

# RO

**Robatech**  
Glueing Technology

## Jumbo Hotmelt application systems

With tank sizes of 55, 80 and 160 litres suitable for all applications requiring high melting capacities. Metering by means of gear pumps for a precise adhesive application.



## Application

The hotmelt appliances of the Jumbo range are used to melt and feed large quantities of thermoplastic adhesives. The precisely working gear pumps with dynamic drives are suitable for all bead-type, airspray and coating applications.

The combination of gear pump and modern drive unit with digital speed feedback control results in a constant adhesive application without pulsation even if the product speed varies.

## Design

Immediately evident to the viewer of the appliance are the compact and optically appealing design and the extremely good accessibility. All operating elements are ergonomically arranged and straightforward to understand. If installation, maintenance or repair work is necessary, all appliance components can easily be reached from all sides after removal of just four covers.



Controllers for the system pressure

## Tank

The three appliance types Jumbo 55, 80 and 160 feature a three-stage tank structure: 1. Storage container, 2. Melting grate, 3. Pump block.

## Gear pumps and drive

The Jumbo appliances can be equipped with one or two gear pumps. Moreover, five different types of gear pumps are available offering different feed capacities. The AC drive motors permit precise and monitored closed loop speed (revs.) control.

To achieve a constant feed pressure without pulsation, the pressure of the molten adhesive is limited by a pressure control valve. A stepless adjustment up to 100 bar is quickly and easily possible at the pressure controllers of the pneumatic unit.

## Safety

In case of a machine stop the existing system pressure is automatically relieved over the pressure valve.



Gear pumps with different feed quantities

The speed of each individual feed pump is either always constant or can be closed loop controlled in dependence of the machine speed. In the latter case, the pump speed and thereby the feed quantity alters in proportion to the product speed.

## Intermittent application

To prevent the initial accumulation of hotmelt in case of an intermittent adhesive application, a pneumatic pressure switch-over or pressure control with sensor is available (options).

### Filter system

As a precautionary measure against nozzle blockages, the molten adhesive passes through large-surface filters which will retain possibly existing foreign particles.

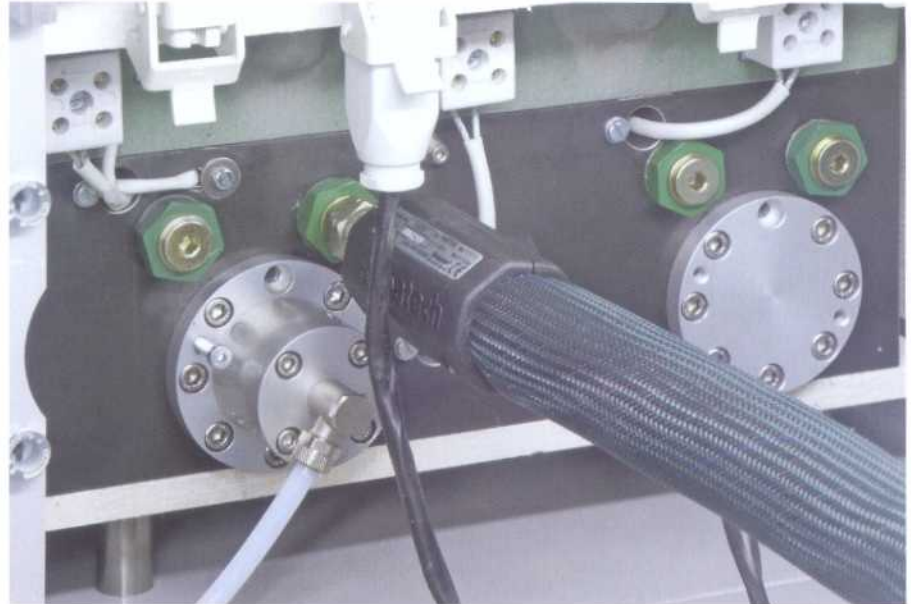
### Application heads and hoses

Two heating hoses per gear pump can be connected directly. By means of a distributor block even more hoses can be connected. Application heads at the ends of the heating hoses apply the hotmelt to the product. The number of activated heating hoses or application heads can be defined at will. Up to 16 external heating zones can be selected and feedback controlled for hoses or heads. Each of these heating zones and each pump can be switched on and off by an external signal.

### Control and operating unit

Even latest technology is only useful if it can be operated quickly and safely. This is why special attention was paid to an absolutely straightforward operation of the Jumbo appliances with ICS electronics. The display/indication and entry field with the schematic layout enables a clear and pictorial presentation of the entries.

The ICS electronic serves to control and monitor the temperature of each heating zone to within one degree accurate. It also closed loop controls the speed of the drive motors and permits



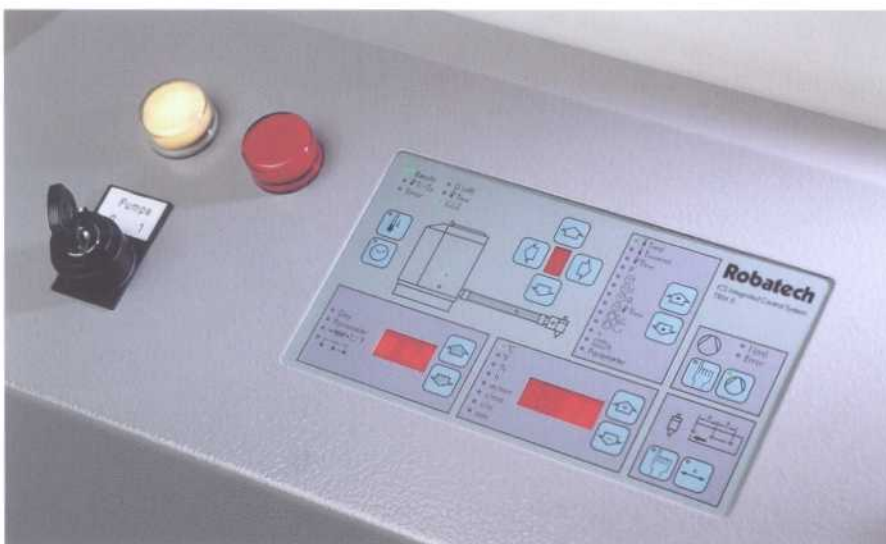
*Pump block with filter and pressure control valve*

