

# Technical data

Pump name (\*See Product description)EVM45 1-0F5/4

Customer	Date	2024-06-13	Company
Contact	Item no.		Issued by
Phone	Project		Phone
E-mail	Project ID	Project redenumit 2024-06-13 20:42:	E-mail

## Requested data

1	Pump type	VERTICAL PUMPS	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	(*See Product description)EVM45 1-0F5/4.0	Frequency Hz	50	
10	Design	VERTICAL PUMPS	Installation type	STANDARD	
11	Manufacturer	EBARA	Impeller Diameter	Max. mm	-
12	Speed rpm	2900		Designed mm	
13	No. of Stage	1		Min. mm	-
14	Connection Suction side		Flow	Operating m <sup>3</sup> /h	
15	Connection Discharge side			Max- m <sup>3</sup> /h	60
16	Max Working Pressure bar	16		Min- m <sup>3</sup> /h	21
17	Shut-off head bar	2.65	Head	Operating m	
18	Total weight kg	See the table of "Dimensions".		- (Qmax.) m	13.3
19	Shaft power kW			- (Qmin.) m	25.7
20			Max. Shaft Power at max. impeller kW	3.64	
21	Required pump NPSH m		Efficiency %		

## Materials

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

## Motor

28	Manufacturer	ETM	Insulation class	F
29	Type	TEFC_EVM45 1-0F5/4.0_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	IP 55		
35				

## Remarks

# Performance curve

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## Requested data

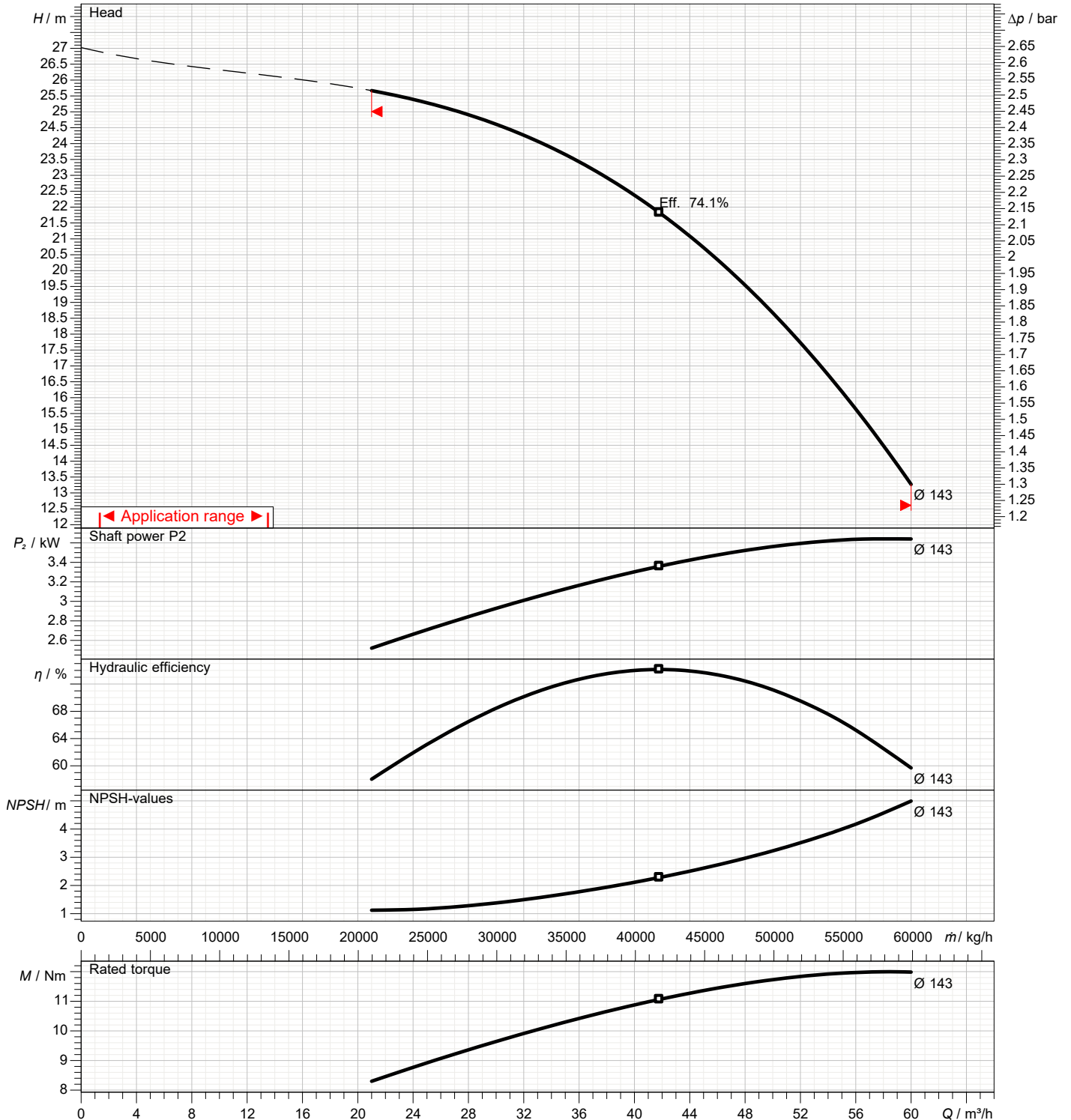
1	Flow	m <sup>3</sup> /h	
2	Head	m	
3	Geodetic head	m	

