EBARA

Japanese Technology since 1912

EVMS - Vertical Multistage Pumps

Data Book 50Hz

EVMS
1-3-5-10-15-20-32-45-64-90

VERTICAL MULTISTAGE PUMPS

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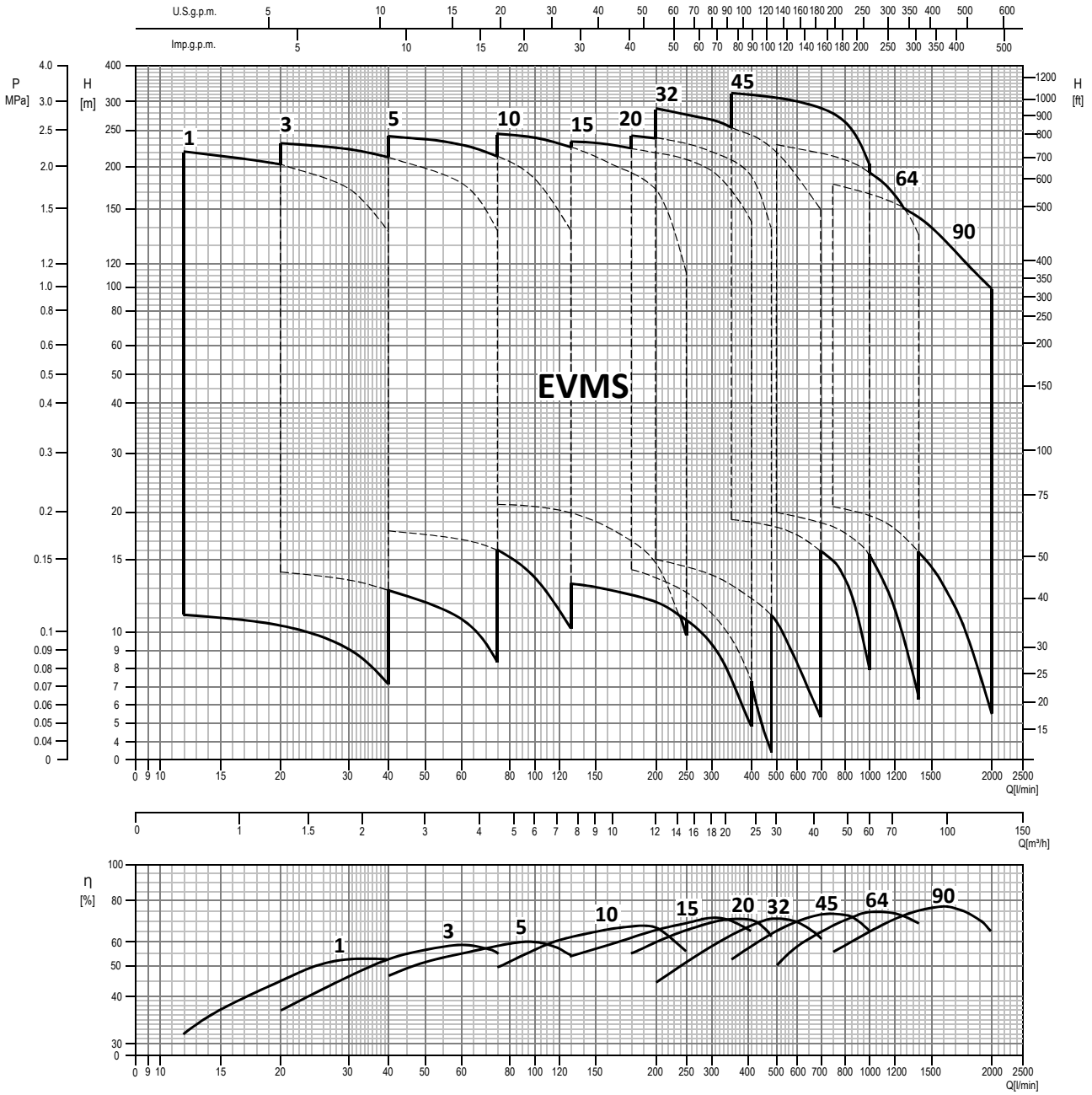
VERTICAL MULTISTAGE PUMPS

TYPICAL APPLICATIONS

INDUSTRY	BUILDING SERVICE	WATER SUPPLY
		
• **Water treatment** reverse osmosis ultra-filtration water purification micro-filtration softening. ionizing and demineralising systems swimming pools separators • **Boiler feeding** steam systems condensate systems • **Wash and clean** vehicle washing systems industrial part washing laundry systems supply of liquids with acids and bases supply of chemical liquids • **Chilling** handling of refrigerants for cooling thermal control systems industrial cooling laser cooling • **Machine tooling** cooling lubricant supply for tooling machines • **Pressure boosting** pressure boosting for industrial use • **Food & Beverage** food washing systems bottle wash systems • **Pharmaceutical industries** • **Marine applications** freshwater. deckwash. high fog and fire fighting on ships	• **Pressure boosting** pressure boosting for buildings pressure boosting for high rise buildings/hotels • **Sprinkler systems** • **Fire fighting systems** jockey pump • **District heating** • **Heat exchangers / fan heaters** • **Air conditioning systems** • **Heating systems**	• **Water treatment** water treatment plants filtration water treatment plants transfer • **Pressure boosting** transfer from water treatment plants (mains) • **Irrigation** golf course / sport fields irrigation • **Agriculture** sprinkler irrigation drip irrigation

PERFORMANCE RANGE
EVMS(.)1-3-5-10-15-20-32-45-64-90



PRODUCT FEATURES

[General]

1. **Pump Type**
   The **EVMS** is Non-self-priming, vertical multistage in line, centrifugal pumps.

2. **Model range**
   The EVMS comes in **1,3,5,10,15,20,32,45,64 and 90 m³/h** flow sizes for the majority market needs.

3. **Maximum operating pressure**
   The EVMS can be operated **at 16, 25, 30 bar or 35 bar as maximum.**

4. **Operating liquid temperature range**
   The EVMS can be operated **from - 30°C to + 140°C** as the maximum.
   (please contact EBARA in case of -30°C to -15°C, or 120-140°C)

5. **Material options**
   AISI 304, AISI 316L and Cast iron versions are available.

6. **Motor**
   The EVMS can be coupled with **the commercial motors** that are acquired in the markets.
   The EVMS is provide as the electric pumps with IE3 motors for the over 0.75 kW.
   PTC sensor pre-installed for motors of 1.5 kW and above.
   Unlosable screw and sealing from 0.75 kW to 45 kW are standard for terminal box fixing.

7. **Certifications**

	Drinking water approval					**Atmospheres explosibles approval**
	DM174/2004	ACS	DVGW *	WRAS	PZH	ATEX 2014/34/UE
Mechanical seal	SiC/Carbon_ EPDM	SiC/Carbon_ EPDM	All variations with EPDM on page 6-7	SiC/Carbon_ EPDM	All variations with EPDM on page 6-7	All variations on page 6-7
EVMSG	●	-	-	-	●	●
EVMS	**	●	●	●	●	●
EVMSL	**	●	●	●	●	●

Note: * DVGW W270 is certified for elastomers. Reg. Nr. DW-5253CR0217
KTW is certified for organic components.
** only for EVMS(.)1-20

● Available

8. **Conform to the provisions of the European directives** CE EuP/ErP

[Main Product Features]

1. **Innovative hydraulic solutions**
   - The **Commercial motors** can be fitted to all of the pump models without any modifications thanks to low pump axial thrust load.
   - The low axial thrust load impellers can ensure **long life of the motor bearings**.
   - **High pump efficiency** classified in MEI > 0.7 for all models.

2. **Energy saving**
   - The **high efficiency IE3 motors** starting from 0.75 kW complied with the EuP 2005/32/EC and ErP 2009/125/EC directives.
   - **The VFD (Variable frequency drive)** and **the commercial sensor** can be directly mounted on EVMS to **maintain physical constant operations** such as pumping pressure depending on the conditions of use.

3. **Piping connection options**
   - The various pipe connections are available depending on the application requirements **Oval flange / Round flange / Loose flange / Victaulic® connection / Clamp connection**.
   - The external dimensions can be adjusted to the replacement of the existing pump in the wide majority.

4. **Shaft seal solutions**
   - Silicon carbide inclusions with graphite can be used as **dry lubricant to reduce friction**.
   - It's conforming to EN12756 (ex DIN 24960)

5. **Easy maintenance**
   - **The cartridge mechanical seal** enables **the plug in replacement** of the shaft seal without disassembling the motor bracket.
   - **The spacer coupling** allows easy maintenance without having to remove heavy motors over 5.5 kW

6. **Smart plug solutions**
   Air ventilation plug / Water filling & sensor plug / Commercial sensor fitting / Measurements for suction and discharge pressure / drain.

PRODUCT SPECIFICATIONS
EVMS(.)1-3-5-10-15-20

PUMP																			
Version			EVMSG						EVMS						EVMSL					
Operating range	Nominal flow rate (m³/h)		1	3	5	10	15	20	1	3	5	10	15	20	1	3	5	10	15	20
	Maximum working pressure		1.6 / 2.5 MPa (16 / 25 bar)																	
	Liquid temperature range		-30ºC to 140ºC (please contact EBARA in case of -30°C to -15°C, or 120-140°C)																	
Key Components Material	Impeller		EN 1.4301 (AISI 304)												EN 1.4404 (AISI 316L)					
	Intermediate casing		EN 1.4301 (AISI 304)												EN 1.4404 (AISI 316L)					
	Liner ring		EN 1.4301 (AISI 304) + PPS												EN 1.4404 (AISI 316L) + PPS					
	Bottom casing		Cast Iron						EN 1.4301 (AISI 304)						EN 1.4404 (AISI 316L)					
	Casing cover		EN 1.4301 (AISI 304)												EN 1.4404 (AISI 316L)					
	Shaft	EN 1.4301 (AISI 304)	EVMSG / EVMS 1-3-10 , EVMSG / EVMS 5-15-20 (depend on models)																	
		EN 1.4404 (AISI 316L)	EVMSL 1-3-10 , EVMSL 5-15-20 (depend on models)																	
		EN 1.4462 (AISI 329A)	EVMSG / EVMS / EVMSL 5-15-20 (depend on models)																	
	Shaft sleeve bearing		Tungsten carbide																	
	Shaft Seal		See the shaft seal options																	
	O-ring	EPDM	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		FPM	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Outer casing		EN 1.4301 (AISI 304)												EN 1.4404 (AISI 316L)					
	Motor Bracket		Cast Iron																	
	Tie rod		EN 1.4057 (AISI 431)																	
	Coupling	up to 4.0 kW	Die cast aluminium																	
		from 5.5 kW	Cast Iron																	
	Base		Cast Iron						Die cast aluminium											
Pipe connection	Oval flange	up to 16 bar	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Round flange (DIN)	up to 16 bar	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		from 16 bar to 25 bar	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Loose round flange (DIN)	up to 16 bar							●	●	●	●	●	●	●	●	●	●	●	●
		from 16 bar to 25 bar							●	●	●	●	●	●	●	●	●	●	●	●
	Victaulic®	up to 16/25 bar							●	●	●	●	●	●	●	●	●	●	●	●
	Clamp	up to 16/25 bar							●	●	●	●	●	●	●	●	●	●	●	●

● Available

MOTOR			
Power Source	Frequency	50 Hz	
	Phase	Single Phase	Three Phase
	Power rating	0.37 ÷ 2.2 kW / 0.5 ÷ 3.0 HP	0.37 ÷ 18.5 kW / 0.5 ÷ 25 HP
	Voltage	230 ± 10% V	230/400 ± 10% V (up to 4.0 kW) 400/690 ± 10% V (above 5.5 kW)
Type	Type	IC411 - TEFC	
	Efficiency Level	from 0.37 kW up to 2.2 kW	- : from 0.37 kW up to 0.55 kW IE3 : above 0.75 kW
	No° of poles	2	
	Protection degree	IP55 : up to 11 kW IP56 : above 15 kW	
	Insulation Class	F (temperature rise class B)	
Others	Thermal Protection	-	PTC sensor pre-installed for motors of 1.5 kW and above
	Casing Material	Aluminium	
	Flange mount (IEC motor)	IM B14 : up to 4.0 kW IM B5 : above 5.5 kW	
	Terminal Box fixing	-	Unlosable screw and sealing from 0.75 kW to 18.5 kW

PRODUCT SPECIFICATIONS
EVMS(.)32-45-64-90

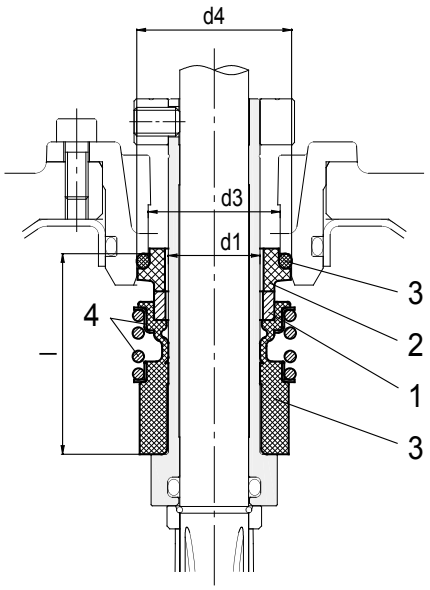
PUMP														
Version			EVMSG				EVMS				EVMSL			
Operating range	Nominal flow rate (m³/h)		32	45	64	90	32	45	64	90	32	45	64	90
	Maximum working pressure		1.6 / 2.5 / 3.0 / 3.5 MPa (16 / 25 / 30 / 35 bar)											
	Liquid temperature range		-30ºC to 140ºC (please contact EBARA in case of -30°C to -15°C, or 120-140°C)											
Key Components Material *	Impeller		EN 1.4301 (AISI 304)								EN 1.4404 (AISI 316L)			
	Intermediate casing		EN 1.4301 (AISI 304)								EN 1.4404 (AISI 316L)			
	Liner ring		EN 1.4301 (AISI 304) + PPS								EN 1.4404 (AISI 316L) + PPS			
	Bottom casing		Cast Iron EN GJL-250 EN 1561 (for EVMSG32 and EVMSG45-90 up to 16 bar) Cast Iron EN GJS 400-15 EN 1563 (for EVMSG45-90 above 25 bar)				EN 1.4308 (ASTM CF8)				EN 1.4408 (ASTM CF8M)			
	Casing cover		EN 1.4301 (AISI 304)								EN 1.4404 (AISI 316L)			
	Shaft	EN 1.4301 (AISI 304)	EVMSG / EVMS 32-45-64-90 (depend on models)											
		EN 1.4404 (AISI 316L)	EVMSL 32-45-64 (depend on models)											
		EN 1.4462 (AISI 329A)	EVMSL 45-64-90 (depend on models)											
	Shaft sleeve bearing		Tungsten carbide											
	Shaft Seal		See the shaft seal options											
	O-ring	EPDM	●	●	●	●	●	●	●	●	●	●	●	●
		FPM	●	●	●	●	●	●	●	●	●	●	●	●
	Outer casing		EN 1.4301 (AISI 304)								EN 1.4404 (AISI 316L)			
	Motor Bracket		Cast Iron EN GJS 400-15 EN 1563											
	Tie rod		EN 1.4057 (AISI 431)											
	Coupling	up to 4.0 kW	Die cast Aluminium EN AB-AISI11 Cu2 (Fe)											
		from 5.5 kW to 30 kW	Cast Iron EN GJL250 EN 1561											
		above 37 kW	Carbon Steel											
	Base		Cast Iron EN GJL200 EN 1561											
Pipe connection	Round flange (DIN)		●	●	●	●								
	Louse round flange (DIN)						●	●	●	●	●	●	●	●

