

# Matrix Midi

pressurisation unit



**altecnic**

# Matrix Midi pressurisation unit



## Introduction

The Altecnic Matrix Midi digital pressurisation units represents the next generation of automatic pressure maintenance solutions for heating and chilled water systems.

The units are capable of monitoring and maintaining the design pressure in sealed water systems.

The Matrix Midi units are exceptionally easy to install and commission and are contained in a compact and robust enclosure suitable for either wall mounting or floor standing.

Matrix Midi digital pressurisation units are available with one (duty) or two (duty-standby) peripheral pumps featuring brass pump heads and continuously rated induction motors.

Utilising the microprocessor controller and pressure transducer, these pressurisation units feature an intuitive and easy to use menu based control system, self diagnostic functions, configurable volt free contact alarm connections and Building Management system Modbus interface.

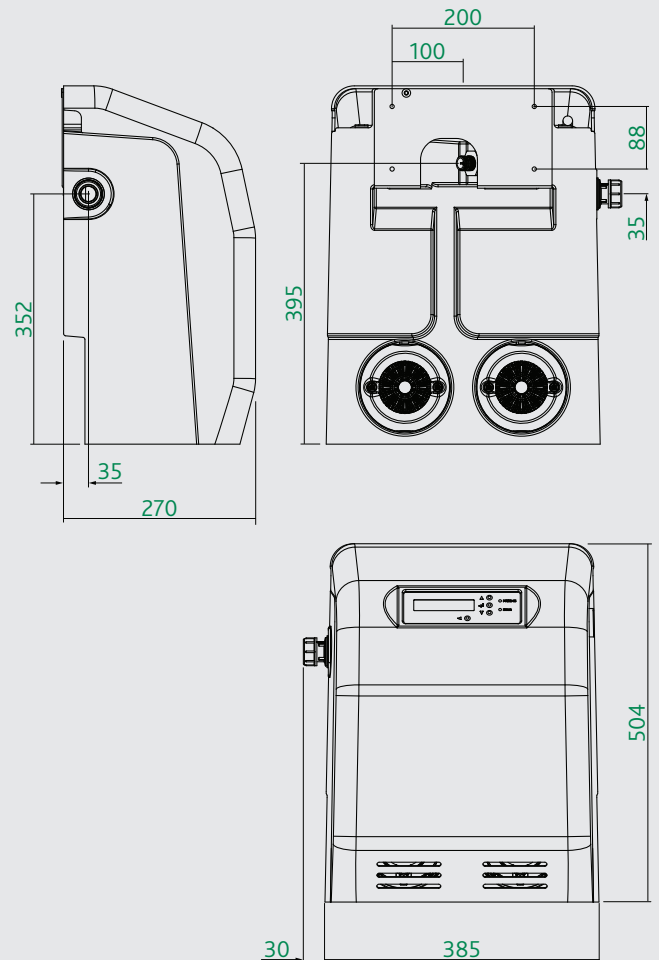
The Matrix Midi unit is designed for use in large domestic or commercial sealed heating systems.

They can also be used in chilled water systems, refrigeration units and industrial cooling systems.

## Features

- Compact design
- Wall mounted or floor standing
- 3.5 and 4.1 bar pressure options
- 8 litre tank capacity
- Digital control system and LED display
- Automated system fill and pressure maintenance
- Inlet and outlet configurable for left or right hand side connection with flexible hoses (supplied)
- Single (duty) or twin pump (duty-standby) configurations
- High recovery water tank fill valve 12 l/min @ 1 bar
- WRAS compliant Category 5 backflow protection, Type AB air gap, weir overflow and warning pipe
- 2 year guarantee
- Patent application submitted

## Dimensions



All dimensions shown in mm unless otherwise stated.

# Matrix Midi pressurisation unit

## Technical Specification

Pump Model		Matrix Midi 135D 121-1011	Matrix Midi 235D 121-1013	Matrix Midi 150D 121-1012	Matrix Midi 250D 121-1014
General	Guarantee	2 years			
Features	System capacity	Up to 300,000 litres			
	Mounting	Wall mounted or floor standing			
	Pumps	1	2	1	2
	System fill mode	✓	✓	✓	✓
	Pump control system	✓	✓	✓	✓
	Control interface	✓	✓	✓	✓
	Dry run protection	✓	✓	✓	✓
	Noise	60 Db(A)	60 Db(A)	60 Db(A)	60 Db(A)
	Fluid category	CAT 5 (type AB air gap with weir)			
	IP rating	IPX2			
Performance	Maximum head (normally closed valve)	3.5 bar / 350 kPa		4.1 bar / 410 kPa	
	Maximum flow	17 l/min		20 l/min	
	Maximum inlet pressure (tank fill valve)	7 bar / 700 kPa			
	Maximum working pressure	6 bar / 600 kPa			
	Ambient air temperature	Min 4 °C / Max 40 °C			
Water tank	Usable capacity	8 litres			
	Fill rate	12 l/min			
Connections	Cold water inlet	15mm compression			
	Cold water outlet	15mm compression			
	Overflow - compression	G¾ (Ø19 -Ø23 pipe)			
Materials	Break tank	Polyethylene			
	Front cover	Acrylic capped ABS			
	Pump head	Brass			
	Pump impeller	Brass			
Pump	Pump type	Peripheral			
	Duty rating	Continuous (S1)			
	Motor type	Induction (thermal trip, auto reset)			
Electrical	Power supply/ phase/ frequency	230V - Single phase - 50 Hz			
	Current - Full load	1.7 A		2.4 A	
	Power consumption	380 W		545 W	
	Fuse rating	5 A			
	Power cable - pre-wired	1.5 m			
Physical	Depth	270 mm			
	Width	415 mm			
	Height	504 mm			
	Empty weight	13.4 kg	19.4 kg	13.4 kg	19.4 kg
	Filled weight	23.4 kg	29.4 kg	23.4 kg	29.4 kg

