AMANDLA PUMPS

Your pumping challenge, our opportunity!

Product Catalogue

South African Pump Design and Manufacturer

Contents

Company Background

Amandla Pumps is a South African company driven by passionate people who have a love for the design and manufacture of pumps and submersible pumps.

The secret to our success is from the vision and commitment of our staff to keep up with the latest technologies, setting high standards and ensuring a good service to industry.

Amandla Pumps was founded in 2002. The primary goal was to design and manufacture industrial submersible pumps for use in heavy industries of all types, which would be totally sourced and manufactured in South Africa for local and global use.

Amandla Pumps is:

- 3rd party certified to ISO9001:2015 quality management system with the key focus on continual improvement,
- certified to manufacture flameproof units to SANS60079-0/1,
- a level 2 BBBEE contributor with 51% black ownership.

Growth

Over the past 20 years the Amandla Pumps team has designed and manufactured a range of quality products that match world standards which we are proud to call ours. We are now recognised by other international pump manufacturers and are continuously achieving an average annual growth in excess of 30% per annum.

Proudly South African

People of Amandla Pumps from various ethnic groups, with common enduring values, work together to build a quality product, a great company, a better life for themselves and for the generations that will follow in their footsteps.

History

Since 2002 from humble beginnings our product range and manufacturing plant has grown steadily. One of the key focuses from the start was to produce a local, South African, product with one of the best backup services in terms of new and spares supply.
Today we pride ourselves in having:

- a well-equipped CNC machine shop with good repeatability in part,
- manufacture and in-house quality controls and standards to ensure good interchangeability of spares for the aftermarket,
- a well-established research, development and design department headed by our Technical Director and resident engineer as well as a well-equipped manufacturing facility.

SADC Approved

The Varkie™ S Series and Jenny J Series is SADC-approved, making the range duty free when imported into SADC countries.

Varkie™ S-Series

Varkie™ is an Amandla Pumps registered trade name for the S-series pumps. These versatile sludge/slurry pumps have proved to be very effective with solids handling.

Name origin:
The name Varkie™ is a well-used name used in the South African industry for these horizontal vortex submersible pumps.

In the late 1970's a platinum mine in the Rustenburg area experienced severe floods which disrupted operations for about eight months.

As the mine was being dewatered a strange noise was heard coming from deep in the one shaft. It sounded like a wild pig (known as a "Varkie" in Afrikaans) snorting in the water. The miners thought that a wild pig had fallen into the mine and had been trapped in the shaft.

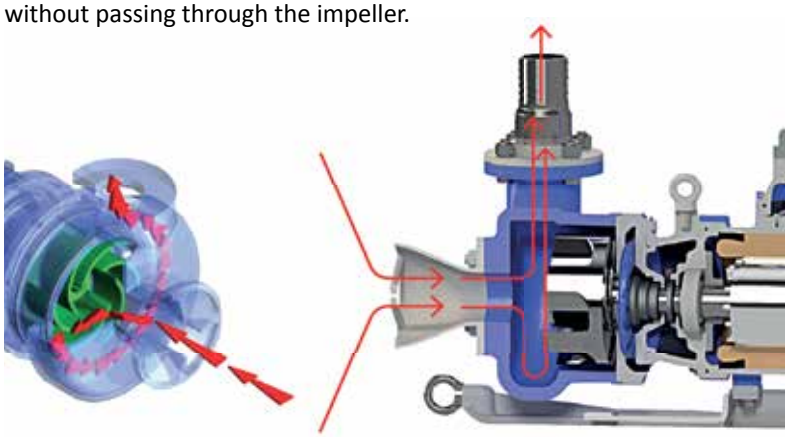
Frantically and with haste the miners waded down the shaft to where the noise was coming from, expecting to find a weak, frightened trapped animal. As they got closer instead of finding a wild pig they found a pump still operating. The pump, due to the level of the water dropping, had reached snorting height, resulting in the pump making a snorting sound and getting the nickname Varkie™.

Vortex Action - How it works

When the pump impeller turns it creates a vortex in front of the impeller in the volute. This vortex is what does the pumping work.

When a solid enters the inlet of the pump it gets caught in the flow of the product and is sucked into the vortex similar to the way a hurricane sucks up objects.

The solid leaves the vortex through the discharge passage without passing through the impeller.

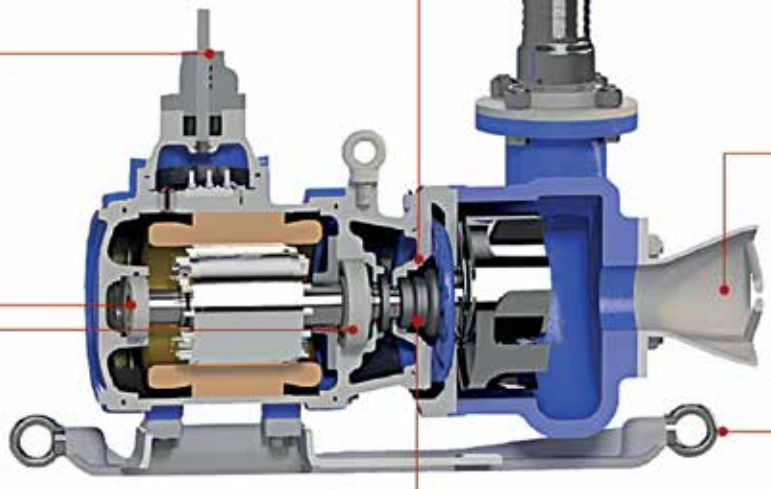


What sets the Varkie™ apart

The Varkie™ S-Series has been designed by Amandla Pumps using sound proven engineering standards and practices. All pump components are manufactured to Amandla in-house standards on CNC machinery, ensuring fitment of spares for the aftermarket requirements.

