

# NABERMANN AURUM PUMPEN



APOLLON SUBMERSIBLE PUMPS

**MADE IN GERMANY** 

2 COMPANY COMPANY 3



HABERMANN AURUM PUMPEN company has been offering experience and extensive know- how in sludge transporting for almost 100 years.

1927

Habermann Aurum Pumpen is one of the leading manufacturers of centrifugal pumps for pumping liquids containing solid particles. With almost 100 years of experience and an expertise of more than 30,000 pumps used worldwide in a wide range of industrial sectors, we have

become a part of the global economic system. Our pumps are widely applied in mining and mineral industries, extractive and energy industries, steel industry, chemicals, pigment industry, in tunnelling and special civil engineering. Our aim is to combine tradition with modernity and continue writing the success story of the company. Achieving this ambitious goal is a daily incentive for a motivated and competent team. Our daily commitment results in customerspecific pumps, most of which have been in trouble-free operation for over 60 years, which is a proof for economy, reliability and efficiency of our Habermann Aurum products.

Our product portfolio comprises the following areas: Pumps, Valves and customized solutions. Thanks to our in-house engineering we are able to solve even technically difficult and complex tasks.

Through our international network and our own branches, we have become a globally active and valued partner for our customers. Habermann Aurum products are used worldwide. Our reach market presence extends across continents from Europe, America and Asia to Africa.

Our satisfied customers are among the market leaders worldwide. Our credo is to meet the demanding

requirements of the market and to support our customers on site in the best possible way.

### **Tradition meets** the future.



www.habermann-aurum-pumpen.de

#### **SUBMERSIBLE PUMPS**

#### designed for sludge and waste water transport as well as muddy waters







**APNO SLIM** 3 - 8 kW Q max up to 70 m<sup>3</sup>/h H max up to 65 m



**ELEVARO** 7.3 - 22 kW H max up to 30 m



**MAXIFLOW** 3.7 - 22 kW Q max up to 390 m<sup>3</sup>/h Q max up to 360 m<sup>3</sup>/h H max up to 44 m



**TINYFLOW** 0,4 - 7,5 kW Q max up to 100 m<sup>3</sup>/h H max up to 35 m



**CUTARGO** 0.75 - 3.7 kW Q max up to 80 m<sup>3</sup>/h H max up to 20 m



**SENTINO** 0.4 - 1.5 kW H max up to 20 m



**SENTINO RW** 0.4 kW Q max up to 28 m³/h Q max up to 14,4 m³/h H max up to 11 m



**SENTINO** LIGHT 0,4 - 0,75 kW Q max up to 19,8 m<sup>3</sup>/h Q max up to 14,4 m<sup>3</sup>/h Q max up to 18 m<sup>3</sup>/h H max up to 15 m



**SENTINO LIGHT RW** 0.4 kW

H max up to 11 m



**DOMO** 

0,15 - 0,55 kW H max up to 11 m

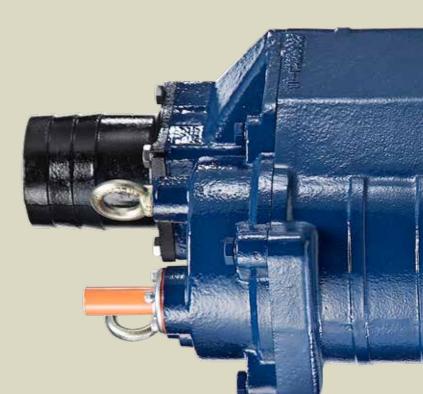


# **CONTENTS**

COMPANY	2
DEWATERING PUMPS	6
APNO, APNO SLIM SERIES	8
SLURRY AND SAND PUMPS	14
ELEVARO SERIES	16
SEWAGE PUMPS	20
CUTARGO SERIES	24
MAXIFLOW SERIES	26
TINYFLOW SERIES	28
GUIDE RAIL SYSTEM	30
HANDY AND RESIDUE PUMPS	32
SENTINO SERIES	36
DOMO SERIES	38
4.00F000 DUFO	(2)
ACCESSORIES	42
TECHNICAL INFORMATION	44



**TRANSPORTABLE H**ABERMANN **A**URUM **TAUCHPUMPEN** 



# **DEWATERI**PUMPS

# APNO SLIM

Our dewatering pumps are engineered for professional use in tough dewatering applications in construction, industrial sites, and mines. With a compact, slim design and our patented ACrS technology, these wearresistant portable dewatering pumps provide economical solutions.



### **APNO SERIES**

#### HIGH CHROME DEWATERING PUMP

Designed for continuous operations, excellent performance and easy maintenance, Apollon APNO series pumps have proven their reliability and durability in demanding areas like construction, mining, tunneling, quarries, industries and rental applications.

#### **FEATURES**

#### 1. WATERTIGHT CABLE ENTRY

The cable entry employs an anti-wicking block where each conductor is stripped and encapsulated in epoxy. This feature effectively prevents water from penetrating the motor chamber when the cable end is submerged or the cable sheath is damaged.

#### 2. MULTI-DIRECTION BSP DISCHARGE COUPLING

Discharge can be converted between vertical and horizontal directions. In pumps 7,5 kW and larger, a vertical discharge connection is supplied as standard.

#### 3. MOTOR PROTECTOR

The motor incorporates a circle thermal protector which protects against overheating and dry-run.

#### 4. TOP DISCHARGE AND DOUBLE HOUSING DESIGN

Designed to construct a water jacket that provides maximum motor cooling effect for continuous operation at low water level, this feature forms the cylindrical and slim shape of the pump and enables the pump to be installed in confined spaces.

#### **5. SUBMERSIBLE MOTOR**

Air filled motor, housed in a watertight casing, conforms to Class  $\mbox{\sf F}$  insulation.

#### 6. C3 BALL BEARINGS AND HARDENED SS SHAFT

High quality of C3 ball bearings and the well-balanced, hardened stainless steel shaft enhance stability during continuous pumping operations.

#### 7. EAGLEBURGMANN® DOUBLE MECHANICAL SEALS

Located in the oil chamber, the device is made of quality materials with highly wear-resistant silicon carbide in lower side that provides extra protection against leakage and dry-run.

#### 8. EXTRA PROTECTION FOR MECHANICAL SEALS AND SHAFT

Lip seals and shaft sleeves are utilized for additional protection against wear.

#### 9. HIGH CHROME STEEL IMPELLER

Formula ACrS Tech is applied to all high chrome steel impellers. This technology increases wear resistance to particle abrasion.

#### 10. DURABLE OUTER JACKET AND STRAINER

Corrugated Outer Jacket and strainer made from 304 stainless steel provide impact resistance to harsh handling and conditions. In pumps 7,5 kW and larger, flat 304 stainless steel outer casing is provided as standard.

#### 11. FOOD GRADE LUBRICANT

We adopt eco-friendly lubricant to minimize environmental impacts..

# ADVANCED CHROMIUM STEEL TECH MATERIAL



Designed for high wear resistance and superb corrosion resistance, ACrS Tech is applied to all our APNO series impellers to tackle tough challenging applications. The use of ACrS Tech chromium steel material significantly reduces operational costs.



### HEAVY DUTY PUR CABLE

As rugged as our pumps. Provides an ultra-solid solution to the weak spot of every submersible pump. Increases safety on the construction site with maximum visibility.

# ADJUSTABLE BSP DISCHARGE COUPLING

The discharge coupling can be adjusted to vertical or horizontal directions. In 7,5 kW and larger pumps, a vertical discharge connection is standard.





The cable entry features an anti-wicking block where each conductor is stripped and encased in epoxy. In doing so, water is effectively prevented from entering the motor chamber when the cable end is submerged or should the cable sheath become damaged.

# **POWER RANGE** APNO

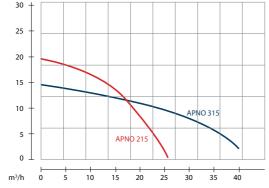
Here is an overview of our series products of APNO pumps:

#### **APNO**

#### P-WS-215-3 P-WS-315-3



P-WS	215-3	315-3
Outlet	2" (BSP)	3" (BSP)
Rated Output	1.5 kW	1.5 kW
Shaft Speed	2850 rpm	2850 rpm
Solid Passage	9 mm	9 mm
Height	568 mm	568 mm
Diameter	Ø 253 mm	Ø 267 mm
Weight	33 kg	33 kg



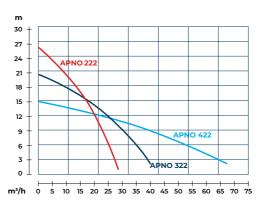
Also available in 230 Volt (S)

#### **APNO**

#### P-WS-222-3 P-WS-322-3 P-WS-422-3



P-WS	222-3	322-3	422-3
Outlet	2" (BSP)	3" (BSP)	4" (BSP)
Rated Output	2.2 kW	2.2 kW	2.2 kW
Shaft Speed	2850 rpm	2850 rpm	2850 rpm
Solid Passage	9 mm	9 mm	9 mm
Height	598 mm	598 mm	630 mm
Diameter	Ø 253 mm	Ø 267 mm	Ø 284 mm
Weight	35 kg	35 kg	43 kg

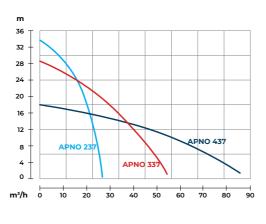


#### **APNO**

#### P-WS-237-3 P-WS-337-3 P-WS-437-3



P-WS	237-3	337-3	437-3
Outlet	2" (BSP)	3" (BSP)	4" (BSP)
Rated Output	3.7 kW	3.7 kW	3.7 kW
Shaft Speed	2850 rpm	2850 rpm	2850 rpm
Solid Passage	10 mm	10 mm	10 mm
Height	625 mm	630 mm	630 mm
Diameter	Ø 291 mm	Ø 269 mm	Ø 284 mm
Weight	61 kg	42 kg	42 kg

