VMTEC

SUBMERSIBLE PUMPS 4",

MOTORS AND ACCESSORIES

50 Hz



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VMS Series Stainless Steel Submersible Pumps for 4" deep wells and larger

Characteristics and Hudraulic Performances

50Hz

APPLICATIONS

- Municipal water works, fountains and wast water
- 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
- Water supply to and from tanks, reservoir and wells
- Lifting and distribution of a wide range of liquids
- Autoclave and cistern charge and discharge
- Turf and landscape
- Greenhouses and nurseries
- Residential and farm wells and drainage
- Marine and off shore platforms
- Food industry
- General industry

FEATURES

- Compact, reliable and suited to operate in horizontal position
- Built-in check valve to protect the pump against water hummer risk
- The hydraulic design is such to enhance the overall efficiency thus reducing energy consumption and making the pumping systems more cost effective

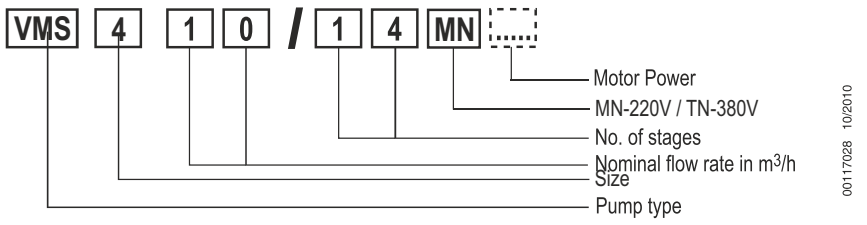
SPECIFICATIONS

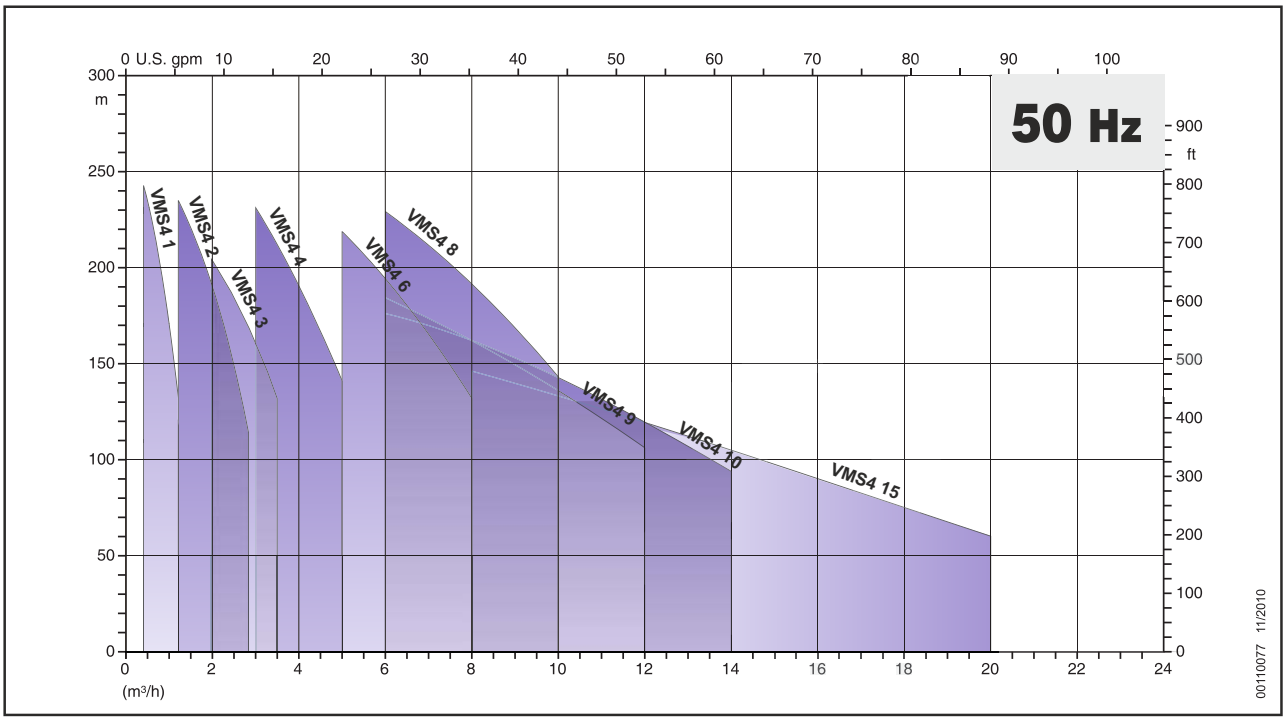
- Capacities up to 20 m³/h at 50Hz
- Liquid being pomped: Chemically and mechanically non aggressive
- Water temperature range: from 0°C to 40°C
- Maximum allowable amount of sand 25 gr/m³, solid dimension max 2mm
- Maximum pump diameter (Including cable guard): 95mm
- Outlet diameter: 1 ¼" VS1-2-3-4-6-8-9-10, 2" VS15
- Maximum depth of application: Up to 400 m below the water level
- 40 Bar (400 m) at 50Hz
- Construction and safety standards:
  TS 11146:1993 - TS EN 809:2000 - 98/37/EC - TS EN ISO 12100-1:2007 - TS EN ISO 12100-2:2006
- Rotation: counter clockwise when looking into the discharge
- Motor adapter in compliance with NEMA standard
- Pump can work continuously in vertical or horizontal position
- Motors: see section Submersible Motors Product Overview

AVAILABLE OPTIONS

- Suction End and Valve Body (only for models VS1-2-3-4-6)
- BRASS or THECNOPLAST
- Motor-pump : Cooling shroud, Suction shroud

PUMP IDENTIFICATION CODE





MATERIAL IN CONTACT WITH THE LIQUID

Pos.	PARTS DESCRIPTIONS	MATERIAL		
		Type	AISI	DIN / EN
1	Shaft	Stainless steel	304	1.4301
2	Retainer	Stainless steel	304	1.4301
3	Coupling	Stainless steel	304	1.4301
4	Suction End	Stainless steel	304	1.4301
5	Body	Stainless steel	304	1.4301
6	Impeller	Polycarbonate		
7	Diffuser	Technopolymer		
8	Bearing	Resine		
9	Bearing Housing	Resine		
10	Bearing	Resine		
11	Bushing	Polycarbonate		
12	Bushing	Stainless steel	304	1.4301
13	Screw	Stainless steel	304	1.4301
14	Washer	Stainless steel	304	1.4301
15	Valve Housing	Resine		
16	O-ring	Nitrile rubber		
17	Valve	Resine		
18	Valve Body 11 TPI	Stainless steel	304	1.4301
19	Housing	Stainless steel	304	1.4301
20	Strainer	Stainless steel	304	1.4301
21	Cable Guard	Stainless steel	304	1.4301

VMS4 1/2/3/4
TABLE OF HYDRAULIC PERFORMANCES AT 50Hz

PUMP TYPE	RATED POWER		Q = DELIVERY																		
			m³/h	0	0,3	0,6	0,9	1,2	1,5	1,8	2,1	2,4	2,7	3,0	3,3	3,6	4,2	4,8	5,4	6,0	7,0
			l/sec	0	0,08	0,17	0,25	0,33	0,42	0,50	0,58	0,67	0,75	0,83	0,92	1,00	1,17	1,33	1,50	1,67	1,94
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER [m]																		
VMS4 1/10	0,37	0,5	68	60	53	45	36	18	2												
VMS4 1/13	0,37	0,5	82	71	63	54	39	20	3												
VMS4 1/19	0,55	0,75	118	104	94	80	58	30	5												
VMS4 1/26	0,75	1	156	142	126	103	77	40	7												
VMS4 1/38	1,1	1,5	241	215	194	160	119	62	9												
VMS4 1/42	1,5	2	265	250	224	185	131	70	10												
VMS4 2/5	0,37	0,5	34				33	31	29	27	24	20	15	10	4						
VMS4 2/7	0,37	0,5	45				43	41	38	34	30	25	19	12,6	6,6						
VMS4 2/10	0,55	0,75	62				60	56	51	45	39	32	25	17	10						
VMS4 2/14	0,75	1	88				80	75	69	60	51	41	30	22	14						
VMS4 2/20	1,1	1,5	125				119	110	101	89	76	59	42	30	17						
VMS4 2/27	1,5	2	176				169	157	145	129	113	91	64	39	20						
VMS4 2/39	2,2	3	244				234	217	200	177	154	124	91	56	23						
VMS4 3/4	0,37	0,5	30				27	26	25	24	23	21	20	18	16	12					
VMS4 3/7	0,55	0,75	50				47	45	43	41	39	36	33	30	27	19					
VMS4 3/10	0,75	1	68				62	60	58	55	53	48	44	39	35	23					
VMS4 3/15	1,1	1,5	100				91	89	85	80	75	70	63	57	50	33					
VMS43/20	1,5	2	133				121	118	112	106	100	93	84	75	66	44					
VMS43/30	2,2	3	199				183	174	169	160	151	138	125	110	98	67					
VMS43/37	3	4	245				225	219	211	202	186	174	157	139	126	81					
VMS4 4/4	0,39	0,5	26						23	23	22	22	21	20	19	18	15	12	8		
VMS4 4/7	0,55	0,75	44						40	39	38	36	35	33	32	28	23	17	11		
VMS4 4/10	0,75	1	65						59	58	56	54	52	50	47	42	35	27	18		
VMS4 4/14	1,1	1,5	92						84	82	80	77	75	71	69	61	51	39	25		
VMS4 4/18	1,5	2	119						109	107	104	100	97	93	90	79	66	51	33		
VMS4 4/27	2,2	3	179						164	160	154	151	145	140	133	115	99	78	54		
VMS4 4/32	3	4	211						197	192	186	181	173	167	159	141	118	93	66		
VMS4 4/40	3,7	5	268						246	239	232	225	215	206	195	168	138	103	71		
VMS4 4/44	4	5,5	292						272	265	256	247	238	226	214	184	150	120	85		

VMS4 6/8
TABLE OF HYDRAULIC PERFORMANCES AT 50Hz

PUMP TYPE	RATED POWER		Q = DELIVERY																		
			m³/h	0	2,7	3,0	3,3	3,6	4,2	4,8	5,4	6,0	7,0	7,2	8,0	8,4	9,0	9,6	10,1	10,8	12,0
			l/sec	0	0,75	0,83	0,92	1,00	1,17	1,33	1,50	1,67	1,94	2,00	2,22	2,33	2,50	2,67	2,81	3,00	3,33
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER [m]																		
VMS4 6/6	0,75	1	35	33	33	32	32	31	30	29	27	23	23	19	16	13					
VMS4 6/9	1,1	1,5	52	48	48	47	47	45	43	41	38	33	32	26	21	18					
VMS4 6/13	1,5	2	78	74	73	73	72	71	68	65	62	55	53	45	37	31					
VMS4 6/19	2,2	3	109	103	102	102	100	98	94	89	83	73	70	60	51	41					
VMS4 6/26	3	4	151	142	141	139	138	133	125	118	108	93	89	74	64	48					
VMS4 6/31	3,7	5	185	173	172	170	167	160	152	141	130	112	109	90	78	56					
VMS4 6/34	4	5,5	201	188	187	185	183	176	165	154	139	120	116	95	84	64					
VMS4 6/45	5,5	7,5	268	253	252	249	247	237	225	212	192	161	154	129	117	99					
VMS4 8/4	0,75	1	25				24	24	23	23	22	20	20	18	17	15	14	12	10	8	
VMS4 8/6	1,1	1,5	38				36	36	35	34	33	31	30	27	26	24	21	19	15	10	
VMS4 8/9	1,5	2	57				54	53	52	51	49	45	44	41	39	35	31	28	24	15	
VMS4 8/14	2,2	3	88				84	83	81	79	75	70	68	63	59	53	47	42	36	22	
VMS4 8/18	3	4	113				108	106	104	101	98	90	88	81	77	69	63	57	47	32	
VMS4 8/21	3,7	5	134				130	128	126	122	117	109	106	99	95	88	80	70	60	39	
VMS4 8/23	4	5,5	146				142	139	137	132	125	115	114	105	100	92	83	75	63	41	
VMS4 8/32	5,5	7,5	201				197	194	189	181	173	158	156	142	142	129	116	105	91	59	
VMS4 8/42	7,5	10	266				259	254	247	239	229	210	206	186	185	164	157	140	119	82	

