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volumix

**BONDING AND SEALING
IN AEROSPACE INDUSTRY**



For Cartridge filling with Polysulfide material

Precision and reliability at every level

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Aircraft wings have to withstand the greatest stresses. The highest requirements therefore apply when bonding and sealing with 2K polysulfide materials.

The metal components are bonded and sealed with the utmost precision - mainly manually. Cartridges are used for this purpose, which are filled with two-component polysulfide-based materials at special metering and mixing stations.

In aircraft construction, a wide range of different adhesives and sealants are processed, each of which must be precisely metered and mixed. This ensures that the total weight of the aircraft is kept as low as possible.

In addition to easy handling, therefore, a fully inline controlled, precise volumetric metering and mixing process is required, as well as connectivity to the production line and maximum usability of the material.



volumix

- The volumix is specifically designed to handle polysulfide materials used in the aircraft industry for sealing and bonding.
- The volumix is designed to automatically initiate the refilling process of cartridges and other small containers of mixed polysulfide material.
- All dispensing operations, to ensure that the specified dispensing ratios are achieved and that the correct amount of mixed material is dispensed for refilling, are constantly monitored by the in-line flow meters, which are controlled by the Siemens electronics.

Technical Specifications

Flow rate	Refill a cartridge of 150 ml in 30 sec
Mixing ratio (by weight)	9:1 to 12:1 depending of references of 2k polysulfide materials
Normal working pressure	Base side : 40 bar (less than 20 bar for A2 type of materials) – Hardener side : 20-85 bar
Mixing system	Disposable static mixer
Material supply	Base side : 20l or 200l – Hardener Side: 20l
Viscosity range	High viscosity materials
Material characteristics	Filled materials, high density and/or low density materials
Power supply	230 VAC / 3/N/PE/50-60Hz
Maximum air inlet pressure	6 bar
Dimensions	Welded frame, Width : 1500mm, Depth : 1500 mm, Height : 2000 mm
Weight	600 kg

Your advantages

- The material supply of the material components is carried out directly from the delivery container, which can be either 20-liter drums or 200-liter drums.
- A set of two pumps is used. The pumps do not change the density or Shore hardness of the cured material.
- The Siemens control unit allows a variable ratio to be set by weight or by volume. The Siemens unit is self-regulating and controls the complete operation of the system.
- There is a possibility of quick change to different polysulfide materials.
- No solvent is required to flush the mixing system.
- Low maintenance requirements.
- The machine is using standard disposable static mixer.





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We are one of the world's most experienced manufacturers of high-quality metering technology. Wherever adhesives, resins, silicones or lubricants are metered and applied in industrial production, we offer reliable, precise solutions. We provide systems and components for highly automated production processes, including for the automotive, wind, household appliances and electrical industries, as well as for aviation.

DOPAG is part of the HILGER & KERN GROUP, a reliable supplier and a development and service partner to industrial companies in a variety of market segments for almost 100 years. The group employs around 350 people and has subsidiaries and distributors in more than 40 countries.



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