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Technical data

K12.450 - 1

With motor

NU 701-2/110

Project ID Untitled project 2025-03-05 00:23:19.113

Project name

Installation location

Customer pos. No.

Date 2025-03-05

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	60
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	3491 1/min

Pump

Make	WILO
Pump type	K12.450
Frame size	12" (Ø275 - Ø300)
Sense of rotation	Clockwise from the drive end
Max. operating pressure	9.5 bar
Stages	1
Impeller type	
Shut off head	96.7 m
Max. shaft power	122 kW
Weight of unit	429.4 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.	228 mm
Min.	183 mm
designed	228 mm

Flow

Referring to: Speed in operating point

Nominal	152 l/s
Max-	180 l/s
Min-	0 l/s

Motor

Referring to: Rated speed

Manufacturer / Type	NU 701-2/110
Specific design	NU (glycol filling)
Rated power	128 kW
Electric voltage	460 ~3 V
Power input with rated power	145.5 kW
Current input with rated power	212.3 A
Number of poles	2
Rated speed	3480 1/min
Load	125 / 100 / 75 / 50 / 25 %
cos phi	0.87/0.86/0.82/0.74/0.55
cos phi with starting	0
Efficiency	85/88/87/84/75
Operation type (VDE 0530)	S1 immersed
Max. fluid temperature	30 °C
Min. flow velocity	0.2 m/s
Starting curr. d-o-l/ YD	1,620 A 540 A
Starting torque	808 Nm
Inertia moment	0.0723 kg m ²
Starts per hour max.	10
Degree of protection	IP 68
Weight of motor	334 kg
Motor connection cable	3X 1X35 + 1X25 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

Material version:	A
Shaft sealing:	Mechanical seal
Motor shroud:	1.4301
Upper bearing housing:	EN - GJL
Lower bearing housing:	1.4301
Shaft:	1.4305
Screws and nuts:	A2

According to IEC 60034-1

Pump curves in accordance with ISO 9906: 2012 2B

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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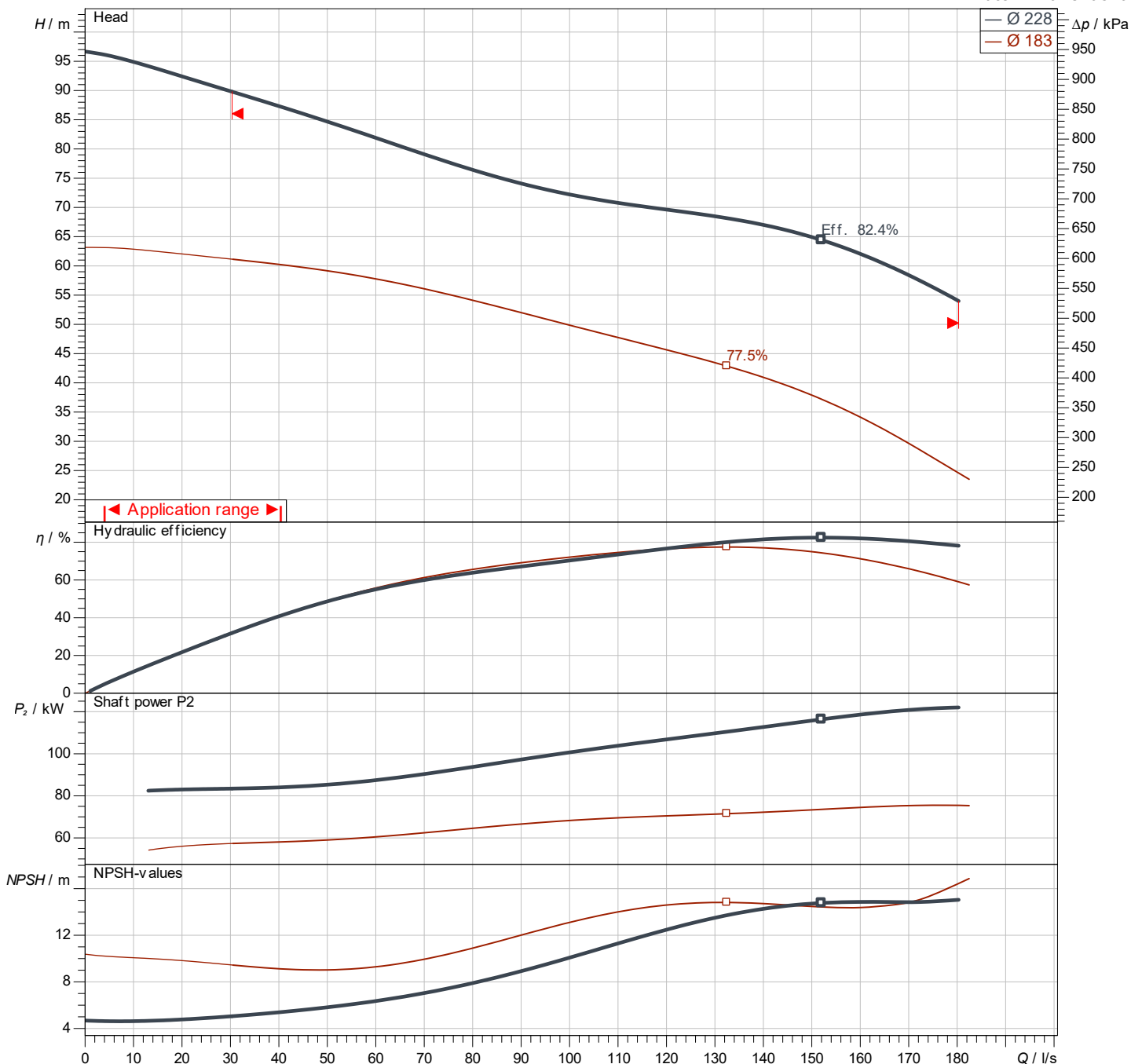
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Pump

