

www.monoflopumps.com ASTRO | A T

### **General Data**

Operating Limits										
Application	Water, wastewater & drainage water									
Medium temperature	0 ~ 40°C									
Submersible depth	30 metres									
Туре										
Motor . Speed	'DRY' type . 2-pole [3000 rpm]									
Voltage/Phase/Frequency	230V/1-ph/50Hz;415V/3-ph/50Hz									
Insulation	Class B									
Protection	IP 6 8									
Bearing	Deep-grooved ball type									
Seal type	Double mechanical seal									
Impeller	Semi-open & semi-open Vortex type									
Mate	erial of Construction									
Parts description	Material									
Upper cover	Cast iron FC-200									
Motor frame/ casing	Stainless steel SUS304									
Shaft	SUS 410 (SUS 403 for 1.5 to 2.2kW)									
Mechanical seal	Motor side   Carbon vs ceramic Pump side   Silicon carbide vs silicon carbide									
Casing	Cast iron FC-200									
Impeller	Cast iron FC-200 (Polyamide for Model 50AT2.4)									
Cable	VCT or H07RN-F or SJOW/SOW									
Optional	Upon request, pump can be customised									

#### **Model Designation**

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	80	AT	2	1.5	F	S
			Τ		Τ	Τ
Pump discharge diameter  80mm						
Model type   AT						
Number of poles of the motor   2-pole	e ├──					
Motor power   1.5kW						
'F' denotes pump c/w float switch						
	,					

Motor phase | 'S'−Single phase; 'T'−Three phase |---



# ΑΤ **Submersible** Wastewater **Drainage Pumps**



#### General

The '**ASTRO**' is a range of dewatering submersible pump designed for effective handling of water and wastewater. It is robust, compact and reliable, and is suitable in a wide range of sump pump and drainage applications in both commercial and industrial installations. The hydraulics with the semi-open vortex type impeller and a stainless steel strainer, allows for pumping soft solids in suspension and less susceptible to blockage.

The **Astro** pumps are designed for permanent submerged installation, e.g. by means of an auto coupling or guide rail system; or for free-standing installation on a ring stand with a flexible pipe connection.



ensuring smooth pumping without clogging. DOUBLE MECHANICAL SEAL Fitted with superior abrasion resistance silicon carbide faced double mechanical shaft seal, with the single coiled spring in an oil chamber. The seal provides an added protection to the motor.

**Design Features** 

MOTOR & 'AUTO-CUT' PROTECTOR | The high efficiency 'dry' type motor design minimises operation cost. It has built-in 'autocut' motor protector, which automatically cuts off power to the motor when there is a power surge or overheating; and auto restarts once the temperature drops to about 60~70°C.

To attain the highest insulation class, the stator winding impregnated with varnish and heat dried in an industrial oven for 8 hours.

FLOAT SWITCH | Versions installed with external float switch for automatic start/stop operation are available. This provides a safe unattended operation.

# Astro

## **Applications**

IMPELLERS | The Astro on different models are fitted with different 'semi-open vortex' type impellers offering various capacities and lifts. The 'whirlpool effect' caused by the impeller; and the spacing between the impeller and casing, allows long fibrous materials and other solid waste or debris to smoothly pass through, thus

# Draining of water or rain-

water in residential cellars or carpark basement and garages.

Small scale irrigation and flood control.

Pumping of waste water in buildings including hotels, hospitals, schools, restaurants, commercial buildings, etc.

General dewatering application from sump pits, tanks and ponds.

Water features



AT pump in a typical water feature application.





















MONOFLO PUMPS PTY LTD



# www.monoflopumps.com

As MONOFLO Pumps is constantly improved, we reserve the right to make specification changes without prior notice and without incurring liability.

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50 Hz | 2-pole | 50mm . 80mm 0.8

to about 60~70°C; or when the cause of the surge has been rectified.

upper and lower ball bearings.

carbon against ceramic.

