

Technical Data

Pump Name

EVMSG20 3N5Q1BEGE/4.0

Customer	Date	2024-06-14	Company
Contact	Item no.		Issued by
Phone	Project		Phone
E-mail	Project ID	Proiect redenumit 2024-06-14 17:13:34	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	EVMSG20 3N5Q1BEGE/4.0	Frequency	Hz	50	
10	Design	VERTICAL MULTISTAGE PUMP	Installation type	Oval flange (STANDARD)		
11	Manufacturer	EBARA	Impeller Diameter	Max.	mm	
12	Speed	rpm		2920	Designed	mm
13	No. of Stage	3		Min.	mm	113
14	Connection	Suction side	Flow	Operating	m³/h	
15	Connection	Discharge side		Max-	m³/h	28.8
16	Max Working Pressure	bar		16	Min-	m³/h
17	Shut-off head	bar	5.02	Head	Operating	m
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	3.50	
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_EVMS20 3/4.0_230_Three Phase	Phases	3~	
30	Specific design	IE3 / 50 Hz / Pole pairs 1	Frame size	112	
31	Rated power	kW	4	Weight	kg
32	Number of poles	2	Electric voltage	V	230
33	Speed	rpm	2920	Electric current	A
34	Degree of protection	IP 55			
35					

Remarks

Performance Curve

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Requested data

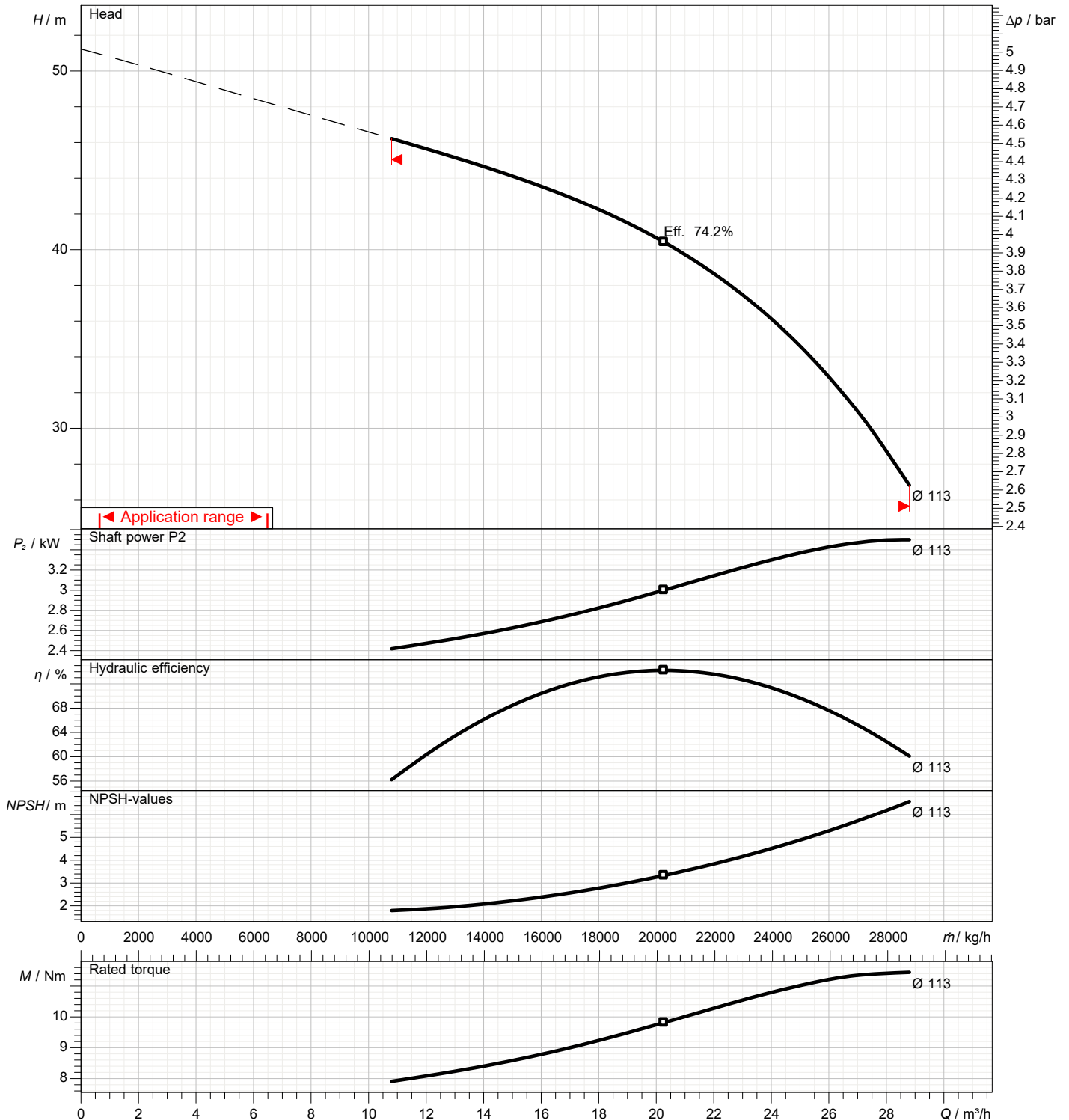
1	Flow	m³/h	
2	Head	m	
3	Geodetic head	m	

