

# High Pressure Compressed Air Purification



## Continuous clean, oil free and dry compressed air

Any moisture or water vapour can cause serious problems for systems using compressed air as it forms condensate which can lead to:

- Pressure drop
- Blocked valves
- Corroded piping
- Frozen pipes
- Costly air leaks
- Equipment failure
- Increased maintenance costs

The Parker domnick hunter five stage high pressure (HP) compressed air purification system provides a continuous supply of clean, oil-free and dry compressed air at a maximum working pressure of 276 bar g.

Parker domnick hunter has been supplying its market leading compressed air purification products to defence organisations for over 40 years. The HP package is in service throughout the Royal Navy Surface Fleet.



## Contact Information:

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## Benefits:

- **Efficient removal of water vapour from compressed air**
- **Delivered air quality in accordance with ISO 8573-1:2001, the international standard for air quality**
- **Fully automatic operation**
- **Runs off ship system or shore air supplies**
- **Improves operational efficiency and reduces maintenance costs and downtime**
- **Constant dewpoint performance**
- **High efficiency inlet and outlet filtration**
- **Electric controls as standard**
- **Fully corrosion protected inside and out**
- **30G shock tested**
- **A smaller, more compact and lightweight dryer**
- **Suitable for bulkhead, wall or deck mounting**
- **Easy to install and maintain**
- **Proven and in-service**



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# Technical Data

## Delivered Air Quality

Particulate removal down to	1 micron
Maximum remaining oil content	0.003 mg/m <sup>3</sup> (0.003 ppw/wt)
Dewpoint	-64°C (-84°F) adp @ 1 bar g

## Weights and Dimensions

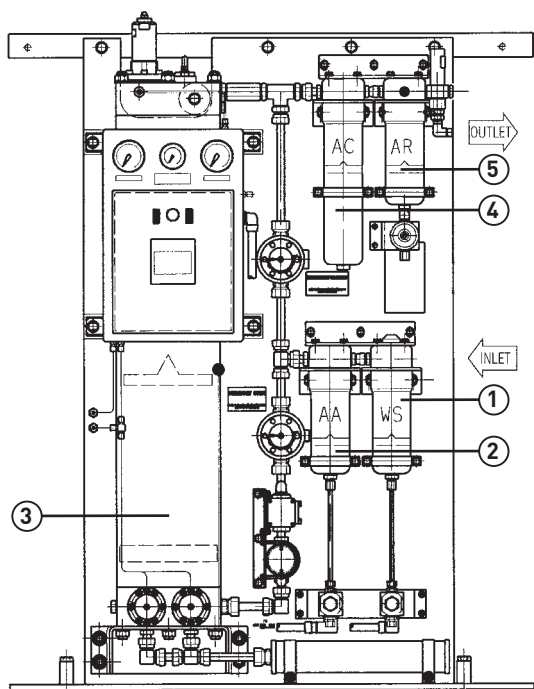
Height		Width		Depth		Weight	
mm	ins	mm	ins	mm	ins	kg	lbs
1437	56.6	1121	44.1	515	20.3	420	925.9

NOTE: Heat Regenerative versions with PLC Controllers now available.

## Normal Operation

Maximum design pressure	345 bar g (5000 psi g)
Normal operating pressure	276 bar g (4000 psi g)
Minimum operating pressure	240 bar g (3480 psi g)
Maximum inlet capacity	84cfm (40L/sec) @ 276 bar g
Maximum inlet temperature	50°C (122°F)
Minimum inlet temperature	5°C (41°F)
Purge air loss	3.5%
Inlet/outlet connections	<sup>3</sup> / <sub>8</sub> " BSPP female
Voltage	110V ac 50/60 Hz (standard) 240V ac (optional)

## High Pressure Compressed Air Dryer



## Operation – HP Dryer

### Stage 1

A high efficiency water separator removes bulk contamination from the air stream by vortex action. 90% condensate and aerosol removal at 21°C. 80% particulate removal of 10 microns and above. An automatic drain removes any condensate present.

### Stage 2

A high efficiency coalescing filter removes oil/water aerosols down to 0.01 mg/m<sup>3</sup> at 21°C and dirt particulate down to 0.01 micron. An automatic drain removes any condensate remaining.

### Stage 3

A regenerative desiccant dryer removes water vapour and maintains a constant pressure dewpoint performance by utilising the pressure/temperature swing adsorption principle that is controlled by an electrically operated cam timer.

A hygrometer in the control cabinet measures and displays outlet air quality dewpoint.

### Stage 4

Any remaining oil vapour (down to 0.003 mg/m<sup>3</sup>) is removed by an activated carbon filter.

### Stage 5

A final particulate filter removes any traces of desiccant dust carried over from the dryer.

A pressure maintaining valve is fitted to the outlet to ensure that a minimum working pressure of 240 bar g is maintained.

DESIGN CONFIGURATIONS OTHER THAN DESCRIBED ARE ALSO AVAILABLE. PLEASE ASK FOR DETAILS.