

# Technical data

Pump name 3M 40-160/3.0

Customer	Date 23-June-2020	Company
Contact	Item no.	Issued by
Phone	Project	Phone
E-mail	Project ID	E-mail

## Requested data

1	Pump type	CENTRIFUGAL PUMPS	Fluid	Water, clean
2	Number of pumps / Reserve	1 / 0	Liquid temperature	K 293
3	Flow	m <sup>3</sup> /h 0	Kin. viscosity	mm <sup>2</sup> /s 1
4	Head	m 0	Vapour pressure	kPa 2.2
5	Geodetic head	m 0	PH value	7
6	Inlet pressure (pin)	kPa 10	Density	kg/m <sup>3</sup> 1000
7	Available system NPSH	0	Solids	Weight % 0
8	Ambient temperature	K 290		

## Pump

9	Pump name	3M 40-160/3.0	Frequency	Hz 50
10	Design	CENTRIFUGAL PUMPS	Installation type	STANDARD
11	Manufacturer	EPE	Impeller Diameter	Max. mm 151
12	Speed	1/min 2900		Designed mm 151
13	No. of Stage	1		Min. mm 151
14	Connection Suction side	DIN 2532	Flow	Operating m <sup>3</sup> /h
15	Connection Discharge side	DIN 2532		Max- m <sup>3</sup> /h 42
16	Max Working Pressure	kPa 1000		Min- m <sup>3</sup> /h 12
17	Shut-off head	kPa 303.58	Head	Operating m
18	Total weight	kg See the table of "Dimensions".		- (Qmax.) m 17.0
19	Shaft power	kW		- (Qmin.) m 29.5
20			Max. Shaft Power at max. impeller	kW 2.83
21	Required pump NPSH	m	Efficiency	%

## Materials

22	Impeller	AISI 304		
23	Casing	AISI 304		
24	Shaft	AISI 304		
25				
26				
27				

## Motor

28	Manufacturer	EPE Standard	Insulation class	F
29	Type	TEFC_3M40-160/3.0_230_Three Phase	Phases	3~
30	Specific design	IE3 / 50 Hz / Pole pairs 1	Frame size	
31	Rated power	kW 3	Weight	kg 0
32	Number of poles	2	Electric voltage	V 230
33	Speed	1/min 2900	Electric current	A 11.1
34	Degree of protection	IP 55		
35				

## Remarks

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# Performance curve Pump name 3M 40-160/3.0