VMS4 9
TABLE OF HYDRAULIC PERFORMANCES AT 50Hz

PUMP TYPE	RATED POWER		Q = DELIVERY																	
			m³/h	0	4,8	5,4	6,0	7,0	7,2	8,0	8,4	9,0	9,6	10,1	10,8	12,0	13,0	13,2	14,0	14,4	15,6
			l/sec	0	1,33	1,50	1,67	1,94	2,00	2,22	2,33	2,50	2,67	2,81	3,00	3,33	3,61	3,67	3,89	4,00	4,33
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER [m]																		
VMS4 9/7	1,1	1,5		40	36	35	34	33	32	31	29	28	26	24	22	18	16	15	13	12	
VMS4 9/10	1,5	2		56	51	50	48	46	45	43	41	39	37	35	32	27	23	22	19	17	
VMS4 9/14	2,2	3		78	71	69	68	65	64	60	57	54	51	48	44	37	31	30	26	24	
VMS4 9/17	3	4		96	87	85	83	79	79	75	72	67	64	60	55	46	39	38	33	30	
VMS4 9/20	3,7	5		116	107	105	102	97	96	91	89	83	80	75	69	58	50	49	42	39	
VMS4 9/22	4	5,5		126	115	113	110	105	103	98	95	89	84	80	73	62	54	53	44	40	
VMS4 9/28	5,5	7,5		165	154	150	145	138	136	131	124	121	117	111	102	90	79	78	68	64	
VMS4 9/35	8	10		210	195	189	184	175	173	165	164	156	148	141	132	116	103	100	90	85	

VMS4 10
TABLE OF HYDRAULIC PERFORMANCES AT 50Hz

PUMP TYPE	RATED POWER		Q = DELIVERY																		
			m³/h	0	6,0	7,0	7,2	8,0	8,4	9,0	9,6	10,1	10,8	12,0	13,0	13,2	14,0	14,4	15,6	16,0	17,0
			l/sec	0	1,67	1,94	2,00	2,22	2,33	2,50	2,67	2,81	3,00	3,33	3,61	3,67	3,89	4,00	4,33	4,44	4,72
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER [m]																		
VMS4 10/5	1,1	1,5		30	26	25	25	24	23	22	21	20	18	16	13	13	12	11	9	8	5
VMS4 10/7	1,5	2		42	37	35	35	33	32	31	30	28	27	23	20	19	17	16	12	11	7
VMS4 10/11	2,2	3		64	57	54	53	51	49	47	45	43	40	34	30	29	25	23	18	16	11
VMS4 10/14	3	4		82	73	70	69	66	64	61	59	57	53	46	39	39	34	31	25	22	15
VMS4 10/17	3,7	5		101	92	88	87	84	81	79	75	73	68	59	52	51	46	42	36	32	23
VMS4 10/18	4	5,5		107	97	93	93	89	87	83	80	77	72	63	56	55	49	45	39	35	26
VMS4 10/25	5,5	7,5		150	134	129	128	123	122	117	113	108	103	89	80	79	70	67	55	50	38
VMS4 10/32	7,5	10		194	175	168	167	160	160	152	148	142	133	118	105	105	92	90	75	66	53

VMS4 15
TABLE OF HYDRAULIC PERFORMANCES AT 50Hz

PUMP TYPE	RATED POWER		Q = DELIVERY																		
			m³/h	0	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
			l/sec	0	2,5	2,8	3,1	3,3	3,6	3,9	4,2	4,4	4,7	5,0	5,3	5,6	5,8	6,1	6,4	6,7	7,0
	kW	HP	H = TOTAL HEAD METERS COLUMN OF WATER [m]																		
VMS4 15/8	2,2	3		46	34	33	31	30	28	26	25	23	22	20	18	16	14	12	10	7	
VMS4 15/10	3	4		57	43	41	39	37	35	33	31	30	28	26	23	21	19	16	13	10	
VMS4 15/11	3	4		63	48	45	43	41	39	37	35	33	30	28	26	24	21	18	15	11	
VMS4 15/12	3	4		69	56	52	48	46	43	41	39	37	35	33	30	27	24	20	16	12	
VMS4 15/13	4	5,5		75	61	56	53	50	47	45	42	40	38	36	33	30	26	22	18	13	
VMS4 15/15	4	5,5		87	72	66	61	58	55	52	49	47	45	42	39	35	31	26	21	15	
VMS4 15/16	4	5,5		93	77	70	65	61	58	55	53	50	47	44	41	37	33	28	22	16	
VMS4 15/20	5,5	7,5		121	98	92	86	81	76	71	67	62	58	54	50	45	40	34	27	18	
VMS4 15/21	7,5	10		127	103	97	91	85	80	75	70	66	61	57	52	48	42	36	28	19	
VMS4 15/28	7,5	10		165	130	121	112	105	98	92	86	80	74	68	62	56	49	42	34	25	

VMS Series Stainless Steel Submersible Pumps for 4" deep wells and larger

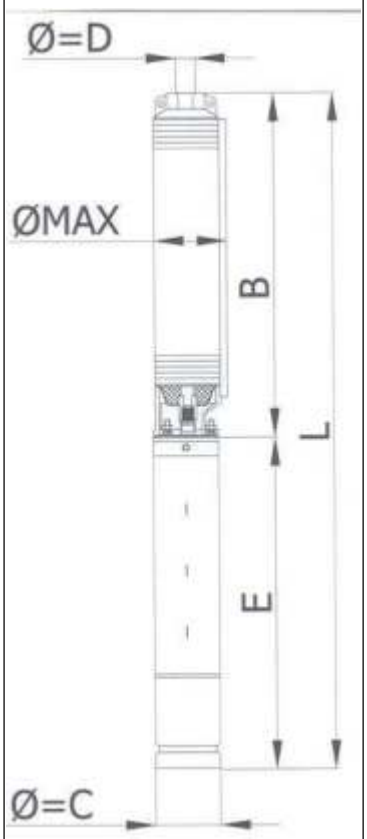
Technical Data and Performance Curves

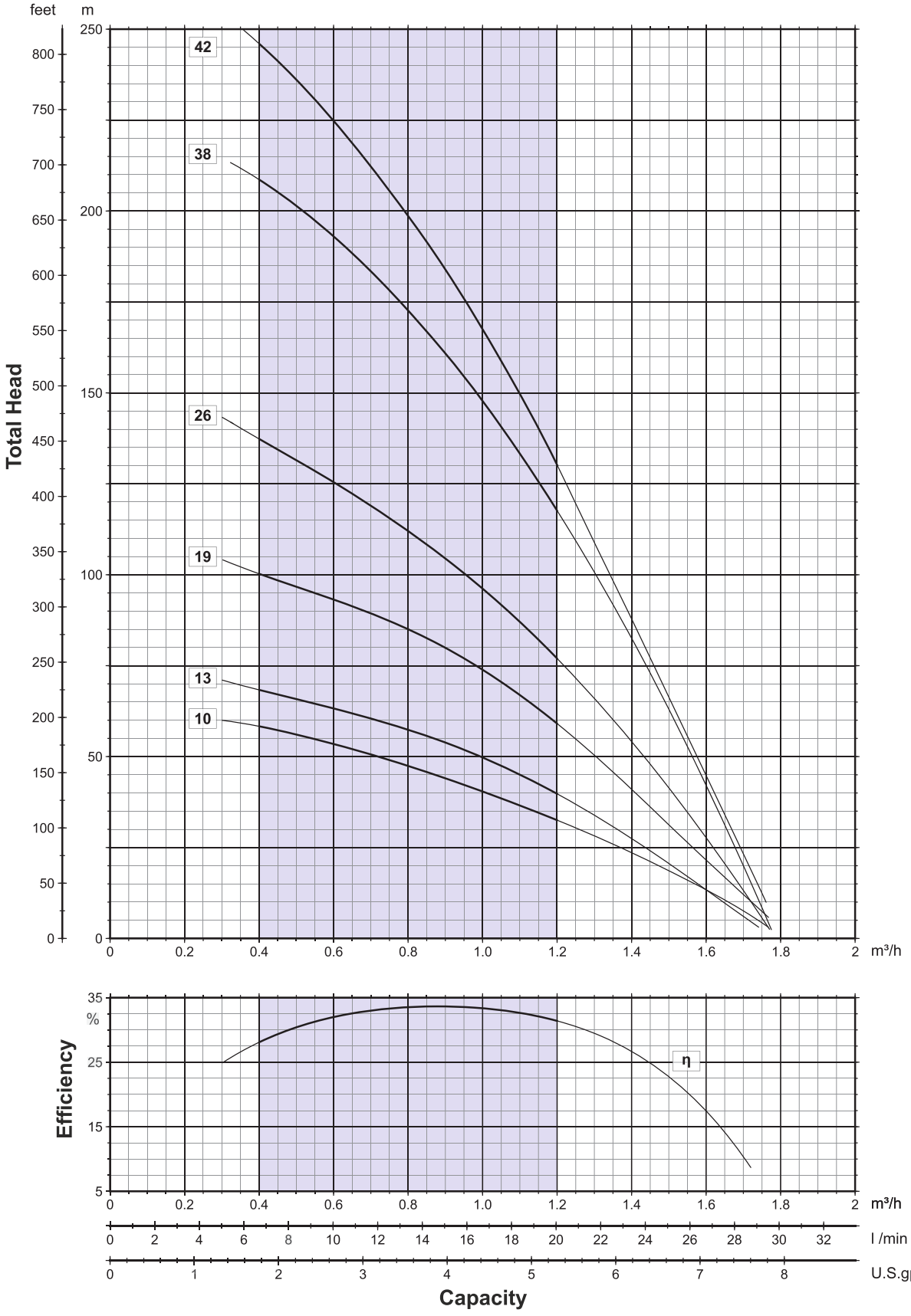
50Hz

Pumps with Encapsulated Motor

Pump model type	Motor			Dimensions [mm]								Weight [Kg]				
	Type	kW	HP	L 1~	L 3~	E 1~	E 3~	B	$Ø_C$	$Ø_D$	$Ø_{MAX}$	1~ Motor	3~ Motor	Pump	1~ Total	3~ Total
VMS4 1/10	E4	0,37	0,5	610	610	242	242	368	93	1 ¼"	95	8,6	8,2	4,0	12,6	12,2
VMS4 1/13	E4	0,37	0,5	662	662	242	242	420	93	1 ¼"	95	8,6	8,2	4,5	13,1	12,7
VMS4 1/19	E4	0,55	0,75	798	798	270	270	528	93	1 ¼"	95	9,5	9,5	5,6	15,1	15,1
VMS4 1/26	E4	0,75	1	978	978	298	298	680	93	1 ¼"	95	10,9	10,9	7,4	18,3	18,3
VMS4 1/38	E4	1,1	1,5	1370	1323	449	402	921	93	1 ¼"	95	11,6	17,3	10,0	21,6	27,3
VMS4 1/42	E4	1,5	2	1472	1434	487	449	985	93	1 ¼"	95	19,5	17,3	10,9	30,4	28,2

