

# Technical Data

Pump Name

EVMSG5 3N6Q1BEG/1.1

Customer	Date	2024-07-02	Company
Contact	Item no.		Issued by
Phone	Project		Phone
E-mail	Project ID	Proiect redenumit 2024-07-02 22:34:28	E-mail

## Requested data

1	Pump type	VERTICAL MULTISTAGE PUMP	Fluid	Water
2	Number of pumps / Reserve	1 / 0	Liquid temperature	°C
3	Flow	m³/h	Kin. viscosity	mm²/s
4	Head	m	Vapour pressure	bar
5	Geodetic head	m	PH value	
6	Inlet pressure (pin)	bar	Density	kg/m³
7	Available system NPSH		Solids	Weight %
8	Ambient temperature	°C		

## Pump

9	Pump Name	EVMSG5 3N6Q1BEG/1.1	Frequency	Hz	60	
10	Design	VERTICAL MULTISTAGE PUMP	Installation type		Oval flange (STANDARD)	
11	Manufacturer	EBARA	Impeller Diameter	Max.	mm	
12	Speed	rpm		3400	Designed	mm
13	No. of Stage			3	Min.	mm
14	Connection	Suction side	Flow	Operating	m³/h	
15	Connection	Discharge side		Max-	m³/h	
16	Max Working Pressure	bar		16	Min-	m³/h
17	Shut-off head	bar	3.83	Head	Operating	
18	Total weight	kg	See the table of "Dimensions".		- (Qmax.)	m
19	Shaft power	kW			- (Qmin.)	m
20			Max. Shaft Power at max. impeller	kW	0.94	
21	Required pump NPSH	m	Efficiency	%		

## Materials

22	Impeller	AISI 304		
23	Intermediate casing	AISI 304		
24	Bottom casing	Cast iron		
25	Shaft	AISI 304		
26	O-ring	EPDM		
27				

## Motor

28	Manufacturer	ETM	Insulation class	F	
29	Type	TEFC_EVMS5 3/1.16_220_Three Phase	Phases	3~	
30	Specific design	IE2 / 60 Hz / Pole pairs 1	Frame size	80	
31	Rated power	kW	1.1	Weight	kg
32	Number of poles		2	Electric voltage	V
33	Speed	rpm	3455	Electric current	A
34	Degree of protection		IP 55		
35					

## Remarks

# Performance Curve

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## Requested data

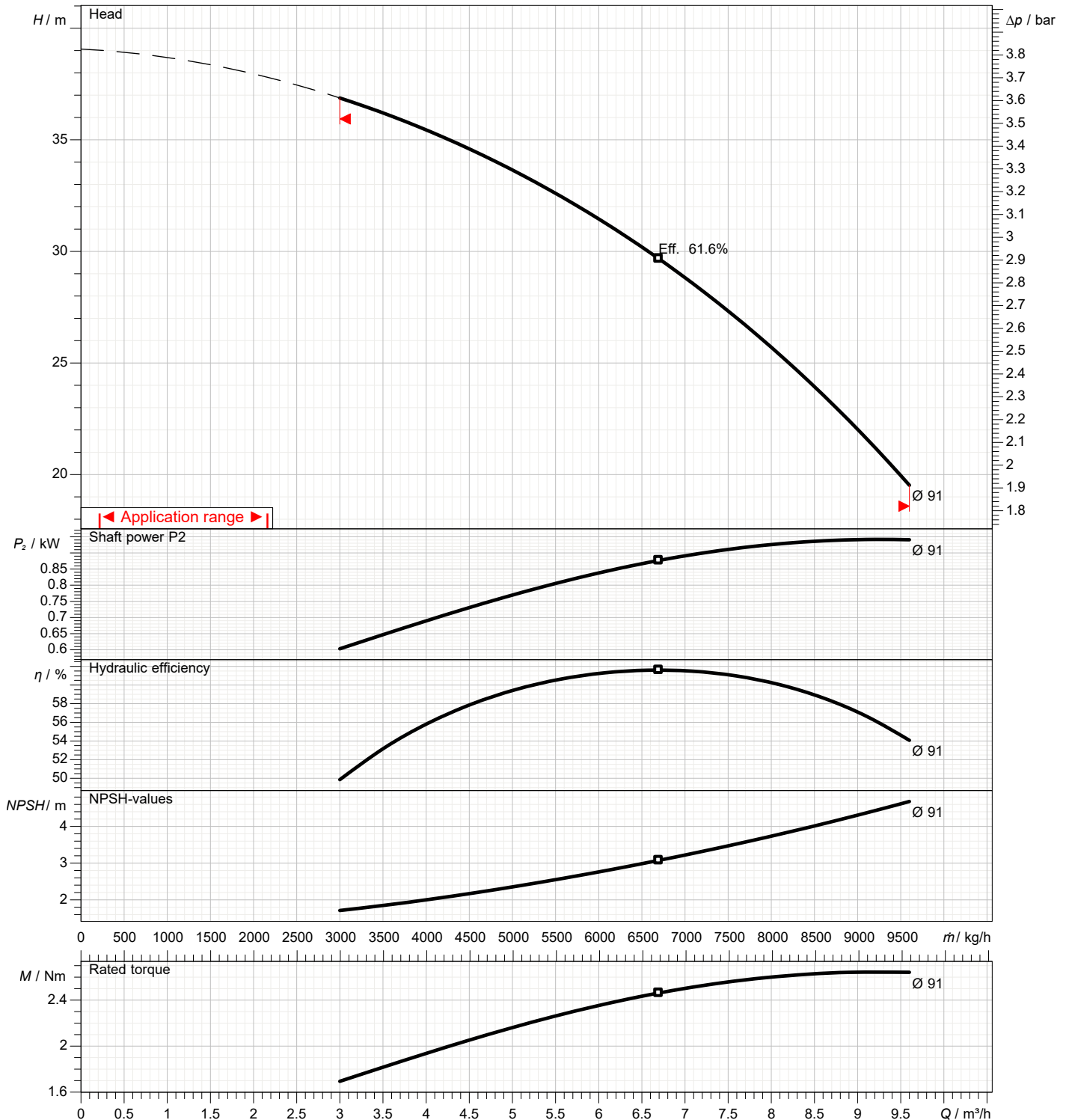
1	Flow	m³/h	
2	Head	m	
3	Geodetic head	m	

