

# PNEUDRI MX

## Heatless (PSA) Regeneration High Efficiency Compressed Air Dryers



Using patented Parker Zander technology, PNEUDRI MX heatless dryers provide the ultimate in clean and dry compressed air.

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.



### Benefits:

- PNEUDRI dryers provide efficient removal of water vapour from compressed air
- Delivered air quality is in accordance with all editions of ISO 8573-1, the international standard for compressed air quality
- Improves production efficiency and reduces maintenance costs and downtime
- Pressure Dewpoint's of -70°C, -40°C & -20°C (ISO 8573-1:2010 Classes 1, 2 & 3) 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
- Low noise level <75 db (A)
- Optional Energy Management System available
- 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
  - Fits through a standard doorway reducing installation costs
  - 100% standby at a fraction of the cost of twin tower designs
  - Simple to install and easy to maintain
  - Offers increased flexibility during maintenance (multi bank)
  - Easily expanded to meet increased system demand
  - 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

## Dryer Performance

| Dryer Models | Dewpoint (Standard) |     | ISO 8573-1:2010 Classification (standard) | Dewpoint (Option 1) |      | ISO 8573-1:2010 Classification (Option 1) | Dewpoint (Option 2) |    | ISO 8573-1:2010 Classification (Option 2) |
|--------------|---------------------|-----|---|---------------------|------|---|---------------------|----|---|
|              | °C                  | °F  |   | °C                  | °F   |   | °C                  | °F |   |
| MXS          | -40                 | -40 | Class 2                                   | -70                 | -100 | Class 1                                   | -20                 | -4 | Class 3                                   |
| MXA          | -40                 | -40 | Class 2                                   | -70                 | -100 | Class 1                                   | -20                 | -4 | Class 3                                   |

## Product Selection PNEUDRI MX

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  |
|-------------|-----------|-----------|------|---------------------|--------------------|------|
| Single Bank | MX □ 102C | G 2       | 113  | 6.81                | 408                | 240  |
|             | MX □ 103C | G 2       | 170  | 10.22               | 612                | 360  |
|             | MX □ 103  | G 2       | 213  | 12.78               | 765                | 450  |
|             | MX □ 104  | G 2       | 283  | 17.03               | 1020               | 600  |
|             | MX □ 105  | G 2½      | 354  | 21                  | 1275               | 750  |
|             | MX □ 106  | G 2½      | 425  | 26                  | 1530               | 900  |
|             | MX □ 107  | G 2½      | 496  | 30                  | 1785               | 1050 |
|             | MX □ 108  | G 2½      | 567  | 34                  | 2040               | 1200 |
| Multi-Bank  | MX □ 205  | G 2½      | 708  | 43                  | 2550               | 1500 |
|             | MX □ 206  | G 2½      | 850  | 51                  | 3060               | 1800 |
|             | MX □ 207  | G 2½      | 992  | 60                  | 3570               | 2100 |
|             | MX □ 208  | G 2½      | 1133 | 68                  | 4080               | 2400 |
|             | MX □ 306  | G 2½      | 1275 | 77                  | 4590               | 2700 |
|             | MX □ 307  | G 2½      | 1488 | 89                  | 5355               | 3150 |
|             | MX □ 308  | G 2½      | 1700 | 102                 | 6120               | 3600 |

## 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   | 13   |
|                                | psi g | 58   | 73   | 87   | 100  | 116  | 131  | 145  | 160  | 174  | 189  |
|                                | CFP   | 1.60 | 1.33 | 1.14 | 1.00 | 0.89 | 0.80 | 0.73 | 0.67 | 0.62 | 0.57 |

| Dewpoint Correction Factor CFD |        |      |      |      |
|--------------------------------|--------|------|------|------|
| Required Dewpoint              | PDP °C | -20  | -40  | -70  |
|                                | PDP °F | -4   | -40  | -100 |
|                                | CFD    | 0.91 | 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 Zander for advice regarding larger multi-banked dryers.