Pump

Operating flow	m³/h		Frequency	Hz	50
Operating head	m		Number of poles		2
Impeller diameter designed	mm	113	Speed	rpm	2920

Test standard: ISO 9906:2012 - Grade3B

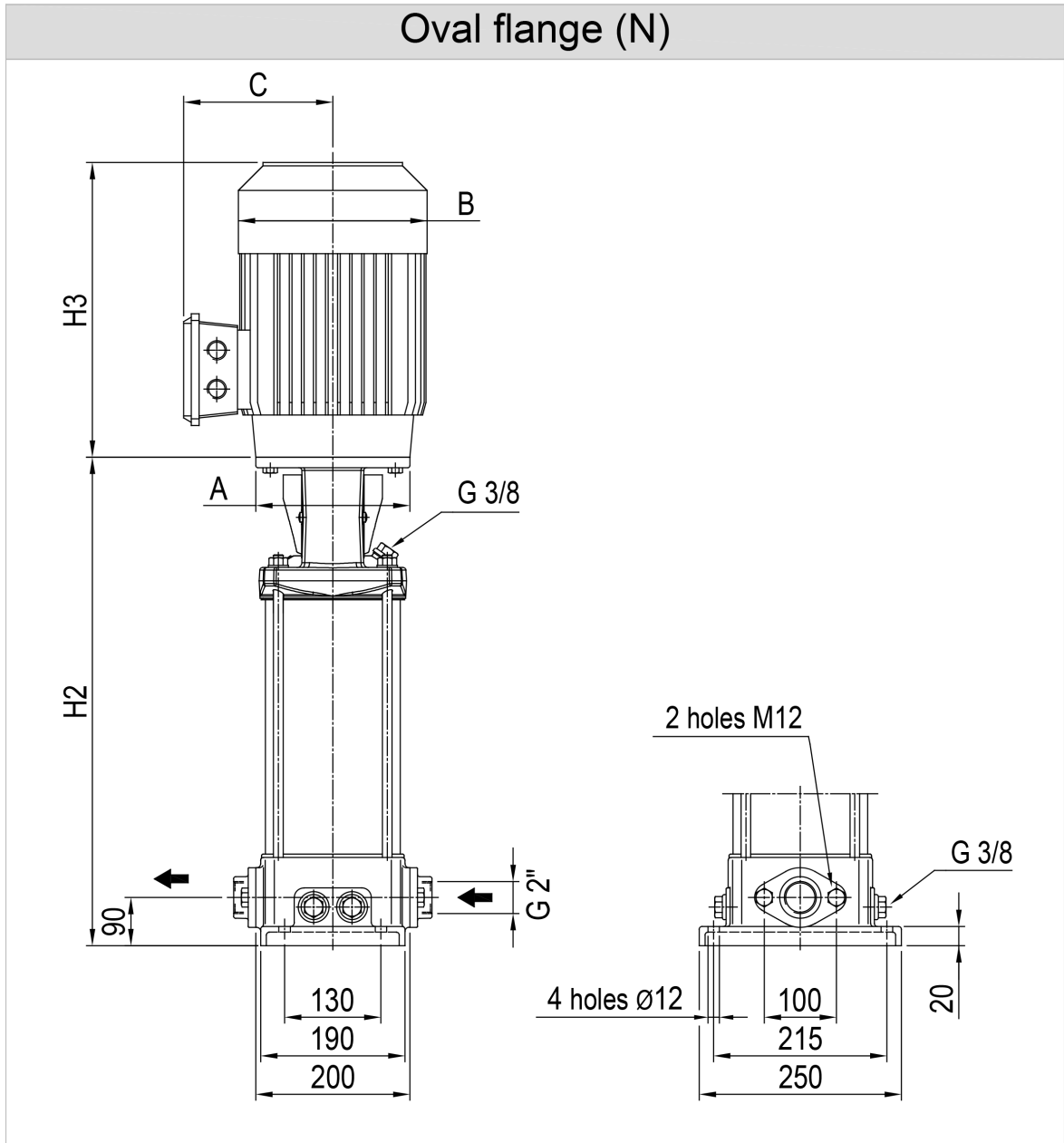
Water; 20°C; 998.3kg/m³; 1mm²/s



Dimensions