## Pump

Operating flow	m³/h		Frequency	Hz	60
Operating head	m		Number of poles		2
Impeller diameter designed	mm	91	Speed	rpm	3400

Test standard: ISO 9906:2012 - Grade3B

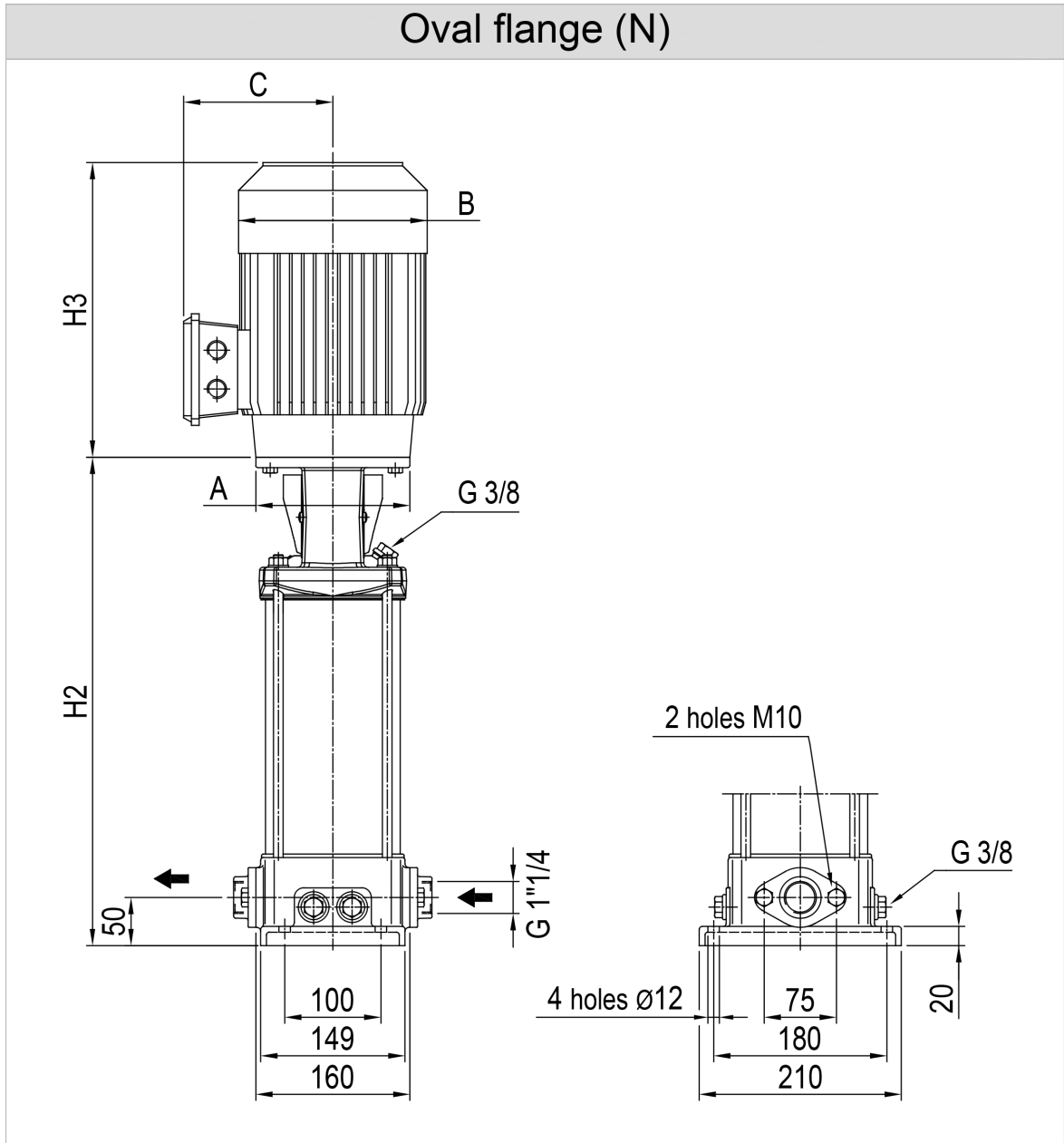
Water; 20°C; 998.3kg/m³; 1mm²/s



