



**Diemme
Filtration**



Solid-liquid separation technology for industrial processes

OVERHEAD BEAM FILTER PRESS GHT

A brand of
Aqseptence Group

GHT 4X4 is the pull-to-close filter press with high reliability and performance



Diemme® Filtration GHT 2500

GHT 2500 is one of the biggest filter presses currently available in the world. This machine is able to dewater huge volumes of slurry reaching very low values of residual moisture thanks to its exceptional chamber volume and filtration area. The picture on the left shows 5 GHT 2500 in operation. The dimensions of the machines can be appreciated related to the man walking near them.

Performance

The GHT 4x4 is a Diemme® Filtration filter press with high productivity.

The filter plates, which are hung from the upper beam, are moved automatically by a rapid shifting device equipped with a carousel system which reduces the filter presses' opening and closing sequence to the minimum.

Reliability

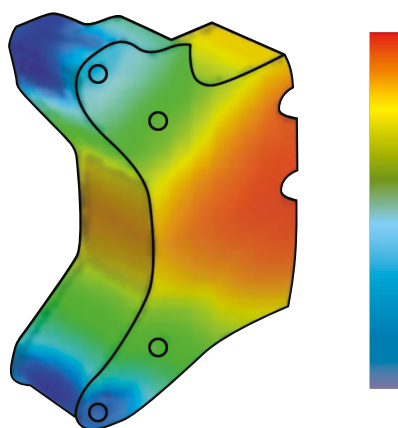
Four hydraulic cylinders placed on the plate pack corners ensure perfect operation and limited structural stress, even in the most unfavorable working conditions.

Effectively-guarded moving parts and the use of state-of-the-art electronic interlock systems mean that the GHT 4x4 conforms to the highest operator health and safety regulations. Routine maintenance operations are simple, thanks to easy access to the filter plates, both for inspection and for filter cloth replacement.

Membrane technology

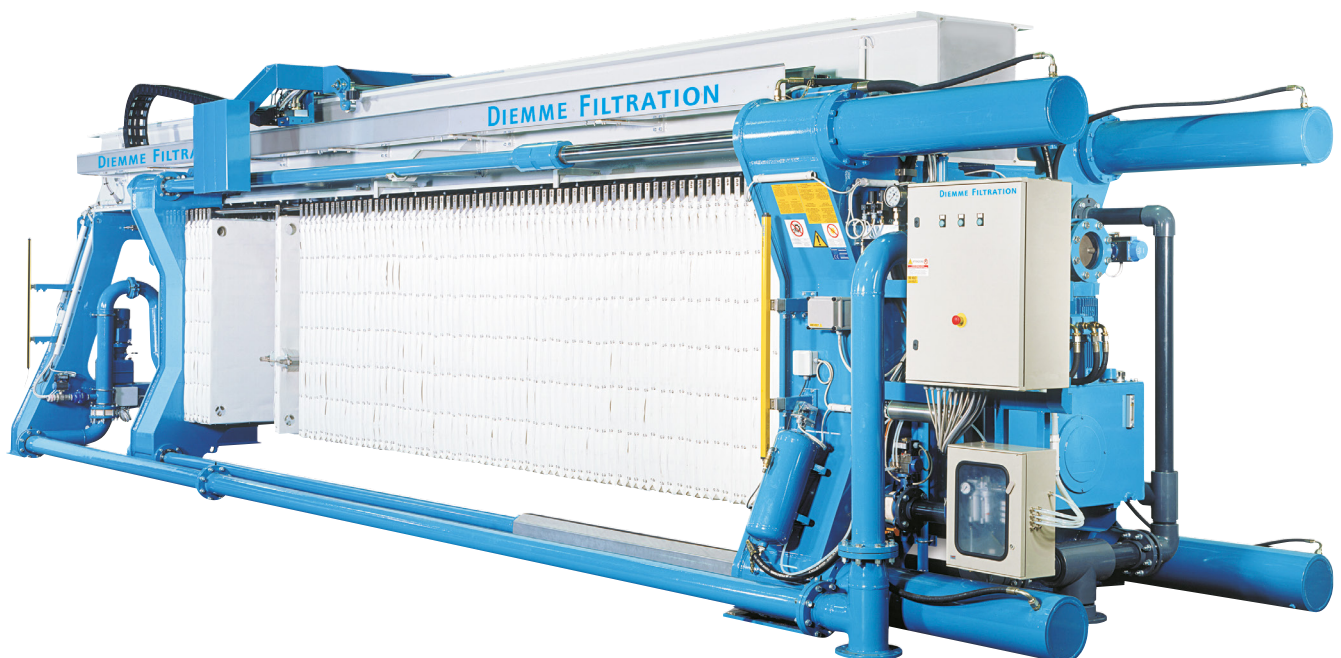
When the application requires washing stages with solvents or drying stages with compressed air, special plates with variable-volume chambers are necessary.

