PNEUDRI MIDIplus

High Efficiency Compressed Air Dryers

EXTENDED WARRANTY - AVAILABLE -

Contact Information:

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Air contains Water, Oil and Dirt

The Problem

Compressed air is an essential power source that is widely used throughout industry. This safe, powerful and reliable utility can be the most important part of your production process. However, your compressed air will contain water, dirt, wear particles, bacteria and even degraded lubricating oil which all mix together to form an unwanted abrasive sludge.

This sludge, often acidic, rapidly wears pneumatic machinery, blocks valves and orifices causing high maintenance and costly air leaks. It also corrodes piping systems and can bring your production process to an extremely expensive standstill!

The Solution

All of these costly problems can be simply avoided by installing a domnick hunter PNEUDRI MIDIplus High Efficiency Compressed Air Dryer package fitted with OIL-X EVOLUTION filtration. The packages are suitable for use with any compressor type and are suited to point of use applications.

PNEUDRI totally cleans and dries compressed air down to -40˚F (-40˚C) dp as standard - (ISO8573.1 Class 1.2.1). For critical applications, PNEUDRI can be supplied with a dewpoint of -100˚F (-70˚C) dp (ISO8573.1 Class 1.1.1). Based on well proven designs and principles, PNEUDRI embodies true innovation and excellent value for money. Technically superior yet simple by design, PNEUDRI leads the way in compressed air drying.

Corrosion

Unwanted Abrasive Sludge

Damaged Tools

How PNEUDRI works

PNEUDRI comprises of a high tensile extruded aluminum column containing twin chambers filled with desiccant material which dries the compressed air as it passes through. One chamber is operational (drying), while the opposite chamber is regenerating using the Pressure Swing Adsorption (PSA) method of drying.

A small amount of the dried compressed air is used to regenerate the saturated desiccant bed by expanding air from line pressure to atmospheric pressure, removing the moisture adsorbed by the desiccant material, and therefore regenerating the dryer.

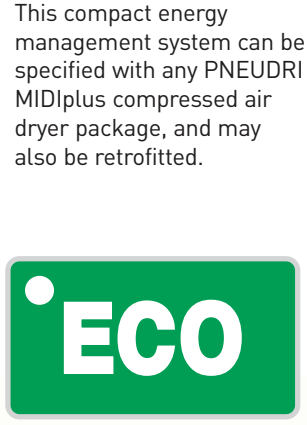
Dewpoint Dependent Switching (DDS) Energy Management System

Up to 80% of compressed air dryer energy can be saved by selecting the Dewpoint Dependent Switching option. By directly monitoring the outlet air quality (dewpoint) of the dryer, the system can automatically extend the 'drying period' beyond a normally fixed time cycle if the on-line drying chamber has adsorptive capacity remaining.

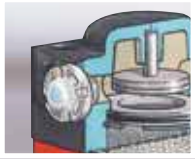
As compressed air systems rarely operate at full rated capacity all of the time, (e.g. during shiftwork and periods of low demand), the energy management system can provide considerable savings.

DURING THIS EXTENDED PERIOD OF ENERGY FREE DRYING, NO PURGE AIR ENERGY IS CONSUMED FOR REGENERATION.

This compact energy management system can be specified with any PNEUDRI MIDIplus compressed air dryer package, and may also be retrofitted.



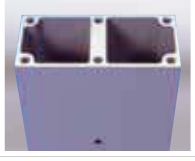
PNEUDRI MIDIplus DME Range



High visibility moisture indicators

High efficiency OIL-X EVOLUTION pre-and after filtration

Corrosion protected by alocrom and epoxy painting



High tensile extruded aluminum construction

Snow Storm filled to prevent fluidization and channelling

Pressure gauges provide constant system status

Reliable high performance electronic controls

Acoustic shroud lowers noise, and can be piped away

Optional energy saving Dewpoint Dependent Switching

The benefits

- **Dewpoint performance**
  Clean dry compressed air prevents corrosion and damage
- **Point of use applications**
  Only dry the air you need
- **Compact and space saving design**
  Ideal for use with light industrial compressors
- **Improve plant efficiency**
  Protect process and finished product
- **Simple to install and easy to maintain**
- **Economic to operate**
- **Approved to International Standards**
  Award winning design in accordance with ASME VIII Div1. Approved to PED, CSA/UL/CRN.

