

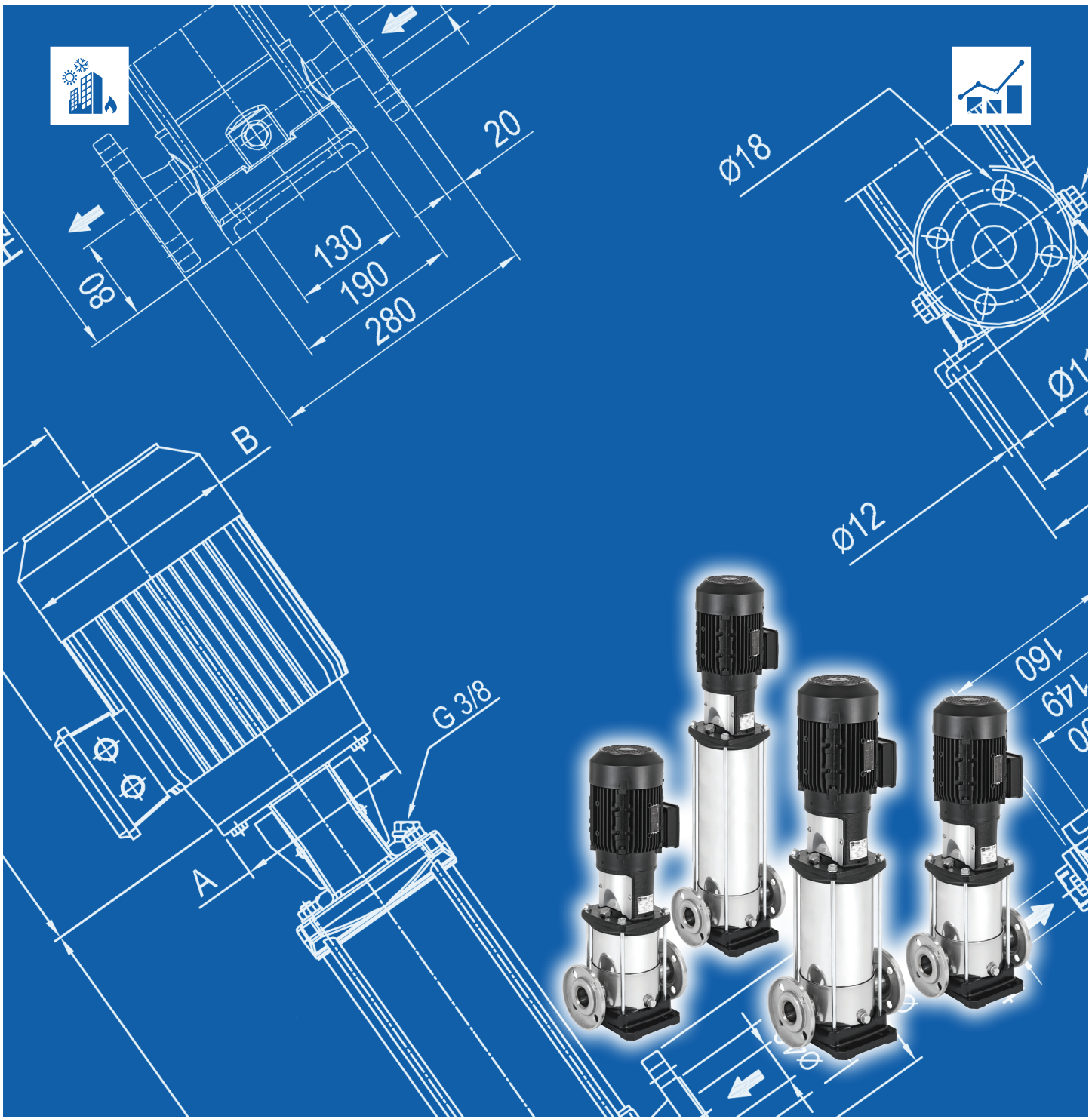
Looking ahead,  
going beyond expectations


*Ahead Beyond*




## EVMSN

Data Book 50Hz



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Rev. A

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EBARA Pumps Europe






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## VERTICAL MULTISTAGE PUMPS

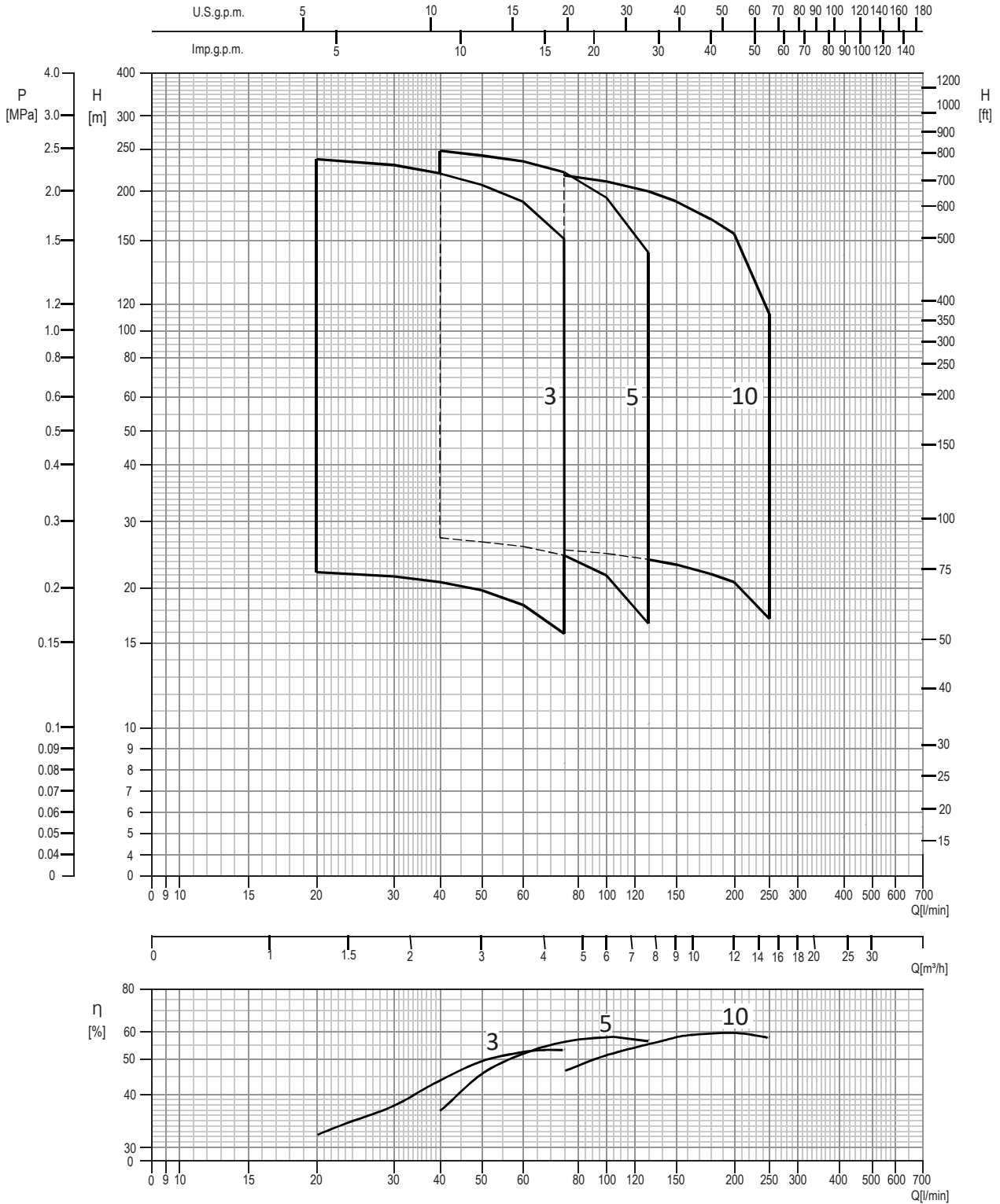
## TYPICAL APPLICATIONS

1.1

TYPICAL APPLICATIONS

INDUSTRY	BUILDING SERVICE	WATER SUPPLY
		
<ul style="list-style-type: none"> <li>• <b>Water treatment</b> reverse osmosis ultra-filtration water purification micro-filtration softening, ionizing and demineralising systems swimming pools separators</li> <li>• <b>Boiler feeding</b> steam systems condensate systems</li> <li>• <b>Wash and clean</b> vehicle washing systems industrial part washing laundry systems supply of liquids with acids and bases supply of chemical liquids</li> <li>• <b>Chilling</b> handling of refrigerants for cooling thermal control systems industrial cooling laser cooling</li> <li>• <b>Machine tooling</b> cooling lubricant supply for tooling machines</li> <li>• <b>Pressure boosting</b> pressure boosting for industrial use</li> <li>• <b>Food &amp; Beverage</b> food washing systems bottle wash systems</li> <li>• <b>Pharmaceutical industries</b></li> <li>• <b>Marine applications</b> freshwater, deckwash, high fog and fire fighting on ships</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Pressure boosting</b> pressure boosting for buildings pressure boosting for high rise buildings/hotels</li> <li>• <b>Sprinkler systems</b></li> <li>• <b>Fire fighting systems</b> jockey pump</li> <li>• <b>District heating</b></li> <li>• <b>Heat exchangers / fan heaters</b></li> <li>• <b>Air conditioning systems</b></li> <li>• <b>Heating systems</b></li> </ul>	<ul style="list-style-type: none"> <li>• <b>Water treatment</b> water treatment plants filtration water treatment plants transfer</li> <li>• <b>Pressure boosting</b> transfer from water treatment plants (mains)</li> <li>• <b>Irrigation</b> golf course / sport fields irrigation</li> <li>• <b>Agriculture</b> sprinkler irrigation drip irrigation</li> </ul>

PERFORMANCE RANGE  
EVMSN(L)3-5-10



### PRODUCT FEATURES

**[General]**

**1. Pump Type**

The **EVMSN** is Non-self-priming, vertical multistage in line, centrifugal pumps.

**2. Model range**

The EVMSN comes in **3,5 and 10 m<sup>3</sup>/h** flow sizes for the majority market needs.

**3. Maximum operating pressure**

The EVMSN can be operated at **16, 25 bar as maximum**.

**4. Operating liquid temperature range**

The EVMSN 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 and AISI 316L** versions are available.

**6. Motor**

The EVMSN can be coupled with **the commercial motors** that are acquired in the markets.  
The EVMSN 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. 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 > 0.4 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 EVMSN to **maintain physical constant operations** such as pumping pressure depending on the conditions of use.