The plate construction material varies depending on the process temperature and of the chemical composition of the product to be filtered.

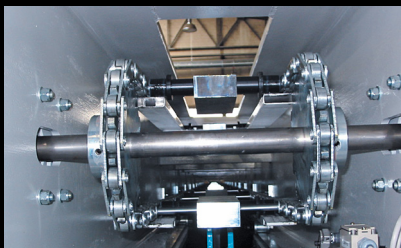


| Model | Working pressure (bar) | | N. of installed plates | | Cake volume (l) | | Filtration area (m ²) | | Length (mm) | | Empty weight (kg) | |
|-------|------------------------|-----|------------------------|-----|-----------------|-------|-----------------------------------|------|-------------|-------|-------------------|--------|
| | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max | Min | Max |
| 1200 | 15 | 30 | 38 | 187 | 1251 | 6500 | 100 | 400 | 7000 | 16000 | 15000 | 30700 |
| 1500 | 15 | 30 | 81 | 182 | 5000 | 11000 | 300 | 700 | 11500 | 17500 | 31500 | 46000 |
| 2000 | 15 | 30 | 80 | 246 | 9000 | 25000 | 600 | 1650 | 11700 | 24700 | 55000 | 105000 |
| 2500 | 15 | 30 | 85 | 231 | 10000 | 43000 | 850 | 2200 | 12000 | 26000 | 79000 | 200000 |

A filter press with world-leading technology

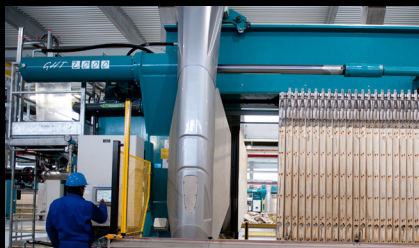


Carousel type plate shifting



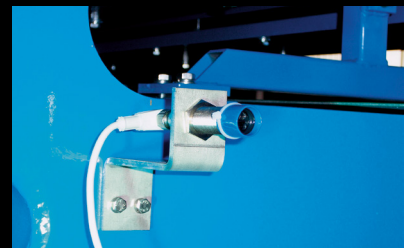
The carousel plate shifting device assures quick and sequential plate movement by means of an automatic transport system controlled by an inverter.

Automatic cloth washing system



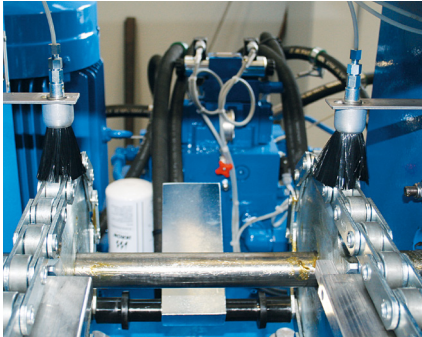
Reliable cloth cleaning using a robotic device ensures that optimum filtration rates are maintained.

Laser



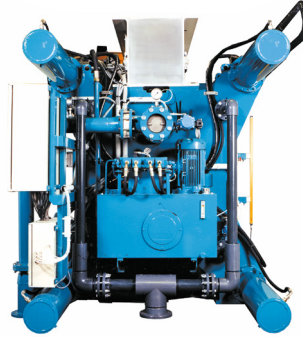
A laser control system ensures correct plate pack alignment and stops the filter press in case of an anomaly, so that any damage can be avoided.

Carousel greasing system



This device ensures the perfect operation of the shifting device, thanks to two brushes that lubricate the carousel chain preventing friction and jams.

Fixed header - 4 cylinders



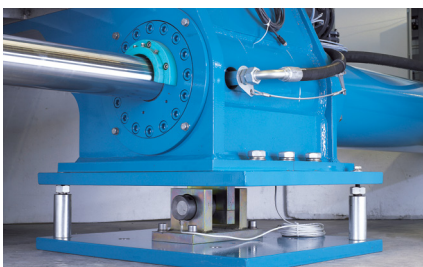
The fixed header is made of a high-tensile steel "cellular" structure in order to best resist stress and it supports 4 hydraulic jacks which are responsible for holding the plate pack closed.

Plc



The GHT is provided with a sophisticated automation system equipped with a human-machine interface (HMI) that simplifies the monitoring of the filter operation, enables quick diagnosis of faults and allows the continual adjustment of filtration parameters in order to optimise the process to suit variable feed conditions.