Technical Specifications

Flow Range:	24 scfm (0.68 Nm³/min) to 176 scfm (4.98 Nm³/min) at 100 psi g (7 bar g)	**Maximum Inlet Temperature:**	122°F (50°C)
Dewpoint: *(If -100°F (-70°C) pdp option required, contact* **domnick hunter***)*	-40°F (-40°C) Standard -100°F (-70°C) Optional	**Minimum Inlet Temperature:**	41°F (5°C)
Air Quality Class:	ISO 8573.1 Class 1.2.1 Standard ISO 8573.1 Class 1.1.1 Optional	**Controls:**	**MIDIplus** Electronic Control Timer†
Maximum Operating Pressure:	DME012 - 040 232 psi g (16 bar g) DME050 - 080 189 psi g (13 bar g)	**Standard Electrical Supply:**	230V/1Ph/50 - 60Hz 110V/1Ph/50 - 60Hz
Minimum Operating Pressure:	58 psi g (4 bar g)	**Noise Level (Average):**	75dB(A)

† Fully pneumatic option available.

Model	Flow Rates* @ 100 psi g (7 bar g)		Dimension ins (mm)	Weight lbs (kg)	Inlet Filter	Outlet Filter	Filter Port Size
	scfm	Nm³/min	A				
DME012	24	0.68	32.9 (837)	70 (32)	AA-020DNFI	AR-020DNMI	½" NPT
DME015	32	0.91	39.5 (1003)	81 (37)	AA-020DNFI	AR-020DNMI	½" NPT
DME020	42	1.19	46.0 (1168)	92 (42)	AA-020DNFI	AR-020DNMI	½" NPT
DME025	53	1.5	52.5 (1333)	103 (47)	AA-020DNFI	AR-020DNMI	½" NPT
DME030	65	1.84	59.0 (1499)	114 (52)	AA-020DNFI	AR-020DNMI	½" NPT
DME040	88	2.49	68.8 (1747)	132 (60)	AA-025DNFI	AR-025DNMI	¾" NPT
DME050	106	3	56.4 (1433)	176 (80)	AA-025ENFI	AR-025ENMI	1" NPT
DME060	130	3.68	62.9 (1599)	198 (90)	AA-030ENFI	AR-030ENMI	1" NPT
DME080	176	4.98	72.7 (1847)	229 (104)	AA-030ENFI	AR-030ENMI	1" NPT

**Referenced to 68°F (20°C) and 14.5 psi a (1 bar a)*

Correct Dryer Selection

1. Select your correction factor for minimum pressure (CFP) to inlet of dryer (Allow for system pressure losses when determining minimum operating pressure).

Minimum Pressure to Inlet of Dryer														
	psi g	58	73	87	102	116	131	145	160	174	189	203	218	232
	bar g	4	5	6	7	8	9	10	11	12	13	14	15	16
Correction Factor (CFP)		0.63	0.75	0.88	1.0	1.13	1.25	1.38	1.5	1.63	1.75	1.88	2.0	2.13

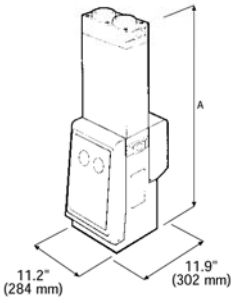
2. Select your correction factor for maximum temperature (CFT) to inlet of dryer.

Maximum Temperature to Inlet of Dryer						
	°F	77	95	104	113	122
	°C	25	35	40	45	50
Correction Factor	(CFT)	1.0	1.0	0.97	0.88	0.73

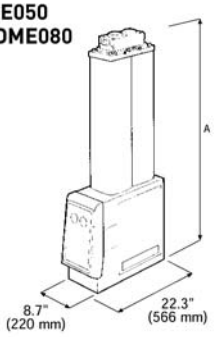
3. Calculate dryer capacity required following the equation below.

$$\frac{\text{Inlet flow requirement}}{\text{CFP x CFT}} = \text{Dryer capacity requirements}$$

DME012 to DME040



DME050 to DME080



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