**3. Improved suction performances**

- Low NPSHr have been achieved thanks to special hydro design
- \* for further information, please see each performance curve

**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**  
**EVMSN(L)3-5-10**

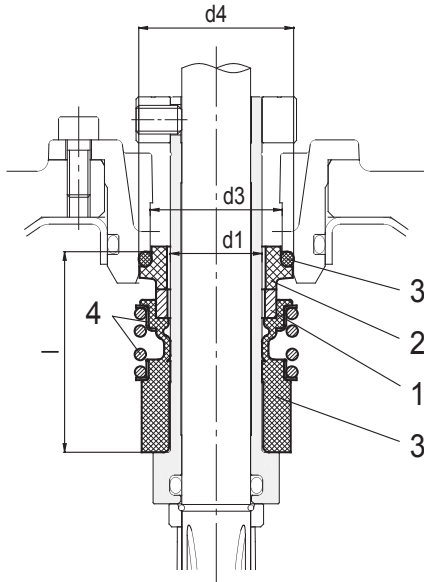
PUMP								
Version		EVMSN			EVMSNL			
Operating range	Nominal flow rate (m <sup>3</sup> /h )	3	5	10	3	5	10	
	Maximum working pressure	1.6 / 2.5 MPa (16 / 25 bar)						
	Liquid temperature range	-30°C to 140°C (please contact EBARA in case of -30°C to -15°C, or 120-140°C)						
Key Components Material	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	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)	Depend on models					
		EN 1.4404 (AISI 316L)						
		EN 1.4462 (AISI 329A)						
	Shaft sleeve bearing	Tungsten carbide						
	Shaft Seal	See the shaft seal options						
	O-ring	EPDM	●	●	●	●	●	●
	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	Die cast aluminium							
Pipe connection	Round flange up to 16 bar	●	●	●	●	●	●	
	(DIN) from 16 bar to 25 bar	●	●	●	●	●	●	

● Available

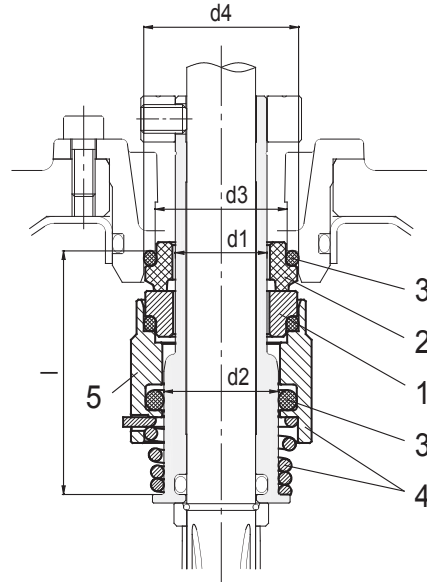
MOTOR		
Power Source	Frequency	50 Hz
	Phase	Three Phase
	Power rating	0.37 ÷ 7.5 kW
		0.5 ÷ 10 HP
Voltage	230/400 ± 10% V (up to 4.0 kW)	
	400/690 ± 10% V (above 5.5 kW)	
Type	Type	IC411 - TEFC
	Efficiency Level	- : from 0.37 kW up to 0.55 kW IE3 : above 0.75 kW
	No° of poles	2
	Protection degree	IP55: up to 7.5 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 7.5 kW

### SHAFT SEAL EVMSN(L)3-5-10

#### 1. Shaft Seal



up to 16 bar  
Cartridge Unbalanced type



up to 25 bar  
Cartridge Balanced type

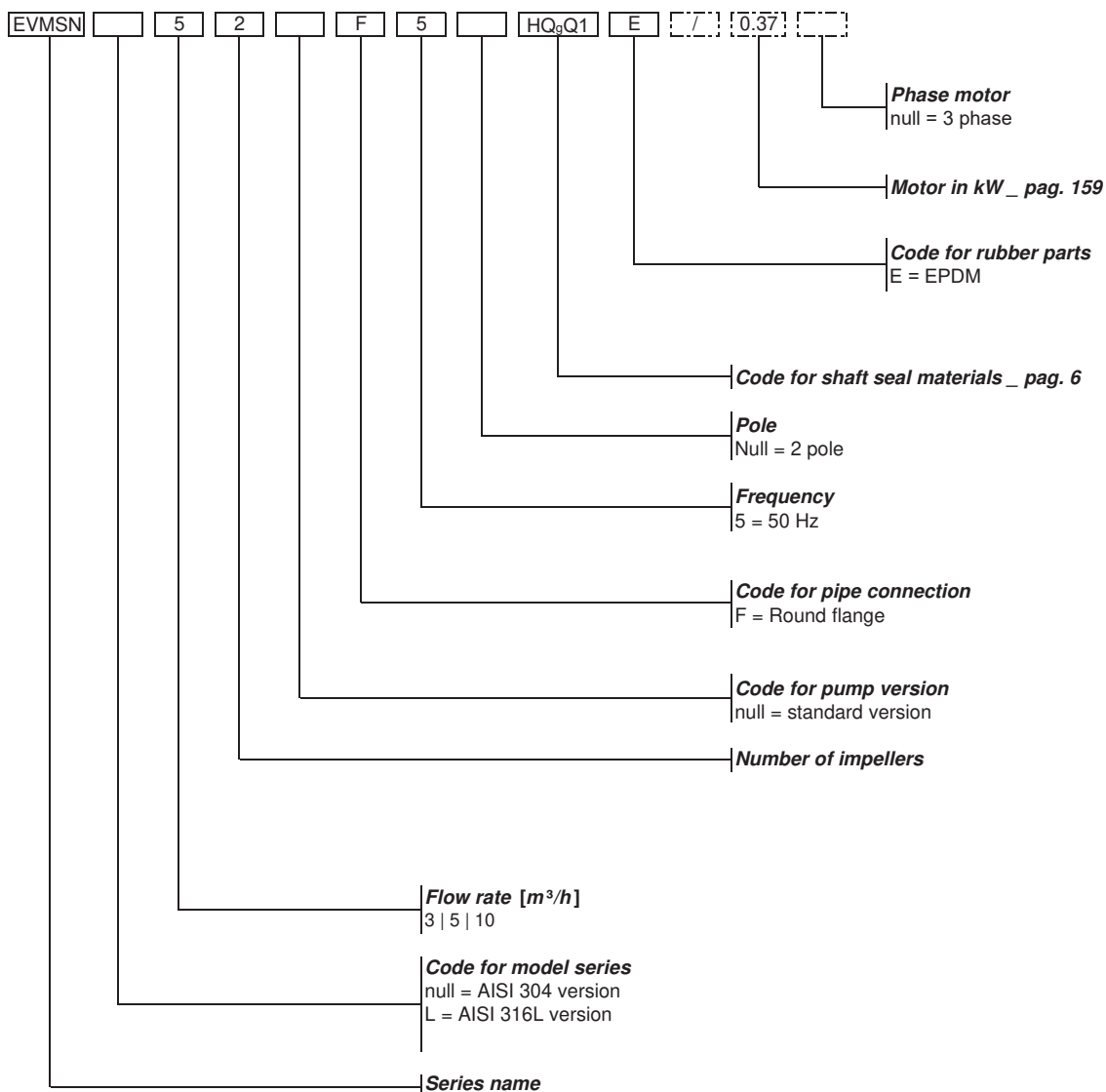
#### 2. Type of Shaft Seal and Dimensions [mm]

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	
HQgQ1EG	●	25 bar	- 30°C to + 140°C	Balanced	(H)	SiC with graphite	(Qg)	SiC	(Q1)	EPDM	(E)	AISI 316		(G)	

● Available

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

TYPE KEY  
EVMSN(L)3-5-10



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

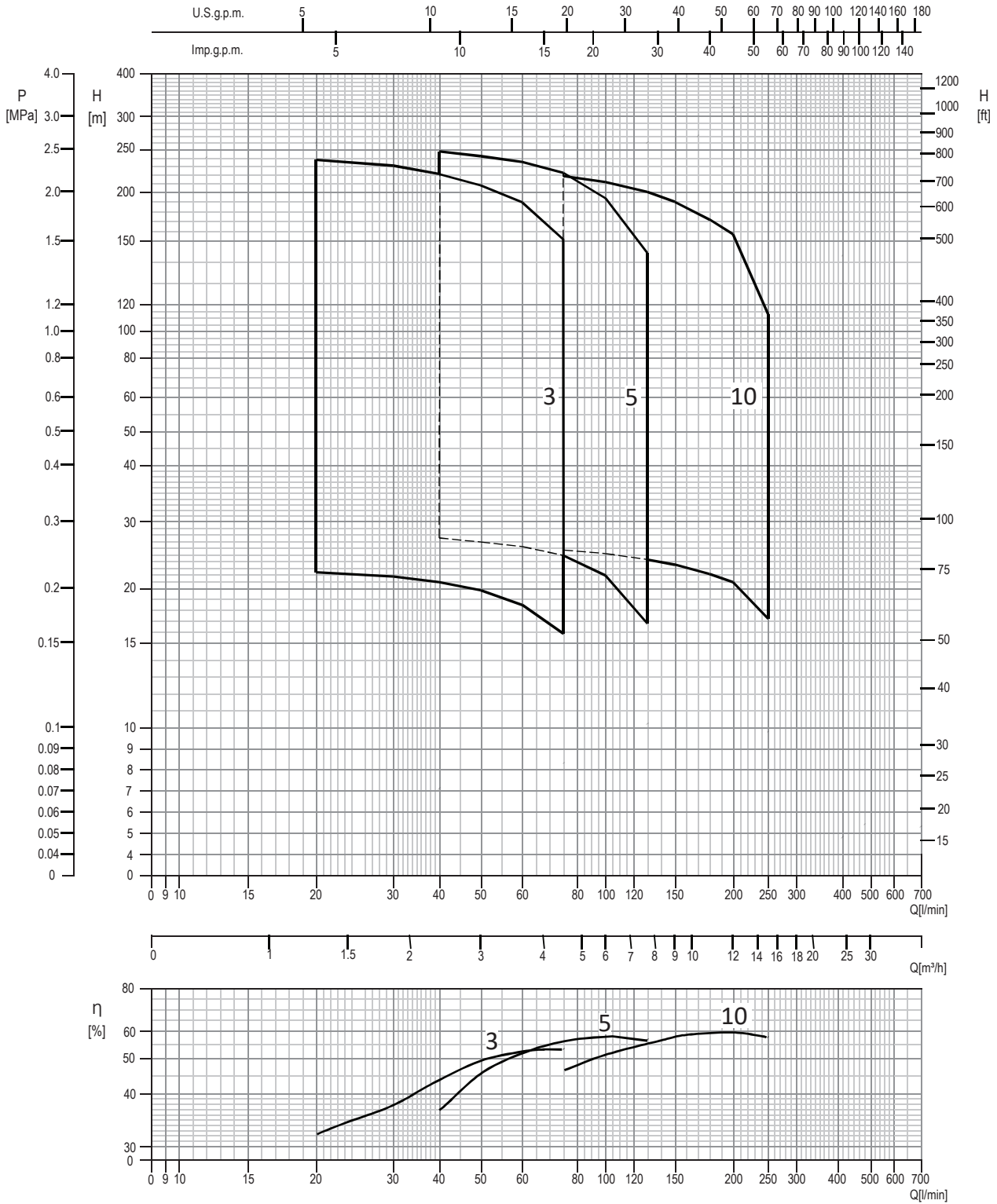
EBARA Pumps Europe S.p.A. Via Campo Sportivo, 30 38023 Cles (TN), ITALY Phone +39 0462 739811 V.A.T.: 01234680221		MADE IN ITALY	
TYPE			
⊕ P/N		⊕	
H <sub>max</sub>	m	H <sub>min</sub>	m
Q	l/min	H	m
P2	kW	HP	
Hz		min <sup>-1</sup>	
MEI >		Hyd. eff.	%



