



# VS 6" - 8" SERIES 50Hz

SUBMERSIBLE PUMPS, MOTORS and ACCESSORIES





# INDEX

VS SERIES 6"	
VS Series Stainless Steel Submersible Pumps for 6" deep wells and larger	4
General Product Curves 6"	5
Materials/Fluids compatibility 6"	6
TABLE OF HYDRAULIC PERFORMANCE	
VS 14 MEI $\geq$ 0,40	7
VS 19 MEI $\geq$ 0,40	8
VS 30 MEI $\geq$ 0,40	9
VS 46 MEI $\geq$ 0,40	10
VS 65 MEI $\geq$ 0,40	11
TECHNICAL DATA AND PERFORMANCE CURVES AT 50HZ	
VS 14	14
VS 14 High Pressure	18
VS 19	20
VS 19 High Pressure	24
VS 30	26
VS 30 High Pressure	30
VS 46	32
VS 46 High Pressure	34
VS 65	36
VS 65 High Pressure	38
PUMP SECTION AND LIST OF MAIN COMPONENTS	
VS 14 - 19	42
VS 30 - 46 - 65	43
APPENDIX A	
Motor adapter VS 14 - 19	40
Motor adapter VS 30 - 46 - 65	41
VS SERIES 8"	
VS Series Stainless Steel Submersible Pumps for 8" deep wells and larger	48
General Product Curves 8"	49
Materials/Fluids compatibility 8"	50
TABLE OF HYDRAULIC PERFORMANCE	
VS 78	51
VS 97	51

TECHNICAL DATA AND PERFORMANCE CURVES AT 50HZ	
VS 78	52
VS 97	54
PUMP SECTION AND LIST OF MAIN COMPONENTS	
VS 78 - 97	56
APPENDIX B	
Motor adapter VS 78 - 97	57
SUBMERSIBLE MOTORS PRODUCT	
4" Encapsulated Motors	60
6" Encapsulated Motors	62
8" Encapsulated Motors	64
6" Rewindable motors	66
8" Rewindable motors	67
ACCESSORIES	
SubMonitor Motor Protection	68
SubStart3P <sup>®</sup>	69
SubTronicSC <sup>®</sup>	70
SubTronic3P <sup>®</sup>	71
Termination Kit 4"	72
Double Plug Lead for Termination Kit	72
Splicing Kit 1,5 - 10mm <sup>2</sup>	72
Filling liquid	72
Motor Filling Kit	72
6" Permanent Star Plug	73
Couplings	73
Surge Arrestor	73
Corrosion Protection 4"	73
PT100 for Rewindable Motors	74

NOTE: Franklin Electric s.r.l. reserves the right to amend specification without prior notice



# **VS Series Stainless Steel Submersible Pumps for 6” deep wells and larger**

## **50 Hz**

**VS 14 - 19 - 30- 46 -65**

# VS Series 6” Stainless Steel Submersible Pumps

## APPLICATIONS

Municipal water works

Water distribution and pressure boosting

Irrigation and sprinkler systems, water treatment plants, filtration and reverse osmosis

Industrial cooling and processing

Mining industry, drainage and dewatering

Fire-fighting equipment

Fountains

## FEATURES

Fabricated stainless steel impellers and diffusers for corrosion resistance

Heavy duty stainless steel structure to assure permanent alignment of all the components in order to increase run time and trouble-free operation

PTFE floating neck ring, ceramic guide journal sleeve (tungsten-carbide on request) and Nitrile rubber fluted bearing to ensure durability against wear for long-lasting constant performances and product reliability

Compact, reliable and suited to operate in horizontal position

Built-in check valve to protect the pump against water hammer risk

External stainless steel sleeve to improve stiffness and assure permanent alignment of all the components

Radial models with double reinforcement rings and mix-flow models longer than 3 mt are equipped with tungsten-carbide (widia) upper journal sleeve and with an intermediate tungsten-carbide (widia) journal sleeve plus special intermediate split cone nut

The hydraulic design is such to enhance the overall efficiency thus reducing energy consumption and making the pumping systems more cost effective

## PUMP SPECIFICATIONS

Capacities up to 80 m<sup>3</sup>/h at 50Hz

Head: up to 700m at 50Hz

Maximum allowable amount of sand 100 gr/m<sup>3</sup>

Water temperature: Minimum: -5° C

Maximum: +60°C for I (A304) version / +90°C for N (A316) and R (904L) versions

Rotation: counter clockwise when looking into the discharge

Pump can work continuously in vertical or horizontal position

## MOTOR SPECIFICATIONS

Motor adapter in compliance with NEMA standard

Motors: see section Submersible Motors Product Overview

## AVAILABLE ON REQUEST

Pump material: 316 Stainless steel (N) version (DIN/EN 1.4401)

904L (R) version (DIN/EN 1.4539)

See specified material variant in Materials/fluids compatibility table on page 6

Double cable guard

Rp 2” and Rp 3” discharge heads for VS14 and VS19

Rp 4” discharge head for VS30-46-65 I and N versions

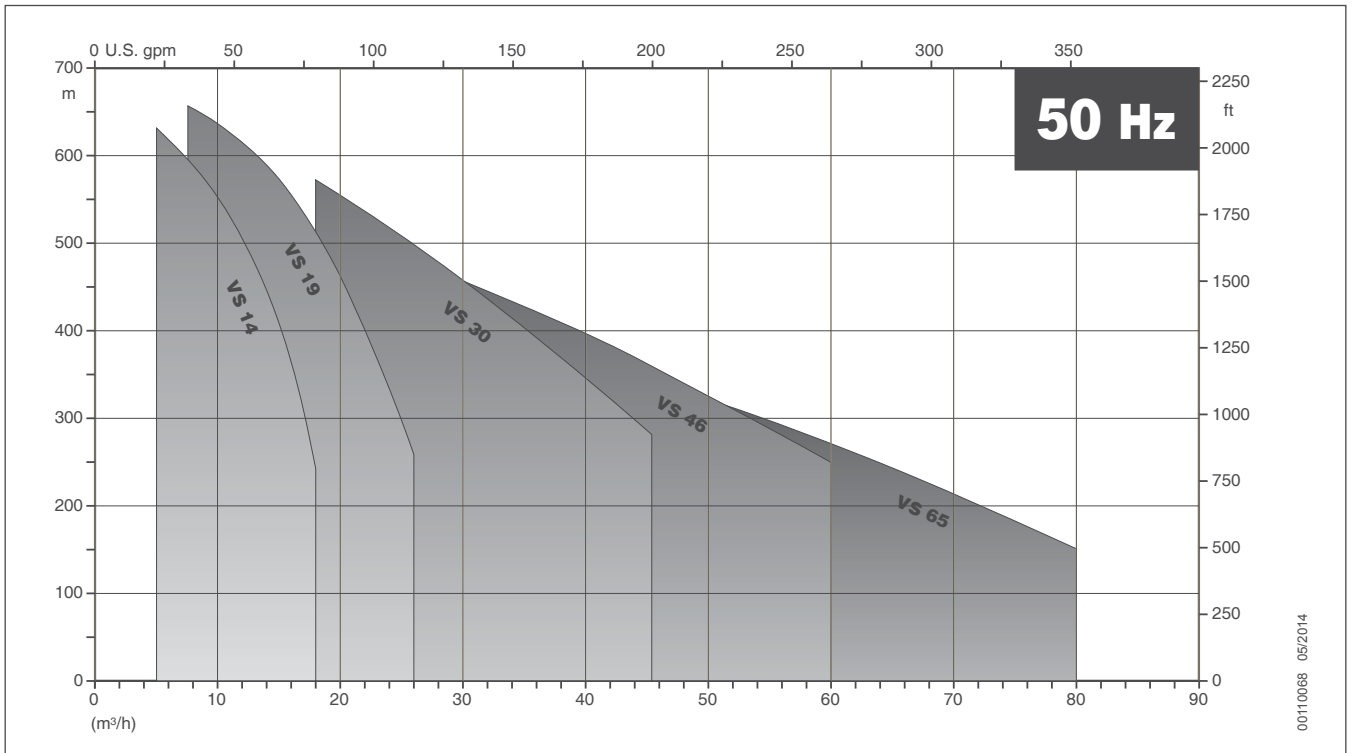
4” motor adapter for I and N version

8” motor adapter for I and N version

Tungsten-carbide guide journal sleeve

High temperature version (up to 90°C)

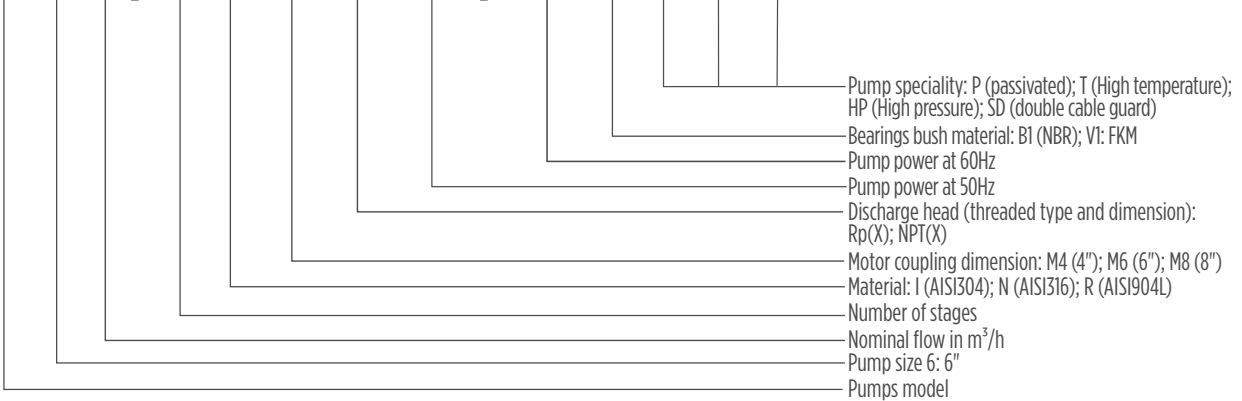
Bearings bush in FKM



00110068 05/2014

### PUMP IDENTIFICATION CODE

VS 6 30 // 15 I M6 Rp3 2005 // 3006 B1 P HP SD



00112520 07/2016

Type	Versions			Motor power range (kW)	
	I	N	R	I AND N	R
	EN 1.4301	EN 1.4401	EN 1.4539		
VS14	○	○	-	4-30	-
VS19	○	○	-	4-37	-
VS25	○	○	-	4-45	-
VS30	○	○	●	3-55	4-37
VS46	○	○	●	3,7-55	4-37
VS65	○	○	●	3,7-55	4-37

○ = Version available    ● = Version available only with 6" motor coupling

## MATERIALS/FLUIDS COMPATIBILITY

Pos.	PARTS DESCRIPTIONS	Type	MATERIAL					
			I version		N version		R version	
			AISI	DIN / EN	AISI	DIN / EN	AISI	DIN / EN
10.00	Discharge head	Stainless steel	304	1.4301	316	1.4401	904L	1.4517
10.01 / 04 / 05	Valve	Stainless steel	316	1.4401	316	1.4401	2205/904L	1.4462/1.4460
10.02	Sealing O-ring		NBR		HNBR		HNBR	
10.03	Outer case locking nuts	Stainless steel	316	1.4401	316	1.4401	2205	1.4462
20.00	Outer case	Stainless steel	304	1.4301	316	1.4401	2205	1.4462
20.01	Suction strainer	Stainless steel	316	1.4401	316	1.4401	904L	1.4539
20.02	Cable guard	Stainless steel	316	1.4401	316	1.4401	904L	1.4539
20.03	Initial spacer	Stainless steel	304	1.4301	316	1.4401	904L	1.4539
20.04	Flange and screws	Stainless steel	304	1.4301	316	1.4401	904L	1.4517/1.4539
20.05	Motor adapter	Stainless steel	304	1.4301	316	1.4401	904L	1.4517
30.00	Pump shaft	Stainless steel	431	1.4057	316/329	1.4401/1.4460	329	1.4460
30.01	Coupling	Stainless steel	431/329	1.4057/1.4460	316/329	1.4401/1.4460	904L/329	1.4462/1.4539/1.4460
30.02 / 03	Upper / Lower up-thrust washer	Stainless steel	316	1.4401	316	1.4401	329	1.4460
30.04	Upper journal sleeve	Stainless steel with ceramic coat-	329	1.4460	329	1.4460	329	1.4460
30.05	Screw and washer	Stainless steel	316	1.4401	316	1.4401	904L/329	1.4539/1.4460
30.06	Up-thrust ring	PTFE + Graphite	-	-	-	-	-	-
30.07 / 08	Lower / Upper spacer	Stainless steel	316	1.4401	316	1.4401	-	-
40.00	Diffuser	Stainless steel	304	1.4301	316	1.4401	904L	1.4539
40.01	Secondary bearing bush		NBR		HNBR		HNBR	
40.02	Floating neck ring	PTFE	-	-	-	-	-	-
40.03	Flange clamping neck ring	Stainless steel	304	1.4301	316	1.4401	904L	1.4539
40.04	Bearing bush		NBR		HNBR		HNBR	
40.05	Last - int. diffuser / Upper bearing guide	Stainless steel	316	1.4401	316	1.4401	904L	1.4539
40.06 / 07 / 08	First / Last diffuser	Stainless steel	316	1.4401	316	1.4401	-	-
50.00 / 05	Impeller / Wear ring	Stainless steel	304	1.4301	316	1.4401	904L	1.4539
50.01	Split cone / Impeller spacer	Stainless steel	316	1.4401	316	1.4401	329	1.4460
50.02 / 03	Split cone nut / Intermediate cone nut	Stainless steel	316	1.4401	316	1.4401	329	1.4460
50.04	Up-thrust split cone nut	Stainless steel	316	1.4401	316	1.4401	329	1.4460
50.06	Intermediate impeller with screw	Stainless steel	304	1.4301	316	1.4401	904L	1.4539



# VS 14

## TABLE OF HYDRAULIC PERFORMANCES AT 50Hz

PUMP TYPE	RATED POWER		Q = DELIVERY									
			m <sup>3</sup> /h 0	6	8	10	12	15	18	21	24	27
	kW	HP	l/min 0	100	133	167	200	250	300	350	400	450
H = TOTAL HEAD METERS COLUMN OF WATER [m]												
VS 14/5	4	5,5	56,1	50,7	48,4	45,4	41,4	31,3	18,6			
VS 14/6	4	5,5	67,3	60,8	58,1	54,5	49,7	37,5	22,3			
VS 14/7	4	5,5	78,5	71,0	67,8	63,6	58,0	43,8	26,0			
VS 14/8	4	5,5	89,7	81,1	77,5	72,7	66,3	50,0	29,7			
VS 14/9	5,5	7,5	100,9	91,2	87,2	81,8	74,6	56,3	33,4			
VS 14/10	5,5	7,5	112,1	101,4	96,9	90,9	82,9	62,5	37,1			
VS 14/11	5,5	7,5	123,3	111,5	106,6	100,0	91,2	68,8	40,8			
VS 14/12	5,5	7,5	134,6	121,7	116,3	109,1	99,5	75,0	44,6			
VS 14/13	5,5	7,5	145,8	131,8	125,9	118,1	107,7	81,3	48,3			
VS 14/14	7,5	10	157,0	141,9	135,6	127,2	116,0	87,5	52,0			
VS 14/15	7,5	10	168,2	152,1	145,3	136,3	124,3	93,8	55,7			
VS 14/16	7,5	10	179,4	162,2	155,0	145,4	132,6	100,0	59,4			
VS 14/17	7,5	10	190,6	172,3	164,7	154,5	140,9	106,3	63,1			
VS 14/18	9,3	12,5	201,8	182,5	174,4	163,6	149,2	112,5	66,8			
VS 14/19	9,3	12,5	213,0	192,6	184,1	172,7	157,5	118,8	70,5			
VS 14/20	9,3	12,5	224,3	202,8	193,8	181,8	165,8	125,0	74,3			
VS 14/21	9,3	12,5	235,5	212,9	203,4	190,8	174,0	131,3	78,0			
VS 14/22	9,3	12,5	246,7	223,0	213,1	199,9	182,3	137,5	81,7			
VS 14/23	11	15	257,9	233,2	222,8	209,0	190,6	143,8	85,4			
VS 14/24	11	15	269,1	243,3	232,5	218,1	198,9	150,0	89,1			
VS 14/25	11	15	280,3	253,4	242,2	227,2	207,2	156,3	92,8			
VS 14/26	11	15	291,5	263,6	251,9	236,3	215,5	162,5	96,5			
VS 14/27	15	20	302,7	273,7	261,6	245,4	223,8	168,8	100,2			
VS 14/28	15	20	314,0	283,9	271,3	254,5	232,1	175,0	104,0			
VS 14/29	15	20	325,2	294,0	280,9	263,5	240,3	181,3	107,7			
VS 14/30	15	20	336,4	304,1	290,6	272,6	248,6	187,5	111,4			
VS 14/31	15	20	347,6	314,3	300,3	281,7	256,9	193,8	115,1			
VS 14/32	15	20	358,8	324,4	310,0	290,8	265,2	200,0	118,8			
VS 14/33	15	20	370,0	334,5	319,7	299,9	273,5	206,3	122,5			
VS 14/34	15	20	381,2	344,7	329,4	309,0	281,8	212,5	126,2			
VS 14/35	15	20	392,4	354,8	339,1	318,1	290,1	218,8	129,9			
VS 14/36	15	20	403,7	365,0	348,8	327,2	298,4	225,0	133,7			
VS 14/37	18,5	25	414,9	375,1	358,4	336,2	306,6	231,3	137,4			
VS 14/38	18,5	25	426,1	385,2	368,1	345,3	314,9	237,5	141,1			
VS 14/39	18,5	25	437,3	395,4	377,8	354,4	323,2	243,8	144,8			
VS 14/40	18,5	25	448,5	405,5	387,5	363,5	331,5	250,0	148,5			
VS 14/41	18,5	25	459,7	415,6	397,2	372,6	339,8	256,3	152,2			
VS 14/42	18,5	25	470,9	425,8	406,9	381,7	348,1	262,5	155,9			
VS 14/43	18,5	25	482,1	435,9	416,6	390,8	356,4	268,8	159,6			
VS 14/44	18,5	25	493,4	446,1	426,3	399,9	364,7	275,0	163,4			
VS 14/45	22	30	504,6	456,2	435,9	408,9	372,9	281,3	167,1			
VS 14/46	22	30	515,8	466,3	445,6	418,0	381,2	287,5	170,8			
VS 14/47	22	30	527,0	476,5	455,3	427,1	389,5	293,8	174,5			
VS 14/48	22	30	538,2	486,6	465,0	436,2	397,8	300,0	178,2			
VS 14/49	22	30	549,4	496,7	474,7	445,3	406,1	306,3	181,9			
VS 14/50	22	30	560,6	506,9	484,4	454,4	414,4	312,5	185,6			
VS 14/51	22	30	571,8	517,0	494,1	463,5	422,7	318,8	189,3			
VS 14/52	22	30	583,1	527,2	503,8	472,6	431,0	325,0	193,1			
VS 14/53	30	40	594,3	537,3	513,4	481,6	439,2	331,3	196,8			
VS 14/54	30	40	605,5	547,4	523,1	490,7	447,5	337,5	200,5			
VS 14/55	30	40	616,7	557,6	532,8	499,8	455,8	343,8	204,2			
VS 14/56	30	40	627,9	567,7	542,5	508,9	464,1	350,0	207,9			
VS 14/57	30	40	639,1	577,8	552,2	518,0	472,4	356,3	211,6			
VS 14/58	30	40	650,3	588,0	561,9	527,1	480,7	362,5	215,3			
VS 14/59	30	40	661,5	598,1	571,6	536,2	489,0	368,8	219,0			
VS 14/60	30	40	672,8	608,3	581,3	545,3	497,3	375,0	222,8			
VS 14/61	30	40	684,0	618,4	590,9	554,3	505,5	381,3	226,5			

# VS 19

## TABLE OF HYDRAULIC PERFORMANCES AT 50Hz

PUMP TYPE	RATED POWER		Q = DELIVERY									
			m <sup>3</sup> /h 0	6	8	10	12	15	18	21	24	27
	kW	HP	l/min 0	100	133	167	200	250	300	350	400	450
H = TOTAL HEAD METERS COLUMN OF WATER [m]												
VS 19/7	5,5	7,5	81,7		77,5	74,7	72,3	67,2	60,2	50,4	38,4	23,9
VS 19/8	5,5	7,5	93,3		88,5	85,3	82,7	76,8	68,8	57,6	43,9	27,4
VS 19/9	5,5	7,5	105,0		99,6	96,0	93,0	86,4	77,4	64,8	49,4	30,8
VS 19/10	7,5	10	116,7		110,7	106,7	103,3	96,0	86,0	72,0	54,9	34,2
VS 19/11	7,5	10	128,3		121,7	117,3	113,7	105,6	94,6	79,2	60,4	37,6
VS 19/12	7,5	10	140,0		132,8	128,0	124,0	115,2	103,2	86,4	65,8	41,0
VS 19/13	9,3	12,5	151,7		143,9	138,7	134,3	124,8	111,8	93,6	71,3	44,5
VS 19/14	9,3	12,5	163,3		154,9	149,3	144,7	134,4	120,4	100,8	76,8	47,9
VS 19/15	9,3	12,5	175		166	160	155	144	129	108	82,3	51,3
VS 19/16	11	15	186,7		177,1	170,7	165,3	153,6	137,6	115,2	87,8	54,7
VS 19/17	11	15	198,3		188,1	181,3	175,7	163,2	146,2	122,4	93,3	58,1
VS 19/18	11	15	210,0		199,2	192,0	186,0	172,8	154,8	129,6	98,8	61,6
VS 19/19	15	20	221,7		210,3	202,7	196,3	182,4	163,4	136,8	104,2	65,0
VS 19/20	15	20	233,3		221,3	213,3	206,7	192,0	172,0	144,0	109,7	68,4
VS 19/21	15	20	245,0		232,4	224,0	217,0	201,6	180,6	151,2	115,2	71,8
VS 19/22	15	20	256,7		243,5	234,7	227,3	211,2	189,2	158,4	120,7	75,2
VS 19/23	15	20	268,3		254,5	245,3	237,7	220,8	197,8	165,6	126,2	78,7
VS 19/24	15	20	280,0		265,6	256,0	248,0	230,4	206,4	172,8	131,7	82,1
VS 19/25	18,5	25	291,7		276,7	266,7	258,3	240,0	215,0	180,0	137,2	85,5
VS 19/26	18,5	25	303,3		287,7	277,3	268,7	249,6	223,6	187,2	142,7	88,9
VS 19/27	18,5	25	315,0		298,8	288,0	279,0	259,2	232,2	194,4	148,1	92,3
VS 19/28	18,5	25	326,7		309,9	298,7	289,3	268,8	240,8	201,6	153,6	95,8
VS 19/29	18,5	25	338,3		320,9	309,3	299,7	278,4	249,4	208,8	159,1	99,2
VS 19/30	18,5	25	350,0		332,0	320,0	310,0	288,0	258,0	216,0	164,6	102,6
VS 19/31	22	30	361,7		343,1	330,7	320,3	297,6	266,6	223,2	170,1	106,0
VS 19/32	22	30	373,3		354,1	341,3	330,7	307,2	275,2	230,4	175,6	109,4
VS 19/33	22	30	385,0		365,2	352,0	341,0	316,8	283,8	237,6	181,1	112,9
VS 19/34	22	30	396,7		376,3	362,7	351,3	326,4	292,4	244,8	186,5	116,3
VS 19/35	22	30	408,3		387,3	373,3	361,7	336,0	301,0	252,0	192,0	119,7
VS 19/36	22	30	420,0		398,4	384,0	372,0	345,6	309,6	259,2	197,5	123,1
VS 19/37	30	40	431,7		409,5	394,7	382,3	355,2	318,2	266,4	203,0	126,5
VS 19/38	30	40	443,3		420,5	405,3	392,7	364,8	326,8	273,6	208,5	130,0
VS 19/39	30	40	455,0		431,6	416,0	403,0	374,4	335,4	280,8	214,0	133,4
VS 19/40	30	40	466,7		442,7	426,7	413,3	384,0	344,0	288,0	219,5	136,8
VS 19/41	30	40	478,3		453,7	437,3	423,7	393,6	352,6	295,2	225,0	140,2
VS 19/42	30	40	490,0		464,8	448,0	434,0	403,2	361,2	302,4	230,4	143,6
VS 19/43	30	40	501,7		475,9	458,7	444,3	412,8	369,8	309,6	235,9	147,1
VS 19/44	30	40	513,3		486,9	469,3	454,7	422,4	378,4	316,8	241,4	150,5
VS 19/45	30	40	525,0		498,0	480,0	465,0	432,0	387,0	324,0	246,9	153,9
VS 19/46	30	40	536,7		509,1	490,7	475,3	441,6	395,6	331,2	252,4	157,3
VS 19/47	30	40	548,3		520,1	501,3	485,7	451,2	404,2	338,4	257,9	160,7
VS 19/48	30	40	560,0		531,2	512,0	496,0	460,8	412,8	345,6	263,4	164,2
VS 19/49	30	40	571,7		542,3	522,7	506,3	470,4	421,4	352,8	268,8	167,6
VS 19/50	37	50	583,3		553,3	533,3	516,7	480,0	430,0	360,0	274,3	171,0
VS 19/51	37	50	595,0		564,4	544,0	527,0	489,6	438,6	367,2	279,8	174,4
VS 19/52	37	50	606,7		575,5	554,7	537,3	499,2	447,2	374,4	285,3	177,8
VS 19/53	37	50	618,3		586,5	565,3	547,7	508,8	455,8	381,6	290,8	181,3
VS 19/54	37	50	630,0		597,6	576,0	558,0	518,4	464,4	388,8	296,3	184,7
VS 19/55	37	50	641,7		608,7	586,7	568,3	528,0	473,0	396,0	301,8	188,1
VS 19/56	37	50	653,3		619,7	597,3	578,7	537,6	481,6	403,2	307,3	191,5
VS 19/57	37	50	665,0		630,8	608,0	589,0	547,2	490,2	410,4	312,7	194,9
VS 19/58	37	50	676,7		641,9	618,7	599,3	556,8	498,8	417,6	318,2	198,4
VS 19/59	37	50	688,3		652,9	629,3	609,7	566,4	507,4	424,8	323,7	201,8
VS 19/60	37	50	700,0		664,0	640,0	620,0	576,0	516,0	432,0	329,2	205,2

# VS 30

## TABLE OF HYDRAULIC PERFORMANCES AT 50Hz

PUMP TYPE	R Vers.	RATED POWER		Q = DELIVERY																
				m <sup>3</sup> /h 0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
				l/min 0	83,5	166,5	250	333,5	416,5	500	583,5	666,5	750	833,5	916,5	1000	1083,5	1166,5	1250	1333,5
				H = TOTAL HEAD METERS COLUMN OF WATER [m]																
VS 30/3	●	3,7	5	46,3			38,9	36	33,3	30,2	26,7	21,7	15,3							
VS 30/4	●	5,5	7,5	62,5			52,6	48,8	45,2	41,1	36,5	30	21,4							
VS 30/5	●	7,5	10	78,6			66,2	61,5	56,9	51,8	46,1	38	27,4							
VS 30/6	●	7,5	10	93,1			78,4	72,6	67,1	61	54	44,1	31,2							
VS 30/7	●	9,3	12,5	110			92,6	86	79,7	72,6	64,6	53,3	38,4							
VS 30/8	●	11	15	125,5			105,7	98,1	90,9	82,7	73,6	60,5	43,5							
VS 30/9	●	11	15	140,1			117,9	109,3	101,1	91,8	81,4	66,6	47,3							
VS 30/10	●	15	20	158,2			133,3	123,8	114,9	104,7	93,5	77,3	56,1							
VS 30/11	●	15	20	173			145,7	135,3	125,4	114,1	101,7	83,8	60,4							
VS 30/12	●	15	20	187,7			158	146,6	135,7	123,4	109,6	90	64,4							
VS 30/13	●	18,5	25	205,2			172,9	160,6	148,9	135,7	121,1	100	72,4							
VS 30/14	●	18,5	25	220			185,3	172,1	159,4	145,1	129,2	106,5	76,7							
VS 30/15	●	22	30	237			199,7	185,5	172,1	156,8	140	115,7	84							
VS 30/16	●	22	30	251,9			212,2	197,1	182,6	166,3	148,3	122,3	88,3							
VS 30/17	●	22	30	266,7			224,5	208,4	193	175,7	156,4	128,7	92,5							
VS 30/18	●	22	30	281,3			236,8	219,7	203,3	185	164,3	134,9	96,5							
VS 30/19	●	30	40	302,1			254,7	236,8	219,9	200,7	179,7	149,2	109,1							
VS 30/20	●	30	40	317,3			267,4	248,6	230,7	210,5	188,2	156	113,8							
VS 30/21	●	30	40	332,3			280	260,2	241,5	220,1	196,7	162,8	118,3							
VS 30/22	●	30	40	347,3			292,6	271,8	252,1	229,7	205	169,4	122,7							
VS 30/23	●	30	40	362,2			305,1	283,4	262,6	239,2	213,2	175,9	127							
VS 30/24	●	30	40	377			317,5	294,8	273,1	248,6	221,4	182,2	131,2							
VS 30/25	●	37	50	395,2			333	309,4	287	261,5	233,5	193,1	140,1							
VS 30/26	●	37	50	410,1			345,5	320,9	297,5	271,1	241,8	199,7	144,5							
VS 30/27	●	37	50	425			357,9	332,4	308,1	280,5	250	206,1	148,8							
VS 30/28	●	37	50	439,8			370,3	343,8	318,5	289,9	258,1	212,5	152,9							
VS 30/29	●	37	50	454,5			382,6	355,2	328,9	299,2	266,2	218,8	157							
VS 30/30	●	37	50	469,1			394,9	366,4	339,1	308,5	274,1	224,9	160,9							
VS 30/31		45	60	490			412,9	383,6	355,8	324,2	289,4	239,3	173,6							
VS 30/32		45	60	505			425,4	395,2	366,4	333,7	297,7	245,8	177,9							
VS 30/33		45	60	519,8			437,9	406,7	376,9	343,2	305,9	252,2	182,1							
VS 30/34		45	60	534,6			450,3	418,1	387,3	352,6	314	258,6	186,2							
VS 30/35		45	60	549,4			462,6	429,5	397,7	361,9	322	264,8	190,2							
VS 30/36		45	60	564,1			474,9	440,8	408	371,1	329,9	270,9	194,2							
VS 30/37		45	60	578,7			487,1	452	418,2	380,3	337,7	277	198							
VS 30/38		55	75	612,9			517,4	481,6	448,2	409,8	368,6	308,6	229,2							
VS 30/39		55	75	628,4			530,5	493,7	459,4	420	377,6	315,9	234,4							
VS 30/40		55	75	644			543,5	505,8	470,6	430,1	386,6	323,2	239,6							
VS 30/41		55	75	659,4			556,6	517,9	481,7	440,2	395,6	330,5	244,7							
VS 30/42		55	75	674,9			569,5	529,9	492,8	450,3	404,5	337,7	249,8							
VS 30/43		55	75	690,3			582,5	542	503,9	460,3	413,3	344,9	254,8							

● = Pump available in R (AISI 904L) version

# VS 46

## TABLE OF HYDRAULIC PERFORMANCES AT 50Hz

PUMP TYPE	R Vers.	RATED POWER		Q = DELIVERY																
		kW	HP	m <sup>3</sup> /h 0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
				l/min 0	83,5	166,5	250	333,5	416,5	500	583,5	666,5	750	833,5	916,5	1000	1083,5	1166,5	1250	1333,5
H = TOTAL HEAD METERS COLUMN OF WATER [m]																				
VS 46/2	●	3	4	26,4					22,6	20,9	19,3	17,8	16,6	15,1	13,4				11,3	
VS 46/3	●	4	5,5	39,4					33,8	31,2	28,8	26,6	24,7	22,5	19,9				16,8	
VS 46/4	●	5,5	7,5	52,5					45	41,5	38,3	35,5	32,9	29,9	26,5				22,3	
VS 46/5	●	7,5	10	66,1					56,8	52,3	48,3	44,7	41,5	37,8	33,6				28,4	
VS 46/6	●	9,3	12,5	80,7					70	65,2	60,4	55,5	50,3	46	41,6				35,7	
VS 46/7	●	9,3	12,5	93,1					80,4	74,8	69,3	63,5	57,6	52,7	47,5				40,5	
VS 46/8	●	11	15	106,1					91,6	85,1	78,9	72,2	65,5	59,9	54				46	
VS 46/9	●	15	20	121,5					105,5	98,2	91	83,7	75,9	69,5	62,9				54,1	
VS 46/10	●	15	20	134					116,1	108	100,1	91,9	83,3	76,2	68,9				59	
VS 46/11	●	15	20	146,3					126,5	117,6	109	99,9	90,5	82,8	74,7				63,7	
VS 46/12	●	18,5	25	161,3					140	130,3	120,8	110,9	100,6	92	83,3				71,4	
VS 46/13	●	18,5	25	173,8					150,5	140	129,8	119	107,9	98,7	89,2				76,3	
VS 46/14	●	18,5	25	186,1					160,9	149,5	138,7	127	115,1	105,3	95				81	
VS 46/15	●	22	30	200,8					174,1	161,9	150,1	137,7	124,9	114,3	103,3				88,4	
VS 46/16	●	22	30	213,2					184,5	171,5	159,1	145,8	132,2	120,9	109,1				93,2	
VS 46/17	●	22	30	225,4					194,7	181	167,8	153,6	139,3	127,3	114,8				97,8	
VS 46/18	●	30	40	243,8					212,3	197,6	183,1	168,6	152,9	139,9	126,8				109,2	
VS 46/19	●	30	40	256,6					223,1	207,7	192,5	177	160,5	146,9	133				114,4	
VS 46/20	●	30	40	269,2					233,8	217,6	201,7	185,3	168,1	153,7	139,1				119,5	
VS 46/21	●	30	40	281,8					244,4	227,4	210,8	193,5	175,5	160,5	145,2				124,4	
VS 46/22	●	30	40	294,2					254,9	237	219,8	201,6	182,8	167,2	151,1				129,3	
VS 46/23	●	30	40	306,6					265,2	246,6	228,6	209,5	190	173,8	156,9				134	
VS 46/24	●	37	50	322,4					279,8	260,3	241,3	221,6	200,9	183,8	166,3				142,6	
VS 46/25	●	37	50	334,9					290,3	270	250,3	229,7	208,3	190,6	172,2				147,5	
VS 46/26		37	50	347,3					300,7	279,6	259,3	237,8	215,6	197,2	178,1				152,3	
VS 46/27		37	50	359,6					311,1	289,2	268,2	245,7	222,8	203,7	183,9				157	
VS 46/28		37	50	371,8					321,3	298,6	276,9	253,6	229,9	210,2	189,6				161,7	
VS 46/29		45	60	390,1					338,7	315,1	292,1	268,3	243,3	222,6	201,4				172,9	
VS 46/30		45	60	402,7					349,2	324,9	301,1	276,5	250,7	229,4	207,4				177,8	
VS 46/31		45	60	415,1					359,6	334,5	310,1	284,5	258	236	213,3				182,6	
VS 46/32		45	60	427,5					370	344,1	319	292,5	265,2	242,6	219,1				187,4	
VS 46/33		45	60	439,8					380,3	353,5	327,8	300,4	272,3	249,1	224,8				192	
VS 46/34		55	75	469,3					410,9	383,1	354,8	328	297,6	271,9	248,1				215,7	
VS 46/35		55	75	482,5					422,3	393,7	364,6	337	305,8	279,4	254,8				221,4	
VS 46/36		55	75	495,7					433,7	404,3	374,4	345,9	313,9	286,8	261,4				227	
VS 46/37		55	75	508,9					445	414,8	384,1	354,8	321,9	294,2	268,1				232,6	
VS 46/38		55	75	522					456,3	425,3	393,8	363,7	330	301,6	274,7				238,2	
VS 46/39		55	75	535,1					467,5	435,7	403,5	372,5	337,9	308,9	281,2				243,8	
VS 46/40		55	75	548,1					478,7	446,1	413,1	381,3	345,9	316,2	287,8				249,3	

