



The **Combined System – CC** is designed for one continuous dewatering of sludge from small water-treatment plants urban and industrial up to 10,000 population equivalent.

This compact technique of a big simplicity of operation associates the functions of a **gravity belt thickener** and one **belt filter press**.



ADVANTAGES

- Construction in stainless steel AISI 304L with polycarbonate cover
- Economic - Very low cost of operation
- Two equipment in one : gravity belt thickener and belt filter press
- Optimum space requirement/efficiency ratio
- Completely closed - Detention of smells and noise pollutions
- Easy maintenance and supervision





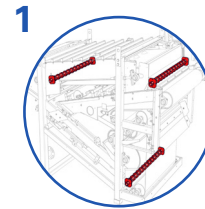
OPERATING PRINCIPLE

The **flocculated sludge** is fed in at the upper part of the machine and makes its way by forming grooves on the upper filtering belt at the intersection of the drainage ploughs.

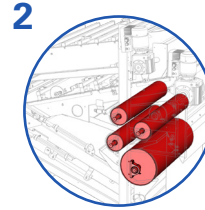
The water contained in the sludge flows through the filtering belt and is then collected in a tank. **Drainage ploughs** located on the thickening zone create grooves in the sludge to ease the draining of the water.

The thickened sludge then reaches the pressing area where it is poured onto a finer mesh filtering belt.

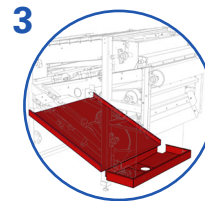
The **second filtering belt** gradually traps the sludge to remove the residual water. After passing through several rollers of various diameters to increase the pressing, the sludge is removed from the filtering belt and discharged into the disposal system (thickened sludge pump or screw conveyor).



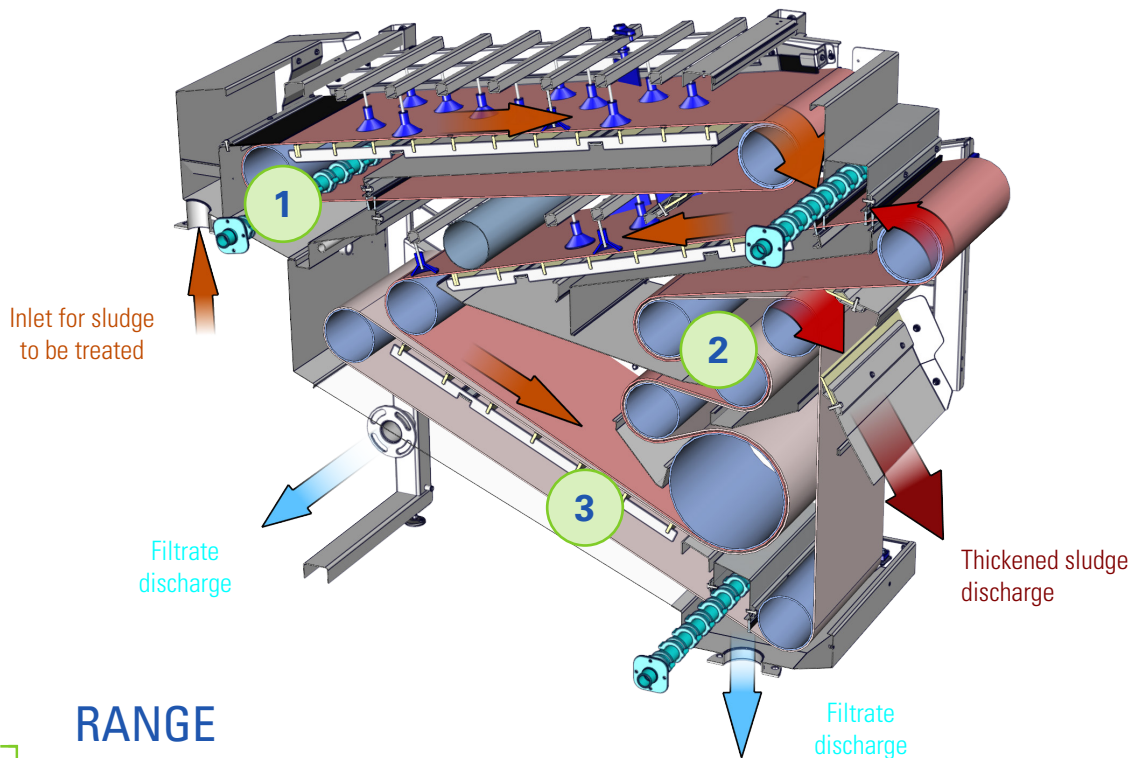
Three washing spraybars
For efficient cleaning of the filtering belts and permanent control of water consumption.



Pressing and rolling
For a maximum sludge dewatering and optimized capture rate.



Two filtrate collection pans
For a better management of drainage of washwater and filtrates.



RANGE & SELECTION TABLE

Thickening of low concentrated sludge (≈ 6 to 10 g/l) and dewatering of the sludge as a final step to obtain drynesses from 150 to 300 g/l depending on sludge characteristics (biological, digested, physico-chemical sludge, etc.).

Model	Maximum flow capacity (m ³ /h)	Belt width (mm)	Active drainage surface (m ²)	Active pressing surface (m ²)
OMEGA CC 060	6	600	1,70	1,20
OMEGA CC 120	12	1200	3,40	2,40
OMEGA CC 180	18	1800	5,10	3,60

Note that this combined unit is selected according to the DS loading rate per hour and per belt meter width. The rate varies from one type of sludge to the other.