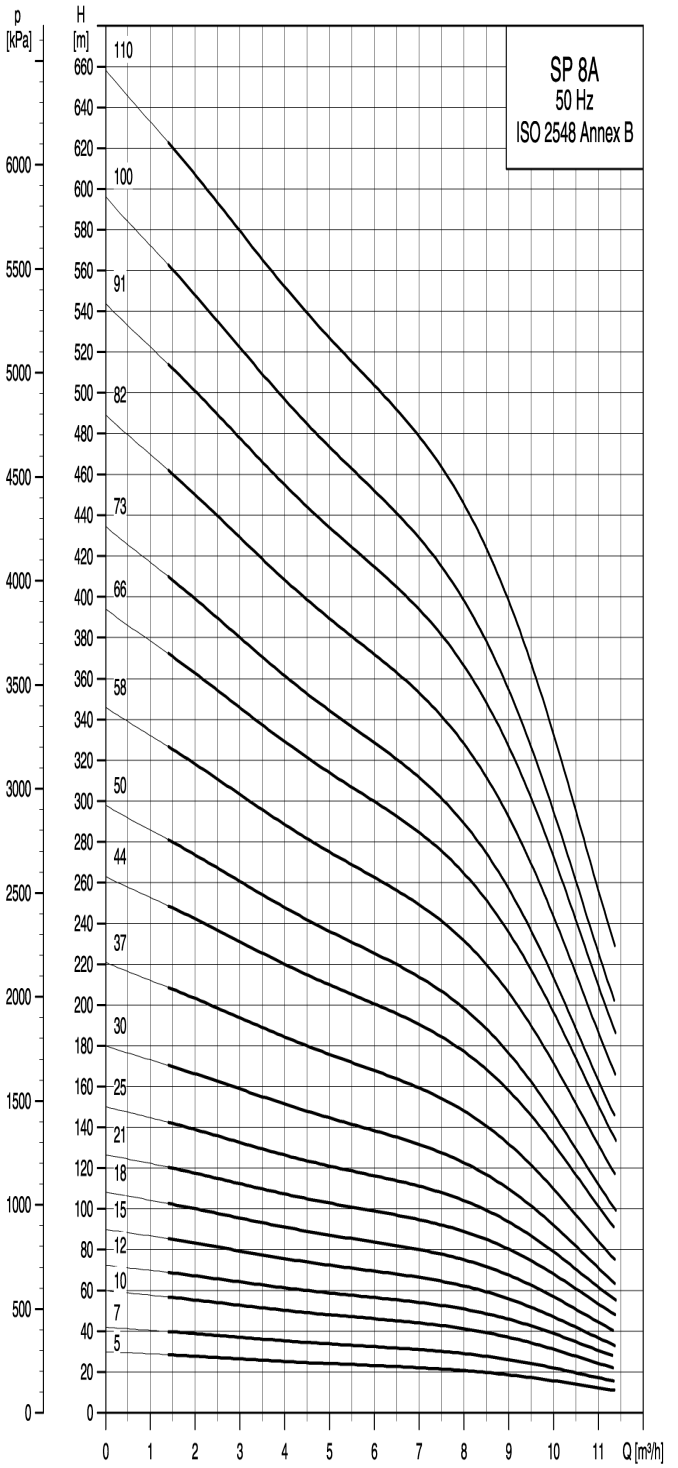
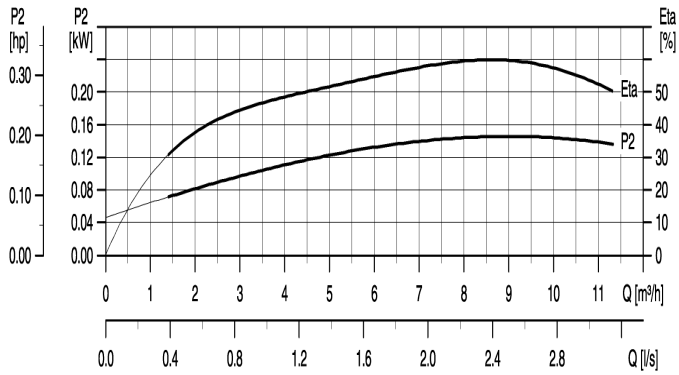


SP 8A-58(N) to SP 8A-110(N) are mounted in sleeve for R 2 connection.

Pump type	Motor		Dimensions [mm]							Net weight [kg]	
	Type	Power [kW]	C	B		A		D	E		
				1x230V	3x230V 3x400V	1x230V	3x230V 3x400V			1x230V	3x230V 3x400V
SP 8A-5	MS 402	0.75	409	306	276	715	685	95	101	15	13
SP 8A-5N (R)	MS 4000R	2.2	409	573		982		95	101	27	
SP 8A-5N (R)	MS 4000R	0.75	409		398		807	95	101		19
SP 8A-7	MS 402	1.1	493	346	306	839	799	95	101	17	16
SP 8A-7N (R)	MS 4000R	2.2	493	573		1066		95	101	28	
SP 8A-7N (R)	MS 4000R	1.1	493		413		906	95	101		21
SP 8A-10	MS 402	1.5	619	346	346	965	965	95	101	19	19
SP 8A-10N (R)	MS 4000R	2.2	619	573		1192		95	101	30	
SP 8A-10N (R)	MS 4000R	1.5	619		413		1032	95	101		23
SP 8A-12	MS 4000	2.2	703	573		1276		95	101	30	
SP 8A-12	MS 402	2.2	703		346		1049	95	101		21
SP 8A-12N (R)	MS 4000R	2.2	703	573	453	1276	1156	95	101	30	25
SP 8A-15	MS 4000	2.2	829	573		1402		95	101	32	
SP 8A-15	MS 402	2.2	829		346		1175	95	101		23
SP 8A-15N (R)	MS 4000R	2.2	829	573	453	1402	1282	95	101	32	27
SP 8A-18	MS 4000	3.0	955		493		1448	95	101		29
SP 8A-18N (R)	MS 4000R	3.0	955		493		1448	95	101		29
SP 8A-21	MS 4000	4.0	1081		573		1654	95	101		35
SP 8A-21N (R)	MS 4000R	4.0	1081		573		1654	95	101		35
SP 8A-25	MS 4000	4.0	1249		573		1822	95	101		37
SP 8A-25N (R)	MS 4000R	4.0	1249		573		1822	95	101		37
SP 8A-30	MS 4000	5.5	1459		673		2132	95	101		45
SP 8A-30N (R)	MS 4000R	5.5	1459		673		2132	95	101		45
SP 8A-37	MS 4000	5.5	1753		673		2426	95	101		49
SP 8A-37N (R)	MS 4000R	5.5	1753		673		2426	95	101		49
SP 8A-30	MS 6000	5.5	1521		541		2062	138	138		56
SP 8A-30N	MS 6000R	5.5	1521		541		2062	138	138		56
SP 8A-37	MS 6000	5.5	1815		541		2356	138	138		60
SP 8A-37N	MS 6000R	5.5	1815		541		2356	138	138		60
SP 8A-44	MS 4000	7.5	2051		773		2824	95	101		60
SP 8A-44N	MS 4000	7.5	2051		773		2824	95	101		60
SP 8A-44	MS 6000	7.5	2109		571		2680	138	138		66
SP 8A-44N	MS 6000R	7.5	2109		571		2680	138	138		66
SP 8A-50	MS 4000	7.5	2303		773		3076	95	101		64
SP 8A-50N	MS 4000	7.5	2303		773		3076	95	101		64
SP 8A-50	MS 6000	7.5	2361		571		2932	138	138		70
SP 8A-50N	MS 6000R	7.5	2361		571		2932	138	138		70
SP 8A-58	MS 6000	9.2	3013		601		3614	138	140		104
SP 8A-58N	MS 6000R	9.2	3013		601		3614	138	140		104
SP 8A-66	MS 6000	11.0	3349		631		3980	138	140		114
SP 8A-66N	MS 6000R	11.0	3349		631		3980	138	140		114
SP 8A-73	MS 6000	11.0	3643		631		4274	138	140		120
SP 8A-73N	MS 6000R	11.0	3643		631		4274	138	140		120
SP 8A-82	MS 6000	13.0	4021		661		4682	138	140		131
SP 8A-82N	MS 6000R	13.0	4021		661		4682	138	140		131
SP 8A-91	MS 6000	15.0	4399		696		5095	138	140		143
SP 8A-91N	MS 6000R	15.0	4399		696		5095	138	140		143
SP 8A-100	MS 6000	15.0	4777		696		5473	138	140		150
SP 8A-100N	MS 6000R	15.0	4777		696		5473	138	140		150
SP 8A-110	MS 6000	18.5	5197		751		5948	138	140		164
SP 8A-110N	MS 6000R	18.5	5197		751		5948	138	140		164

E = Maximum diameter of pump inclusive of cable guard and motor.





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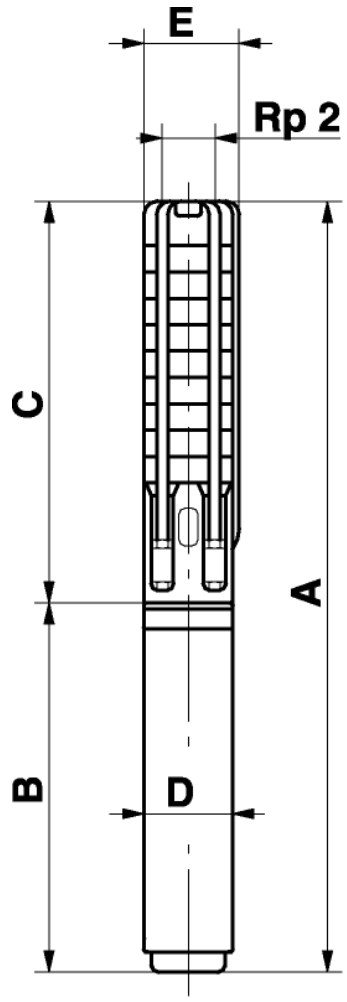

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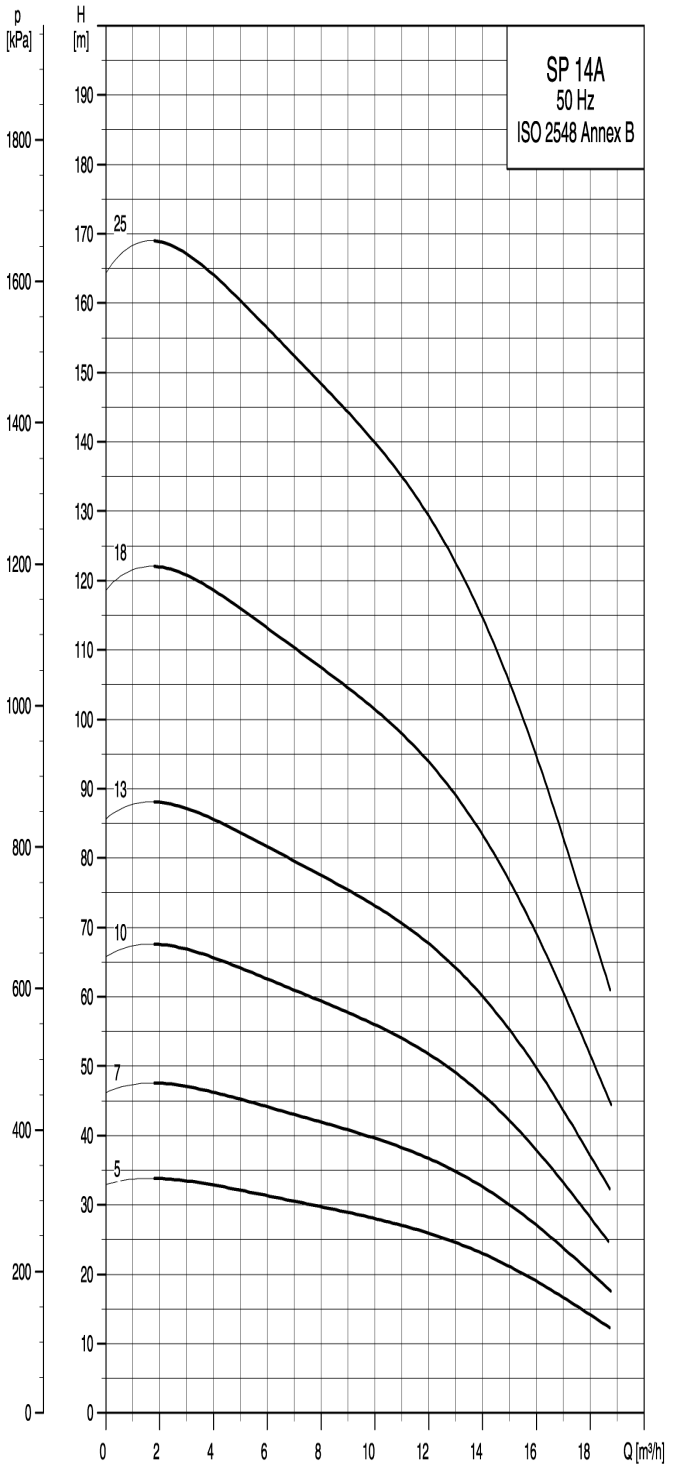
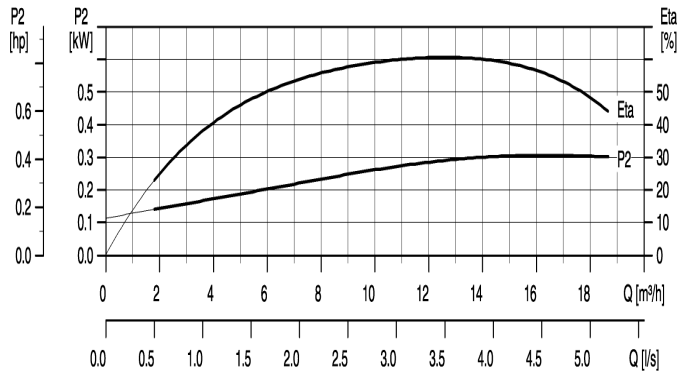
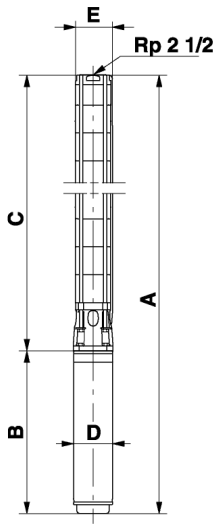




Pump type	Motor		Dimensions [mm]							Net weight [kg]	
	Type	Power [kW]	C	B		A		D	E		
				1x230V	3x230V 3x400V	1x230V	3x230V 3x400V			1x230V	3x230V 3x400V
SP 14A-5	MS 402	1.5	510	346	346	856	856	95	101	18	17
SP 14A-7	MS 4000	2.2	640	573		1213		95	101	29	
SP 14A-7	MS 402	2.2	640		346		986	95	101		19
SP 14A-10	MS 4000	3.0	835		493		1328	95	101		27
SP 14A-13	MS 4000	4.0	1030		573		1603	95	101		33
SP 14A-18	MS 4000	5.5	1355		673		2028	95	101		41
SP 14A-25	MS 4000	7.5	1810		773		2584	95	101		67
SP 14A-18	MS 6000	5.5	1417		541		1958	138	138		52
SP 14A-25	MS 6000	7.5	1872		571		2443	138	138		60

E = Maximum diameter of pump inclusive of cable guard and motor.



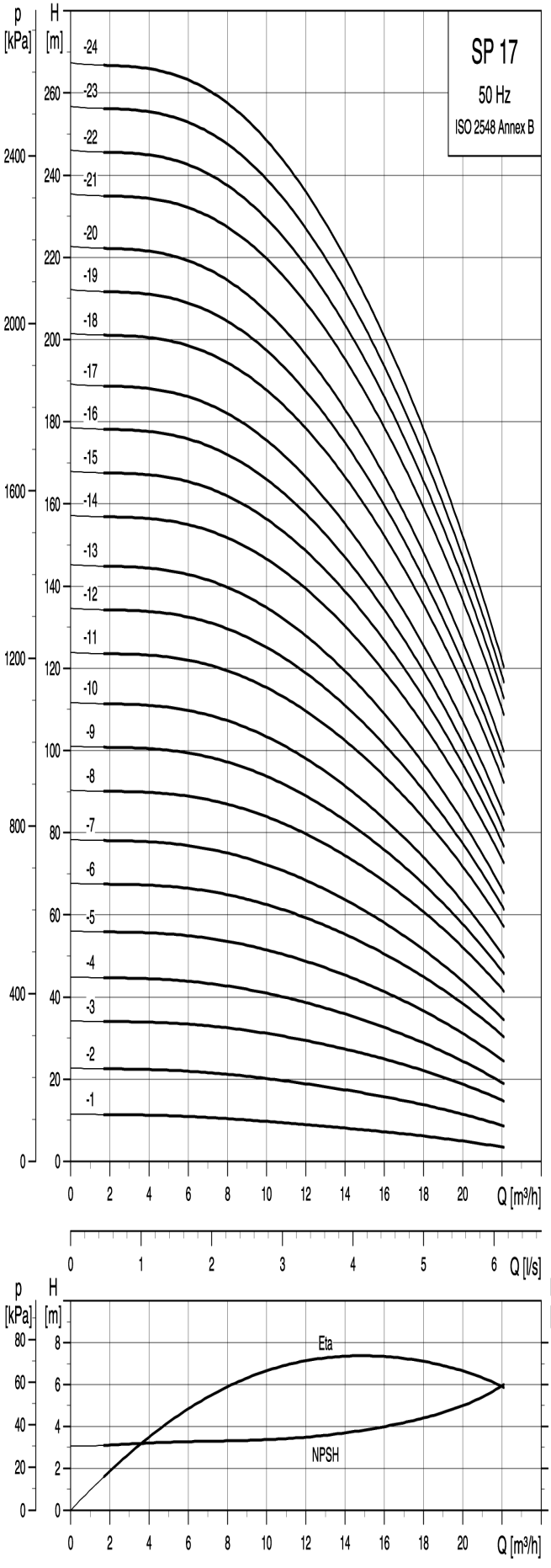
SP 17-43 to SP 17-48 are mounted in sleeve for R 3 connection.

Pump type	Motor		Dimensions [mm]								Net weight [kg]	
	Type	Power [kW]	C	B		A		D	E*	E**		
				1x230V	3x230V 3x400V	1x230V	3x230V 3x400V				1x230V	3x230V 3x400V
SP 17-1	MS 402	0.55	314	291	241	605	555	95	131		13	11
SP 17-1 N (R)	MS 4000 R	0.75	314		398		712	95	131			17
SP 17-1 N (R)	MS 4000 R	2.2	314	573		887		95	131		26	
SP 17-2	MS 402	1.1	374	346	306	652	680	95	131		17	15
SP 17-2 N (R)	MS 4000 R	1.1	374		413		787	95	131			20
SP 17-2 N (R)	MS 4000 R	2.2	374	573		947		95	131		27	
SP 17-3	MS 402	2.2	435		346		781	95	131			19
SP 17-3 N (R)	MS 4000 R	2.2	435	573	453	1008	888	95	131		28	23
SP 17-4	MS 402	2.2	495		346		841	95	131			20
SP 17-4	MS 4000	2.2	495	573	453	1068	948	95	131		29	24
SP 17-5	MS 4000	3.0	556		494		1050	95	131			26
SP 17-6	MS 4000	4.0	616		574		1190	95	131			31
SP 17-7	MS 4000	4.0	677		574		1251	95	131			33
SP 17-8	MS 4000	5.5	737		674		1411	95	131			39
SP 17-9	MS 4000	5.5	798		674		1472	95	131			40
SP 17-10	MS 4000	5.5	858		773		1532	95	131			41
SP 17-11	MS 4000	7.5	919		773		1692	95	131			47
SP 17-12	MS 4000	7.5	979		773		1752	95	131			49
SP 17-13	MS 4000	7.5	1040		773		1813	95	131			50
SP 17-8	MS 6000	5.5	753		544		1297	138	142	142		50
SP 17-9	MS 6000	5.5	814		544		1358	138	142	142		51
SP 17-10	MS 6000	5.5	874		544		1418	138	142	142		53
SP 17-11	MS 6000	7.5	935		574		1509	138	142	142		55
SP 17-12	MS 6000	7.5	995		574		1569	138	142	142		56
SP 17-13	MS 6000	7.5	1056		574		1630	138	142	142		57
SP 17-14	MS 6000	9.2	1116		604		1720	138	142	142		64
SP 17-15	MS 6000	9.2	1177		604		1781	138	142	142		65
SP 17-16	MS 6000	9.2	1237		604		1841	138	142	142		66
SP 17-17	MS 6000	9.2	1298		604		1902	138	142	142		67
SP 17-18	MS 6000	11	1358		634		1992	138	142	142		72
SP 17-19	MS 6000	11	1419		634		2053	138	142	142		73
SP 17-20	MS 6000	11	1479		634		2113	138	142	142		74
SP 17-21	MS 6000	13	1540		664		2204	138	142	142		78
SP 17-22	MS 6000	13	1600		664		2264	138	142	142		79
SP 17-23	MS 6000	13	1661		664		2325	138	142	142		81
SP 17-24	MS 6000	13	1721		664		2385	138	142	142		82
SP 17-25	MS 6000	15	1782		699		2481	138	142	142		87
SP 17-26	MS 6000	15	1842		699		2541	138	142	142		88
SP 17-27	MS 6000	15	1903		699		2602	138	142	142		89
SP 17-28	MS 6000	18.5	1963		754		2717	138	142	142		96
SP 17-29	MS 6000	18.5	2024		754		2778	138	142	142		97
SP 17-30	MS 6000	18.5	2084		754		2838	138	142	142		99
SP 17-31	MS 6000	18.5	2145		754		2899	138	142	142		100
SP 17-32	MS 6000	18.5	2205		754		2959	138	142	142		101
SP 17-33	MS 6000	18.5	2266		754		3020	138	142	142		102
SP 17-34	MS 6000	22	2326		814		3140	138	142	142		109
SP 17-35	MS 6000	22	2387		814		3201	138	142	142		111
SP 17-36	MS 6000	22	2447		814		3261	138	142	142		112
SP 17-37	MS 6000	22	2508		814		3322	138	142	142		113
SP 17-38	MS 6000	22	2568		814		3382	138	142	142		114
SP 17-39	MS 6000	22	2629		814		3443	138	142	142		115
SP 17-40	MS 6000	22	2689		814		3503	138	142	142		117
SP 17-43	MS 6000	26	3118		874		3992	138	175	181		164
SP 17-45	MS 6000	26	3239		874		4113	138	175	181		167
SP 17-48	MS 6000	26	3420		874		4294	138	175	181		172

* Maximum diameter of pump with one motor cable.

