

# Technical Data

Pump Name

EVMS20 11F5HQ1BEGE/15

Customer	Date	2024-06-14	Company
Contact	Item no.		Issued by
Phone	Project		Phone
E-mail	Project ID	Proiect redenumit 2024-06-14 09:53:20	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	Density	kg/m³	998.3
7	Available system NPSH		Solids	Weight %	0
8	Ambient temperature	°C	20		

## Pump

9	Pump Name	EVMS20 11F5HQ1BEGE/15	Frequency	Hz	50		
10	Design	VERTICAL MULTISTAGE PUMP	Installation type		Round flange (STANDARD)		
11	Manufacturer	EBARA	Impeller Diameter	Max.	mm	113	
12	Speed	rpm		2960	Designed	mm	113
13	No. of Stage			11	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		25	Min-	m³/h	10.8
17	Shut-off head	bar	18.90	Head	Operating	m	
18	Total weight	kg	See the table of "Dimensions".		- (Qmax.)	m	104.2
19	Shaft power	kW			- (Qmin.)	m	174.4
20			Max. Shaft Power at max. impeller	kW		12.69	
21	Required pump NPSH	m	Efficiency	%			

## Materials

22	Impeller	AISI 304		
23	Intermediate casing	AISI 304		
24	Bottom casing	AISI 304		
25	Shaft	AISI 329A		
26	O-ring	EPDM		
27				

## Motor

28	Manufacturer	ATB	Insulation class	F		
29	Type	TEFC_EVMS20 11/15_400_Three Phase	Phases	3~		
30	Specific design	IE3 / 50 Hz / Pole pairs 1	Frame size	160 L		
31	Rated power	kW	15	Weight	kg	101
32	Number of poles	2	Electric voltage	V	400	
33	Speed	rpm	2940	Electric current	A	26.2
34	Degree of protection	IP 55				
35						

## Remarks

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# Performance Curve

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## Requested data

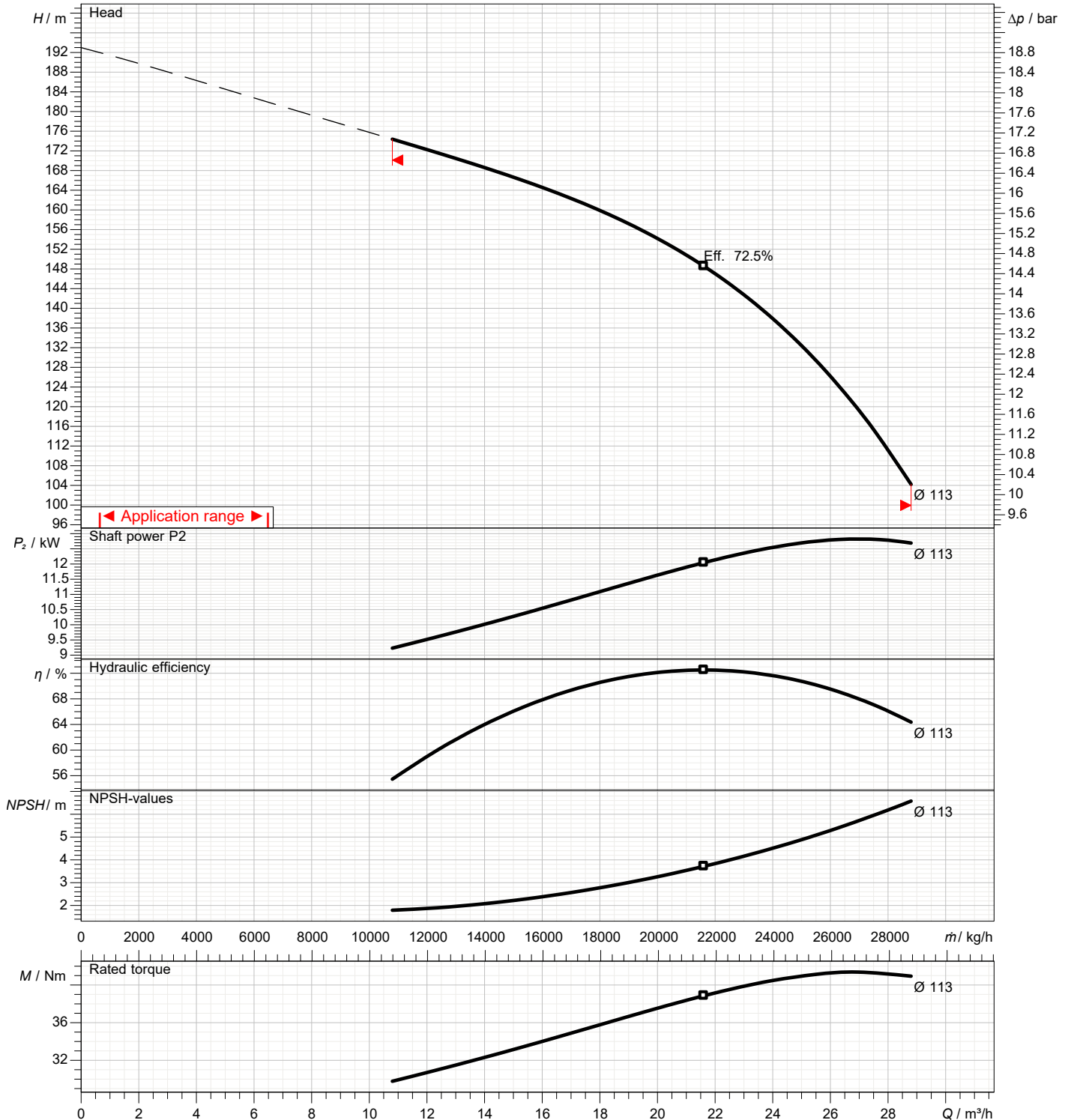
1	Flow	m³/h	
2	Head	m	
3	Geodetic head	m	

