

Technical Data

Pump Name

EVMS45 1-0LF5BQ1EG E/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 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	0	Density kg/m³	998.3
7	Available system NPSH		Solids Weight %	0
8	Ambient temperature °C	20		

Pump

9	Pump Name	EVMS45 1-0LF5BQ1EG E/4.0	Frequency Hz	50
10	Design	VERTICAL MULTISTAGE PUMP	Installation type	Loose flange
11	Manufacturer	EBARA	Impeller Diameter	Max. mm 141
12	Speed rpm	2920		Designed mm 141
13	No. of Stage	1		Min. mm 141
14	Connection Suction side		Flow	Operating m³/h
15	Connection Discharge side			Max- m³/h 60
16	Max Working Pressure bar	16		Min- m³/h 21
17	Shut-off head bar	2.82	Head	Operating m
18	Total weight kg	See the table of "Dimensions".		- (Qmax.) m 14.7
19	Shaft power kW			- (Qmin.) m 25.1
20			Max. Shaft Power at max. impeller kW	3.77
21	Required pump NPSH m		Efficiency %	

Materials

22	Impeller	AISI 304		
23	Intermediate casing	AISI 304		
24	Bottom casing	EN 1.4308 (ASTM CF8)		
25	Casing cover	AISI 304		
26	Shaft	AISI 304		
27	O-ring	EPDM		

Motor

28	Manufacturer	ETM	Insulation class	F
29	Type	TEFC_EVMS45 1-0/4.0_230_Three Phase	Phases	3~
30	Specific design	IE3 / 50 Hz / Pole pairs 1	Frame size	112
31	Rated power kW	4	Weight kg	28.5
32	Number of poles	2	Electric voltage V	230
33	Speed rpm	2920	Electric current A	15.1
34	Degree of protection	IP55		
35				

Remarks

Performance Curve

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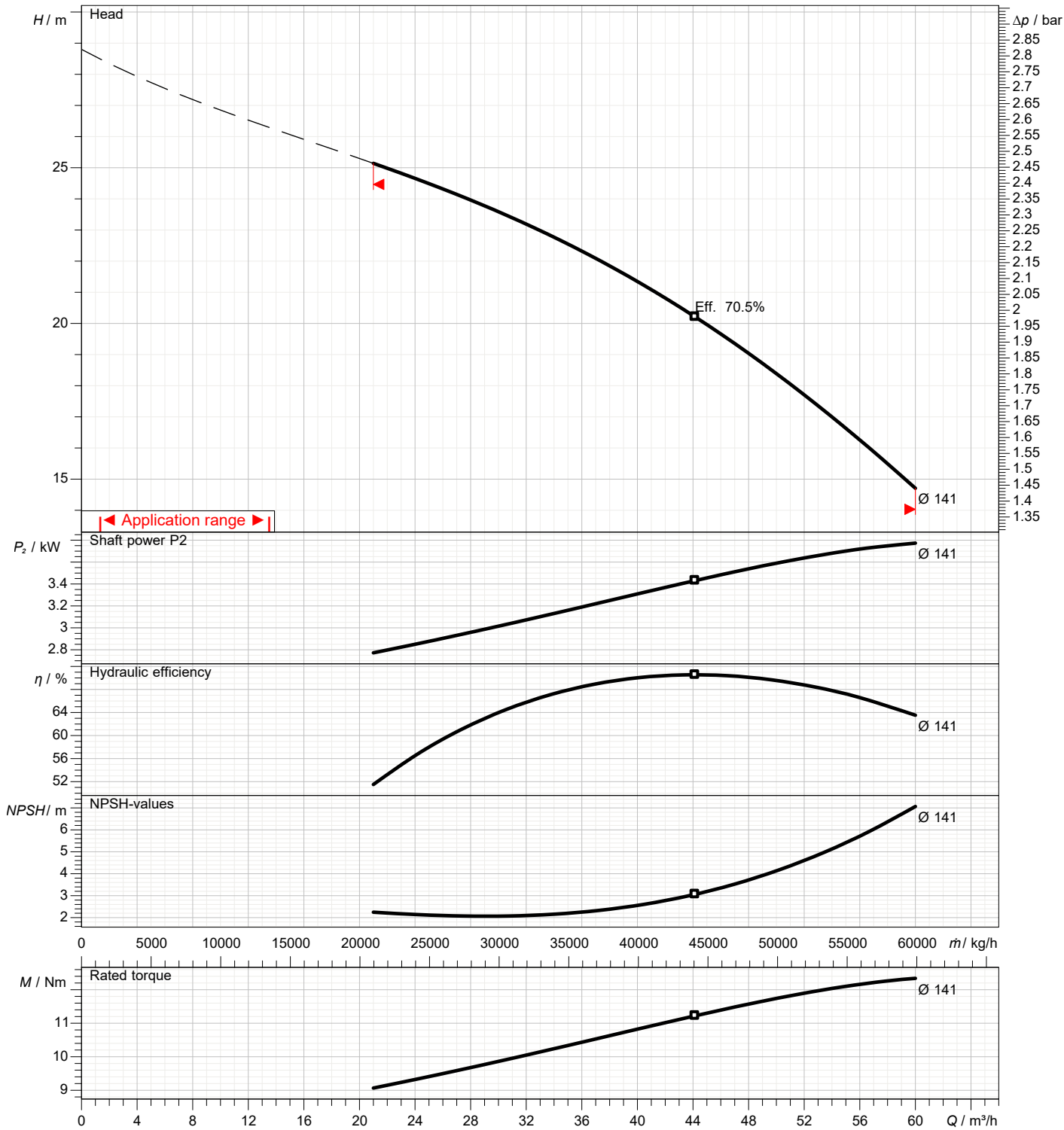
1	Flow	m³/h	
2	Head	m	
3	Geodetic head	m	