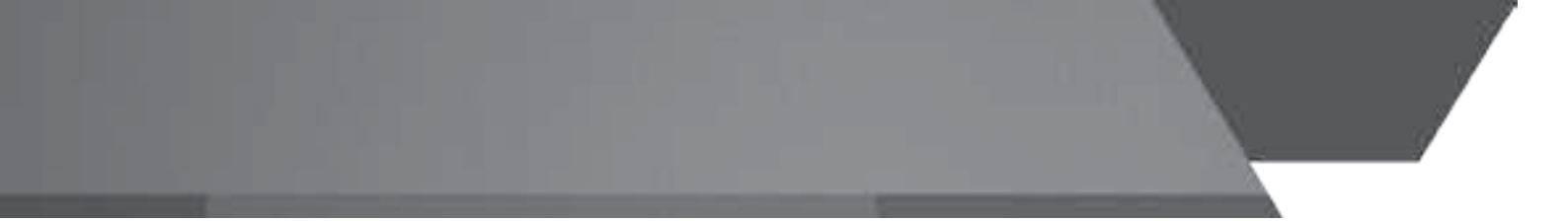
● = Pump available in R (AISI 904L) version

# VS 65

## TABLE OF HYDRAULIC PERFORMANCES AT 50Hz

PUMP TYPE	R Vers.	RATED POWER		Q = DELIVERY																
				m <sup>3</sup> /h 0	5	10	15	20	25	30	35	40	45	50	55	60	65	70	75	80
				l/min 0	83,5	166,5	250	333,5	416,5	500	583,5	666,5	750	833,5	916,5	1000	1083,5	1166,5	1250	1333,5
				H = TOTAL HEAD METERS COLUMN OF WATER [m]																
VS 65/2	●	3,7	5	26,8							21,1	19	17,3	16,5	15,7	14,9	13,9	12,4	10,5	8,2
VS 65/3	●	5,5	7,5	40,4							31,8	28,8	26,2	24,9	23,7	22,5	21	18,9	16	12,6
VS 65/4	●	7,5	10	54							42,5	38,4	35	33,2	31,6	30,1	28	25,2	21,4	16,9
VS 65/5	●	9,3	12,5	68							53,8	48,7	44,3	41,9	40,1	38,2	35,6	32,2	27,5	22
VS 65/6	●	11	15	81,2							64	57,9	52,7	50	47,7	45,3	42,3	38,1	32,3	25,7
VS 65/7	●	15	20	94,9							76,2	70,1	65,2	61,7	58,6	55,7	52,1	46,1	39,7	33,4
VS 65/8	●	15	20	107,6							86	79,1	73,5	69,7	66,1	62,8	58,5	51,6	44,3	37
VS 65/9	●	15	20	120,1							95,5	87,8	81,5	77,4	73,4	69,6	64,6	56,8	48,6	40,2
VS 65/10	●	18,5	25	134,5							107,6	99	91,9	87,2	82,7	78,5	73,2	64,6	55,5	46,3
VS 65/11	●	18,5	25	147							117,2	107,8	100,1	95	90	85,4	79,4	69,8	59,9	49,6
VS 65/12	●	22	30	161,2							128,9	118,5	110,1	104,4	99,1	94,1	87,6	77,3	66,3	55,3
VS 65/13	●	22	30	173,7							138,5	127,3	118,2	112,2	106,4	101	93,8	82,5	70,8	58,6
VS 65/14	●	30	40	190,3							153,3	141	131,1	124	118	112	104,9	93	80,2	67,7
VS 65/15	●	30	40	203,2							163,4	150,2	139,6	132,2	125,7	119,3	111,5	98,7	85	71,5
VS 65/16	●	30	40	216							173,3	159,3	148	140,3	133,2	126,5	118,1	104,3	89,7	75,2
VS 65/17	●	30	40	228,6							183	168,3	156,3	148,2	140,7	133,5	124,4	109,8	94,3	78,8
VS 65/18	●	37	50	243,4							195,5	179,8	167	158,2	150,3	142,7	133,3	117,9	101,5	85,2
VS 65/19	●	37	50	256,1							205,3	188,8	175,4	166,2	157,9	149,9	139,8	123,5	106,1	88,9
VS 65/20	●	37	50	268,8							215	197,7	183,7	174,1	165,3	156,9	146,2	128,9	110,7	92,4
VS 65/21	●	37	50	281,4							224,6	206,5	191,8	182	172,6	163,8	152,4	134,2	115,1	95,7
VS 65/22		45	60	297,7							239,2	219,9	204,4	193,6	183,9	174,6	163,2	144,3	124,2	104,4
VS 65/23		45	60	310,5							249	229	212,7	201,6	191,4	181,7	169,6	149,8	128,9	108
VS 65/24		45	60	323,2							258,7	237,9	221	209,5	198,9	188,8	176	155,3	133,4	111,5
VS 65/25		45	60	335,8							268,4	246,7	229,2	217,3	206,2	195,7	182,2	160,6	137,9	114,9
VS 65/26		45	60	348,4							277,9	255,5	237,3	225,1	213,5	202,5	188,3	165,8	142,2	118,1
VS 65/27		55	75	372,8							303	278,8	259,3	244,7	233,4	221,6	208,5	186,4	161,6	137,5
VS 65/28		55	75	386,1							313,5	288,5	268,3	253,3	241,5	229,3	215,7	192,6	166,9	142
VS 65/29		55	75	399,4							324	298,1	277,2	261,8	249,5	237	222,8	198,8	172,2	146,4
VS 65/30		55	75	412,6							334,5	307,7	286,1	270,3	257,6	244,6	229,8	204,9	177,4	150,8
VS 65/31		55	75	425,8							344,9	317,3	295	278,7	265,5	252,2	236,8	211	182,6	155

● = Pump available in R (AISI 904L) version



# Technical Data and Performance Curves

## 50 Hz

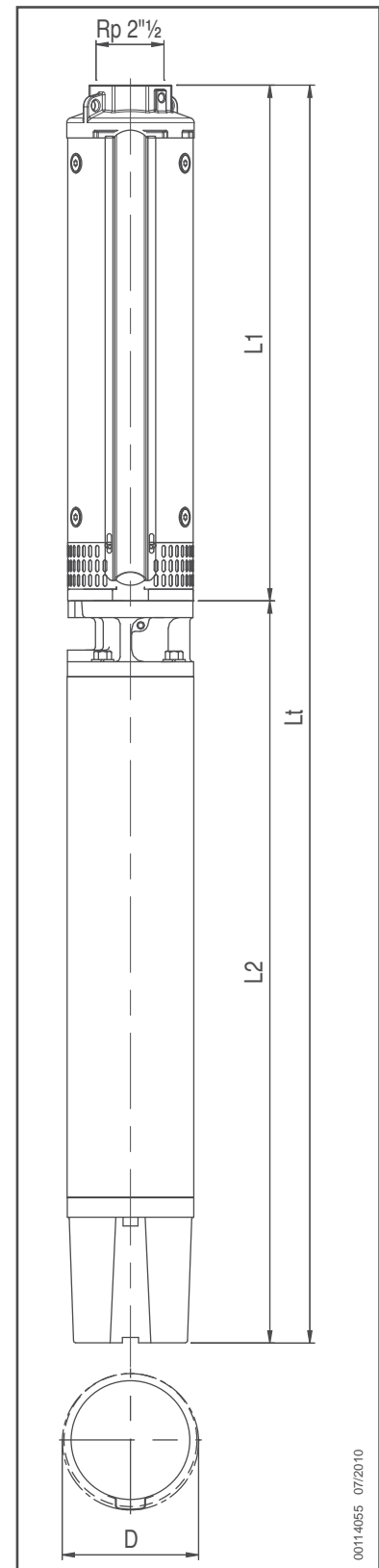
VS 14 - 19 - 30 - 46 - 65

# VS 14 50Hz

## Technical Data

### PUMPS WITH ENCAPSULATED MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 14/5	E4	2,2	3	413,5	422	835,5	142,5	-	26,5
VS 14/6	E4	3,7	5	443,5	520	963,5	142,5	-	32
VS 14/7	E4	3,7	5	473,5	520	993,5	142,5	-	32
VS 14/8	E4	3,7	5	503,5	520	1023,5	142,5	-	33
VS 14/9	E4	5,5	7,5	533,5	652,5	1186	142,5	-	41
VS 14/10	E4	5,5	7,5	563,5	652,5	1216	142,5	-	41,5
VS 14/11	E4	5,5	7,5	593,5	652,5	1246	142,5	-	42,5
VS 14/12	E4	5,5	7,5	623,5	652,5	1276	142,5	-	43,5
VS 14/13	E4	5,5	7,5	653,5	652,5	1306	142,5	-	44
VS 14/14	E4	7,5	10	683,5	730,5	1414	142,5	-	49
VS 14/15	E4	7,5	10	713,5	730,5	1444	142,5	-	49,5
VS 14/16	E4	7,5	10	743,5	730,5	1474	142,5	-	50,5
VS 14/17	E4	7,5	10	773,5	730,5	1504	142,5	-	51
VS 14/5	E6	4	5,5	411	581	992	143	144,5	49
VS 14/6	E6	4	5,5	441	581	1022	143	144,5	50
VS 14/7	E6	4	5,5	471	581	1052	143	144,5	50,5
VS 14/8	E6	4	5,5	501	581	1082	143	144,5	51,5
VS 14/9	E6	5,5	7,5	531	614,5	1145,5	143	144,5	55,5
VS 14/10	E6	5,5	7,5	561	614,5	1175,5	143	144,5	56
VS 14/11	E6	5,5	7,5	591	614,5	1205,5	143	144,5	57
VS 14/12	E6	5,5	7,5	621	614,5	1235,5	143	144,5	58
VS 14/13	E6	5,5	7,5	651	614,5	1265,5	143	144,5	58,5
VS 14/14	E6	7,5	10	681	646	1327	143	144,5	63,5
VS 14/15	E6	7,5	10	711	646	1357	143	144,5	64
VS 14/16	E6	7,5	10	741	646	1387	143	144,5	65
VS 14/17	E6	7,5	10	771	646	1417	143	144,5	65,5
VS 14/18	E6	9,3	12,5	801	678,5	1479,5	143	144,5	69
VS 14/19	E6	9,3	12,5	831	678,5	1509,5	143	144,5	69,5
VS 14/20	E6	9,3	12,5	861	678,5	1539,5	143	144,5	70,5
VS 14/21	E6	9,3	12,5	891	678,5	1569,5	143	144,5	71
VS 14/22	E6	9,3	12,5	921	678,5	1599,5	143	144,5	71,5
VS 14/23	E6	11	15	951	711	1662	143	144,5	76
VS 14/24	E6	11	15	981	711	1692	143	144,5	76,5
VS 14/25	E6	11	15	1011	711	1722	143	144,5	77,5
VS 14/26	E6	11	15	1041	711	1752	143	144,5	78



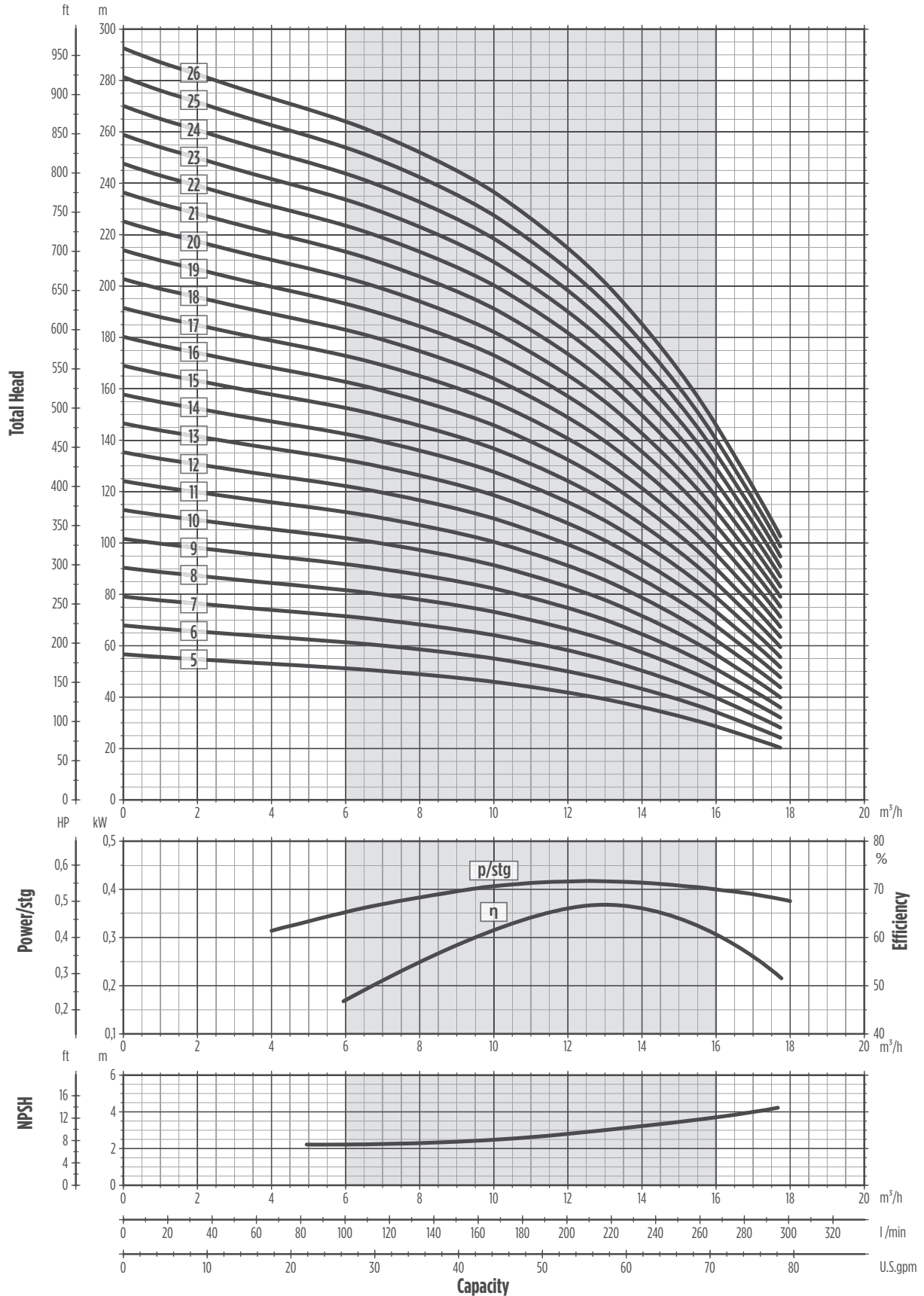
### PUMPS WITH REWINDABLE MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 14/5	RW6	4	5,5	411	699	1110	147	147,5	59,5
VS 14/6	RW6	4	5,5	441	699	1140	147	147,5	60,5
VS 14/7	RW6	4	5,5	471	699	1170	147	147,5	61
VS 14/8	RW6	4	5,5	501	699	1200	147	147,5	62
VS 14/9	RW6	5,5	7,5	531	699	1230	147	147,5	62,5
VS 14/10	RW6	5,5	7,5	561	699	1260	147	147,5	63
VS 14/11	RW6	5,5	7,5	591	699	1290	147	147,5	64
VS 14/12	RW6	5,5	7,5	621	699	1320	147	147,5	65
VS 14/13	RW6	5,5	7,5	651	699	1350	147	147,5	65,5
VS 14/14	RW6	7,5	10	681	719	1400	147	147,5	68,5
VS 14/15	RW6	7,5	10	711	719	1430	147	147,5	69
VS 14/16	RW6	7,5	10	741	719	1460	147	147,5	70
VS 14/17	RW6	7,5	10	771	719	1490	147	147,5	70,5
VS 14/18	RW6	9,3	12,5	801	749	1550	147	147,5	74,5
VS 14/19	RW6	9,3	12,5	831	749	1580	147	147,5	75
VS 14/20	RW6	9,3	12,5	861	749	1610	147	147,5	76
VS 14/21	RW6	9,3	12,5	891	749	1640	147	147,5	76,5
VS 14/22	RW6	9,3	12,5	921	749	1670	147	147,5	77
VS 14/23	RW6	11	15	951	699	1650	147	147,5	81
VS 14/24	RW6	11	15	981	719	1700	147	147,5	81,5
VS 14/25	RW6	11	15	1011	749	1760	147	147,5	82,5
VS 14/26	RW6	11	15	1041	779	1820	147	147,5	83

00114055 07/2010



### PERFORMANCE CURVES 50HZ



The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

0010067 07/2010

# VS 14 50Hz

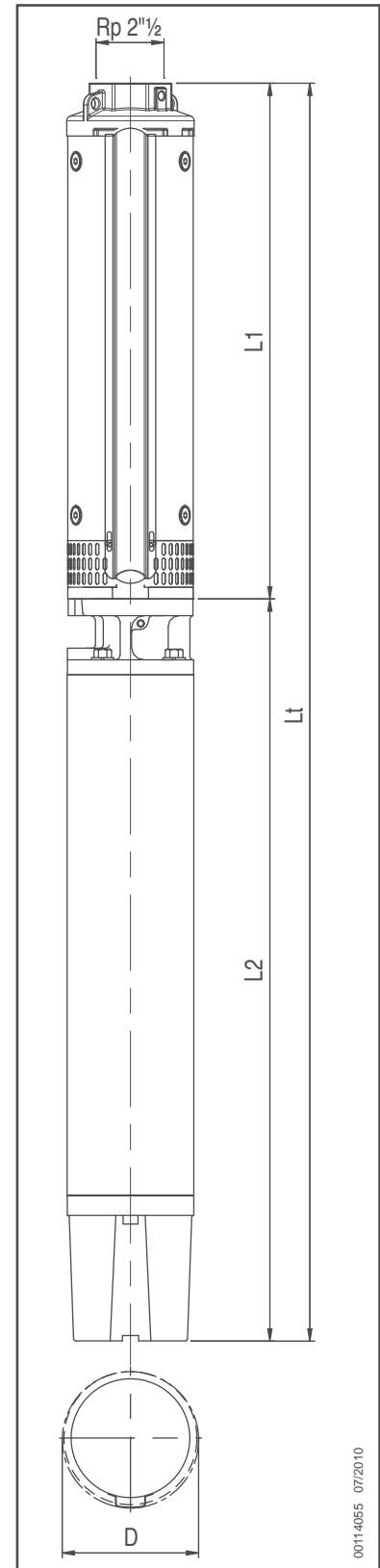
## Technical Data

### PUMPS WITH ENCAPSULATED MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 14/27	E6	15	20	1071	776	1847	143	144,5	85,5
VS 14/28	E6	15	20	1101	776	1877	143	144,5	85,5
VS 14/29	E6	15	20	1131	776	1907	143	144,5	87
VS 14/30	E6	15	20	1161	776	1937	143	144,5	87,5
VS 14/31	E6	15	20	1191	776	1967	143	144,5	87,5
VS 14/32	E6	15	20	1220,5	776	1996,5	143	144,5	88
VS 14/33	E6	15	20	1250,5	776	2026,5	143	144,5	89
VS 14/34	E6	15	20	1280,5	776	2056,5	143	144,5	90
VS 14/35	E6	15	20	1310,5	776	2086,5	143	144,5	90,5
VS 14/36	E6	15	20	1340,5	776	2116,5	143	144,5	91
VS 14/37	E6	18,5	25	1370,5	841,5	2212	143	144,5	99
VS 14/38	E6	18,5	25	1400,5	841,5	2242	143	144,5	99,5
VS 14/39	E6	18,5	25	1430,5	841,5	2272	143	144,5	101
VS 14/40	E6	18,5	25	1460,5	841,5	2302	143	144,5	102
VS 14/41	E6	18,5	25	1490,5	841,5	2332	143	144,5	102,5
VS 14/42	E6	18,5	25	1520,5	841,5	2362	143	144,5	102,5
VS 14/43	E6	18,5	25	1550,5	841,5	2392	143	144,5	103,5
VS 14/44	E6	18,5	25	1580,5	841,5	2422	143	144,5	104
VS 14/45	E6	22	30	1610,5	906,5	2517	143	144,5	111
VS 14/46	E6	22	30	1640,5	906,5	2547	143	144,5	111,5
VS 14/47	E6	22	30	1670,5	906,5	2577	143	144,5	112,5
VS 14/48	E6	22	30	1700	906,5	2606,5	143	144,5	113,5
VS 14/49	E6	22	30	1730,5	906,5	2637	143	144,5	114,5

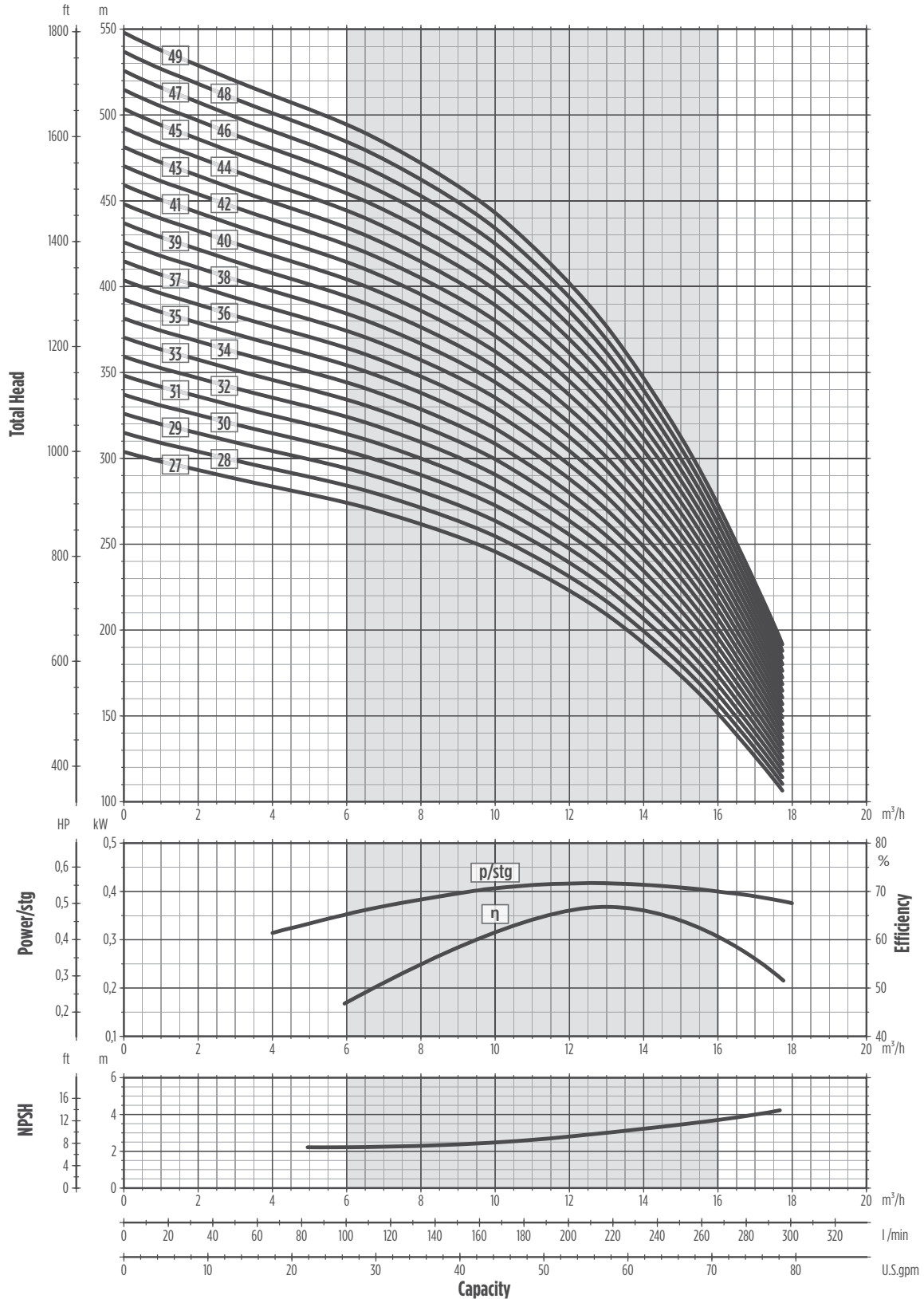
### PUMPS WITH REWINDABLE MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 14/27	RW6	13	17,5	1071	829	1900	147	147,5	90
VS 14/28	RW6	13	17,5	1101	829	1930	147	147,5	90
VS 14/29	RW6	13	17,5	1131	829	1960	147	147,5	91,5
VS 14/30	RW6	13	17,5	1161	829	1990	147	147,5	92
VS 14/31	RW6	13	17,5	1191	829	2020	147	147,5	92
VS 14/32	RW6	15	20	1220,5	874	2094,5	147	147,5	97,5
VS 14/33	RW6	15	20	1250,5	874	2124,5	147	147,5	98,5
VS 14/34	RW6	15	20	1280,5	874	2154,5	147	147,5	99,5
VS 14/35	RW6	15	20	1310,5	874	2184,5	147	147,5	100
VS 14/36	RW6	15	20	1340,5	874	2214,5	147	147,5	100,5
VS 14/37	RW6	18,5	25	1370,5	919	2289,5	147	147,5	105,5
VS 14/38	RW6	18,5	25	1400,5	919	2319,5	147	147,5	106
VS 14/39	RW6	18,5	25	1430,5	919	2349,5	147	147,5	107,5
VS 14/40	RW6	18,5	25	1460,5	919	2379,5	147	147,5	108,5
VS 14/41	RW6	18,5	25	1490,5	919	2409,5	147	147,5	109
VS 14/42	RW6	18,5	25	1520,5	919	2439,5	147	147,5	109
VS 14/43	RW6	18,5	25	1550,5	919	2469,5	147	147,5	110
VS 14/44	RW6	18,5	25	1580,5	919	2499,5	147	147,5	110,5
VS 14/45	RW6	22	30	1610,5	1009	2619,5	147	147,5	120,5
VS 14/46	RW6	22	30	1640,5	1009	2649,5	147	147,5	121
VS 14/47	RW6	22	30	1670,5	1009	2679,5	147	147,5	122
VS 14/48	RW6	22	30	1700	1009	2709	147	147,5	123
VS 14/49	RW6	22	30	1730,5	1009	2739,5	147	147,5	124



00114055 07/2010

### PERFORMANCE CURVES 50HZ



The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

# VS 14 High Pressure 50Hz

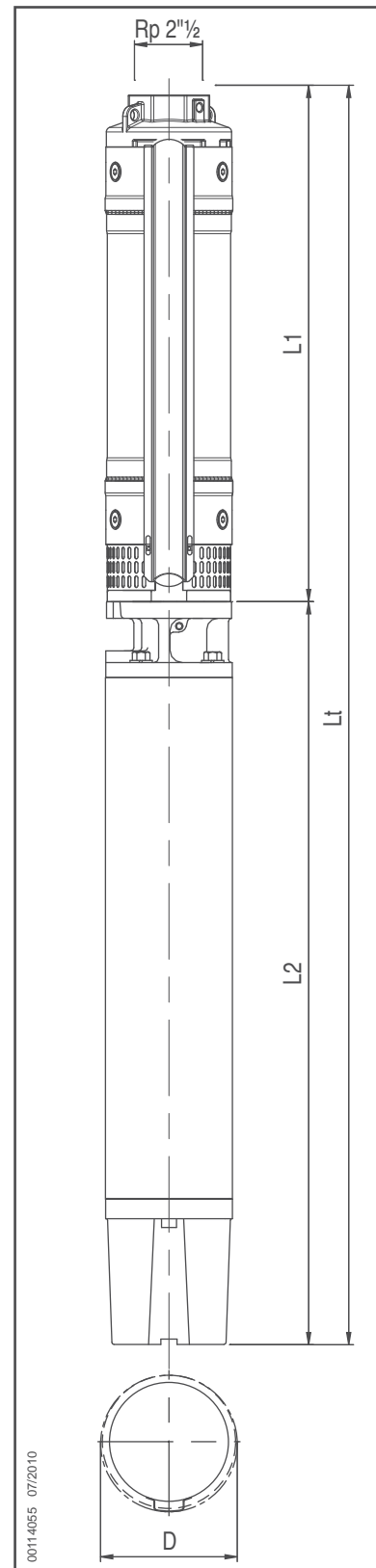
## Technical Data

### PUMPS WITH ENCAPSULATED MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 14/50	E6	22	30	1760,5	906,5	2667	145	146,5	115,5
VS 14/51	E6	22	30	1790,5	906,5	2697	145	146,5	116,5
VS 14/52	E6	22	30	1820,5	906,5	2727	145	146,5	117,5
VS 14/53	E6	30	40	1850,5	1036,5	2887	145	146,5	133
VS 14/54	E6	30	40	1880,5	1036,5	2917	145	146,5	133,5
VS 14/55	E6	30	40	1910,5	1036,5	2947	145	146,5	134,5
VS 14/56	E6	30	40	1940,5	1036,5	2977	145	146,5	135,5
VS 14/57	E6	30	40	1970,5	1036,5	3007	145	146,5	136
VS 14/58	E6	30	40	2000	1036,5	3036,5	145	146,5	137
VS 14/59	E6	30	40	2030	1036,5	3066,5	145	146,5	138
VS 14/60	E6	30	40	2060	1036,5	3096,5	145	146,5	139
VS 14/61	E6	30	40	2090	1036,5	3126,5	145	146,5	140