## Pump

Operating flow	m³/h		Frequency	Hz	50
Operating head	m		Number of poles		2
Impeller diameter designed	mm	113	Speed	rpm	2960

Test standard: ISO 9906:2012 - Grade3B

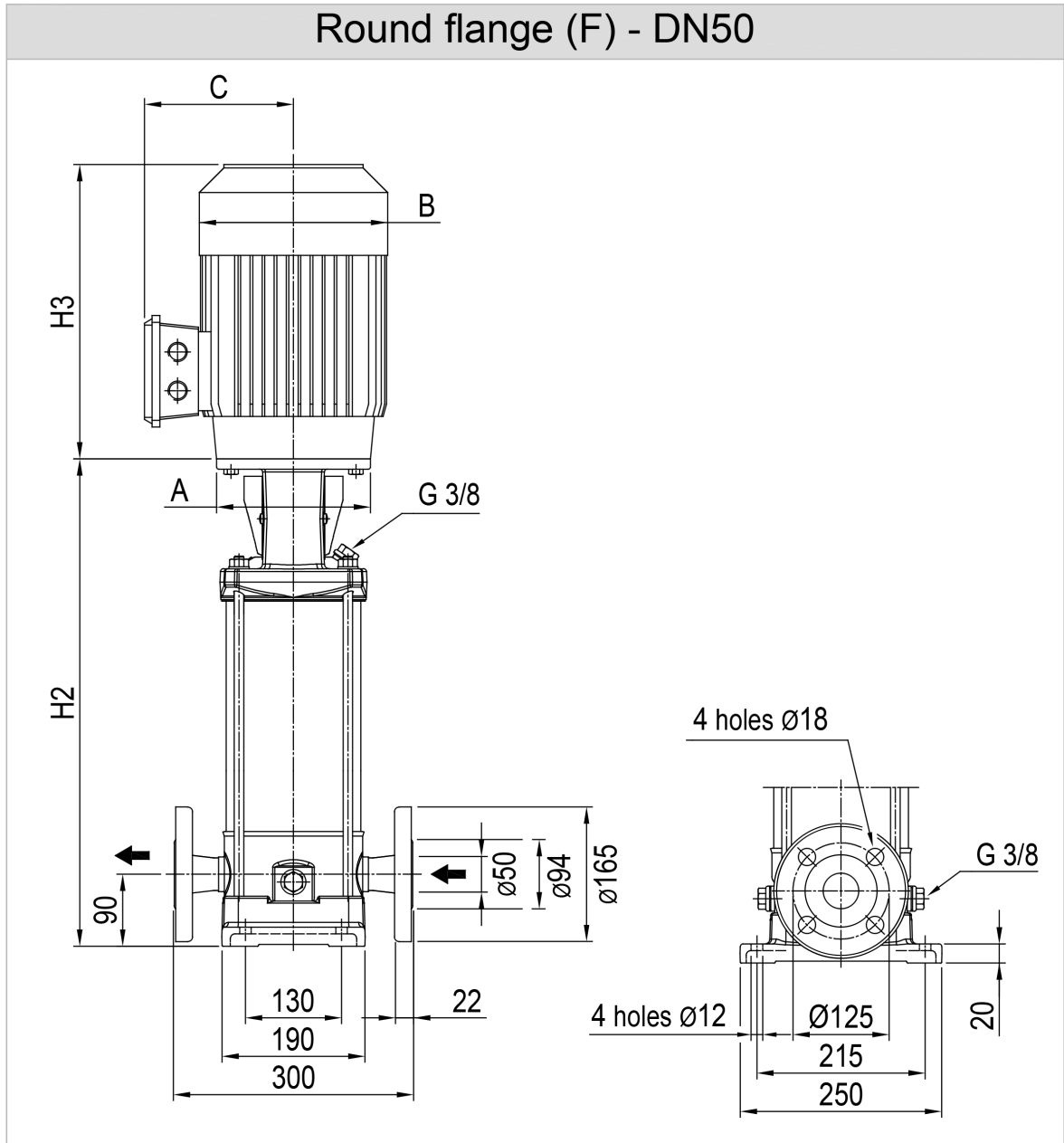
Water; 20°C; 998.3kg/m³; 1mm²/s



