

Technical Data

Pump Name

EVMSG90 1-1F6BQ1EG/11

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	0	Density	kg/m³
7	Available system NPSH		Solids Weight %	0
8	Ambient temperature °C	20		

Pump

9	Pump Name	EVMSG90 1-1F6BQ1EG/11	Frequency	Hz	60
10	Design	VERTICAL MULTISTAGE PUMP	Installation type		Round flange
11	Manufacturer	EBARA	Impeller Diameter	Max. mm	137
12	Speed rpm	3510		Designed mm	137
13	No. of Stage	1		Min. mm	137
14	Connection Suction side		Flow	Operating m³/h	
15	Connection Discharge side			Max- m³/h	138
16	Max Working Pressure bar	16		Min- m³/h	51
17	Shut-off head bar	3.80	Head	Operating m	
18	Total weight kg	See the table of "Dimensions".		- (Qmax.) m	8.9
19	Shaft power kW			- (Qmin.) m	32.6
20			Max. Shaft Power at max. impeller	kW	8.77
21	Required pump NPSH m		Efficiency	%	

Materials

22	Impeller	AISI 304		
23	Intermediate casing	AISI 304		
24	Bottom casing	Cast Iron EN GJL-250 EN 1561		
25	Casing cover	AISI 304		
26	Shaft	AISI 304		
27	O-ring	EPDM		

Motor

28	Manufacturer	ETM	Insulation class	F
29	Type	TEFC_EVMS90 1-1/11_380_Three Phase	Phases	3~
30	Specific design	IE3 / 60 Hz / Pole pairs 1	Frame size	160
31	Rated power kW	11	Weight kg	62.5
32	Number of poles	2	Electric voltage V	380
33	Speed rpm	3535	Electric current A	20.3
34	Degree of protection	IP55		
35				

Remarks

Performance Curve

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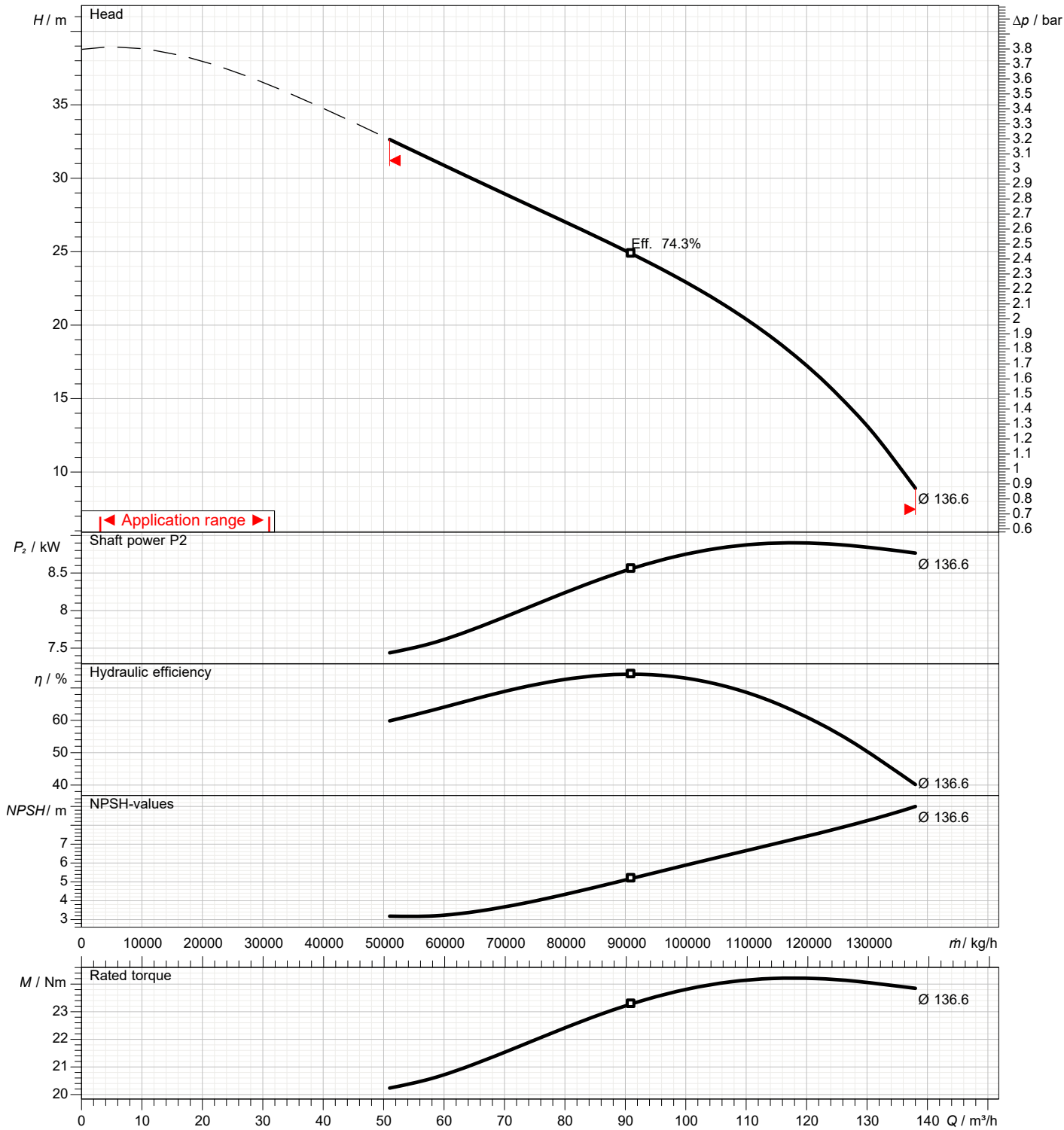
1	Flow	m³/h	
2	Head	m	
3	Geodetic head	m	