** Maximum diameter of pump with two motor cables.

SP 17-1 to SP 17-48 are also available in N and R versions with motors in R version.
Dimensions as above.
Other types of connection are possible by means of connecting flanges, see page 85


p [kPa]
H [m]
SP 17
50 Hz
ISO 2548 Annex B
-24
-23
-22
-21
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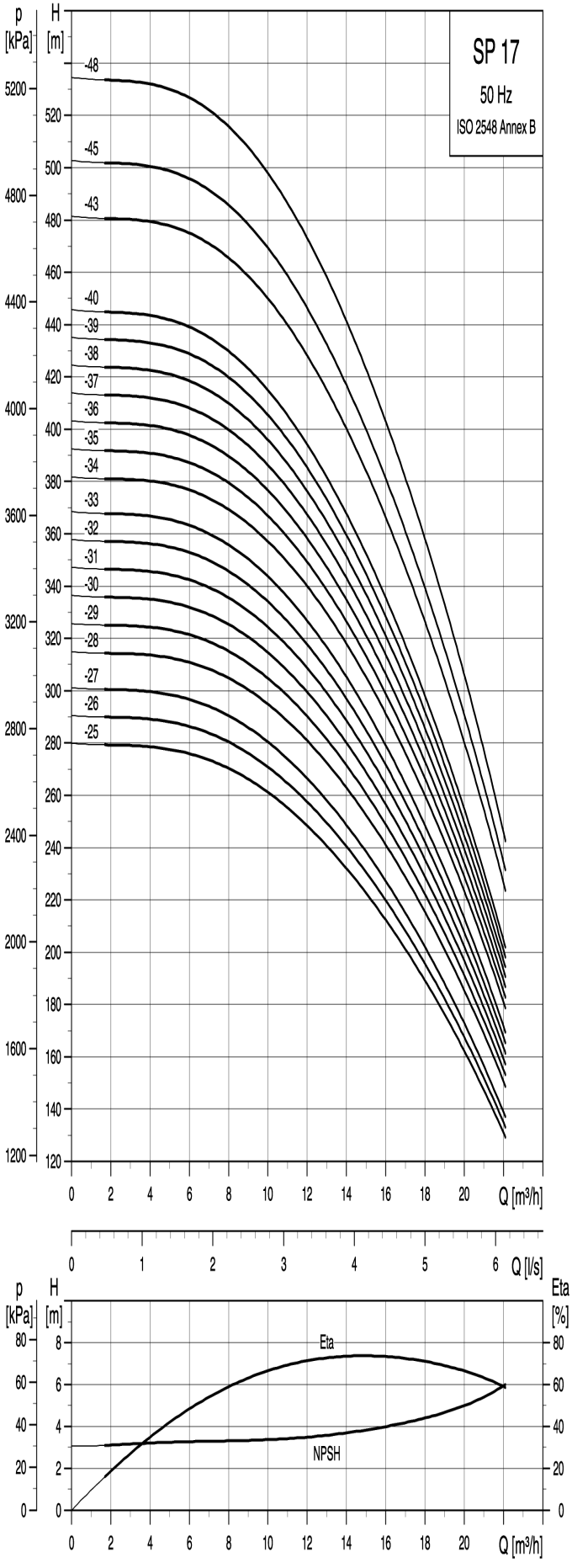
-19
-18
-17
-16
-15
-14
-13
-12
-11
-10
-9
-8
-7
-6
-5
-4
-3
-2
-1
Q [m³/h]
Q [l/s]
Eta [%]
Eta
NPSH


p [kPa]
H [m]
SP 17
50 Hz
ISO 2548 Annex B
-48
-45
-43
-40
-39
-38
-37
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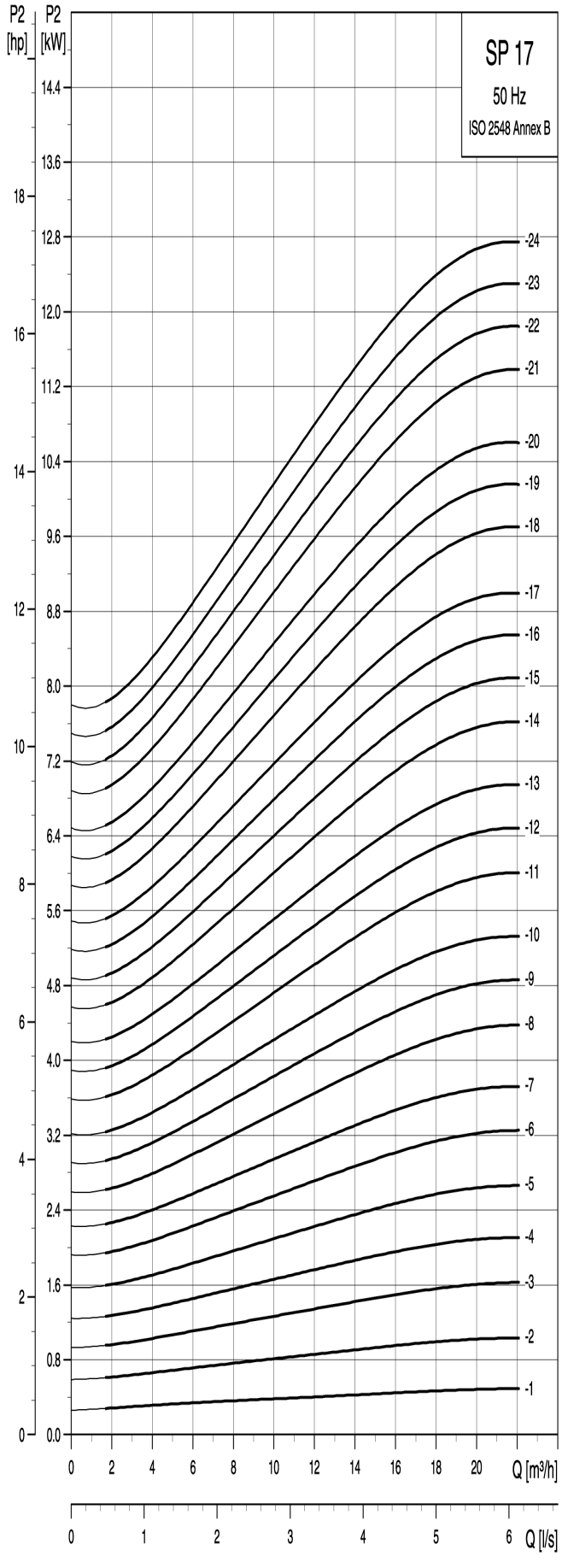
-34
-33
-32
-31
-30
-29
-28
-27
-26
-25
Q [m³/h]
Q [l/s]
Eta [%]
Eta
NPSH

13

GRUNDFOS


P2 [hp]
P2 [kW]
SP 17
50 Hz
ISO 2548 Annex B
-24
-23
-22
-21
-20
-19
-18
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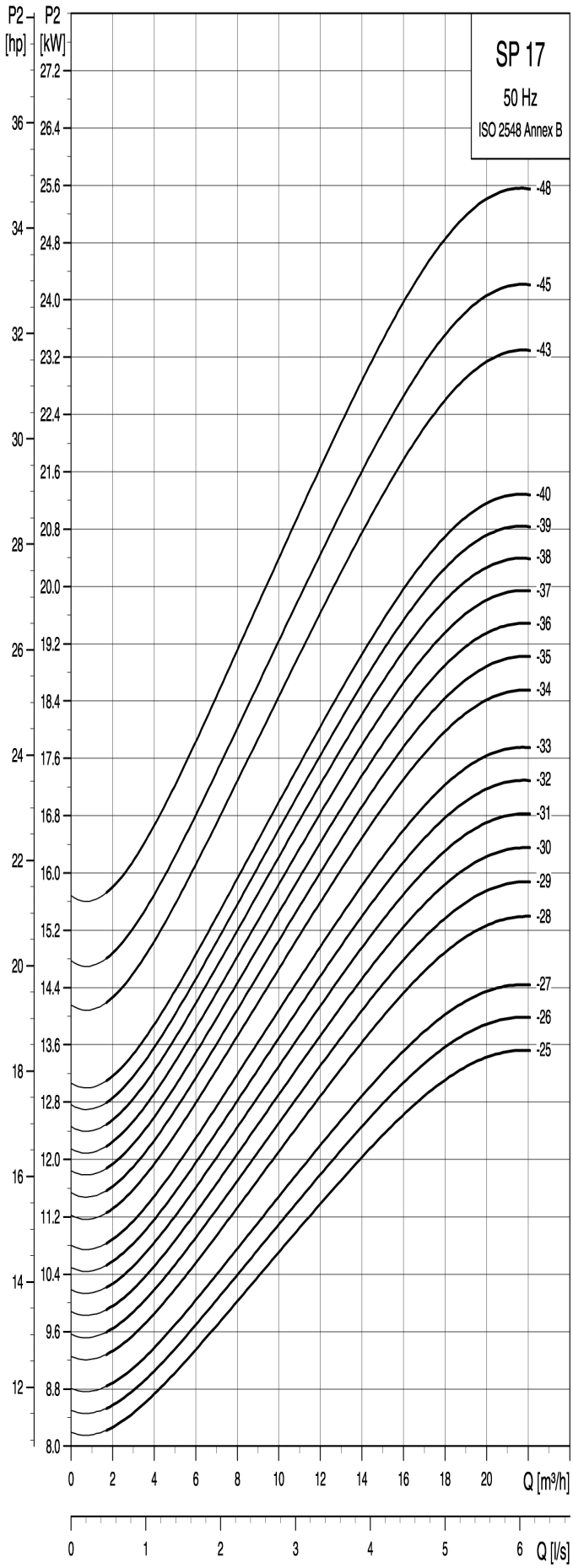
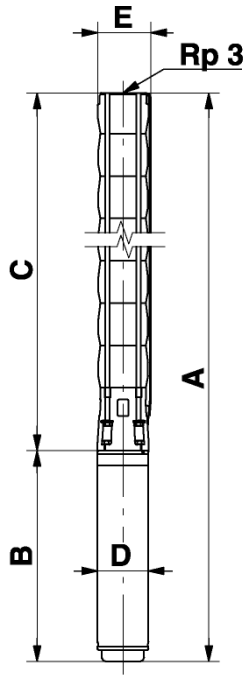
-14
-13
-12
-11
-10
-9
-8
-7
-6
-5
-4
-3
-2
-1
Q [m³/h]
Q [l/s]


P2 [hp]
P2 [kW]
SP 17
50 Hz
ISO 2548 Annex B
-48
-45
-43
-40
-39
-38
-37
-36
-35
-34
-33
-32
-31
-30
-29
-28
-27
-26
-25
Q [m³/h]
Q [l/s]

GRUNDFOS



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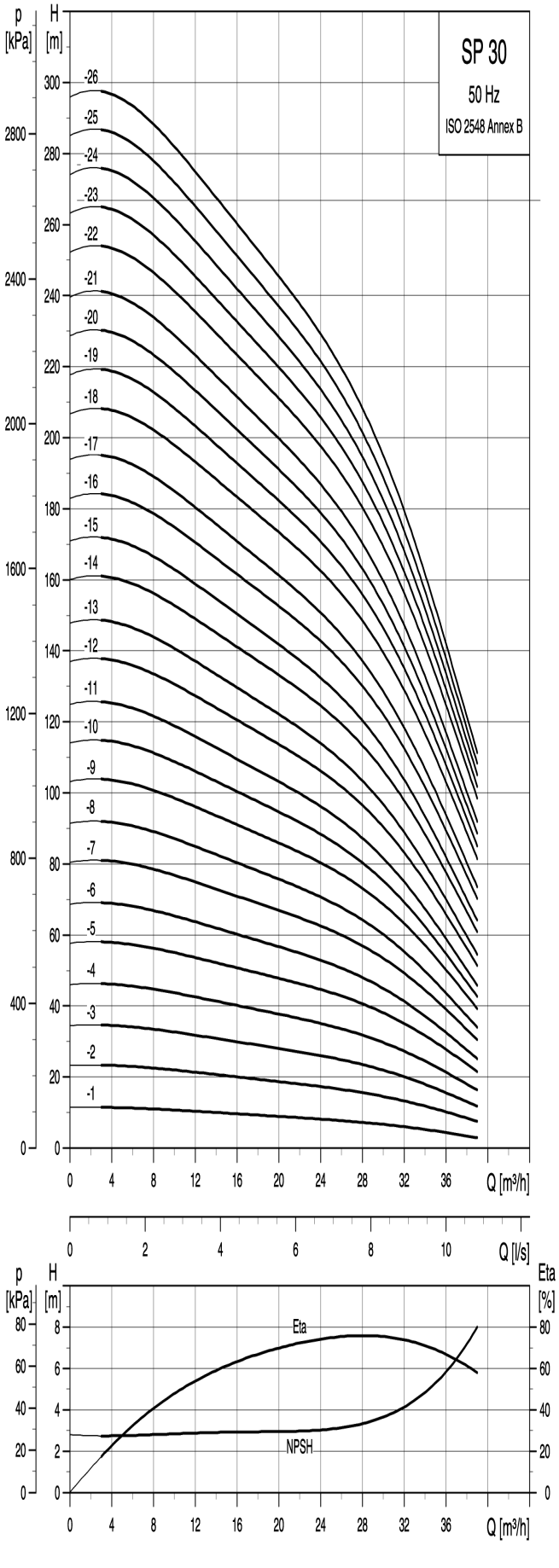
SP 30-39 to SP 30-49 are mounted in sleeve for R 3 connection.

Pump type	Motor		Dimensions [mm]								Net weight [kg]	
	Type	Power [kW]	C	B		A		D	E*	E**		
				1x230V	3x230V 3x400V	1x230V	3x230V 3x400V				1x230V	3x230V 3x400V
SP 30-1	MS 402	1.1	349	346	306	695	655	95	131		16	14
SP 30-1 N (R)	MS 4000 R	2.2	349	573		922		95	131		26	
SP 30-2 N (R)	MS 4000 R	2.2	445	573	453	1018	898	95	131		28	23
SP 30-3	MS 4000	3.0	541		494		1035	95	131			25
SP 30-4	MS 4000	4.0	637		574		1211	95	131			31
SP 30-5	MS 4000	5.5	733		674		1407	95	131			38
SP 30-6	MS 4000	5.5	829		674		1503	95	131			39
SP 30-7	MS 4000	7.5	925		773		1698	95	131			46
SP 30-8	MS 4000	7.5	1021		773		1794	95	131			48
SP 30-5	MS 6000	5.5	749		544		1293	138	142	142		49
SP 30-6	MS 6000	5.5	845		544		1389	138	142	142		51
SP 30-7	MS 6000	7.5	941		574		1515	138	142	142		53
SP 30-8	MS 6000	7.5	1037		574		1611	138	142	142		55
SP 30-9	MS 6000	9.2	1133		604		1737	138	142	142		62
SP 30-10	MS 6000	9.2	1229		604		1833	138	142	142		64
SP 30-11	MS 6000	9.2	1325		604		1929	138	142	142		65
SP 30-12	MS 6000	11	1421		634		2055	138	142	142		70
SP 30-13	MS 6000	11	1517		634		2151	138	142	142		72
SP 30-14	MS 6000	13	1613		664		2277	138	142	142		76
SP 30-15	MS 6000	13	1709		664		2373	138	142	142		78
SP 30-16	MS 6000	15	1805		699		2504	138	142	142		84
SP 30-17	MS 6000	15	1901		699		2600	138	142	142		85
SP 30-18	MS 6000	18.5	1997		754		2751	138	142	142		93
SP 30-19	MS 6000	18.5	2093		754		2847	138	142	142		94
SP 30-20	MS 6000	18.5	2189		754		2943	138	142	142		96
SP 30-21	MS 6000	18.5	2285		754		3039	138	142	142		98
SP 30-22	MS 6000	22	2381		814		3195	138	142	142		105
SP 30-23	MS 6000	22	2477		814		3291	138	142	142		107
SP 30-24	MS 6000	22	2573		814		3387	138	142	142		109
SP 30-25	MS 6000	22	2669		814		3483	138	142	142		110
SP 30-26	MS 6000	22	2765		814		3579	138	142	142		112
SP 30-27	MS 6000	26	2861		874		3735	138	142	142		119
SP 30-28	MS 6000	26	2957		874		3831	138	142	142		121
SP 30-29	MS 6000	26	3053		874		3927	138	142	142		123
SP 30-30	MS 6000	26	3149		874		4023	138	142	142		124
SP 30-31	MS 6000	26	3245		874		4119	138	142	142		126
SP 30-32	MS 6000	30	3341		944		4285	138	144	145		136
SP 30-33	MS 6000	30	3437		944		4381	138	144	145		137
SP 30-34	MS 6000	30	3533		944		4477	138	144	145		139
SP 30-35	MS 6000	30	3629		944		4573	138	144	145		141
SP 30-39	MMS 6000	37	4260		1425		5685	144	175	181		253
SP 30-43	MMS 6000	37	4644		1425		6069	144	175	181		264
SP 30-46	MMS 8000	45	4881		1270		6151	192	175	181		325
SP 30-49	MMS 8000	45	5169		1270		6439	192	175	181		332

* Maximum diameter of pump with one motor cable.

** Maximum diameter of pump with two motor cables.

SP 30-1 to SP 30-35 are also available in N and R versions with motors in R version. Dimensions as above.
Other types of connection are possible by means of connecting pieces, see page 85.



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13

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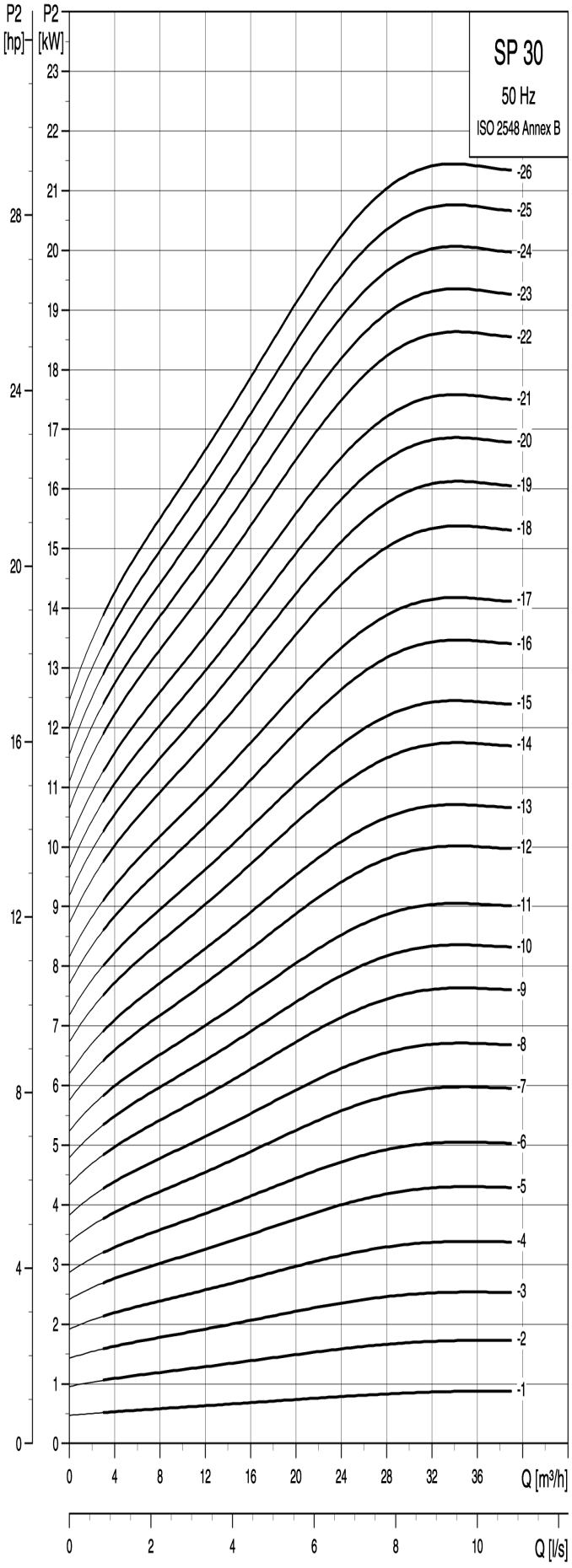
P2 [hp]
P2 [kW]
SP 30
50 Hz
ISO 2548 Annex B
-26
-25
-24
-23
-22
-21
-20
-19
-18
-17
-16
-15
-14
-13
-12
-11
-10
-9
-8
-7
-6
-5
-4
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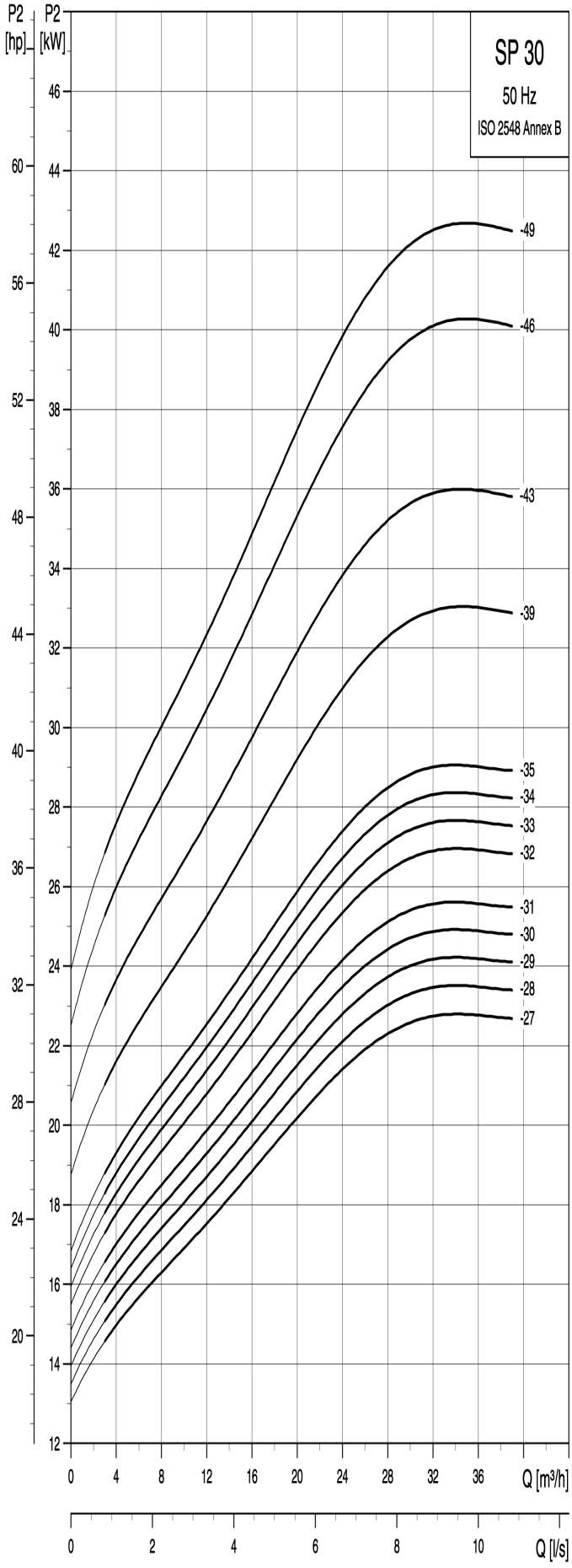
-1
Q [m³/h]
Q [l/s]