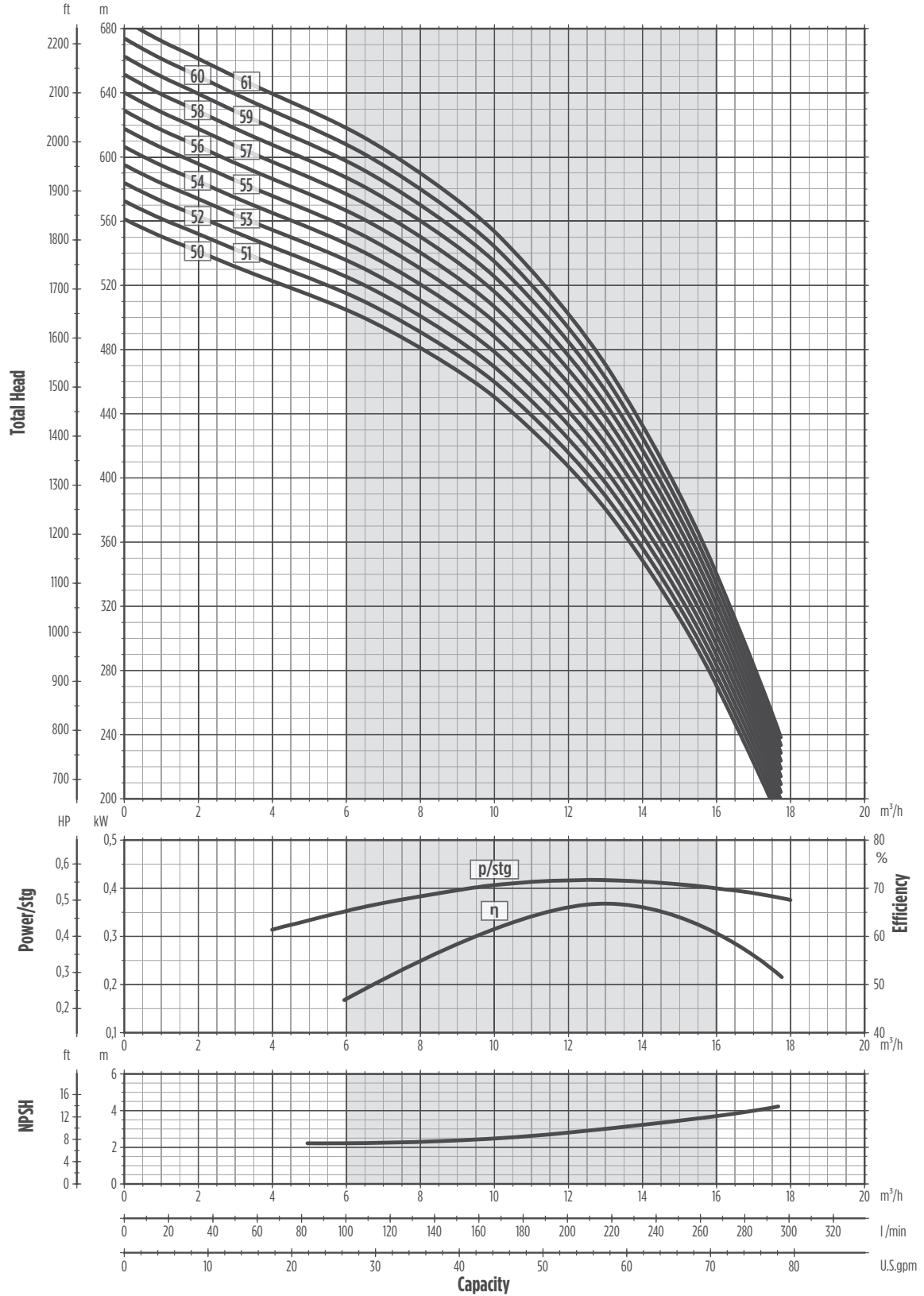
### PUMPS WITH REWINDABLE MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 14/50	RW6	22	30	1760,5	1009	2769,5	149	149,5	125
VS 14/51	RW6	22	30	1790,5	1009	2799,5	149	149,5	126
VS 14/52	RW6	22	30	1820,5	1009	2829,5	149	149,5	127
VS 14/53	RW6	26	35	1850,5	1114	2964,5	149	149,5	139
VS 14/54	RW6	26	35	1880,5	1114	2994,5	149	149,5	139,5
VS 14/55	RW6	26	35	1910,5	1114	3024,5	149	149,5	140,5
VS 14/56	RW6	26	35	1940,5	1114	3054,5	149	149,5	141,5
VS 14/57	RW6	26	35	1970,5	1114	3084,5	149	149,5	142
VS 14/58	RW6	26	35	2000	1114	3114	149	149,5	143
VS 14/59	RW6	26	35	2030	1114	3144	149	149,5	144
VS 14/60	RW6	26	35	2060	1114	3174	149	149,5	145
VS 14/61	RW6	26	35	2090	1114	3204	149	149,5	146



00114055 07/2010

### PERFORMANCE CURVES 50HZ



The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

0010067 07/2010

# VS 19 50Hz

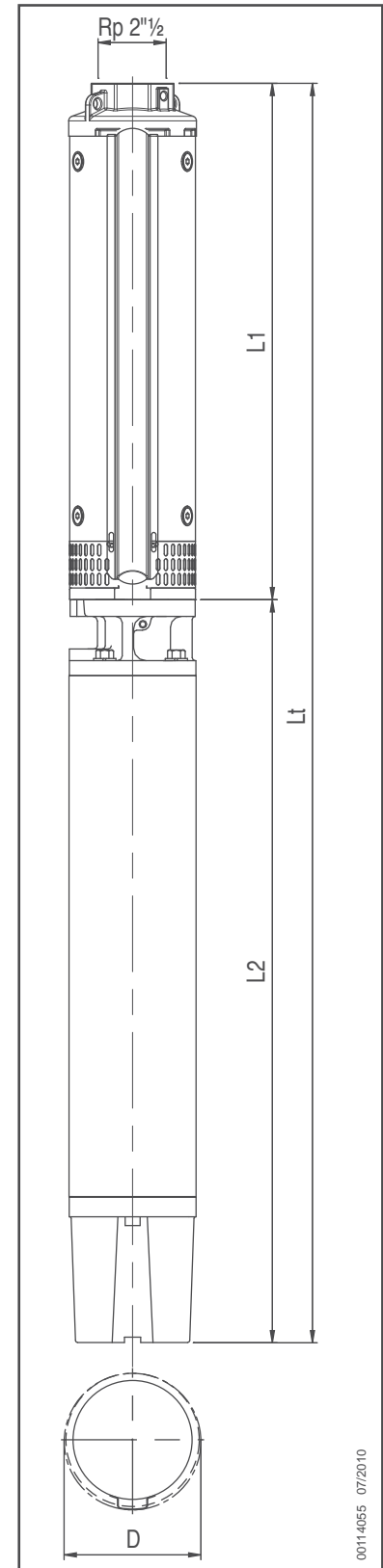
## Technical Data

### PUMPS WITH ENCAPSULATED MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 19/6	E4	3,7	5	497,5	520	1017,5	142,5	-	31,5
VS 19/7	E4	5,5	7,5	535	652,5	1187,5	142,5	-	40
VS 19/8	E4	5,5	7,5	572,5	652,5	1225	142,5	-	41
VS 19/9	E4	5,5	7,5	610	652,5	1262,5	142,5	-	41,5
VS 19/10	E4	7,5	10	647,5	730,5	1378	142,5	-	46,5
VS 19/11	E4	7,5	10	685	730,5	1415,5	142,5	-	47,5
VS 19/12	E4	7,5	10	722,5	730,5	1453	142,5	-	48
VS 19/6	E6	4	5,5	495	581	1076	143	144,5	50
VS 19/7	E6	5,5	7,5	532,5	614,5	1147	143	144,5	54,5
VS 19/8	E6	5,5	7,5	570	614,5	1184,5	143	144,5	55,5
VS 19/9	E6	5,5	7,5	607,5	614,5	1222	143	144,5	56
VS 19/10	E6	7,5	10	645	646	1291	143	144,5	61
VS 19/11	E6	7,5	10	682,5	646	1328,5	143	144,5	62
VS 19/12	E6	7,5	10	720	646	1366	143	144,5	62,5
VS 19/13	E6	9,3	12,5	757,5	678,5	1436	143	144,5	66
VS 19/14	E6	9,3	12,5	795	678,5	1473,5	143	144,5	67
VS 19/15	E6	9,3	12,5	832,5	678,5	1511	143	144,5	67,5
VS 19/16	E6	11	15	870	711	1581	143	144,5	72
VS 19/17	E6	11	15	907,5	711	1618,5	143	144,5	73
VS 19/18	E6	11	15	945	711	1656	143	144,5	73,5
VS 19/19	E6	15	20	982,5	776	1758,5	143	144,5	80
VS 19/20	E6	15	20	1020	776	1796	143	144,5	80,5
VS 19/21	E6	15	20	1057,5	776	1833,5	143	144,5	81,5
VS 19/22	E6	15	20	1095	776	1871	143	144,5	82,5
VS 19/23	E6	15	20	1132,5	776	1908,5	143	144,5	83
VS 19/24	E6	15	20	1170	776	1946	143	144,5	84

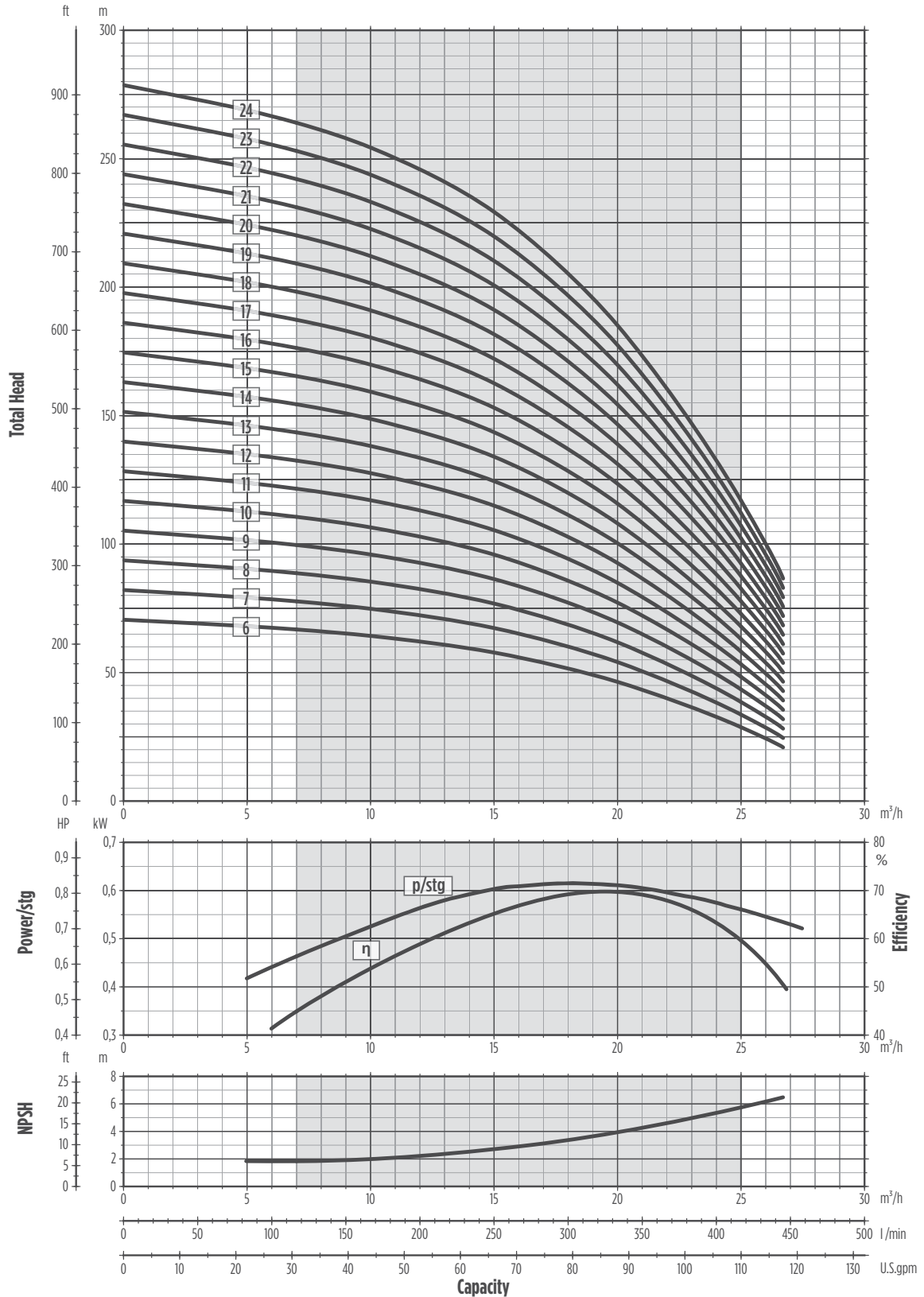
### PUMPS WITH REWINDABLE MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 19/6	RW6	4	5,5	495	699	1194	147	147,5	60,5
VS 19/7	RW6	5,5	7,5	532,5	699	1231,5	147	147,5	61,5
VS 19/8	RW6	5,5	7,5	570	699	1269	147	147,5	62,5
VS 19/9	RW6	5,5	7,5	607,5	699	1306,5	147	147,5	63
VS 19/10	RW6	7,5	10	645	719	1364	147	147,5	66
VS 19/11	RW6	7,5	10	682,5	719	1401,5	147	147,5	67
VS 19/12	RW6	7,5	10	720	719	1439	147	147,5	67,5
VS 19/13	RW6	9,3	12,5	757,5	749	1506,5	147	147,5	71,5
VS 19/14	RW6	9,3	12,5	795	749	1544	147	147,5	72,5
VS 19/15	RW6	9,3	12,5	832,5	749	1581,5	147	147,5	73
VS 19/16	RW6	11	15	870	779	1649	147	147,5	77
VS 19/17	RW6	11	15	907,5	779	1686,5	147	147,5	78
VS 19/18	RW6	11	15	945	779	1724	147	147,5	78,5
VS 19/19	RW6	13	17,5	982,5	829	1811,5	147	147,5	84,5
VS 19/20	RW6	13	17,5	1020	829	1849	147	147,5	85
VS 19/21	RW6	13	17,5	1057,5	829	1886,5	147	147,5	86
VS 19/22	RW6	15	20	1095	874	1969	147	147,5	92
VS 19/23	RW6	15	20	1132,5	874	2006,5	147	147,5	92,5
VS 19/24	RW6	15	20	1170	874	2044	147	147,5	93,5



00114055 07/2010

### PERFORMANCE CURVES 50HZ



0010067 07/2010

The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

# VS 19 50Hz

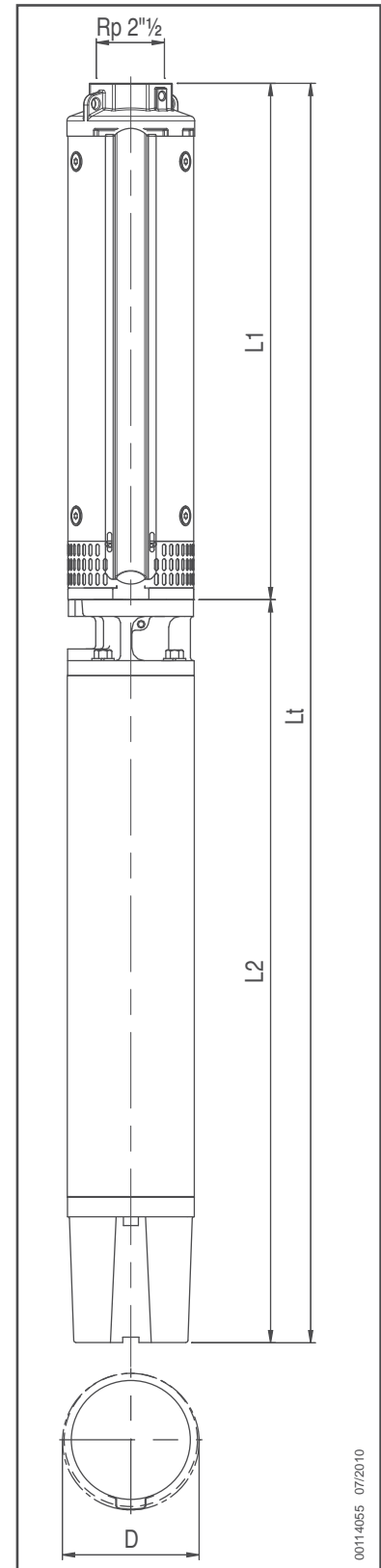
## Technical Data

### PUMPS WITH ENCAPSULATED MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 19/25	E6	18,5	25	1207,5	841,5	2049	143	144,5	92
VS 19/26	E6	18,5	25	1245	841,5	2086,5	143	144,5	92,5
VS 19/27	E6	18,5	25	1282,5	841,5	2124	143	144,5	94,5
VS 19/28	E6	18,5	25	1319,5	841,5	2161	143	144,5	94,5
VS 19/29	E6	18,5	25	1357	841,5	2198,5	143	144,5	95
VS 19/30	E6	18,5	25	1394,5	841,5	2236	143	144,5	96
VS 19/31	E6	22	30	1432	906,5	2338,5	143	144,5	103
VS 19/32	E6	22	30	1469,5	906,5	2376	143	144,5	103,5
VS 19/33	E6	22	30	1507	906,5	2413,5	143	144,5	104,5
VS 19/34	E6	22	30	1544,5	906,5	2451	143	144,5	105
VS 19/35	E6	22	30	1582	906,5	2488,5	143	144,5	106
VS 19/36	E6	22	30	1619,5	906,5	2526	143	144,5	106,5
VS 19/37	E6	30	40	1657	1036,5	2633,5	143	144,5	122,5
VS 19/38	E6	30	40	1694,5	1036,5	2731	143	144,5	124
VS 19/39	E6	30	40	1732	1036,5	2768,5	143	144,5	124
VS 19/40	E6	30	40	1769,5	1036,5	2806	143	144,5	124,5
VS 19/41	E6	30	40	1807	1036,5	2843,5	143	144,5	126
VS 19/42	E6	30	40	1844,5	1036,5	2881	143	144,5	127
VS 19/43	E6	30	40	1882	1036,5	2918,5	143	144,5	128
VS 19/44	E6	30	40	1919,5	1036,5	2956	143	144,5	129
VS 19/45	E6	30	40	1957	1036,5	2993,5	143	144,5	130
VS 19/46	E6	30	40	1994	1036,5	3030,5	143	144,5	131

### PUMPS WITH REWINDABLE MOTOR

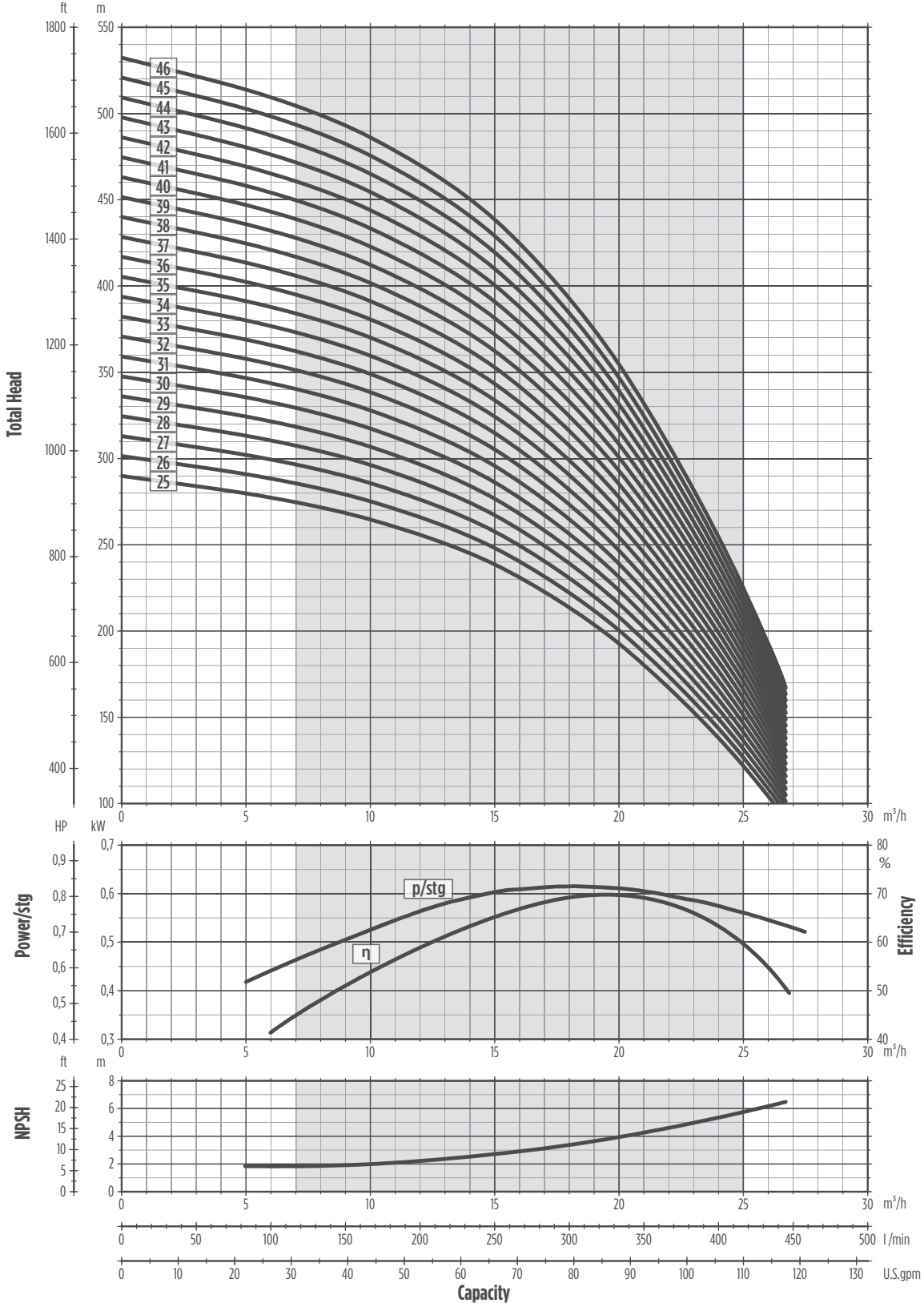
Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 19/25	E6	18,5	25	1207,5	841,5	2049	143	144,5	92
VS 19/26	E6	18,5	25	1245	841,5	2086,5	143	144,5	92,5
VS 19/27	E6	18,5	25	1282,5	841,5	2124	143	144,5	94,5
VS 19/28	E6	18,5	25	1319,5	841,5	2161	143	144,5	94,5
VS 19/29	E6	18,5	25	1357	841,5	2198,5	143	144,5	95
VS 19/30	E6	18,5	25	1394,5	841,5	2236	143	144,5	96
VS 19/31	E6	22	30	1432	906,5	2338,5	143	144,5	103
VS 19/32	E6	22	30	1469,5	906,5	2376	143	144,5	103,5
VS 19/33	E6	22	30	1507	906,5	2413,5	143	144,5	104,5
VS 19/34	E6	22	30	1544,5	906,5	2451	143	144,5	105
VS 19/35	E6	22	30	1582	906,5	2488,5	143	144,5	106
VS 19/36	E6	22	30	1619,5	906,5	2526	143	144,5	106,5
VS 19/37	E6	30	40	1657	1036,5	2633,5	143	144,5	122,5
VS 19/38	E6	30	40	1694,5	1036,5	2731	143	144,5	124
VS 19/39	E6	30	40	1732	1036,5	2768,5	143	144,5	124
VS 19/40	E6	30	40	1769,5	1036,5	2806	143	144,5	124,5
VS 19/41	E6	30	40	1807	1036,5	2843,5	143	144,5	126
VS 19/42	E6	30	40	1844,5	1036,5	2881	143	144,5	127
VS 19/43	E6	30	40	1882	1036,5	2918,5	143	144,5	128
VS 19/44	E6	30	40	1919,5	1036,5	2956	143	144,5	129
VS 19/45	E6	30	40	1957	1036,5	2993,5	143	144,5	130
VS 19/46	E6	30	40	1994	1036,5	3030,5	143	144,5	131



00114055 07/2010



PERFORMANCE CURVES 50HZ



001006F 07/2010

The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

# VS 19 High Pressure 50Hz

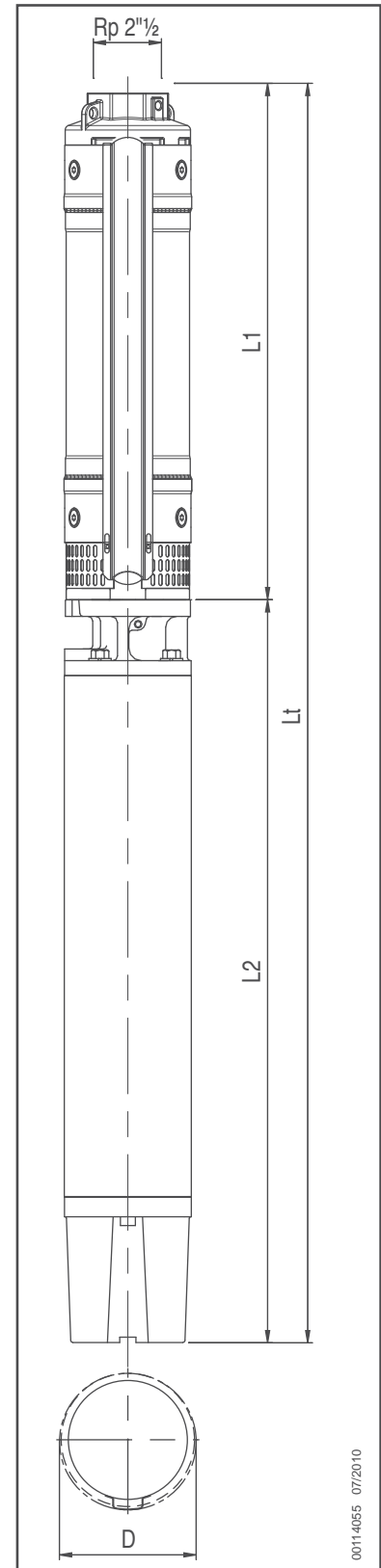
## Technical Data

### PUMPS WITH ENCAPSULATED MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 19/47	E6	30	40	2031,5	1036,5	3068	145	146,5	131,5
VS 19/48	E6	30	40	2069	1036,5	3105,5	145	146,5	132
VS 19/49	E6	30	40	2106,5	1036,5	3143	145	146,5	134
VS 19/50	E6	37	50	2144	1421,5	3565,5	145	146,5	189
VS 19/51	E6	37	50	2181,5	1421,5	3603	145	146,5	190
VS 19/52	E6	37	50	2219	1421,5	3640,5	145	146,5	191
VS 19/53	E6	37	50	2256,5	1421,5	3678	145	146,5	192
VS 19/54	E6	37	50	2294	1421,5	3715,5	145	146,5	193
VS 19/55	E6	37	50	2331,5	1421,5	3753	145	146,5	194
VS 19/56	E6	37	50	2369	1421,5	3790,5	145	146,5	195
VS 19/57	E6	37	50	2406,5	1421,5	3828	145	146,5	196
VS 19/58	E6	37	50	2444	1421,5	3865,5	145	146,5	197
VS 19/59	E6	37	50	2481,5	1421,5	3903	145	146,5	198
VS 19/60	E6	37	50	2519	1421,5	3940,5	145	146,5	199

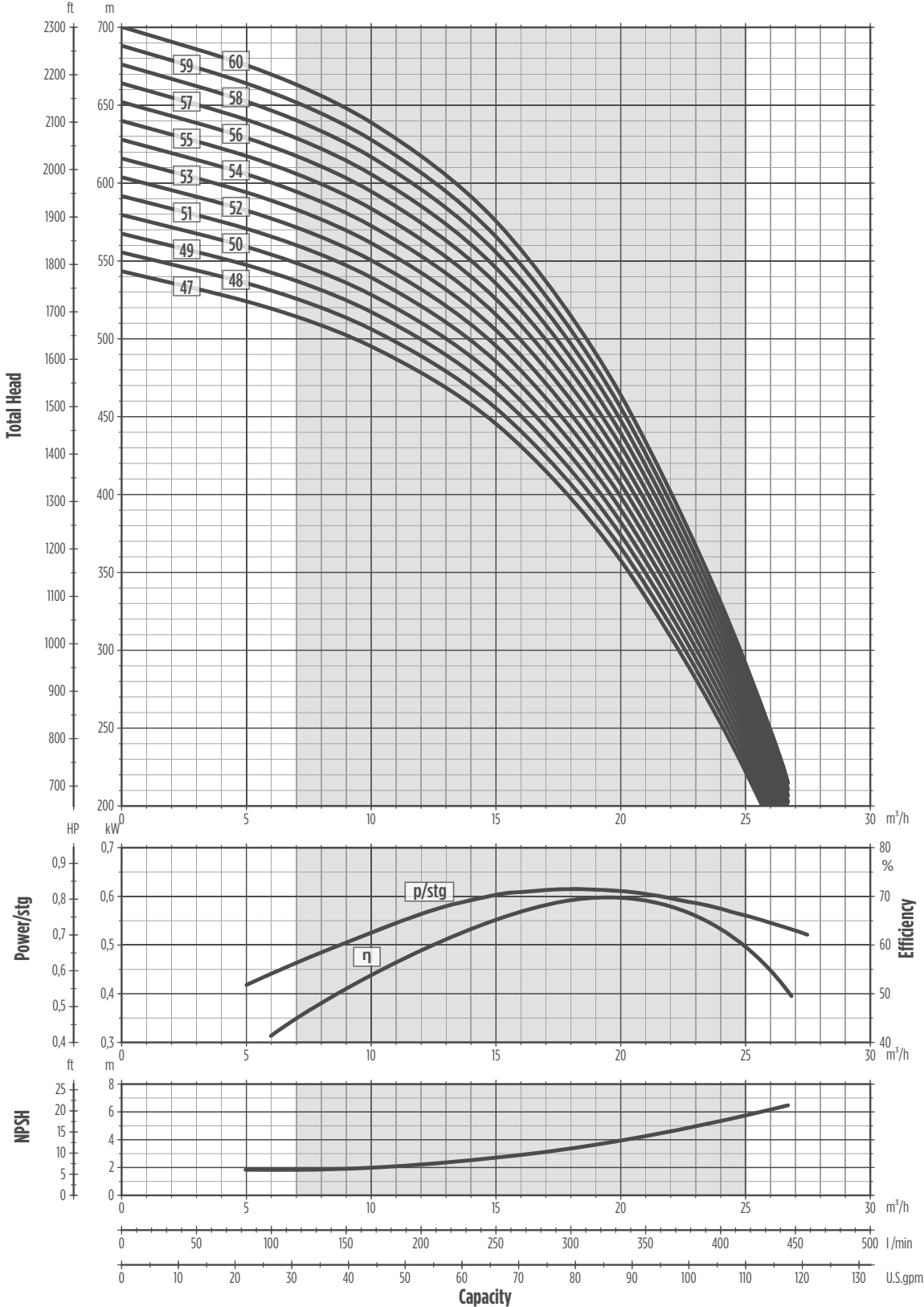
### PUMPS WITH REWINDABLE MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 19/47	E6	30	40	2031,5	1036,5	3068	145	146,5	131,5
VS 19/48	E6	30	40	2069	1036,5	3105,5	145	146,5	132
VS 19/49	E6	30	40	2106,5	1036,5	3143	145	146,5	134
VS 19/50	E6	37	50	2144	1421,5	3565,5	145	146,5	189
VS 19/51	E6	37	50	2181,5	1421,5	3603	145	146,5	190
VS 19/52	E6	37	50	2219	1421,5	3640,5	145	146,5	191
VS 19/53	E6	37	50	2256,5	1421,5	3678	145	146,5	192
VS 19/54	E6	37	50	2294	1421,5	3715,5	145	146,5	193
VS 19/55	E6	37	50	2331,5	1421,5	3753	145	146,5	194
VS 19/56	E6	37	50	2369	1421,5	3790,5	145	146,5	195
VS 19/57	E6	37	50	2406,5	1421,5	3828	145	146,5	196
VS 19/58	E6	37	50	2444	1421,5	3865,5	145	146,5	197
VS 19/59	E6	37	50	2481,5	1421,5	3903	145	146,5	198
VS 19/60	E6	37	50	2519	1421,5	3940,5	145	146,5	199



00114055 07/2010

PERFORMANCE CURVES 50HZ



0010067\_07/2010

The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

# VS 30 50Hz

## Technical Data

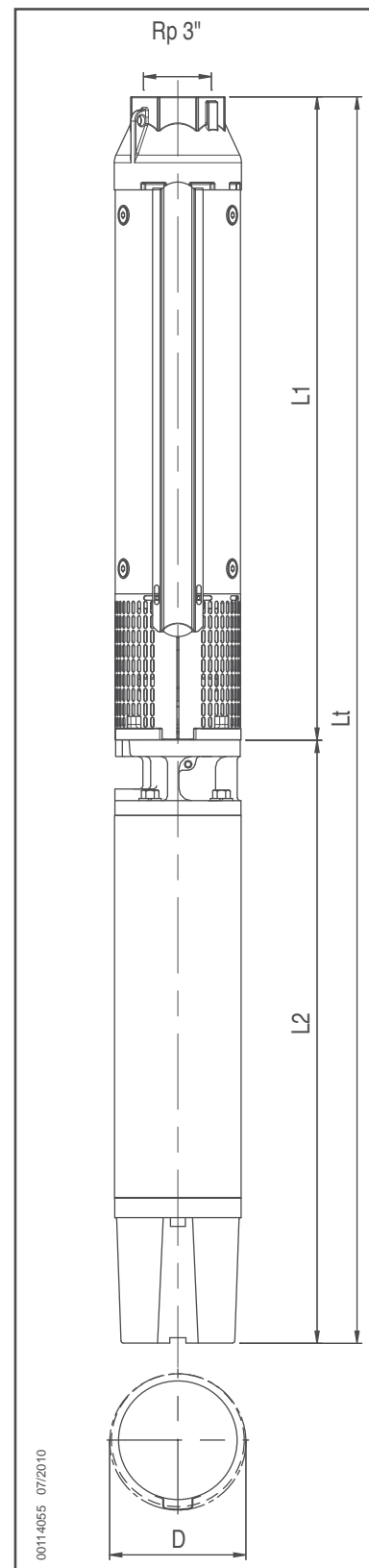
### PUMPS WITH ENCAPSULATED MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 30/3	E4	3,7	5	622	520	1142	142,5	-	34
VS 30/4	E4	5,5	7,5	707,5	652,5	1360	142,5	-	43,5
VS 30/5	E4	7,5	10	793	730,5	1523,5	142,5	-	50
VS 30/6	E4	7,5	10	878,5	730,5	1609	142,5	-	52
VS 30/3	E6	4	5,5	620	581	1201	143	144,5	52
VS 30/4	E6	5,5	7,5	705,5	614,5	1320	143	144,5	58
VS 30/5	E6	7,5	10	790,5	646	1436,5	143	144,5	64
VS 30/6	E6	7,5	10	876	646	1522	143	144,5	66
VS 30/7	E6	9,3	12,5	961,5	678,5	1640	143	144,5	70,5
VS 30/8	E6	11	15	1047	711	1758	143	144,5	76,5
VS 30/9	E6	11	15	1132,5	711	1843,5	143	144,5	78,5
VS 30/10	E6	15	20	1218	776	1994	143	144,5	86
VS 30/11	E6	15	20	1303,5	776	2079,5	143	144,5	88
VS 30/12	E6	15	20	1389	776	2165	143	144,5	90
VS 30/13	E6	18,5	25	1474,5	841,5	2316	143	144,5	99
VS 30/14	E6	18,5	25	1560	841,5	2401,5	143	144,5	101,5
VS 30/15	E6	22	30	1645,5	906,5	2552	143	144,5	109,5
VS 30/16	E6	22	30	1730,5	906,5	2637	143	144,5	111,5
VS 30/17	E6	22	30	1816	906,5	2722,5	143	144,5	113,5
VS 30/18	E6	22	30	1901,5	906,5	2808	143	144,5	115,5
VS 30/19	E6	30	40	1987	1036,5	3023,5	143	144,5	132
VS 30/20	E6	30	40	2072,5	1036,5	3109	143	144,5	134,5

