



Japanese Technology since 1912

EVMS - Vertical Multistage Pumps


Data Book 50Hz



EVMS

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






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VERTICAL MULTISTAGE PUMPS

TYPICAL APPLICATIONS

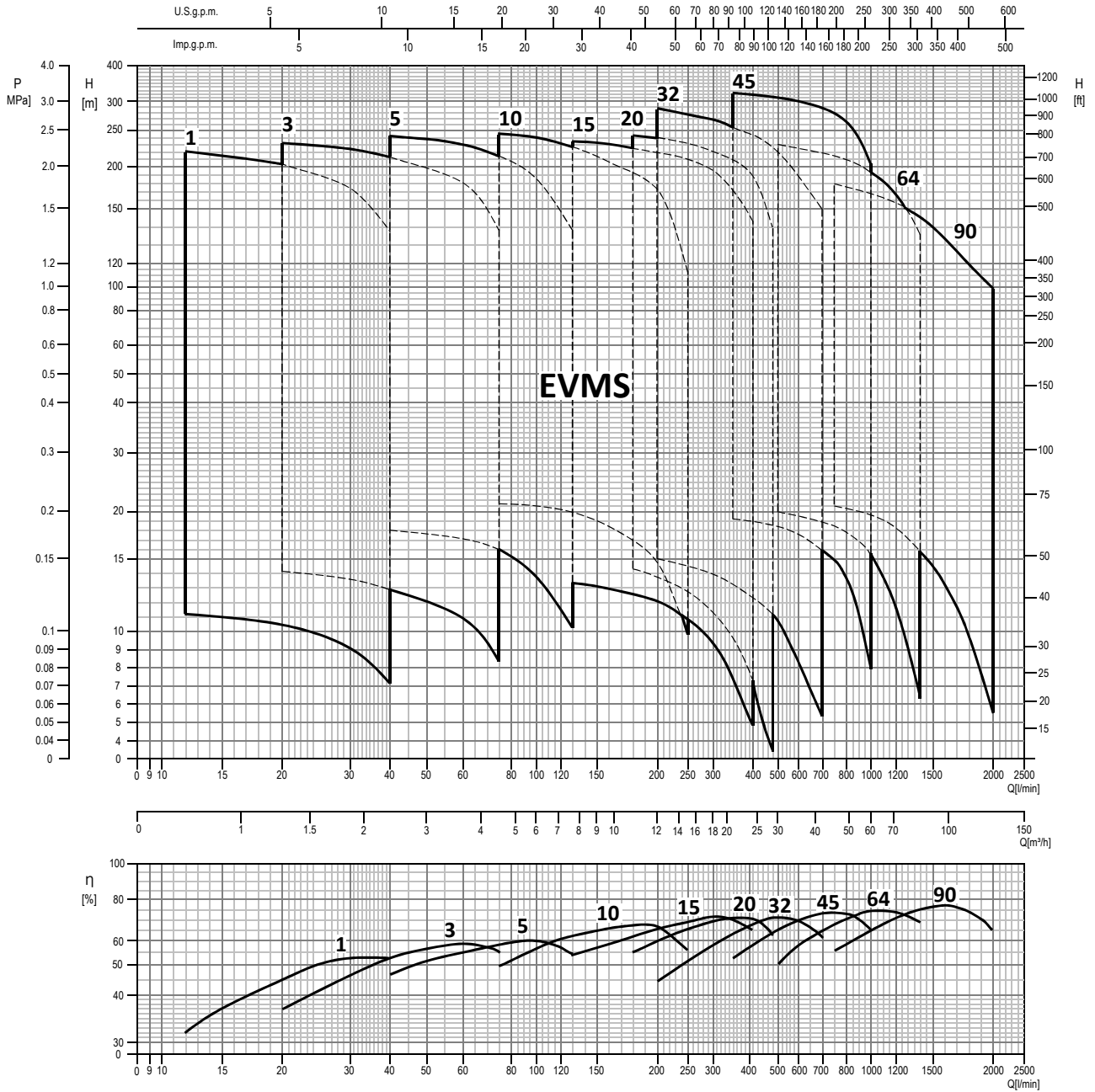
1.1

TYPICAL APPLICATIONS

INDUSTRY	BUILDING SERVICE	WATER SUPPLY
		
<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • 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

PERFORMANCE RANGE



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 
<u>Mechanical seal</u>	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



[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 (m ³ /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	-30°C to 140°C (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 1.4301 (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	0.37 ÷ 18.5 kW
		0.5 ÷ 3.0 HP	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

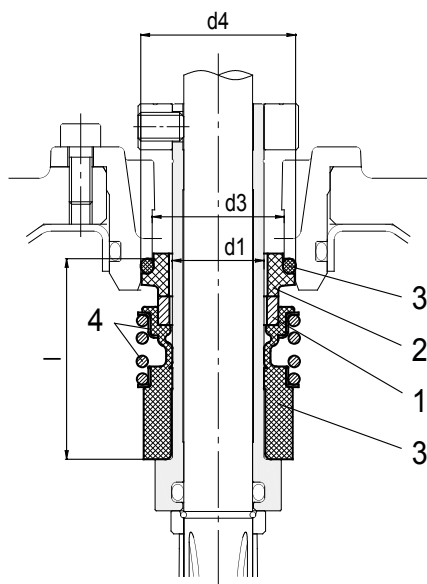
PUMP														
Version		EVMSG				EVMS				EVMSL				
Nominal flow rate (m³/h)		32	45	64	90	32	45	64	90	32	45	64	90	
Operating range	Maximum working pressure	1.6 / 2.5 / 3.0 / 3.5 MPa (16 / 25 / 30 / 35 bar)												
	Liquid temperature range	-30°C to 140°C (please contact EBARA in case of -30°C to -15°C, or 120-140°C)												
	Impeller	EN 1.4301 (AISI 304)								EN 1.4404 (AISI 316L)				
Key Components Material *	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

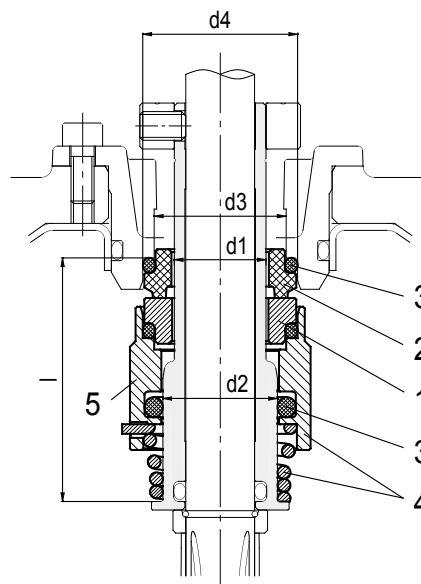
MOTOR		
Power Source	Frequency	50 Hz
	Phase	Three Phase
	Power rating	1.5 ÷ 45 kW
		2.0 ÷ 60 HP
Voltage	230/400 ± 10% V (up to 4.0 kW)	
	400/690 ± 10% V (above 5.5 kW)	
Type	Type	IC411 - TEFC
	Efficiency Level	IE3
	No° of poles	2
	Protection degree	IP55 : up to 11 kW
		IP56 : above 15 kW
Insulation Class	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

