

Technical data

Pump name (*See Product description)EVM45 3-3F6/15

Customer	Date	2024-07-01	Company
Contact	Item no.		Issued by
Phone	Project		Phone
E-mail	Project ID	Project redenumit 2024-07-01 19:11:	E-mail

Requested data

1	Pump type	VERTICAL MULTISTAGE PUMPS	Fluid	Water
2	Number of pumps / Reserve	1 / 0	Liquid temperature °C	20
3	Flow m ³ /h		Kin. viscosity mm ² /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 ³	998.3
7	Available system NPSH		Solids Weight %	0
8	Ambient temperature °C	20		

Pump

9	Pump name	(*See Product description)EVM45 3-3F6/15	Frequency Hz	60	
10	Design	VERTICAL MULTISTAGE PUMPS	Installation type	Round flange	
11	Manufacturer	EBARA	Impeller Diameter	Max. mm	-
12	Speed rpm	3520		Designed mm	
13	No. of Stage	3		Min. mm	-
14	Connection Suction side		Flow	Operating m ³ /h	
15	Connection Discharge side			Max- m ³ /h	66
16	Max Working Pressure bar	16		Min- m ³ /h	27
17	Shut-off head bar	9.11	Head	Operating m	
18	Total weight kg	See the table of "Dimensions".		- (Qmax.) m	41.8
19	Shaft power kW			- (Qmin.) m	85.0
20			Max. Shaft Power at max. impeller kW	12.42	
21	Required pump NPSH m		Efficiency %		

Materials

22	Impeller	AISI 304		
23	Intermediate casing	AISI 304		
24	Bottom casing	ASTMCF8		
25	Shaft	AISI 316L		
26				
27				

Motor

28	Manufacturer	ATB	Insulation class	F
29	Type	TEFC_EVM45 3-3F6/15_380_Three Phase	Phases	3~
30	Specific design	IE3 / 60 Hz / Pole pairs 1	Frame size	160
31	Rated power kW	15	Weight kg	101
32	Number of poles	2	Electric voltage V	380
33	Speed rpm	3545	Electric current A	27.5
34	Degree of protection	IP 55		
35				