### PUMPS WITH REWINDABLE MOTOR

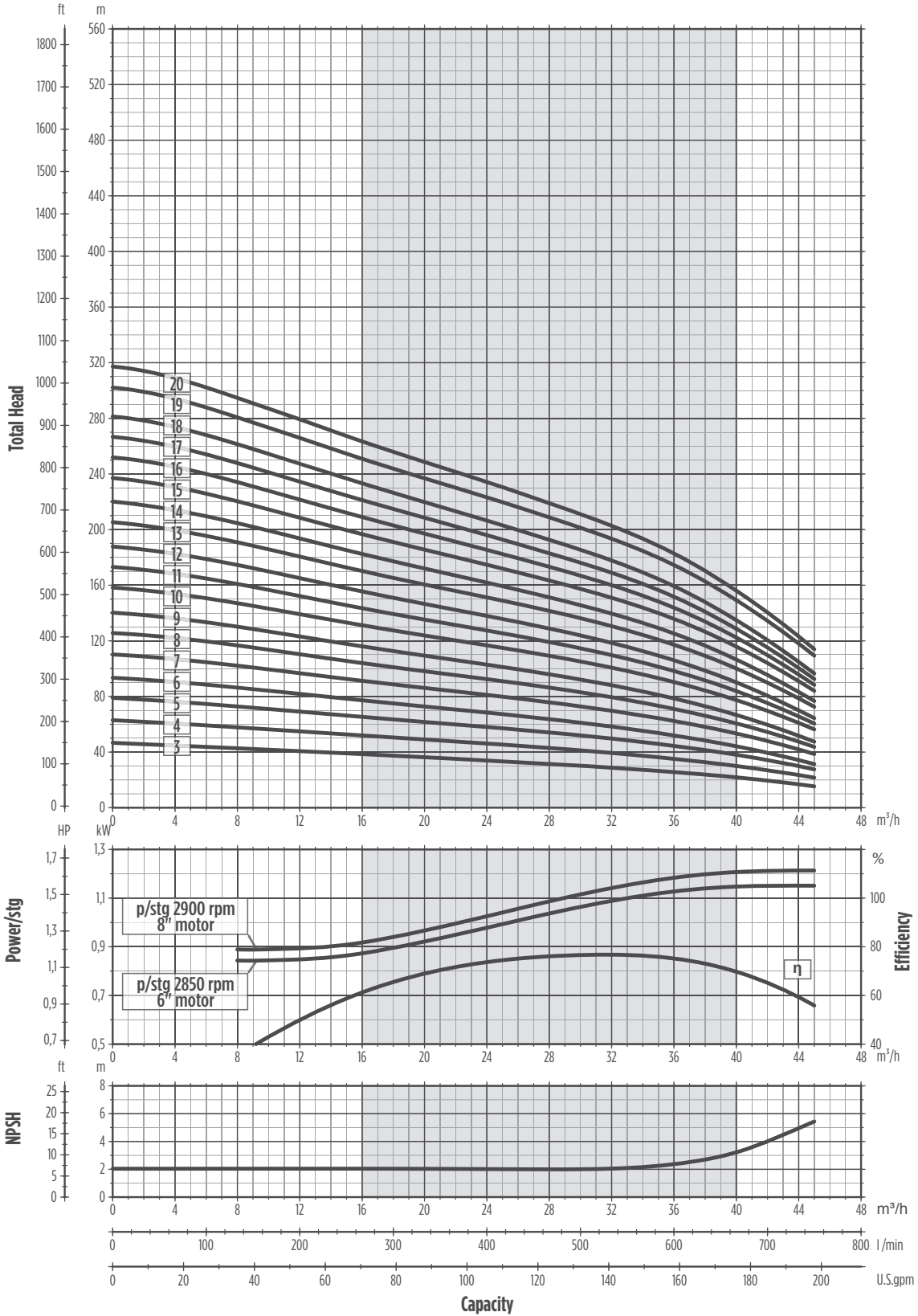
Pump model type	R vers.	Motor			Dimensions					Weight Pump [Kg]
		Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
								1 cable	2 cable	
VS 30/3	●	RW6	4	5,5	620	699	1319	147	147,5	62,5
VS 30/4	●	RW6	5,5	7,5	705,5	699	1404,5	147	147,5	65
VS 30/5	●	RW6	7,5	10	790,5	719	1509,5	147	147,5	69
VS 30/6	●	RW6	7,5	10	876	719	1595	147	147,5	71
VS 30/7	●	RW6	9,3	12,5	961,5	749	1710,5	147	147,5	76
VS 30/8	●	RW6	11	15	1047	779	1826	147	147,5	81,5
VS 30/9	●	RW6	11	15	1132,5	779	1911,5	147	147,5	83,5
VS 30/10	●	RW6	13	17,5	1218	829	2047	147	147,5	90,5
VS 30/11	●	RW6	15	20	1303,5	874	2177,5	147	147,5	97,5
VS 30/12	●	RW6	15	20	1389	874	2263	147	147,5	99,5
VS 30/13	●	RW6	18,5	25	1474,5	919	2393,5	147	147,5	105,5
VS 30/14	●	RW6	18,5	25	1560	919	2479	147	147,5	108
VS 30/15	●	RW6	22	30	1645,5	1009	2654,5	147	147,5	119
VS 30/16	●	RW6	22	30	1730,5	1009	2739,5	147	147,5	121
VS 30/17	●	RW6	22	30	1816	1009	2825	147	147,5	123
VS 30/18	●	RW6	22	30	1901,5	1009	2910,5	147	147,5	125
VS 30/19	●	RW6	26	35	1987	1114	3101	147	147,5	138
VS 30/20	●	RW6	26	35	2072,5	1114	3186,5	147	147,5	140,5

● = Pump available in R (AISI 904L) version



00114055 07/2010

### PERFORMANCE CURVES 50HZ



001067 07/2010

The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

# VS 30 50Hz

## Technical Data

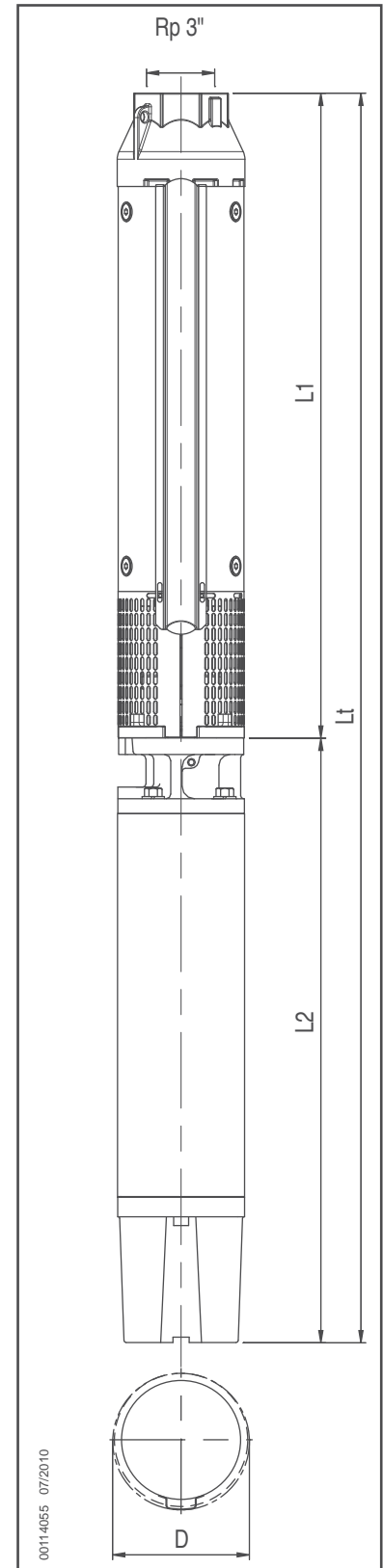
### PUMPS WITH ENCAPSULATED MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 30/21	E6	30	40	2157,5	1036,5	3194	143	144,5	136,5
VS 30/22	E6	30	40	2243	1036,5	3279,5	143	144,5	138,5
VS 30/23	E6	30	40	2328,5	1036,5	3365	143	144,5	140,5
VS 30/24	E6	30	40	2414	1036,5	3450,5	143	144,5	142,5
VS 30/25	E6	37	50	2499	1421,5	3920,5	143	144,5	199
VS 30/26	E6	37	50	2584,5	1421,5	4006	143	144,5	201
VS 30/27	E6	37	50	2670	1421,5	4091,5	143	144,5	203
VS 30/28	E6	37	50	2755	1421,5	4176,5	143	144,5	205
VS 30/29	E6	37	50	2840,5	1421,5	4262	143	144,5	207
VS 30/30	E6	37	50	2926	1421,5	4347,5	143	144,5	209,5
VS 30/31	E6	45	60	3011	1574	4585	143	144,5	224,5
VS 30/32	E6	45	60	3096,5	1574	4670,5	143	144,5	227,5
VS 30/33	E6	45	60	3182	1574	4756	143	144,5	229,5
VS 30/34	E6	45	60	3267,5	1574	4841,5	143	144,5	231,5
VS 30/35	E6	45	60	3352,5	1574	4926,5	143	144,5	234

### PUMPS WITH REWINDABLE MOTOR

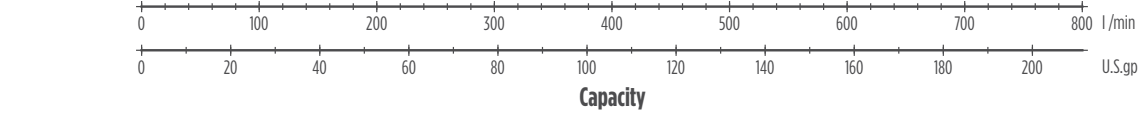
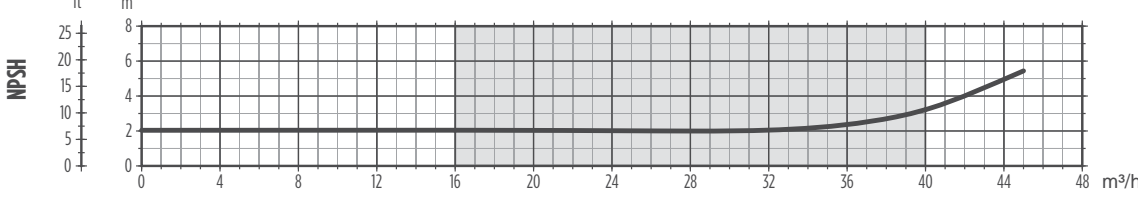
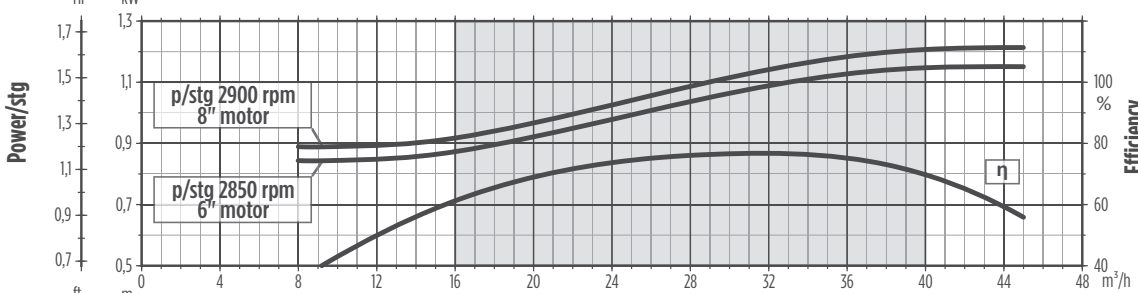
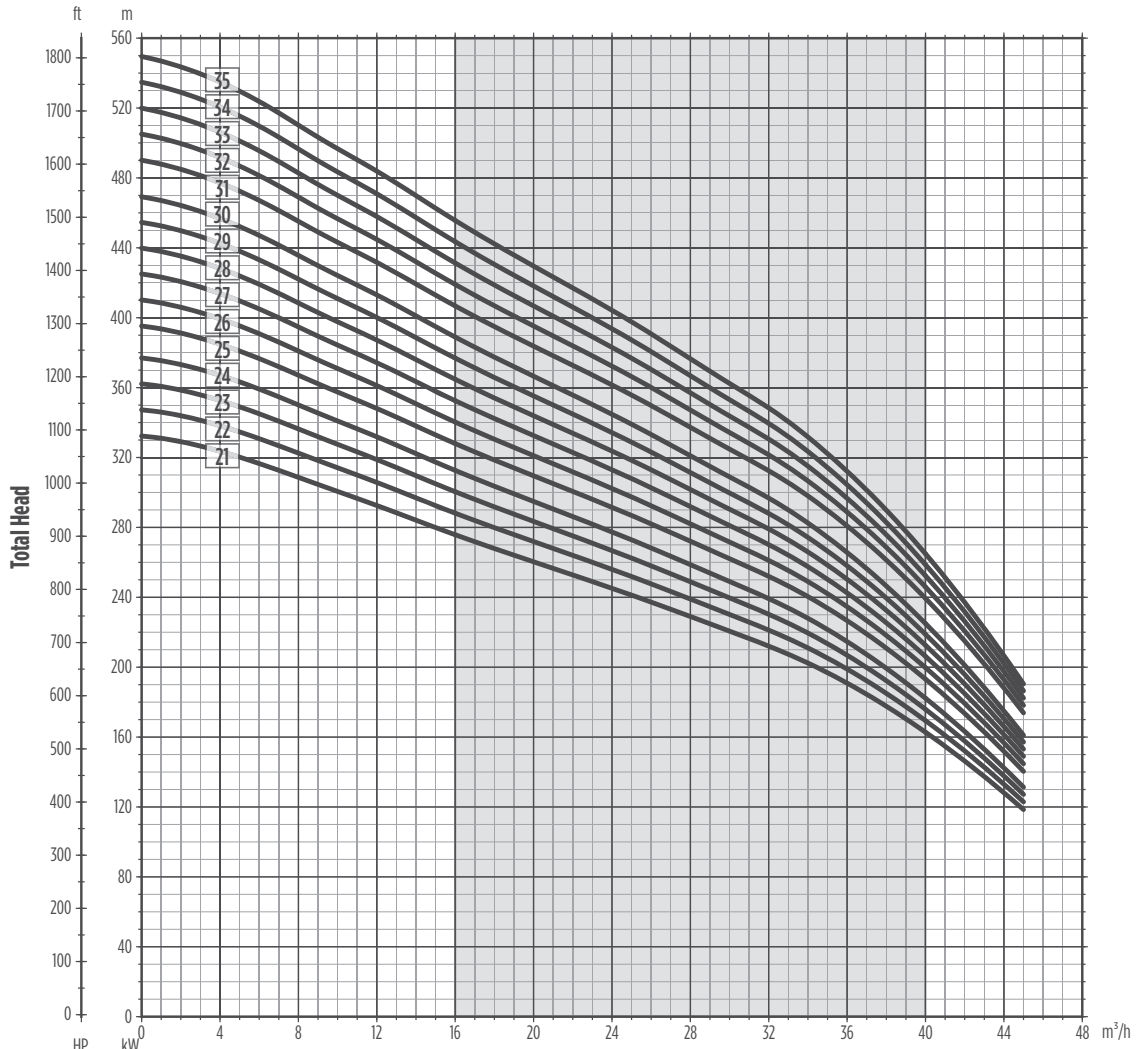
Pump model type	R vers.	Motor			Dimensions					Weight Pump [Kg]
		Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
								1 cable	2 cable	
VS 30/21	●	RW6	26	35	2157,5	1114	3271,5	147	147,5	142,5
VS 30/22	●	RW6	30	40	2243	1214	3457	147	147,5	154,5
VS 30/23	●	RW6	30	40	2328,5	1214	3542,5	147	147,5	156,5
VS 30/24	●	RW6	30	40	2414	1214	3628	147	147,5	158,5
VS 30/25	●	RW6	37	50	2499	1294	3793	147	147,5	168
VS 30/26	●	RW6	37	50	2584,5	1294	3878,5	147	147,5	170
VS 30/27	●	RW6	37	50	2670	1294	3964	147	147,5	172
VS 30/28	●	RW6	37	50	2755	1294	4049	147	147,5	174
VS 30/29	●	RW6	37	50	2840,5	1294	4134,5	147	147,5	176
VS 30/30	●	RW6	37	50	2926	1294	4220	147	147,5	178,5
VS 30/31		RW8	45	60	3111	1230	4341	189	189	234,5
VS 30/32		RW8	45	60	3196,5	1230	4426,5	189	189	237,5
VS 30/33		RW8	45	60	3282	1230	4512	189	189	239,5
VS 30/34		RW8	45	60	3367,5	1230	4597,5	189	189	241,5
VS 30/35		RW8	45	60	3452,5	1230	4682,5	189	189	244

● = Pump available in R (AISI 904L) version



00114055 07/2010

PERFORMANCE CURVES 50HZ



The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

001016 07/2010

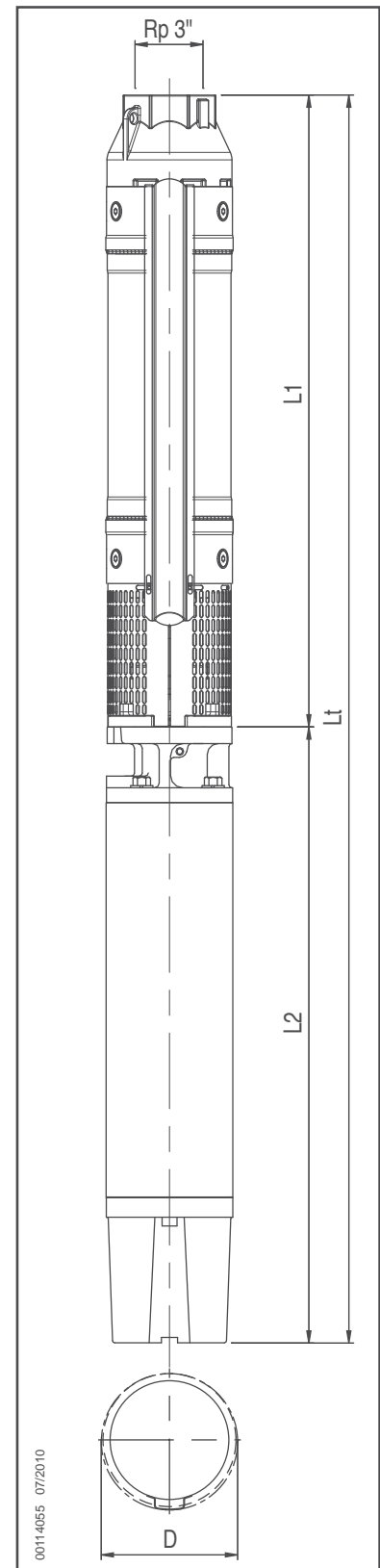
# VS 30 High Pressure 50Hz

## PUMPS WITH ENCAPSULATED MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 30/36	E6	45	60	3438	1574	5012	145	146,5	237
VS 30/37	E6	45	60	3523,5	1574	5097,5	145	146,5	239
VS 30/38	E8	55	75	3709	1204	4913	190,5	190,5	270,5
VS 30/39	E8	55	75	3794	1204	4998	190,5	190,5	272,5
VS 30/40	E8	55	75	3879,5	1204	5083,5	190,5	190,5	275
VS 30/41	E8	55	75	3965	1204	5169	190,5	190,5	276
VS 30/42	E8	55	75	4050,5	1204	5254,5	190,5	190,5	277
VS 30/43	E8	55	75	4135,5	1204	5339,5	190,5	190,5	278

## PUMPS WITH REWINDABLE MOTOR

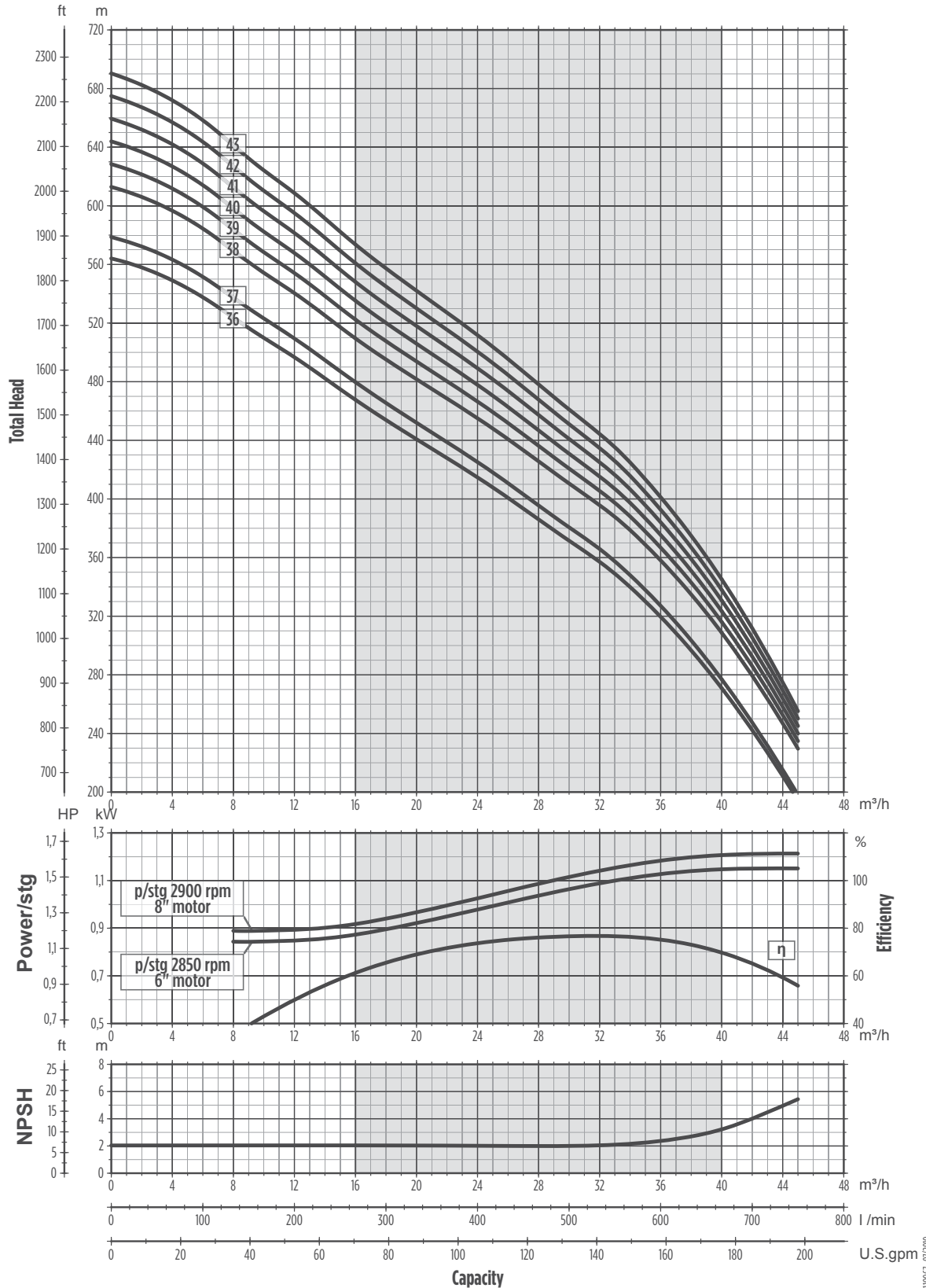
Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 30/36	E6	45	60	3438	1574	5012	145	146,5	237
VS 30/37	E6	45	60	3523,5	1574	5097,5	145	146,5	239
VS 30/38	E8	55	75	3709	1204	4913	190,5	190,5	270,5
VS 30/39	E8	55	75	3794	1204	4998	190,5	190,5	272,5
VS 30/40	E8	55	75	3879,5	1204	5083,5	190,5	190,5	275
VS 30/41	E8	55	75	3965	1204	5169	190,5	190,5	276
VS 30/42	E8	55	75	4050,5	1204	5254,5	190,5	190,5	277
VS 30/43	E8	55	75	4135,5	1204	5339,5	190,5	190,5	278



0011.4055 07/2010



### PERFORMANCE CURVES 50HZ



The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

0010067 07/2010

# VS 46 50Hz

## Technical Data

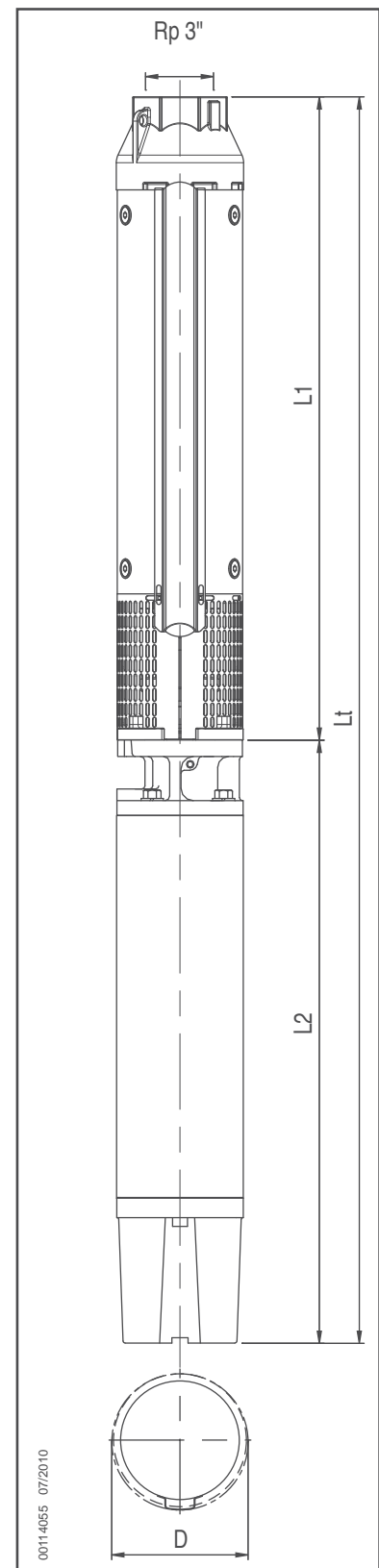
### PUMPS WITH ENCAPSULATED MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 46/2	E4	3	4	593,5	477	1070,5	142,5	-	31
VS 46/3	E4	4	5,5	707,5	543	1250,5	142,5	-	36,5
VS 46/4	E4	5,5	7,5	821,5	652,5	1474	142,5	-	45,5
VS 46/5	E4	7,5	10	935,5	730,5	1666	142,5	-	52,5
VS 46/2	E6	4	5,5	591,5	581	1172,5	143	144,5	51
VS 46/3	E6	4	5,5	705,5	581	1286,5	143	144,5	53,5
VS 46/4	E6	5,5	7,5	819,5	614,5	1434	143	144,5	60
VS 46/5	E6	7,5	10	933,5	646	1579,5	143	144,5	66,5
VS 46/6	E6	9,3	12,5	1047	678,5	1725,5	143	144,5	71,5
VS 46/7	E6	9,3	12,5	1161	678,5	1839,5	143	144,5	74
VS 46/8	E6	11	15	1275	711	1986	143	144,5	80
VS 46/9	E6	15	20	1389	776	2165	143	144,5	88,5
VS 46/10	E6	15	20	1503	776	2279	143	144,5	91
VS 46/11	E6	15	20	1617	776	2393	143	144,5	93,5
VS 46/12	E6	18,5	25	1730,5	841,5	2572	143	144,5	103
VS 46/13	E6	18,5	25	1844,5	841,5	2686	143	144,5	105,5
VS 46/14	E6	18,5	25	1958,5	841,5	2800	143	144,5	108,5
VS 46/15	E6	22	30	2072,5	906,5	2979	143	144,5	117
VS 46/16	E6	22	30	2186	906,5	3092,5	143	144,5	119,5
VS 46/17	E6	22	30	2300	906,5	3206,5	143	144,5	122
VS 46/18	E6	30	40	2414	1036,5	3450,5	143	144,5	139,5
VS 46/19	E6	30	40	2527,5	1036,5	3564	143	144,5	142
VS 46/20	E6	30	40	2641,5	1036,5	3678	143	144,5	144,5
VS 46/21	E6	30	40	2755	1036,5	3791,5	143	144,5	147
VS 46/22	E6	30	40	2869	1036,5	3905,5	143	144,5	149,5
VS 46/23	E6	30	40	2983	1036,5	4019,5	143	144,5	152,5
VS 46/24	E6	37	50	3096,5	1421,5	4518	143	144,5	209
VS 46/25	E6	37	50	3210,5	1421,5	4632	143	144,5	211,5
VS 46/26	E6	37	50	3324	1421,5	4745,5	143	144,5	214

### PUMPS WITH REWINDABLE MOTOR

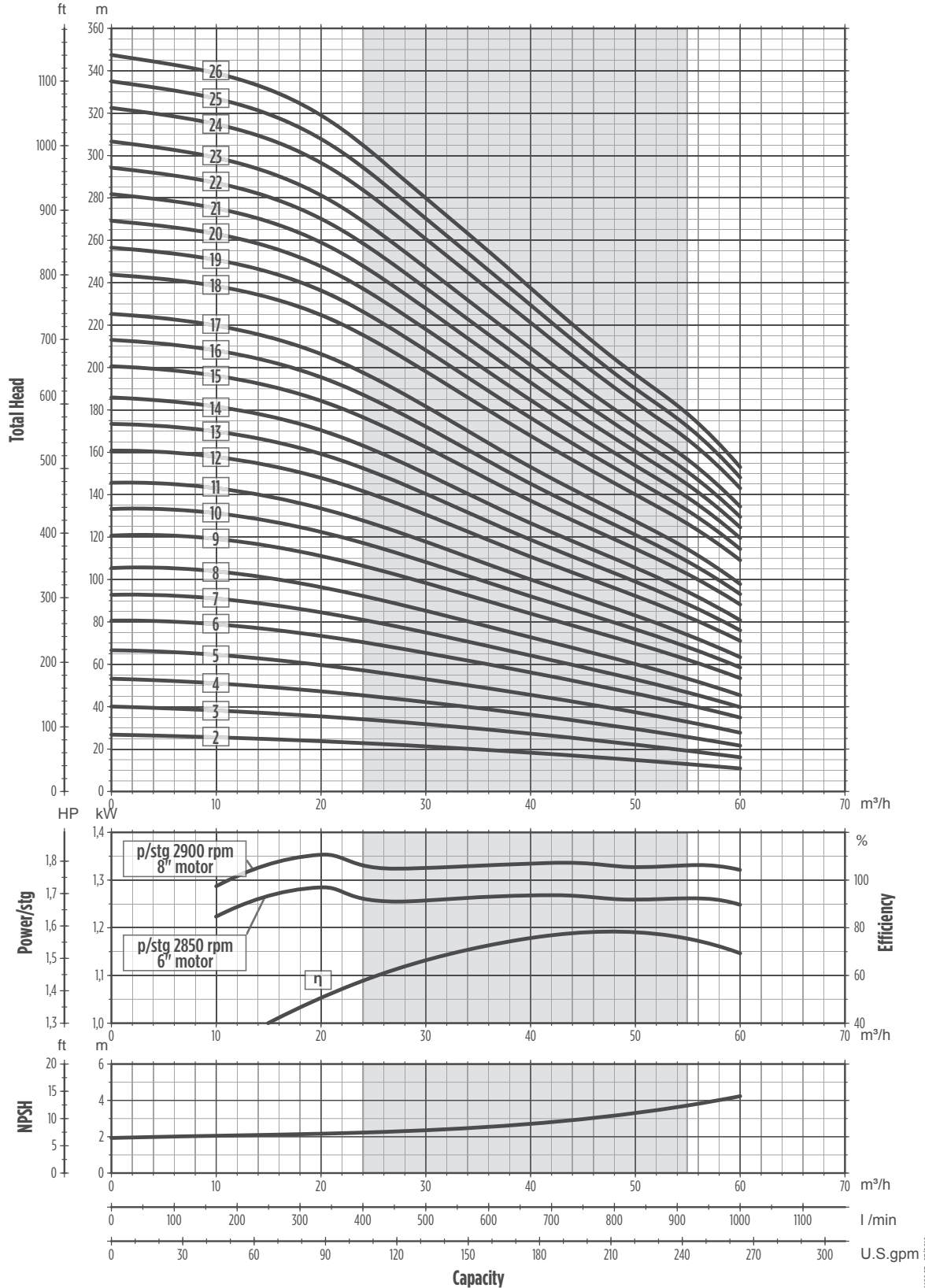
Pump model type	R vers.	Motor			Dimensions					Weight Pump [Kg]
		Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
								1 cable	2 cable	
VS 46/2	●	RW6	4	5,5	591,5	699	1290,5	147	147,5	61,5
VS 46/3	●	RW6	4	5,5	705,5	699	1404,5	147	147,5	64
VS 46/4	●	RW6	5,5	7,5	819,5	699	1518,5	147	147,5	67
VS 46/5	●	RW6	7,5	10	933,5	719	1652,5	147	147,5	71,5
VS 46/6	●	RW6	9,3	12,5	1047	749	1796	147	147,5	77
VS 46/7	●	RW6	9,3	12,5	1161	749	1910	147	147,5	79,5
VS 46/8	●	RW6	11	15	1275	779	2054	147	147,5	85
VS 46/9	●	RW6	13	17,5	1389	829	2218	147	147,5	93
VS 46/10	●	RW6	13	17,5	1503	829	2332	147	147,5	95,5
VS 46/11	●	RW6	15	20	1617	874	2491	147	147,5	103
VS 46/12	●	RW6	18,5	25	1730,5	919	2649,5	147	147,5	109,5
VS 46/13	●	RW6	18,5	25	1844,5	919	2763,5	147	147,5	112
VS 46/14	●	RW6	18,5	25	1958,5	919	2877,5	147	147,5	115
VS 46/15	●	RW6	22	30	2072,5	1009	3081,5	147	147,5	126,5
VS 46/16	●	RW6	22	30	2186	1009	3195	147	147,5	129
VS 46/17	●	RW6	22	30	2300	1009	3309	147	147,5	131,5
VS 46/18	●	RW6	26	35	2414	1114	3528	147	147,5	145,5
VS 46/19	●	RW6	26	35	2527,5	1114	3641,5	147	147,5	148
VS 46/20	●	RW6	30	40	2641,5	1214	3855,5	147	147,5	160,5
VS 46/21	●	RW6	30	40	2755	1214	3969	147	147,5	163
VS 46/22	●	RW6	30	40	2869	1214	4083	147	147,5	165,5
VS 46/23	●	RW6	30	40	2983	1214	4197	147	147,5	168,5
VS 46/24	●	RW6	37	50	3096,5	1294	4390,5	147	147,5	178
VS 46/25	●	RW6	37	50	3210,5	1294	4504,5	147	147,5	180,5
VS 46/26	●	RW6	37	50	3324	1294	4618	147	147,5	183