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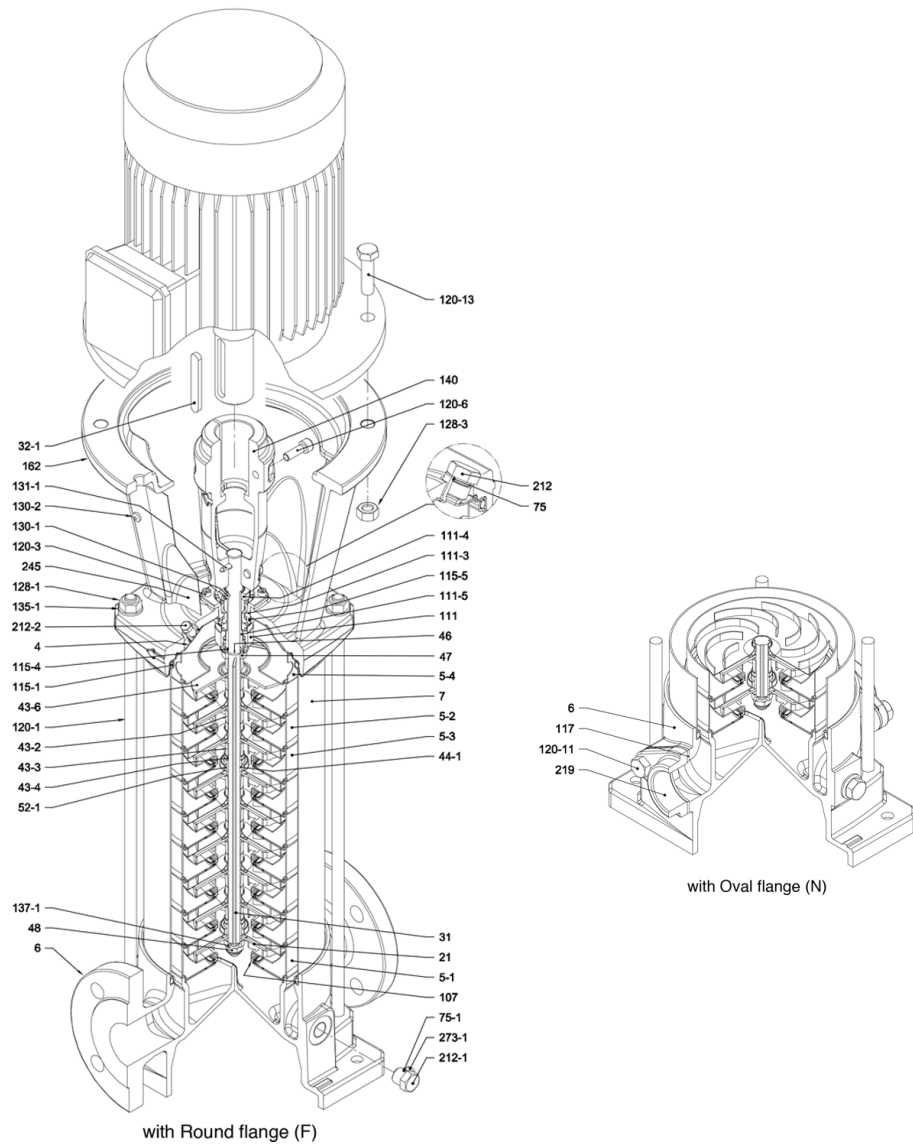
Dimensions in		mm						
1	A	Dia160						
2	B	193						
3	C	138						
4	H2	437						
5	H3	364						
6	Weight P&M (kg)	52.6						
7								
8								
9								
10								
11								
12								
13								
14								
15								