● Available

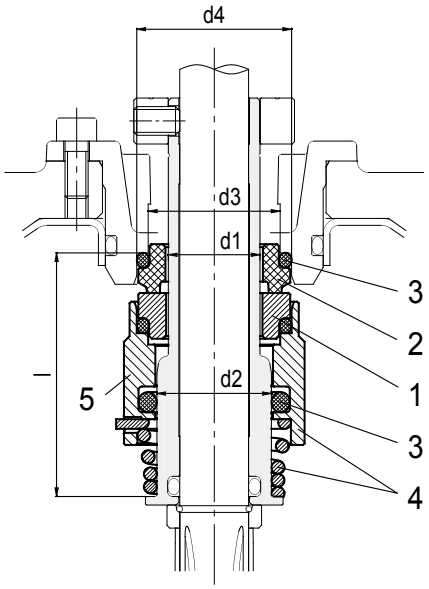
MOTOR		
Power Source	Frequency	50 Hz
	Phase	Three Phase
	Power rating	1.5 ÷ 45 kW / 2.0 ÷ 60 HP
	Voltage	230/400 ± 10% V (up to 4.0 kW) 400/690 ± 10% V (above 5.5 kW)
Type	Type	IC411 - TEFC
	Efficiency Level	IE3
	No° of poles	2
	Protection degree	IP55 : up to 11 kW IP56 : above 15 kW
	Insulation Class	F (temperature rise class B)
Others	Thermal Protection	PTC
	Casing Material	Aluminium : up to 30 KW Cast Iron : above 37 KW
	Flange mount (IEC motor)	IM B14 : up to 4.0 kW IM B5 : above 5.5 kW
	Terminal Box fixing	Unlosable screw and sealing from 1.5 kW to 45 kW

SHAFT SEAL
EVMS(.)1-3-5-10-15-20

1. Shaft Seal



up to 16 bar
Cartridge Unbalanced type



up to 25 bar
Cartridge Balanced type

2. Type of Shaft Seal and Dimensions [mm]

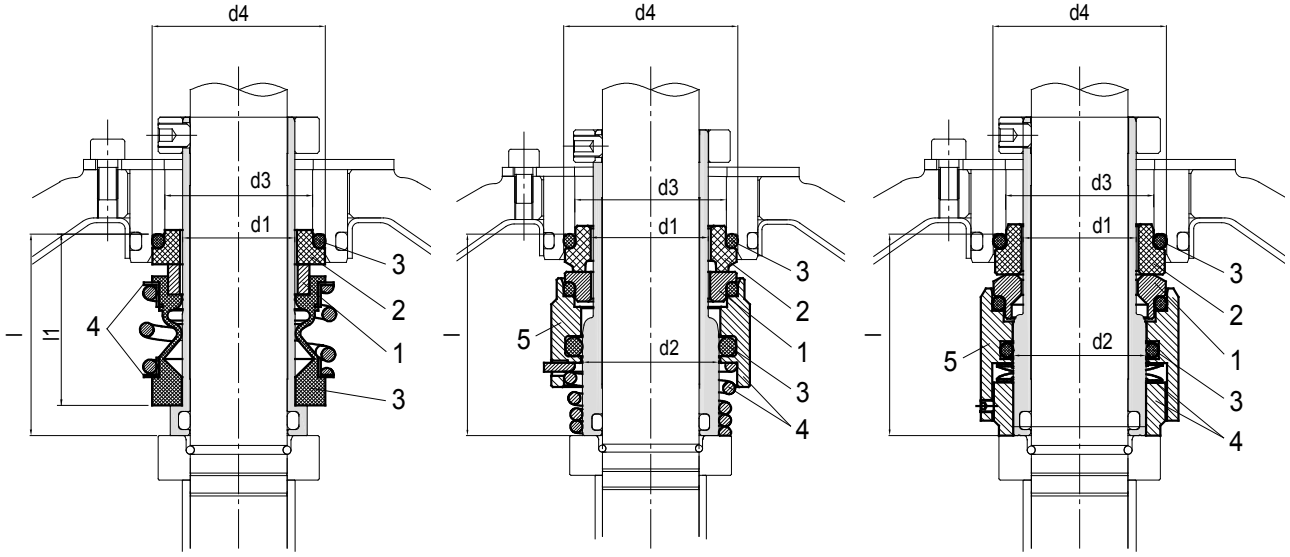
Type key	Availability	Max operating pressure	Max operating temperature	Shaft seal type		Shaft seal material								
				Cartridge		1		2		3		4	5	
				Type	Code	Rotating part	Code	Stationary part	Code	Elastomers	Code	Compression spring	Collar	Code
Q1BEG	●	16 bar	- 30°C to + 120°C	Unbalanced	(-)	SiC	(Q1)	Carbon	(B)	EPDM	(E)	AISI 316		(G)
BQ1VG	●	16 bar	- 30°C to + 80°C	Unbalanced	(-)	Carbon	(B)	SiC	(Q1)	FPM	(V)	AISI 316		(G)
HQ1BEG	●	25 bar	- 30°C to + 140°C	Balanced	(H)	SiC	(Q1)	Carbon	(B)	EPDM	(E)	AISI 316		(G)
HQ1BVG	●	25 bar	- 30°C to + 80°C	Balanced	(H)	SiC	(Q1)	Carbon	(B)	FPM	(V)	AISI 316		(G)
HQgQ1EG	●	25 bar	- 30°C to + 140°C	Balanced	(H)	SiC with graphite	(Qg)	SiC	(Q1)	EPDM	(E)	AISI 316		(G)
HQgQ1VG	●	25 bar	- 30°C to + 80°C	Balanced	(H)	SiC with graphite	(Qg)	SiC	(Q1)	FPM	(V)	AISI 316		(G)

● Available

Pump model	Shaft seal type		Max operating pressure	d1 [mm]	d2 [mm]	d3 [mm]	d4 [mm]	l [mm]
EVMS 1/3/5	Cartridge	Unbalanced	16 bar	16	-	23	27	35
		Balanced	25 bar		20			42.5
EVMS 10/15/20	Cartridge	Unbalanced	16 bar	20	-	29	35	37.5
		Balanced	25 bar		24			45

SHAFT SEAL
EVMS(.)32-45-64-90

1. Shaft Seal



up to 16 bar
Cartridge Unbalanced type

up to 25 bar
Cartridge Balanced type

up to 35 bar
Cartridge Balanced type

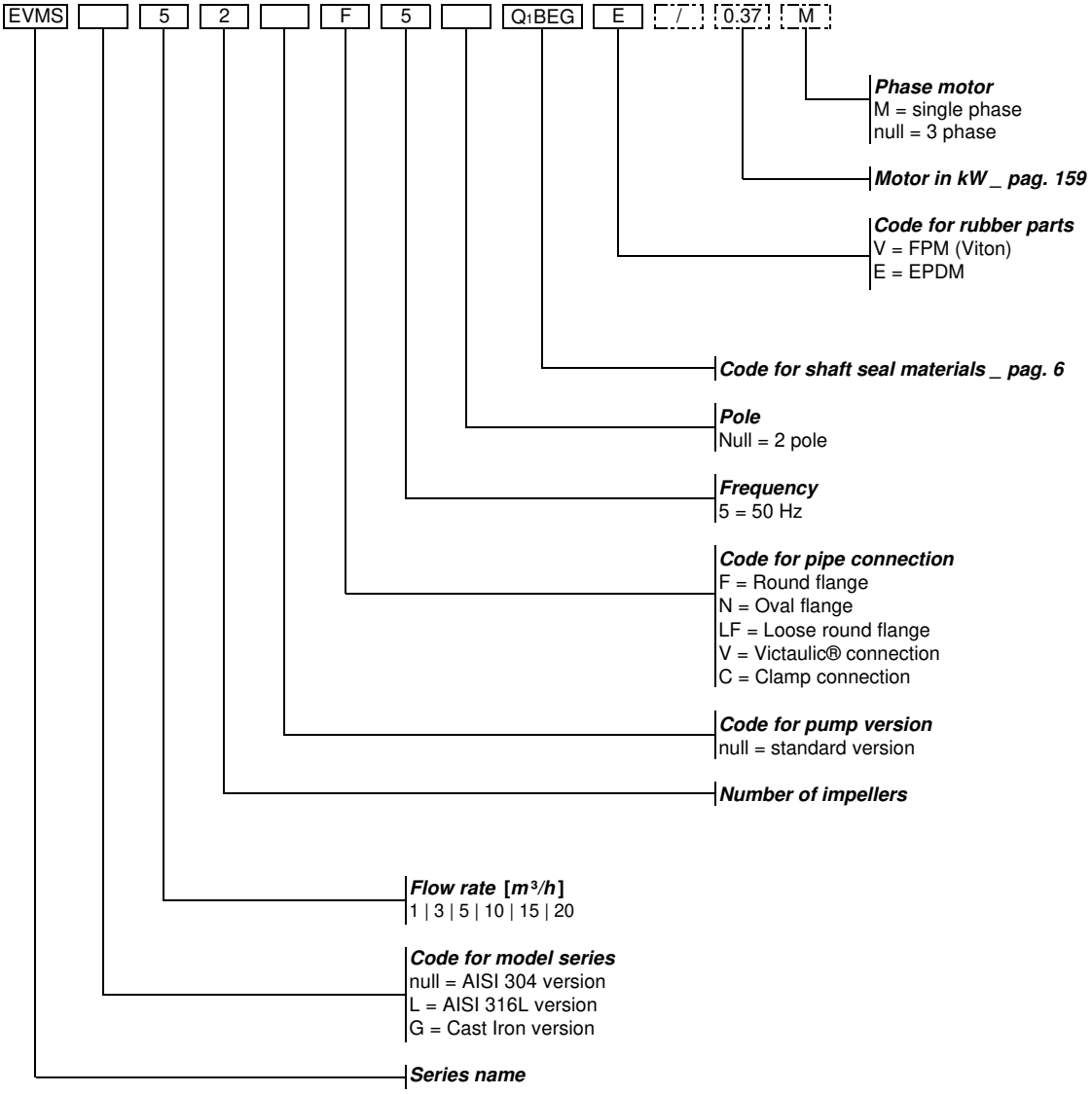
2. Type of Shaft Seal and Dimensions [mm]

Type key	Availability	Max operating pressure	Max operating temperature	Shaft seal type		Shaft seal material								
				Cartridge		1		2		3		4	5	
				Type	Code	Rotating part	Code	Stationary part	Code	Elastomers	Code	Compression spring	Collar	Code
BQ1EG	●	16 bar	- 30°C to + 120°C	Unbalanced	(-)	Carbon	(B)	SiC	Q1	EPDM	(E)	AISI 316		(G)
BQ1VG	●	16 bar	- 30°C to + 80°C	Unbalanced	(-)	Carbon	(B)	SiC	Q1	FPM	(V)	AISI 316		(G)
HQ1BEG	●	25/35 bar	- 30°C to + 140°C	Balanced	(H)	SiC	(Q1)	Carbon	(B)	EPDM	(E)	AISI 316		(G)
HQ1BVG	●	25/35 bar	- 30°C to + 80°C	Balanced	(H)	SiC	(Q1)	Carbon	(B)	FPM	(V)	AISI 316		(G)
HQgQ1EG	●	25/35 bar	- 30°C to + 140°C	Balanced	(H)	SiC with graphite	(Qg)	SiC	(Q1)	EPDM	(E)	AISI 316		(G)
HQgQ1VG	●	25/35 bar	- 30°C to + 80°C	Balanced	(H)	SiC with graphite	(Qg)	SiC	(Q1)	FPM	(V)	AISI 316		(G)

● Available

Pump model	Shaft seal type		Max operating pressure	d1 [mm]	d2 [mm]	d3 [mm]	d4 [mm]	l [mm]	l1 [mm]
EVMS 32/45/64/90	Cartridge	Unbalanced	16 bar	28	-	37	43	50	42.5
		Balanced	25 bar		33				-
		Balanced	35 bar						

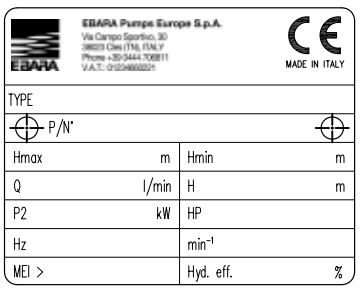
TYPE KEY
EVMS(.)1-3-5-10-15-20



Example for **pump without motor**:
EVMS5 2F5Q1BEG E

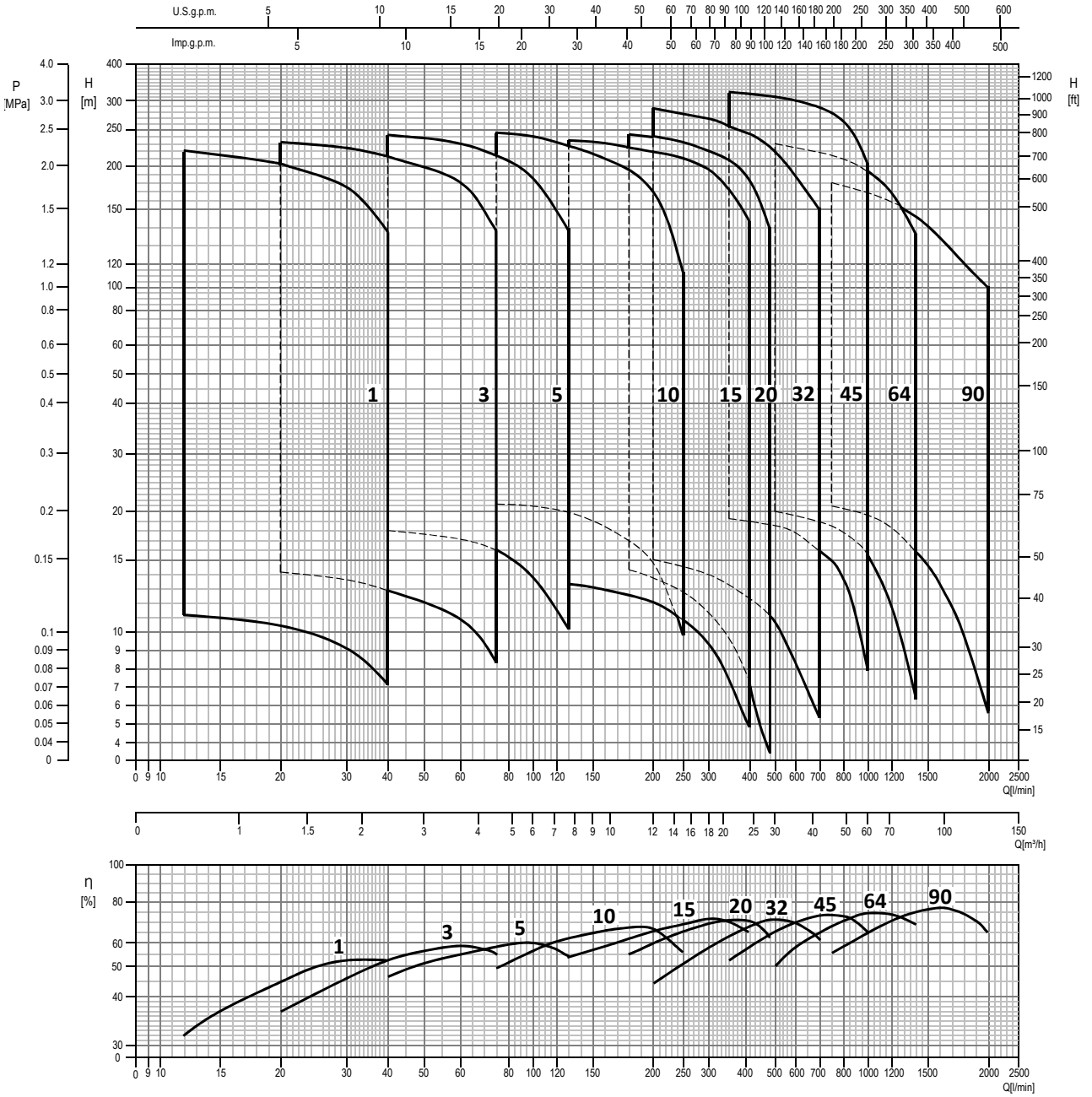
Example for **pump with motor**:
EVMS5 2F5Q1BEG E/0.37M

NAMEPLATE



"TYPE"	Pump model
"P/N°"	Pump item number
"Hmax"	Maximum head
"Hmin"	Minimum head
"Q"	Indicates upper and lower flow rate limits
"H"	Indicates head limits corresponding to minimum and maximum flow rate
"P2"	Rated power of the motor (output at shaft)
"HP"	Rated power of the motor expressed in HP (Horse Power)
"Hz"	Frequency
"min-1"	Speed of rotation
"MEI"	Index of the pump's quality in relation to its efficiency
"Hyd. Eff."	Hydraulic efficiency of the pump

PERFORMANCE RANGE
EVMS(.)1-3-5-10-15-20-32-45-64-90



CURVE SPECIFICATIONS

The specifications below qualify the curves shown on the following pages.