Where special needs are required (over and above the existing range) Amandla Pumps has the capability to manufacture a customised solution.

The Varkie S Series has a minimum South African local content of 80% by weight.



***Horizontal Configuration**
The unit has a horizontal configuration for cooling the motor by keeping the motor partially submerged even when the water level drops and the unit stops pumping.

Varkie™ S-Series

Application

The Varkie range of pumps has proved to be very successful in the following industries:

- Chemical industries - Abrasion applications (raw materials).
- Power generation industry - Fly ash, coal handling and dewatering.
- Sewage and Waste water transportation - Raw sewage transportation.
- Paper and forestry - Wood chips, pulp and bark transportation.
- Construction industry - Dirty water transportation.
- Coal, Gold, Platinum, Diamond mining and process industry - Solids and slurry handling.
- Animal and organic wast transportation

Application	Maximum recommended concentration by weight
Gravel and Ore	16%
Sand and Clay	29%
Ash	42%

Application	Min. recommended velocity (m/s)
Fine Particles and slurries	1.1
Fly Ash	1.9
Fine sand and Mud	3.2
Raw Sewage	3.2
Coarse sand and Soft Clay	3.6
Gravel and Hard Clay	4.1

Varkie S55 in process plant sump

Suction vortex created by Varkie S55 in process plant sump while running

Varkie™ S-Series

Varkie™ S40

Motor Specification		Pump Specification	
Rating	4kW	Weight	66kg
Phases	3	Solids Handling	up to 45mm
Voltage	380V - 1000V	Max S.G	1.3
Speed	2950rpm	Max Temp	60^{0}C
Dimensions			
Length		570mm	
Width		250mm	
Height		315mm	
Snorting Height		175mm	
Discharge Diameter		2” (50mm)	

Material Construction: Cast Iron and High Chrome. Available in SS316

Varkie™ S55

Motor Specification		Pump Specification	
Rating	5,5kW	Weight	150kg
Phases	3	Solids Handling	up to 70mm
Voltage	380V - 1000V	Max S.G	1.3
Speed	1450rpm	Max Temp	60^{0}C
Dimensions			
Length		840mm	
Width		355mm	
Height		500mm	
Snorting Height		250mm	
Discharge Diameter		3” (75mm)	

Material Construction: Cast Iron, High Chrome and Polyurethane.
Available in SS316

Varkie™ S75

Motor Specification		Pump Specification	
Rating	7,5kW	Weight	185kg
Phases	3	Solids Handling	up to 70mm
Voltage	380V - 1000V	Max S.G	1.3
Speed	1450rpm	Max Temp	60^{0}C
Dimensions			
Length		865mm	
Width		370mm	
Height		500mm	
Snorting Height		290mm	
Discharge Diameter		3” (75mm)	

Material Construction: Cast Iron, High Chrome and Polyurethane.
Available in SS316

Varkie™ S-Series

Varkie™ S110

Motor Specification		Pump Specification	
Rating	11kW	Weight	238kg
Phases	3	Solids Handling	up to 95mm
Voltage	380V - 1000V	Max S.G	1.3
Speed	1450rpm	Max Temp	60^{0}C
Dimensions			
Length		915mm	
Width		415mm	
Height		590mm	
Snorting Height		310mm	
Discharge Diameter		4” (100mm)	

Material Construction: Cast Iron, High Chrome and Polyurethane.
Available in SS316

Varkie™ S220

Motor Specification		Pump Specification	
Rating	22kW	Weight	316kg
Phases	3	Solids Handling	up to 95mm
Voltage	380V - 1000V	Max S.G	1.3
Speed	1450rpm	Max Temp	60^{0}C
Dimensions			
Length		965mm	
Width		465mm	
Height		620mm	
Snorting Height		310mm	
Discharge Diameter		4” (100mm)	

Material Construction: Cast Iron, High Chrome and Polyurethane.
Available in SS316