## SEMI-OPEN VORTEX



particularly tough and have excellent sliding and wear

			Te	Technical & Dimension Data							
Solid Passage [mm]	Weight [kg]		Dimensions [mm]								
	۱ø	3Ø	A	B  C  D1Ø D3	D 3Ø						
7.5	13	12	226	-	161	372	372				
8.0	16	14	245	-	173	430	430				
10.0	17	15	245	-	173	430	430				

**10.5** 31 27 282 - 207 580 499

18.0 **10.5** 35 30 282 - 207 592 499

30.0 **10.5** 37 32 391 249 214 603 510

42.0 **20.0** 37 32 389 248 207 601 520

**10.5** 33 29 391 249 214 591 510

15 0.16 9,6 **7.0** 20 18 262 - 187 428 408

m3/hr

		×	11				5		Ę			3		<u>२</u>
0 0.1	0.2 10	1	0.3 0 20	1	m5/m 30 m3/	lin I Ihr		0.2 0 :	0.4 20	0.6 30	40	0.8 50	$1.0 \\ -1 \\ -60$	m3/n m3,
										Т	echnic	al & Dim	ension I	Data
Model	Motor [Pole]	[kW]	Discharge [mm]	Head [m]	Capacity [m3/min]	[m3/h]	Solid Passage [mm]	Weig [kg]	jht ∣3ø	Dimen [mm]	sions		10	D 30
50AT2.4 <sup>S</sup>	2	0.4	50	8.0	0.1	6.0	7.5	13	12	226	-	161	372	372
50AT2.4L <sup>S</sup>	2	0.4	50	7.0	0.15	9.0	8.0	16	14	245	-	173	430	430
50AT2.75 <sup>S</sup>	2	0.75	50	10.0	0.18	10.8	10.0	17	15	245	-	173	430	430
50AT2.75L <sup>S</sup>	2	0.75	50	13.5	0.12	7.2	7.0	18	17	262	-	187	408	408
80AT2.75 <sup>S</sup> T	2	0.75	80	6.5	0.3	18.0	10.0	18	17	278	-	173	457	457

18.5 0.25

10.5 0.5

23.5 0.3

15.5 0.5

11.5 0.7

15.0

30.0





50AT21.1<sup>\$</sup>

80AT21.5<sup>5</sup>

80AT22.2<sup>\$</sup>

**50AT21.5<sup>s</sup> 2** 1.5 50

**50AT22.2<sup>s</sup> 2** 2.2 50

**100AT22.2<sup>s</sup> 2** 2.2 100

1.1 50

1.5 80

2.2 80

emarks | All models available in single or three phase.



characteristics.

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## **POWER CABLE**

Available in VCT or H07RN-F or SJOW/SOW. Variable length of cable is available upon request.

#### - CABLE BASE (ENTRY)

Epoxy resin sealed cable base to prevent the intrusion of moisture into motor through the core wires.

#### UPPER BEARING

High grade, deep grooved, ball bearing, which is sealed-for-life type. As the bearings are permanently lubricated by grease, there is no requirement for lubricating oil.

## - MOTOR FRAME/CASING

Corrosion resistant SUS304 stainless steel motor casing, providing a longer service life; and gives an attractive and lasting appearance.

#### 

High-efficiency 'dry' motor, designed to ensure energy saving operations. Highest insulation class is achieved by 8 hours of stator winding impregnated with varnish heat dried in industrial oven.

#### - LOWER BEARING

#### OIL SEAL

An oil lip seal is mounted outside of the seal chamber to prevent solids from gathering around the mechanical seal faces.

ASTRO 'AT' Series fitted with different 'semi-open' vortex type impeller to cater to various demands in duties.

Separate oil chamber, lubricating and cooling the mechanical seals.

Produces a vortex (whirlpool effect) coupled with a wide pump casing, allows fibrous matters and other solid waste to pass through, without contact with the impeller, preventing clogging.

OIL CHAMBER (LUBRICANTS)

STRAINER -

Model 50AT2.4 The impeller is of *Polyamides* (PA) material which is

Model 50AT2.75



Model 50AT2.75L

Model 50AT21.1

Model 50AT21.5 Model 50AT22.2



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of ASTRO

Cut-away construction

Model 80AT21.5 Model 80AT22.2 Model 100AT22.2



...engineering flow in our lives