Remarks

Performance curve

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Requested data

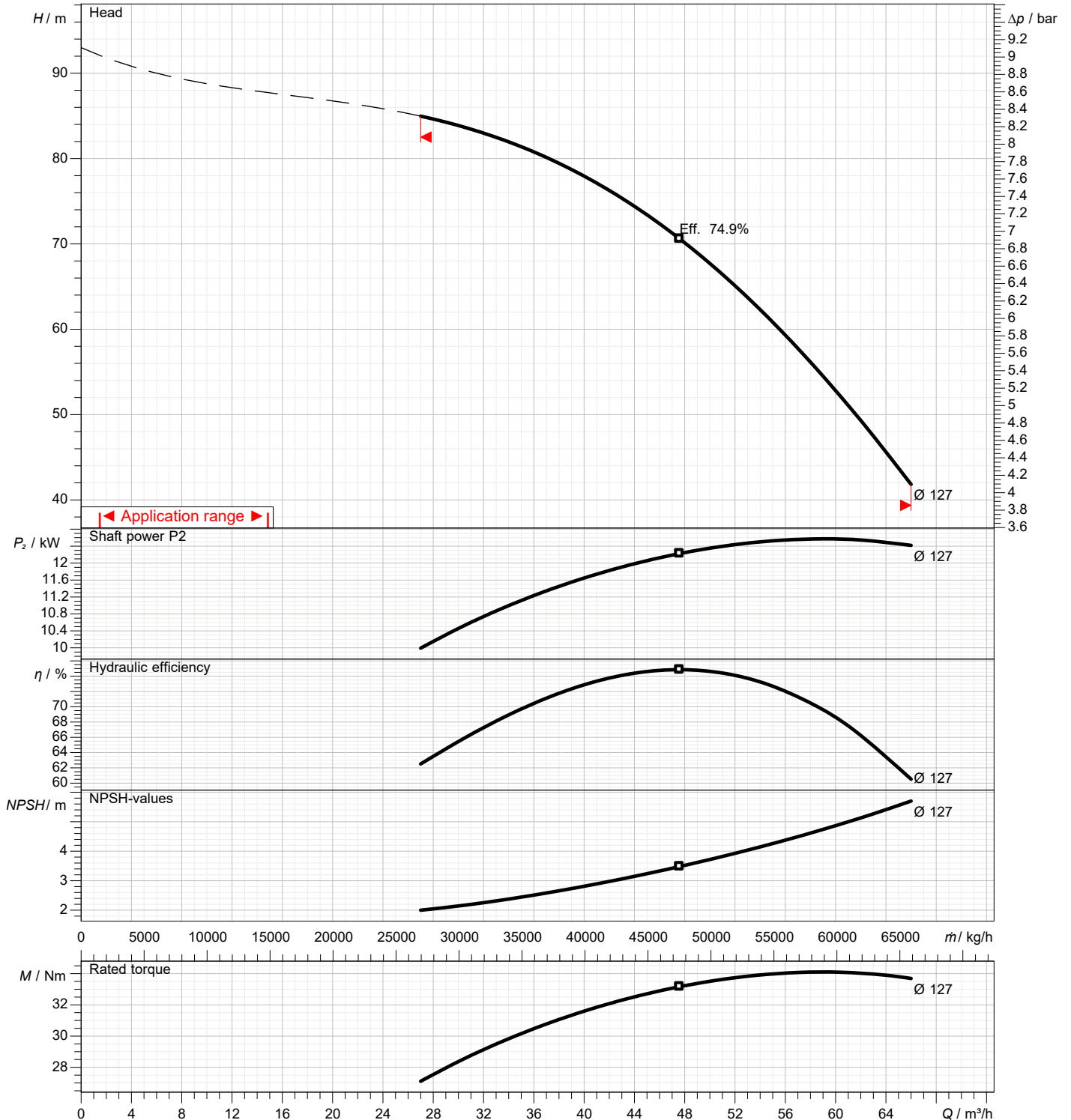
1	Flow	m ³ /h	
2	Head	m	
3	Geodetic head	m	

Pump

Operating flow	m ³ /h		Impeller Diameter Designed	mm	
Operating head	m		Frequency	Hz	60
			Speed	rpm	3520