# Dimensions

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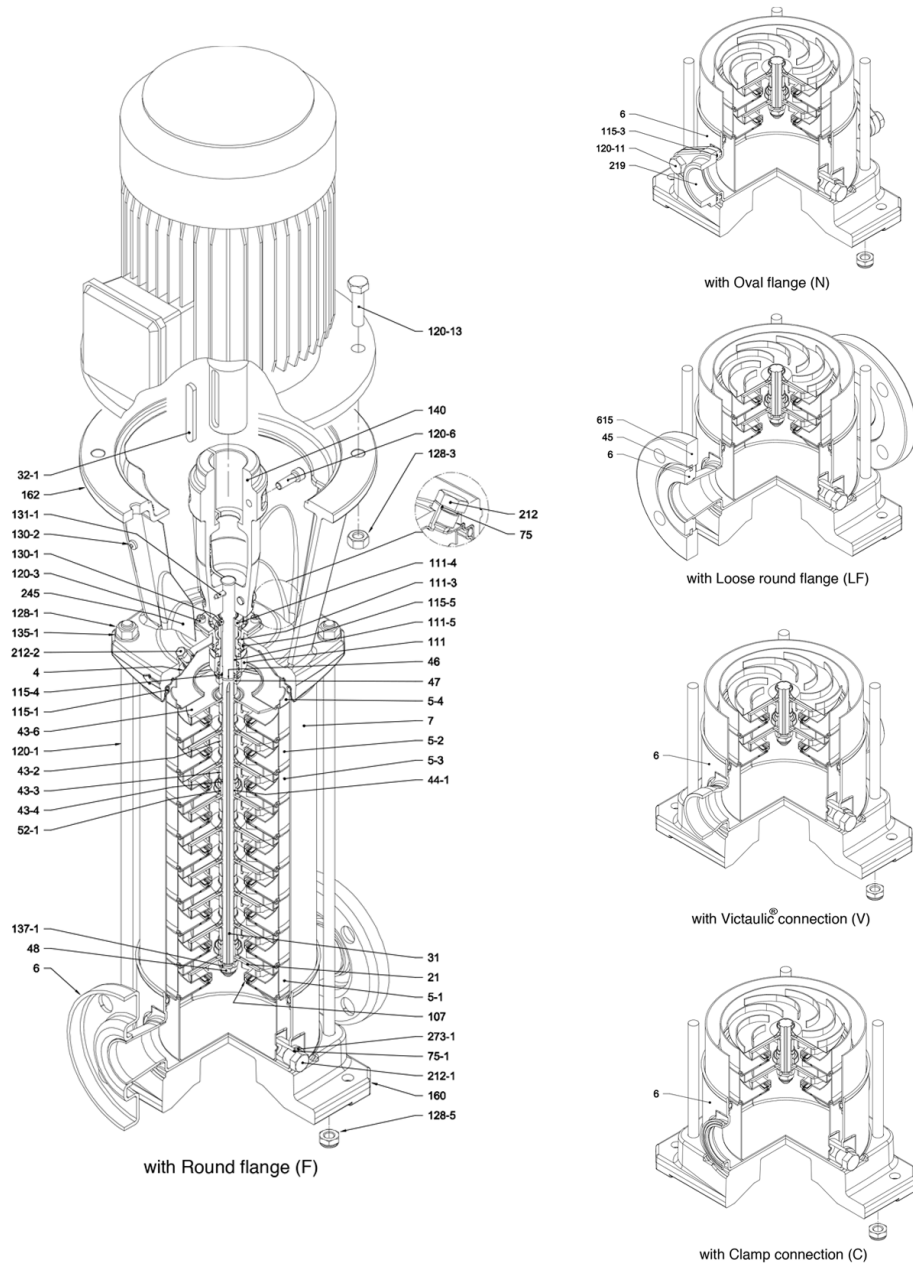
Dimensions in		mm					
1	A	Dia350					
2	B	311					
3	C	240					
4	H2	884					
5	H3	495					
6	Weight P&M (kg)	148					
7							
8							
9							
10							
11							
12							
13							
14							
15							