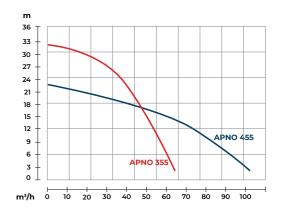


#### APNO

#### P-WS-355-3 P-WS-455-3



P-WS	355-3	455-3
Outlet	3" (BSP)	4" (BSP)
Rated Output	5.5 kW	5.5 kW
Shaft Speed	2850 rpm	2850 rpm
Solid Passage	10 mm	10 mm
Height	656 mm	656 mm
Diameter	Ø 306 mm	Ø 320 mm
Weight	60 kg	60 kg

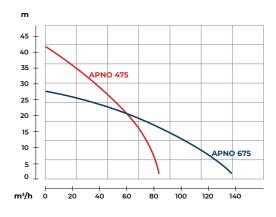


#### **APNO**

#### P-WS-475-3 P-WS-675-3



P-WS	475-3	675-3
Outlet	4" (BSP)	6" (BSP)
Rated Output	7.5 kW	7.5 kW
Shaft Speed	2850 rpm	2850 rpm
Solid Passage	15 mm	15 mm
Height	801 mm	826 mm
Diameter	Ø 317 mm	Ø 317 mm
Weight	93 kg	97 kg

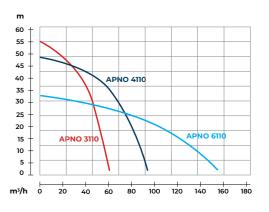


#### **APNO**

#### P-WS-3110-3 P-WS-4110-3 P-WS-6110-3



P-WS	3110-3	4110-3	6110-3
Outlet	3" (BSP)	4" (BSP)	6" (BSP)
Rated Output	11 kW	11 kW	11 kW
Shaft Speed	2850 rpm	2850 rpm	2850 rpm
Solid Passage	12 mm	15 mm	15 mm
Height	863 mm	858 mm	870 mm
Diameter	Ø 354 mm	Ø 354 mm	Ø 354 mm
Weight	135 kg	135 kg	137 kg

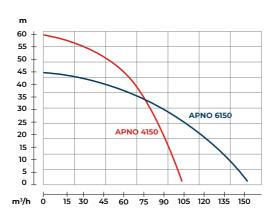


#### **APNO**

#### P-WS-4150-3 P-WS-6150-3



P-WS	4150-3	6150-3
Outlet	4" (BSP)	6" (BSP)
Rated Output	15 kW	15 kW
Shaft Speed	2850 rpm	2850 rpm
Solid Passage	15 mm	15 mm
Height	887 mm	899 mm
Diameter	Ø 354 mm	Ø 354 mm
Weight	141 kg	142 kg

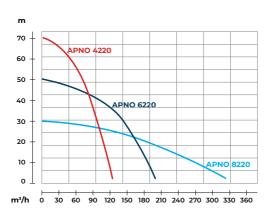


#### **APNO**

P-WS-4220-3 P-WS-6220-3 P-WS-8220-3



P-WS	4220-3	6220-3	8220-3
Outlet	4" (BSP)	6" (BSP)	8" (BSP)
Rated Output	22 kW	22 kW	22 kW
Shaft Speed	2850 rpm	2850 rpm	2850 rpm
Solid Passage	15 mm	20 mm	20 mm
Height	1085 mm	1099 mm	1154 mm
Diameter	Ø 424 mm	Ø 424 mm	Ø 424 mm
Weight	256 kg	259 kg	264 kg

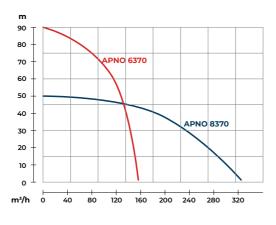


#### **APNO**

#### P-WS-6370-3 P-WS-8370-3



P-WS	6370-3	8370-3
Outlet	6" (BSP)	8" (BSP)
Rated Output	37 kW	37 kW
Shaft Speed	2850 rpm	2850 rpm
Solid Passage	10 mm	20 mm
Height	1294 mm	1256 mm
Diameter	Ø 532 mm	Ø 532 mm
Weight	510 kg	510 kg

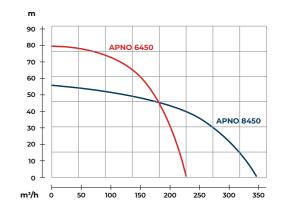


#### **APNO**

#### P-WS-6450-3 P-WS-8450-3



P-WS	6450-3	8450-3
Outlet	6" (BSP)	8" (BSP)
Rated Output	45 kW	45 kW
Shaft Speed	2850 rpm	2850 rpm
Solid Passage	10 mm	20 mm
Height	1294 mm	1256 mm
Diameter	Ø 532 mm	Ø 532 mm
Weight	530 kg	530 kg

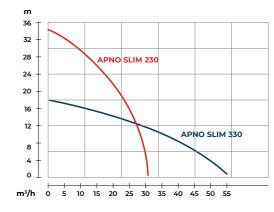


#### **APNO** SLIM

#### P-WS-230-3 P-WS-330-3



P-WS	230-3	330-3
Outlet	2" (BSP)	3" (BSP)
Rated Output	3 kW	3 kW
Shaft Speed	2850 rpm	2850 rpm
Solid Passage	7 mm	7 mm
Height	659 mm	629 mm
Diameter	Ø 188 mm	Ø 188 mm
Weight	45 kg	38 kg

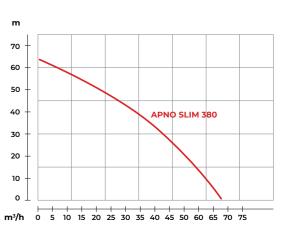


#### **APNO** SLIM

#### P-WS-380-3



P-WS	380-3
Outlet	3" (BSP)
Rated Output	8 kW
Shaft Speed	2850 rpm
Solid Passage	8 mm
Height	798 mm
Diameter	Ø 283 mm
Weight	92 kg



# SLURRY AND SAND PUMPS

# **ELEVARO**

Serving a wide range of slurry transport applications, APOLLON slurry pumps are designed for long wear life, low energy consumption, excellent performance, and easy maintenance. With our patented ACrS Tech and rugged construction, these abrasion and corrosion resistant slurry pumps provide economical solutions for challenging slurry transportation.



# **ELEVARO SERIES**

#### OPEN STAND AND AGITATOR, STRAINER AND AGITATOR

Rugged, reliable and cost effective, the Elevaro series pumps come complete with patented high chrome impellers, agitators, and wear plates to withstand tough slurry transportation. ELEVARO pumps are designed with two different types of pump stands, the open stand and the strainer. Our slurry pumps serve a wide range of slurry transport applications like mining, quarrying, construction sites, and other demanding industries.

#### **FEATURES**

#### 1. WATERTIGHT CABLE ENTRY

The cable entry employs an anti-wicking block where each conductor is stripped and encapsulated in epoxy. This feature effectively prevents water from penetrating the motor chamber when the cable end is submerged or the cable sheath is damaged.

#### 2. TOP DISCHARGE AND SIDE FLOW DESIGN

Designed to cool the motor with pumped water even at low water level, this feature forms the cylindrical and slim shape of the pump and enables the pump to be installed in confined spaces.

#### 3. MOTOR PROTECTOR

The motor incorporates a circle thermal protector which protects against overheating and dry-run.

#### 4. SUBMERSIBLE 4-POLE MOTOR

Air filled motor, housed in a watertight casing, conforms to Class F insulation. The 4-pole motor helps reducing impeller wears.

#### 5. C3 BALL BEARINGS AND HARDENED SS SHAFT

High quality of C3 ball bearings and the well-balanced, hardened stainless steel shaft enhance stability during continuous pumping operations.

#### **6. EAGLEBURGMANN® DOUBLE MECHANICAL SEALS**

Located in the oil chamber, the device is made of quality materials with highly wear-resistant silicon carbide in lower side that provides extra protection against leakage and dry-run.

#### 7. EXTRA PROTECTION FOR MECHANICAL SEALS AND SHAFT

Lip seals and shaft sleeves are utilized for additional protection against wear.

#### 8. HIGH CHROME STEEL IMPELLER, AGITATOR, AND WEAR PLATE

Our patent formula, ACrS Tech is applied to all high chrome steel components, including impellers, agitators, and wear plates. This technology increases wear resistance to particle abrasion.

#### 9. HARDENED PUMP VOLUTE

The pump volute is made from hardened cast ductile iron. This technology enhances the hardness and wear life of the pump casing.

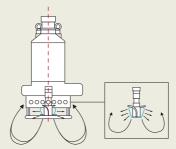
#### 10. RUGGED CAST IRON CONSTRUCTION

The whole cast iron pump features a simple, robust structure that provides durability and impact resistance to rough conditions.

#### 11. FOOD GRADE LUBRICANT

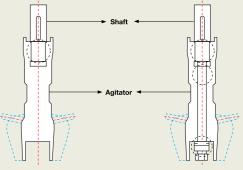
We adopt eco-friendly lubricant to minimize environmental impacts.

#### How the agitator works



The rigid agitator delivers kinetic energy (energy of motion) to stir solids surrounding the pump intake, re-suspending them into a fluid state for easy pumping.

**Agitator fastening** 



Conventional:

The agitator is simply attached onto the end of the pump shaft. As the agitator is only fastened at a single point, the agitator can loosen itself or come off during use.

**APOLLON Pump's design:** 

By using a prolonged pump shaft, the agitator is fastened at three separate points, ensuring that the agitator cannot loosen itself.



#### **High Chrome Steel Impeller, Agitator** and Wear plate

Designed for high wear resistance and superb corrosion resistance, ACrS Tech is applied to all our ELEVARO series impellers, agitators and wear plates to tackle tough

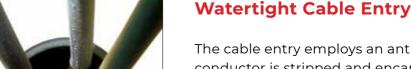


challenging applications. The use of ACrS Tech chromium steel material significantly reduces operational costs.



