

Technical Data

Pump Name

3LM 50-160/156

Customer	Date	2024-06-20	Company
Contact	Item no.		Issued by
Phone	Project		Phone
E-mail	Project ID	Proiect redenumit 2024-06-20 10:03:09	E-mail

Requested data

1	Pump type		CENTRIFUGAL PUMPS	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		3LM 50-160/156	Frequency	Hz	60
10	Design		CENTRIFUGAL PUMPS	Installation type		STANDARD
11	Manufacturer		EBARA	Impeller Diameter	Max. mm	166
12	Speed	rpm	3480		Designed mm	166
13	No. of Stage		1		Min. mm	166
14	Connection	Suction side	DIN 2532	Flow	Operating m³/h	
15	Connection	Discharge side	DIN 2532		Max- m³/h	86
16	Max Working Pressure	bar	10		Min- m³/h	30
17	Shut-off head	bar	5.63	Head	Operating m	
18	Total weight	kg	See the table of "Dimensions".		- (Qmax.) m	39.0
19	Shaft power	kW			- (Qmin.) m	56.2
20				Max. Shaft Power at max. impeller	kW	12.77
21	Required pump NPSH	m		Efficiency	%	

Materials

22	Impeller		AISI 316L			
23	Casing		AISI 316L			
24	Shaft		AISI 316L			
25						
26						
27						

Motor

28	Manufacturer		EPE Standard	Insulation class		F
29	Type		TEFC_3M 50-160/156_380_Three Phase	Phases		3~
30	Specific design		IE2 / 60 Hz / Pole pairs 1	Frame size		
31	Rated power	kW	15	Weight	kg	
32	Number of poles		2	Electric voltage	V	380
33	Speed	rpm	3500	Electric current	A	27.1
34	Degree of protection		IP 55			
35						

Remarks

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Performance Curve

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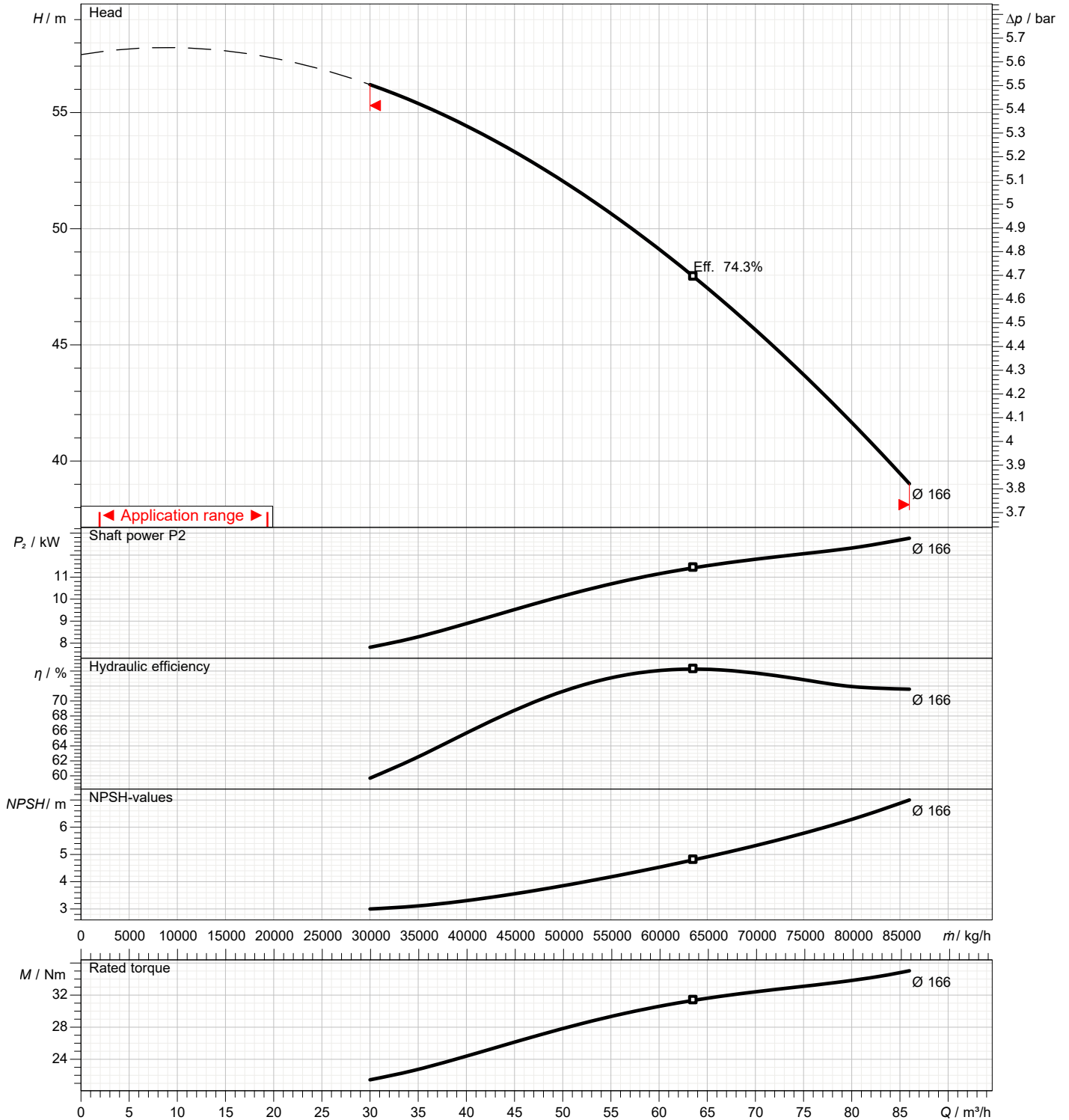
1	Flow	m³/h	
2	Head	m	
3	Geodetic head	m	

