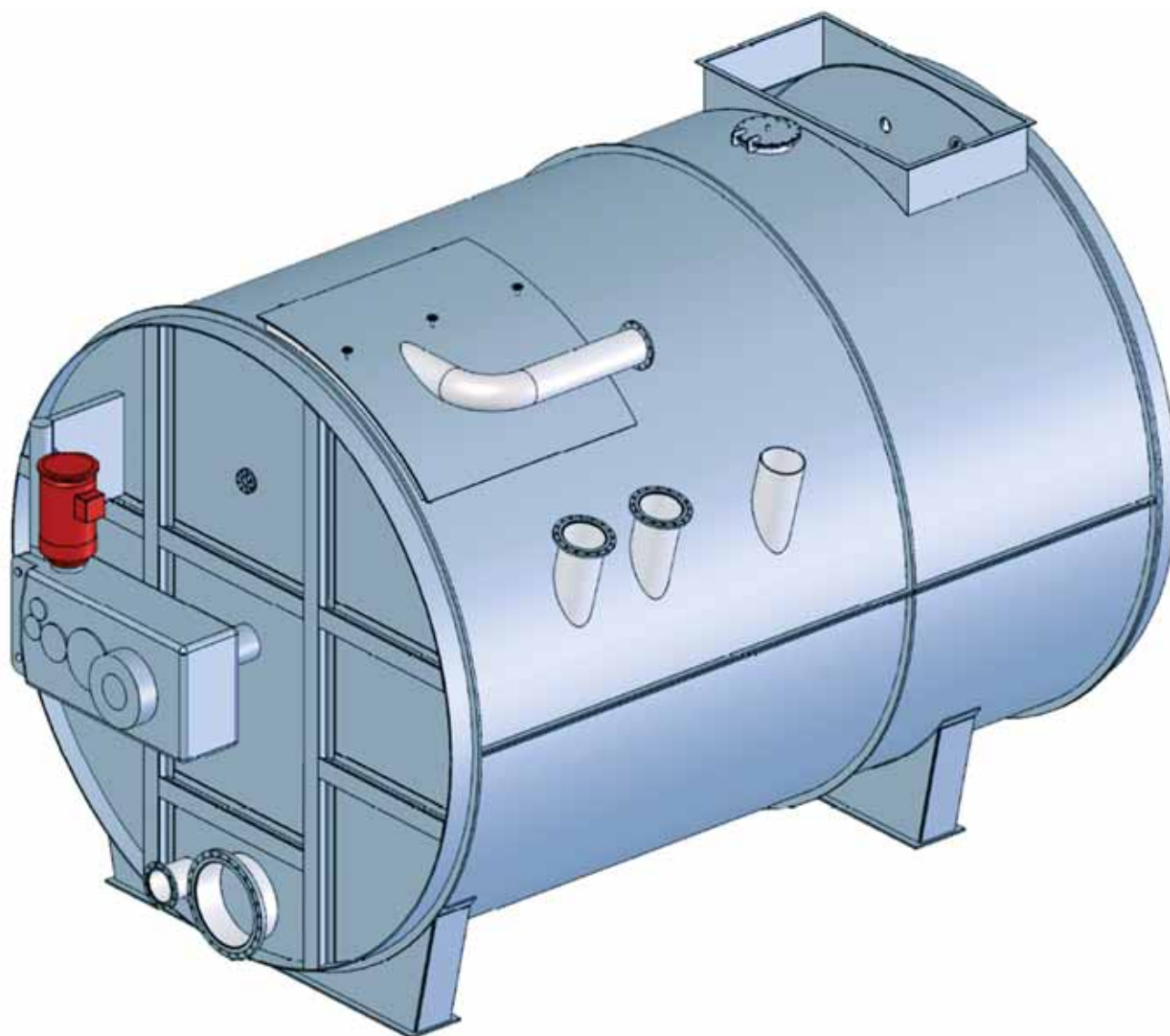


## EXTRACTOR



## Application

Counter-current extractor of raw beet cossette is a part of technology line for continuous diffusion of beet cell sap and has two functions:

- Optimal heating of cossette by the use of juice from extraction tower – energy saving on heating
- plasmolysis (denaturation of protein cell membranę) of cossette entering extraction process.

## Principle of operation

Extractor is a part of line for diffusion between cell juice and water/raw juice. In order to allow diffusion process, it is necessary to denaturate cell membranes of beet cossette, so the mixture is heated up to temperature 70°C in extractor. Fresh beet cossette enters the extractor after cutting machine. By wormshaft cossette is transported through the extractor. Rotation speed of transporting shaft can be regulated by frequency inverter at a range 0,8 - 1,6 rpm. Raw juice flows in direction opposite to cossette and heats the fresh cossette. Heated cossette is mixed with circulating juice, and then, through nozzles is pumped to diffusion tower for further extraction process. In area of cossette inlet, the cooled raw juice is draughted through sieve and then, by nozzle, is transported for purification. Cell membrane denaturation process creates foam, which is then removed by defoaming sieve with steam or mixture of steam and defoaming agent. Juice level plays critical role for proper machine operation and it is measured by pressure transducer. As optimal heat exchange can be achieved only with full load of cossette, it has to be delivered continuously and adjust rotation speed of transport device accordingly.

## Technical specification

CAPACITY	6000 t/24h	8000 t/24h
WEIGHT	75 t	90 t
VOLUME	170 m <sup>3</sup>	226 m <sup>3</sup>
DRIVE POWER	55 kW	75 kW
ROTATION SPEED	0,8 - 1,6 1/min	0,8 - 1,6 1/min
SUPPLY VOLTAGE	400V	400V
TRANSMISSION RATIO	625:1	625:1
DIAMETER	5200 mm	6000 mm
LENGHT	8000 mm	8000 mm

## Extractor outline drawing

