

# Technical Data

Pump Name

3ES 40-160/1.5

Customer	Date	09.06.2024	Company
Contact	Item no.		Issued by
Phone	Project		Phone
E-mail	Project ID		E-mail

## Requested data

1	Pump type	Inline vertical	Fluid	Water
2	Number of pumps / Reserve	1 / 0	Liquid temperature	°C
3	Flow	m³/h	Kin. viscosity	cSt
4	Head	m	Vapour pressure	kPa
5	Geodetic head	m	PH value	
6	Inlet pressure (pin)	kPa	Density	kg/m³
7	Available system NPSH		Solids	Weight %
8	Ambient temperature	°C		

## Pump

9	Pump Name	3ES 40-160/1.5	Frequency	Hz	50	
10	Design	Inline vertical	Installation type		With motor	
11	Manufacturer	EBARA	Impeller Diameter	Max.	mm	
12	Speed	rpm		2900	Designed	mm
13	No. of Stage	1		Min.	mm	151
14	Connection	Suction side	EN	16k	Flow	
15	Connection	Discharge side	EN	16k		Operating
16	Max Working Pressure	kPa	1600	Max-		m³/h
17	Shut-off head	kPa	280.48	Head	Min-	
18	Total weight	kg	See the table of "Dimensions".		Operating	m
19	Shaft power	kW			- (Qmax.)	m
20				- (Qmin.)	m	
20			Max. Shaft Power at max. impeller	kW	1.51	
21	Required pump NPSH	m	Efficiency	%		

## Materials

22	Impeller	AISI 304		
23	Casing	Cast iron		
24	Shaft	AISI 304(wet extension)		
25				
26				
27				

## Motor

28	Manufacturer	LAFERT	Insulation class	F	
29	Type	TEFC_3ES_2_1.5_230_1	Phases	3~	
30	Specific design	TEFC / 50 Hz / Pole pairs 1	Frame size	90S	
31	Rated power	kW	1.5	Weight	kg
32	Number of poles	2	Electric voltage	V	230
33	Speed	rpm	2900	Electric current	A
34	Degree of protection	IP55			
35					

## Remarks

# Performance Curve

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## Requested data

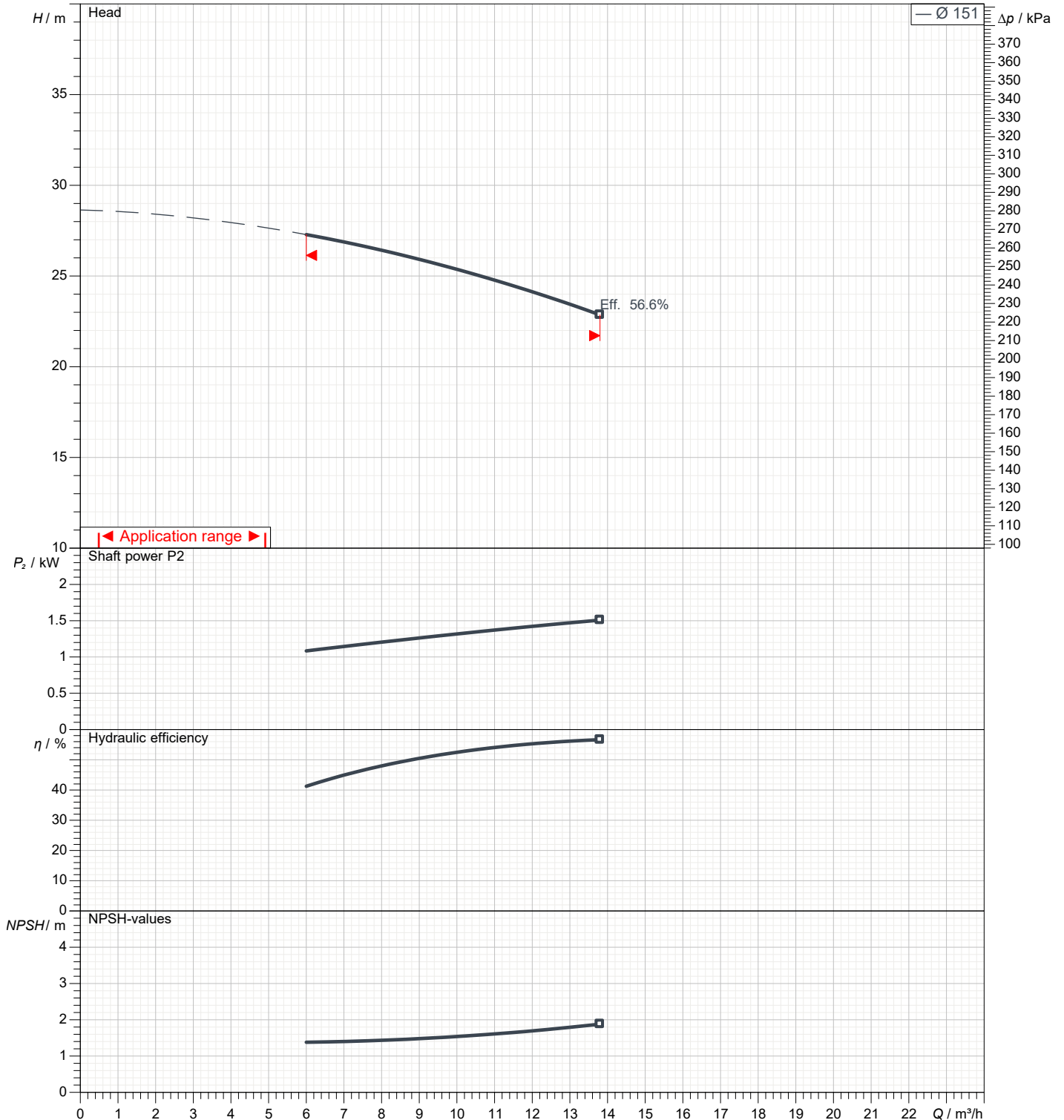
1	Flow	m³/h	
2	Head	m	
3	Geodetic head	m	