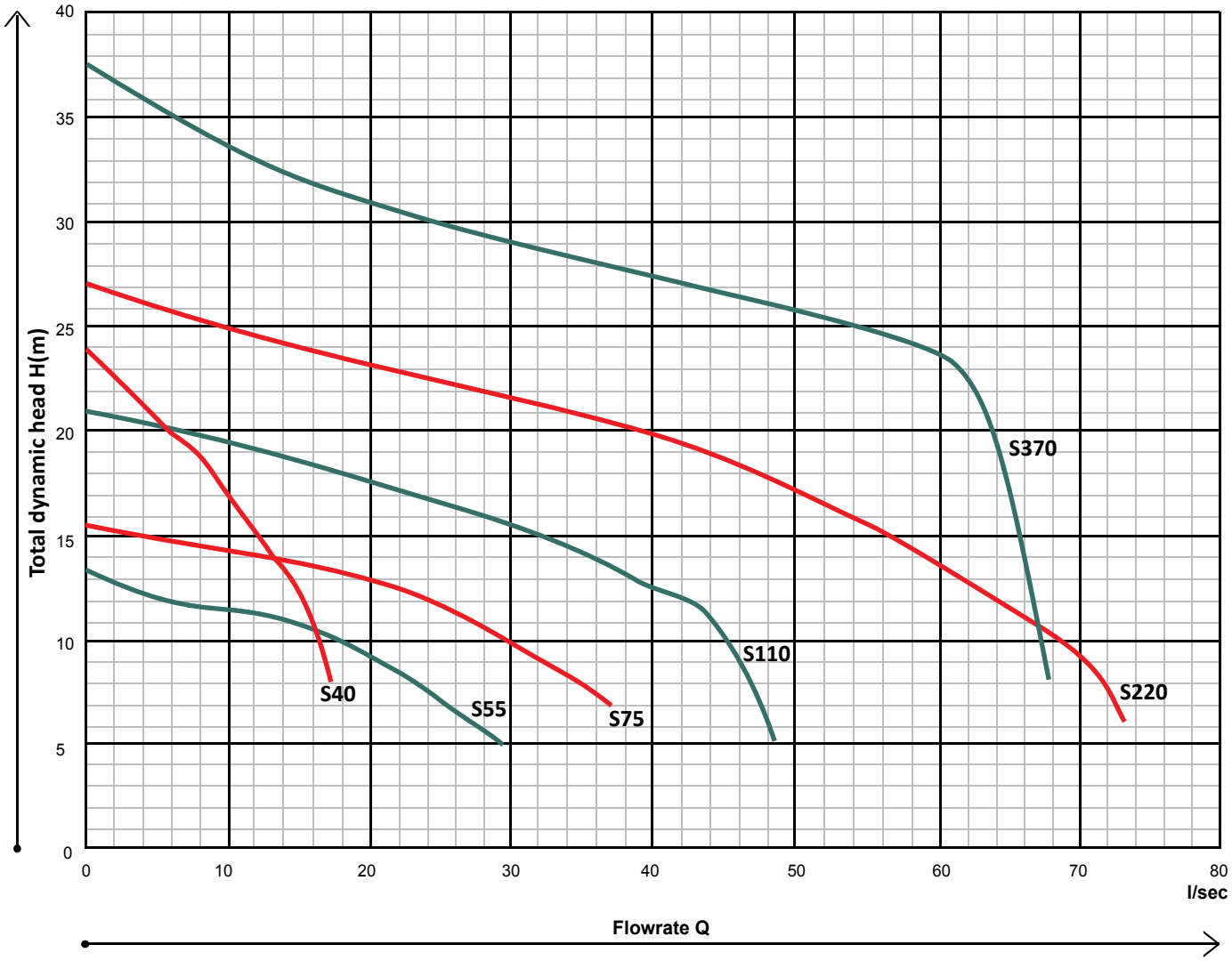
Varkie™ S370

Motor Specification		Pump Specification	
Rating	37kW	Weight	630kg
Phases	3	Solids Handling	up to 95mm
Voltage	380V - 1000V	Max S.G	1.3
Speed	1450rpm	Max Temp	60^{0}C
Dimensions			
Length		1120mm	
Width		520mm	
Height		735mm	
Snorting Height		395mm	
Discharge Diameter		4” (100mm)	

Material Construction: Cast Iron, High Chrome and Polyurethane.
Available in SS316

Varkie™ S-Series

Performance Curves



Jenny J-Series

The Jenny J-Series has been designed for typical drainage applications where small particles may be present.

These applications would typically be:

- Mining applications (including fiery mines),
- Industrial waste water,
- Agriculture irrigation,
- Construction site drainage or even water features.

The pump range was designed with two types per motor size (excluding the 4kw):

- A high head, low flow range with a suffix H
- A high head with a high flow range with a suffix M

Jenny J90H being installed in a tailings dam

The Jenny J series range from a 4kw to a 90kw. All units are available in flameproof construction for underground use in fiery mines where methane gas may be present. Flameproof units are identified by a suffix X after the pump model name.

What sets the Jenny apart

The Jenny J-Series has been designed by Amandla Pumps using sound proven engineering standards and practices. All pump components are manufactured to Amandla in-house standards on CNC machinery, ensuring fitment of spares for the aftermarket requirements.

Where special needs are required (over and above the existing range) Amandla Pumps has the capability to manufacture a customised solution.

The Jenny J-Series has a minimum South African local content of 80% by weight.

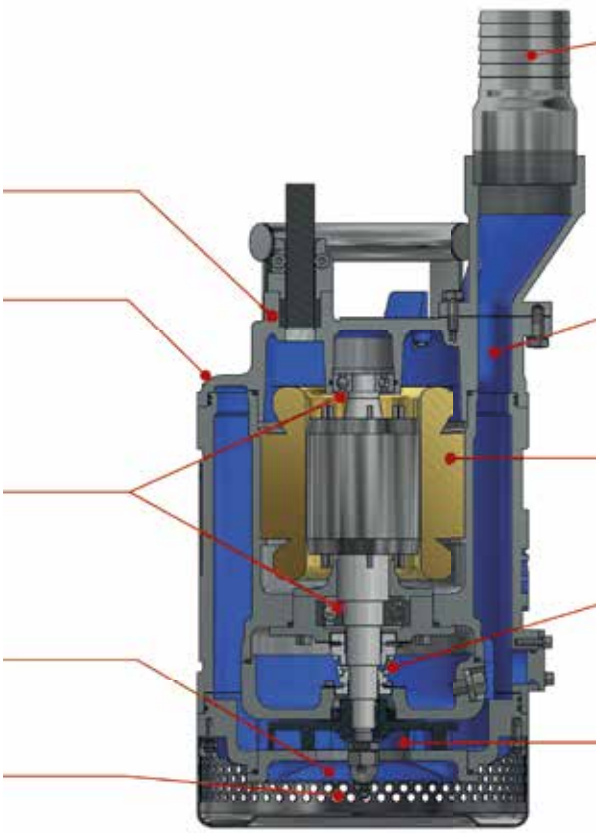
Ranges Available:

Motor size kW	Standard Units		Flameproof Units	
	High Head / Low Flow	Medium Head / High Flow	High Head / Low Flow	Medium Head / High Flow
4	Jenny J4		Jenny J4X	
11	Jenny J11H	Jenny J11M	Jenny J11HX	Jenny J11MX
22	Jenny J22H	Jenny J22M	Jenny J22HX	Jenny J22MX
37	Jenny J37H	Jenny J37M	Jenny J37HX	Jenny J37MX
90	Jenny J90H	Jenny J90M	Jenny J90HX	Jenny J90MX

Jenny J-Series

Jenny J4

Motor Specification		Pump Specification	
Rating	4kW	Weight	70kg
Phases	3	Solids Handling	up to 8mm
Voltage	380V - 1000V	Max S.G	1.0
Speed	2950rpm	Max Temp	60^{0}C
Dimensions			
Length		335mm	
Width		315mm	
Height		760mm	
Min. recommended submerged depth (bottom of strainer)		290mm	
Discharge Diameter		3” (75mm)	



Discharge Fitting
Unit supplied standard with threaded fitting and sewage adaptor ready for hose attachment

Body
Robust cast iron construction

Surface Finish
Epoxy paint for PH protection. The smooth finish allows for easy cleaning.

Water Jacket
The motor has a cooling jacket to cool the motor with the liquid being pumped past the full length of the motor

Bearings
Sealed-for-life, heavy duty, maintenance-free bearings are used

Induction Motor
Air-filled

Mechanical Seal
Single, double-sided mechanical seals in oil bath

Suction Cover
Allows for adjustment when the impeller and suction cover gets worn

Impeller
Open vane centrifugal impeller

Strainer
Stainless steel

***Available in SS316**

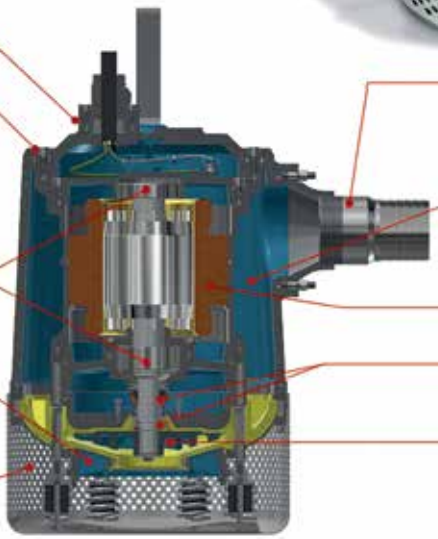
Jenny J-Series

Jenny J11H

Motor Specification		Pump Specification	
Rating	11kW	Weight	282kg
Phases	3	Solids Handling	up to 8mm
Voltage	380V - 1000V	Max S.G	1.1
Speed	2950rpm	Max Temp	60°C
Dimensions			
Length		695mm	
Width		475mm	
Height		870mm	
Min. recommended submerged depth (bottom of strainer)		430mm	
Discharge Diameter		4” (100mm)	

Jenny J11M

Motor Specification		Pump Specification	
Rating	11kW	Weight	285kg
Phases	3	Solids Handling	up to 15mm
Voltage	380V - 1000V	Max S.G	1.1
Speed	2950rpm	Max Temp	60°C
Dimensions			
Length		785mm	
Width		480mm	
Height		870mm	
Min. recommended submerged depth (bottom of strainer)		800mm	
Discharge Diameter		6” (150mm)	



Body
Robust cast iron construction

Surface Finish
Epoxy paint for PH protection. The smooth finish allows for easy cleaning.

Bearings
Upper bearing: sealed-for-life heavy duty, maintenance free
Lower bearing: angular contact double row

Suction Cover
Allows for adjustment when the impeller and suction cover gets worn

Strainer
Stainless Steel

Discharge Fitting
Unit supplied standard with threaded fitting and sewage adaptor ready for hose attachment

Water Jacket
The motor has a cooling jacket to cool the motor with the liquid being pumped past the full length of the motor

Induction Motor
Air-filled

Mechanical Seals
Two independent mechanical seals in oil bath

Impeller
Open vane centrifugal impeller

***Available in SS316**

Jenny J-Series

Jenny J22H

Motor Specification		Pump Specification	
Rating	22kW	Weight	415kg
Phases	3	Solids Handling	up to 8mm
Voltage	380V - 1000V	Max S.G	1.1
Speed	2950rpm	Max Temp	60^{0}C
Dimensions			
Length		745mm	
Width		520mm	
Height		945mm	
Min. recommended submerged depth (bottom of strainer)		650mm	
Discharge Diameter		4” (100mm)	

Jenny J22M

Motor Specification		Pump Specification	
Rating	22kW	Weight	423kg
Phases	3	Solids Handling	up to 15mm
Voltage	380V - 1000V	Max S.G	1.1
Speed	2950rpm	Max Temp	60^{0}C
Dimensions			
Length		830mm	
Width		520mm	
Height		945mm	
Min. recommended submerged depth (bottom of strainer)		900mm	
Discharge Diameter		6” (150mm)	

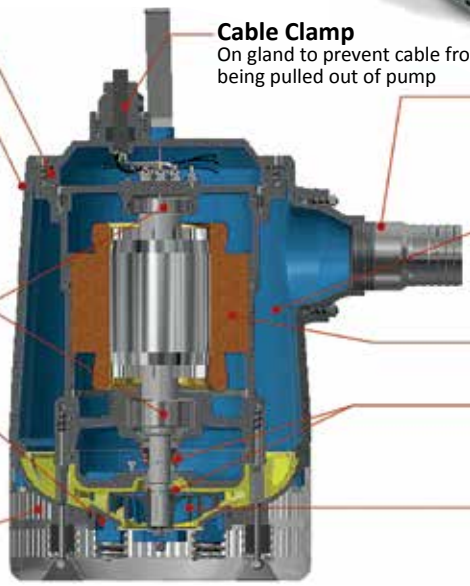
Body
Robust cast iron construction

Surface Finish
Epoxy paint for PH protection.
The smooth finish allows for easy cleaning.