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## Requested data

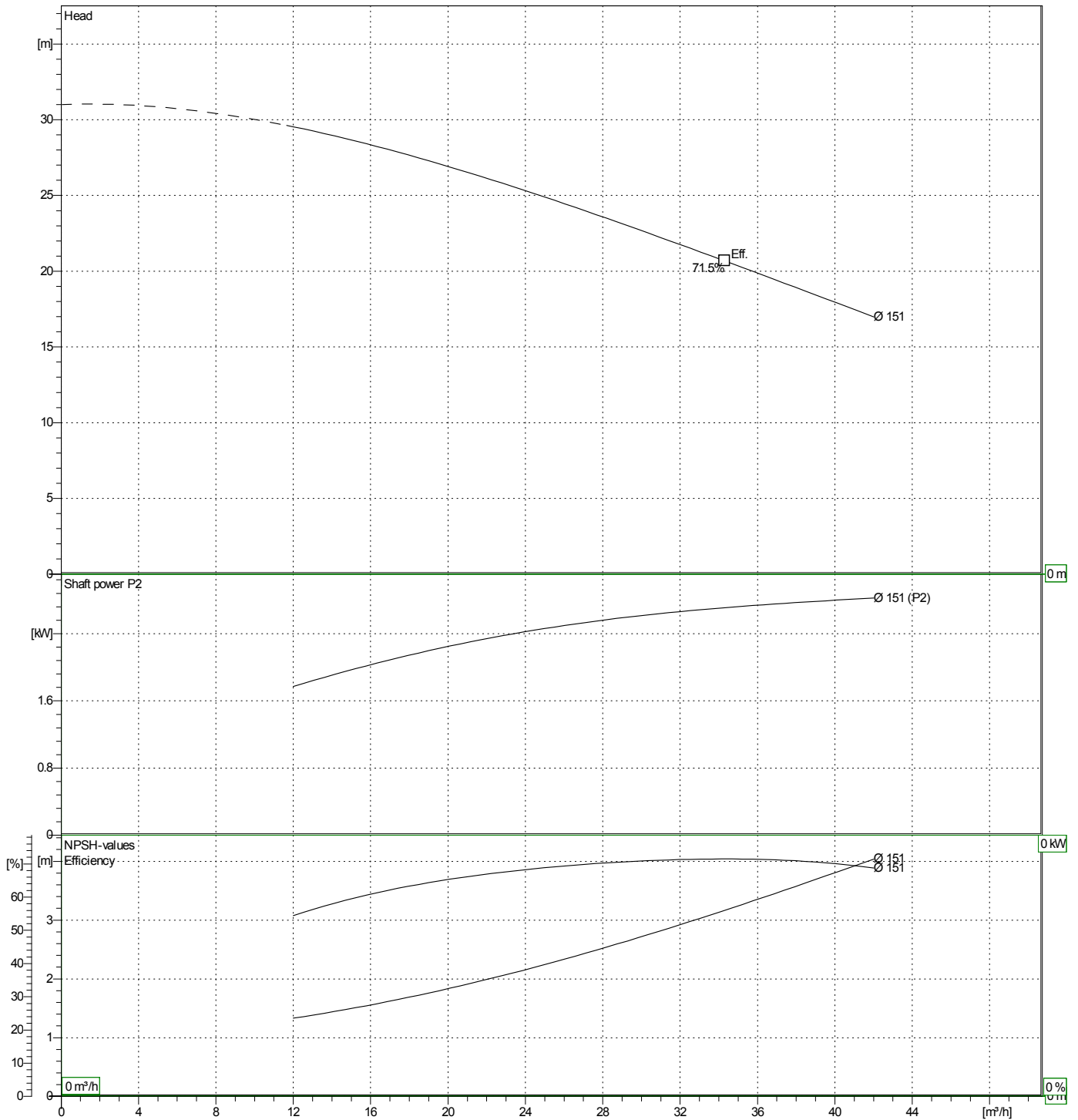
1	Flow	m <sup>3</sup> /h	0
2	Head	m	0
3	Geodetic head	m	0

## Pump

Operating Flow	m <sup>3</sup> /h	Frequency	Hz	50
Operating Head	m	Number of poles	2	
Impeller Diameter	Designed mm	151	Speed	1/min

