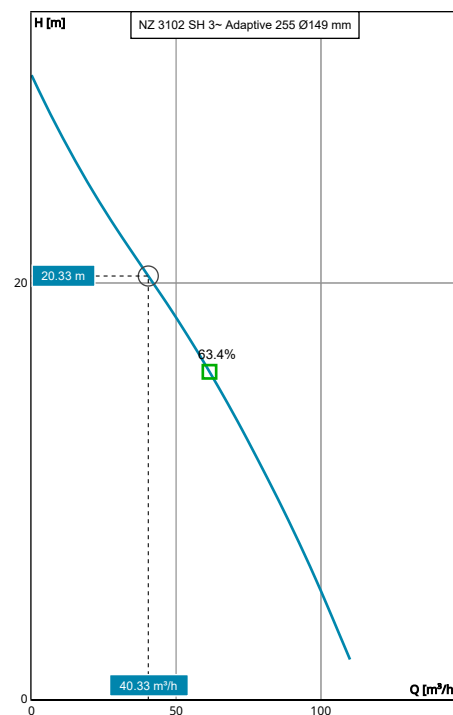


NZ 3102 SH 3~ Adaptive 255 | Configuration Summary



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	149 mm
Max. Pumped Media Temp.	
40 °C	

MATERIAL AND COATING

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

MOTOR

Rated Voltage	Motor Efficiency Class
400 V	Standard
Coupling	Rated Power
Y	4.2 kW

INSTALLATION

Installation Type
Z - Horizontal Permanent, Dry

NZ 3102 SH 3~ Adaptive 255 | Product Details

Description

N 3102

Wastewater N-Technology Pump With Adaptive N® Impeller

Flygt N-pumps take on the toughest applications and get the job done. Every component is designed and manufactured to deliver sustained high efficiency. Thanks to patented N-technology with its innovative self-cleaning impeller, Flygt N-pumps deliver the highest total efficiency. They lower your energy bill and reduce unplanned maintenance costs. That adds up to total peace of mind – and big savings over the long term. Most 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. Due to the mechanical self-cleaning design, a sludge concentration up to 8% can easily be pumped.

Flexible and Modular Design

- This self-cleaning pump features innovative functions that make it the best choice for a broad range of applications. The modular hydraulic design enables you to tailor the hydraulics to meet the requirements of virtually any application.
- 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 abrasive and corrosive applications
- Stainless steel impeller for special applications that require duplex stainless steel
- Short shaft overhang reduces shaft deflection and increases seal and bearing life
- Motor designed for submersible use. Heat is concentrated to the stator core for improved cooling properties
- The double mechanical seal system consists of two sets of mechanical shaft seals that work independently to provide double security. Available in Tungsten carbide (WCCR) or Silicone carbide (SiC) depending on pumped media.
- Griploc mechanical face seal system secures locking to the shaft, no rubber friction, no grub screws and no shaft damage
- Motor cable SUBCAB ® specially developed for submersible use.

Product Features

- Sustained high efficiency
- Hardened cast iron, optional Duplex stainless steel and Hard-Iron impellers
- State-of-the-art wastewater pump with enhanced Adaptive N® hydraulic
- Sustained high efficiency with energy savings up to 25%
- Flexible and modular design
- Robust and reliable