Tolerances according to ISO 9906:2012 - Grade 3B.
Performance curves are defined with the following rotation speed (nominal rotation speed of the motor):
- up to 15 kW: 2900 rpm
- from 18.5 kW up to 30 kW: 2950 rpm
- 37 kW and 45 kW: 2975 rpm

Measurements were carried out with clean water at 20°C of temperature and with a kinematic viscosity of ν = 1 mm2/s (1 cSt).
The NPSH curve is an average curve obtained in the same conditions of performance curves.
During the pump selection. consider to get a safety margin of at least 0.5 m.
The continuous curves indicate the recommended working range. The dotted curve is only a guide.
In order to avoid the risk of over-heating. the pumps should not be used at a flow rate below 10% of best efficiency point.

Symbols explanation:

Q	-	volume flow rate
H	-	total head
P_2	-	pump power input (shaft power)
η	-	pump efficiency
NPSH	-	net positive suction head required by the pump
MEI	-	minimum efficiency index
$\varnothing D_2$	-	P_2 with full diameter
$\varnothing D_2^*$	-	P_2 with reduced diameter

The minimum efficiency index (MEI) is a measure of the quality of a pump size in respect to its mean efficiency. The minimum efficiency index is based on the hydraulic efficiency and on the head at the best efficiency point.

The efficiency of a pump with trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point. leading to a reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.

The operation of these water pumps with variable duty points may be more efficient and economical when controlled. for example. by the use of a variable speed drive that matches the pump duty to the system.

Information on benchmark efficiency is available at: www.europump.org (Ecodesign section)

Information on benchmark efficiency graph for MEI = 0.7 for the pump are available at:
www.europump.org/efficiencycharts (refer to "Multistage Vertical 2900 rpm")

Minimum efficiency index (MEI)

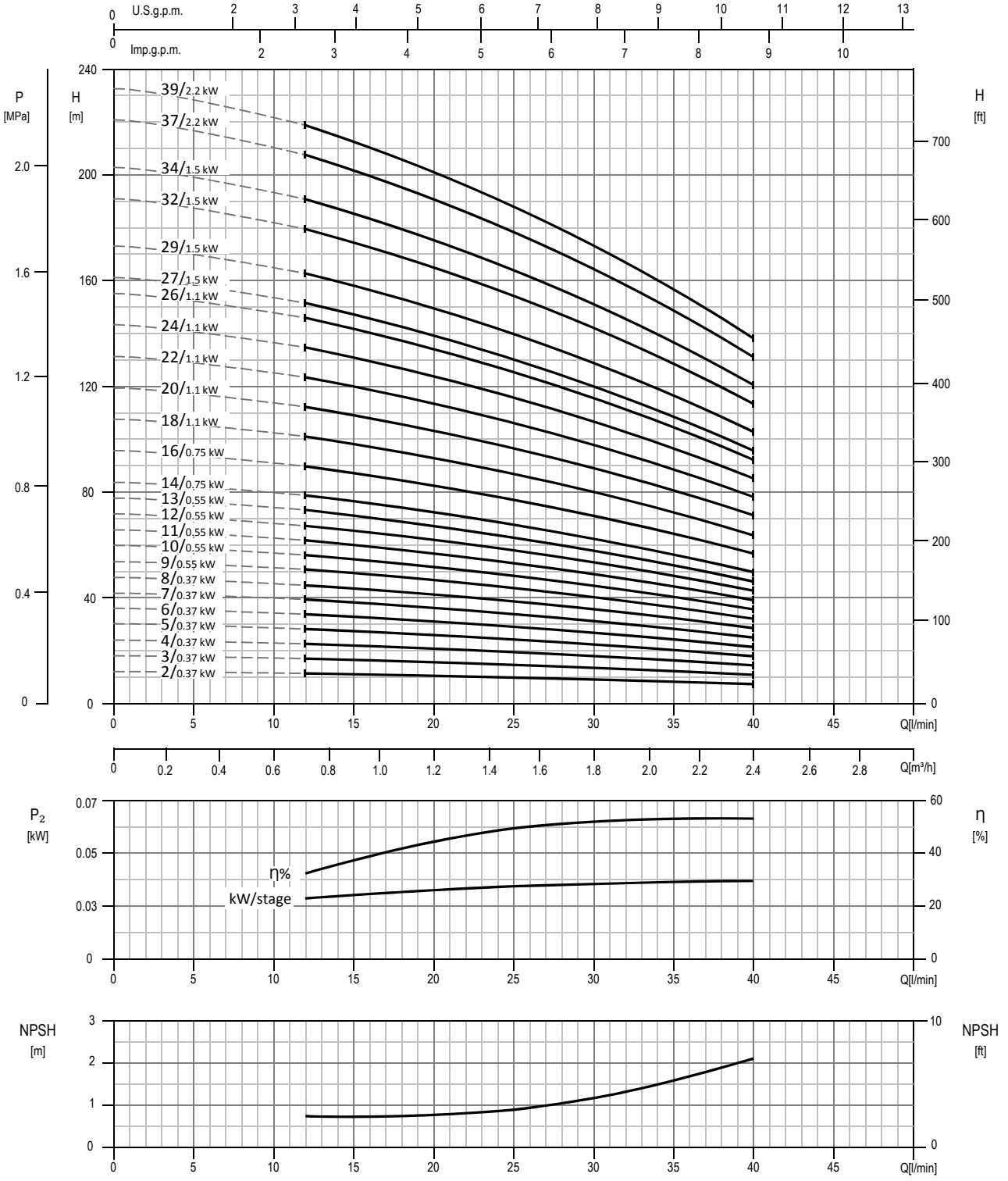
Pump type	MEI
EVMS(.)1	> 0.70
EVMS(.)3	> 0.70
EVMS(.)5	> 0.70
EVMS(.)10	> 0.70
EVMS(.)15	> 0.70
EVMS(.)20	> 0.70
EVMS(.)32	> 0.60
EVMS(.)45	> 0.70
EVMS(.)64	> 0.40
EVMS(.)90	> 0.50

SELECTION CHART
EVMS(.)1-3-5

	Pump Type		Motor			Maximum working pressure [MPa]	Q=Capacity								
							l/min 0	12	20	30	40	60	75	100	130
			kW	HP	Size		m³/h 0	0.72	1.2	1.8	2.4	3.6	4.5	6	7.8
	Single phase	Three phase					H=Total manometric head in metres								
	EVMS(.)1 2/0.37M	EVMS(.)1 2/0.37	0.37	0.5	71	1.6	11.9	11.2	10.4	9.1	7.1	-	-	-	-
	EVMS(.)1 3/0.37M	EVMS(.)1 3/0.37	0.37	0.5	71	1.6	17.9	16.8	15.6	13.6	10.6	-	-	-	-
	EVMS(.)1 4/0.37M	EVMS(.)1 4/0.37	0.37	0.5	71	1.6	23.8	22.4	20.8	18.2	14.2	-	-	-	-
	EVMS(.)1 5/0.37M	EVMS(.)1 5/0.37	0.37	0.5	71	1.6	30	28	26	22.7	17.7	-	-	-	-
	EVMS(.)1 6/0.37M	EVMS(.)1 6/0.37	0.37	0.5	71	1.6	35.8	33.6	31.2	27.3	21.2	-	-	-	-
	EVMS(.)1 7/0.37M	EVMS(.)1 7/0.37	0.37	0.5	71	1.6	41.5	39.2	36.4	31.8	24.8	-	-	-	-
	EVMS(.)1 8/0.37M	EVMS(.)1 8/0.37	0.37	0.5	71	1.6	47.5	44.5	41.5	36.4	28.3	-	-	-	-
	EVMS(.)1 9/0.55M	EVMS(.)1 9/0.55	0.55	0.75	71	1.6	53.5	50.5	47	41	31.8	-	-	-	-
	EVMS(.)1 10/0.55M	EVMS(.)1 10/0.55	0.55	0.75	71	1.6	59.6	56	52	45.5	35.4	-	-	-	-
	EVMS(.)1 11/0.55M	EVMS(.)1 11/0.55	0.55	0.75	71	1.6	65.5	61.5	57	50	38.9	-	-	-	-
	EVMS(.)1 12/0.55M	EVMS(.)1 12/0.55	0.55	0.75	71	1.6	71.5	67	62.5	54.5	42.5	-	-	-	-
	EVMS(.)1 13/0.55M	EVMS(.)1 13/0.55	0.55	0.75	71	1.6	77.5	73	67.5	59	46	-	-	-	-
1	EVMS(.)1 14/0.75M	EVMS(.)1 14/0.75	0.75	1	80	1.6	83.5	78.5	73	63.5	49.5	-	-	-	-
	EVMS(.)1 16/0.75M	EVMS(.)1 16/0.75	0.75	1	80	1.6	95.5	89.5	83	72.5	56.5	-	-	-	-
	EVMS(.)1 18/1.1M	EVMS(.)1 18/1.1	1.1	1.5	80	1.6	107	101	93.5	82	63.5	-	-	-	-
	EVMS(.)1 20/1.1M	EVMS(.)1 20/1.1	1.1	1.5	80	1.6	119	112	104	91	71	-	-	-	-
	EVMS(.)1 22/1.1M	EVMS(.)1 22/1.1	1.1	1.5	80	1.6	131	123	114	100	78	-	-	-	-
	EVMS(.)1 24/1.1M	EVMS(.)1 24/1.1	1.1	1.5	80	1.6	143	135	125	109	85	-	-	-	-
	EVMS(.)1 26/1.1M	EVMS(.)1 26/1.1	1.1	1.5	80	1.6	155	146	135	118	92	-	-	-	-
	EVMS(.)1 27/1.5M	EVMS(.)1 27/1.5	1.5	2	90	2.5	161	151	140	123	95.5	-	-	-	-
	EVMS(.)1 29/1.5M	EVMS(.)1 29/1.5	1.5	2	90	2.5	173	163	151	132	103	-	-	-	-
	EVMS(.)1 32/1.5M	EVMS(.)1 32/1.5	1.5	2	90	2.5	191	179	166	145	113	-	-	-	-
	EVMS(.)1 34/1.5M	EVMS(.)1 34/1.5	1.5	2	90	2.5	203	191	177	155	120	-	-	-	-
	EVMS(.)1 37/2.2M	EVMS(.)1 37/2.2	2.2	3	90	2.5	221	207	192	168	131	-	-	-	-
	EVMS(.)1 39/2.2M	EVMS(.)1 39/2.2	2.2	3	90	2.5	232	219	203	177	138	-	-	-	-
	EVMS(.)3 2/0.37M	EVMS(.)3 2/0.37	0.37	0.5	71	1.6	14.7	-	14.1	13.6	12.9	10.9	8.3	-	-
	EVMS(.)3 3/0.37M	EVMS(.)3 3/0.37	0.37	0.5	71	1.6	22.1	-	21.1	20.4	19.4	16.4	12.5	-	-
	EVMS(.)3 4/0.37M	EVMS(.)3 4/0.37	0.37	0.5	71	1.6	29.5	-	28.2	27.1	25.8	21.9	16.7	-	-
	EVMS(.)3 5/0.55M	EVMS(.)3 5/0.55	0.55	0.75	71	1.6	36.9	-	35.2	33.9	32.3	27.4	20.9	-	-
	EVMS(.)3 6/0.55M	EVMS(.)3 6/0.55	0.55	0.75	71	1.6	44.2	-	42.5	40.5	38.8	32.8	25	-	-
	EVMS(.)3 7/0.75M	EVMS(.)3 7/0.75	0.75	1	80	1.6	51.5	-	49.5	47.5	45	38.3	29.2	-	-
	EVMS(.)3 8/0.75M	EVMS(.)3 8/0.75	0.75	1	80	1.6	59	-	56.5	54.5	51.5	44	33.4	-	-
	EVMS(.)3 9/1.1M	EVMS(.)3 9/1.1	1.1	1.5	80	1.6	66.5	-	63.5	61	58	49	37.6	-	-
	EVMS(.)3 10/1.1M	EVMS(.)3 10/1.1	1.1	1.5	80	1.6	73.5	-	70.5	68	64.5	54.5	41.5	-	-
	EVMS(.)3 11/1.1M	EVMS(.)3 11/1.1	1.1	1.5	80	1.6	81	-	77.5	74.5	71	60	46	-	-
	EVMS(.)3 12/1.1M	EVMS(.)3 12/1.1	1.1	1.5	80	1.6	88.5	-	84.5	81.5	77.5	65.5	50	-	-
	EVMS(.)3 13/1.5M	EVMS(.)3 13/1.5	1.5	2	90	1.6	96	-	91.5	88	84	71	54.5	-	-
3	EVMS(.)3 14/1.5M	EVMS(.)3 14/1.5	1.5	2	90	1.6	103	-	98.5	95	90.5	76.5	58.5	-	-
	EVMS(.)3 15/1.5M	EVMS(.)3 15/1.5	1.5	2	90	1.6	111	-	106	102	97	82	62.5	-	-
	EVMS(.)3 16/1.5M	EVMS(.)3 16/1.5	1.5	2	90	1.6	118	-	113	109	103	87.5	67	-	-
	EVMS(.)3 17/2.2M	EVMS(.)3 17/2.2	2.2	3	90	1.6	125	-	120	115	110	93	71	-	-
	EVMS(.)3 19/2.2M	EVMS(.)3 19/2.2	2.2	3	90	1.6	140	-	134	129	123	104	79.5	-	-
	EVMS(.)3 21/2.2M	EVMS(.)3 21/2.2	2.2	3	90	1.6	155	-	148	142	136	115	87.5	-	-
	EVMS(.)3 23/2.2M	EVMS(.)3 23/2.2	2.2	3	90	2.5	170	-	162	156	149	126	96	-	-
	EVMS(.)3 24/2.2M	EVMS(.)3 24/2.2	2.2	3	90	2.5	177	-	169	163	155	131	100	-	-
	-	EVMS(.)3 25/3.0	3.0	4	100	2.5	184	-	176	170	161	137	104	-	-
	-	EVMS(.)3 27/3.0	3.0	4	100	2.5	199	-	190	183	174	148	113	-	-
	-	EVMS(.)3 29/3.0	3.0	4	100	2.5	214	-	204	197	187	159	121	-	-
	-	EVMS(.)3 31/3.0	3.0	4	100	2.5	229	-	218	210	200	170	129	-	-
	-	EVMS(.)3 33/3.0	3.0	4	100	2.5	243	-	232	224	213	181	138	-	-
	EVMS(.)5 2/0.37M	EVMS(.)5 2/0.37	0.37	0.5	71	1.6	19	-	-	-	18	17.1	16	13.8	10.2
	EVMS(.)5 3/0.55M	EVMS(.)5 3/0.55	0.55	0.75	71	1.6	28.4	-	-	-	26.9	25.6	23.9	20.7	15.3
	EVMS(.)5 4/0.75M	EVMS(.)5 4/0.75	0.75	1	80	1.6	37.9	-	-	-	35.9	34.1	31.9	27.6	20.4
	EVMS(.)5 5/1.1M	EVMS(.)5 5/1.1	1.1	1.5	80	1.6	47.5	-	-	-	45	42.5	39.9	34.5	25.5
	EVMS(.)5 6/1.5M	EVMS(.)5 6/1.5	1.5	2	90	1.6	57	-	-	-	54	51	48	41.5	30.6
	EVMS(.)5 7/1.5M	EVMS(.)5 7/1.5	1.5	2	90	1.6	66.5	-	-	-	63	59.5	56	48.5	35.7
	EVMS(.)5 8/2.2M	EVMS(.)5 8/2.2	2.2	3	90	1.6	76	-	-	-	72	68	64	55	41
	EVMS(.)5 9/2.2M	EVMS(.)5 9/2.2	2.2	3	90	1.6	85.5	-	-	-	81	77	72	62	46
	EVMS(.)5 10/2.2M	EVMS(.)5 10/2.2	2.2	3	90	1.6	95	-	-	-	90	85.5	80	69	51
5	EVMS(.)5 11/2.2M	EVMS(.)5 11/2.2	2.2	3	90	1.6	104	-	-	-	98.5	94	87.5	76	56
	-	EVMS(.)5 12/3.0	3.0	4	100	1.6	114	-	-	-	108	102	95.5	83	61
	-	EVMS(.)5 13/3.0	3.0	4	100	1.6	123	-	-	-	117	111	104	89.5	66.5
	-	EVMS(.)5 14/3.0	3.0	4	100	1.6	133	-	-	-	126	119	112	96.5	71.5
	-	EVMS(.)5 15/3.0	3.0	4	100	1.6	142	-	-	-	135	128	120	104	76.5
	-	EVMS(.)5 17/4.0	4.0	5.5	112	1.6	161	-	-	-	153	145	136	117	86.5
	-	EVMS(.)5 19/4.0	4.0	5.5	112	2.5	180	-	-	-	171	162	152	131	97
	-	EVMS(.)5 20/4.0	4.0	5.5	112	2.5	190	-	-	-	179	171	160	138	102
	-	EVMS(.)5 23/5.5	5.5	7.5	132	2.5	218	-	-	-	206	196	183	159	117
	-	EVMS(.)5 25/5.5	5.5	7.5	132	2.5	237	-	-	-	224	213	199	173	127
	-	EVMS(.)5 27/5.5	5.5	7.5	132	2.5	256	-	-	-	242	230	215	186	138

