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Technical data

Offshore K12.590 - 5

With motor

NU 160-2/120-o

Project ID Untitled project 2025-03-03 23:00:00.495
Project name
Installation location
Customer pos. No.

Date 2025-03-04

Operating data specification

Pumped fluid	Water
Operating temperature t A	20 °C
pH at t A	
Density at t A	998.3 kg/m ³
Kin. viscosity at t A	1.005 mm ² /s
Rated frequency	50
Rated flow	
Rated head	
Geodetic head	
Max. inlet pressure	0 kPa
Installation type	Vertical installation

Duty point data

Volume flow	
Head	
Shaft power P ₂	P ₂
Hydr. efficiency η _{hyd.}	
Power input P ₁	P ₁
Required pump NPSH	
Rotational speed	2971 1/min

Pump

Make	WILO
Pump type	Offshore K12.590
Frame size	12" (Ø275 - Ø300)
Sense of rotation	Counter clockwise
Max. operating pressure	32.8 bar
Stages	5
Impeller type	Semi axial impeller
Shut off head	335 m
Max. shaft power	449 kW
Weight of unit	1583.3 kg
(without detachable Accessories)	

Discharge port

Pressure rating	PN40
Rated diameter	8" NPT I
Standard	ANSI B 1.20.1
Non-return valves	Yes

Impeller Ø

Max.	229 mm
Min.	184 mm
designed	229 mm

Flow

	Referring to: Speed in operating point
Nominal	174 l/s
Max-	220 l/s
Min-	0.103 l/s

Motor

	Referring to: Rated speed
Manufacturer / Type	NU 160-2/120-o
Specific design	NU (glycol filling)
Rated power	425 kW
Electric voltage	1000 ~3 V
Power input with rated power	471.2 kW
Current input with rated power	305.7 A
Number of poles	2
Rated speed	2972 1/min
Load	125 / 100 / 75 / 50 / 25 %
cos phi	0.89/0.89/0.88/0.86/0.73
cos phi with starting	0
Efficiency	91.3/90.2/88.4/85.1/77.4
Operation type (VDE 0530)	S1 immersed
Max. fluid temperature	40 °C
Min. flow velocity	0.1 m/s
Starting curr. d-o-l/ YD	1,560 A 520 A
Starting torque	1640 Nm
Inertia moment	1.0621 kg m ²
Starts per hour max.	5
Degree of protection	IP 68
Weight of motor	1311 kg
Motor connection cable	6X 1X35 + 1X35 S07BB

Application limits for operation with frequency inverter:

- Max. voltage rise: 500 V/μs
- Max. overvoltage (phase - phase): 1000 V

Pump materials - Material design

	C
Suction piece	1.4408
Stage- /guide casing	1.4408
Impeller	1.4408
Stationary wear ring	1.4470
Pump shaft	1.4462
clamp sleeve	1.4462
Shaft sleeve	1.4462
Bearing sleeve	EPDM
Connecting screws	A4
Nuts	A4

