

# ODIS

IRRIGATION EQUIPMENT LTD.

## FERTILIZER TANKS SERIES 6000

### APPLICATIONS

- Designed specifically for fertigation in agriculture
- Simple, efficient and trouble free operation.
- Standard models apply fertilizer on the quantitative principle.



ODIS Filtration is The Heart of Every Irrigation System

## DESCRIPTION

A fertilizer tank specifically designed for fertigation in agriculture.

The quantitative models available in the following volumes:

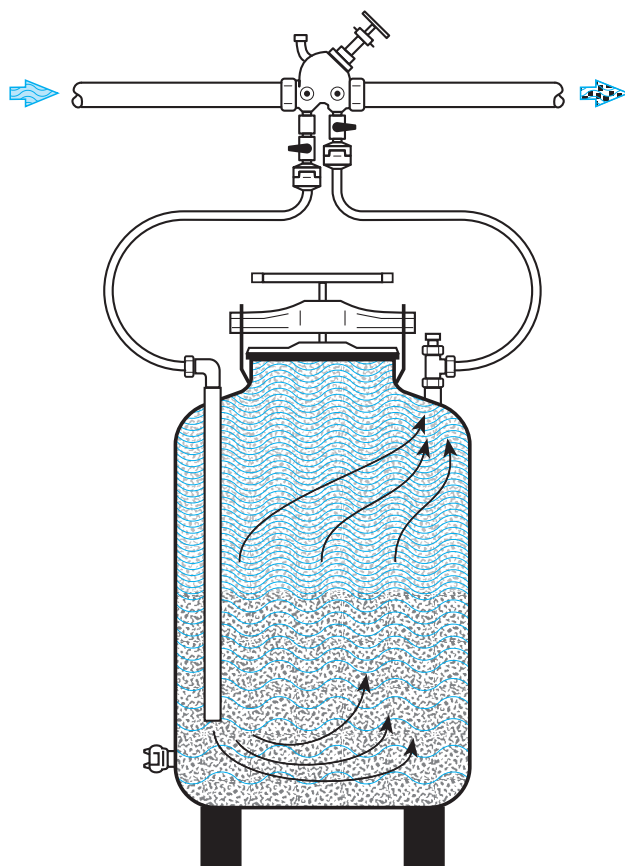
5, 30, 60, 90, 120 liters (vertical tanks);  
120, 220, 300, 500 liters (horizontal tanks).

The fertilizer tanks have a large opening port, this facilitates the filling of the tanks and prevents spilling over of its nutrients.

The physical shape of the opening port and neoprene gasket ensures hermetic sealing and long life service. Moreover, the neoprene gasket is not affected by adverse environmental conditions or by chemicals, used in agriculture.

Rubber coated metal legs isolate the filter from the ground to prevent corrosion and damage to the protective coating.

The fertilizer tanks have a 120 micron protective coating of extra durable polyester applied electrostatically and oven cured on a zinc-phosphate layer for maximal anti-corrosion protection.