1.6 MPa=16 bar; 2.5 MPa=25 bar

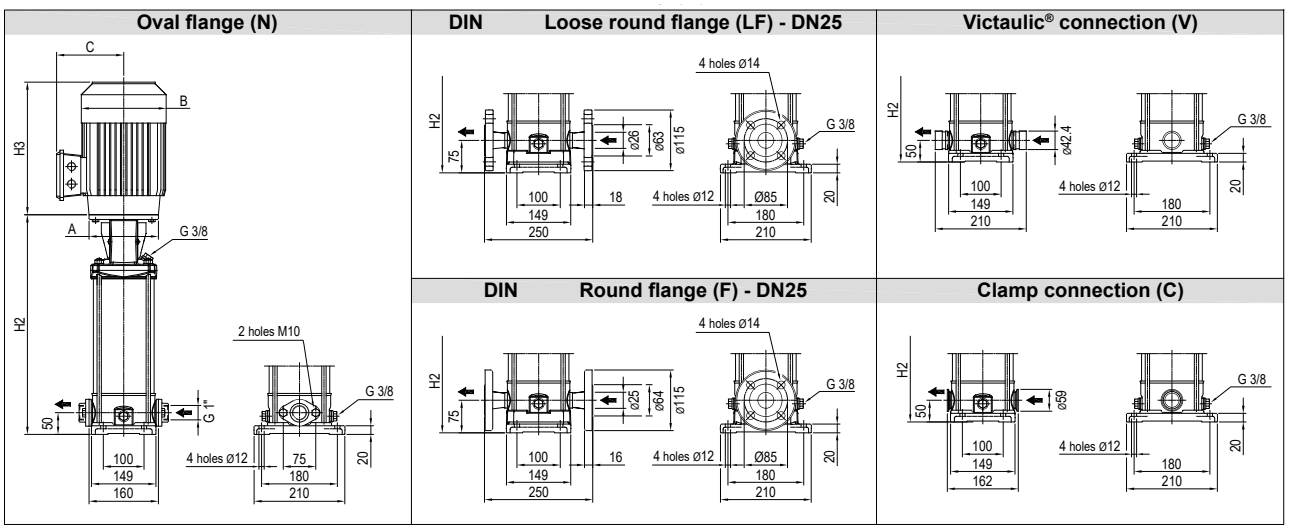
PERFORMANCE CURVE
EVMS(L)1



Test standard: ISO 9906:2012 - Grade 3B

TECHNICAL DATA
EVMS(L)1

Dimensional sketch



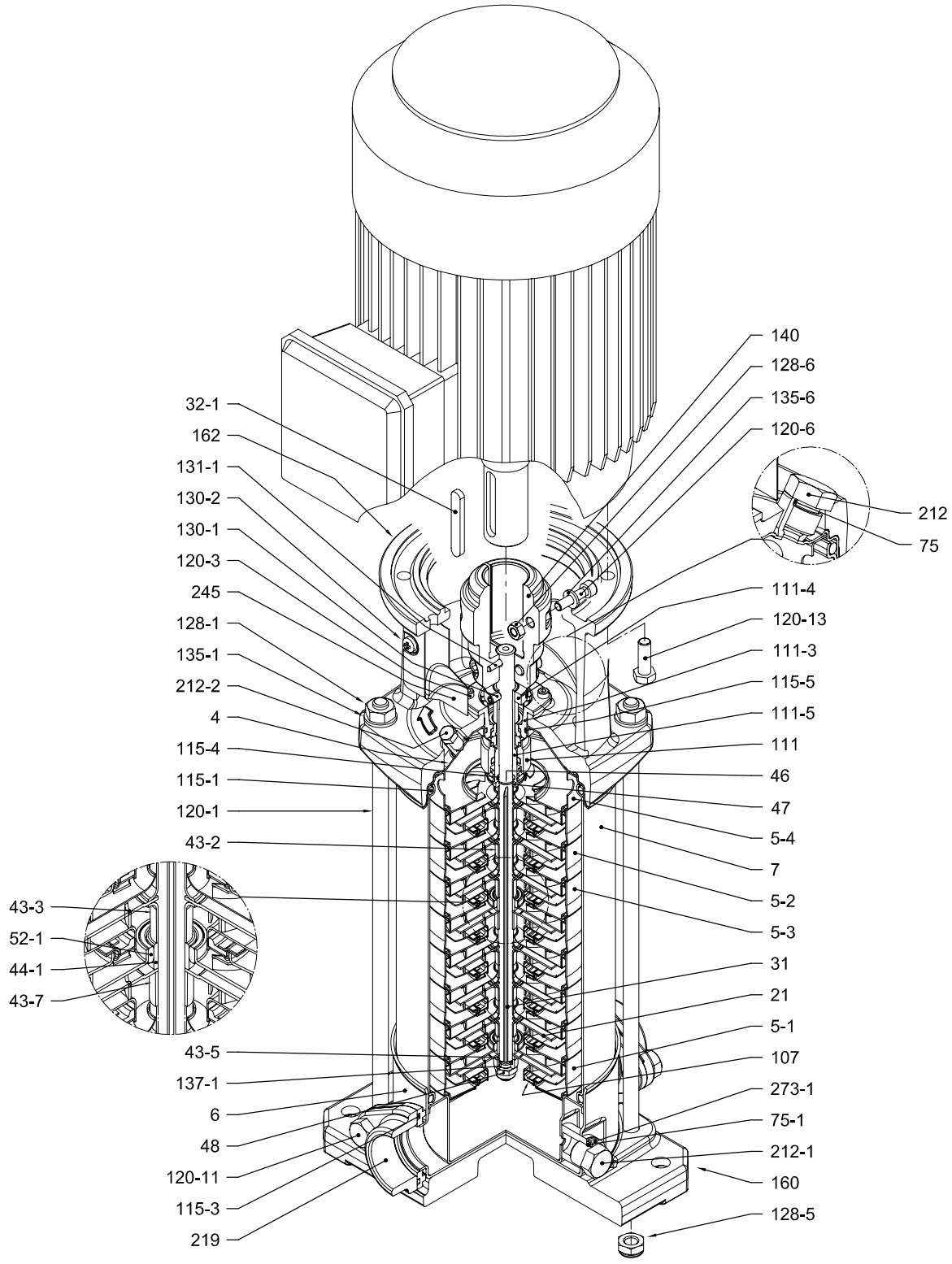
Dimensions [mm] and Weights [Kg]

Pump Type	Pmax [MPa]	Motor kW	Size	A Ø	1~ B	1~ C	3~ B	3~ C	Oval flange (N) H2	H2+H3 1~	H2+H3 3~	Weight Pump	Weight Pump + Motor 1~	Weight Pump + Motor 3~	Loose round flange (LF) Round flange (F) H2	H2+H3 1~	H2+H3 3~	Weight Pump	Weight Pump + Motor 1~	Weight Pump + Motor 3~	Victaulic® connection (V) Clamp connection (C) H2	H2+H3 1~	H2+H3 3~	Weight Pump	Weight Pump + Motor 1~	Weight Pump + Motor 3~
EVMS(L)1 2/0.37	1.6	0.37	71	105	141	119	141	119	250	452	452	9.7	16.2	16.2	275	477	477	10.4	16.9	16.9	250	452	452	9.7	16.2	16.2
EVMS(L)1 3/0.37	1.6	0.37	71	105	141	119	141	119	271	473	473	10.2	16.7	16.7	296	498	498	10.9	17.4	17.4	271	473	473	10.2	16.7	16.7
EVMS(L)1 4/0.37	1.6	0.37	71	105	141	119	141	119	292	494	494	10.6	17.1	17.1	317	519	519	11.3	17.8	17.8	292	494	494	10.6	17.1	17.1
EVMS(L)1 5/0.37	1.6	0.37	71	105	141	119	141	119	313	515	515	11.1	17.6	17.6	338	540	540	11.8	18.3	18.3	313	515	515	11.1	17.6	17.6
EVMS(L)1 6/0.37	1.6	0.37	71	105	141	119	141	119	334	536	536	11.5	18.0	18.0	359	561	561	12.2	18.7	18.7	334	536	536	11.5	18.0	18.0
EVMS(L)1 7/0.37	1.6	0.37	71	105	141	119	141	119	355	557	557	11.9	18.4	18.4	380	582	582	12.6	19.1	19.1	355	557	557	11.9	18.4	18.4
EVMS(L)1 8/0.37	1.6	0.37	71	105	141	119	141	119	376	578	578	12.4	18.9	18.9	401	603	603	13.1	19.6	19.6	376	578	578	12.4	18.9	18.9
EVMS(L)1 9/0.55	1.6	0.55	71	105	141	119	141	119	397	599	599	12.8	19.8	19.8	422	624	624	13.5	20.5	20.5	397	599	599	12.8	19.8	19.8
EVMS(L)1 10/0.55	1.6	0.55	71	105	141	119	141	119	418	620	620	13.2	20.2	20.2	443	645	645	13.9	20.9	20.9	418	620	620	13.2	20.2	20.2
EVMS(L)1 11/0.55	1.6	0.55	71	105	141	119	141	119	439	641	641	13.7	20.7	20.7	464	666	666	14.4	21.4	21.4	439	641	641	13.7	20.7	20.7
EVMS(L)1 12/0.55	1.6	0.55	71	105	141	119	141	119	460	662	662	14.4	21.4	21.4	485	687	687	15.1	22.1	22.1	460	662	662	14.4	21.4	21.4
EVMS(L)1 13/0.55	1.6	0.55	71	105	141	119	141	119	481	683	683	15	22.0	22.0	506	708	708	15.7	22.7	22.7	481	683	683	15	22.0	22.0
EVMS(L)1 14/0.75	1.6	0.75	80	120	160	142	141	102	512	741	745	15.7	25.7	24.2	537	766	770	16.4	26.4	24.9	512	741	745	15.7	25.7	24.2
EVMS(L)1 16/0.75	1.6	0.75	80	120	160	142	141	102	554	783	787	16.7	26.7	25.2	579	808	812	17.4	27.4	25.9	554	783	787	16.7	26.7	25.2
EVMS(L)1 18/1.1	1.6	1.1	80	120	160	142	141	102	596	825	840	17.8	28.8	27.8	621	850	865	18.5	29.5	28.5	596	825	840	17.8	28.8	27.8
EVMS(L)1 20/1.1	1.6	1.1	80	120	160	142	141	102	638	867	882	18.8	29.8	28.8	663	892	907	19.5	30.5	29.5	638	867	882	18.8	29.8	28.8
EVMS(L)1 22/1.1	1.6	1.1	80	120	160	142	141	102	680	909	924	20	31.0	30.0	705	934	949	20.7	31.7	30.7	680	909	924	20	31.0	30.0
EVMS(L)1 24/1.1	1.6	1.1	80	120	160	142	141	102	722	951	966	21	32.0	31.0	747	976	991	21.7	32.7	31.7	722	951	966	21	32.0	31.0
EVMS(L)1 26/1.1	1.6	1.1	80	120	160	142	141	102	764	993	1008	22	33.0	32.0	789	1018	1033	22.7	33.7	32.7	764	993	1008	22	33.0	32.0
EVMS(L)1 27/1.5	2.5	1.5	90	140	172	140	160	119	-	-	-	-	-	-	820	1098	1111	23.1	40.9	36.6	795	1073	1086	22.4	40.2	35.9
EVMS(L)1 29/1.5	2.5	1.5	90	140	172	140	160	119	-	-	-	-	-	-	862	1140	1153	24.1	41.9	37.6	837	1115	1128	23.4	41.2	36.9
EVMS(L)1 32/1.5	2.5	1.5	90	140	172	140	160	119	-	-	-	-	-	-	925	1203	1216	25.4	43.2	38.9	900	1178	1191	24.7	42.5	38.2
EVMS(L)1 34/1.5	2.5	1.5	90	140	172	140	160	119	-	-	-	-	-	-	967	1245	1258	26.3	44.1	39.8	942	1220	1233	25.6	43.4	39.1
EVMS(L)1 37/2.2	2.5	2.2	90	140	172	140	160	119	-	-	-	-	-	-	1030	1308	1321	27.7	47.2	42.7	1005	1283	1296	27	46.5	42.0
EVMS(L)1 39/2.2	2.5	2.2	90	140	172	140	160	119	-	-	-	-	-	-	1072	1350	1363	28.7	48.2	43.7	1047	1325	1338	28	47.5	43.0