# Dimensions

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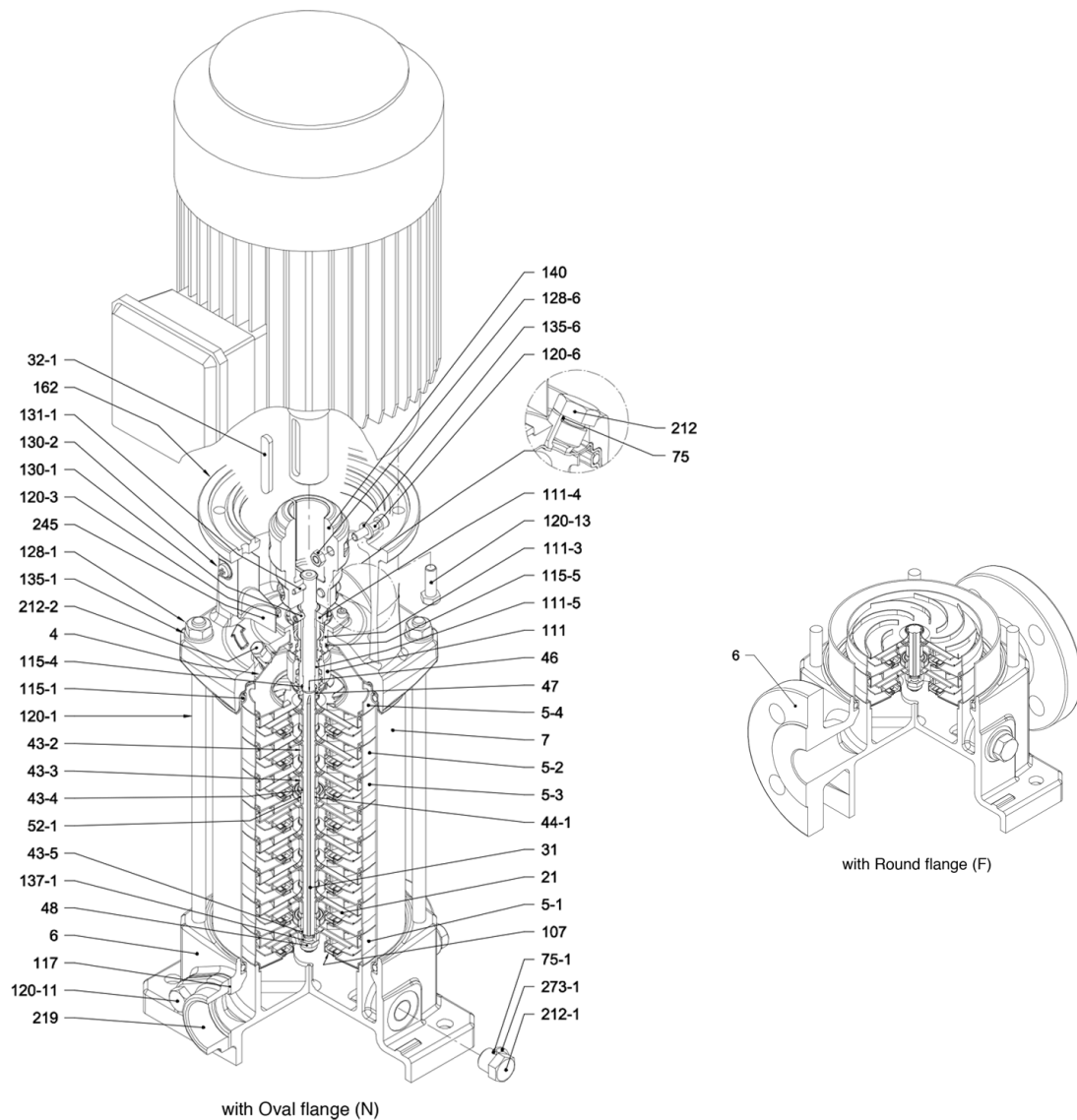
Dimensions in		mm						
1	A	Dia 120						
2	B	141						
3	C	102						
4	H2	302						
5	H3	244						
6	Weight P&M (kg)	21.4						
7								
8								
9								
10								
11								
12								
13								
14								
15								

