



# DELKOR FAST FP FILTER PRESS

It pays to talk to a specialist

TAKRAF, a Tenova company, is an integrated solutions provider to the global mining, bulk material handling, minerals processing and beneficiation industries, offering innovative technological solutions as well as process and commodity knowledge along the industry value chains. With the integration of the well-known DELKOR and Tenova Advanced Technologies (formerly Bateman Advanced Technologies) brand of products into TAKRAF as specialized product lines, our portfolio for the minerals processing and beneficiation sectors has been considerably enhanced.

**DELKOR** is an industry specialist in solid/liquid separation and mineral processing applications for the mineral, chemical and industrial markets, offering flotation, sedimentation, filtration, screening, and gravity separation systems. DELKOR's services range from test work, process optimization and flowsheet design, to installation, commissioning and aftermarket support.

DELKOR's track record in solid/liquid separation and mineral processing applications stretches back to the seventies with more than 3,000 successful installations worldwide.

DELKOR specialists offer an unmatched combination of experience and product-based knowledge that is enhanced through sharing of the company's extensive experiences worldwide. Clients therefore benefit from face-to-face technical discussions with DELKOR local experts who are able to draw upon global experiences so as to offer clients the best local solution. DELKOR aims to be your global, local specialist.

TAKRAF and DELKOR have committed to both environmental and social sustainability in their business interactions and have adopted a Zero Harm approach to safety under the SAFETY FIRST promise of Tenova.



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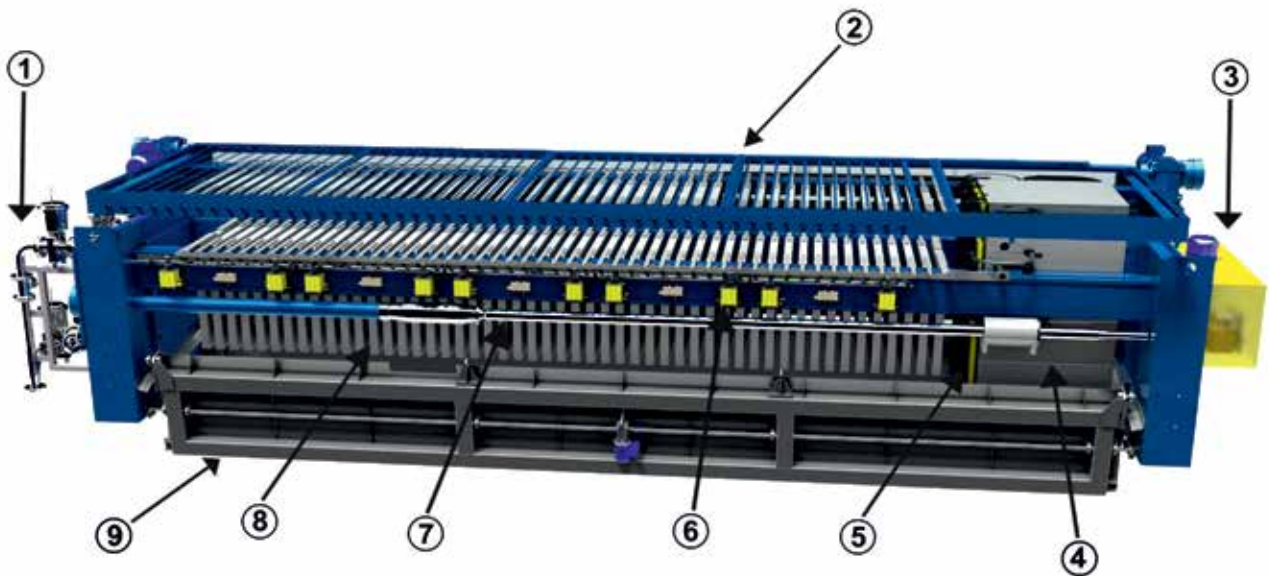
## DELKOR FAST FP FILTER PRESS

The DELKOR FAST FP consists of a fabricated sidebar frame supporting a moving head and filter plates positioned between the head frame and moving head. As opposed to traditional filter presses, opening and closing of the plate pack are carried out by two synchronized non-reversible screws. Final compression of the plate pack is achieved by using a pressurized cushion inflated with water at low pressure.

If required, the filtration process can be enhanced by using membrane plates to further reduce the moisture content and/or through the use of the efficient air blow or cake wash features of the machine.