Pump

Operating flow	m³/h		Frequency	Hz	60
Operating head	m		Number of poles		2
Impeller diameter designed	mm	137	Speed	rpm	3510

Test standard: ISO 9906:2012 - Grade3B

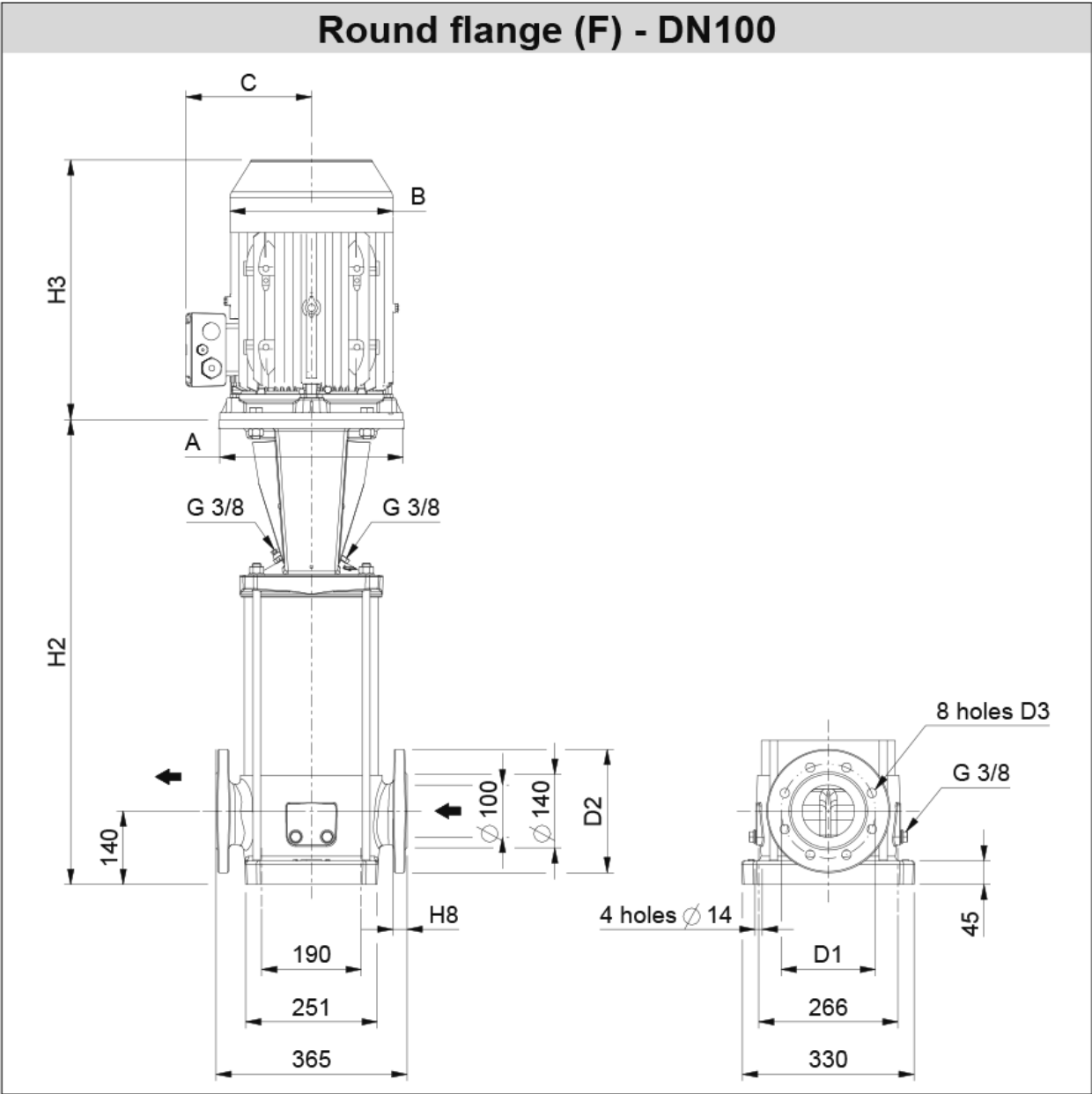
Water; 20°C; 998.3kg/m³; 1mm²/s



Dimensions

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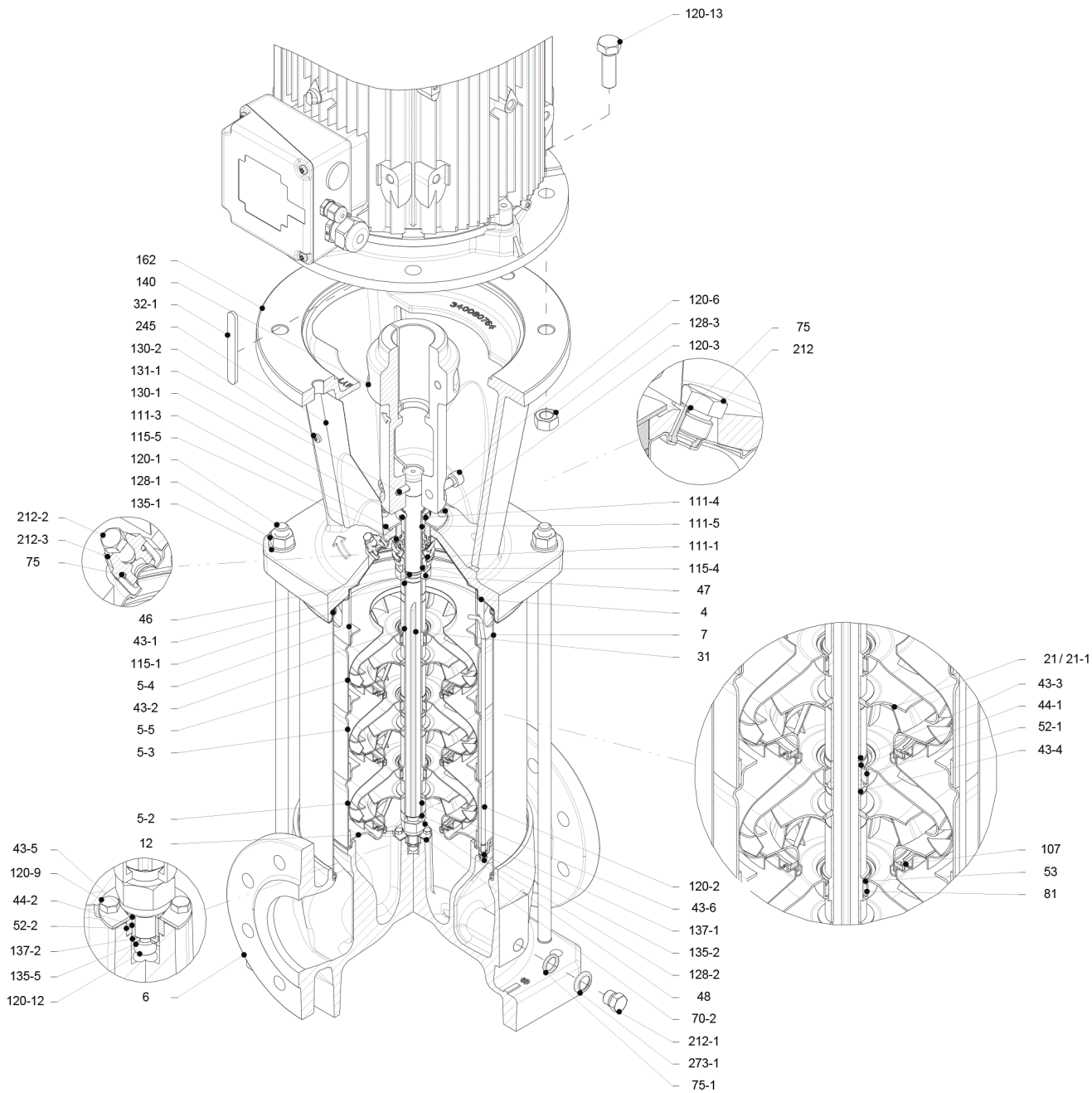