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Construction

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Construction

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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-250EN1551			
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 1.4301 (AISI 304)			
43-6	Washer	EN 1.4404 (AISI 316L)	Ø26x2.5		
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	M10		
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 *	Ø164.46x5.34	OR 6945	
115-4	O-Ring (cartridge sleeve)	EPDM / FPM *	Ø15.88x2.62	OR 4093	
115-5	O-Ring (seal flange)	EPDM / FPM *	Ø37.77x2.62	OR 4175	
117	Flange gasket	EPDM / FPM *			
120-1	Tie-rod	EN 1.4057 (AISI 431)	M12		
120-3	Screw (seal flange)	A2-70	M5x12	ISO 4762	
120-6	Screw (pump coupling)	Galvanized steel 6.8 strength class ISO 898/1	up to 4.0 kW	M6x25	ISO 4762
			from 5.5 kW to 7.5 kW	M8x20	ISO 4762
			above 11 kW	M10x30	ISO 4762
120-11	Screw (counterflange)	A2-70			
120-13	Screw for motor	Galvanized steel 8.8 strength class ISO 898/1	MEC 90-100-112	M8x20	ISO 4017
			MEC 132	M12x40	ISO 4017
			MEC 160	M16x50	ISO 4017
128-1	Nut (tie rod)	A2-70	M12	ISO 4032	
128-3	Nut (motor)	Galvanized steel	MEC 132	M12	ISO 4032
			MEC 160	M16	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	Ø5x35	ISO 2338	
135-1	Washer (tie rod)	EN 1.4301 (AISI 304)	Ø13x24x2.5	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)	up to 4.0 kW		
			above 5.5 kW	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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Construction

