EBARA

EVM

VERTICAL MULTISTAGE PUMPS in AISI 304

Vertical multistage centrifugal pumps completely made of stainless steel AISI 304. Reliable, quiet and easy to maintain. Suitable for municipal, Industrial and agricultural applications e.g. Fire fighting, water boosting (WRAS approved) water treatment plants, irrigation, hot and cold water movement for heating systems, cooling and airconditioners, especially suitable for boiler feed due to the robust construction of the pumps. IEC standard motors are used on all models.

SPECIFICATIONS

- Maximum working pressure up to 25 bar
- Liquid temperature: from –15°C up to +120°C

MATERIALS

- Pump body, external casing, casing cover, impellers, diffusers, bearing sleeve, coupling guard and bolts in contact with liquid AISI 304 ("G" version for EVM 30-60: Bottom casing in cast iron).
- Tie-rods and bolts not in contact with liquid in zinc coated steel
- Shaft in AISI 316
- Bearing in contact with liquid in tungsten-carbide
- Bracket and base in cast iron
- Mechnical seal in SiC/Sic/FPM

TECHNICAL DATA

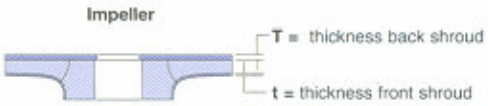
- Asincronous 2 poles motor
- Insulation class F
- Protection IP 55
- Three-phase standard voltage: 220-265/380-460V ±6% (up to 4 kW)
  380-460VΔ ±6% (above 4 kW)

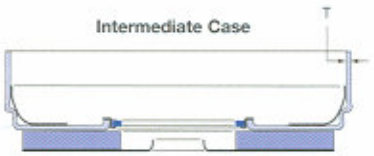
EBARA

EVM

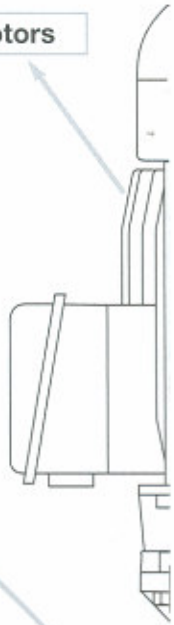
VERTICAL MULTISTAGE PUMPS in AISI 304

The EBARA EVM vertical multistage pumps offer technically advanced designs to meet market demands including hot water applications.
Unique bulge forming process produces rugged construction with increased wall thickness and assures component integrity.

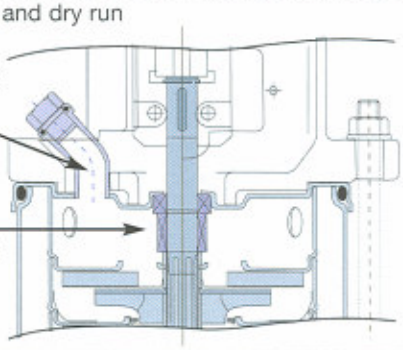




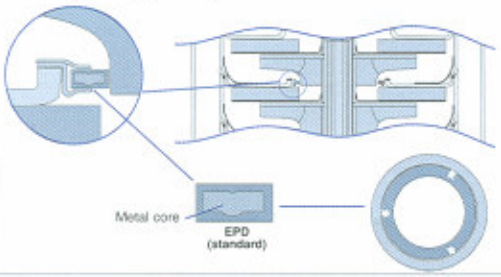
Standard IEC motors



Air vent
in casing cover allows proper venting preventing air entrapment and dry run



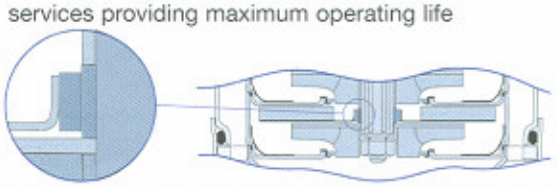
Liner ring
is a self-aligning, floating design constructed of EPD bonded to stainless steel to prevent swelling at high temperatures

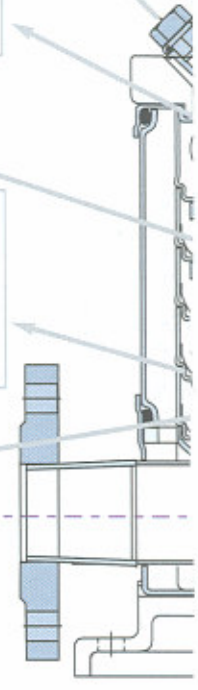


Mechanical seal
Silicon/Carbon/FPM mechanical shaft seal

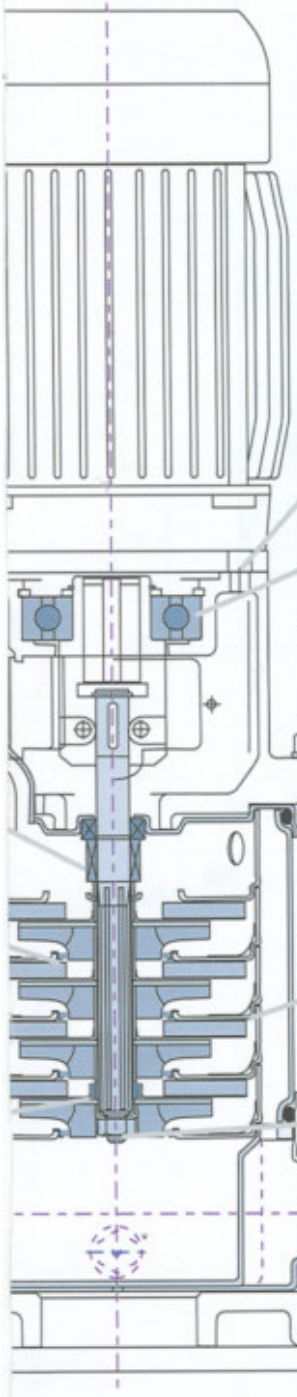
Positive Sealing
O-rings between intermediate casings provide positive sealing

Tungsten carbide lower pump bearings
and sleeves are standard construction for all services providing maximum operating life

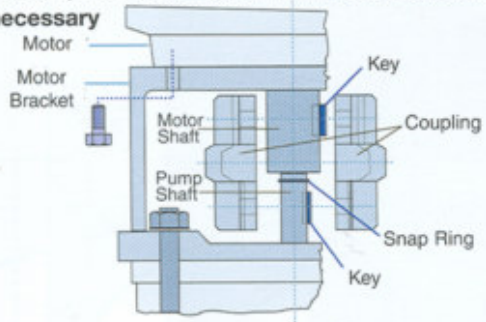




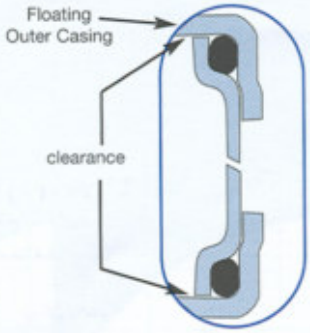
All wetted parts are constructed of high quality stainless steel.
EBARA's robust construction extends to critical internal components such as the impellers. The back shrouds are as much as three times thicker than the front shrouds while front shrouds are 20% to 60% thicker than comparable designs.