● = Pump available in R (AISI 904L) version



00114055 07/2010

PERFORMANCE CURVES 50HZ



The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

# VS 46 High Pressure 50Hz

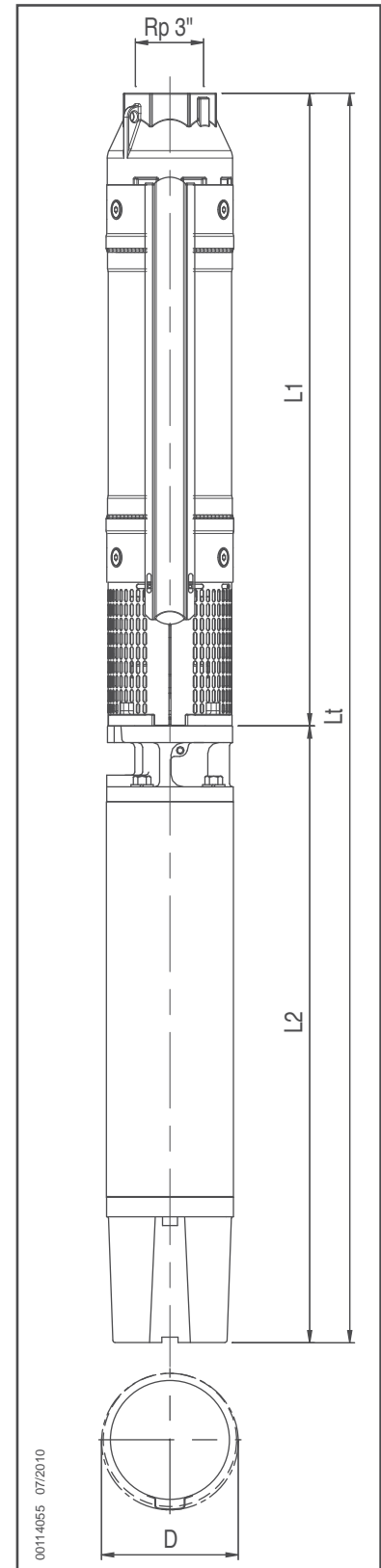
## Technical Data

### PUMPS WITH ENCAPSULATED MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 46/27	E6	37	50	3438	1421,5	4859,5	145	146,5	217,5
VS 46/28	E6	37	50	3552	1421,5	4973,5	145	146,5	220
VS 46/29	E6	45	60	3665,5	1574	5239,5	145	146,5	236,5
VS 46/30	E6	45	60	3779,5	1574	5353,5	145	146,5	239
VS 46/31	E6	45	60	3893,5	1574	5467,5	145	146,5	242
VS 46/32	E6	45	60	4007	1574	5581	145	146,5	244,5
VS 46/33	E6	45	60	4121	1574	5695	145	146,5	247
VS 46/34	E8	55	75	4335	1204	5539	190,5	190,5	279
VS 46/35	E8	55	75	4449	1204	5653	190,5	190,5	281,5
VS 46/36	E8	55	75	4562,5	1204	5766,5	190,5	190,5	284,5
VS 46/37	E8	55	75	4676,5	1204	5880,5	190,5	190,5	287
VS 46/38	E8	55	75	4790,5	1204	5994,5	190,5	190,5	289,5
VS 46/39	E8	55	75	4904,5	1204	6108,5	190,5	190,5	292
VS 46/40	E8	55	75	5018,5	1204	6222,5	190,5	190,5	295

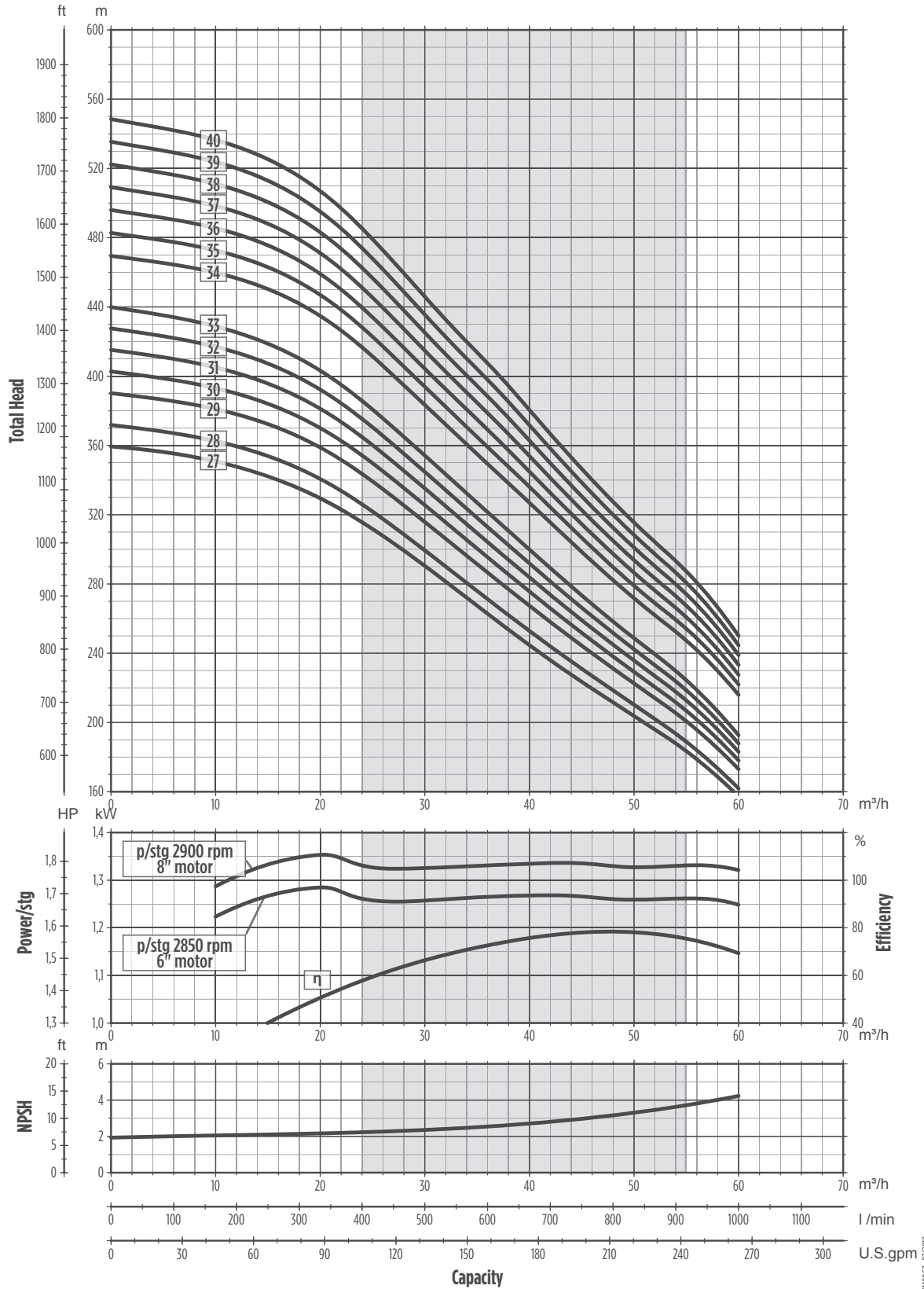
### PUMPS WITH REWINDABLE MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 46/27	RW6	37	50	3438	1294	4732	149	149,5	186,5
VS 46/28	RW6	37	50	3552	1294	4846	149	149,5	189
VS 46/29	RW8	45	60	3765,5	1230	4995,5	189	189	246,5
VS 46/30	RW8	45	60	3879,5	1230	5109,5	189	189	249
VS 46/31	RW8	45	60	3993,5	1230	5223,5	189	189	252
VS 46/32	RW8	45	60	4107	1230	5337	189	189	254,5
VS 46/33	RW8	45	60	4221	1230	5451	189	189	257
VS 46/34	RW8	55	75	4335	1340	5675	189	189	283
VS 46/35	RW8	55	75	4449	1340	5789	189	189	285,5
VS 46/36	RW8	55	75	4562,5	1340	5902,5	189	189	288,5
VS 46/37	RW8	55	75	4676,5	1340	6016,5	189	189	291
VS 46/38	RW8	55	75	4790,5	1340	6130,5	189	189	293,5
VS 46/39	RW8	55	75	4904,5	1340	6244,5	189	189	296
VS 46/40	RW8	55	75	5018,5	1340	6358,5	189	189	299



0011.4055 07/2010

### PERFORMANCE CURVES 50HZ



The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

0010067 07/2010

# VS 65 50Hz

## Technical Data

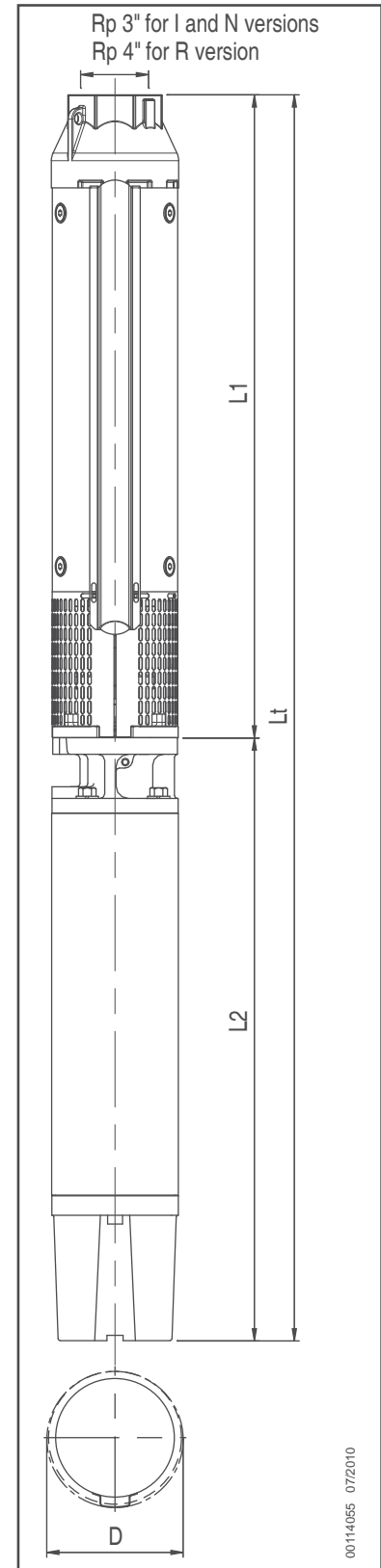
### PUMPS WITH ENCAPSULATED MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 65/2	E4	3,7	5	593,5	520	1113,5	142,5	-	33
VS 65/3	E4	5,5	7,5	707,5	652,5	1360	142,5	-	43
VS 65/4	E4	7,5	10	821,5	730,5	1552	142,5	-	49,5
VS 65/2	E6	4	5,5	591,5	581	1172,5	143	144,5	51
VS 65/3	E6	5,5	7,5	705,5	614,5	1320	143	144,5	57
VS 65/4	E6	7,5	10	819,5	646	1465,5	143	144,5	64
VS 65/5	E6	9,3	12,5	933,5	678,5	1612	143	144,5	69
VS 65/6	E6	11	15	1047	711	1758	143	144,5	75
VS 65/7	E6	15	20	1161	776	1937	143	144,5	83
VS 65/8	E6	15	20	1275	776	2051	143	144,5	86
VS 65/9	E6	15	20	1389	776	2165	143	144,5	88,5
VS 65/10	E6	18,5	25	1503	841,5	2344,5	143	144,5	98
VS 65/11	E6	18,5	25	1617	841,5	2458,5	143	144,5	100,5
VS 65/12	E6	22	30	1730,5	906,5	2637	143	144,5	109
VS 65/13	E6	22	30	1844,5	906,5	2751	143	144,5	112
VS 65/14	E6	30	40	1958,5	1036,5	2995	143	144,5	129
VS 65/15	E6	30	40	2072,5	1036,5	3109	143	144,5	131,5
VS 65/16	E6	30	40	2186	1036,5	3222,5	143	144,5	134
VS 65/17	E6	30	40	2300	1036,5	3336,5	143	144,5	137
VS 65/18	E6	37	50	2414	1421,5	3835,5	143	144,5	193,5
VS 65/19	E6	37	50	2527,5	1421,5	3949	143	144,5	196
VS 65/20	E6	37	50	2641,5	1421,5	4063	143	144,5	198,5
VS 65/21	E6	37	50	2755	1421,5	4176,5	143	144,5	201,5
VS 65/22	E6	45	60	2869	1574	4443	143	144,5	218
VS 65/23	E6	45	60	2983	1574	4557	143	144,5	220,5
VS 65/24	E6	45	60	3096,5	1574	4670,5	143	144,5	223
VS 65/25	E6	45	60	3210,5	1574	4784,5	143	144,5	225,5
VS 65/26	E6	45	60	3324	1574	4898	143	144,5	228,5

### PUMPS WITH REWINDABLE MOTOR

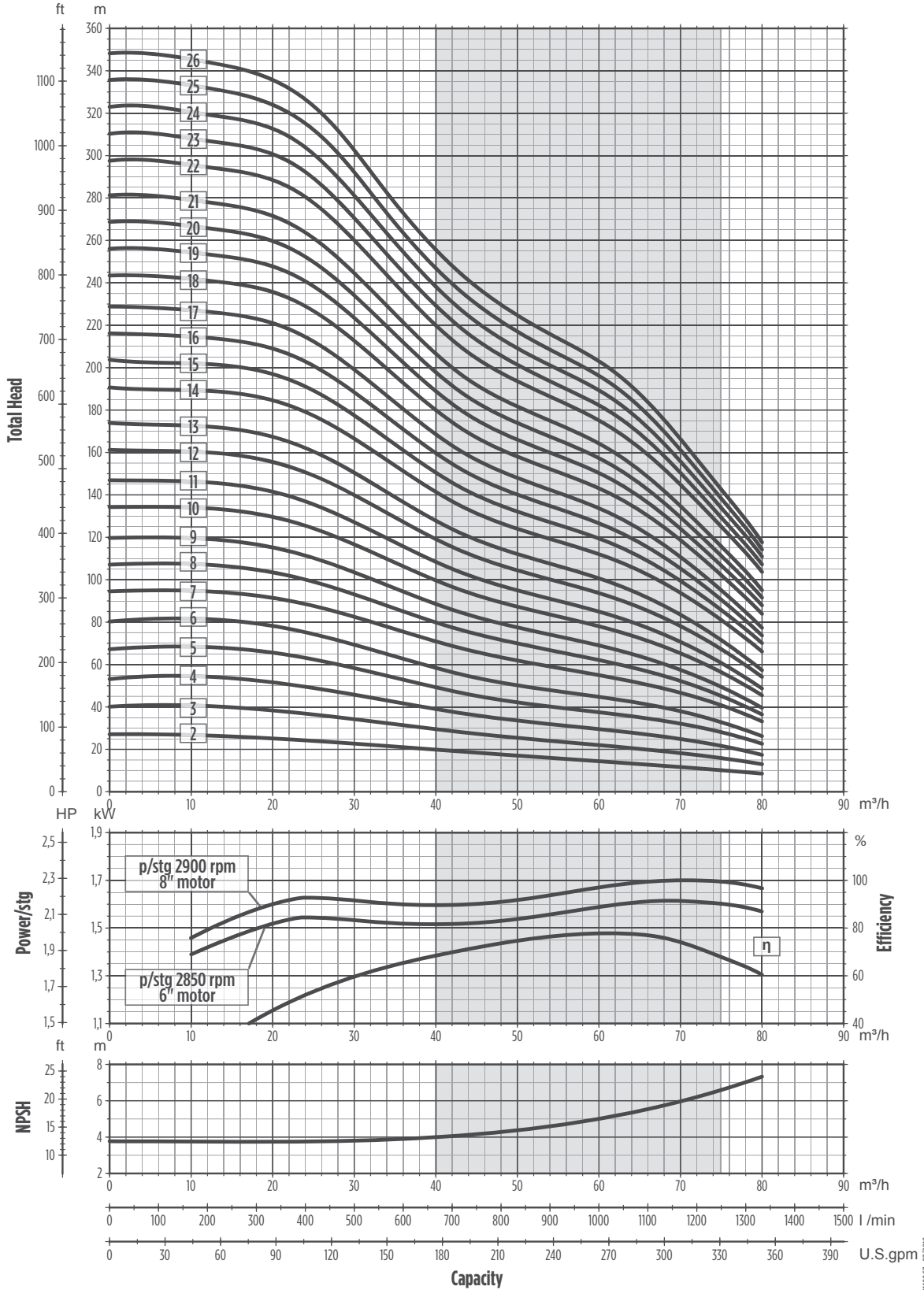
Pump model type	R vers.	Motor			Dimensions					Weight Pump [Kg]
		Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
								1 cable	2 cable	
VS 65/2	●	RW6	4	5,5	591,5	699	1290,5	147	147,5	61,5
VS 65/3	●	RW6	5,5	7,5	705,5	699	1404,5	147	147,5	64
VS 65/4	●	RW6	7,5	10	819,5	719	1538,5	147	147,5	69
VS 65/5	●	RW6	9,3	12,5	933,5	749	1682,5	147	147,5	74,5
VS 65/6	●	RW6	11	15	1047	779	1826	147	147,5	80
VS 65/7	●	RW6	13	17,5	1161	829	1990	147	147,5	87,5
VS 65/8	●	RW6	15	20	1275	874	2149	147	147,5	95,5
VS 65/9	●	RW6	15	20	1389	874	2263	147	147,5	98
VS 65/10	●	RW6	18,5	25	1503	919	2422	147	147,5	104,5
VS 65/11	●	RW6	18,5	25	1617	919	2536	147	147,5	107
VS 65/12	●	RW6	22	30	1730,5	1009	2739,5	147	147,5	118,5
VS 65/13	●	RW6	22	30	1844,5	1009	2853,5	147	147,5	121,5
VS 65/14	●	RW6	26	35	1958,5	1114	3072,5	147	147,5	135
VS 65/15	●	RW6	26	35	2072,5	1114	3186,5	147	147,5	137,5
VS 65/16	●	RW6	30	40	2186	1214	3400	147	147,5	150
VS 65/17	●	RW6	30	40	2300	1214	3514	147	147,5	153
VS 65/18	●	RW6	37	50	2414	1294	3708	147	147,5	162,5
VS 65/19	●	RW6	37	50	2527,5	1294	3821,5	147	147,5	165
VS 65/20	●	RW6	37	50	2641,5	1294	3935,5	147	147,5	167,5
VS 65/21	●	RW6	37	50	2755	1294	4049	147	147,5	170,5
VS 65/22		RW8	45	60	2969	1230	4199	189	189	224,5
VS 65/23		RW8	45	60	3083	1230	4313	189	189	227,5
VS 65/24		RW8	45	60	3196,5	1230	4426,5	189	189	230
VS 65/25		RW8	45	60	3310,5	1230	4540,5	189	189	232,5
VS 65/26		RW8	45	60	3424	1230	4654	189	189	235

● = Pump available in R (AISI 904L) version



00114055 07/2010

PERFORMANCE CURVES 50HZ



The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

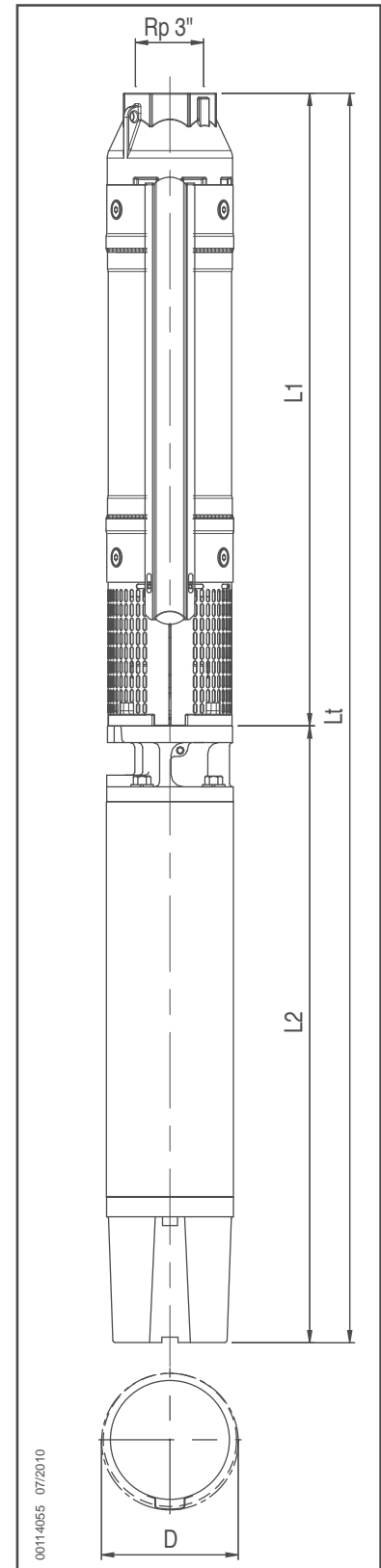
# VS 65 High Pressure 50Hz

## PUMPS WITH ENCAPSULATED MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 65/27	E8	55	75	3538	1204	4742	190,5	190,5	261
VS 65/28	E8	55	75	3652	1204	4856	190,5	190,5	263,5
VS 65/29	E8	55	75	3765,5	1204	4969,5	190,5	190,5	266
VS 65/30	E8	55	75	3879,5	1204	5083,5	190,5	190,5	268,5
VS 65/31	E8	55	75	3993,5	1204	5197,5	190,5	190,5	271,5

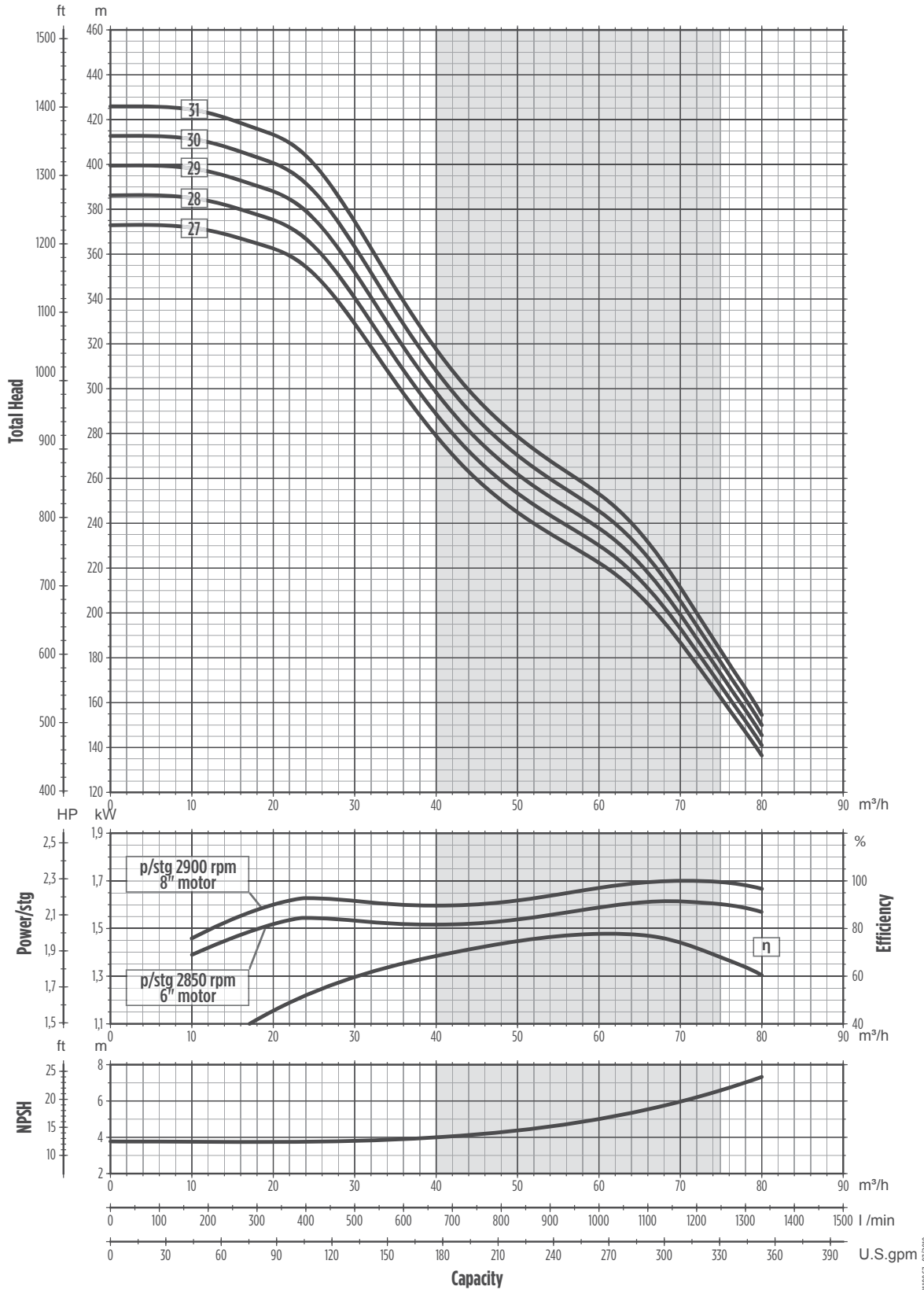
## PUMPS WITH REWINDABLE MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 65/27	RW8	55	75	3538	1340	4878	189	189	265
VS 65/28	RW8	55	75	3652	1340	4992	189	189	267,5
VS 65/29	RW8	55	75	3765,5	1340	5105,5	189	189	270
VS 65/30	RW8	55	75	3879,5	1340	5219,5	189	189	272,5
VS 65/31	RW8	55	75	3993,5	1340	5333,5	189	189	275,5



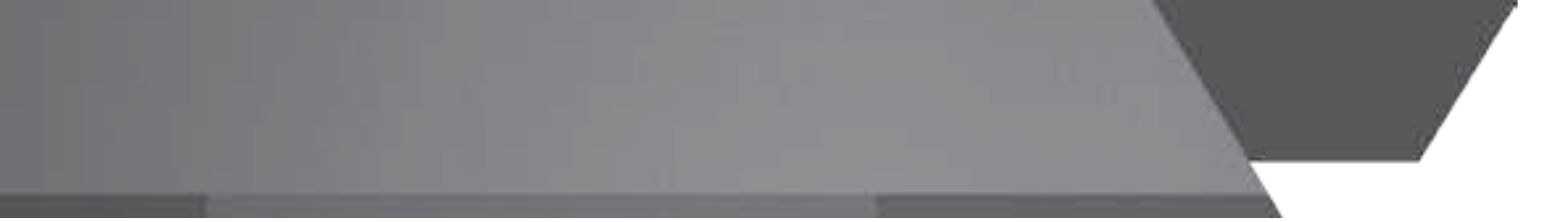


### PERFORMANCE CURVES 50HZ



0010067 07/2010

The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B



# **VS Series**

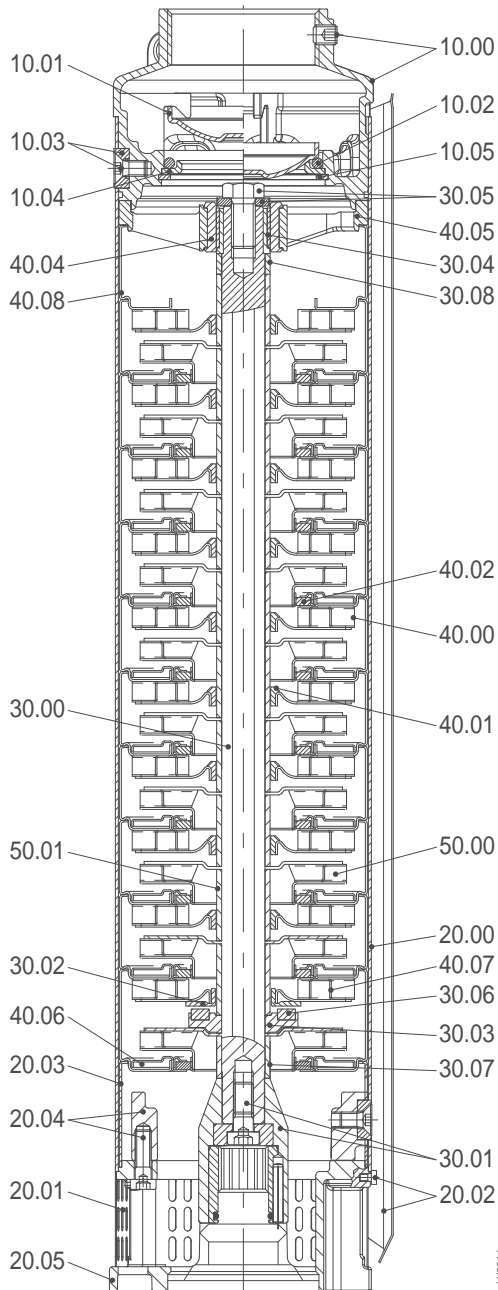
## **Pump Section and**

### **List of Main Components**

**VS 14 - 19 - 30- 46 -65**

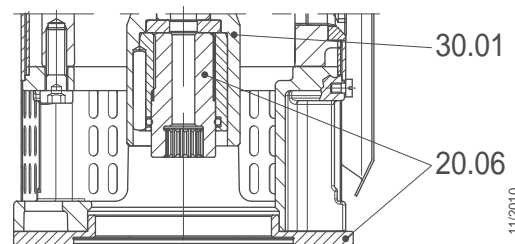
# Pump section and List of Main components

## VS 14 - 19



00114056 11/2014

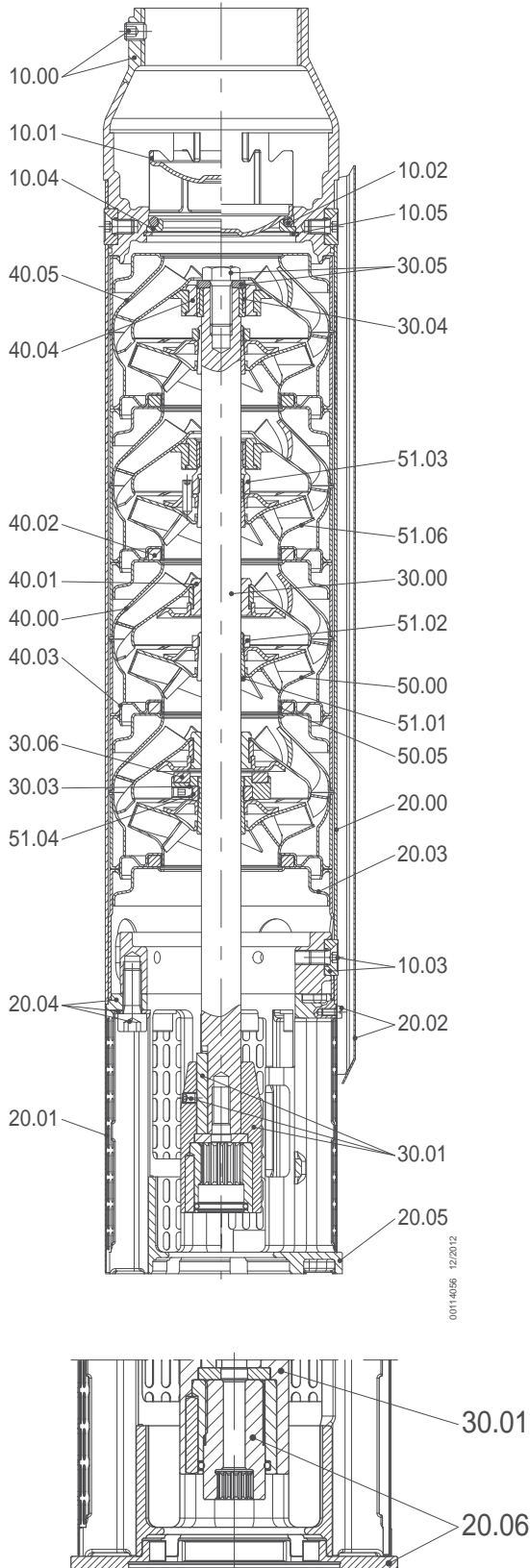
Ref. N.	Description
10.00	Discharge head and screw
10.01	Valve
10.02	O-ring
10.03	Screws and outer case locking nuts
10.04	Valve support
10.05	Seeger ring
20.00	Outer case
20.01	Suction strainer
20.02	Cable guard and screws
20.03	Initial spacer
20.04	Flange and bolts
20.05	Motor adapter
20.06	4" motor flange / coupling adapter
30.00	Pump shaft
30.01	Coupling
30.02	Upper up-thrust washer
30.03	Lower up-thrust washer
30.04	Upper journal sleeve
30.05	Screw and washer
30.06	Up-thrust ring
30.07	Lower spacer
30.08	Upper spacer
40.00	Diffusers
40.01	Secondary bearing bush
40.02	Floating neck ring
40.04	Bearing bush
40.05	Upper bearing guide
40.06	First diffuser
40.07	Diffuser with upper up-thrust washer
40.08	Last diffuser
50.00	Impeller
51.01	Impeller spacer
50.05	Wear ring



