

PNEUDRI MPX

Heatless (PSA) Regeneration High Efficiency Compressed Air Dryers



PNEUDRI heatless dryers can provide the simple and cost effective solution for the provision of clean dry compressed air.

Using patented Parker domnick hunter technology, PNEUDRI heatless dryers provide the ultimate in performance, security and reliability.

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 CO₂ 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 & -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



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)
	°C	°F		°C	°F	
MPXS	-40	-40	Class 2	-70	-100	Class 1
MPXE	-40	-40	Class 2	-70	-100	Class 1

Product Selection

PNEUDRI MAXIplus MPX

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
MPX□110	G 4	652	39	2346	1381
MPX□112	G 4	782	47	2815	1657
MPX□210	G 4	1303	78	4692	2762
MPX□212	G 4	1564	94	5630	3314
MPX□310	G 4	1955	118	7038	4143
MPX□312	G 4	2346	141	8445	4971

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	-40	-70
	PDP °F	-40	-100
	CFD	0	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 Temp		Max Operating Temp		Max Ambient Temp		Electrical supply (standard)	Electrical supply (optional)	Thread Connections	Noise Level dB (A)
	bar g	psi g	bar g	psi g	°C	°F	°C	°F	°C	°F				
MPXS	4	58	13	190	2	35	50	122	55	131	230 V 1ph 50/60Hz	110 V 1PH 50/60Hz	BSPP or NPT	<75
MPXE	4	58	13	190	2	35	50	122	55	131	230 V 1ph 50/60Hz	110 V 1PH 50/60Hz	BSPP 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	•	•		•			•			•
ELECTRONIC	•	•	•	•	•	•	•	•		•

Dryer Coding Example

DRYER MODEL	CONTROLLER TYPE	NUMBER OF DRYING BANKS	NUMBER OF DRYING COLUMNS	DDS ENERGY MANAGEMENT
MPX	S = Smart E = Electronic	No of individual dryers in installation	Number of columns per dryer bank	DDS = DDS Fitted (DDS standard with Electronic Controller)
MPX	S	3	12	DDS

Example Dryer Model MPXS312DDS

Weights and Dimensions

Model	Pipe Size	Height (H)		Width (W)		Depth (D)		Weight	
		mm	ins	mm	ins	mm	ins	kg	lbs
MPX□110	G 4	1788	70.4	2223	87.5	550	21.7	895	1969
MPX□112	G 4	1788	70.4	2551	100.4	550	21.7	1025	2255



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.

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