#### **Heavy Duty PUR Cable**

As rugged as our pumps. Provides an ultra solid solution to the weak spot of every submersible pump. Extra safety on the construction site and maximum visibility.



The cable entry employs an anti-wicking block where each conductor is stripped and encapsulated in epoxy. This feature effectively prevents water from penetrating the motor chamber when the cable end is submerged or the cable sheath is damaged.

# **POWER RANGE ELEVARO**

Here is an overview of our series products of ELEVARO pumps:

#### **ELEVARO**

#### P-ASO-337-3 P-ASO-437-3 P-ASC-337-3 P-ASC-437-3



P-ASO; P-ASC	337-3	437-3
Outlet	3" (BSP)	4" (BSP)
Rated Output	3.7 kW	3.7 kW
Shaft Speed	1450 rpm	1450 rpm
Solid Passage	25 mm	25 mm
Height © Height ©	762 mm 793 mm	783 mm 814 mm
Diameter © Diameter ©	Ø 385 mm Ø 382 mm	Ø 385 mm Ø 382 mm
Weight © Weight ©	110 kg 115 kg	110 kg 115 kg



# **ELEVARO 437** 0 10 20 30 40 50 60 70 80 90 100 110

#### ⊚ = open stand © = strainer

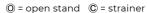
#### **ELEVARO**

#### P-ASO-355-3 P-ASO-455-3 P-ASC-355-3 P-ASC-455-3





355-3	455-3
3" (BSP)	4" (BSP)
5.5 kW	5.5 kW
1450 rpm	1450 rpm
25 mm	25 mm
806 mm 806 mm	826 mm 826 mm
Ø 420 mm Ø 412 mm	Ø 420 mm Ø 412 mm
123 kg 131 kg	124 kg 132 kg
	3" (BSP) 5.5 kW 1450 rpm 25 mm 806 mm 806 mm Ø 420 mm Ø 412 mm 123 kg



# ELEVARO 455 **ELEVARO 355** 20 40 60 80 100 120 140

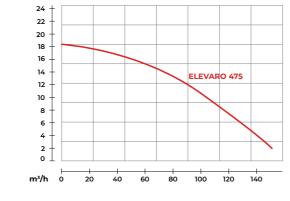
#### **ELEVARO**

#### P-ASO-475-3 P-ASC-475-3





P-ASO; P-ASC	475-3
Outlet	4" (BSP)
Rated Output	7.5 kW
Shaft Speed	1450 rpm
Solid Passage	25 mm
Height © Height ©	826 mm 826 mm
Diameter © Diameter ©	Ø 420 mm Ø 412 mm
Weight © Weight ©	124 kg 132 kg



#### **ELEVARO**

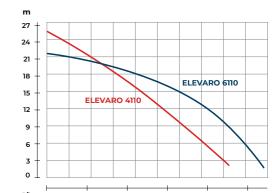
#### P-ASO-4110-3 P-ASO-6110-3 P-ASC-4110-3 P-ASC-6110-3





P-ASO; P-ASC	4110-3	6110-3
Outlet	4" (BSP)	6" (BSP)
Rated Output	11 kW	11 kW
Shaft Speed	1450 rpm	1450 rpm
Solid Passage	25 mm	35 mm
Height © Height ©	901 mm 910 mm	913 mm 922 mm
Diameter © Diameter ©	Ø 479 mm Ø 479 mm	Ø 479 mm Ø 479 mm
Weight © Weight ©	191 kg 199 kg	192 kg 200 kg

<sup>© =</sup> open stand © = strainer



#### **ELEVARO**

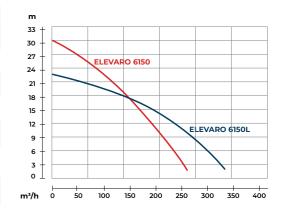
#### P-ASO-6150-3 6150L P-ASC-6150-3





P-ASO; P-ASC	6150-3	6150L
Outlet	6" (BSP)	6" (BSP)
Rated Output	15 kW	15 kW
Shaft Speed	1450 rpm	1450 rpm
Solid Passage	35 mm	35 mm
Height © Height ©	913 mm 922 mm	913 mm 922 mm
Diameter © Diameter ©	Ø 479 mm Ø 479 mm	Ø 479 mm Ø 479 mm
Weight © Weight ©	201 kg 208 kg	201 kg 208 kg

© = open stand © = strainer



#### **ELEVARO**

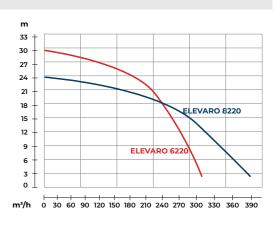
#### P-ASO-6220-3 P-ASO-8220-3 P-ASC-6220-3 P-ASC-8220-3





P-ASO; P-ASC	6220-3	8220-3
Outlet	6" (BSP)	8" (BSP)
Rated Output	22 kW	22 kW
Shaft Speed	1450 rpm	1450 rpm
Solid Passage	30 mm	40 mm
Height © Height ©	1204 mm 1210 mm	1166 mm 1172 mm
Diameter © Diameter ©	Ø 592 mm Ø 592 mm	Ø 592 mm Ø 592 mm
Weight © Weight ©	345 kg 357 kg	355 kg 367 kg



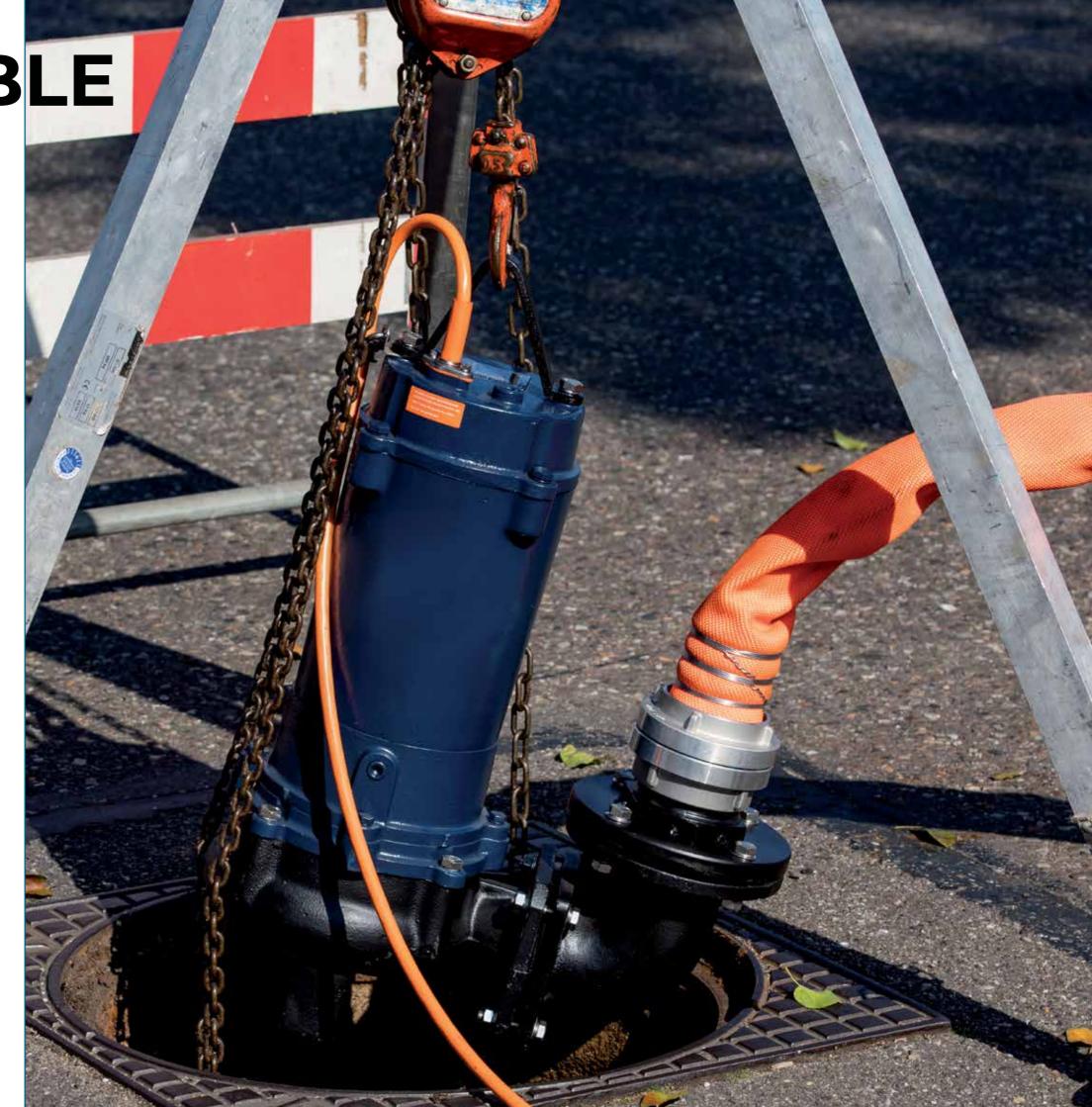


<sup>© =</sup> open stand © = strainer

# SUBMERSIBLE SEWAGE PUMPS

# CUTARO MAXIFLOW TINYFLOW

Designed for excellent performance,
low energy consumption, and easy
maintenance, APOLLON submersible
sewage pumps serve a wide range of
sewage transport applications. They
are ideal for residential, commercial,
industrial sewage transferring, wastewater
treatment plant, site drainage, etc.



# **SEWAGE PUMPS**

#### **COMMON FEATURES**

#### 1. WATERTIGHT CABLE ENTRY

The cable entry employs an anti-wicking block where each conductor is stripped and encapsulated in epoxy. This feature effectively prevents water from penetrating the motor chamber when the cable end is submerged or the cable sheath is damaged.