Test standard: ISO 9906:2012 - Grade3B

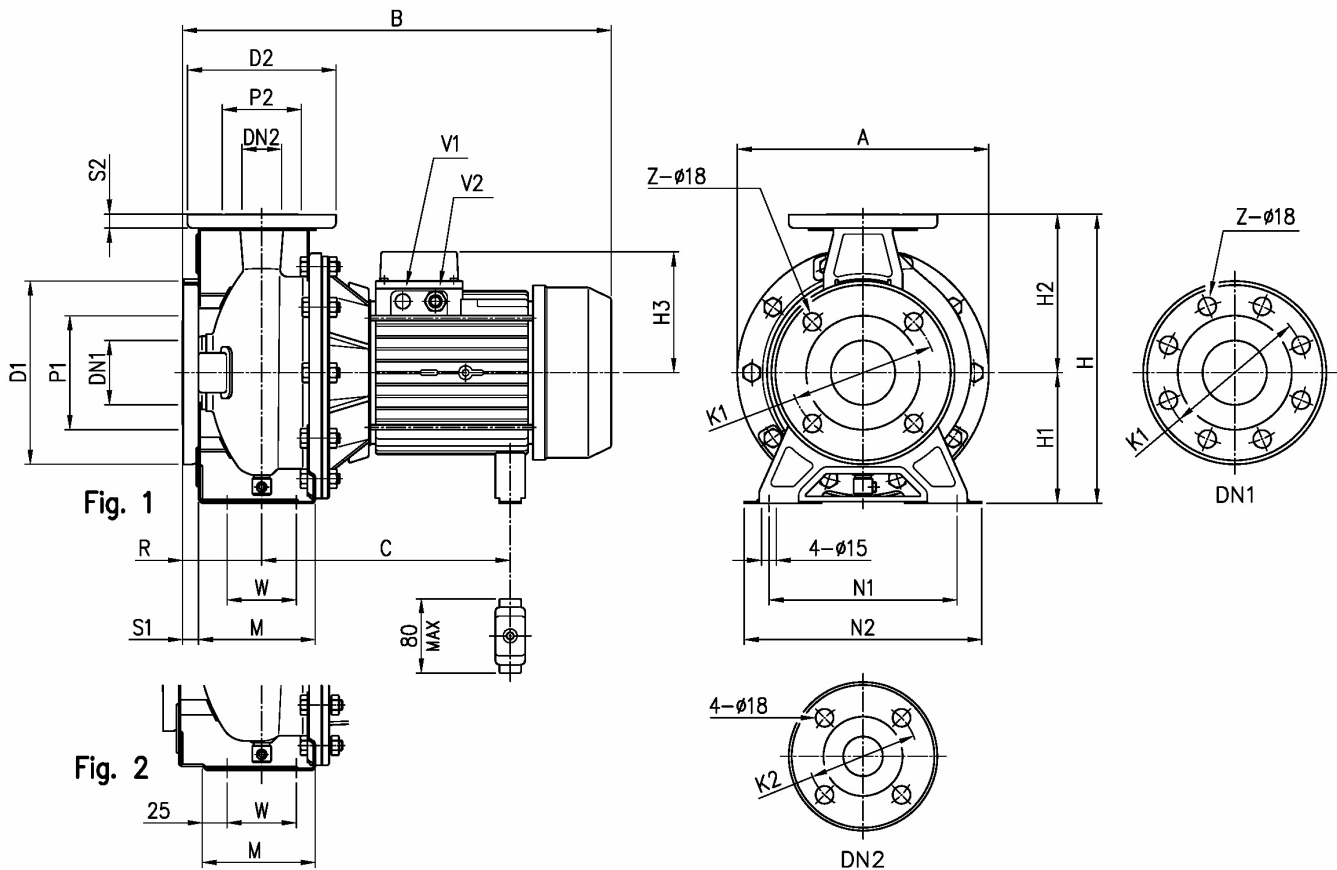
Water, clean [100%] ; 293K; 998.3kg/m<sup>3</sup>; 1mm<sup>2</sup>/s



# Dimensions

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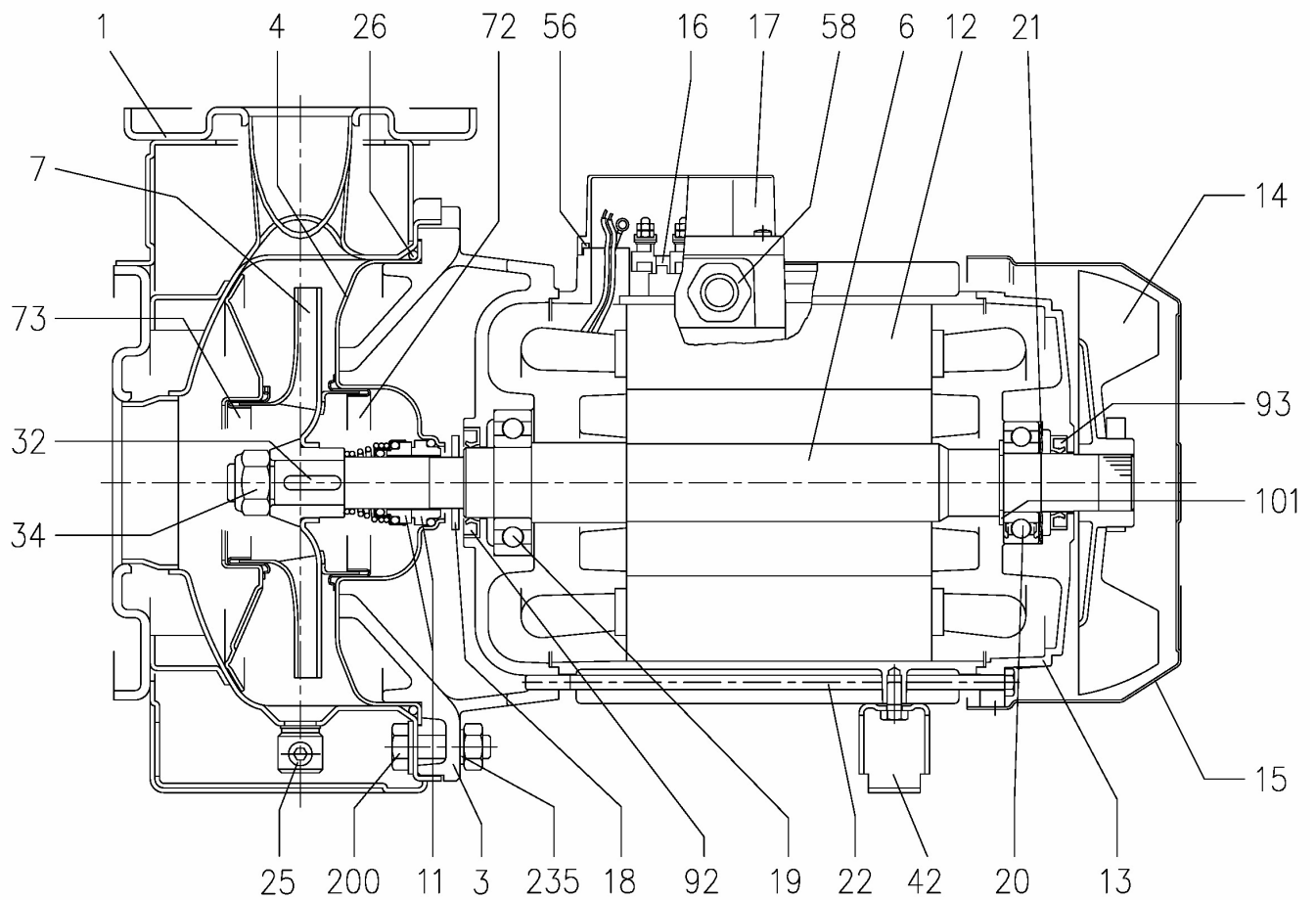


