Technical Data

Pump Name EVMS45 11-0LF5HQ1BEG E/45

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 11-0LF5HQ1BEG E/45	Frequency		Hz	50
10	Design		VERTICAL MULTISTAGE PUMP	Installation type			Loose flange
11	Manufacturer		EBARA	Impeller Diameter	Max.	mm	141
12	Speed	rpm	2970		Designed	mm	141
13	No. of Stage		11		Min.	mm	141
14	Connection Suction side			Flow	Operating	m³/h	
15	Connection Discharge side				Max-	m³/h	60
16	Max Working Pressure	bar	35		Min-	m³/h	21
17	Shut-off head	bar	28.91	Head	Operating	m	
18	Total weight	kg	See the table of "Dimensions".		- (Qmax.)	m	178.6
19	Shaft power	kW			- (Qmin.)	m	277.8
20				Max. Shaft Power at max. impeller		kW	42.00
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		ATB	Insulation class		F
29	Type		TEFC_EVMS45 11-0/45_400_Three Phase	Phases		3~
30	Specific design		IE3 / 50 Hz / Pole pairs 1	Frame size		225
31	Rated power	kW	45	Weight	kg	374
32	Number of poles		2	Electric voltage	V	400
33	Speed	rpm	2960	Electric current	A	77
34	Degree of protection		IP56			
35						

Remarks

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Performance Curve

Pump Name EVMS45 11-0LF5HQ1BEG E/45

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Requested data

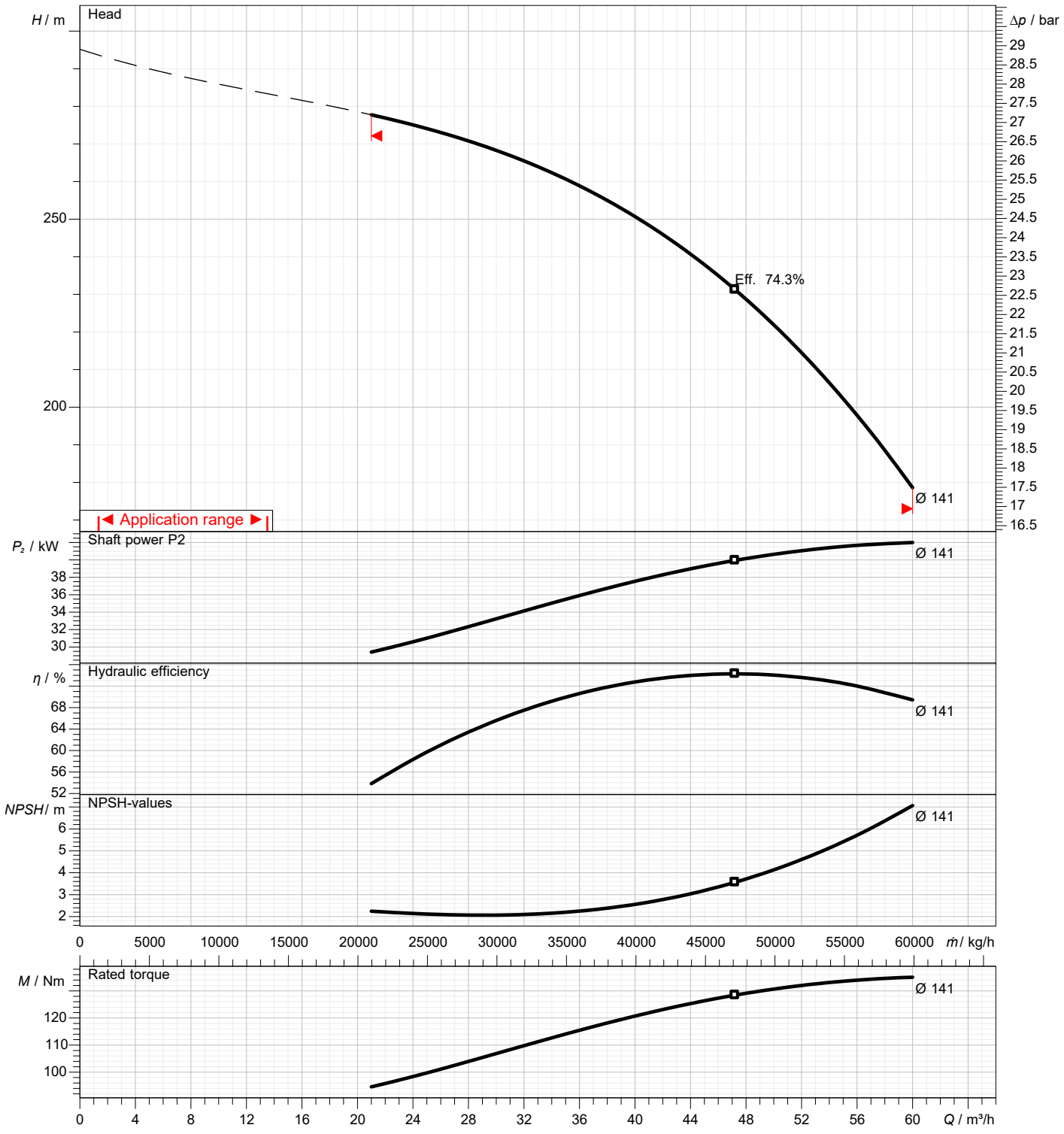
1	Flow	m³/h	
2	Head	m	
3	Geodetic head	m	