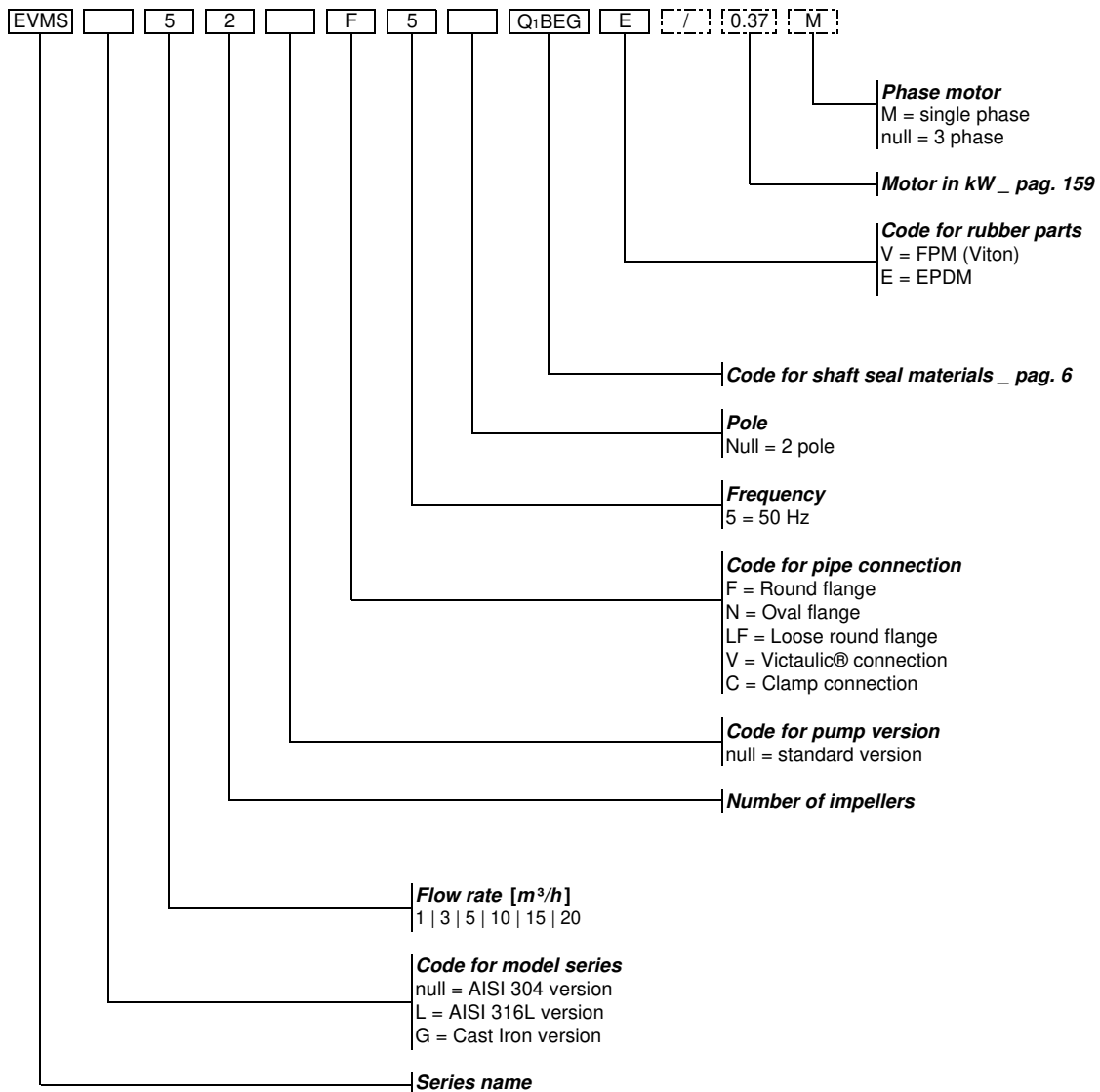
2. Type of Shaft Seal and Dimensions [mm]

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

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

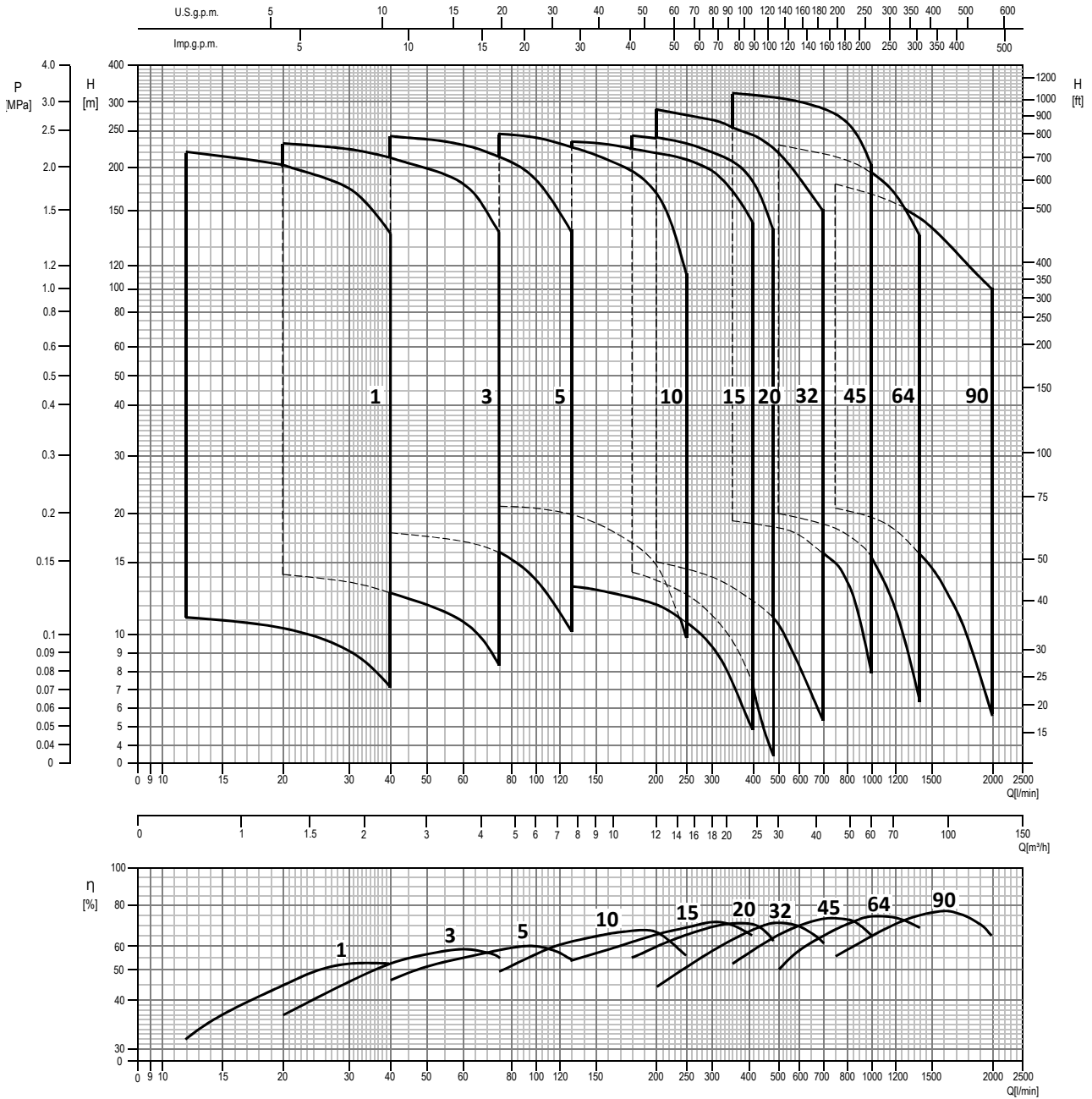
NAMEPLATE

EBARA Pompe Europe S.p.A. Via Campo Sportivo, 30 36020 Gole (VI) - Italy Phone +39 0444 708111 V.A.T. 01258680201				MADE IN ITALY	
TYPE					
⊕ P/N ⊕					
Hmax	m	Hmin	m		
Q	l/min	H	m		
P2	kW		HP		
Hz	min ⁻¹				
MEI >	Hyd. eff.		%		

- "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

PERFORMANCE RANGE



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 $\nu = 1 \text{ mm}^2/\text{s}$ (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

