



# SELF-PRIMING CENTRIFUGAL PUMPS



**VICTOR  
PUMPS**





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## Victor Pumps: "Well done!"

*We meet all the requirements,  
even in the most  
difficult applications.*







surface mounted for easy access



entrained air/abrasives/corrosives



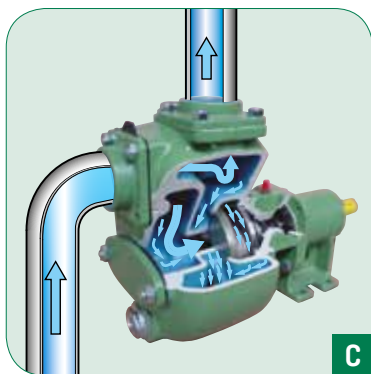
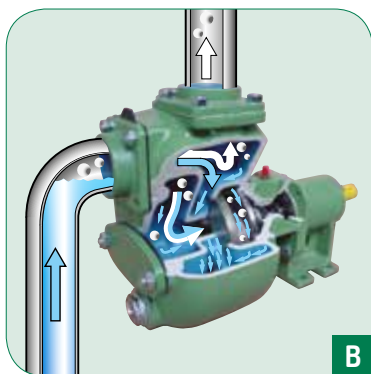
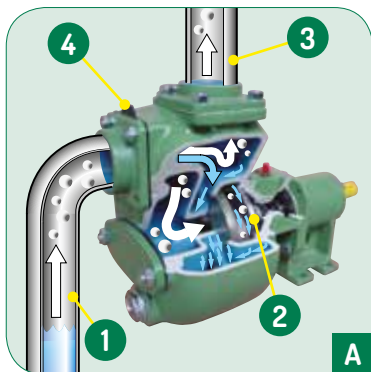
self-priming up to 8 m



also for viscous liquids



## Operating principle and limits of use



The S series pumps are centrifugal and self-priming. The impeller with open blades allows a wide passage of solids. With this kind of pump you can handle wastewater also with corrosive and viscous liquids containing solids in suspension, abrasive powders, even if there are air bubbles. One of the advantages of this type of pump is indeed that it doesn't need to be immersed in the liquid. The maximum suction height is given by the physical conditions of the pumped liquid and can reach up to 8 m.

Since the pump is normally placed dry above or aside the liquid, the suction line contains air.

The self-priming pump will evacuate all the air. The vacuum produced as the impeller rotates (2) draws the air (1) into the pump where it is mixed with the liquid already contained in the pump casing. The air/liquid mixture is driven to the discharge side where the air separates out and is expelled through the discharge port (3) while the liquid, due to the higher gravity, falls back and is reused in the suction side through a small passage. When all the air has been evacuated from the suction line the liquid is pumped, even if air-charged.

The high suction port keeps enough liquid inside the casing to allow re-priming any time. The non-return valve in the suction port (4) avoids a backflow of the liquid and reduces priming times.



The pumps are available with ATEX certifications to fulfill the EU regulation "Directive 2014/34/EU" that regulates the security of use for equipment in potentially explosive atmospheres.

We can supply ATEX certifications for the areas of Group II, categories 2GD (Zone 1) and 3GD (Zone 2) for the temperature classes T1/T2/T3 and T4. By filling out a simple questionnaire, you can check the availability of the certificate for the specific request. Further information is available on request.



## Pumpable liquids

Acids

Bentonite

Biomass

Cutting oil

Diesel

Emulsions

Flood drainage

Fresh or brackish water

Industrial wastewater

Leachate

Light petroleum products

Lime milk

Liquid fertilizer

Liquid manure

Low viscosity oils

Mineral oils

Must

Petrol

Rain water

Sea water

Sewage

Soda and alkaline solutions

Water with sand or mud

Transformer oil

Vegetable oils

Washing water

Water with boron

Water with solid residues

Whey from alcohol distillation

and many others...



## Close coupled

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### S 80 G31T+F

Cast iron pump, with DN80 flanged ports and close coupled to the motor. Compact, competitively priced and easy to use. Typically for non-heavy applications and intermittent use.





### S 41 K57BBDe+F+2A

Stainless steel pump, with DN40 flanged ports, with elastic coupling mounted in the bracket with the IEC standard B5 motor.



