

# Technical data

Pump name EVMSG90 5-2F5HQ1BEG E/37

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:	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 m <sup>3</sup> /h		Kin. viscosity mm <sup>2</sup> /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/m <sup>3</sup>	998.3
7	Available system NPSH		Solids Weight %	0
8	Ambient temperature °C	20		

## Pump

9	Pump name	EVMSG90 5-2F5HQ1BEG E/37	Frequency Hz	50
10	Design	VERTICAL MULTISTAGE PUMP	Installation type	Round flange
11	Manufacturer	EBARA	Impeller Diameter	Max. mm -
12	Speed rpm	2970		Designed mm
13	No. of Stage	5		Min. mm -
14	Connection Suction side		Flow	Operating m <sup>3</sup> /h
15	Connection Discharge side			Max- m <sup>3</sup> /h 120
16	Max Working Pressure bar	25		Min- m <sup>3</sup> /h 45
17	Shut-off head bar	15.45	Head	Operating m
18	Total weight kg	See the table of "Dimensions".		- (Qmax.) m 67.5
19	Shaft power kW			- (Qmin.) m 136.9
20			Max. Shaft Power at max. impeller kW	33.35
21	Required pump NPSH m		Efficiency %	

## Materials

22	Impeller	AISI 304	
23	Intermediate casing	AISI 304	
24	Bottom casing	Cast Iron EN GJS 400-15 EN 1563	
25	Casing cover	AISI 304	
26	Shaft	AISI 304	
27	O-ring	EPDM	

## Motor

28	Manufacturer	ATB	Insulation class	F
29	Type	TEFC_EVMS90 5-2/37_400_Three Phase	Phases	3~
30	Specific design	IE3 / 50 Hz / Pole pairs 1	Frame size	200
31	Rated power kW	37	Weight kg	260
32	Number of poles	2	Electric voltage V	400
33	Speed rpm	2945	Electric current A	64
34	Degree of protection	IP56		
35				

## Remarks

# Performance curve

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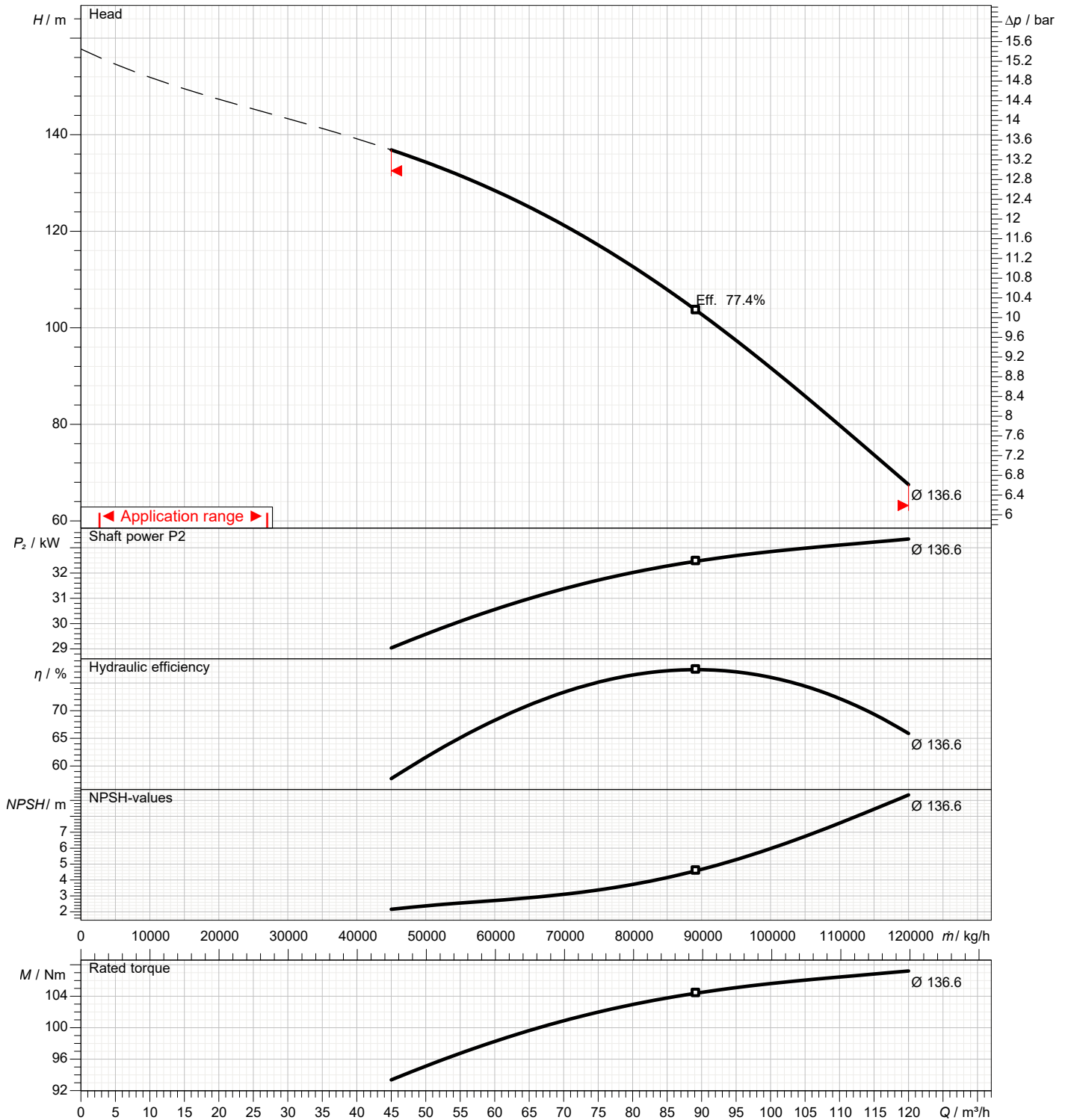
1	Flow	m <sup>3</sup> /h	
2	Head	m	
3	Geodetic head	m	

