

Technical Data

Pump Name

EVMSG3 16N5Q1BEG/1.5

Customer	Date	2024-06-14	Company
Contact	Item no.		Issued by
Phone	Project		Phone
E-mail	Project ID	Proiect redenumit 2024-06-14 15:41:37	E-mail

Requested data

1	Pump type	VERTICAL MULTISTAGE PUMP	Fluid	Water
2	Number of pumps / Reserve	1 / 0	Liquid temperature	°C 20
3	Flow m³/h		Kin. viscosity	mm²/s 1.005
4	Head m		Vapour pressure	bar 0.0234
5	Geodetic head m		PH value	
6	Inlet pressure (pin) bar	0	Density	kg/m³ 998.3
7	Available system NPSH		Solids	Weight % 0
8	Ambient temperature °C	20		

Pump

9	Pump Name	EVMSG3 16N5Q1BEG/1.5	Frequency	Hz	50
10	Design	VERTICAL MULTISTAGE PUMP	Installation type	Oval flange (STANDARD)	
11	Manufacturer	EBARA	Impeller Diameter	Max.	mm 79
12	Speed rpm	2890		Designed	mm 79
13	No. of Stage	16		Min.	mm 79
14	Connection Suction side		Flow	Operating	m³/h
15	Connection Discharge side			Max-	m³/h 4.5
16	Max Working Pressure bar	16		Min-	m³/h 1.2
17	Shut-off head bar	11.47	Head	Operating	m
18	Total weight kg	See the table of "Dimensions".		- (Qmax.)	m 65.9
19	Shaft power kW			- (Qmin.)	m 111.9
20			Max. Shaft Power at max. impeller	kW	1.46
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_EVMS3 16/1.5_230_Three Phase	Phases	3~
30	Specific design	IE3 / 50 Hz / Pole pairs 1	Frame size	90
31	Rated power kW	1.5	Weight	kg 13.5
32	Number of poles	2	Electric voltage	V 230
33	Speed rpm	2885	Electric current	A 5.8
34	Degree of protection	IP 55		
35				

Remarks

Performance Curve

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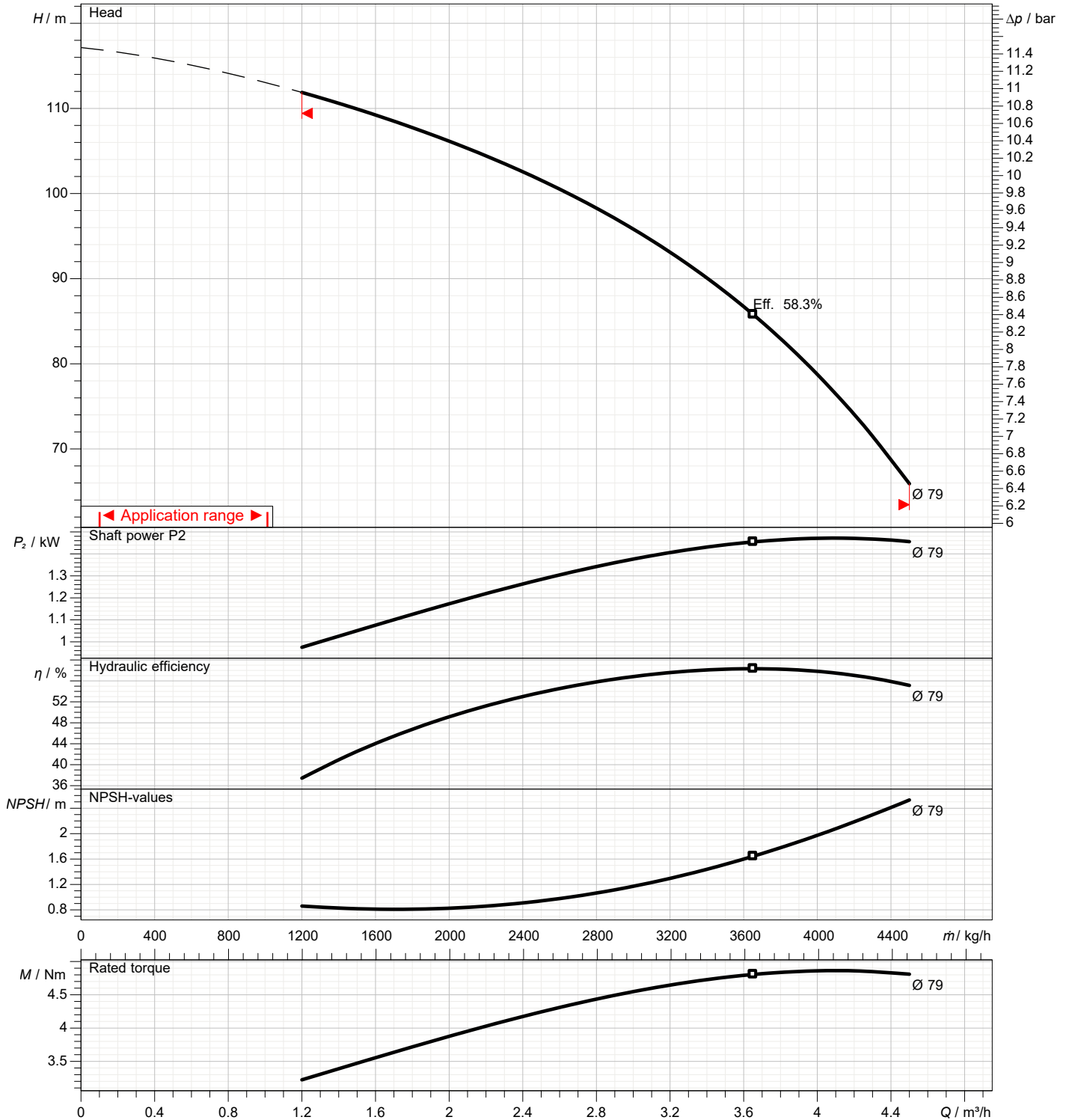
1	Flow	m³/h	
2	Head	m	
3	Geodetic head	m	