1.6 MPa=16 bar; 2.5 MPa=25 bar

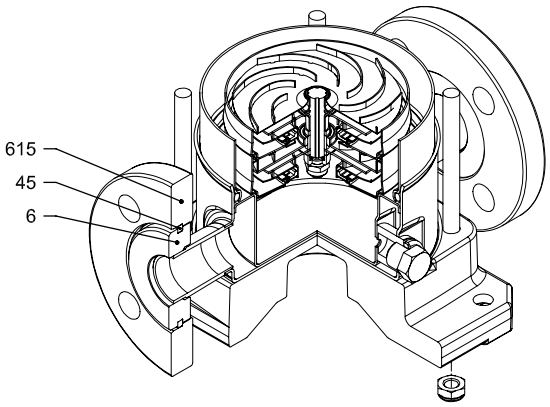
- not available model

SECTIONAL VIEW
EVMS(L)1

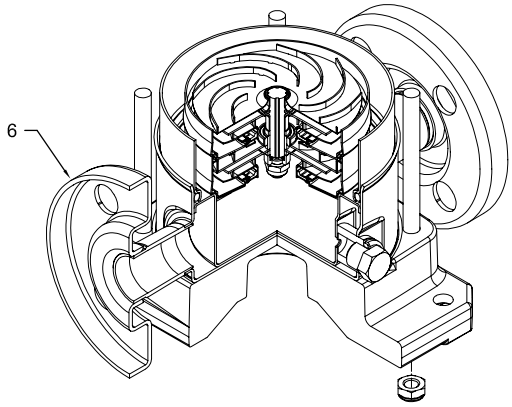


with Oval flange (N)

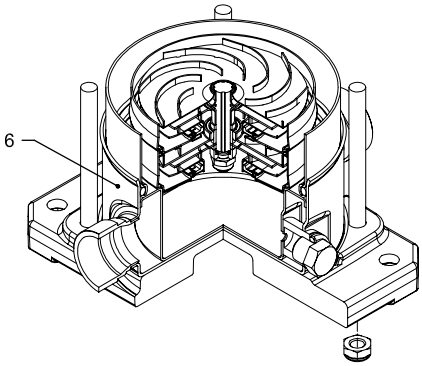
PIPE CONNECTION
EVMS(L)1



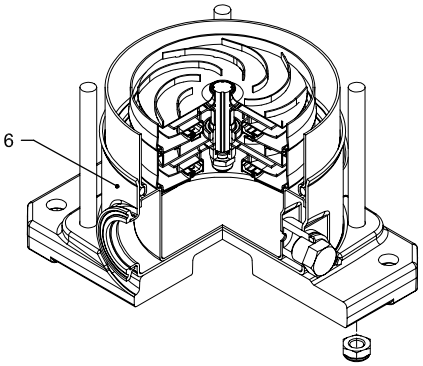
with Loose round flange (LF)



with Round flange (F)



with Victaulic® connection (V)



with Clamp connection (C)

SECTIONAL TABLE
EVMS(L)1

N°	PART NAME		MATERIAL		DIMENSIONS	STANDARD
			EVMS	EVMSL		
4	Casing cover		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
5-1	Suction casing		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
5-2	Intermediate casing		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
5-3	Intermediate casing with bearing		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
5-4	Discharge casing		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
6	Bottom casing		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
7	Outer casing		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
21	Impeller		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
31	Shaft		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
32-1	Adjuster key		EN 1.4301 (AISI 304)			
43-2	Shaft sleeve (intermediate)		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
43-3	Shaft sleeve (bearing)		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
43-5	Shaft sleeve (last stage)		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
43-7	Spacer		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
44-1	Shaft sleeve bearing		Tungsten carbide			
45	Flange holder		EN 1.4301 (AISI 304)			
46	Ring (mechanical seal)		EN 1.4404 (AISI 316L)			
47	Ring holder		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
48	Impeller nut		EN 1.4301 (AISI 304) with inox insert	EN 1.4401 (AISI 316) with inox insert	M8	
52-1	Sleeve bearing		Tungsten carbide			
75	O-Ring (priming plug)		EPDM / FPM		Ø12.37x2.62	OR 3050
75-1	O-Ring (drainage plug)		EPDM / FPM			
107	Liner ring		EN 1.4301 (AISI 304) + PPS	EN 1.4404 (AISI 316L) + PPS		
111	Mechanical seal		see pages 6-7			
111-3	Mechanical seal seat		EN 1.4308 (ASTM CF8)	EN 1.4408 (ASTM CF8M)		
111-4	Seal holder		EN 1.4301 (AISI 304)			
111-5	Mechanical seal cartridge sleeve		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
115-1	O-Ring (outer casing)		EPDM / FPM		Ø129.54x5.34	OR 6945
115-3	O-Ring		EPDM / FPM			
115-4	O-Ring (cartridge sleeve)		EPDM / FPM		Ø11.91x2.62	OR 4093
115-5	O-Ring (seal flange)		EPDM / FPM		Ø32.99x2.62	OR 4175
120-1	Tie-rod		EN 1.4057 (AISI 431)		M10	
120-3	Screw (seal flange)		A2-70		M4x10	ISO 4762
120-6	Screw (pump coupling)		Galvanized steel		M6x25	ISO 4762
120-11	Screw (counterflange)		A2-70			
120-13	Screw for motor	MEC 71-80	Galvanized steel 8.8 strength class ISO 898/1		M6x20	ISO 4017
		MEC 90			M8x20	ISO 4017
128-1	Nut (tie rod)		A2-70		M10	ISO 4032
128-5	Nut (tie rod)		A2-70		M10	UNI 7474
128-6	Nut (aluminium coupling)	MEC 71-80-90-100-112	Galvanized steel		M6	ISO 4032
130-1	Set screw		EN 1.4301 (AISI 304)		M5x8	ISO 4026
130-2	Screw for coupling guard		A2-70		M5x6	UNI 7687
131-1	Pin for shaft		Carbon Steel		Ø4x32	ISO 2338
135-1	Washer (tie rod)		EN 1.4301 (AISI 304)		Ø10.5x21x2	ISO 7089
135-6	Washer (aluminium coupling)	up to 4.0 kW	Carbon Steel		Ø6	
137-1	Impeller spacer		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
140	Coupling	up to 4.0 kW	Die cast Aluminium EN AB-AISI11Cu2 (Fe)			
160	Base		Die cast Aluminium EN AB-AISI11Cu2 (Fe)			
162	Motor bracket		Cast iron EN-GJL-250			
212	Priming plug		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)	G 3/8	
212-1	Drainage plug		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)	G 3/8	
212-2	Venting plug		EN 1.4404 (AISI 316L)			
219	Counter flange	flange type: N	EN 1.4308 (ASTM CF8)	EN 1.4408 (ASTM CF8M)		
		flange type: LF-F-V-C	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
245	Coupling guard		EN 1.4301 (AISI 304)			
273-1	Washer (drainage plug)		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
615	Flange		Nodular Cast Iron			

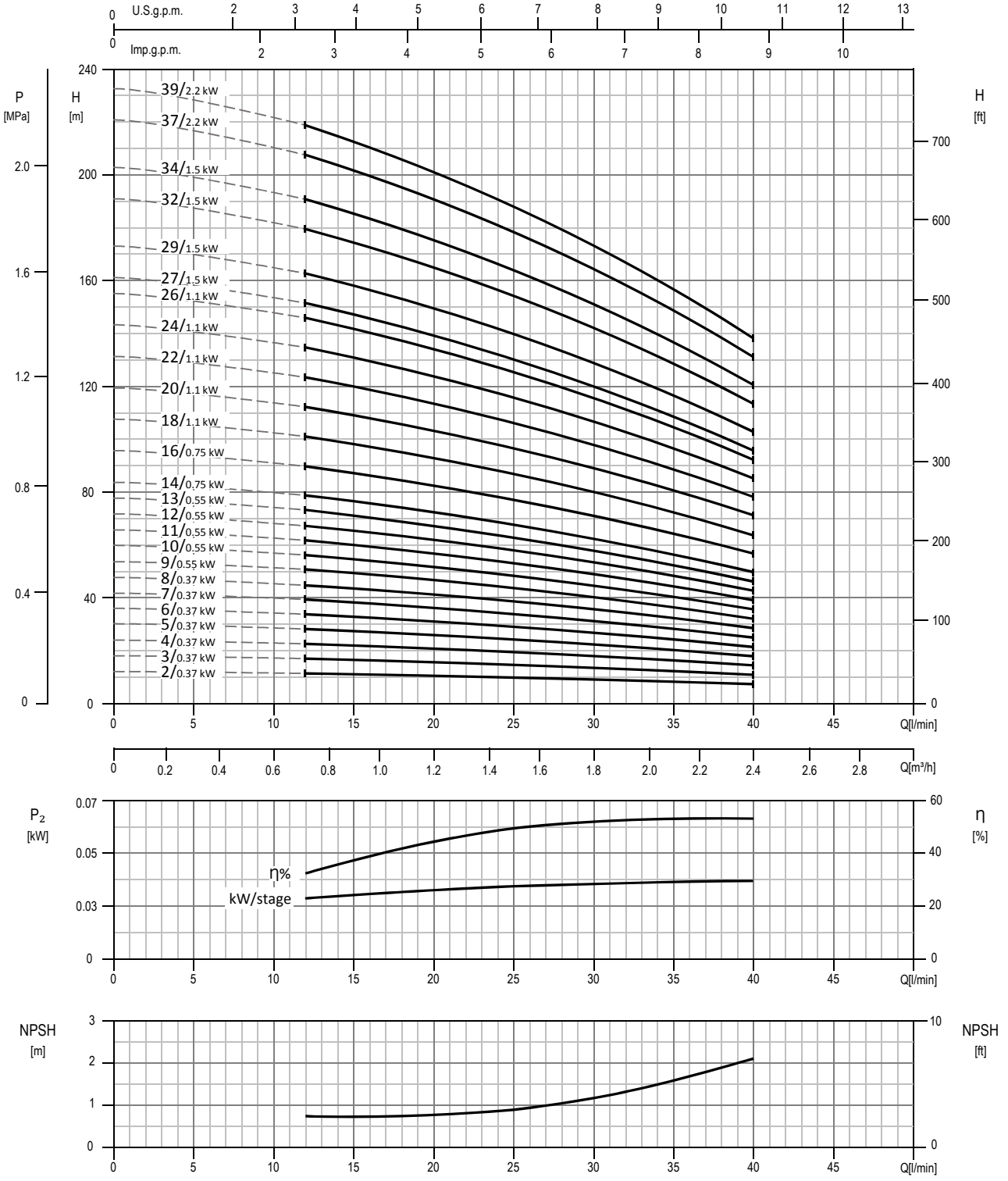
QUANTITY FOR MODEL EVMS(L)1

Pump Type	N°																													
	4	5-1	5-2	5-3	5-4	6	7	21	31	32-1	43-2	43-3	43-5	43-7	44-1	45**	46	47	48	52-1	75	75-1	107	111	111-3	111-4	111-5	115-1	115-3*	115-4	115-5
EVMS(L)1 2/0.37	1	1	/	1	1	1	1	2	1	1	1	1	/	/	1	4	2	1	1	1	1	2	2	1	1	1	1	2	2	1	1
EVMS(L)1 3/0.37	1	1	1	1	1	1	1	3	1	1	3	1	/	/	1	4	2	1	1	1	1	2	3	1	1	1	1	2	2	1	1
EVMS(L)1 4/0.37	1	1	2	1	1	1	1	4	1	1	5	1	/	/	1	4	2	1	1	1	1	2	4	1	1	1	1	2	2	1	1
EVMS(L)1 5/0.37	1	1	3	1	1	1	1	5	1	1	7	1	1	/	1	4	2	1	1	1	1	2	5	1	1	1	1	2	2	1	1
EVMS(L)1 6/0.37	1	1	4	1	1	1	1	6	1	1	9	1	/	/	1	4	2	1	1	1	1	2	6	1	1	1	1	2	2	1	1
EVMS(L)1 7/0.37	1	1	5	1	1	1	1	7	1	1	11	1	/	/	1	4	2	1	1	1	1	2	7	1	1	1	1	2	2	1	1
EVMS(L)1 8/0.37	1	1	6	1	1	1	1	8	1	1	13	1	/	/	1	4	2	1	1	1	1	2	8	1	1	1	1	2	2	1	1
EVMS(L)1 9/0.55	1	1	7	1	1	1	1	9	1	1	15	1	1	/	1	4	2	1	1	1	1	2	9	1	1	1	1	2	2	1	1
EVMS(L)1 10/0.55	1	1	8	1	1	1	1	10	1	1	17	1	/	/	1	4	2	1	1	1	1	2	10	1	1	1	1	2	2	1	1
EVMS(L)1 11/0.55	1	1	9	1	1	1	1	11	1	1	19	1	/	/	1	4	2	1	1	1	1	2	11	1	1	1	1	2	2	1	1
EVMS(L)1 12/0.55	1	1	10	1	1	1	1	12	1	1	21	1	/	/	1	4	2	1	1	1	1	2	12	1	1	1	1	2	2	1	1
EVMS(L)1 13/0.55	1	1	10	2	1	1	1	13	1	1	20	2	1	1	2	4	2	1	1	2	1	2	13	1	1	1	1	2	2	1	1
EVMS(L)1 14/0.75	1	1	11	2	1	1	1	14	1	1	22	2	/	1	2	4	2	1	1	2	1	2	14	1	1	1	1	2	2	1	1
EVMS(L)1 16/0.75	1	1	13	2	1	1	1	16	1	1	26	2	/	1	2	4	2	1	1	2	1	2	16	1	1	1	1	2	2	1	1
EVMS(L)1 18/1.1	1	1	15	2	1	1	1	18	1	1	30	2	/	1	2	4	2	1	1	2	1	2	18	1	1	1	1	2	2	1	1
EVMS(L)1 20/1.1	1	1	17	2	1	1	1	20	1	1	34	2	/	1	2	4	2	1	1	2	1	2	20	1	1	1	1	2	2	1	1
EVMS(L)1 22/1.1	1	1	19	2	1	1	1	22	1	1	38	2	/	1	2	4	2	1	1	2	1	2	22	1	1	1	1	2	2	1	1
EVMS(L)1 24/1.1	1	1	21	2	1	1	1	24	1	1	42	2	/	1	2	4	2	1	1	2	1	2	24	1	1	1	1	2	2	1	1
EVMS(L)1 26/1.1	1	1	23	2	1	1	1	26	1	1	46	2	/	1	2	4	2	1	1	2	1	2	26	1	1	1	1	2	2	1	1
EVMS(L)1 27/1.5	1	1	24	2	1	1	1	27	1	1	48	2	/	1	2	4	2	1	1	2	1	2	27	1	1	1	1	2	/	1	1
EVMS(L)1 29/1.5	1	1	26	2	1	1	1	29	1	1	52	2	/	1	2	4	2	1	1	2	1	2	29	1	1	1	1	2	/	1	1
EVMS(L)1 32/1.5	1	1	29	2	1	1	1	32	1	1	58	2	/	1	2	4	2	1	1	2	1	2	32	1	1	1	1	2	/	1	1
EVMS(L)1 34/1.5	1	1	31	2	1	1	1	34	1	1	62	2	/	1	2	4	2	1	1	2	1	2	34	1	1	1	1	2	/	1	1
EVMS(L)1 37/2.2	1	1	34	2	1	1	1	37	1	1	68	2	/	1	2	4	2	1	1	2	1	2	37	1	1	1	1	2	/	1	1
EVMS(L)1 39/2.2	1	1	36	2	1	1	1	39	1	1	72	2	/	1	2	4	2	1	1	2	1	2	39	1	1	1	1	2	/	1	1

