

BREAK

Filtering • Machinery



Automatic self-cleaning filtering system
with constant pressure output

BREAK DUO



Minimal waste.



Suitable for highly contaminated materials.



Constant pressure output.

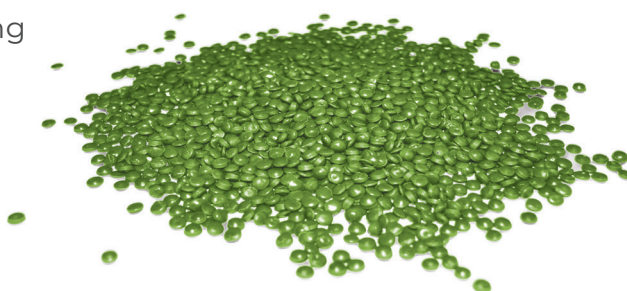
Quality polymer

Filtration is undoubtedly the most important step in obtaining a quality polymer, which is why **BREAK Machinery** made this process central in its mission.

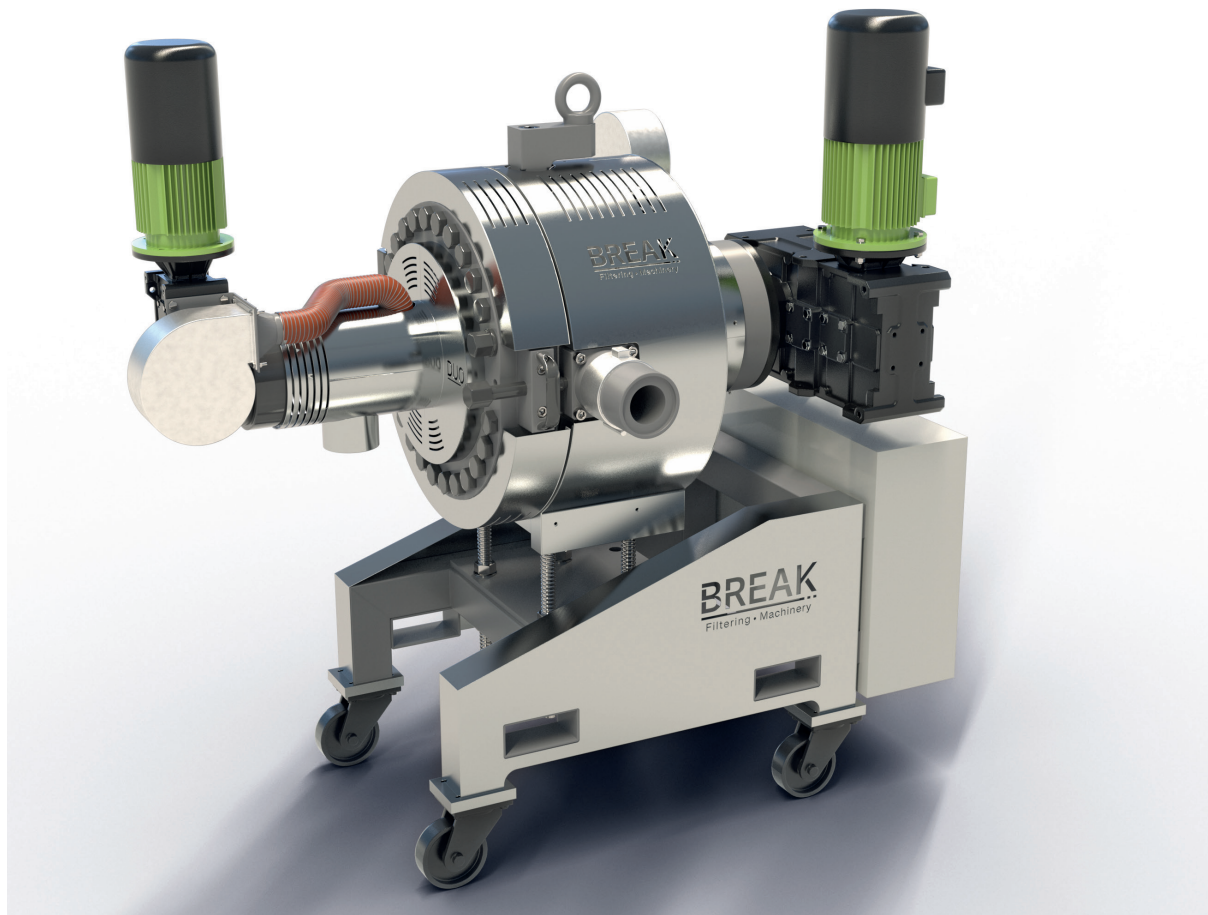


A passion for recycling, observation of solutions on the market and **listening to customers** were the starting point in the development of **BREAK DUO**.

