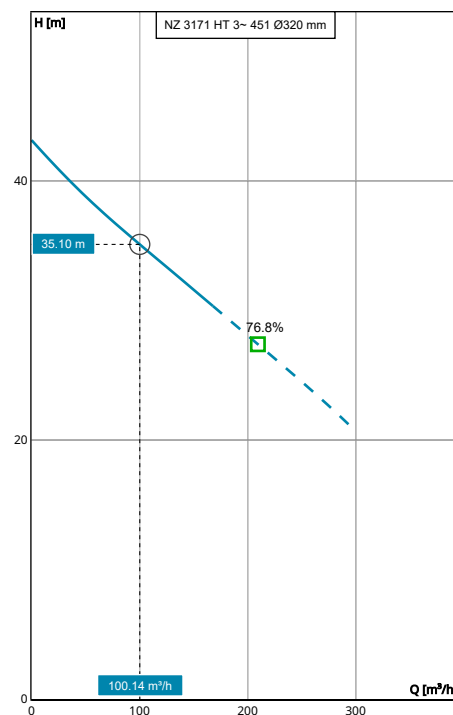


NZ 3171 HT 3~ 451 | Configuration Summary



Flygt's self-cleaning non-clog N-pumps feature innovative designs and functions that deliver high sustained efficiency and the most reliable operation. This makes them the most reliable choice available for a broad range of wastewater applications for tough applications such as unscreened sewage, wastewater and sludge up to an 8 percent solids concentration. Impeller material available in Hardened cast Iron, Hard Iron and Stainless Steel to fit any wastewater application.



Curve: ISO 9906

Nominal (mean) data shown. Under- and over-performance from this data should be expected due to standard manufacturing tolerances. Please consult your local Flygt representative for additional performance guarantees.

GENERAL

Explosion Proof	Impeller Diameter
No	320 mm
Max. Pumped Media Temp.	
40 °C	

MATERIAL AND COATING

Impeller Material
Grey Cast Iron
Volute Material
Grey Cast Iron

MOTOR

Rated Voltage	Motor Efficiency Class
400 V	Standard
Coupling	Rated Power
Y	18.5 kW

INSTALLATION

Installation Type
Z - Horizontal Permanent, Dry

NZ 3171 HT 3~ 451 | Product Details

Description

N 3171

The Flygt N-series are equipped with the Flygt invented N-technology with its innovative self-cleaning impeller. Solid objects entering the pump will pass through the impeller between the impeller vanes. If an object gets caught on the leading edge of one of the vanes, it will slide along the backswept shape towards the perimeter of the inlet where it will be guided by a relief groove through the pump housing. This ensures a high sustained total efficiency over time. Due to the mechanical self-cleaning design, a sludge concentration of solids up to 8% can easily be pumped. The pump can easily be installed in either permanently or temporary submerged, or horizontally or vertically dry installations.

Flexible and Modular Design

The modular hydraulic design enables customization of the hydraulics to meet the requirements of many applications.

- Replaceable wear ring in two materials, gray iron or Hard Iron, for different operation conditions
- Hardened gray iron impeller for typical wastewater applications
- Hard-iron impeller for heavy duty wastewater applications containing abrasive and corrosive content
- Chopper ring intended for tough wastewater applications where cutting is required due to long fibres and solid concentrations up to 10-12%
- Stainless steel impeller for special applications that require duplex stainless steel

Robust and Reliable

- Short shaft overhang reduces shaft deflection and increases seal and bearing life
- Class H Motor designed for submersible use. Heat is concentrated to the stator core for improved cooling properties.
- The Plug-in seal with Active Seal system eliminates the risk associated with incorrect installation and careless handling. All in one unit. Available in Tungsten carbide (WCCR) or Silicone carbide (SiC) depending on pumped media.
- Motor cable SUBCAB® specially developed for submersible use
- Offers flexible cooling systems, e.g. closed-loop cooling system, media cooled or external cooling that allows full motor potential in dry installations.
- Premium brand bearings, greased for life, ensures a minimum of 50 000 hours of duty
- Leakage sensor and motor temperature sensor as standard

