

## ODIS Irrigation Equipment Ltd - Company Profile

ODIS Irrigation Equipment Ltd. manufactures and supplies a large variety of filtration systems and water treatment solutions for Irrigation and Agriculture.

The company has more than 25 years of experience in developing, designing, manufacturing and supply of filtration systems and filters all over the world.

Company Products include:

- Water treatment plants.
- Filtration Arrays.
- Automatic filters (Electrically operated and Hydraulically operated).
- Manual Filters.
- Fertilizer and control systems.
- Manifolds and accessories.

All ODIS products are modular and interchangeable, so modifications and expansions of arrays can be done on site easily according to the changing needs of the customer.

ODIS is committed to supply the highest level of quality and service. All ODIS products are manufactured under ISO 9001-2000 Standard.

As a world leader in its field, ODIS has a wide world presence in all five continents with products exported to customers all over the world including the USA, Spain, France, Holland, Japan and Australia.

### Research and Development

The company has a highly skilled team of engineers and technicians supported by a sophisticated laboratory to develop new products, improve existing ones and respond to customer needs. ODIS provides technical support and consultation to its customers all over the world and organizes seminars and practical training.

### The ODIS Group

ODIS Irrigation Equipment Ltd is part of the ODIS group of companies dealing with various aspects of water and sewage treatment to industrial applications, municipalities and domestic users.

The experience gathered in the different companies within the group enables ODIS Irrigation Equipment to offer unique solutions.

## Proper Selection of ODIS Filters

ODIS Irrigation equipment Ltd manufactures filters, separators, manifolds, filtering equipment and modular filter arrays, designed to achieve the highest standards of quality and finish, thus providing long lasting, reliable and trouble-free operation.

To obtain the desired level of filtering quality, appropriate filtering equipment must be selected, taking into consideration the water source and the varying types and quantities of water impurities. It should always be kept in mind that there is no single filtering system that filters all kinds of water impurities.

To help make a preliminary choice of filters, the main points to consider are:

- Irrigation system (sprinklers, micro sprinklers or drip irrigation).
- Type and quantity of impurities in the water.
- Required flow rate (capacity).
- Required filtration (mesh size or microns).
- Maximum and minimum water pressure.
- Future needs and modification.

After selecting the filters that suit your water quality requirements, considering the above mentioned points, the decision for ordering a modular array will be based on standard Odis products.

These modular filters make future modifications easy and at minimal cost, (See Chapter 1 - Arrays).

For best results, the filters, manifolds and accessories must be correctly assembled and properly operated, according to the instruction leaflet provided with each filter.

General recommendations are provided here to help you select the correct filters and their combinations in accordance with the level of water impurities.

### 1. Sand Mainly in wells

- A. Hydrocyclones (series 5000)
- B. Hydrocyclones (series 5000) combined with Odismatic filters (series 850, 851, 852, 860, 862, 863) or with automatic filters (series 8000).
- C. Automatic filters (series 8000) or Circulating filters (series 3000) –for water containing relatively small quantities of sand.

### 2. Algae, organic and suspended matter (Rivers, lakes, reservoirs)

- A. Gravel filters (series 4000) combined with Control filters (series 1900).
- B. Gravel filters (series 4000) combined with Odismatic filters (series 850, 851, 852, 860, 862, 863).
- C. Gravel filters (series 4000) combined with back flushing filters (series 7000).

### 3. Rivers containing large quantities of silt and algae

- A. Hydrocyclones (series 5000) followed by Gravel filters (series 4000) and control filters (series 1900).

- B. Hydrocyclones (series 5000) followed by Gravel filters (series 4000) and Automatic filters (series 8000).
- C. Hydrocyclones (series 5000) followed by Gravel filters (series 4000) combined with backflushing filters (Series 7000)

#### 4. Clay with or without organic matter

- A. Hydrocyclones (series 5000) followed by Gravel filters (series 4000) and Automatic filters (series 8000) or with circulating filters (series 3000) or with control filter (series 1900).  
Special attention should be given to the water flow rate –it should be relatively low in the gravel filters.

#### 5. Iron (or Manganese) Oxides\*

- A. Gravel filters (series 4000) containing multi media at minimal recommended flow rate combined with automatic filters (series 8000) or with circulating filters (series 3000) or with control filters (series 1900).  
If necessary water should be chlorinated.

#### 6. Reclaimed water (reservoirs)\*

- A. Gravel filters (series 4000) combined with automatic filters (series 8000) or with circulating filters (series 3000).
- B. Odismatic filters (series 850,851,852-860,862,863) when the dirt load is not above 50 p.p.m.  
Prefiltration might be needed

\* In such a case please consult ODIS technical department.

Type of Dirt	Filtration Solutions
Sand (Wells)	Hydrocyclone Separators Automatic Circulation Filters
Algae Organic Matter (River water, Reservoirs)	Media Filters OdisMatic® Filters Automatic Circulation Filters (According to dirt quantities)
Suspended Solids Silt (Rivers, Lakes, Channels)	Media Filters
Wastewater Reuse (Wastewater after secondary treatment)	Multi-Media Filters OdisMatic® Filters (According to dirt quantities)
Iron and Manganese Removal (Wells)	Oxidation (by chemical treatment or air) And Multi-Media Filtration
Greenhouses Leachate Recycling	Multi-Media Filtration and Disinfection (by UV, chlorine, ozone)

## COATING PROCESS

ODIS has introduced a new and improved process for product coating.

This process provides ODIS's products with maximum anti-corrosion protection and safeguards against common agricultural chemicals.

The previous process included shotblast cleaning, electrostatic polyester spraying as well as oven curing.

The new process includes an additional phase, known as "phosphatization".

During this phase, a protective layer of zinc-phosphate is created. This layer protects the steel against corrosion and strengthens the adhesion of the coating.

The new coating process is performed in seven stages, as follows:

- 1st stage: Automated shotblast cleaning of products to a level of SA 2<sup>1/2</sup> as per international standard ISO 8501.
- 2nd stage: Phosphatization
- 3rd stage: Rinsing
- 4th stage: Sealing
- 5th stage: Drying
- 6th stage: Electrostatic polyester spraying
- 7th stage: Oven curing

**This process creates a perfectly coated product with a protective layer of 100 micron.**

### Comparative Table of Three Coating Processes

	Regular Wet Paint	Polyester Coating + Shotblast Cleaning	Polyester Coating + Phosphatization + Shotblast Cleaning
Salt spray (fog) test - ASTM B 117 Exposure - 1000 hours Corrosion spread from scratch	32mm (1.25")	18mm (0.7")	less than 1.0mm (0.04")
Humidity chamber - 100% R.H. Exposure - 100 hours Blister formation	60%	20%	less than 1%
Resistance to chemicals and fertilizers	poor	good	good