Dimensions in		mm						
1	A	254	H1	132				
2	B	471	H2	160				
3	C	244+255	H3	124				
4	Dia D1	185	M	118				
5	Dia D2	150	N1	190				
6	Dia DN1	65	N2	240				
7	Dia DN2	40	R	80				
8	Dia K1	145	S1	16				
9	Dia K2	110	S2	14				
10	Dia P1	115	V2	PG 13.5				
11	Dia P2	80	W	70				
12	Fig	1	Weight P&M	26.6 kg				
13	H	292	Z	4				

# (1/3) Construction

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(2/3)

# 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	[9]				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	Carbon/Ceramic/NBR	SiC/SiC/FPM	[8]		1
12	Motor frame with stator	-				1
13	Motor cover	Aluminium				1
14	Fan	PA				1
15	Fan cover	Fe P04 Galvanized				1
16	Terminal	-				1
17	Terminal box cover	Aluminium (three phase version)				1
18	Splash ring	NBR	/	40x21.5x3	EBARA DRAWING	1
				15 kW and above		
19	Bearing	-		See table p.324		1
20	Bearing	-		See table p.324		1
21	Adjusting ring	Steel C70				1
22	Tie rod	Fe 42 Galvanized	-	Up to 3 kW	EBARA DRAWING	4
				For 4 - 5.5 - 7.5 kW		
				9.2 e 11kW		
				Screw		
25	Draing plug	Galvanized Steel 8.8 strenght class ISO 898-1		M10x40	UNI 5739	1
26	"O" ring	NBR [7]	FPM	EN 1.4401 (AISI 316) / PTFE	R 1/8" L=8	DIN 906
				32-125, 40-125	158.11x5.34	OR 6625
				32-160, 40-160, 50-125	183.52x5.34	OR 6720
				32-200, 40-200, 50-160, 50-200, 65-160, 65-200	227.96x5.34	OR 6895
32	Key	EN 1.4401 (AISI 316)		A 6x6x25	UNI 6604	1
		Up to 11 kW	A 8x7x30			
34	Impeller nut	EN 1.4301 (AISI 304)	EN 1.4404 (AISI 316L)	Up to 11kW	UNI 7474	1
				50-200/15		
				15 kW and above		
				Screw		
42	Foot	Aluminium / Galvanized steel			EBARA DRAWING	[1]
56	Box gasket	NBR				1
58	Fasting nut	-				[2]
72	Casing ring [3]	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	-	-	Up to 3kW	DIN 3760 without spring	1
				From 4 to 7.5 kW		
				From 9.2 kW to 11 kW		
				From 15 kW to 22 kW		
093	Lip seal	-	-	Up to 4 kW	DIN 3760 without spring	1
				From 5.5 kW to 7.5 kW		
				From 9.2 kW to 11 kW		
				From 15 kW to 22 kW		
101	Snap ring (only 9.2 and 11kW)	Carbon tool steels TC 80		Ø 40	UNI 7435	1
200	Screw	Stainless steel A2 70 class ISO 3506/1	-	32-125, 40-125	M 8x30	UNI 5739
				40-160, 40-200, 50-125, 50-160, 50-200, 65-125, 65-160, 65-200	M 10x35	
				32-125, 40-125	8.4x17	
235	Washer	EN 1.4301 (AISI 304)	-	40-160, 40-200, 50-125, 50-160, 50-200, 65-125, 65-160, 65-201	10.5x21	UNI 6592
				8		
206	Screw for bracket [5]	Galvanized Steel 8.8 strenght class ISO 898-1		M 10x40	UNI 5739	4
244	Pin [6]	-	EN 1.4301 (AISI 304)	4x15		1