BREAK DUO sits in the upper class among automatic machines for continuous filtering at constant pressure output.



Break DUO



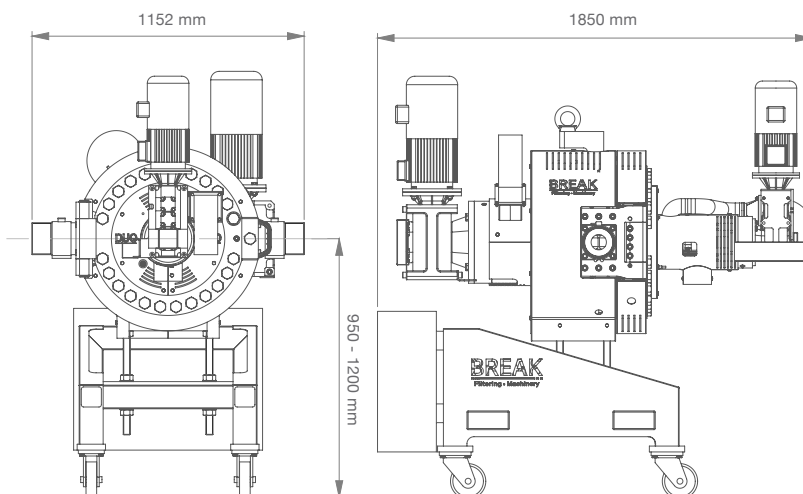
BREAK DUO automatic self-cleaning filtering system with constant pressure output

This is a **double filter system** that achieves maximum productivity while assuring high end product quality.

The **scraper disc** geometry and the innovative **discharge system** permit the **removal of contamination in a fast and controlled way, and reduce the amount of waste.**

BREAK DUO	
Filtering surface area [cm ²]	1750
Heating zones	6+1
Max. pressure [bar]	350
Max. flow rate [kg/h] ¹	3000
Weight [kg]	1800
Total installed power [kW]	30
Filtration [μm]	60-2000

⁽¹⁾ The flow rate depends on various factors: the melt viscosity, the degree of filtration, the type of contaminant and its percentage, the production line.



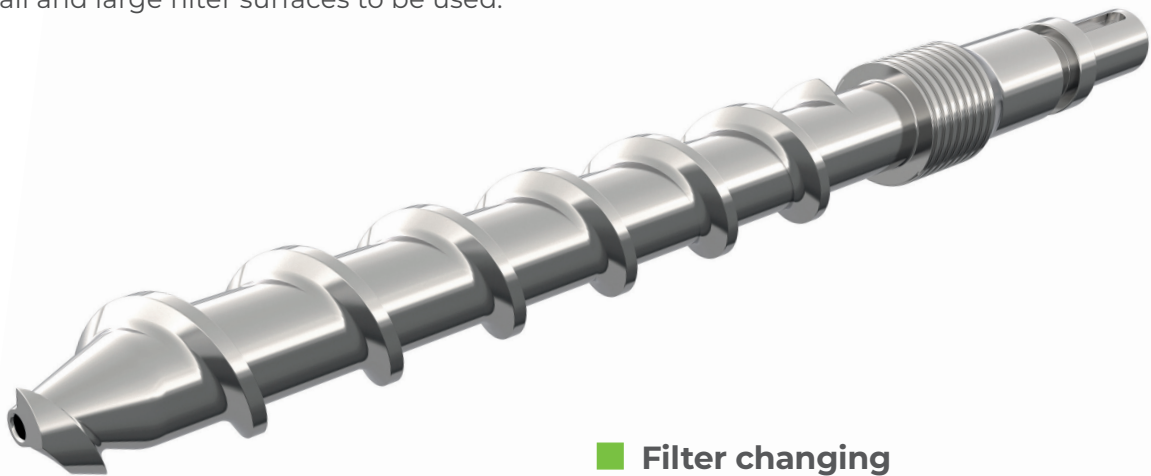
Technical advantages

■ Continuous filtration

The operating principle of **BREAK DUO** enables it to work in continuous mode and at constant pressure.

■ Double filter

BREAK DUO uses two filters. This allows the size of the filtration chamber to be kept small and large filter surfaces to be used.



■ Cleaning efficiency

The special geometry of the 6-blade rotating scraper disc enables excellent cleaning even at low rotational speeds.