Test standard: ISO 9906:2012 - Grade3B

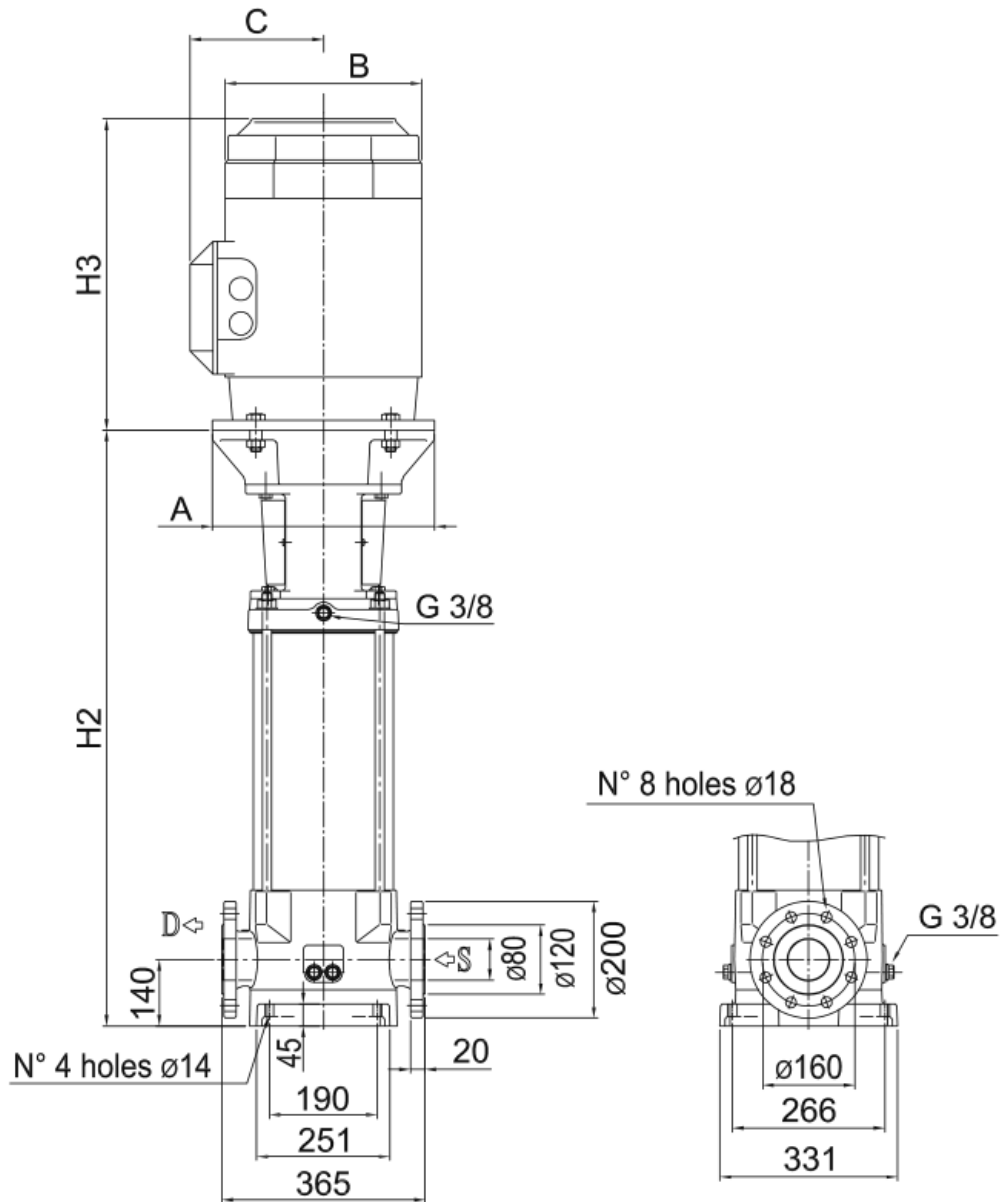
Water; 20°C; 998.3kg/m³; 1mm²/s



Dimensions

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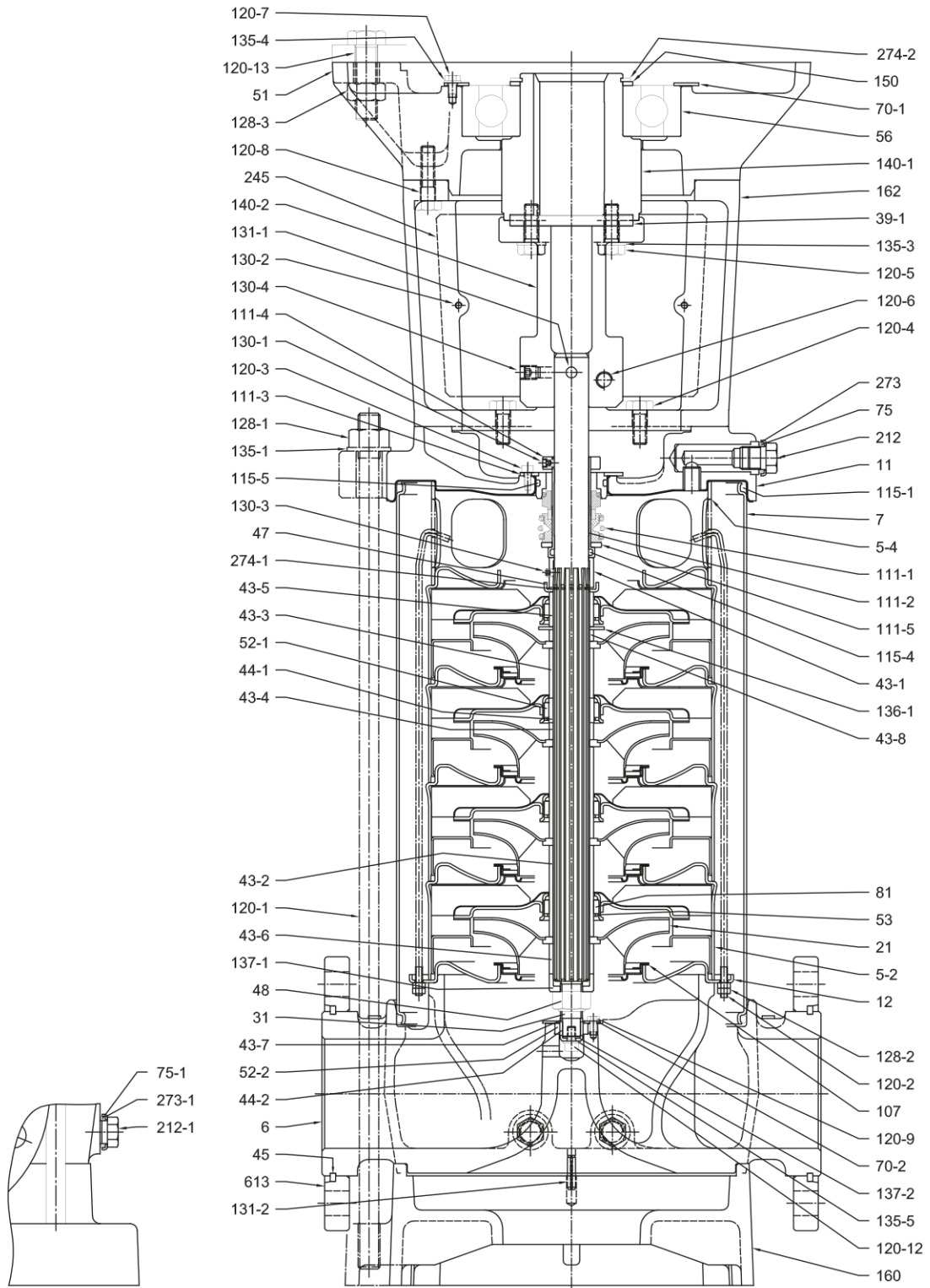
Dimensions in		mm						
1	H2	822						
2	Weight P&M	[162].9 kg						
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								

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Construction

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Pump with single ball bearing