Motor materials

According to IEC 60034-1

Pump curves in accordance with ISO 9906: 2012 2B



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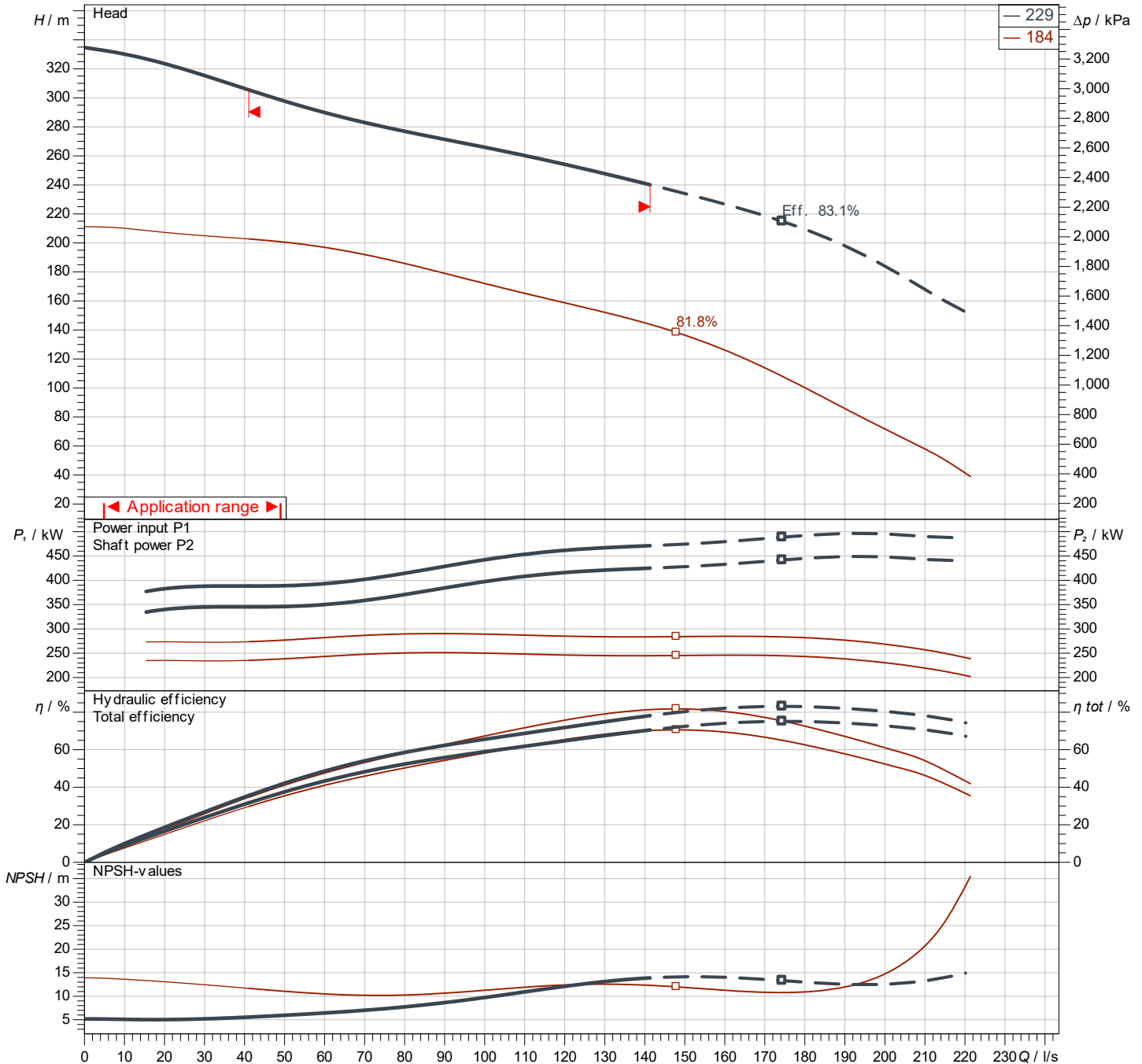
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Pump

Stages	5
Impeller Ø designed	229 mm
Nominal speed	2,900 1/min
Frequency	50 Hz
Impeller type	Semi axial impeller

Motor

Rated power	425 kW
Sel. explosion protection	

Duty point data

Volume flow	
Head	
Shaft power P2	P ₂
Hydr. efficiency η hyd.	
Power input P1	P ₁
Required pump NPSH	
Rotational speed	2971 1/min