## Bi-Block on base plate

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### S 40 G312BBDe+F+B+2A

Cast iron pump with DN40 flanged ports, Bi-Block version with electric motor, on base plate. Easy to install, heavy duty and safe. For fixed stations and continuous use.



With hydraulic motor

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### S 51 K301S0

Stainless steel pump with 2" threaded ports, coupled to hydraulic motor. Normally used on trucks and trailers.

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### S126 K312B+3A/XDe302

Stainless steel pump, with 4" counter flanges for pipe welding, flexible shaft coupling with guard and IEC standard B3 motor on baseplate. Traditional build, heavy duty for many applications.



## Carrying frame

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### **S 40 G31M+SG**

Cast iron pump with 1 ½" threaded ports, close coupled with 230 V single-phase motor; on/off switch, motor protection, and cable with Schuko plug. Mounted on a carrying frame: compact and transportable.

## 4-wheeled trolley for flat ground



### S 66 K30BBDe+TV+SX+3A

Stainless steel pump with 2" threaded ports, Bi-Block build with electric cable, on/off switch, with 4-wheeled trolley suitable for flat ground.





## 2-wheeled trolley

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### S 60 G31RZ+TEB

2" cast iron pump, close coupled to diesel engine, on 2-wheeled all terrain trolley with recoil and electric start with integrated battery on the frame.

## 2-wheeled trailer with tank



### S150 G12ZH2+TSB

6" cast iron pump, close coupled to diesel engine, on trailer with tractor profile wheels, large capacity tank for heavy and continuous use. The lifting and towing hooks allow various types of handling.



### S201 G12BBZH4+BSB

8" cast iron pump, Bi-Block coupled to engine, fixed with anti-vibration mountings on base with large tank. Supplied with document box and battery cover. Solid and particularly recommended for heavy-duty applications.



## Special versions



THE  
**LIGHTEST**  
PUMP IN ITS CLASS  
55 KG

### S 81 A30Q+G

3" aluminium pump, close coupled to gasoline engine; on a practical, easily transportable carrying frame. Designed to be used in emergency situation such as flooding.



### S108 G31BBZH2+TVSB

4" cast iron pump, Bi-Block coupled to diesel engine; on 4-wheeled trailer for flat ground, can be moved manually, with a forklift or crane.



### S150 G12ZHC2+SKID

6" cast iron pump close coupled to "Silent Pack" diesel engine for construction sites near residential areas mounted on skid, designed to be sled or lifted by the hook.

## Materials and construction variants

Versatility is one of the main characteristics of Victor Pumps. The same model of machine has been developed for different uses and applications in various sectors.



Depending upon the application and the pumped product, the S pumps are available in cast iron, ductile cast iron, stainless steel, bronze or aluminium. Furthermore hybrid versions are available with different material combinations to extend pump life. It is also possible to strengthen the pump with special materials to reduce component wear. For example to suit highly abrasive particles. Many drives are also available including different electric motors, engines and even hydraulic motors. All of these options allow the Victor pumps to be adapted to suit many different applications for process plants, on board ships, for environmental protection, on construction sites, for civil emergencies and for many other situations! Using extensive experience gained over many years, Victor Pumps is able to offer the very best solution for all of your fluid handling requirements!



### **S 81 B30T**

3" close coupled pump to three-phase electric motor, made of bronze, highly recommended for sea water pumping.

## Materials and construction variants

The possibility of customisation of the pump units according to the specific applications and special requests of the customer is another plus that distinguishes us and that has led our customers, over the years, to appreciate us all over the world.



Mechanical seals and gasket sets can also be selected as needed. The most common seal is an elastomeric bellows, available in various materials including, for example, silicon carbide/ceramic, tungsten carbide/tungsten carbide or graphite. For the most complex applications we also offer metal bellows seals or a magnetic drive. The rubber gaskets are selectable in NBR, FKM, EPDM, PTFE or Aflas®. Our technical department is always updated on new materials and on their specific characteristics to offer you cutting-edge solutions.



### S 46 K16TM

Stainless steel pump with 1 ½" threaded ports, magnetic drive shaft to eliminate any type of leakage of the pumped product. Recommended with dangerous liquids to protect the users and the environment.