Dimensions

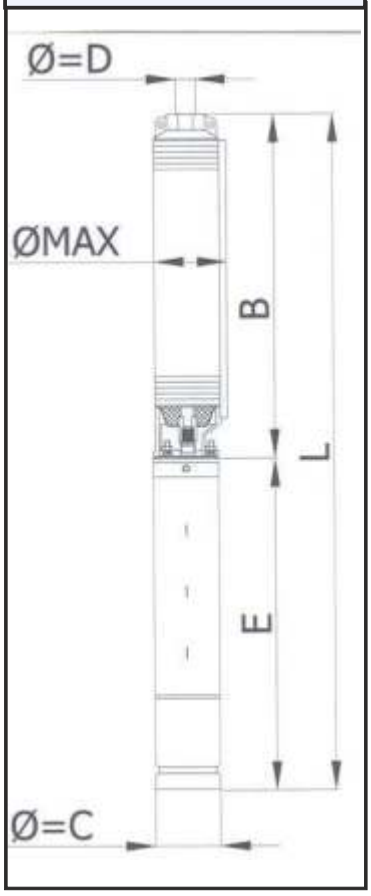


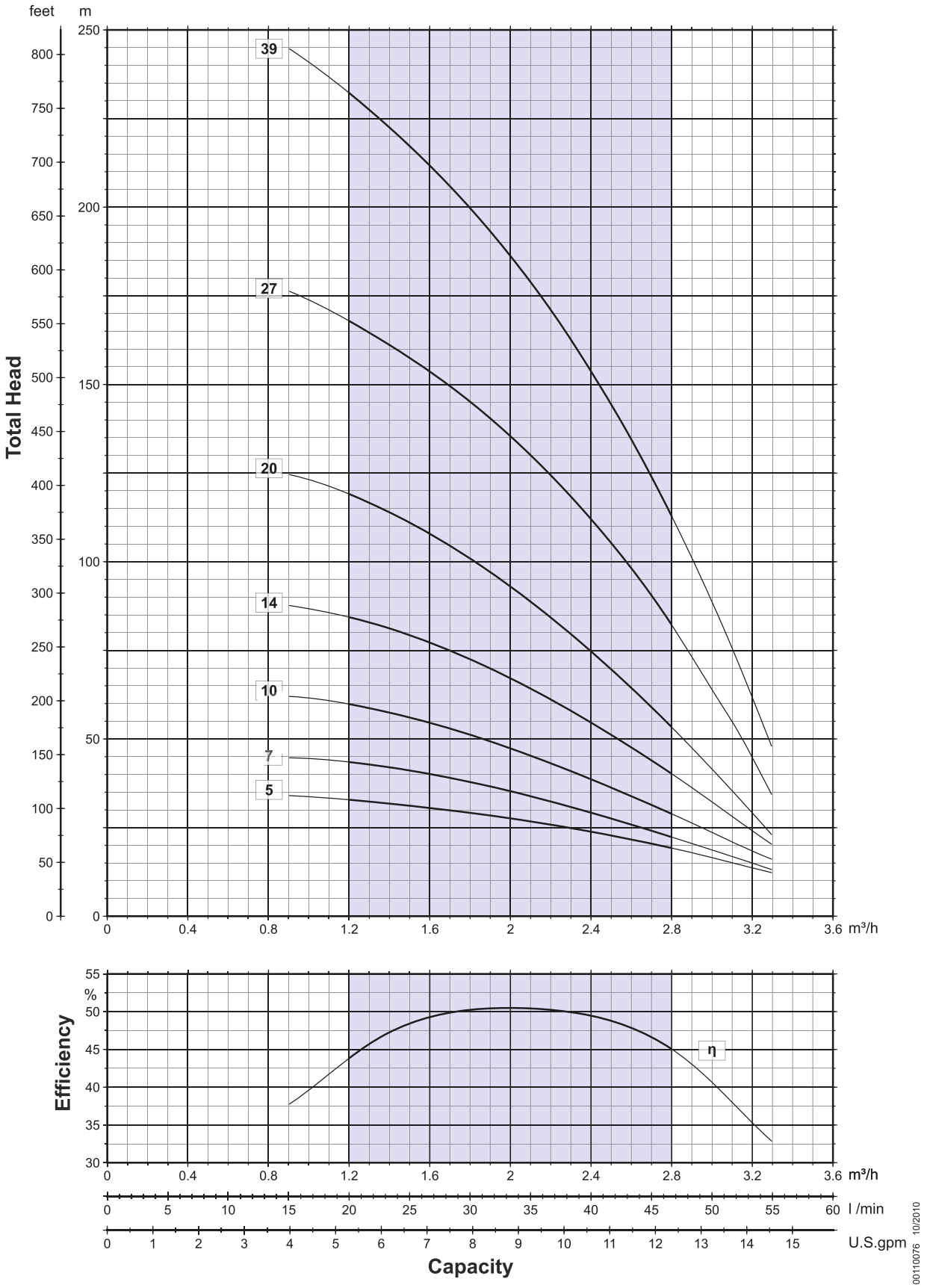

feet
m
Total Head
42
38
26
19
13
10
m³/h
Efficiency
%
η
m³/h
l /min
U.S.gpm
Capacity
00110076 10/2010

Pumps with Encapsulated Motor

Pump model type	Motor			Dimensions [mm]								Weight [Kg]				
	Type	kW	HP	L 1~	L 3~	E 1~	E 3~	B	$Ø_C$	$Ø_D$	$Ø_{MAX}$	1~ Motor	3~ Motor	Pump	1~ Total	3~ Total
VMS4 2/5	E4	0,37	0,5	520	520	242	242	278	93	1 ¼"	95	8,6	8,2	3,0	11,6	11,2
VMS4 2/7	E4	0,37	0,5	556	556	242	242	314	93	1 ¼"	95	8,6	8,2	3,4	12,0	11,6
VMS4 2/10	E4	0,55	0,75	637	637	270	270	367	93	1 ¼"	95	9,5	9,5	4,0	13,5	13,5
VMS4 2/14	E4	0,75	1	736	736	298	298	438	93	1 ¼"	95	10,9	10,9	4,6	15,5	15,5
VMS4 2/20	E4	1,1	1,5	991	944	449	402	542	93	1 ¼"	95	11,6	17,3	15,0	26,6	32,3
VMS4 2/27	E4	1,5	2	1173	1144	487	449	695	93	1 ¼"	95	13,5	19,5	17,3	30,8	36,8
VMS4 2/39	E4	2,2	3	1498	1421	564	487	934	93	1 ¼"	95	14,7	25,0	19,5	34,2	44,5

Dimensions

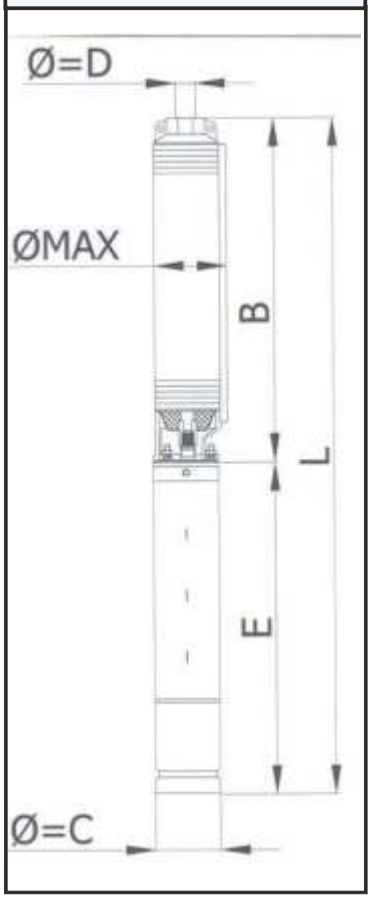


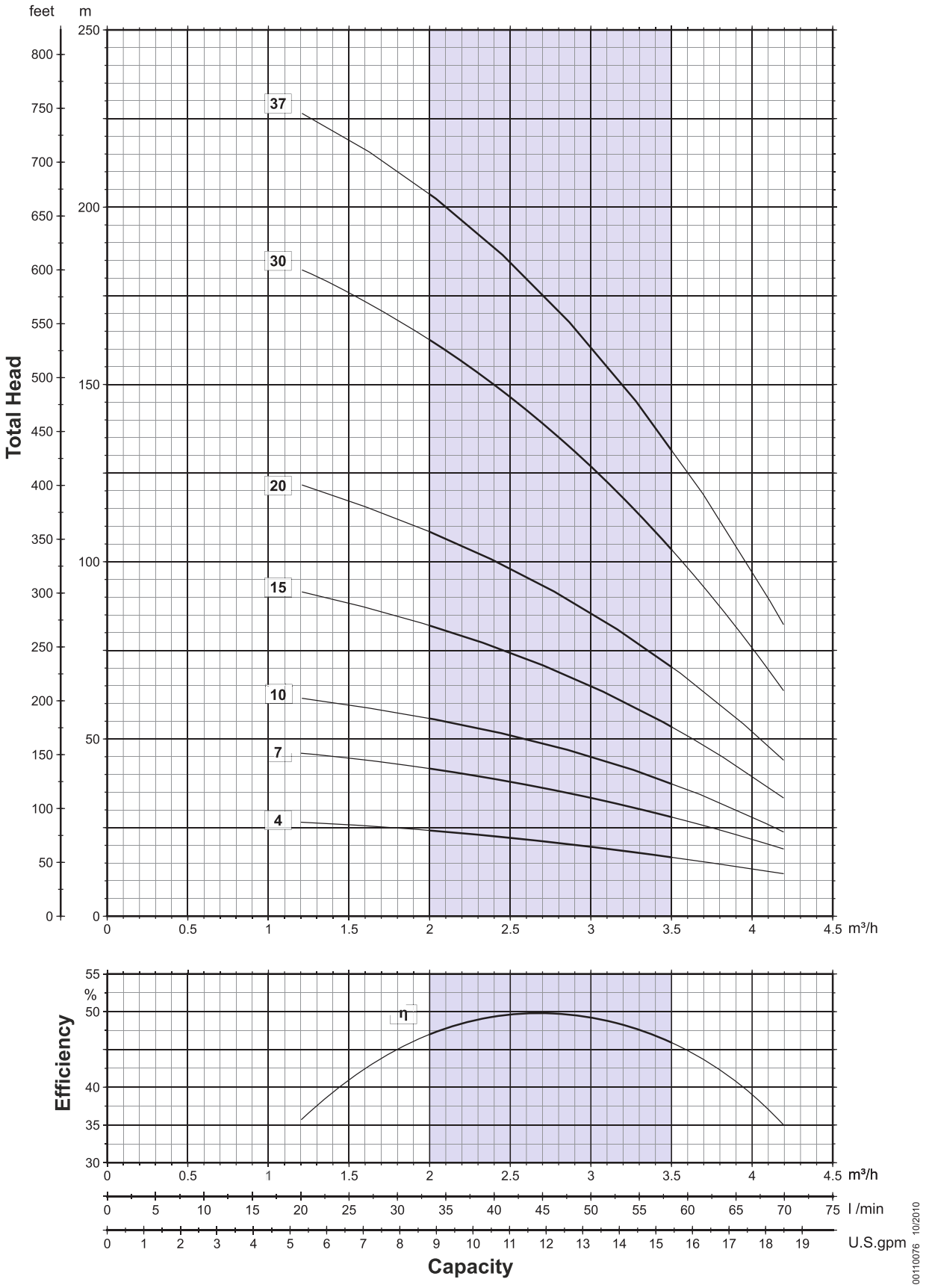

feet
m
Total Head
39
27
20
14
10
7
5
m³/h
Efficiency
%
η
m³/h
l /min
U.S.gpm
Capacity
00110076 10/2010

