

Vela

He'd do it this way.



Vela

series p
series w



The new VELA melters represent a major step forward in the application of hot-melt thermoplastic adhesives in a variety of sectors, offering a range of advanced features specifically designed to improve production flexibility and versatility of operations, making them the ultimate choice for all companies seeking cutting-edge gluing solutions.

The VELA melters are highly innovative in terms of ease of use, reduced operations and maintenance costs, speed of installation, ease of programming, high safety standards, reliability and total integration with any existing packaging line.

Modern and distinctive design combined with modularity, sustainability, compatibility, advanced interconnectivity, and increased energy efficiency provide the ideal quality solution for adhesive application in multiple sectors.

With VELA, Preo once again confirms itself as an international reference, offering high quality and reliable technological tools that meet the most demanding expectations and support business growth and innovation by promoting sustainable practices and redefining new standards of excellence.



DESIGN AND FUNCTIONALITY

The first distinguishing aspect of VELA is its careful, unique, modern and elegant design. The combination of high-quality materials, soft lines and attention to detail represent PREO's commitment to providing products that combine aesthetics and functionality, technology and innovation.

PERSONALISATION AND VERSATILITY

VELA melters, which can be customized in different configurations according to each Customer's specific needs, allow operators to work in total safety and significantly optimize application times. All parts are easily inspected thanks to a practical, safe and quick-to-open cover system that significantly reduces downtime and maintenance.

COMPATIBILITY AND INTERCHANGEABILITY

VELA has been conceived and designed to integrate easily with a wide range of companies' existing equipment so that production lines can be upgraded without costly replacements or radical changes. Its total compatibility with other existing systems, easy installation through plug & play connections and interchangeability of modules make VELA the perfect system for every need.

ECO-SUSTAINABILITY AND EFFICIENCY

VELA is equipped with special insulation that significantly improves the insulation system keeping the internal temperature constant. This improvement ensures even heat distribution and increases the energy efficiency of the entire system, reducing the heating time and, consequently, the energy consumption itself.

MELTING TANK

VELA mounts a tank that distributes heat more evenly achieving a precise and effective melting while increasing energy savings. The wide loading mouth open on 3 sides facilitates filling by making it easier to clean and maintain. The 20° angle of inclination and fan-arranged melting fins are designed to improve the melting of glue that slides toward the pump suction point.

GLUE FILTER

Each melter is supplied as standard with an easy-to-access and easy-to-replace glue filter located at the top of the manifold that prevents impurities in the adhesive from clogging hoses, guns and nozzles. A wide range of models is available (with single or multilayer micro filter mesh and different pitches from 200 microns and up) depending on the type of adhesive used.

VELA P MELTERS

HIGH-PRECISION PNEUMATIC PUMP WITH AUTOMATIC PRESSURE RELIEF VALVE

The 14:1 dual-effect piston pump is ideal for melting and applying adhesives and thermoplastic materials with a viscosity of up to 30,000 Cps. Fully manufactured by Preo, the pump is treated with a hard oxide coating and it is easy to extract in case of maintenance or replacement operations. The bottom of the pump is inspectable in order to check the conditions of the suction sphere. An automatic pressure relief valve is installed as standard to ensure maximum safety during operation by automatically discharging residual pressure in both emergency and system shutdown.

ELECTROMAGNETIC REVERSE SYSTEM

The new reversing system with the solenoid valve mounted directly on the pump, in addition to increasing the reversing speed, guarantees absolute cycle precision by ensuring that the flow rate of the adhesive is always constant and balanced and significantly reducing pressure surges. The use of reed-switch type proximity sensors (protected and sealed inside the electronic cylinder, and therefore never in contact with the outside environment and not subject to wear) increases the reliability of life cycles, reducing machine shut-downs for malfunctions or maintenance, giving the system mechanical solidity, in addition to resistance to environmental conditions and to electrical and electromagnetic disturbances.