P2 [hp]
P2 [kW]
SP 30
50 Hz
ISO 2548 Annex B
-49
-46
-43
-39
-35
-34
-33
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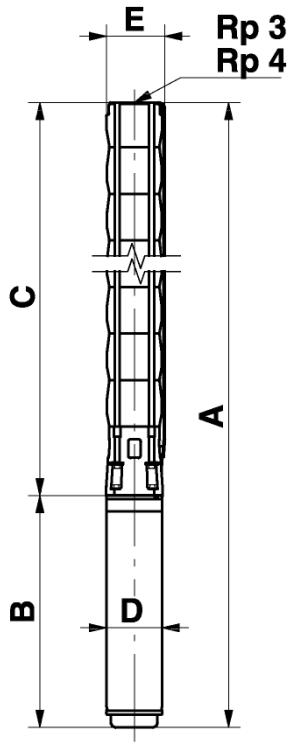
-30
-29
-28
-27
Q [m³/h]
Q [l/s]



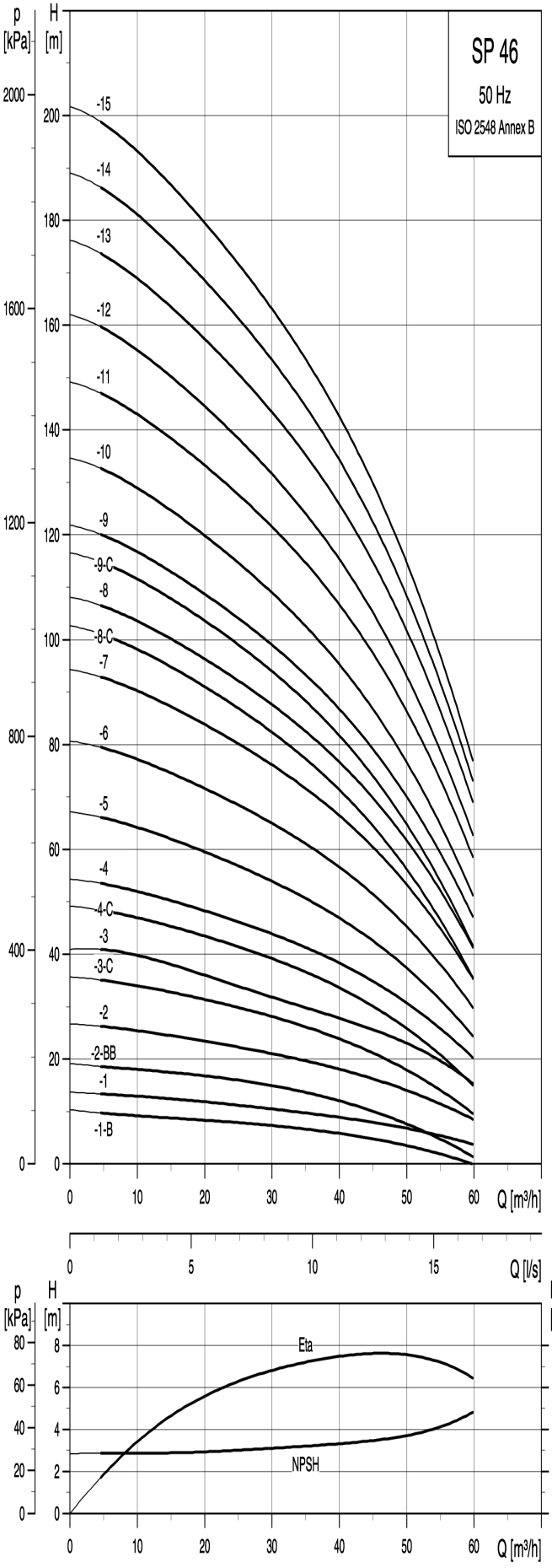
SP 46-26 to SP 46-33 are mounted in sleeve for R 4 connection.

Pump type	Motor		Dimensions [mm]										Net weight [kg]
	Type	Power [kW]	Rp 3 connection				Rp 4 connection				B	D	
			A	C	E*	E**	A	C	E*	E**			
SP 46-1-B	MS 4000	1.1	777	364	141		783	370	145		413	95	20
SP 46-1	MS 4000	2.2	930	364	141		823	370	145		453	95	22
SP 46-2-BB	MS 4000	2.2	817	477	141		936	483	145		4536	95	24
SP 46-2	MS 4000	3.0	970	477	141		976	483	145		493	95	25
SP 46-3-C	MS 4000	4.0	1166	590	141		1169	596	145		573	95	32
SP 46-3	MS 4000	5.5	1263	590	141		1269	596	145		673	95	37
SP 46-4-C	MS 4000	5.5	1376	703	141		1382	709	145		673	95	39
SP 46-4	MS 4000	7.5	1476	703	141		1482	709	145		773	95	44
SP 46-5	MS 4000	7.5	1589	816	141		1595	822	145		773	95	47
SP 46-3	MS 6000	5.5	1150	606	145	150	1156	612	147	152	544	138	48
SP 46-4	MS 6000	7.5	1293	719	145	150	1299	725	147	152	574	138	52
SP 46-5	MS 6000	7.5	1406	832	145	150	1412	838	147	152	574	138	54
SP 46-6	MS 6000	9.2	1549	945	145	150	1555	951	147	152	604	138	62
SP 46-7	MS 6000	11	1692	1058	145	150	1698	1064	147	152	634	138	68
SP 46-8-C	MS 6000	11	1805	1171	145	150	1811	1177	147	152	634	138	70
SP 46-8	MS 6000	13	1835	1171	145	150	1841	1177	147	152	664	138	73
SP 46-9-C	MS 6000	13	1948	1284	145	150	1954	1290	147	152	664	138	76
SP 46-9	MS 6000	15	1983	1284	145	150	1989	1290	147	152	699	138	80
SP 46-10	MS 6000	15	2096	1397	145	150	2102	1403	147	152	699	138	82
SP 46-11	MS 6000	18.5	2264	1510	145	150	2270	1516	147	152	754	138	90
SP 46-12	MS 6000	18.5	2377	1623	145	150	2383	1629	147	152	754	138	93
SP 46-13	MS 6000	22	2550	1736	145	150	2556	1742	147	152	814	138	101
SP 46-14	MS 6000	22	2663	1849	145	150	2669	1855	147	152	814	138	104
SP 46-15	MS 6000	22	2776	1962	145	150	2782	1968	147	152	814	138	106
SP 46-16	MS 6000	26	2949	2075	145	150	2955	2081	147	152	874	138	114
SP 46-17	MS 6000	26	3062	2188	145	150	3068	2194	147	152	874	138	117
SP 46-18	MS 6000	30	3245	2301	145	150	3251	2307	147	152	944	138	128
SP 46-19	MS 6000	30	3358	2414	145	150	3364	2420	147	152	944	138	130
SP 46-20	MS 6000	30	3551	2607	145	150	3557	2613	147	152	944	138	132
SP 46-21	MMS 6000	37	4145	2720	145	150	4151	2726	147	152	1425	144	185
SP 46-22	MMS 6000	37	4258	2833	145	150	4264	2839	147	152	1425	144	188
SP 46-23	MMS 6000	37	4371	2946	145	150	4377	2952	147	152	1425	144	190
SP 46-24	MMS 6000	37	4484	3059	145	150	4490	3065	147	152	1425	144	193
SP 46-25	MMS 6000	37					4603	3178	147	152	1425	144	195
SP 46-26	MMS 8000	45					4673	3403	147	192	1270	192	278
SP 46-27	MMS 8000	45					4786	3516	192	192	1270	192	281
SP 46-28	MMS 8000	45					4899	3629	192	192	1270	192	284
SP 46-29	MMS 8000	45					5012	3742	192	192	1270	192	287
SP 46-30	MMS 8000	45					5125	3855	192	192	1270	192	290
SP 46-31	MMS 8000	55					5318	3968	192	192	1350	192	308
SP 46-32	MMS 8000	55					5431	4081	192	192	1350	192	311
SP 46-33	MMS 8000	55					5544	4194	192	192	1350	192	314

* Maximum diameter of pump with one motor cable.

** Maximum diameter of pump with two motor cables.

All pumps are also available in N version with motors up to 30 kW in R version .
Dimensions as above.
SP 46-1 to SP 46-20 are also available in R version with motors in R version. Dimensions as above.
Other types of connection are possible by means of connecting pieces, see page 85.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H [m]
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-13
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-11
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-9
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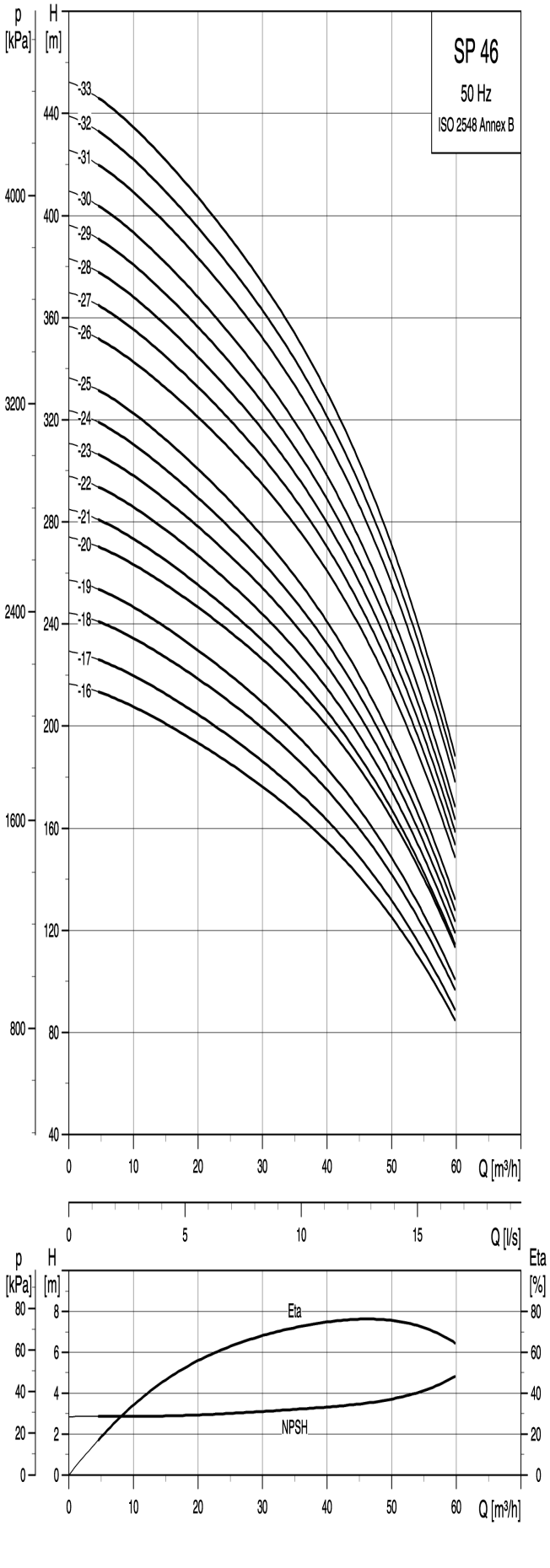
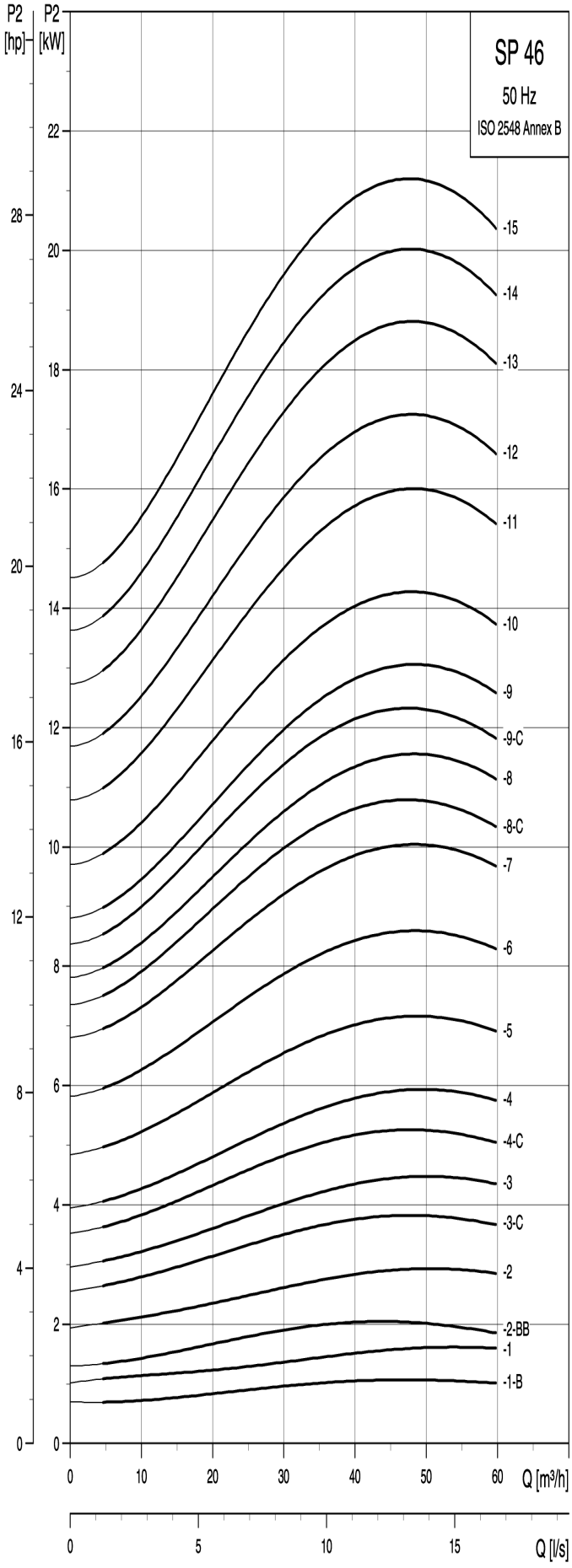
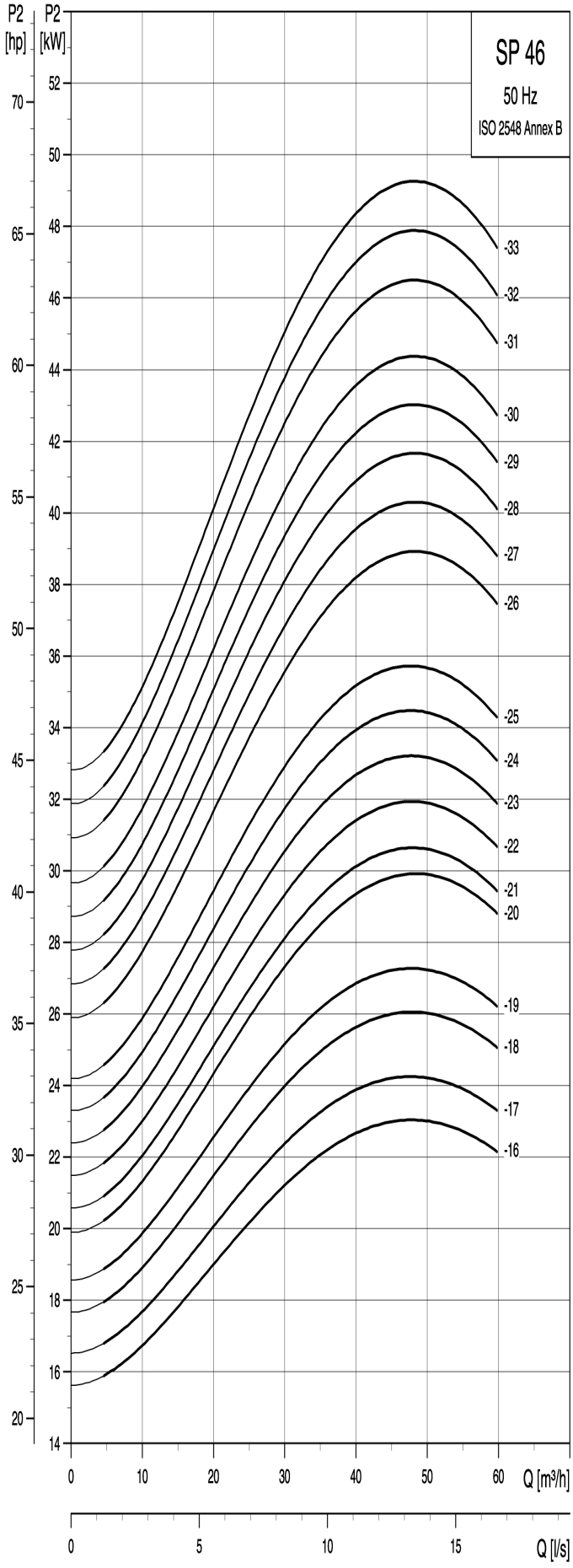
-4-C
-3
-3-C
-2
-2-BB
-1
-1-B
Q [m³/h]
Q [l/s]
Eta
[%]
NPSH


SP 46
50 Hz
ISO 2548 Annex B
p [kPa]
H [m]
-33
-32
-31
-30
-29
-28
-27
-26
-25
-24
-23
-22
-21
-20
-19
-18
-17
-16
Q [m³/h]
Q [l/s]
Eta
[%]
NPSH
TM01 8766 0800

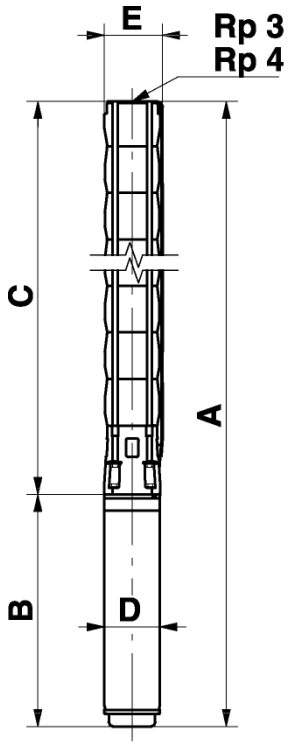
GRUNDFOS


P2 [hp]
P2 [kW]
SP 46
50 Hz
ISO 2548 Annex B
-15
-14
-13
-12
-11
-10
-9
-9-C
-8
-8-C
-7
-6
-5
-4
-4-C
-3
-3-C
-2
-2-BB
-1
-1-B
Q [m³/h]
Q [l/s]


P2 [hp]
P2 [kW]
SP 46
50 Hz
ISO 2548 Annex B
-33
-32
-31
-30
-29
-28
-27
-26
-25
-24
-23
-22
-21
-20
-19
-18
-17
-16
Q [m³/h]
Q [l/s]