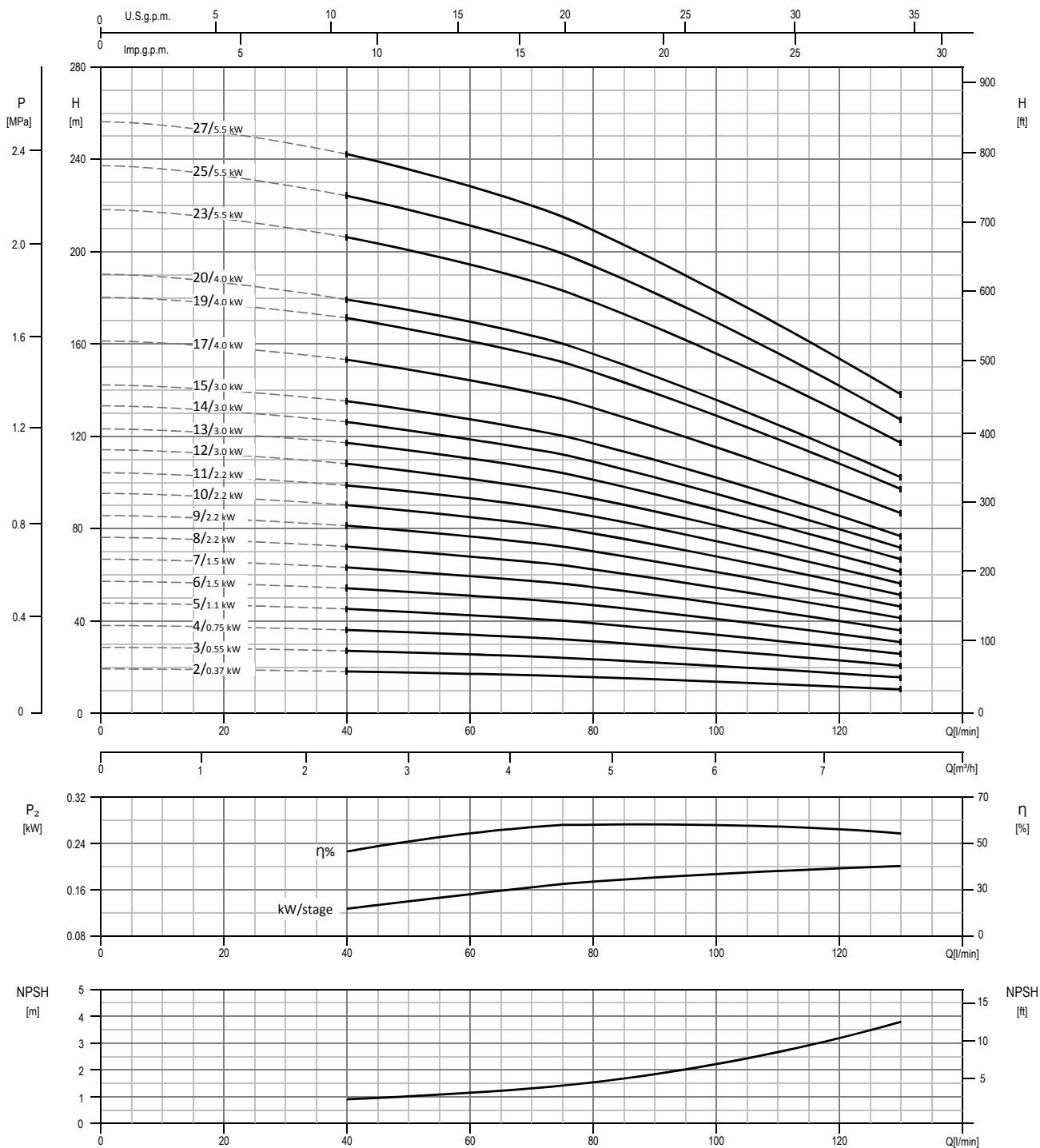
SELECTION CHART
EVMS(.)1-3-5

Pump Type		Motor			Maximum working pressure [MPa]	Q=Capacity										
						l/min	0	12	20	30	40	60	75	100	130	
Single phase	Three phase	kW	HP	Size	m³/h	0	0.72	1.2	1.8	2.4	3.6	4.5	6	7.8		
						H=Total manometric head in metres										
1	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	-	-	-	-	
	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	-	-	-	-		
3	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	-	-	
	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	-	-		
5	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	
	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)5

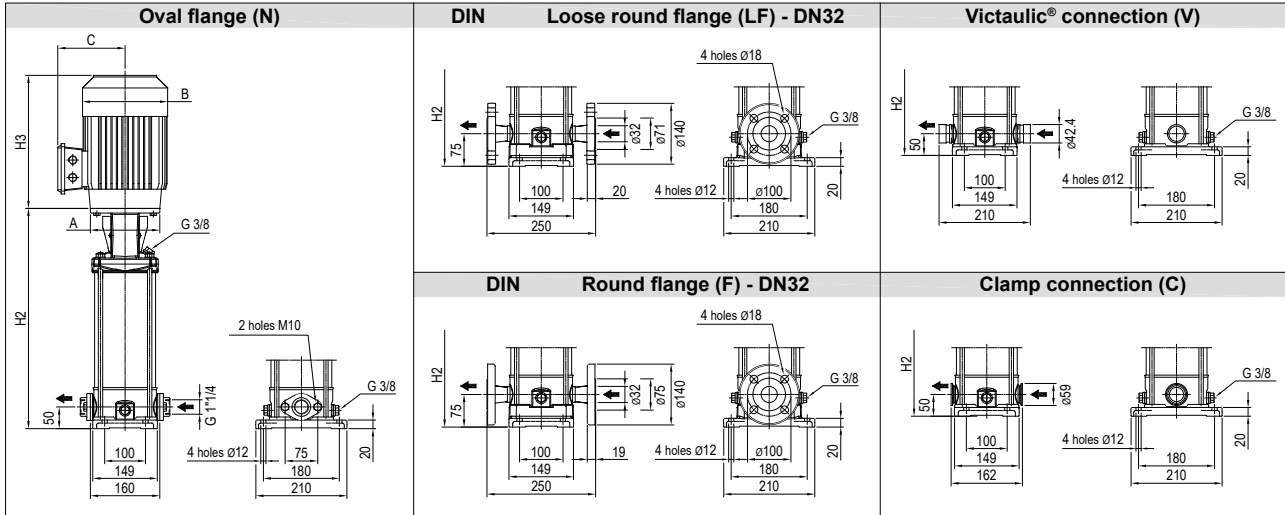
EVMS(L)5



Test standard: ISO 9906:2012 - Grade 3B

TECHNICAL DATA EVMS(L)5

Dimensional sketch

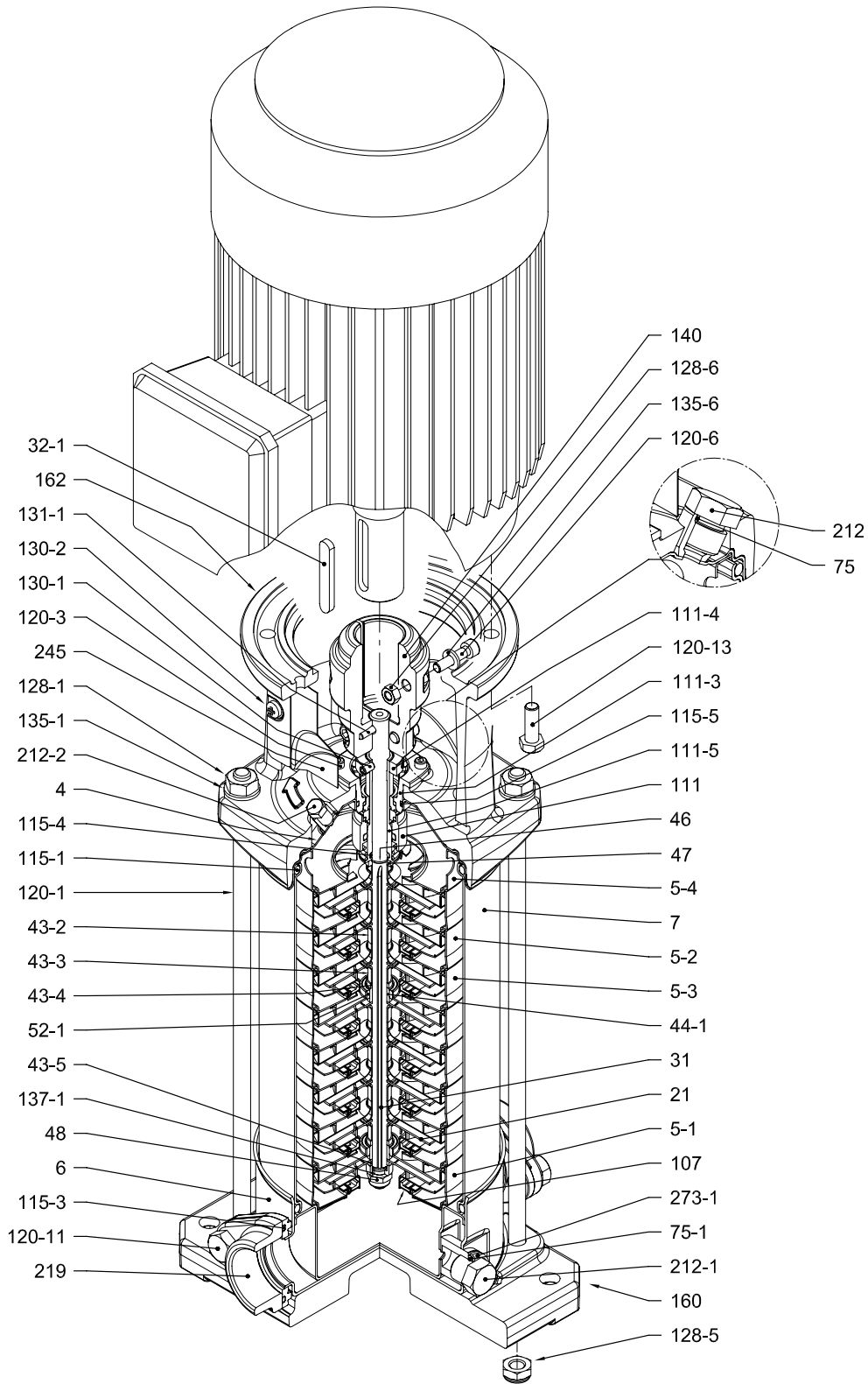


Dimensions [mm] and Weights [Kg]