## Pump

Operating flow	m³/h	Frequency	Hz	50	
Operating head	m	Number of poles	2		
Impeller diameter designed	mm	151	Speed	rpm	2900

Test standard: ISO 9906:2012 - Grade3B

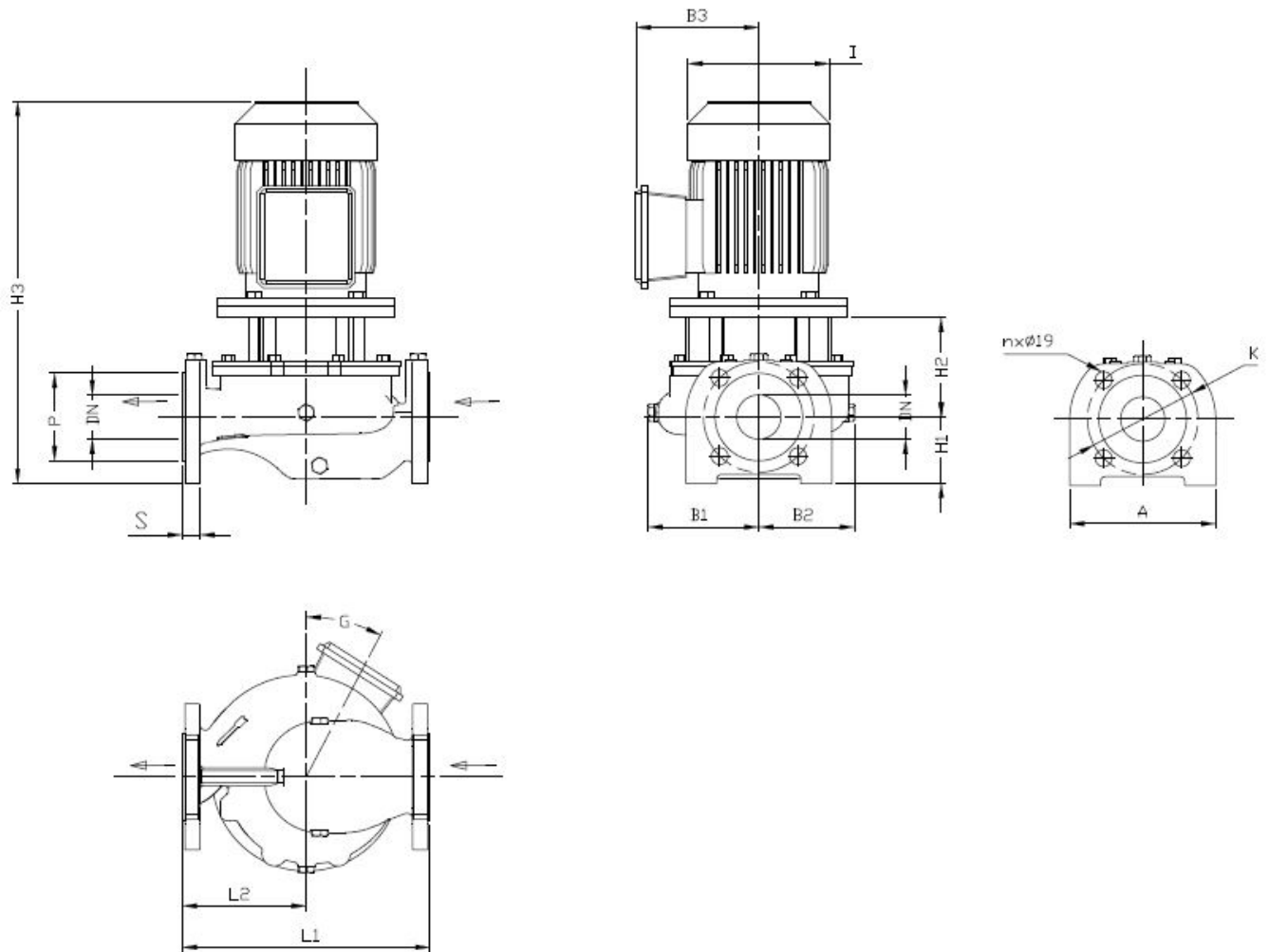
Water; 20°C; 998.3kg/m³; 1cSt



# Dimensions

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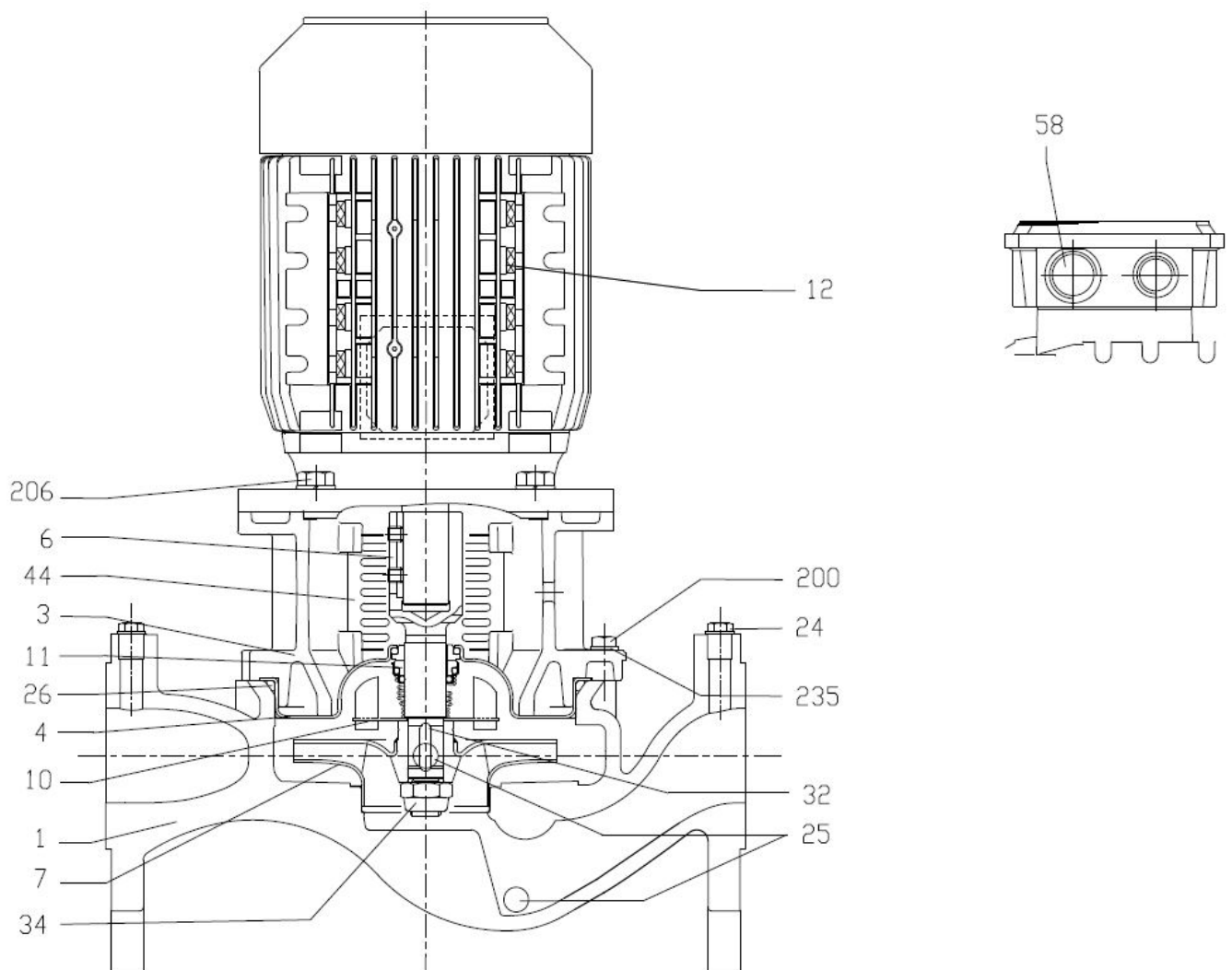
Dimensions in		mm						
1	A	150	Φ K	110				
2	B1	127	Φ P	84				
3	B2	127						
4	B3	148						
5	G	18						
6	H1	68						
7	H2	130						
8	H3	465						
9	I	180						
10	L1	320						
11	L2	160						
12	n	4(Num)						
13	S	18						
14	Weight P&M	32.5 kg						
15	Φ DN	40						