The N 3171 is available with the following options:

- ATEX, FM, CSA-approvals
- Premium efficiency motors
- Hard Iron hydraulic design
- Stainless Steel hydraulic design
- Vibration-sensor, extended motor temperature sensors, additional leakage-sensor, current-sensor and pump memory
- Compatible with SmartRun® Wastewater pump controller
- Compatible with MAS 801 monitoring system

Product Features

- State-of-the-art wastewater pump with N-technology
- Sustained high efficiency pumping with energy savings up to 25%
- Flexible and modular design
- Robust and reliable

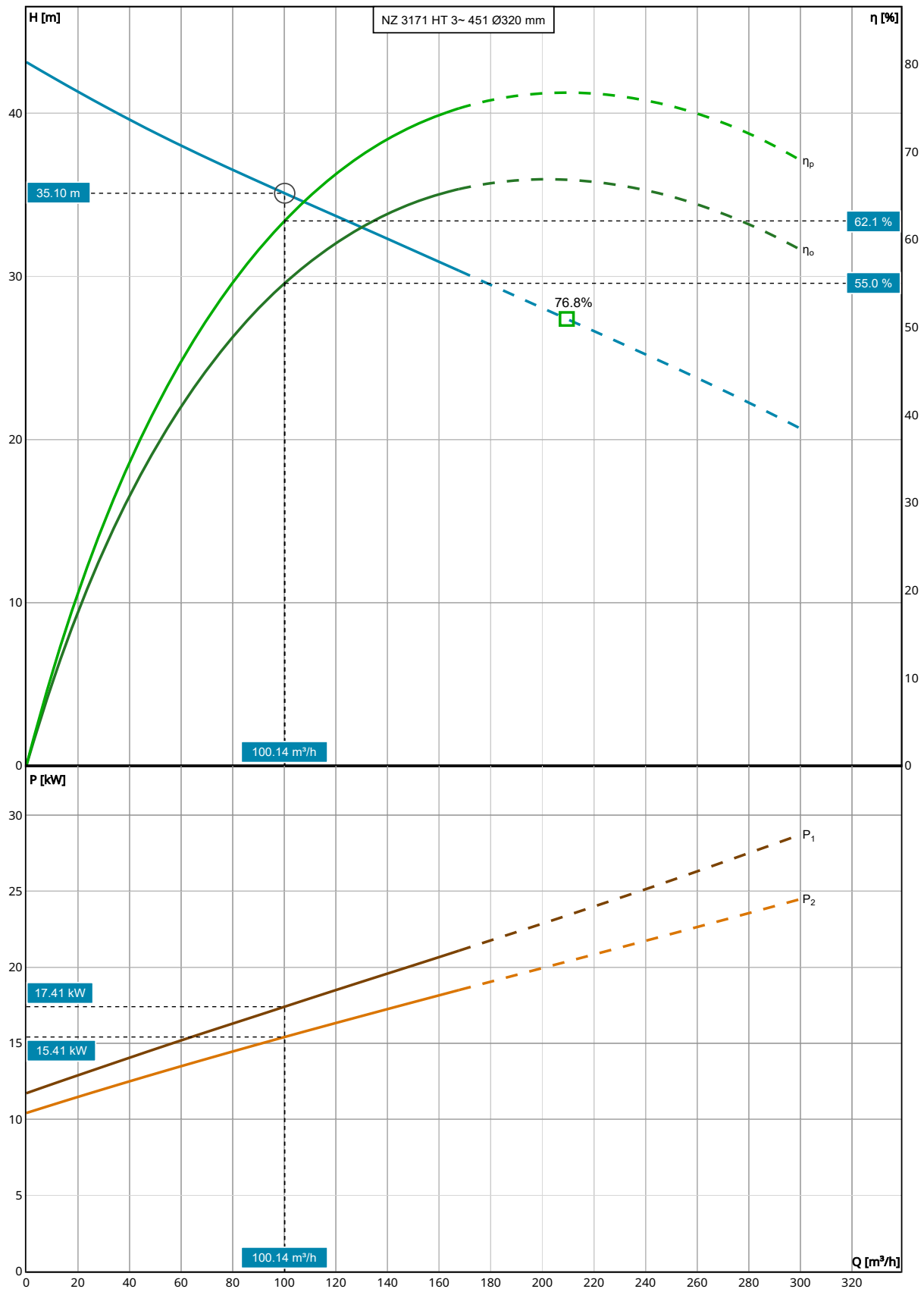
Construction Materials

Impeller Material	Volute Material	Stator Cover Material
Grey Cast Iron	Grey Cast Iron	-

Motor

Rated Power	Number Of Phases	Start Current Ratio	Motor Issue
18.5 kW	3	6.31	12
Motor Denomination	Rated Motor Speed	Insulation Class	Locked Rotor Code
25-17-4AA	1,460 RPM	H	G
Motor Efficiency Class	Rated Voltage	Approval	Max starts per hour
Standard	400 V	STD	30
Version Code	Rated Current	Total Moment Of Inertia	Power Factor 100%
181	36 A	0.18 kgm ²	0.85
Frequency	Start Current	Type of duty	Power Factor 75%
50 Hz	225 A	S1	0.8
Max P2 (1x)	Starting Current, Direct Starting	Stator Variant	Power Factor 50%
24.47 kW	225 A	2	0.69
Number Of Poles	Starting Current, Star Delta	Motor Module	Efficiency 100%
4	75 A	146	87.8 %
			Efficiency 75%
			88.8 %
			Efficiency 50%