Direct drive
pump and motor shafts are keyed for positive, reliable power transmission with **no adjustments necessary**



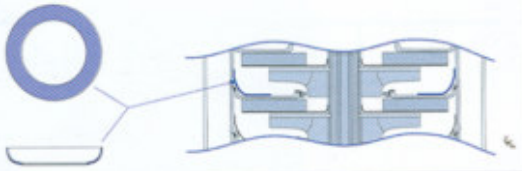
Floating outer casing
allows for thermal expansion in hot water applications and is flexible preventing deformation due to pressure fluctuations



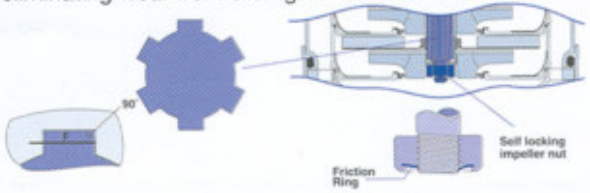
Thrust Bearing
built-in on 3 HP and larger pumps to handle axial thrust loads

Tie bolts

Anti-erosion measures
a dish-shaped insert is fitted to the intermediate casing designed to promote smooth flow and prevent high velocity areas that accelerate erosion

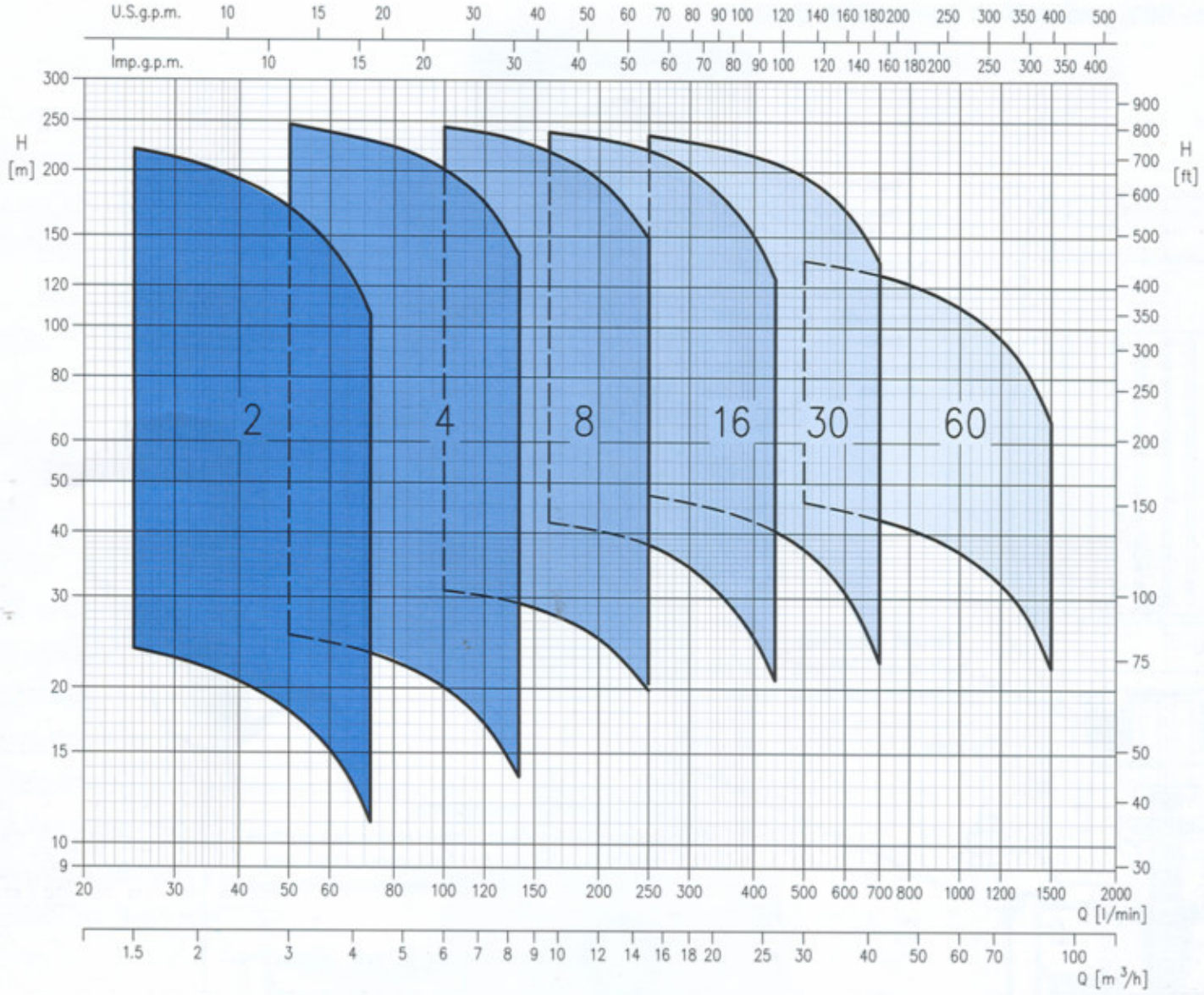


Square-edge spline shaft
provides positive location and drive of impellers eliminating wear from sliding between faces



Dimensions & flanges
installation is to market accepted dimensions for easy upgrade of existing installations