MICROPROCESSOR

VELA melters are equipped with a new, modern microprocessor with a 7" Touch Screen color LCD graphic display through which, by means of a single graphic interface showing all sections of the system (tank, manifold, hoses and guns), the operator is facilitated in daily operations such as temperature management and setting, pump control, programming of machine parameters and glue strokes, and integration and communication with any external units, allowing immediate use of the system even by unskilled personnel, without any problems of codes or foreign languages to interpret. The main functions of the user interface can be summarized as follows: sequential channel heating, machine ready signal and pump start, absolute maximum temperature protection system, dual mode economy, clock, weekly programming with "daily ECO" function, color status bar with machine status in real time, disable thermoregulation hose/gun pair, management of up to 8 independent channels with integrated glue pattern programming, hours-life, hours-work, pump cycles counters, customization of system section names and glue programs, copy/paste parameters function, user management with password, firmware upgrade via USB port, upload, download and saving of machine parameters and configurations, scheduled programmed maintenance, event log and real-time diagnostics.

MULTICOLOR LED BAR

The new multicolor LED bar, installed as standard on all VELA systems, illuminates the melter itself, showing the operational status of the system in real time by replicating the display of the status button.

GREEN - FIXED light	STATUS OK
GREEN - BLINKING light	STATUS OK - COUNTDOWN in progress
YELLOW - BLINKING light	NO GLUE / EMPTY TANK
BLUE - FIXED light	ECONOMY ON
VIOLET - FIXED light	WEEKLY PROGRAMMING - ENABLED / SYSTEM OFF
ORANGE - FIXED light	HEATING MODE
ORANGE - BLINKING light	STATUS OK - 24V OFF / PUMP OFF
RED - FIXED light	ALARM / FAULT

INTERCONNECTIVITY

In line with Industry 4.0 principles, VELA has a simple, intuitive yet advanced interface that facilitates integration with OEM systems. Through PLC Interface and Modbus TCP-IP protocol, the melter is able to communicate and dialogue with other devices and management systems, enabling real-time remote monitoring and control.

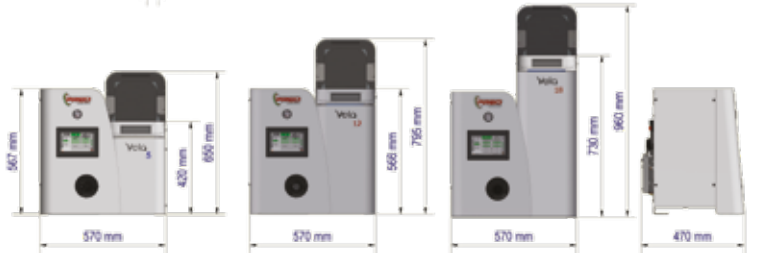
GEAR MOTOR AND HIGH PRECISION GEAR PUMP

The melters are fitted with variable speed AC motors controlled by an inverter to obtain reduced overall dimensions and easy access both for inspection and maintenance, thanks to a quick connector. Gear pumps of different capacities (0.8 - 3.0 - 7.0 - 10 and 20 cc/rev) are available with the same dimensions. These pumps are absolute precise and reliable, made of fully hardened super-quick steel. Like all internal parts of the melter, even the pump is easy to inspect and remove in case of maintenance or replacement.

REGULATION VALVE AND QUICK PRESSURE RELEASE WITH CONTROL DEVICE

VELA melters are supplied as standard with a valve (pneumatic or mechanical) to keep the set pressure constant and to ensure safety while using the system, discharging the adhesive pressure into the system automatically even in an emergency. Optionally, it is possible to mount a sophisticated control system that shows the adhesive output pressure on the applicator display. This view can be combined with a traditional digital pressure gauge that shows the pressure of the adhesive in bars.