Pump

Operating flow	m³/h		Frequency	Hz	50
Operating head	m		Number of poles		2
Impeller diameter designed	mm	141	Speed	rpm	2920

Test standard: ISO 9906:2012 - Grade3B

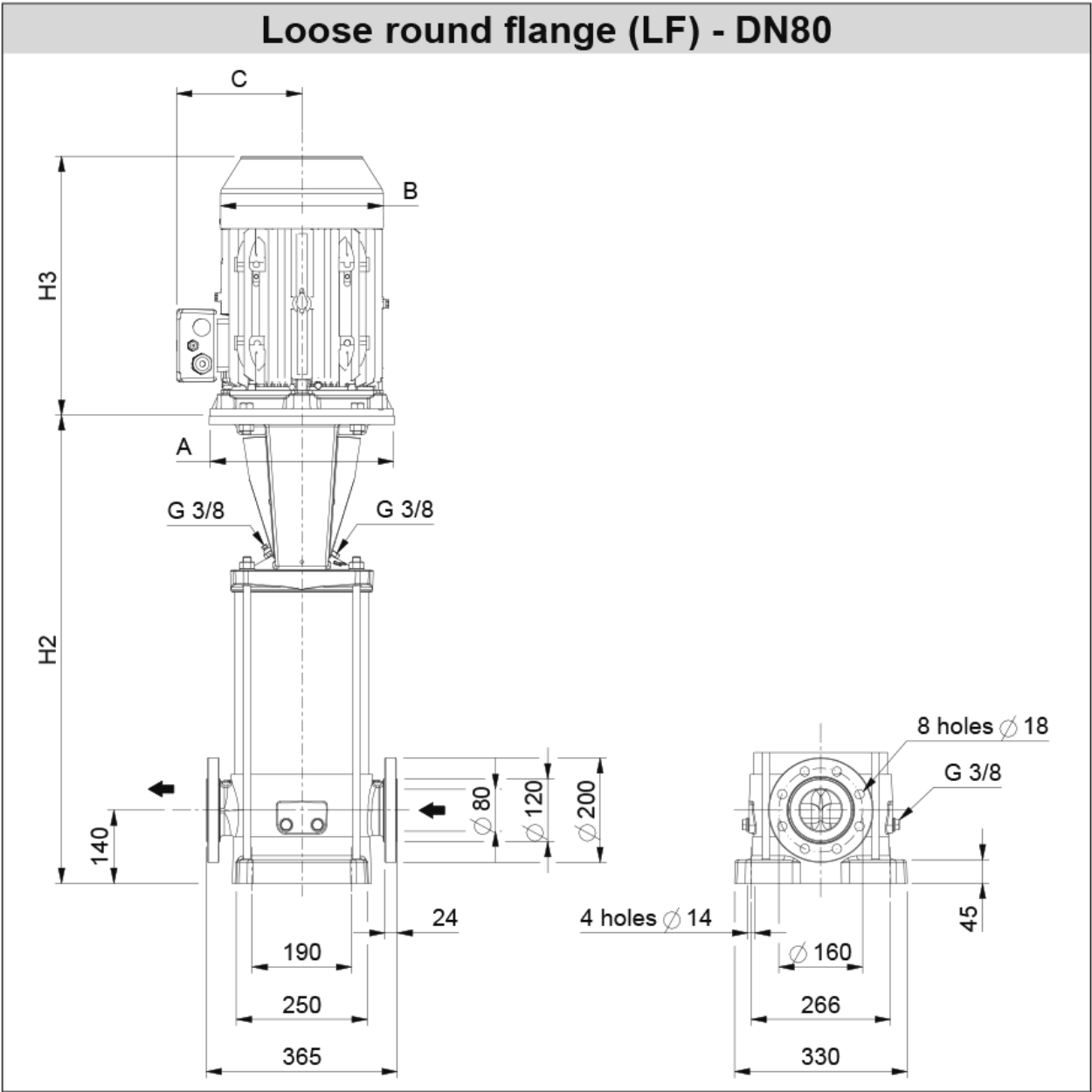
Water; 20°C; 998.3kg/m³; 1mm²/s



Dimensions

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Dimensions in mm								
