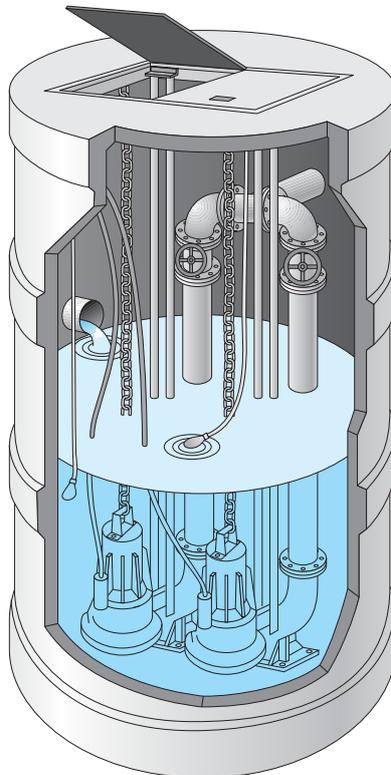# CYLINDRICAL MONOBLOC LIFTING STATIONS

SSL/C series

WHAT ARE CYLINDRICAL MONOBLOC LIFTING STATIONS SSL/C SERIES

Cylindrical monobloc lifting stations type EURO MEC SSL/C series, used for the accumulation and the lifting of civil and industrial sewage water, are composed of a monolithic tank made of reinforced concrete highly resistant, to guarantee total leak absence and absence of ground infiltrations.

Cylindrical monobloc lifting stations type EURO MEC SSL/C series are already supplied with inside one or more submersible pumps with pipes, level regulators and their devices for the correct functioning; the standard model also includes inspection manholes made of hot galvanised steel.

In order to install and start the lifting stations, to position even in presence of ground water in the excavation, the only operations to do are monobloc earthing, pipe connection, command electric panel connection.

HOW CYLINDRICAL MONOBLOC LIFTING STATIONS SSL/C SERIES WORK

Cylindrical monobloc lifting stations type EURO MEC SSL/C series are supplied with submersible pumps proportioned to the sewage flow rate to lift, commanded by floating level regulators with automatic functioning. For a good functioning it is important to calculate the effective volume obtained according to the formula written hereafter, taking care for the starts per hour permitted to the electropumps.

For guidance for an optimal functioning it is suggested that the lifting station volume permits to every installed power from eight to twelve starts per hour.

By request for the protection of the lifting pumps, a basket screen sliding on guides complete with extraction chain can be supplied.

USED MATERIALS

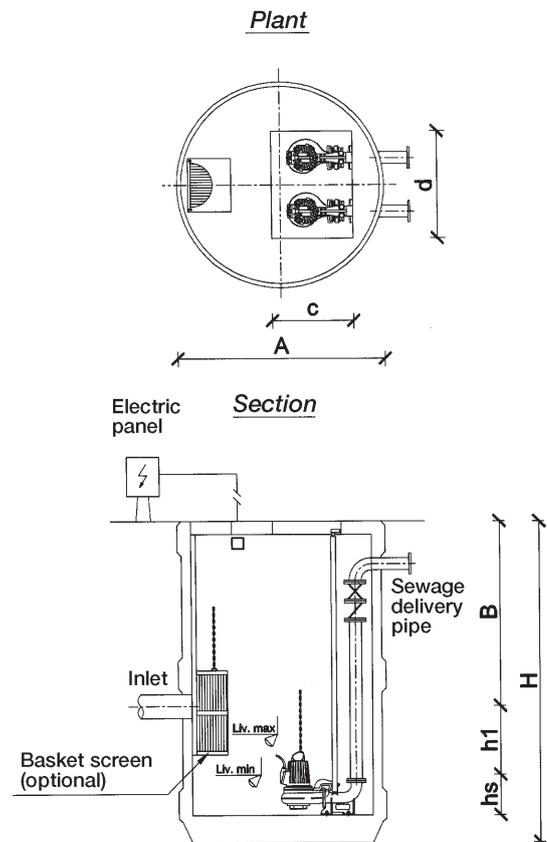|		
Tanks	:	highly resistant reinforced vibrated concrete
By request	:	painted steel, reinforced fiberglass
Shafts	:	concrete
By request	:	hot galvanised steel, stainless steel AISI 304, class D 400 cast iron
Piping	:	galvanised steel
By request	:	stainless steel AISI 304

SPECIFICATION

"Supply of a monobloc lifting station type EURO MEC SSL/C series, composed of a cylindrical monolithic tank vertical axe, made of highly resistant reinforced concrete, complete with inspection manholes made of hot galvanised steel sheet, one or two submersible electropumps each with automatic coupling system and extraction chain, delivery pipes with terminal flange equipped with sluice valve and non-return valve of the same diameter, hot galvanised guide pipes of the pumps with brackets, automatic floating switch level with support, complete with electric panel constructed according to the CEI norms, in water-proof case type IP55, with wiring and assembly inside of all devices necessary for the automatic alternated working of the electropumps."

STANDARD PRODUCTION

MODEL	Tank diam. cm	External height cm	Inspection manhole dimensions cm	Weight q.ls
	A	H	cxd	
SSL/C 130	130	200	50x70	10
		250	50x70	18
		300	50x70	25
SSL/C 151	151	250	50x70	23
		300	50x70	30
SSL/C 192	192	200	50x70	27
		250	50x70	30
		300	50x70	35
		350	50x70	42
		400	50x70	46
SSL/C 244	244	250	70x140	60
		300	70x140	65
		350	70x140	69
		400	70x140	73
SSL/C 250*	250	235	70x140	90
		285	70x140	120

The above written data are given as information. The Society EURO MEC S.r.l. reserves the right to change them in every moment.

(*) Model with cover detached from the tank.

Plant

Section

Electric panel

Sewage delivery pipe

Inlet

Basket screen (optional)

Liv. max

Liv. min

DIMENSIONING

Lifting station volume:
The effective volume necessary for a good functioning of the electropumps is calculated on the basis of the number of starts per hour, adopting the following formula:

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

where:
V = effective volume of the tank (mc)   Q = electropump flow rate in l/s   z = number of starts per hour per pump

For the good functioning of the electropumps it is appropriate that the lifting station volume consents a number of starts from 8 till 12 per hour.

Pumping volume height (H 1):
In order to determine the difference between the start and the stop of the pumps (H 1), the following formula is used:

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

where:
A = tank standard diameters   V = required effective volume

Control of the lifting station total height (H):
The total external height of the tank is obtained from the following sum:

$$H = B + (h/n) + hs + 0,4$$

where:
H = total tank height   B = entry pipe width from ground level   n = n. of installed pumps
hs = minimum level submergence pump   0,4 = tank thickness + security margin

The lifting station can be supplied with the following accessories:
- non-return valve made of cast iron or ball valve
- flat body sluice valve made of cast iron
- sliding guides manual screen, complete with fixing frame, recovery chain, carreageable inspection shaft made of hot galvanised sheet.
By request made of AISI 304.
- manholes made of cast iron
- electric panel arranged for eventual telecontrol
- electronic alarm device with buffer bactery and flash lamp.