#### 2. MOTOR PROTECTOR

The motor incorporates a motor protection device which protects against overheating and dry-run. Pumps with a capacitor-run or direct-on line starting motor are equipped with a circle thermal protector. Pumps with a start-delta starting motor are equipped with miniature thermal protectors in each phase.

#### 3. SUBMERSIBLE MOTOR

Air filled motor, housed in a watertight casing, conforms to Class F insulation.

### 4. C3 BALL BEARINGS AND HARDENED SS SHAFT

High quality of C3 ball bearings and the well-balanced, hardened stainless steel shaft enhance stability during continuous pumping operations.

# 5. EAGLEBURGMANN® DOUBLE MECHANICAL SEALS

Located in the oil chamber, the device is made of quality materials with highly wear-resistant silicon carbide in lower side that provides extra protection against leakage and dry-run.

## 6. EXTRA PROTECTION FOR MECHANICAL SEALS AND SHAFT

Lip seals and shaft sleeves are utilized for additional protection against wear.

#### 7. RUGGED CAST IRON DESIGN

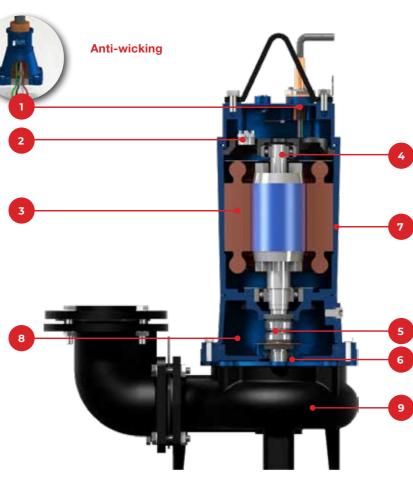
The whole cast iron pump features a simple, robust structure that provides durability and impact resistance to rough conditions.

#### 8. FOOD GRADE LUBRICANT

We adopt eco-friendly lubricant to minimize environmental impacts.

#### 9. IMPELLERS AND VOLUTES

Types of impellers and volutes are varied with pump models, cultivated through years of experience in the pump manufacturing industry. They include singe channel impellers, vortex impellers, semiopen impellers, grinders, and agitators.



#### **CUTARGO** CUTTER PUMPS

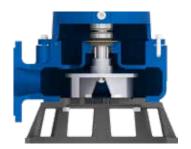
**Discharge Bore:** 50 - 100 mm

Features:

**Motor:** 0,4 ~ 3,7 kW, 2-Pole Motor

Impeller Type: Semi-Open Channel Cutter impeller

Utilizing a cutter mechanism and tungsten carbide alloy to cut fibrous matters and to prevent clogging.



#### MaxiFlow SINGLE CHANNEL PUMPS

**Discharge Bore:** 80 - 150 mm

**Motor:** 3,7 ~ 22 kW, 4-Pole Motor **Impeller Type:** Single Channel impeller

**Features:** Passing 76mm diameter solids without clogging.



#### **TinyFlow** VORTEX PUMPS

**Discharge Bore:** 50 - 100 mm

**Motor:** 0,4 ~ 7,5 kW, 2-Pole Motor

Impeller Type: Vortex impeller

**Features:** A whirling action enables large solids and fibrous

matters to be pumped out without obstruction.



#### **TinyFlow-A** VORTEX & AGITATOR PUMPS

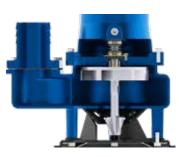
**Discharge Bore:** 80 - 100 mm

**Motor:** 2,2 ~ 3,7 kW, 2-Pole Motor

Impeller Type: Vortex impeller

**Features:** Coupled with an agitator, which significantly and efficiently

improves solids handling.



# **POWER RANGE CUTARGO**

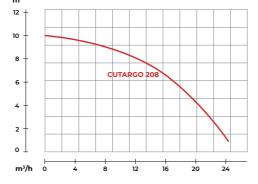
- CUTARGO Series pumps are designed for handling raw sewages and various wastewater treatments
- The cutting mechanism shreds fibrous materials into small pieces to prevent from clogging that would happen on a common pump.
- The cutting mechanism consists of a chopper plate and a tungsten carbide alloy tip onto each vane of the semi-open channel impeller.
- · Guide rail fittings are available on request.

#### **CUTARGO**

#### P-CUT-208-1



P-CUT	208-1
Outlet	2" (50 mm)
Rated Output	0.75 kW
Shaft Speed	2850 rpm
Solid Passage	26 mm
Height	434 mm
Diameter	Ø 301 mm
Weight	21.5 kg



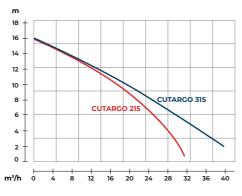
Also available with float switch (A).

#### **CUTARGO**

#### P-CUT-215-1 P-CUT-315-3 P-CUT-315-1



P-CUT	215-1	315-1
Outlet	2" (50 mm)	3" (80 mm)
Rated Output	1.5 kW	1.5 kW
Shaft Speed	2850 rpm	2850 rpm
Solid Passage	27 mm	27 mm
Height	463 mm	463 mm
Diameter	Ø 301 mm	Ø 301 mm
Weight	26.5 kg	26.5 kg



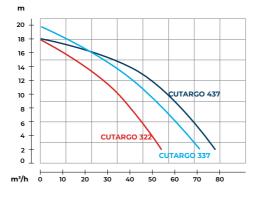
Also available in 230 Volt (S)

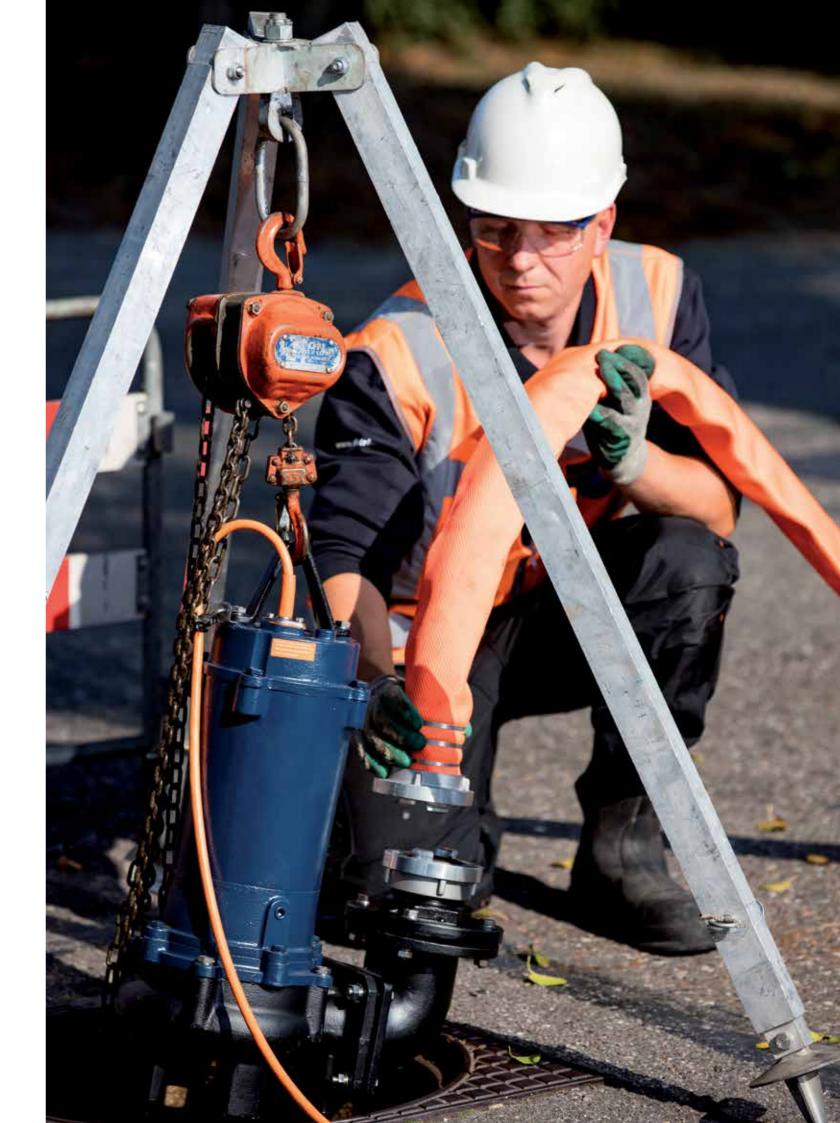
#### **CUTARGO**

# P-CUT-322-3 P-CUT-337-3 P-CUT-437-3



P-CUT	322-3	337-3	437-3
Outlet	3" (80 mm)	3" (80 mm)	4" (100 mm)
Rated Output	2.2 kW	3.7 kW	3.7 kW
Shaft Speed	2850 rpm	2850 rpm	2850 rpm
Solid Passage	27 mm	37 mm	37 mm
Height	642 mm	642 mm	642 mm
Diameter	Ø 482 mm	Ø 482 mm	Ø 482 mm
Weight	55 kg	59.5 kg	59.5 kg





# **POWER RANGE MAXIFLOW**

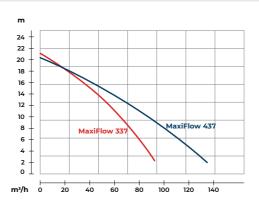
- Designed for passing 76mm diameter solids without clogging, MaxiFlow series employ a singlechannel enclosed impeller to efficiently and reliably transfer raw sewage.
- · MaxiFlow series featured high efficiency, non-clogging, long life, and energy saving.
- The design of air release valve in pump casing prevents air lock.
- MaxiFlow series are suitable for commercial and industrial wastewater applications.
- · Guide rail fittings are available on request.