1	A	Dia160						
2	B	193						
3	C	138						
4	H2	546						
5	H2+H3	911						
6	Weight P&M (kg)	90.9						
7								
8								
9								
10								
11								
12								
13								
14								
15								

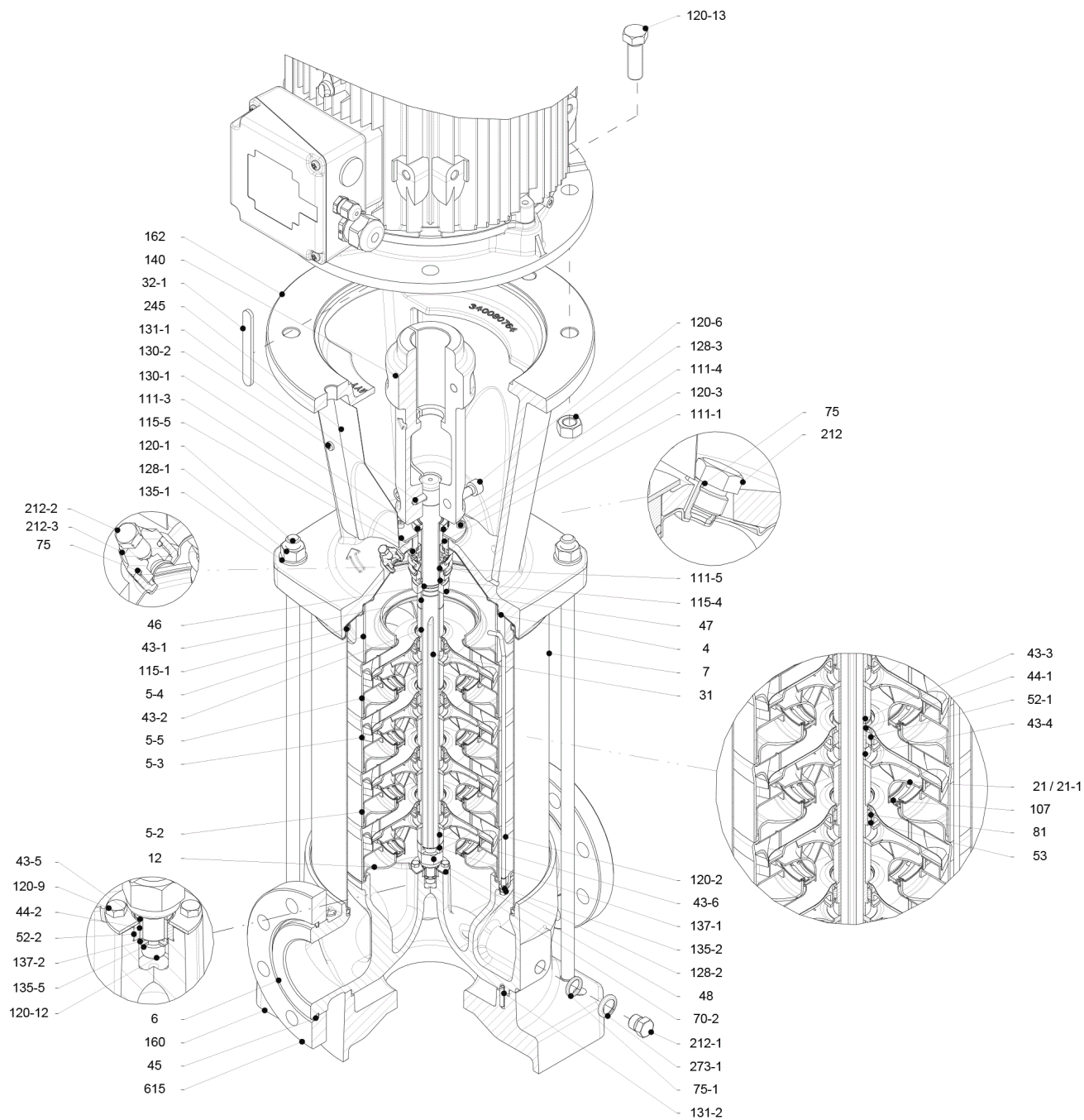
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Construction