Pumps with Encapsulated Motor

Pump model type	Motor			Dimensions [mm]								Weight [Kg]				
	Type	kW	HP	L 1~	L 3~	E 1~	E 3~	B	$Ø_C$	$Ø_D$	$Ø_{MAX}$	1~ Motor	3~ Motor	Pump	1~ Total	3~ Total
VMS4 3/4	E4	0,37	0,5	519	519	242	242	277	93	1 ¼"	95	8,6	8,2	2,9	11,5	11,1
VMS4 3/7	E4	0,55	0,75	613	613	270	270	343	93	1 ¼"	95	9,5	9,5	3,5	13,0	13,0
VMS4 3/10	E4	0,75	1	708	708	298	298	410	93	1 ¼"	95	10,9	10,9	4,2	15,1	15,1
VMS4 3/15	E4	1,1	1,5	967	920	449	402	518	93	1 ¼"	95	17,3	15,0	5,0	22,3	20,0
VMS4 3/20	E4	1,5	2	1115	1077	487	449	628	93	1 ¼"	95	19,5	17,3	6,0	25,5	23,3
VMS4 3/30	E4	2,2	3	1440	1363	564	487	876	93	1 ¼"	95	25,0	19,5	8,6	33,6	28,1
VMS4 3/37	E4	3	4	-	1624	-	564	1060	93	1 ¼"	95	-	25,0	10,2	-	35,5

Dimensions

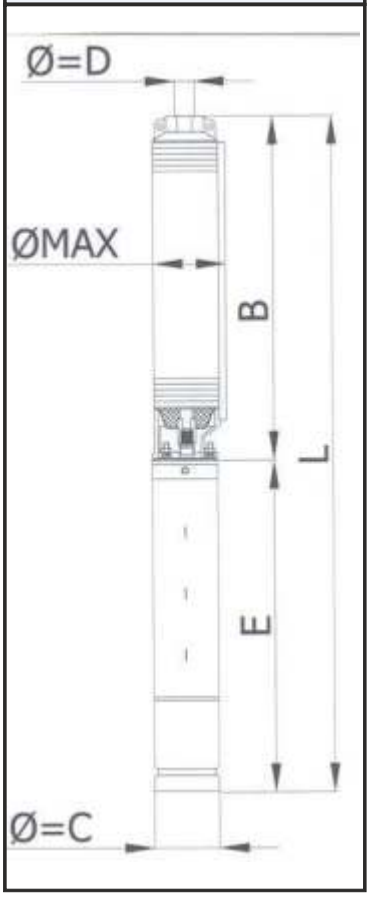


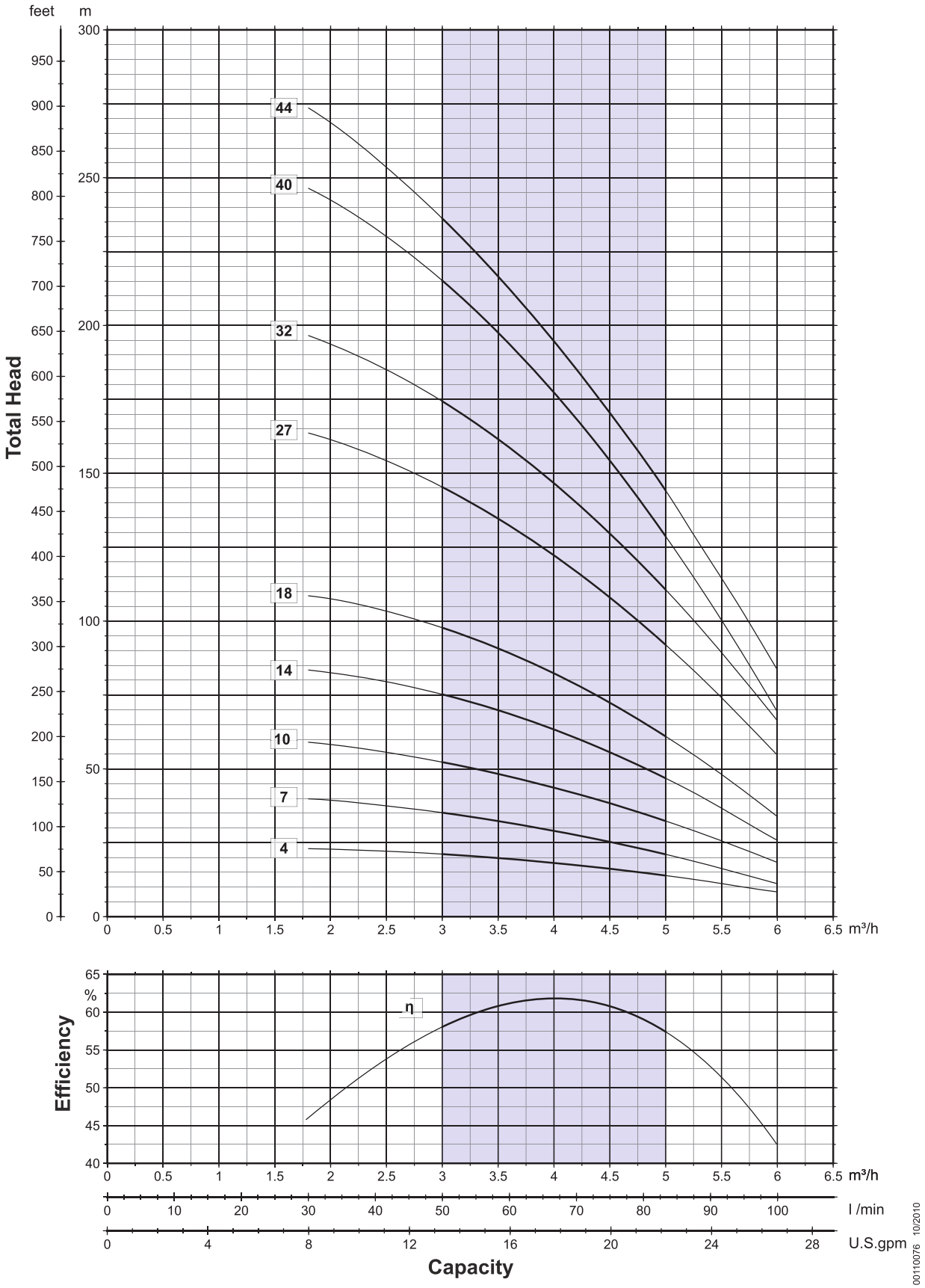

feet
m
Total Head
37
30
20
15
10
7
4
m³/h
Efficiency
%
η
m³/h
l /min
U.S.gpm
Capacity
00110076 10/2010

Pumps with Encapsulated Motor

Pump model type	Motor			Dimensions [mm]								Weight [Kg]				
	Type	kW	HP	L 1~	L 3~	E 1~	E 3~	B	$Ø_C$	$Ø_D$	$Ø_{MAX}$	1~ Motor	3~ Motor	Pump	1~ Total	3~ Total
VMS4 4/4	E4	0,37	0,5	520	520	242	242	278	93	1 ¼"	95	8,6	8,2	2,9	11,5	11,1
VMS4 4/7	E4	0,55	0,75	613	613	270	270	343	93	1 ¼"	95	9,5	9,5	3,5	13,0	13,0
VMS4 4/10	E4	0,75	1	709	709	298	298	411	93	1 ¼"	95	10,9	10,9	4,2	15,1	15,1
VMS4 4/14	E4	1,1	1,5	947	900	449	402	498	93	1 ¼"	95	17,3	15,0	5,1	22,4	20,1
VMS4 4/18	E4	1,5	2	1075	1037	487	449	588	93	1 ¼"	95	19,5	17,3	5,9	25,4	23,2
VMS4 4/27	E4	2,2	3	1348	1271	564	487	784	93	1 ¼"	95	25,0	19,5	7,2	32,2	26,7
VMS4 4/32	E4	3	4	-	1517	-	564	953	93	1 ¼"	95	-	25,0	9,2	-	34,2
VMS4 4/40	E4	3,7	5	-	1692	-	564	1128	93	1 ¼"	95	-	25,0	10,5	-	35,5
VMS4 4/44	E4	4	5,5	-	1846	-	627	1219	93	1 ¼"	95	-	27,7	11,8	-	39,5