## Pump characteristics



**Standard inlet and outlet ports** are BSP (GAS) threaded (up to 4"), on request also NPT; the ports are screwed on the casing to easily disconnect the pipes.



**Ports with counter flanges to weld** from 6" up. They are connected to other parts of the system with a simple welding.



**DIN or ANSI flanged ports**  
ON REQUEST: with through holes to facilitate the assembly and disassembly. Additional  $\frac{1}{4}$ " threaded hole for vacuum gauge and pressure gauge.



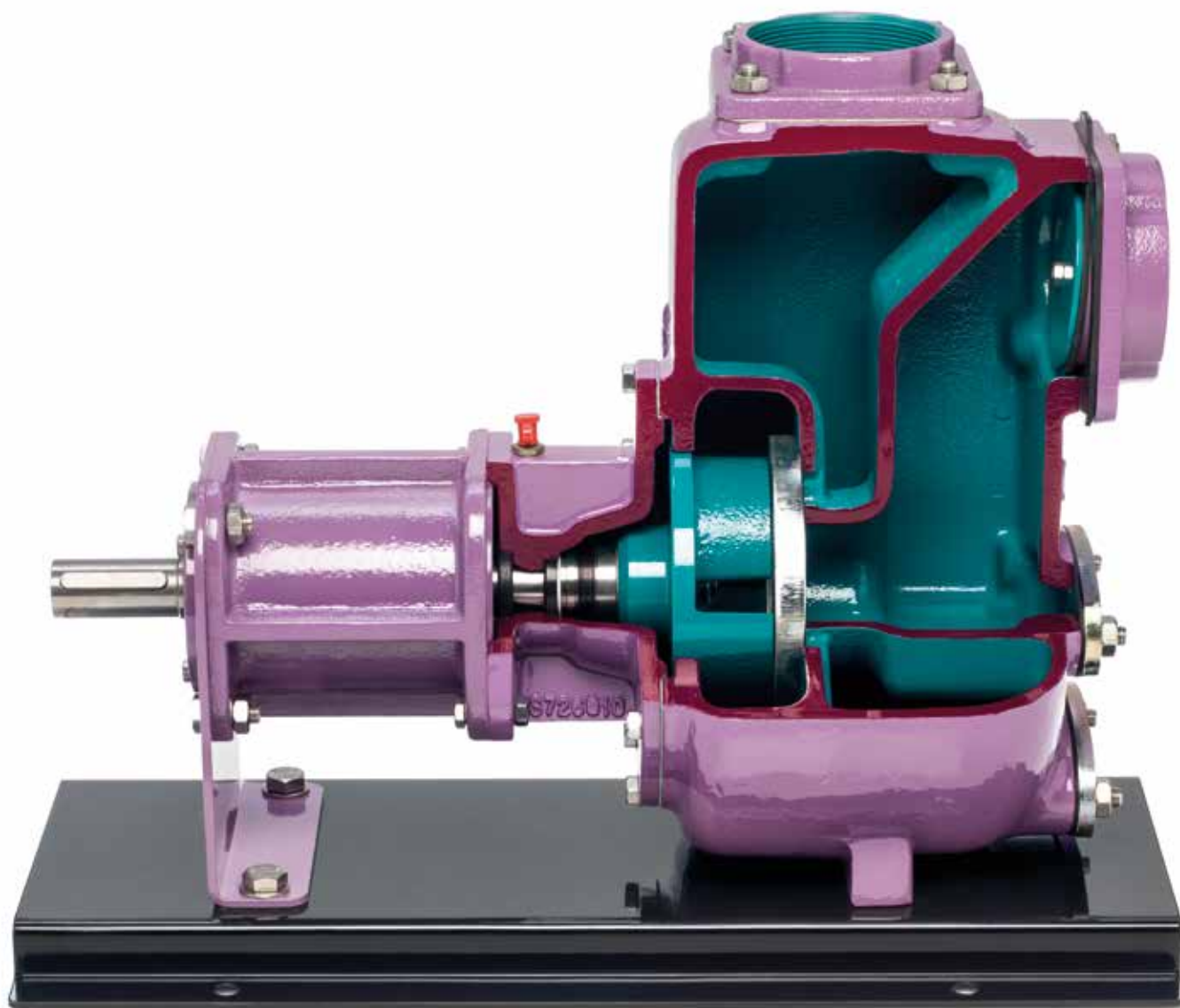
**Wear plates** of considerable thickness that are life-extending for of the pump also in presence of abrasives. On request in anti-wear version.