### Pump

Operating flow	m <sup>3</sup> /h		Impeller Diameter Designed	mm	
Operating head	m		Frequency	Hz	50
			Speed	rpm	2970

Test standard: ISO 9906:2012 - Grade3B

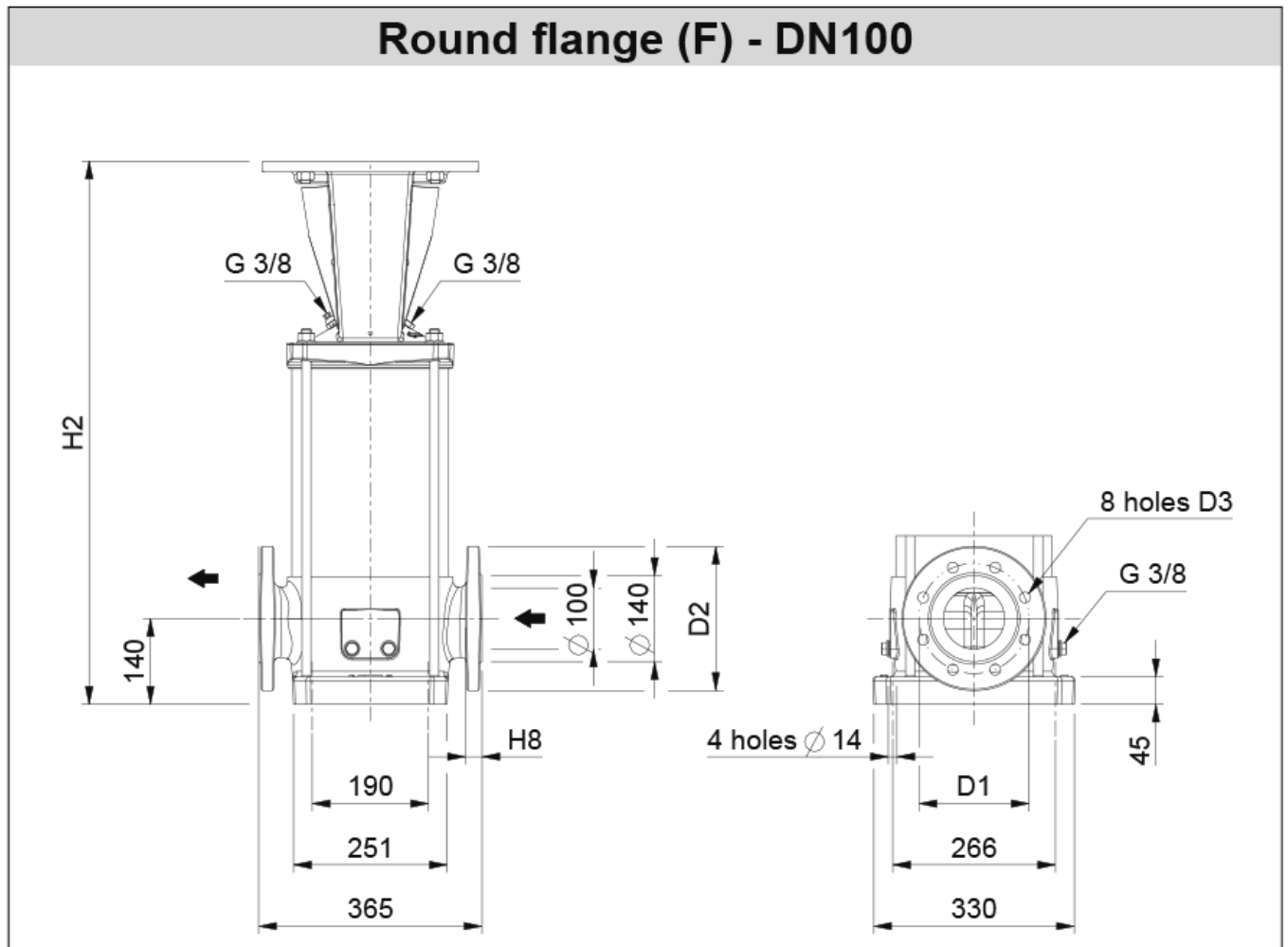
Water; 20°C; 998.3kg/m<sup>3</sup>; 1mm<sup>2</sup>/s



