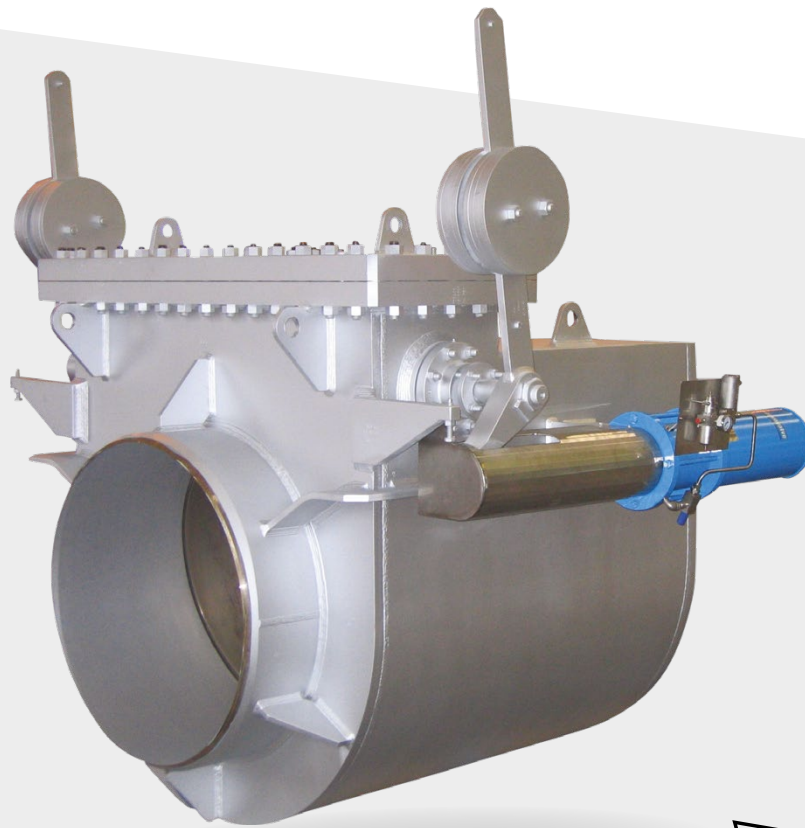



# Check Valves



  
Engineering  
**GREAT** Solutions

**Fluidised catalytic cracking  
(FFC) air blower line check valves**

# Check Valves

The fluidised catalytic cracking (FCC) air blower line check valves are used to prevent the backflow of catalyst from the regenerator.

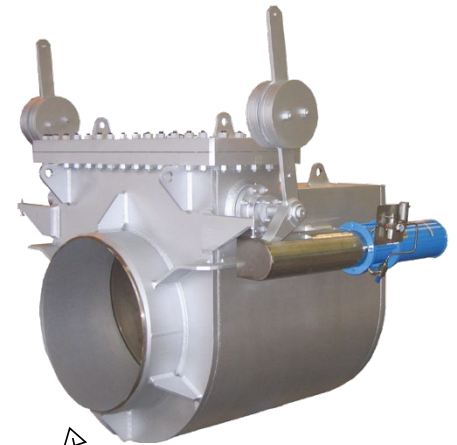
IMI Remosa's check valves guarantee high reliability in compressor protection thanks to the special design which includes a range of key features (listed below).

It is a fully customisable product, specifically designed and manufactured to fit your plant requirements. The body of the valve is made of SA 516 Gr70 carbon steel or 304H stainless steel. IMI Remosa however, will meet any customer request for different body or internal materials.

The bolted bonnet design allows for the maintenance of valve internals without removal of the valve from the line.

Disc and seat contact areas are hard faced with a cobalt base material.

IMI Remosa's non return valves are made from plates and forged materials. No cast parts are used in the valve's fabrication.



Fully customisable product, specifically designed and manufactured to fit your plant requirements

## Key features

- > Pneumatic cylinder with spring return
- > Oil dashpot to prevent undue swinging, chattering or vibrating of the valve disc
- > External lever with counter weight
- > Self-aligning disc and disc arm
- > Stuffing boxes with bushing made of self lubricated material
- > Shaft for disc arm
- > Free swinging disc

## Benefits

- > For high temperature service, valve body is made of stainless steel (SA240 TP 304H).
- > The valve is a full bore, requiring some additional space to host the disc and shaft outside the flow streamlines, minimising energy losses compared to fully cast bodies.
- > Bonnet opening is designed to allow the fast removal of internal parts, without removing the valve from its line.
- > Check valves can be furnished with both bevel ends and flanged ends, according to customer requirements.

