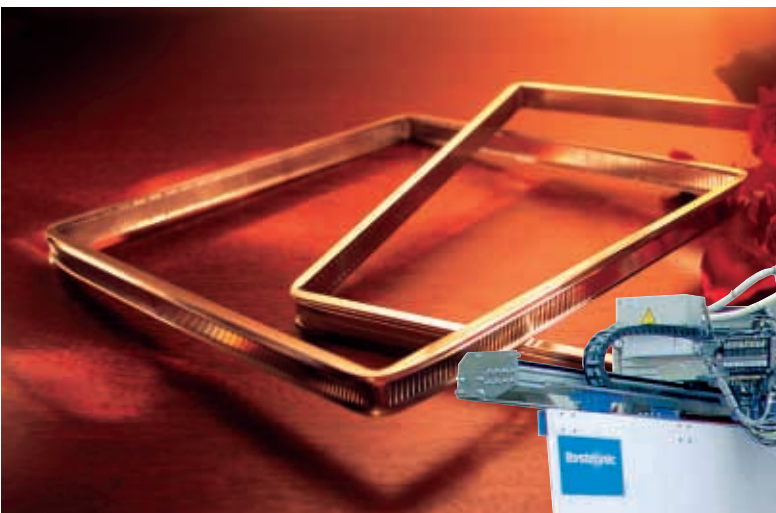


System for automatic desiccant filling and butyl coating of spacer frames

Efficient manufacturing process due to simplified logistics

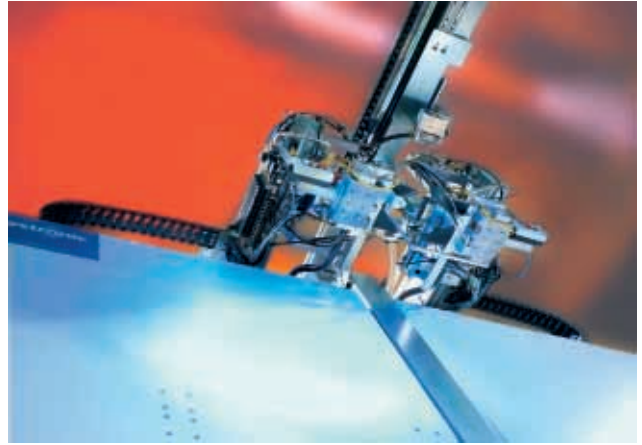
- ◆ Combination of desiccantfiller AT and butyler BA ensures automatic processing of spacer frames
- ◆ Simplified logistics with first-in/first-out process
- ◆ Automatic transfer of the frames to the butyl coating robot
- ◆ Data transfer including muntin bar identification



desiccantfiller AT

Fully automatic desiccant filling on highest level

- ◆ Automatic filling of spacer frames with desiccant without manual intervention
- ◆ Simplified logistics with first-in/first-out process
- ◆ Shortest possible cycle times with desiccant filling and transporting in parallel operations
- ◆ Proven drilling of fill holes centered in the back of the spacer profile
- ◆ Clean and sensor-controlled filling operation
- ◆ Automatic transfer of the frames to the butyl coating robot
- ◆ Suitable for aluminum, steel, stainless steel, as well as plastic spacer profiles
- ◆ Automatic transport of the frames from frame carrier feeder to the filling station
- ◆ Drilling and filling of the two vertical sides of the frames
- ◆ Filling gap in the centre of the profile width
- ◆ Possible processing of assembled or bent frames
- ◆ Desiccant feeding by 200 litres (55 gallons) drums
- ◆ Removal of excessive desiccant grains by suction
- ◆ Desiccant grains, spheric \varnothing 0.5 up to 0.9 mm (0.02 – 0.04 in.)
- ◆ Automatic sealing of the filling holes with butyl
- ◆ Processing of symmetrical internal bars up to 40 mm (1.57 in.) broad
- ◆ Filling of shapes in the manual operation possible
- ◆ Stairs for platform, movable, with handrail for stable and secure use during maintenance