Pump Type	P _{max} [MPa]	kW	Motor				Oval flange (N)				Loose round flange (LF) Round flange (F)				Victaulic® connection (V) Clamp connection (C)											
			Size	1~		3~		H2	H2+H3		Weight Pump	Weight Pump + Motor		H2	H2+H3		Weight Pump	Weight Pump + Motor								
				A	B	C	B		C	1~		3~	1~		3~	1~		3~	1~	3~						
EVMS(L)5 2/0.37	1.6	0.37	71	105	141	119	141	119	264	466	466	9.8	16.3	16.3	289	491	491	11	17.5	17.5	264	466	466	9.9	16.4	16.4
EVMS(L)5 3/0.55	1.6	0.55	71	105	141	119	141	119	292	494	494	10.3	17.3	17.3	317	519	519	11.5	18.5	18.5	292	494	494	10.4	17.4	17.4
EVMS(L)5 4/0.75	1.6	0.75	80	120	160	142	141	102	330	559	563	11.3	21.3	19.8	355	584	588	12.5	22.5	21.0	330	559	563	11.4	21.4	19.9
EVMS(L)5 5/1.1	1.6	1.1	80	120	160	142	141	102	358	587	602	11.8	22.8	21.8	383	612	627	13	24.0	23.0	358	587	602	11.9	22.9	21.9
EVMS(L)5 6/1.5	1.6	1.5	90	140	172	140	160	119	396	674	687	12.7	30.5	26.2	421	699	712	13.7	31.5	27.2	396	674	687	12.6	30.4	26.1
EVMS(L)5 7/1.5	1.6	1.5	90	140	172	140	160	119	424	702	715	12.8	30.6	26.3	449	727	740	14.1	31.9	27.6	424	702	715	13	30.8	26.5
EVMS(L)5 8/2.2	1.6	2.2	90	140	172	140	160	119	452	730	743	13.4	32.9	28.4	477	755	768	14.6	34.1	29.6	452	730	743	13.5	33.0	28.5
EVMS(L)5 9/2.2	1.6	2.2	90	140	172	140	160	119	480	758	771	13.9	33.4	28.9	505	783	796	15.2	34.7	30.2	480	758	771	14.1	33.6	29.1
EVMS(L)5 10/2.2	1.6	2.2	90	140	172	140	160	119	508	786	799	14.4	33.9	29.4	533	811	824	15.6	35.1	30.6	508	786	799	14.5	34.0	29.5
EVMS(L)5 11/2.2	1.6	2.2	90	140	172	140	160	119	536	814	827	15.2	34.7	30.2	561	839	852	16.5	36.0	31.5	536	814	827	15.4	34.9	30.4
EVMS(L)5 12/3.0	1.6	3.0	100	160	-	-	176	123	574	-	916	16.7	-	38.7	599	-	941	17.7	-	39.7	574	-	916	16.6	-	38.6
EVMS(L)5 13/3.0	1.6	3.0	100	160	-	-	176	123	602	-	944	17	-	39.0	627	-	969	18.3	-	40.3	602	-	944	17.2	-	39.2
EVMS(L)5 14/3.0	1.6	3.0	100	160	-	-	176	123	630	-	972	17.6	-	39.6	655	-	997	18.8	-	40.8	630	-	972	17.7	-	39.7
EVMS(L)5 15/3.0	1.6	3.0	100	160	-	-	176	123	658	-	1000	18.6	-	40.6	683	-	1025	19.9	-	41.9	658	-	1000	18.8	-	40.8
EVMS(L)5 17/4.0	1.6	4.0	112	160	-	-	193	138	714	-	1078	19.3	-	47.8	739	-	1103	20.6	-	49.1	714	-	1078	19.5	-	48.0
EVMS(L)5 19/4.0	2.5	4.0	112	160	-	-	193	138	-	-	-	-	-	795	-	1159	21.7	-	50.2	770	-	1134	20.6	-	49.1	
EVMS(L)5 20/4.0	2.5	4.0	112	160	-	-	193	138	-	-	-	-	-	823	-	1187	23.9	-	52.4	798	-	1162	22.8	-	51.3	
EVMS(L)5 23/5.5	2.5	5.5	132	300	-	-	220	152	-	-	-	-	-	1001	-	1400	30.6	-	69.6	976	-	1375	29.5	-	68.5	
EVMS(L)5 25/5.5	2.5	5.5	132	300	-	-	220	152	-	-	-	-	-	1057	-	1456	31.6	-	70.6	1032	-	1431	30.5	-	69.5	
EVMS(L)5 27/5.5	2.5	5.5	132	300	-	-	220	152	-	-	-	-	-	1113	-	1512	33.1	-	72.1	1088	-	1487	32	-	71.0	

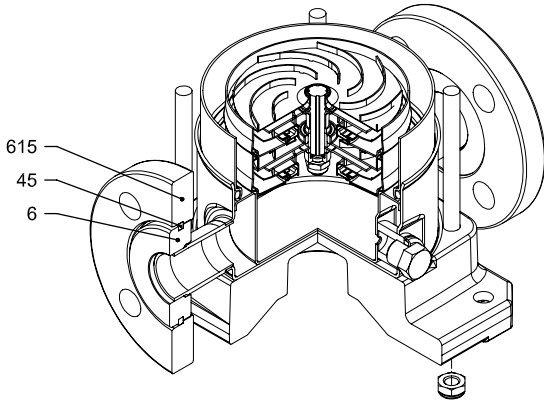
1.6 MPa=16 bar; 2.5 MPa=25 bar
- not available model

SECTIONAL VIEW
EVMS(L)5

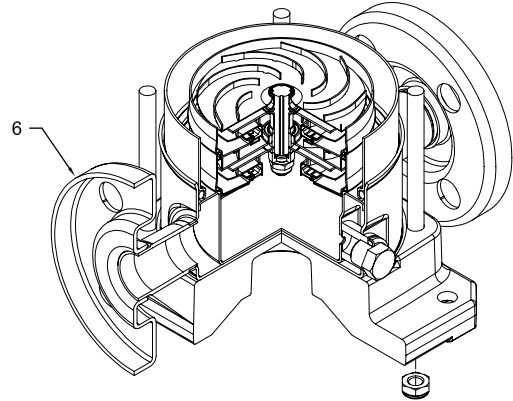


with Oval flange (N)

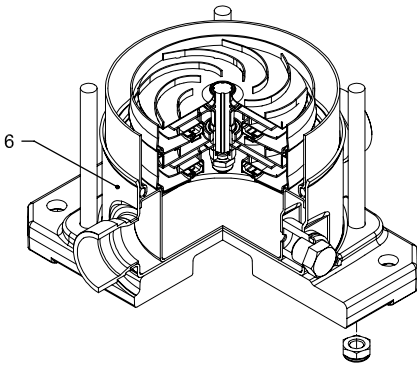
PIPE CONNECTION EVMS(L)5



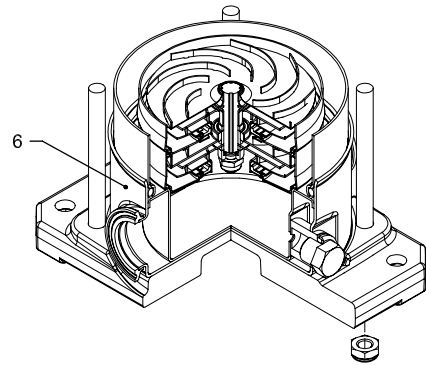
with Loose round flange (LF)



with Round flange (F)



with Victaulic® connection (V)



with Clamp connection (C)