## General operation

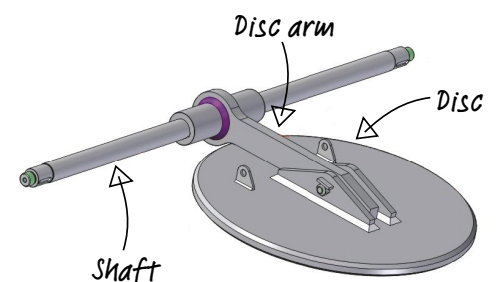
The check valve shaft is connected to a pneumatic piston on one side, and to the oil dashpot on the other. These two components are necessary for the correct operation of this valve. During normal operation, the contemporary action of air flow and counterbalances (providing about 50% of torque caused by disc's weight) allows the disc to move outside the flow streamlines. This design, together with the tilted seat design, ensures this valve has a low pressure loss.

The pneumatic piston holds fully extended, but it does not interfere with disc movements.

The oil dashpot provides the necessary dampening action to stabilise the disc during normal operation.



Check valve during a hot stroking test



Disc with Stellite applied, disc arm and shaft

## Product specification and dimensions

### Materials

Abrasion resistant lining  
 (Rescobond AA22S)  
 SA182 F304H  
 TP 304H

### Body design

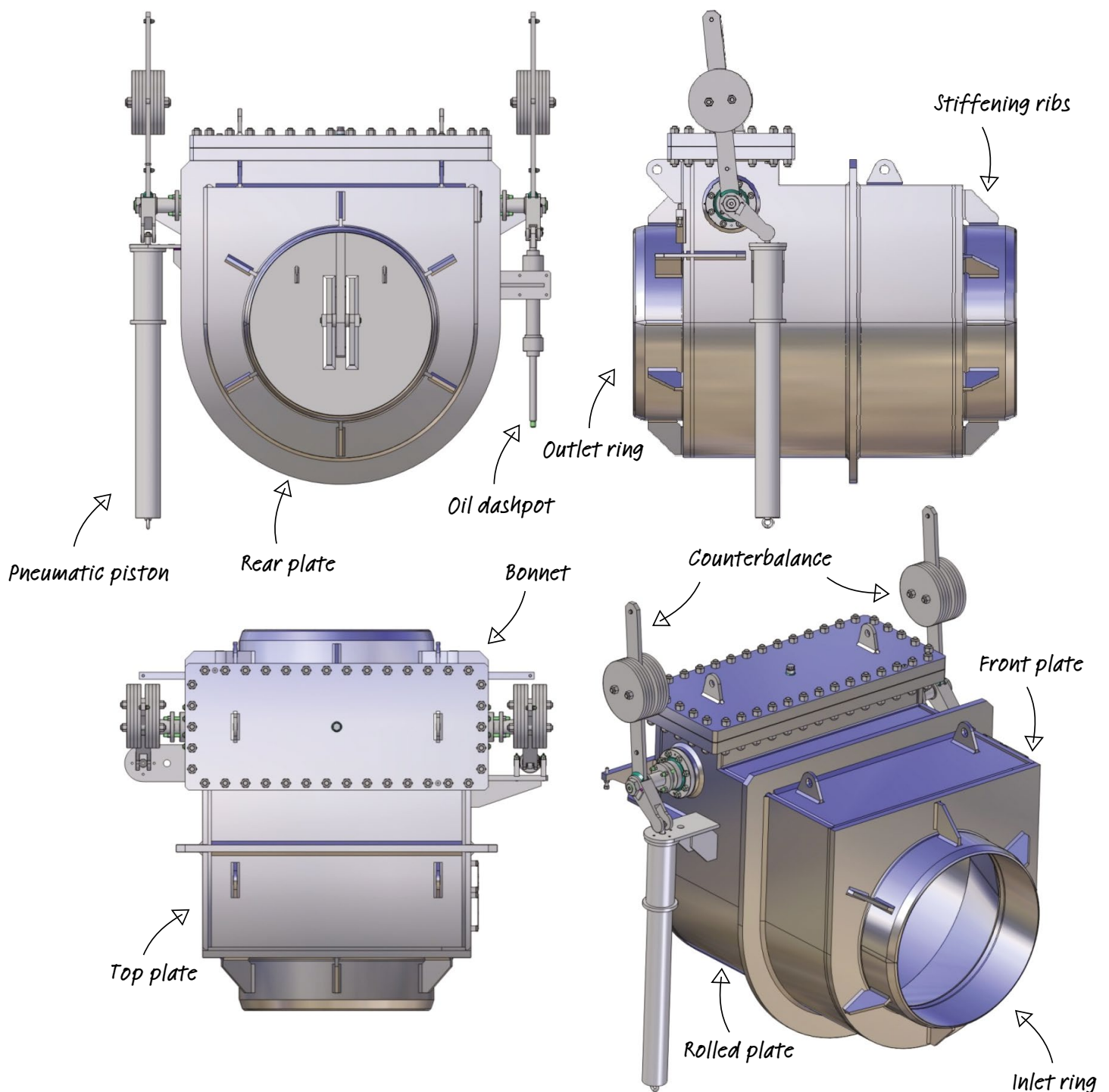
Hot wall  
 Cold wall

### Production range

From 18" to 56"  
 Weight 0.5-5 tons

### Temperature limits

Up to 780°C (1436°F)



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