## Dimensions & Weight

### Metric Units

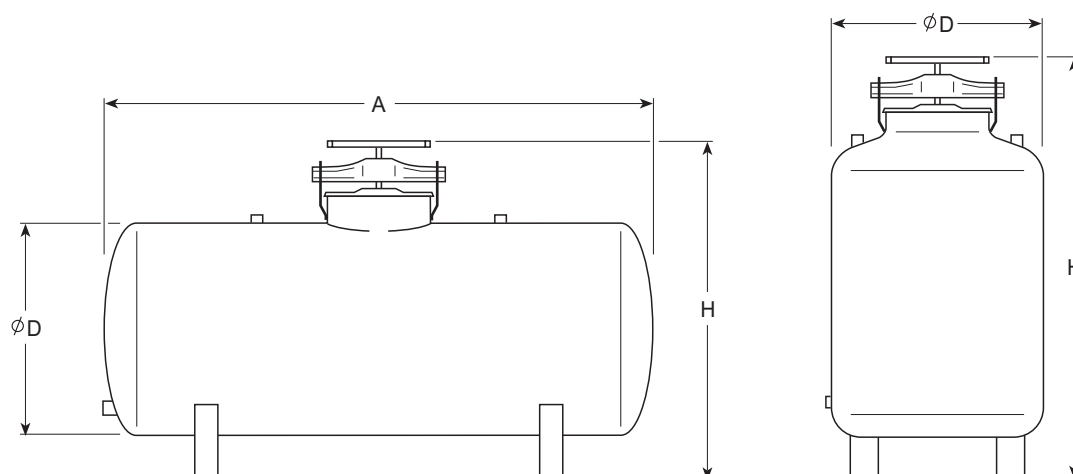
| Model  | Capacity | D   | H    | A    | Weight |
|--------|----------|-----|------|------|--------|
|        | liters   | mm  | mm   | mm   | kg     |
| 6005   | 5        | 225 | 380  |      | 8      |
| 6010 * | 10       | 225 | 450  | 330  | 9      |
| 6015   | 15       | 324 | 500  |      | 18     |
| 6030   | 30       | 390 | 600  |      | 24     |
| 6060   | 60       | 390 | 800  |      | 31     |
| 6090   | 90       | 480 | 800  |      | 38     |
| 6120   | 120      | 480 | 950  |      | 44     |
| 6121 * | 120      | 480 | 750  | 700  | 45     |
| 6221 * | 220      | 480 | 750  | 1100 | 59     |
| 6301 * | 300      | 610 | 860  | 1000 | 75     |
| 6501 * | 500      | 750 | 1110 | 1300 | 130    |

\* Horizontal models

### U.S. Units

| Model  | Capacity     | D    | H    | A    | Weight |
|--------|--------------|------|------|------|--------|
|        | U.S. gallons | inch | inch | inch | lbs    |
| 6005   | 1.3          | 9    | 15   |      | 18     |
| 6010 * | 2.6          | 9    | 18   | 13   | 20     |
| 6015   | 4            | 12   | 20   |      | 40     |
| 6030   | 8            | 15   | 24   |      | 53     |
| 6060   | 16           | 15   | 32   |      | 68     |
| 6090   | 24           | 19   | 32   |      | 84     |
| 6120   | 32           | 19   | 38   |      | 97     |
| 6121 * | 32           | 19   | 30   | 28   | 99     |
| 6221 * | 58           | 19   | 30   | 43   | 130    |
| 6301 * | 79           | 24   | 34   | 39   | 165    |
| 6501 * | 132          | 30   | 44   | 51   | 287    |

\* Horizontal models.





## ILLUSTRATED PARTS BREAKDOWN

### Catalog Numbers - Fertilizer Tank

| Model                   | 6005                            | 6010*   | 6015    | 6030    | 6060    | 6090    | 6120    |
|-------------------------|---------------------------------|---------|---------|---------|---------|---------|---------|
| Capacity (Liters)       | 5                               | 10      | 15      | 30      | 60      | 90      | 120     |
| Capacity (U.S. Gallons) | 1.3                             | 2.6     | 4       | 8       | 16      | 19      | 32      |
| Part No.                | Description                     |         |         |         |         |         |         |
| 1                       | Handle                          | E000101 | E000101 | E000100 | E000100 | E000100 | E000100 |
| 2                       | Tightening Bracket              | E000014 | E000014 | E000216 | E000218 | E000218 | E000218 |
| 3                       | Cover                           | E999240 | E000240 | E000260 | E001280 | E001280 | E001280 |
| 4                       | Neoprene Cover Gasket           | E001340 | E001340 | E004365 | E004380 | E004380 | E004380 |
| 5                       | High Pressure Hose              | E600502 | E600502 | E600501 | E600501 | E600500 | E600500 |
| 6                       | P.V.C. Pipe                     | -       | -       | -       | -       | -       | -       |
| 7                       | Air Valve (Vacuum Breaker)      | E000910 | E000910 | E000910 | E000910 | E000910 | E000910 |
| 8                       | Flexible Liner                  | -       | -       | -       | -       | -       | -       |
| 9                       | Flow Meter                      | -       | -       | -       | -       | -       | -       |
| 10                      | Regulating Valve                | -       | -       | -       | -       | -       | -       |
| 11                      | Quick Connection Stopper (Plug) | -       | -       | H200005 | H200005 | H200005 | H200005 |
| 12                      | Quick Connection                | -       | -       | H200008 | H200008 | H200001 | H200001 |
| 13                      | Rubber Legs                     | -       | -       | E004367 | E004367 | E004367 | E004367 |
| 14                      | Annular Gasket                  | -       | -       | -       | -       | -       | -       |
| 15                      | Fertilizer Tank Body            | A6005   | A6010   | A6015   | A6030   | A6060   | A6090   |

