

SPECIAL DESIGN

MEMBRANE CHAMBER PLATE FOR THE SUGAR INDUSTRY

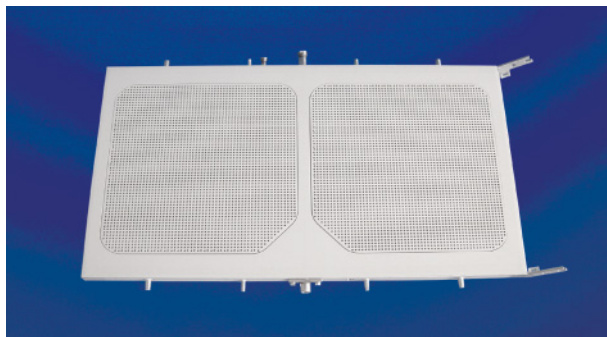
PATENT No. DE 19905674

APPLICATION

- Use in carbonated lime filtration from first stage of carbonization
- full automatic filtration cycle and cake release
- for all kind of filter presses in raw juice filtration of sugar beets
- for filter presses 1000 x 1000 mm to 1500 x 1500 mm with corner-, center-, or bottom feed port
- membrane plates for tower filter presses with stainless steel frame, plate sizes 2000 x 1000 mm and 4000 x 1700 mm, patented design
- in the sugar industry more than 3000 filter plates are successful in operation



Horizontal membrane filter plate 2000 x 1000 mm membrane view



Horizontal membrane filter plate with stainless steel frame drainage grid made from abrasion resistant PE

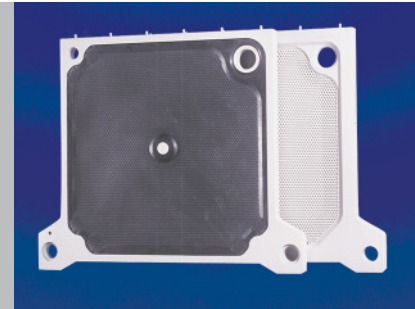
MEMBRANE PLATES IN TOWER FILTER PRESSES

sizes [mm x mm]	feed port	support bosses	cake thickness [mm]
2000 x 1000	corner	0	45
4000 x 1700	lateral	1	45

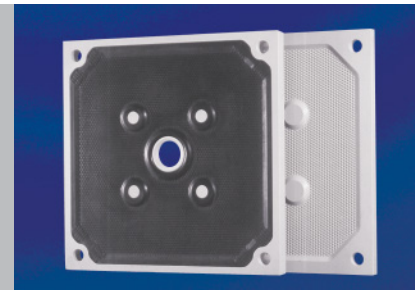
Usual press capacities:

1,3 to 1,8 m³ total volume and 34 m² bis 47 m² filter area

Membrane- and combination chamber plate 1200 x 1200 mm corner feed



Membrane- and combination chamber plate 1200 x 1200 mm center feed



MEMBRANE FILTER PLATES IN FILTER PRESSES

Sizes [mm x mm]	feed port	support bosses	cake thickness [mm]
1000 x 1000	center	0	50
1200 x 1200	corner	0/1	50
1200 x 1200	center	4	50
1200 x 1200	bottom	1	40/50
1300 x 1300	top	1	50
1500 x 1500	corner	1	50
1500 x 1500	center	4	50

Usual press capacities:

1,6 to 3,2 m³ total volume and 70 m² to 145 m² filter area

ADVANTAGES

- increase of throughput up to ca. 400 % compared to normal recessed plates
- reproduceable lower residual moisture in filter cake in the range of 25% - 32%
- reproduceable de-sweetening results of around 0,1% can be achieved easily
- very short cycle times realized by using special developed elastomere membrane material for high temperatures
- very long life time under rough operation conditions by one piece moulded plates
- process safety by large filtrate outlets, blockage by filtercloth or crystallization extremely reduced
- overhang filter cloth and elimination of support cloth contributes to additional cost savings