#### MaxiFlow

#### P-MAX-337-3 P-MAX-437-3



P-MAX	337-3	437-3
Outlet	3" (80 mm)	4" (100 mm)
Rated Output	3.7 kW	3.7 kW
Shaft Speed	1450 rpm	1450 rpm
Solid Passage	76 mm	76 mm
Height	673 mm	673 mm
Diameter	Ø 580 mm	Ø 589 mm
Veight	94 kg	97 kg



#### **MaxiFlow**

#### P-MAX-455-3 P-MAX-655-3



P-MAX	455-3	655-3
Outlet	4" (100 mm)	6" (150 mm)
Rated Output	5.5 kW	5.5 kW
Shaft Speed	1450 rpm	1450 rpm
Solid Passage	76 mm	76 mm
Height	810 mm	810 mm
Diameter	Ø 693 mm	Ø 752 mm
Weight	132 kg	136 kg

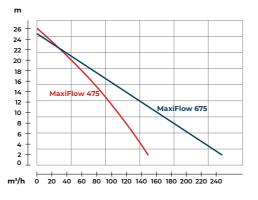
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#### **MaxiFlow**

#### P-MAX-475-3 P-MAX-675-3



P-MAX	475-3	675-3
Outlet	4" (100 mm)	6" (150 mm)
ated Output	7.5 kW	7.5 kW
haft Speed	1450 rpm	1450 rpm
olid Passage	76 mm	76 mm
leight	810 mm	810 mm
Diameter	Ø 693 mm	Ø 752 mm
Veight	142 kg	148 kg

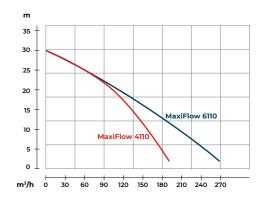


#### **MaxiFlow**

#### P-MAX-4110-3 P-MAX-6110-3



P-MAX	4110-3	6110-3
Outlet	4" (100 mm)	6" (150 mm)
Rated Output	11 kW	11 kW
Shaft Speed	1450 rpm	1450 rpm
Solid Passage	76 mm	76 mm
Height	803 mm	803 mm
Diameter	Ø 753 mm	Ø 813 mm
Weight	167 kg	175 kg

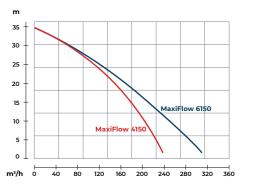


#### **MaxiFlow**

#### P-MAX-4150-3 P-MAX-6150-3



P-MAX	4150-3	6150-3
Outlet	4" (100 mm)	6" (150 mm)
ated Output	15 kW	15 kW
haft Speed	1450 rpm	1450 rpm
olid Passage	76 mm	76 mm
leight	803 mm	803 mm
Diameter	Ø 753 mm	Ø 813 mm
Veight	178 kg	186 kg

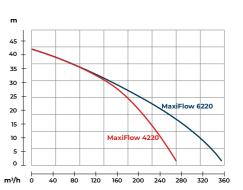


#### **MaxiFlow**

#### P-MAX-4220-3 P-MAX-6220-3



P-MAX	4220-3	6220-3
Outlet	4" (100 mm)	6" (150 mm)
Rated Output	22 kW	22 kW
Shaft Speed	1450 rpm	1450 rpm
Solid Passage	76 mm	76 mm
Height	1007 mm	1007 mm
Diameter	Ø 808 mm	Ø 867 mm
Weight	256 kg	262 kg





# **POWER RANGE** TINYFLOW

- TinyFlow series features its vortex impeller coupled with a wide pump casing. The rotation of
  the impeller produces a whirling, centrifugal action between the impeller and pump casing. The
  action enables large solids and fibrous matters to be pumped out without obstruction, leading
  to less impeller wear and longer pump life.
- · Guide rail fittings are available on request.

#### TinyFlow

#### P-MIN-204-1



P-MIN	204-1
Outlet	2" (50 mm)
Rated Output	0.4 kW
Shaft Speed	2850 rpm
Solid Passage	32 mm
Height	395 mm
Diameter	Ø 243 mm
Weight	13.5 kg

Also available with float switch (A).

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m³/h	0	4	8	12	16

#### TinyFlow

#### P-MIN-208-1 P-MIN-315-3 P-MIN-315-1



P-MIN	208-1	315-1; 315-3
Outlet	2" (50 mm)	3" (80 mm)
Rated Output	0.75 kW	1.5 kW
Shaft Speed	2850 rpm	2850 rpm
Solid Passage	37 mm	50 mm
Height	473 mm	501 mm
Diameter	Ø 243 mm	Ø 302 mm
Weight	19.5 kg	24 kg

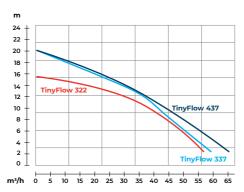
TinyFlow 315 also available in 230 Volt (S). Also available with float switch (A).

#### TinyFlow

#### P-MIN-322-3 P-MIN-337-3 P-MIN-437-3



P-MIN	322-3	337-3	437-3
Outlet	3" (80 mm)	3" (80 mm)	4" (100 mm)
Rated Output	2.2 kW	3.7 kW	3.7 kW
Shaft Speed	2850 rpm	2850 rpm	2850 rpm
Solid Passage	47 mm	52 mm	52 mm
Height	643 mm	643 mm	643 mm
Diameter	Ø 464 mm	Ø 464 mm	Ø 464 mm
Weight	59.5 kg	64 kg	64 kg

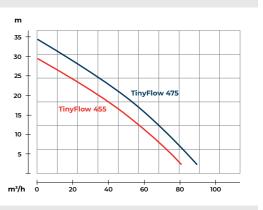


#### **TinyFlow**

#### P-MIN-455-3 P-MIN-475-3



P-MIN	455-3	475-3
Outlet	4" (100 mm)	4" (100 mm)
Rated Output	5.5 kW	7.5 kW
Shaft Speed	2850 rpm	2850 rpm
Solid Passage	52 mm	52 mm
Height	695 mm	717 mm
Diameter	Ø 464 mm	Ø 464 mm
Weight	72.5 kg	75 kg

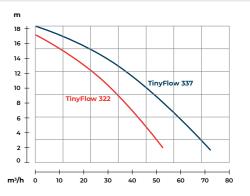


#### **TinyFlow**

#### P-MIN-322-3 P-MIN-337-3



P-MIN	322-3	337-3
Outlet	3" (BSP)	3" (BSP)
Rated Output	2.2 kW	3.7 kW
Shaft Speed	2850 rpm	2850 rpm
Solid Passage	55 mm	55 mm
Height	655 mm	712 mm
Diameter	Ø 366 mm	Ø 376 mm
Weight	40 kg	49 kg

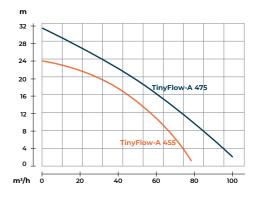


#### TinyFlow-A

#### P-MIN-455-3 P-MIN-475-3



-MIN	455-3	475-3
utlet	4" (BSP)	4" (BSP)
ated Output	5.5 kW	7.5 kW
naft Speed	2850 rpm	2850 rpm
olid Passage	55 mm	55 mm
eight	720 mm	754 mm
iameter	Ø 376 mm	Ø 389 mm
/eight	60 kg	67 kg

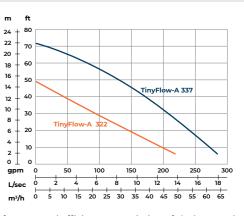


#### TinyFlow-A

#### P-MIN-A-322 P-MIN-A-337



P-MIN-A	322	337
Outlet	3" (BSP)	3" (BSP)
Rated Output	2.2 kW	3.7 kW
Shaft Speed	2850 rpm	2850 rpm
Solid Passage	13 mm	13 mm
Height	603 mm	660 mm
Diameter	Ø 373 mm	Ø 383 mm
Weight	43 kg	57 kg



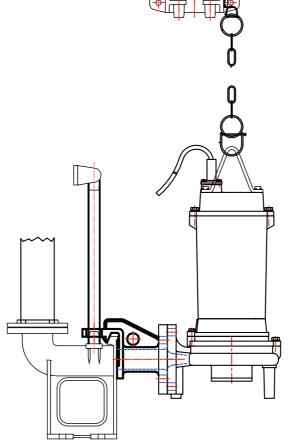
- TinyFlow-A series pumps are equipped with an agitator, which forcibly agitates the fluid for easy and efficient transmission of sludge, sand, mud, and debris.
- The agitator prevents air lock that tends to take place on vortex pumps.

# GUIDE RAIL FITTING SYSTEMS

The guide rail fitting system connects the pump to and from the piping simply just by lowering and elevating the pump. The mechanism allows easy maintenance and inspection without the need to enter the sump. Pump models used in combination with the guide rail fitting system can be identified by the following index and reference.