### PERFORMANCE RANGE EVMSN(L)3-5-10

2.5

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 2900 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)
$\eta$	-	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 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](http://www.europump.org)  (Ecodesign section)

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

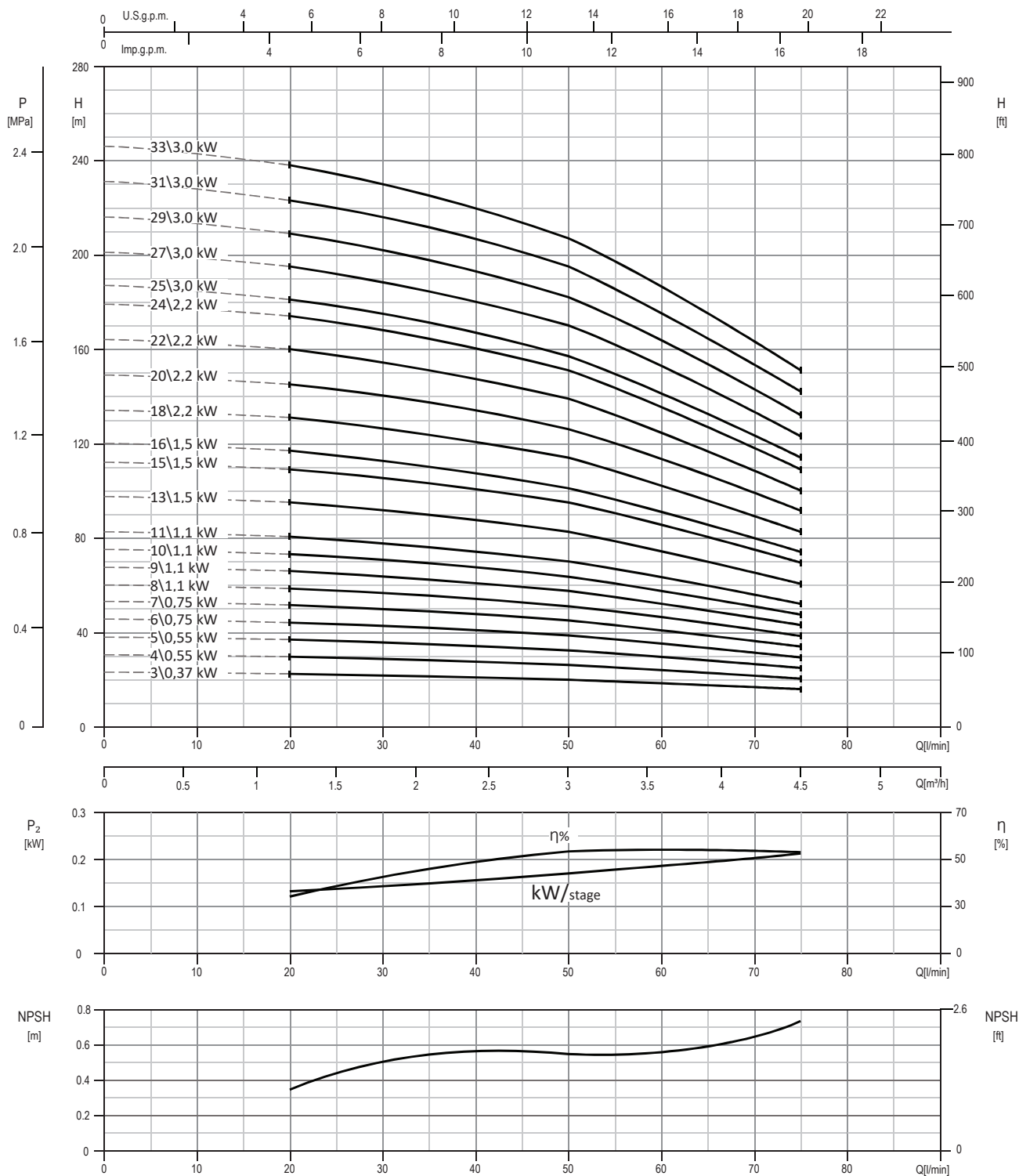
## Minimum efficiency index (MEI)

Pump type	MEI
EVMSN(L)3	> 0.40
EVMSN(L)5	> 0.40
EVMSN(L)10	> 0.40



PERFORMANCE CURVE  
EVMSN(L)3

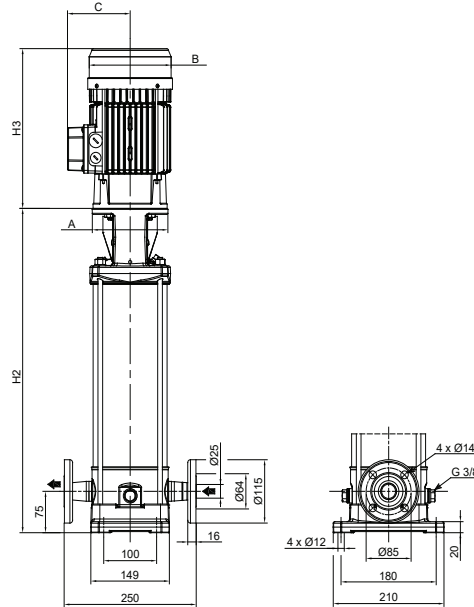
EVMSN(L)3



Test standard: ISO 9906:2012 - Grade 3B

### TECHNICAL DATA EVMSN(L)3

#### Dimensional sketch



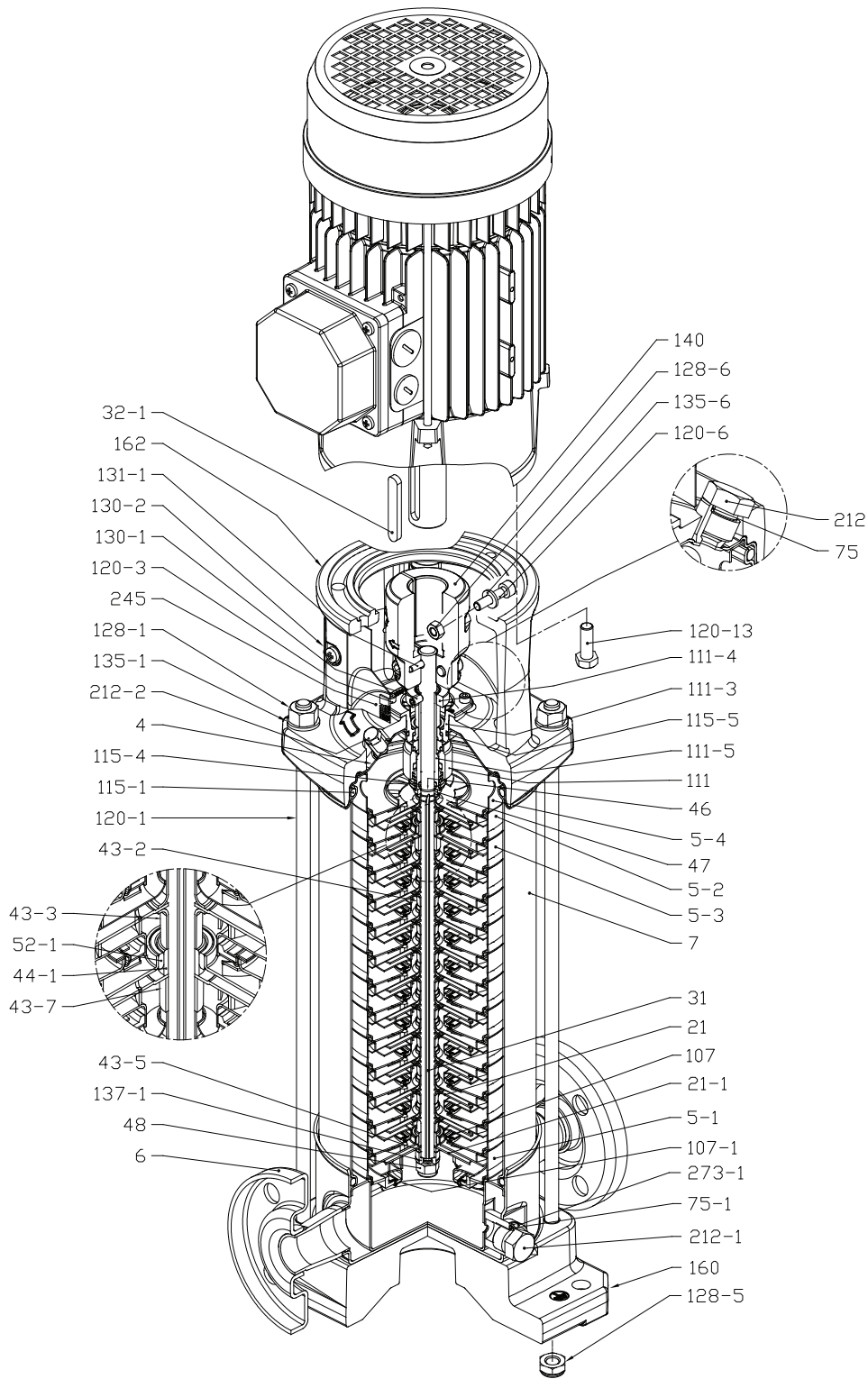
#### Dimensions [mm] and Weights [Kg]