Dimensions

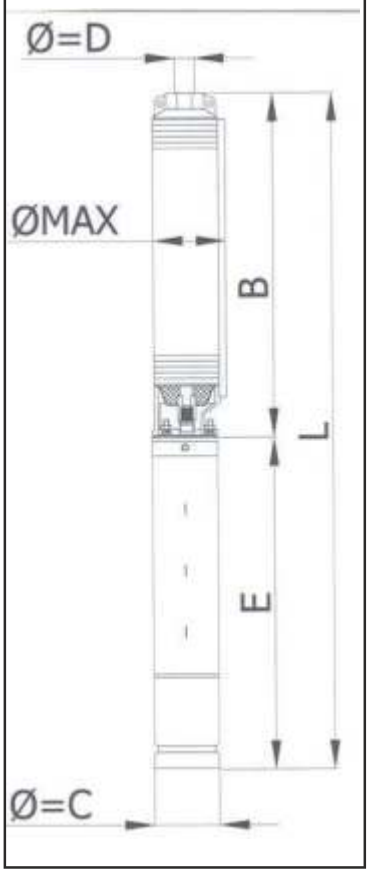


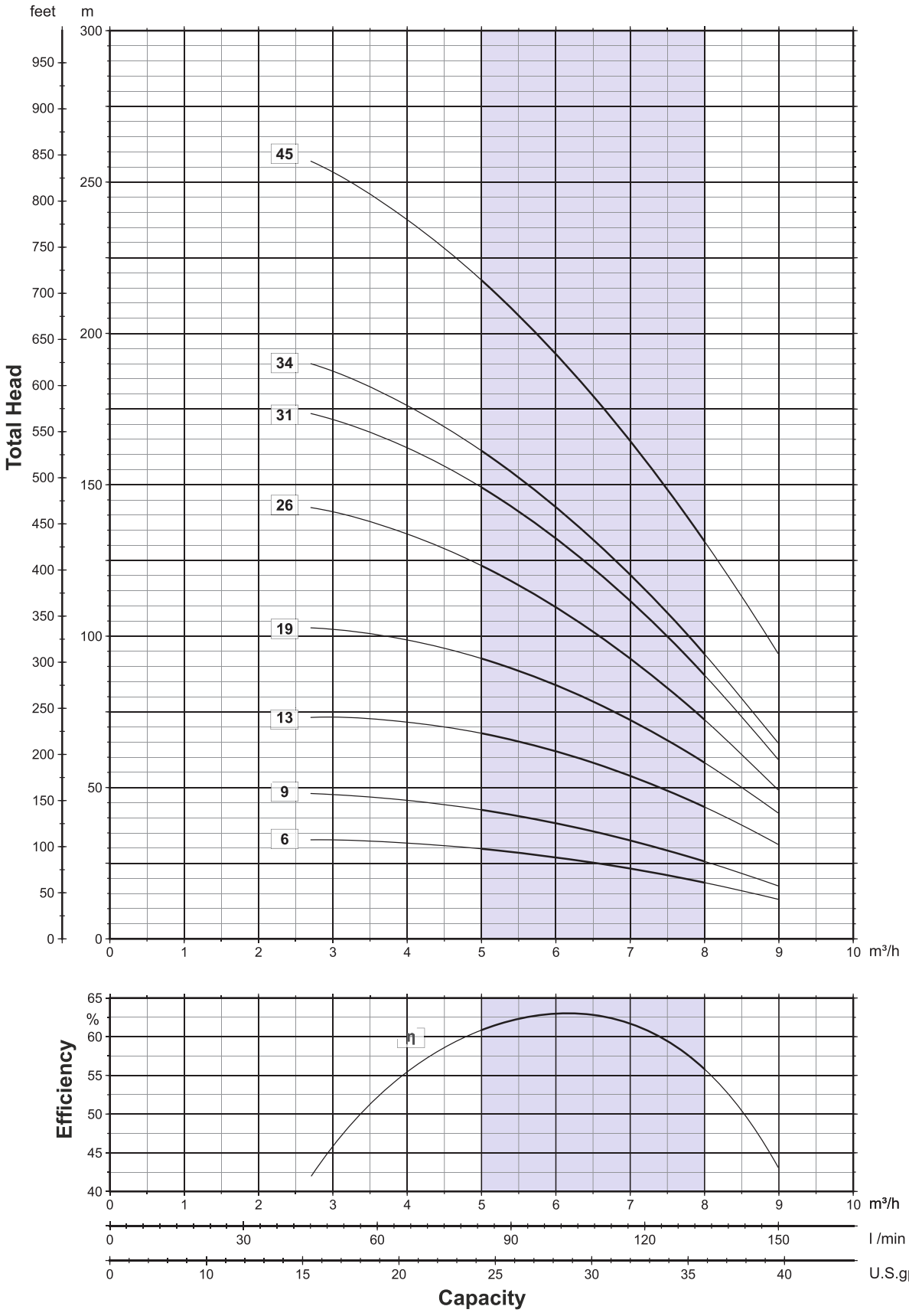

feet
m
Total Head
44
40
32
27
18
14
10
7
4
m³/h
Efficiency
%
η
l /min
U.S.gpm
Capacity
00110076 10/2010

Pumps with Encapsulated Motor

Pump model type	Motor			Dimensions [mm]								Weight [Kg]				
	Type	kW	HP	L 1~	L 3~	E 1~	E 3~	B	$Ø_C$	$Ø_D$	$Ø_{MAX}$	1~ Motor	3~ Motor	Pump	1~ Total	3~ Total
VMS4 6/6	E4	0,75	1	669	669	298	298	371	93	2"	95	10,9	10,9	3,2	14,1	14,1
VMS4 6/9	E4	1,1	1,5	910	863	449	402	461	93	2"	95	17,3	15,0	4,0	21,3	19,0
VMS4 6/13	E4	1,5	2	1099	1061	487	449	612	93	2"	95	19,5	17,3	5,3	24,8	22,6
VMS4 6/19	E4	2,2	3	1385	1308	564	487	821	93	2"	95	25,0	19,5	7,3	32,3	26,8
VMS4 6/26	E4	3	4	-	1595	-	564	1031	93	2"	95	-	25,0	8,7	-	33,7
VMS4 6/31	E4	3,7	5	-	1776	-	564	1212	93	2"	95	-	25,0	10,2	-	35,2
VMS4 6/34	E4	4	5,5	-	1931	-	627	1303	93	2"	95	-	27,7	10,9	-	38,6
VMS4 6/45	E4	5,5	7,5	-	2347	-	716	1631	93	2"	95	-	31,8	14,1	-	45,9

Dimensions

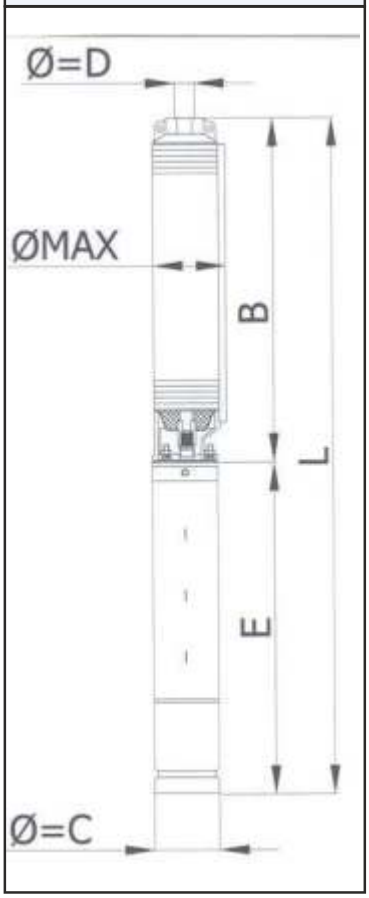


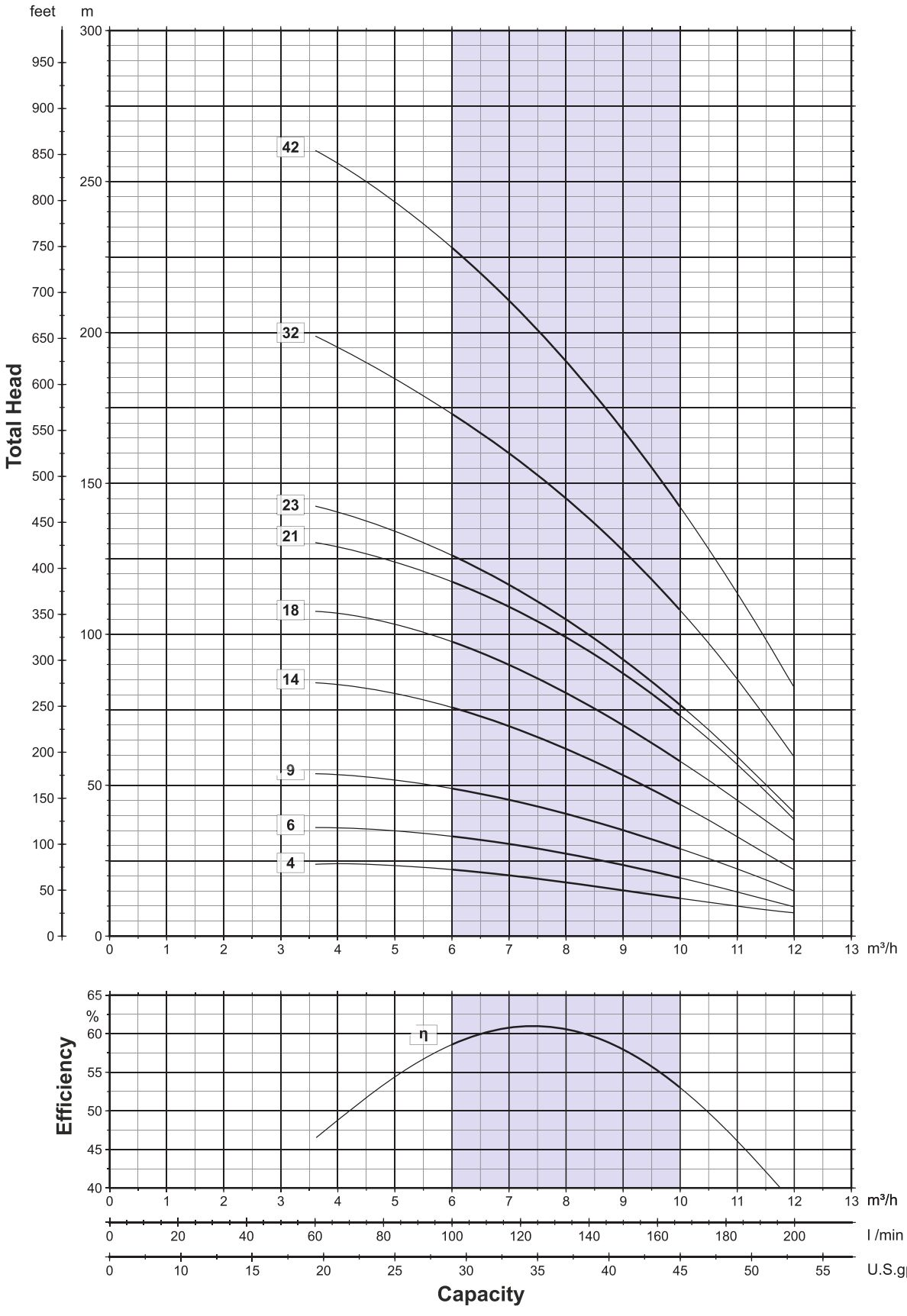

feet
m
Total Head
45
34
31
26
19
13
9
6
m³/h
Efficiency
%
η
m³/h
l /min
U.S.gpm
Capacity
00110076 10/2010

Pumps with Encapsulated Motor

Pump model type	Motor			Dimensions [mm]								Weight [Kg]				
	Type	kW	HP	L 1~	L 3~	E 1~	E 3~	B	$Ø_C$	$Ø_D$	$Ø_{MAX}$	1~ Motor	3~ Motor	Pump	1~ Total	3~ Total
VMS4 8/4	E4	0,75	1	608	609	298	298	311	93	2"	95	10,9	10,9	2,9	13,8	13,8
VMS4 8/6	E4	1,1	1,5	820	773	449	402	371	93	2"	95	17,3	15,0	3,2	20,5	18,2
VMS4 8/9	E4	1,5	2	948	910	487	449	461	93	2"	95	19,5	17,3	4,0	23,5	21,3
VMS4 8/14	E4	2,2	3	1207	1130	564	487	643	93	2"	95	25,0	19,5	5,4	30,4	24,9
VMS4 8/18	E4	3	4	-	1357	-	564	793	93	2"	95	-	25,0	6,6	-	31,6
VMS4 8/21	E4	3,7	5	-	1447	-	564	883	93	2"	95	-	25,0	7,6	-	32,6
VMS4 8/23	E4	4	5,5	-	1570	-	627	943	93	2"	95	-	27,7	7,7	-	35,4
VMS4 8/32	E4	5,5	7,5	-	1961	-	716	1245	93	2"	95	-	31,8	10,1	-	41,9
VMS4 8/42	E4	7,5	10	-	2349	-	773	1576	93	2"	95	-	34,1	12,8	-	46,9

