BKG® HiCon™ V-Type 3G

Double Piston Backflush Screen Changer for Continuous Operation with Power Backflush Technology

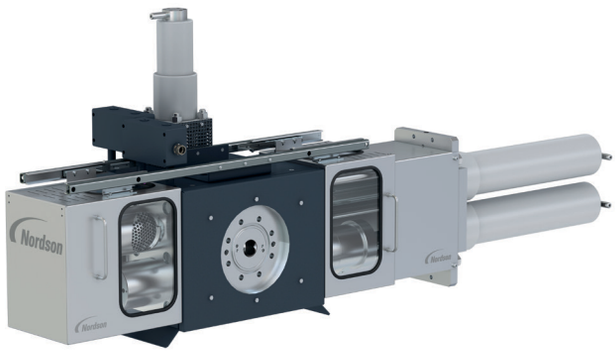
Normal operation: 4 screen cavities (100%) in the process

Backflushing: 3 screen cavities (75%) in the process, 1 screen cavity (25%) in backflush position

Screen change: 3 screen cavities (75%) in the process, 1 screen cavity (25%) in change position

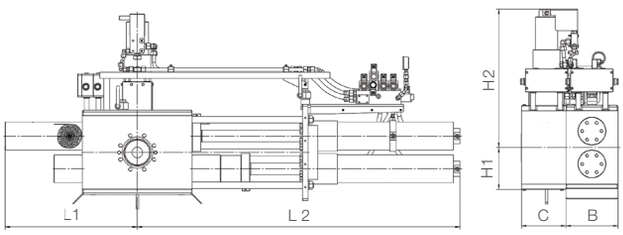
Reservoir filling: 4 screen cavities (100%) in the process

The BKG HiCon V-Type 3G is suitable for almost all processes and materials. It is used in processes with a high demand for pressure consistency (e.g. strap, film, fiber) as well as in processes with insufficient back pressure for backflushing (e.g. strand pelletizing). It is also suited for processes with a high proportion of contaminates (e.g. recycling). The system enables a continuous operation without any system shutdowns during screen change.



Features

- Patented highly efficient backflushing through integrated POWER BACKFLUSH technology
- With the patented 4K-75-technology, three screen cavities (75%) remain available for filtration at all times during the process steps “backflush” and “screen change”
- Optimized flow channel geometries (free of dead zones)
- Wear-free metallic sealing system – no additional seal required
- Easily integrated into the line controls



Benefits

- All process steps are performed pressure- and volume-constant
- Patented POWER BACKFLUSH technology ensures highest efficiency and operates independently of the extrusion pressure
- Fully automated backflushing and venting procedure reduces operator intervention to a minimum
- Up to 200 backflushing cycles allow for a significant reduction in operating cost
- Four screen cavities provide a large filtration area in a comparably small housing, with only minimal backflushing amounts during the self-cleaning

New generation efficiency enhancement: Old vs New

- Increased cleaning performance through reduction of the backflushing cycle - only one displacing piston
- Higher degree of automation through autonomous parameterizing of venting and backflushing
- Easy and clean handling through an outlet for the backflushing discharge on the bottom of the housing
- Lower extrusion height possible through compact construction
- 100% of the filtration area available during reservoir filling procedure

Technical Details

Machine Type	Extruder Output [kg/h]*	Screen Changer Dimensions						Screen		Weight [kg]
		L1	L2	B	C	H1	H2	Ø [mm]	[cm²]	
V-Type 125 - 3G	450 - 750	689	1681	270	230	219	711	125,0	4 x 122	1200
V-Type 160 - 3G	500 - 1200	819	1966	310	260	259	847	148,3	4 x 172	1780
V-Type 180 - 3G	650 - 1400	952	2304	380	320	294	933	176,3	4 x 244	2910
V-Type 200 - 3G	800 - 1800	1068	2582	410	350	329	1038	200,0	4 x 314	3980
V-Type 250 - 3G	1300 - 2500	1203	2893	460	390	369	1134	230,3	4 x 415	5800
V-Type 280 - 3G	2000 - 3000	1349	3202	500	390	409	1254	250,0	4 x 490	7400
V-Type 300 - 3G	3500 - 5500	1467	4119	580	440	454	1371	270,0	4 x 572	10100
V-Type 320 - 3G	4000 - 7000	1780	4119	640	440	509	1596	320,0	4 x 804	14000
V-Type 380 - 3G	6000 - 11000	1854	4219	695	440	539	1606	340,0	4 x 908	16700

* The throughput values are only estimates. The actual rates are dependent upon the viscosity of the material, filter mesh, application and the contamination level of the material; therefore, the values may differ depending upon the actual process parameters.

