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## Technical data

### DCH 980 - 3

With motor  
**NU 160-4/135**

Project ID Untitled project 2025-03-30 23:31:51.900

Project name

Installation location

Customer pos. No.

Date 2025-03-30

#### Operating data specification

Pumped fluid	Water
Operating temperature t A	20
pH at t A	
Density at t A	998.3 kg/m <sup>3</sup>
Kin. viscosity at t A	1.005 mm <sup>2</sup> /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 <sub>2</sub>	P <sub>2</sub>
Hydr. efficiency η <sub>hyd.</sub>	
Power input P <sub>1</sub>	P <sub>1</sub>
Required pump NPSH	
Rotational speed	1744 1/min

#### Pump

Make	WILO
Pump type	DCH 980
Frame size	21" (Ø490 - Ø523)
Sense of rotation	Counter clockwise
Max. operating pressure	14 bar
Stages	3
Impeller type	Semi axial impeller
Shut off head	143 m
Max. shaft power	371 kW
Weight of unit	2120 kg
(without detachable Accessories)	

#### Discharge port

Pressure rating	PN 16
Rated diameter	DN 300
Standard	EN 1092-2

#### Impeller Ø

Max.	330 mm
Min.	290 mm
designed	330 mm

According to IEC 60034-1

No test norm defined for this product

#### Flow

Referring to: Speed in operating point	
Nominal	304 l/s
Max-	409 l/s
Min-	96.6 l/s

#### Motor

Referring to: Rated speed	
Manufacturer / Type	NU 160-4/135
Specific design	NU (glycol filling)
Rated power	390 kW
Electric voltage	440 V
Power input with rated power	433.3 kW
Current input with rated power	693.4 A
Number of poles	4
Rated speed	1740 1/min
Load	125 / 100 / 75 / 50 / 25 %
cos phi	0.84/0.82/0.78/0.7/0.54
cos phi with starting	
Efficiency	88/90/90/88/78
Operation type (VDE 0530)	S1 immersed
Max. fluid temperature	30
Min. flow velocity	0.1
Starting curr. d-o-l/ YD	3,960 <del>Å</del> 1320 A
Starting torque	3040 Nm
Inertia moment	2.5572 kg m <sup>2</sup>
Starts per hour max.	5
Degree of protection	IP 68
Weight of motor	1371 kg
Motor connection cable	Eingetaucht, 6X 1X95 + 1X95 SO

Application limits for operation with frequency inverter:

- Max. voltage rise: 500 V/μs

- Max. overvoltage (phase - phase): 1000 V

#### Pump materials - Material design

A	
Suction piece	EN-GJL-250
Stage- /guide casing	EN-GJL-250
Discharge PN 10	EN-GJL-250
Discharge PN 16	EN-GJL-300
Impeller	G-CuAl10Ni
Stationary wear ring	1.4580
Pump shaft	1.4021
Shaft sleeve	1.4021
Pump end bearing	Brass + NBR
Connecting screws	A 2 - 70

#### Motor materials

Material version:	A
Shaft sealing:	Mechanical seal
Stator tube:	St
Upper bearing housing:	EN - GJL 200
Lower bearing housing:	EN - GJL 200
Lower part:	EN - GJL 200
Shaft journal:	1.4462
Rubber parts:	EPDM
Screws and nuts:	A2 - 70