Pump Type	Pmax [MPa]	kW	Size	Motor			Round flange (F)		Pump + motor Weight [kg]
				A [Ø]	B	C	H2	H2+H3	
EVMSN(L)3-3/0,37	1,6	0,37	71	105	139	114	296	512	16,7
EVMSN(L)3-4/0,55	1,6	0,55	71	105	139	114	317	533	17,5
EVMSN(L)3-5/0,55	1,6	0,55	71	105	139	114	338	554	18,0
EVMSN(L)3-6/0,75	1,6	0,75	80	120	141	102	369	602	20,7
EVMSN(L)3-7/0,75	1,6	0,75	80	120	141	102	390	623	21,6
EVMSN(L)3-8/1,1	1,6	1,1	80	120	141	102	411	655	23,6
EVMSN(L)3-9/1,1	1,6	1,1	80	120	141	102	432	676	24,0
EVMSN(L)3-10/1,1	1,6	1,1	80	120	141	102	453	697	24,5
EVMSN(L)3-11/1,1	1,6	1,1	80	120	141	102	474	718	24,9
EVMSN(L)3-13/1,5	1,6	1,5	90	140	160	119	526	817	29,6
EVMSN(L)3-15/1,5	1,6	1,5	90	140	160	119	568	859	30,5
EVMSN(L)3-16/1,5	1,6	1,5	90	140	160	119	589	880	31,5
EVMSN(L)3-18/2,2	1,6	2,2	90	140	160	119	631	922	33,7
EVMSN(L)3-20/2,2	2,5	2,2	90	140	160	119	673	964	34,4
EVMSN(L)3-22/2,2	2,5	2,2	90	140	160	119	715	1006	35,3
EVMSN(L)3-24/2,2	2,5	2,2	90	140	160	119	757	1048	36,8
EVMSN(L)3-25/3,0	2,5	3,0	100	160	176	123	788	1130	44,4
EVMSN(L)3-27/3,0	2,5	3,0	100	160	176	123	830	1172	45,4
EVMSN(L)3-29/3,0	2,5	3,0	100	160	176	123	872	1214	46,3
EVMSN(L)3-31/3,0	2,5	3,0	100	160	176	123	914	1256	47,3
EVMSN(L)3-33/3,0	2,5	3,0	100	160	176	123	956	1298	48,1

1.6 MPa=16 bar; 2.5 MPa=25 bar

SECTIONAL VIEW  
EVMSN(L)3

EVMSN(L)3



with Round flange (F)

### SECTIONAL TABLE EVMSN(L)3

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)		
21-1	Suction 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 1.4404 (AISI 316L)			
43-7	Spacer	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)	12x10	
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	EN 1.4401 (AISI 316) with inox insert	M8	
52-1	Sleeve bearing	Tungsten carbide			
75	O-Ring (priming plug)	EPDM		Ø12.37x2.62	OR 3050
75-1	O-Ring (drainage plug)	EPDM			
107	Liner ring	EN 1.4301 (AISI 304) + PPS	EN 1.4404 (AISI 316L) + PPS		
107-1	Liner ring bracket (suction casing)	EN 1.4301 (AISI 304) + PPS	EN 1.4404 (AISI 316L) + PPS		
111	Mechanical seal	SiC+graphite / SiC / EPDM _ balanced type			
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		Ø129.54x5.34	OR 6945
115-4	O-Ring (cartridge sleeve)	EPDM			
115-5	O-Ring (seal flange)	EPDM		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
120-13	Screw for motor	MEC 71-80 MEC 90-100	Galvanized steel 8.8 strength class ISO 898/1	M6x20 M8x20	ISO 4017 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	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)			
245	Coupling guard	EN 1.4301 (AISI 304)			
273-1	Washer (drainage plug)	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		

QUANTITY FOR MODEL  
EVMSN(L)3

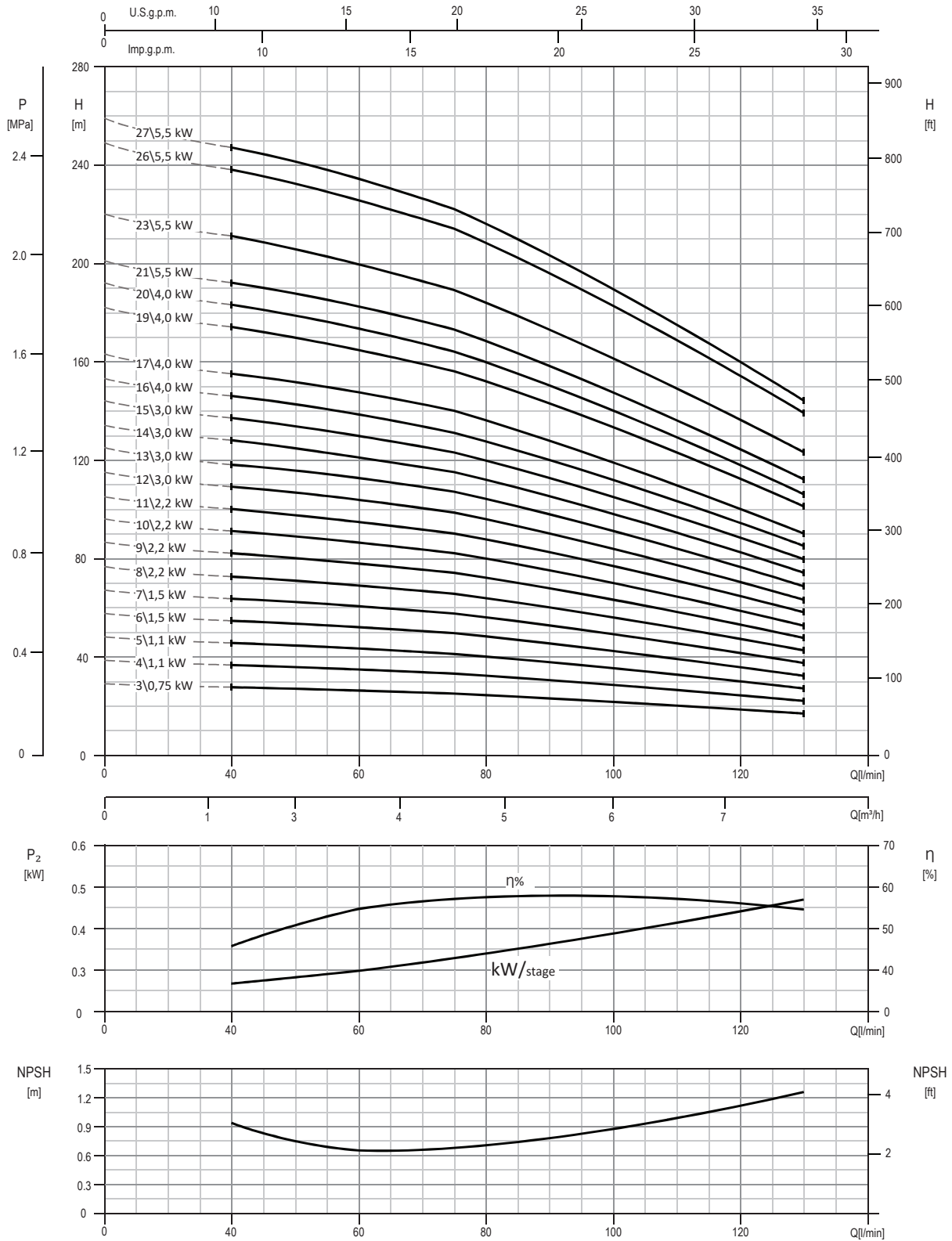
Pump Type	N°																															
	4	5-1	52	53	54	6	7	21	21-1	31	32-1	432	433	435	437	441	46	47	48	52-1	75	75-1	107	107-1	111	111-3	111-4	111-5	115-1	115-4	115-5	
EVMSN(L)3-310,37	1	1	1	1	1	1	1	3	1	1	1	3	1	/	/	1	2	1	1	1	1	2	3	1	1	1	1	1	2	1	1	
EVMSN(L)3-410,55	1	1	2	1	1	1	1	4	1	1	1	5	1	/	/	1	2	1	1	1	1	2	4	1	1	1	1	1	2	1	1	
EVMSN(L)3-510,55	1	1	3	1	1	1	1	5	1	1	1	7	1	/	/	1	2	1	1	1	1	2	5	1	1	1	1	1	2	1	1	
EVMSN(L)3-610,75	1	1	4	1	1	1	1	6	1	1	1	9	1	/	/	1	2	1	1	1	1	2	6	1	1	1	1	1	2	1	1	
EVMSN(L)3-710,75	1	1	5	1	1	1	1	7	1	1	1	11	1	/	/	1	2	1	1	1	1	2	7	1	1	1	1	1	2	1	1	
EVMSN(L)3-811,1	1	1	6	1	1	1	1	8	1	1	1	13	1	/	/	1	2	1	1	1	1	2	8	1	1	1	1	1	2	1	1	
EVMSN(L)3-911,1	1	1	7	1	1	1	1	9	1	1	1	15	1	/	/	1	2	1	1	1	1	2	9	1	1	1	1	1	2	1	1	
EVMSN(L)3-1011,1	1	1	8	1	1	1	1	10	1	1	1	17	1	/	/	1	2	1	1	1	1	2	10	1	1	1	1	1	2	1	1	
EVMSN(L)3-1111,1	1	1	9	1	1	1	1	11	1	1	1	19	1	/	/	1	2	1	1	1	1	2	11	1	1	1	1	1	2	1	1	
EVMSN(L)3-1311,5	1	1	10	2	1	1	1	13	1	1	1	20	2	1	1	2	2	1	1	2	1	2	13	1	1	1	1	1	2	1	1	
EVMSN(L)3-1511,5	1	1	11	2	1	1	1	15	1	1	1	22	2	/	/	1	2	2	1	1	2	1	2	15	1	1	1	1	1	2	1	1
EVMSN(L)3-1611,5	1	1	11	2	1	1	1	16	1	1	1	22	2	/	/	1	2	2	1	1	2	1	2	16	1	1	1	1	1	2	1	1
EVMSN(L)3-1812,2	1	1	13	2	1	1	1	18	1	1	1	26	2	/	/	1	2	2	1	1	2	1	2	18	1	1	1	1	1	2	1	1
EVMSN(L)3-2012,2	1	1	14	2	1	1	1	20	1	1	1	28	2	/	/	1	2	2	1	1	2	1	2	20	1	1	1	1	1	2	1	1
EVMSN(L)3-2212,2	1	1	14	2	1	1	1	22	1	1	1	28	2	/	/	1	2	2	1	1	2	1	2	22	1	1	1	1	1	2	1	1
EVMSN(L)3-2412,2	1	1	15	2	1	1	1	24	1	1	1	30	2	/	/	1	2	2	1	1	2	1	2	24	1	1	1	1	1	2	1	1
EVMSN(L)3-2513,0	1	1	16	2	1	1	1	25	1	1	1	32	2	/	/	1	2	2	1	1	2	1	2	25	1	1	1	1	1	2	1	1
EVMSN(L)3-2713,0	1	1	17	2	1	1	1	27	1	1	1	34	2	/	/	1	2	2	1	1	2	1	2	27	1	1	1	1	1	2	1	1
EVMSN(L)3-2913,0	1	1	16	2	1	1	1	29	1	1	1	32	2	/	/	1	2	2	1	1	2	1	2	29	1	1	1	1	1	2	1	1
EVMSN(L)3-3113,0	1	1	17	2	1	1	1	31	1	1	1	34	2	/	/	1	2	2	1	1	2	1	2	31	1	1	1	1	1	2	1	1
EVMSN(L)3-3313,0	1	1	18	2	1	1	1	33	1	1	1	36	2	/	/	1	2	2	1	1	2	1	2	33	1	1	1	1	1	2	1	1