**Impeller with open blades** allows the passage of solids and also good for abrasive products, thanks to its thick blades.



**Impeller and wear plate with cutter device**  
ON REQUEST: to cut soft solids and filaments. Good to wash out the labels from bottles, or black water on ship or rinsing of vegetables.



## Pump characteristics



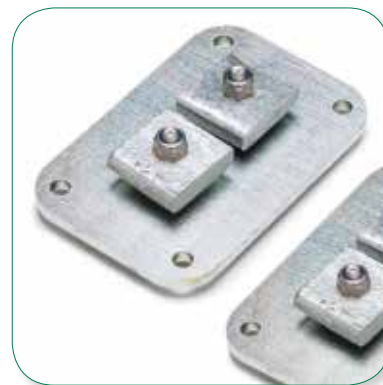
### Priming cover

to fill the pump casing at the first start; enables the self-priming.



### Inspection cover

to check the impeller and, if required, to clean the pump.



### Zinc anodes

ON REQUEST:

mounted on the covers of the pump, to protect the cast iron parts from sea water.



### Non-return valve

prevents the reflux of liquid from the discharge line. Available in NBR, FKM, PTFE and EPDM.



### Clean out cover

it is used to empty the casing, especially in the colder months, to prevent the water from freezing inside.

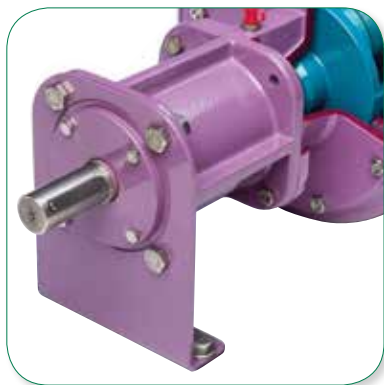


### Discharge valve

ON REQUEST:

installed on the clean out cover, it is used to quickly empty the casing without the use of tools.

## Types of seals and accessories



### Pedestal

standard with maintenance free self-lubricating ball bearings. The shaft length and the construction materials are designed to withstand prolonged vibrations.



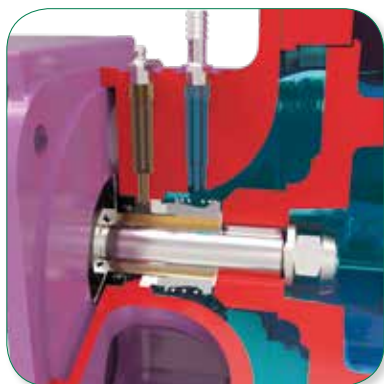
### Mechanical seal

with stainless steel shaft sleeve and lubrication behind the seal to increase the dry running capabilities.



### + PS Automatic seal lubricator

ON REQUEST:  
automatic lubricator of the mechanical seal to prolong the dry-running capabilities or when working out of curve.



### External flushing seal

ON REQUEST: to avoid the deposit of product on the surfaces of the seal and rear of the impeller.