The DELKOR FAST FP features a core blow system and a plate/cloth shaking device to prevent contamination of the final product and ensure proper cake discharge. Based upon client's process requirements, a fully automated cloth washing device can operate at high or low pressure and thus regenerate filter cloths every cycle or after a pre-set number of cycles.

DELKOR designs and supplies reliable and fully automated filter presses for flexible operation and easy maintenance. The DELKOR FAST FP is suitable for a wide range of dewatering applications, from mineral concentrates and tailings to very fine materials in the chemical, iron & steel, food processing and water treatment sectors.



- |                                |                       |                          |
|--------------------------------|-----------------------|--------------------------|
| ① Feeding manifolds and valves | ④ Moving head         | ⑦ Synchronized screwline |
| ② Cloth washer system          | ⑤ Pressurized cushion | ⑧ Filter plates          |
| ③ Screw lines drive            | ⑥ Plates shakers      | ⑨ Bomb bay doors         |

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## TECHNOLOGY FEATURES - DELKOR FAST FP

- The DELKOR FAST FP employs a proprietary technology, which replaces the complex, hydraulically-operated high pressure systems for the opening and closing of the plate pack with a simple system combining a pressurized cushion and synchronized screws.
- Once the screw system has closed the filter press and it is effectively locked in position, the sealing and the compression phase of the operating cycle are carried out by a water cushion. The cushion transfers the closing force evenly over the entire plate cross section and allows uniform sealing at low system pressures.
- The multi-layered cushion is suitable for a wide temperature range and boasts superior wear and UV resistance.



Filter press screw line



Deflated cushion



Inflated cushion



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## ADVANTAGES OF DELKOR FAST FP

The pressurized cushion and synchronized screws, together with the combined effect of the two, provide numerous advantages over traditional filter press technology.

- Compensation of plate misalignment
- Simple construction with few moving parts
- Improved plate edge sealing
- Longer plate and cloth life
- Lighter frame
- No tension load on sidebar
- No frame bending
- Balanced forces through screw control
- No complex load balancing
- Economic operation
- Simple control
- Low maintenance
- No product contamination by failing hydraulic system
- Reduced safety hazard
- Smaller footprint
- No space needed for piston stroke



Screw drive without protection cover



Screw line encoder



Screw drive with protection cover

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## DELKOR FAST FP FEATURES

- Complete plate pack opened at once (up to 100 chambers)
- Recessed, mixed membrane and full membrane plate pack (20 to 60 mm cake thickness)
- Filter plates with various feed and filtrate port configuration to suit process requirements
- Automatic plate misalignment detection
- Optional slurry pump and tank
- Double-end feeding for fast filling
- Flow meter for filter feed
- Integrated bomb bay doors with no impact on surrounding items
- Filter cloth fixing system: barrel neck or single cloth with feed shoe to allow for fast and efficient cloth changing
- Compressed air system for air blow/core blow
- Fully-automated plate/cloth shaker for cake discharge
- Safety devices such as light guards against mechanical movements; pull-wire switches on operator's side along complete length of filter; and moving splash curtains or a polycarbonate splash box to protect against hot, toxic or corrosive slurries
- Optional remote control of filter press to support operation and maintenance
- CE marking