Pump

Operating flow	m³/h		Frequency	Hz	60
Operating head	m		Number of poles		2
Impeller diameter designed	mm	166	Speed	rpm	3480

Test standard: ISO 9906:2012 - Grade3B

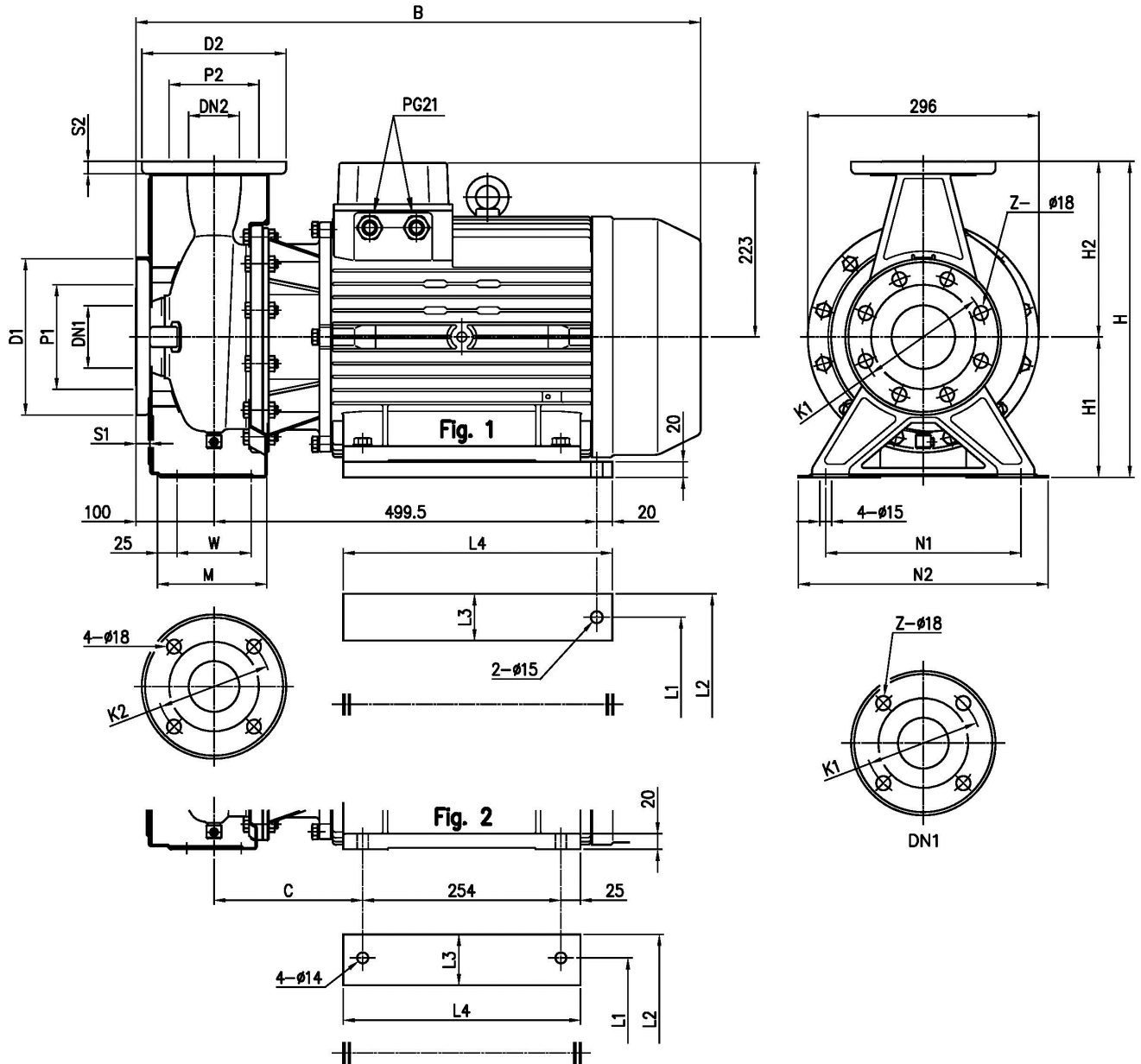
Water; 20°C; 998.3kg/m³; 1mm²/s



Dimensions

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Dimensions in		mm		
1	B	723	L2	318
