

COBOT SEALING

SEMI-AUTOMATIC
HRC SEALING

- Reliable high quality sealing
- Multiple Sealing Types available
- Human-Robot-Collaboration for higher productivity and increased quality

COMPOSED TO COMPETE



COBOT SEALING - TECHNICAL INFORMATION

Area of Application

The manual sealing process of aircraft structures is a time consuming task which requires absolute precision and quality. Broetje-Automation has successfully developed market-ready industrial technology to meet the high standards of the sealing process with automated systems.

Based on a modular cobot integration environment, specialized sealing end-effectors for collaborative robots are market ready and available for industrial production. Broetje-Automation's portfolio of tailor-made nozzles for different sealing types can be used with both and industrial robots for full automation or the cobot system for semi-automated operation.

The cobot end-effector integrates a vision system for precise positioning of the end-effector while being capable to adapt to varying workpiece contours. Maintenance is kept very simple thus cost- and time-efficient thanks to an integrated semi-automatic exchange system for sealant cartridges. The system can be used stationary or based on a mobile platform using the Broetje-Automation Universal Carrier System AGVs.

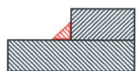
Sealing Types



Edge Sealing



Fillet Sealing



Fastener Sealing

Technical Data

Mixing on Demand

Functional Principle: Volumetric

Weight: 40 kg (88 lb)

Add-on: opt. rotatable nozzle

Packages: Mobile tanks (up to 3 liter capacity)

Application pressure: 0 - 20 bar

Size: 750 x 250 x 200 mm
30 x 10 x 8 in

Materials: Polysulfide Et Epoxy

Offline programmable with Broetje Soul

Cartridge Application

Functional Principle: Pneumatic

Weight: 12 kg (28 lb)

Add-on: rotatable nozzle (7th Axis); Cartridge quick change system; Nozzle quick change system; Fill level measuring; Live view camera HD; Scale System; Collision prevention

Application pressure: 0 - 8 bar

Size: 450 x 250 x 230 mm
18 x 10 x 9 in

Materials: Polysulfide Et Epoxy

Offline programmable with Broetje Soul

Special Features

- Reduced number of process steps and labour hours
- Improved H&S
- Reduced cost of material and demand on labour qualification
- Reduction of waste
- Reliable high quality sealing beads
- Solution for all requirements, in Assembly lines as a stationary robot as well as a mobile robot on a platform or a collaborative robot (Cobot).

Referencing:

- Global referencing with Laser Scanner
- Local tracking/ Path Correction

Sealing Areas:

- 3-D printed, customized Nozzles for application on various pin and collar sizes
- Fillet sealing on straight as well as curved material
- Edge Sealing on single as well as connected parts



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