Dimensions in mm								
1	A	Dia350						
2	B	259						
3	C	180						
4	D1	180						
5	D2	235						
6	D3	18						
7	H2	701						
8	H2+H3	1140						
9	H8	24.3						
10	Weight P&M	144,2 kg						
11								
12								
13								
14								
15								

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Construction

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N°	PART NAME	MATERIAL EVMSG	DIMENSIONS	STANDARD	QTY
4	Casing cover	EN 1.4301 (AISI 304)			1
5-4	Discharge casing	EN 1.4301 (AISI 304)			1
5-5	Top intermediate casing	EN 1.4301 (AISI 304)			1
6	Bottom casing	Cast Iron EN GJL-250 EN 1561 Cast Iron EN GJS 400-15 EN 1563			1
7	Outer casing	EN 1.4301 (AISI 304)			1
12	Suction cover	EN 1.4301 (AISI 304)			1
21-1	Reduced impeller	EN 1.4301 (AISI 304)			1
31	Shaft	EN 1.4301 (AISI 304)			1
32-1	Adjuster key	EN 1.4301 (AISI 304)			1
43-1	Shaft sleeve (mechanical seal)	EN 1.4301 (AISI 304)			1
43-2	Shaft sleeve (intermediate)	EN 1.4301 (AISI 304)			1
43-5	Shaft sleeve (last stage)	EN 1.4301 (AISI 304)			1
43-6	Shaft sleeve (adjustment)	EN 1.4301 (AISI 304)			1
44-2	Shaft sleeve (bearing)	Tungsten carbide			1
46	Ring (mechanical seal)	EN 1.4404 (AISI 316L)			1
47	Ring holder	EN 1.4301 (AISI 304)			1
48	Impeller nut	EN 1.4301 (AISI 304) with inox insert			1
52-2	Bearing sleeve (bottom casing)	Tungsten carbide			1
53	Bush holder	EN 1.4301 (AISI 304)			1
70-2	Ring for bearing sleeve	EN 1.4301 (AISI 304)			1
75	O-Ring (priming plug)	EPDM / FPM *	Ø12.37x2.62	OR 3050	2
75-1	O-Ring (drainage plug)	EPDM / FPM *			4
81	Bush	PTFE			1
107	Liner ring	EN 1.4301 (AISI 304) + PPS			1
111-1	Mechanical seal	- - - **			1
111-3	Mechanical seal seat	EN 1.4301 (AISI 304)			1
111-4	Seal holder	EN 1.4404 (AISI 316L)			1
111-5	Mechanical seal cartridge sleeve	EN 1.4301 (AISI 304)			1
115-1	O-Ring (outer casing)	EPDM / FPM *	Ø240.66x5.34	OR 6945	2
115-4	O-Ring (cartridge sleeve)	EPDM / FPM *	Ø23.39x3.53	OR 4093	1