SECTIONAL TABLE
EVMS(L)5

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 1.4462 (AISI 329A)	EN 1.4404 (AISI 316L) - EN 1.4462 (AISI 329A)		
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)		
43-4	Shaft sleeve (adjustment)	EN 1.4404 (AISI 316L)			
43-5	Shaft sleeve (last stage)	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)	up to 4.0 kW above 5.5 kW	Galvanized steel	M6x25 M8x20	ISO 4762 ISO 4762
120-11	Screw (counterflange)	A2-70			
120-13	Screw for motor	MEC 71-80 MEC 90-100-112 MEC 132	Galvanized steel 8.8 strength class ISO 898/1	M6x20 M8x20 M12x40	ISO 4017 ISO 4017 ISO 4017
128-1	Nut (tie rod)	A2-70		M10	ISO 4032
128-3	Nut (motor)	MEC 132	Galvanized steel	M12	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 above 5.5 kW	Die cast Aluminium EN AB-AISI11Cu2 (Fe) Cast Iron		
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 flange type: LF-F-V-C	EN 1.4308 (ASTM CF8) EN 1.4301 (AISI 304)	EN 1.4408 (ASTM CF8M) 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)5

Pump Type	N°																														
	4	5-1	52	53	54	6	7	21	31 ^{***}	32-1	432	433	434	435	44-1	45 ^{**}	46	47	48	52-1	75	75-1	107	111	111-3	1114	111-5	115-1	115-3*	1154	1155
EVMS(L)5 2/0.37	1	1	/	1	1	1	1	2	1	1	1	1	1	/	1	4	2	1	1	1	1	2	2	1	1	1	1	2	2	1	1
EVMS(L)5 3/0.55	1	1	1	1	1	1	1	3	1	1	3	1	2	1	1	4	2	1	1	1	1	2	3	1	1	1	1	2	2	1	1
EVMS(L)5 4/0.75	1	1	2	1	1	1	1	4	1	1	5	1	1	/	1	4	2	1	1	1	1	2	4	1	1	1	1	2	2	1	1
EVMS(L)5 5/1.1	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)5 6/1.5	1	1	4	1	1	1	1	6	1	1	9	1	2	1	1	4	2	1	1	1	1	2	6	1	1	1	1	2	2	1	1
EVMS(L)5 7/1.5	1	1	5	1	1	1	1	7	1	1	11	1	1	/	1	4	2	1	1	1	1	2	7	1	1	1	1	2	2	1	1
EVMS(L)5 8/2.2	1	1	6	1	1	1	1	8	1	1	13	1	1	/	1	4	2	1	1	1	1	2	8	1	1	1	1	2	2	1	1
EVMS(L)5 9/2.2	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)5 10/2.2	1	1	8	1	1	1	1	10	1	1	17	1	1	/	1	4	2	1	1	1	1	2	10	1	1	1	1	2	2	1	1
EVMS(L)5 11/2.2	1	1	8	2	1	1	1	11	1	1	17	2	2	/	2	4	2	1	1	2	1	2	11	1	1	1	1	2	2	1	1
EVMS(L)5 12/3.0	1	1	9	2	1	1	1	12	1	1	19	2	2	1	2	4	2	1	1	2	1	2	12	1	1	1	1	2	2	1	1
EVMS(L)5 13/3.0	1	1	10	2	1	1	1	13	1	1	21	2	2	/	2	4	2	1	1	2	1	2	13	1	1	1	1	2	2	1	1
EVMS(L)5 14/3.0	1	1	11	2	1	1	1	14	1	1	23	2	2	/	2	4	2	1	1	2	1	2	14	1	1	1	1	2	2	1	1
EVMS(L)5 15/3.0	1	1	12	2	1	1	1	15	1	1	25	2	3	1	2	4	2	1	1	2	1	2	15	1	1	1	1	2	2	1	1
EVMS(L)5 17/4.0	1	1	14	2	1	1	1	17	1	1	29	2	2	/	2	4	2	1	1	2	1	2	17	1	1	1	1	2	2	1	1
EVMS(L)5 19/4.0	1	1	16	2	1	1	1	19	1	1	33	2	2	/	2	4	2	1	1	2	1	2	19	1	1	1	1	2	/	1	1
EVMS(L)5 20/4.0	1	1	17	2	1	1	1	20	1	1	35	2	2	/	2	4	2	1	1	2	1	2	20	1	1	1	1	2	/	1	1
EVMS(L)5 23/5.5	1	1	20	2	1	1	1	23	1	1	41	2	2	/	2	4	2	1	1	2	1	2	23	1	1	1	1	2	/	1	1
EVMS(L)5 25/5.5	1	1	22	2	1	1	1	25	1	1	45	2	2	/	2	4	2	1	1	2	1	2	25	1	1	1	1	2	/	1	1
EVMS(L)5 27/5.5	1	1	23	3	1	1	1	27	1	1	47	3	3	/	3	4	2	1	1	3	1	2	27	1	1	1	1	2	/	1	1

Pump Type	N°																								
	120-1	120-3	120-6	120-11*	120-13	128-1	128-3	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)5 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)5 3/0.55	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)5 4/0.75	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)5 5/1.1	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)5 6/1.5	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)5 7/1.5	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)5 8/2.2	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)5 9/2.2	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)5 10/2.2	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)5 11/2.2	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)5 12/3.0	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)5 13/3.0	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)5 14/3.0	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)5 15/3.0	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)5 17/4.0	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)5 19/4.0	4	4	4	/	4	4	/	4	4	3	4	1	4	4	1	2	1	1	1	2	1	/	2	2	2
EVMS(L)5 20/4.0	4	4	4	/	4	4	/	4	4	3	4	1	4	4	1	2	1	1	1	2	1	/	2	2	2
EVMS(L)5 23/5.5	4	4	4	/	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	/	2	2	2	2
EVMS(L)5 25/5.5	4	4	4	/	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	/	2	2	2	2
EVMS(L)5 27/5.5	4	4	4	/	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	/	2	2	2	2

* only for Oval flange (N)