\* Horizontal fertilizer tank.

■ **When ordering, please specify tank capacity.**

■ ODIS can manufacture to order special size fertilizer tanks up to 1000 liters (265 US gallons).

■ Aimed at continued improvement, ODIS reserves the right to change specifications without prior notice.

**Catalog Numbers - Fertilizer Tank**

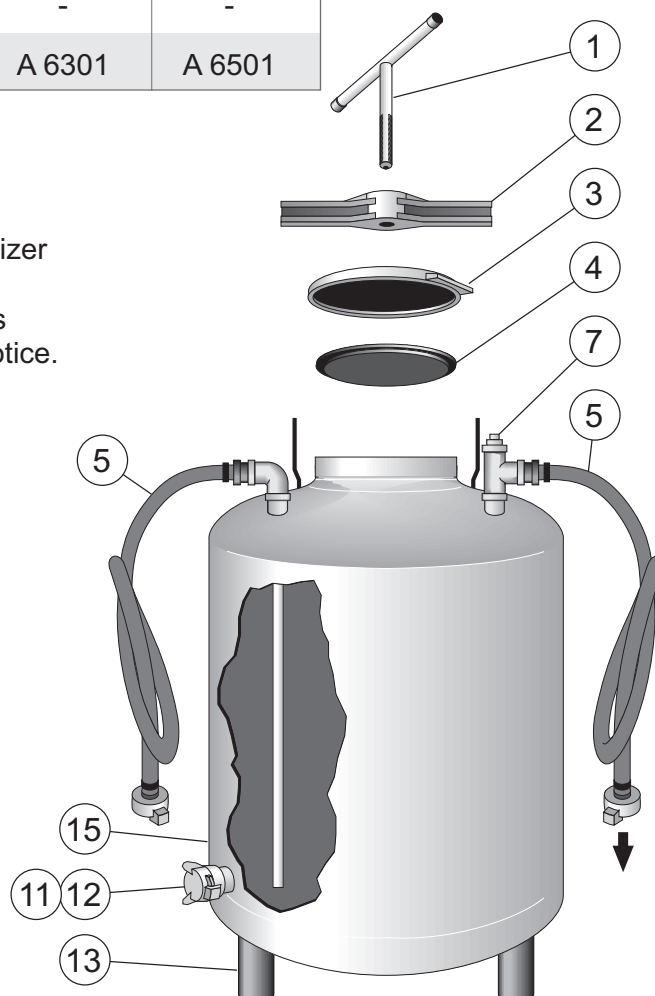
| Model                   | 6121 *                          | 6221 *  | 6301 *  | 6501 *  |
|-------------------------|---------------------------------|---------|---------|---------|
| Capacity (Liters)       | 120                             | 220     | 300     | 500     |
| Capacity (U.S. Gallons) | 32                              | 58      | 79      | 132     |
| Part No.                | Description                     |         |         |         |
| 1                       | Handle                          | E000100 | E000100 | E000100 |
| 2                       | Tightening Bracket              | E000218 | E000218 | E000218 |
| 3                       | Cover                           | E001280 | E001280 | E001280 |
| 4                       | Neoprene Cover Gasket           | E004381 | E004381 | E004381 |
| 5                       | High Pressure Hose              | E600500 | E600500 | E600506 |
| 7                       | Air Valve (Vacuum Breaker)      | E000910 | E000910 | E000910 |
| 11                      | Quick Connection Stopper (Plug) | H200005 | H200005 | H071320 |
| 12                      | Quick Connection                | H200001 | H200001 | H200001 |
| 13                      | Rubber Legs                     | E004389 | -       | -       |
| 15                      | Fertilizer Tank Body            | A6121   | A 6221  | A 6301  |

\* Horizontal fertilizer tank.