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# Construction

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# Construction

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No	PART NAME	MATERIAL	DIMENSIONS	STANDARD	QTY
1	Casing	Cast iron EN-GJL-200-EN 1561			1
3	Motor bracket [1]	Cast iron EN-GJL-200-EN 1561			1
4	Casing cover	EN 1.4301(AISI 304)			1
6	Coupling - Wet extensions	EN 1.4301(AISI 304)			1
7	Impeller	EN 1.4301(AISI 304)[5]			1
10	Baffle	EN 1.4301(AISI 304)			1
11	Mechanical seal [2]	-			1
12	Motor				1
24	Priming plug	Brass	G 1/4		2
25	Draining plug	Brass	G 1/4		4
26	O-ring	EPDM[3]	158.11x5.34	OR 6625	1
			183.52x5.34	OR 6720	
32	Key	EN 1.4401(AISI 316)	6x6x18	UNI 6604	1
34	Impeller nut	EN 1.4301(AISI 304)	M16x1.5	UNI 7474	1
44	Protection	EN 1.4301(AISI 304)		EBARA DRAWING	1
200	Screw	Gv. Steel 8.8 strength class ISO 898-1	M6x25	UNI 5739	8
			M6x30		
			M8x30		
			M 10x35		
206	Screw for bracket	Gv. Steel 8.8 strength class ISO 898-1	M10x25	UNI 5739	4
			M12x30		
235	Washer	Galvanized Steel	8.4x17	UNI 6592	8
			10.5x21		

[1] Cast iron EN-GJL-200-EN 1561 for motor of 0.75kW  
Aluminum AL-EN-1706-AC-46000-D for motor of 1.1 to 4kW

[2] See MECHANICAL SEAL pages

[3] FPM for Q1AVGG  
EPDM for Q1AEGG, Q4Q1EGG

[4] See 3ES COUPLING page

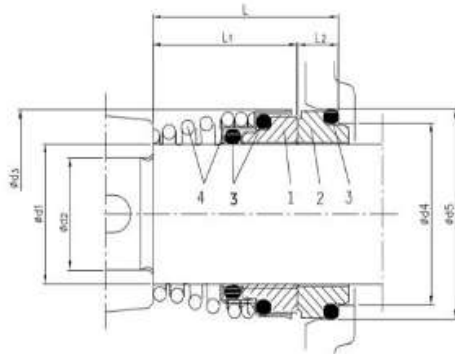
[5] CF8 impeller for 65-100 and 80-100

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Version	Pump type	Dimensions [ mm ]								Material			
		d1	d2	d3	d4	d5	L	L1	L2	1 Rotary seal ring	2 Stationary seal ring	3 Rubber	4 Frame + Spring
Standard (Q1AEGG)	32-125/160/200 50-100 65-100/0.55-0.75 40-160/200	15	12	26	21	26.9	29	22	7	Silicon Carbide	Metarised Carbon	EPDM	EN 1.4401 (AISI 316)
	50-125/160/200 65-100/1.1-1.5 65-125/160/200	22	19	36	31	37	37.5	27.5	10				
	80-100 80-160/9.2-11 80-160/15	30	24	46	39	45	42.5	32.5	10				
	80-200 100-160												