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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	43-6	44-1	46	47	48	52-1	75	75-1	107	111	111-3	111-4	111-5	115-1	115-4	115-5
EVMSG20 1/1.5	1	1	/	1	1	1	1	1	1	1	/	2	1	1	1	2	1	1	1	1	4	1	1	1	1	1	2	1	1
EVMSG20 2/3.0	1	1	/	1	1	1	1	2	1	1	/	2	1	/	1	2	1	1	1	1	4	2	1	1	1	1	2	1	1
EVMSG20 3/4.0	1	1	1	1	1	1	1	3	1	1	1	2	1	/	1	2	1	1	1	1	4	3	1	1	1	1	2	1	1
EVMSG20 4/5.5	1	1	2	1	1	1	1	4	1	1	2	2	1	/	1	2	1	1	1	1	4	4	1	1	1	1	2	1	1
EVMSG20 5/7.5	1	1	3	1	1	1	1	5	1	1	3	2	1	/	1	2	1	1	1	1	4	5	1	1	1	1	2	1	1
EVMSG20 6/7.5	1	1	4	1	1	1	1	6	1	1	4	2	1	/	1	2	1	1	1	1	4	6	1	1	1	1	2	1	1
EVMSG20 7/11	1	1	4	2	1	1	1	7	1	1	4	3	2	/	2	2	1	1	2	1	4	7	1	1	1	1	2	1	1
EVMSG20 8/11	1	1	5	2	1	1	1	8	1	1	5	3	2	/	2	2	1	1	2	1	4	8	1	1	1	1	2	1	1
EVMSG20 9/11	1	1	6	2	1	1	1	9	1	1	6	3	2	/	2	2	1	1	2	1	4	9	1	1	1	1	2	1	1
EVMSG20 10/11	1	1	7	2	1	1	1	10	1	1	7	3	2	/	2	2	1	1	2	1	4	10	1	1	1	1	2	1	1
EVMSG20 11/15	1	1	8	2	1	1	1	11	1	1	8	3	2	/	2	2	1	1	2	1	4	11	1	1	1	1	2	1	1
EVMSG20 12/15	1	1	9	2	1	1	1	12	1	1	9	3	2	/	2	2	1	1	2	1	4	12	1	1	1	1	2	1	1
EVMSG20 13/15	1	1	10	2	1	1	1	13	1	1	10	3	2	/	2	2	1	1	2	1	4	13	1	1	1	1	2	1	1
EVMSG20 14/18.5	1	1	11	2	1	1	1	14	1	1	11	3	2	/	2	2	1	1	2	1	4	14	1	1	1	1	2	1	1
EVMSG20 15/18.5	1	1	12	2	1	1	1	15	1	1	12	3	2	/	2	2	1	1	2	1	4	15	1	1	1	1	2	1	1
EVMSG20 16/18.5	1	1	13	2	1	1	1	16	1	1	13	3	2	/	2	2	1	1	2	1	4	16	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
EVMSG20 1/1.5	2	4	4	4	4	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG20 2/3.0	2	4	4	4	4	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG20 3/4.0	2	4	4	4	4	4	4	/	4	3	4	1	4	4	1	2	1	1	4	1	2	2	4
EVMSG20 4/5.5	2	4	4	4	4	4	4	/	3	4	1	4	4	1	2	1	1	4	1	2	2	4	
EVMSG20 5/7.5	2	4	4	4	4	4	4	/	3	4	1	4	4	1	2	1	1	4	1	2	2	4	
EVMSG20 6/7.5	2	4	4	4	4	4	4	/	3	4	1	4	4	1	2	1	1	4	1	2	2	4	
EVMSG20 7/11	2	4	4	4	4	4	4	/	3	4	1	4	4	1	2	1	1	4	1	2	2	4	
EVMSG20 8/11	2	4	4	4	4	4	4	/	3	4	1	4	4	1	2	1	1	4	1	2	2	4	
EVMSG20 9/11	2	4	4	4	4	4	4	/	3	4	1	4	4	1	2	1	1	4	1	2	2	4	
EVMSG20 10/11	/	4	4	4	/	4	4	/	3	4	1	4	4	1	2	1	1	4	1	/	2	4	
EVMSG20 11/15	/	4	4	4	/	4	4	/	3	4	1	4	4	1	2	1	1	4	1	/	2	4	
EVMSG20 12/15	/	4	4	4	/	4	4	/	3	4	1	4	4	1	2	1	1	4	1	/	2	4	
EVMSG20 13/15	/	4	4	4	/	4	4	/	3	4	1	4	4	1	2	1	1	4	1	/	2	4	
EVMSG20 14/18.5	/	4	4	4	/	4	4	/	3	4	1	4	4	1	2	1	1	4	1	/	2	4	
EVMSG20 15/18.5	/	4	4	4	/	4	4	/	3	4	1	4	4	1	2	1	1	4	1	/	2	4	
EVMSG20 16/18.5	/	4	4	4	/	4	4	/	3	4	1	4	4	1	2	1	1	4	1	/	2	4	

* only for Oval flange (N)

*** shaft in EN 1.4462 (AISI 329A)

128-6 / 135-6: with Aluminium coupling

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● : Standard

Pump model	Max operating temperature	Shaft seal type		Shaft seal material								Type key		
		Cartridge		1		2		3		4			5	
		Unbalanced	Balanced	Rotating Part	Code	Stationary Part	Code	Elastomers	Code	Compression spring	Collar		Code	
up to 16 bar	- 30°C to + 120°C	●		SiC	(Q1)	Carbon	(B)	EPDM	(E)	AISI 316		(G)	Q1BEG	

Max operating pressure	d1 [mm]	d2 [mm]	d3 [mm]	d4 [mm]	l [mm]
16 bar	20	-	29	35	37.5