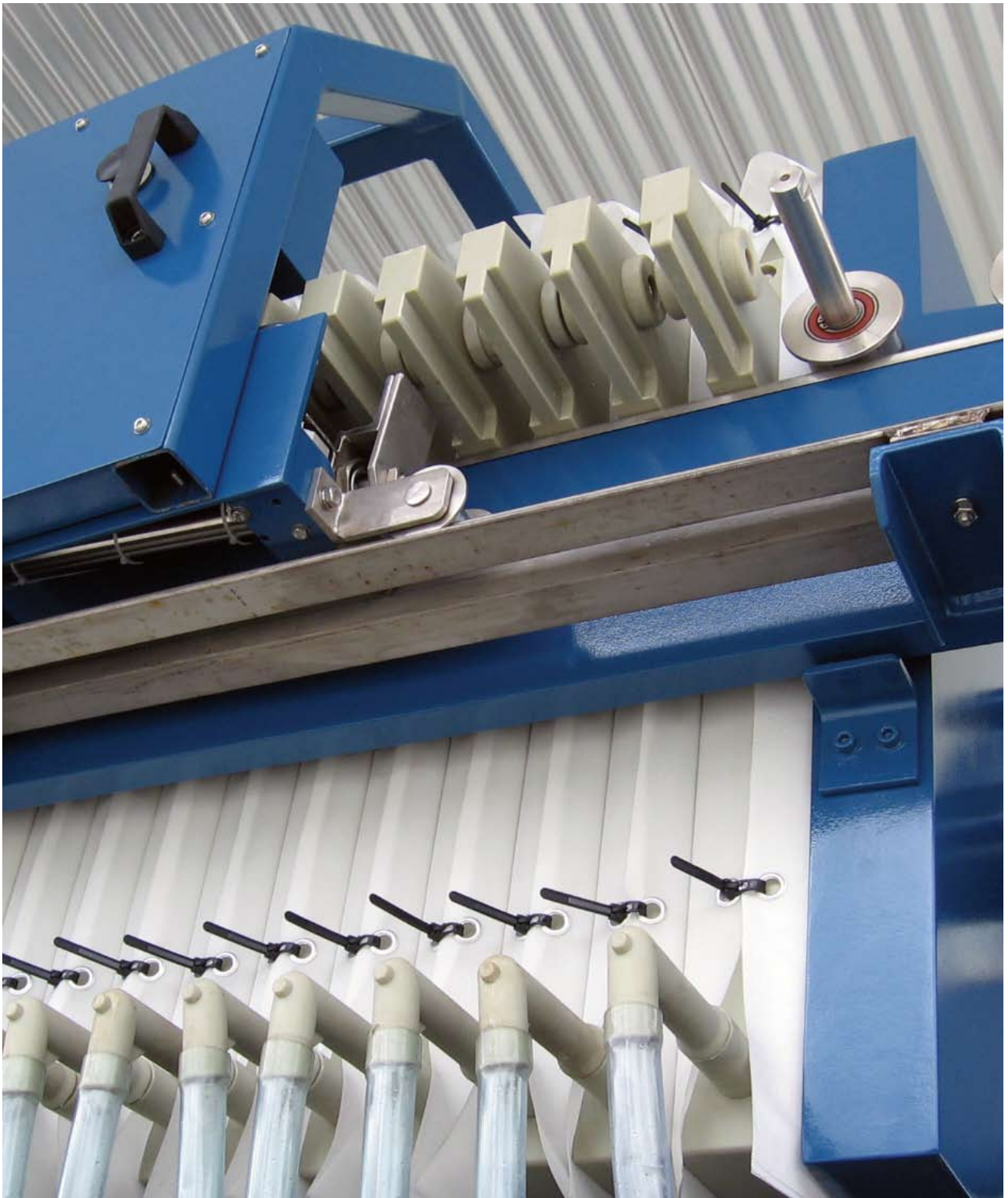


Amston™ Press

Recessed Plate Filter Press



Features

With many superior features and an extensive range of capacities, the Amston™ filter press leads the way in world sludge dewatering technology.

