

# Prefabricated plants for sewage water purification

## Series SOL/C Monobloc cylinder lifting stations.

### Technical specifications

Supply of a monobloc lifting station type EMS WATER TECHNOLOGY series SOL/C, composed of a highly resistant reinforced concrete monolithic vertical axis tank, complete with hot galvanized steel covers, one or two electrical pumps each with an automatic coupling system and extraction chain, delivery pipes with end flange equipped with sluice and non return valve of the same diameter, hot galvanized guide pipes for the pumps with fixing supports, automatic floater level switches with support stirrup, complete with an electrical panel built according to the CEI regulations, located into a watertight box type IP55, with every necessary device for the automatic alternate functioning of the pumps duly cabled and mounted.



MODEL	Tank diameter cm	External height cm	Manhole dimensions cm	Weight q.l.s
SOL/C 148	148	206 282	50x70 50x70	18 28
SOL/C 196	196	206 282	50x70 50x70	30 38
SOL/C 242	242	206 282	70x140 70x140	41 48
SOL/C 250	250	235 285	70x140 70x140	90 120

### DIMENSIONING

#### Lifting station volume:

The required necessary volume for a good functioning of the electrical pumps is calculated according to the number of hourly start ups using the following equation:

$$V = \frac{(0,9 \times Q)}{z}$$

where:

**V** = useful tank volume (m<sup>3</sup>) - **Q** = electrical pump flow in l/s - **z** = number of hourly start ups for each pump

In order to keep the electrical pumps correct functioning, the lifting station volume must allow a number of hourly start ups between 8 to 12.

#### Pumping volume height:

In order to determine the difference between the start up and halt level of the pumps (H1) we use the following equation:

$$H1 = (V \times 4) / (A^2 \times 3,14)$$

where:

**A** = standard tanks diameters - **V** = useful needed volume