PERFORMANCE TABLE EVM 2-4-8-16-30-60



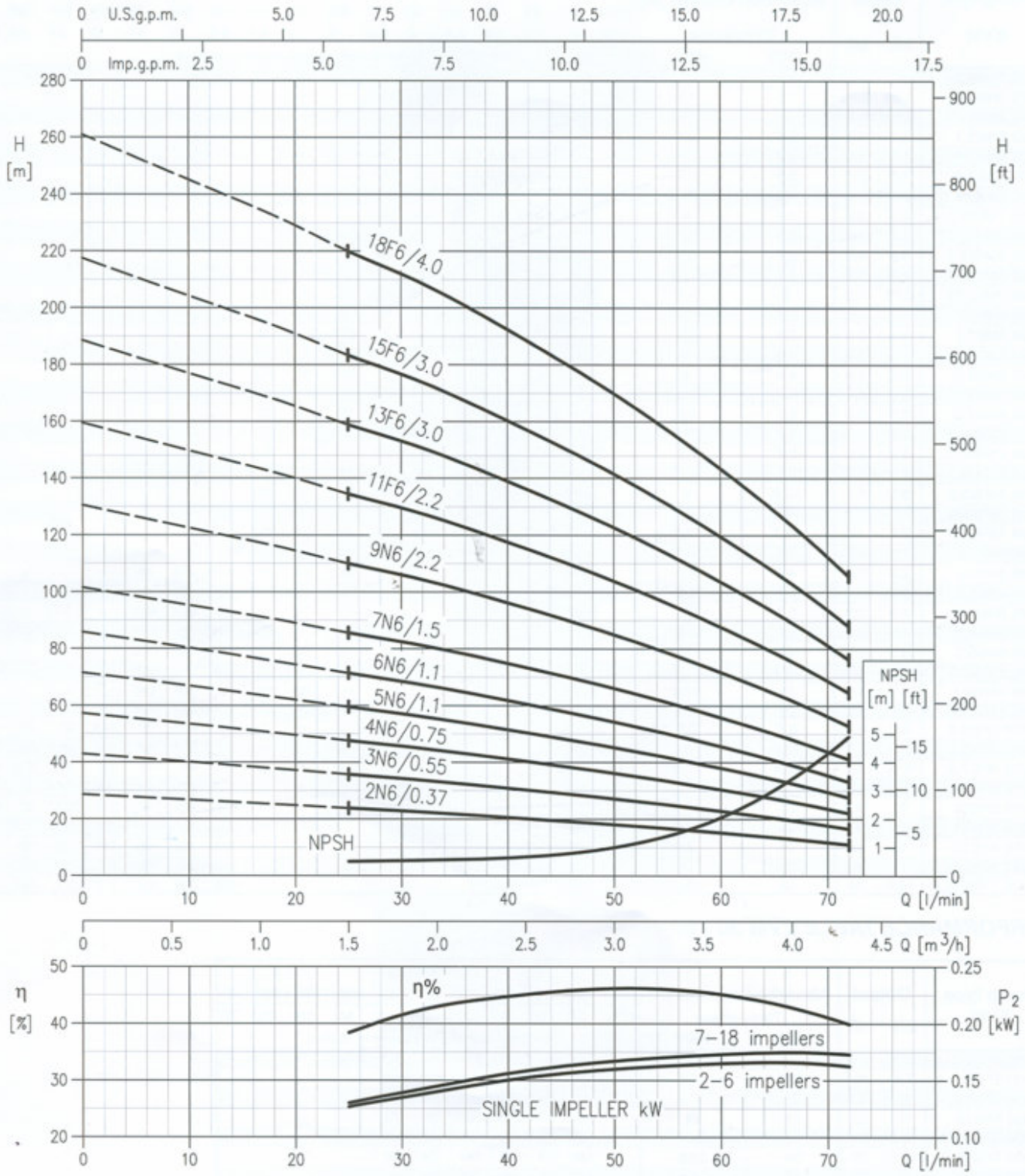
PERFORMANCE TABLE EVM 2-16

Pump type EVM	Output		Absorbed current [A]		Q=Capacity															
					l/min	0	25	30	40	50	72	100	120	140	160	200	250	300	350	400	440
	kW	HP	Three-phase		m³/h	0	1,5	1,8	2,4	3	4,3	6	7,2	8,4	9,6	12	15	18	21	24	26,4
			380V	460V	H=Total manometric head in meters																
EVM2 2N6/0.37	0,37	0.55	1,2	1		28.5	24	23	20.5	18.1	11	-	-	-	-	-	-	-	-	-	-
EVM2 3N6/0.55	0,55	0.75	1,7	1,4		43	35.5	34	31	27	16.5	-	-	-	-	-	-	-	-	-	-
EVM2 4N6/0.75	0,75	1.0	2	1,7		57	47.5	45.5	41	36	22	-	-	-	-	-	-	-	-	-	-
EVM2 5N6/1.1	1,1	1.5	2,6	2,1		71.5	59.5	57	51.5	45	27.5	-	-	-	-	-	-	-	-	-	-
EVM2 6N6/1.1	1,1	1.5	2,6	2,1		86	71.5	68.5	62	54	33	-	-	-	-	-	-	-	-	-	-
EVM2 7N6/1.5	1,5	2.0	3,5	2,9		102	85.5	82.5	75	66	41	-	-	-	-	-	-	-	-	-	-
EVM2 9N6/2.2	2,2	3.0	4,9	4		131	110	106	96	85	52.5	-	-	-	-	-	-	-	-	-	-
EVM2 11F6/2.2	2,2	3.0	4,9	4		160	134	130	118	104	64.5	-	-	-	-	-	-	-	-	-	-
EVM2 13F6/3.0	3.0	4.0	6,7	5,5		189	159	153	139	123	76	-	-	-	-	-	-	-	-	-	-
EVM2 15F6/3.0	3.0	4.0	6,7	5,5		218	183	177	160	142	88	-	-	-	-	-	-	-	-	-	-
EVM2 18F6/4.0	4.0	5.5	8,7	7,2		261	220	212	192	170	105	-	-	-	-	-	-	-	-	-	-
EVM4 2N6/0.75	0.75	1.0	2	1,7		28.5	-	-	-	25.5	23.5	20	17.1	13.5	-	-	-	-	-	-	-
EVM4 3N6/1.1	1.1	1.5	2,6	2,1		43	-	-	-	38	35	30	25.5	20	-	-	-	-	-	-	-
EVM4 4N6/1.5	1.5	2.0	3,5	2,9		58	-	-	-	52	48	42.5	36.5	29	-	-	-	-	-	-	-
EVM4 5N6/2.2	2.2	3.0	4,9	4		72.5	-	-	-	65	60	53	46	36.5	-	-	-	-	-	-	-
EVM4 6N6/2.2	2.2	3.0	4,9	4		87	-	-	-	77.5	72	63.5	55	43.5	-	-	-	-	-	-	-
EVM4 7N6/3.0	3.0	4.0	6,7	5,5		101	-	-	-	90.5	84.5	74	64	51	-	-	-	-	-	-	-
EVM4 8N6/3.0	3.0	4.0	6,7	5,5		116	-	-	-	104	96.5	85	73	58	-	-	-	-	-	-	-
EVM4 10N6/4.0	4.0	5.5	8,7	7,2		145	-	-	-	130	120	106	91.5	72.5	-	-	-	-	-	-	-
EVM4 11F6/4.0	4.0	5.5	8,7	7,2		159	-	-	-	142	132	117	101	79.5	-	-	-	-	-	-	-
EVM4 12F6/4.0	4.0	5.5	8,7	7,2		174	-	-	-	155	144	127	110	87	-	-	-	-	-	-	-
EVM4 14F6/5.5	5.5	7.5	10,6	9		202	-	-	-	181	169	148	128	102	-	-	-	-	-	-	-
EVM4 16F6/5.5	5.5	7.5	10,6	9		231	-	-	-	207	193	170	146	116	-	-	-	-	-	-	-
EVM4 19F6/7.5	7.5	10	13,4	11,6		275	-	-	-	246	229	201	174	138	-	-	-	-	-	-	-
EVM8 2N6/1.5	1.5	2.0	3,5	2,9		32	-	-	-	-	-	31	30	29	28	25	19.9	-	-	-	-
EVM8 3N6/2.2	2.2	3.0	4,9	4,0		48	-	-	-	-	-	46.5	45	44	42	37.5	30	-	-	-	-
EVM8 4N6/3.0	3.0	4.0	6,7	5,5		64	-	-	-	-	-	62	60	58.5	56	50	40	-	-	-	-
EVM8 5N6/4.0	4.0	5.5	8,7	7,2		80	-	-	-	-	-	77.5	75	73	70	62.5	49.5	-	-	-	-
EVM8 6N6/4.0	4.0	5.5	8,7	7,2		96	-	-	-	-	-	93	90	87.5	84	75	59.5	-	-	-	-
EVM8 8N6/5.5	5.5	7.5	10,6	9		128	-	-	-	-	-	124	120	117	112	100	79.5	-	-	-	-
EVM8 11F6/7.5	7.5	10	13,4	11,6		174	-	-	-	-	-	167	164	158	150	133	102	-	-	-	-
EVM8 14F6/11	11	15	21	17,9		221	-	-	-	-	-	213	208	200	191	169	130	-	-	-	-
EVM8 16F6/11	11	15	21	17,9		253	-	-	-	-	-	244	237	229	218	193	149	-	-	-	-
EVM16 2F6/3.0	3.0	4.0	6,7	5,5		45	-	-	-	-	-	-	-	-	42	40.5	38	34.5	30	25	21
EVM16 3F6/5.5	5.5	7.5	10,6	9		68	-	-	-	-	-	-	-	-	63	60.5	57	51.5	45	38	31
EVM16 4F6/7.5	7.5	10	13,4	11,6		90.5	-	-	-	-	-	-	-	-	84	81	76	69	60	50.5	41.5
EVM16 5F6/7.5	7.5	10	13,4	11,6		113	-	-	-	-	-	-	-	-	105	101	95	86	75	63	52
EVM16 6F6/11	11	14.5	21	17,9		139	-	-	-	-	-	-	-	-	130	126	120	110	96.5	82	67.5
EVM16 7F6/11	11	14.5	21	17,9		163	-	-	-	-	-	-	-	-	152	147	140	128	113	95.5	79
EVM16 8F6/15	15	20	28	24		186	-	-	-	-	-	-	-	-	173	168	160	147	129	109	90
EVM16 10F6/15	15	20	28	24		232	-	-	-	-	-	-	-	-	217	211	200	183	161	137	113
EVM16 11F6/18.5	18.5	25	34	28,8		256	-	-	-	-	-	-	-	-	238	232	218	202	177	150	124

