TECNI-AR
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Para automação

PNEUDRI MX

Heatless (PSA) Regeneration
High Efficiency Compressed Air Dryers

Using patented Parker domnick hunter 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.

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_2 emissions.

DESIGNED FOR AIR QUALITY & ENERGY EFFICIENCY

REDUCED CO_2

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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 & -20°C (ISO 8573-1:2001 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**

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ENGINEERING YOUR SUCCESS.

Dryer Performance

Dryer Models	Dewpoint (Standard)		ISO 8573-1:2001 Classification (standard)	Dewpoint (Option 1)		ISO 8573-1:2001 Classification (Option 1)	Dewpoint (Option 2)		ISO 8573-1:2001 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	m³/min	m³/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.

1. 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.
2. Select correction factor for maximum inlet temperature from the CFT Table (always round up e.g. for 37°C use 40°C correction factor)
3. 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)
4. Select correction factor for required outlet dewpoint from the CFD table
5. Calculate minimum drying capacity
   Minimum Drying Capacity = Compressed Air Flow x CFT x CFP x CFD
6. 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 Temp		Max Operating Temp		Max Ambient Temp		Electrical supply (standard	Electrical supply (optional)	Thread Connections	Noise Level
	bar g	psi g	bar g	psi g	°C	°F	°C	°F	°C	°F				dB (A)
MXS	4	58	13	190	2	35	50	122	55	131	85 - 265 V 1ph 50/60Hz	N/A	BSPP or NPT	<75
MXA	4	58	13	190	2	35	50	122	55	131	85 - 265 V 1ph 50/60Hz	N/A	BSPP or NPT	<75
MXP	4	58	13	190	2	35	50	122	55	131	N/A	N/A	BSPP or NPT	<75

Controller Options

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

Dryer Coding Example

DRYER MODEL	CONTROLLER TYPE	NUMBER OF DRYING BANKS	NUMBER OF DRYING COLUMNS	DDS ENERGY MANAGEMENT
MX	S = Smart A = Advanced P = Pneumatic	No of individual dryers in installation	Number of columns per dryer bank	DDS = DDS Fitted (DDS standard with Advanced Controllers)
MX	S	3	08	DDS

Example Dryer Model MXS308DDS

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

For Dryer Model	Filter Pipe Size (R = BSPT)	Inlet General Purpose Pre-filter	Inlet High Efficiency Filter	Outlet Dust Filter
MX102C	R 2	AO040HBFX	AO040HBFX	AR040HBMX
MX103C	R 2	AO040HBFX	AO040HBFX	AR040HBMX
MX103	R 2	AO045HBFX	AO045HBFX	AR045HBMX
MX104	R 2	AO045HBFX	AO045HBFX	AR045HBMX
MX105	R 2½	AO050IBFX	AO050IBFX	AR050IBMX
MX106	R 2½	AO055IBFX	AO055IBFX	AR055IBMX
MX107	R 2½	AO055IBFX	AO055IBFX	AR055IBMX
MX108	R 2½	AO055IBFX	AO055IBFX	AR055IBMX

Important Note

Adsorption dryers are designed to remove water vapour from compressed air. For optimum performance and to deliver air quality in accordance with ISO 8573-1:2001, 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.