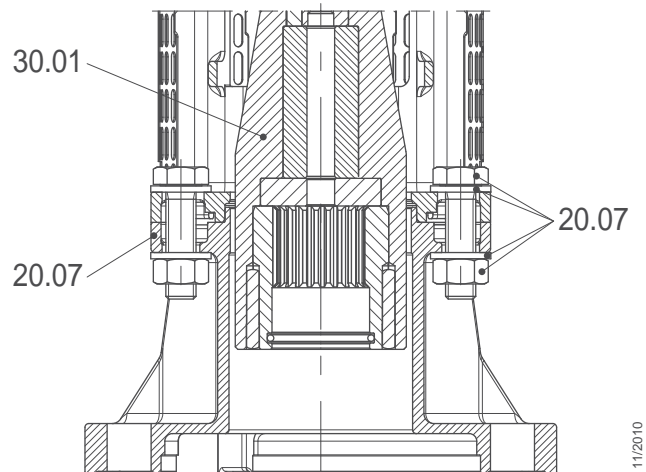
00114056 11/2010

# Pump section and List of Main components

## VS 30 - 46 - 65

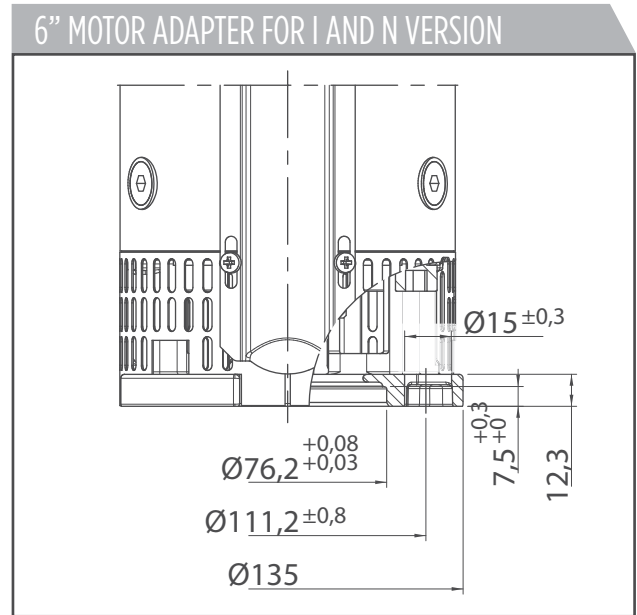
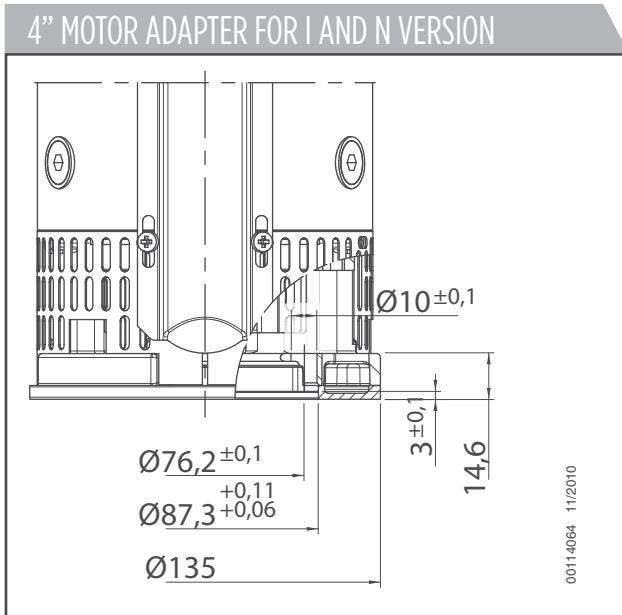


Ref. N.	Description
10.00	Discharge head and screw
10.01	Valve
10.02	O-ring
10.03	Screws and outer case locking nuts
10.04	Valve support
10.05	Seeger ring
20.00	Outer case
20.01	Suction strainer
20.02	Cable guard and screws
20.03	Initial spacer
20.04	Flange and bolts
20.05	Motor adapter
20.06	4" motor flange / coupling adapter
20.07	8" motor adapter / bolts and washer
30.00	Pump shaft
30.01	Coupling
30.03	Lower up-thrust washer
30.04	Upper journal sleeve
30.05	Screw and washer
30.06	Up-thrust ring
40.00	Diffusers
40.01	Secondary bearing bush
40.02	Floating neck ring
40.03	Flange clamping neck ring
40.04	Bearing bush
40.05	Last / intermediate diffuser
50.00	Impeller
51.01	Split cone
51.02	Split cone nut
51.03	Intermediate split cone nut
51.06	Up-thrust split cone nut
50.05	Wear ring
51.05	Intermediate impeller with screw



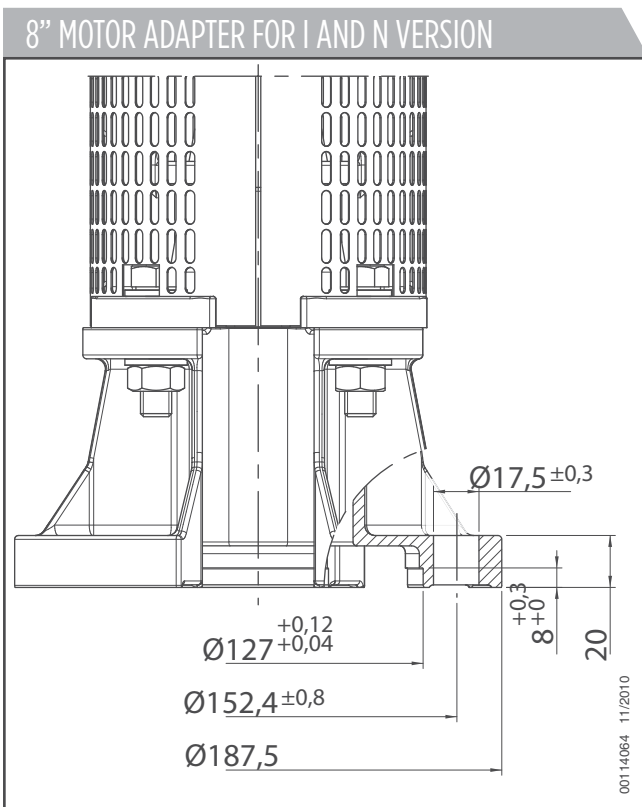
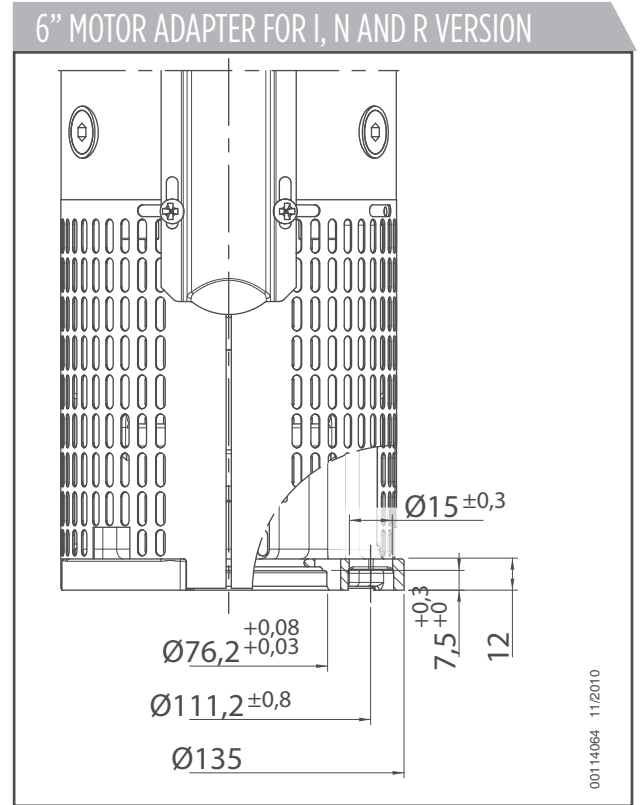
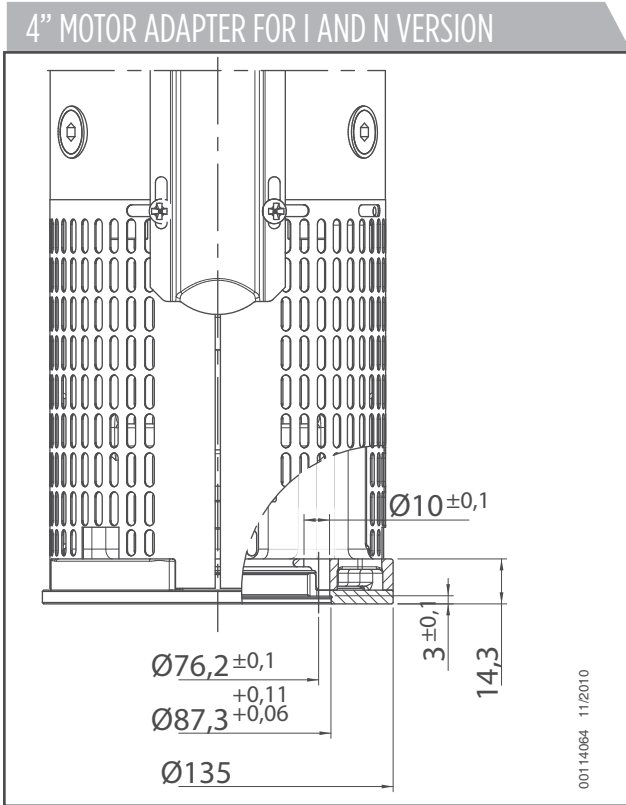
# Appendix A

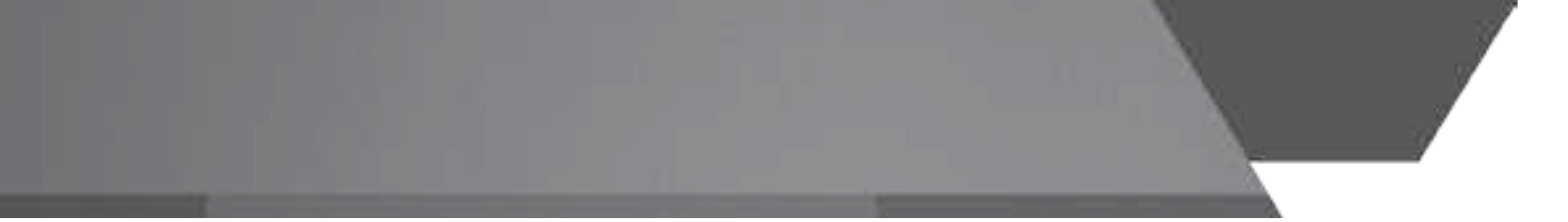
## Motor adaptor VS 14 - 19



# Appendix A

## Motor adaptor VS 30 - 46 - 65







# **VS Series Stainless Steel Submersible Pumps for 8” deep wells and larger**

**50 Hz**

**VS 78 - 97**

# VS Series 8” Stainless Steel Submersible Pumps

## APPLICATIONS

Municipal water works

Water distribution and pressure boosting

Irrigation and sprinkler systems, water treatment plants, filtration and reverse osmosis

Industrial cooling and processing

Mining industry, drainage and dewatering

Fire-fighting equipment

Fountains

## FEATURES

Stainless steel components for durability and robustness, to increase run-time and trouble-free operation. Many design technical features make this pump range very compact and extremely reliable

External stainless steel sleeve to improve stiffness and assure permanent alignment of all the components

Motor adapter and discharge head may be removed without disturbing the impeller / diffuser stack

Built-in check valve and over size pump shaft

Very compact and extremely reliable to resist to the most complex and severe conditions

Easy maintenance without the need of special tools

## PUMP SPECIFICATIONS

Capacities up to 120 m<sup>3</sup>/h at 50Hz

50 Bar (500 m) at 50 Hz

Maximum allowable amount of sand 100 gr/m<sup>3</sup>

Water temperature: Minimum: -5 °C to 60 °C

Maximum: +60°C for I (A304) version / + 90°C for N (A316) and R (904L) versions

Rotation: counter clockwise when looking into the discharge

Pump can work continuously in vertical or horizontal position

## MOTOR SPECIFICATIONS

Motor adapter in compliance with NEMA standard

Motors: see section Submersible Motors Product Overview

## AVAILABLE ON REQUEST

Pump material: 316 Stainless steel (N) version (DIN/EN 1.4401)

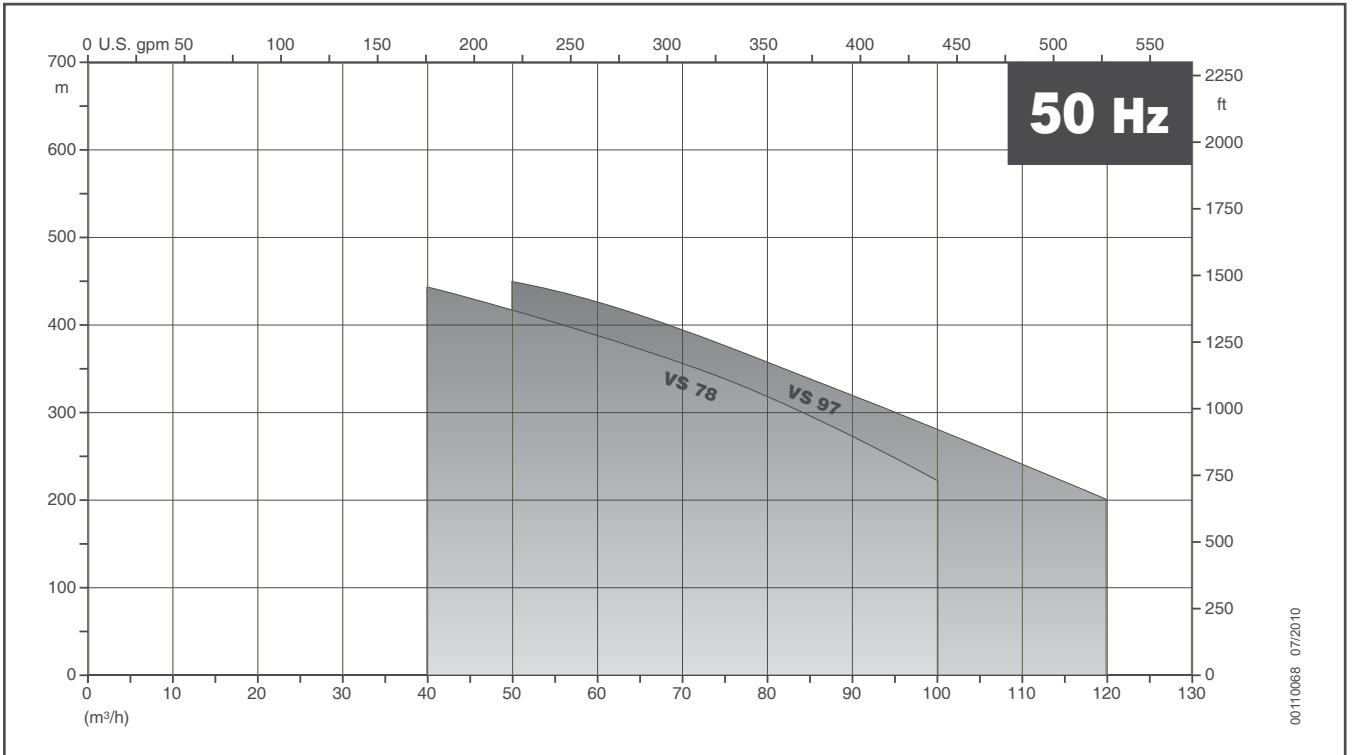
904L (R) version (DIN/EN 1.4539)

See specified material variant in Materials/fluids compatibility table on page 50

Double cable guard

Rp 4” for I and N versions

Rp 6” for R version



### PUMP IDENTIFICATION CODE

VS 8 78 // 15 I M8 Rp5 5505 // 9306 B1 P HP SD

- Pump speciality: P (passivated); T (High temperature); HP (High pressure); SD (double cable guard)
- Bearings bush material: B1 (NBR); VI: FKM
- Pump power at 60Hz
- Pump power at 50Hz
- Discharge head (threaded type and dimension): Rp(X); NPT(X)
- Motor coupling dimension: M4 (4"); M6 (6"); M8 (8")
- Material: I (AISI304); N (AISI316); R (AISI904L)
- Number of stages
- Nominal flow in m³/h
- Pump size 8: 8"
- Pumps model

00112520 07/2016

Type	Versions			Motor power range (kW)	
	I	N	R	I AND N	R
	EN 1.4301	EN 1.4401	EN 1.4539		
VS78	○	○	●	7,5-93	30-93
VS97	○	○	●	9,3-110	30-93

○ = Version available    ● = Version available only with 6" motor coupling

## MATERIALS/FLUIDS COMPATIBILITY

Pos.	PARTS DESCRIPTIONS	Type	MATERIAL					
			I version		N version		R version	
			AISI	DIN / EN	AISI	DIN / EN	AISI	DIN / EN
10.00	Discharge head	Stainless steel	304	1.4301	316	1.4401	904L	1.4517
10.01	Valve	Stainless steel	316	1.4401	316	1.4401	2205	1.4462
10.02	Sealing O-ring		NBR		NBR		NBR	
10.03	Outer case locking nuts	Stainless steel	316	1.4401	316	1.4401	2205/904L	1.4462/1.4539
10.04	Valve support	Stainless steel and PTFE	316	1.4401	316	1.4401	904L	1.4539
10.05	Seeger ring	Stainless steel	316	1.4401	316	1.4401	904L	1.4539
10.06	Spring	Stainless steel	316	1.4401	316	1.4401	2205	1.4462
20.00	Outer case	Stainless steel	304	1.4301	316	1.4401	2205	1.4462
20.01	Suction strainer	Stainless steel	316	1.4401	316	1.4401	904L	1.4539
20.02	Cable guard	Stainless steel	316	1.4401	316	1.4401	904L	1.4539
20.03	Initial spacer	Stainless steel	316	1.4401	316	1.4401	904L	1.4539
20.04	Flange and screws	Stainless steel	304	1.4301	316	1.4401	904L	1.4517/1.4539
20.05	Motor adapter	Stainless steel	304	1.4301	316	1.4401	904L	1.4517
30.00	Pump shaft	Stainless steel	329	1.4460	329	1.4460	329	1.4460
30.01	Coupling	Stainless steel	431/329	1.4057/1.4460	316/329	1.4401/1.4460	2205/904L	1.4462/1.4539
30.02	Upper up-thrust washer	Stainless steel	329	1.4460	329	1.4460	329	1.4460
30.03	Lower up-thrust washer	Stainless steel	329	1.4460	329	1.4460	329	1.4460
30.04	Upper journal sleeve (1)	Stainless steel with ceramic casting	-	-	-	-	-	-
30.05	Screw and washer	Stainless steel	316	1.4401	316	1.4401	904L/329	1.4539/1.4460
30.06	Up-thrust ring	PTFE + Graphite	-	-	-	-	-	-
40.00	Diffuser	Stainless steel	304	1.4301	316	1.4401	904L	1.4539
40.01	Secondary bearing bush		NBR		NBR		NBR	
40.02	Floating neck ring	PTFE	-	-	-	-	-	-
40.03	Flange clamping neck ring	Stainless steel	316	1.4401	316	1.4401	904L	1.4539
50.00	Impeller	Stainless steel	316	1.4401	316	1.4401	904L	1.4539
50.01	Split cone	Stainless steel	316	1.4401	316	1.4401	329	1.4460
50.02	Split cone nut	Stainless steel	316	1.4401	316	1.4401	329	1.4460

## VS 78

### TABLE OF HYDRAULIC PERFORMANCES AT 50Hz

PUMP TYPE	R Vers.	RATED POWER		Q = DELIVERY										
				m <sup>3</sup> /h 0	30	40	50	60	70	80	90	100	110	120
				l/min 0	500	666	833	1000	1166	1333	1500	1666	1833	2000
		kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER [m]										
VS 78/2		7,5	10	40	38	35	32	30	29	24	20	18		
VS 78/3		11	15	60	55	51	49	45	41	36	30	24		
VS 78/4		15	20	80	74	70	65	60	55	49	41	32		
VS 78/5		18,5	25	99	92	88	81	75	69	60	51	41		
VS 78/6	●	22	30	119	110	104	98	89	81	71	60	49		
VS 78/7	●	30	40	139	130	122	114	105	96	85	72	58		
VS 78/8	●	30	40	159	149	140	131	120	110	98	82	67		
VS 78/9	●	30	40	180	168	158	147	135	123	110	92	73		
VS 78/10	●	37	50	197	183	172	160	148	134	119	100	79		
VS 78/11	●	37	50	216	202	190	176	162	148	130	110	87		
VS 78/12	●	45	60	248	232	219	205	189	172	153	131	106		
VS 78/13	●	55	75	269	252	237	221	205	188	168	142	115		
VS 78/14	●	55	75	289	271	256	239	220	201	180	153	123		
VS 78/15	●	55	75	309	290	274	255	235	215	192	165	132		
VS 78/16	●	75	100	332	311	294	275	252	231	208	177	143		
VS 78/17	●	75	100	352	330	312	291	269	246	220	188	151		
VS 78/18	●	75	100	373	350	330	309	284	260	232	198	161		
VS 78/19	●	75	100	394	370	348	325	300	275	245	210	170		
VS 78/20	●	75	100	415	389	368	343	316	290	259	220	179		
VS 78/21	●	75	100	436	409	385	360	331	304	271	231	189		
VS 78/22	●	93	125	457	428	404	378	347	320	284	243	198		
VS 78/23	●	93	125	478	446	421	394	362	332	297	254	207		
VS 78/24	●	93	125	498	467	440	411	379	348	310	265	216		

● = Pump available in R (AISI 904L) version

## VS 97

### TABLE OF HYDRAULIC PERFORMANCES AT 50Hz

PUMP TYPE	R Vers.	RATED POWER		Q = DELIVERY										
				m <sup>3</sup> /h 0	30	40	50	60	70	80	90	100	110	120
				l/min 0	500	666	833	1000	1166	1333	1500	1666	1833	2000
		kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER [m]										
VS 97/2		9,3	12,5	42	41	39	36	32	30	29	26	22	19	15
VS 97/3		15	20	63	60	58	53	49	45	42	39	33	29	21
VS 97/4		18,5	25	84	81	77	71	65	60	57	51	45	38	30
VS 97/5	●	22	30	104	101	95	88	80	74	69,5	62	55	46	37
VS 97/6	●	30	40	127	122	115	107	98	90	84	77	68	57	46
VS 97/7	●	30	40	148	143	135	123	115	106	99	90	79	68	52
VS 97/8	●	37	50	168	160	151	140	130	120	110	100	88,5	74	59
VS 97/9	●	37	50	188	180	170	158	147	133	124	113	99	83	66
VS 97/10	●	45	60	219	211	200	185	172	159	148	137	120	103	82
VS 97/11	●	55	75	241	232	220	204	189	175	162	149	132	113	91
VS 97/12	●	55	75	262	253	240	221	207	191	178	162	143	123	99
VS 97/13	●	55	75	284	275	260	241	223	207	191	177	155	132	108
VS 97/14	●	75	100	309	297	282	261	242	226	209	191	169	145	121
VS 97/15	●	75	100	330	319	303	280	260	240	222	205	181	155	130
VS 97/16	●	75	100	352	340	322	299	279	258	238	220	194	165	139
VS 97/17	●	75	100	373	361	342	319	294	272	252	232	207	176	147
VS 97/18	●	93	125	398	382	363	337	313	289	268	247	219	188	155
VS 97/19	●	93	125	419	403	382	354	330	305	282	260	230	197	164
VS 97/20	●	93	125	440	423	404	372	347	320	298	273	241	208	171
VS 97/21	●	93	125	462	445	422	391	363	337	312	289	255	219	171
VS 97/22		110	150	484	466	442	410	381	353	328	301	267	229	190
VS 97/23		110	150	507	487	463	430	399	370	341	315	279	239	199

● = Pump available in R (AISI 904L) version

# VS 78 50Hz

## Technical Data

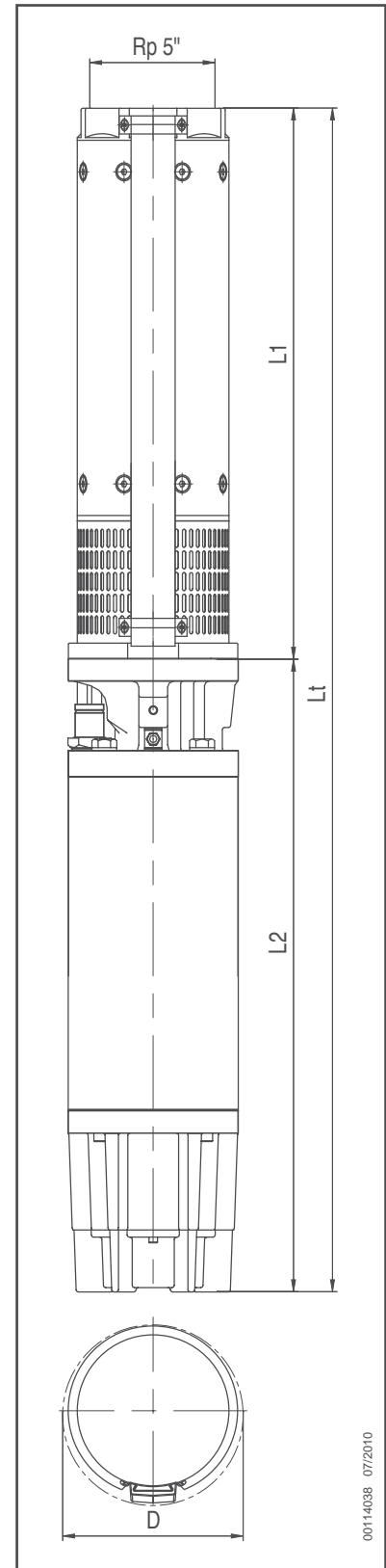
### PUMPS WITH ENCAPSULATED MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 78/2	E6	7,5	10	644	646	1290	188	194	77
VS 78/3	E6	11	15	770	711	1481	188	194	87
VS 78/4	E6	15	20	896	776	1672	188	194	57
VS 78/5	E6	18,5	25	1022	841,5	1863,5	188	194	109
VS 78/6	E6	22	30	1148	906,5	2054,5	188	194	120
VS 78/7	E6	30	40	1274	1036,5	2310,5	188	194	140
VS 78/8	E6	30	40	1400	1036,5	2436,5	188	194	145
VS 78/9	E6	30	40	1526	1036,5	2562,5	188	194	150
VS 78/10	E6	37	50	1652	1405	3057	188	194	206
VS 78/11	E6	37	50	1778	1405	3183	188	194	211
VS 78/12	E8	45	60	1909	1077	2986	200	202	254
VS 78/13	E8	55	75	2035	1394	3429	200	202	259
VS 78/14	E8	55	75	2161	1394	3555	200	202	294
VS 78/15	E8	55	75	2287	1394	3681	200	202	299
VS 78/16	E8	75	100	2413	1496	3909	200	202	342
VS 78/17	E8	75	100	2539	1496	4035	200	202	347
VS 78/18	E8	75	100	2665	1496	4161	200	202	352
VS 78/19	E8	75	100	2791	1496	4287	200	202	357
VS 78/20	E8	75	100	2917	1496	4413	200	202	361
VS 78/21	E8	75	100	3043	1496	4539	200	202	366
VS 78/22	E8	93	125	3169	1748	4917	200	202	449
VS 78/23	E8	93	125	3295	1748	5043	200	202	454
VS 78/24	E8	93	125	3421	1748	5169	200	202	459

### PUMPS WITH REWINDABLE MOTOR

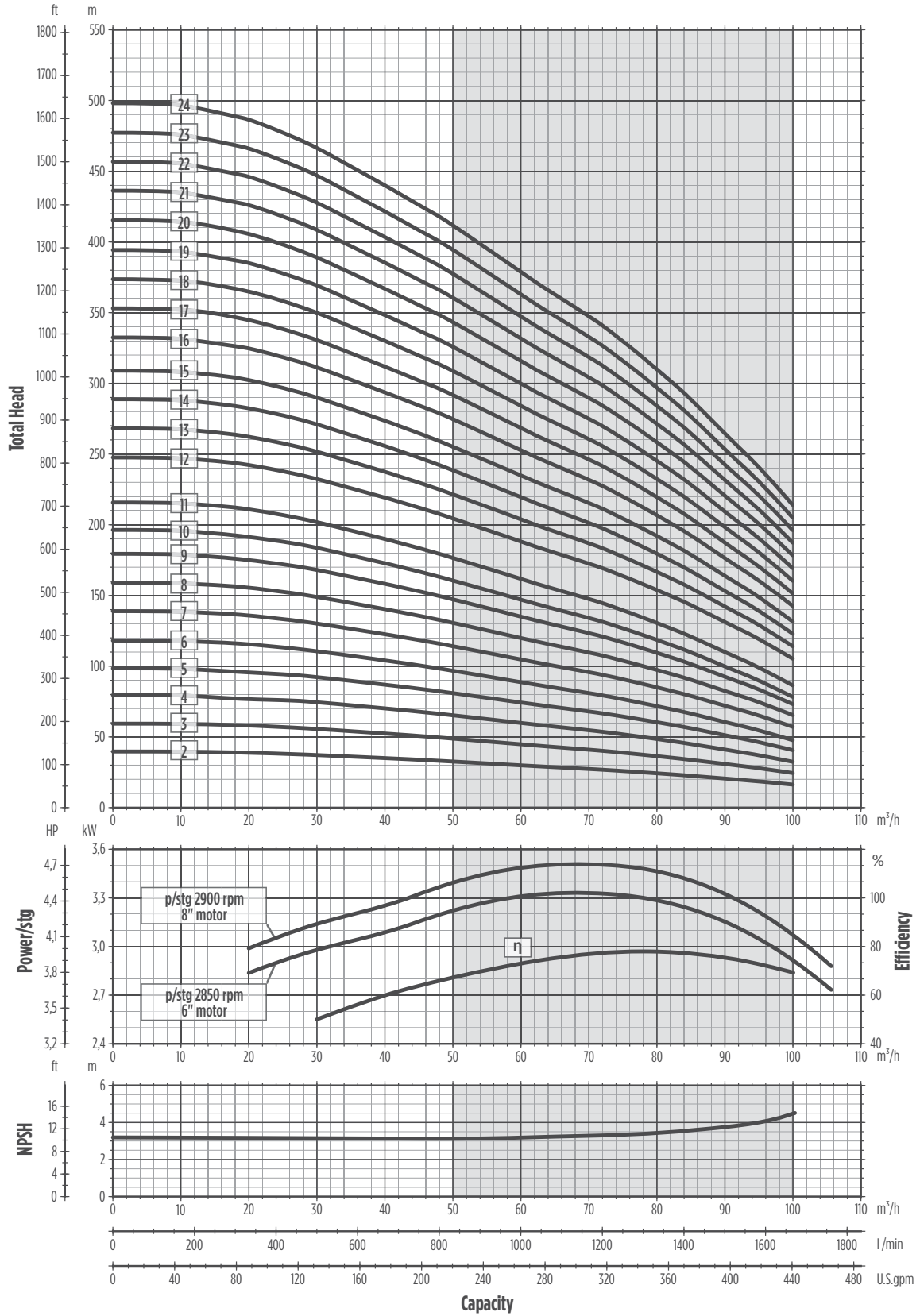
Pump model type	R vers.	Motor			Dimensions					Weight Pump [Kg]
		Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
								1 cable	2 cable	
VS 78/2		6RW	7,5	10	644	719	1363	188	194	82
VS 78/3		6RW	11	15	770	779	1549	188	194	92
VS 78/4		6RW	15	20	896	874	1770	188	194	96
VS 78/5	●	6RW	18,5	25	1022	919	1941	188	194	116
		8RW	30	40	1022	1140	2162	197	199,5	190
VS 78/6	●	6RW	22	30	1148	1009	2157	188	194	130
		8RW	30	40	1148	1140	2288	197	199,5	193
VS 78/7	●	6RW	26	35	1274	1114	2388	188	194	146
		8RW	30	40	1274	1140	2288	197	199,5	198
VS 78/8	●	6RW	30	40	1400	1214	2614	188	194	161
		8RW	30	40	1400	1140	2540	197	199,5	203
VS 78/9	●	6RW	30	40	1526	1214	2740	188	194	166
		8RW	30	40	1526	1140	2666	197	199,5	208
VS 78/10	●	6RW	37	50	1652	1294	2946	188	194	178
		8RW	37	50	1652	1140	2792	197	199,5	213
VS 78/11	●	6RW	37	50	1778	1294	3072	188	194	183
		8RW	37	50	1778	1140	2918	197	199,5	218
VS 78/12	●	8RW	45	60	1909	1230	3139	197	199,5	238
VS 78/13	●	8RW	52	70	2035	1340	3375	197	199,5	266
VS 78/14	●	8RW	52	70	2161	1340	3501	197	199,5	271
VS 78/15	●	8RW	55	75	2287	1340	3627	197	199,5	276
VS 78/16	●	8RW	60	80	2413	1470	3883	197	199,5	300
VS 78/17	●	8RW	67	90	2539	1470	4009	197	199,5	305
VS 78/18	●	8RW	67	90	2665	1470	4135	197	199,5	310
VS 78/19	●	8RW	75	90	2791	1560	4351	197	199,5	332
VS 78/20	●	8RW	75	100	2917	1560	4477	197	199,5	336
VS 78/21	●	8RW	75	100	3043	1560	4603	197	199,5	341
VS 78/22	●	8RW	83	110	3169	1560	4729	197	199,5	378
VS 78/23	●	8RW	83	110	3295	1560	4855	197	199,5	383
VS 78/24	●	8RW	93	125	3421	1740	5161	197	199,5	388

