

# PNEUDRI MIDAS

A totally clean and dry  
Compressed Air System (CDA)



The Parker domnick hunter PNEUDRI MIDAS range of desiccant air dryers, offers the user uncompromised performance from a dedicated "point of use" Clean Dry Air system. It is easy to install and will transform an ordinary process into a highly reliable and efficient production operation.

Compressed air purification equipment must deliver uncompromising performance and reliability whilst providing the right balance of air quality with the lowest cost of operation. Many manufacturers offer products for the filtration and purification of contaminated compressed air, which are often selected only upon their initial purchase cost, with little or no regard for the air quality they provide, the cost of operation throughout their life or indeed their environmental impact. When purchasing purification equipment, delivered air quality, the overall cost of ownership and the equipment's environmental impact must always be considered.



## The Parker domnick hunter Design Philosophy

Parker domnick hunter has been supplying industry with high efficiency filtration and purification products since 1963. Our philosophy 'Designed for Air Quality & Energy Efficiency' ensures products that not only provide the user with clean, high quality compressed air, but also with low lifetime costs and reduced CO<sub>2</sub> emissions.



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## Benefits:

- PNEUDRI dryers provide efficient removal of water vapour from compressed air
- Delivered air quality is in accordance with ISO 8573-1:2001, the international standard for compressed air quality
- Improves production efficiency and reduces maintenance costs and downtime
- Pressure Dewpoint's of -70°C & -40°C (ISO 8573-1 :2001 Classes 1 & 2) are available
- Unlike refrigeration dryers, the -40°C & -70°C pressure dewpoint's offered by PNEUDRI not only eliminates corrosion, it also inhibits the growth of micro-organisms
- Ideal for both compressor room and point of use applications
- Low noise level <75 db (A)
- Compared to traditional twin tower dryer designs, PNEUDRI's unique modular construction and snowstorm filling of the adsorbent desiccant material provides:-
  - Consistent dewpoint performance
  - A smaller, more compact and lightweight dryer
  - Simple to install and easy to maintain
  - Fully corrosion protected inside and out
  - Approvals to International Standards (PED, CSA/UL/CRN)
  - Eliminates the need for costly annual pressure vessel inspections
  - 10 year guarantee on pressure envelope



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## Dryer Performance

| Dryer Models | Dewpoint (Standard) |     | ISO 8573-1:2001<br>Classification (standard) | Dewpoint (Option 1) |      | ISO 8573-1:2001<br>Classification<br>(Option 1) |
|--------------|---------------------|-----|--|---------------------|------|---|
|              | °C                  | °F  |  | °C                  | °F   |   |
| DAS          | -40                 | -40 | Class 2                                      | -70                 | -100 | Class 1   |

## Product Selection

Stated flows are for operation at 7 bar g (100 psi g) with reference to 20°C, 1 bar a, 0% relative water vapour pressure.  
For flows at other pressures, apply the correction factors shown.

| Model | Pipe Size | L/S | m <sup>3</sup> /min | m <sup>3</sup> /hr | cfm |
|-------|-----------|-----|---------------------|--------------------|-----|
| DAS1  | G 3/8     | 1   | 0.09                | 5.1                | 3   |
| DAS2  | G 3/8     | 2   | 0.14                | 8.5                | 5   |
| DAS3  | G 3/8     | 4   | 0.23                | 13.6               | 8   |
| DAS4  | G 3/8     | 5   | 0.28                | 17.0               | 10  |
| DAS5  | G 3/8     | 6   | 0.37                | 22.1               | 13  |
| DAS6  | G 3/8     | 7   | 0.43                | 25.5               | 15  |
| DAS7  | G 3/8     | 9   | 0.57                | 34.0               | 20  |

## Correction Factor

| Temperature Correction Factor CFT |     |      |      |      |      |      |      |
|-----------------------------------|-----|------|------|------|------|------|------|
| Maximum Inlet Temperature         | °C  | 25   | 30   | 35   | 40   | 45   | 50   |
|                                   | °F  | 77   | 86   | 95   | 104  | 113  | 122  |
|                                   | CFT | 1.00 | 1.00 | 1.00 | 1.04 | 1.14 | 1.37 |

| Pressure Correction Factor CFP |       |      |      |      |      |      |      |      |      |      |
|--------------------------------|-------|------|------|------|------|------|------|------|------|------|
| Minimum Inlet Pressure         | bar g | 4    | 5    | 6    | 7    | 8    | 9    | 10   | 11   | 12   |
|                                | psi g | 58   | 73   | 87   | 102  | 116  | 131  | 145  | 160  | 174  |
|                                | CFP   | 1.60 | 1.33 | 1.14 | 1.00 | 1.03 | 0.93 | 0.85 | 0.78 | 0.71 |

| Dewpoint Correction Factor CFD |        |      |      |
|--------------------------------|--------|------|------|
| Required Dewpoint              | PDP °C | -40  | -70  |
|                                | PDP °F | -40  | -100 |
|                                | CFD    | 1.00 | 1.43 |

## Dryer Selection

To correctly select a dryer model, the flow rate of the dryer must be adjusted for the minimum operating pressure and, maximum operational temperature of the system. If the dewpoint required is different to the standard dewpoint of the dryer then the flow rate must also be adjusted for the required outlet dewpoint.

