

# Atlas Copco

Heatless Adsorption Compressed Air Dryers

CDX series



Absolutely moisture free clean air



# CDX – dryers for demanding applications



## Moisture: an avoidable threat ?

Compressed air entering the air net is always 100 % saturated with water vapour. When cooling down, this moisture will condense, causing damage to your air system... and to your finished products. The amount of water is directly proportional to the flow and although an aftercooler will eliminate 2/3 of the moisture, the remaining third can still be very destructive in many applications, such as instrument air, dry powder conveying or processes with rapid air expansion.

## Maximum performance for minimum cost

The robust design of CDX ensures that the complete range operates with total reliability, producing the desired pressure dew point even in the most difficult conditions. Coupled with the most advanced control systems, the CDX range provides the best quality air for the lowest possible cost.

Atlas Copco's dew point dependent purge control significantly reduces energy costs while ensuring a totally stable and reliable dew point. Using the unique microprocessor based in combination with a top class PDP sensor, a payback period of less than 6 months is not uncommon.



Stainless steel 3-way switching valve

## CDX totally eliminates moisture

Atlas Copco CDX adsorption dryers eliminate the moisture before it can cause any damage. Even the possibility of freezing is non-existent. The CDX dryers ensure a reliable process and impeccable end products by offering absolutely dry air to your compressed air system, with a pressure dew point of  $-40^{\circ}\text{C}$  or even  $-70^{\circ}\text{C}$



Purge control technology

## CDX 120 - 1050 – High performance for critical application

- Wide dessicant vessels
- Pneumatically operated switching valves
- Silencers with integrated Safety valves
- Robust frame with fork lift slots and lifting eyes
- Integrated filter pack

# Technical Specifications

CDX DRYER TYPE	Inlet capacity		Inlet capacity		Inlet/outlet Connections
	11 bar variant at 7 bar g		16 bar variant at 12.5 bar g		
	l/s	cfm	l/s	cfm	ANSI
CDX 120	120	252	144	305	1 ½"
CDX 180	180	381	215	456	1 ½"
CDX 220	220	466	265	562	1 ½"
CDX 300	300	636	360	763	2"
CDX 350	360	763	430	911	2"
CDX 400	400	844	N/A	N/A	3"
CDX 520	520	1101	N/A	N/A	3"
CDX 780	780	1651	N/A	N/A	4"
CDX 1050	1050	2223	N/A	N/A	4"

## Reference Conditions:

Compressor air inlet temperature:  
35°C/ 100°F

Inlet relative humidity:  
100%

Dryer inlet pressure for 11 bar variants, after inlet filtration:  
7 bar(g)/ 102 psi(g)

Dryer inlet pressure for 16 bar variants, after inlet filtration:  
12.5 bar(g)/ 181 psi(g)

To adjust the performance of each dryer for different inlet conditions,  
use the correction factors below.

## Pressure dew point correction (Kd)

Pressure dew point	°C	-20	-40	-70
	°F	-4	-40	-100
CDX 120-1050	Kd	1	1	0.8

## Inlet pressure correction factor(Kp)

Inlet pressure	bar (g) psi (g)	11 bar(g)/160 psi(g) version								16 bar(g)/232 psi(g) version				
		4	5	6	7	8	9	10	11	12.5	13	14	15	16
		58	73	87	102	116	131	145	160	181	189	203	218	232
CDX 120 -1050	Kp	0.47	0.68	0.84	1	1.1	1.2	1.3	1.38	1	1.04	1.11	1.19	1.24

## Inlet temperature correction factor (Kt )

Inlet pressure	bar (g)	25	30	35	40	45	50
		psi (g)	77	86	95	104	113
CDX 120-1050	Kp	1	1	1	0.84	0.71	0.55

## Example:

What is the capacity of an CDX120, working at 8 bar(g)/116 psi(g), with an inlet temperature of 40°C/104°F with a required pressure dew point of -40°C/-40°F ?

Find each correction factor :

Kd = 1, Kp = 1.1, Kt = 0.84

Actual capacity = nominal capacity x Kd x Kp x Kt

Actual capacity = 120 x 1 x 1.1 x 0.84

Actual capacity = 111 l/s or 235 cfm



# Atlas Copco

- Global industrial group, headquartered in Stockholm, Sweden.
- More than 130 years of experience.
- World leader in Compressed Air technology.
- More than 26,000 employees worldwide, with sales turnover, over US\$ 6 billion.
- Manufacturing facilities in 17 countries across 4 continents.
- From design to production and delivery of compressors, Atlas Copco adheres to the ISO 9001 management system.
- Atlas Copco's Environmental Management System forms an integral part of each business process.
- State-of-the-art manufacturing facility in India.
- Sales, Service & Dealer network in 150 countries.



ISO 9001

Atlas Copco's Environmental Management System forms an integral part of each business process.



ISO 9001

From design to production and delivery, Atlas Copco compressors adhere to the ISO 9001 Management Systems requirements.

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