Pump Type	N°																								
	120-1	120-3	120-6	120-11*	120-13	128-1	128-5	128-6	130-1	130-2	131-1	135-1	135-6	137-1	140	160	162	212	212-1	212-2	219*	245	273-1	615**
EVMS(L)1 2/0.37	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 3/0.37	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 4/0.37	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 5/0.37	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 6/0.37	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 7/0.37	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 8/0.37	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 9/0.55	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 10/0.55	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 11/0.55	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 12/0.55	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 13/0.55	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 14/0.75	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 16/0.75	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 18/1.1	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 20/1.1	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 22/1.1	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 24/1.1	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 26/1.1	4	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)1 27/1.5	4	4	4	/	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	/	2	2	2
EVMS(L)1 29/1.5	4	4	4	/	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	/	2	2	2
EVMS(L)1 32/1.5	4	4	4	/	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	/	2	2	2
EVMS(L)1 34/1.5	4	4	4	/	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	/	2	2	2
EVMS(L)1 37/2.2	4	4	4	/	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	/	2	2	2
EVMS(L)1 39/2.2	4	4	4	/	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	/	2	2	2

* only for Oval flange (N)
** only for Loose round flange (LF)

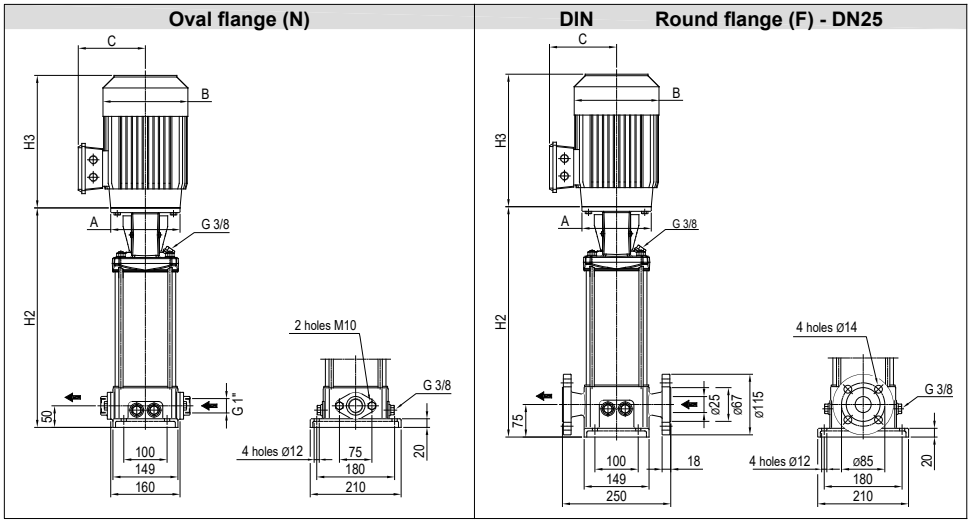
PERFORMANCE CURVE
EVMSG1



Test standard: ISO 9906:2012 - Grade 3B

TECHNICAL DATA
EVMSG1

Dimensional sketch

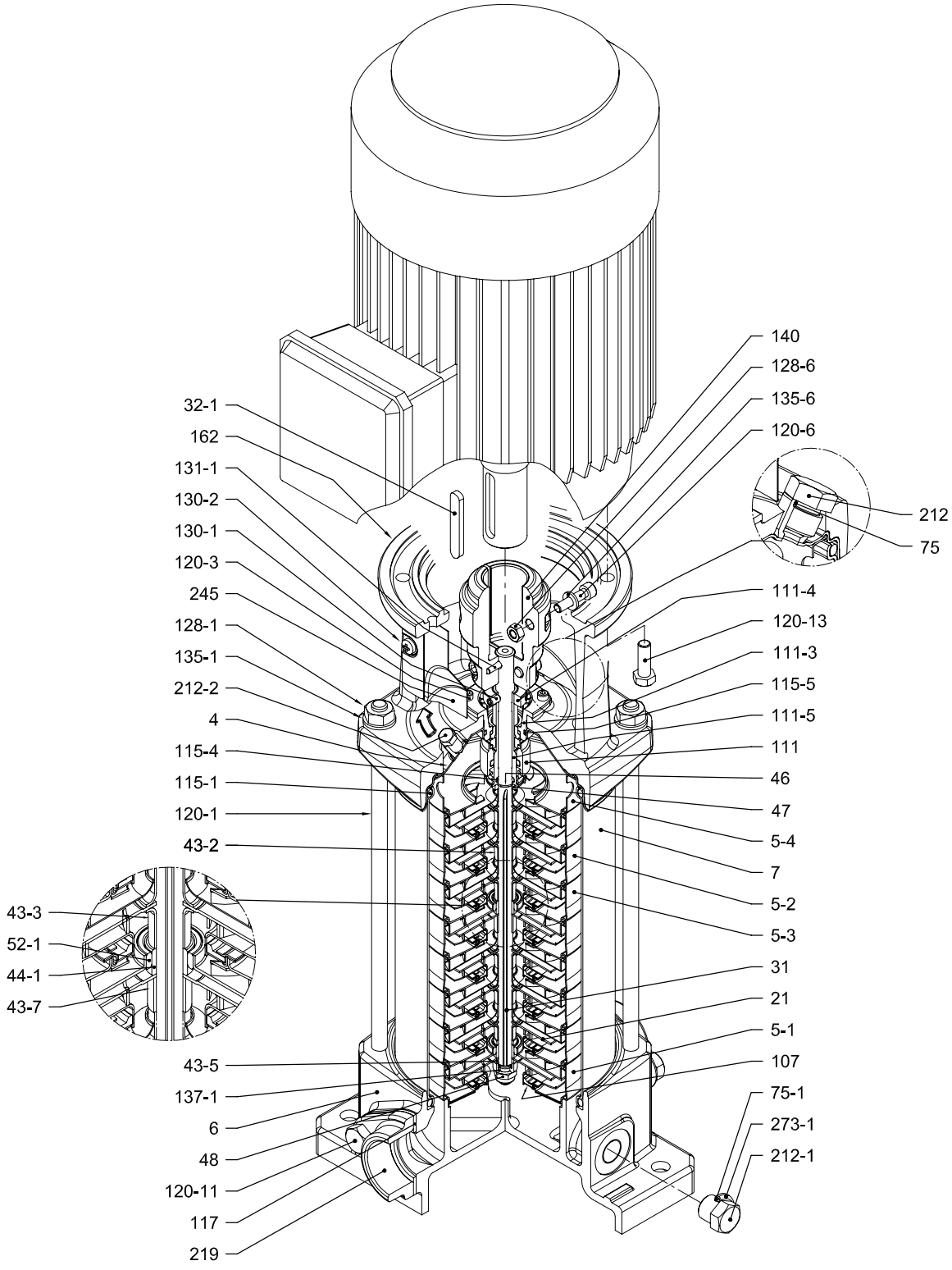


Dimensions [mm] and Weights [Kg]

Pump Type	Pmax [MPa]	Motor kW	Size	A Ø	1~ B	1~ C	3~ B	3~ C	Oval flange (N) H2	H2+H3 1~	H2+H3 3~	Weight Pump	Weight Pump + Motor 1~	Weight Pump + Motor 3~	Round flange (F) H2	H2+H3 1~	H2+H3 3~	Weight Pump	Weight Pump + Motor 1~	Weight Pump + Motor 3~
EVMSG1 2/0.37	1.6	0.37	71	105	141	119	141	119	250	452	452	14	20.5	20.5	275	477	477	17.4	23.9	23.9
EVMSG1 3/0.37	1.6	0.37	71	105	141	119	141	119	271	473	473	14.5	21.0	21.0	296	498	498	17.9	24.4	24.4
EVMSG1 4/0.37	1.6	0.37	71	105	141	119	141	119	292	494	494	14.9	21.4	21.4	317	519	519	18.3	24.8	24.8
EVMSG1 5/0.37	1.6	0.37	71	105	141	119	141	119	313	515	515	15.4	21.9	21.9	338	540	540	18.8	25.3	25.3
EVMSG1 6/0.37	1.6	0.37	71	105	141	119	141	119	334	536	536	15.8	22.3	22.3	359	561	561	19.2	25.7	25.7
EVMSG1 7/0.37	1.6	0.37	71	105	141	119	141	119	355	557	557	16.2	22.7	22.7	380	582	582	19.6	26.1	26.1
EVMSG1 8/0.37	1.6	0.37	71	105	141	119	141	119	376	578	578	16.7	23.2	23.2	401	603	603	20.1	26.6	26.6
EVMSG1 9/0.55	1.6	0.55	71	105	141	119	141	119	397	599	599	17.1	24.1	24.1	422	624	624	20.5	27.5	27.5
EVMSG1 10/0.55	1.6	0.55	71	105	141	119	141	119	418	620	620	17.5	24.5	24.5	443	645	645	20.9	27.9	27.9
EVMSG1 11/0.55	1.6	0.55	71	105	141	119	141	119	439	641	641	18	25.0	25.0	464	666	666	21.4	28.4	28.4
EVMSG1 12/0.55	1.6	0.55	71	105	141	119	141	119	460	662	662	18.7	25.7	25.7	485	687	687	22.1	29.1	29.1
EVMSG1 13/0.55	1.6	0.55	71	105	141	119	141	119	481	683	683	19.3	26.3	26.3	506	708	708	22.7	29.7	29.7
EVMSG1 14/0.75	1.6	0.75	80	120	160	142	141	102	512	741	745	20	30.0	28.5	537	766	770	23.4	33.4	31.9
EVMSG1 16/0.75	1.6	0.75	80	120	160	142	141	102	554	783	787	21	31.0	29.5	579	808	812	24.4	34.4	32.9
EVMSG1 18/1.1	1.6	1.1	80	120	160	142	141	102	596	825	840	22.1	33.1	32.1	621	850	865	25.5	36.5	35.5
EVMSG1 20/1.1	1.6	1.1	80	120	160	142	141	102	638	867	882	23.1	34.1	33.1	663	892	907	26.5	37.5	36.5
EVMSG1 22/1.1	1.6	1.1	80	120	160	142	141	102	680	909	924	24.3	35.3	34.3	705	934	949	27.7	38.7	37.7
EVMSG1 24/1.1	1.6	1.1	80	120	160	142	141	102	722	951	966	25.3	36.3	35.3	747	976	991	28.7	39.7	38.7
EVMSG1 26/1.1	1.6	1.1	80	120	160	142	141	102	764	993	1008	26.3	37.3	36.3	789	1018	1033	29.7	40.7	39.7
EVMSG1 27/1.5	2.5	1.5	90	140	172	140	160	119	-	-	-	-	-	-	820	1098	1111	30.1	47.9	43.6
EVMSG1 29/1.5	2.5	1.5	90	140	172	140	160	119	-	-	-	-	-	-	862	1140	1153	31.1	48.9	44.6
EVMSG1 32/1.5	2.5	1.5	90	140	172	140	160	119	-	-	-	-	-	-	925	1203	1216	32.4	50.2	45.9
EVMSG1 34/1.5	2.5	1.5	90	140	172	140	160	119	-	-	-	-	-	-	967	1245	1258	33.3	51.1	46.8
EVMSG1 37/2.2	2.5	2.2	90	140	172	140	160	119	-	-	-	-	-	-	1030	1308	1321	34.7	54.2	49.7
EVMSG1 39/2.2	2.5	2.2	90	140	172	140	160	119	-	-	-	-	-	-	1072	1350	1363	35.7	55.2	50.7

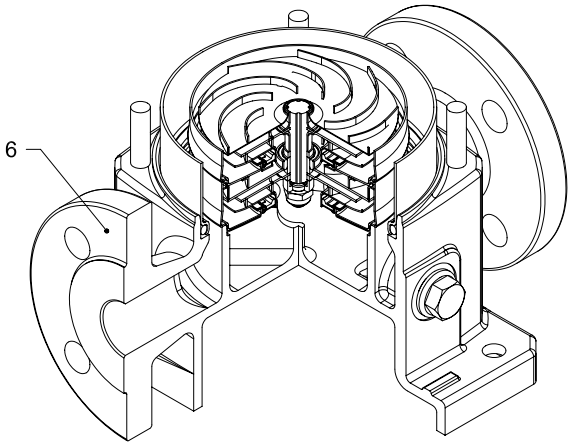
1.6 MPa=16 bar; 2.5 MPa=25 bar
- not available model

SECTIONAL VIEW
EVMSG1



with Oval flange (N)

PIPE CONNECTION
EVMSG1



with Round flange (F)