● = Pump available in R (AISI 904L) version



00114038 07/2010

PERFORMANCE CURVES 50HZ



The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

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# VS 97 50Hz

## Technical Data

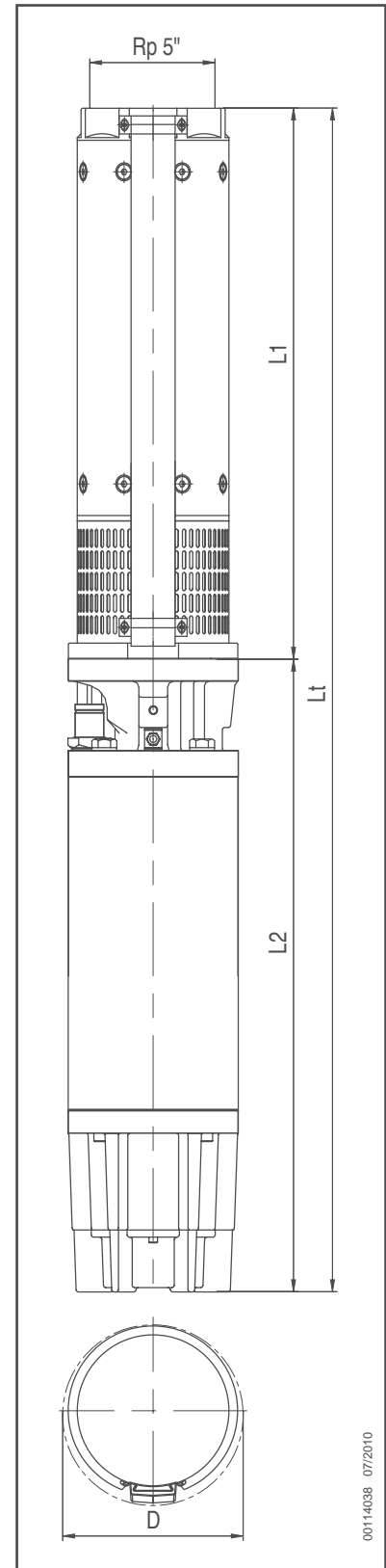
### PUMPS WITH ENCAPSULATED MOTOR

Pump model type	Motor			Dimensions					Weight Pump [Kg]
	Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
							1 cable	2 cable	
VS 97/2	E6	9,3	12,5	644	678,5	1322,5	188	194	79
VS 97/3	E6	15	20	770	776	1546	188	194	93
VS 97/4	E6	18,5	25	896	841,5	1737,5	188	194	105
VS 97/5	E6	22	30	1022	906,5	1928,5	188	194	115,5
VS 97/6	E6	30	40	1148	1036,5	2184,5	188	194	135
VS 97/7	E6	30	40	1274	1036,5	2310,5	188	194	140
VS 97/8	E6	37	50	1400	1405	2805	188	194	196
VS 97/9	E6	37	50	1526	1405	2931	188	194	201
VS 97/10	E8	45	60	1657	1077	2734	200	202	244
VS 97/11	E8	55	75	1783	1394	3177	200	202	279
VS 97/12	E8	55	75	1909	1394	3303	200	202	284
VS 97/13	E8	55	75	2035	1394	3429	200	202	289
VS 97/14	E8	75	100	2161	1496	3657	200	202	332
VS 97/15	E8	75	100	2287	1496	3783	200	202	337
VS 97/16	E8	75	100	2413	1496	3909	200	202	342
VS 97/17	E8	75	100	2539	1496	4035	200	202	346,5
VS 97/18	E8	93	125	2665	1748	4413	200	202	429,5
VS 97/19	E8	93	125	2791	1748	4539	200	202	434,5
VS 97/20	E8	93	125	2917	1748	4665	200	202	439
VS 97/21	E8	93	125	3043	1748	4791	200	202	444
VS 97/22	E8	110	150	3169	1976	5145	200	202	512
VS 97/23	E8	110	150	3295	1976	5271	200	202	517

### PUMPS WITH REWINDABLE MOTOR

Pump model type	R vers.	Motor			Dimensions					Weight Pump [Kg]
		Type	kW	HP	L1 [mm]	L2 [mm]	Lt [mm]	D		
								1 cable	2 cable	
VS 97/2		6RW	9,3	12,5	644	749	1393	188	194	84,5
VS 97/3		6RW	13	17,5	770	829	1599	188	194	97,5
VS 97/4		6RW	18,5	25	896	919	1815	188	194	111,5
VS 97/5	●	6RW	22	30	1022	1009	2031	188	194	125
		8RW	30	40	1022	1140	2162	197	199,5	188
VS 97/6	●	6RW	26	35	1148	1114	2262	188	194	141
		8RW	30	40	1148	1140	2288	197	199,5	193
VS 97/7	●	6RW	30	40	1274	1214	2488	188	194	156
		8RW	30	40	1274	1140	2414	197	199,5	198
VS 97/8	●	6RW	37	50	1400	1294	2694	188	194	168
		8RW	37	50	1400	1140	2540	197	199,5	203
VS 97/9	●	6RW	37	50	1526	1294	2820	188	194	173
		8RW	37	50	1526	1140	2666	197	199,5	208
VS 97/10	●	8RW	45	70	1657	1230	2887	197	199,5	228
VS 97/11	●	8RW	52	70	1783	1340	3123	197	199,5	256
VS 97/12	●	8RW	52	75	1909	1340	3249	197	199,5	261
VS 97/13	●	8RW	55	90	2035	1340	3375	197	199,5	266
VS 97/14	●	8RW	67	90	2161	1470	3631	197	199,5	290
VS 97/15	●	8RW	67	90	2287	1470	3757	197	199,5	295
VS 97/16	●	8RW	75	100	2413	1560	3973	197	199,5	317
VS 97/17	●	8RW	75	100	2539	1560	4099	197	199,5	321,5
VS 97/18	●	8RW	83	110	2665	1560	4225	197	199,5	358,5
VS 97/19	●	8RW	83	110	2791	1560	4351	197	199,5	363,5
VS 97/20	●	8RW	93	125	2917	1740	4657	197	199,5	368
VS 97/21	●	8RW	93	125	3043	1740	4783	197	199,5	373

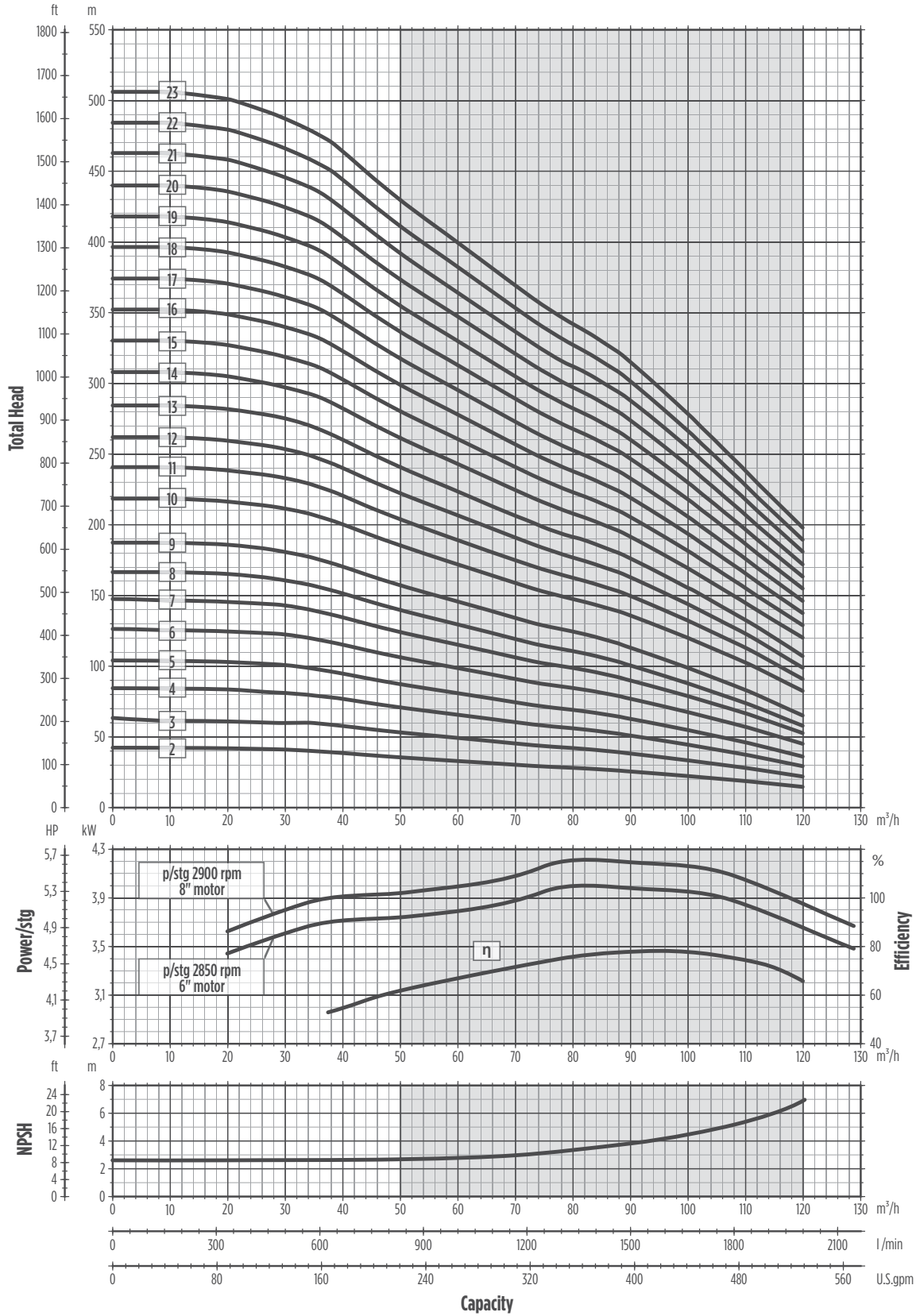
● = Pump available in R (AISI 904L) version



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PERFORMANCE CURVES 50HZ

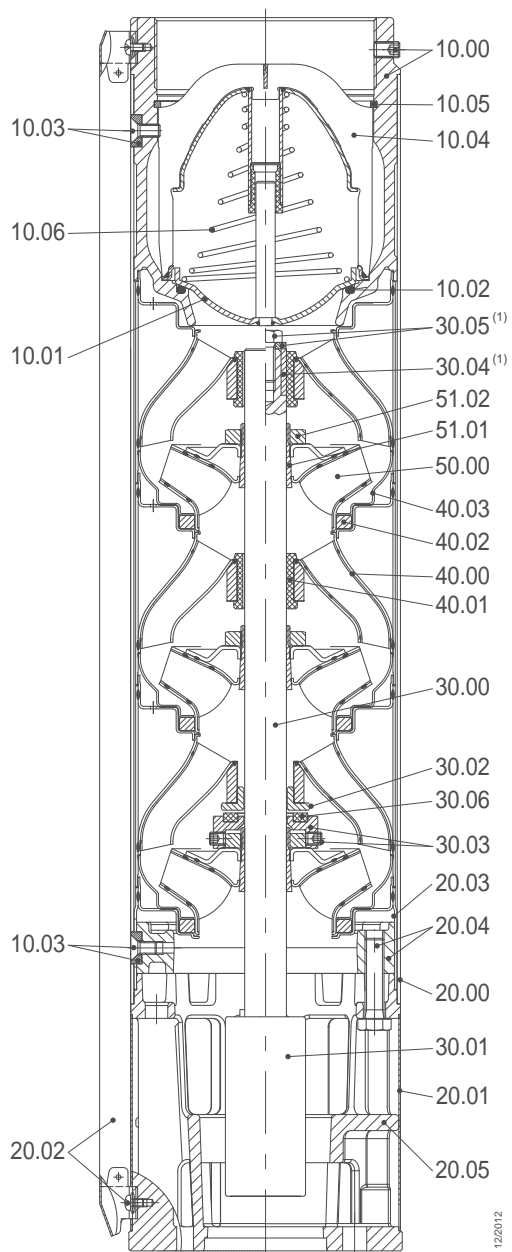


The hydraulic characteristics are guaranteed, according to ISO standard 9906:2012, grade 3B

0010070 07/2010

# Pump section and List of Main components

## VS 78 - 97



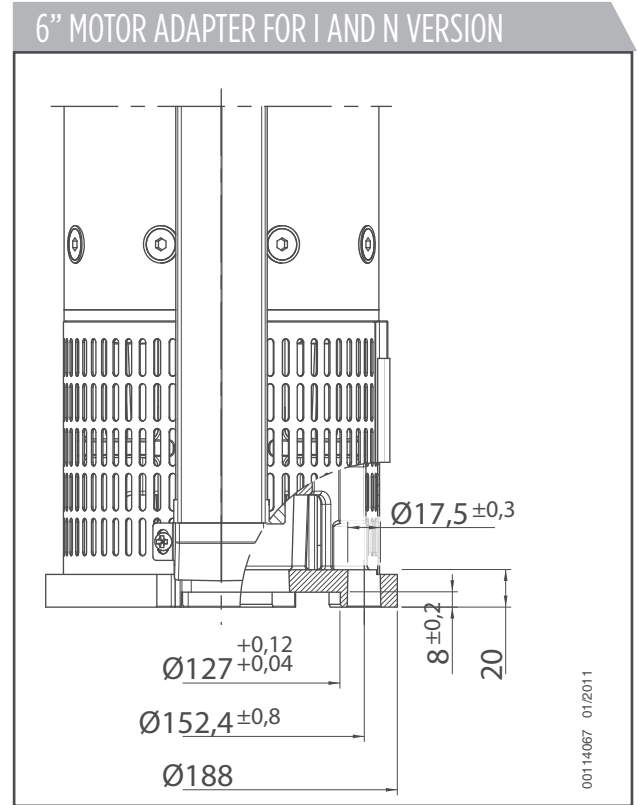
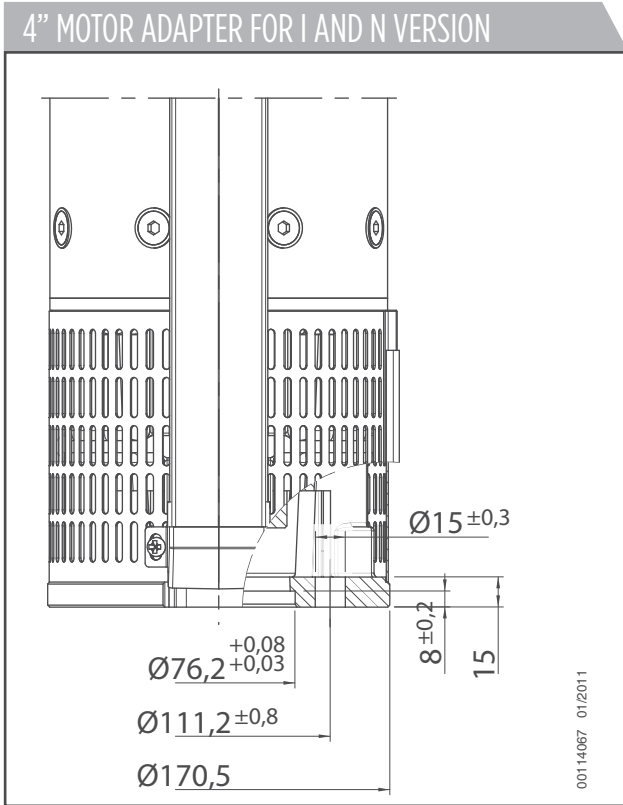
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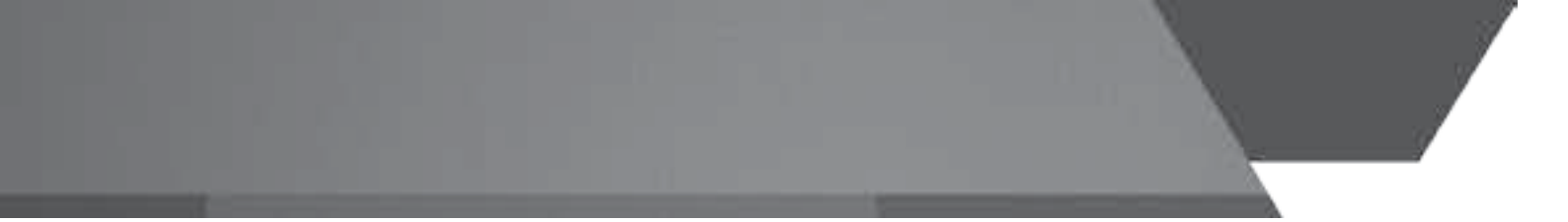
Ref. N.	Description
10.00	Discharge head
10.01	Valve
10.02	Sealing O-ring
10.03	Outer case locking nuts
10.04	Valve support
10.05	Seeger ring
10.06	Spring
20.00	Outer case
20.01	Suction strainer
20.02	Cable guard
20.03	Initial spacer
20.04	Flange
20.05	Motor adapter
30.00	Pump shaft
30.01	Coupling
30.02	Upper up-thrust washer
30.03	Lower up-thrust washer
30.04	Upper journal sleeve
30.05	Screw and washer
30.06	Up-thrust ring
40.00	Diffuser
40.01	Secondary bearing bush
40.02	Floating neck ring
40.03	Flange clamping neck ring
50.00	Impeller
50.01	Split cone
50.02	Split cone nut

1) only for types with more than 8 stages

## Appendix B

### Motor adaptor VS 78 - 97





# Submersible Motors Product Overview

# E4 4" - Super Stainless Three-phase

## SUBMERSIBLE MOTORS

### Quality in the Well

Franklin Electric 4" encapsulated submersible motors, built in ISO 9001/14001 certified facilities for outstanding performance in 4" or larger water wells. The three phase motor offers maximum life and highest efficiency under various load conditions. It should ideally be combined to the Franklin Electric SubStart/SubTronic3P control boxes for maximum system performance, protection and warranty

## FEATURES

Hermetically sealed stator. Anti track, self healing stator resin prevents motor burn out, mechanically supports the winding and provides fast heat dissipation

High efficiency electrical design (low operation cost, cool running winding)

Removable water bloc lead connector

No-wear, water lubricated radial and thrust bearings for 100% maintenance free operation

Non-contaminating FES 93 filling liquid

Various agency approvals for use in drinking water

## BRACKISH WATER VERSION SPECIFICATIONS

For use in water that has more salinity than fresh water, but not as much as seawater

The novel Franklin Electric Brackish Water Motor proposes a cost-effective solution wherever standard 4" motors are not giving sufficient service life

## POLLUTION RECOVERY MOTOR-VERSION SPECIFICATIONS

Fluorelastomere (Viton®) rubber parts

Special Polyuretane (PUR) lead assemblies

304 graded stainless steel as standard, 316SS as an option

## TECHNICAL SPECIFICATION (Standard motor)

3 phase motor range: 0,25 – 9,3kW

4" NEMA flange

Rotation: reversible

Degree of protection: IP68, Insulation: Cl.B

Rated ambient temperature: 30°C

Required cooling flow: min. 0,08m/s

Max. starts/hr.: 20, equally distributed

Mounting: vertical to horizontal, shaft upwards

Voltage tolerance 50Hz from nominal: -10% / +6% (60Hz: ±10%)

Protection requirements: EN 61947-4-1

## HEAT PUMP MOTOR-VERSION SPECIFICATIONS

Many modern heating systems extract heat that is stored in aquifer / river water. Such so-called two-pit or open systems require low-power, high efficiency 3-phase submersible motors. To meet the demands of this niche market, Franklin Electric has developed a special 4" encapsulated submersible motor range optimized for shallow settings and low power consumption available from 0,25kW to 1,1kW.

## OPTIONS

Motor cable VDE / ACS / KTW approved (1,5m; 2,5m; special lengths available)

Special Polyuretane (PUR) lead assemblies

Motors with factory- installed lead in Single Packing

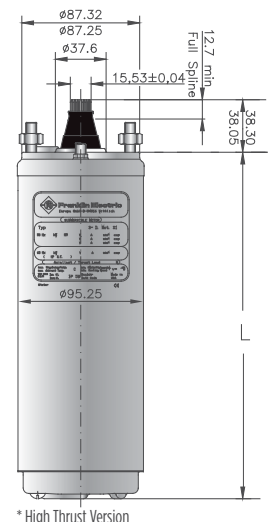
Special voltages on request

Motor complete in AISI 316SS with SiC seal



## 3~ 4" ENCAPSULATED MOTORS - 400V / 50Hz

P <sub>N</sub> [kW]	Thrust F [N]	U <sub>N</sub> [V]	n <sub>N</sub> [min <sup>-1</sup> ]	I <sub>N</sub> [A]	I <sub>A</sub> [A]	η [%]	cos φ [%]	TN [Nm]	TA [Nm]	L [mm]	m [kg]
0.25	3000	400	2865	0,68	3,67	70	0,77	0,83	2,5	214,2	7,2
0.37	3000	400	2870	1,1	5,4	66	0,74	1,22	3,00	214,2	7,2
0.55	3000	400	2870	1,6	7,4	68	0,74	1,82	4,20	228,2	7,7
0.75	3000	400	2865	2,0	10,6	70	0,77	2,49	6,70	248,2	8,7
1,1	3000	400	2850	2,8	16,0	74	0,78	3,67	11,33	282,6	10,2
1,5	3000	400	2855	3,9	20,7	73	0,78	5,00	14,10	306,6	11,2
2,2	4000	400	2845	5,5	29,8	75	0,77	7,37	22,0	338,6	12,6
	6500*	400	2845	5,5	29,8	75	0,77	7,37	22,0	422,2	15,0
3,0	4000	400	2845	7,5	42,0	76	0,77	10,06	31,93	393,6	15,0
	6500*	400	2845	7,5	42,0	76	0,77	10,06	31,93	477,2	17,0
3,7	6500*	400	2840	9,0	52,3	78	0,78	12,5	41,5	520,2	19,1
4,0	6500*	400	2840	9,9	57,0	78	0,77	13,4	44,0	543,2	20,0
5,5	6500*	400	2865	12,6	77,2	79	0,81	18,3	56,5	652,5	26,6
7,5	6500*	400	2855	17,1	99,3	79	0,81	25,1	73,1	730,5	33,1
9,3	6500*	400	2850	21,4	96,9	79	0,86	31,1	45,0	855,1	38,8



\* High Thrust Version

# ENG4 4" NextGen - Super Stainless Three-phase

## SUBMERSIBLE MOTORS

### Quality in the Well

Franklin Electric 4" encapsulated submersible motors, built in ISO 9001/14001 certified facilities for outstanding performance in 4" or larger water wells. The three phase motor offers maximum life and highest efficiency under various load conditions. It should ideally be combined to the Franklin Electric SubStart/SubTronic3P control boxes for maximum system performance, protection and warranty.

## FEATURES

Hermetically sealed stator with 316SS shell. Anti track, self healing stator resin prevents motor burn out, mechanically supports the winding and provides fast heat dissipation

High efficiency electrical design (low operation cost, cool running winding)

Removable water bloc lead connector

No-wear, water lubricated radial and thrust bearings for 100% maintenance free operation

Non-contaminating FES 93 filling liquid

Various agency approvals for use in drinking water



## BRACKISH WATER VERSION SPECIFICATIONS

For use in water that has more salinity than fresh water, but not as much as seawater

The novel Franklin Electric Brackish Water Motor proposes a cost-effective solution wherever standard 4" motors are not giving sufficient service life

## POLLUTION RECOVERY MOTOR-VERSION SPECIFICATIONS

Fluorelastomere (Viton®) rubber parts

Special Polyuretane (PUR) lead assemblies

304 graded stainless steel as standard, 316SS as an option

## TECHNICAL SPECIFICATION (Standard motor)

3 phase motor range: 0,37 – 3kW

4" NEMA flange

Rotation: reversible

Degree of protection: IP68

Insulation: Cl.B

Rated ambient temperature: 30°C

Required cooling flow: min. 0,08m/s

Max. starts/hr.: 20, equally distributed

Mounting: vertical to horizontal, shaft upwards

Voltage tolerance 50Hz from nominal: -10% / +6%

Protection requirements: EN 61947-4-1

## HEAT PUMP MOTOR-VERSION SPECIFICATIONS

Many modern heating systems extract heat that is stored in aquifer / river water. Such so-called two-pit or open systems require low-power, high efficiency 3-phase submersible motors. To meet the demands of this niche market, Franklin Electric has developed a special 4" encapsulated submersible motor range optimized for shallow settings and low power consumption available from 0,25kW to 1,1kW.

## OPTIONS

Built in lightning arrestors

Motors in full 316SS

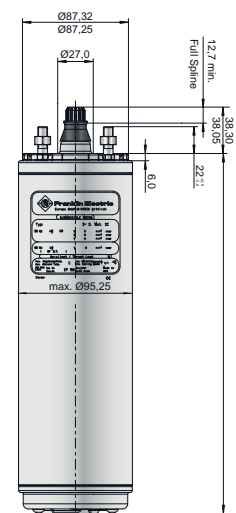
Various cable lengths

Special voltages

Alternative material executions

## 3~ 4" ENCAPSULATED MOTORS NEXTGEN - 400V / 50Hz

P <sub>n</sub> [kW]	Thrust F [N]	U <sub>n</sub> [V]	n <sub>n</sub> [min <sup>-1</sup> ]	I <sub>n</sub> [A]	I <sub>k</sub> [A]	η [%]	cos φ [%]	TN [Nm]	TA [Nm]	L [mm]	m [kg]
0,37	4000	400	2870	1,1	5,41	66	0,74	1,22	3	237,2	6,05
0,55	4000	400	2870	1,6	7,4	68	0,74	1,82	4,2	251,1	6,65
0,75	4000	400	2865	2	10,6	70	0,77	2,49	6,7	271,2	7,55
1,1	4000	400	2850	2,8	16	74	0,78	3,67	11,33	297,2	8,8
1,5	4000	400	2855	3,9	20,7	73	0,78	5	14,1	321,2	9,75
2,2	4000	400	2845	5,5	29,8	75	0,77	7,37	22	353,2	11,4
3	4000	400	2845	7,5	42	76	0,77	10,06	31,93	408,2	13,8



# E6 6” - Encapsulated Motors

## SUBMERSIBLE MOTORS

### Quality in the Well

These 6” encapsulated motors, manufactured in ISO 9001 certified facilities, are built for dependable operation in 6” diameter or larger water wells. Water lubricated thrust and radial bearings enable a maintenance free operation. A special diaphragm ensures pressure compensation inside the motor. The motor is filled with a special FES91 fluid, providing frost protection down to -15°C storage temperature. The Sand fighter® SiC seal system is standard.

## FEATURES

Hermetically sealed stator, anti track, self healing stator resin prevents motor burn out

37 and 45kW up to 50°C ambient temperature

Removable “water bloc” lead connector

Cable material according to drinking water regulations (KTW approved)

“Sand fighter®” Motor with SiC-Mechanical Seal

High efficiency electrical design for low operation cost

All motors prefilled and 100% tested

Max. storage temperature -15°C - + 60°C

Non contaminating FES91 -filling

45kN High Thrust Version on request (standard in 37kW and 45kW motors)

## TECHNICAL SPECIFICATION (Standard motor)

4 - 45 kW

6” NEMA flange

Protection: IP 68

Insulation: Class F

Starts per hour: 20

Installation: vertical/horizontal

Standard Voltage: 380-415V/50Hz, 460V/60Hz

Voltage tolerance 50Hz: -10% / +6% UN [380-415V=(380-10%)-(415+6%)]

Voltage tolerance 60Hz: ±10%UN

Motor protection: Select thermal overloads according to DIN 61947-4-1

YΔ - start (pos. of cables 90°)

“Sand fighter®” Motor with SiC-Mechanical Seal

Rated ambient temperature: 4- 30kW up to 30°C; 37 & 45 kW up to 50°C

Cooling flow: min. 0,16 m/s

Motor lead in 4m length (KTW approved)

## OPTIONS

Other voltages

45kN High Thrust Version on request (standard in 37kW and 45kW motors)

PT 100 temperature sensor (sold separately)

Special Lead lengths up to 50m

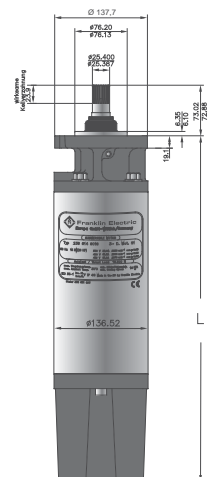
Built-in PTC temperature sensor

Built-in SubMonitor Transmitter (standard for 37&45kW)



## 6” ENCAPSULATED MOTORS STANDARD - 3~/ 400 V / 50 Hz

P <sub>N</sub> [kW]	Thrust F [N]	n <sub>N</sub> [min <sup>-1</sup> ]	I <sub>N</sub> [A]	I <sub>A</sub> [A]	η [%]	cos φ [%]	TN [Nm]	TA [Nm]	L [mm]	m [kg]
4	15.500	2860	9,3	43	78	0,82	12,3	20,2	581,2	37,5
5,5	15.500	2870	12,5	64	79	0,82	18,6	35	614,4	41,1
7,5	15.500	2860	16	83	79	0,86	25	47,7	646,2	45,2
9,3	15.500	2870	20,7	112	81	0,8	31,1	68,2	678,7	47,5
11	15.500	2860	23,3	129	81	0,85	37,3	78,3	711,2	50,9
15	15.500	2860	31,3	169	81	0,85	49,9	107,3	776,2	56,7
18,5	15.500	2860	38,5	231	82	0,85	62,4	154,6	841,5	63,3
22	15.500	2860	45,3	268	83	0,86	74,7	177,6	906,5	69,3
30	27.500	2860	63,5	393	83	0,84	99,4	263,1	1036,6	83,9
37	45.000	2875	79	411	81	0,85	123,6	280,8	1476,7	140
45	45.000	2875	95,2	509	82	0,84	148,4	332,3	1629,2	156





# E6HT 6” – Encapsulated Motors “HighTemp 90°C”

## SUBMERSIBLE MOTORS

### Quality in the Well

These 6” encapsulated motors, manufactured in ISO 9001 certified facilities, are built for dependable operation in 6” diameter or larger water wells with ambient temperature up to 90°C. Water lubricated thrust and radial bearings enable a maintenance free operation. A special diaphragm ensures pressure compensation inside the motor. The motor is filled with a special FES92 fluid, providing frost protection down to -15°C storage temperature. The Sand fighter® SiC seal system is standard.



## FEATURES

- Up to 90°C ambient temperature
- Increase thrust capacity up to 30°C
- No cooling flow in larger wells (12” / open reservoirs) up to 30°C ambient
- Hermetically sealed encapsulated stator, anti track, self healing stator resin
- Removable “Water Bloc” lead connector
- “Sand fighter®” Motor with SiC-Mechanical Seal
- High efficiency electrical design for low operation cost
- All motors prefilled and 100% tested
- Max. storage temperature -15°C - + 60°C
- High temperature leads
- Non contaminating FES92 -filling
- 45kN High Thrust version on request (standard in 22kW and 30kW motors)

## TECHNICAL SPECIFICATION (Standard motor)

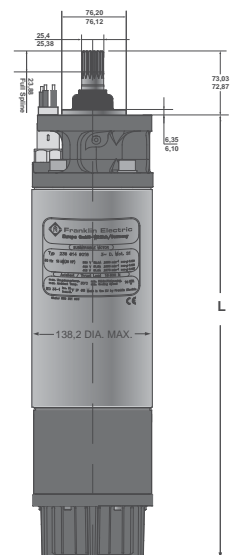
- 30 - 150 kW / 3,7 - 30 kW
- 6” NEMA double flange
- Protection: IP 68
- Insulation: Class F
- Starts per hour: 20
- Installation: vertical/horizontal
- Standard Voltage: 380-415V/50Hz, 460V/60Hz
- Voltage tolerance 50Hz: -10% / +6% UN [380-415V=(380-10%)-(415+6%)]
- Voltage tolerance 60Hz: ±10%UN
- Motor protection: Select thermal overloads according to DIN 61947-4-1
- Rated ambient temperature: 90°C
- Cooling flow: min. 0,16 m/s
- DOL / YΔ - start (pos. of cables 90°)
- Motor lead in 4m length

## OPTIONS

- Built in lightning arrestors
- Motors in full 316SS
- Various cable lengths
- Special voltages
- Alternative material executions

## 6” ENCAPSULATED MOTORS NEXTGEN - 3~/400V / 50Hz

P <sub>N</sub> [kW]	Thrust F [N]	U <sub>N</sub> [V]	n <sub>n</sub> [min <sup>-1</sup> ]	I <sub>N</sub> [A]	I <sub>A</sub> [A]	η [%]	cos φ [%]	TN [Nm]	TA [Nm]	L [mm]	m [kg]
3,7	15.500	400	2880	8,5	52,5	75	0,86	12,3	31,4	716	53
5,5	15.500	400	2890	12,3	83	77	1	18,3	48,36	752	59
7,5	15.500	400	2890	16	110	81	1	24,9	76,6	780	66
11	15.500	400	2890	24,2	160	80	0,82	36,6	111,4	846	71
15	15.500	400	2885	33	205	80	0,83	49,9	161,3	909	79
18,5	27.500	400	2890	40,5	266	83	0,82	61,5	227,8	1041	92
22	45.000	400	2885	48	304	81	1	74	221	1476,7	140
30	45.000	400	2885	64,5	441	83	0,82	98,7	301	1629,2	156



# E8 8” - Encapsulated Motors

## SUBMERSIBLE MOTORS

### Quality in the Well

These 8” encapsulated motors, manufactured in ISO 9001 certified facilities, are built for dependable operation in 8” diameter or larger water wells. It is fitted with water lubricated radial and thrust bearings for maintenance-free operation. A special diaphragm ensures pressure compensation inside the motor. The motor is filled with a special FES91 fluid, providing frost protection down to -15°C storage temperature. The Sand fighter® SiC seal system is the option for sandy applications.