Subject to change

Software version
Data version

Spaix® 5-2024.2 - 2024/09/18 (Build 140), 64 bit
21.11.2024

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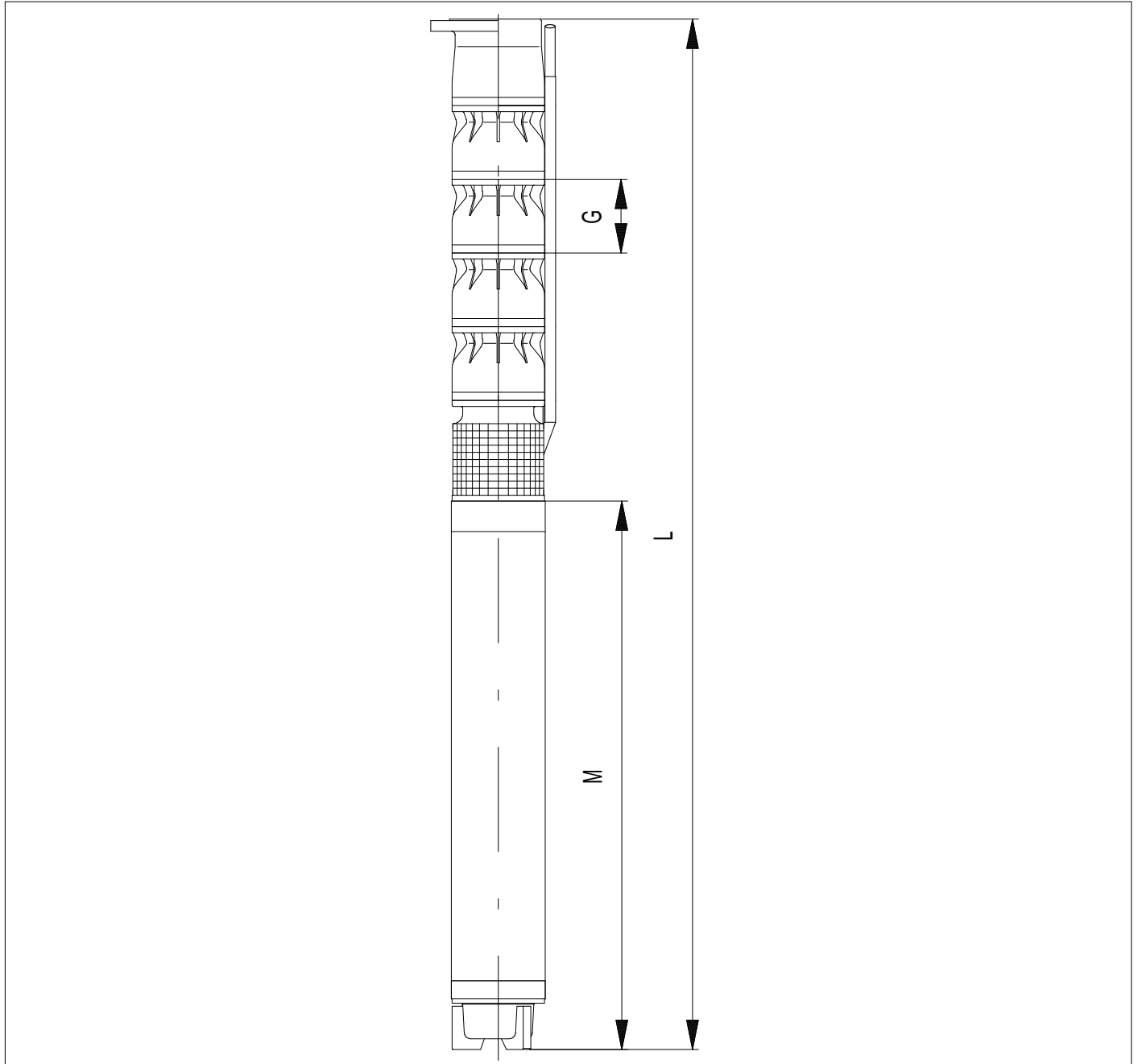
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Dimensions

Name	Value	Name	Value
G	240 mm		
L	4,358 mm		
M	2,408 mm		

Connections

Discharge port	RV 8 NPT I PN 40 PN40
Intake piece	
Non-return valves	no