■ Single discharge screw

Impurities are discharged by means of a single screw capable of conveying the contaminants collected from both filter surfaces.

■ Versatility

BREAK DUO is designed for the filtration of various types of plastic materials. It is engineered to handle different types of contamination such as paper, wood, aluminium, copper, etc...

■ Reliability

BREAK DUO is manufactured using high quality alloy steel and anti-wear treatments are applied to the most stressed parts. It is also engineered to withstand high line pressure (up to 350 bar).

■ Filter changing

BREAK DUO is designed to make maintenance and filter changing procedures simple without having to disassemble parts of the machine.

■ Flexibility

The ability to adjust the speed of the discharge screw allows even the most contaminated materials to be treated according to customer requirements.

■ Proportion of impurities

BREAK DUO can be used to filter materials with high proportion of impurities (up to 15% by weight depending on the type of contaminant).

Economic advantages

■ Productivity

The continuous filtering system with constant pressure maximises line productivity.

■ Savings

The efficiency of the cleaning system in continuous mode extends the life of the laser filter, resulting in lower consumable purchase costs.

■ Minimal waste

The screw rotates independently of the scraper disc. In this way, waste can be minimised depending on contamination.

■ Labour

The innovative design reduces cleaning and replacement time for filter and blades. The need for operator presence is greatly reduced. Routine and unscheduled maintenance operations are also simple, fast and carried directly at the client's production site.

■ Optimisation

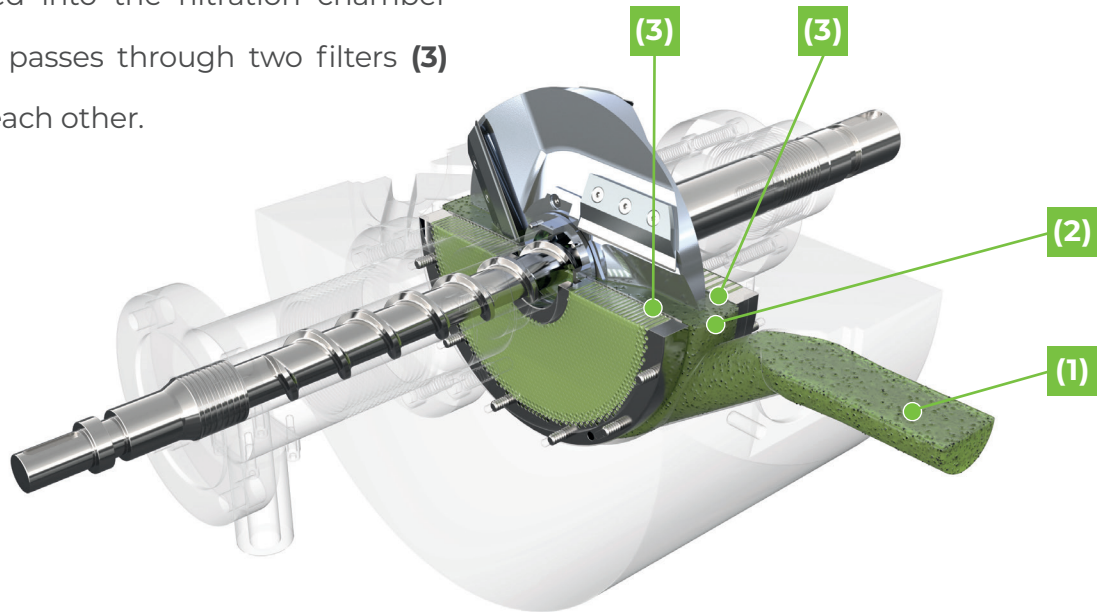
The ability to adjust the discharge screw independently of the speed of the scraper disc facilitates the treatment of highly contaminated materials.



