

# ODIS

IRRIGATION EQUIPMENT LTD.

## PRELIMINARY SUCTION STRAINERS

SERIES

# 181

### APPLICATIONS

- Used as preliminary filter for water supply pump intake.
- Protects the pump from clogging by debris and solid dirt.



ODIS Filtration *is The Heart* of Every Irrigation System

**DESCRIPTION**

The **self cleaning suction strainer** is designed to protect the pump from clogging by debris and solid dirt. It is connected to the pump inlet and submerged in the water source (river, lake, reservoir etc.).

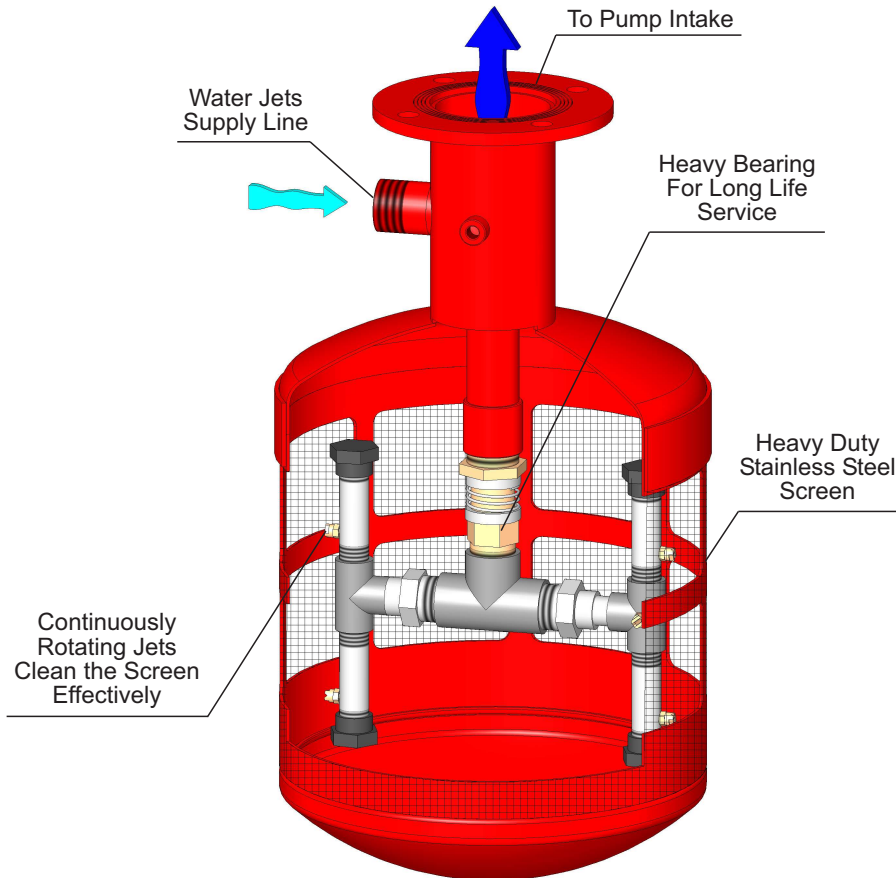
The pumped water flows through the strainer, and the debris are stopped on the heavy duty stainless steel screen, protecting the pump from clogging or getting damaged by the debris. As a result, the pump efficiency is increased and the maintenance costs are reduced.

The screen is kept clean during pump operation by continuously rotating jets (using pump pressure through the water jet system supply line) blowing away the debris from the screen. The water jet system supply line includes a screen filter to protect the jets, a pressure gauge mounted on a three way valve for checking the head loss across the screen filter and a manual valve for screen filter's maintenance.

Available in the following sizes: 4", 6", 8", 10", 12", 14", 16".

A foot valve (Series 189) must be installed at the suction strainer outlet to ensure that the pump supply line is always full.