Pump

Operating flow	m³/h		Frequency	Hz	50
Operating head	m		Number of poles		2
Impeller diameter designed	mm	141	Speed	rpm	2970

Test standard: ISO 9906:2012 - Grade3B

Water; 20°C; 998.3kg/m³; 1mm²/s



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Dimensions

Pump Name EVMS45 11-0LF5HQ1BEG E/45

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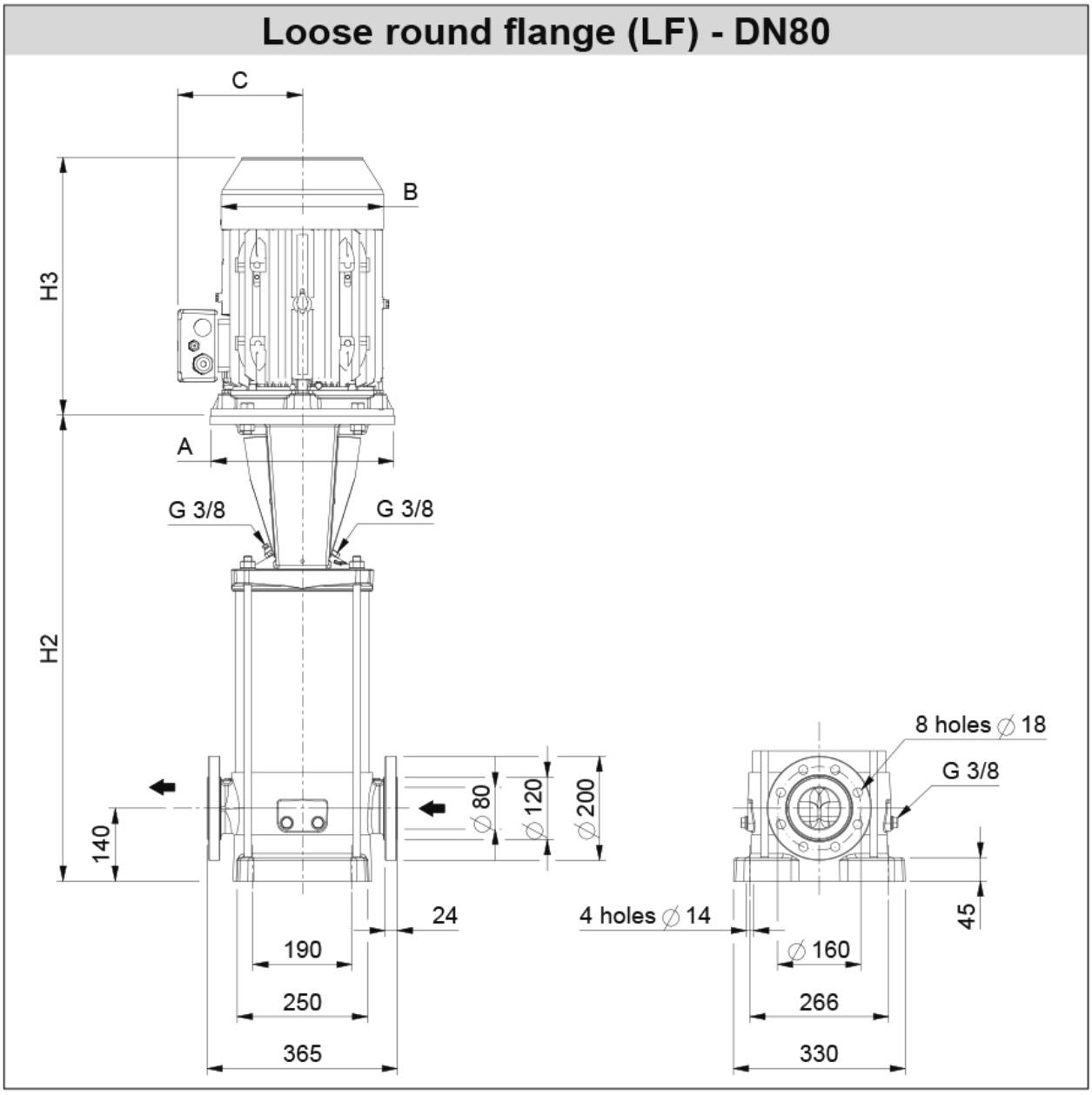
Loose round flange (LF) - DN80