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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+discharge casing)	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
43-4	Shaft sleeve (adjustment)	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		
43-6	Washer	EN 1.4404 (AISI 316L)		Ø26x2.5	
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	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	EN 1.4404 (AISI 316L) + PPS		
111	Mechanical seal	--- **			
111-3	Mechanical seal seat	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)		
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 *		Ø164.46x5.34	OR 6945
115-3	O-Ring	EPDM / FPM *			
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
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)	up to 4.0 kW from 5.5 kW to 7.5 kW above 11 kW	Galvanized steel	M6x25	ISO 4762
				M8x20	ISO 4762
				M10x30	ISO 4762
120-11	Screw (counterflange)	A2-70			
120-13	Screw for motor	MEC 90-100-112 MEC 132 MEC 160	Galvanized steel 8.8 strength class ISO 898/1	M8x20	ISO 4017
				M12x40	ISO 4017
				M16x50	ISO 4017
128-1	Nut (tie rod)	A2-70		M12	ISO 4032
128-3	Nut (motor)	MEC 132 MEC 160	Galvanized steel	M12	ISO 4032
				M16	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)			
219	Counter flange	EN 1.4301 (AISI 304)	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	Carbon Steel			

\* 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	43-6	44-1	45**	46	47	48	52-1	75	75-1	107	111	111-3	111-4	111-5	115-1	115-3*	115-4	115-5
EVMS(L)20 1/1.5	1	1	/	1	1	1	1	1	1	1	/	2	1	1	1	4	2	1	1	1	1	2	1	1	1	1	1	2	2	1	1
EVMS(L)20 2/3.0	1	1	/	1	1	1	1	2	1	1	/	2	1	/	1	4	2	1	1	1	1	2	2	1	1	1	1	2	2	1	1
EVMS(L)20 3/4.0	1	1	1	1	1	1	1	3	1	1	1	2	1	/	1	4	2	1	1	1	1	2	3	1	1	1	1	2	2	1	1
EVMS(L)20 4/5.5	1	1	2	1	1	1	1	4	1	1	2	2	1	/	1	4	2	1	1	1	1	2	4	1	1	1	1	2	2	1	1
EVMS(L)20 5/7.5	1	1	3	1	1	1	1	5	1	1	3	2	1	/	1	4	2	1	1	1	1	2	5	1	1	1	1	2	2	1	1
EVMS(L)20 6/7.5	1	1	4	1	1	1	1	6	1	1	4	2	1	/	1	4	2	1	1	1	1	2	6	1	1	1	1	2	2	1	1
EVMS(L)20 7/11	1	1	4	2	1	1	1	7	1	1	4	3	2	/	2	4	2	1	1	2	1	2	7	1	1	1	1	2	2	1	1
EVMS(L)20 8/11	1	1	5	2	1	1	1	8	1	1	5	3	2	/	2	4	2	1	1	2	1	2	8	1	1	1	1	2	2	1	1
EVMS(L)20 9/11	1	1	6	2	1	1	1	9	1	1	6	3	2	/	2	4	2	1	1	2	1	2	9	1	1	1	1	2	2	1	1
EVMS(L)20 10/11	1	1	7	2	1	1	1	10	1	1	7	3	2	/	2	4	2	1	1	2	1	2	10	1	1	1	1	2	/	1	1
EVMS(L)20 11/15	1	1	8	2	1	1	1	11	1	1	8	3	2	/	2	4	2	1	1	2	1	2	11	1	1	1	1	2	/	1	1