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N°	PART NAME	MATERIAL		DIMENSIONS	STANDARD	QTY
		EVMS	EVMSL			
4	Casing cover	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
5-4	Discharge casing	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
5-5	Top intermediate casing	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
6	Bottom casing	EN 1.4308 (ASTM CF8)	EN 1.4408 (ASTM CF8M)			1
7	Outer casing	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
12	Suction cover	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
21	Impeller	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
31	Shaft	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L) - EN 1.4462 (AISI 329A)			1
32-1	Adjuster key	EN 1.4301 (AISI 304)				1
43-1	Shaft sleeve (mechanical seal)	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
43-2	Shaft sleeve (intermediate)	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
43-5	Shaft sleeve (last stage)	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
43-6	Shaft sleeve (adjustment)	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
44-2	Shaft sleeve (bearing)	Tungsten carbide				1
45	Flange holder	EN 1.4301 (AISI 304)				4
46	Ring (mechanical seal)	EN 1.4404 (AISI 316L)				1
47	Ring holder	EN 1.4404 (AISI 316L)				1
48	Impeller nut	EN 1.4301 (AISI 304) with inox insert	EN 1.4401 (AISI 316) with inox insert			1
52-2	Bearing sleeve (bottom casing)	Tungsten carbide				1
53	Bush holder	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
70-2	Ring for bearing sleeve	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			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	EN 1.4404 (AISI 316L) + PPS			1
111-1	Mechanical seal	- - - **				1
111-3	Mechanical seal seat	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
111-4	Seal holder	EN 1.4404 (AISI 316L)				1
111-5	Mechanical seal cartridge sleeve	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			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)	EN 1.4401 (AISI 316)			2
120-3	Screw (seal flange)	A2-70		M5x12	ISO 4762	4
120-6	Screw (pump coupling)	up to 4.0 kW Galvanized steel 8.8 strength class ISO 898/1		M6x25	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 90-100-112 Galvanized steel 8.8 strength class ISO 898/1		M8x20	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
128-6	Nut (aluminium coupling)	MEC 90-100-112 Galvanized steel		M6	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	up to 4.0 kW Carbon Steel		Ø8x42	ISO 2338	1
131-2	Elastic pin	EN 1.4301 (AISI 304)		Ø6x26	ISO 8752	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)	EN 1.4404 (AISI 316)	Ø5.1	UNI 1751	2
135-5	Washer (impeller nut)	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
135-6	Washer (aluminium coupling)	up to 4.0 kW Carbon Steel				4
137-1	Impeller spacer	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
137-2	Shaft spacer	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
140	Coupling	up to 4.0 kW Die cast Aluminium EN AB-AISI11 Cu2 (Fe)				2
160	Base	Cast Iron EN GJL200 EN 1561				1
162	Motor bracket	up to 30 kW Cast Iron EN GJS 400-15 EN 1563				1
212	Priming plug	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
212-1	Drainage plug	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			4
212-2	Venting plug	EN 1.4401 (AISI 316)				1
212-3	Priming plug	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
245	Coupling guard	EN 1.4301 (AISI 304)				2
273-1	Washer (drainage plug)	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			4
615	Loose flange	Cast Iron EN GJS 500-7 EN 1563				2

* EPDM (standard)
FPM (option)

** see CONSTRUCTION 3/3

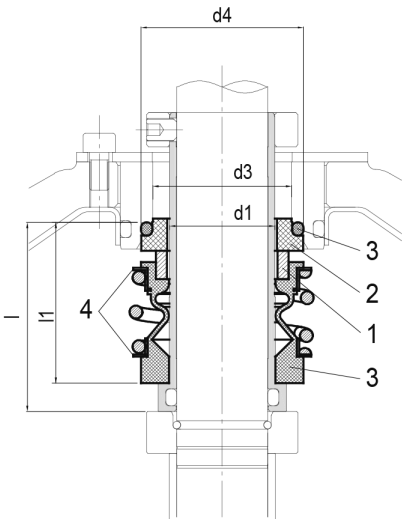
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● Standard

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