Dimensions

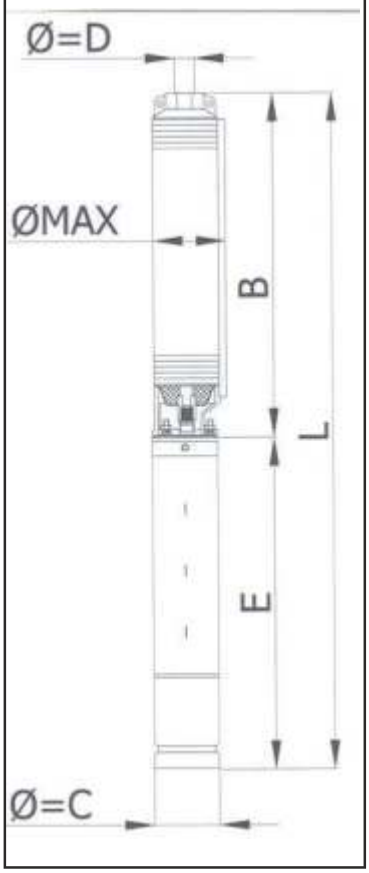


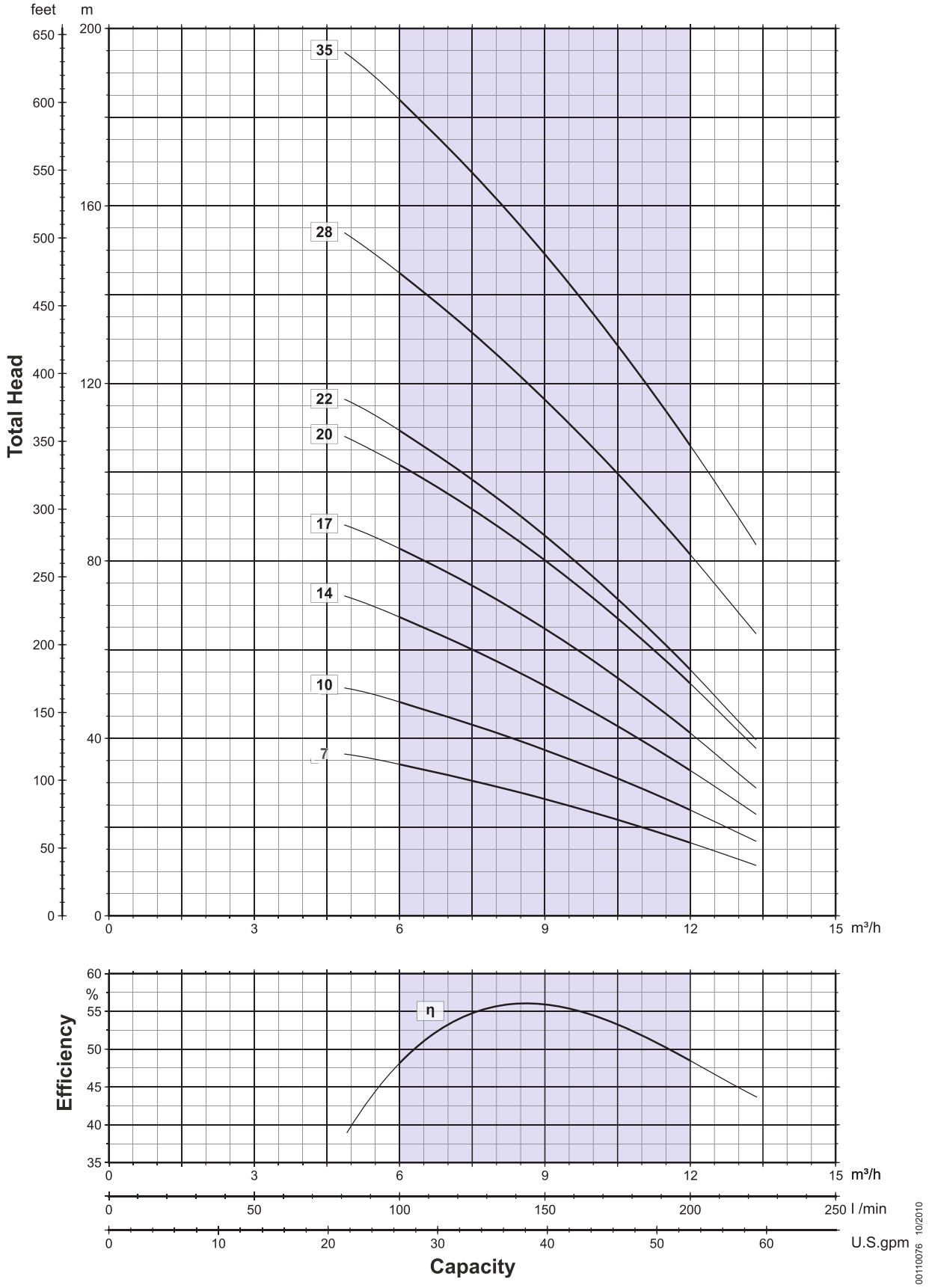

feet
m
Total Head
42
32
23
21
18
14
9
6
4
m³/h
Efficiency
%
η
m³/h
l /min
U.S.gpm
Capacity
00110076 10/2010

Pumps with Encapsulated Motor

Pump model type	Motor			Dimensions [mm]								Weight [Kg]				
	Type	kW	HP	L 1~	L 3~	E 1~	E 3~	B	$Ø_C$	$Ø_D$	$Ø_{MAX}$	1~ Motor	3~ Motor	Pump	1~ Total	3~ Total
VMS4 9/7	E4	1,1	1,5	989	942	449	402	540	93	2"	95	17,3	15,0	4,5	21,8	19,5
VMS4 9/10	E4	1,5	2	1260	1222	487	449	773	93	2"	95	19,5	17,3	5,7	25,2	23,0
VMS4 9/14	E4	2,2	3	1487	1410	564	487	923	93	2"	95	25,0	19,5	7,5	32,5	27,0
VMS4 9/17	E4	3	4	-	1666	-	564	1102	93	2"	95	-	25,0	8,8	-	33,8
VMS4 9/20	E4	3,7	5	-	1814	-	564	1250	93	2"	95	-	25,0	10,3	-	35,3
VMS4 9/22	E4	4	5,5	-	2012	-	627	1385	93	2"	95	-	27,7	11,3	-	39,0
VMS4 9/28	E4	5,5	7,5	-	2401	-	716	1685	93	2"	95	-	31,8	13,6	-	45,4
VMS4 9/35	E4	7,5	10,0	-	2843	-	773	2070	93	2"	95	-	34,1	16,6	-	50,7

Dimensions

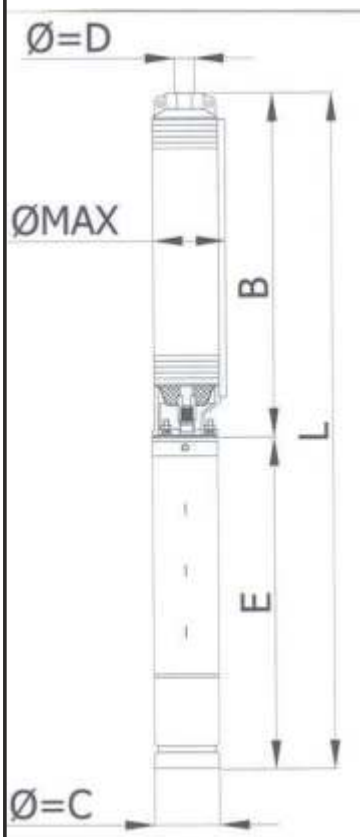


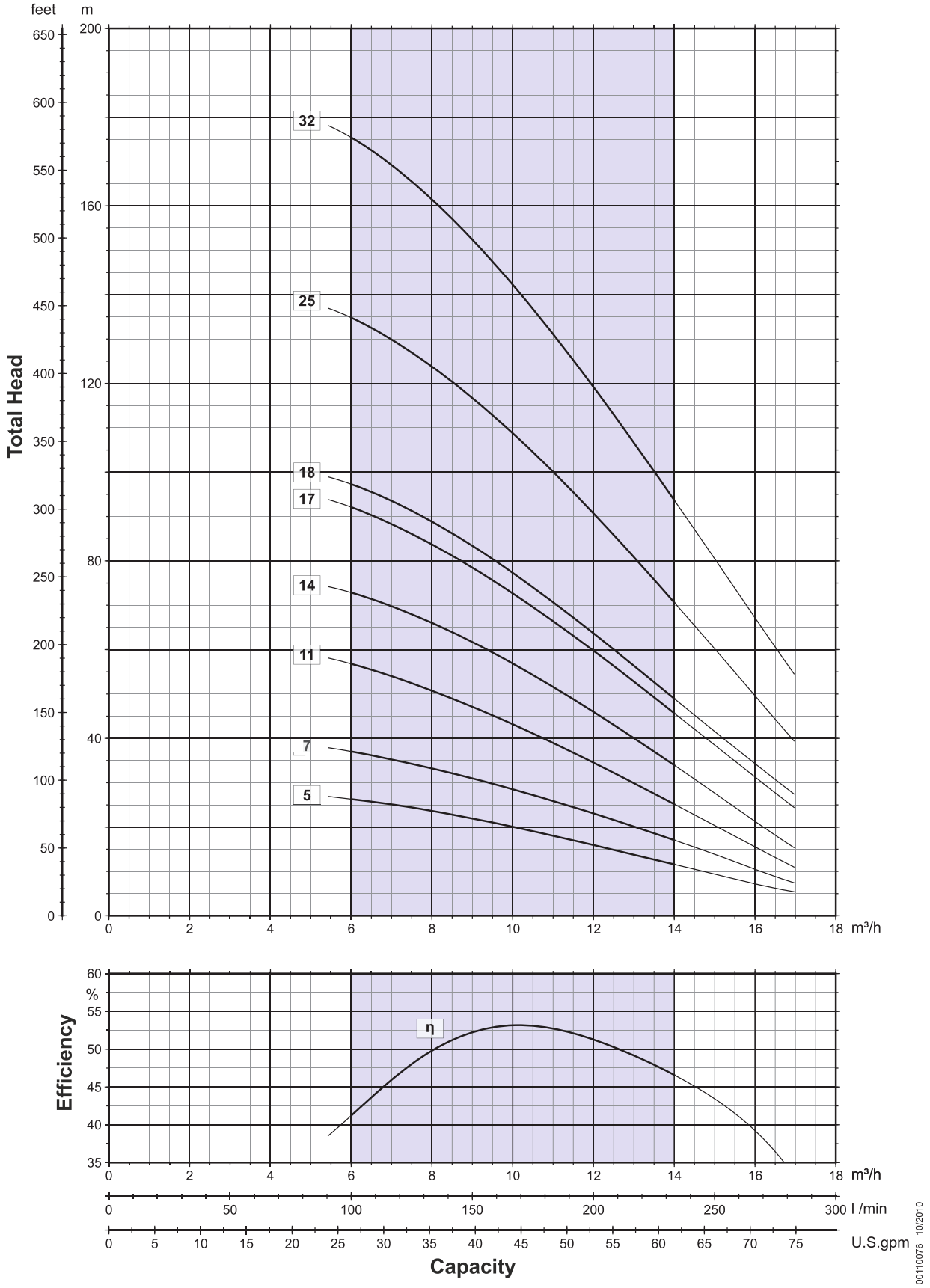

feet
m
Total Head
35
28
22
20
17
14
10
7
m³/h
Efficiency
%
η
m³/h
l /min
U.S.gpm
Capacity
00110076 10/2010

Pumps with Encapsulated Motor

Pump model type	Motor			Dimensions [mm]								Weight [Kg]				
	Type	kW	HP	L 1~	L 3~	E 1~	E 3~	B	$Ø_C$	$Ø_D$	$Ø_{MAX}$	1~ Motor	3~ Motor	Pump	1~ Total	3~ Total
VMS4 10/5	E4	1,1	1,5	889	842	449	402	440	93	2"	95	17,3	15,0	3,7	21,0	18,7
VMS4 10/7	E4	1,5	2	1028	990	487	449	541	93	2"	95	19,5	17,3	4,4	23,9	21,7
VMS4 10/11	E4	2,2	3	1337	1260	564	487	773	93	2"	95	25,0	19,5	6,3	31,3	25,8
VMS4 10/14	E4	3	4	-	1487	-	564	923	93	2"	95	-	25,0	7,6	-	32,6
VMS4 10/17	E4	3,7	5	-	1666	-	564	1102	93	2"	95	-	25,0	8,9	-	33,9
VMS4 10/18	E4	4	5,5	-	1780	-	627	1153	93	2"	95	-	27,7	9,4	-	37,1
VMS4 10/25	E4	5,5	7,5	-	2252	-	716	1536	93	2"	95	-	31,8	12,4	-	44,2
VMS4 10/32	E4	7,5	10	-	2691	-	773	1918	93	2"	95	-	34,1	15,8	-	49,9