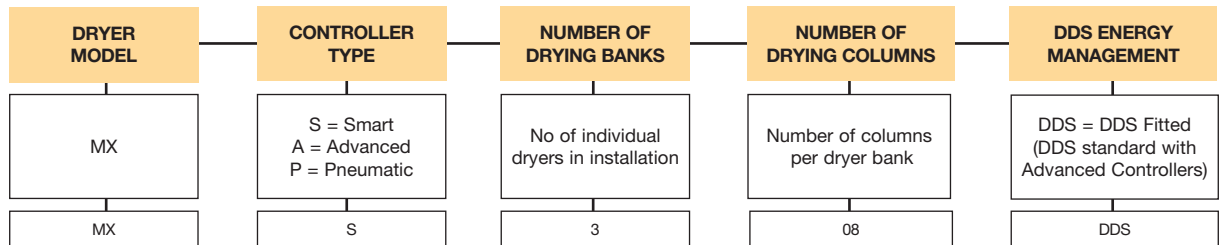
## Technical Data

| Dryer Models | Min Operating Pressure |       | Max Operating Pressure |       | Min Operating Temp |    | Max Operating Temp |     | Max Ambient Temp |     | Electrical supply (standard) | Electrical supply (optional) | Thread Connections | Noise Level<br>dB (A) |
|--------------|------------------------|-------|------------------------|-------|--------------------|----|--------------------|-----|------------------|-----|------------------------------|------------------------------|--------------------|-----------------------|
|              | bar g                  | psi g | bar g                  | psi g | °C                 | °F | °C                 | °F  | °C               | °F  |                              |                              |                    |                       |
| MXS          | 4                      | 58    | 13                     | 190   | 2                  | 35 | 50                 | 122 | 55               | 131 | 85 - 265 V<br>1ph 50/60Hz    | N/A                          | BSPP<br>or NPT     | <75                   |
| MXA          | 4                      | 58    | 13                     | 190   | 2                  | 35 | 50                 | 122 | 55               | 131 | 85 - 265 V<br>1ph 50/60Hz    | N/A                          | BSPP<br>or NPT     | <75                   |
| MXP          | 4                      | 58    | 13                     | 190   | 2                  | 35 | 50                 | 122 | 55               | 131 | N/A                          | N/A                          | BSPP<br>or NPT     | <75                   |

## Controller Options

| Controller Options | Function            |                  |                                |                             |                          |                             |                                 |                      |                              |
|--------------------|---------------------|------------------|--------------------------------|-----------------------------|--------------------------|-----------------------------|---------------------------------|----------------------|------------------------------|
|                    | Power on Indication | Fault Indication | Display Fault Condition Values | Service Interval Indication | Service Countdown Timers | Configurable Alarm Settings | Remote Volt Free Alarm Contacts | Filter Service Timer | DDS Energy Management System |
| SMART              | ●                   | ●                |                                | ●                           |                          |                             | ●                               |                      |                              |
| SMART DDS          | ●                   | ●                |                                | ●                           |                          |                             | ●                               |                      | ●                            |
| ADVANCED           | ●                   | ●                | ●                              | ●                           | ●                        | ●                           | ●                               | ●                    | ●                            |