13

GRUNDFOS



TM00 0961 1196

Pump type	Motor		Dimensions [mm]										Net weight [kg]
	Type	Power [kW]	Rp 3 connection				Rp 4 connection				B	D	
			A	C	E*	E**	A	C	E*	E**			
SP 60-1-A	MS 4000	1.5	780	364	142		785	370	146		416	95	20
SP 60-1	MS 4000	2.2	817	364	142		823	370	146		453	95	22
SP 60-2-B	MS 4000	3.0	973	477	142		976	483	146		493	95	25
SP 60-2	MS 4000	4.0	1050	477	142		1056	483	146		573	95	29
SP 60-3	MS 4000	5.5	1263	590	142		1269	596	146		673	95	37
SP 60-4	MS 4000	7.5	1493	719	142		1482	709	146		773	95	44
SP 60-5	MS 6000	9.2	1436	832	147	150	1442	838	149	152	604	138	60
SP 60-6	MS 6000	11	1584	950	147	150	1585	951	149	152	634	138	65
SP 60-7	MS 6000	13	1722	1058	147	150	1728	1064	149	152	664	138	71
SP 60-8-B	MS 6000	13	1835	1171	147	150	1841	1177	149	152	664	138	73
SP 60-8	MS 6000	15	1870	1171	147	150	1876	1177	149	152	699	138	77
SP 60-9-B	MS 6000	15	1983	1284	147	150	1989	1290	149	152	699	138	80
SP 60-9	MS 6000	18.5	2038	1284	147	150	2044	1290	149	152	754	138	85
SP 60-10	MS 6000	18.5	2151	1397	147	150	2157	1403	149	152	754	138	88
SP 60-11	MS 6000	22	2324	1510	147	150	2330	1516	149	152	814	138	96
SP 60-12	MS 6000	22	2437	1623	147	150	2443	1629	149	152	814	138	99
SP 60-13	MS 6000	26	2610	1736	147	150	2616	1742	149	152	874	138	107
SP 60-14	MS 6000	26	2723	1849	147	150	2729	1855	149	152	874	138	109
SP 60-15	MS 6000	26	2836	1962	147	150	2842	1968	149	152	874	138	112
SP 60-16	MS 6000	30	3019	2075	147	150	3025	2081	149	152	944	138	122
SP 60-17	MS 6000	30	3132	2188	150	154	3138	2194	152	156	944	138	125
SP 60-18	MMS 6000	37	3806	2381	150	154	3812	2387	152	156	1425	144	178
SP 60-19	MMS 6000	37	3919	2494	150	154	3925	2500	152	156	1425	144	180
SP 60-20	MMS 6000	37	4032	2607	150	154	4038	2613	152	156	1425	144	183
SP 60-21	MMS 6000	37	4147	2722	150	154	4151	2726	152	156	1425	144	185
SP 60-22	MMS 8000	45	4105	2784	180	180	4058	2788	180	180	1270	192	239

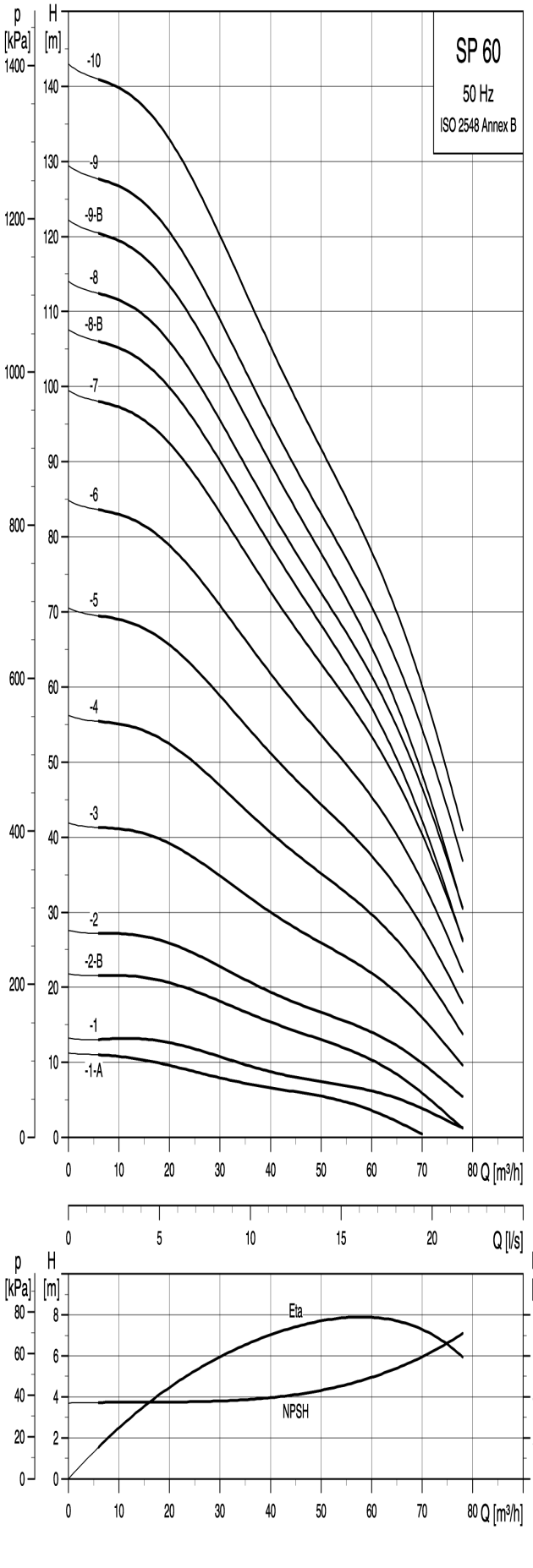
* Maximum diameter of pump with one motor cable.

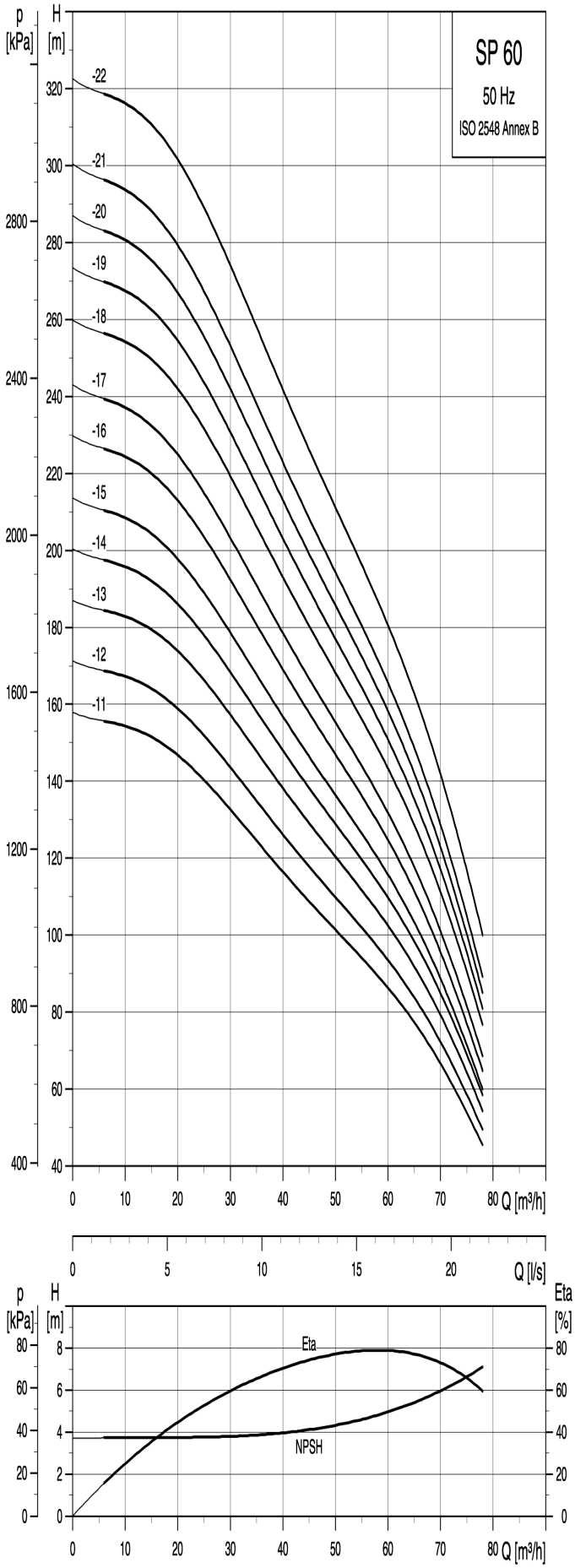
** Maximum diameter of pump with two motor cables.

All pumps are also available in N version with motors up to 30 kW in R version.
Dimensions as above.

SP 60-1 to SP 60-17 are also available in R version with motors in R version. Dimensions as above.

Other types of connection are possible by means of connecting pieces, see page 85.

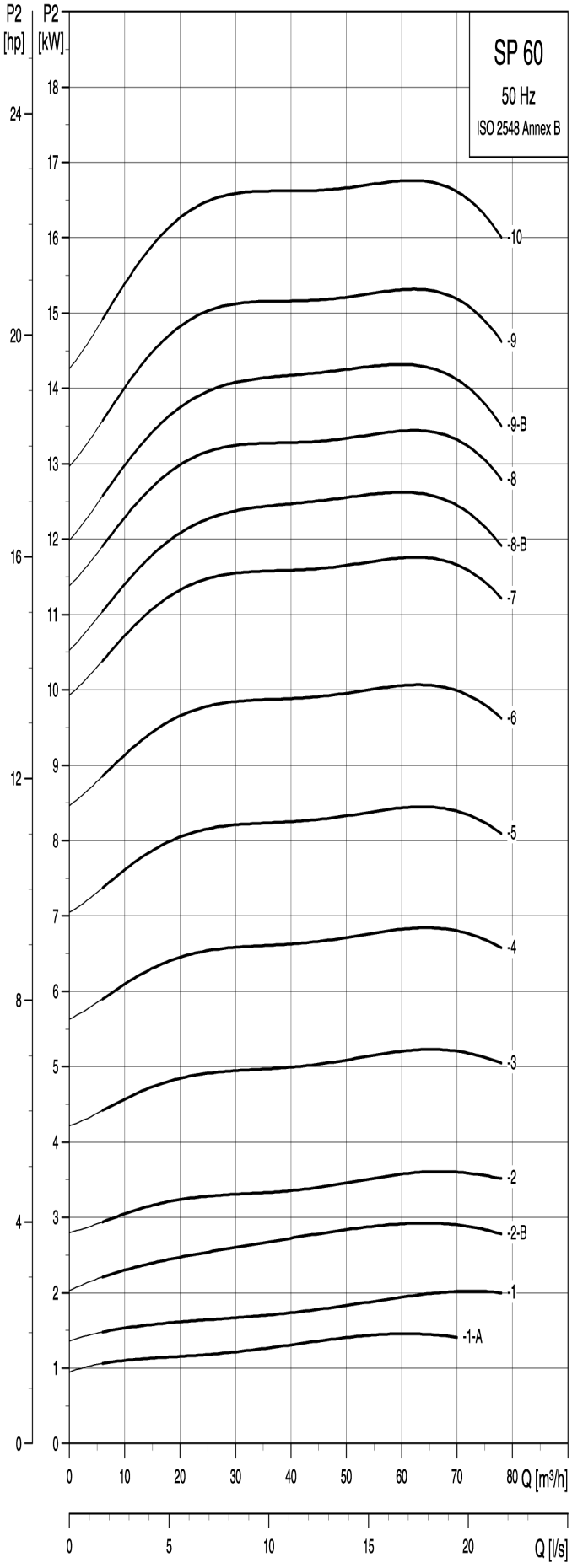


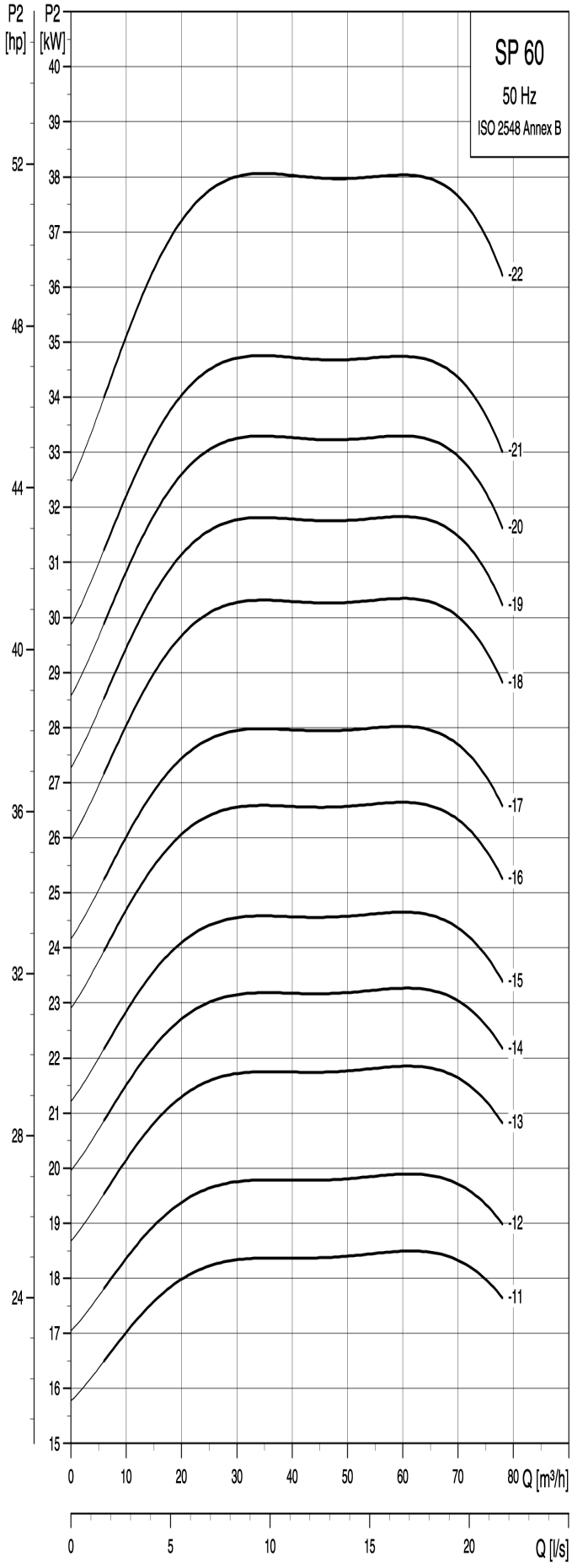


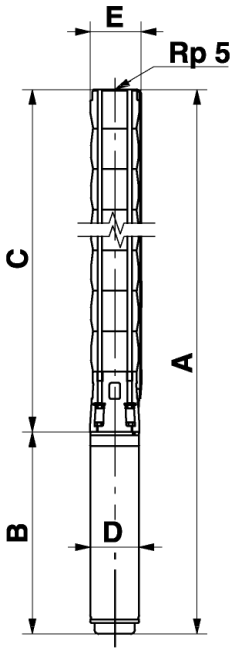
TM01 8826 0800

13

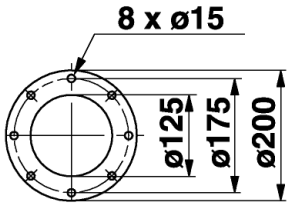
GRUNDFOS


P2 [hp]
P2 [kW]
SP 60
50 Hz
ISO 2548 Annex B
-10
-9
-9-B
-8
-8-B
-7
-6
-5
-4
-3
-2
-2-B
-1
-1-A
Q [m³/h]
Q [l/s]


P2 [hp]
P2 [kW]
SP 60
50 Hz
ISO 2548 Annex B
-22
-21
-20
-19
-18
-17
-16
-15
-14
-13
-12
-11
Q [m³/h]
Q [l/s]



TM00 7872 2196



TM00 7323 1798

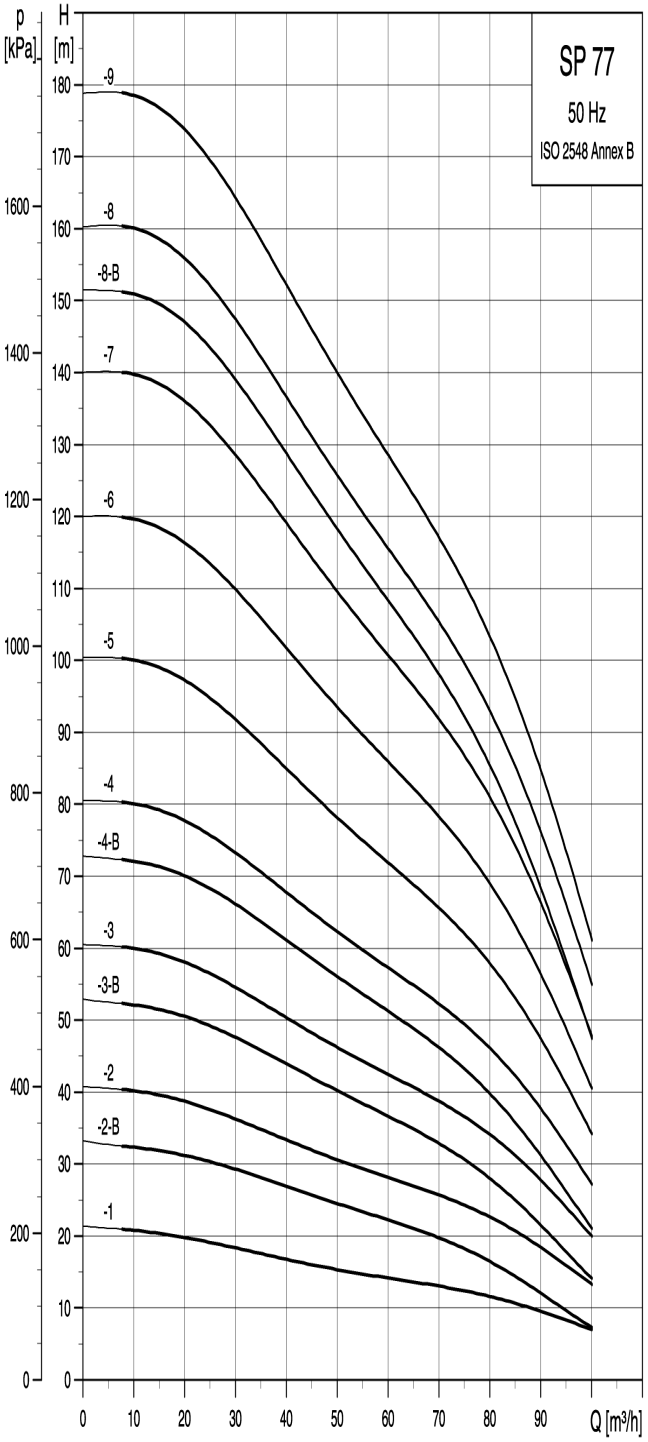
Pump type	Motor		Dimensions [mm]										Net weight [kg]
	Type	Power [kW]	Rp 5 connection				5" Grundfos flange				B	D	
			A	C	E*	E**	A	C	E*	E**			
SP 77-1	MS 6000	5.5	1162	618	178	186	1162	618	200	200	544	138	55
SP 77-2-B	MS 6000	5.5	1290	746	178	186	1290	746	200	200	544	138	59
SP 77-2	MS 6000	7.5	1320	746	178	186	1320	746	200	200	574	138	63
SP 77-3-B	MS 6000	9.2	1478	874	178	186	1478	874	200	200	604	138	72
SP 77-3	MS 6000	11	1508	874	178	186	1508	874	200	200	634	138	75
SP 77-4-B	MS 6000	13	1667	1003	178	186	1667	1003	200	200	664	138	82
SP 77-4	MS 6000	15	1702	1003	178	186	1702	1003	200	200	699	138	86
SP 77-5	MS 6000	18.5	1885	1131	178	186	1885	1131	200	200	754	138	95
SP 77-6	MS 6000	22	2073	1259	178	186	2073	1259	200	200	814	138	105
SP 77-7	MS 6000	26	2261	1387	178	186	2261	1387	200	200	874	138	114
SP 77-8-B	MS 6000	26	2389	1515	178	186	2389	1515	200	200	874	138	118
SP 77-8	MS 6000	30	2459	1515	178	186	2459	1515	200	200	944	138	126
SP 77-9	MS 6000	30	2587	1643	178	186	2587	1643	200	200	944	138	129
SP 77-10	MMS 6000	37	3196	1771	178	186	3196	1771	200	200	1425	144	181
SP 77-11	MMS 6000	37	3339	1914	178	186	3323	1898	200	200	1425	144	184
SP 77-12	MMS 8000	45	3313	2043	200	204	3313	2043	209	209	1270	192	240
SP 77-13	MMS 8000	55	3522	2172	200	204	3522	2172	209	209	1350	192	259
SP 77-14	MMS 8000	55	3650	2300	200	204	3650	2300	209	209	1350	192	263
SP 77-15	MMS 8000	55	3779	2429	200	204					1350	192	266
SP 77-16	MMS 8000	63	4047	2557	200	204					1490	192	296
SP 77-17	MMS 8000	63	4175	2685	200	204					1490	192	300
SP 77-18	MMS 8000	63	4304	2814	200	204					1490	192	304
SP 77-19	MMS 8000	75	4532	2942	200	204					1590	192	326
SP 77-20	MMS 8000	75	4660	3070	200	204					1590	192	330

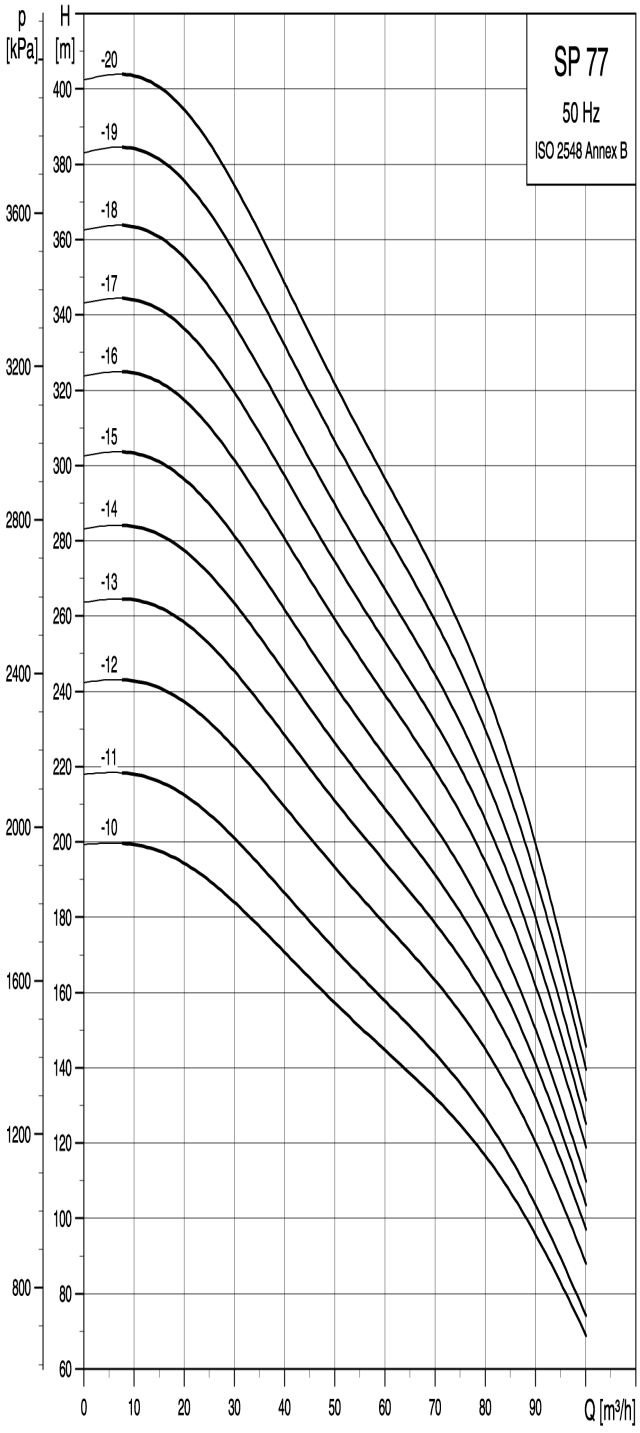
* Maximum diameter of pump with one motor cable.