2	C	190.5	L3	64
3	Dia D1	185	L4	304
4	Dia D2	165	M	115
5	Dia DN1	65	N1	212
6	Dia DN2	50	N2	265
7	Dia K1	145	S1	16
8	Dia K2	125	S2	16
9	Dia P1	115	W	70
10	Dia P2	95	Weight P&M	82,6 kg
11	Fig	2	Z	4
12	H	340		
13	H1	160		
14	H2	180		
15	L1	254		

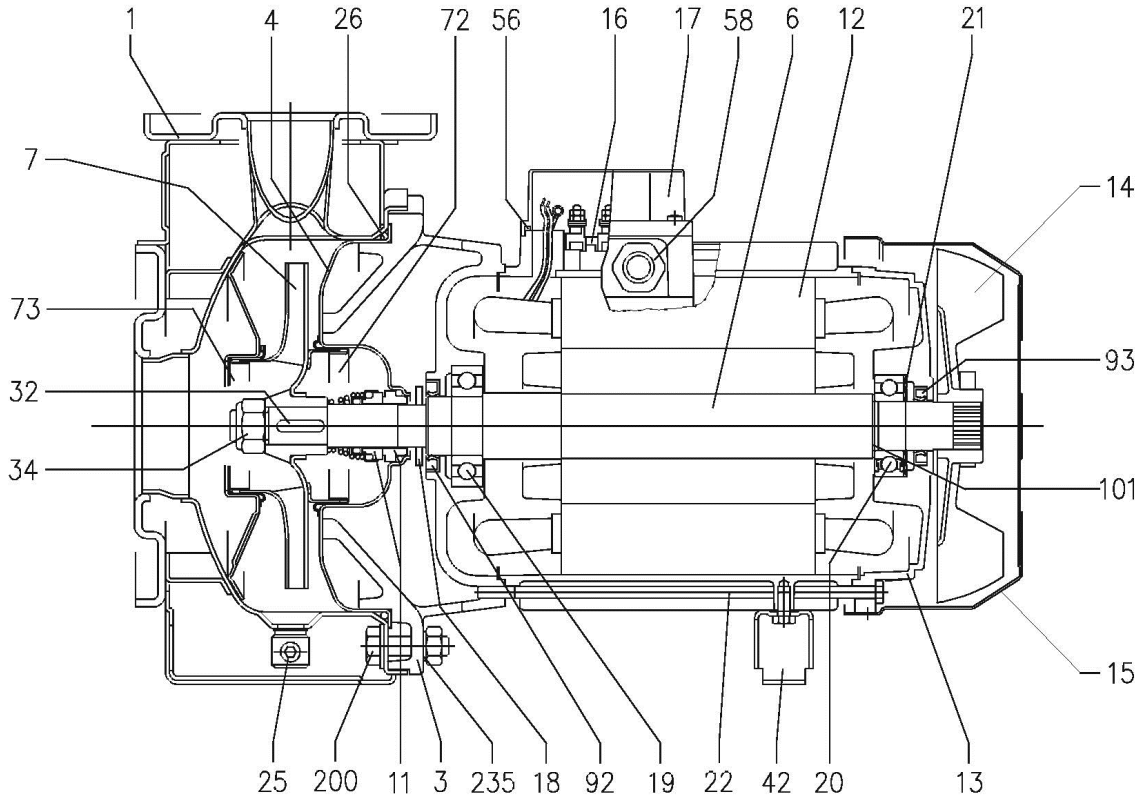
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Construction

