

DBF

Deep Bed Filter[®]

How it works

Aluminium alloys need to meet ever more stringent quality requirements, particularly for beverage cans, foils, fine wires, lithographic sheets and bright trims. In fact, inclusions lead to problems when metal is produced to ever decreasing thicknesses approaching those of the inclusion size or when surface quality is paramount.

The DBF / Deep Bed Filter[®] consists of an insulated box containing layers of carefully sized alumina balls through which molten aluminium flows from top to bottom. The filtering area, or bed, is sized as a function of metal flow rates.

Key features

METAL QUALITY IMPROVEMENT

- > Inclusion removal efficiency higher than 90%.
- > LiMCA and PoDFA analyses show best quality requirements consistently achieved with DBF.
- > Different ball sizes and variable layers allow custom quality requirements.
- > Excellent constancy and repeatability of results.

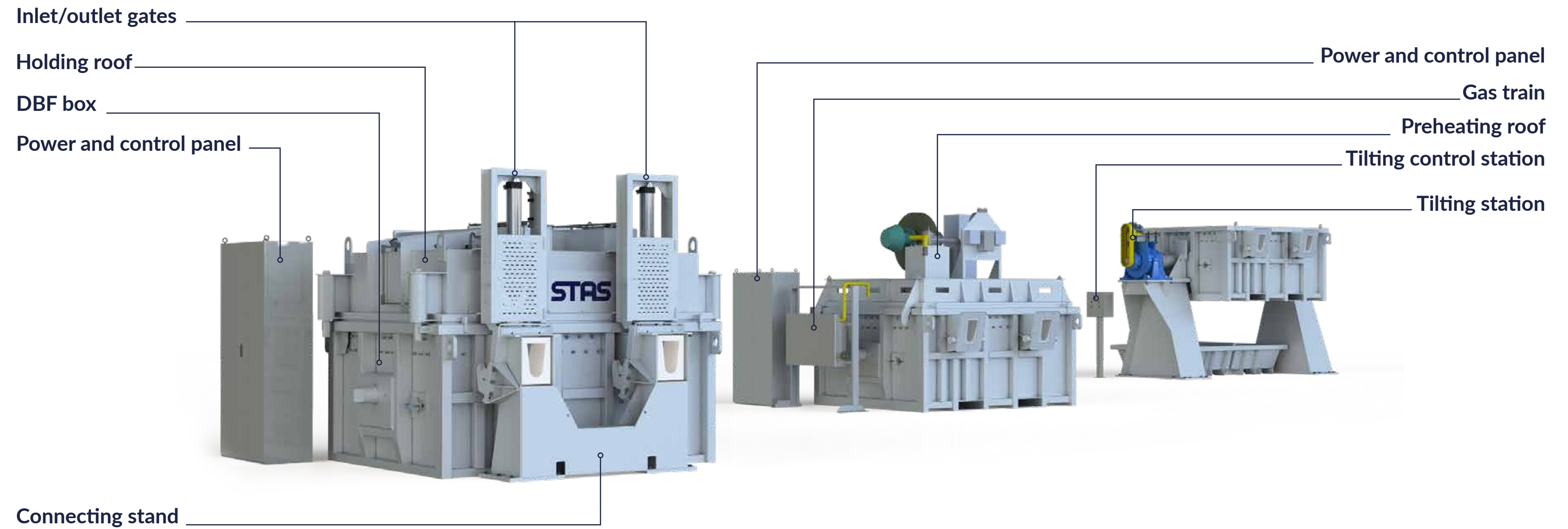
PRODUCTIVITY ENVIRONMENT

- > Preheat station permits quick change of filter box to avoid downtime.
- > Large volumes can be treated before cleaning of filter boxes is required.
- > Flow rates of up to 1,500 kg/min can be processed.
- > Box design adapts to casting station layout.
- > Used for applications which are critical in terms of quality.

« The proven filtering technology for consistent high quality aluminium »

Other parts of the equipment

- > Electrical holding lid: used when the box is operating to maintain the melt at the right temperature.
- > Preheating roof: used after bed rebuilding to prepare the box for filtering by removing its moisture content; reduces thermal shocks when the box put into contact with molten metal.
- > Dumping stand: used to get rid of the out-of-life media.



Typical specifications

Capacity	Filter box Overall dimensions			Power requirement	
	Length (mm)	Width (mm)	Height (mm)	Holding power (kW)	Preheating power (kW)
200 kg/min	1650	1450	1250	60	200
400 kg/min	2100	1800	1400	70	200
500 kg/min	2250	1900	1400	70	200
650 kg/min	2550	2150	1400	75	250
850 kg/min	2800	2400	1400	100	300
1000 kg/min	3100	2650	1400	120	375
1200 kg/min	3400	2700	1400	150	450
1500 kg/min	4100	3050	2000	180	600