Stages	1
Impeller Ø designed	228 mm
Nominal speed	3,500 1/min
Frequency	60 Hz
Impeller type	

Motor

Rated power	128 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	3491 1/min



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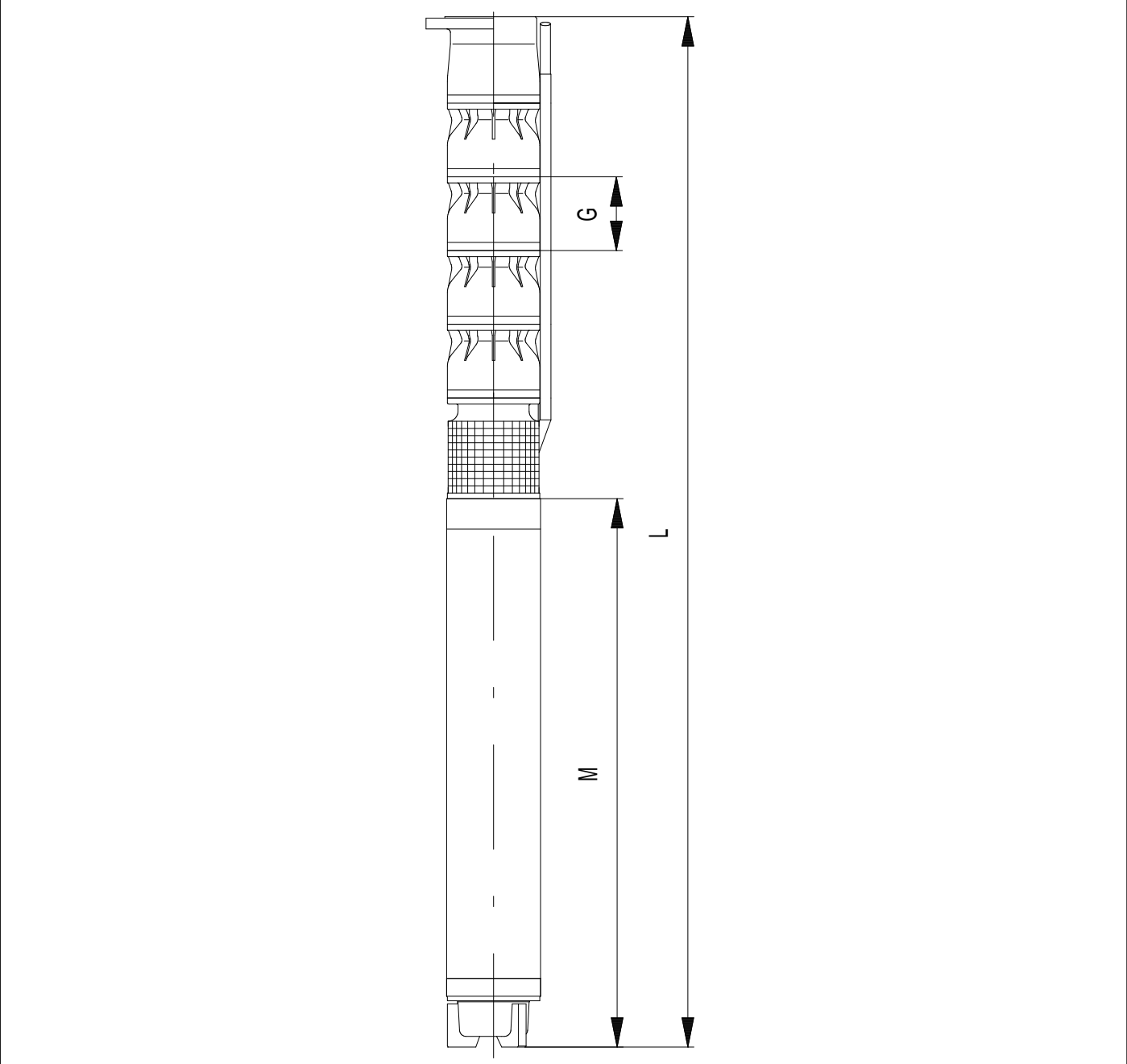
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Dimensions			
Name	Value	Name	Value
G	230 mm		
L	2,836 mm		
M	1,976 mm		

Connections	
Discharge port	RV 8 NPT I PN 40 PN40
Intake piece	
Non-return valves	yes