

# FILTER BELT PRESS

## ■ St. St. Belt Presses

### III.1 MACHINE DESCRIPTION

Resulting from the keen R&D activity R.E.M. srl has recently launched on the market the most economic Filter Belt Press for sludge dewatering, a simple and compact functional dewatering unit, Type PMT E, when considering overall costs; low capital investment, operating and maintenance costs.

The system is based on the years long experience from our standard types Filter Belt Presses using a combination of rotary drum thickener and belt press technology in a single unit.

PMT E press provide the means of continuously dewatering sewage sludge into a handleable cake.

Using four distinct stages, the machine firstly conditions and flocculates the wastewater, agglomerating the solids using a polymer.

Next, rotating gravity forces in the drum thickener allow the free water to drain away over a continuous, cylindrical porous, filter belt. In the drum thickener sludge DS content increases already up to 6-9%.



The remaining sludge solid fraction is sandwiched between two tensioned filter belts after free gravity zone and travels through low and high - pressure zones round a series of compression and shear rollers.

	PMT E 600	PMT E 800	PMT E 1000
<b>Length (mm)</b>	2050	2050	2550
<b>Width (mm)</b>	900	1100	1300
<b>Height (mm)</b>	2000	2000	2000
<b>Capacity* (m<sup>3</sup>/h)</b>	1 - 4*	3 - 8*	8 - 12
<b>Capacity (kgDS/h)</b>	60	120	200
<b>Belt width (mm)</b>	600	800	1000
<b>Motor of thickener</b>	0.37	0.37	0.37
<b>Motor of press (kW)</b>	0.37	0.37	0.55

*\* for excess and other low DS - content sludge (<1%) is available 500 mm longer thickener drums for handling higher hydraulic capacities.*

*Dry solids capacity is the base when the width of the belt will be determined.*

An unique belt alignment system without valves, cylinders or air pressure enhances operational safety and minimize overall maintenance costs.

The frame design makes easy access possible to all parts from both sides, back, front and also top covers are detachable plates.

Type PMT E is suitable for all types of sludge:

- municipal,
- industrial etc.

The whole steel construction is made of stainless or acid-proof steel (AISI 304 or AISI 316).

Due to automatic washing system of the drum and the filter belts, there is minimal extra cleaning and maintenance required.

PMT E technology is fully automated, needing minimum operator input, and significant improvements have been made in PLC control instrumentation and information communication technology such as linking to SCADA systems.