

MSE HOT FILTER PRESS

HFP 400 - 2000

The hot filter press combines the standard process steps of a membrane filter press, (filtration, filter cake washing and squeezing), with the additional function of a thermal filter cake drying (TCD). As a result, all process steps are carried out in one plant, the hot filter press. Dewatering and drying of the resulting filter cake is thus done without a downstream drying process. Cost-intensive and time-consuming vacuum contact drying is therefore no longer necessary.

FUNCTIONAL PRINCIPLE OF THE HOT FILTER PRESS - MSE HIGH-TEMPERATURE FILTER PRESS WITH THERMAL FILTER CAKE DRYING

In the basic version, the technical design corresponds to a conventional filter press with a plate pack of membrane plates. Filtration, washing and pressing out are carried out as usual. In contrast to the conventional method, the system consists of membrane filter plates and heat exchanger plates, which are installed alternately in a filter press (see illustration). For thermal drying, hot steam and/or oil is applied to the working space behind the membrane and the filter cake is thermally dried accordingly.

The advantage of this process is that a high dry matter content (DM content) of over 90% is achieved. On the one hand, the combination of membrane filter plate and heating plate reduces energy and dewatering costs at comparatively low procurement costs. On the other hand, experience has shown that it guarantees low residual moisture in the filter cake.



ADVANTAGES OF MSE HOT FILTER PRESSES (TCD)

- Filtration and thermal drying in one machine
- High dry matter content in the filter cake can be realized
- Saving of downstream drying processes / drying plants and thus comparatively low investment costs
- Shorter cycle times, reduced drainage costs and low specific energy consumption

Size	Pressure max.(bar)	Max. chamber vol.	Filter cake thickness	FilterCloth Acidification	FilterCake blow drying	FilterCloth washing	FilterCake washing	Plate shifter	Core blowing/ core rinsing	Spreader cloth	Vibrating device I	Vibrating device II	Membrane technology	Splash guard	Corrosion protection
HFP 400	30	148	15-50mm	-	-	-	+	-	+	-	-	-	-	+	+
HFP 470	30	208	15-50mm	-	-	+	+	+	+	-	-	-	X	+	+
HFP 500	30	295		-	-	+	+	+	+	-	-	-	X	+	+
HFP 630	30	576	15-50mm	-	-	+	+	+	+	-	-	-	X	+	+
HFP 800	30	1288	15-50mm	-	-	+	+	+	+	-	-	-	X	+	+
HFP 1000	30	2530	15-50mm	-	-	+	+	X	+	-	-	-	X	+	+
HFP 1200	30	4104	15-50mm	-	-	+	+	X	+	-	-	-	X	+	+
HFP 1500	30	9594	15-50mm	-	-	+	+	X	+	-	-	-	X	+	+
HFP 2000	30	20360	15-50mm	-	-	+	+	X	+	-	-	-	X	+	+