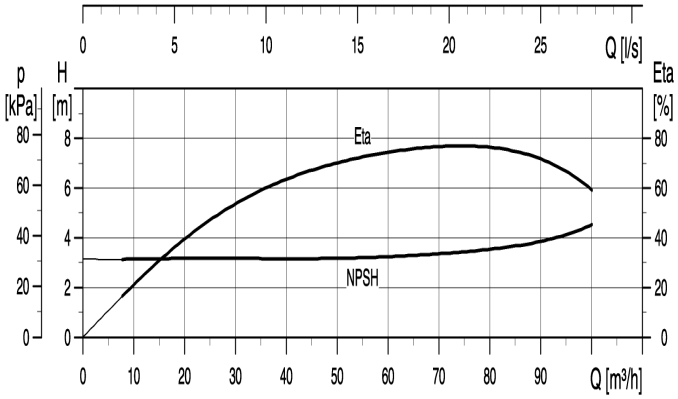
** Maximum diameter of pump with two motor cables.

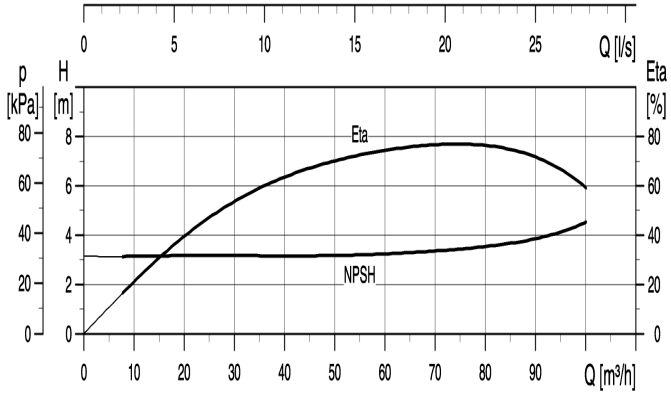
All pumps are also available in N version with motors up to 30 kW in R version.
Dimensions as above.

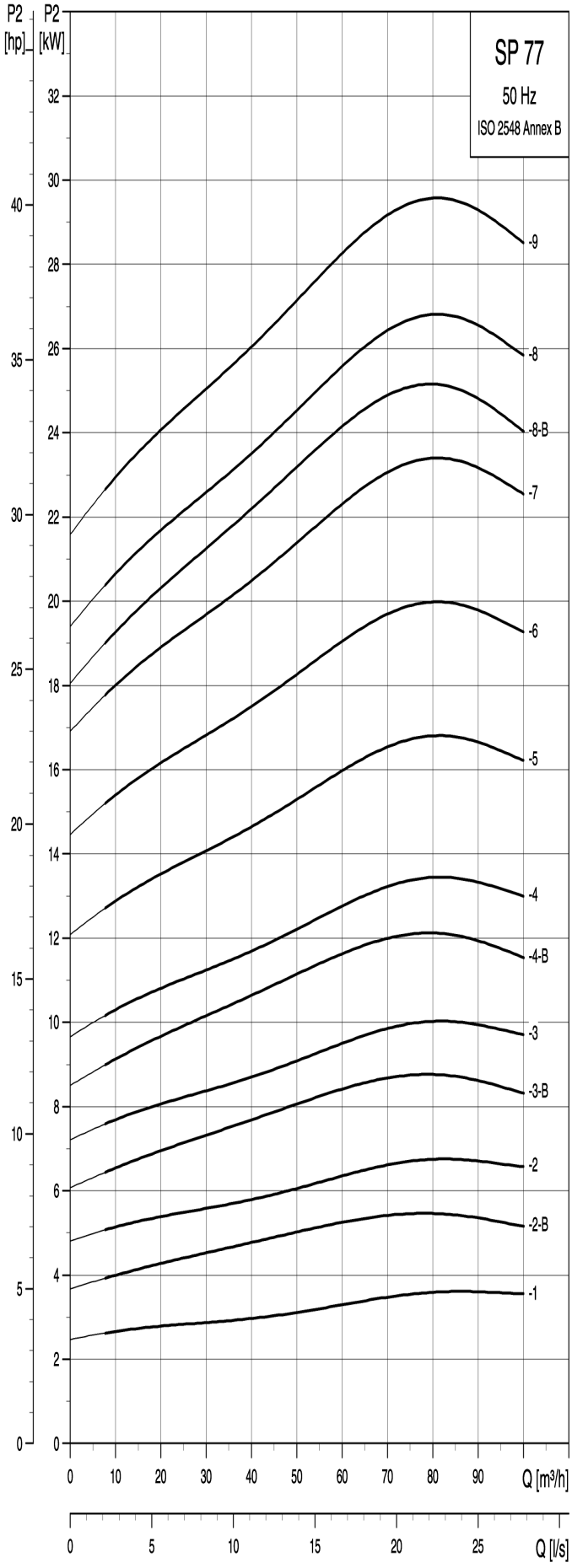
Other types of connection are possible by means of connecting pieces, see page 85.

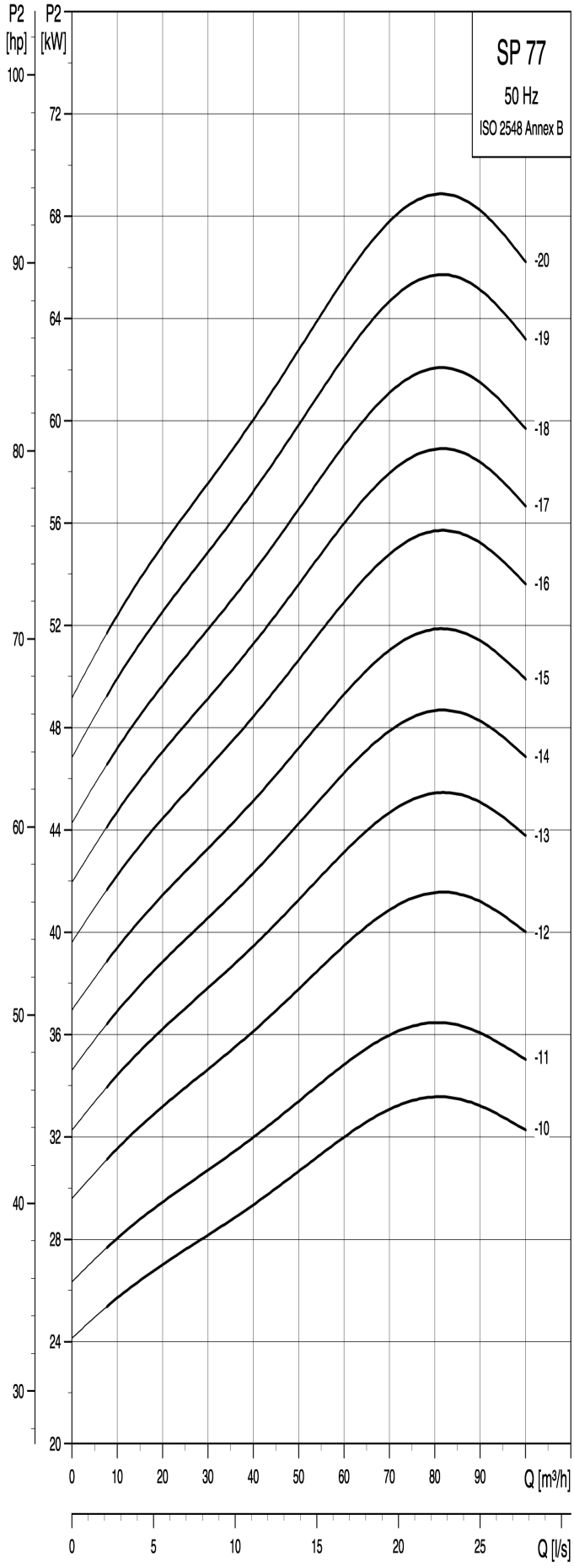

SP 77
50 Hz
ISO 2548 Annex B
p [kPa]
H [m]
-9
-8
-8-B
-7
-6
-5
-4
-4-B
-3
-3-B
-2
-2-B
-1
Q [m³/h]


SP 77
50 Hz
ISO 2548 Annex B
p [kPa]
H [m]
-20
-19
-18
-17
-16
-15
-14
-13
-12
-11
-10
Q [m³/h]


Q [l/s]
p [kPa]
H [m]
Eta [%]
Eta
NPSH
Q [m³/h]

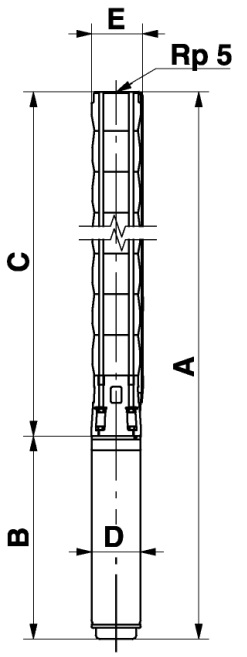

Q [l/s]
p [kPa]
H [m]
Eta [%]
Eta
NPSH
Q [m³/h]


P2 [hp]
P2 [kW]
SP 77
50 Hz
ISO 2548 Annex B
-9
-8
-8-B
-7
-6
-5
-4
-4-B
-3
-3-B
-2
-2-B
-1
Q [m³/h]
Q [l/s]

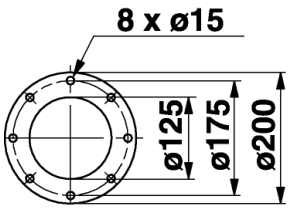

P2 [hp]
P2 [kW]
SP 77
50 Hz
ISO 2548 Annex B
-20
-19
-18
-17
-16
-15
-14
-13
-12
-11
-10
Q [m³/h]
Q [l/s]

13

GRUNDFOS



TM00 7872 2196



TM00 7323 1798

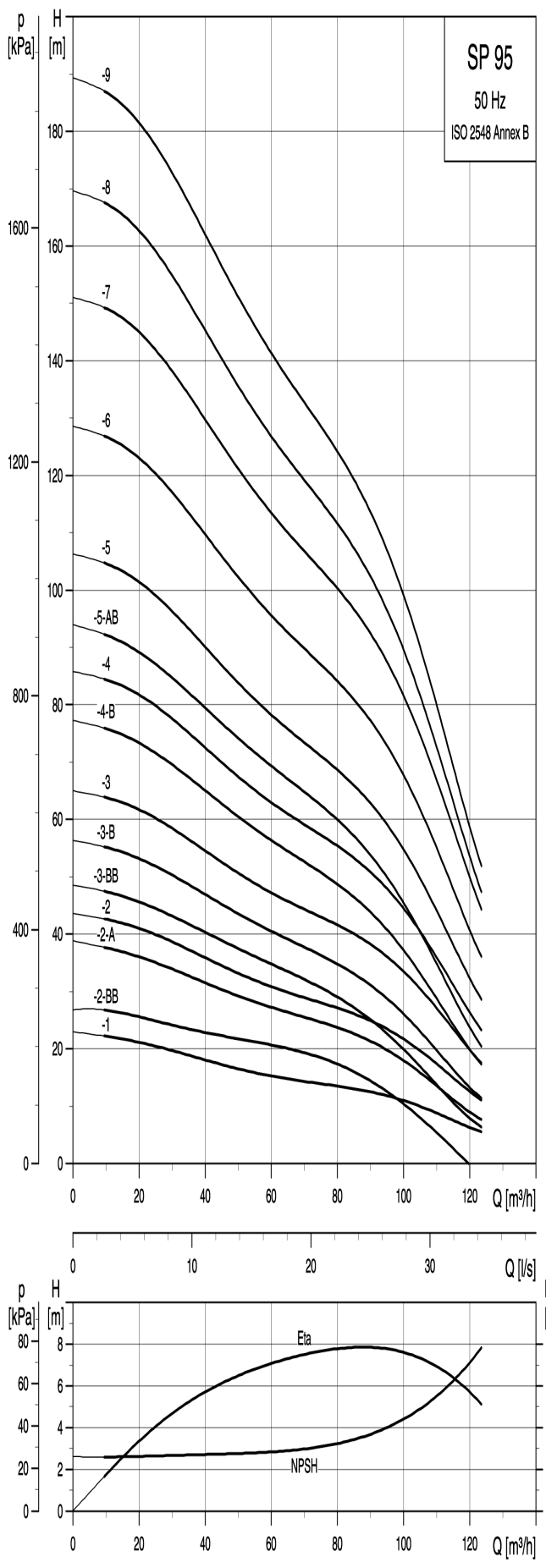
Pump type	Motor		Dimensions [mm]										Net weight [kg]
	Type	Power [kW]	Rp 5 connection				5" Grundfos flange				B	D	
			A	C	E*	E**	A	C	E*	E**			
SP 95-1	MS 6000	5.5	1162	618	178	186	1162	618	200	200	544	138	55
SP 95-2-BB	MS 6000	5.5	1290	746	178	186	1290	746	200	200	544	138	66
SP 95-2-A	MS 6000	7.5	1320	746	178	186	1320	746	200	200	574	138	63
SP 95-2	MS 6000	9.2	1350	746	178	186	1350	746	200	200	604	138	68
SP 95-3-BB	MS 6000	9.2	1478	874	178	186	1478	874	200	200	604	138	72
SP 95-3-B	MS 6000	11	1508	874	178	186	1508	874	200	200	634	138	75
SP 95-3	MS 6000	13	1538	874	178	186	1538	874	200	200	664	138	78
SP 95-4-B	MS 6000	15	1703	1003	178	186	1703	1003	200	200	699	138	86
SP 95-4	MS 6000	18.5	1757	1003	178	186	1757	1003	200	200	754	138	91
SP 95-5-AB	MS 6000	18.5	1885	1131	178	186	1885	1131	200	200	754	138	95
SP 95-5	MS 6000	22	1945	1131	178	186	1945	1131	200	200	814	138	101
SP 95-6	MS 6000	26	2133	1259	178	186	2133	1259	200	200	874	138	110
SP 95-7	MS 6000	30	2331	1387	178	186	2331	1387	200	200	944	138	122
SP 95-8	MMS 6000	37	2940	1515	178	186	2940	1515	200	200	1425	144	173
SP 95-9	MMS 6000	37	3067	1642	178	186	3067	1642	200	200	1425	144	177
SP 95-10	MMS 8000	45	3055	1785	196	204	3055	1785	205	205	1270	192	233
SP 95-11	MMS 8000	55	3264	1914	196	204	3264	1914	205	205	1350	192	251
SP 95-12	MMS 8000	55	3393	2043	196	204	3393	2043	205	205	1350	192	255
SP 95-13	MMS 8000	55	3522	2172	196	204	3522	2172	205	205	1350	192	259
SP 95-14	MMS 8000	63	3790	2300	196	204	3790	2300	205	205	1490	192	289
SP 95-15	MMS 8000	75	4019	2429	196	204					1590	192	311
SP 95-16	MMS 8000	75	4147	2557	196	204					1590	192	315
SP 95-17	MMS 8000	75	4275	2685	196	204					1590	192	319
SP 95-18	MMS 8000	92	4314	2814	196	204					1500	192	369
SP 95-19	MMS 8000	92	4442	2942	196	204					1500	192	372
SP 95-20	MMS 8000	92	4570	3070	196	204					1500	192	376

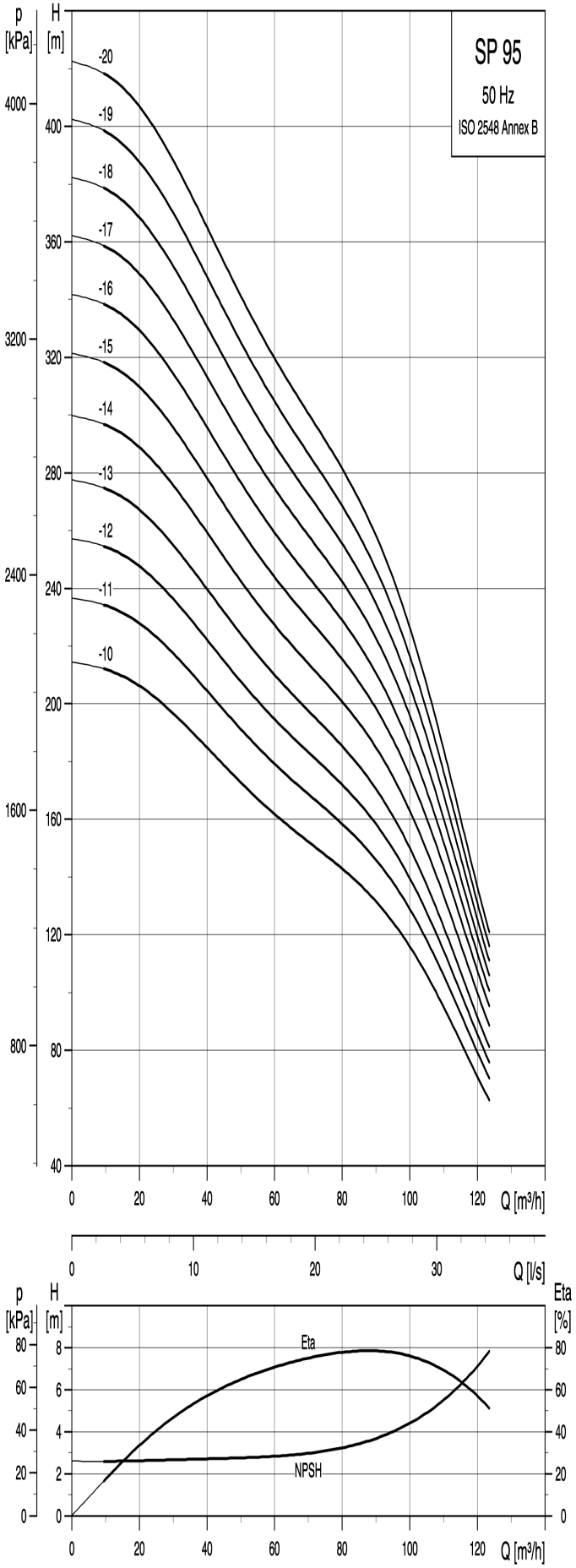
* Maximum diameter of pump with one motor cable.

** Maximum diameter of pump with two motor cables.

All pumps are also available in N version with motors up to 30 kW in R version.
Dimensions as above.

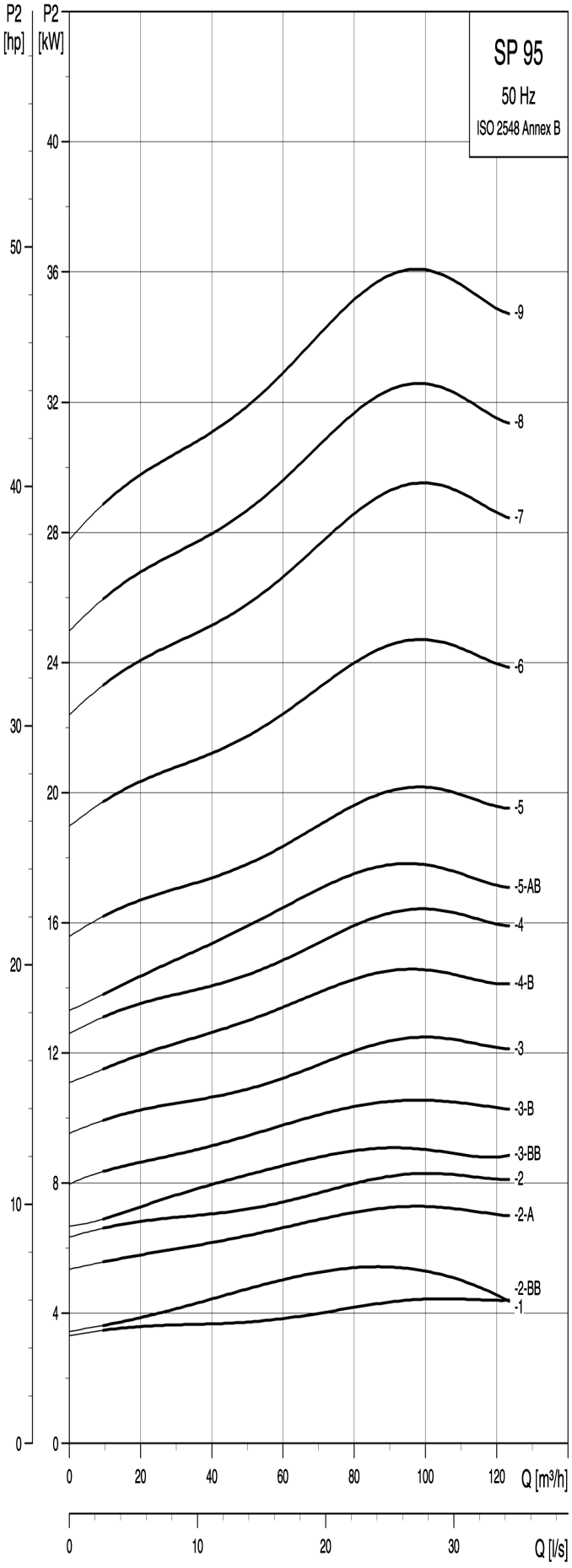
Other types of connection are possible by means of connecting pieces, see page 85.