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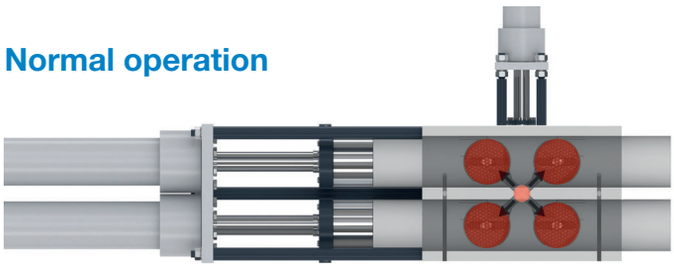
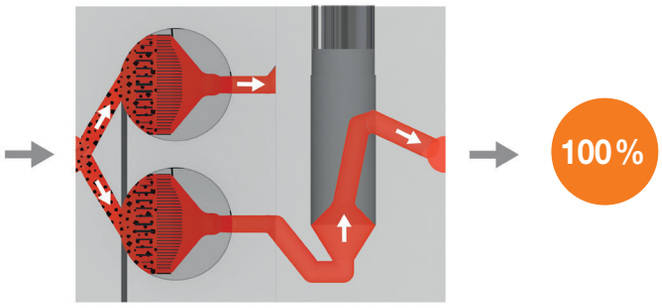
Double Piston Backflush Screen Changer for Continuous Operation with Power Backflush Technology

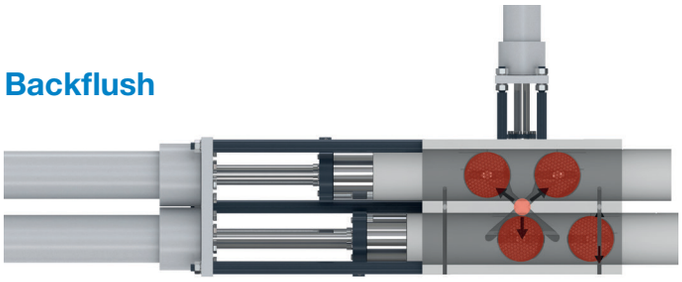
Normal operation



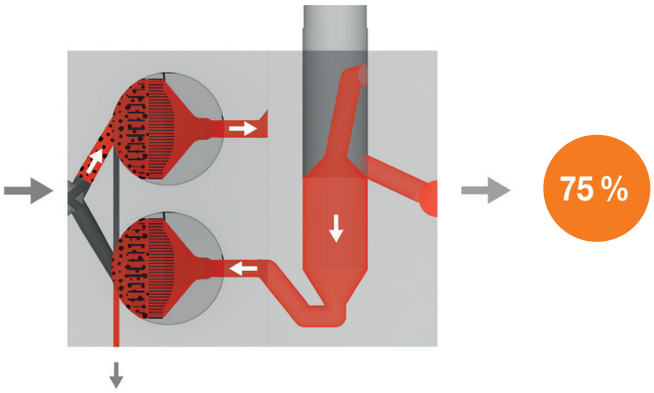
The heated steel housing allows for two screen bearing pistons, positioned transversely to the melt stream, and containing two screen cavities each per piston. The melt flow is subdivided into four flow paths, directed through each of the four screen cavities, and reunited after filtration at the material outlet. The contamination of the melt and the resulting deposits on the screen packs result in an increase in flow resistance.



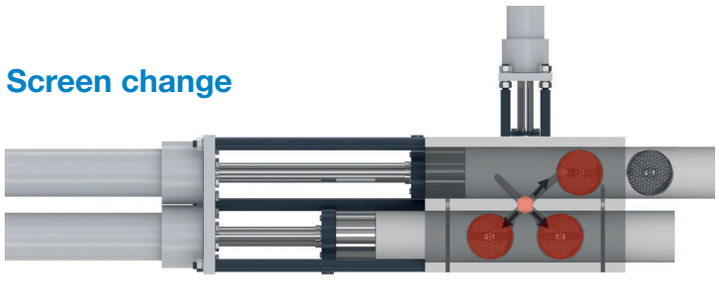
Backflush



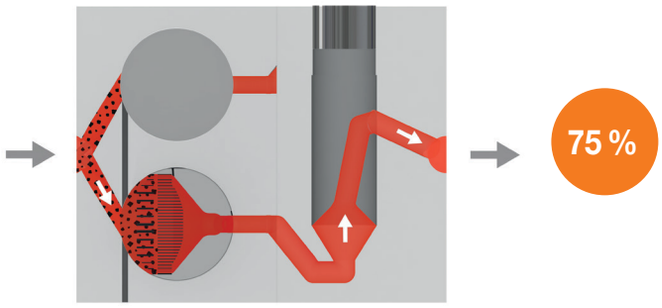
The backflushing is initiated automatically when an individually defined pressure limit is reached. The displacing piston moves to its end position and thus fills the melt reservoir. The screen pack that needs to be cleaned moves into the cleaning position and the displacing piston flushes the screen cavity free in a fast forward movement with hydraulic assistance. The contaminants on the screen pack peel away and pass through the flushing channel. During backflushing, the relevant screen area is completely separated, so that any influence on the process is inhibited. After the cleaning of the screen, the adjacent screen area of the same piston is cleaned in an identical manner. During each backflushing, three screen cavities (75%) remain in production.



Screen change



The screen change takes place when the self-cleaning is completed. The screen piston with the filter element to be cleaned is moved out of the housing, far enough to allow for the screen pack to be removed and replaced with a new filter element. During the screen change, three screen cavities (75%) remain in production. The screen change proceeds for all four screens successively.



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