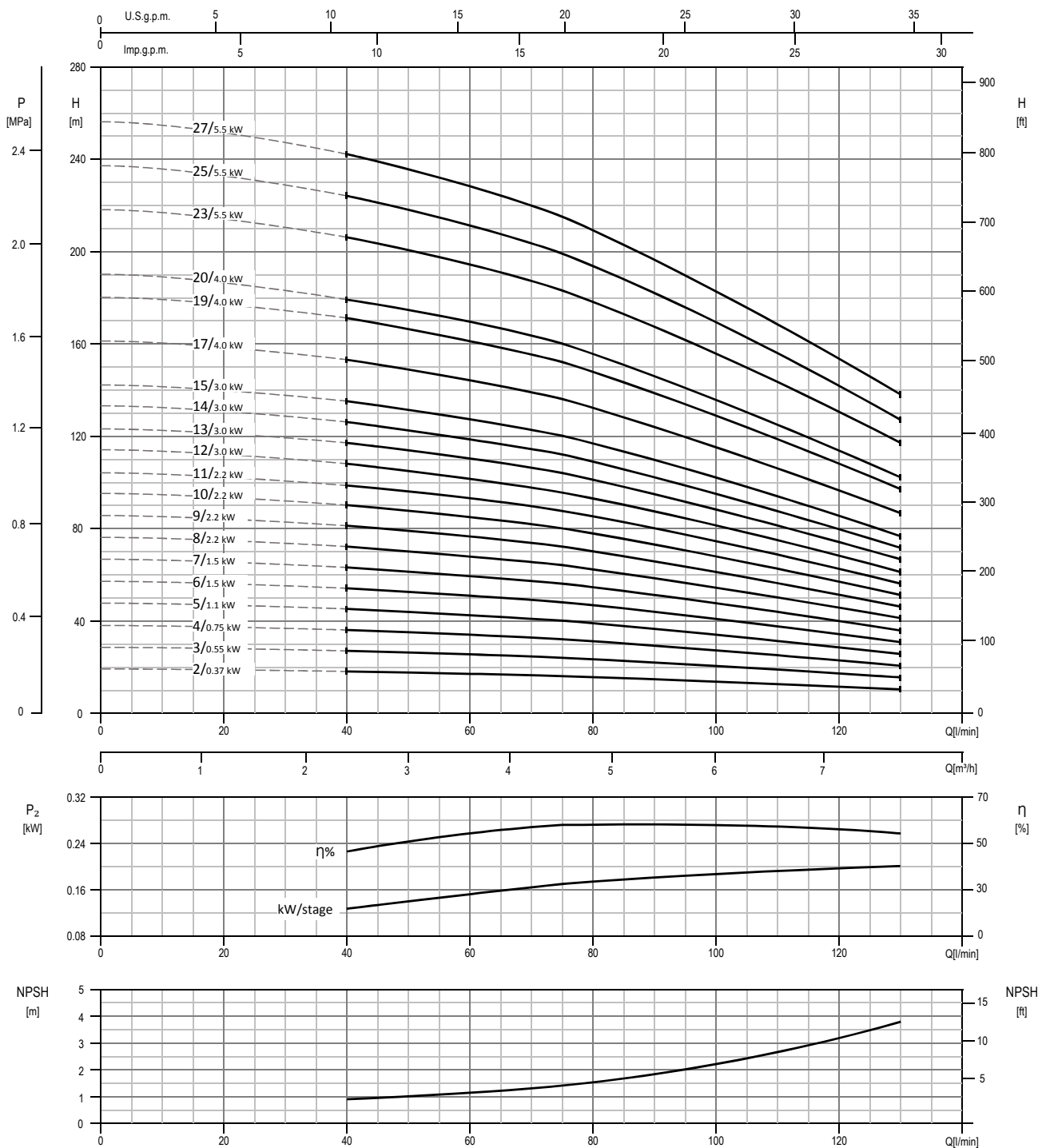
** only for Loose round flange (LF)

**  shaft in EN 1.4462 (AISI 329A)

128-3: only for motor above 5.5 kW (see drawing pag.54)

PERFORMANCE CURVE
EVMSG5

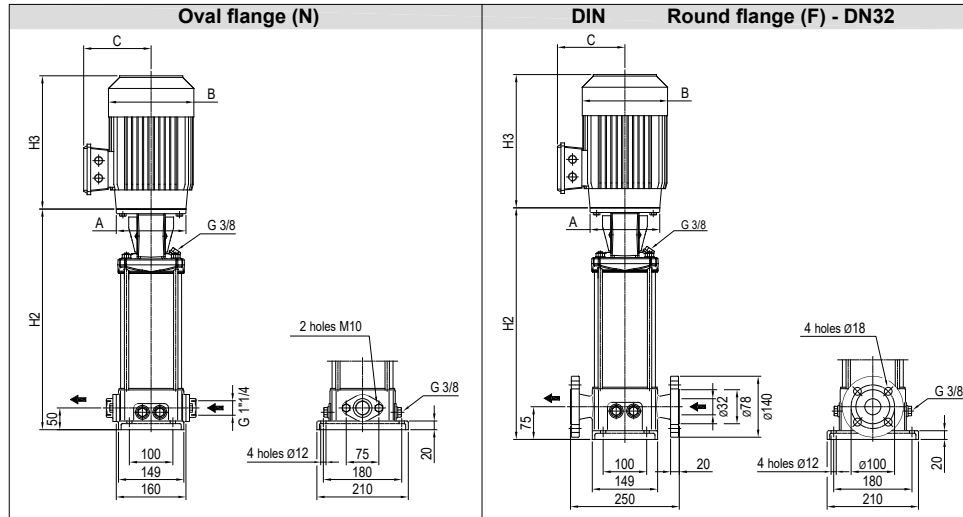
EVMSG5



Test standard: ISO 9906:2012 - Grade 3B

TECHNICAL DATA EVMSG5

Dimensional sketch

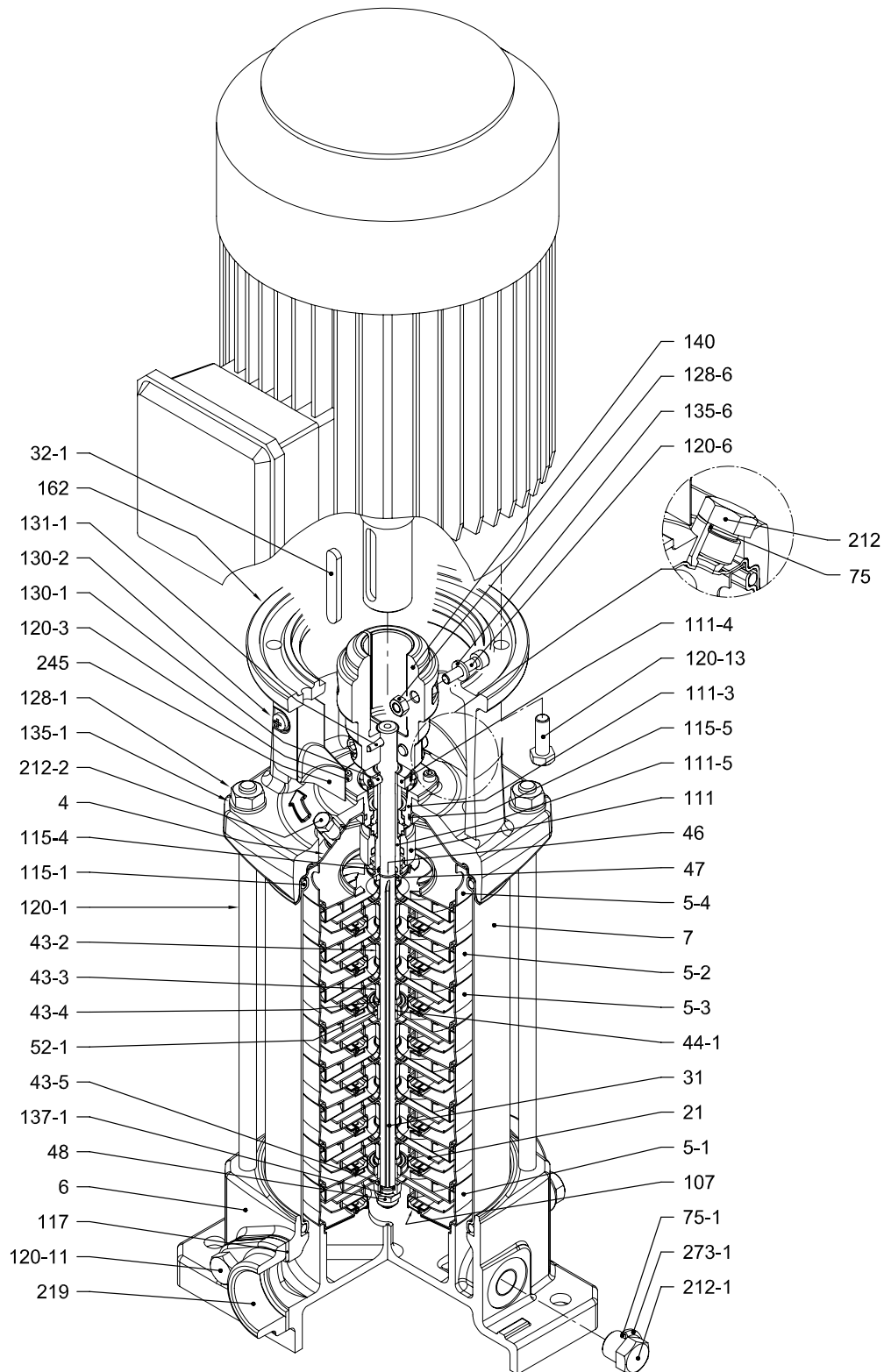


Dimensions [mm] and Weights [Kg]