Pump Type	N°																				
	120-1	120-3	120-6	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	245	273-1
EVMSN(L)3-310,37	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-410,55	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-510,55	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-610,75	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-710,75	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-811,1	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-911,1	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-1011,1	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-1111,1	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-1311,5	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-1511,5	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-1611,5	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-1812,2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-2012,2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-2212,2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-2412,2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-2513,0	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-2713,0	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-2913,0	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-3113,0	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)3-3313,0	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2

EVMSN(L)3



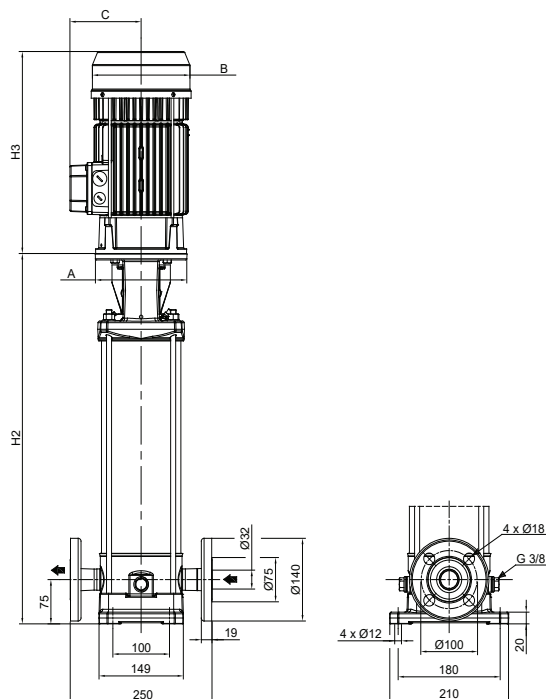
### PERFORMANCE CURVE EVMSN(L)5



Test standard: ISO 9906:2012 - Grade 3B

### TECHNICAL DATA EVMSN(L)5

#### Dimensional sketch

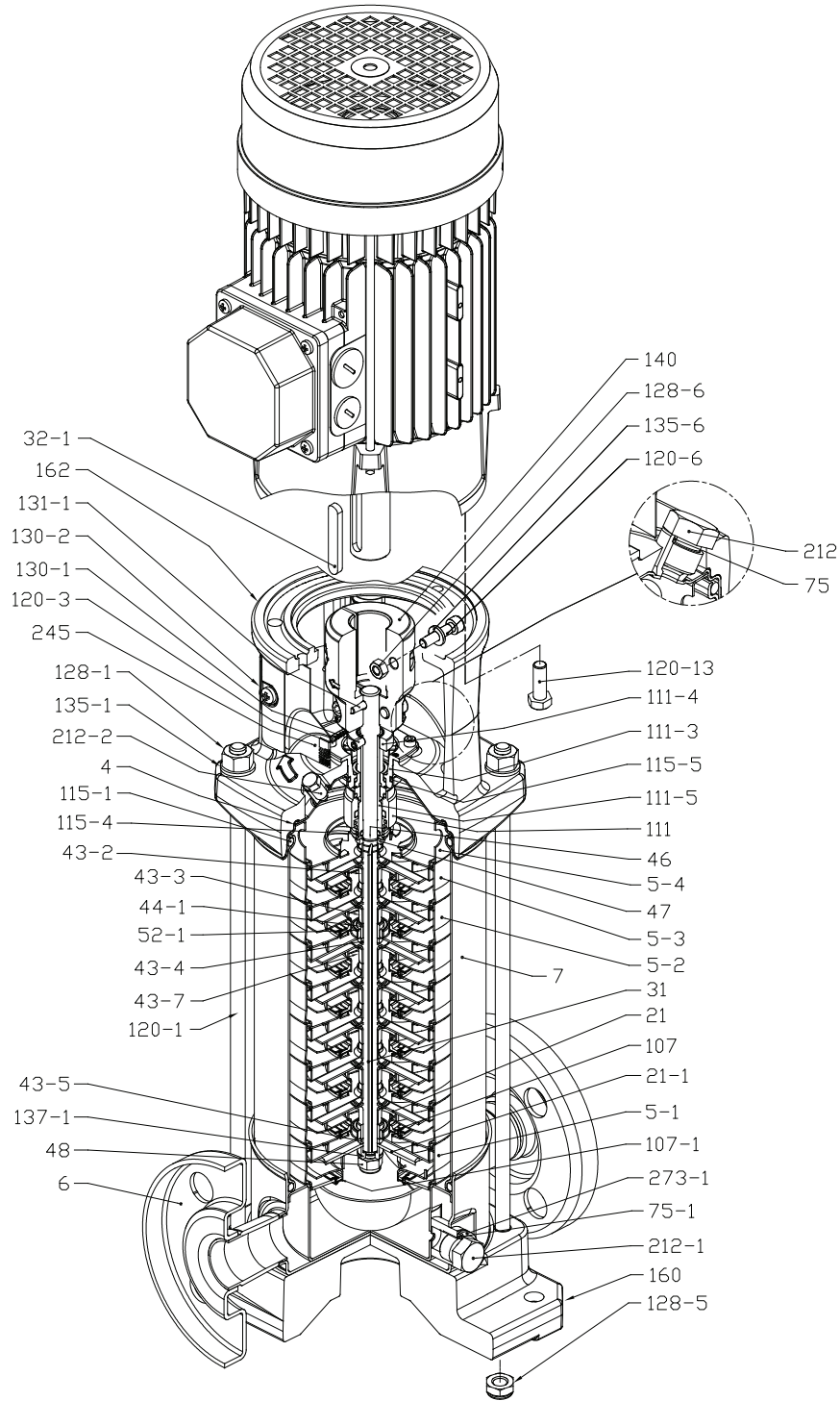


#### Dimensions [mm] and Weights [Kg]

Pump Type	Pmax [MPa]	kW	Size	Motor			Round flange (F)		Pump + motor Weight [kg]
				A [Ø]	B	C	H2	H2+H3	
EVMSN(L)5-3 0,75	1,6	0,75	80	120	141	102	327	560	20,2
EVMSN(L)5-4 1,1	1,6	1,1	80	120	141	102	355	599	22,5
EVMSN(L)5-5 1,1	1,6	1,1	80	120	141	102	383	627	23,0
EVMSN(L)5-6 1,5	1,6	1,5	90	140	160	119	421	712	27,2
EVMSN(L)5-7 1,5	1,6	1,5	90	140	160	119	449	740	27,6
EVMSN(L)5-8 2,2	1,6	2,2	90	140	160	119	477	768	29,6
EVMSN(L)5-9 2,2	1,6	2,2	90	140	160	119	505	796	30,2
EVMSN(L)5-10 2,2	1,6	2,2	90	140	160	119	533	824	30,6
EVMSN(L)5-11 2,2	1,6	2,2	90	140	160	119	561	852	31,5
EVMSN(L)5-12 3,0	1,6	3,0	100	160	176	123	599	941	39,7
EVMSN(L)5-13 3,0	1,6	3,0	100	160	176	123	627	969	40,3
EVMSN(L)5-14 3,0	1,6	3,0	100	160	176	123	655	997	40,8
EVMSN(L)5-15 3,0	1,6	3,0	100	160	176	123	683	1025	41,9
EVMSN(L)5-16 4,0	2,5	4,0	112	160	193	138	711	1075	48,7
EVMSN(L)5-17 4,0	2,5	4,0	112	160	193	138	739	1103	49,1
EVMSN(L)5-19 4,0	2,5	4,0	112	160	193	138	795	1159	50,2
EVMSN(L)5-20 4,0	2,5	4,0	112	160	193	138	823	1187	52,4
EVMSN(L)5-21 5,5	2,5	5,5	132	300	220	152	945	1344	69,3
EVMSN(L)5-23 5,5	2,5	5,5	132	300	220	152	1001	1400	69,6
EVMSN(L)5-26 5,5	2,5	5,5	132	300	220	152	1085	1484	70,6
EVMSN(L)5-27 5,5	2,5	5,5	132	300	220	152	1113	1512	72,1

1.6 MPa=16 bar; 2.5 MPa=25 bar

### SECTIONAL VIEW EVMSN(L)5



with Round flange (F)

SECTIONAL TABLE  
EVMSN(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)		
21-1	Suction 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 1.4404 (AISI 316L)			
43-7	Spacer	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)	12x10	
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	EN 1.4401 (AISI 316) with inox insert	M8	
52-1	Sleeve bearing	Tungsten carbide			
75	O-Ring (priming plug)	EPDM		Ø129.37x2.62	OR 3050
75-1	O-Ring (drainage plug)	EPDM			
107	Liner ring	EN 1.4301 (AISI 304) + PPS	EN 1.4404 (AISI 316L) + PPS		
107-1	Liner ring bracket (suction casing)	EN 1.4301 (AISI 304) + PPS	EN 1.4404 (AISI 316L) + PPS		
111	Mechanical seal	SiC+graphite / SiC / EPDM _ balanced type			
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		Ø129.54x5.34	OR 6945
115-4	O-Ring (cartridge sleeve)	EPDM		Ø11.91x2.62	OR 4093
115-5	O-Ring (seal flange)	EPDM		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
120-13	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
128-5	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) Cast iron EN-GJL-250			
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)			
245	Coupling guard	EN 1.4301 (AISI 304)			
273-1	Washer (drainage plug)	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		

