

Discontinuous and Continuous Piston Screen Changer

In applications with low pollution and smaller filter replacement intervals usually piston screen changers are used. These systems are primarily used in the post-industrial, post-production and new-product sectors.

Depending on required flow rates and different operating modes, customers choose between the discontinuous version – commonly with one piston – or the continuous one – with two pistons version.

At higher level of contamination and more frequent filter change intervals, a continuous backwash version is available.

Filter Types

- ▶ **CMF-ECO:** Continuous screen changer with double screen carrier piston without attachment
- ▶ **CMF:** Continuous piston screen changer
- ▶ **CMF-BF:** Continuous piston screen changer with back flush function
- ▶ **DMF:** Discontinuous piston screen changer in rectangular or round execution

CMF / CMF-ECO

Continuous piston screen changer

Two screen carrier pistons built in heated filter housing are fed by partial melt channels with contaminated melt.

In case of required screen change, one of the two screen carrier pistons is moved out of the housing. The screen can now be changed and then the screen carrier piston is moved back into the housing. During screen change, the entire melt stream is directed through in housing remaining screen.

Afterwards, the screen in second piston is changed in the same way. The hydraulics for moving the screen carrier pistons can be operated either manually or automatically.

For CMF-ECO version the retrofit kit for back flush function is not applicable.

Filter type	Screen area		Output [kg/h]*	Output [lbs/h]	Screen diameter	
	[cm ²]	[sqin]			[mm]	[in]
CMF-2/076	2 x 45	2 x 7,0	80 - 195	176 - 430	2 x 76,3	2 x 3,0
CMF-2/096	2 x 72	2 x 11,2	130 - 290	286 - 639	2 x 96,3	2 x 3,8
CMF-2/116	2 x 106	2 x 16,4	190 - 430	418 - 948	2 x 116,3	2 x 4,6
CMF-2/125	2 x 122	2 x 18,9	220 - 490	485 - 1080	2 x 125,0	2 x 4,9
CMF-2/148	2 x 172	2 x 26,7	310 - 690	683 - 1521	2 x 148,3	2 x 5,8
CMF-2/176	2 x 244	2 x 37,8	430 - 980	948 - 2161	2 x 176,3	2 x 6,9
CMF-2/200	2 x 314	2 x 48,7	560 - 1260	1235 - 2778	2 x 200,0	2 x 7,9

Hint: further dimensions and output rates on demand!

*... output rates are only benchmarks

Applications

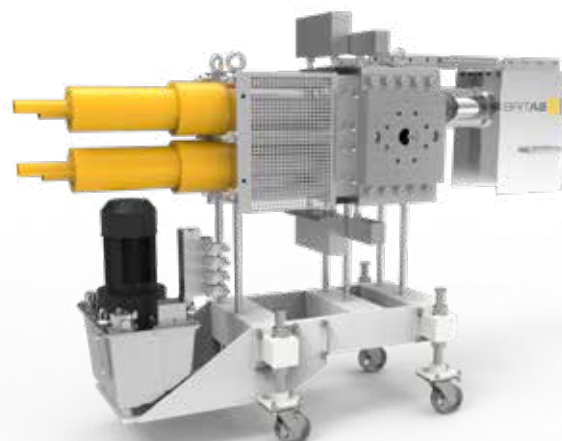
- ▶ **Allrounder.** Filtration of industrial and production waste
- ▶ **Products.** Pipe, profile and film production
- ▶ **Versatile.** For polyolefins, many engineering plastics and hotmelt adhesives
- ▶ **High temperature.** Process temperatures up to 350°C
- ▶ **Flexible.** Process pressures up to 350 bar

