

# RSFgenius

*Fully-automatic, pressure-constant, permanent process consistency*

With regard to product quality, cost efficiency, operator friendliness and ease of maintenance, the RSFgenius represents the highest standard of all filtration systems today. This fully-automatic and pressure-constant filtration system can be used in virtually any application, for automation of the production process and for the manufacture of a high quality final product. The RSFgenius is particularly well suited for ultra-fine filtration and the filtration of thermally-sensitive melts.

## The advantages of the RSFgenius Filtration System

- **Fully-automatic mode of operation with integrated self-cleaning**

The filtration system operates fully-automatically and ensures a 100% availability of the line. Depending on the contamination level, a screen change (which takes approx. 20-30 minutes) is carried out approx. every 1-5 months and has no influence on the production process and product quality.

- **Constant melt pressure, temperature and viscosity**

By always keeping the size of the active screen area constant, pressure, temperature and viscosity of the melt remain constant, which guarantees the highest end product quality.

- **Guaranteed melt purity and quality, short dwell time of the melt**

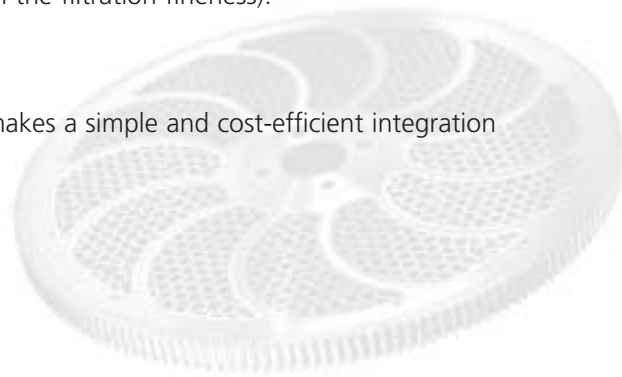
Optimal flow channel design and encapsulation guarantee lasting purity and quality of the melt after the filtration. The short dwell time of the melt in the filtration system (< 1 minute) permits quick material or color changes. Filtration finenesses down to 1 µm are possible.

- **Simple and safe screen changes, low filtration costs**

Screen changes do not expose personnel and environment to any danger. With the fully encapsulated design of the RSFgenius, influence from air during the filtration process is excluded. Due to the very effective screen cleaning with high pressure impulses, screens are automatically re-used 30-400 times (depending on the filtration fineness).

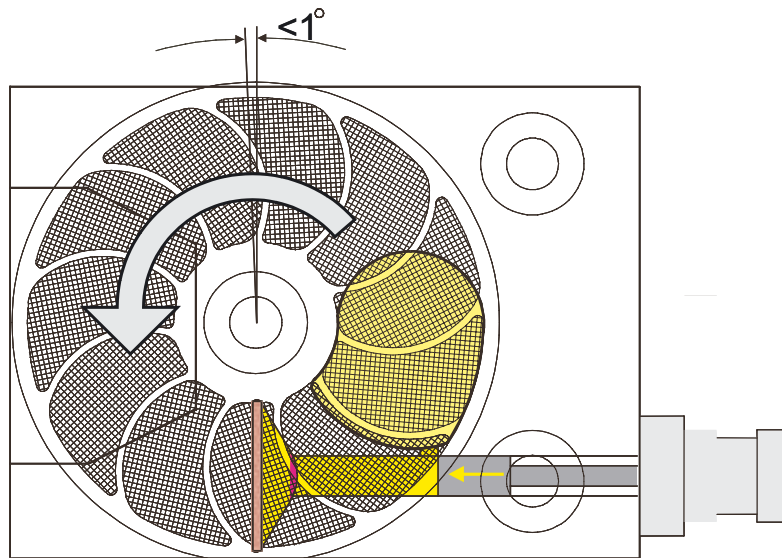
- **Compact size and minimal installation effort**

The small and compact design of the RSFgenius makes a simple and cost-efficient integration possible even in a very confined space.