Pump Type	Pmax [MPa]	kW	Size	Motor				Oval flange (N)				Round flange (F)								
				A	1~		3~		H2	H2+H3		Weight Pump	Weight Pump + Motor		H2	H2+H3		Weight Pump	Weight Pump + Motor	
					Ø	B	C	B		C	1~		3~	1~		3~	1~		3~	1~
EVMSG5 2/0.37	1.6	0.37	71	105	141	119	141	119	264	466	466	13	19.5	19.5	289	491	491	17.5	24.0	24.0
EVMSG5 3/0.55	1.6	0.55	71	105	141	119	141	119	292	494	494	13.5	20.5	20.5	317	519	519	18	25.0	25.0
EVMSG5 4/0.75	1.6	0.75	80	120	160	142	141	102	330	559	563	14.5	24.5	23.0	355	584	588	19	29.0	27.5
EVMSG5 5/1.1	1.6	1.1	80	120	160	142	141	102	358	587	602	15	26.0	25.0	383	612	627	19.5	30.5	29.5
EVMSG5 6/1.5	1.6	1.5	90	140	172	140	160	119	396	674	687	15.5	33.3	29.0	421	699	712	20.1	37.9	33.6
EVMSG5 7/1.5	1.6	1.5	90	140	172	140	160	119	424	702	715	16	33.8	29.5	449	727	740	20.5	38.3	34.0
EVMSG5 8/2.2	1.6	2.2	90	140	172	140	160	119	452	730	743	16.6	36.1	31.6	477	755	768	21.1	40.6	36.1
EVMSG5 9/2.2	1.6	2.2	90	140	172	140	160	119	480	758	771	17.1	36.6	32.1	505	783	796	21.6	41.1	36.6
EVMSG5 10/2.2	1.6	2.2	90	140	172	140	160	119	508	786	799	17.6	37.1	32.6	533	811	824	22.1	41.6	37.1
EVMSG5 11/2.2	1.6	2.2	90	140	172	140	160	119	536	814	827	18.4	37.9	33.4	561	839	852	22.9	42.4	37.9
EVMSG5 12/3.0	1.6	3.0	100	160	-	-	176	123	574	-	916	19.6	-	41.6	599	-	941	24.1	-	46.1
EVMSG5 13/3.0	1.6	3.0	100	160	-	-	176	123	602	-	944	20.2	-	42.2	627	-	969	24.7	-	46.7
EVMSG5 14/3.0	1.6	3.0	100	160	-	-	176	123	630	-	972	20.8	-	42.8	655	-	997	25.3	-	47.3
EVMSG5 15/3.0	1.6	3.0	100	160	-	-	176	123	658	-	1000	21.8	-	43.8	683	-	1025	26.3	-	48.3
EVMSG5 17/4.0	1.6	3.0	112	160	-	-	193	138	714	-	1078	22.5	-	51.0	739	-	1103	27	-	55.5
EVMSG5 19/4.0	2.5	4.0	112	160	-	-	193	138	-	-	-	-	-	-	795	-	1159	28.1	-	56.6
EVMSG5 20/4.0	2.5	4.0	112	160	-	-	193	138	-	-	-	-	-	-	823	-	1187	30.3	-	58.8
EVMSG5 23/5.5	2.5	4.0	132	300	-	-	220	152	-	-	-	-	-	-	1001	-	1400	37	-	76.0
EVMSG5 25/5.5	2.5	5.5	132	300	-	-	220	152	-	-	-	-	-	-	1057	-	1456	38	-	77.0
EVMSG5 27/5.5	2.5	5.5	132	300	-	-	220	152	-	-	-	-	-	-	1113	-	1512	39.6	-	78.6

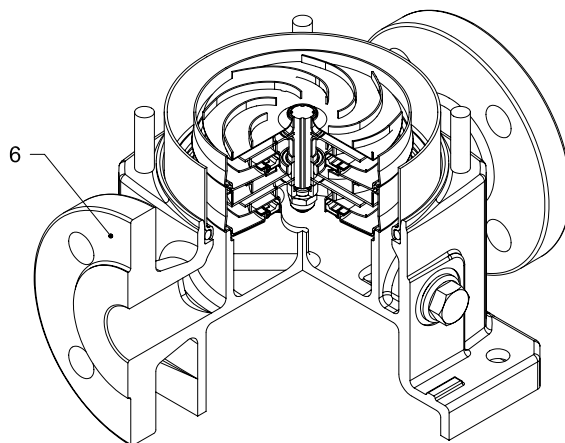
1.6 MPa=16 bar; 2.5 MPa=25 bar
- not available model

SECTIONAL VIEW
EVMSG5



with Oval flange (N)

PIPE CONNECTION EVMSG5



with Round flange (F)

SECTIONAL TABLE
EVMSG5

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) - EN 1.4462 (AISI 329A)		
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)		
43-4	Shaft sleeve (adjustment)	EN 1.4404 (AISI 316L)		
43-5	Shaft sleeve (last stage)	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	up to 4.0 kW above 5.5 kW	M6x25 ISO 4762 M8x20 ISO 4762
120-11	Screw (counterflange)		A2-70	
120-13	Screw for motor	Galvanized steel 8.8 strength class ISO 898/1	MEC 71-80 MEC 90-100-112 MEC 132	M6x20 ISO 4017 M8x20 ISO 4017 M12x40 ISO 4017
128-1	Nut (tie rod)		A2-70	M10 ISO 4032
128-3	Nut (motor)		Galvanized steel	M12 ISO 4032
128-6	Nut (aluminium coupling)	Galvanized steel	MEC 71-80-90-100-112 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)	Carbon Steel	up to 4.0 kW Ø6	
137-1	Impeller spacer	EN 1.4301 (AISI 304)		
140	Coupling	Die cast Aluminium EN AB-AISI11Cu2 (Fe) Cast Iron	up to 4.0 kW above 5.5 kW	
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	Galvanized steel Cast Iron EN-GJL-250	flange type: N flange type: F	
245	Coupling guard	EN 1.4301 (AISI 304)		
273-1	Washer (drainage plug)	EN 1.4301 (AISI 304)		

QUANTITY FOR MODEL EVMSG5

Pump Type	N°																												
	4	5-1	52	53	54	6	7	21	31**	32-1	43-2	43-3	43-4	43-5	44-1	46	47	48	52-1	75	75-1	107	111	111-3	111-4	111-5	115-1	115-4	115-5
EVMSG5 2/0.37	1	1	/	1	1	1	1	2	1	1	1	1	1	/	1	2	1	1	1	1	4	2	1	1	1	1	2	1	1
EVMSG5 3/0.55	1	1	1	1	1	1	1	3	1	1	3	1	2	1	1	2	1	1	1	1	4	3	1	1	1	1	2	1	1
EVMSG5 4/0.75	1	1	2	1	1	1	1	4	1	1	5	1	1	/	1	2	1	1	1	1	4	4	1	1	1	1	2	1	1
EVMSG5 5/1.1	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
EVMSG5 6/1.5	1	1	4	1	1	1	1	6	1	1	9	1	2	1	1	2	1	1	1	1	4	6	1	1	1	1	2	1	1
EVMSG5 7/1.5	1	1	5	1	1	1	1	7	1	1	11	1	1	/	1	2	1	1	1	1	4	7	1	1	1	1	2	1	1
EVMSG5 8/2.2	1	1	6	1	1	1	1	8	1	1	13	1	1	/	1	2	1	1	1	1	4	8	1	1	1	1	2	1	1
EVMSG5 9/2.2	1	1	7	1	1	1	1	9	1	1	15	1	1	1	1	2	1	1	1	1	4	9	1	1	1	1	2	1	1
EVMSG5 10/2.2	1	1	8	1	1	1	1	10	1	1	17	1	1	/	1	2	1	1	1	1	4	10	1	1	1	1	2	1	1
EVMSG5 11/2.2	1	1	8	2	1	1	1	11	1	1	17	2	2	/	2	2	1	1	2	1	4	11	1	1	1	1	2	1	1
EVMSG5 12/3.0	1	1	9	2	1	1	1	12	1	1	19	2	2	1	2	2	1	1	2	1	4	12	1	1	1	1	2	1	1
EVMSG5 13/3.0	1	1	10	2	1	1	1	13	1	1	21	2	2	/	2	2	1	1	2	1	4	13	1	1	1	1	2	1	1
EVMSG5 14/3.0	1	1	11	2	1	1	1	14	1	1	23	2	2	/	2	2	1	1	2	1	4	14	1	1	1	1	2	1	1
EVMSG5 15/3.0	1	1	12	2	1	1	1	15	1	1	25	2	3	1	2	2	1	1	2	1	4	15	1	1	1	1	2	1	1
EVMSG5 17/4.0	1	1	14	2	1	1	1	17	1	1	29	2	2	/	2	2	1	1	2	1	4	17	1	1	1	1	2	1	1
EVMSG5 19/4.0	1	1	16	2	1	1	1	19	1	1	33	2	2	/	2	2	1	1	2	1	4	19	1	1	1	1	2	1	1
EVMSG5 20/4.0	1	1	17	2	1	1	1	20	1	1	35	2	2	/	2	2	1	1	2	1	4	20	1	1	1	1	2	1	1
EVMSG5 23/5.5	1	1	20	2	1	1	1	23	1	1	41	2	2	/	2	2	1	1	2	1	4	23	1	1	1	1	2	1	1
EVMSG5 25/5.5	1	1	22	2	1	1	1	25	1	1	45	2	2	/	2	2	1	1	2	1	4	25	1	1	1	1	2	1	1
EVMSG5 27/5.5	1	1	23	3	1	1	1	27	1	1	47	3	3	/	3	2	1	1	3	1	4	27	1	1	1	1	2	1	1