SECTIONAL TABLE
EVMSG1

N°	PART NAME		MATERIAL EVMSG	DIMENSIONS	STANDARD
4	Casing cover		EN 1.4301 (AISI 304)		
5-1	Suction casing		EN 1.4301 (AISI 304)		
5-2	Intermediate casing		EN 1.4301 (AISI 304)		
5-3	Intermediate casing with bearing		EN 1.4301 (AISI 304)		
5-4	Discharge casing		EN 1.4301 (AISI 304)		
6	Bottom casing		Cast Iron EN-GJL-250		
7	Outer casing		EN 1.4301 (AISI 304)		
21	Impeller		EN 1.4301 (AISI 304)		
31	Shaft		EN 1.4301 (AISI 304)		
32-1	Adjuster key		EN 1.4301 (AISI 304)		
43-2	Shaft sleeve (intermediate)		EN 1.4301 (AISI 304)		
43-3	Shaft sleeve (bearing)		EN 1.4301 (AISI 304)		
43-5	Shaft sleeve (last stage)		EN 1.4301 (AISI 304)		
43-7	Spacer		EN 1.4301 (AISI 304)		
44-1	Shaft sleeve bearing		Tungsten carbide		
46	Ring (mechanical seal)		EN 1.4404 (AISI 316L)		
47	Ring holder		EN 1.4404 (AISI 316L)		
48	Impeller nut		EN 1.4301 (AISI 304) with inox insert	M8	
52-1	Sleeve bearing		Tungsten carbide		
75	O-Ring (priming plug)		EPDM / FPM	Ø12.37x2.62	OR 3050
75-1	O-Ring (drainage plug)		EPDM / FPM		
107	Liner ring		EN 1.4301 (AISI 304) + PPS		
111	Mechanical seal		see pages 6-7		
111-3	Mechanical seal seat		EN 1.4308 (ASTM CF8)		
111-4	Seal holder		EN 1.4301 (AISI 304)		
111-5	Mechanical seal cartridge sleeve		EN 1.4301 (AISI 304)		
115-1	O-Ring (outer casing)		EPDM / FPM	Ø129.54x5.34	OR 6945
115-4	O-Ring (cartridge sleeve)		EPDM / FPM	Ø11.91x2.62	OR 4093
115-5	O-Ring (seal flange)		EPDM / FPM	Ø32.99x2.62	OR 4175
117	Flange gasket		EPDM / FPM		
120-1	Tie-rod		EN 1.4057 (AISI 431)	M10	
120-3	Screw (seal flange)		A2-70	M4x10	ISO 4762
120-6	Screw (pump coupling)		Galvanized steel	M6x25	ISO 4762
120-11	Screw (counterflange)		A2-70		UNI 7323
120-13	Screw for motor	MEC 71-80	Galvanized steel 8.8 strength class ISO 898/1	M6x20	ISO 4017
		MEC 90		M8x20	ISO 4017
128-1	Nut (tie rod)		A2-70	M10	ISO 4032
128-6	Nut (aluminium coupling)	MEC 71-80-90-100-112	Galvanized steel	M6	ISO 4032
130-1	Set screw		A2-70	M5x8	ISO 4026
130-2	Screw for coupling guard		A2-70	M5x6	UNI 7687
131-1	Pin for shaft		Carbon Steel	Ø4x32	ISO 2338
135-1	Washer (tie rod)		EN 1.4301 (AISI 304)	Ø10.5x21x2	ISO 7089
135-6	Washer (aluminium coupling)	up to 4.0 kW	Carbon Steel	Ø6	
137-1	Impeller spacer		EN 1.4301 (AISI 304)		
140	Coupling	up to 4.0 kW	Die cast Aluminium EN AB-AISI11Cu2 (Fe)		
162	Motor bracket		Cast iron EN-GJL-250		
212	Priming plug		EN 1.4301 (AISI 304)	G 3/8	
212-1	Drainage plug		EN 1.4301 (AISI 304)	G 3/8	
212-2	Venting plug		EN 1.4404 (AISI 316L)		
219	Counter flange	flange type: N	Galvanized steel		
		flange type: F	Cast Iron EN-GJL-250		
245	Coupling guard		EN 1.4301 (AISI 304)		
273-1	Washer (drainage plug)		EN 1.4301 (AISI 304)		

QUANTITY FOR MODEL EVMSG1

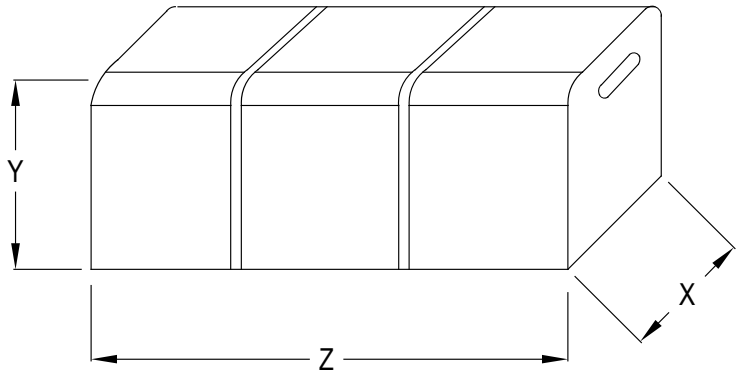
Pump Type	N°																											
	4	5-1	5-2	5-3	5-4	6	7	21	31	32-1	43-2	43-3	43-5	43-7	44-1	46	47	48	52-1	75	75-1	107	111	111-3	111-4	111-5	115-1	115-4	115-5
EVMSG1 2/0.37	1	1	/	1	1	1	1	2	1	1	1	1	/	/	1	2	1	1	1	1	4	2	1	1	1	1	2	1	1
EVMSG1 3/0.37	1	1	1	1	1	1	1	3	1	1	3	1	/	/	1	2	1	1	1	1	4	3	1	1	1	1	2	1	1
EVMSG1 4/0.37	1	1	2	1	1	1	1	4	1	1	5	1	/	/	1	2	1	1	1	1	4	4	1	1	1	1	2	1	1
EVMSG1 5/0.37	1	1	3	1	1	1	1	5	1	1	7	1	1	/	1	2	1	1	1	1	4	5	1	1	1	1	2	1	1
EVMSG1 6/0.37	1	1	4	1	1	1	1	6	1	1	9	1	/	/	1	2	1	1	1	1	4	6	1	1	1	1	2	1	1
EVMSG1 7/0.37	1	1	5	1	1	1	1	7	1	1	11	1	/	/	1	2	1	1	1	1	4	7	1	1	1	1	2	1	1
EVMSG1 8/0.37	1	1	6	1	1	1	1	8	1	1	13	1	/	/	1	2	1	1	1	1	4	8	1	1	1	1	2	1	1
EVMSG1 9/0.55	1	1	7	1	1	1	1	9	1	1	15	1	1	/	1	2	1	1	1	1	4	9	1	1	1	1	2	1	1
EVMSG1 10/0.55	1	1	8	1	1	1	1	10	1	1	17	1	/	/	1	2	1	1	1	1	4	10	1	1	1	1	2	1	1
EVMSG1 11/0.55	1	1	9	1	1	1	1	11	1	1	19	1	/	/	1	2	1	1	1	1	4	11	1	1	1	1	2	1	1
EVMSG1 12/0.55	1	1	10	1	1	1	1	12	1	1	21	1	/	/	1	2	1	1	1	1	4	12	1	1	1	1	2	1	1
EVMSG1 13/0.55	1	1	10	2	1	1	1	13	1	1	20	2	1	1	2	2	1	1	2	1	4	13	1	1	1	1	2	1	1
EVMSG1 14/0.75	1	1	11	2	1	1	1	14	1	1	22	2	/	1	2	2	1	1	2	1	4	14	1	1	1	1	2	1	1
EVMSG1 16/0.75	1	1	13	2	1	1	1	16	1	1	26	2	/	1	2	2	1	1	2	1	4	16	1	1	1	1	2	1	1
EVMSG1 18/1.1	1	1	15	2	1	1	1	18	1	1	30	2	/	1	2	2	1	1	2	1	4	18	1	1	1	1	2	1	1
EVMSG1 20/1.1	1	1	17	2	1	1	1	20	1	1	34	2	/	1	2	2	1	1	2	1	4	20	1	1	1	1	2	1	1
EVMSG1 22/1.1	1	1	19	2	1	1	1	22	1	1	38	2	/	1	2	2	1	1	2	1	4	22	1	1	1	1	2	1	1
EVMSG1 24/1.1	1	1	21	2	1	1	1	24	1	1	42	2	/	1	2	2	1	1	2	1	4	24	1	1	1	1	2	1	1
EVMSG1 26/1.1	1	1	23	2	1	1	1	26	1	1	46	2	/	1	2	2	1	1	2	1	4	26	1	1	1	1	2	1	1
EVMSG1 27/1.5	1	1	24	2	1	1	1	27	1	1	48	2	/	1	2	2	1	1	2	1	4	27	1	1	1	1	2	1	1
EVMSG1 29/1.5	1	1	26	2	1	1	1	29	1	1	52	2	/	1	2	2	1	1	2	1	4	29	1	1	1	1	2	1	1
EVMSG1 32/1.5	1	1	29	2	1	1	1	32	1	1	58	2	/	1	2	2	1	1	2	1	4	32	1	1	1	1	2	1	1
EVMSG1 34/1.5	1	1	31	2	1	1	1	34	1	1	62	2	/	1	2	2	1	1	2	1	4	34	1	1	1	1	2	1	1
EVMSG1 37/2.2	1	1	34	2	1	1	1	37	1	1	68	2	/	1	2	2	1	1	2	1	4	37	1	1	1	1	2	1	1
EVMSG1 39/2.2	1	1	36	2	1	1	1	39	1	1	72	2	/	1	2	2	1	1	2	1	4	39	1	1	1	1	2	1	1

Pump Type	N°																					
	117*	120-1	120-3	120-6	120-11*	120-13	128-1	128-6	130-1	130-2	131-1	135-1	135-6	137-1	140	162	212	212-1	212-2	219*	245	273-1
EVMSG1 2/0.37	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 3/0.37	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 4/0.37	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 5/0.37	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 6/0.37	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 7/0.37	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 8/0.37	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 9/0.55	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 10/0.55	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 11/0.55	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 12/0.55	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 13/0.55	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 14/0.75	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 16/0.75	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 18/1.1	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 20/1.1	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 22/1.1	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 24/1.1	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 26/1.1	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG1 27/1.5	/	4	4	4	/	4	4	4	3	4	1	4	4	1	2	1	1	4	1	/	2	4
EVMSG1 29/1.5	/	4	4	4	/	4	4	4	3	4	1	4	4	1	2	1	1	4	1	/	2	4
EVMSG1 32/1.5	/	4	4	4	/	4	4	4	3	4	1	4	4	1	2	1	1	4	1	/	2	4
EVMSG1 34/1.5	/	4	4	4	/	4	4	4	3	4	1	4	4	1	2	1	1	4	1	/	2	4
EVMSG1 37/2.2	/	4	4	4	/	4	4	4	3	4	1	4	4	1	2	1	1	4	1	/	2	4
EVMSG1 39/2.2	/	4	4	4	/	4	4	4	3	4	1	4	4	1	2	1	1	4	1	/	2	4

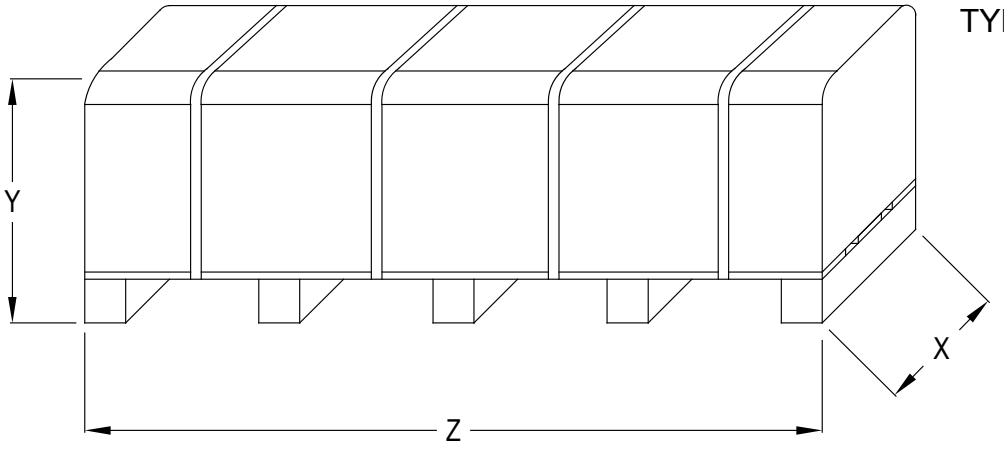
* only for Oval flange (N)

PACKING DRAWING
EVMS(.)1-3-5-10-15-20-32-45-64-90

TYPE 1

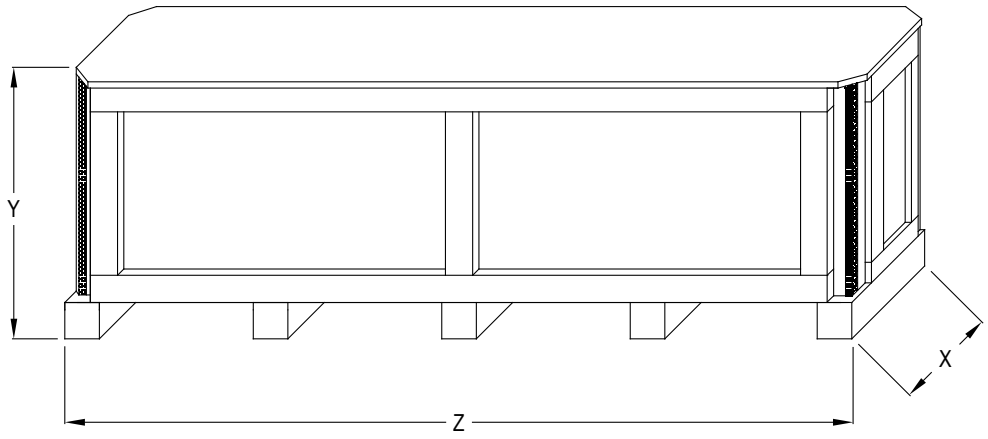


TYPE 2



PACKING DRAWING
EVMS(.)1-3-5-10-15-20-32-45-64-90

TYPE 3



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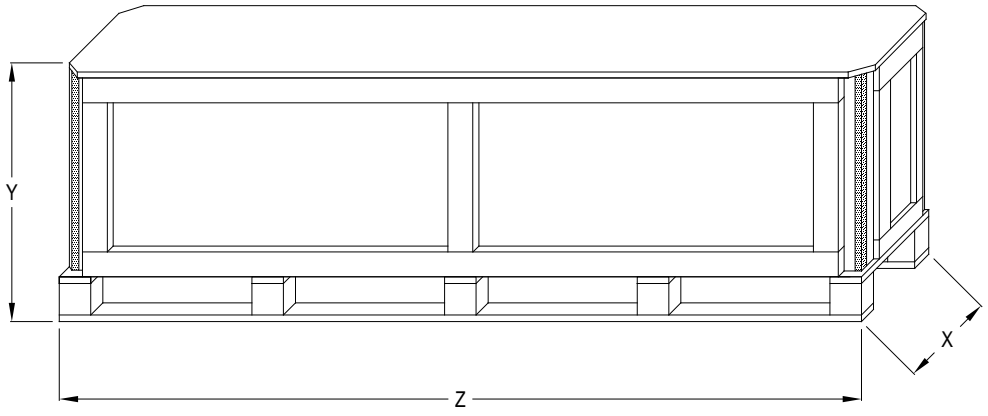