### Metal bellow mechanical seal

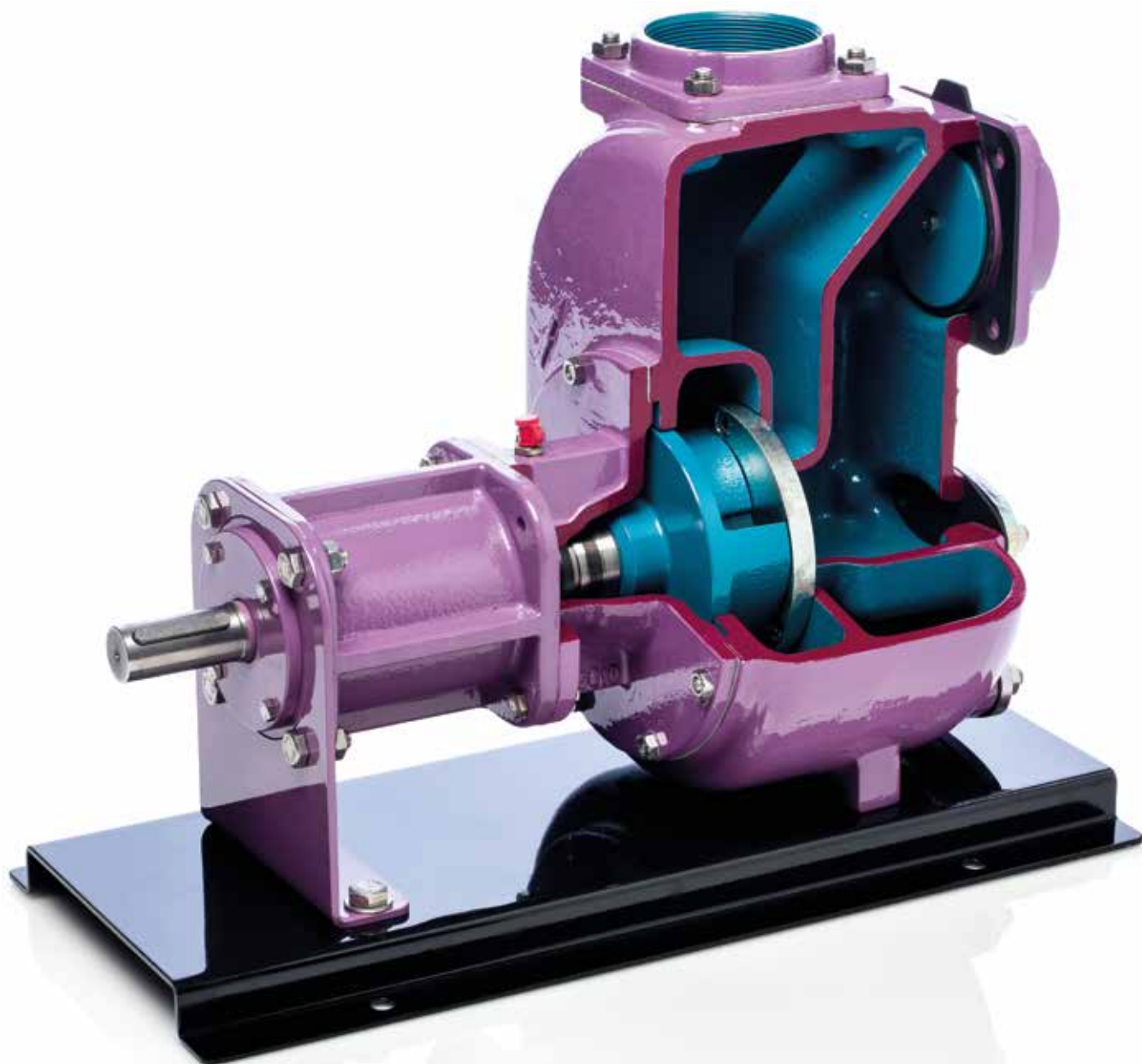
ON REQUEST: for dirty solvents and other chemical products compatible with PTFE.



### Magnetic coupling

ON REQUEST: makes the pump tight and has only static gaskets. Recommended for dangerous liquids to protect the environment.