115-5	O-Ring (seal flange)	EPDM / FPM *	Ø44.04x3.53	OR 4175	1
120-1	Tie rod	EN 1.4057 (AISI 431)			4
120-2	Tie rod (stage)	EN 1.4301 (AISI 304)			2
120-3	Screw (seal flange)	A2-70	M5x12	ISO 4762	4
120-6	Screw (pump coupling) up to 30 kW	Galvanized steel 8.8 strength class ISO 898/1	M10x30	ISO 4762	4
120-9	Screw (bottom casing)	A2-70	M5x8	ISO 4017	4
120-12	Screw (shaft)	A2-70	M6x16	ISO 4762	1
120-13	Screw for motor MEC 160-180	Galvanized steel 8.8 strength class ISO 898/1	M16x50	ISO 4017	4
128-1	Nut (tie rod)	A2-70	M16	ISO 4032	4
128-2	Nut (casing tie rod)	A2-70	M5	ISO 4032	4
128-3	Nut (motor) MEC 160-180-200-225	Galvanized steel	M16	ISO 4032	4
130-1	Set screw	EN 1.4301 (AISI 304)	M6x8	ISO 4026	3
130-2	Screw for coupling guard	A2-70	M5x6	UNI 7687	4
131-1	Pin for shaft	Carbon Steel	Ø8X50	ISO 2338	1
135-1	Washer (tie rod)	EN 1.4301 (AISI 304)	Ø16	ISO 7089	4
135-2	Washer (casing tie rod)	EN 1.4301 (AISI 304)	Ø5.1	UNI 1751	2
135-5	Washer (impeller nut)	EN 1.4301 (AISI 304)			1
137-1	Impeller spacer	EN 1.4301 (AISI 304)			1
137-2	Shaft spacer	EN 1.4301 (AISI 304)			1
140	Coupling up to 30 kW	Cast Iron EN GJL250 EN 1561			2
162	Motor bracket up to 30 kW	Cast Iron EN GJS 400-15 EN 1563			1
212	Priming plug	EN 1.4301 (AISI 304)			1
212-1	Drainage plug	EN 1.4301 (AISI 304)			4
212-2	Venting plug	EN 1.4401 (AISI 316)			1
212-3	Priming plug	EN 1.4301 (AISI 304)			1
245	Coupling guard	EN 1.4301 (AISI 304)			2
273-1	Washer (drainage plug)	EN 1.4301 (AISI 304)			4

* EPDM (standard)
FPM (option)

** see CONSTRUCTION 3/3


EBARA

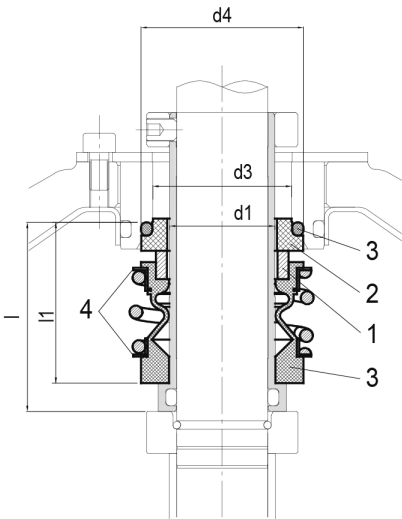
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Construction

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● Standard

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	
BQ1EG	●	16 bar	- 30°C to + 120°C	Unbalanced	(-)	Carbon	(B)	SiC	Q1	EPDM	(E)	AISI 316		(G)	

Max operating pressure	d1 [mm]	d3 [mm]	d4 [mm]	l [mm]	l1 [mm]
16 bar	28	37	43	50	42.5