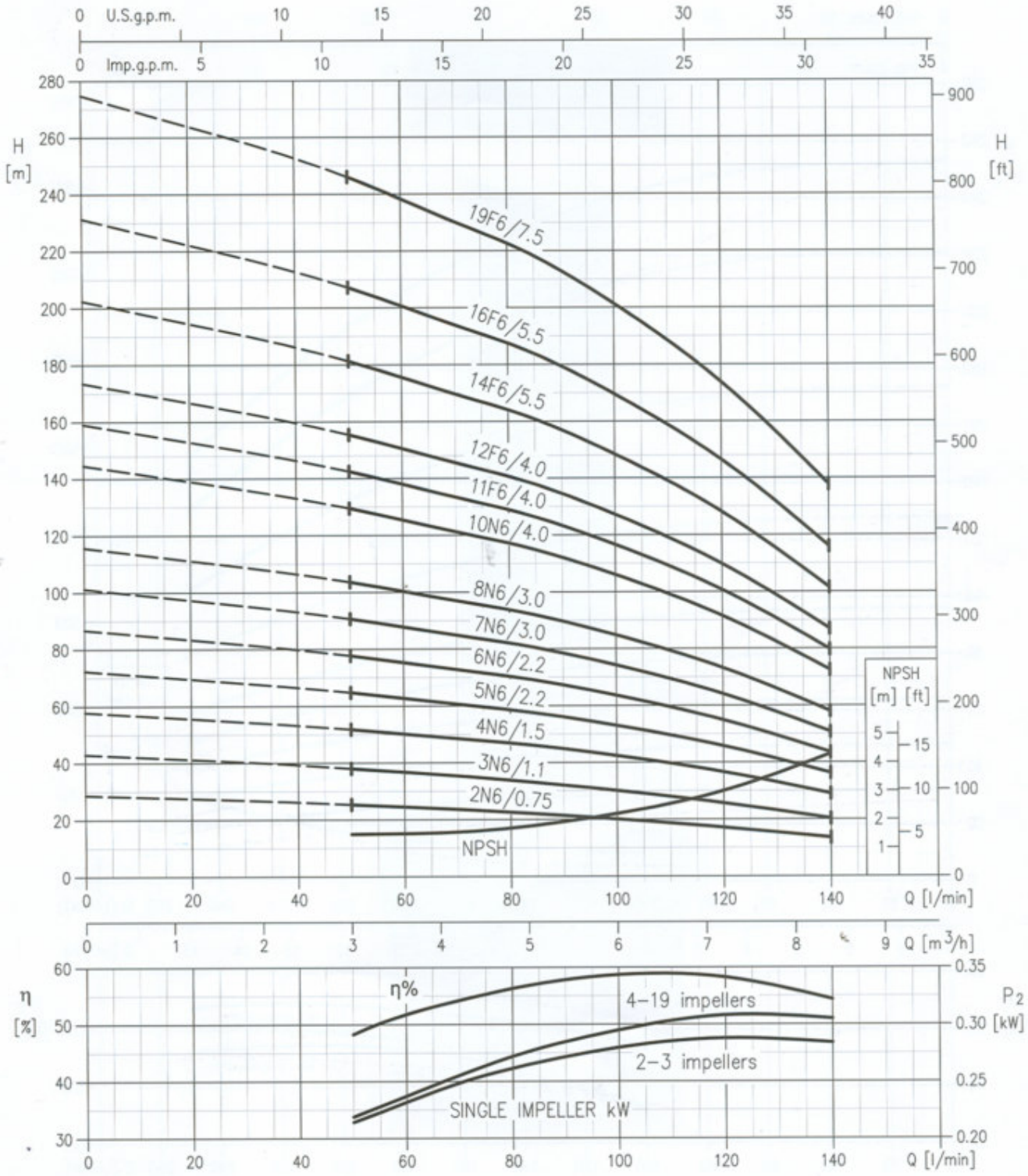
PERFORMANCE TABLE EVM 30 - 60

Pump type EVM	Output		Absorbed current [A]		Q=Capacity									
					l/min	0	250	400	500	600	700	900	1100	1300	1500
	kW	HP	Three-phase		m³/h	0	15	24	30	36	42	54	66	78	90
			380V	460V	H=Total manometric head in meters										
EVM30 2F6/5.5	5.5	7.5	10,6	9		52	47.5	42	37.5	31	22.5	-	-	-	-
EVM30 3F6/7.5	7.5	10	13,4	11,6		78	71	63.5	56	46.2	34	-	-	-	-
EVM30 4F6/11	11	14.5	21	17,9		108	101	91.5	82	70	54	-	-	-	-
EVM30 5F6/15	15	20	28	24		140	131	118	106	91	72	-	-	-	-
EVM30 6F6/18.5	18.5	25	34	28,8		164	155	139	125	107	85	-	-	-	-
EVM30 7F6/18.5	18.5	25	34	28,8		188	178	161	145	124	98	-	-	-	-
EVM30 8F6/22	22	30	41	34,4		220	209	188	170	146	117	-	-	-	-
EVM30 9F6/30	30	40	54	50		249	235	215	196	169	134	-	-	-	-
EVM60 2F6/11	11	15	21	17,9		49	-	-	46	44.5	42.5	39	34.5	29	22
EVM60 3F6/15	15	20	28	24		72	-	-	66.5	64.5	62	56.5	50	42	31
EVM60 4F6/18.5	18.5	25	34	28,8		93	-	-	86.5	83.5	80.5	73	64.5	54	40
EVM60 5F6/22	22	30	41	34,4		115	-	-	107	104	100	91	80	67	50
EVM60 6F6/30	30	40	54	50		145	-	-	135	131	127	116	103	87	66

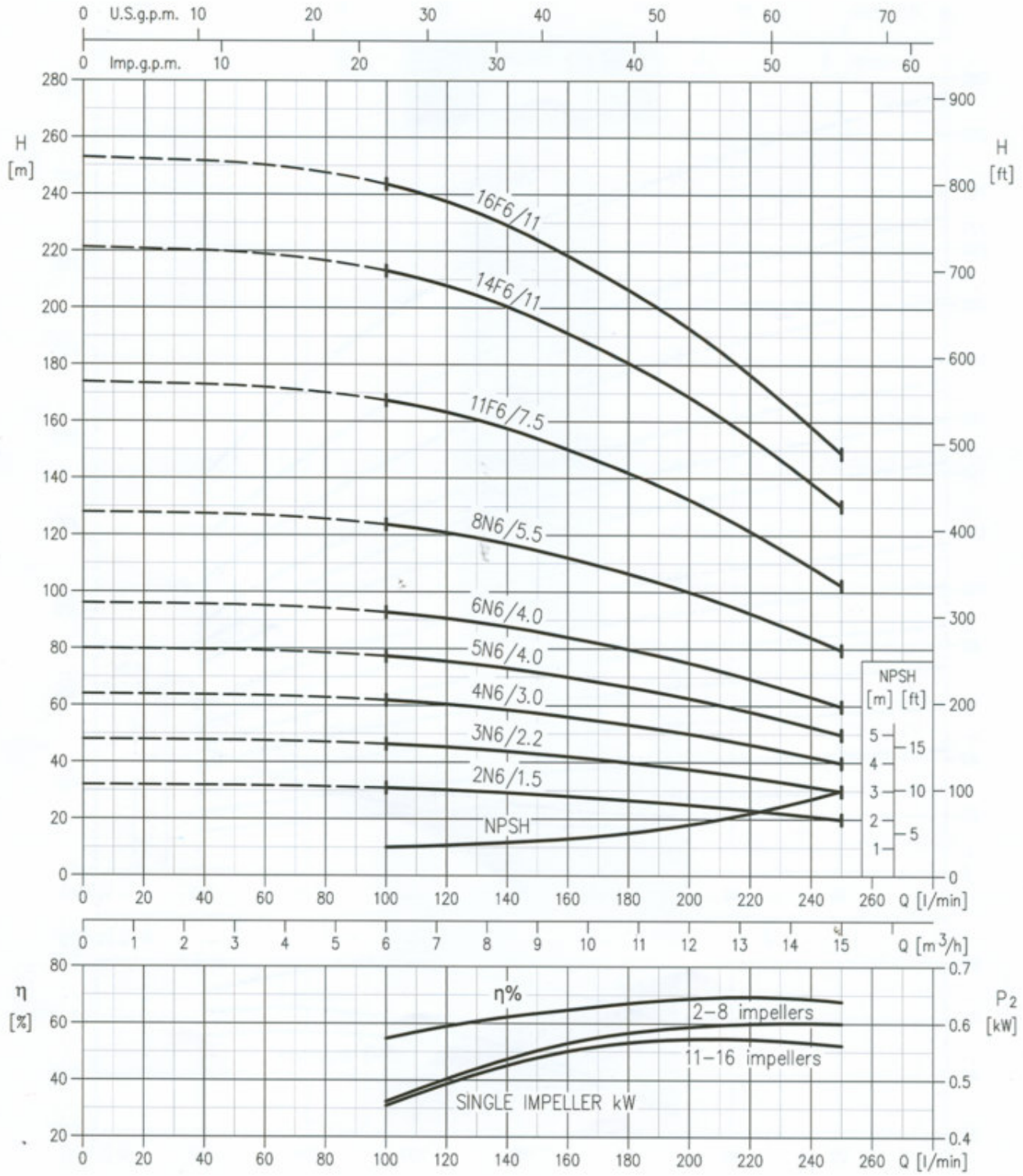
PERFORMANCE CURVES EVM2 series *(according to ISO 9906 Annex A)*