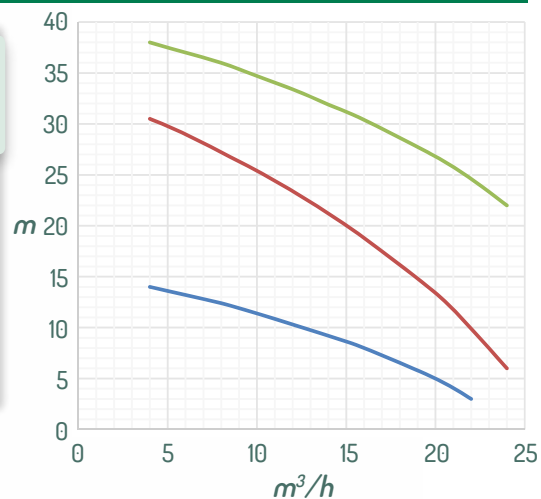




## 50 Hz Performance

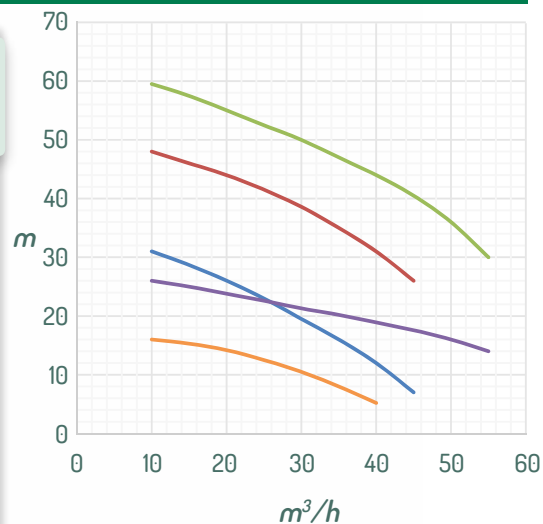
### 1½" - DN 40

Model	Heavy duty	Self-priming	Noise dB(A)	Passage of solids mm	400 V, 50 Hz motor	
					kW	rpm
S 45-4	***	*****	<85	12	4,0	2900
S 45	***	*****	<80	14x19	2,2	2900
S 46				13	3,0	
S 40	*****	***	<75	20	1,1	2900
S 41						
S 42						



### 2" - DN 50

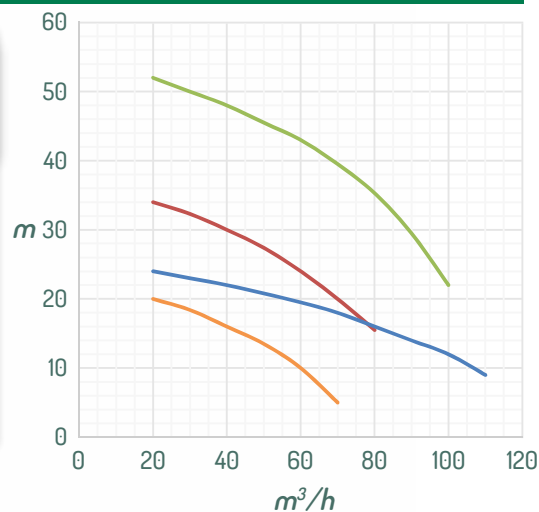
Model	Heavy duty	Self-priming	Noise dB(A)	Passage of solids mm	400 V, 50 Hz motor	
					kW	rpm
S 68	***	*****	>85	25	11	2900
S 69						
S 68+40	****	*****	<85	25	7,5	2900
S 69+40						
S 63	**	*****	<85	22	7,5	2900
S 60	****	*****	<80	17	4	2900
S 61						
S 67	*****	*****	<75	24	5,5	1450
S 65	*****	**	<70	25	2,2	1450
S 66						
S 50	****	***	<80	25	2,2	2900
S 51						



## 50 Hz Performance

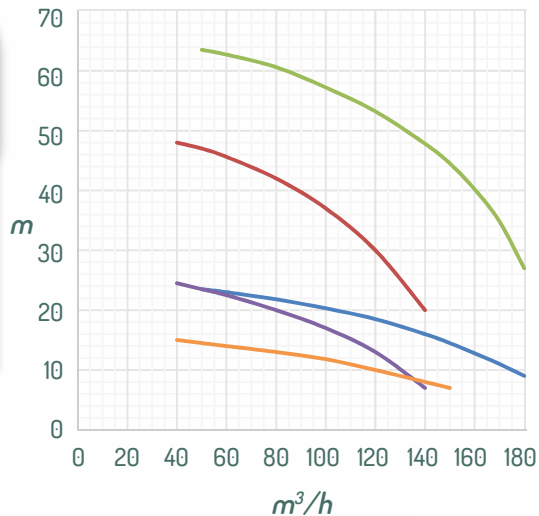
### 3" - DN80

Model	Heavy duty	Self-priming	Noise dB(A)	Passage of solids mm	400 V, 50 Hz motor	
					kW	rpm
S 88	★★★	★★★★★	>85	35	15	2900
S 83	★★★	★★★★★	>85	27	7,5	2900
S 91	★★★★★	★★★★	<85	37	7,5	1450
S 80						
S 81	★★★★	★★★	<85	32	4	2900
S 82						
S 85	★★★★★	★★	<75	40	4	1450