automatic switching on and off of the appliance as well as lowering of the temperatures by the internal switch clock. The current operating status is always indicated. If, additionally, the Jumbo is to be monitored and controlled by a higher-ranking machine control, various inputs and outputs are provided in the ICS electronic. More details on the electronics are available in the separate ICS brochure.

### Options and accessories

Various extensions permit to further expand the deployment possibilities of the appliance:

- Application control ICS-IK for the precise, programmed application of adhesive patterns with up to eight application heads
- PROFIBUS interface for communications and control of the appliance by a central machine control
- Remote installation of the operating unit
- Fill level sensors
- as well as accessories such as heating hoses, application heads, photoelectric cells, encoders, etc.



*Operating unit with schematic presentation of the appliance*

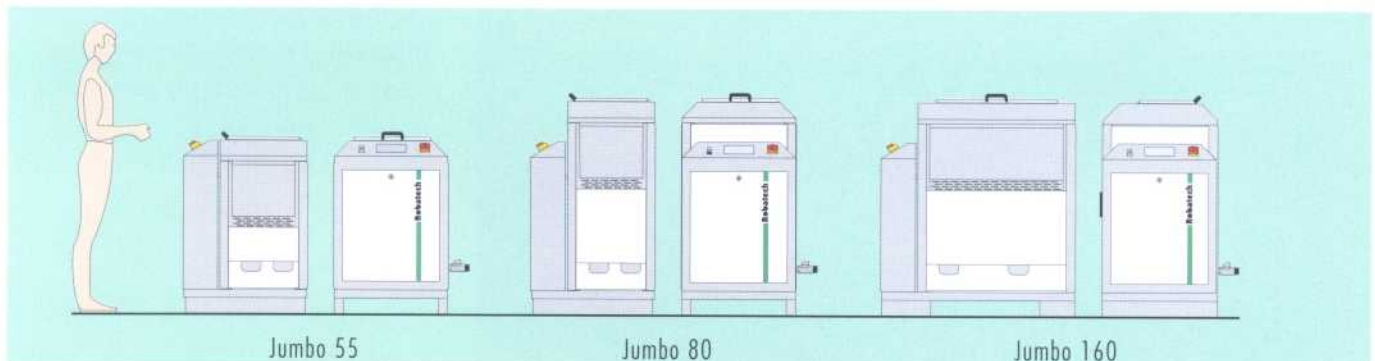
## Technical data

	Jumbo 55	Jumbo 80	Jumbo 160
Tank content	55 litres / 3.357 in <sup>3</sup>	80 litres / 4.880 in <sup>3</sup>	160 litres / 9.765 in <sup>3</sup>
Tank lid opening	338 x 338 mm	338 x 338 mm	640 x 260 mm
Melting rate*	65kg/h / 143.3 lb/hr	65 kg/h / 143.3 lb/hr	130 kg/h / 286.6 lb/hr
Numbers of gear pumps	1 or 2	1 or 2	1, 2 or 4
Gear pump types		ZP0.25, ZP0.5, ZP1, ZP2 oder ZP3	
Pumping rate ZP 0.25		0.35...5.5 kg/h / 0.8...12.1 lb/hr	
ZP 0.5		0.7...11 kg/h / 1.5...24.2 lb/hr	
ZP 1		1.4...22 kg/h / 3.0...48.5 lb/hr	
ZP 2		2.8...44 kg/h / 6.2...97.0 lb/hr	
ZP 3		5.6...88 kg/h / 12.3...194 lb/hr	
Output pressure		continuous variable, max. 100 bar	
Viscosity		100...100'000 mPas	
Drive unit		AC-Motor/400V/750W or AC-Servomotor/400V/750W	
Heated hose connections		2connections per pump 1/2" thread with 1/4" screw fitting	
External heating zones		Standard 8, optional up to 16 hoses/heads	
Operating temperature		20...230° C / 68...446° F / Tolerance ± 0,5 °C	
Compressed air connection		5...6 bar, processed, not oiled	
Operating voltage accord. Euronorm EN60204-1		400 V, 3LNPE	
Mains frequency		50/60 Hz	
Capability Melting grill	8.1 kWatt	8.1 kWatt	16.2 kWatt
Capability Pump block	3.75 kWatt	3.75 kWatt	7.5 kWatt
Power consumption** Basic unit	13...27 kWatt	13...27 kWatt	25...39 kWatt
Ambient temperature		0...45° C oder 0...113° F	
Dimensions		see next page	
Weight	250 kg / 551 lb	290 kg / 639 lb	410 kg / 904 lb
Sound pressure			< 70dB(A)

\* Guide value, melt rate depends on the adhesive

\*\* depending on the number of installed heated hoses and application heads

## Size comparison of Jumbo appliances



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