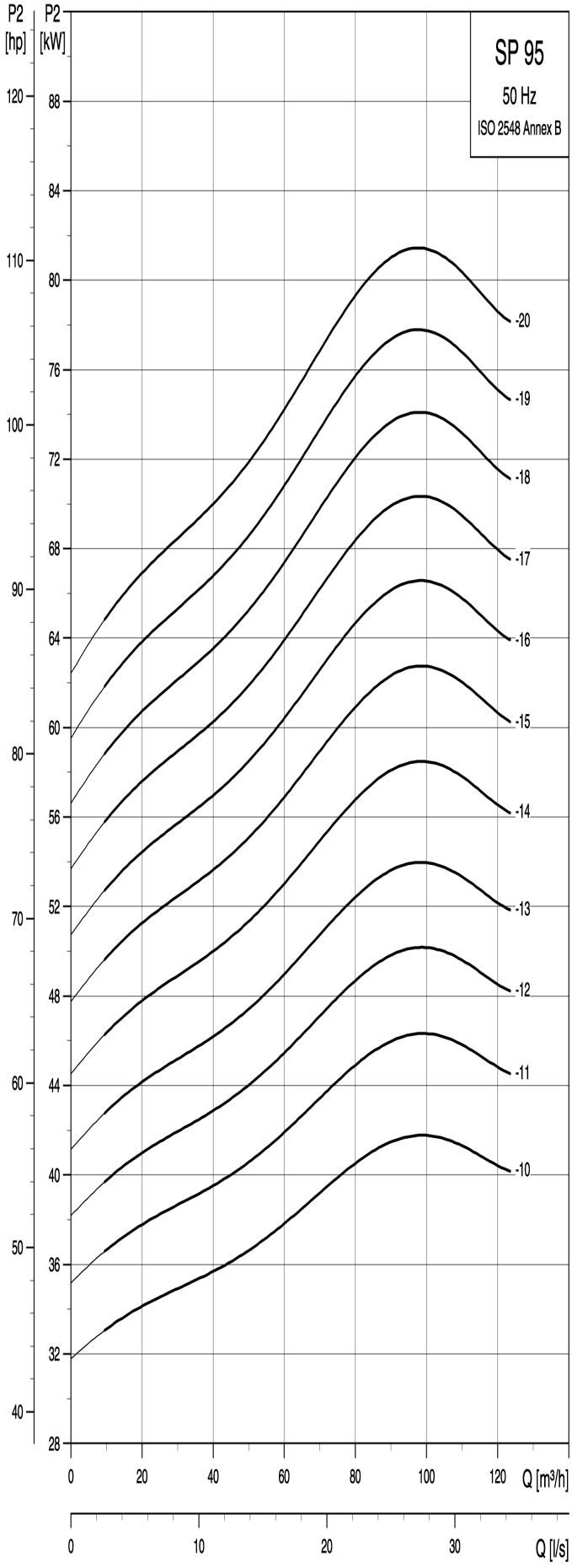

SP 95
50 Hz
ISO 2548 Annex B
p [kPa]
H [m]
-9
-8
-7
-6
-5
-5-AB
-4
-4-B
-3
-3-B
-3-BB
-2
-2-A
-2-BB
-1
Q [m³/h]
Q [l/s]
Eta [%]
Eta
NPSH

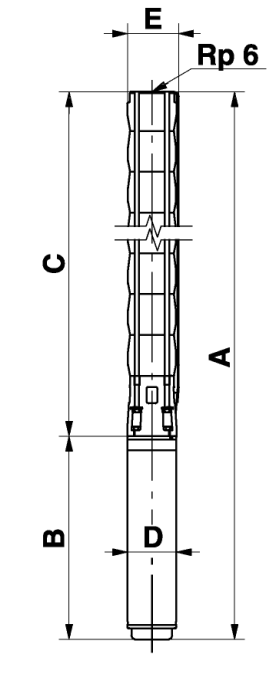

SP 95
50 Hz
ISO 2548 Annex B
p [kPa]
H [m]
-20
-19
-18
-17
-16
-15
-14
-13
-12
-11
-10
Q [m³/h]
Q [l/s]
Eta [%]
Eta
NPSH

13

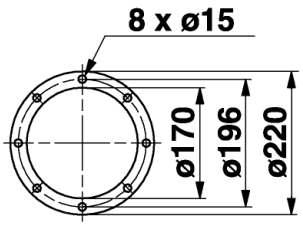
GRUNDFOS


P2 [hp]
P2 [kW]
SP 95
50 Hz
ISO 2548 Annex B
-9
-8
-7
-6
-5
-5-AB
-4
-4-B
-3
-3-B
-3-BB
-2
-2-A
-2-BB
-1
Q [m³/h]
Q [l/s]


P2 [hp]
P2 [kW]
SP 95
50 Hz
ISO 2548 Annex B
-20
-19
-18
-17
-16
-15
-14
-13
-12
-11
-10
Q [m³/h]
Q [l/s]



TM00 8760 3596



TM00 7324 1798

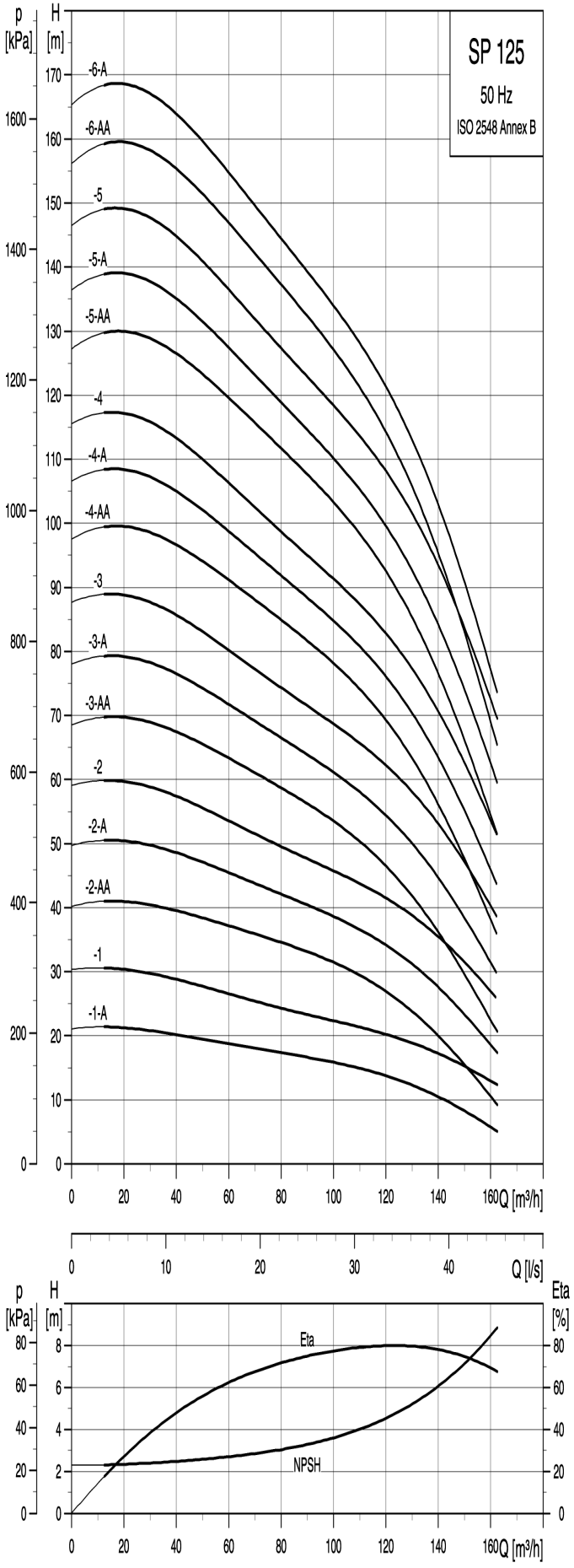
Pump type	Motor		Dimensions [mm]										Net weight [kg]
	Type	Power [kW]	Rp 6 connection				6" Grundfos flange				B	D	
			A	C	E*	E**	A	C	E*	E**			
SP 160-1-A	MS 6000	9.2	1255	651	211	218	1255	651	222	226	604	138	76
SP 160-1	MS 6000	13	1315	651	211	218	1315	651	222	226	664	138	82
SP 160-2-AA	MS 6000	18.5	1561	807	211	218	1561	807	222	226	754	138	97
SP 160-2-A	MS 6000	22	1621	807	211	218	1621	807	222	226	814	138	103
SP 160-2	MS 6000	26	1681	807	211	218	1681	807	222	226	874	138	109
SP 160-3-AA	MS 6000	30	1907	963	211	218	1907	963	222	226	944	138	123
SP 160-3-A	MMS 6000	37	2388	963	211	218	2388	963	222	226	1425	144	170
SP 160-3	MMS 6000	37	2388	963	218	227	2388	963	222	226	1425	144	170
SP 160-4-AA	MMS 8000	45	2389	1119	218	227	2389	1119	229	232	1270	192	230
SP 160-4-A	MMS 8000	45	2389	1119	218	227	2389	1119	229	232	1270	192	230
SP 160-4	MMS 8000	55	2469	1119	218	227	2469	1119	229	232	1350	192	245
SP 160-5-AA	MMS 8000	55	2625	1275	218	227	2625	1275	229	232	1350	192	251
SP 160-5-A	MMS 8000	55	2625	1275	218	227	2625	1275	229	232	1350	192	251
SP 160-5	MMS 8000	63	2765	1275	218	227	2765	1245	229	232	1490	192	277
SP 160-6-AA	MMS 8000	63	2921	1431	218	227	2921	1431	229	232	1490	192	283
SP 160-6-A	MMS 8000	75	3021	1431	218	227	3021	1431	229	232	1590	192	302
SP 160-6	MMS 8000	75	3021	1431	218	227	3021	1431	229	232	1590	192	302
SP 160-7-AA	MMS 8000	75	3177	1587	218	227					1590	192	302
SP 160-7-A	MMS 8000	75	3417	1587	218	227					1830	192	354
SP 160-7	MMS 8000	92	3417	1587	218	227					1830	192	354
SP 160-8-AA	MMS 8000	92	3573	1743	218	227					1830	192	360
SP 160-8-A	MMS 8000	92	3573	1743	218	227					1830	192	360
SP 160-8	MMS 8000	92	3573	1743	218	227					1830	192	360
SP 160-9-AA	MMS 8000	110	3959	1899	218	227					2060	192	416
SP 160-9-A	MMS 8000	110	3959	1899	218	227					2060	192	416
SP 160-9	MMS 8000	110	3959	1899	218	227					2060	192	416

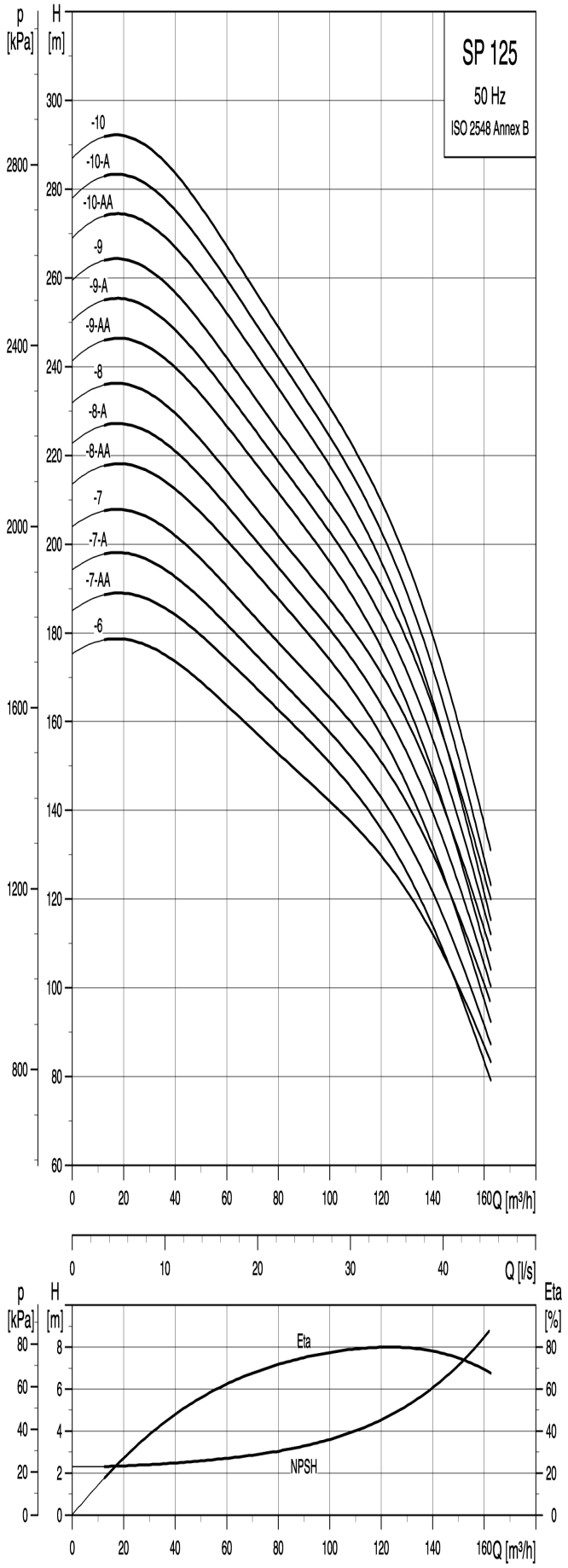
* Maximum diameter of pump with one motor cable.

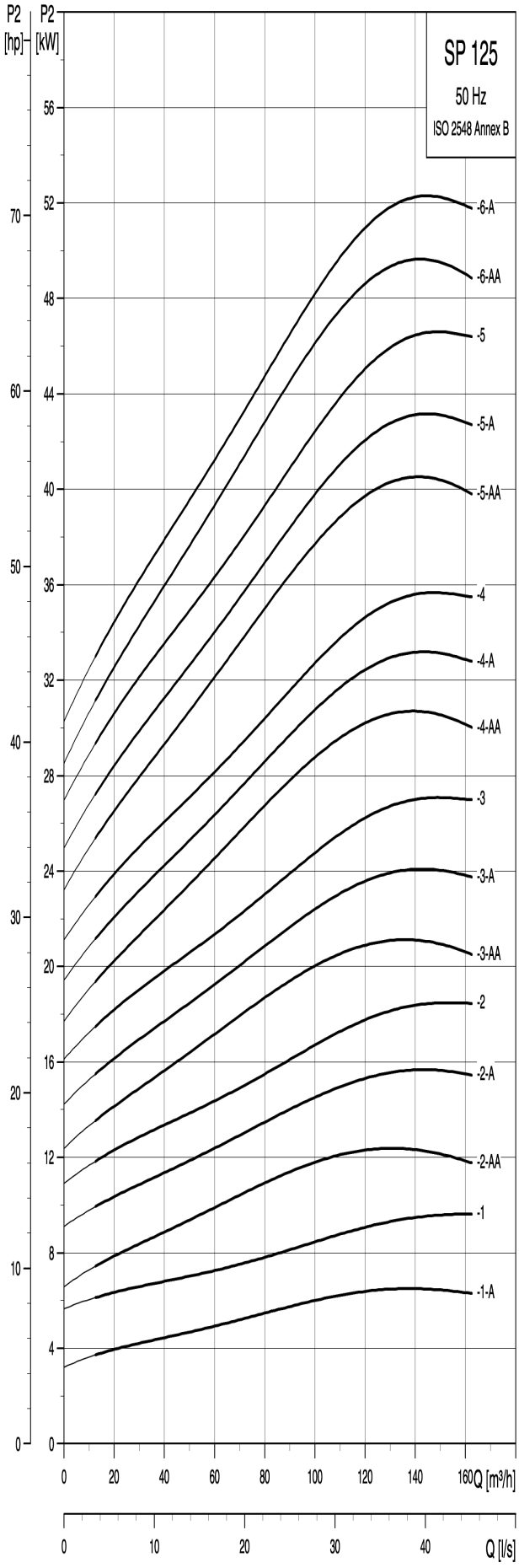
** Maximum diameter of pump with two motor cables.

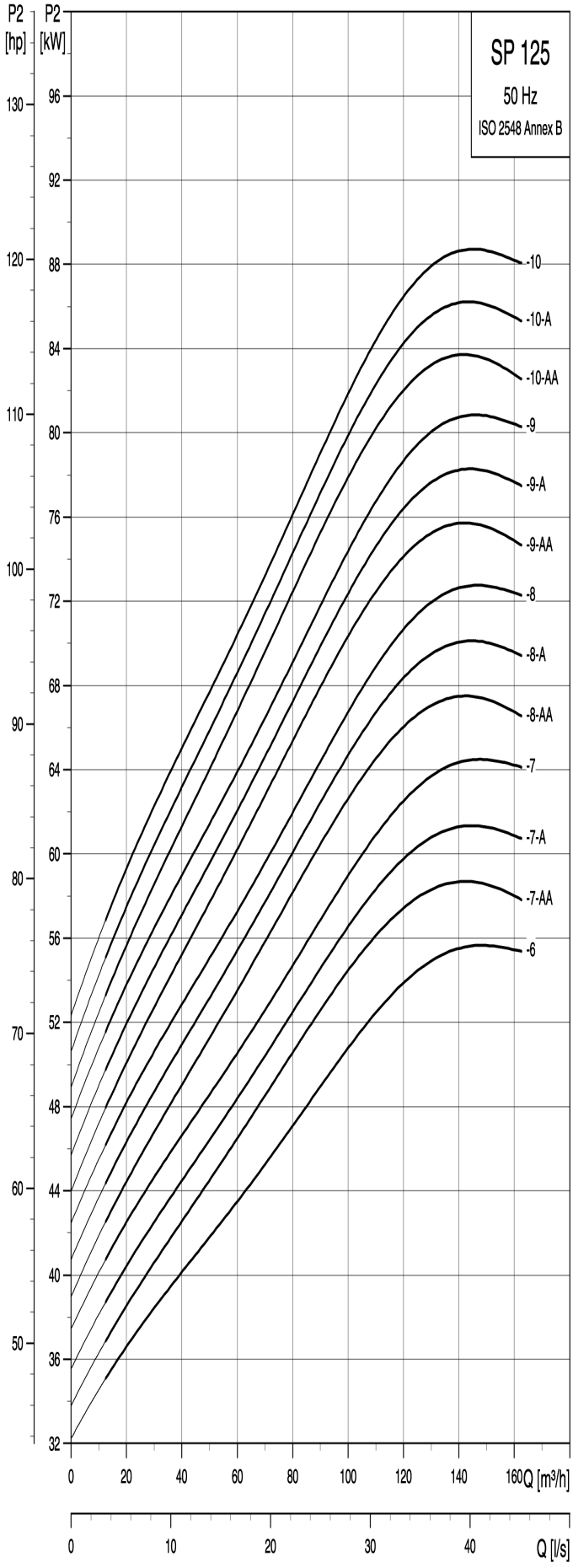
All pumps are also available in N version with motors up to 30 kW in R version.
Dimensions as above.

Other types of connection are possible by means of connecting pieces, see page 85.