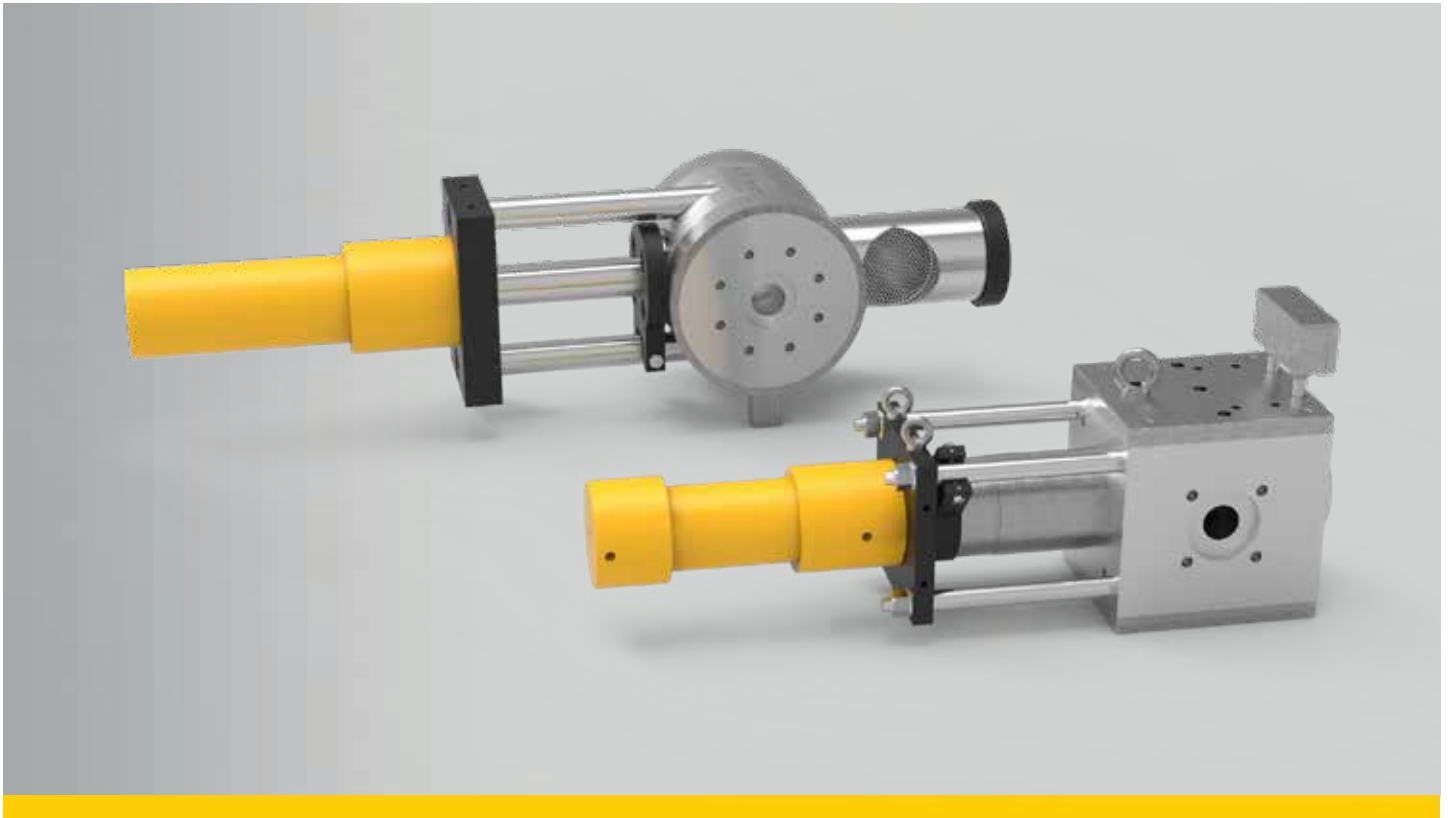
Customer benefits

- ▶ **Efficient.** No dead zones in melt channel
- ▶ **Practically.** Simple but robust design
- ▶ **Speed.** Short remaining time of melt
- ▶ **Steady.** No production shut down

Options

- ▶ Steam or fluid heated
- ▶ One hydraulic to operate several screen changers
- ▶ High temperature execution
- ▶ CMF-ECO execution





DMF — Discontinuous Piston Screen Changer

The discontinuously operating piston screen changers are used in production areas, where a short interruption of production for filter change is possible. They differ mainly in the shape of their housings.