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Construction

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N°	PART NAME	MATERIAL		DIMENSIONS	STANDARD	
		EVM	EVML			
5-2	Intermediate casing	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 1.4308 (ASTM CF8)	EN 1.4408 (ASTM CF8M)			
7	Outer casing	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
11	Casing cover	Cast iron + EN 1.4301 (AISI 304)	Cast iron + EN 1.4404 (AISI 316L)			
12	Suction cover	EN 1.1301 (AISI304)	EN 1.4404 (AISI 316L)			
21	Impeller	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
31	Shaft	EN 1.4404 (AISI 316L)				
39-1	Key	Carbon steel		12X8X90	UNI 6604	
43-1	Shaft sleeve (mechanical seal)	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
43-2	Shaft sleeve (intermediate)	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
43-3	Shaft sleeve (bearing)	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)			
43-5	Shaft sleeve (last stage)	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
43-6	Shaft sleeve (adjustment)	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
43-7	Shaft sleeve	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
43-8	Shaft sleeve (discharge-lower)	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
44-1	Shaft sleeve bearing	Tungsten carbide				
44-2	Bearing sleeve (bottom bearing)	Tungsten carbide				
45	Flange holder	EN 1.402 (AISI 420)				
47	Ring holder	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
48	Impeller nut	A2-70 UNI 7323 with inox insert	A4-70 UNI 7323 with inox insert	M16		
51	Motor adapter	Cast iron EN-GJL-200-EN 1561				
52-1	Bearing	Tungsten carbide				
52-2	Bearing	Tungsten carbide				
53	Bush holder	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
56	Ball bearing	[1]				
70-1	Ring for bearing	EN 1.4301 (AISI 304)				
70-2	Ring for bearing	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
75	O-Ring (plug)	EPDM	FPM			
75-1	O-Ring (plug)	EPDM	FPM			
81	Bush	PTFE				
107	Liner ring	PTFE /EN 1.4401 (AISI316)				
111-1	Mechanical seal	[2]				
111-2	Mechanical seal cartridge	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
111-3	Mechanical seal seat	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
111-4	Seal holder	Brass OT 58 UNI 5705	EN 1.4404 (AISI 316L)			
111-5	Adjusting ring	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			
115-1	O-Ring (outer casing)	EPDM	FPM	D.240 66X5.34		
115-4	O-Ring (cartridge sleeve)	EPDM	FPM	D.24.99X3.53		
115-5	O-Ring (seal cover)	EPDM	FPM	D.44.04X3.53		
120-1	Tie Rod	Galvanized steel 6.8 strenght class ISO 898/1				
120-2	Tie Rod	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
120-3	Screw	A2-70 UNI 7323		M5X10	UNI 5931	
120-4	Screw	Galvanized steel 8.8 strenght class ISO 898/1		M10X25	UNI 5739	
120-5	Screw for coupling	Galvanized steel 8.8 strenght class ISO 898/1		M10X30	UNI 5739	
120-6	Screw for coupling	EVM 45 1	Galvanized steel 8.8 strenght class ISO 898/1	M8X20	UNI 5931	
120-7	Screw	EVM 45 2 to 6	Galvanized steel 8.8 strenght class ISO 898/1	M12X30	UNI 5931	
120-8	Screw	EVM 45 1	Galvanized steel 8.8 strenght class ISO 898/1	M6X10	UNI 5739	
120-9	Screw	EVM 45 2 to 6	Galvanized steel 8.8 strenght class ISO 898/1	M12X25	UNI 5739	
120-9	Screw	EVML	EN 1.4301 (AISI 304)	M10X30	UNI 5739	
120-12	Screw	EVM	EN 1.4301 (AISI 304)	M10X30	UNI 5739	
120-12	Screw	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)	M5X8	UNI 5737	
120-13	Screw for motor	EVM45 1-0, 1-1	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)	M6X20	UNI 5931
120-13	Screw for motor	EVM45 6	Galvanized steel 8.8 strenght class ISO 898/1		M12X30	UNI 5739
120-13	Screw for motor	EVM45 2 to 5-3	Galvanized steel 8.8 strenght class ISO 898/1		M16X55	UNI 5737
120-13	Screw for motor		Galvanized steel 8.8 strenght class ISO 898/1		M16X65	UNI 5739
128-1	Nut for tie rod	Galvanized steel		M16	UNI 5588	
128-2	Nut	Carbon steel	EN 1.4401 (AISI 316)	M5	UNI 5588	
128-3	Nut	Galvanized steel		M16	UNI 5588	
130-1	Set screw	A2-70 UNI 7323		M6X8	UNI 5923	
130-2	Screw for coupling guard	A2-70 UNI 7323		M5X6	UNI 7687	
130-3	Set screw	A2-70 UNI 7323		M6X6	UNI 5923	
130-4	Set screw	Carbon steel		M10X10	UNI 5923	
131-1	Pin for shaft	Carbon steel				
131-2	Elastic pin	Galvanized steel		6X25	UNI 6873	
135-1	Washer	Galvanized steel		17X30X3	UNI 6592	
135-3	Washer	Galvanized steel		10.5X17.5X2.2	UNI 1751	
135-4	Washer	Plated carbon steel		6.4	UNI 1751	
135-5	Washer	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			
136-1	Stopper ring	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
137-1	Impeller spacer	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			
137-2	Shaft spacer	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
140-1	Motor coupling	Carbon steel				
140-2	Coupling (pump side)	Carbon steel				
150	Spacer	Carbon steel				
160	Base	Cast iron EN-GJL-200 EN1561				
162	Mator bracket	Cast iron EN-GJL-200 EN1561				
212	Plug	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
212-1	Plug	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
245	Coupling guard	EN 1.4301 (AISI 304)				
273	Plug washer	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
273-1	Plug washer	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			
274-1	C-type snap ring	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)	D.26	UNI 7435	
274-2	C-Typr snap ring	EVM45 1-0, 1-1	Carbon steel TC80		D.50	UNI 7435
274-2	C-Typr snap ring	EVM45 2 to 4-3	Carbon steel TC80		D.65	UNI 7435
274-2	C-Typr snap ring	EVM45 4-2	Carbon steel TC80		D.75	UNI 7535
613	Flange	Carbon steel				