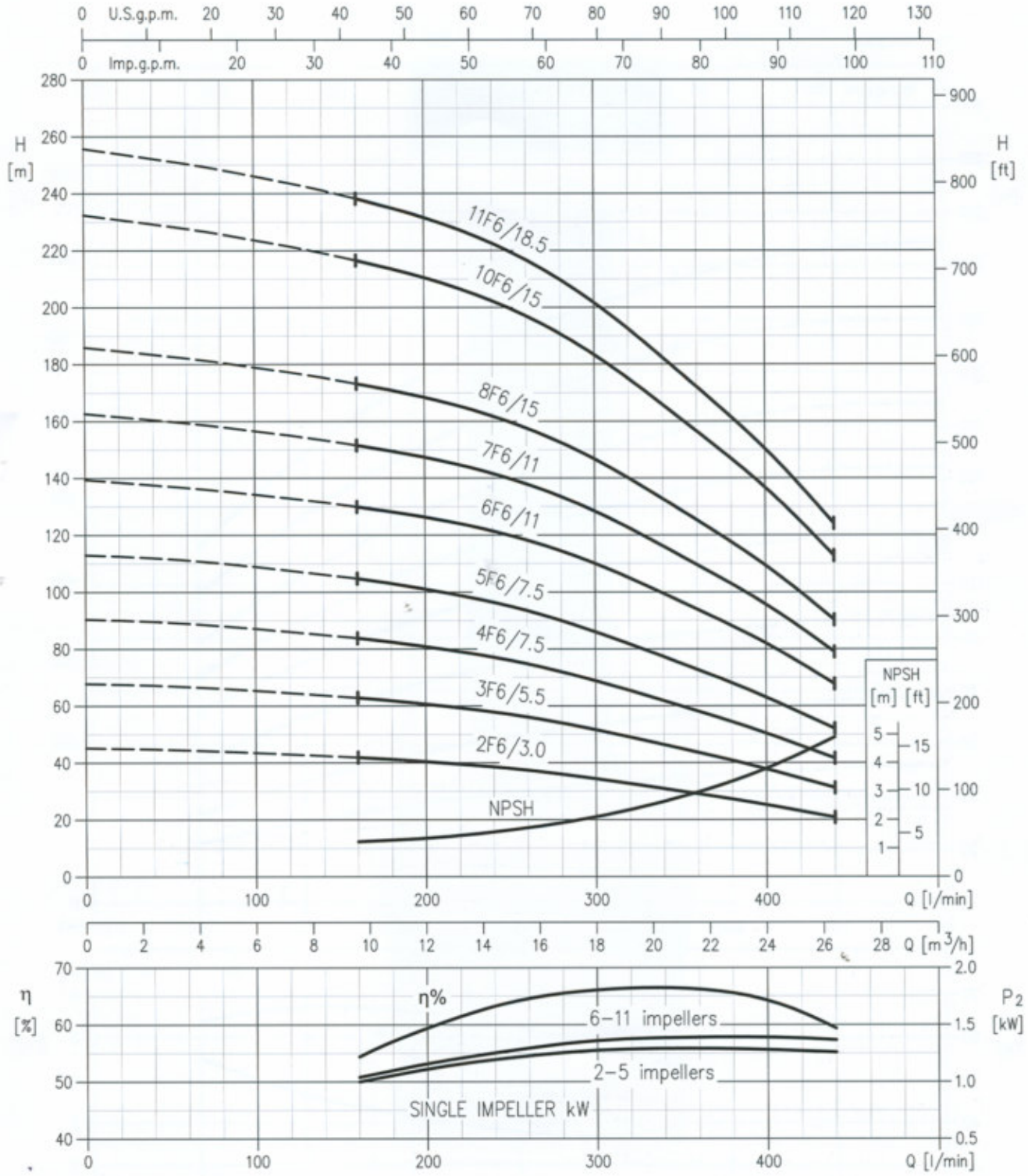
PERFORMANCE CURVES EVM4 series *(according to ISO 9906 Annex A)*



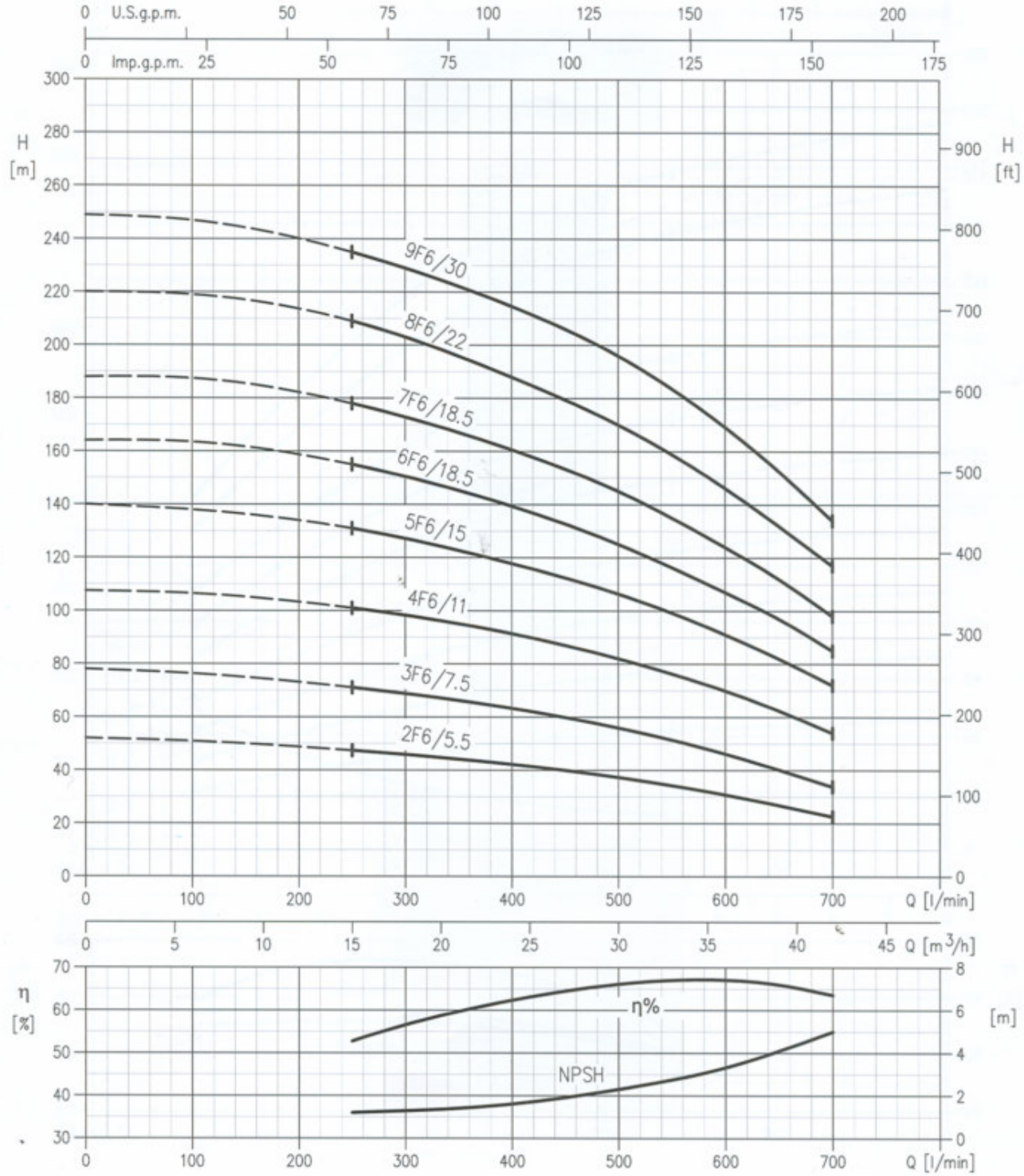
PERFORMANCE CURVES EVM8 series *(according to ISO 9906 grade 2)*