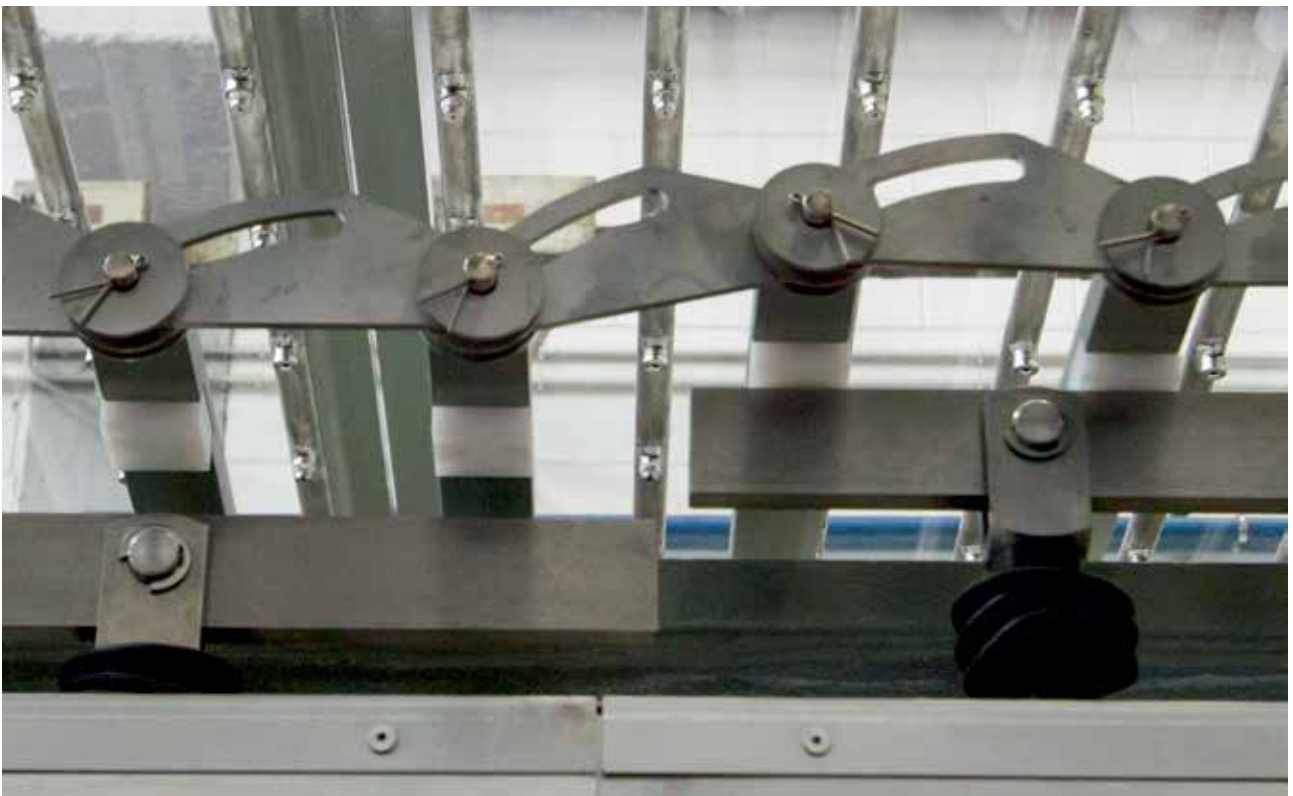
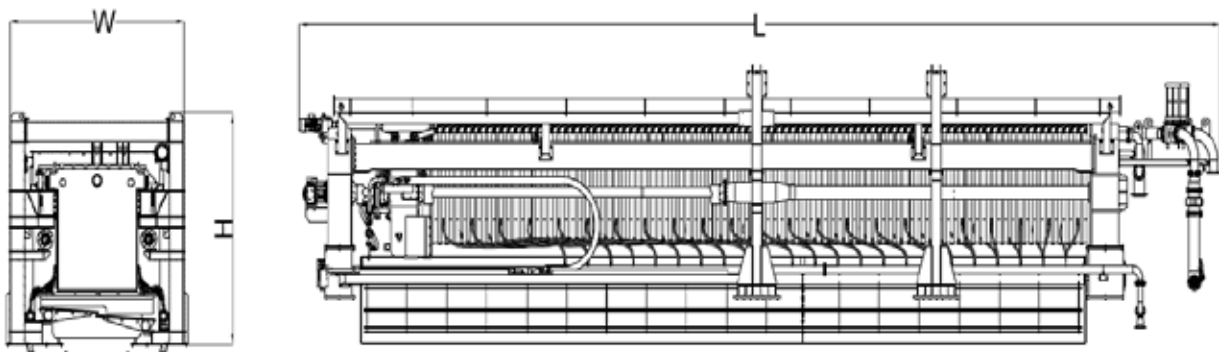


Plate shaker

## DELKOR FAST FP PRODUCT PORTFOLIO

Plate size	mm	1,000 x 1,000	1,500x1,500	2,000x2,000	2,400x2,500
Operating pressure *	bar	15	15	15	15
		Min - Max	Min - Max	Min - Max	Min - Max
Chambers	#	20 – 98	20 – 100	20 – 100	20 – 100
Press volume	ltr	252 – 3,861	660 – 9,123	1,115 – 15,274	12,049 – 17,280
Filtration area	m2	29 – 169	69 – 387	123 – 711	642 - 663
Overall length	mm	6,600 – 19,600	7,700 – 21,700	5,720 – 22,720	5,720 – 22,720
Overall height	mm	2,350	3,130	4,611	4,611
Overall width	mm	2,550	3,200	4,632	4,632
Overall weight	t	14 – 28	28 – 58	50 – 108	58 – 109
Main drive power	kW	8	22	44 – 60	44 – 60

\* Technical data is subject to change without notice



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