The **DMF-rd** is a round case that is heated with ceramic heating bands. This filter is the most cost-effective filter version and is mainly used as a pre-filter for coarse contaminants, as a pump protection or used in reduced space conditions (co-extrusion).

The **DMF-sq** is suitable for higher temperatures (up to 350 ° C) and higher pressures (up to 500 bar) due to its square housing and is heated with heating cartridges.

Both types can be used for polyolefins, melt adhesives and for many engineering plastics too.

When a filter change is required, the screen carrier piston is hydraulically moved out of the housing which is activated by a hand valve, and will be returned to the housing after completed screen change. This requires a short break down in production.

Filter type	Screen area		Output [kg/h]*	Output [lbs/h]	Screen diameter	
	[cm ²]	[sqin]			[mm]	[in]
DMF-1/058-rd*	26	4,0	20 - 55	44 - 121	58,3	2,3
DMF-1/076-rd*	45	7,0	40 - 90	88 - 198	76,3	3,0
DMF-1/096-rd*	72	11,2	65 - 145	143 - 320	96,3	3,8
DMF-1/116-rd*	106	16,4	95 - 215	209 - 474	116,3	4,6
DMF-1/125-rd*	122	18,9	110 - 245	243 - 540	125,0	4,9
DMF-1/148-rd*	172	26,7	155 - 345	342 - 761	148,3	5,8
DMF-1/176-sq	244	37,8	215 - 490	474 - 1080	176,3	6,9
DMF-1/200-sq	314	48,7	280 - 630	617 - 1389	200,0	7,9

*... available with square housing as well (-sq)

*... output rates are only benchmarks

Hint: further dimensions and output rates on demand!

Applications

- ▶ **Allrounder.** Filtration of industrial and production waste
- ▶ **Products.** Pipe, profile and film production
- ▶ **Versatile.** For polyolefins, many engineering plastics and hotmelt adhesives
- ▶ **High temperature.** Process temperatures up to 350°C
- ▶ **Flexible.** Process pressures up to 350 bar
- ▶ **Variable.** Used as prefilter or pump protection

Customer benefits

- ▶ **Optimized.** Small footprint
- ▶ **Simple.** In operation
- ▶ **Perfect.** Leakage free function without additional sealing
- ▶ **Robust.** In design

Options

- ▶ Steam or fluid heated
- ▶ One hydraulic to operate several screen changers
- ▶ Round housing with ceramic heating bands DMF-rd
- ▶ Square housing with heating cartridges DMF-sq
- ▶ Vertical orientation



THE CLEAN WAY.

CMF-BF

Continuous piston screen changer with back flush function

For applications with higher levels of contamination and frequent screen change intervals, the continuous piston screen changer with **back flush function CMF-BF** is used.

This filter type is able to clean the screens automatically. The back flush attachment includes two pistons which automatically perform the back flushing process.

When a filter change is required, one of the two back flush pistons is moved into the back flush position first. As a result, the melt inflow of the corresponding filter is interrupted. A small melt stream of already purified material is diverted and passed backwards through the filter to be cleaned and discharged to the outside. Subsequently, this process is automatically repeated for the second filter.