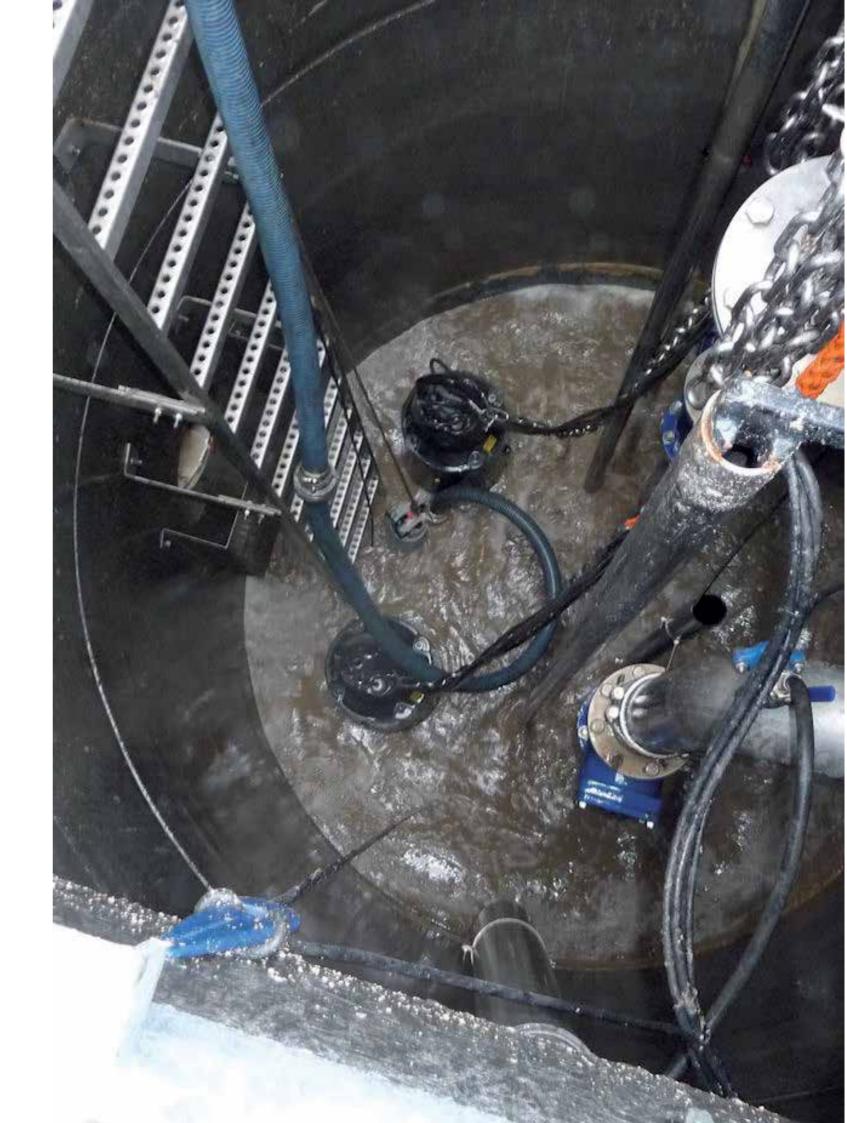
GUIDE RAIL TYPE	APPLICABLE MODELS
GRL-02	GOVOX 204/208
GRL-02F	CUTARGO 208 / 215
GRL-03F	CUTARGO 315
GRL-03F	TINYFLOW 315
GRF-03	CUTARGO 322/337
GRF-03	TINYFLOW 322 / 337
GRF-04	CUTARGO 437
GRF-04	TINYFLOW 437 / 455 / 475
GRN-03	MAXIFLOW 322/337/437
	MAXIFLOW 455 / 655 / 475 / 675
	MAXIFLOW 475 / 675
GRN-04	MAXIFLOW 4110 / 6110
	MAXIFLOW 4150 / 6150
	MAXIFLOW 4220 / 6220





#### **Guide rail system includes:**

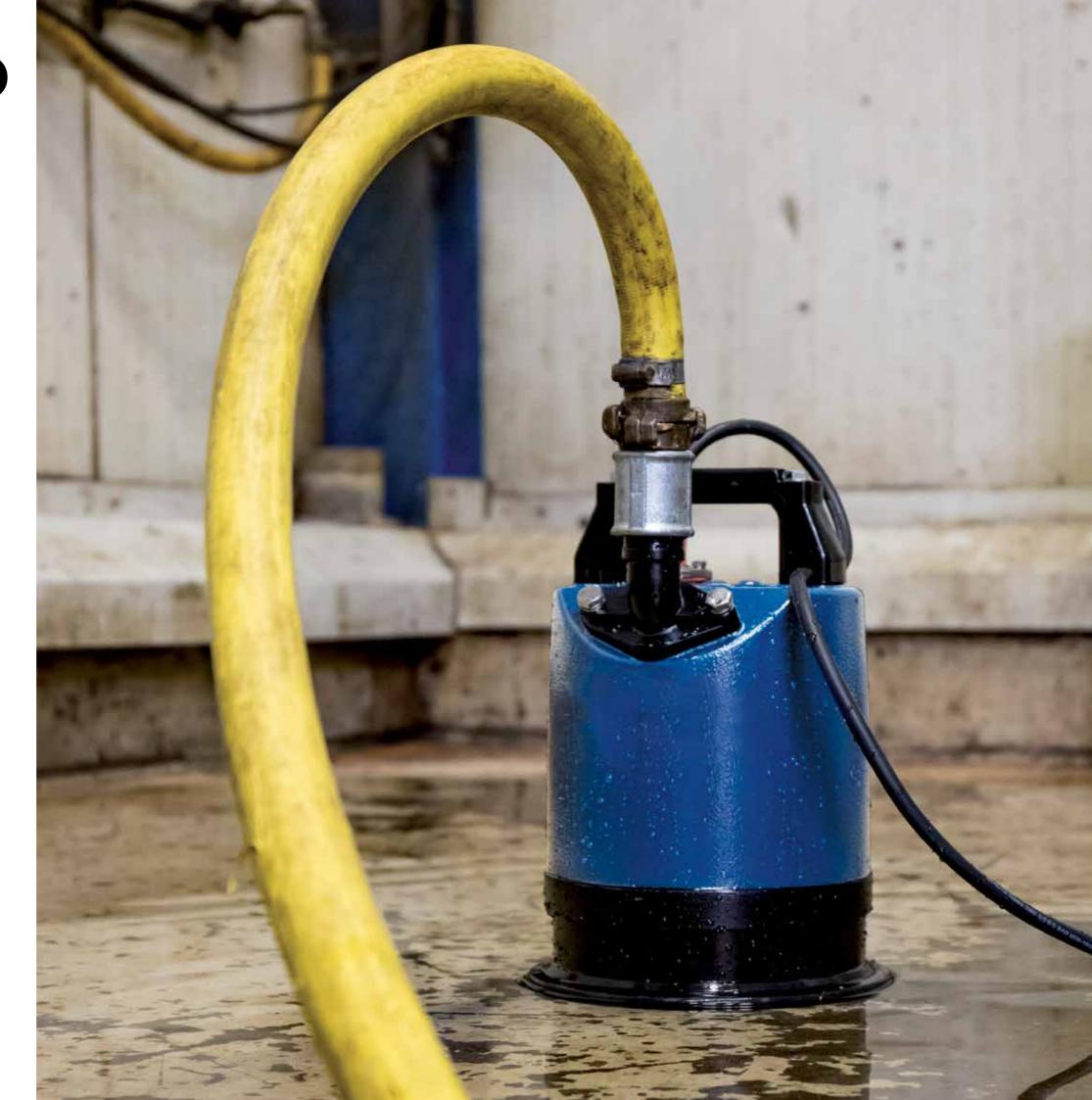
- · Cast iron upper holder.
- 5 meter stainless steel chain.
- · Required fixtures.



# HANDY AND RESIDUE PUMPS

# SENTINO SENTINO LIGHT DOMO

Designed for light weight, excellent performance, low energy consumption, and easy maintenance, APOLLON's submersible handy and residue pumps serve a wide range of pumping applications on utility, construction, industrial, and municipal job sites.



# **SENTINO SERIES**

#### **HANDY & RESIDUE PUMPS**

Compact, lightweight and easy to use, the SENTINO series pumps deliver high performance for their size. These small but effective dewatering pumps are easily maintained and perfect for a variety of applications, such as small construction sites, rental industries, and municipal jobs.

#### **FEATURES**

#### 1. WATERTIGHT CABLE ENTRY

The cable entry employs an anti-wicking block where each conductor is stripped and encapsulated in epoxy. This feature effectively prevents water from penetrating the motor chamber when the cable end is submerged or the cable sheath is damaged.

#### 2. TOP DISCHARGE AND DOUBLE **HOUSING DESIGN**

Designed to construct a water jacket that provides maximum motor cooling effect for continuous operation at low water level, this feature forms the cylindrical and slim shape of the pump and enables the pump to be installed in confined spaces.

#### 3. MOTOR PROTECTOR

The motor incorporates a circle thermal protector which protects against overheating and dry-run.

#### **4. SUBMERSIBLE MOTOR**

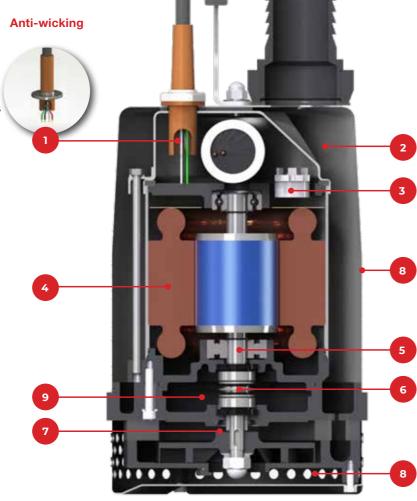
Air filled motor, housed in a watertight casing, conforms to Class F insulation.

#### 5. C3 BALL BEARINGS AND HARDENED **SS SHAFT**

High quality of C3 ball bearings and the wellbalanced, hardened stainless steel shaft enhance stability during continuous pumping operations.

#### **6. EAGLEBURGMANN® DOUBLE MECHANICAL SEALS**

Located in the oil chamber, the device is made of quality materials with highly wear-resistant silicon carbide in lower side that provides extra protection against leakage and dry-run.



#### **7.EXTRA PROTECTION FOR MECHANICAL SEALS AND SHAFT**

Lip seals and shaft sleeves are utilized for additional protection against wear.

#### 8. DURABLE OUTER JACKET AND STRAINER

The outer housing and strainer made of 304 stainless steel provide impact resistant to harsh handling and conditions.

#### 9. FOOD GRADE LUBRICANT

APOLLON adopts eco-friendly lubricant to minimize environmental impacts.