Dimensions in	mm							
1	A	Dia450						
2	B	449						
3	C	335						
4	H2	1417						
5	H2+H3	2183						
6	Weight P&M (kg)	530.1						
7								
8								
9								
10								
11								
12								
13								
14								
15								

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Construction

Pump Name EVMS45 11-0LF5HQ1BEG E/45

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Contact	Item no.		Issued by
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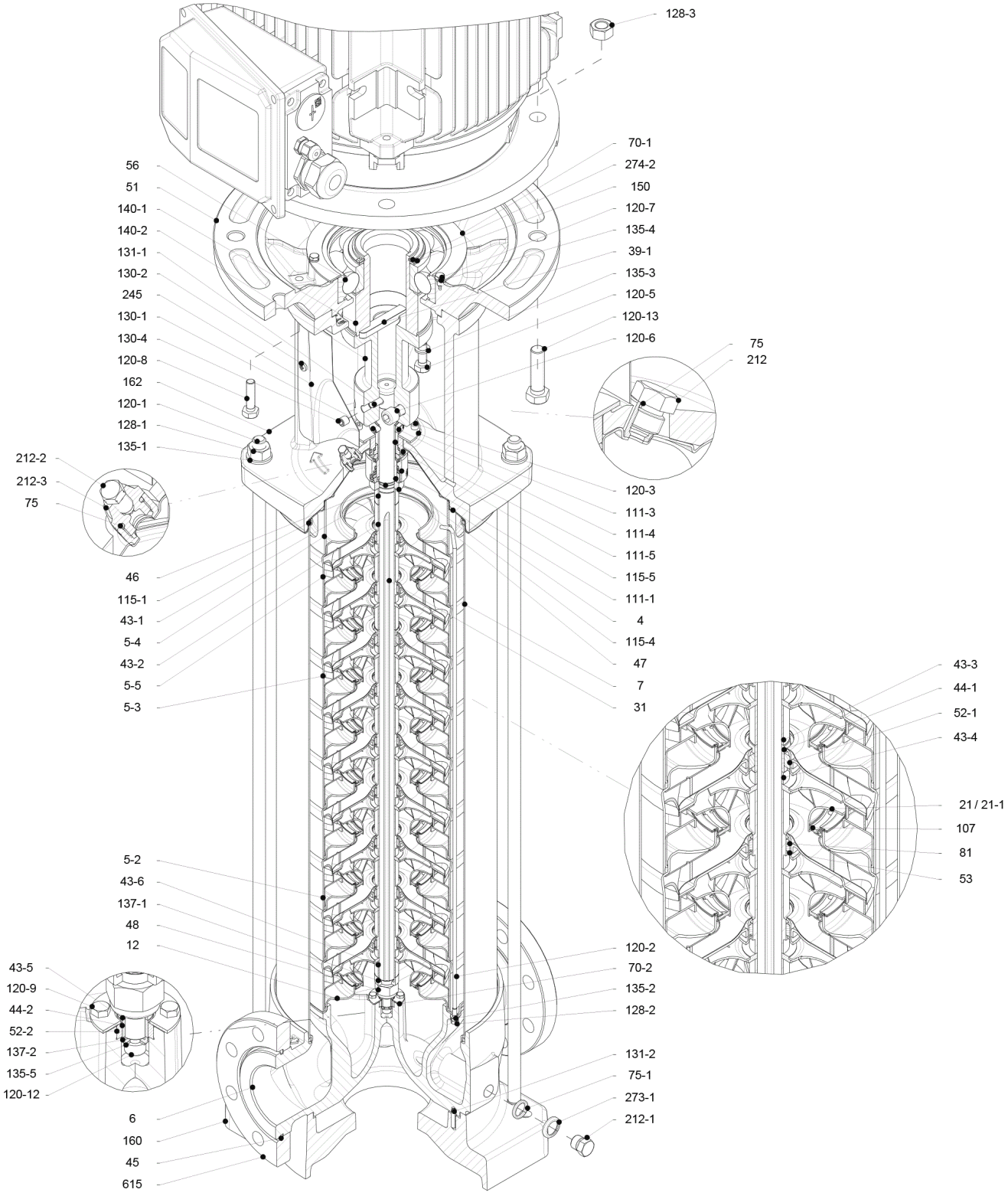
E-mail	Project ID	Proiect redenumit 2024-06-14 09:53:20	E-mail