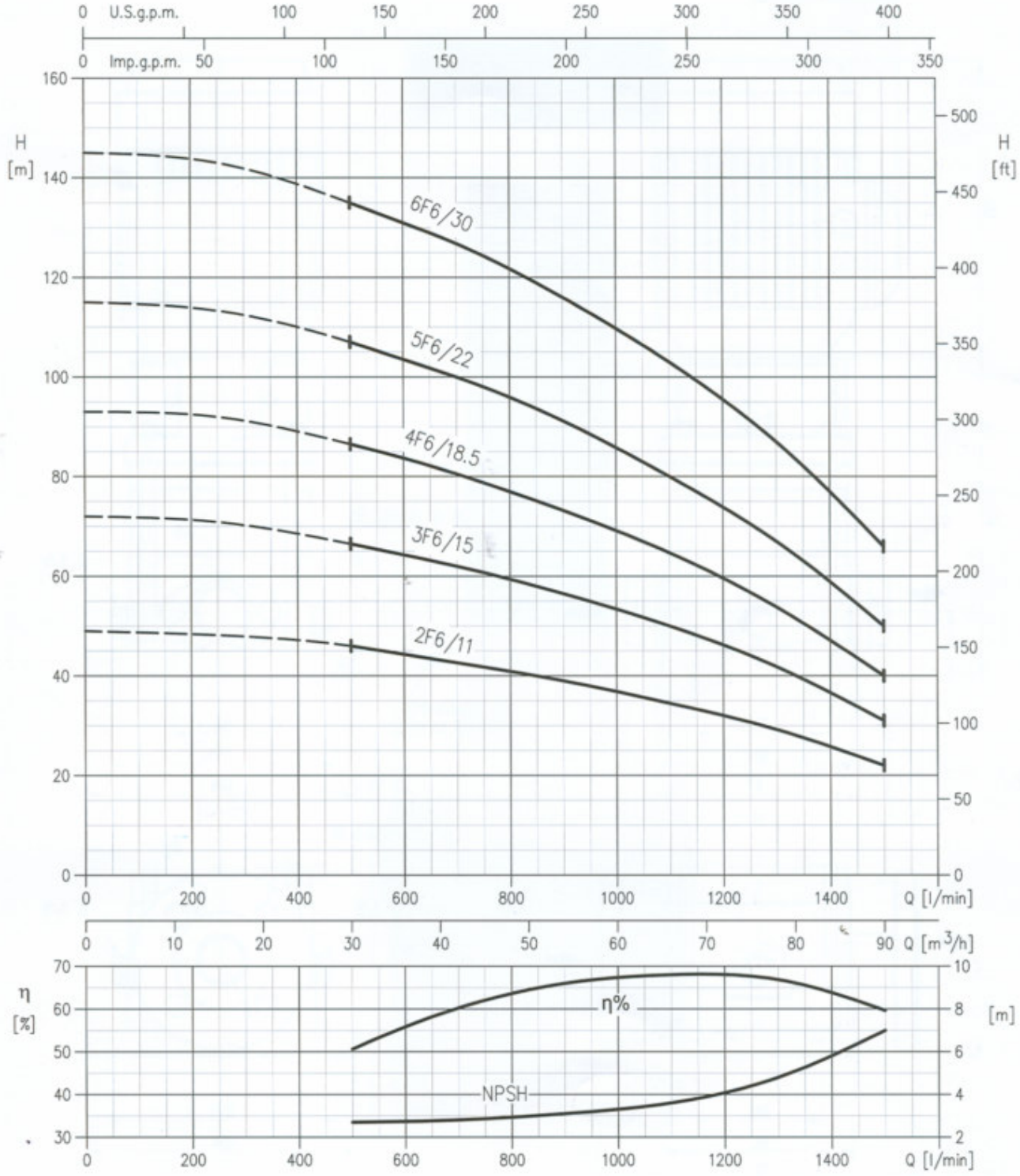
PERFORMANCE CURVES EVM16 series *(according to ISO 9906 grade 2)*



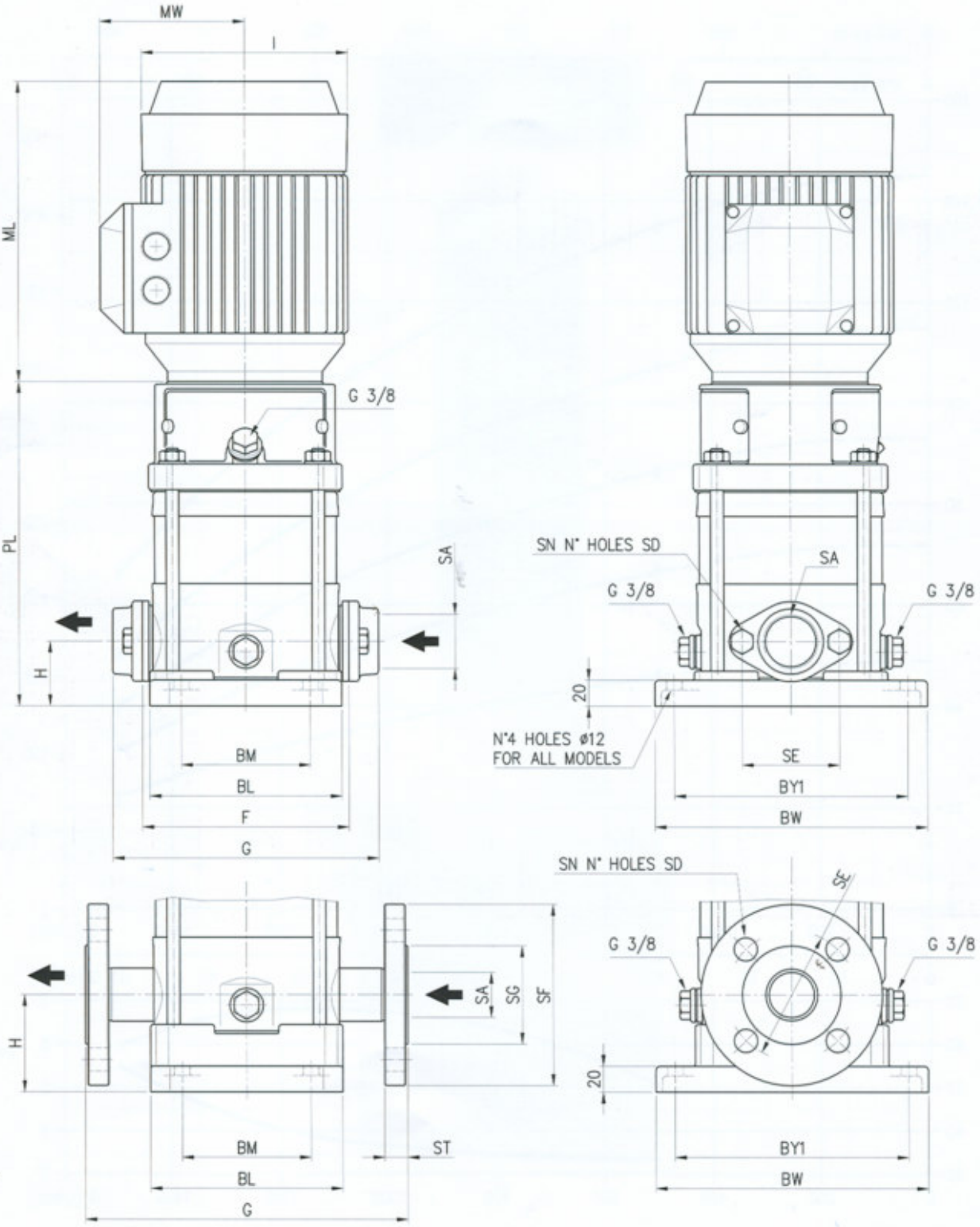
PERFORMANCE CURVES EVM30 series *(according to ISO 9906 grade 2)*