### 4" - DN 100

Model	Heavy duty	Self-priming	Noise dB(A)	Passage of solids mm	400 V, 50 Hz motor	
					kW	rpm
S126	★★★	★★★★★	>85	42	30	2900
S108(210)	★★	★★★★★	>85	35	18,5	2900
S121	★★★★	★★★★★	<80	45	11	1450
S100	★★★	★★	>85	37	11	2900
S105	★★★★★	★★	<75	45	5,5	1450



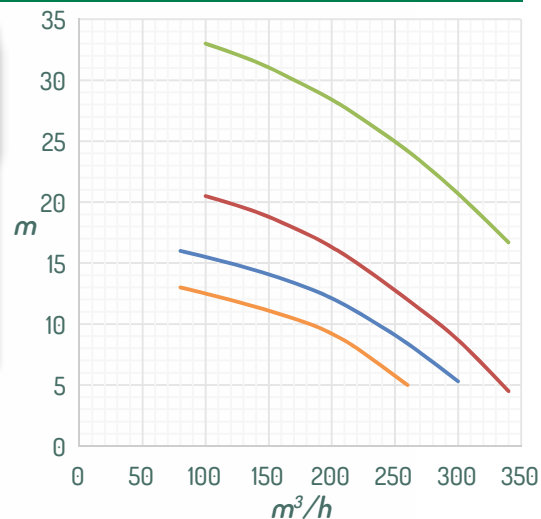
Heavy duty / Self-priming: ★ = SUFFICIENT / ★★ = DISCRETE / ★★★ = GOOD / ★★★★ = VERY GOOD / ★★★★★ = EXCELLENT

The data shown refer to standard pumps. For more information contact our sales offices.

## 50 Hz Performance

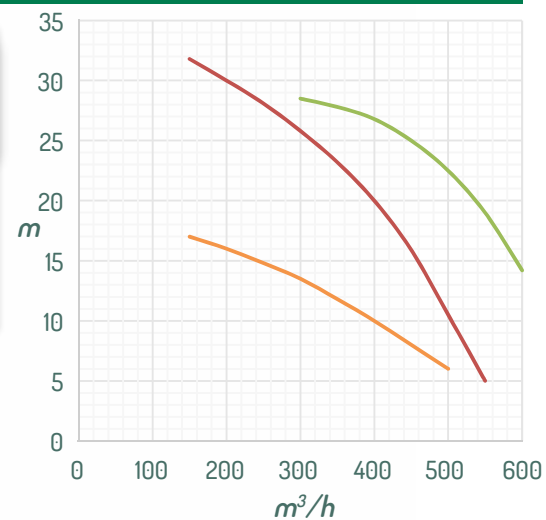
### 6" - DN 150

Model	Heavy duty	Self-priming	Noise dB(A)	Passage of solids mm	400 V, 50 Hz motor	
					kW	rpm
S180	★★★	★★★★★	>85	40	30	1450
S161	★★★★					
S163	★★★★★	★★★★	<85	54	18,5	1450
S170	★★★★★	★★★	<75	54	11	960
S150	★★★★	★★★	<85	72x50	11	1450



### 8" - DN 200

Model	Heavy duty	Self-priming	Noise dB(A)	Passage of solids mm	400 V, 50 Hz motor	
					kW	rpm
S230+50	★★	★★★★★	>85	72	55	1450
S230+40	★★★	★★★★★	>85	54	45	1450
S201+50	★★★★	★★★★	<85	57	22	1450
S220+50	★★★★★	★★★	<80	76	18,5	960



Heavy duty / Self-priming: ★ = SUFFICIENT / ★★ = DISCRETE / ★★★ = GOOD / ★★★★ = VERY GOOD / ★★★★★ = EXCELLENT

The data shown refer to standard pumps. For more information contact our sales offices.