Pump

Operating flow	m³/h		Frequency	Hz	50
Operating head	m		Number of poles		2
Impeller diameter designed	mm	79	Speed	rpm	2890

Test standard: ISO 9906:2012 - Grade3B

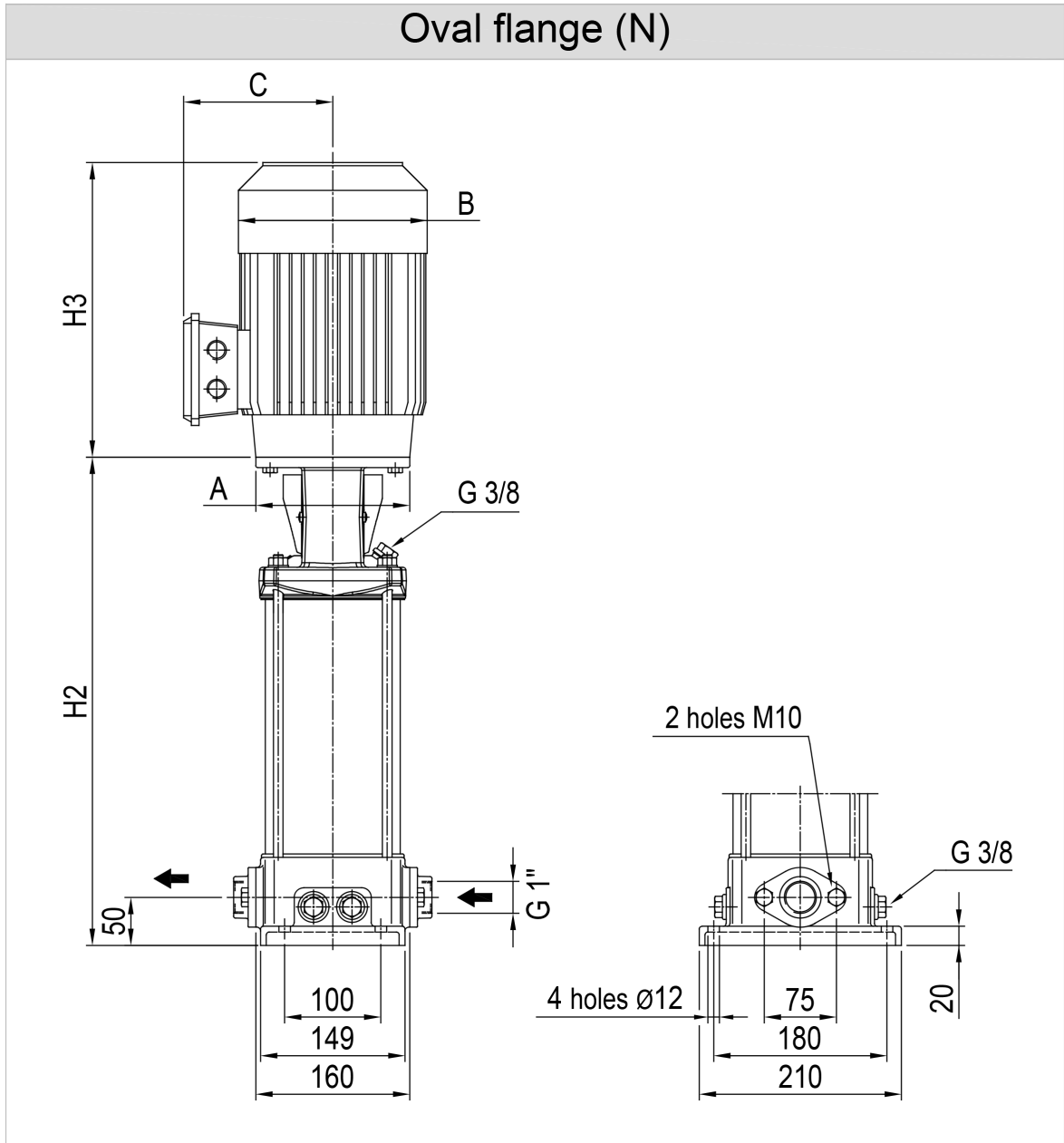
Water; 20°C; 998.3kg/m³; 1mm²/s



Dimensions

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Dimensions in		mm						
1	A	Dia140						
2	B	160						
3	C	119						
4	H2	564						
5	H3	291						
6	Weight P&M (kg)	34						
7								
8								
9								
10								
11								
12								
13								
14								
15								

(1/4)

Construction

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(2/4)**Construction****Pump name** EVMSG3 16N5Q1BEG/1.5

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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)		
32-1	Adjuster key	EN 1.4301 (AISI 304)		
43-2	Shaft sleeve (intermediate)	EN 1.4301 (AISI 304)		
43-3	Shaft sleeve (bearing)	EN 1.4301 (AISI 304)		
43-5	Shaft sleeve (last stage)	EN 1.4301 (AISI 304)		
43-7	Spacer	EN 1.4301 (AISI 304)		
44-1	Shaft sleeve bearing	Tungsten carbide		
46	Ring (mechanical seal)	EN 1.4404 (AISI 316L)		
47	Ring holder	EN 1.4404 (AISI 316L)		
48	Impeller nut	EN 1.4301 (AISI 304) with inox insert	M8	
52-1	Sleeve bearing	Tungsten carbide		
75	O-Ring (priming plug)	EPDM / FPM *	Ø12.37x2.62	OR 3050