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## TECHNICAL DATA

- Max. recommended working pressure: 8 bar (120 psi)
- Max. pressure: 10 bar (150 psi)
- Very large opening port facilitates filling of tank and prevents spilling of fertilizer.
- Neoprene gasket ensures hermetic sealing and long life service.
- The neoprene gasket is not affected by adverse environmental conditions or by fertilizers used in agriculture.
- Vacuum breaker (kinetic air valve) installed at tank outlet.
- Fertilizing can be performed continuously during irrigation or controlled (by controller or computer) as required, or manually operated.
- Standard models contain:
  - P.E tube to increase the efficiency of fertilizer mixing.
- Rubber coated metal legs isolate the filter from the ground to prevent corrosion and damage to the protective coating.

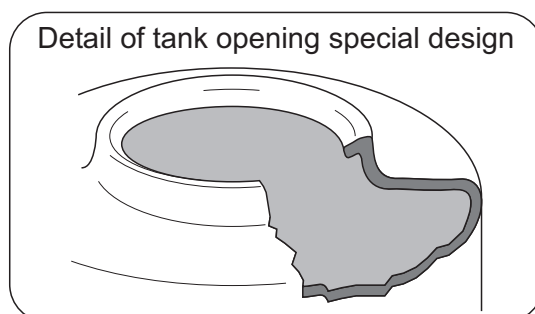
## Protective Coating

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

## Pressure Relief Valve

A pressure relief valve must be inserted before the fertilizer "head" if pressure is not controlled effectively.

- Each fertilizer tank is designed and manufactured to achieve the highest standard of quality and finish.



## GENERAL INSTRUCTIONS

Irrigation with fertilizer is generally recommended during the first two thirds of irrigation time. This ensures proper flushing of irrigation system and minimizes clogging of the emitters by the chemicals.

### Operating Instructions

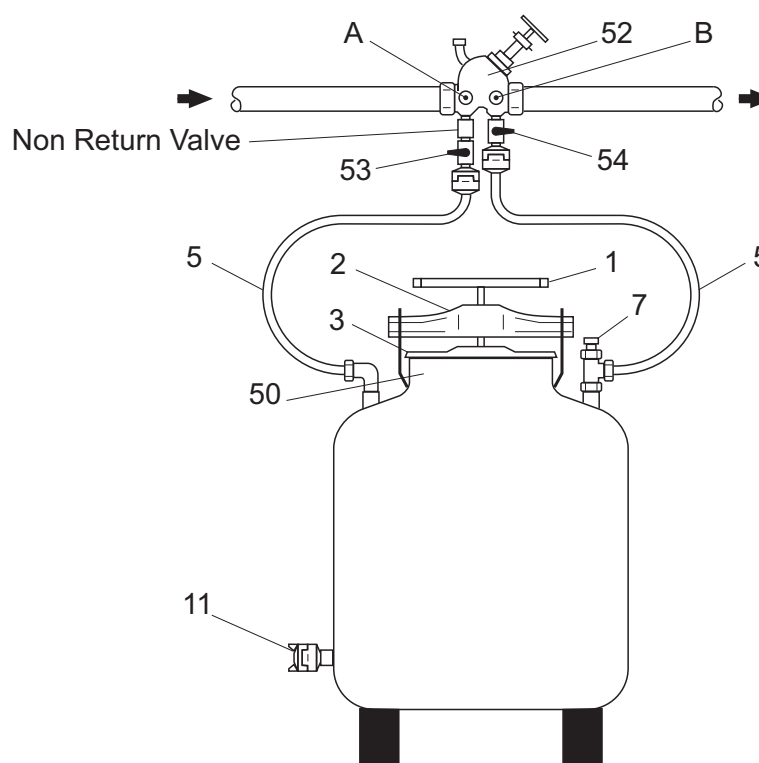
Irrigation can be performed in one of two ways:

1. Irrigation without fertilizer:

- Close valves (53), (54) then
- Open valve (52)

2. Irrigation with fertilizer:

- Fill the tank with the required fertilizer through the top filling port (50). The maximum level should not exceed 2/3 of the tank height.
- Close the filling port (50) with the cover (3) and the tightening bracket (2) and tighten properly with handle (1).
- Rinse thoroughly with clean water externally.
- Verify drain plug (11) is closed.
- Open main valve, then partially open the fertilizing head valve (52).
- Open inlet (53) and outlet (54) valves completely.
- Regulate the fertilizer head valve (52), according to the required fertilizing times (see table), and measure pressure loss between A and B by inserting pressure gauge with needle into pressure testing ports (A,B).



### Approximate Fertilizing Times (Hours)

| Pressure Loss<br>Inlet / Outlet |       | Tank Capacity                   |                                 |                                  |                                  |                                  |                                   |
|---------------------------------|-------|---------------------------------|---------------------------------|----------------------------------|----------------------------------|----------------------------------|-----------------------------------|
|                                 |       | 60 Liters<br>16 U.S.<br>Gallons | 90 Liters<br>24 U.S.<br>Gallons | 120 Liters<br>32 U.S.<br>Gallons | 220 Liters<br>58 U.S.<br>Gallons | 300 Liters<br>79 U.S.<br>Gallons | 500 Liters<br>132 U.S.<br>Gallons |
| (bar)                           | (psi) | (2)                             | (3)                             | (4)                              | (5)                              | (6)                              | (7)                               |
| 0.05                            | 0.7   | 1 - 1 1/4                       | 1 3/4 - 2                       | 2 - 2 1/2                        | 3 3/4 - 4 1/2                    | 5 1/2 - 6 1/2                    | 9 1/2 - 10 1/2                    |
| 0.1                             | 1.5   | 3/4 - 1                         | 1 1/4 - 1 1/2                   | 1 1/2 - 2                        | 2 1/2 - 2 3/4                    | 3 3/4 - 4 1/2                    | 6 3/4 - 7 1/2                     |
| 0.2                             | 3     | 1/2 - 3/4                       | 3/4 - 1                         | 1 - 1 1/2                        | 1 3/4 - 2 1/4                    | 2 3/4 - 3 1/4                    | 5 - 5 1/4                         |
| 0.4                             | 6     | 1/3 - 1/2                       | 1/2 - 3/4                       | 3/4 - 1 1/4                      | 1 1/4 - 1 1/2                    | 1 1/2 - 1 3/4                    | 3 - 3 3/4                         |

The fertilizing times are **for general use only**, and for fertilizers easily soluble in water. Actual times may be altered according to field conditions.

**Column 1:** Indicates the pressure difference between inlet A and outlet B of the fertilizer head.

**Columns 2 - 7:** Indicate the time in hours, of fertilizing (until concentration becomes negligible). Usually, fertilizing times are determined according to type of fertilizer, crops and experience.

**NOTE:**

The fertilizing time is determined by the pressure loss.



## Installation

- Install the fertilizer tank in place.
- Connect the fertilizer assembly to the tank:
  - a. Connect the fertilizer head (combination valve) (52) after the main valve of the water supply line/pipe.
  - b. Connect the inlet and outlet (5) flexible hoses (  $\frac{1}{2}$ " ) to the fertilizer head.
- A pressure relief valve must be inserted before the fertilizer "head" if pressure is not controlled effectively.
- Maximal operational pressure should not exceed 8 bar (120 psi).
- Fertilizer tank is designed to withstand a maximum pressure of 10 bar (150 psi).

## Periodic Cleaning

Clean the tank at the end of fertigation and before storage.