# Dimensions

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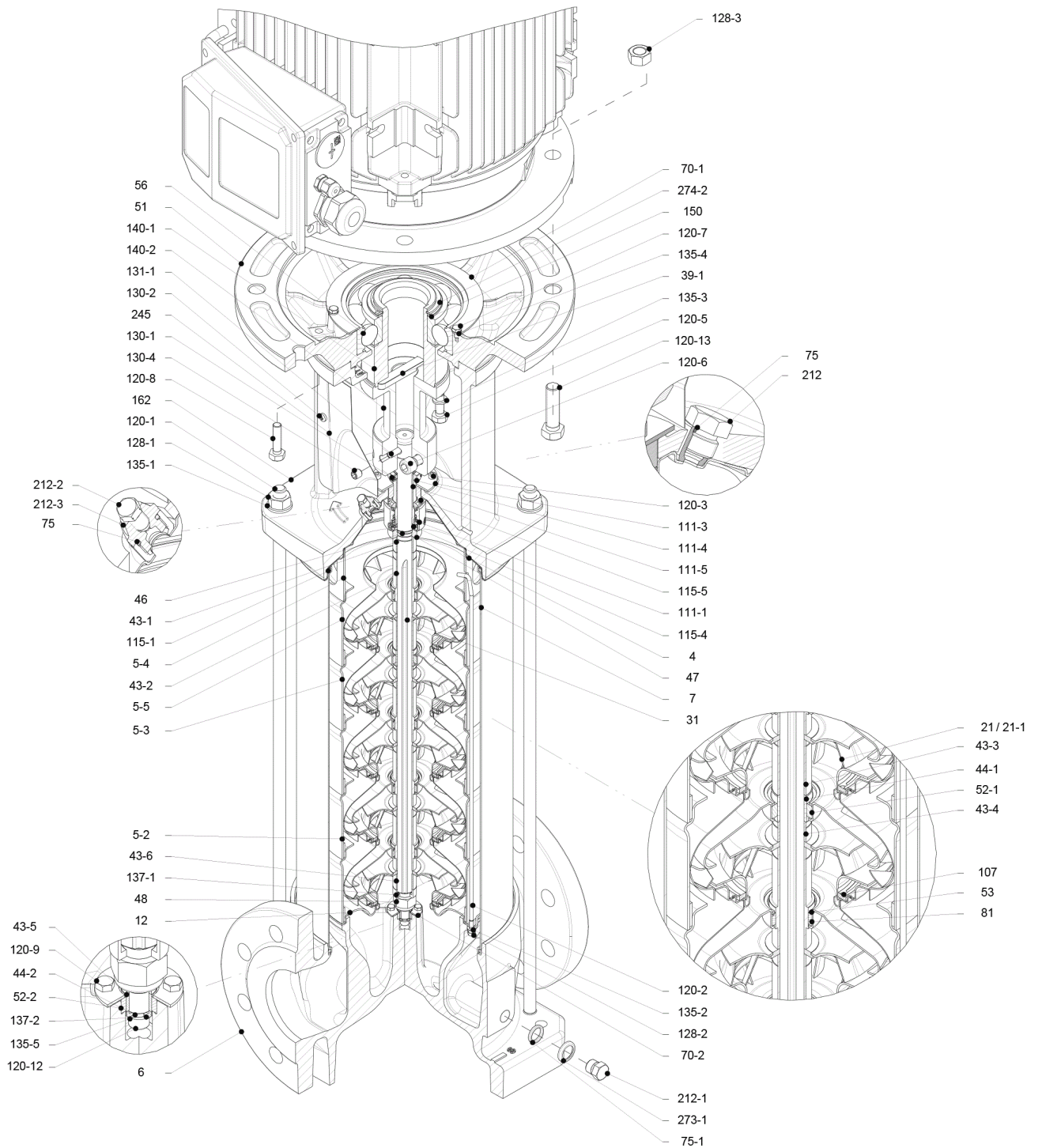