Load cells



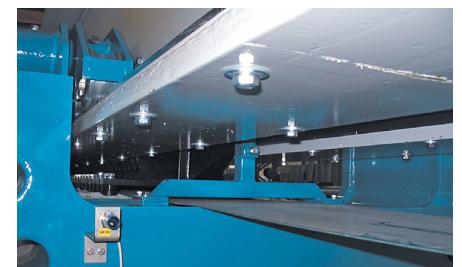
Placed under the supporting feet, load cells constantly monitor the machine weight to ensure all cakes are discharged. The throughput of each load can also be recorded for accurate production tracking.

Automatic lifting platform



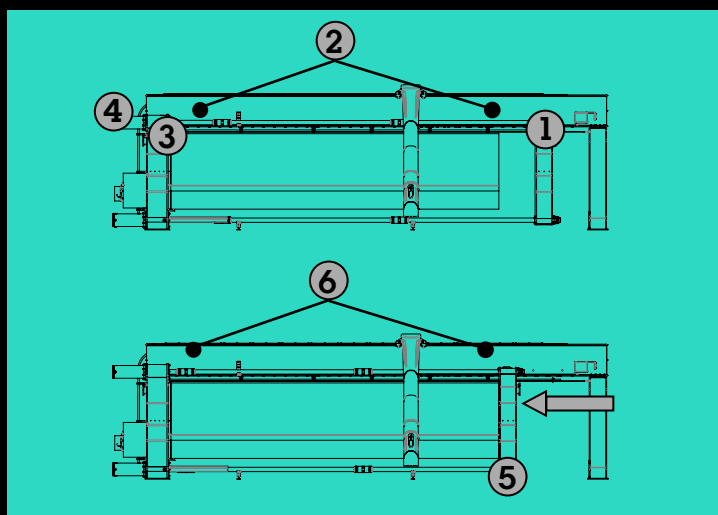
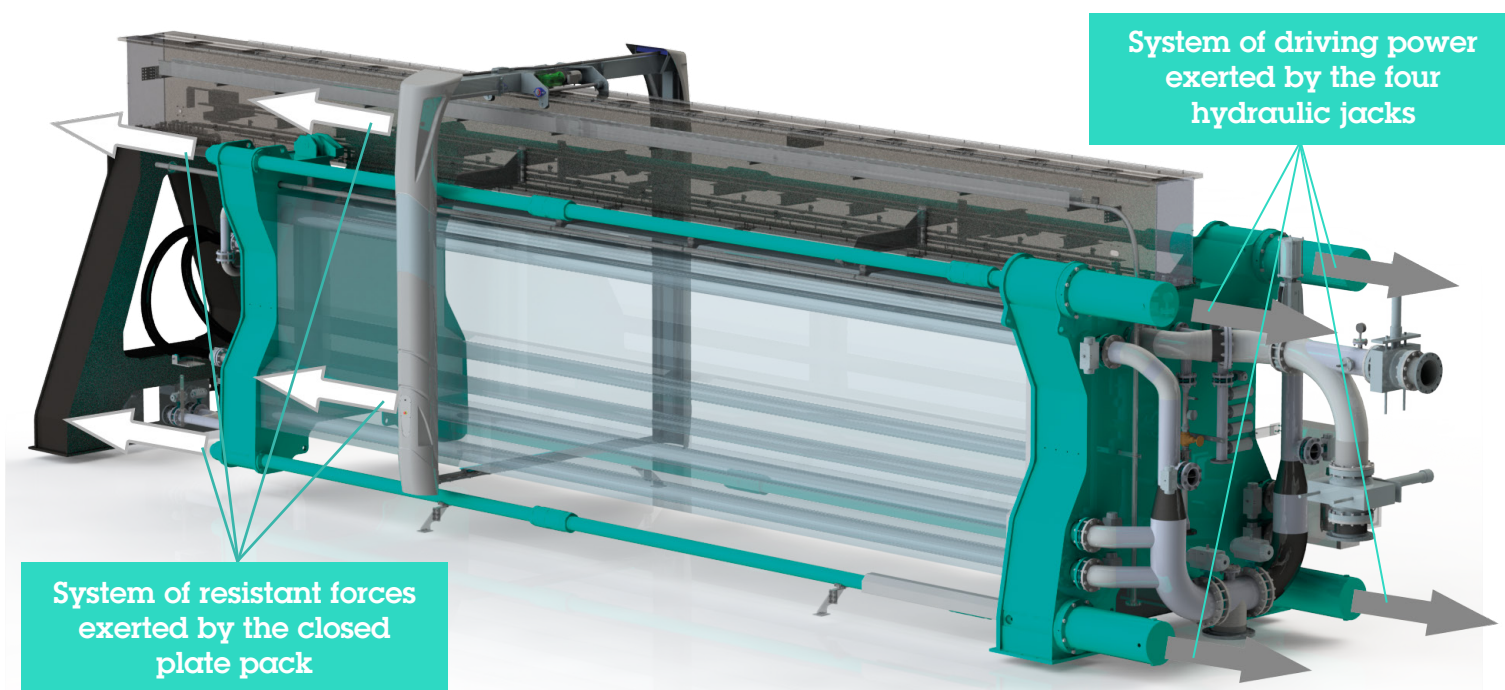
Developed for large machines, the sliding hydraulic platform allows inspection of filtering elements and routine machine maintenance in a convenient, quick and safe way.