## Pump

Operating flow	m <sup>3</sup> /h		Impeller Diameter Designed	mm	
Operating head	m		Frequency	Hz	50
			Speed	rpm	2900

Test standard: ISO 9906:2012 - Grade3B

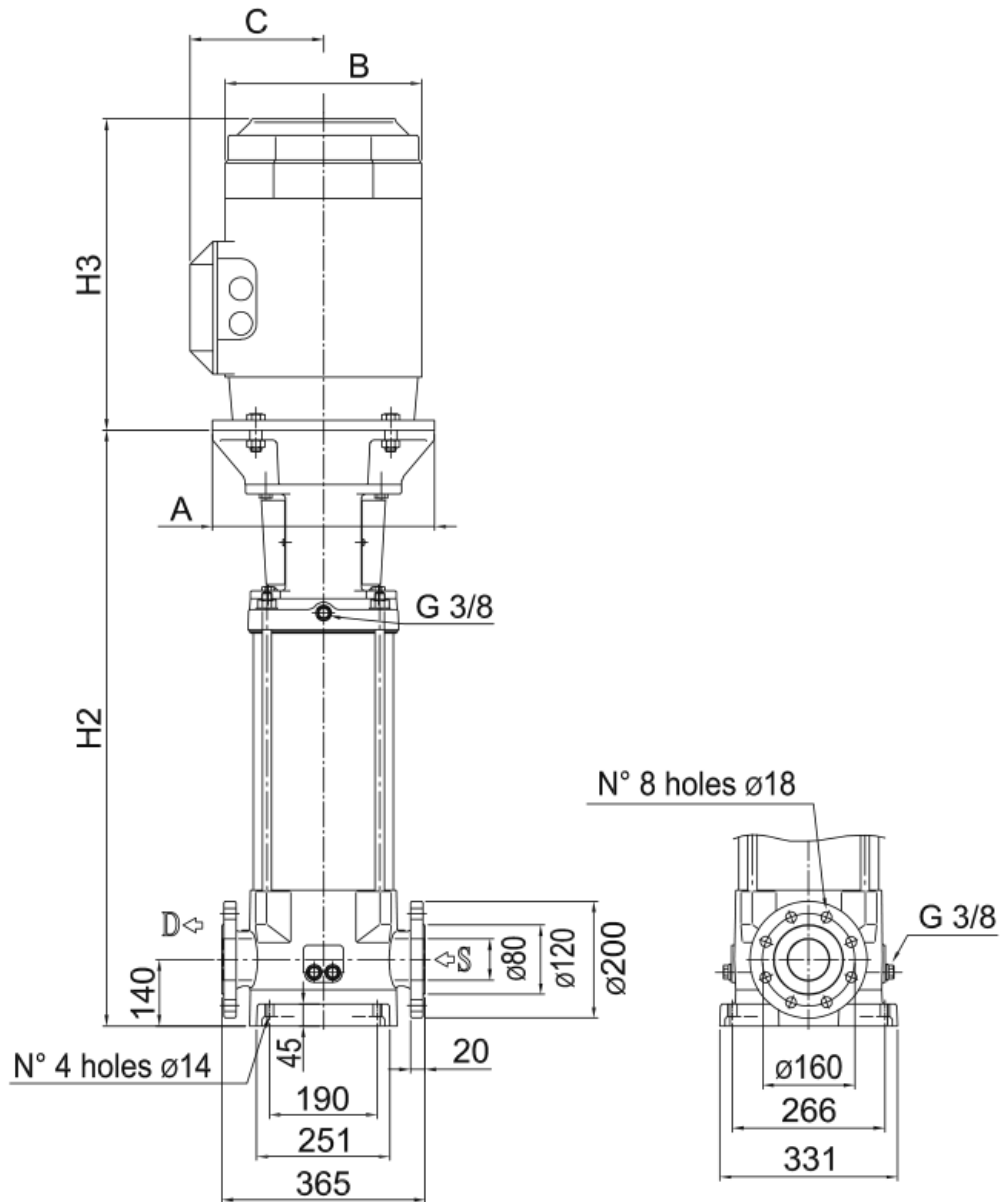
Water; 20°C; 998.3kg/m<sup>3</sup>; 1mm<sup>2</sup>/s