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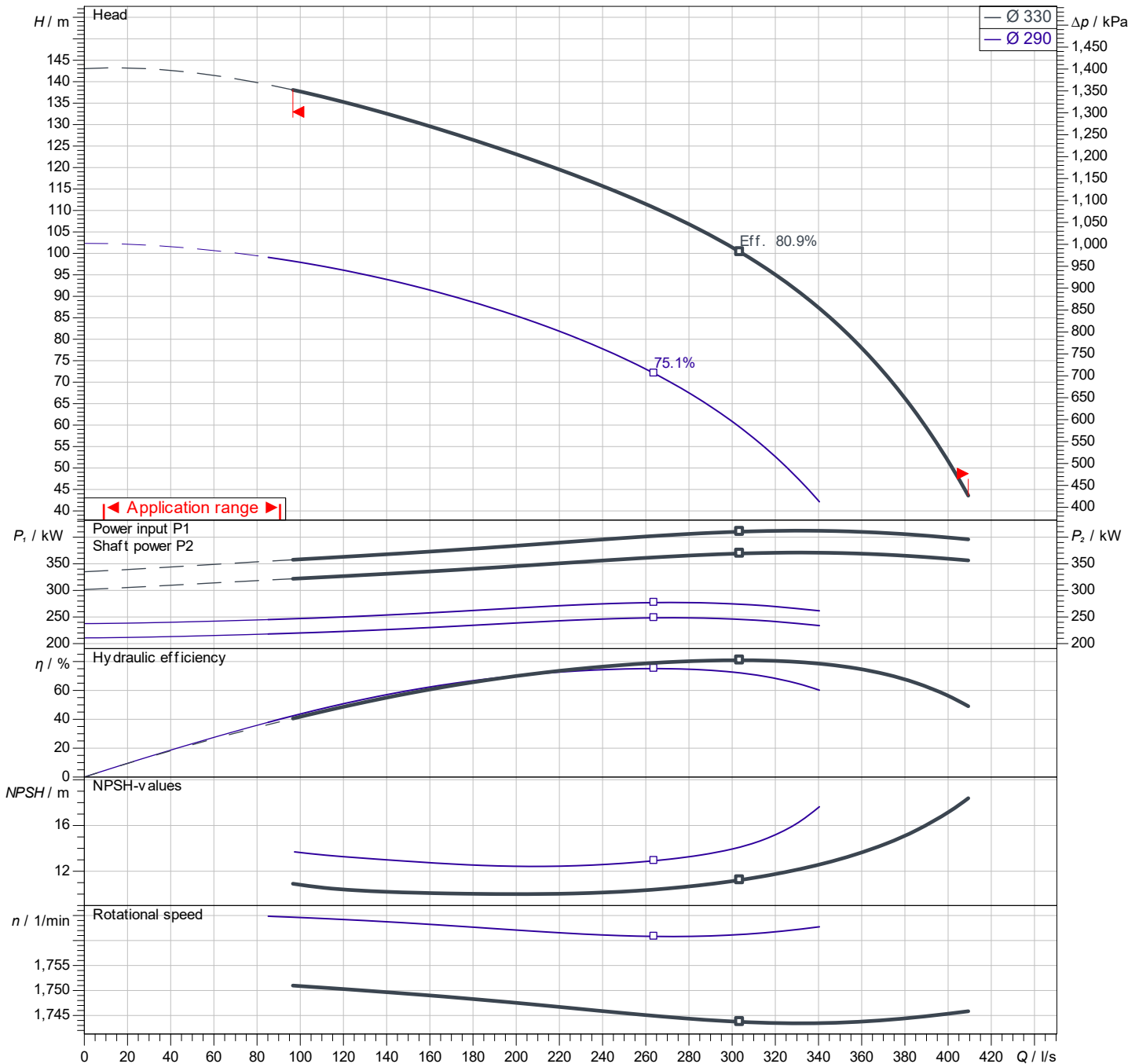
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#### Pump

Stages	3
Impeller Ø    designed	330 mm
Nominal speed	1,700 1/min
Frequency	60 Hz
Impeller type	Semi axial impeller

#### Motor

Rated power	390 kW
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Sel. explosion protection

Subject to change

#### Duty point data

Volume flow	
Head	
Shaft power P2	P <sub>2</sub>
Hydr. efficiency η <sub>hyd</sub> .	
Power input P1	P <sub>1</sub>
Required pump NPSH	
Rotational speed	1744 1/min

Software version  
Data version

Spaix® 5-2024.2 - 2024/09/19 (Build 140), 64 bit  
20.02.2025

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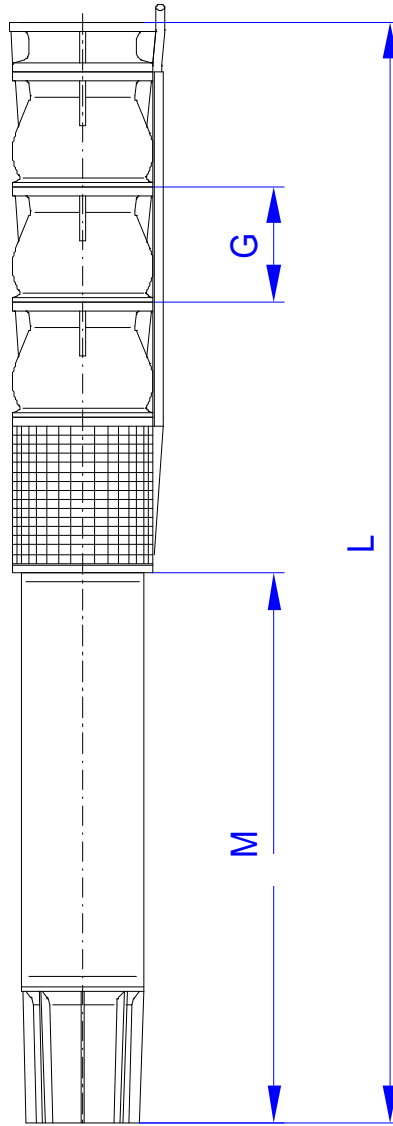
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### Dimensions

Name	Value	Name	Value
G	350 mm		
L	4,218 mm		
M	2,543 mm		

### Connections

Discharge port	DN 300 PN 16 PN 16
Intake piece	
Non-return valves	no