Protection of the shifting device



The plate-shifting mechanism, located inside the upper beam, is effectively protected from sludge, dust and corrosive chemicals by a continuous belt of rubber-lined cloth.

A structure designed for long life



Closing

1. Mobile Header
2. Open plate pack
3. Fix header
4. Hydraulic Jack
5. The mobile header, which is pulled by hydraulic jacks, closes the plate pack
6. Closed plate pack

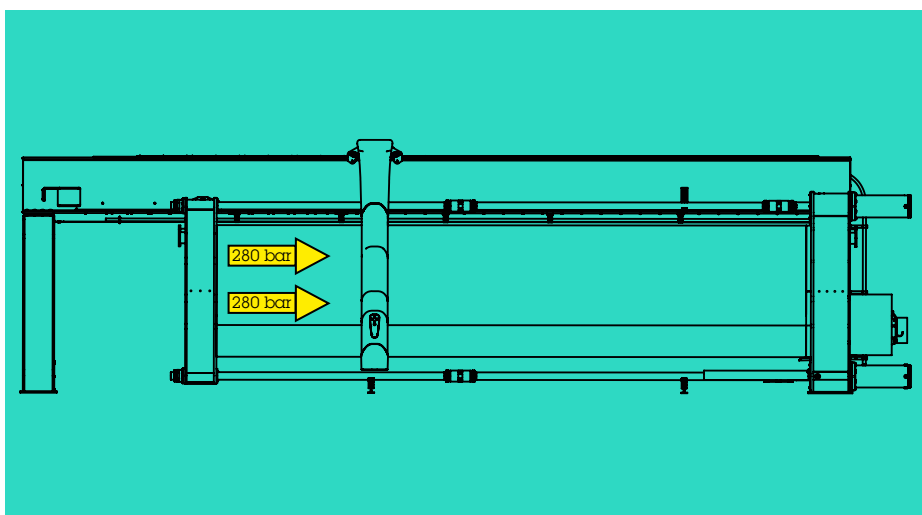
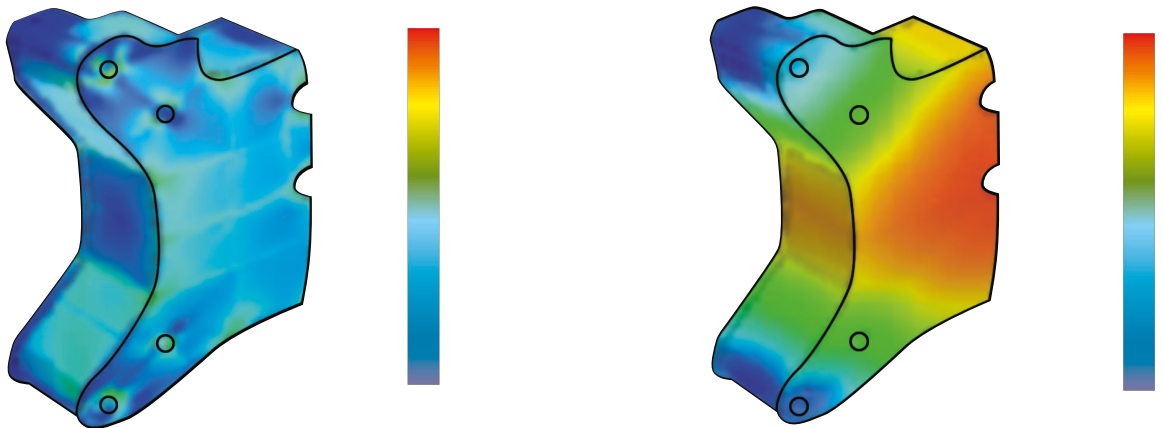
Total Traction

Different from the traditional push-type system, the "total traction" system does not transmit any stress to the upper beam, which is only subjected to the weight of plates supported from it. In fact, the forces applied by the closing device are subjecting the tie beams to tension, which avoids stress on the frame and consequently, the risk of structural deformation.

Maximum safety

The frame is conservatively designed so that the safety threshold of the material is far above the maximum stress experienced during normal operation.

The upper beam is non-deformable and its maximum deflection is equal to 1/1000 of its span, even in the most severe working conditions.



Perfect tightening

The pressure exerted by the closing device is uniformly distributed on each plate, thanks to the four hydraulic jacks.

The jacks are equipped with an automatic control system and each one adjusts its length according to the exerted pressure, in order to assure perfect closure of the plate pack.

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