# **POWER RANGE SENTINO**

Here is an overview of our series products of SENTINO pumps:

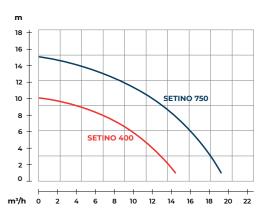
#### **SENTINO**

#### P-LIGHT-400-1 P-LIGHT-750-1



P-LIGHT	400-1	750-1
Outlet	2" (BSP)	2" (BSP)
Rated Output	0.4 kW	0.75 kW
Shaft Speed	2850 rpm	2850 rpm
Solid Passage	5.5 mm	7 mm
Height	333 mm	361 mm
Diameter	Ø 184 mm	Ø 184 mm
Weight	12.5 kg	14 kg

Also available with float switch (A).



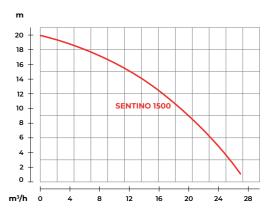
#### SENTINO

#### P-LIGHT-1500-1 P-LIGHT-1500-3



P-LIGHT	1500-1; 1500-3
Outlet	2" (BSP)
Rated Output	1.5 kW
haft Speed	2850 rpm
solid Passage	9 mm
leight	433 mm
Diameter	Ø 225 mm
Veight	23.5 kg
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Also available in 230 Volt (S).

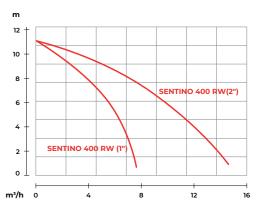


#### **SENTINO**

#### P-LIGHT-400-1-RW



P-LIGHT-RW	400-1
Outlet	1" (BSP) 2" (BSP)
Rated Output	0.4 kW
Shaft Speed	2850 rpm
Solid Passage	2 mm
Height	336 mm
Diameter	Ø 206 mm
Weight	14 kg



# **POWER RANGE SENTINO LIGHT**

Small, lightweight and cost-effective, the SENTINO LIGHT pumps perform an excellent job for their size. These small but effective dewatering pumps are easily maintained and perfect for a variety of applications, such as small construction sites, rental industries, and municipal jobs.

#### **FEATURES**

- Watertight Cable entry prevents water ingress by wicking.
- Pressure outlet can be converted to vertical and horizontal.
- Slim design allows use in confined spaces.
- **Double housing** creates water flow, which provides excellent cooling for the motor.
- Motor is equipped with a **temperature monitor** to protect against overheating and dry running.
- Air-enclosed motor in waterproof housing according to insulation class F.
- C3 ball bearing and hardened stainless steel shaft enhance stability during operation.
- Silicon carbide mechanical seal on the underside provides additional protection against ingress and dry running.
- Radial shaft seal additionally protects the mechanical seal from wear.
- The **PU impeller** is designed for easy maintenance.
- Food grade lubricants minimize environmental impact.

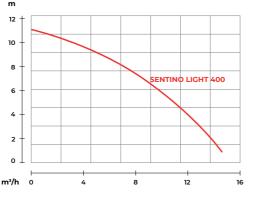
#### **SENTINO LIGHT**

#### P-LIGHT-SP-400-1



P-LIGHT-SP	400-1
Outlet	2" (BSP)
Rated Output	0.4 kW
Shaft Speed	2850 rpm
Solid Passage	5.5 mm
Height	303 mm
Diameter	Ø 205 mm
Weight	8 kg

Also available with float switch (A)



#### **SENTINO LIGHT**

#### P-LIGHT-SP-750-1



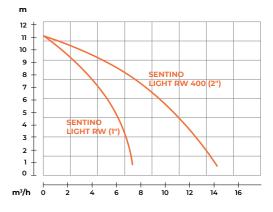
P-LIGHT-SP	750-1
Outlet	2" (BSP)
Rated Output	0.75 kW
Shaft Speed	2850 rpm
Solid Passage	7 mm
Height	343 mm
Diameter	Ø 205 mm
Weight	12.5 kg
Also available with float s	switch (A)

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m³/h	0	2	4	6	8	10	12	14	16	18

#### SENTINO LIGHT RW 400



P-LIGHT-SP-RW	400
Outlet	1" (BSP) 2" (BSP)
Rated Output	0.4 kW
Shaft Speed	2850 rpm
Solid Passage	2 mm
Height	304 mm
Diameter	Ø 215 mm
Weight	10.5 kg





# **DOMO SERIES**

#### **HANDY & RESIDUE PUMPS**

The DOMO series pumps are suitable for a variety of domestic applications, including draining basements and garages, emptying swimming pool and fountains, gardening, and hobby applications in general.

#### **FEATURES**

#### 1. WATERTIGHT CABLE ENTRY

Watertight cable entry prevents water incursion from the capillary wicking.

#### 2. DURABLE OUTER HOUSING

The outer housing made of 304 stainless steel provides impact resistant to harsh handling and conditions.

#### 3. MOTOR PROTECTOR

The motor incorporates a miniature thermal protector which protects against overheating and dry-run.

#### **4. SUBMERSIBLE MOTOR**

Air filled motor, housed in a watertight casing, conforms to Class F insulation.

#### 5. STAINLESS STEEL 304 MOTOR HOUSING

The material provides superior corrosion resistance.

# 6. C3 BALL BEARINGS AND HARDENED SS SHAFT

High quality of C3 ball bearings and the well-balanced, hardened stainless steel shaft enhance stability during continuous pumping operations.

#### 7. MECHANICAL SEAL

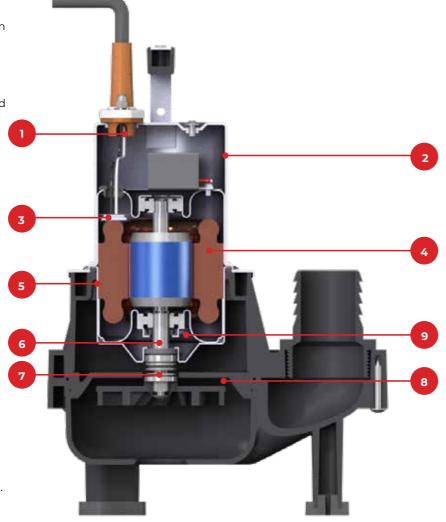
The premium mechanical seal provides extra protection against leakage and longer life span.

## 8. IMPACT-RESISTANT NYLON PUMP CASING AND SUCTION GRID

Lightweight design and corrosion-resistance.

#### 9. FOOD GRADE LUBRICANT

We adopt eco-friendly lubricant to minimize environmental impacts.



# **POWER RANGE DOMO**

#### **FEATURES**

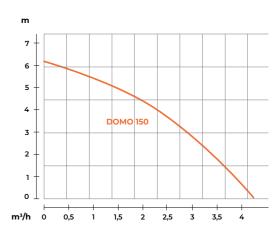
- · Compact, lightweight, and easy-to-use design.
- DOMO 150: Aluminum alloy outer case with lightweight top cover, impeller, and suction grids.
- · Air filled motor with Class F insulation.
- · Thermal protection on motor.
- · Built-in high torque capacitor.
- · Triple seals design.
- · Removable filter screen for easy maintenance.

#### **DOMO**

#### P-W-150



P-W	150
Outlet	1" (25 mm)
Rated Output	0.15 kW
Shaft Speed	2850 rpm
Solid Passage	6 mm
Height	273 mm
Diameter	Ø 158 mm
Weight	3.2 kg



#### DOMO

#### P-W-300-1 P-W-600-1



P-W	300-1	600-1
Outlet	2" (50 mm)	2" (50 mm)
Rated Output	0.25 kW	0.55 kW
Shaft Speed	2850 rpm	2850 rpm
Solid Passage	6 mm	6 mm
Height	306 mm	341 mm
Diameter	Ø 244 mm	Ø 244 mm
Weight	4 kg	6 kg

Also available with float switch (A).

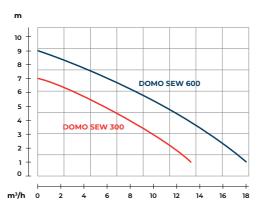
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#### DOMO SEW

#### P-W-300-1 P-W-600-1



P-W	300-1	600-1
Outlet	2" (50 mm)	2" (50 mm)
Rated Output	0.25 kW	0.55 kW
Shaft Speed	2850 rpm	2850 rpm
Solid Passage	35 mm	35 mm
Height	337 mm	372 mm
Diameter	Ø 245 mm	Ø 245 mm
Weight	4.2 kg	6 kg



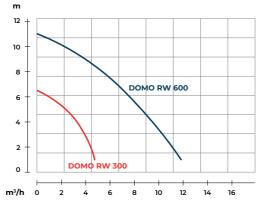
Also available with float switch (A).

#### DOMO RW

#### P-W-300-1 P-W-600-1



600-1
600-i
2" (50 mm)
0.55 kW
2850 rpm
5 mm
357 mm
Ø 244 mm
6 kg
( (



Also available with float switch (A).





# **ACCESSORIES**

#### **PROTECTOR PLUGS**

#### THERMAL AND CURRENT OVERLOAD MOTOR PROTECTOR PLUGS

Standard with phase inverter and sequence indicator.



ITEM NUMBER	MPP CODE 28	SETTING RANGE	VOLT	PLUG TYPE - 32 A
AFMPP03-32	28	2,5 A - 4,0 A	400	CEE 32 A - 5 pole
AFMPP05-32	29	4,0 A - 6,3 A	400	CEE 32 A - 5 pole
AFMPP07-32	30	6,3 A - 10,0 A	400	CEE 32 A - 5 pole
AFMPP09-32	31	10,0 A - 16,0 A	400	CEE 32 A - 5 pole
AFMPP11-32	32	16,0 A - 20,0 A	400	CEE 32 A - 5 pole
AFMPP13-32	33	20,0 A - 25,0 A	400	CEE 32 A - 5 pole
AFMPP15-32	34	25,0 A - 32,0 A	400	CEE 32 A - 5 pole

# FLOAT SWITCH SOLUTION FOR 400 VOLT PUMPS WITH CURRENT OVERLOAD PROTECTION

To be used in combination with the floatswitches. Auto - 0 - Manual.