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Construction

Pump Name EVMS45 11-0LF5HQ1BEG E/45

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E-mail	Project ID	Proiect redenumit 2024-06-14 09:53:20	E-mail

N°	PART NAME		MATERIAL		DIMENSIONS	STANDARD	QTY
			EVMS	EVMSL			
4	Casing cover		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
5-2	Intermediate casing		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			9
5-3	Intermediate casing with bearing		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)			11
31	Shaft		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L) - EN 1.4462 (AISI 329A)			1
39-1	Coupling key	above 37 kW	Carbon Steel				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)			10
43-3	Shaft sleeve (bearing)		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
43-4	Shaft sleeve (adjustment)		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
44-1	Shaft sleeve bearing		Tungsten carbride				1
44-2	Shaft sleeve (bearing)		Tungsten carbride				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
51	Motor adapter	above 37 kW	Cast Iron EN GJL250 EN 1561				1
52-1	Sleeve bearing		Tungsten carbride				1
52-2	Bearing sleeve (bottom casing)		Tungsten carbride				1
53	Bush holder		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			11
56	Ball bearing	above 37 kW	6315 ZZ C3				1
70-1	Ring for ball bearing	above 37 kW	EN 1.4301 (AISI 304)				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				10
107	Liner ring		EN 1.4301 (AISI 304) + PPS	EN 1.4404 (AISI 316L) + PPS			11
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
120-5	Screw (extension coupling)	above 37 kW	Galvanized steel 8.8 strength class ISO 898/1		M10x30	ISO 4017	4
120-6	Screw (pump coupling)	above 37 kW	Galvanized steel 8.8 strength class ISO 898/1		M12x30	ISO 4762	2
120-7	Screw (ball bearing)	above 37 kW	Galvanized steel 8.8 strength class ISO 898/1		M6x10	ISO 4017	3
120-8	Screw (motor adapter)	above 37 kW	Galvanized steel 8.8 strength class ISO 898/1		M10x40	ISO 4017	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 200-225	Galvanized steel 8.8 strength class ISO 898/1		M16x60	ISO 4014	8
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	8
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
130-4	Set screw (pump coupling)	above 37 kW	Galvanized steel		M10x10	ISO 4026	1
131-1	Pin for shaft	above 5.5 kW	Carbon Steel		Ø8X50	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
135-3	Washer (extension coupling)	above 37 kW	Galvanized steel		Ø10.2	UNI 1751	4
135-4	Washer (ball bearing)	above 37 kW	Plated carbon steel		Ø6.1	UNI 1751	3
135-5	Washer (impeller nut)		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1
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
140-1	Extension coupling	above 37 kW	Carbon Steel				1
140-2	Coupling	above 37 kW	Carbon Steel				1
150	Spacer (snap ring)	above 37 kW	Carbon Steel				1
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
274-2	C-type snap ring (coupling)	above 37 kW	Carbon Steel TC80		Ø75	UNI 7435	1
615	Loose flange		Cast Iron EN GJS 500-7 EN 1563				2

* EPDM (standard)
FPM (option)

** see CONSTRUCTION 3/3

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Construction

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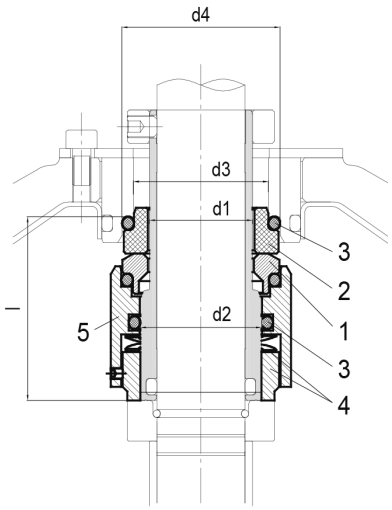

● Standard

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
HQ1BEG	●	25/35 bar	- 30°C to + 140°C	Balanced	(H)	SiC	(Q1)	Carbon	(B)	EPDM	(E)	AISI 316		(G)

Max operating pressure	d1 [mm]	d2 [mm]	d3 [mm]	d4 [mm]	l [mm]
35 bar	28	33	37	43	50