PERFORMANCE CURVES EVM60 series *(according to ISO 9906 grade 2)*



DIMENSIONS EVM 2-4

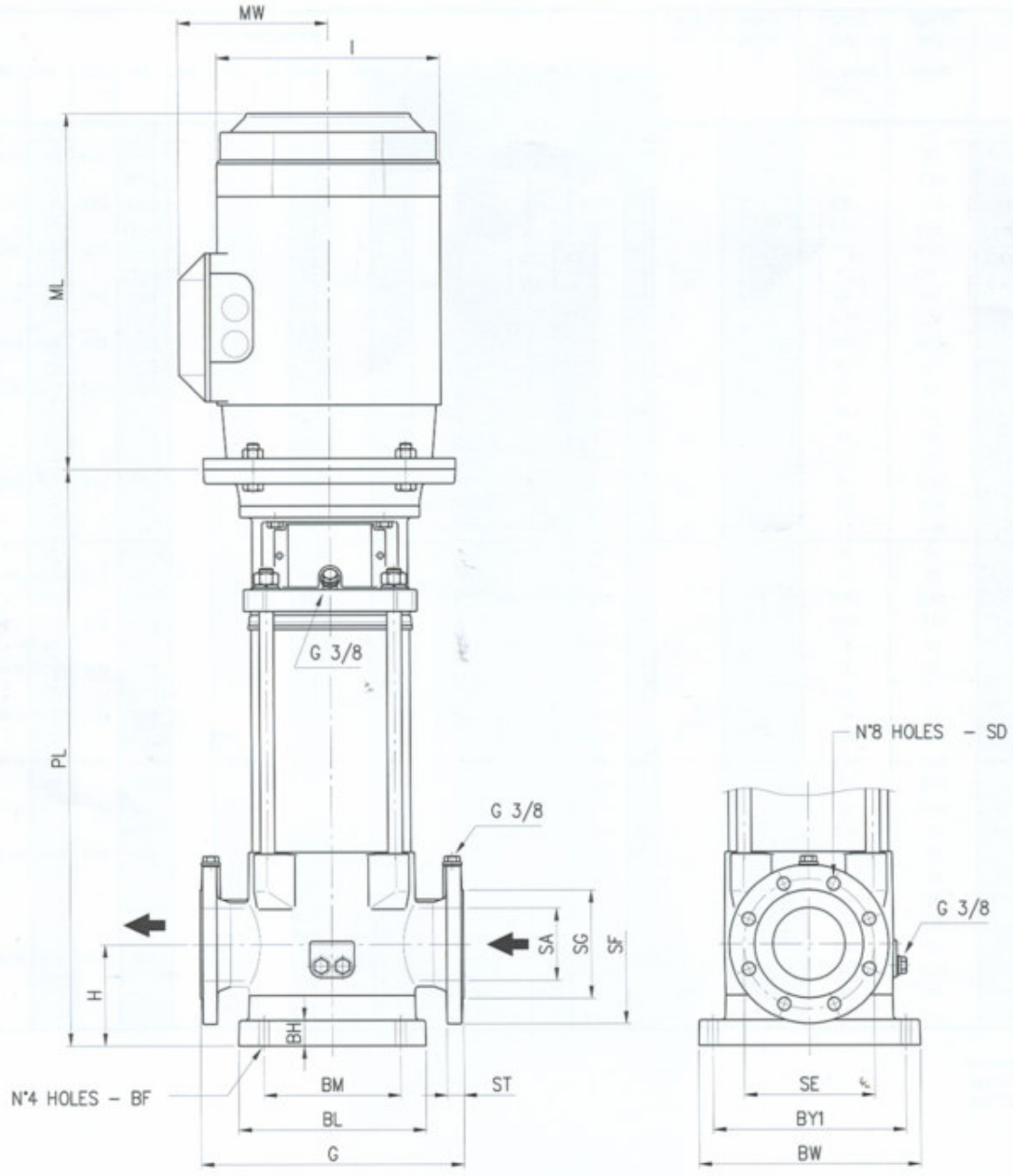


DIMENSIONAL TABLE EVM 2-4

Pump Type EVM	Weight [kg] Pump	Weight [kg] Pump with motor	Pmax. [MPa] 2)	Motor Size	Dimensions [mm]																	
					H	PL	ML 1)	F	G	I 1)	MW 1) 1~	MW 1) 3~	BM	BL	BY1	BW	SA	SG	SE	SF	ST	SN	SD
EVM 2 2N6/0.37	14	20	1,6	71	50	226,5	215	160	206	Ø142	129	112	100	149	180	210	G 1"	-	75	-	-	2	M10
EVM 2 2F6/0.37	20	26			75	251,5		-	250								Ø25	Ø66	Ø85	Ø115	16	4	Ø14
EVM 2 3N6/0.55	14,5	21,5			50	247,5		160	206								G 1"	-	75	-	-	2	M10
EVM 2 3F6/0.55	20,5	27,5			75	272,5		-	250								Ø25	Ø66	Ø85	Ø115	16	4	Ø14
EVM 2 4N6/0.75	15,5	25,5		80	50	278,5	232	160	206	Ø160	150	129					G 1"	-	75	-	-	2	M10
EVM 2 4F6/0.75	21,5	31,5			75	303,5		-	250								Ø25	Ø66	Ø85	Ø115	16	4	Ø14
EVM 2 5N6/1.1	16	27			50	299,5		160	206								G 1"	-	75	-	-	2	M10
EVM 2 5F6/1.1	22	33			75	324,5		-	250								Ø25	Ø66	Ø85	Ø115	16	4	Ø14
EVM 2 6N6/1.1	16,5	27,5			50	320,5		160	206								G 1"	-	75	-	-	2	M10
EVM 2 6F6/1.1	22,5	33,5			75	345,5		-	250								Ø25	Ø66	Ø85	Ø115	16	4	Ø14
EVM 2 7N6/1.5	18	33		90 S	50	351,5		160	206								G 1"	-	75	-	-	2	M10
EVM 2 7F6/1.5	24	39			75	376,5		-	250								Ø25	Ø66	Ø85	Ø115	16	4	Ø14
EVM 2 9N6/2.2	21	38		90L	50	393,5	267	160	206	Ø180	-	138					G 1"	-	75	-	-	2	M10
EVM 2 9F6/2.2	27	44				418,5																	
EVM 2 11F6/2.2	25	42				460,5																	
EVM 2 13F6/3.0	26,5	48	2,5	100	75	512,5		-	250								Ø25	Ø66	Ø85	Ø115	16	4	Ø14
EVM 2 15F6/3.0	30,5	52				554,5	306			Ø196		145											
EVM 2 18F6/4.0	32,5	59		112		617,5																	
EVM 4 2N6/0.75	15	25	1,6	80	50	250,5	232	160	206	Ø160	150	129					G 1"1/4	-	75	-	-	2	M10
EVM 4 2F6/0.75	21	31			75	275,5		-	250								Ø32	Ø76	Ø100	Ø140	18	4	Ø18
EVM 4 3N6/1.1	15,5	26,5			50	278,5		160	206								G 1"1/4	-	75	-	-	2	M10
EVM 4 3F6/1.1	21,5	32,5			75	303,5		-	250								Ø32	Ø76	Ø100	Ø140	18	4	Ø18
EVM 4 4N6/1.5	16	31		90 S	50	316,5	267	160	206	Ø180	-	138					G 1"1/4	-	75	-	-	2	M10
EVM 4 4F6/1.5	22	37			75	341,5		-	250								Ø32	Ø76	Ø100	Ø140	18	4	Ø18
EVM 4 5N6/2.2	17	34		90L	50	344,5		160	206								G 1"1/4	-	75	-	-	2	M10
EVM 4 5F6/2.2	23	40			75	369,5		-	250								Ø32	Ø76	Ø100	Ø140	18	4	Ø18
EVM 4 6N6/2.2	18,5	35,5			50	372,5		160	206								G 1"1/4	-	75	-	-	2	M10
EVM 4 6F6/2.2	24,5	41,5			75	397,5		-	250								Ø32	Ø76	Ø100	Ø140	18	4	Ø18
EVM 4 7N6/3.0	20,5	42		112	50	410,5	306	160	206	Ø196	-	145					G 1"1/4	-	75	-	-	2	M10
EVM 4 7F6/3.0	26,5	48			75	435,5		-	250								Ø32	Ø76	Ø100	Ø140	18	4	Ø18
EVM 4 8N6/3.0	21	42,5			50	438,5		160	206								G 1"1/4	-	75	-	-	2	M10
EVM 4 8F6/3.0	27	48,5			75	463,5		-	250								Ø32	Ø76	Ø100	Ø140	18	4	Ø18
EVM 4 10N6/4.0	24	50,5			50	494,5		160	206								G 1"1/4	-	75	-	-	2	M10
EVM 4 10F6/4.0	30	56,5				519,5	306																
EVM 4 11F6/4.0	29,5	56				547,5																	
EVM 4 12F6/4.0	30	56,5			75	575,5		-	250								Ø32	Ø76	Ø100	Ø140	18	4	Ø18
EVM 4 14F6/5.5	35,5	74,5	2,5			651,5																	
EVM 4 16F6/5.5	36	75		132		707,5	370			270		198											
EVM 4 19F6/7.5	43,5	87,5				791,5																	