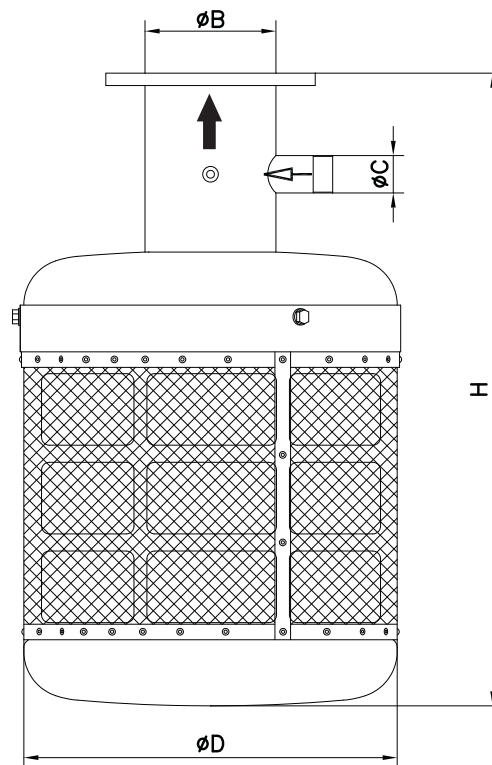
The filter has a 100 micron coating of extra-durable polyester, applied electrostatically and oven-cured on a zinc-phosphate layer for maximal anti-corrosion protection.



**Dimensions & Weight**

Metric Units/ U.S. Units

Model	B		D	C	H		Weight	
	inch	mm	inch	inch	mm	inch	kg	lbs
18104	4"	100	16"	1½	650	25.5	24	53
18106	6"	150	18"	1½	770	30.25	35	77
18108	8"	200	18"	1½	970	38.25	40	88
18110	10"	250	24"	1½	1040	41	57	126
18112	12"	300	24"	1½	1240	48.75	62	137
18114	14"	350	36"	1½	1340	52.75	71	156
18116	16"	400	36"	1½	1340	52.75	81	178



## Recommended Flow Rates

Metric Units/ U.S. Units

Model	Inlet/Outlet diameter		Max. Flow Rate 1200 micron		Max. Flow Rate 2500 micron		Flushing Flow Rate	
	inch	mm	m <sup>3</sup> /h	U.S. gpm	m <sup>3</sup> /h	U.S. gpm	m <sup>3</sup> /h	U.S. gpm
18104	4"	100	80	350	100	440	5	22
18106	6"	150	180	790	230	1000	5	22
18108	8"	200	300	1300	380	1700	5	22
18110	10"	250	420	1850	550	2400	6.5	29
18112	12"	300	600	2650	750	3300	6.5	29
18114	14"	350	800	3500	1000	4400	6.5	29
18116	16"	400	1000	4400	1200	5300	6.5	29

## Stainless Steel Filter Screen

### Filtering Grades

Mesh Grade	Micron
18	1200
8	2500

- Heavy duty stainless steel screen

## How To Order Odis Self Cleaning Suction Strainer

1. Catalogue Number of the strainer.
2. Preferred mesh grade.
3. Min./ Max. Pressure.
4. Flange type
5. Additional accessories: Screen Filter, Pressure Gauge, Regulation Valve.
6. Other than standard material required for the body or screen.
7. Special Coating Requirements.

### Technical Data

- Heavy duty stainless steel screen
- Available screens: 1200 micron (18 mesh), 2500 micron (8 mesh)
- Fixed screen drum, no external moving parts
- Rotating jets with heavy duty bearings
- The water jet system supply line includes a screen filter to protect the jets, a pressure gauge mounted on a three way valve for checking the head across the screen filter and a manual valve for screen filter's maintenance.
- Strainer is supplied with flanged connection
- Available in the following sizes: 4", 6", 8", 10", 12", 14", 16".