- Obtain the minimum operating pressure, maximum inlet temperature and maximum compressed air flow rate at the inlet of the dryer.  
Obtain the outlet dewpoint required.
- Select correction factor for maximum inlet temperature from the CFT Table (always round up e.g. for 37°C use 40°C correction factor)
- Select correction factor for minimum inlet pressure from the CFP table (always round down e.g. for 5.3 bar use 5 bar correction factor)
- Select correction factor for required outlet dewpoint from the CFD table
- Calculate minimum drying capacity  
Minimum Drying Capacity = Compressed Air Flow x CFT x CFP x CFD
- Using the minimum drying capacity, select a dryer model from the flow rate tables above (dryer selected must have a flow rate equal to or greater than the minimum drying capacity)

If the minimum drying capacity exceeds the maximum values of the models shown within the tables, please contact Parker domnick hunter for advice regarding larger multi-banked dryers.

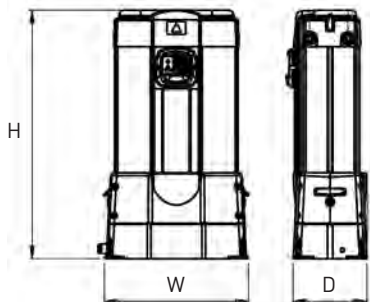
## Technical Data

| Dryer Models | Min Operating Pressure |       | Max Operating Pressure |       | Min Operating Temperature |    | Max Operating Temperature |     | Max Ambient Temperature |     |
|--------------|------------------------|-------|------------------------|-------|---------------------------|----|---------------------------|-----|-------------------------|-----|
|              | bar g                  | psi g | bar g                  | psi g | °C                        | °F | °C                        | °F  | °C                      | °F  |
| DAS          | 4                      | 58    | 12                     | 175   | 2                         | 35 | 50                        | 122 | 55                      | 131 |

| Dryer Models | Electrical Supply (Standard)<br>Tolerance ± 10% | Electrical Supply (Optional)<br>Tolerance ± 10% | Thread Connection | Noise Level (average) | Electronic Controller Options | Function            |                             |
|--------------|---|---|-------------------|-----------------------|-------------------------------|---------------------|-----------------------------|
|              |   |   |                   | dB(A)                 |                               | Power On Indication | Service Interval Indication |
| DAS          | 230 / 1ph / 50Hz                                | 115 / 1ph / 60Hz                                | BSPP or NPT       | <75                   | DAS                           | •                   | •                           |

## Weights and Dimensions

| Model | Pipe Size                     | Dimensions |      |           |      |           |     | Weight |      |
|-------|-------------------------------|------------|------|-----------|------|-----------|-----|--------|------|
|       |                               | Height (H) |      | Width (W) |      | Depth (D) |     | Kg     | lbs  |
|       |                               | mm         | ins  | mm        | ins  | mm        | ins |        |      |
| DAS1  | G <sup>3</sup> / <sub>8</sub> | 422        | 16.6 | 289       | 11.4 | 149       | 5.9 | 11     | 24.2 |
| DAS2  | G <sup>3</sup> / <sub>8</sub> | 500        | 19.7 | 289       | 11.4 | 149       | 5.9 | 13     | 28.7 |
| DAS3  | G <sup>3</sup> / <sub>8</sub> | 616        | 24.2 | 289       | 11.4 | 149       | 5.9 | 16     | 35.3 |
| DAS4  | G <sup>3</sup> / <sub>8</sub> | 692        | 27.2 | 289       | 11.4 | 149       | 5.9 | 18     | 39.7 |
| DAS5  | G <sup>3</sup> / <sub>8</sub> | 847        | 33.3 | 289       | 11.4 | 149       | 5.9 | 20     | 44.1 |
| DAS6  | G <sup>3</sup> / <sub>8</sub> | 906        | 35.7 | 289       | 11.4 | 149       | 5.9 | 23     | 50.7 |
| DAS7  | G <sup>3</sup> / <sub>8</sub> | 1098       | 43.2 | 289       | 11.4 | 149       | 5.9 | 28     | 61.7 |



## Maintenance kits

| Model | Maintenance Kit |
|-------|-----------------|
| DAS 1 | DASMK1          |
| DAS 2 | DASMK2          |
| DAS 3 | DASMK3          |
| DAS 4 | DASMK4          |
| DAS 5 | DASMK5          |
| DAS 6 | DASMK6          |
| DAS 7 | DASMK7          |

## Accessories

| Description                    | Kit       |
|--------------------------------|-----------|
| Fixed Wall Mounting Bracket    | DASMB1    |
| 45° Tilt Wall Mounting Bracket | DASMB2    |
| Purge Economy Gland Kit        | 608203185 |
| Volt Free Relay Kit            | 608203186 |



## Notes

1. It is recommended that an A0 pre-filter should be used to protect the Integral Grade AA filter.
2. For hazardous areas, fully pneumatic Mini and Midi dryers are available.

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