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# Construction

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**(2/4)****Construction****Pump name EVMSG5 3N6Q1BEG/1.1**

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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-250EE1551		
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	- - - **		
111-3	Mechanical seal seat	EN 1.4308 (ASTM CF8)		
111-4	Seal holder	EN 1.4301 (AISI 304)		
111-5	Mechanical seal cartridge sleeve	EN 1.4301 (AISI 304)		
115-1	O-Ring (outer casing)	EPDM / FPM *	Ø129.54x5.34	OR 6945
115-4	O-Ring (cartridge sleeve)	EPDM / FPM *	Ø11.91x2.62	OR 4093
115-5	O-Ring (seal flange)	EPDM / FPM *	Ø32.99x2.62	OR 4175
117	Flange gasket	EPDM / FPM *		
120-1	Tie-rod	EN 1.4057 (AISI 431)	M10	
120-3	Screw (seal flange)	A2-70	M4x10	ISO 4762
120-6	Screw (pump coupling)	Galvanized steel	M6x25 M8x20	ISO 4762 ISO 4762
120-11	Screw (counterflange)	A2-70		
120-13	Screw for motor	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)	Galvanized steel	M12	ISO 4032
128-6	Nut (aluminium coupling)	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)	Carbon Steel	Ø6	
137-1	Impeller spacer	EN 1.4301 (AISI 304)		
140	Coupling	Die cast Aluminium EN AB-AISI11Cu2 (Fe) Cast Iron		
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		
245	Coupling guard	EN 1.4301 (AISI 304)		
273-1	Washer (drainage plug)	EN 1.4301 (AISI 304)		

\* EPDM (standard)  
FPM (option)

\*\* see CONSTRUCTION 4/4

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Pump Type	N°																												
	4	5-1	5-2	5-3	5-4	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	1	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	1	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	2	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	/	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)

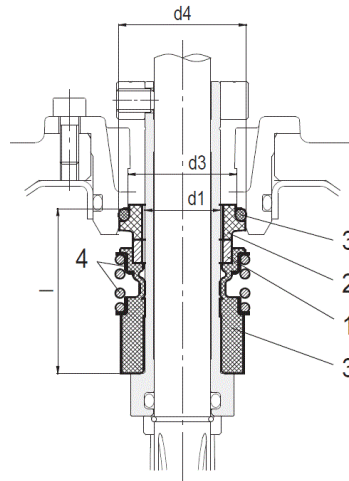
128-3: only for motor above 5.5 kW

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up to 16 bar  
Cartridge Unbalanced type

Type key	Availability	Max operating pressure	Max operating temperature	Shaft seal type		Shaft seal material							
				Type	Code	1 Rotating part	Code	2 Stationary part	Code	3 Elastomers	Code	4 Compression spring	5 Collar
Q1BEG	●	16 bar	- 30°C to + 120°C	Unbalanced	(-)	SIC	(Q1)	Carbon	(B)	EPDM	(E)	AISI 316	(G)

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