PACKING DATA
EVMS(.)1-3-5

	Pump type	Pumps							Pumps with motor ~1							Pumps with motor ~3						
		Packing [mm]			Weight [kg] + Pack Type				Packing [mm]			Weight [kg] + Pack Type				Packing [mm]			Weight [kg] + Pack Type			
		X	Y	Z	EVMS(L)		EVMSG		X	Y	Z	EVMS(L)		EVMSG		X	Y	Z	EVMS(L)		EVMSG	
1	EVMS(.)1 2/0,37	385	400	385	12	1	20	1	385	400	585	20	1	27	1	385	400	585	20	1	27	1
	EVMS(.)1 3/0,37	385	400	385	13	1	20	1	385	400	585	20	1	27	1	385	400	585	20	1	27	1
	EVMS(.)1 4/0,37	385	400	385	13	1	20	1	385	400	770	21	1	28	1	385	400	770	21	1	28	1
	EVMS(.)1 5/0,37	385	400	585	14	1	21	1	385	400	770	21	1	28	1	385	400	770	21	1	28	1
	EVMS(.)1 6/0,37	385	400	585	15	1	22	1	385	400	770	22	1	30	1	385	400	770	22	1	30	1
	EVMS(.)1 7/0,37	385	400	585	15	1	22	1	385	400	770	22	1	30	1	385	400	770	22	1	30	1
	EVMS(.)1 8/0,37	385	400	585	16	1	23	1	385	400	770	23	1	31	1	385	400	770	23	1	31	1
	EVMS(.)1 9/0,55	385	400	585	16	1	23	1	385	400	770	24	1	31	1	385	400	770	24	1	31	1
	EVMS(.)1 10/0,55	385	400	585	16	1	23	1	385	400	770	24	1	31	1	385	400	770	24	1	31	1
	EVMS(.)1 11/0,55	385	400	585	17	1	24	1	385	400	970	25	1	32	1	385	400	770	25	1	32	1
	EVMS(.)1 12/0,55	385	400	585	17	1	25	1	385	400	770	25	1	32	1	385	400	970	25	1	32	1
	EVMS(.)1 13/0,55	385	400	585	18	1	25	1	385	400	970	26	1	33	1	385	400	970	26	1	33	1
	EVMS(.)1 14/0,75	385	400	770	19	1	26	1	400	430	1000	37	2	40	2	400	430	1000	37	2	40	2
	EVMS(.)1 16/0,75	385	400	770	20	1	27	1	400	430	1000	41	2	48	2	400	430	1000	41	2	48	2
	EVMS(.)1 18/1,1	385	400	770	21	1	28	1	400	430	1000	42	2	50	2	400	430	1000	42	2	50	2
	EVMS(.)1 20/1,1	385	400	770	22	1	29	1	400	430	1000	43	2	50	2	400	430	1000	43	2	50	2
	EVMS(.)1 22/1,1	385	400	770	24	1	31	1	400	430	1200	46	2	53	2	400	430	1200	46	2	53	2
	EVMS(.)1 24/1,1	385	400	970	25	1	32	1	400	430	1200	47	2	54	2	400	430	1200	47	2	54	2
	EVMS(.)1 26/1,1	385	400	970	26	1	33	1	400	430	1200	48	2	55	2	400	430	1200	48	2	55	2
	EVMS(.)1 27/1,5	385	400	970	26	1	33	1	400	430	1200	54	2	61	2	400	430	1200	54	2	61	2
	EVMS(.)1 29/1,5	385	400	970	27	1	34	1	500	430	1350	60	2	68	2	500	430	1350	60	2	68	2
	EVMS(.)1 32/1,5	400	430	1000	37	2	44	2	500	430	1350	61	2	68	2	500	430	1350	61	2	68	2
	EVMS(.)1 34/1,5	400	430	1200	40	2	46	2	500	430	1350	62	2	70	2	500	430	1350	62	2	70	2
	EVMS(.)1 37/2,2	400	430	1200	41	2	48	2	500	430	1540	78	2	85	2	500	430	1540	78	2	85	2
	EVMS(.)1 39/2,2	400	430	1200	42	2	50	2	500	430	1540	80	2	86	2	500	430	1540	80	2	86	2
3	EVMS(.)3 2/0,37	385	400	385	12	1	18	1	385	400	585	20	1	25	1	385	400	585	20	1	25	1
	EVMS(.)3 3/0,37	385	400	385	13	1	18	1	385	400	585	20	1	25	1	385	400	585	20	1	25	1
	EVMS(.)3 4/0,37	385	400	385	13	1	18	1	385	400	770	21	1	26	1	385	400	770	21	1	26	1
	EVMS(.)3 5/0,55	385	400	585	14	1	20	1	385	400	770	22	1	27	1	385	400	770	22	1	27	1
	EVMS(.)3 6/0,55	385	400	585	15	1	20	1	385	400	770	22	1	28	1	385	400	770	22	1	28	1
	EVMS(.)3 7/0,75	385	400	585	16	1	21	1	385	400	770	26	1	31	1	385	400	770	26	1	31	1
	EVMS(.)3 8/0,75	385	400	585	16	1	21	1	385	400	770	27	1	32	1	385	400	770	27	1	32	1
	EVMS(.)3 9/1,1	385	400	585	17	1	22	1	385	400	770	28	1	33	1	385	400	770	28	1	33	1
	EVMS(.)3 10/1,1	385	400	585	17	1	22	1	385	400	770	30	1	34	1	385	400	770	30	1	34	1
	EVMS(.)3 11/1,1	385	400	585	17	1	23	1	385	400	970	30	1	34	1	385	400	970	30	1	34	1
	EVMS(.)3 12/1,1	385	400	585	18	1	23	1	385	400	970	30	1	35	1	385	400	970	30	1	35	1
	EVMS(.)3 13/1,5	385	400	770	19	1	24	1	400	430	1000	46	2	52	2	400	430	1000	46	2	52	2
	EVMS(.)3 14/1,5	385	400	770	20	1	25	1	400	430	1000	47	2	52	2	400	430	1000	47	2	52	2
	EVMS(.)3 15/1,5	385	400	770	20	1	25	1	400	430	1000	48	2	52	2	400	430	1000	48	2	52	2
	EVMS(.)3 16/1,5	385	400	770	21	1	26	1	400	430	1000	49	2	53	2	400	430	1000	49	2	53	2
	EVMS(.)3 17/2,2	385	400	770	22	1	27	1	400	430	1000	50	2	55	2	400	430	1000	50	2	55	2
	EVMS(.)3 19/2,2	385	400	770	22	1	28	1	400	430	1200	52	2	57	2	400	430	1200	52	2	57	2
	EVMS(.)3 21/2,2	385	400	770	23	1	30	1	400	430	1200	53	2	58	2	400	430	1200	53	2	58	2
	EVMS(.)3 23/2,2	385	400	970	25	1	30	1	400	430	1200	54	2	60	2	400	430	1200	54	2	60	2
	EVMS(.)3 24/2,2	385	400	970	25	1	31	1	400	430	1200	55	2	60	2	400	430	1200	55	2	60	2
	EVMS(.)3 25/3,0	385	400	970	26	1	31	1	-	-	-	-	-	-	-	400	430	1200	57	2	63	2
	EVMS(.)3 27/3,0	385	400	970	27	1	32	1	-	-	-	-	-	-	-	500	430	1350	63	2	70	2
	EVMS(.)3 29/3,0	385	400	970	28	1	33	1	-	-	-	-	-	-	-	500	430	1350	64	2	70	2
	EVMS(.)3 31/3,0	400	430	1000	37	2	43	2	-	-	-	-	-	-	-	500	430	1350	65	2	71	2
	EVMS(.)3 33/3,0	400	430	1200	40	2	44	2	-	-	-	-	-	-	-	500	430	1350	66	2	71	2
5	EVMS(.)5 2/0,37	385	400	385	13	1	20	1	385	400	585	21	1	28	1	385	400	585	21	1	28	1
	EVMS(.)5 3/0,55	385	400	385	14	1	20	1	385	400	770	23	1	30	1	385	400	770	23	1	30	1
	EVMS(.)5 4/0,75	385	400	585	15	1	21	1	385	400	770	27	1	33	1	385	400	770	27	1	33	1
	EVMS(.)5 5/1,1	385	400	585	16	1	22	1	385	400	770	28	1	34	1	385	400	770	28	1	34	1
	EVMS(.)5 6/1,5	385	400	585	17	1	23	1	400	430	1000	44	2	50	2	400	430	1000	44	2	50	2
	EVMS(.)5 7/1,5	385	400	585	17	1	23	1	400	430	1000	45	2	50	2	400	430	1000	45	2	50	2
	EVMS(.)5 8/2,2	385	400	585	18	1	24	1	400	430	1000	46	2	53	2	400	430	1000	46	2	53	2
	EVMS(.)5 9/2,2	385	400	585	18	1	24	1	400	430	1000	47	2	53	2	400	430	1000	47	2	53	2
	EVMS(.)5 10/2,2	385	400	770	19	1	25	1	400	430	1000	48	2	54	2	400	430	1000	48	2	54	2
	EVMS(.)5 11/2,2	385	400	770	19	1	26	1	400	430	1000	50	2	54	2	400	430	1000	50	2	54	2
	EVMS(.)5 12/3,0	385	400	770	21	1	27	1	-	-	-	-	-	-	-	400	430	1200	52	2	60	2
	EVMS(.)5 13/3,0	385	400	770	21	1	28	1	-	-	-	-	-	-	-	400	430	1200	53	2	60	2
	EVMS(.)5 14/3,0	385	400	770	22	1	28	1	-	-	-	-	-	-	-	400	430	1200	54	2	60	2
	EVMS(.)5 15/3,0	385	400	770	23	1	30	1	-	-	-	-	-	-	-	400	430	1200	55	2	61	2
	EVMS(.)5 17/4,0	385	400	970	24	1	30	1	-	-	-	-	-	-	-	400	430	1200	61	2	70	2
	EVMS(.)5 19/4,0	385	400	970	25	1	31	1	-	-	-	-	-	-	-	500	430	1350	68	2	75	2
	EVMS(.)5 20/4,0	385	400	970	27	1	34	1	-	-	-	-	-	-	-	500	430	1350	70	2	78	2
	EVMS(.)5 23/5,5	400	430	1200	44	2	50	2	-	-	-	-	-	-	-	500	430	1540	101	2	107	2
	EVMS(.)5 25/5,5	400	430	1200	45	2	51	2	-	-	-	-	-	-	-	500	430	1540	102	2	108	2
	EVMS(.)5 27/5,5	400	430	1200	46	2	53	2	-	-	-	-	-	-	-	610	430	1750	103	2	113	2

GENERAL

Various regulatory authorities in many countries have introduced or are planning legislation to encourage the manufacture and use of higher efficiency motors, as part of a concerted effort worldwide to reduce energy consumption. Indeed, the International Electrotechnical Commission (IEC) has introduced a new standards relating to energy efficient motors. **IEC 60034-30** defines new efficiency classes for motors and harmonizes the currently different requirements for induction motor efficiency levels around the world.
The **Commission Regulation (EC) N. 640/2009** implementing EcoDesign Directive 2009/125/EC states that in the European Community, with the exception of some special applications, motors shall not be less efficient than the IE3 efficiency level as from 1 January 2015.

In detail:
IE3 by January 1, 2015 (for motors from 7.5 kW to 375 kW).
IE3 for all motors by January 1, 2017 (for motors from 0.75 kW to 375 kW).

		MOTOR	
Power Source	Frequency	50 Hz	
	Phase	Single Phase	Three Phase
	Power rating	0.37 ÷ 2.2 kW / 0.5 ÷ 3.0 HP	0.37 ÷ 45 kW / 0.5 ÷ 60 HP
	Voltage	230 ± 10% V	230/400 ± 10% V (up to 4.0 kW) 400/690 ± 10% V (above 5.5 kW)
Type	Type	IC411 - TEFC	
	Efficiency Level	from 0.37 kW up to 2.2 kW	IE2 : from 0.37 kW up to 0.55 kW IE3 : above 0.75 kW
	No° of poles	2	
	Protection degree	IP55 : up to 11 kW IP56 : above 15 kW	
	Insulation Class	F (temperature rise class B)	
Others	Thermal Protection	-	PTC sensor pre-installed for motors of 1.5 kW and above
	Casing Material	Aluminium	Aluminium : up to 30 KW Cast Iron : above 37 KW
	Flange mount (IEC motor)	IM B14 : up to 4.0 kW IM B5 : above 5.5 kW	
	Terminal Box fixing	-	Unlosable screw and sealing from 0.75 kW to 45 kW

NOISE DATA

Motor Size	Power [kW]	Power [HP]	Noise LpA - dB(A) *
71	0.37	0.5	52
	0.55	0.75	
80	0.75	1	52
	1.1	1.5	
90	1.5	2	60
	2.2	3	
100	3.0	4	62
112	4.0	5.5	66
132	5.5	7.5	68
	7.5	10	
160	11	15	73
	15	20	72
	18.5	25	70
180	22	30	70
200	30	40	70
	37	50	73
225	45	60	75

* Noise values were measured with a tolerance of ± 2.5 dB (A).

TECHNICAL MOTOR DATA
EVMS 1-3-5-10-15-20-32-45-64-90

Single Phase Motor at 50Hz, 2 poles

(only for EVMS(.)1-3-5-10-15-20)

Size	Power [kW]	Power [HP]	Capacitor [µF]	Capacitor [V]	Load efficency and power-factor η % 100%	Load efficency and power-factor cos−φ 100%	Imput [kW]	Full load current [A] 230 V	Locked rotor current [A] 230 V
71	0.37	0.5	12	400	65.0	0.95	0.57	2.2	7.0
	0.55	0.75	16	400	68.0	0.95	0.81	4.2	14.7
80	0.75	1	20	400	67.0	0.94	1.12	5.0	20.0
	1.1	1.5	30	400	74.8	0.98	1.49	6.8	31.0
90 S ●	1.5	2	35	400	79.0	0.97	1.90	8.8	46.0
90 L ●	2.2	3	40	400	78.0	0.97	2.82	12.9	61.0

● Single phase motors manufactured by EBARA

Three Phase Motor at 50Hz, 2 poles

Size	Power [kW]	Power [HP]	Efficiency	Load efficency and power-factor (400V) η % 50%	η % 75%	η % 100%	cos−φ 100%	Imput [kW]	Full load current [A] 230 V	400V	690V	Locked rotor current [A] 230 V	400V	690V
71	0.37	0.5	IE2	63.0	70.0	74.0	0.8	0.50	1.94	1.12	-	10.7	6.2	-
71	0.55	0.75	IE2	75.7	78.1	77.4	0.8	0.71	2.16	1.25	-	11.9	6.9	-
80 ♦	0.75	1	IE3	80.2	82.5	82.1	0.8	0.91	3.0	1.7	-	19.7	11.4	-
	1.1	1.5	IE3	81.3	82.8	82.7	0.8	1.33	4.3	2.5	-	28.8	16.6	-
90 ♦	1.5	2	IE3	83.5	84.3	84.6	0.8	1.77	5.8	3.3	-	44.1	25.5	-
	2.2	3	IE3	85.7	86.8	86.0	0.8	2.56	8.2	4.7	-	63.3	36.6	-
100 ♦	3.0	4	IE3	85.9	87.5	87.1	0.8	3.44	11.1	6.4	-	89.8	51.8	-
112 ♦	4.0	5.5	IE3	86.0	88.3	88.1	0.8	4.54	15.1	8.7	-	131.8	76.1	-
132 ♦	5.5	7.5	IE3	88.9	90.3	90.0	0.9	6.11	-	10.4	6.0	-	115.3	66.6
	7.5	10	IE3	89.0	90.7	90.4	0.9	8.30	-	13.6	7.9	-	144	83.1
160 ♦	11	15	IE3	90.1	91.4	91.2	0.8	12.06	-	21.3	12.3	-	184	106.2
160	15	20	IE3	91.5	92.0	91.9	0.9	16.32	-	26.2	15.2	-	215	124
160	18.5	25	IE3	90.9	92.4	92.4	0.9	20.02	-	32.8	19.0	-	299	173
180	22	30	IE3	92.5	92.9	92.7	0.9	23.73	-	38.5	22.3	-	347	201
200	30	40	IE3	93.1	93.4	93.3	0.9	32.15	-	51.0	29.6	-	459	266
200	37	50	IE3	92.0	93.4	93.7	0.9	39.49	-	64.0	37.1	-	524	303
225	45	60	IE3	93.8	93.9	94.0	0.9	47.87	-	77.0	44.5	-	601	347

♦ MOTOR DATA ETM