Bearings
Upper bearing: sealed-for-life heavy duty, maintenance free
Lower bearing: angular contact double row

Suction Cover
Allows for adjustment when the impeller and suction cover gets worn

Strainer
Stainless Steel



Cable Clamp
On gland to prevent cable from being pulled out of pump

Discharge Fitting
Unit supplied standard with threaded fitting and sewage adaptor ready for hose attachment

Water Jacket
The motor has a cooling jacket to cool the motor with the liquid being pumped past the full length of the motor

Induction Motor
Air-Filled

Mechanical Seals
Two independent mechanical seals in oil bath

Impeller
Open vane centrifugal impeller

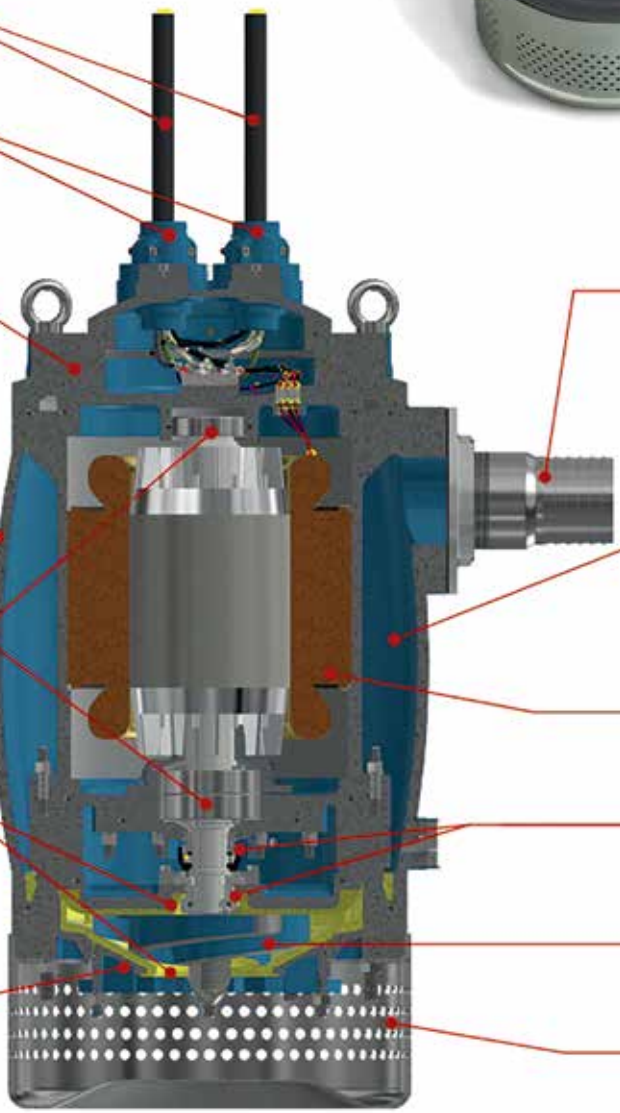
***Available in SS316**

Jenny J-Series

Jenny J37H

Motor Specification		Pump Specification	
Rating	37kW	Weight	505kg
Phases	3	Solids Handling	up to 8mm
Voltage	380V - 1000V	Max S.G	1.1
Speed	2950rpm	Max Temp	60^{0}C

Dimensions	
Length	725mm
Width	505mm
Height	1025mm
Min. recommended submerged depth (bottom of strainer)	1000mm
Discharge Diameter	4” (100mm)



Cables
Available with 2 cables

Cable Clamps
On gland to prevent cable from being pulled out of pump

Body
Robust cast iron construction

Surface Finish
Epoxy paint for PH protection. The smooth finish allows for easy cleaning.

Bearings
Upper bearing: sealed-for-life heavy duty, maintenance free
Lower bearing: angular contact double row

Linings
Wear parts are lined with Polyurethane (oil box cover, Suction Cover and diffuser) to give a smooth finish and extend the wear life.

Suction Cover
Allows for adjustment when the impeller and suction cover gets worn

Discharge Fitting
Unit supplied standard with threaded fitting and sewage adaptor ready for hose attachment

Water Jacket
The motor has a cooling jacket to cool the motor with the liquid being pumped past the full length of the motor