Clean and sensor-controlled filling operation



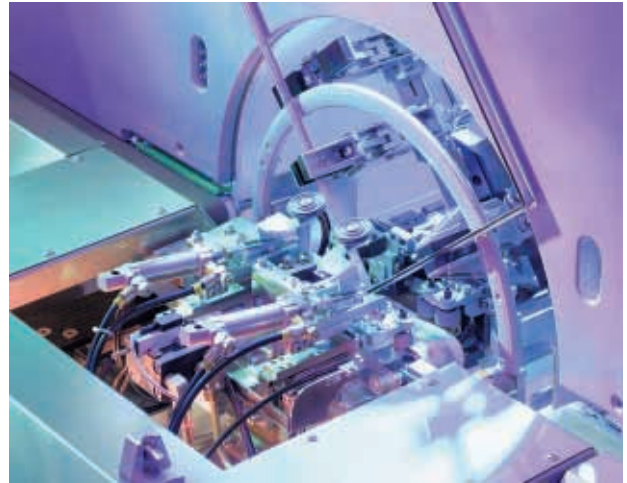
picker

desiccantfiller AT

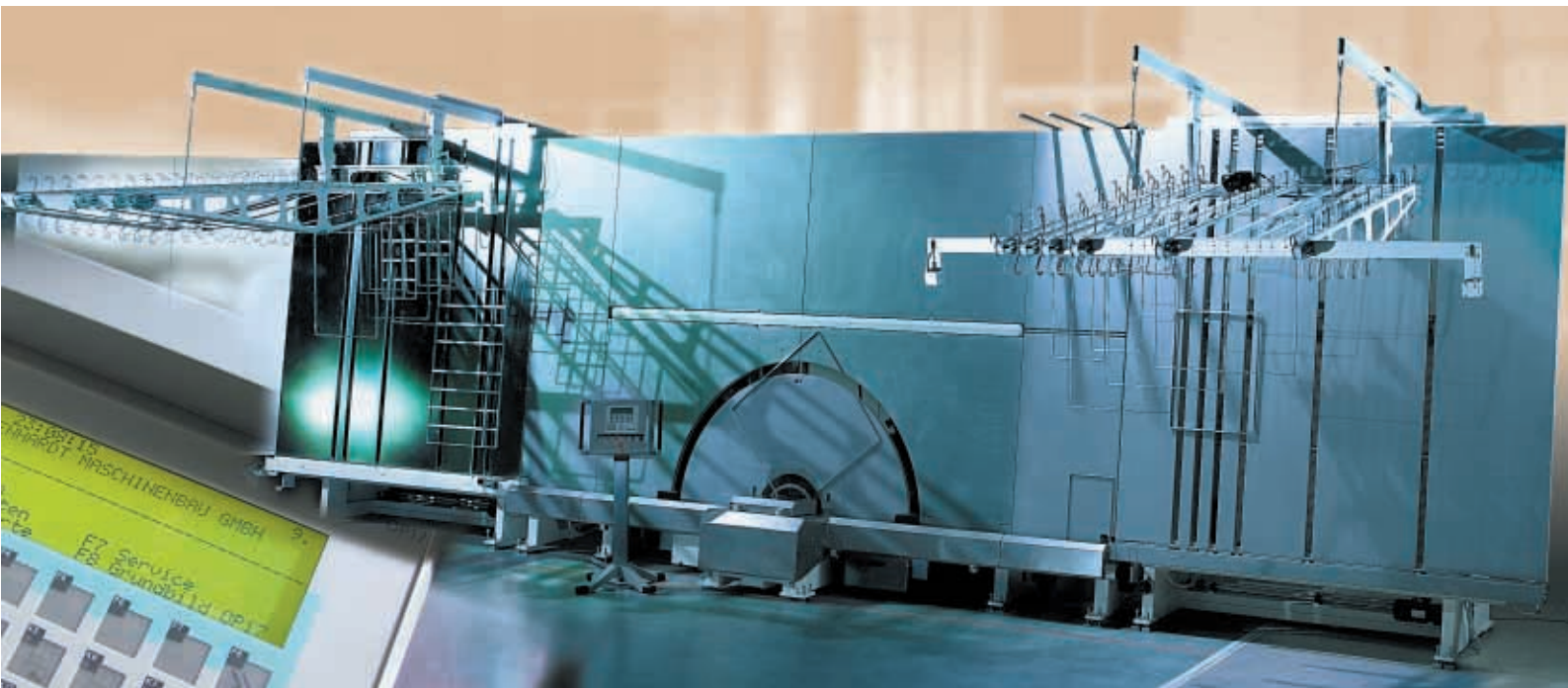
feeder

Precise butyl coating of spacer frames

- ◆ Step less automatic nozzle adjustment for spacer width 5 – 24 mm (0.2 – 0.94 in.)
- ◆ Manual instruction for automatic nozzle adjustment for 12 pre-adjustable spacer widths possible
- ◆ Interruption free, long term operation by using a 200 litres butyl drum pump system
- ◆ Frame transport system with servo motors for reliable application on corner section and controlling of application speed
- ◆ Positioning stops and frame guidings for high repetition precision of application
- ◆ Gentle turning of spacer frames by step less adjustable rotating speed, depending on dimension of spacer frame
- ◆ Double gripper system, automatic switching-on of outer gripper for safe support and fast turning of larger frames
- ◆ Frame feeding and take-off automatic and manual available
- ◆ Feeding of sealant to nozzles by temperature controlled pipe system
- ◆ Controlled heating circuits for gentle material treatment
- ◆ Easy operator guidance and convenient parameter input for changed operating conditions by operating panel and display
- ◆ Fault indication by diagnosis program
- ◆ Many possibilities of adaptation to local conditions due to modular design



Safe and fast turning of spacer frames, also for spacers with muntin bars (option)



desiccantfiller AT

Options:

- ◆ picker – frame carrier for buffering of spacer frames at the spacerbender
- ◆ feeder – frame carrier for buffering and transporting of spacer frames from the spacerbender to the desiccantfiller AT

| desiccantfiller AT Technical data | |
|---|--|
| Processable dimensions with automatic feeding (h x l) | min. 250 mm x 250 mm (9.84 x 9.84 in.) max. 2000 mm x 2000 mm (78.7 x 78.7 in.) |