### Back - Flushing

- Min. pressure: 1.5 bar (22 psi).
- Recommended working pressure: 2 - 3 bar (30 - 44 psi)
- Screen filter, 1½" with 20 mesh screen to protect the jets
- Return line pipe diameter: 1.5" min.  
2" if the pipe length is 10 meters or more
- Return line flow rates : 5 m<sup>3</sup>/h for models: 18104 (4") - 18108 (08").  
6.5 m<sup>3</sup>/h for models: 18110 (10") - 18116 (16")

### Foot Valve

A foot valve must be installed at the outlet of the strainer to ensure that the pump supply line is always full.

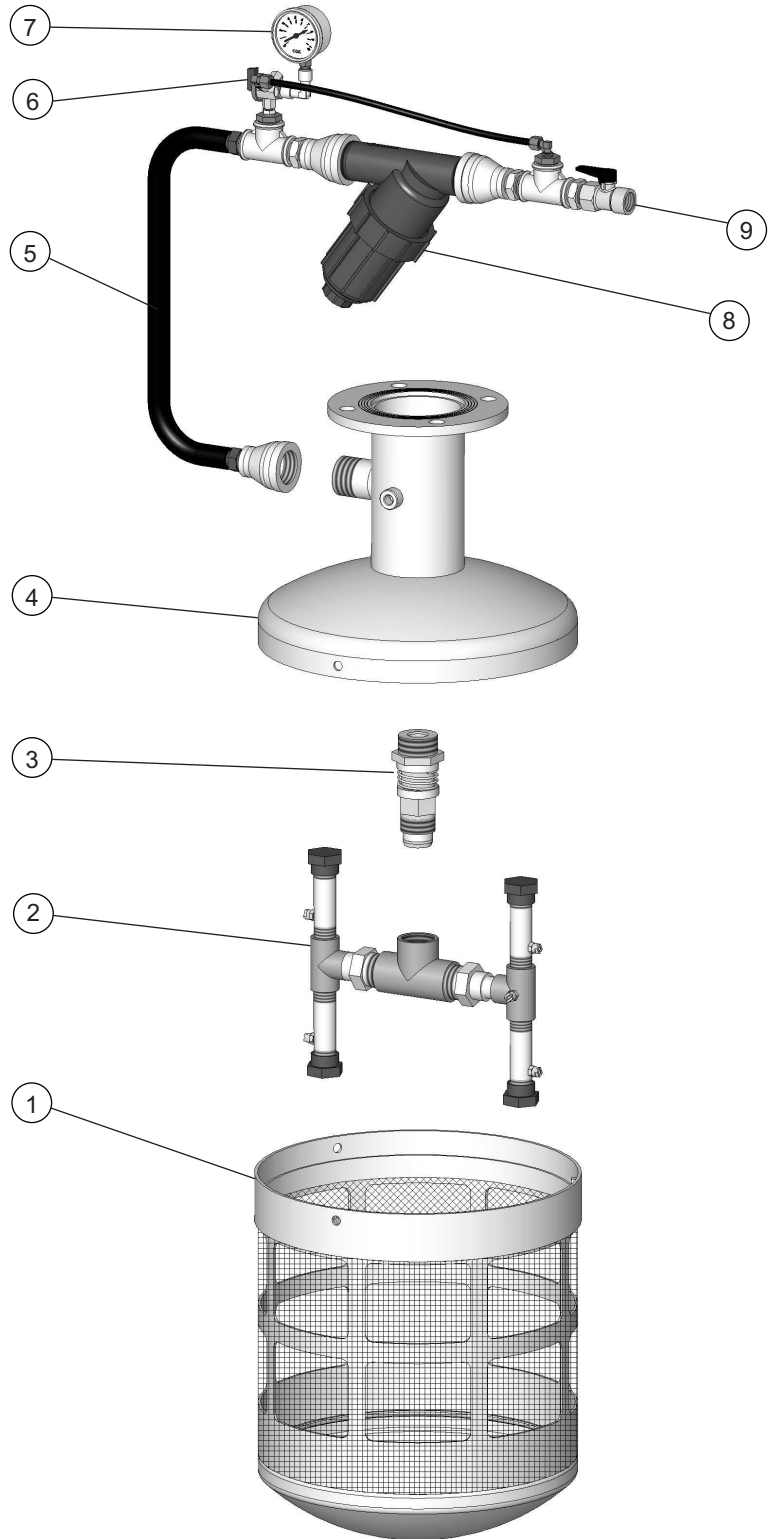
### Protective Coating

100 micron extra-durable polyester, applied electrostatically and oven-cured on a zinc-phosphate layer for maximal anti-corrosion protection.