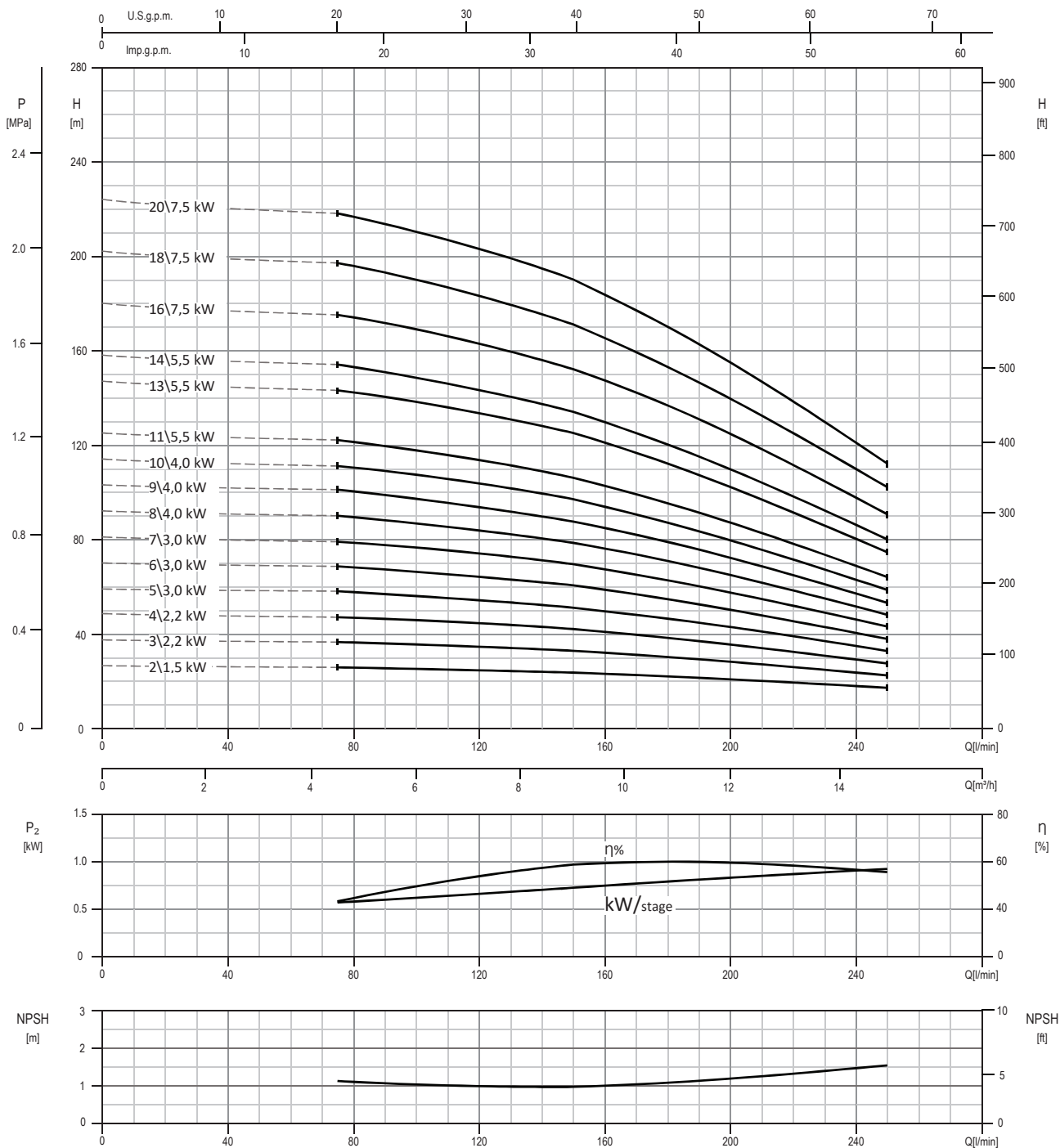
### QUANTITY FOR MODEL EVMSN(L)5

Pump Type	N°																															
	4	5-1	52	53	54	6	7	21	21-1	31	32-1	43-2	433	434	435	437	44-1	46	47	48	52-1	75	75-1	107	107-1	111	111-3	1114	111-5	115-1	1154	1155
EVMSN(L)5-310,75	1	1	2	1	1	1	1	3	1	1	1	4	1	1	1	/	1	2	1	1	1	1	2	3	1	1	1	1	1	2	1	1
EVMSN(L)5-411,1	1	1	3	1	1	1	1	4	1	1	1	6	1	1	/	/	1	2	1	1	1	1	2	4	1	1	1	1	1	2	1	1
EVMSN(L)5-511,1	1	1	4	1	1	1	1	5	1	1	1	8	1	1	/	/	1	2	1	1	1	1	2	5	1	1	1	1	1	2	1	1
EVMSN(L)5-611,5	1	1	5	1	1	1	1	6	1	1	1	10	1	1	1	/	1	2	1	1	1	1	2	6	1	1	1	1	1	2	1	1
EVMSN(L)5-711,5	1	1	6	1	1	1	1	7	1	1	1	12	1	1	/	/	1	2	1	1	1	1	2	7	1	1	1	1	1	2	1	1
EVMSN(L)5-812,2	1	1	7	1	1	1	1	8	1	1	1	14	1	1	/	/	1	2	1	1	1	1	2	8	1	1	1	1	1	2	1	1
EVMSN(L)5-912,2	1	1	8	1	1	1	1	9	1	1	1	16	1	1	1	/	1	2	1	1	1	1	2	9	1	1	1	1	1	2	1	1
EVMSN(L)5-1012,2	1	1	9	1	1	1	1	10	1	1	1	18	1	1	/	/	1	2	1	1	1	1	2	10	1	1	1	1	1	2	1	1
EVMSN(L)5-1112,2	1	1	10	2	1	1	1	11	1	1	1	20	2	2	/	1	2	2	1	1	1	2	11	1	1	1	1	1	1	2	1	1
EVMSN(L)5-1213,0	1	1	11	2	1	1	1	12	1	1	1	22	2	2	1	1	2	2	1	1	2	1	2	12	1	1	1	1	1	2	1	1
EVMSN(L)5-1313,0	1	1	12	2	1	1	1	13	1	1	1	24	2	2	/	1	2	2	1	1	2	1	2	13	1	1	1	1	1	2	1	1
EVMSN(L)5-1413,0	1	1	13	2	1	1	1	14	1	1	1	26	2	2	/	1	2	2	1	1	2	1	2	14	1	1	1	1	1	2	1	1
EVMSN(L)5-1513,0	1	1	14	2	1	1	1	15	1	1	1	28	2	2	1	1	2	2	1	1	2	1	2	15	1	1	1	1	1	2	1	1
EVMSN(L)5-1614,0	1	1	15	2	1	1	1	16	1	1	1	30	2	2	1	1	2	2	1	1	2	1	2	16	1	1	1	1	1	2	1	1
EVMSN(L)5-1714,0	1	1	16	2	1	1	1	17	1	1	1	32	2	2	1	1	2	2	1	1	2	1	2	17	1	1	1	1	1	2	1	1
EVMSN(L)5-1914,0	1	1	18	2	1	1	1	19	1	1	1	36	2	2	1	1	2	2	1	1	2	1	2	19	1	1	1	1	1	2	1	1
EVMSN(L)5-2014,0	1	1	19	2	1	1	1	20	1	1	1	38	2	2	1	1	2	2	1	1	2	1	2	20	1	1	1	1	1	2	1	1
EVMSN(L)5-2115,5	1	1	20	2	1	1	1	21	1	1	1	40	2	2	1	1	2	2	1	1	2	1	2	21	1	1	1	1	1	2	1	1
EVMSN(L)5-2315,5	1	1	22	2	1	1	1	23	1	1	1	44	2	2	1	1	2	2	1	1	2	1	2	23	1	1	1	1	1	2	1	1
EVMSN(L)5-2615,5	1	1	25	2	1	1	1	26	1	1	1	50	2	2	1	1	2	2	1	1	2	1	2	26	1	1	1	1	1	2	1	1
EVMSN(L)5-2715,5	1	1	26	3	1	1	1	27	1	1	1	52	3	3	/	1	3	2	1	1	3	1	2	27	1	1	1	1	1	2	1	1

Pump Type	N°																				
	120-1	120-3	1206	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	245	273-1
EVMSN(L)5-310,75	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-411,1	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-511,1	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-611,5	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-711,5	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-812,2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-912,2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-1012,2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-1112,2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-1213,0	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-1313,0	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-1413,0	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-1513,0	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-1614,0	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-1714,0	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-1914,0	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-2014,0	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-2115,5	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-2315,5	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-2615,5	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)5-2715,5	4	4	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	2	2