### Cleaning the Tank

- Verify that outlet valve (54) and fertilizer head (52) are tightly closed.
  - Open drain plug (11) (\*).
  - Open inlet valve (53) and main valve, and let the water flow rinse the tank (\*).
  - Rinse thoroughly with clean water the interior of the tank and make sure no fertilizer remains inside.
  - Rinse thoroughly with clean water the exterior of the tank and make sure there are no remains of fertilizer.
- \* The small tanks (models 6005, 6010, of 5 ,10 liters) have no drain plug and can be rinsed under a tap or with separate hose.

## Maintenance

- Apply a layer of grease to the thread of the handle (1) once a year.
- Any damage to the protective coating must be repaired without delay. Prior to the application of the protective paint, clean thoroughly the damaged spot with wire brush.

## How To Order Odis Fertilizer Tanks

- Catalogue number of tank.
- Capacity.
- Max. Pressure.
- Additional Accessories: Nipples, Valves, Fertilizer Valves, Hoses, Pressure Gauges.
- Other than standard material.
- Special Requirements: Special Coating Requirements, Special Size (\*).

\* ODIS can manufacture to order special size fertilizer tanks up to 1000 liters (265 U.S. gallons).

## PACKING / SHIPPING DATA

### Metric Units

| Model  | Capacity<br>(liter) | Weight<br>(kg) | Length<br>(m) | Width<br>(m) | Height<br>(m) | Gross<br>Volume<br>(m <sup>3</sup> ) |
|--------|---------------------|----------------|---------------|--------------|---------------|--------------------------------------|
| 6005   | 5                   | 8              | 0.24          | 0.24         | 0.38          | 0.02                                 |
| 6010 * | 10                  | 9              | 0.33          | 0.23         | 0.47          | 0.04                                 |
| 6015   | 15                  | 18             | 0.3           | 0.3          | 0.5           | 0.05                                 |
| 6030   | 30                  | 24             | 0.4           | 0.4          | 0.6           | 0.1                                  |
| 6060   | 60                  | 31             | 0.4           | 0.4          | 0.8           | 0.13                                 |
| 6090   | 90                  | 38             | 0.5           | 0.5          | 0.8           | 0.2                                  |
| 6120   | 120                 | 44             | 0.5           | 0.5          | 1.0           | 0.25                                 |
| 6121 * | 120                 | 45             | 0.7           | 0.5          | 0.8           | 0.28                                 |
| 6221 * | 220                 | 59             | 1.1           | 0.5          | 0.8           | 0.44                                 |
| 6301 * | 300                 | 75             | 1.0           | 0.61         | 0.86          | 0.53                                 |
| 6501 * | 500                 | 130            | 1.3           | 0.8          | 1.11          | 1.15                                 |

### U.S. Units

| Model  | Capacity<br>(U.S. gallon) | Weight<br>(lbs) | Length<br>(inch) | Width<br>(inch) | Height<br>(inch) | Gross<br>Volume<br>(cu.ft) |
|--------|---------------------------|-----------------|------------------|-----------------|------------------|----------------------------|
| 6005   | 1.3                       | 18              | 10               | 10              | 15               | 0.71                       |
| 6010 * | 2.6                       | 20              | 13               | 9               | 19               | 1.41                       |
| 6015   | 4                         | 40              | 12               | 12              | 20               | 1.77                       |
| 6030   | 8                         | 53              | 16               | 16              | 24               | 3.53                       |
| 6060   | 16                        | 68              | 16               | 16              | 32               | 4.60                       |
| 6090   | 24                        | 84              | 20               | 20              | 32               | 7.10                       |
| 6120   | 32                        | 97              | 20               | 20              | 40               | 8.85                       |
| 6121 * | 32                        | 99              | 28               | 20              | 32               | 9.90                       |
| 6221 * | 58                        | 130             | 43               | 20              | 32               | 15.55                      |
| 6301 * | 79                        | 165             | 39               | 24              | 34               | 18.7                       |
| 6501 * | 132                       | 287             | 51               | 32              | 44               | 40.6                       |

\* Horizontal models