75-1	O-Ring (drainage plug)	EPDM / FPM *		
107	Liner ring	EN 1.4301 (AISI 304) + PPS		
111	Mechanical seal	- - - **		
111-3	Mechanical seal seat	EN 1.4308 (ASTM CF8)		
111-4	Seal holder	EN 1.4301 (AISI 304)		
111-5	Mechanical seal cartridge sleeve	EN 1.4301 (AISI 304)		
115-1	O-Ring (outer casing)	EPDM / FPM *	Ø129.54x5.34	OR 6945
115-4	O-Ring (cartridge sleeve)	EPDM / FPM *	Ø11.91x2.62	OR 4093
115-5	O-Ring (seal flange)	EPDM / FPM *	Ø32.99x2.62	OR 4175
117	Flange gasket	EPDM / FPM *		
120-1	Tie-rod	EN 1.4057 (AISI 431)	M10	
120-3	Screw (seal flange)	A2-70	M4x10	ISO 4762
120-6	Screw (pump coupling)	Galvanized steel	M6x25	ISO 4762
120-11	Screw (counterflange)	A2-70		
120-13	Screw for motor	MEC 71-80 Galvanized steel 8.8 strength class ISO 898/1 MEC 90-100	M6x20 M8x20	ISO 4017 ISO 4017
128-1	Nut (tie rod)	A2-70	M10	ISO 4032
128-6	Nut (aluminium coupling)	MEC 71-80-90-100-112 Galvanized steel	M6	ISO 4032
130-1	Set screw	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)		
140	Coupling	up to 4.0 kW Die cast Aluminium EN AB-AISI11Cu2 (Fe)		
162	Motor bracket	Cast iron EN-GJL-250		
212	Priming plug	EN 1.4301 (AISI 304)	G 3/8	
212-1	Drainage plug	EN 1.4301 (AISI 304)	G 3/8	
212-2	Venting plug	EN 1.4404 (AISI 316L)		
219	Counter flange	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