## FEATURES

Hermetically sealed stator, anti track, self healing stator resin prevents motor burn out

Removable “Water Bloc” lead connector

Cable material according to drinking water regulations (KTW approved)

Sand slinger and Mechanical seal for high performance in sand

High efficiency electrical design for low operation cost

All motors prefilled and 100% tested

Max. storage temperature -15°C - + 60°C

Non contaminating FES91 -filling

## TECHNICAL SPECIFICATION (Standard motor)

30 - 150 kW

8” NEMA flange

Protection: IP 68

Insulation: Class F

Starts per hour: 10

Installation: vertical/horizontal

Standard Voltage: 380-415V/50Hz, 460V/60Hz

Voltage tolerance 50Hz: -10% / +6% UN [380-415V=(380-10%)-(415+6%)]

Voltage tolerance 60Hz: ±10%UN

Motor protection: Select thermal overloads according to DIN 61947-4-1

DOL / YΔ - start (pos. of cables 90°)

Rated ambient temperature: 4- 30kW up to 30°C; 37 & 45 kW up to 50°C

Cooling flow: min. 0,16 m/s

Built-in Subtrol Heat Sensor

Motor lead in 4m length (KTW approved)

## OPTIONS

Other voltages

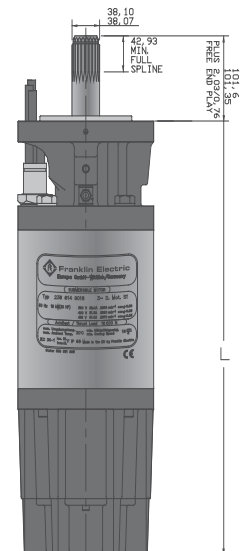
Motors complete in 316 SS

PT 100 temperature sensor (sold separately)

“Sand fighter®” Motor with SiC- Mechanical seal

## 8” ENCAPSULATED MOTORS STANDARD - 3~/ 400 V / 50 Hz

P <sub>n</sub> [kW]	Thrust F [N]	n <sub>n</sub> [min <sup>-1</sup> ]	I <sub>N</sub> [A]	I <sub>A</sub> [A]	η [%]	cos φ [%]	TN [Nm]	TA [Nm]	L [mm]	m [kg]
30	45000	2900	61	418	86	0,84	97	255	925	145
37	45000	2920	74	534	87	0,86	121	295	1000	157
45	45000	2920	89	645	87	0,85	145	395	1077	172
55	45000	2920	108	862	88	0,87	182	563	1204	202
75	45000	2925	145	1157	87	0,87	242	561	1394	240
93	45000	2930	190	1332	87	0,83	302	567	1748	318
110	45000	2930	222	1597	88	0,84	363	769	1976	381
130	45000	2920	252	1738	88	0,87	424	927	2179	420
150	45000	2920	284	1858	88	0,88	485	1034	2408	494



# E8HT 8” - Encapsulated Motors “HighTemp 75°C”

## SUBMERSIBLE MOTORS

### Quality in the Well

These 8” encapsulated motors, manufactured in ISO 9001 certified facilities, are built for dependable operation in 8” diameter or larger water wells. It is fitted with water lubricated radial and thrust bearings for maintenance-free operation. A special diaphragm ensures pressure compensation inside the motor. The motor is filled with a special FES91 fluid, providing frost protection down to -15°C storage temperature. The Sand fighter® SiC seal system is the option for sandy applications.



## FEATURES

- Up to 75°C ambient temperature

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- Increase thrust capacity up to 30°C

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- No cooling flow in larger wells (open reservoirs) up to 30°C ambient

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- Hermetically sealed encapsulated stator, anti track, self healing stator resin

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- Removable “Water Bloc” lead connector

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- “Sand fighter®” Motor with SiC-Mechanical Seal

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- High efficiency electrical design for low operation cost

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- All motors prefilled and 100% tested.

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- Max. storage temperature -15°C - + 60°C

---

- High temperature leads

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- Non contaminating FES 92 filling

## TECHNICAL SPECIFICATION (Standard motor)

- 30 - 110 kW

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- 8” NEMA flange

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- Protection: IP 68

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- Insulation: Class F

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- Starts per hour: 10

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- Installation: vertical/horizontal

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- Standard Voltage: 380-415V/50Hz, 460V/60Hz

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- Voltage tolerance 50Hz: -10% / +6% UN [380-415V=(380-10%)-(415+6%)]

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- Voltage tolerance 60Hz: ±10%UN

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- Motor protection: Select thermal overloads according to DIN 61947-4-1

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- DOL / YΔ - start (pos. of cables 90°)

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- Rated ambient temperature: 75°C

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- Cooling flow: min. 0,16 m/s

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- Motor lead in 4m length

## OPTIONS

- Other voltages

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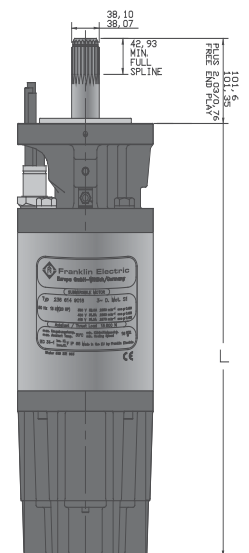
- Motors complete in 316 SS

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- Motor lead in 8m length

## 8” ENCAPSULATED MOTORS STANDARD - 3~/ 400 V / 50 Hz

P <sub>n</sub> [kW]	Thrust F [N]	U <sub>n</sub> [V]	n <sub>n</sub> [min <sup>-1</sup> ]	I <sub>n</sub> [A]	I <sub>k</sub> [A]	η	cos φ	TN [Nm]	TA [Nm]	L [mm]	m [kg]
30	45000	400	2930	65,5	499	80	0,83	97,8	298	1138	182
37	45000	400	2940	79,6	692	82	0,84	120	398	1265	207
45	45000	400	2945	93,1	884	84	0,84	146	465	1455	252
56	45000	400	2930	115	927	84	0,85	182	526	1748	318
75	45000	400	2935	151	1254	86	0,85	244	695	1976	382
93	45000	400	2925	186	1482	86	0,86	304	949	2179	421
110	45000	400	2935	224	1690	86	0,85	358	1002	2408	473



# RW6 6" - Rewindable Motor

## SUBMERSIBLE MOTORS

### Quality in the Well

These 6" rewindable motors, manufactured in ISO 9001 certified facilities, are built for dependable operation in 6" diameter or larger water wells. Water lubricated thrust and radial bearings enable a maintenance free operation. A special diaphragm ensures pressure compensation inside the motor. The motor is filled with a special FES93 fluid, providing frost protection down to -15°C storage temperature. The Sand fighter® SiC seal system is the option for sandy applications. For applications in aggressive media, motors made of 316SS and 904L are available

## FEATURES

Cable material according to drinking water regulations (KTW approved)

Sand slinger and mechanical seal for high performance in sand

High efficiency electrical design for low operation cost

All motors prefilled and 100% tested

Max. storage temperature -15°C - + 60°C

Design for retrofitable PT100 sensor

Approved Franklin Electric „Kingsbury Type“ thrust bearing

Non contaminating FES 93 -filling

Sand fighter® SiC seal system is standard

Standard motors in complete 304SS

## TECHNICAL SPECIFICATION (Standard motor)

4 - 37 kW

6" NEMA flange with Studs (M 12)

Protection: IP 68

Starts per hour: max 20

Installation: vertical / horizontal (37 kW motors may not be installed horizontally)

Standard Voltage: 380-415V/50Hz, 460V/60Hz

Voltage tolerance 50Hz: -10%/+6% UN [380-415V=(380-10%)-(415+6%)]

Voltage tolerance 60Hz: ±10%UN

Motor protection: Select thermal overloads according to DIN 61947-4-1

YΔ - start (pos. of cables 90°)

Standard motor with PVC winding insulation (37kW in standard with PE2/PA insulation) for max. ambient temp. of 30°C with a min.cooling flow: 4 kW - 15 kW  $v = 0,2$  m/s; 18,5 kW - 37 kW  $v = 0,5$  m/s

## 6" REWINDABLE MOTORS 3~ /400 V / 50 HZ

P <sub>N</sub> [kW]	Thrust F [N]	n <sub>N</sub> [min <sup>-1</sup> ]	I <sub>N</sub> [A]	I <sub>A</sub> [A]	η [%]	cos φ [%]	TN [Nm]	TA [Nm]	L [mm]	m [kg]
4	15500	2930	10,6	51	0,76	0,73	13,1	17,3	679	43
5,5	15500	2890	13,3	51	0,76	0,81	18,2	17,3	679	43
7,5	15500	2880	17,7	63	0,77	0,82	24,8	21,5	699	45
9,3	15500	2870	21,4	78	0,78	0,82	31	29	729	48
11	15500	2880	25,2	98	0,79	0,83	36,4	35,3	759	51
13	15500	2900	29,6	125	0,8	0,81	42,8	50,3	809	56
15	15500	2890	33,1	148	0,81	0,83	49,4	60,4	854	61
18,5	15500	2880	42	182	0,81	0,8	61,2	84,3	899	65
22	15500	2900	49	231	0,82	0,8	72,5	102,2	989	74
26	15500	2900	56,7	284	0,83	0,83	85,6	134,7	1094	85
30	27500	2910	66,4	347	0,83	0,8	98,4	151	1194	95
37	27500	2900	81,9	433	0,83	0,8	121,6	215,8	1274	102



## OPTIONS

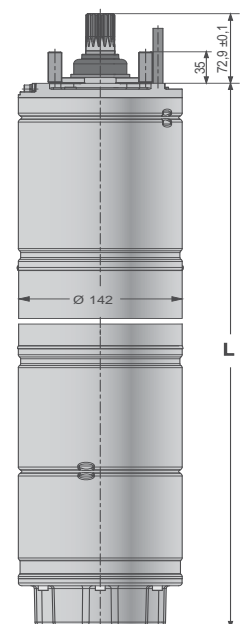
Other voltages

Motors in complete 316 SS and 904 L

Motors up to 30kW with PE2/PA winding insulation for max. ambient temp. of 50°C at the same cooling conditions as standard (37 kW max. 45°)

PT 100 temperature sensor (sold separately)

Lead in different lengths up to 50m



# RW8 8" - Rewindable Motor

## SUBMERSIBLE MOTORS

### Quality in the Well

These 8" rewindable motors, manufactured in ISO 9001 certified facilities, are built for dependable operation in 8" diameter or larger water wells. It is fitted with water lubricated radial and thrust bearings for maintenance-free operation. The motor is filled with a special FES93 fluid, providing frost protection down to -15°C storage temperature. A special diaphragm ensures pressure compensation inside the motor. The Sand fighter® SiC seal system is standard. For applications in aggressive media, motors made of 316SS and 904L are available.

## FEATURES

- Easy to assemble with double flange
- Cable material according to drinking water regulations (KTW approved)
- Sand fighter® SiC seal system for high performance in sand
- High efficiency electrical design for low operation cost
- All motors prefilled and 100% tested
- Max. storage temperature -15°C - +60°C
- Design for retrofitable PT100 sensor
- Non contaminating FES 93 filling

## TECHNICAL SPECIFICATION (Standard motor)

- 30 - 93 kW
- 8" NEMA flange
- Protection: IP 68
- Starts per hour: 10
- Installation: vertical/horizontal (93 kW motors may not be installed horizontally)
- Motor Lead in 6 m length (KTW approved)
- Standard Voltage: 380-415V/50Hz, 460V/60Hz
- Voltage tolerance 50Hz: -10% / +6% UN [380-415V=(380-10%)-(415+6%)]
- Voltage tolerance 60Hz: ±10%UN
- Motor protection: Select thermal overloads according to DIN 61947-4-1
- DOL / YΔ - start (pos. of cables 90°)
- Standard motor with PVC winding insulation
- For max. ambient temp. of 30°C with a min. cooling flow:
  - 30 kW - 52 kW v = 0,2 m/s
  - 55 kW - 93 kW v = 0,5 m/s

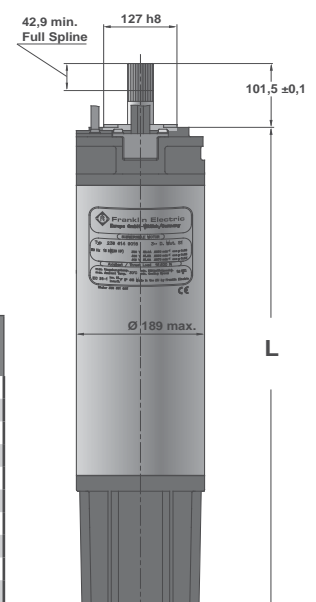


## OPTIONS

- Other voltages
- Motors in complete 316 SS and 904 L
- YΔ - start (pos. of cables 90°)
- PE2/PA winding insulation for max. ambient temp. of 50°C at the same cooling conditions as standard
- PT 100 temperature sensor (sold separately)
- Lead in different lengths up to 50m

## 8" REWINDABLE MOTORS 3~ /400 V / 50 HZ

P <sub>N</sub> [kW]	Thrust F [N]	n <sub>n</sub> [min <sup>-1</sup> ]	I <sub>N</sub> [A]	I <sub>A</sub> [A]	η [%]	cos φ [%]	TN [Nm]	TA [Nm]	L [mm]	m [kg]
30	45 000	2900	60	318	0,84	0,89	99	141	1140	140
37	45 000	2900	76	400	0,84	0,86	122	176	1140	140
45	45 000	2910	90	520	0,86	0,86	148	241	1230	156
52	45 000	2910	103	608	0,86	0,87	175	318	1340	179
55	45 000	2915	110	660	0,86	0,86	181	340	1340	179
60	45 000	2910	116	725	0,87	0,88	197	357	1470	198
67	45 000	2910	133	797	0,87	0,86	220	359	1470	198
75	45 000	2910	148	942	0,87	0,87	246	472	1560	215
83	45 000	2920	160	1077	0,88	0,88	273	544	1560	247
93	45 000	2920	183	1276	0,88	0,86	305	626	1740	247



# SubMonitor Motor Protection

These 6" rewindable motors, manufactured in ISO 9001 certified facilities, are built for dependable operation in 6" diameter or larger water wells. Water lubricated thrust and radial bearings enable a maintenance free operation. A special diaphragm ensures pressure compensation inside the motor. The motor is filled with a special FES93 fluid, providing frost protection down to -15°C storage temperature. The Sand fighter® SiC seal system is the option for sandy applications. For applications in aggressive media, motors made of 316SS and 904L are available.



## FEATURES

Quick setup to monitor a motor, simply enter the Line Frequency (Hz), Line Voltage (volts), and Motor Service Factor Amp rating

Digital display indicates voltage and current on all three legs at the same time, and fault messages are in easily understandable text

Monitors - Under/Overload; Under/Overvoltage; Current Unbalance; Overheated Motor (Subtrol Equipped); False Start (Chattering); Phase Reversal

For motors with service factor amp ratings between 3 and 359 amps

One unit covers the entire range from 190 to 600 Volts

No need to make additional turns around the CT or add external CTs

Password Protection Option

DIN Rail Mounting Option

Stores fault, setting changes, and pump run-time, that can be accessed through the display

Detachable NEMA 3R display unit can be mounted on panel door

UL 508 Listed

MODEL NUMBER	
Premium Package	586 000 5100
Input Voltage	190 – 600 VAC
Frequency	60/50 Hz
Motor Service Factor Amps	3 to 359 Amps
MAXIMUM CONDUCTOR SIZE THROUGH SENSORS	
Max. Diameter	0.920 in. (23 mm)
TRIP RESPONSE	
Motor, Under / Overload, Under / Overvoltage, Overheat Unbalance	3 seconds
Control Circuit Rating	1.5 Amp AC, up to 600 volts
Signal Circuit Rating	1 Amp AC, up to 250 volts (Incandescent: 100 watts max.)
WIRING TERMINALS	
Wire Gauge	#12 to #18 AWG
Tighten to	4.5 in-lbs
Weight (SubMonitor)	3.3 lbs/7.3 kg
Carton Size (Std. Unit)	7,75 in x 11,5 in x 6,75 in (19,7 cm x 29,2 cm x 17,1 cm)
Shipping Weight (Std. Unit)	3.5 Lbs./7.5 kg

## DIMENSIONS



## SubStart3P® – 3 Phase Submersible Motor Starter

The SubStart3P® range covers all 3 phase motors from 0.37kW to 7,5kW. Ergonomic design, attention to detail and unique features make the SubStart3P® motor starter range your first choice when considering submersible motor protection. In conjunction with Franklin Electric submersible motors you now have an tangible water system advantage resulting in ease of installation and reliable protection.



### FEATURES

Attention to detail – every aspect engineered for the application

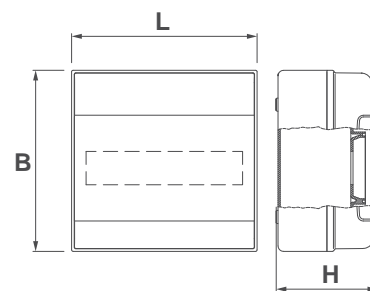
The complete package – The device is 100% compatible with the motor characteristics

All in one name – Reliability backed by the leader in submersible motors

ERGONOMICALLY DESIGN				
<b>Mounting</b>	Easy wall mounting without destroying the protection rating of the enclosure.			
<b>Wiring</b>	Sufficient space is provided for ease of wiring.			
ENCLOSURE				
<b>Protection</b>	IP54			
<b>Material</b>	PVC / Polycarbonate			
COMPONENTS				
<b>ON/OFF Switch</b>	Manual motor starter switch			
<b>Circuit breaker</b>	Integrated thermal and magnetic overload protection			
<b>Auxiliary relay</b>	Powered auxiliary contactor for use with external switches			
<b>Cable glands</b>	ensure IP54 rating			
SUBMERSIBLE MOTOR STARTER SPECIFICATIONS				
Motor Rating (kW)	Type 3- 400V 50Hz	Model Number	Nom. Current (A)	Starting Current (A)
0,37	SS037P3	288 500 3510	1,1	5,4
0,55	SS055P3	288 501 3510	1,6	7,4
0,75	SS075P3	288 502 3510	2	10,6
1,10	SS110P3	288 503 3510	2,8	16
1,50	SS150P3	288 504 3510	3,9	20,7
2,20	SS220P3	288 505 3510	5,5	29,8
3,0	SS300P3	288 506 3510	7,5	42
3,7	SS370P3	288 507 3510	9	52,3
4,0	SS400P3	288 508 3510	9,9	57
5,5	SS550P3	288 509 3510	12,6	77,2
7,5	SS750P3	288 510 3510	17,1	99,3

TECHNICAL SPECIFICATIONS	
MECHANICAL	
<b>Protection level</b>	IP 54
<b>Environment</b>	This equipment is suitable for environment B according to IEC/EN 61439 - 1 : 2010
<b>Altitude</b>	max 2000m above sea level
<b>External dimensions</b>	190x184x106mm <= 4kW 250x256x140mm >= 5,5kW
<b>Weight</b>	1,2 kg <= 4kW 2,3 kg >= 7,5kW
<b>Mounting</b>	Wall mounting (mounting hardware provided)
<b>Storage temperature</b>	-25°C to +55°C
<b>Operation temperature</b>	-5°C to +40°C
<b>Humidity</b>	50% at 40°C (without condensation)
ELECTRICAL	
<b>Working Voltage</b>	3- / 50Hz 380 - 415V / -10% +6%
<b>Voltage tolerance</b>	380V -10% / 415V+6%
<b>Rated insulation voltage</b>	400 Vac
<b>Rated short-time withstand current</b>	50 kA
<b>Rated conditional short-circuit current</b>	50 kA
<b>Current</b>	5A, 9A, 16 A
<b>Power</b>	0,37kW - 7,5kW
STANDARDS	
IEC/EN 61439 - 1 : 2010	

Motor Ratings (kW)	DIMENSIONS		
	B (mm)	L (mm)	H (mm)
0,37kW - 4,0kW	190	184	106
5,5kW - 7,5kW	250	256	140





# SubTronicSC® - Single Phase Motor Protection

The SubTronicSC® range covers all PSC motors from 0.25kW to 2.2kW for all voltages. Ergonomic design, attention to detail and unique features make the SubTronicSC® motor starter range your first choice when considering submersible motor protection. In conjunction with Franklin Electric submersible motors you now have an tangible water system advantage resulting in ease of installation and reliable protection.



## FEATURES

Attention to detail – every aspect engineered for the application

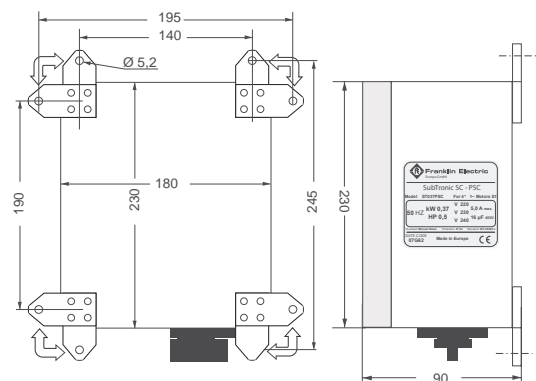
The complete package – The device is 100% compatible with the motor characteristics

All in one name – Reliability backed by the leader in submersible motors

ERGONOMICALLY DESIGN	
<b>Mounting</b>	Easy wall mounting without destroying the protection rating of the enclosure
<b>Wiring</b>	Reliable connectors are provided for ease of wiring
MOTOR COMPATIBLE DESIGN	
<b>Matching range</b>	The SubTronicSC® Protector range was designed to match the Franklin Electric range of PSC motors.
<b>Wide range of operation</b>	Compatibility with motor design allows for a wide range of operation resulting in minimized nuisance tripping.
INTELLIGENT PROTECTION AND MANAGEMENT FEATURES	
<b>Dry-run detection (without probes)</b>	Prevents motor and pump damage due to running the pump without water based on a proprietary reliable detection method.
<b>Dry-run auto- reset</b>	Automatic dry-run reset time is based on a proprietary search algorithm to find the best operating point for weak wells. Reset time 6 to 60 minutes.
<b>Over &amp; Under voltage</b>	Prevents motor damage that may be caused by abnormal voltage conditions without limiting the range of operation, made possible by matching the design of the SubTronicSC® Protector with the motor. Reset time approximately 3 minutes.
<b>Over current protection</b>	Prevents operation under conditions where motor current may exceed safe levels due to bound pump or other fault condition. Detection is based on current heating capacity measurement to prevent unnecessary nuisance tripping. Reset time approximately 10 minutes.
<b>Faulty Start Protection</b>	Prevents system damage due to factors such as faulty contacts or switch. Contact failure detection reacts fast and will prevent damage to system components.
<b>Rapid Cycle Protection</b>	Prevents system damage due to factors such as continuous rapid cycling and excessive motor thermal cycling caused by waterlogged tank, faulty contacts or faulty pressure switch.
INDICATORS	
<b>Status</b>	Indication shows normal operation or other condition.
<b>Voltage</b>	Faulty voltage condition is indicated.
<b>Fault conditions</b>	Dry-run, Over current, Rapid Cycling, and Faulty start are indicated.

TECHNICAL SPECIFICATIONS					
MECHANICAL					
<b>Protection level</b>	IP54				
<b>External dimensions</b>	290 x 230 x 95mm				
<b>Weight</b>	0,6 - 1,0 kg				
<b>Mounting</b>	Wall mounting (with options)				
<b>Temperature</b>	-5°C - +40°C				
<b>Humidity</b>	50% at 55°C (without condensation)				
ELECTRICAL					
<b>Voltage</b>	220 - 240V; ± 10 %; 50Hz single phase				
<b>Current</b>	16 A				
<b>Power</b>	0,25 - 2,2 kW				
STANDARDS					
IEC 60439-1 when supplied with suitably fused supply.					
SUBTRONIC SC MOTOR PROTECTION SPECIFICATIONS					
Part Number	Type	Motor rating (kW)	Nominal Current (A)	Maximal expected current (A)	Capacitor (µF) 450V ac
284 623 3511	ST025PSC	0,25	2,4	9,4	12,5
284 624 3511	ST037PSC	0,37	3,3	12,6	16
284 625 3511	ST055PSC	0,55	4,3	17,7	20
284 626 3511	ST075PSC	0,75	5,7	22,7	35
284 627 3511	ST110PSC	1,1	8,4	33,9	40
284 628 3511	ST150PSC	1,5	10,7	41,7	50
284 629 3511	ST220PSC	2,2	14,7	61,8	70

## DIMENSIONS





# SubTronic3P® - 3 Phase Motor Protection

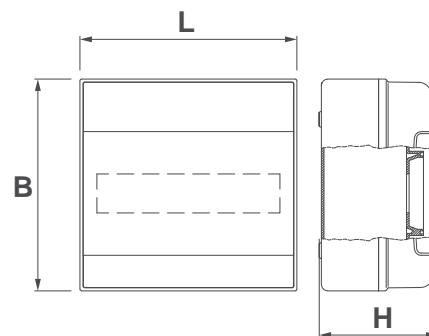
The SubTronic3P® range covers all 4 inch 3 phase motors from 0.37kW to 7,5kW. Ergonomic design, attention to detail and unique features make the SubTronic3P® range your first choice when considering submersible motor protection and management. Together with Franklin Electric submersible motors you have an undisputable advantage, resulting in ease of installation, sophisticated system management and peace of mind.



ERGONOMICALLY DESIGN				
<b>Mounting</b>	Easy wall mounting offering various options without destroying the protection rating of the enclosure			
<b>Wiring</b>	Reliable connectors are provided for ease of wiring			
MOTOR COMPATIBLE DESIGN				
<b>Matching range</b>	The SubTronic3P® Protector range was designed to match the Franklin Electric range of 3 phase motors			
<b>Wide range of operation</b>	Compatibility with motor design allows for a wide range of operation resulting in minimized nuisance tripping			
INTELLIGENT PROTECTION AND MANAGEMENT FEATURES				
<b>Dry-run detection (without probes)</b>	Prevents motor and pump damage due to running the pump without water based on a proprietary reliable detection method			
<b>Dry-run auto- reset</b>	Automatic dry-run reset time is based on a proprietary search algorithm to find the best operating point for weak wells. Reset time in max. 60 minutes			
<b>Over &amp; Under voltage</b>	Prevents motor damage that may be caused by abnormal voltage conditions without limiting the range of operation, made possible by matching the design of the SubTronic3P® Protector with the motor. Reset time approximately 3 minutes			
<b>Over current protection</b>	Prevents operation under conditions where motor current may exceed safe levels due to bound pump or other fault condition. Detection is based on current heating capacity measurement to prevent unnecessary nuisance tripping. Auto-reset in 15 minutes. Manual reset possible in approximately 5 minutes by reapplying power			
<b>Rapid Cycle Protection</b>	Prevents operation under conditions where motor current may exceed safe levels due to bound pump or other fault condition. Detection is based on current heating capacity measurement to prevent unnecessary nuisance tripping. Auto-reset in 15 minutes. Manual reset possible in approximately 5 minutes by reapplying power			
INDICATORS				
<b>Status</b>	Indication shows normal operation or other condition			
<b>Voltage</b>	Faulty voltage condition is indicated			
<b>Fault conditions</b>	Dry-run, Over Current, Rapid Cycling, Over Voltage and Under Voltage are indicated			
SUBTRONIC SC MOTOR PROTECTION SPECIFICATIONS				
Motor Rating (kW)	Type 3- 400V 50Hz	Model Number	Nom. Current (A)	Max. Current (A)
0,37	ST037P3	288 500 3511	1,1	5,4
0,55	ST055P3	288 501 3511	1,6	7,4
0,75	ST075P3	288 502 3511	2	10,6
1,1	ST110P3	288 503 3511	2,8	16
1,5	ST150P3	288 504 3511	3,9	20,7
2,2	ST220P3	288 505 3511	5,5	29,8
3	ST300P3	288 506 3511	7,5	42
3,7	ST370P3	288 507 3511	9	52,3
4	ST400P3	288 508 3511	9,9	57
5,5	ST550P3	288 509 3511	12,6	77,2
7,5	ST750P3	288 510 3511	17,1	99,3

TECHNICAL SPECIFICATIONS	
MECHANICAL	
<b>Protection level</b>	IP 54
<b>Environment</b>	This equipment is suitable for environment B according to IEC/EN 61439 - 1 : 2010
<b>Altitude</b>	max 2000m above sea level
<b>External dimensions</b>	190x184x106mm <= 3kW 250x256x140mm >= 3,7kW
<b>Weight</b>	1,2 kg <= 3kW 2,3 kg >= 3,7kW
<b>Mounting</b>	Wall mounting (mounting hardware provided)
<b>Storage temperature</b>	-25°C to +55°C
<b>Operation temperature</b>	-5°C to +40°C
<b>Humidity</b>	50% at 40°C (without condensation)
ELECTRICAL	
<b>Working Voltage</b>	3- / 50Hz 380 - 415V
<b>Voltage tolerance</b>	380V -10% / 415V+6%
<b>Rated insulation voltage</b>	400 Vac
<b>Rated short-time withstand current</b>	50 kA
<b>Rated conditional short-circuit current</b>	50 kA
<b>Current</b>	5A, 9A, 16 A
<b>Power</b>	0,37kW - 7,5kW
STANDARDS	
IEC/EN 61439 - 1 : 2010	

Motor Ratings (kW)	DIMENSIONS		
	B (mm)	L (mm)	H (mm)
0,37kW - 3,0kW	190	184	106
3,7kW - 7,5kW	250	256	140



## Termination Kit 4"

This proven, sturdy solution is your choice of cable joining in temporary pump applications or when re-usage if the drop cable is desired. Furthermore, the flexibility and safety it provides for under field service conditions makes it the preferred choice over conventional, not breakable splicing kits.



## Double Plug Lead for Termination Kit

Required for use of lead termination kit. Connected between termination kit and 4" motor

2-wire / 3-wire

1,5m / 2,5m Lead length

With / without Strain relief

Max. current 16 Apms

KTW approved



## Splicing Kit 1,5 - 10mm<sup>2</sup>

3M Quality

4 wire

1,5 - 10mm<sup>2</sup>

up to 1,1kV



## Filling Liquid

FILLING LIQUID 5 L FES92					
4" Encapsulated	→	FES93	8" Encapsulated Standard	→	FES91
6" Encapsulated Standard	→	FES91	8" Encapsulated HighTemp75	→	FES92
6" Encapsulated HighTemp90	→	FES92	Rewindable Standard Motors All	→	FES93
			6" Rewindable PM Motors	→	FES91
FES91		FES92		FES93	



## Motor Filling Kit

This kit contains all necessary tools to check and replenish Franklin Electric submersible motors with FES 91, 92 or 93 filling liquid (fill solution/concentrate must be ordered separately)



## 6” – Permanent Star Plug

### Application

For some applications it may be necessary to permanently run a star-delta submersible motor in star connection. This may be achieved by using the PERMANENT-STAR-PLUG . This connector short - circuits all three pins in one of the two motor sockets and is designed to replace one lead.



## Couplings

### Application

Franklin Electric offers this line of motor-pump couplings for maximum customer convenience in matching the Franklin motor to a variety of pump shafts. Couplings are designed to transmit the pump thrust to the motor in order to provide maximum benefits from the Franklin internal thrust bearing construction.

Hardened stainless steel spacer discs in the 4” and 6” couplings assure positive bearing between motor and pump shafts, and assure full support for downward thrust created by the pump.

8” couplings DO NOT contain hardened spacer discs, since the motor shaft itself is hardened.



## Surge Arrestor

### Application

These surge arrestors or their equivalents are highly recommended for protecting submersible motors from a variety of commonly occurring high voltage spikes which can damage the motor insulation system and cause motor winding failure. These arrestors will not, as is true of any surge protection equipment, protect the motor from a direct lightning strike.



## Corrosion Protection 4”

### Application

The sacrificial anode attaches to the bottom end bell of Franklin Electric 4” Super Stainless submersible motors. Since cast iron is more chemically active than the metals that make up the motor and pump, it is the cast iron that reacts to the corrosive elements in the water. This results in longer motor and pump life in aggressive / corrosive water conditions.

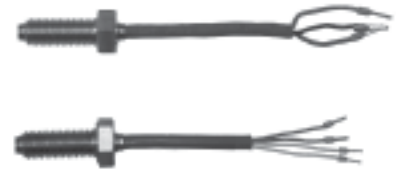


## PT100 for 6” and 8” – Encapsulated Motors

### Application

The PT100 is a precision platinum wire resistor that is specified occasionally as a temperature input for process control equipment. A jacketed control lead must be run from the PT100 lead to the above-ground equipment. The above-ground equipment is not available from Franklin Electric and is typically part of a custom panel or data acquisition system.

PT100 sensor retrofit kits from Franklin Electric come with complete instructions and allow for easy field installation.



## PT100 – Rewindable Motors

### Application

Fitted into the upper end bell flange, all end bells 6”,8”,10” and 12” Rewindable are prepared for installation PT 100

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Measures the temperature of the filling liquid

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Conductor with a resistance proportional to the temperature

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Allows monitoring the temperature continuously

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The above-ground equipment is not available from Franklin Electric and is typically part of a custom panel or data acquisition system. PT100 sensor retrofit kits from Franklin Electric come with complete instructions and allow for easy field installation.







## Franklin Electric

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