[1] Quantity =0 for 65-160/15

Quantity =1 for 32-40-50 and 65 up to 11kW

Quantity =2 for 65-200/15, 65-200/18.5, 65-200/22

[2] Quantity =1 up to 11kW

Quantity =2 from 15kW to 22kW

[3] For version 32-200/3, 32-200/4, 32-200/5.5, 40-200/5.5, 40-200/7.5, 40-200/11, 50-160/5.5, 50-160/7.5, 50-200/9.2, 50-200/11, 50-200/15

[4] Quantity =10 for 32-160, 40-160, 50-125, 65-125

Quantity =12 for 32-200, 40-200, 50-160, 50-200, 65-160, 65-200

[5] For 15kW and above

[6] Only for 65-160/15 and 65-200

[7] FPM for H-HS-HW-HSW version

EPDM for E version, Q1AEGG, Q1Q1EGG, Q1U3EGG, U3CEGG, U3U3EGG (U3U3EGG not available for model 65-160/15 and 65-200)

[8] Special version: see CONSTRUCTION 3

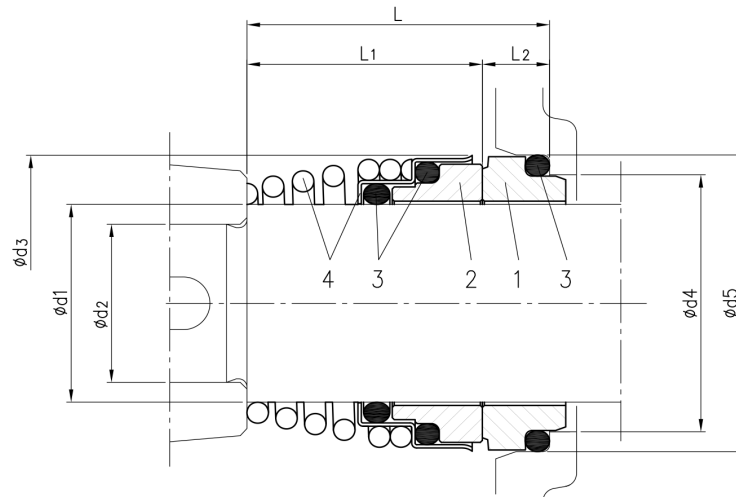
[9] Cast iron EN-GJL-200-EN 1561 for 32-200/3 and models with 15, 18.5, 22 kW motor

Aluminum AL-EN-1706-AC-46000-D for all the others.

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Version	Pump type	Dimensions								Material			
		d1	d2	d3	d4	d5	L	L1	L2	1 Stationary seal ring	2 Rotary seal ring	3 Rubber	4 Frame + Spring
Standard	32-125/160/200	22	19	38	31	37	37.5	27.5	10	Carbon	Ceramic	NBR	EN 1.4401 (AISI 316)
	40-125/160/200												
	50-125/160/200												
	65-125												
	65-160/7.5-9.2-11												
65-160/15	30	24	46	39	45	42.5	32.5	10					
65-200													