PERFORMANCE CURVE  
EVMSN(L)10

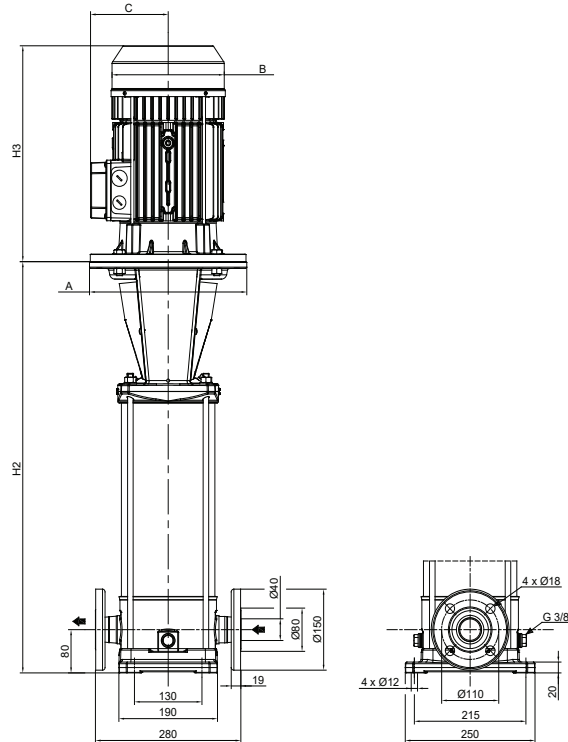
EVMSN(L)10



Test standard: ISO 9906:2012 - Grade 3B

### TECHNICAL DATA EVMSN(L)10

#### Dimensional sketch



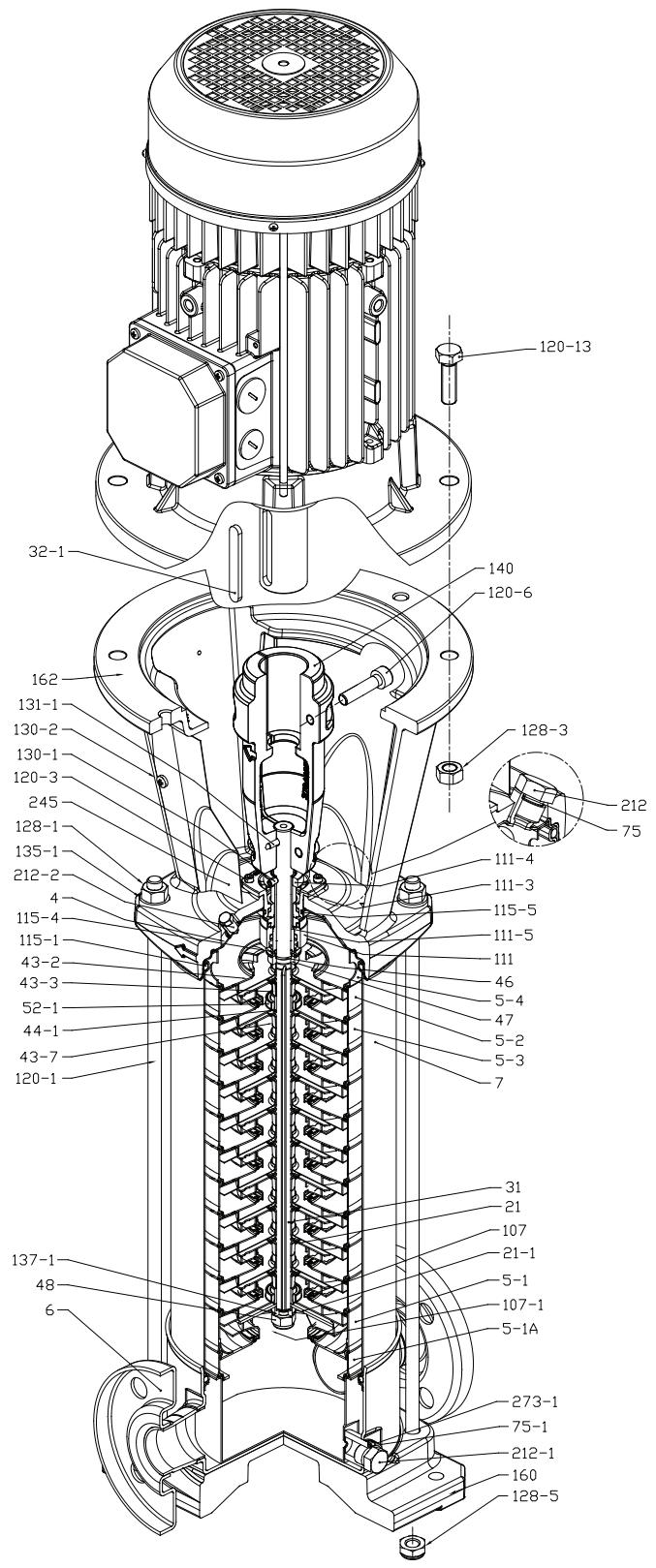
#### Dimensions [mm] and Weights [Kg]

Pump Type	P <sub>max</sub> [MPa]	kW	Size	Motor			Round flange (F)			Pump + motor Weight [kg]
				A [Ø]	B	C	H2	H2+H3		
EVMSN(L)10-2 1,5	1,6	1,5	90	140	160	119	383	674	32,0	
EVMSN(L)10-3 2,2	1,6	2,2	90	140	160	119	413	704	34,3	
EVMSN(L)10-4 2,2	1,6	2,2	90	140	160	119	443	734	35,1	
EVMSN(L)10-5 3,0	1,6	3,0	100	160	176	123	483	825	43,1	
EVMSN(L)10-6 3,0	1,6	3,0	100	160	176	123	513	855	43,9	
EVMSN(L)10-7 3,0	1,6	3,0	100	160	176	123	543	885	44,8	
EVMSN(L)10-8 4,0	1,6	4,0	112	160	193	138	573	937	52,1	
EVMSN(L)10-9 4,0	1,6	4,0	112	160	193	138	603	967	53,0	
EVMSN(L)10-10 4,0	1,6	4,0	112	160	193	138	633	997	54,6	
EVMSN(L)10-11 5,5	1,6	5,5	132	300	220	152	761	1160	74,9	
EVMSN(L)10-13 5,5	1,6	5,5	132	300	220	152	821	1220	76,7	
EVMSN(L)10-14 5,5	1,6	5,5	132	300	220	152	851	1250	77,6	
EVMSN(L)10-16 7,5	2,5	7,5	132	300	220	152	911	1330	86,5	
EVMSN(L)10-18 7,5	2,5	7,5	132	300	220	152	971	1390	88,3	
EVMSN(L)10-20 7,5	2,5	7,5	132	300	220	152	1031	1450	90,1	

1.6 MPa=16 bar; 2.5 MPa=25 bar

SECTIONAL VIEW  
EVMSN(L)10

EVMSN(L)10



with Round flange (F)



### SECTIONAL TABLE EVMSN(L)10

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)		
5-1A	Spacer 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)		
21-1	Suction 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 + discharge casing)	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
43-7	Spacer	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)	12x10	
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	EN 1.4401 (AISI 316) with inox insert	M10	
52-1	Sleeve bearing	Tungsten carbide			
75	O-Ring (priming plug)	EPDM		Ø12.37x2.62	OR 3050
75-1	O-Ring (drainage plug)	EPDM			
107	Liner ring	EN 1.4301 (AISI 304) + PPS	EN 1.4404 (AISI 316L) + PPS		
107-1	Liner ring bracket (suction casing)	EN 1.4301 (AISI 304) + PPS	EN 1.4404 (AISI 316L) + PPS		
111	Mechanical seal	SiC+graphite / SiC / EPDM _ balanced type			
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		Ø164.46x5.34	OR 6945
115-4	O-Ring (cartridge sleeve)	EPDM		Ø15.88x2.62	OR 4093
115-5	O-Ring (seal flange)	EPDM		Ø37.77x2.62	OR 4175
120-1	Tie-rod	EN 1.4057 (AISI 431)		M12	
120-3	Screw	A2-70		M5x12	ISO 4762
120-6	Screw (pump coupling)	up to 4.0 kW from 5.5 kW to 7.5 kW	Galvanized steel	M6x25	ISO 4762
120-13	Screw for motor	MEC 80	Galvanized steel 8.8 strength class ISO 898/1	M6x20	ISO 4017
		MEC 90-100-112		M8x20	ISO 4017
		MEC 132		M12x40	UNI 5739
128-1	Nut (tie rod)	A2-70		M12	ISO 4032
128-5	Nut (tie rod)	A2-70		M12	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		Ø5x35	ISO 2338
135-1	Washer (tie rod)	EN 1.4301 (AISI 304)		Ø13x24x2.5	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-AISI11 Cu2 (Fe) Cast Iron		
160	Base	Die cast Aluminium EN AB-AISI11 Cu2 (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)			
245	Coupling guard	EN 1.4301 (AISI 304)			
273-1	Washer (drainage plug)	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		

QUANTITY FOR MODEL  
EVMSN(L)10

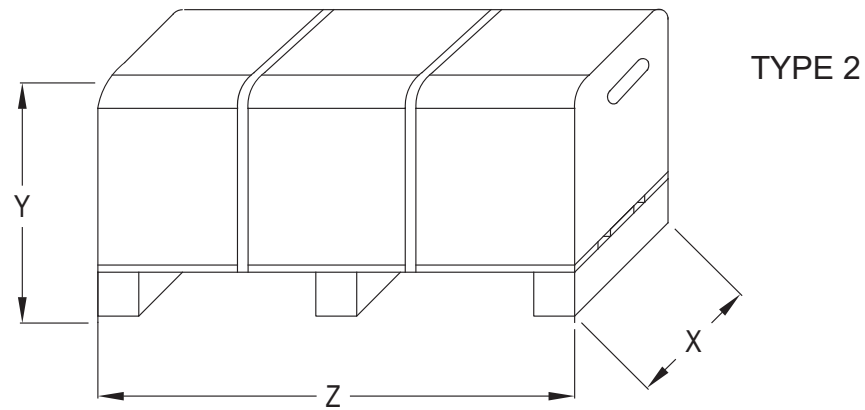
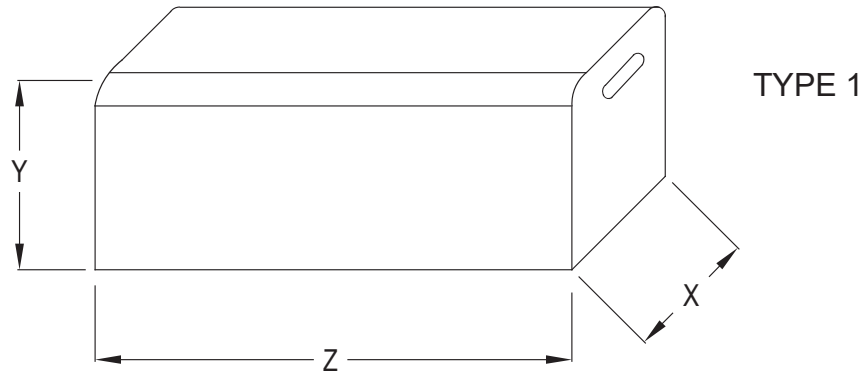
Pump Type	N°																											
	4	5-1	5-1A	52	53	54	6	7	21	21-1	31	32-1	432	43-3	43-7	44-1	46	47	48	52-1	75	75-1	107	107-1	111	111-3	1114	111-5
EVMSN(L)10 2/0.75	1	1	1	/	1	1	1	1	2	1	1	1	1	/	1	2	1	1	1	1	2	2	1	1	1	1	1	1
EVMSN(L)10 3/1.5	1	1	1	1	1	1	1	1	3	1	1	1	3	1	/	1	2	1	1	1	1	2	3	1	1	1	1	1
EVMSN(L)10 4/2.2	1	1	1	2	1	1	1	1	4	1	1	1	5	1	/	1	2	1	1	1	1	2	4	1	1	1	1	1
EVMSN(L)10 5/2.2	1	1	1	3	1	1	1	1	5	1	1	1	7	1	/	1	2	1	1	1	1	2	5	1	1	1	1	1
EVMSN(L)10 6/2.2	1	1	1	4	1	1	1	1	6	1	1	1	9	1	/	1	2	1	1	1	1	2	6	1	1	1	1	1
EVMSN(L)10 7/3.0	1	1	1	5	1	1	1	1	7	1	1	1	11	1	/	1	2	1	1	1	1	2	7	1	1	1	1	1
EVMSN(L)10 8/3.0	1	1	1	6	1	1	1	1	8	1	1	1	13	1	/	1	2	1	1	1	1	2	8	1	1	1	1	1
EVMSN(L)10 9/4.0	1	1	1	7	1	1	1	1	9	1	1	1	15	1	/	1	2	1	1	1	1	2	9	1	1	1	1	1
EVMSN(L)10 10/4.0	1	1	1	8	1	1	1	1	10	1	1	1	17	1	/	1	2	1	1	1	1	2	10	1	1	1	1	1
EVMSN(L)10 11/4.0	1	1	1	9	1	1	1	1	11	1	1	1	19	1	1	1	2	1	1	1	1	2	11	1	1	1	1	1
EVMSN(L)10 12/5.5	1	1	1	9	2	1	1	1	12	1	1	1	19	2	1	2	2	1	1	2	1	2	12	1	1	1	1	1
EVMSN(L)10 14/5.5	1	1	1	11	2	1	1	1	14	1	1	1	23	2	1	2	2	1	1	2	1	2	14	1	1	1	1	1
EVMSN(L)10 15/5.5	1	1	1	12	2	1	1	1	15	1	1	1	25	2	1	2	2	1	1	2	1	2	15	1	1	1	1	1
EVMSN(L)10 16/7.5	1	1	1	13	2	1	1	1	16	1	1	1	27	2	1	2	2	1	1	2	1	2	16	1	1	1	1	1
EVMSN(L)10 18/7.5	1	1	1	15	2	1	1	1	18	1	1	1	31	2	1	2	2	1	1	2	1	2	18	1	1	1	1	1
EVMSN(L)10 19/7.5	1	1	1	16	2	1	1	1	19	1	1	1	33	2	1	2	2	1	1	2	1	2	19	1	1	1	1	1
EVMSN(L)10 21/7.5	1	1	1	18	2	1	1	1	21	1	1	1	37	2	1	2	2	1	1	2	1	2	21	1	1	1	1	1
EVMSN(L)10 22/11	1	1	1	19	2	1	1	1	22	1	1	1	39	2	1	2	2	1	1	2	1	2	22	1	1	1	1	1
EVMSN(L)10 23/11	1	1	1	19	3	1	1	1	23	1	1	1	39	3	1	3	2	1	1	3	1	2	23	1	1	1	1	1