## Dryer Coding Example



Example Dryer Model MXS308DDS

\*Please state dewpoint at time of ordering

## Weights and Dimensions

| Model     | Pipe Size | Height (H) |      | Width (W) |      | Depth (D) |      | Weight |      |
|-----------|-----------|------------|------|-----------|------|-----------|------|--------|------|
|           |           | mm         | ins  | mm        | ins  | mm        | ins  | kg     | lbs  |
| MX □ 102C | G 2       | 1647       | 64.8 | 687       | 27.0 | 550       | 21.7 | 235    | 518  |
| MX □ 103C | G 2       | 1647       | 64.8 | 856       | 33.7 | 550       | 21.7 | 316    | 696  |
| MX □ 103  | G 2       | 1892       | 74.5 | 856       | 33.7 | 550       | 21.7 | 355    | 782  |
| MX □ 104  | G 2       | 1892       | 74.5 | 1025      | 40.3 | 550       | 21.7 | 450    | 992  |
| MX □ 105  | G 2½      | 1892       | 74.5 | 1194      | 47.0 | 550       | 21.7 | 543    | 1197 |
| MX □ 106  | G 2½      | 1892       | 74.5 | 1363      | 53.6 | 550       | 21.7 | 637    | 1404 |
| MX □ 107  | G 2½      | 1892       | 74.5 | 1532      | 60.3 | 550       | 21.7 | 731    | 1611 |
| MX □ 108  | G 2½      | 1892       | 74.5 | 1701      | 67.0 | 550       | 21.7 | 825    | 1818 |



## Recommended Filtration

Adsorption dryers are designed to remove water vapour from compressed air. For optimum performance and to deliver air quality in accordance with all editions of ISO8573-1, liquid water, oil and solid particulate must be first be removed using Parker domnick hunter OIL-X EVOLUTION Grade AO, AA filters. Grade AR filters should also be fitted to the outlet of the dryer for solid particulate removal.

□ = B (BSPT)    □ = N (NPT)

| For Dryer Model | Filter Pipe Size BSPT or NPT | Inlet General Purpose Pre-filter | Inlet High Efficiency Filter | Outlet Dust Filter |
|-----------------|------------------------------|----------------------------------|------------------------------|--------------------|
| MX□102C         | 2"                           | AO040H□FX                        | AA040H□FX                    | AR040H□MX          |
| MX□103C         | 2"                           | AO040H□FX                        | AA040H□FX                    | AR040H□MX          |
| MX□103          | 2"                           | AO045H□FX                        | AA045H□FX                    | AR045H□MX          |
| MX□104          | 2"                           | AO045H□FX                        | AA045H□FX                    | AR045H□MX          |
| MX□105          | 2½"                          | AO050I□FX                        | AA050I□FX                    | AR050I□MX          |
| MX□106          | 2½"                          | AO055I□FX                        | AA055I□FX                    | AR055I□MX          |
| MX□107          | 2½"                          | AO055I□FX                        | AA055I□FX                    | AR055I□MX          |
| MX□108          | 2½"                          | AO055I□FX                        | AA055I□FX                    | AR055I□MX          |