Dimensions

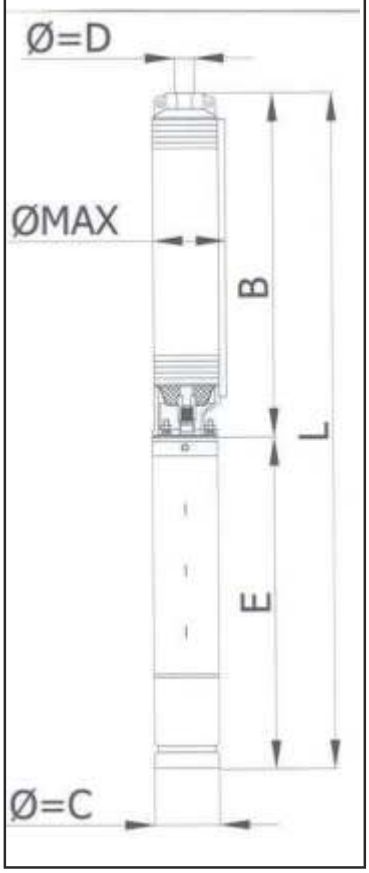


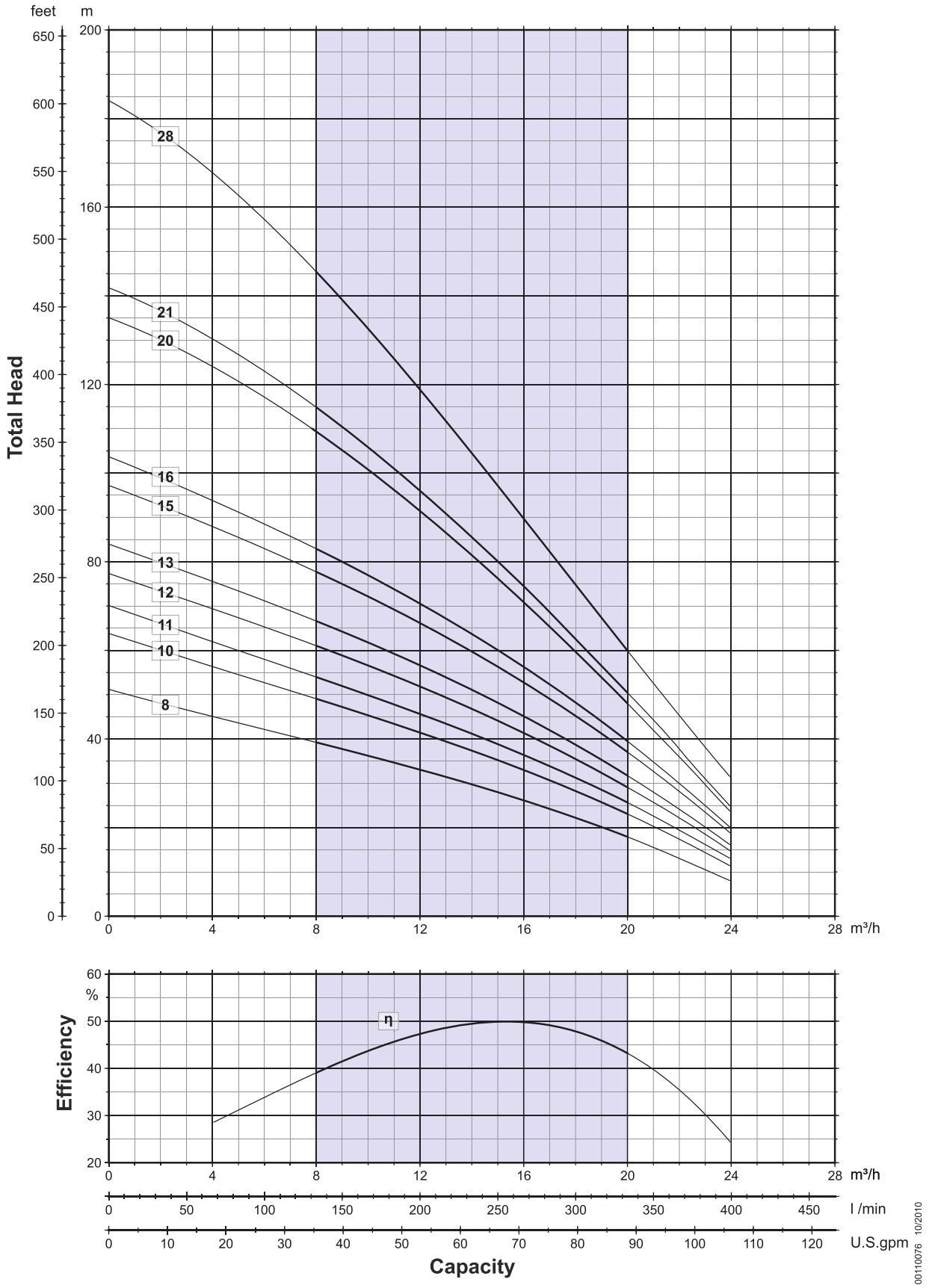

feet
m
Total Head
650
600
550
160
500
450
400
120
350
300
80
250
200
150
40
100
50
0
200
0
32
25
18
17
14
11
7
5
0
2
4
6
8
10
12
14
16
18
m³/h
Efficiency
60
%
55
50
45
40
35
η
0
50
100
150
200
250
300
l /min
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
U.S.gpm
Capacity
00110076 10/2010

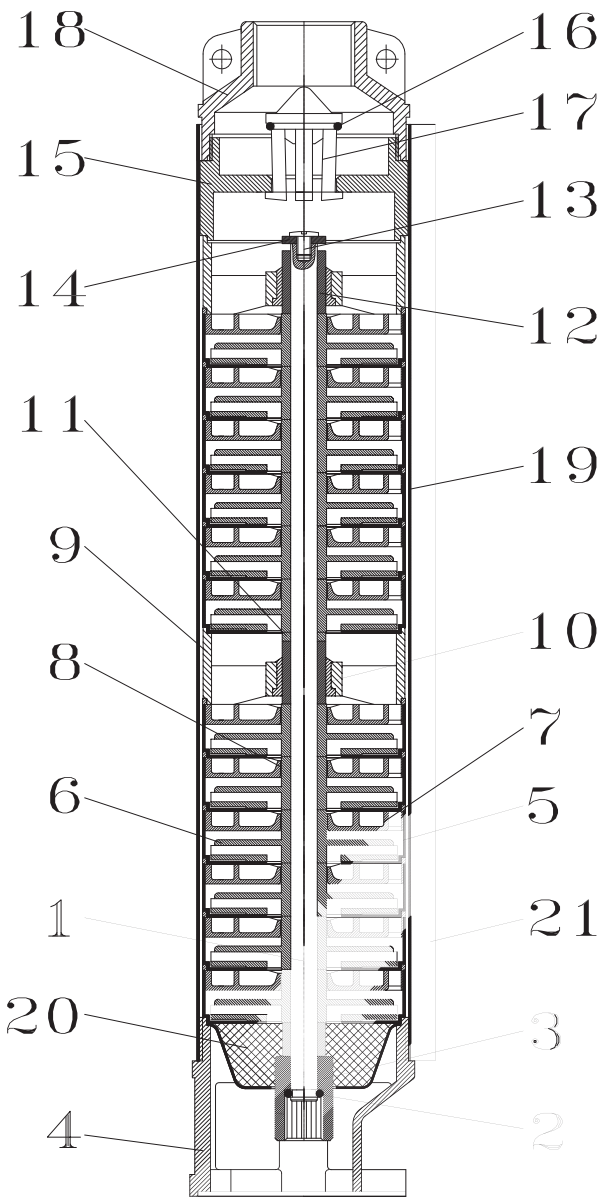
Pumps with Encapsulated Motor

Pump model type	Motor			Dimensions [mm]								Weight [Kg]				
	Type	kW	HP	L 1~	L 3~	E 1~	E 3~	B	$Ø_C$	$Ø_D$	$Ø_{MAX}$	1~ Motor	3~ Motor	Pump	1~ Total	3~ Total
VMS4 15/8	E4	2,2	3	1195	1175	509	489	686	93	2"	95	14,7	13,9	5,4	20,0	19,2
VMS4 15/10	E4	3	4	-	1381	-	548	833	93	2"	95	-	17,6	6,4	-	24,0
VMS4 15/11	E4	3	4	-	1455	-	548	907	93	2"	95	-	17,6	6,9	-	24,5
VMS4 15/12	E4	3	4	-	1529	-	548	981	93	2"	95	-	17,6	7,4	-	25,0
VMS4 15/13	E4	4	5,5	-	1672	-	618	1054	93	2"	95	-	20,9	8,0	-	28,9
VMS4 15/15	E4	4	5,5	-	1820	-	618	1202	93	2"	95	-	20,9	9,0	-	29,9
VMS4 15/16	E4	4	5,5	-	1893	-	618	1275	93	2"	95	-	20,9	9,5	-	30,4
VMS4 15/20	E4	5,5	7,5	-	2258	-	688	1570	93	2"	95	-	24,0	11,6	-	35,6
VMS4 15/21	E4	7,5	10	-	2331	-	688	1643	93	2"	95	-	24,0	12,1	-	36,1
VMS4 15/28	E4	7,5	10	-	2927	-	768	2159	93	2"	95	-	28,0	15,8	-	43,8

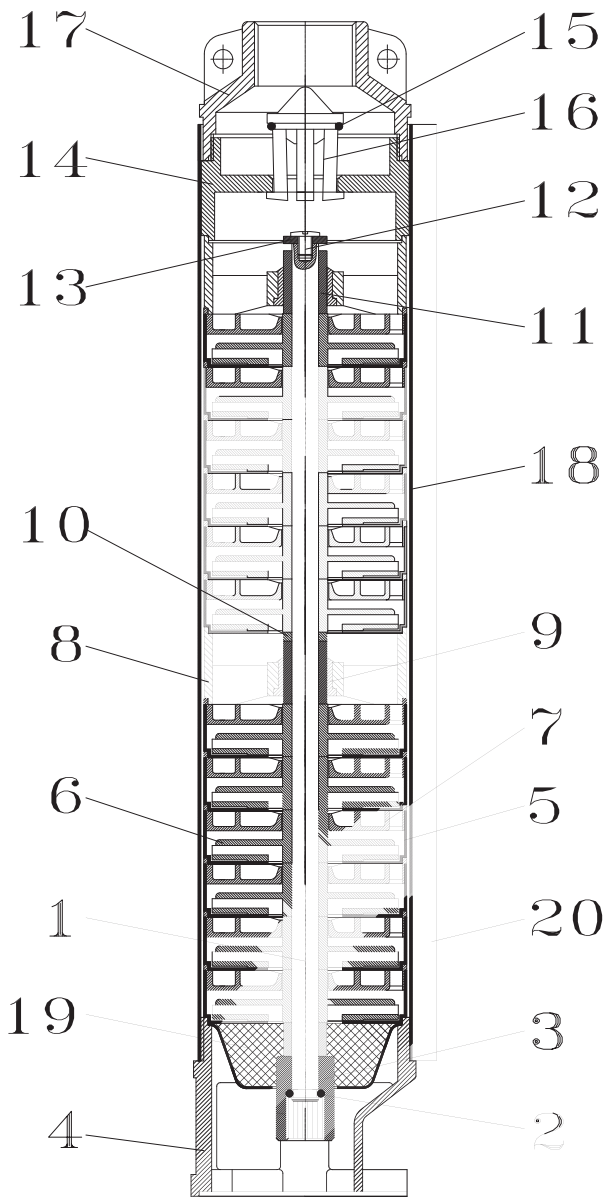
Dimensions




feet
m
Total Head
650
600
550
500
450
400
350
300
250
200
150
100
50
0
200
160
120
80
40
0
28
21
20
16
15
13
12
11
10
8
0
4
8
12
16
20
24
28
m³/h
Efficiency
%
60
50
40
30
20
η
l /min
0
50
100
150
200
250
300
350
400
450
U.S.gpm
0
10
20
30
40
50
60
70
80
90
100
110
120
Capacity
00110076 10/2010