# Dimensions

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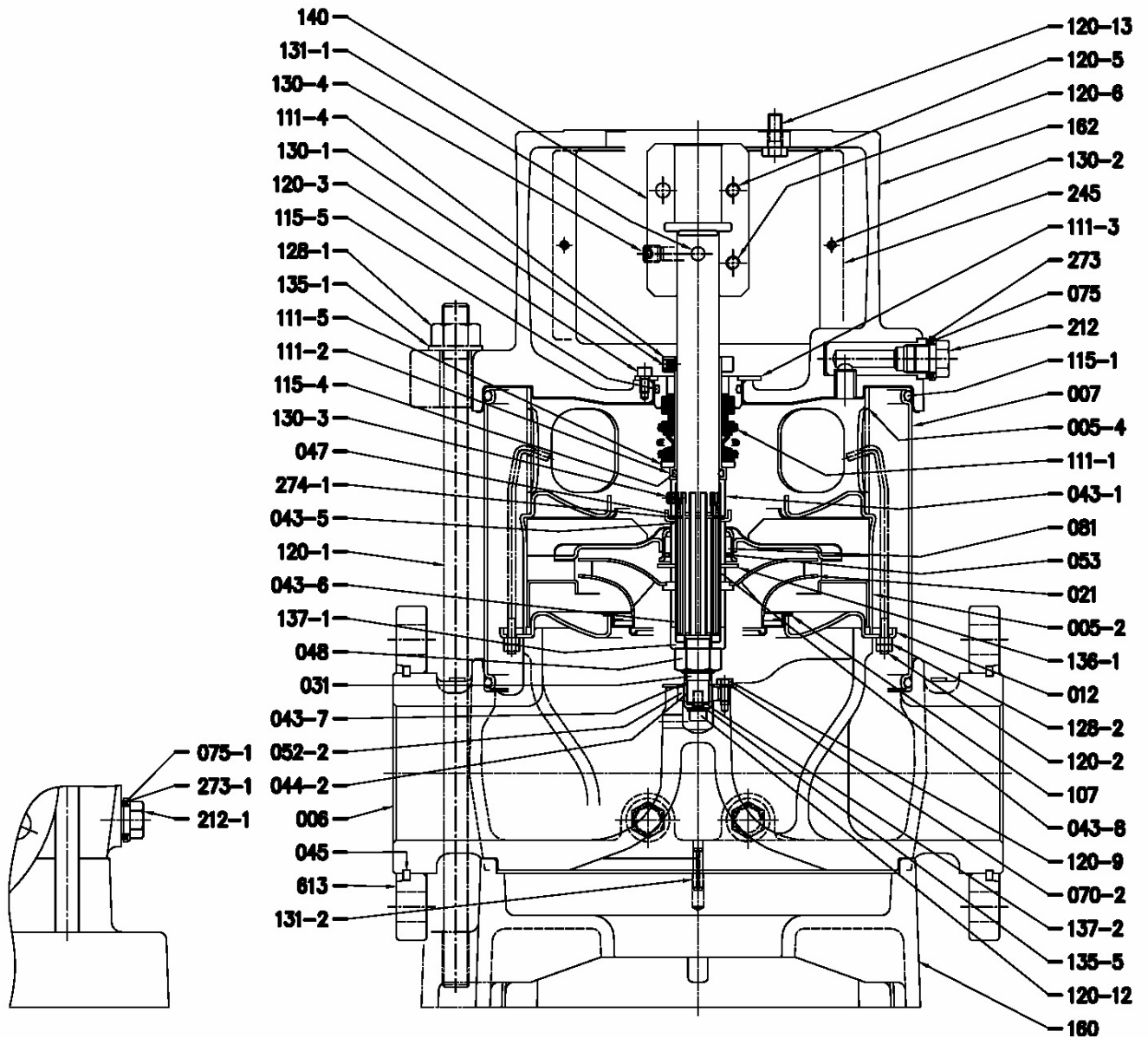
Dimensions in		mm						
1	A	160						
2	B	193						
3	C	138						
4	H2	525						
5	H3	364						
6	Weight P&M	100 kg						
7								
8								
9								
10								
11								
12								
13								
14								
15								