Pump Type	N°																						
	117*	120-1	120-3	120-6	120-11*	120-13	128-1	128-3	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
EVMSG5 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
EVMSG5 3/0.55	2	4	4	4	4	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG5 4/0.75	2	4	4	4	4	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG5 5/1.1	2	4	4	4	4	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG5 6/1.5	2	4	4	4	4	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG5 7/1.5	2	4	4	4	4	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG5 8/2.2	2	4	4	4	4	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG5 9/2.2	2	4	4	4	4	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG5 10/2.2	2	4	4	4	4	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG5 11/2.2	2	4	4	4	4	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG5 12/3.0	2	4	4	4	4	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG5 13/3.0	2	4	4	4	4	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG5 14/3.0	2	4	4	4	4	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG5 15/3.0	2	4	4	4	4	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG5 17/4.0	2	4	4	4	4	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG5 19/4.0	/	4	4	4	/	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	/	2	4
EVMSG5 20/4.0	/	4	4	4	/	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	/	2	4
EVMSG5 23/5.5	/	4	4	4	/	4	4	/	4	3	4	1	4	/	1	2	1	1	4	1	/	2	4
EVMSG5 25/5.5	/	4	4	4	/	4	4	/	3	4	1	4	/	1	2	1	1	4	1	/	2	4	
EVMSG5 27/5.5	/	4	4	4	/	4	4	/	3	4	1	4	/	1	2	1	1	4	1	/	2	4	

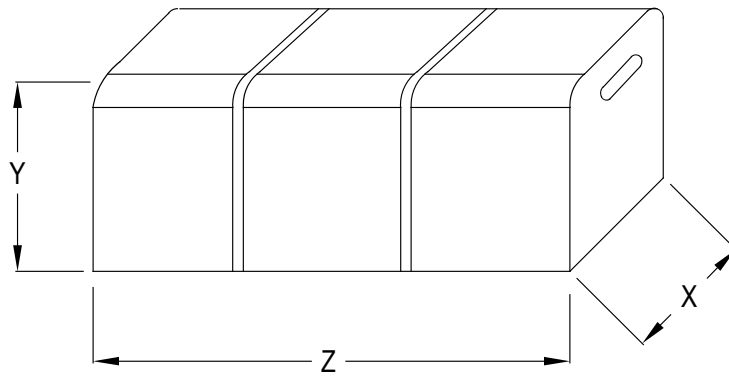
* only for Oval flange (N)

** shaft in EN 1.4462 (AISI 329A)

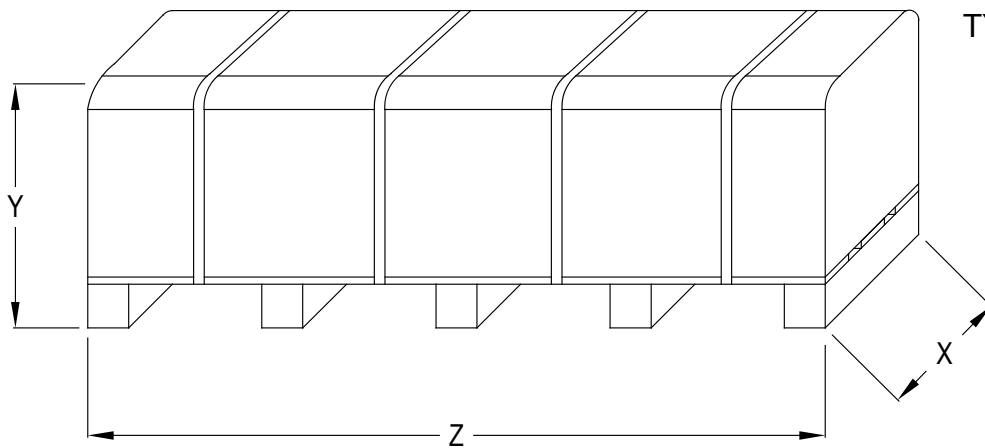
128-3: only for motor above 5.5 kW (see drawing pag.54)

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

PACKING DRAWING

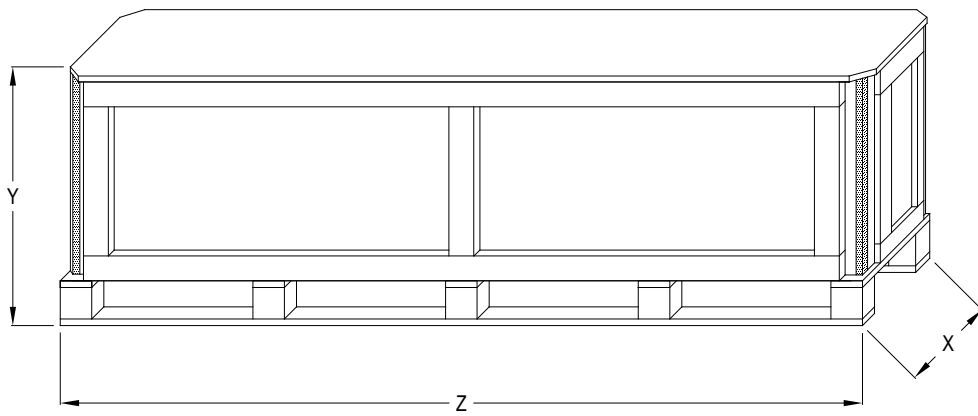
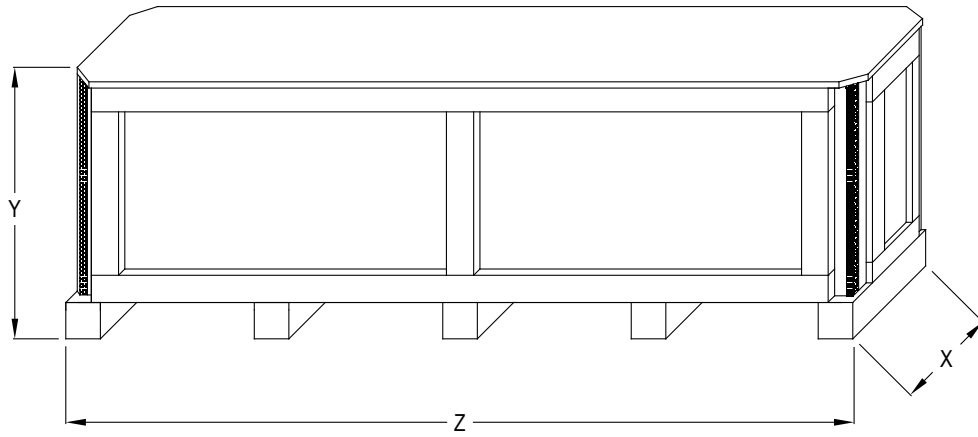


TYPE 1



TYPE 2

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



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			
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
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	
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	

PACKING DATA

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		Noise LpA - dB(A) *
	[kW]	[HP]	
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)

Motor Size	Power		Capacitor		Load efficiency and power-factor		Input [kW]	Full load current [A]		Locked rotor current [A]	
	[kW]	[HP]	[μF]	[V]	η % 100%	cos-φ 100%		230 V	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

Motor Size	Power		Efficiency	Load efficiency and power-factor (400V)				Input [kW]	Full load current [A]			Locked rotor current [A]		
	[kW]	[HP]		η %		cos-φ			230 V	400V	690V	230 V	400V	690V
				50%	75%	100%	100%							
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