Metal Sludges

Chemical Sludges

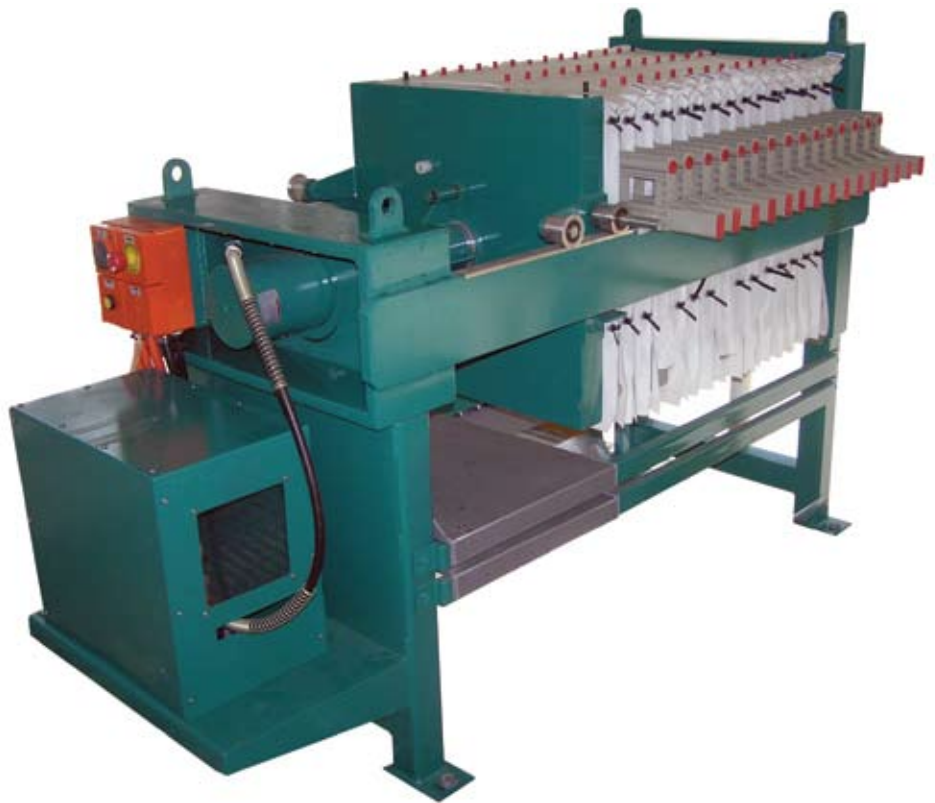
DAF Sludges

Clarifier Sludges

Paper Industry

Water Treatment Sludge

Mining & Tunneling Waste



High Quality Plates

The Amston technology uses quality polypropylene filter plates that conform to DIN7129. Other sources of supply can be used on request for low stress duties which can reduce capital costs. Sizes available range from 470–1500mm square. Membrane plates are also available for extra sludge squeezing and cake washing/blowing duties.

Superior Plate Pack Closure

High quality hydraulic cylinder and power packs are used for plate pack closure and sealing. End plate cross beams are made from high tensile steel for deformation free operation.

Fully Automated Units

Automatic plate vibration and cloth washing options are available on the fully automated units to ensure full cake discharge and maintain clean cloths on programmable cycles.

Drip Tray Options

To catch the filtrate drips and any cloth wash water from the plate pack, a range of devices are available. Manual presses have a manually sliding drip tray. For automated options a *bomb bay door* assembly can be used on pneumatic arms. When a discharge conveyor is used, then the conveyor is reverse inclined to allow drips to run back to a collection tray. All options prevent the dewatered cake in the bin from being wet by filtrate water.

Step 1

Determine the volume of dry cake that will be produced.

V_w = Volume of "wet" sludge
 V_d = Volume of dewatered cake
 C_w = Dry solids content in wet sludge
 C_d = Dry solids content in dry sludge

$$V_d = (V_w \times C_w) \times (C_d / 100)$$

Step 2

Decide, based on level of automation and labour available, the number of operations per day.

O_d = Number of operations per day
 P = Filter press size

$$P = V_d / O_d$$

Once the size of the press is established, Eimco Water Technologies will determine the most appropriate unit for each application.

Specific gravity also influences sizes.

Contact Eimco Water Technologies for details.



- The Amston press is unmatched in quality and performance.
- Thousands of Amston press installations worldwide.
- Capacities ranging from 10L to 3000L.
- Slurry volumes reduced by more than 95%.
- Cake dry solids concentrations exceeding 50%.
- Experience in all industrial sectors.

Capacities & Sizes*

Model	Volume	Plate Size	# Plates
05-4H	22	470x470	5
15-4H	78	470x470	15
10-6H	93	630x630	10
20-6H	196	630x630	20
30-6H	299	630x630	30
40-6H	402	630x630	40
50-6H	505	630x630	50
30-8L	505	800x800	30
40-8L	679	800x800	40
50-8L	853	800x800	50
60-8L	1000	800x800	60
60-12L	2000	1200x1200	60
60-15L	3000	1500x1500	60

*Dimensions and capacities are only a guide and are subject to change. Please confirm with your local Eimco Water Technologies representative prior to using the above.

Applications

Filter Press Operation

A filter press is a pressure filter used for dewatering sludge. Often a low dose of polymer is required if the solids need assistance to speed dewatering. One advantage of filter presses over belt presses is that they will require a lower polymer input due to higher pressures and finer cloths used.

A filter press comprises a number of plates, each fitted with a durable permeable cloth. In normal operation the recessed plates are pushed together.

The pressure used for dewatering in a chamber press is provided by the feed pump. During the filtration cycle, the sludge is pumped into the chambers, initially at a high rate, reducing as the chambers are filled and the pressure in the chambers builds up. The cloths retain the solids allowing the water to pass through as filtrate.

Once the pressure in the press reaches a set point and the filtrate is reduced to a trickle, the dewatering cycle is complete.

The next stage of the process is to empty the press by opening the plate chambers and allowing the dewatered cake *biscuits* to drop out. This entire operation can be a manual, semi automated or fully automated process.

Once the press is empty, the plates are returned to the closed position ready for further batches.

Uncompromised Quality and Performance

The Amston range of filter presses includes manual presses, semi-automatic and fully automated units.

The MH Series is a manual filter press unit fitted with a hand pump ideal for small volumes of sludge.

The SA Series is a semi-automatic filter press range with hydraulic pump for plate pack closing whilst the C Series is a fully automatic machine that includes automatic plate shifting, plate vibration and drip trays.

A number of options are available to facilitate ease of operation for all models including the Air-Track plate shifter, membrane plates for increased filtration pressures and automatic *bombay* type drip trays.

The Amston range includes plate sizes from 470 x 470mm through to 2000 x 1500mm. The plates are manufactured from high quality moulded high density polypropylene. Filter cloths are available to suit a wide range of applications.

The filter press frame is fabricated from heavy duty mild steel with a heavy industrial paint specification for long life and reliability.