(3/4)

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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	43-5	43-7	44-1	46	47	48	52-1	75	75-1	107	111	111-3	111-4	111-5	115-1	115-4	115-5
EVMSG3 2/0.37	1	1	/	1	1	1	1	2	1	1	1	1	/	/	1	2	1	1	1	1	4	2	1	1	1	1	2	1	1
EVMSG3 3/0.37	1	1	1	1	1	1	1	3	1	1	3	1	/	/	1	2	1	1	1	1	4	3	1	1	1	1	2	1	1
EVMSG3 4/0.37	1	1	2	1	1	1	1	4	1	1	5	1	/	/	1	2	1	1	1	1	4	4	1	1	1	1	2	1	1
EVMSG3 5/0.55	1	1	3	1	1	1	1	5	1	1	7	1	/	/	1	2	1	1	1	1	4	5	1	1	1	1	2	1	1
EVMSG3 6/0.55	1	1	4	1	1	1	1	6	1	1	9	1	/	/	1	2	1	1	1	1	4	6	1	1	1	1	2	1	1
EVMSG3 7/0.75	1	1	5	1	1	1	1	7	1	1	11	1	/	/	1	2	1	1	1	1	4	7	1	1	1	1	2	1	1
EVMSG3 8/0.75	1	1	6	1	1	1	1	8	1	1	13	1	/	/	1	2	1	1	1	1	4	8	1	1	1	1	2	1	1
EVMSG3 9/1.1	1	1	7	1	1	1	1	9	1	1	15	1	/	/	1	2	1	1	1	1	4	9	1	1	1	1	2	1	1
EVMSG3 10/1.1	1	1	8	1	1	1	1	10	1	1	17	1	/	/	1	2	1	1	1	1	4	10	1	1	1	1	2	1	1
EVMSG3 11/1.1	1	1	9	1	1	1	1	11	1	1	19	1	/	/	1	2	1	1	1	1	4	11	1	1	1	1	2	1	1
EVMSG3 12/1.1	1	1	10	1	1	1	1	12	1	1	21	1	/	/	1	2	1	1	1	1	4	12	1	1	1	1	2	1	1
EVMSG3 13/1.5	1	1	10	2	1	1	1	13	1	1	20	2	1	1	2	2	1	1	2	1	4	13	1	1	1	1	2	1	1
EVMSG3 14/1.5	1	1	11	2	1	1	1	14	1	1	22	2	/	1	2	2	1	1	2	1	4	14	1	1	1	1	2	1	1
EVMSG3 15/1.5	1	1	12	2	1	1	1	15	1	1	24	2	/	1	2	2	1	1	2	1	4	15	1	1	1	1	2	1	1
EVMSG3 16/1.5	1	1	13	2	1	1	1	16	1	1	26	2	/	1	2	2	1	1	2	1	4	16	1	1	1	1	2	1	1
EVMSG3 17/2.2	1	1	14	2	1	1	1	17	1	1	28	2	1	1	2	2	1	1	2	1	4	17	1	1	1	1	2	1	1
EVMSG3 19/2.2	1	1	16	2	1	1	1	19	1	1	32	2	/	1	2	2	1	1	2	1	4	19	1	1	1	1	2	1	1
EVMSG3 21/2.2	1	1	18	2	1	1	1	21	1	1	36	2	1	1	2	2	1	1	2	1	4	21	1	1	1	1	2	1	1
EVMSG3 23/2.2	1	1	20	2	1	1	1	23	1	1	40	2	/	1	2	2	1	1	2	1	4	23	1	1	1	1	2	1	1
EVMSG3 24/2.2	1	1	21	2	1	1	1	24	1	1	42	2	/	1	2	2	1	1	2	1	4	24	1	1	1	1	2	1	1
EVMSG3 25/3.0	1	1	22	2	1	1	1	25	1	1	44	2	/	1	2	2	1	1	2	1	4	25	1	1	1	1	2	1	1
EVMSG3 27/3.0	1	1	24	2	1	1	1	27	1	1	48	2	/	1	2	2	1	1	2	1	4	27	1	1	1	1	2	1	1
EVMSG3 29/3.0	1	1	26	2	1	1	1	29	1	1	52	2	/	1	2	2	1	1	2	1	4	29	1	1	1	1	2	1	1
EVMSG3 31/3.0	1	1	28	2	1	1	1	31	1	1	56	2	/	1	2	2	1	1	2	1	4	31	1	1	1	1	2	1	1
EVMSG3 33/3.0	1	1	30	2	1	1	1	33	1	1	60	2	/	1	2	2	1	1	2	1	4	33	1	1	1	1	2	1	1