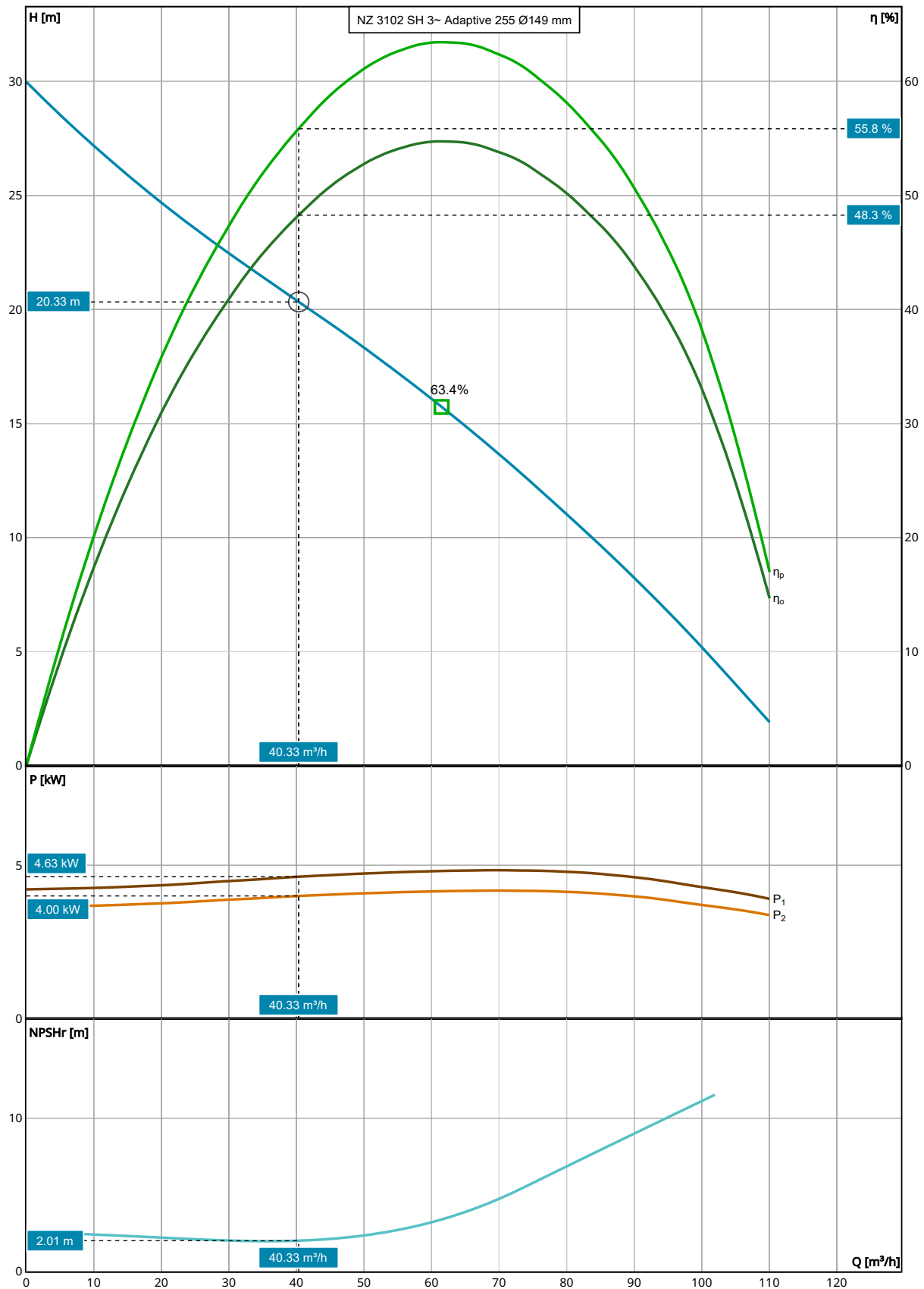
Construction Materials

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

Motor

Rated Power	Number Of Phases	Start Current Ratio	Motor Issue
4.2 kW	3	8.63	19
Motor Denomination	Rated Motor Speed	Insulation Class	Locked Rotor Code
18-10-2AL	2,905 RPM	H	K
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%
160	7.9 A	0.01 kgm ²	0.9
Frequency	Start Current	Type of duty	Power Factor 75%
50 Hz	68 A	When S3 30 show description: S3 30 = 18 minutes duty/42 minutes rest of 60 minutes cycle time.	0.86
Max P2 (1x)	Starting Current, Direct Starting		Power Factor 50%
4.18 kW	68 A		0.78
Number Of Poles	Starting Current, Star Delta	Stator Variant	Efficiency 100%
2	22.67 A	62	85.9 %
		Motor Module	Efficiency 75%
		150	86.4 %
			Efficiency 50%
			85.4 %
			Cooling Jacket
			-

NZ 3102 SH 3~ Adaptive 255 | 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	255
Name	Impeller Diameter
NZ 3102 SH 3~ Adaptive 255	149 mm
Frequency	Inlet Diameter
50 Hz	100 mm
Total Flow	Outlet Diameter
40 m ³ /h	80 mm
Total Head	Number Of Vanes
20 m	2
Pump Flow	
40 m ³ /h	
Pump Head	
20 m	
System Type	
Single Pump	
Operating Pumps	
1	
Standby Pumps	
No Standby Pump	

Design Point

Flow	Shaft Power (P2)
40.33 m ³ /h	4 kW
Head	NPSHR
20.33 m	2.01 m
Overall Efficiency (η_o)	Speed
48.27 %	2,913 RPM
Pump Efficiency (η_p)	Flow To BEP Ratio
55.85 %	65.59 %
Input Power (P1)	
4.63 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	61.49 m ³ /h
Max Flow	BEP Head
110.04 m ³ /h	15.73 m
H@QMin	Max P2
29.98 m	4.18 kW
H@QMax	Specific Energy
1.91 m	0.11 kWh/m ³
BEP	
63.42 %	

NZ 3102 SH 3~ Adaptive 255 | Dimensional Data & Drawing

