

Your Partner For Success

 **ROBOTEK**[®]

Polyurethane Dispensing

CE



Polyurethane

System description

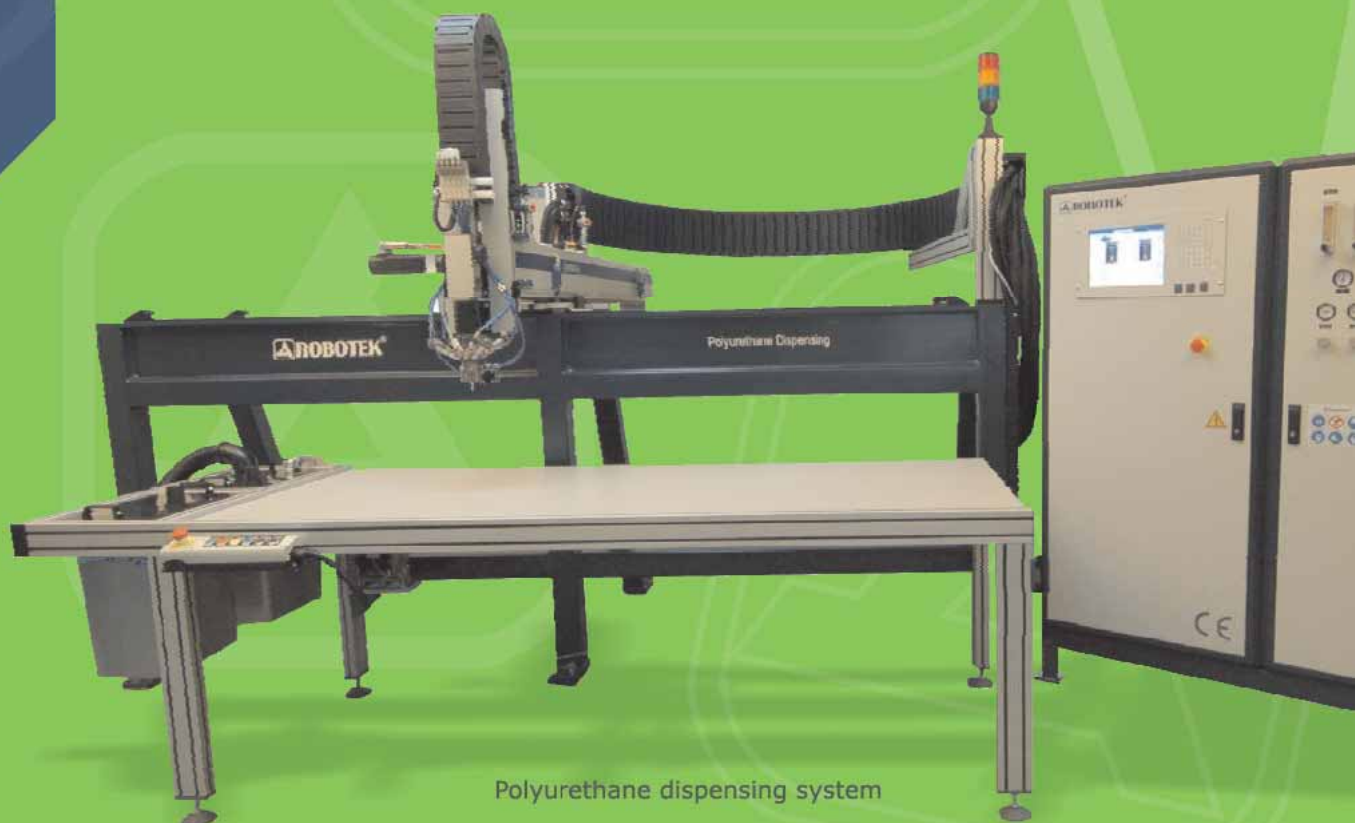
One or multi component foam system made of polyurethane or silicon is dispensed into a groove, a mould or directly applied onto a flat surface at room temperature in Formed-in-Place-Foam-Gasket (FIPFG) process. The robotic dispensing system is a high technology sealing and gasketing solution for electrical enclosures, automotive parts, filter equipments, luminaries, packaging lids and electronic components.

The standard configuration includes a Polyurethane Machine, dynamic mixing head, cartesian or anthropomorphic robot, shuttle table and a temperature conditioning unit. The system control is based on a powerful industrial CNC unit with linear, circular and helical interpolation. The CNC unit is programmed in G code according to DIN 66025 and special dispensing software for enclosure cabinets is also available. The system has an operator friendly interface with 12" TFT industrial touch panel for simple setting of all the operating parameters, such as output and dispensing values, speed and acceleration ramps.

The modular robotic system is used separately or integrated into production lines. Customised solutions and intelligent fixture designs to handle different types of work pieces are available to keep your production uninterrupted. Different kinds of forms and contours are achieved with close dimensional tolerance.