ARTIKELNUMMER	MAX. kW	SETTING RANGE	VOLT	PLUG TYPE - 32 A
AFMPPCWF01-32	7,5	1,6 A - 2,4 A	400	CEE 32 A - 5 pole
AFMPPCWF02-32	7,5	2,4 A - 4,0 A	400	CEE 32 A - 5 pole
AFMPPCWF03-32	7,5	4,0 A - 6,0 A	400	CEE 32 A - 5 pole
AFMPPCWF04-32	7,5	6,0 A - 10,0 A	400	CEE 32 A - 5 pole
AFMPPCWF05-32	7,5	9,0 A - 12,0 A	400	CEE 32 A - 5 pole
AFMPPCWF06-32	7,5	12,0 A - 16,0 A	400	CEE 32 A - 5 pole
AFMPPCWF07-32	15	16,0 A - 20,0 A	400	CEE 32 A - 5 pole
AFMPPCWF08-32	15	20,0 A - 25,0 A	400	CEE 32 A - 5 pole
AFMPPCWF09-32	15	25,0 A - 32,0 A	400	CEE 32 A - 5 pole

#### **FLOAT SWITCH**



ARTIKELNUMMER	NUMBER OF CORES	LENGTH IN M.	VOLT
5600070	2	10	230
5600090	2	20	230

# GUIDE RAIL FITTING SYSTEMS

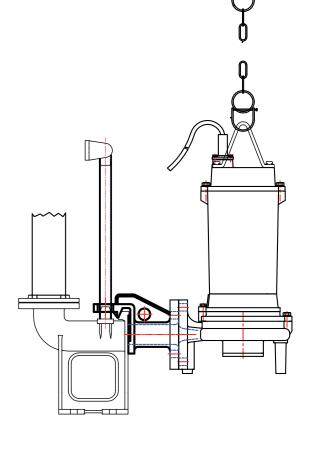
The guide rail fitting system connects the pump to and from the piping simply just by lowering and elevating the pump. The mechanism allows easy maintenance and inspection without the need to enter the sump. Pump models used in combination with the guide rail fitting system can be identified by the following index and reference.

GUIDE RAIL TYPE	APPLICABLE MODELS
GRL-02	TINYFLOW 204/208
GRL-02F	CUTARGO 208/215
GRL-03F	CUTARGO 315
	TINYFLOW 315
GRF-03	CUTARGO 322/337
	TINYFLOW 322 / 337
GRF-04	CUTARGO 437
	TINYFLOW 437 / 455 / 475
GRN-03	MAXIFLOW 322 / 337 / 437
	MAXIFLOW 455 / 655 / 475 / 675
GRN-04	MAXIFLOW 475 / 675
	MAXIFLOW 4110 / 6110
	MAXIFLOW 4150 / 6150
	MAXIFLOW 4220 / 6220



#### Guide rail system includes:

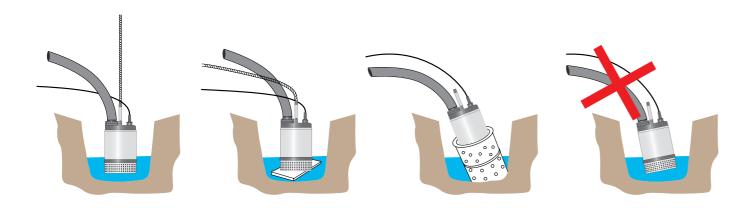
- · Cast iron upper holder.
- 5 meter stainless steel chain.
- · Required fixtures.



44 TECHNICAL INFORMATION TECHNICAL INFORMATION 45

# **TECHNICAL INFORMATION**

#### **INSTALLATION**



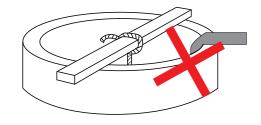
#### **CORRECT INSTALLATION OF THE PUMPS**

Although installing APOLLON submersible pumps is fairly straightforward, there are a few basic things that need to be taken into consideration to ensure optimal performance and to prevent excessive wear and/or damages.

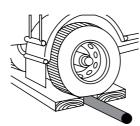
Firstly, it is paramount that the pump is prevented from digging itself into the soil, which is particularly common on sites with sandy- or clay type soils. This can be achieved by suspending the pump above the bottom of the casing using a rope/chain in case of deepwell applications, or by placing the pump on a base of some sort (e.g. wooden plank or coarse gravel) in case of open sump pumping.

Secondly you should prevent tight bends and kinks in the discharge hose at all times. When bent strongly, the maximum flow capacity of the hose is reduced and it will create additional friction losses and will reduce the overall flow performance of the pump.



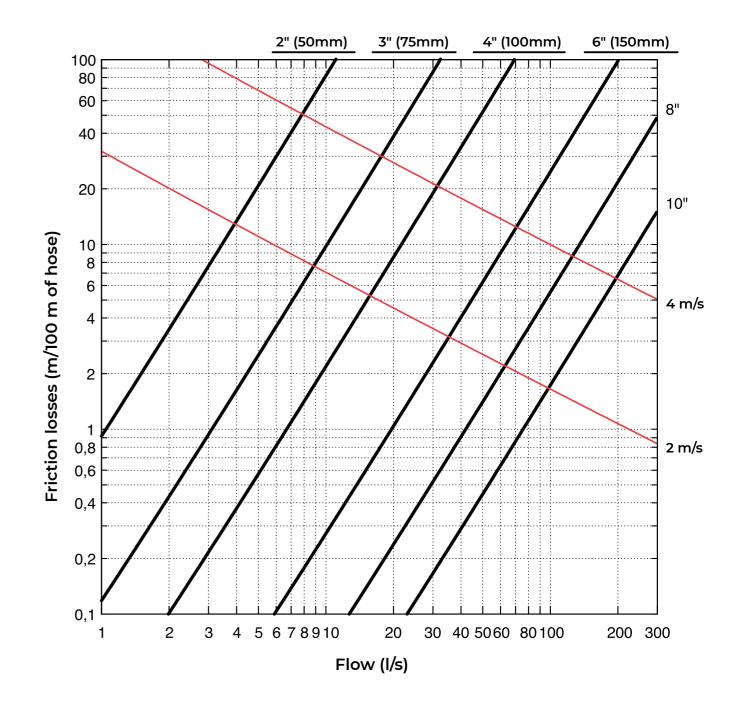






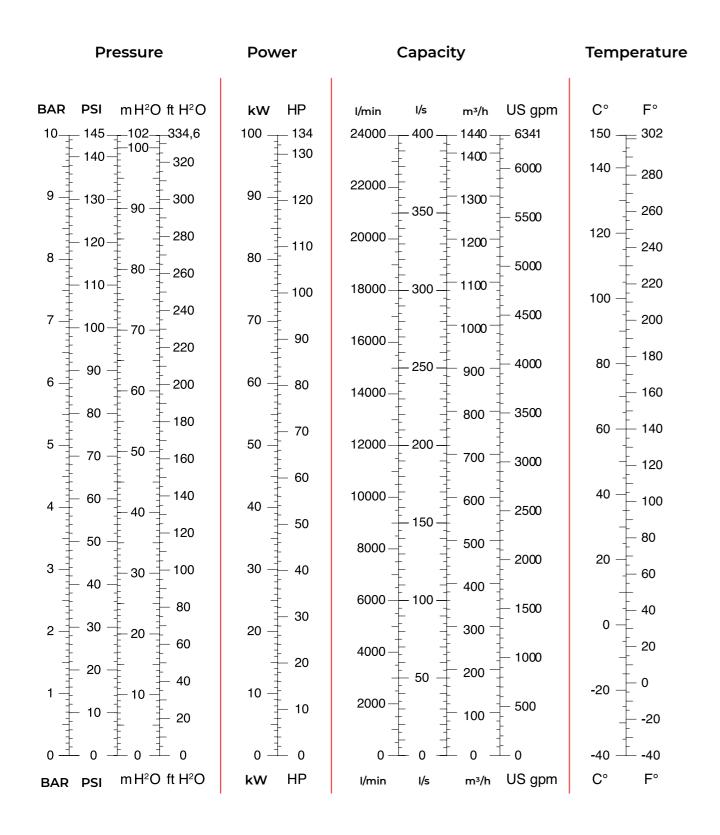
# **TECHNICAL INFORMATION**

#### **CHART FOR CALCULATING FRICTION LOSSES IN HOSES**



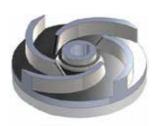
# **TECHNICAL INFORMATION**

#### **CONVERSION TABLES**



# **TECHNICAL INFORMATION**

#### **TYPE OF IMPELLER**



#### **SEMI-OPEN IMPELLER**

An impeller that has no bottom shroud. Liquid which passes through the impeller is deflected, forming a plain perpendicular to the spindle. Most of submersible



#### **VORTEX IMPELLER**

An indented impeller produces a whirling, centrifugal action which allows long and fibrous material, solid materials, etc. to be pumped without contacting the



#### **PERIPHERAL IMPELLER**

The impeller has a number of slots on its periphery, and the rotation gives energy to the liquid. Low volume and high head, and widely used in shallow pumps.



#### **CLOSED IMPELLER**

The impeller vanes are enclosed in a unified contruction. Suited for high-head



#### **AGITATOR**

The rigid agitator delivers kinetic energy (energy of motion) to stir solids surrounding the pump intake, re-suspending them into a fluid state for easy



#### **SEMI-OPEN CHANNEL IMPELLER**

This type of impeller is designed with single or twin circular shaped vanes. This construction is effective in the prevention of blockage by solid matters.



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