Operating principle

BREAK DUO : high filtering efficiency

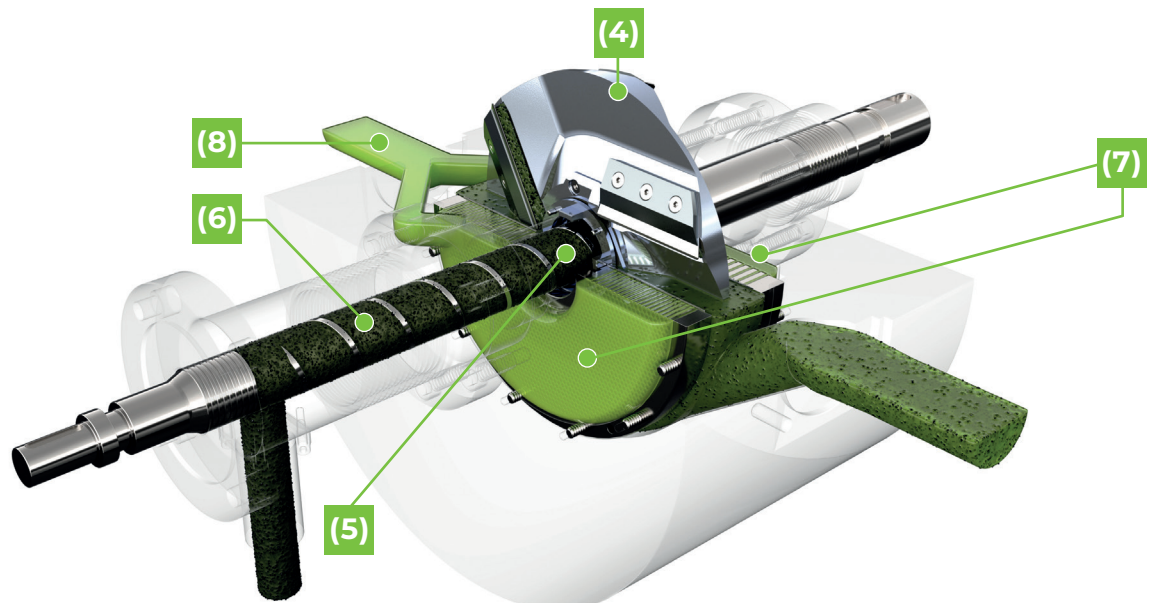
The molten plastic material **(1)** is conveyed into the filtration chamber **(2)** and passes through two filters **(3)** facing each other.



Between the two filters there is a scraper disc **(4)**, equipped with interchangeable blades, which rotates to remove the contamination deposited on the filters by channelling it into the disc itself **(5)**. The centre of the scraper disc communicates with an independent

discharge screw **(6)** that ejects the contaminated material.

The filtered molten plastic material **(7)** from the two filters then rejoins the outlet channel **(8)** to proceed to the next process.



Technical features

■ Double filtering surface

BREAK DUO is equipped with two perforated discs (breakers), thus increasing the filtering surface and the production volume.

■ Innovative scraper disc

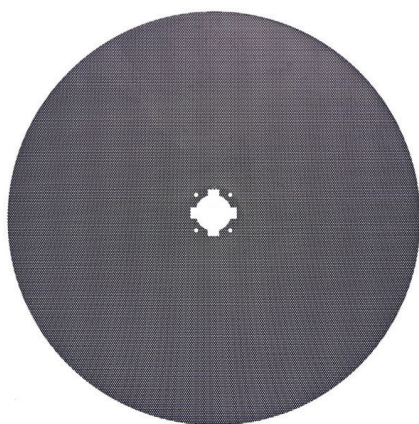
The scraper disc, placed between the two filters, is fitted with blades on both sides and by rotating removes contamination from both surfaces. Its innovative shape prevents filtered contaminants from returning into the melt. The filter surfaces are cleaned continually, allowing longer periods of use compared to traditional technologies.

■ Component quality

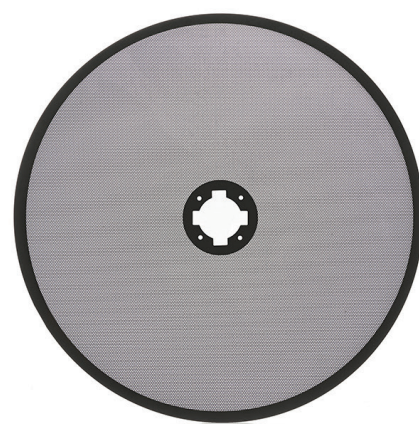
All **BREAK DUO** components and consumables are made of high-quality materials to ensure high wear resistance.

■ Laser filtration

The laser filter is crucial in the operation of **BREAK DUO**. The filter discs are perforated using the very latest laser technology and processed for resistance to wear. The conical shape of the holes facilitates the smooth flow of the melt.



*Break Duo
Punched Filter*



*Break Duo
Laser Filter*



**Environmental sustainability
is always at the core of our vision.**

BREAK MACHINERY s.r.l.

Via Martiri della Libertà, 7
35010 Grantorto (PD) Italy
Tel +39 049 9490350
info@breakmachinery.com
www.breakmachinery.com