Dimensions in		mm						
1	A	Dia400						
2	B	382						
3	C	295						
4	D1	190						
5	D2	254						
6	D3	22						
7	H2	1090						
8	H2+H3	1767						
9	H8	31						
10	Weight P&M	386,8 kg						
11								
12								
13								
14								
15								

# (1/3) Construction

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(2/3)

# Construction

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N°	PART NAME	MATERIAL EVMSG	DIMENSIONS	STANDARD	QTY
4	Casing cover	EN 1.4301 (AISI 304)			1
5-2	Intermediate casing	EN 1.4301 (AISI 304)			3
5-3	Intermediate casing with bearing	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 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	Impeller	EN 1.4301 (AISI 304)			3
21-1	Reduced impeller	EN 1.4301 (AISI 304)			2
31	Shaft	EN 1.4301 (AISI 304)			1
39-1	Coupling key	above 37 kW Carbon Steel			1
43-1	Shaft sleeve (mechanical seal)	EN 1.4301 (AISI 304)			1
43-2	Shaft sleeve (intermediate)	EN 1.4301 (AISI 304)			4
43-3	Shaft sleeve (bearing)	EN 1.4301 (AISI 304)			1
43-4	Shaft sleeve (adjustment)	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
44-1	Shaft sleeve bearing	Tungsten carbide			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
51	Motor adapter	above 37 kW Cast Iron EN GJL250 EN 1561			1
52-1	Sleeve bearing	Tungsten carbide			1
52-2	Bearing sleeve (bottom casing)	Tungsten carbide			1
53	Bush holder	EN 1.4301 (AISI 304)			5
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)			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			4
107	Liner ring	EN 1.4301 (AISI 304) + PPS			5
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
120-5	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	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
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
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
135-3	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)			1
137-1	Impeller spacer	EN 1.4301 (AISI 304)			1
137-2	Shaft spacer	EN 1.4301 (AISI 304)			1
140-1	Extension coupling	above 37 kW Carbon Steel			1
140-2	Coupling	above 37 kW Carbon Steel			1
160	Spacer (snap ring)	above 37 kW Carbon Steel			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)			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
274-2	C-type snap ring (coupling)	above 37 kW Carbon Steel TC80	Ø75	UNI 7435	1

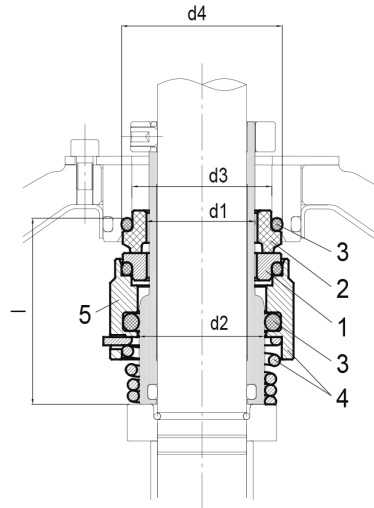
\* EPDM (standard)  
FPM (option)

\*\* see CONSTRUCTION 3/3

# (3/3) Construction

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- Standard

Type key	Availability	Max operating pressure	Max operating temperature	Shaft seal type		Shaft seal material									
				Cartridge		1 Rotating part		2 Stationary part		3 Elastomers		4 Compression spring		5 Collar	
				Type	Code	Code	Code	Code	Code	Code	Code	Code	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]
25 bar	28	33	37	43	50