VELA W MELTERS



series p5 (pneumatic pump)

series w5 (gear pump)

GENERAL SPECIFICATIONS

TYPE OF ADHESIVES USED	hot-melt (EVA, PO, coolmelt, metallocene, APAO, PSA, wax) granulates, pellet, tablets and blocks					
ADHESIVE VISCOSITY	up to 30,000 Cps			up to 70,000 Cps		
ADHESIVE FILLING	manual or automatic through TWISTER automatic filling system					
OPERATING TEMPERATURE	50°C±210°C (120°F±410°F) standard version - 50°C±230°C (120°F±450°F) HT high temperature version					
HOSE/GUN CONNECTIONS	2, 4, 6, 8 (fitting thread 1/2"x20 UNF)			2, 4 (fitting thread 1/2"x20 UNF)		
TANK CAPACITY	5 kg (11 lb)	12 kg (26 lb)	18 kg (40 lb)	5 kg (11 lb)	12 kg (26 lb)	18 kg (40 lb)
MELTING RATE	6 kg/h (13 lb/h)*	12 kg/h (26 lb/h)*	18 kg/h (39 lb/h)*	6 kg/h (13 lb/h)*	12 kg/h (26 lb/h)*	18 kg/h (39 lb/h)*
WEIGHT (EMPTY)	55 kg (120 lb)	60 kg (132 lb)	65 kg (143 lb)	60 kg (132 lb)	65 kg (143 lb)	70 kg (154 lb)
MACHINE DIMENSIONS (LxDxH)	570 x 470 x 650 mm	570 x 470 x 795 mm	570 x 470 x 960 mm	570 x 470 x 650 mm	570 x 470 x 795 mm	570 x 470 x 960 mm
TANK OPENING DIMENSIONS (MM)	170 x 150 mm	170 x 150 mm	170 x 150 mm	170 x 150 mm	170 x 150 mm	170 x 150 mm
TANK	internally coated with PTFE scratch-resistant non-stick treatment, heated fins and quick drain valve					
MANIFOLD	coated with hard oxidation treatment and glue filter integrated					
WARM-UP TIME	35'±40' starting from ambient temperature (0°C±45°C - 32°F±113°F)					
FASTENING	slots for M8 screws					
SAFETIES	by-pass, maximum temperature alarm, over-temperature automatic protection, emergency stop, glue pressure release					

ELECTRICAL SPECIFICATIONS

VOLTAGE	1/N/PE AC 230 V + 10% 50/60 Hz, 3/N/PE AC 400V + 10% 50/60 Hz					
WATTAGE (WITHOUT HOSES & GUNS)	2.2 kW (10 A)	3.5 kW (16 A)	4.2 kW (18 A)	2.4 kW (11 A)	3.7 kW (17 A)	4.4 kW (20 A)
MAXIMUM POWER PER CHANNEL	1.0 kW					

MICROPROCESSOR SPECIFICATIONS

TEMPERATURE CONTROL	PT100 + 0.5°C (1°F) - Ni120 e NTC (on request) with sequential heating zones function					
USER INTERFACE	multi-language 7" color IPS TFT LCD capacitive LED lighted touchscreen (1024x600 pixel) remotely mounted on request					
COMMUNICATION PROTOCOLS	Industry 4.0 ready, PLC integrated interface, easy OEM system integration via Modbus TCP-IP protocols					
STANDARD FUNCTIONS	economy, weekly programming, parameter saving, firmware upgrade via USB port					
NEW FUNCTIONS	operating and status info multicolor LED bar, user management, programmed maintenance, event log, real time diagnostics					
OPTIONAL FUNCTIONS	quick pressure release and flow regulation valve, integrated glue pattern control, level sensor, automatic filling system					

PUMP SPECIFICATIONS

PUMP TYPE	double acting pneumatic piston pump ratio 14:1			gear single flow pump				
SYSTEM SPECIFICATIONS	electro-magnetic with end stroke sensors			inverter 0.25 kW motor with variable speed, reduction gear ratio 1:20				
WORKING PRESSURE	0.3±5.0 bar							
MAXIMUM WORKING PRESSURE	55 bar							
COMPRESSED AIR SUPPLY	from 5 to 6 bar, unoiled and cleaned according to ISO 8573-1 Class 3							
MAXIMUM PUMP RATE	35 kg/h *			3.8 kg/h *	14 kg/h *	33 kg/h *	48 kg/h *	96 kg/h *
PUMP MAXIMUM SPEED (80 RPM)				0.8cc	3.0cc	7.0cc	10.0 cc	20.0 cc

(*) depending on the type of adhesives used