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# Construction

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# Construction

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N°	PART NAME	MATERIAL		DIMENSIONS	STANDARD	Q.TY
		EVM	EVML			
005-2	Intermediate casing	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			[1]
005-4	Discharge casing	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
006	Bottom casing	EN. 1.4308 (ASTM CF8)	EN. 1.4408 (ASTM CF8M)			1
007	Outer casing	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
012	Suction cover	EN. 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
021	Impeller	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
021-1	Reduced impeller	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			[1]
031	Shaft	EN 1.4401 (AISI 316)				1
043-1	Shaft sleeve (mechanical seal)	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
043-5	Shaft sleeve (last stage)	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
043-6	Shaft sleeve (adjustment)	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
043-7	Shaft sleeve	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
043-8	Shaft sleeve (discharge-lower)	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
044-2	Bearing sleeve (bottom bearing)	Tungsten carbide				1
045	Flange holder	EN 1.402 (AISI 420)				4
047	Ring holder	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
048	Impeller nut	A2-70 UNI 7323 with inox insert	A4-70 UNI 7323 with inox insert	M16		1
052-2	Bearing	Tungsten carbide				1
053	Bush holder	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			[1]
070-2	Ring for bearing	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
075	O-Ring (plug)	EPDM	FPM			1
075-1	O-Ring (plug)	EPDM	FPM			4
081	Bush	PTFE				[1]
107	Liner ring	PTFE /EN 1.4401 (AISI316)				[1]
111-1	Mechanical seal	Silicon carbide /Carbon/FPM				1
111-2	Mechanical seal cartridge	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
111-3	Mechanical seal seat	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
111-4	Seal holder	Brass OT 58 UNI 5705	EN 1.4401 (AISI 316)			1
111-5	Adjusting ring	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
115-1	O-Ring (outer casing)	EPDM	FPM	D.240.66x5.34		2
115-4	O-Ring (cartridge sleeve)	EPDM	FPM	D.24.99x3.53		1
115-5	O-Ring (seal cover)	EPDM	FPM	D.44.04x3.53		1
120-1	Tie Rod	Zincate steel 6.8 strenght class ISO 898/1				4
120-2	Tie Rod	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			2
120-3	Screw	A2-70 UNI 7323		M5x10	UNI 5931	4
