



## **AUTOMATIC CLINCHING ASSEMBLY**

OF VENTILATION POCKET FILTERS (HVAC)

**BÖLLHOFF**  
**attexor** 

## Filter clinching assembly automatic station

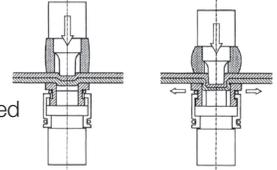
The automatic station is delivered complete ready operate, once connected to a 6 bar air and 220V supplies. Up to 9 clinch heads can be installed (6 by standard), the distance between them can be manually adjusted. The station can accommodate filter frames from 270 x 270 mm up to 915 x 915 mm.

The number of work heads can be changed by means of quick locking individual supports

### Sheet metal joining without fasteners

When clinching two or more layers of sheet metal, the material is plastically deformed inside a die through a squeezing process between the punch and the anvil. The joint is created as the material flows sideways pushing out the die walls.

Clinching is well suited for joining pocket filters, with the filter material in sandwich between two layers of thin galvanized sheets metal. Without fastener, without adding any alien material, it dramatically cut down the production costs and facilitates the elimination of worn out filters.

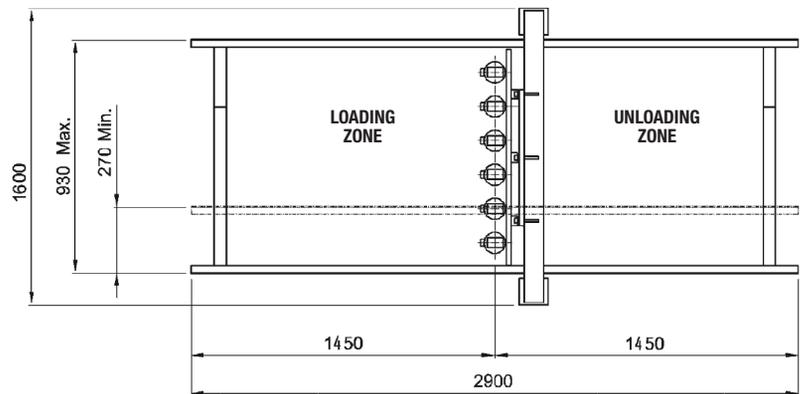
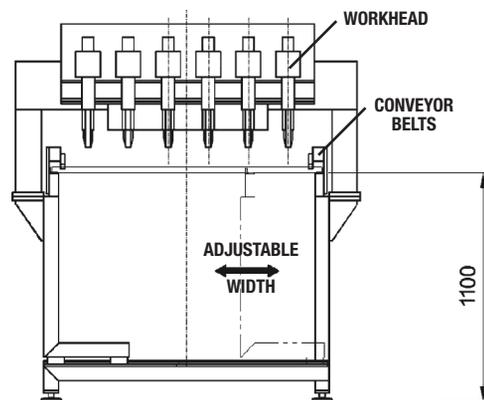


### Automatic operation

The operator places the filter frame with the pockets on the loading zone and activates the cycle. The filter frame is moved automatically under the work heads. Once the filter strip is in position (controlled by detectors), the PLC (Programmable Logic Controller) activates the downward motion of the work heads and activates the clinching cycle. Once the clinching process is fulfilled and automatically checked, the crossbeam is move upward for allowing the next row of filter strips to take place and so on. Once all filter strips are clinched, the assembled frame can be unloaded to the rear side.



## Technical specifications



Clinched joints

### Accessories

- Mechanical strippers (instead of polymer) in case of joining metal strips with sharp edges (in option)
- Automatic die cleaning (air blow) (in option)
- Loading or/and unloading conveyors, with automatic transfer to clinching station
- Additional workheads (in option)
- Up to 3 additional work heads can be added total of 9 instead of 6

Approx. Weight	250 kg
Working air pressure	6 bar
Electrical supply	220V
Average cycle time per pocket strip, including motion for re-placement	3s
Dimension of filter frame (mm)	270 x 270 up to 915 x 915
Filter media pocket depth (mm)	up to 915
Maximum clinching force (per workhead)	25 kN
Jaw opening (work stroke)	12 mm
Max. total sheet thickness, mild steel	2.5 mm
Max. total thickness, with filter fabric in sandwich	3.0 mm

### Tool kits

Standard tool kits specifically designed for filters are mounted on the workhead ST402 (rectangular joint). Other dimensions of tool kits are also available.

### Products numbers

Designation	Part No
RIVCLINCH® (SPOT CLINCH®) Filter clinching assembly automatic station (6 x SC 0201 IP)	<b>3 842 2112 576</b>
Punch ST402 for filters (included)	<b>3 924 2748 155</b>
Die ST402 for filters (included)	<b>3 924 2718 229</b>
Elastomer stripper ST (included)	<b>3 924 9831 711</b>