Induction Motor
Air-Filled

Mechanical Seals
Two independent mechanical seals in oil bath

Impeller
Open vane centrifugal impeller

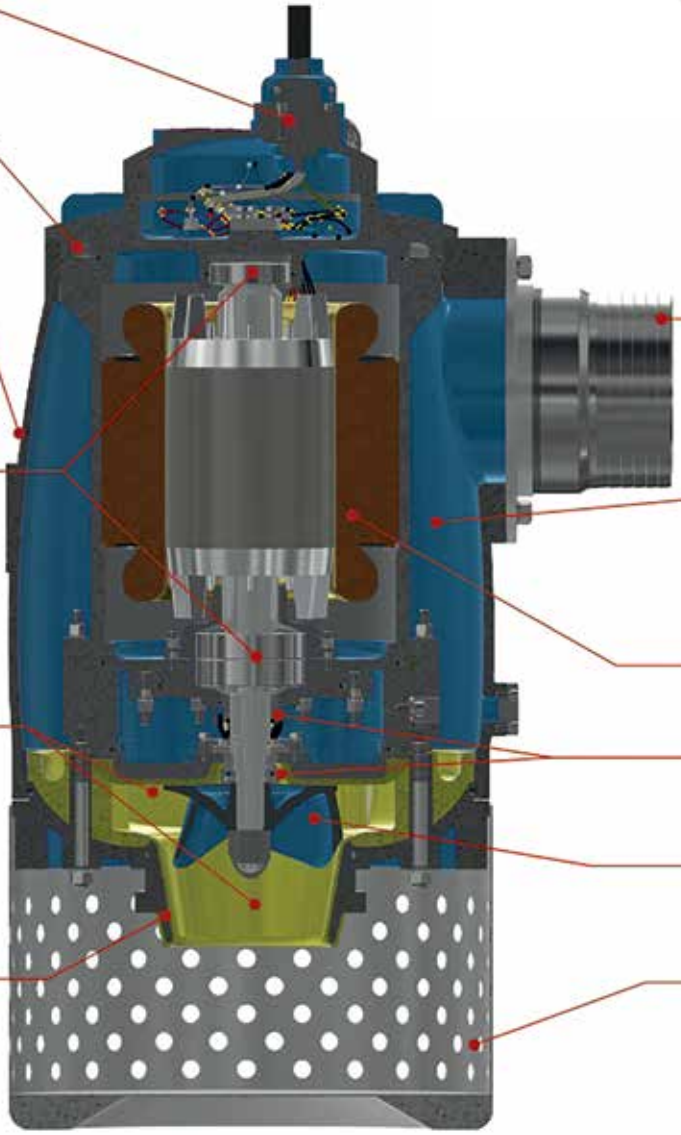
Strainer
Stainless Steel

***Available in SS316**

Jenny J-Series

Jenny J37M

Motor Specification		Pump Specification	
Rating	37kW	Weight	512kg
Phases	3	Solids Handling	up to 15mm
Voltage	380V - 1000V	Max S.G	1.1
Speed	2950rpm	Max Temp	60^{0}C
Dimensions			
Length		735mm	
Width		535mm	
Height		1180mm	
Min. recommended submerged depth (bottom of strainer)		1000mm	
Discharge Diameter		8” (200mm)	



Cable Clamps
On gland to prevent cable from being pulled out of pump

Body
Robust cast iron construction

Surface Finish
Epoxy paint for PH protection.
The smooth finish allows for easy cleaning.

Bearings
Upper bearing: sealed-for-life heavy duty, maintenance free
Lower bearing: angular contact double row

Linings
Wear parts are lined with Polyurethane (oil box cover, Suction Cover and diffuser) to give a smooth finish and extend the wear life.

Suction Cover
Allows for adjustment when the impeller and suction cover gets worn

Discharge Fitting
Unit supplied standard with threaded fitting and sewage adaptor ready for hose attachment

Water Jacket
The motor has a cooling jacket to cool the motor with the liquid being pumped past the full length of the motor

Induction Motor
Air-Filled

Mechanical Seals
Two independent mechanical seals in oil bath

Impeller
Open vane centrifugal impeller

Strainer
Stainless Steel

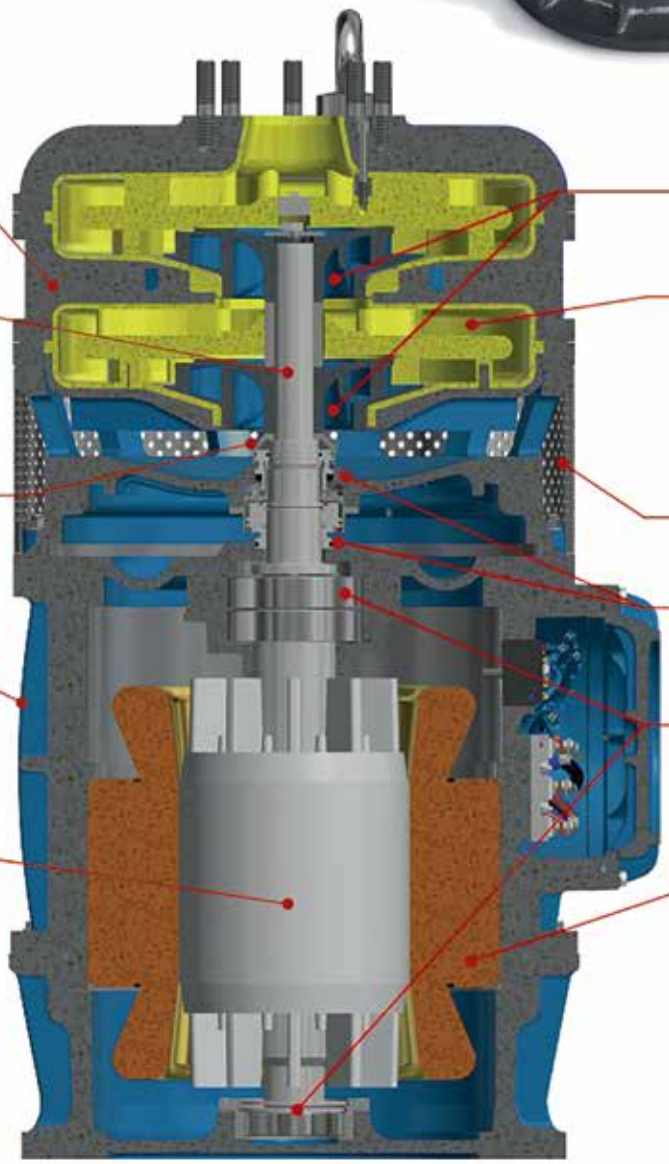
***Available in SS316**

Jenny J-Series

Jenny J90H

Motor Specification		Pump Specification	
Rating	90kW	Weight	1155kg
Phases	3	Solids Handling	up to 8mm
Voltage	380V - 1000V	Max S.G	1.1
Speed	2950rpm	Max Temp	60^{0}C