EVMS(L)20 12/15	1	1	9	2	1	1	1	12	1	1	9	3	2	/	2	4	2	1	1	2	1	2	12	1	1	1	1	2	/	1	1
EVMS(L)20 13/15	1	1	10	2	1	1	1	13	1	1	10	3	2	/	2	4	2	1	1	2	1	2	13	1	1	1	1	2	/	1	1
EVMS(L)20 14/18.5	1	1	11	2	1	1	1	14	1	1	11	3	2	/	2	4	2	1	1	2	1	2	14	1	1	1	1	2	/	1	1
EVMS(L)20 15/18.5	1	1	12	2	1	1	1	15	1	1	12	3	2	/	2	4	2	1	1	2	1	2	15	1	1	1	1	2	/	1	1
EVMS(L)20 16/18.5	1	1	13	2	1	1	1	16	1	1	13	3	2	/	2	4	2	1	1	2	1	2	16	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)20 1/1.5	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)20 2/3.0	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)20 3/4.0	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)20 4/5.5	4	4	4	4	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)20 5/7.5	4	4	4	4	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)20 6/7.5	4	4	4	4	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)20 7/11	4	4	4	4	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)20 8/11	4	4	4	4	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)20 9/11	4	4	4	4	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	2	2	2	2
EVMS(L)20 10/11	4	4	4	/	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	/	2	2	2
EVMS(L)20 11/15	4	4	4	/	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	/	2	2	2
EVMS(L)20 12/15	4	4	4	/	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	/	2	2	2
EVMS(L)20 13/15	4	4	4	/	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	/	2	2	2
EVMS(L)20 14/18.5	4	4	4	/	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	/	2	2	2
EVMS(L)20 15/18.5	4	4	4	/	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	/	2	2	2
EVMS(L)20 16/18.5	4	4	4	/	4	4	4	4	/	3	4	1	4	/	1	2	1	1	1	2	1	/	2	2	2

\* only for Oval flange (N)

\*\* only for Loose round flange (LF)

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

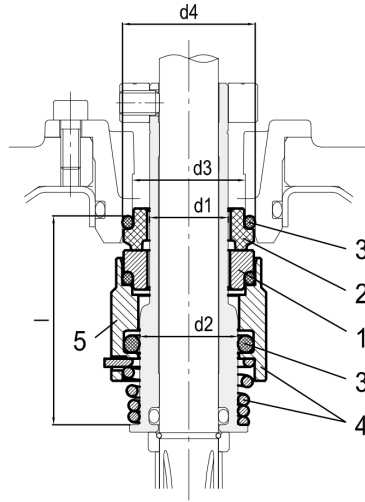
128-6 / 135-6: with Aluminium coupling

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● : Standard

Pump model	Max operating temperature	Shaft seal type		Shaft seal material								Type key
		Unbalanced	Balanced	1 Rotating Part	Code	2 Stationary Part	Code	3 Elastomers	Code	4 Compression spring	5 Collar	
from 16 bar to 25 bar	- 30°C to + 140°C		●	SiC	(Q1)	Carbon	(B)	EPDM	(E)	AISI 316	(G)	HQ1BEG

Max operating pressure	d1 [mm]	d2 [mm]	d3 [mm]	d4 [mm]	l [mm]
25 bar	20	24	29	35	45