Pump Type	N°																							
	115-1	1154	1155	120-1	120-3	120-6	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	245	273-1
EVMSN(L)10 2/0.75	2	1	1	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)10 3/1.5	2	1	1	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)10 4/2.2	2	1	1	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)10 5/2.2	2	1	1	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)10 6/2.2	2	1	1	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)10 7/3.0	2	1	1	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)10 8/3.0	2	1	1	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)10 9/4.0	2	1	1	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)10 10/4.0	2	1	1	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)10 11/4.0	2	1	1	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	1	2	1	2	2
EVMSN(L)10 12/5.5	2	1	1	4	4	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	2	2
EVMSN(L)10 14/5.5	2	1	1	4	4	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	2	2
EVMSN(L)10 15/5.5	2	1	1	4	4	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	2	2
EVMSN(L)10 16/7.5	2	1	1	4	4	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	2	2
EVMSN(L)10 18/7.5	2	1	1	4	4	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	2	2
EVMSN(L)10 19/7.5	2	1	1	4	4	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	2	2
EVMSN(L)10 21/7.5	2	1	1	4	4	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	2	2
EVMSN(L)10 22/11	2	1	1	4	4	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	2	2
EVMSN(L)10 23/11	2	1	1	4	4	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	2	2

128-6 / 135-6: with Aluminium coupling (see drawing pag.17)

### PACKING DRAWING EVMSN(L)3-5-10

3.1



PACKING DRAWING

### PACKING DATA EVMSN(L)3-5-10

Pump Type	Pumps with motor				
	X [mm]	Y [mm]	Z [mm]	Weight [kg]	Pack Type
EVMSN(L)3-3\0,37	385	400	585	20,1	1
EVMSN(L)3-4\0,55	385	400	585	20,9	1
EVMSN(L)3-5\0,55	385	400	585	21,9	1
EVMSN(L)3-6\0,75	385	400	770	23,7	1
EVMSN(L)3-7\0,75	385	400	770	24,7	1
EVMSN(L)3-8\1,1	385	400	770	25,9	1
EVMSN(L)3-9\1,1	385	400	770	27,1	1
EVMSN(L)3-10\1,1	385	400	770	27,6	1
EVMSN(L)3-11\1,1	385	400	770	28,6	1
EVMSN(L)3-13\1,5	400	430	1000	50,8	2
EVMSN(L)3-15\1,5	400	430	1000	51,8	2
EVMSN(L)3-16\1,5	400	430	1000	52,8	2
EVMSN(L)3-18\2,2	400	430	1000	53,8	2
EVMSN(L)3-20\2,2	400	430	1200	56,8	2
EVMSN(L)3-22\2,2	400	430	1200	57,9	2
EVMSN(L)3-24\2,2	400	430	1200	58	2
EVMSN(L)3-25\3,0	400	430	1200	68,3	2
EVMSN(L)3-27\3,0	400	430	1350	70,3	2
EVMSN(L)3-29\3,0	400	430	1350	71,3	2
EVMSN(L)3-31\3,0	400	430	1350	72,3	2
EVMSN(L)3-33\3,0	400	430	1350	75,3	2
EVMSN(L)5-3\0,75	385	400	770	24,1	1
EVMSN(L)5-4\1,1	385	400	770	26,1	1
EVMSN(L)5-5\1,1	385	400	770	27,1	1
EVMSN(L)5-6\1,5	400	430	1000	41,6	2
EVMSN(L)5-7\1,5	400	430	1000	42,2	2
EVMSN(L)5-8\2,2	400	430	1000	49,2	2
EVMSN(L)5-9\2,2	400	430	1000	51,8	2
EVMSN(L)5-10\2,2	400	430	1000	52,2	2
EVMSN(L)5-11\2,2	400	430	1000	53,1	2
EVMSN(L)5-12\3,0	400	430	1200	57,2	2
EVMSN(L)5-13\3,0	400	430	1200	57,8	2
EVMSN(L)5-14\3,0	400	430	1200	58,3	2
EVMSN(L)5-15\3,0	400	430	1200	59,4	2
EVMSN(L)5-16\4,0	400	430	1200	73,7	2
EVMSN(L)5-17\4,0	400	430	1200	74,1	2
EVMSN(L)5-19\4,0	400	430	1350	75,2	2
EVMSN(L)5-20\4,0	400	430	1350	77,4	2
EVMSN(L)5-21\5,5	500	430	1540	109	2
EVMSN(L)5-23\5,5	500	430	1540	111,2	2
EVMSN(L)5-26\5,5	500	430	1540	114	2
EVMSN(L)5-27\5,5	610	430	1750	119,2	2
EVMSN(L)10-2\1,5	400	430	800	49,3	2
EVMSN(L)10-3\2,2	400	430	800	53	2
EVMSN(L)10-4\2,2	400	430	800	55,3	2
EVMSN(L)10-5\3,0	400	430	1000	59,2	2
EVMSN(L)10-6\3,0	400	430	1000	60,5	2
EVMSN(L)10-7\3,0	400	430	1000	61,6	2
EVMSN(L)10-8\4,0	400	430	1000	68,8	2
EVMSN(L)10-9\4,0	400	430	1200	69,8	2
EVMSN(L)10-10\4,0	500	430	1350	71,4	2
EVMSN(L)10-11\5,5	500	430	1350	116,9	2
EVMSN(L)10-13\5,5	500	430	1350	118,1	2
EVMSN(L)10-14\5,5	500	430	1350	119,7	2
EVMSN(L)10-16\7,5	500	430	1540	128,7	2
EVMSN(L)10-18\7,5	500	430	1540	130,4	2
EVMSN(L)10-20\7,5	500	430	1540	132,1	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	Three Phase
	Power rating	0.37 ÷ 7.5 kW 0.5 ÷ 10 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	IE2 : from 0.37 kW up to 0.55 kW IE3 : above 0.75 kW
	No° of poles	2
	Protection degree	IP55: up to 7.5 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 7.5 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	

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

### TECHNICAL MOTOR DATA EVMSN(L)3-5-10

#### Three Phase Motor at 50Hz, 2 poles

Motor Size	Power		Efficiency	Load efficiency and power-factor (400V)				Full load current [A]			Locked rotor current [A]		
	[kW]	[HP]		η %			cos-φ 100%	230 V	400V	690V	230 V	400V	690V
				50%	75%	100%							
71	0.37	0.5	-	60.0	66.9	67.0	0.8	1.7	1.0	-	8.3	4.8	-
71	0.55	0.75	-	74.0	77.2	78.0	0.8	2.4	1.4	-	13.0	7.5	-
80	0.75	1	IE3	80.2	82.5	82.1	0.8	3.0	1.7	-	19.7	11.4	-
	1.1	1.5	IE3	81.3	82.8	82.7	0.8	4.3	2.5	-	28.8	16.6	-
90	1.5	2	IE3	83.5	84.3	84.6	0.8	5.8	3.3	-	44.1	25.5	-
	2.2	3	IE3	85.7	86.8	86	0.8	8.2	4.7	-	63.3	36.6	-
100	3.0	4	IE3	85.9	87.5	87.1	0.8	11.1	6.4	-	89.8	51.8	-
112	4.0	5.5	IE3	86	88.3	88.1	0.8	15.1	8.7	-	131.8	76.1	-
132	5.5	7.5	IE3	88.9	90.3	90	0.9	-	10.4	6.0	-	115.3	66.6
	7.5	10	IE3	89	90.7	90.4	0.9	-	13.6	7.9	-	144	83.1

♦ MOTOR DATA ETM

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VERTICAL MULTISTAGE PUMPS

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50 Hz

NOTE

50 Hz

## VERTICAL MULTISTAGE PUMPS

NOTE







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