| Processable dimensions with manual feeding (h x l) | min. 250 mm x 250 mm (9.84 x 9.84 in.) max. 2500 mm x 2300 mm (98.4 x 90.5 in.) |
| Processable spacer widths | 6 – 32 mm (0.24 – 1.26 in.) |
| Horizontal frame transport height | 500 mm (19.7 in.) |
| Working direction | left – right or right – left |



Automatic processing in combination with butyler BA

butyler BA

Options:

- ◆ Semi-automatic quick adjustment for butyl coating of different spacer heights
- ◆ Additional equipment for automatic coating of frames with muntin bars
- ◆ Coating process can be switched over for bent radius corners and key corners
- ◆ Run in conveyor for uncoated frames
- ◆ Overhead frame conveyor for storage and automatic transfer of uncoated frames
- ◆ Overhead frame conveyor for automatic takeover and storage of coated frames
- ◆ Additional equipment for frame tilting if support walls are opposed slanted
- ◆ Intermediate conveyor for adapting to spacer frame application robot
- ◆ Equipment for processing of butyl with abrasive effects

| butyler BA Technical data | |
|------------------------------|--|
| Processable dimensions | min. 250 x 250 mm (9.84 x 9.84 in.) max. 1800 x 1800 mm (70.9 x 70.9 in.) or 2300 x 2500 mm (90.5 x 98.4 in.) with support wall extension |
| Spacer width | 5 – 24 mm (0.2 – 0.94 in.) |

Bystronic Maschinen AG
Industriestrasse 5
CH-4922 Bützberg
Phone +41 (0)62 958 77 77
Fax +41 (0)62 958 76 76
www.bystronic-glass.com
bystronic@bystronic-glass.com

Lenhardt Maschinenbau GmbH
Karl-Lenhardt-Strasse 1–9
D-75242 Neuhausen-Hamberg
Phone +49 (0)7234 601 0
Fax +49 (0)7234 17 19
www.bystronic-glass.com
lenhardt@bystronic-glass.com

Armotec Vierhaus GmbH
Industriestrasse 19
D-91710 Gunzenhausen
Phone +49 (0)9831 5002 0
Fax +49 (0)9831 5002 20
www.bystronic-glass.com
armotec@bystronic-glass.com

Further subsidiaries and representatives worldwide