Technical features

- Dynamic mixing head with temperature control
- Welded robust steel frame construction
- High performance CNC unit with standard programming according to DIN 66025
- Automatic cleaning and drying system
- Mixing head spindle motor with speed up to 9000 rpm
- High performance servo motors with high precision gearboxes
- Anti-dripping nozzle valve system
- Temperature controlled, jacketed component tanks with thermal insulation
- High precision dosing pumps and recirculation pumps
- Automatic component tank filling system with sensor feedback
- Electrically actuated agitator system for Polyol tank
- Self cleaning filter
- High capacity air dryer filter
- High precision air pressure regulators
- Digital pressure switches
- Operator panel with membrane keyboard and 12" TFT industrial touch screen
- Closed loop components flow rate and pressure control
- Pluggable connectors on the switchgear cabinet
- High tensile steel-reinforced polyamide high-pressure component hoses
- Thermal isolation and protective cover for hoses
- Emergency stop button monitoring unit



Polyurethane dispensing system

Scope of Application

Electrical and Electronics

Control cabinets
Electrical housing

Lighting

Industrial lightings
High powered outdoor lamps
Casing for street lighting

Domestic outdoor lamps

Packaging

Lids for cans and drums

Automotive

Headlights and tail lights
Automotive door modules
Automotive vehicle electronic boxes

Ignition coil covers

Appliances

Cooker plates
Rear and internal panels
Top plates for washing machines
Table top refrigerators

Filtration

Oil filters
Filters for cleaners
Filters for air conditioning systems
Walk-in coolers
Clean rooms



Polyurethane machinery



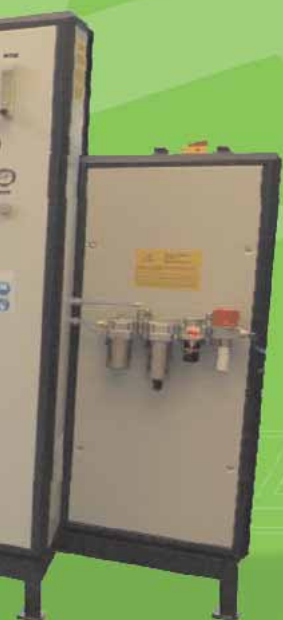
Graphics based user interface

Environmentally friendly cleaning system

The system is used with biodegradable cleaning agent which is separated out from the waste, recycled after the flushing and used several times. It is a real and proven alternative to cleaning systems with methylene chloride in terms of performance, economy and greatly improved environmental health and safety.

Benefits

- Special system construction for easy maintenance
- Operator friendly interface with menu based programming and advanced help
- Compact system construction with smaller space requirement
- Safe emergency status deactivation through emergency stop button monitoring unit
- Recipe management
- Multi level operator password protection
- Automatic and manual operating modes
- Simulation mode
- Special dispensing software for enclosure cabinet doors
- Environmentally friendly recirculating cleaning system
- Precise and reliable dispensing with two stage pumping system and precise temperature control
- Polyol nucleation control to achieve a uniform foam structure
- Accurate overlapping at the start and stop point of the seal contour
- Remote diagnostics and maintenance over the internet from the technical service department
- Self cleaning filter for easy maintenance and increased pump life
- Digital pressure switches for automatic system protection



● Technical values

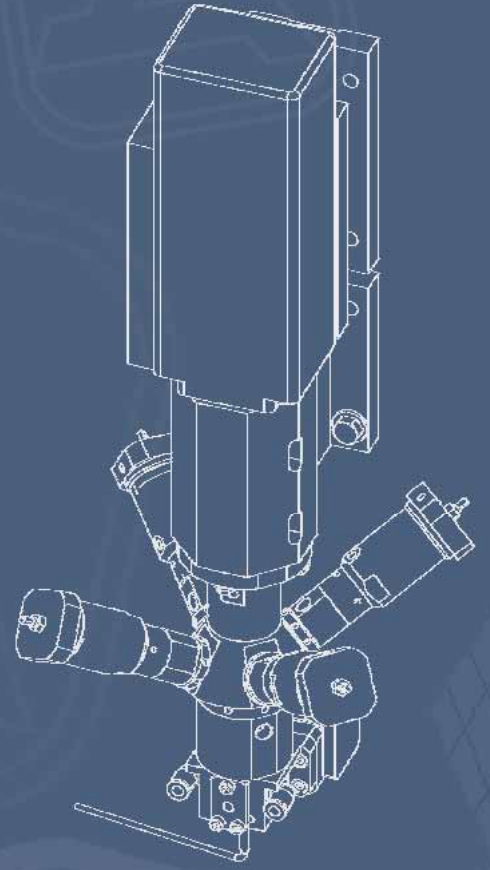
Electrical design: According to EN60204-1 and EN60439-1
Mains connection: 3x400V AC, 50/60 Hz
Rated power approx.: 10kVA
Compressed air approx.: 4kVA, 150l/m @ 6-7bar
Maximum axis speed: 0.6m/s
Displacements: X=2250mm, Y=1250mm, Z=300mm
Positioning accuracy (X,Y,Z): +/-0.20mm
Repeatability: +/-0.20mm
Mixing ratio: infinitely adjustable
Output quantity: 5-100g/m
Viscosity processing range: 50-250.000mPas (Higher viscosities on request)

● Options

Automatic refilling station for 30/60/200-litre barrels.
Electrically actuated agitator on Polyol barrel for pre-homogenisation
High speed three axis cartesian robot with rack and pinion drive
Work piece waiting station until secure packing
Anthropomorphic robot
Shuttle table
Turn table

● Sales and technical support

Continuous production is maintained with delivery from stock for spare parts, comprehensive product manuals and customer training programs. With a team of expert designers, application engineers, sales specialists and service technicians, Robotek is focused on not only meeting customer expectations, but always exceeding them.



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