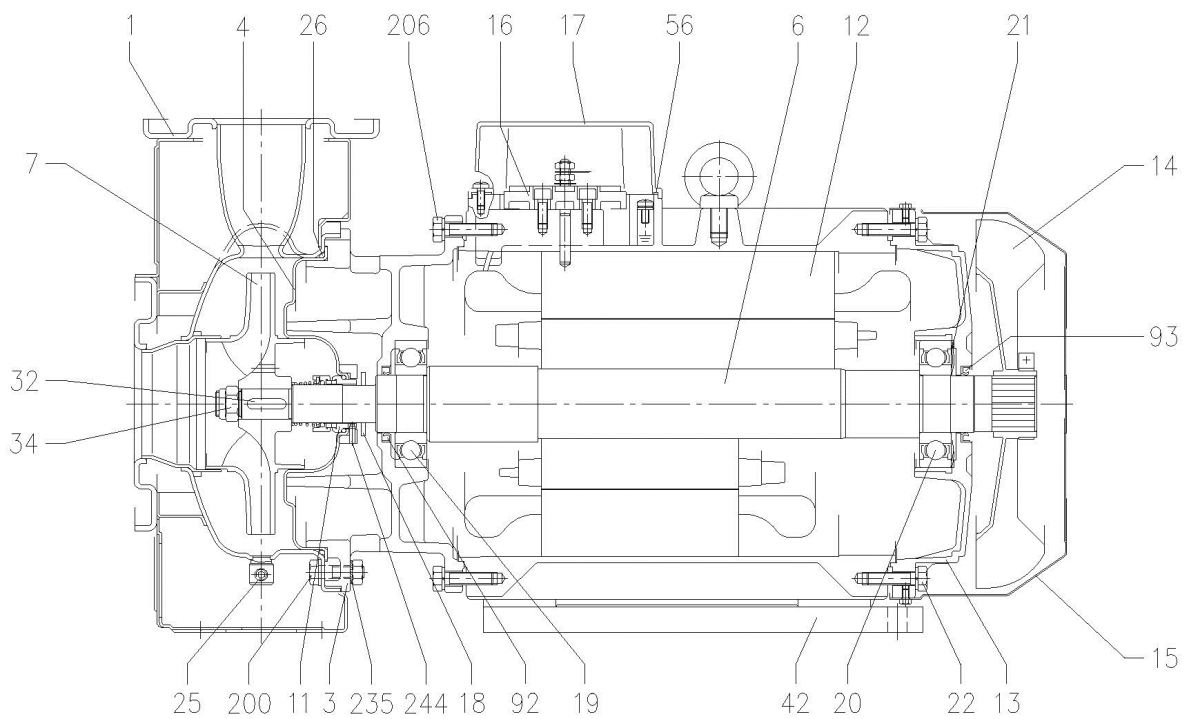
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UP TO 11 kW