SP 125
50 Hz
ISO 2548 Annex B
p [kPa]
H [m]
-6-A
-6-AA
-5
-5-A
-5-AA
-4
-4-A
-4-AA
-3
-3-A
-3-AA
-2
-2-A
-2-AA
-1
-1-A
Q [m³/h]
Q [l/s]
Eta [%]
Eta
NPSH


SP 125
50 Hz
ISO 2548 Annex B
p [kPa]
H [m]
-10
-10-A
-10-AA
-9
-9-A
-9-AA
-8
-8-A
-8-AA
-7
-7-A
-7-AA
-6
Q [m³/h]
Q [l/s]
Eta [%]
Eta
NPSH





8779 0800

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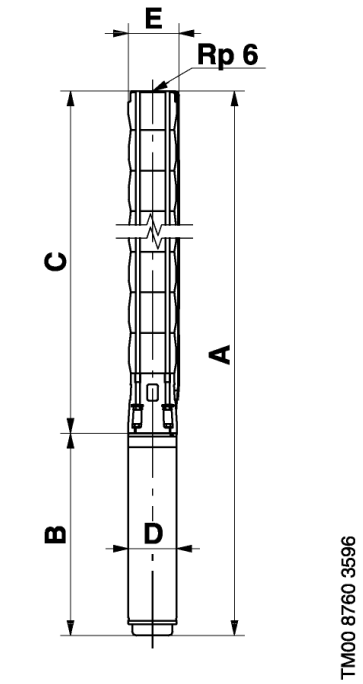
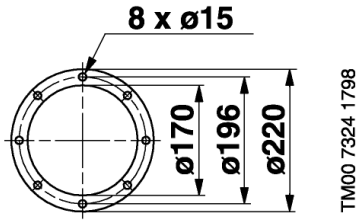
GRUNDFOS





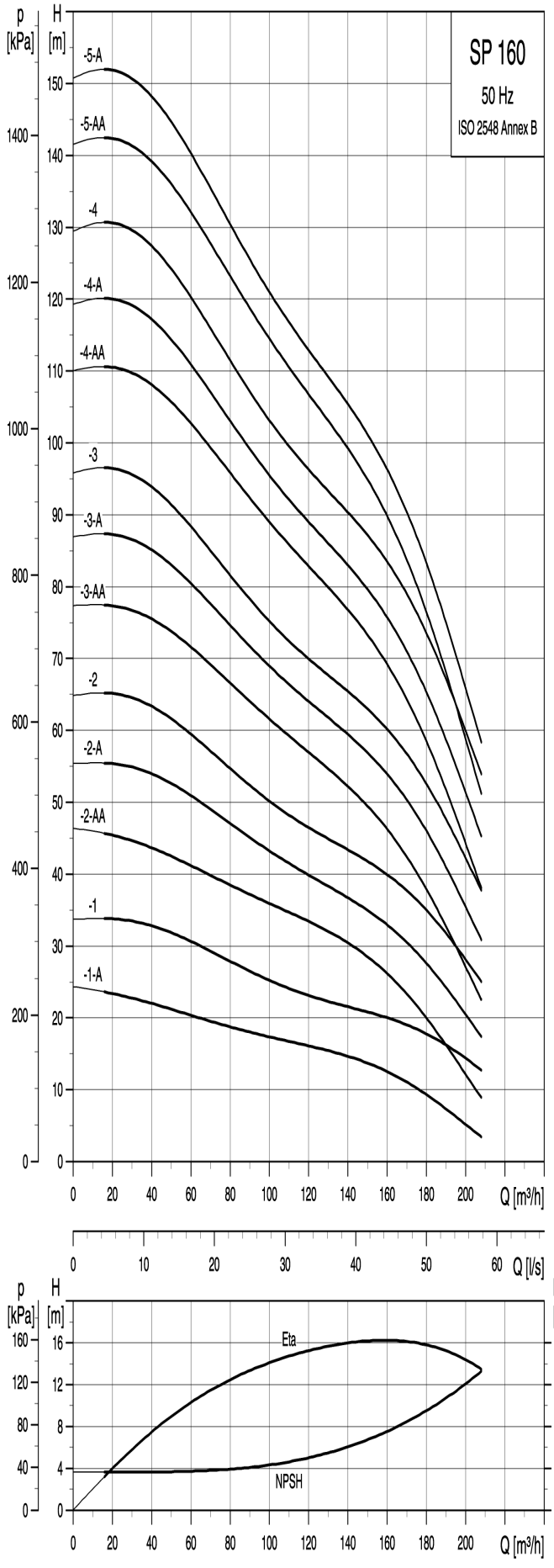
Pump type	Motor		Dimensions [mm]										Net weight [kg]
	Type	Power [kW]	Rp 6 connection				6" Grundfos flange				B	D	
			A	C	E*	E**	A	C	E*	E**			
SP 160-1-A	MS 6000	9.2	1255	651	211	218	1255	651	222	226	604	138	76
SP 160-1	MS 6000	13	1315	651	211	218	1315	651	222	226	664	138	82
SP 160-2-AA	MS 6000	18.5	1561	807	211	218	1561	807	222	226	754	138	97
SP 160-2-A	MS 6000	22	1621	807	211	218	1621	807	222	226	814	138	103
SP 160-2	MS 6000	26	1681	807	211	218	1681	807	222	226	874	138	109
SP 160-3-AA	MS 6000	30	1907	963	211	218	1907	963	222	226	944	138	123
SP 160-3-A	MMS 6000	37	2388	963	211	218	2388	963	222	226	1425	144	170
SP 160-3	MMS 6000	37	2388	963	218	227	2388	963	222	226	1425	144	170
SP 160-4-AA	MMS 8000	45	2389	1119	218	227	2389	1119	229	232	1270	192	230
SP 160-4-A	MMS 8000	45	2389	1119	218	227	2389	1119	229	232	1270	192	230
SP 160-4	MMS 8000	55	2469	1119	218	227	2469	1119	229	232	1350	192	245
SP 160-5-AA	MMS 8000	55	2625	1275	218	227	2625	1275	229	232	1350	192	251
SP 160-5-A	MMS 8000	55	2625	1275	218	227	2625	1275	229	232	1350	192	251
SP 160-5	MMS 8000	63	2765	1275	218	227	2765	1245	229	232	1490	192	277
SP 160-6-AA	MMS 8000	63	2921	1431	218	227	2921	1431	229	232	1490	192	283
SP 160-6-A	MMS 8000	75	3021	1431	218	227	3021	1431	229	232	1590	192	302
SP 160-6	MMS 8000	75	3021	1431	218	227	3021	1431	229	232	1590	192	302
SP 160-7-AA	MMS 8000	75	3177	1587	218	227					1590	192	302
SP 160-7-A	MMS 8000	75	3417	1587	218	227					1830	192	354
SP 160-7	MMS 8000	92	3417	1587	218	227					1830	192	354
SP 160-8-AA	MMS 8000	92	3573	1743	218	227					1830	192	360
SP 160-8-A	MMS 8000	92	3573	1743	218	227					1830	192	360
SP 160-8	MMS 8000	92	3573	1743	218	227					1830	192	360
SP 160-9-AA	MMS 8000	110	3959	1899	218	227					2060	192	416
SP 160-9-A	MMS 8000	110	3959	1899	218	227					2060	192	416
SP 160-9	MMS 8000	110	3959	1899	218	227					2060	192	416

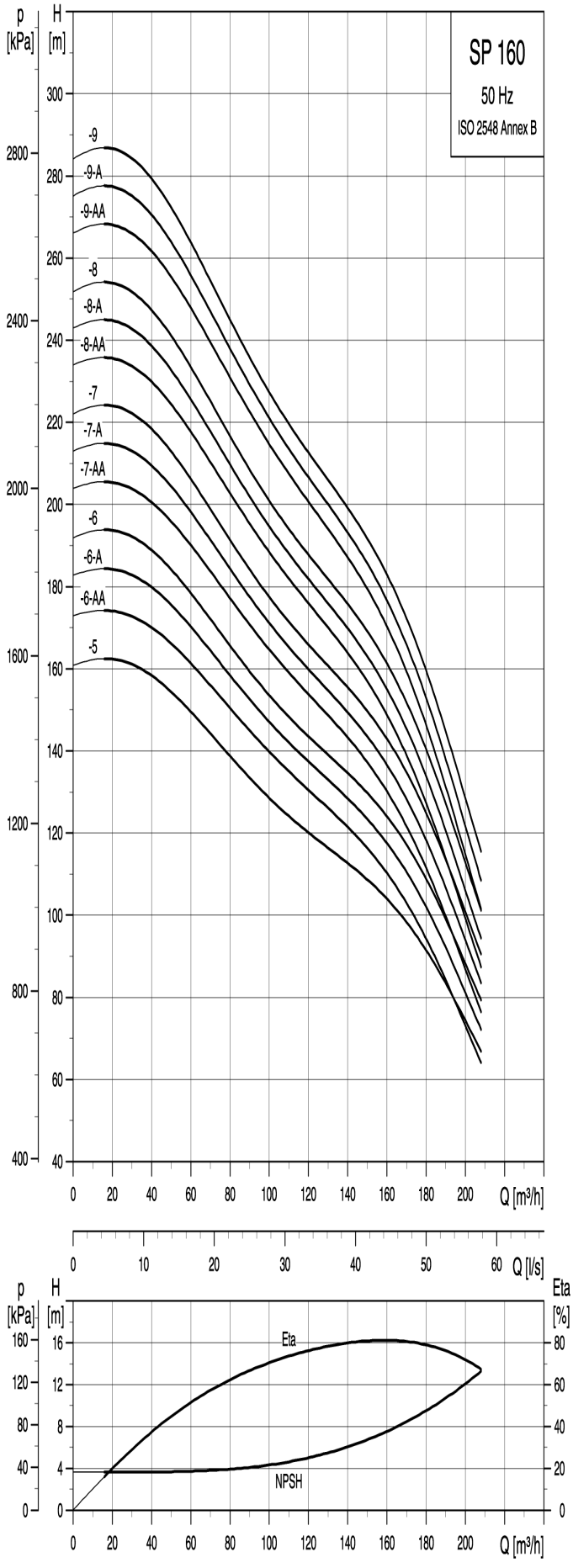
* Maximum diameter of pump with one motor cable.

** Maximum diameter of pump with two motor cables.

All pumps are also available in N version with motors up to 30 kW in R version.
Dimensions as above.

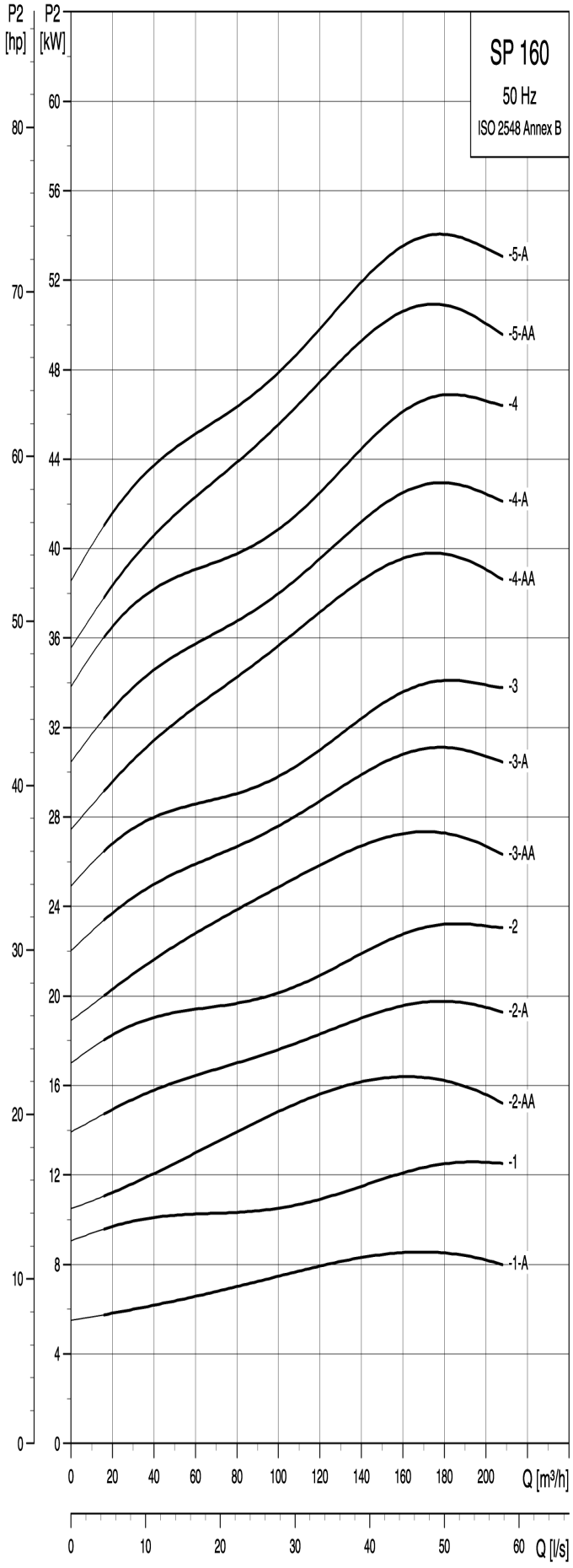
Other types of connection are possible by means of connecting pieces, see page 85.

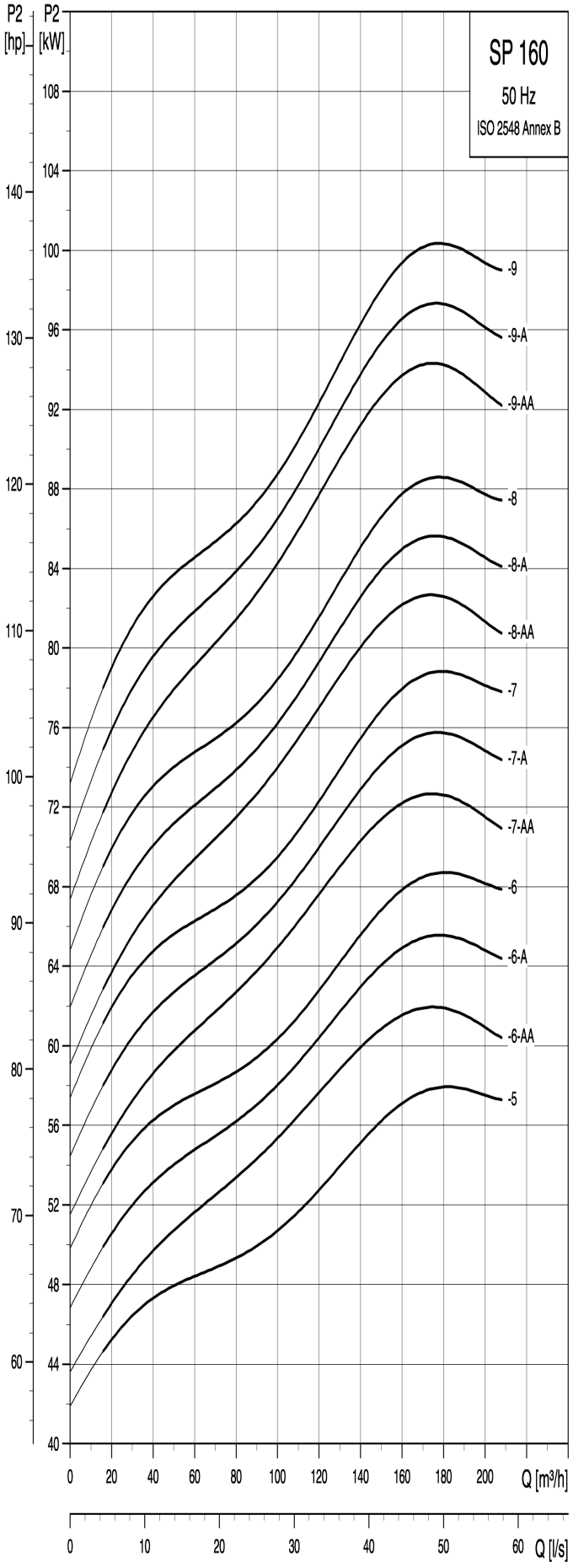

p [kPa]
H [m]
SP 160
50 Hz
ISO 2548 Annex B
-5-A
-5-AA
-4
-4-A
-4-AA
-3
-3-A
-3-AA
-2
-2-A
-2-AA
-1
-1-A
Q [m³/h]
Q [l/s]
Eta [%]
Eta
NPSH


p [kPa]
H [m]
SP 160
50 Hz
ISO 2548 Annex B
-9
-9-A
-9-AA
-8
-8-A
-8-AA
-7
-7-A
-7-AA
-6
-6-A
-6-AA
-5
Q [m³/h]
Q [l/s]
Eta [%]
Eta
NPSH

13

GRUNDFOS


P2 [hp]
P2 [kW]
SP 160
50 Hz
ISO 2548 Annex B
-5-A
-5-AA
-4
-4-A
-4-AA
-3
-3-A
-3-AA
-2
-2-A
-2-AA
-1
-1-A
Q [m³/h]
Q [l/s]


P2 [hp]
P2 [kW]
SP 160
50 Hz
ISO 2548 Annex B
-9
-9-A
-9-AA
-8
-8-A
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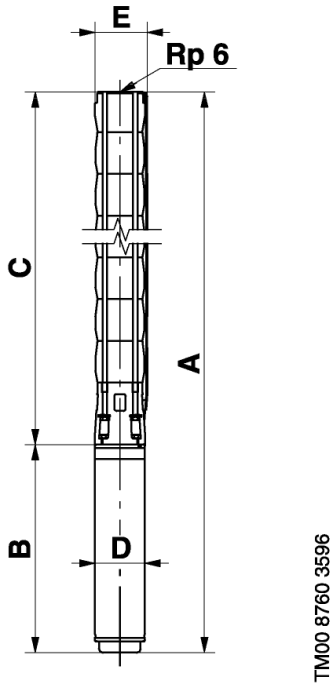
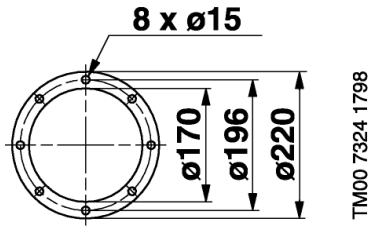
-7-A
-7-AA
-6
-6-A
-6-AA
-5
Q [m³/h]
Q [l/s]



TM00 8760 3596



TM00 7324 1798

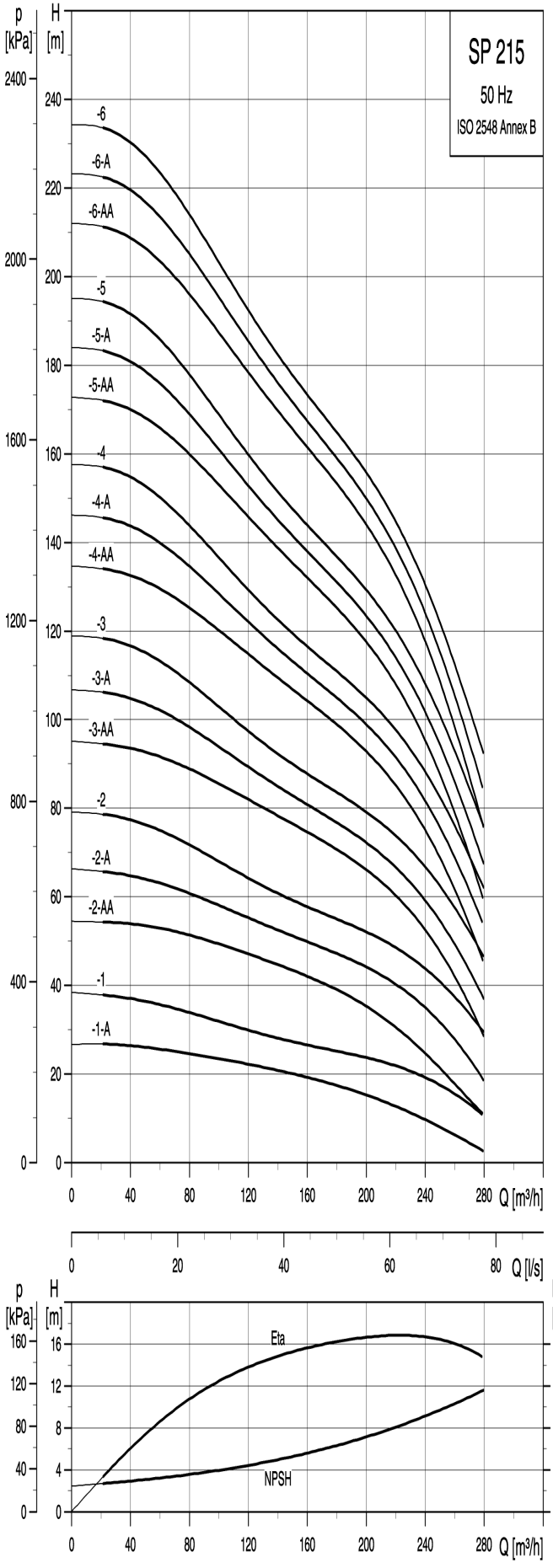
Pump type	Motor		Dimensions [mm]										Net weight [kg]
	Type	Power [kW]	Rp 6 connection				6" Grundfos flange				B	D	
			A	C	E*	E**	A	C	E*	E**			
SP 215-1-A	MS 6000	15	1489	790	241	247	1489	790	241	247	699	138	92
SP 215-A	MS 6000	18.5	1544	790	241	247	1544	790	241	247	754	138	97
SP 215-2-AA	MS 6000	30	1910	966	241	247	1910	966	241	247	944	138	127
SP 215-2-A	MMS 6000	37	2126	966	241	247	2126	966	241	247	1160	144	174
SP 215-2	MMS 8000	45	2236	966	241	247	2236	966	241	247	1270	192	228
SP 215-3-AA	MMS 8000	55	2492	1142	241	247	2492	1142	241	247	1350	192	253
SP 215-3-A	MMS 8000	55	2492	1142	241	247	2492	1142	241	247	1350	192	253
SP 215-3	MMS 8000	63	2632	1142	241	247	2632	1142	241	247	1490	192	279
SP 215-4-AA	MMS 8000	75	2908	1318	241	247	2908	1318	241	247	1590	192	308
SP 215-4-A	MMS 8000	75	2908	1318	241	247	2908	1318	241	247	1590	192	308
SP 215-4	MMS 8000	75	2908	1318	241	247	2908	1318	241	247	1590	192	308
SP 215-5-AA	MMS 8000	92	3324	1494	241	247	3324	1494	241	247	1830	192	364
SP 215-5-A	MMS 8000	92	3324	1494	241	247	3324	1494	241	247	1830	192	364
SP 215-5	MMS 8000	92	3554	1494	241	247	3554	1494	241	247	2060	192	364
SP 215-6-AA	MMS 8000	110	3730	1670	241	247	3730	1670	241	247	2060	192	424
SP 215-6-A	MMS 8000	110	3730	1670	241	247	3730	1670	241	247	2060	192	424
SP 215-6	MMS 8000	110	3730	1670	241	247	3730	1670	241	247	2060	192	424
SP 215-7-AA	MMS 10000	132	3716	1846	241	247	3716	1846	241	247	1870	237	536
SP 215-7-A	MMS 10000	132	3716	1846	241	247	3716	1846	241	247	1870	237	536
SP 215-7	MMS 10000	132	3716	1846	241	247	3716	1846	241	247	1870	237	536
SP 215-8-AA	MMS 10000	147	4092	2022	241	247	4092	2022	241	247	2070	237	611
SP 215-8-A	MMS 10000	147	4092	2022	241	247	4092	2022	241	247	2070	237	611
SP 215-8	MMS 10000	147	4092	2022	241	247					2070	237	611
SP 215-9-AA	MMS 10000	170	4418	2198	276	276					2220	237	661
SP 215-9-A	MMS 10000	170	4418	2198	276	276					2220	237	661
SP 215-9	MMS 10000	170	4418	2198	276	276					2220	237	661
SP 215-10-AA	MMS 12000	190	4774	2374	276	276					2400	286	781
SP 215-10-A	MMS 12000	190	4774	2374	276	276					2400	286	781
SP 215-10	MMS 12000	190	4774	2374	276	276					2400	286	781

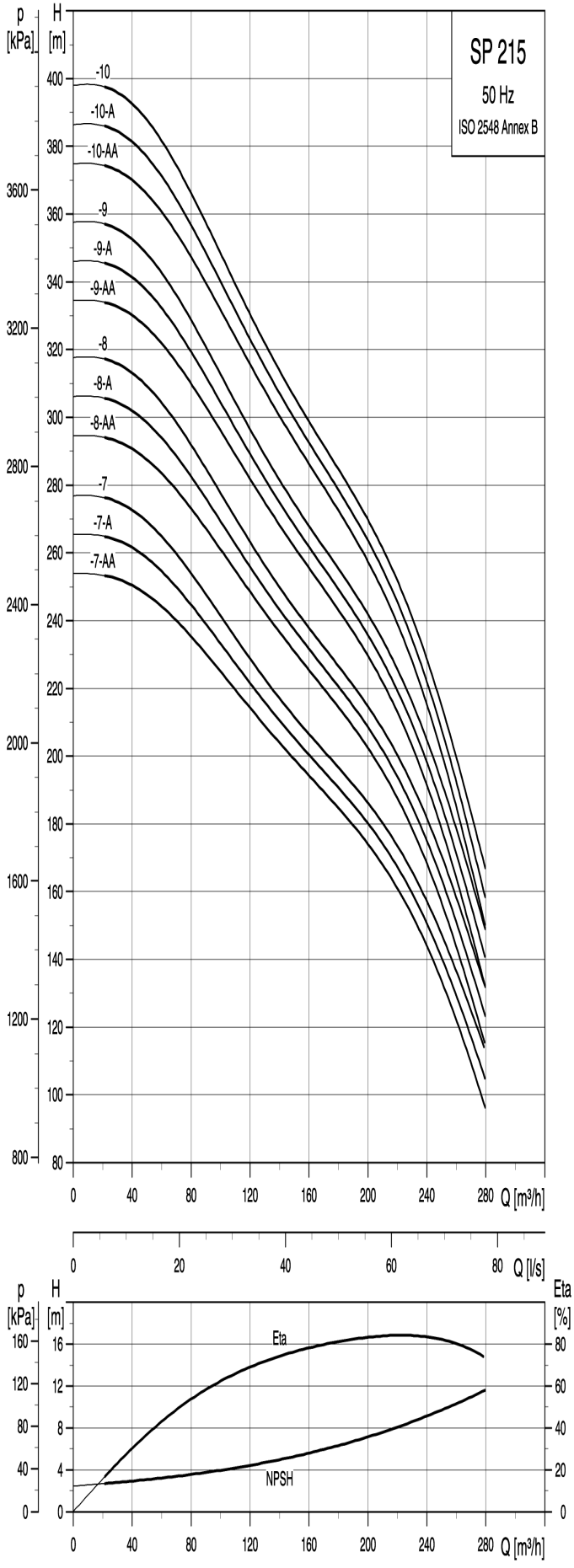
* Maximum diameter of pump with one motor cable.