Dimensions	
Length	735mm
Width	705mm
Height	1265mm
Min. recommended submerged depth (bottom of strainer)	1200mm
Discharge Diameter	4” (100mm)



Body
Robust cast iron construction

Shaft Sleeve
Used to protect the shaft in high wear areas.

Seal Cover
Above mechanical seal to protect the seal from foreign objects

Surface Finish
Epoxy paint for PH protection.
The smooth finish allows for easy cleaning.

Orientation
Motor below wet end when in vertical orientation.
This keeps the motor submerged and cooled by the liquid.

Impellers
Two closed vane centrifugal impellers in series for high head

Linings
Wear parts are lined with Polyurethane (Upper disk, Lower disk, upper diffuser, intermediate diffuser and lower diffuser) to give a smooth finish and extend the wear life.

Strainer
Stainless steel

Mechanical Seals
Two independent mechanical seals in oil bath

Bearings
Upper bearings are heavy duty angular contact bearings. Lower bearing roller bearing.

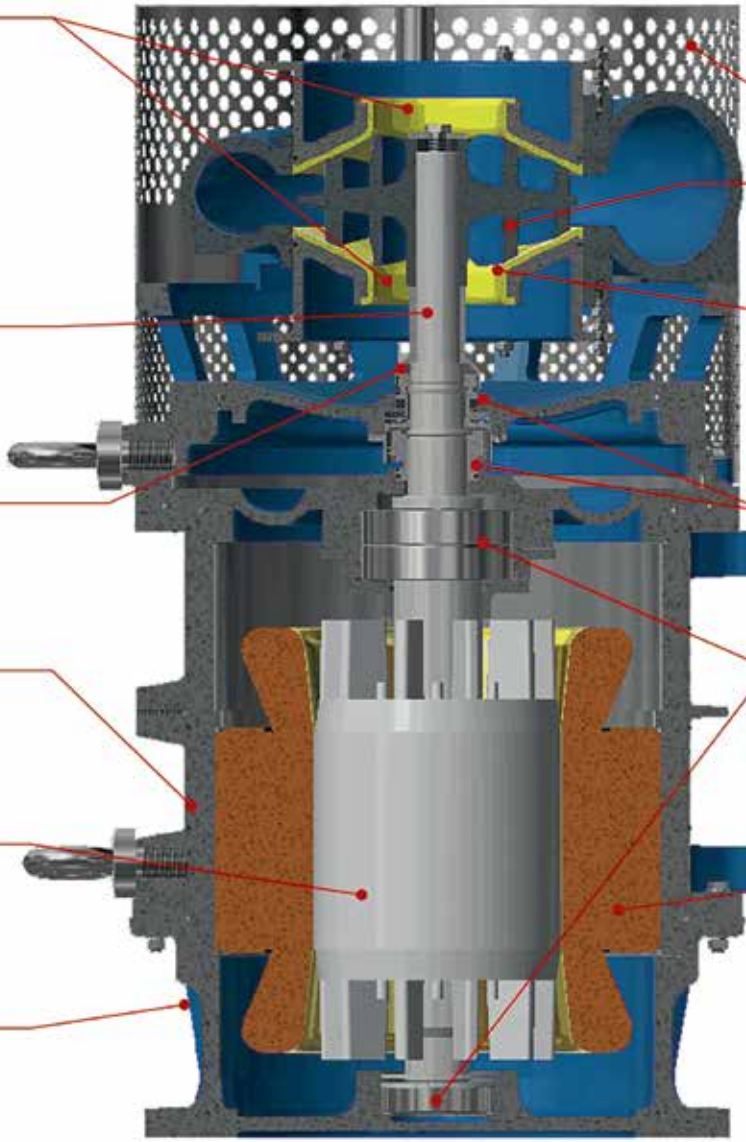
Induction Motor
Air-filled

***Available in SS316**

Jenny J-Series

Jenny J90M

Motor Specification		Pump Specification	
Rating	90kW	Weight	1070kg
Phases	3	Solids Handling	up to 15mm
Voltage	380V - 1000V	Max S.G	1.05
Speed	2950rpm	Max Temp	60^{0}C
Dimensions			
Length		1120mm	
Width		705mm	
Height		815mm	
Min. recommended submerged depth (bottom of strainer)		1500mm	
Discharge Diameter		6” (150mm)	



Suction Cover
Adjustable to allow for adjustment when the impeller and suction covers get worn.

Shaft Sleeve
Used to protect the shaft in high wear areas.

Seal Cover
Above mechanical seal to protect the seal from foreign objects

Body
Robust cast iron construction

Orientation
Motor below wet end orientation. This keeps the motor submerged and cooled by the liquid.

Surface Finish
Epoxy paint for PH protection. The smooth finish allows for easy cleaning.

Strainer
Stainless Steel

Impeller
Single double sided open vane centrifugal impeller in series for high flow.

Linings
Suction covers are lined with Polyurethane to give a smooth finish and extend the wear life.