			88.6 %
			Cooling Jacket
			-

NZ 3171 HT 3~ 451 | Hydraulic Data & Performance Curve



Curve: ISO 9906

Nominal (mean) data shown. Under- and over-performance from this data should be expected due to standard manufacturing tolerances. Please consult your local Flygt representative for additional performance guarantees.

Selection

Series	Curve Code
N 3000	451
Name	Impeller Diameter
NZ 3171 HT 3~ 451	320 mm
Frequency	Inlet Diameter
50 Hz	150 mm
Total Flow	Outlet Diameter
100 m ³ /h	100 mm
Total Head	Number Of Vanes
35 m	2
Pump Flow	
100 m ³ /h	
Pump Head	
35 m	
System Type	
Single Pump	
Operating Pumps	
1	
Standby Pumps	
No Standby Pump	

Design Point

Flow	Shaft Power (P2)
100.14 m ³ /h	15.41 kW
Head	Speed
35.1 m	1,468 RPM
Overall Efficiency (η_o)	Flow To BEP Ratio
55.02 %	47.81 %
Pump Efficiency (η_p)	
62.13 %	
Input Power (P1)	
17.41 kW	

Fluid and Operating Conditions

Fluid Type	Density
Water	1,000 kg/m ³
Fluid Temperature	Dynamic Viscosity
4 °C	0.002 Pa·s
Specific Gravity	Fluid Vapor Pressure
1	8.14 mbar
	Atmospheric Pressure
	1,013.53 mbar
	Elevation
	0 m
	Ambient Temperature
	20 °C
	NPSH Available
	10.27 m
	Submergence
	0 m

Design Curve

Rated Speed	BEP Flow
50 Hz	209.45 m ³ /h
Max Flow	BEP Head
299.84 m ³ /h	27.39 m
H@QMin	Max P2
43.14 m	24.47 kW
H@QMax	Specific Energy
20.69 m	0.17 kWh/m ³
BEP	
76.76 %	

NZ 3171 HT 3~ 451 | Dimensional Data & Drawing