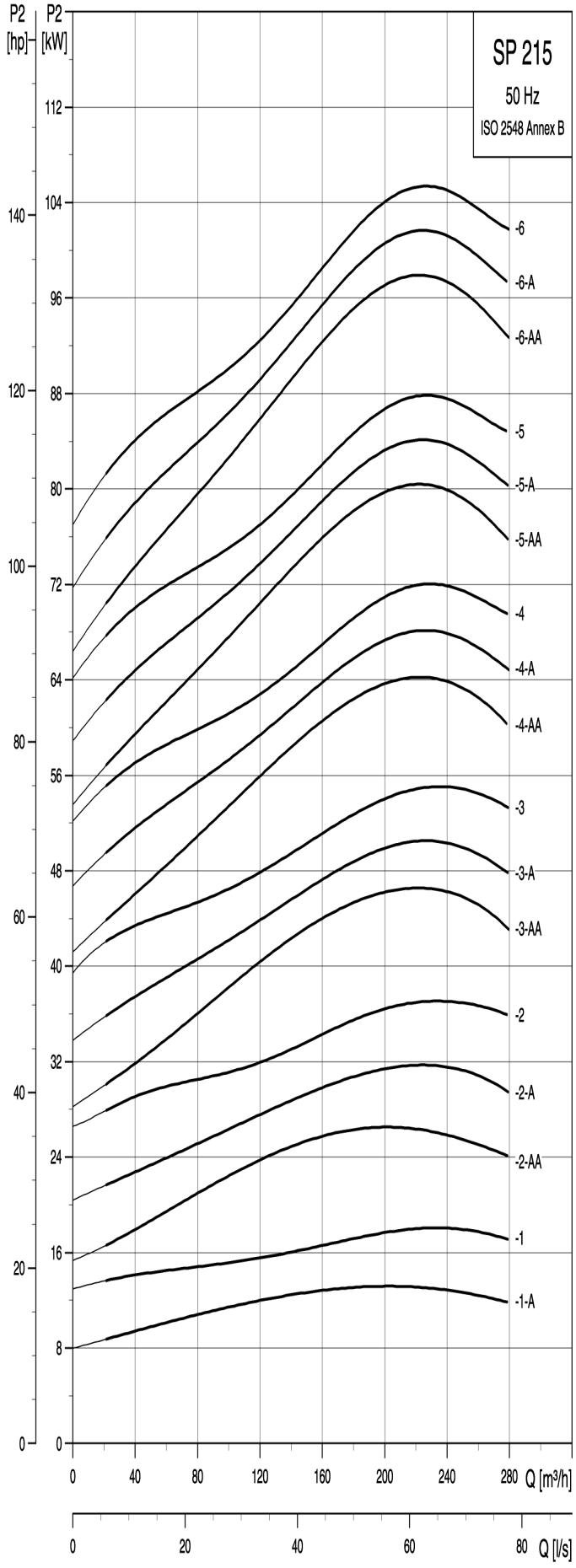
** Maximum diameter of pump with two motor cables.

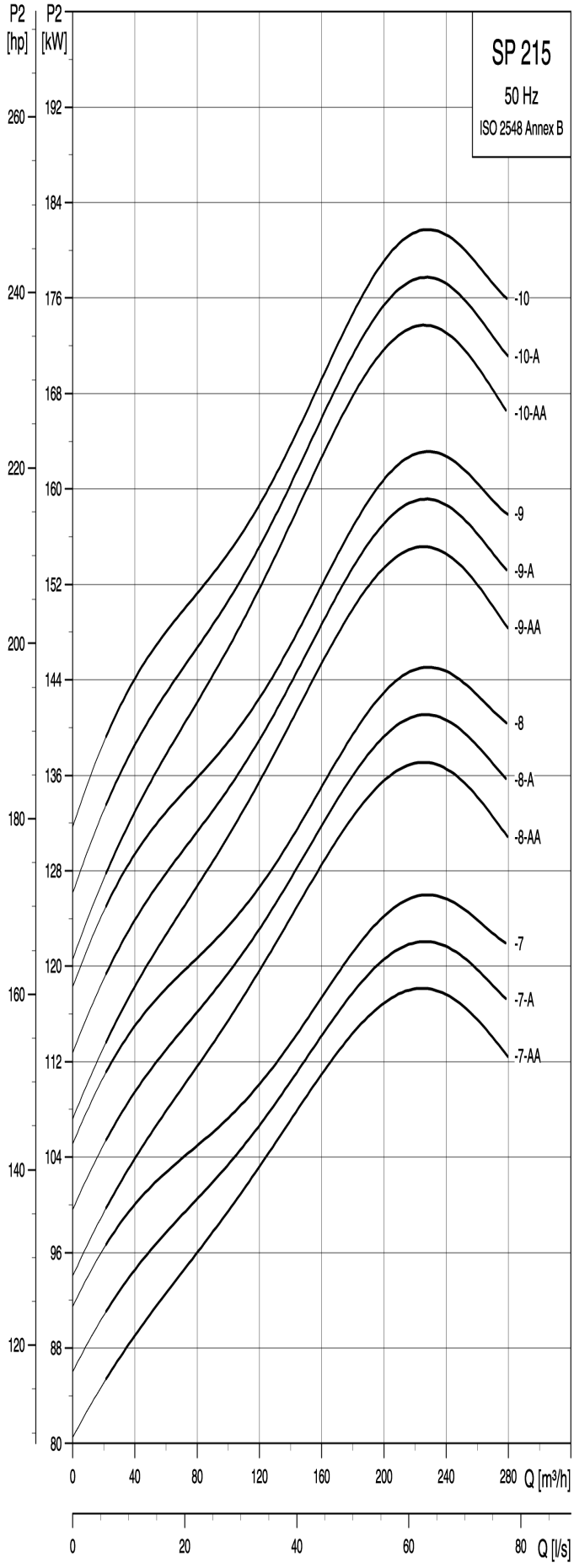
All pumps are also available in N version with motors up to 30 kW in R version.
Dimensions as above.

Other types of connection are possible by means of connecting pieces, see page 85.


SP 215
50 Hz
ISO 2548 Annex B
p [kPa]
H [m]
-6
-6-A
-6-AA
-5
-5-A
-5-AA
-4
-4-A
-4-AA
-3
-3-A
-3-AA
-2
-2-A
-2-AA
-1
-1-A
Q [m³/h]
Q [l/s]
Eta [%]
Eta
NPSH


SP 215
50 Hz
ISO 2548 Annex B
p [kPa]
H [m]
-10
-10-A
-10-AA
-9
-9-A
-9-AA
-8
-8-A
-8-AA
-7
-7-A
-7-AA
Q [m³/h]
Q [l/s]
Eta [%]
Eta
NPSH


P2 [hp]
P2 [kW]
SP 215
50 Hz
ISO 2548 Annex B
-6
-6-A
-6-AA
-5
-5-A
-5-AA
-4
-4-A
-4-AA
-3
-3-A
-3-AA
-2
-2-A
-2-AA
-1
-1-A
0 40 80 120 160 200 240 280 Q [m³/h]
0 20 40 60 80 Q [l/s]


P2 [hp]
P2 [kW]
SP 215
50 Hz
ISO 2548 Annex B
-10
-10-A
-10-AA
-9
-9-A
-9-AA
-8
-8-A
-8-AA
-7
-7-A
-7-AA
0 40 80 120 160 200 240 280 Q [m³/h]
0 20 40 60 80 Q [l/s]

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GRUNDFOS

INSTALLATION

Do not remove terminal box covers, electrical cables or any other electrical protective covering without first ensuring that the electrical supply is suitably isolated and cannot be switched on.

Do not attempt to supply electricity to the pump without ensuring that all electrical fittings, cables and enclosures are intact and suitably electrically isolated from human touch during operation.

Always use proprietary lifting equipment when lifting submersible pumps. The weight of SP pumps is marked on a label which is attached to the pump packaging. When lifting pumps ensure that the pump is adequately supported along it's length to prevent bending of the pump.

It is recommended that SP submersible pumps be completely submerged during operation.

Where the water level in a borehole or well can fall below the 1m minimum water level required above the pump inlet port it is recommended that a low-level cut-out is fitted.
To ensure an adequate cooling velocity flow over the motor where a pump is installed vertically or horizontally in a lake, sump or large diameter well, a flow sleeve must be fitted over the motor and inlet of the pump so that all the pumped water flows over the motor before entering the pump inlet. The flow sleeve internal diameter should be sized for the minimum operating duty flow rate and the arrangement must ensure that the motor receives a constant flow of cooling water and that sediment/ochre does not settle on the outside of the stator shell. Minimum water velocity 0.15 m/s
All 4", 6" and 8" motors can be installed horizontally. The pump and motor must be adequately supported along the entire length of the unit and must not be subjected to bending stress but the centre section of the motor must receive an unimpeded flow of cooling water.

Grundfos 4" MS and 6" motors (up to 30kW)

The submersible motor is a 2 pole squirrel cage induction motor of the canned rotor type. Standard Grundfos motors are made of stainless steel to BS 1449 Grade 304 S15. The stator is encapsulated with synthetic resin and hermetically sealed in stainless steel.

Enclosure Class: IP58.
Insulation Class B: Grundfos 4" motors.
Insulation Class F: Grundfos 6" motors.

The stainless steel shaft is carried by two radial bearings. The thrust bearing which takes up the axial load of the pump is located in the bottom of the motor casing. The rotor chamber is filled with a water/glycol liquid from our works which lubricates all bearings and protects the motor against frost damage down to -20°C.

Grundfos MMS 6", 8", 10" and 11" motors (45kW to 190kW) Franklin 6" and 8" motors (from 30kW to 150kW)

The MMS motors are rewindable and are of stainless and coated cast iron construction. These motors are used on larger pump and motor applications

Mercury 12" motor (185kW)

This motor is offered in conjunction with the largest sizes of the SP215 range.

Starting

Motors should not be started more than 20 times per hour. The motor may be used with a frequency converter, providing the motor is derated by 10% and a Grundfos flow shroud fitted to ensure an adequate cooling flow velocity over the motor.

Motor Protection

The motor must be connected to a contactor starter incorporating no voltage release, overload protection and for three phase motors phase failure protection (single phase prevention). For direct on line starters the overload unit should be adjusted to trip out at the motor full load current as shown on the motor rating plate, under no circumstances should the overload be set to a higher value.

Single phase motors -Control Boxes

These control boxes are essential for motor operation and should be used in conjunction with either a manual On/Off switch or an automatically controlled starter as required. Two types are available:

SA-SPM2 for single phase 0.37kW, 0.55kW, 0.75kW motors

This has a pressure die cast aluminium housing with a removable lid for access to the electrical connections. A canister containing starting relay, starting capacitor, one manual and one automatic reset Klixon overload unit, plugs into the main terminal box housing. Protected to IP54.

SA-SPM3 for single phase 1.1kW, 1.5kW, 2.2kW motors

This has an extruded aluminium housing with a removable lid and a pull-out base plate. Mounted on the base plate are: starting relay, starting capacitor, operating capacitor, one manual and one automatic reset Klixon overload unit, protected to IP42.

MTP75 Controller (three phase motors)

This controller is designed for use with M4" and 6" submersible motors which incorporate a built-in temperature transmitter 'Tempcon'. This is a standard feature on MS6000 motors and is available as an optional extra on MS4000 (4") motors.

CU3 Control Unit (three phase motors)

The CU3 control unit is a microprocessor controlled device designed for control and protection of the Grundfos MS6000 6in. submersible motors. Details are available upon request.

Horizontal Operation

Pumps fitted with 4" or 6" motors may be operated horizontally and 8in./10in. motors can be supplied for horizontal operation if necessary. MMS motors are for vertical operation only.
The pump and motor must be adequately supported along the entire length of the unit and must not be subjected to bending stress, but the centre section of the motor must receive an unimpeded flow of cooling water.

Cable

Neoprene sheathed 4 core cables are available ranging in size from 1.5-25mm^2.

Cable Strapping

Consists of 7.5 metre length of punched rubber strapping and 16 stainless steel buttons and is ideal for securing the drop cable, water level indicator tube and electrode cables to the rising main. SP submersible pumps must be completely submerged during operation, it is recommended that a low level cut-out electrode is fitted in cases where low water level, in a borehole or well, is a problem.

Borehole Electrodes

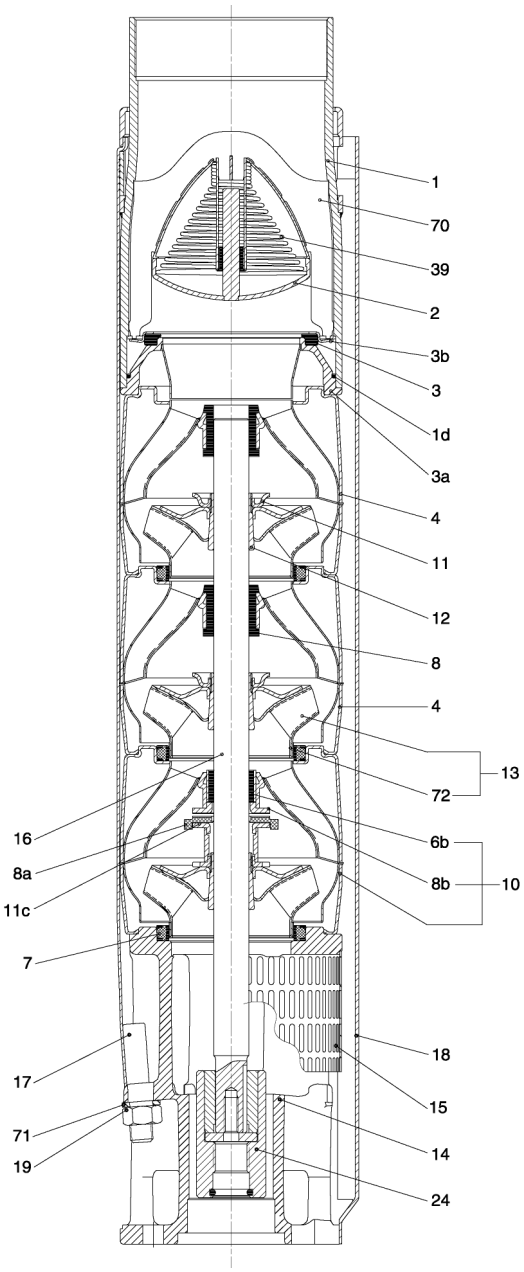
Units can be supplied comprising controller, shrouded borehole electrodes and electrode cable to give level control between two liquid levels or high/low level alarm in a borehole application where water level is a problem.

Pump Shrouding

In cases where a pump is to be installed vertically or horizontally in a lake, sump or large diameter well, a full pipe shroud must be fitted over pump and motor, so that all the pumped water enters the motor end of the shroud and passes over the motor before entering the pump inlet. This arrangement ensures that the motor receives a constant flow of cooling

CONSTRUCTION

Pos.	Components	Materials Standard	N-version
1	Valve casing	Stainless steel 1.4301 304	1.4401 316
1d	O-ring	NBR	
2	Valve cup	Stainless steel 1.4301 304	1.4401 316
3	Valve seat	Stainless steel 1.4301 304	1.4401 316
3a	Lower valve seat retainer	Stainless steel 1.4301 304	1.4401 316
3b	Upper valve seat retainer	Stainless steel 1.4301 304	1.4401 316
4	Intermediate chamber	Stainless steel 1.4301 304	1.4401 316
6b	Lower bearing	Stainless steel/NBR	
		1.4301 304	1.4401 316
7	Neck ring	NBR/PPS	
8	Intermediate bearing	NBR	
8a	Spacing washer for stop ring	Carbon/graphite HY22 in PTFE mass	
8b	Stop ring	Stainless steel 1.4401 316	1.4401 316
10	Bottom intermediate chamber with stop ring	Stainless steel 1.4301 304	1.4401 316
11	Split cone nut	Stainless steel 1.4301 304	1.4401 31
11c	Nut for stop ring	Stainless steel 1.4401 316	1.4401 316
12	Split cone	Stainless steel 1.4301 304	1.4401 316
13	Impeller	Stainless steel 1.4301 304	1.4401 316
14	Suction interconnector	Stainless steel 1.4301 304	1.4401 316
15	Strainer	Stainless steel 1.4301 304	1.4401 316
16	Shaft	Stainless steel 1.4057 431	1.4460 329
17	Strap	Stainless steel 1.4301 304	1.4401 316
18	Cable guard	Stainless steel 1.4301 304	1.4401 316
19	Nut for strap	Stainless steel 1.4301 304	1.4401 316
24	Coupling	Stainless steel 1.4460 329	1.4460 329
39	Spring for valve cup	Stainless steel 1.4301 304	1.4401 316
70	Valve guide	Stainless steel 1.4301 304	1.4401 316
71	Washer	Stainless steel 1.4401 316	14401 316
72	Wear ring	Stainless steel 1.4301 304	1.4401 316



GRUNDFOS PUMPS LTD

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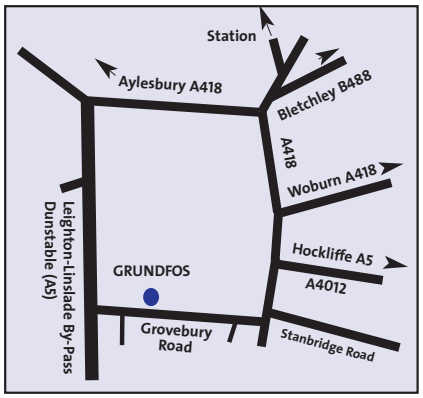
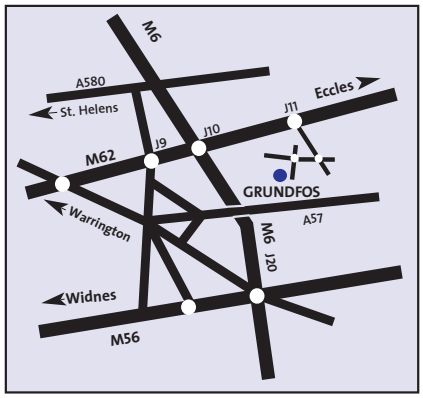
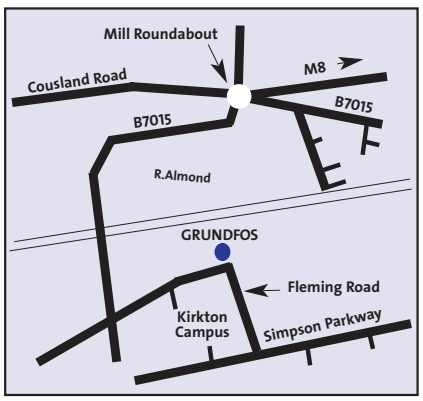
Grovebury Road,
Leighton Buzzard,
Beds LU7 4TL
Tel: 01525 850000
Fax: 01525 850011
Spares: Tel: 01525 775401
Fax: 01525 370625



North:
Gawsworth Court ,
Risley Road, Risley
Warrington, Cheshire WA3 6NJ
Tel: 01925 813300
Fax: 01925 830014
Service (Repairs): Tel: 01925 838527
Fax: 01925 811658



Scotland/N.Ireland :
Fleming Road, Kirkton Campus,
Livingston
West Lothian, Scotland
EH54 7BN
Tel: 01506 461666
Fax: 01506 461555



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