

WAVE-SHAPED BREAKER PLATES

80% more screen area. Almost the same space.

Patt's latest wave-shaped breaker plate design delivers 1.8 times the filtration area of our flat breaker plates, with approximately 15 mm of additional system width. A compact upgrade for existing Patt filtration systems.

1.8×

Screen area versus Patt flat plates

≈15 mm

Additional system width

4 steels

H13 · Dievar · Patt Tool · Patt Structural



D-size wave-shaped breaker plates

A practical retrofit

The wave-shaped plate and matching screen add area to existing Patt systems. Compared with replacing the complete filter, this is a straightforward, relatively inexpensive route to a new filtration duty.

01

Finer filtration

Use finer screens to target smaller contaminants and improve clarity or quality.

02

More recycled content

Manage higher contaminant loading by distributing the duty across more screen area.

03

Higher throughput

Relieve a filtration-area bottleneck when the filter limits line output.

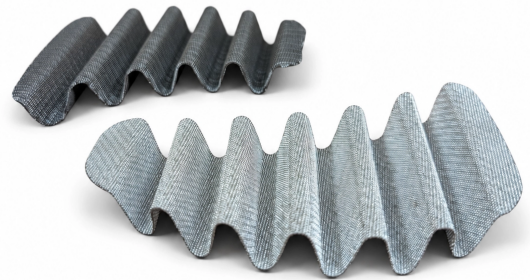
AREA WITHOUT EXTRA HOLD-UP

Keep the melt path compact

Adding screen area by enlarging a filter body can also add melt hold-up volume and complicate flow distribution. Patt's wave-shaped approach adds the surface at the screen while retaining the main flow-channel geometry. It avoids the new stagnant pockets associated with an expanded flow path and helps maintain consistent melt-temperature control.

Retaining the compact channel avoids additional residence time from extra hold-up volume. Where the upgrade enables higher throughput, melt residence time through the same flow volume is reduced. The result is more filtration flexibility while protecting the melt's thermal history.

Manufacturers using Patt wave-shaped breaker plates have reported improvements in product quality associated with these flow characteristics. Patt considers melt flow, screen support and thermal management together when configuring the upgrade.



Formed screens follow the wave profile.

What the additional area changes

At the same flow: $Q / 1.8A = 0.556 \times (Q / A)$

Average flow per unit screen area is approximately 44% lower. This geometric relationship provides selection flexibility; actual pressure drop and throughput depend on the melt, mesh and contamination.

The plate and screen work as a matched pair

The machined wave profile supports the matching screen across its developed surface. Patt supplies laser-cut screens in a wide variety of meshes, with sintered or spot-welded constructions selected for the application.

The plate adds developed surface without expanding or distorting the main melt-flow channel. Screen support, mesh sequence and seating are specified as one assembly.

CONFIGURE THE UPGRADE

Match the plate to the process

Wave-shaped breaker plates are available in H13, Dievar, Patt Tool and Patt Structural. This range allows Patt to coordinate the plate material, heat treatment and surface treatment with the polymer, contaminants, cleaning method and operating cycle.

H13**Dievar****Patt Tool****Patt Structural**

Material selection starts with what limits service life: abrasive wear, hydrogen embrittlement, heat checking or corrosion. Patt reviews that failure mode alongside core hardness, toughness and operating temperature. Hydrogen exposure, cleaning chemistry and treatment history are considered together where embrittlement is a concern.

Upgrade the filter you already own

Send Patt the filter model, size and serial number, along with the current plate or screen drawing if available. Include the polymer, throughput, melt temperature, operating pressure, current screen pack and the improvement you want to achieve.

Patt can then specify the wave-shaped plate, matching screen construction, steel and installation details. This review matches the approximately 15 mm width allowance to your installation and turns the additional filtration area into a practical upgrade plan.

A published history, continued development

Canadian Plastics featured Patt's wave-shaped screen-changer design in "The new shape of screen changers" on May 1, 2001. Continued development has brought the current design to 1.8 times the screen area of Patt's flat breaker plates. The archived article documents the earlier design; the specifications on this page describe today's Patt upgrade.

[Canadian Plastics: The new shape of screen changers \(May 1, 2001\)](#)

Discuss your filtration upgrade

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[Read the article and contact Patt online](#)