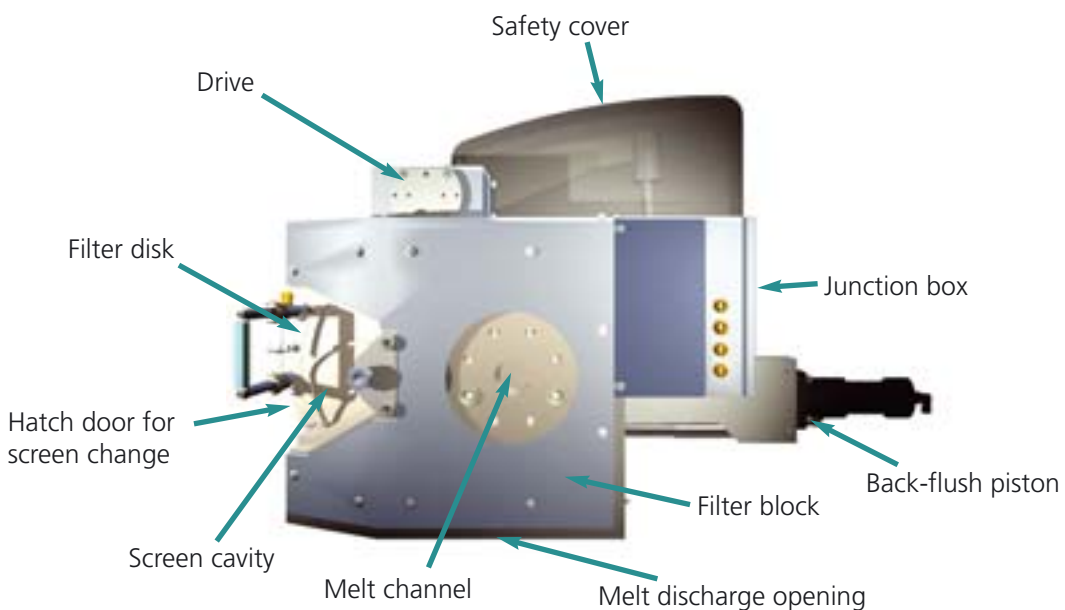
## Mode of operation

When a pressure increase upstream of the filter is registered, the filter disk is indexed by means of a hydraulic drive. This guarantees that the free screen area is always kept constant. Just before the contaminated screen is reintroduced into the melt channel, it is cleaned by a patented, integrated back-flush piston system.



## Design

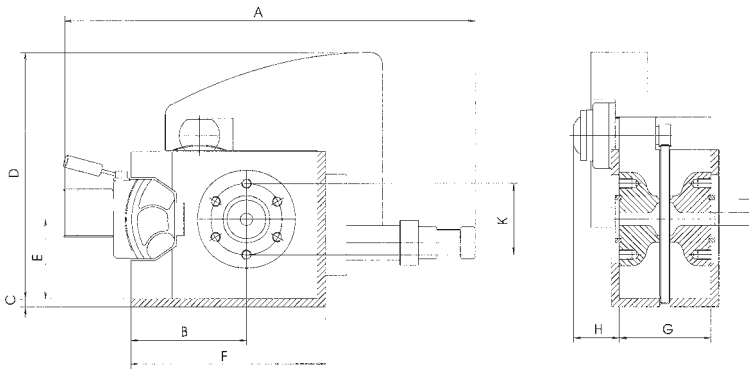
The filter disk – on which the screen cavities are located in a ring pattern – is completely encapsulated by the two filter blocks. Screens can be inserted into the cavities by opening a small hatch door giving access to the cavities. The production process is not disturbed by the screen change procedure. Thanks to the modular design of this filtration system, it is possible to replace the few wearing parts (such as heater elements and bearing bushings) during operation. Continuous production over many years is thus made possible.



# Technical data



patented



## Technical data RSFgenius

as of 08.2004

filter type	active screen area		heating capacity in watt		heater zones		pressure in psi max. <sup>(1)</sup>	temp. in °F max. <sup>(2)</sup>	Q <sup>(3)</sup> in lbs/h	dimensions in inches											weight in lbs
	active in in <sup>2</sup>	capacity in in <sup>2</sup> /h	electric	oil/vapor	electric	oil/vapor				A	B	C	D	E	F	G	H	I <sup>(4)</sup>	K		
RSFgenius 45	7,0	116,3	7800	8000	3	2	5075	600	418	40,9	12,6	0,8	22,9	5,9	15,9	7,3	3,6	0,8	4,3	440	
RSFgenius 60	12,1	155,0	7800	8000	3	2	5075	600	858	40,9	12,6	0,8	22,9	5,9	15,9	7,3	3,6	1,0	4,3	440	
RSFgenius 75	15,5	232,5	8100	9000	3	2	5075	600	1122	43,9	13,8	0,8	24,8	7,1	18,5	9,1	2,6	1,0	5,5	682	
RSFgenius 90	26,4	465,0	18490	20000	4	2	4350	600	1716	48,9	17,4	0,8	28,3	8,7	22,0	12,9	3,0	1,0	6,3	1430	
RSFgenius 150	52,7	713,0	21580	22000	4	2	3625	600	4070	49,4	18,5	0,8	30,9	9,8	22,8	14,3	2,2	1,4	6,3	1804	
RSFgenius 175	74,4	1054,0	26400	28000	4	2	3625	600	4620	60,7	23,7	1,6	40,2	12,2	28,7	15,9	4,6	1,6	8,7	3190	
RSFgenius 200	111,6	1395,0	36500	40000	6	2	3190	600	6600	68,1	27,4	1,6	46,3	14,6	37,0	21,9	4,6	1,8	9,8	7040	
RSFgenius 300	282,1	1937,5	-	48000	-	2	2900	600	9240	74,8	34,1	1,6	52,2	19,6	44,1	23,5	3,5	2,0	13,8	9240	
RSFgenius 400	421,6	2712,5	-	60000	-	2	2610	600	15840	88,6	44,1	2,8	65,0	27,6	57,1	31,5	4,3	2,0	13,8	16500	

- (1)= High pressure versions available as an option.
- (2)= Up to 750° C possible as an option.
- (3)= Based on: 1000 Pas, 60 µm, Δp 580 psi.
- (4)= The dimension "I" can be freely chosen, the values given are minimum values.



For more information on the control system see "controls"!