[1] See CONSTRUCTION 3
[2] See CONSTRUCTION 4

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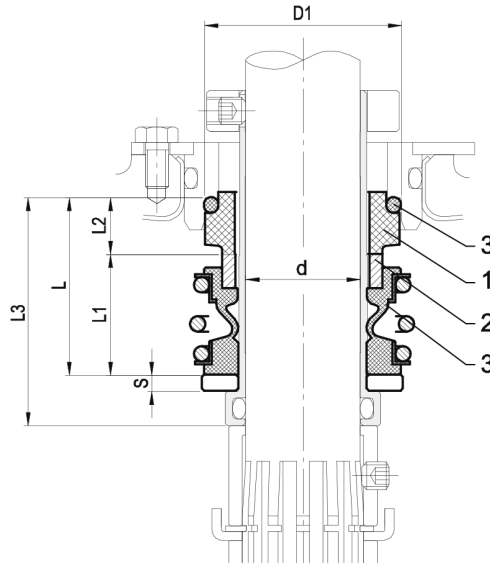
Pump Type	N°																												
	5-2	11	21	21-1	39-1	43-2	43-3	43-4	44-1	52-1	53	56	70-1	81	107	120-4	120-5	120-7	128-3	129	135-3	135-4	136	140	140-1	140-2	150	274-2	274-3
EVM(L)45 2-2F6/11	2	1	/	2	1	1	/	/	/	/	2	1	1	2	2	4	4	3	4	/	4	3	/	/	1	1	1	1	/
EVM(L)45 2-1F6/11	2	1	1	1	1	1	/	/	/	/	2	1	1	2	2	4	4	3	4	/	4	3	/	/	1	1	1	1	/
EVM(L)45 2-0F6/15	2	1	2	/	1	1	/	/	/	/	2	1	1	2	2	4	4	3	4	/	4	3	/	/	1	1	1	1	/
EVM(L)45 3-3F6/15	3	1	/	3	1	2	/	/	/	/	3	1	1	3	3	4	4	3	4	/	4	3	/	/	1	1	1	1	/
EVM(L)45 3-2F6/15	3	1	1	2	1	2	/	/	/	/	3	1	1	3	3	4	4	3	4	/	4	3	/	/	1	1	1	1	/
EVM(L)45 3-1F6/18.5	3	1	2	1	1	2	/	/	/	/	3	1	1	3	3	4	4	3	4	/	4	3	/	/	1	1	1	1	/
EVM(L)45 3-0F6/22	3	1	3	/	1	2	/	/	/	/	3	1	1	3	3	4	4	3	4	/	4	3	/	/	1	1	1	1	/
EVM(L)45 4-3F6/18.5	4	1	1	3	1	2	1	1	1	1	4	1	1	3	4	4	4	3	4	/	4	3	/	/	1	1	1	1	/
EVM(L)45 4-2F6/22	4	1	2	2	1	2	1	1	1	1	4	1	1	3	4	4	4	3	4	/	4	3	/	/	1	1	1	1	/

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Size [mm]	Max operating pressure [bar]	d [mm]	D1 [mm]	L [mm]	L1 [mm]	L2 [mm]	L3 [mm]	S [mm]	Material		
									1 Stationary Seal Ring	2 Rotary Seal Ring	3 Rubber
25	25	25	43	39	26.5	12.5	50	3.5	Carbon graphite	Silicon carbide	FPM