# Parker Worldwide

## Europe, Middle East, Africa

### AE – United Arab Emirates, Dubai

Tel: +971 4 8127100  
parker.me@parker.com

### AT – Austria, Wiener Neustadt

Tel: +43 (0)2622 23501-0  
parker.austria@parker.com

### AT – Eastern Europe, Wiener Neustadt

Tel: +43 (0)2622 23501 900  
parker.easteurope@parker.com

### AZ – Azerbaijan, Baku

Tel: +994 50 2233 458  
parker.azerbaijan@parker.com

### BE/LU – Belgium, Nivelles

Tel: +32 (0)67 280 900  
parker.belgium@parker.com

### BG – Bulgaria, Sofia

Tel: +359 2 980 1344  
parker.bulgaria@parker.com

### BY – Belarus, Minsk

Tel: +48 (0)22 573 24 00  
parker.poland@parker.com

### CH – Switzerland, Etoy

Tel: +41 (0)21 821 87 00  
parker.switzerland@parker.com

### CZ – Czech Republic, Klecany

Tel: +420 284 083 111  
parker.czechrepublic@parker.com

### DE – Germany, Kaarst

Tel: +49 (0)2131 4016 0  
parker.germany@parker.com

### DK – Denmark, Ballerup

Tel: +45 43 56 04 00  
parker.denmark@parker.com

### ES – Spain, Madrid

Tel: +34 902 330 001  
parker.spain@parker.com

### FI – Finland, Vantaa

Tel: +358 (0)20 753 2500  
parker.finland@parker.com

### FR – France, Contamine s/Arve

Tel: +33 (0)4 50 25 80 25  
parker.france@parker.com

### GR – Greece, Athens

Tel: +30 210 933 6450  
parker.greece@parker.com

### HU – Hungary, Budaörs

Tel: +36 23 885 470  
parker.hungary@parker.com

### IE – Ireland, Dublin

Tel: +353 (0)1 466 6370  
parker.ireland@parker.com

### IL – Israel

Tel: +39 02 45 19 21  
parker.israel@parker.com

### IT – Italy, Corsico (MI)

Tel: +39 02 45 19 21  
parker.italy@parker.com

### KZ – Kazakhstan, Almaty

Tel: +7 7273 561 000  
parker.easteurope@parker.com

### NL – The Netherlands, Oldenzaal

Tel: +31 (0)541 585 000  
parker.nl@parker.com

### NO – Norway, Asker

Tel: +47 66 75 34 00  
parker.norway@parker.com

### PL – Poland, Warsaw

Tel: +48 (0)22 573 24 00  
parker.poland@parker.com

### PT – Portugal

Tel: +351 22 999 7360  
parker.portugal@parker.com

### RO – Romania, Bucharest

Tel: +40 21 252 1382  
parker.romania@parker.com

### RU – Russia, Moscow

Tel: +7 495 645-2156  
parker.russia@parker.com

### SE – Sweden, Spånga

Tel: +46 (0)8 59 79 50 00  
parker.sweden@parker.com

### SK – Slovakia, Banská Bystrica

Tel: +421 484 162 252  
parker.slovakia@parker.com

### SL – Slovenia, Novo Mesto

Tel: +386 7 337 6650  
parker.slovenia@parker.com

### TR – Turkey, Istanbul

Tel: +90 216 4997081  
parker.turkey@parker.com

### UA – Ukraine, Kiev

Tel: +48 (0)22 573 24 00  
parker.poland@parker.com

### UK – United Kingdom, Warwick

Tel: +44 (0)1926 317 878  
parker.uk@parker.com

### ZA – South Africa, Kempton Park

Tel: +27 (0)11 961 0700  
parker.southafrica@parker.com

## North America

### CA – Canada, Milton, Ontario

Tel: +1 905 693 3000

### US – USA, Cleveland

Tel: +1 216 896 3000

## Asia Pacific

### AU – Australia, Castle Hill

Tel: +61 (0)2-9634 7777

### CN – China, Shanghai

Tel: +86 21 2899 5000

### HK – Hong Kong

Tel: +852 2428 8008

### IN – India, Mumbai

Tel: +91 22 6513 7081-85

### JP – Japan, Tokyo

Tel: +81 (0)3 6408 3901

### KR – South Korea, Seoul

Tel: +82 2 559 0400

### MY – Malaysia, Shah Alam

Tel: +60 3 7849 0800

### NZ – New Zealand, Mt Wellington

Tel: +64 9 574 1744

### SG – Singapore

Tel: +65 6887 6300

### TH – Thailand, Bangkok

Tel: +662 186 7000

### TW – Taiwan, Taipei

Tel: +886 2 2298 8987

## South America

### AR – Argentina, Buenos Aires

Tel: +54 3327 44 4129

### BR – Brazil, Sao Jose dos Campos

Tel: +55 800 727 5374

### CL – Chile, Santiago

Tel: +56 2 623 1216

### MX – Mexico, Toluca

Tel: +52 72 2275 4200

### EMEA Product Information Centre

Free phone: 00 800 27 27 5374

(from AT, BE, CH, CZ, DE, DK, EE, ES, FI, FR, IE, IL, IS, IT, LU, MT, NL, NO, PL, PT, RU, SE, SK, UK, ZA)

### US Product Information Centre

Toll-free number: 1-800-27 27 537

[www.parker.com/gsf](http://www.parker.com/gsf)