Heavy galvanized coating can be supplied on special order.

**ILLUSTRATED PARTS BREAKDOWN**

NO.	DESCRIPTION
1	Screen Assembly
2	Jets Assembly
3	Bearing
4	Strainer Body
5	3/4" Hose
6	Three Way Valve
7	Pressure Gauge
8	Screen Filter
9	Control Valve



## GENERAL INSTRUCTIONS

### Operation

- In case of heavy dirt load, the strainer must be flushed continuously.
- In case of normal or light dirt load, the strainer must be flushed when clogged or at least once a week. (According to local conditions)
- Recommended back-flushing line pressure: 2 - 3 bar (30 - 44 psi).
- If the back flushing line pressure is lower than 1.5 bar (22 psi), a booster pump should be installed to increase flushing pressure.

### Installation

- The strainer can be installed at any position
- The strainer should not be located closer than 200 mm (8") to any object.
- The strainer must be located at least 300 mm (12") above the bottom of the reservoir, lake, river etc.
- The strainer should be submerged at least 200 mm (8") below water surface.
- Connect the strainer to the pump inlet, a foot valve / non-return valve should be installed.
- If pipe length is more than 10 m', a 2" (50 mm) pipe should be installed.
- Flush thoroughly the back flushing system supply line before connecting it to the strainer to prevent the spray jets from getting clogged.
- Install the flushing system supply line from the pump pressure line to the strainer water jet system supply line.

**NOTE:** If the water level may vary, the strainer should be installed accordingly

### Manual Flushing

- Before operating the back-flushing process, check that the jets protecting screen filter is not clogged. Clean filter will guaranty proper operation of the back-flushing process.
- Open slowly the manual valve, until the pressure reaches the recommended pressure (2 - 3 bar, 30 - 44 psi).
- Check that the jets system function properly.
- Flush the strainer for 15 - 30 seconds, and then close the valve slowly

### Maintenance

- Each filter is supplied with detailed maintenance instructions, as well as assembly, installation and operation instructions.
- Clean the jets protecting filter screen periodically.
- Check jets protecting filter head loss, using 3 way valve selector and pressure gauge, to check pressure at the filter's inlet and outlet.  
If head loss is 0.7 bar (10 psi) open the filter's plug for 10 seconds. Check the head loss again, if head loss remains above 0.5 bar (7 psi), the screen should be removed for cleaning.
- Inspect every 2 - 3 months that the water jets system function properly, and the jets are not clogged.
- For servicing the jets or the bearings, the entire screen of the strainer can be removed simply

### PACKING / SHIPPING DATA

#### Metric Units

Model	Inlet / Outlet (inch)	Gross * Weight (kg)	Packaging	Gross Volume (m <sup>3</sup> )
18104	100	39	Packed on a pallet	0.21
18106	150	49	Packed on a pallet	0.31
18108	200	59	Packed on a pallet	0.36
18110	250	69	Packed on a pallet	0.51
18112	300	78	Packed on a pallet	0.57
18114	350	91	Packed on a pallet	1.21
18116	400	101	Packed on a pallet	1.21

#### U.S. Units

Model	Inlet / Outlet (inch)	Gross * Weight (lbs)	Packaging	Gross Volume (cu.ft)
18104	4	86	Packed on a pallet	7.41
18106	6	108	Packed on a pallet	10.95
18108	8	130	Packed on a pallet	12.71
18110	10	152	Packed on a pallet	18.00
18112	12	172	Packed on a pallet	20.13
18114	14	201	Packed on a pallet	42.73
18116	16	223	Packed on a pallet	42.73

\* Gross weight includes packaging materials.