Ref. N.	Description
1	Shaft
2	Retainer
3	Coupling
4	Suction End
5	Body
6	Impeller
7	Diffuser
8	Bearing
9	Bearing Housing
10	Bearing
11	Bushing
12	Bushing
13	Screw
14	Washer
15	Valve Housing
16	O-ring
17	Valve
18	Valve Body 11 TPI
19	Housing
20	Strainer
21	Cable Guard



Ref. N.	Description
1	Shaft
2	Retainer
3	Coupling
4	Suction End
5	Body
6	Impeller
7	Diffuser
8	Bearing Housing
9	Bearing
10	Bushing
11	Bushing
12	Screw
13	Washer
14	Valve Housing
15	O-ring
16	Valve
17	Valve Body 11 TPI
18	Housing
19	Strainer
20	Cable Guard

Submersible Motors
Product Overview

4" Encapsulated Motors
4" Super Stainless 3 Phase



SUBMERSIBLE MOTORS

These 4" encapsulated three phase motors, manufactured in ISO 9001 certified facilities, are built for dependable operation in 4" diameter or larger water wells. The motor offer you a maintenance free long life submersible pump application.
The motor is filled with a special FES93 fluid, providing frost protection down to -40°C storage temperature. A special diaphragm ensures pressure compensation inside the motor.

FEATURES

- Hermetically sealed stator. Anti track, self healing stator resin prevents motor burn out
- High efficiency electrical design (low operation cost, cooler winding temperature)
- Removable "Water Bloc™" lead connector
- Cable material according to drinking water regulations (KTW approved)
- Water lubricated radial and thrust bearings
- All motors prefilled and 100% tested.
  Non contaminating, FES93- filled design

SPECIFICATIONS

- 0,37 - 7,5kW
- 4" NEMA flange
- Degree of protection: IP68
- Insulation: Cl. B
- Rated ambient temp.: 30°C
- Cooling flow: Motors 2,2 kW and larger: min. 8 cm/s
- Starts/h: 20
- Mounting: vertical/horizontal
- Voltage tolerance: 380-415V/50Hz, 460V/60Hz; -10% / +6% U_N [380-415V = (380-10%) – (415+6%)]
- Motor protection: Select thermal overloads according to EN 60947-4-1,Trip time <10 s at 5 x I_N

AVAILABLE OPTIONS

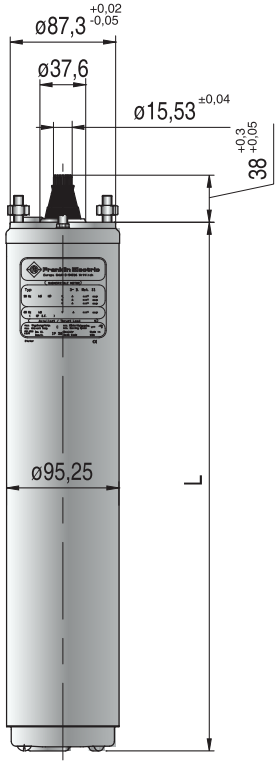
- Motor cable VDE / KTW approved (1,5m; 2,5m; special lengths available)
- Motors with factory- installed lead in Single Packing
- Special voltages on request
- YΔ - start (pos. of cables 90°) in motors 316SS on request
- Motor complete in AISI 316SS with SiC seal

Three-Phase 4" Encapsulated Motors 400V

P_N		Thrust	n_N	I_N	I_A	η	cos φ	T_N	T_A	L	Weight
[kW]	[HP]	F [N]	[min^{-1}]	[A]	[A]	[%]	[%]	[Nm]	[Nm]	[mm]	[kg]
0,37	0,5	3000	2870	1,1	5,41	66	0,74	1,22	3,00	214,2	7,2
0,55	0,75	3000	2870	1,6	7,4	68	0,74	1,82	4,20	228,2	7,7
0,75	1	3000	2865	2,0	7,0	70	0,77	2,49	6,70	248,2	8,7
1,1	1,5	3000	2850	2,8	16,0	74	0,78	3,67	11,33	282,6	10,2
1,5	2	3000	2855	3,9	20,7	73	0,78	5,00	14,10	306,6	11,2
2,2	3	3000	2845	5,5	29,8	75	0,77	7,37	22,0	338,6	12,6
		6500*	2845	5,5	29,8	75	0,77	7,37	22,0	422,2	15,0
3,0	4	3000	2845	7,5	42,0	76	0,77	10,06	31,93	393,6	15,0
		6500*	2845	7,5	42,0	76	0,77	10,06	31,93	477,2	17,0
3,7	5	6500*	2840	9,0	52,3	78	0,78	12,5	41,5	520,2	19,1
4,0	5,5	6500*	2840	9,9	57,0	78	0,77	13,4	44,0	543,2	20,0
5,5	7,5	6500*	2865	12,6	77,2	79	0,81	18,3	56,5	652,5	26,6
7,5	10	6500*	2855	17,1	99,3	79	0,81	25,1	73,1	730,5	30,6

* High Thrust Version

Dimensions



Accessories

Motor Control



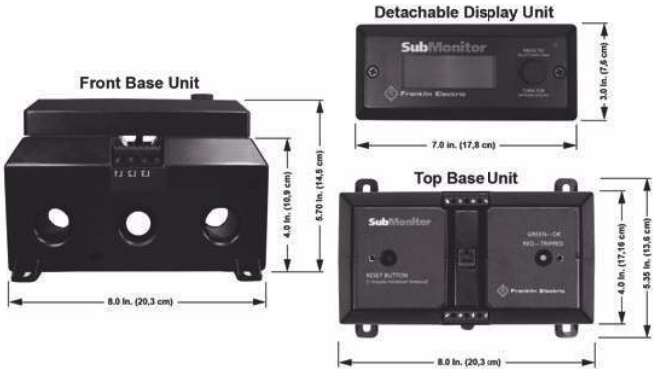
SUBMONITOR MOTOR PROTECTION

The SubMonitor is designed to protect 3-phase pumps with horsepower ratings between 3 and 200 Hp. Current, voltage and motor temperature are monitored using three integrated current transformers. A digital display provides current and voltage readings for all three legs and allows the user to set up the SubMonitor quickly and easily. The SubMonitor is the latest innovation in 3-phase pump protection from Franklin Electric. Using state-of-the-art technology, the SubMonitor provides the ultimate protection for a pump and motor. There is simply no better way to protect a large 3-phase submersible pump investment than with a SubMonitor. It's the protection device that can sense overheating straight from the motor windings! And it is made by the world leader in submersible motors - Franklin Electric.

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



Motor Control

SubStartSC® Single phase Submersible Motor Starter

The SubStartSC® range covers all PSC motors from 0.25kW to 2.2kW for all voltages. Ergonomic design, attention to detail and unique features make the SubStartSC® 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 designed

Mounting	Easy wall mounting without destroying the protection rating of the enclosure.
Wiring	Sufficient space is provided for ease of wiring.
Enclosure	
Protection	IP54
Material	IN
Components	
ON/OFF switch	Iluminated integral ON/OFF switch for ease of power
Circuit breaker	Thermal circuit breaker for protection of the motor.
Capacitor	High quality motor run capacitor for long life
Terminal board	Terminal board suitable for ease of reliable connections
Cable glands	Cable glands to ensure IP54 rating

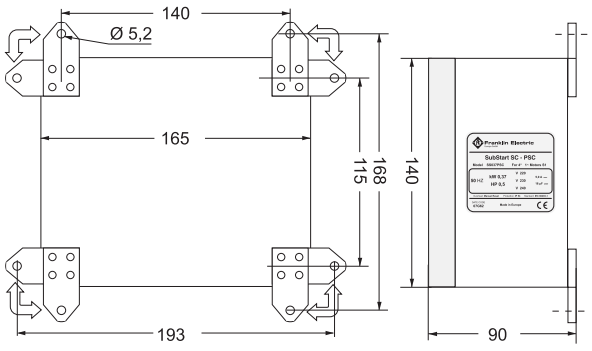
Technical Specifications

Mechanical	
Protection level	IP54
External dimensions	168 x 142 x 85mm
Weight	0,6 - 1,0 kg
Mounting	Wall mounting (mounting hardware provided)
Temperature	-5°C - +40°C
Humidity	50% at 55°C (without condensation)
Electrical	
Voltage	220 - 240V; - 1 / +10 %; 50Hz single phase
Current	16 A
Power	0,25 - 2,2 kW
Standards	
IEC 60439-1	

Submersible Motor Starter Specification

Part Number[1]	Type[2]	Motor rating (kW)	Nominal Current[3] (A)	Maximal expected current[4] (A)	Capacitor (µF) 450V ac
284 623 3510	SS025SC	0,25	2,5	8,4	12,5
284 624 3510	SS037SC	0,37	3,4	11,2	16
284 625 3510	SS055SC	0,55	4,3	16,1	20
284 626 3510	SS075SC	0,75	5,8	21,1	35
284 627 3510	SS110SC	1,10	8,6	31,5	40
284 628 3510	SS150SC	1,50	10,6	35,4	50
284 629 3510	SS220SC	2,20	16,0	54,2	70

Dimensions



NOTES:

1. Can be used with both 220-230V and 230-240V PSC motor ranges.
2. Type indicates motor power rating and motor type.
3. Nominal supply current at nominal voltage
4. Motor starting current under nominal conditions

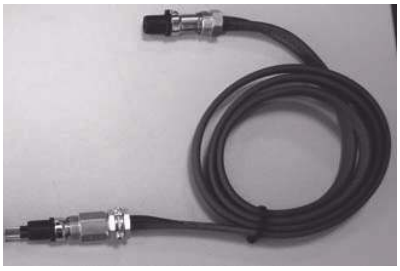
Termination Kit 4"

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

- 2-wire / 3-wire
- 1,5m / 2,5m Lead lenght
- with / without Strain relief
- Max. current 16 Apms.
- KTW approved



Corrosion Protection 4"

APPLICATION

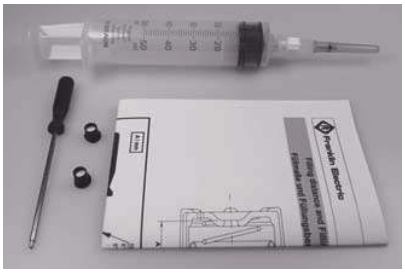
The sacrificial anode attaches to the bottom end bell of Franklin Electric 4" Super Stainless submersible motors. Since cast iron is more chemically active than the metals that make up the motor and pump, it is the cast iron that reacts to the corrosive elements in the water. This results in longer motor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

IO **O**



Motor Filling Kit

This kit offers all tools for control the level of the engine filling liquid and to fill up if necessary!



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.





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