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## Features

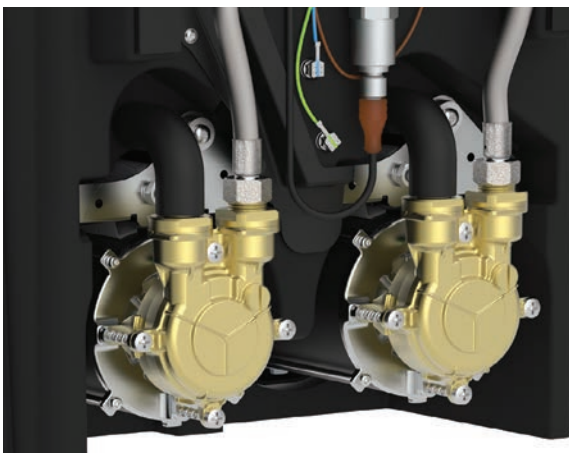
### Break Tank



Altecnic digital pressurisation units feature a robust single piece moulded polyethylene water tank.

- 8 litre usable capacity
- Torbeck side entry fill valve (WRAS approved)
- High flow fill rate 12 l/min @ 1 bar
- 15 mm compression fitting flexible hose inlet connection (supplied) configurable for left or right hand side connection
- Category 5 fluid backflow risk compatible
- Type AB air gap, weir overflow and overflow warning pipe

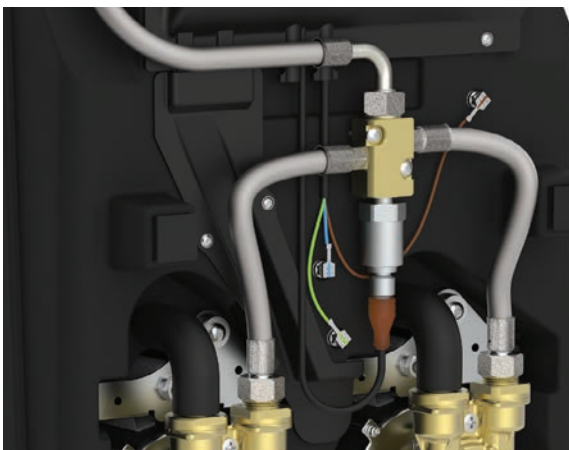
### Pressurisation Pumps



The pressurisation units are available with one or two highly quality peripheral pumps.

- Single (duty) or twin (duty-standby) pump options
- Brass pump heads and impellers
- Up to 3.5 bar or 4.1 bar pump options available
- Continuous rested induction motors
- Twin pump systems feature cyclic operation, balancing usage based on running time
- Integral non-return valves

### Pressure Transducer Monitoring & Control



A closed loop control system featuring a pressure transducer enables precise pressure monitoring and system top-up.

- Precise pressure monitoring
- Pressure control in 0.1 bar increments
- Pump dry run protection
- Pump anti-seize function
- Outlet can be configured for left or right hand side connection via a 15 mm compression fitting, flexible hose supplied

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## Features continued

### Advanced Digital Control System



An advanced microprocessor control system designed specifically for the range of Altecnic pressurisation units.

- LCD backlit display, power on and error status LEDs
- Automated system fill and pressure maintenance
- Event logging
- Self diagnostics
- Password protected control settings
- Service due reminder

### Alarm Outputs & System Connectivity



Multiple volt-free contacts and BMS connectivity enable connection to external alarms and systems

- Volt-free contact outputs for high system pressure, low system pressure and boiler interlock
- Configurable volt-free contact output for low water level, pump failure, pump run time alerts or external equipment activation
- Contact outputs are software configurable for normally closed (n/c) or normally open (n/o) operation
- BMS interface (RS485 Modbus)

### Easy Installation & Maintenance Access



Altecnic Matrix Midi pressurisation units are simple to install and are floor mounted or wall mounted using the wall hanging bracket supplied.

A single screw and snap-fit fastenings make access for maintenance remarkably easy.

- Durable high gloss ABS moulded cover
- Dual Lock™ and single screw cover fastening

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