



# EPSR3

## Pressure/Vacuum supply Unit

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The EPSR3 is a high technology pressure and vacuum supply unit that provides the values required for air data testing with the ability to be controlled either manually or automatically.

By the use of membrane low noise pumps that operate only when required the system provides a long life, reliable and clean air source of pressures and vacuums.

Many existing supply units presently used in ATE air data systems utilize bulky oil based pumps. The EPSR3 provides an attractive alternative to such users.

The ultimate pressure / vacuum capabilities enable aeronautical values of greater than 100,000ft and 1,000 knots to be achieved.

For air data test systems that require pressure and vacuum supplies incorporated into ATE rack systems the 19 inch assembly offered by the EPSR3 gives the necessary features.

The Supply unit is electronically controlled via either the integral colour touchscreen and adjacent keyboard, a PC or DMA laboratory pitot-static testers such as the DMA MPS36 and MPS46.

The touch screen enables display of the pressure and vacuum supplies in aeronautical units or engineering units. Various displays are available and changing from local, manual, control to remote control is selected from here.

### FEATURES

- Supply rack for Pressures and Vacuums in Air Data ranges.
- Incorporates three integrated units: Two vacuum generators and one pressure generator.
- Pressures to 4,000hPa abs (118 inHg), vacuums to 6.7hPa abs (0.198 inHg).
- Contains 4 membrane pumps for vacuum and pressure: 2 for vacuum and 2 for pressure.
- Membrane pumps require zero maintenance, pumps run only on-demand.
- Internal pressure reservoirs drained by control system.
- Electronic control and transducers to monitor internal pressures and drive the pumps.
- Control via touchscreen display and keyboard.
- Control also possible by DMA laboratory ADTS units MPS36 and MPS46.

### OPERATING CONFIGURATIONS.

The EPSR3 is an amalgamation of 3 units, two vacuum and one pressure, that can be configured to meet the specific pressure and vacuum needs of the overall system.

Two independent pressure lines are available able to reach up to 4,000 hPa abs (118 inHg). Also 2 independent vacuum lines able to reach 6.7 hPa abs (0.198 inHg). These twin lines/ports can be either used separately or joined together dependent on system needs.

For increased vacuum flow requirements the two output ports can be joined together to provide increased capability. The maximum flow rate from the EPSR3 itself will be limited by the subsequent pressure controller employed.

Internally pressure reservoirs associated with each line are monitored by sensors to achieve the desired values at the output ports. The membrane pumps are controlled to only be in operation when needed.

The P1 and P2 reservoirs are periodically and automatically drained to avoid condensation. Draining can also be requested at any time by pressing a button.



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# EPSR3 Standard Specifications

Parameter	Value
Vacuum set point range:	6 to 115 hPa absolute (0.2 to 3.4 inHg abs)
Flow for single vacuum line:	36 litres / min (2200 SCIM) at 1,016 hPa abs (30 inHg abs) 0.003 litres / min (0.2 SCIM) at 6.8 hPa abs (0.2 inHg abs)
P1 line set point range:	1,300 to 3,700 hPa abs (38 to 110 inHg abs)
P2 line set point range:	1,300 to 4,000 hPa abs (38 to 118 inHg abs)
Maximum Flow Rate on P1 and P2 lines:	7 litres / min (450 SCIM) at 3,380 hPa abs (100inHg abs)

## FEATURES

- The two vacuum lines can be connected in parallel to double the flow rate
- Automatic drain of P1 and P2 lines
- Manual drain activated by software
- "Max Vacuum" mode
- PC remote control options
  - Manual – (touch screen and keyboard)
  - MPS36 – (EPSR compatible)
  - MPS46 - (EPSR2 compatible)
  - RS232 - (for PC or ATE systems)  
(USB and RS232 cables available)
- Remote control software bundled (for Windows or Linux systems)
- Compatible with MPS46 and MPS36
- ADTS (EPSR and EPSR2 emulation modes)

## DISPLAYED UNITS

Altitude: ft, m, hm  
 Airspeed: kts, km/h, mph  
 Pressure: inHg, hPa, kPa, Pa, psi, mmHg, inH2O

## ENVIRONMENTAL

Temperature range  
 Operating: +5°C to +35°C  
 Transport and Storage: -20°C to +70°C  
 CE compliant

## PHYSICAL SPECIFICATIONS

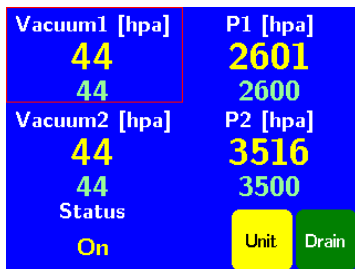
Weight: 42.5 kg. (93.5 lbs.)  
 Dimensions: Standard 19" rack 9U case. (15.75")  
 W 48 x D 37 x H 40 cms  
 (19" x 14.6" x 15.7")

## POWER SUPPLY

Power requirement: 100-240 VAC; 50-60 Hz.

## DISPLAY AND CONTROLS

All the operations are controlled through the touch screen or via external instructions.

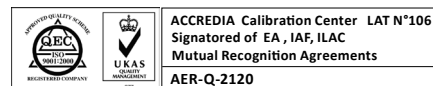


## CALIBRATION

The internal sensors require recalibration on a 12 month basis, carried out via software instructions, no manual adjustments.

## WARRANTY

2 years



Ongoing development results in specifications being subject to change without notice



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Representative