120-5	Screw for coupling	EVM45 1-0 and 1-1	Zincate steel 8.8 strenght class ISO 898/1	M8x20	UNI 5931	[1]
120-6		EVM45 3 to 10		M10x30	UNI 5739	
120-6	Screw for coupling	EVM45 1 to 2	Zincate steel 8.8 strenght class ISO 898/1	M8x20	UNI 5931	2
120-9		EVM45 3 to 10		M12x30	UNI 5931	
120-9	Screw	EVML	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)	M5x8	UNI 5737
120-12		EVM			UNI 5739	
120-12	Screw	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)	M6x20	UNI 5931	1
120-13	Screw	EVM45 1-0, 1-1	Zincate steel 8.8 strenght class ISO 898/1	M8x20	UNI 5739	4
120-13		EVM45 2-0, 2-2		M12x30	UNI 5739	
120-13		EVML45 9-0, 10-0, 10-2		M6x10	UNI 5739	
120-13		EVM45 9-0, 10-0, 10-2		M16x55	UNI 5737	
120-13		EVM45 3-0 to 9-2		M16x65	UNI 5739	
128-1	Nut for tie rod	Zincate steel		M16	UNI 5588	4
128-2	Nut	Carbon steel	EN 1.4401 (AISI 316)	M5	UNI 5588	4
130-1	Set screw	A2- 70 UNI 7323		M6x8	UNI 5923	3
130-2	Screw for coupling guard	A2-70 UNI 7323		M5x6	UNI 7687	4
130-3	Set screw	A2- 70 UNI 7323		M6x6	UNI 5923	1
130-4	Set screw	Carbon steel		M10x10	UNI 5923	1
131-1	Pin for shaft	Carbon steel				1
131-2	Elastic pin	Zincate steel		6x25	UNI 6873	1
135-1	Washer	Zincate steel		17x30x3	UNI 6592	4
135-5	Washer	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
136-1	Stopper ring	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
137-1	Impeller spacer	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
137-2	Shaft spacer	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
140	Coupling	Brass OT 58 UNI 5705				[1]
160	Base	Cast iron EN-GJL-200 EN1561				1
162	Mator bracket	Cast iron EN-GJL-200 EN1561				1
212	Plug	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
212-1	Plug	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			4
245	Coupling guard	EN 1.4301 (AISI 304)				2
273	Plug washer	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			1
273-1	Plug washer	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)			4
274-1	C-type snap ring	EN 1.4301 (AISI 304)	EN 1.4401 (AISI 316)	D.26	UNI 7435	1
613	Flange	Carbon steel				2

[1] See table on CONSTRUCTION 3

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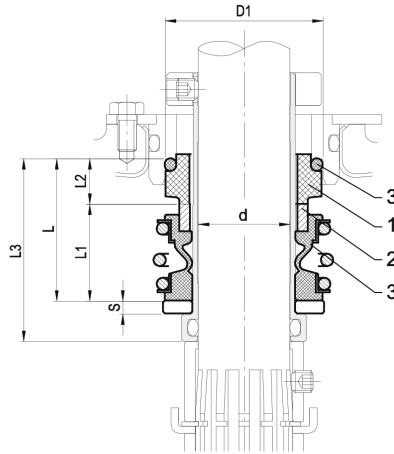
Pump Type EVM(.)	Quantity for model																														
	005-2	011	021	021-1	039-1	043-2	043-3	043-4	044-1	051	052-1	053	056	070-1	081	107	120-4	120-5	120-7	120-8	128-3	129	135-3	135-4	136	140	140-1	140-2	150	274-2	274-3
45 1-1F5/3.0	1	/	/	1	/	/	/	/	/	/	/	1	/	/	1	1	/	2	/	/	/	/	/	/	1	1	/	/	/	/	/
45 1-0F5/4.0	1	/	1	/	/	/	/	/	/	/	/	1	/	/	1	1	/	2	/	/	/	/	/	/	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