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Applications

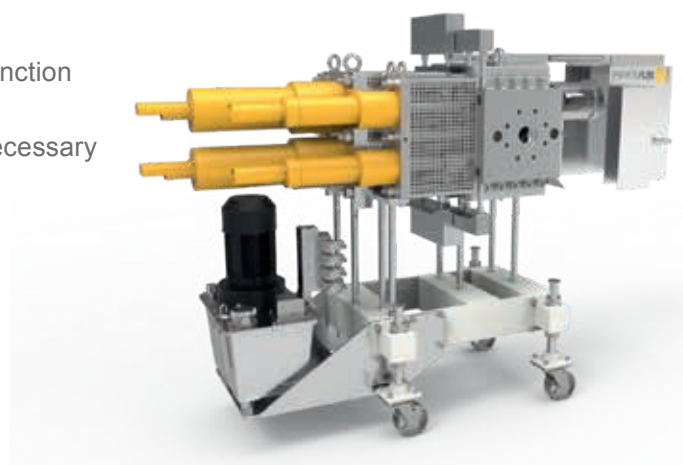
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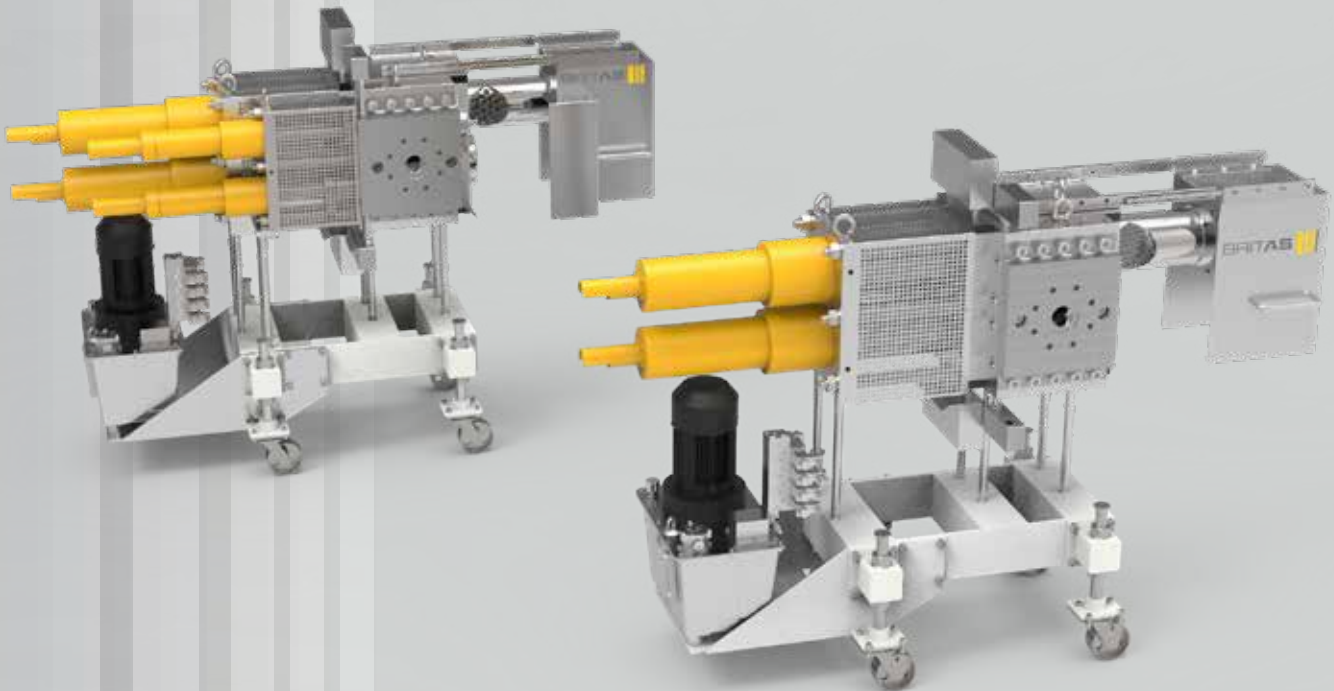
Customer benefits

- ▶ **In time.** Within seconds in back flush position!
- ▶ **Fast.** Easy and quick retrofit from standard to back flush function
- ▶ **Economical.** Low melt loss at back flush
- ▶ **Practically.** Quick mounting of retainer, no bayonet lock necessary
- ▶ **Efficient.** Short back flush process

Options

- ▶ Steam or fluid heated
- ▶ One hydraulic to operate several screen changers
- ▶ High temperature execution
- ▶ CMF-ECO execution





Service

- ▶ **Consulting.** From technology selection up to financing.
- ▶ **Test runs.** Your material in one of our customer centers.
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