Pump Type	N°																					
	117*	120-1	120-3	120-6	120-11*	120-13	128-1	128-6	130-1	130-2	131-1	135-1	135-6	137-1	140	162	212	212-1	212-2	219*	245	273-1
EVMSG3 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
EVMSG3 3/0.37	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG3 4/0.37	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG3 5/0.55	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG3 6/0.55	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG3 7/0.75	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG3 8/0.75	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG3 9/1.1	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG3 10/1.1	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG3 11/1.1	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG3 12/1.1	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG3 13/1.5	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG3 14/1.5	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG3 15/1.5	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG3 16/1.5	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG3 17/2.2	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG3 19/2.2	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG3 21/2.2	2	4	4	4	4	4	4	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG3 23/2.2	/	4	4	4	/	4	4	4	3	4	1	4	4	1	2	1	1	4	1	/	2	4
EVMSG3 24/2.2	/	4	4	4	/	4	4	4	3	4	1	4	4	1	2	1	1	4	1	/	2	4
EVMSG3 25/3.0	/	4	4	4	/	4	4	4	3	4	1	4	4	1	2	1	1	4	1	/	2	4
EVMSG3 27/3.0	/	4	4	4	/	4	4	4	3	4	1	4	4	1	2	1	1	4	1	/	2	4
EVMSG3 29/3.0	/	4	4	4	/	4	4	4	3	4	1	4	4	1	2	1	1	4	1	/	2	4
EVMSG3 31/3.0	/	4	4	4	/	4	4	4	3	4	1	4	4	1	2	1	1	4	1	/	2	4
EVMSG3 33/3.0	/	4	4	4	/	4	4	4	3	4	1	4	4	1	2	1	1	4	1	/	2	4

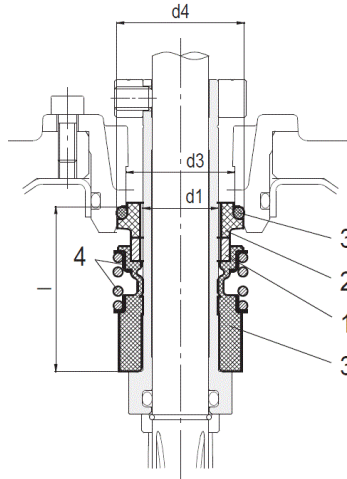
* only for Oval flange (N)

(4/4)

Construction

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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									
				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)		

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