1) Motor dimensions
2) 1,6 MPa = 16 bar
2,5 MPa = 25 bar

DIMENSIONS EVM 8-16



DIMENSIONAL TABLE EVM 8-16

Pump Type EVM	Weight [kg] Pump	Weight [kg] Pump with motor	Motor Size	Dimensions [mm] H	PL	ML 1)	F	G	I 1)	MW 1)	BM	BL	BY1	BW	SA	SG	SE	SF	ST	SN	SD
EVM 8 2N6/1.5	25	40	90 S	80	337,5	267	200	252	Ø180	138	130	190	215	250	G 1"1/2	-	100	-	-	2	M12
EVM 8 2F6/1.5	39	54					-	280							Ø40	Ø88	Ø110	Ø150	18	4	Ø18
EVM 8 3N6/2.2	26,5	43,5	90 L		367,5		200	252							G 1"1/2	-	100	-	-	2	M12
EVM 8 3F6/2.2	40,5	57,5					-	280							Ø40	Ø88	Ø110	Ø150	18	4	Ø18
EVM 8 4N6/3.0	29	51	100		407,5	306	200	252	Ø196	145					G 1"1/2	-	100	-	-	2	M12
EVM 8 4F6/3.0	43,5	65					-	280							Ø40	Ø88	Ø110	Ø150	18	4	Ø18
EVM 8 5N6/4.0	30	56,5	112		437,5		200	252							G 1"1/2	-	100	-	-	2	M12
EVM 8 5F6/4.0	44	70,5					-	280							Ø40	Ø88	Ø110	Ø150	18	4	Ø18
EVM 8 6N6/4.0	31,5	58			467,5		200	252							G 1"1/2	-	100	-	-	2	M12
EVM 8 6F6/4.0	45,5	72					-	280							Ø40	Ø88	Ø110	Ø150	18	4	Ø18
EVM 8 8N6/5.5	39	78	132		547,5	370	200	252	270	198					G 1"1/2	-	100	-	-	2	M12
EVM 8 8F6/5.5	53	92					-	280							Ø40	Ø88	Ø110	Ø150	18	4	Ø18
EVM 8 11F6/7.5	44,5	88,5			637,5																
EVM 8 14F6/11	51	129	160 M		757,5	503			335	246											
EVM 8 16F6/11	52,5	131			817,5																
EVM 16 2F6/3.0	36	57,5	100	90	377,5	306	-	300	Ø196	145					Ø50	Ø102	Ø125	Ø165	18	4	Ø18
EVM 16 3F6/5.5	39	78			437,5																
EVM 16 4F6/7.5	41,5	86	132		477,5	370			270	198											
EVM 16 5F6/7.5	46	90			517,5																
EVM 16 6F6/11	53	131	160M		587,5	503			335	246											
EVM 16 7F6/11	55,5	134			627,5																
EVM 16 8F6/15	57	146			667,5																
EVM 16 10F6/15	64	153			747,5																
EVM 16 11F6/18	67	166	160 L		787,5	547															

1) Motor dimensions
2) 1,6 MPa = 16 bar
2,5 MPa = 25 bar

DIMENSIONAL TABLE EVM 30-60

Pump Type EVM	Weight [kg] Pump	Weight [kg] Pump + motor	Pmax. [Mpa] 2)	Motor Size	Dimensions [mm]																	
					H	PL	ML 1)	G	I 1)	MW 1)	BM	BL	BY1	BW	BF	BH	SA	SG	SE	SF	ST	SD
EVM30 2F6/5,5	80	117	1,6	132	105	522,5	370	320	270	198,0	170	210	240	280	14	35	65	122	145	185	22	18
EVM30 3F6/7,5	87	125				570,5																
EVM30 4F6/11	97	172		160M		648,5	503		335	246,0												
EVM30 5F6/15	100	186				696,5																
EVM30 6F6/18.5	104	200	2,5	160L		744,5	547															
EVM30 7F6/18.5	107	203				792,5																
EVM30 8F6/22	112	234		180		840,5	602		366	266,0												
EVM30 9F6/30	119	297		200		888,5	669		405	341,0												
EVM60 2F6/11	103	178	1,6	160M	140	653,5	503	365	335	246,0	190	260	266	306	14	35	100	150	180	220	24	18
EVM60 3F6/15	107	193				725,5																
EVM60 4F6/18.5	112	209		160L		797,5	547															
EVM60 5F6/22	117	239		180		869,5	602		366	266,0												
EVM60 6F6/30	126	304		200		941,5	669		405	341,0												
EVM30(G) 2F6/5,5	75	112	1,6	132	105	522,5	370	320	270	198,0	170	210	240	280	14	35	65	122	145	185	22	18
EVM(G)30 3F6/7,5	78	120				570,5																
EVM(G)30 4F6/11	92	167		160M		648,5	503		335	246,0												
EVM(G)30 5F6/15	95	181				696,5																
EVM(G)30 6F6/18.5	99	195	2,5	160L		744,5	547															
EVM(G)30 7F6/18.5	102	198				792,5																
EVM(G)30 8F6/22	107	229		180		840,5	602		366	266,0												
EVM(G)30 9F6/30	114	292		200		888,5	669		405	341,0												
EVM(G)60 2F6/11	95	170	1,6	160M	140	653,5	503	365	335	246,0	190	260	266	306	14	35	100	150	180	220	24	18
EVM(G)60 3F6/15	99	185				725,5																
EVM(G)60 4F6/18.5	104	201		160L		797,5	547															
EVM(G)60 5F6/22	109	231		180		869,5	602		366	266,0												
EVM(G)60 6F6/30	118	296		200		941,5	669		405	341,0												

1) Motor dimensions
2) 1,6 MPa = 16 bar
2,5 MPa = 25 bar