Mechanical Seals
Two independent mechanical seals in oil bath

Bearings
Upper bearings are heavy duty angular contact bearings. Lower bearing roller bearing.

Induction Motor
Air-filled

***Available in SS316**

Jenny J-Series Float

The Jenny J series floats have been designed to suspend pumps on a dam where it is required for the pumps to remove the product close to the surface.
These applications would typically be:

- Mine dams
- Industrial waste water
- Agriculture irrigation
- Construction site drainage

Jenny J1200

The Jenny J1200 is designed to suspend 1200 kg and comes complete with a bracket to suspend a 90kw to 37kw Jenny pump between 1.5 to 2 meters below the surface of a dam.

Jenny J600

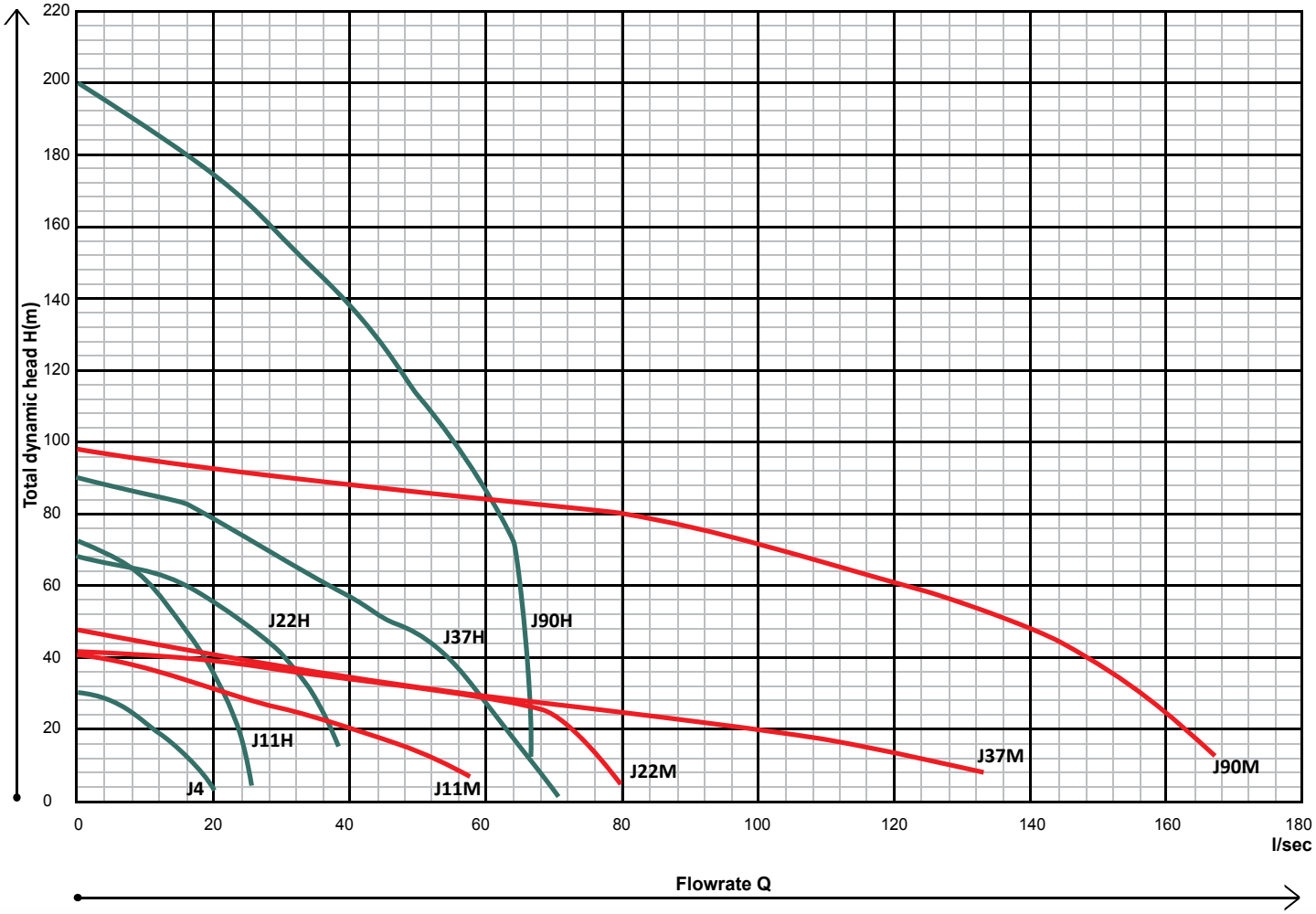
The Jenny J600 is designed to suspend 600 kg and comes complete with a bracket to suspend a 4kw to 37kw Jenny pump between 1 to 2 meters below the surface of a dam.

Features

- **Eye Nuts** - Heavy duty lifting Eye Nuts to lift float complete with pump
- **Foam Filled** - The float is foam filled. This helps keep the buoyancy, should the float get punctured and prevent the pump and float from sinking. The foam is self-extinguishing
- **Plastic** - The float outer shell is made from plastic to be light for easily transportation and good buoyancy.
- **Cable Gland** - The cable gland clamps the cable and prevents unnecessary movement and helps prevent the gland on the pump from leaking.
- **Cable Top Exit** - The cable passes through the bracket and exits on top of the float, which helps prevent the cable from being dropped into the water during installation
- **Design** - Flat top and bottom for easy stacking. Strong Hexagonal shape with strengthening rib on outer edge and inner edge.

Jenny J-Series

Performance Curves



Notes

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Revised 26-05-2023