15 kW AND ABOVE



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Construction

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N°	PART NAME	MATERIAL		DIMENSIONS	STANDARD	Q.TY	
		3M	3LM				
1	Casing	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1	
3	Motor bracket	[3]	-			1	
4	Casing cover	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1	
6	Shaft with rotor-Part in contact with liquid	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1	
7	Impeller	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)			1	
11	Mechanical seal	[5]	-			1	
12	Motor frame with stator		-			1	
13	Motor cover		Aluminium			1	
14	Fan		PA			1	
15	Fan cover		Fe P04 Zincate			1	
16	Terminal		-			1	
17	Terminal box cover		Aluminium (three phase version)			1	
18	Splash ring	NBR	-	40x21.5x3	EBARA DRAWING	[6]	
19	Bearing	[7]	-			1	
20	Bearing		-			1	
21	Adjusting ring		Steel C70			1	
22	Tie rod	For 2.2 - 3 kW For 4 - 5.5 - 7.5 kW For 9.2 - 11 - 15 kW	Fe 42 Zincate	M5 M6 M8	EBARA DRAWING	4	
25	Draing plug		EN 1.4401 (AISI 316) / PTFE	R 1/8" L=8	DIN 906	1	
26	O-ring	32-125, 40-125 40-160, 50-125 32-160, 32-200, 40-200, 50-160	NBR/FPM/EPDM FPM/EPDM	158.11x5.34 183.52x5.34 227.96x5.34	OR 6625 OR 6720 OR 6895	1	
32	Key		EN 1.4401 (AISI 316)	6x6x25	UNI 6604	1	
34	Impeller nut		A 270 EN ISO 35062	M16x1.5	UNI 7474	1	
42	Foot		Aluminium / Zincate steel		EBARA DRAWING	1	
56	Box gasket		NBR			1	
58	Fasting nut		-			1	
72	Casing ring	[1]	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		1	
73	Casing ring		EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)		1	
92	Lip seal	For 2.2 - 3 kW For 4 - 5.5 - 7.5 kW For 9.2 - 11 - 15 kW	-	-	25x40x7 30x47x7 40x55x7	DIN 3760 without spring	1
93	Lip seal	For 2.2 - 3 kW For 4 - 5.5 - 7.5 kW For 9.2 - 11 - 15 kW	-	-	25x40x7 30x47x7 40x55x7	DIN 3760 without spring	1
101	Snap ring (only for 9.2 - 11 - 15 kW)		Carbon tool steels TC 80	Ø 40	UNI 7435	1	
200	Screw	32-125, 40-125 32-160, 32-200, 40-160, 40-200, 50-125, 50-160	Stainless steel A2 70 class ISO 3506/1	M 8x30 M 10x35	UNI 5739 UNI 5739	8 [2]	
235	Washer	32-125, 40-125 32-160, 32-200, 40-160, 40-200, 50-125, 50-160	EN 1.4301 (AISI 304)	M8.4x17 M10.5x21	UNI 6592	8 [2]	

[1] For versions 32-200/5.56, 32-200/7.56, 40-200/5.5, 40-200/9.26, 40-200/156, 50-160/9.26, 50-160/156

[2] Quantity =10 for 32-160, 40-160, 50-125

Quantity =12 for 32-200, 40-200, 50-160

[3] Aluminium EN 1706 AC 46000 D for version, 40-200/9.26, 40-200/156, 50-160/9.26, 50-160/156

Cast iron EN-GJL-200-EN 1561 for other versions.

[4] See **MECHANICAL SEAL**, "O-ring" column, see CONSTRUCTION 3

[5] See **MECHANICAL SEAL**, see CONSTRUCTION 3

[6] Quantity =1, not for L version

[7] See **BEARINGS**, CONSTRUCTION 3

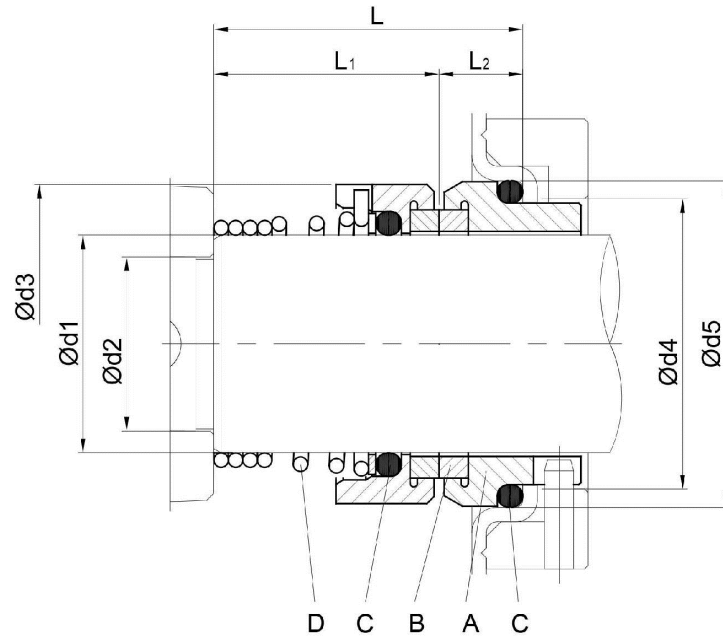
[8] CF8M – EN 1.4408 (AISI316) material for 65-125 up to 65-200

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Version	Pump type	Dimensions [mm]									Material Standard			
		d1	d2	d3	d4	d5	L	L1	L2	A Stationary seal ring	B Rotary seal ring	C O-ring	D Frame + spring	
L	32-125/160/200 40-125/160/200 50-125/160 65-125 65-160/7,56-9,26-116	22	19	36	31	37	37.5	27.5	9.5	SiC	SiC	FPM	EN 1.4401 (AISI 316)	