

Atlas Copco



FX 400-2000

Refrigerant dryers

Complete protection for your application

Compressed air entering the air net is always saturated. When it cools, the moisture will condense, causing damage to your air system and finished products.

By removing moisture from compressed air with a pressure dewpoint (PDP) as low as +3°C / +37°F, our FX refrigerant dryers are your reliable partner to reduce system failures, production downtime and costly repairs.



Best in class performance

FX refrigerant dryers are designed in-house, tested using the most stringent methods and manufactured on a highly advanced, lean production line. They meet or exceed the international standards for compressed air purity and are tested according to ISO 7183:2007.



Atlas Copco – your reliable partner in air treatment

Atlas Copco has been your reliable partner in compressed air for many decennia. Our commitment to your operational objectives didn't end there. For more than 25 years we are now developing in-house air treatment products to offer you quality air with performance, reliability and efficiency.



Peace of mind

Why compromise using third party add-ons when you can extend the Atlas Copco peace of mind to your entire compressed air system?



Reliability

Our FX refrigerant dryers offer you the most reliable products.



Heat exchanger

- Competitive pressure drop
- Crossflow design giving highest heat transfer efficiency
- Integrated high efficiency water separator

Refrigerant

R410A has proven itself as a reliable refrigerant gas with no chlorine, zero ozone depletion potential (ODP) and only 0.1 Å°C/0.18 Å°F temperature glide. This reduces refrigerant and compression energy use and allows for a constant pressure dew point.

Oil Separator

Rerouting compressor oil from the refrigerant back to the compressor improving overall compressor efficiency and guaranteeing all time lubrication.

Electronic drains

- Nonstick floater design
- Control algorithm programmed to avoid clogging of the drain
- Automatic cleaning routine
- Zero-air-loss drain
- Easy access for service

Refrigerant compressor

A high efficiency scroll refrigerant compressor consumes on average 20% less power than dryers operating with a reciprocating refrigerant compressor.

The FX refrigerant compressor is accurately sized for a reliable & competitive performance.

Microchannel condenser

Having a microchannel design makes it a more robust component and contributes to a better cooler efficiency. The condenser ensures a reliable long lifetime with optimal performance.

Refrigerant filter

The refrigerant filter protects the entire system from water and solid particles.

Liquid separator

The liquid separator ensures that only gaseous refrigerant enters the compressor.

Robust base frame

The robust base frame design provides a strong base to build the unit on.

Forklift slot holes provide an easy access from the side, but the unit is designed to be able to be lifted from all 4 sides.

Refrigerant control valves

The FX relies on thermostatic expansion valves to regulate the dryer behavior to the most efficient operation point at all times.

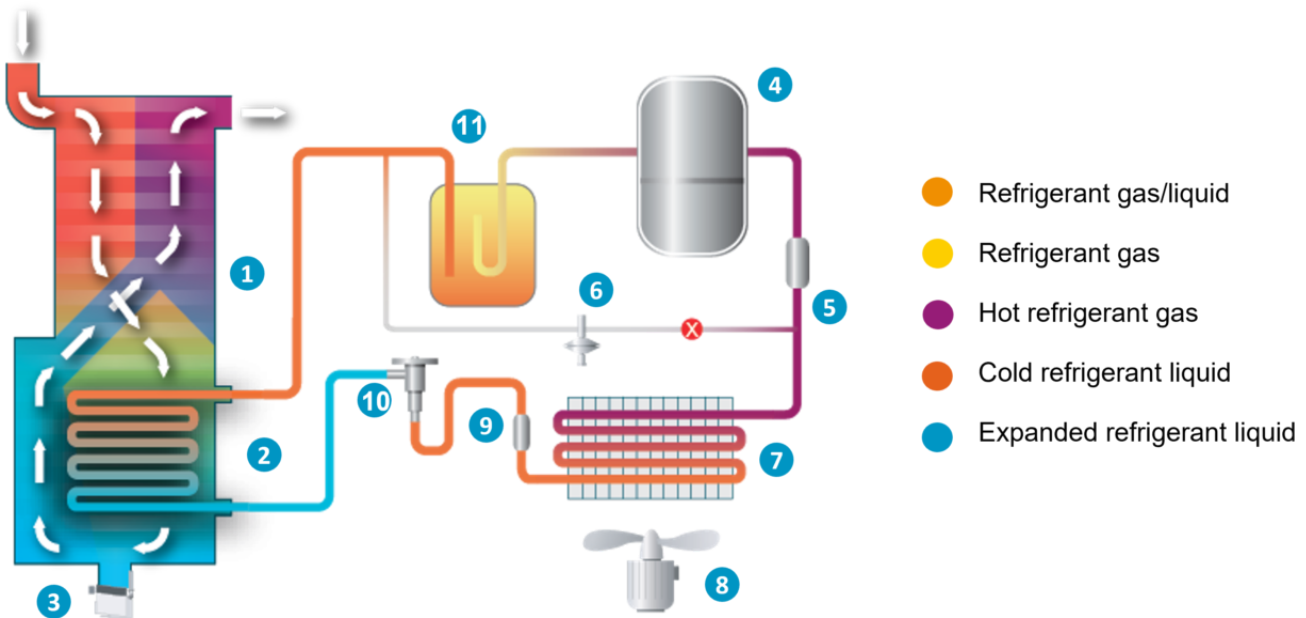
A hot gas bypass will avoid potential frost damage in the airflow circuit. Also, the pressure reducer uses a refrigerant control valve that regulates the pressure reducing opening to the required section. No chance for any blockages you might have on a capillary design.

Digital display

An IP54 digital display precision-measures and monitors the pressure dew point and dryer performance. The clear display, symbols and operating buttons guarantees an easy-going user experience.

Flowchart

Working principal FX series



1. Air to air part Heat exchanger
2. Integrated water separator
3. Drain
4. Refrigerant compressor
5. Oil separator
6. Hot gas bypass valve
7. Refrigerant condenser
8. Fans (air cooled versions)
9. Refrigerant filter
10. Expansion valve
11. Liquid separator

Scope of supply

Scope of supply

Air treatment	Inlet and outlet connections
	– DIN / ANSI flanges
	– BSPT / NPT thread
	Heat exchanger with integrated water separator
	Zero loss condensate drain
Refrigerant gas	R410A
Voltage	400/3/50 380/3/60, 460/3/60, 575/3/60
Electrical approval	IEC / cULus
Unit controller	Digital display
	IP54 protection
	Voltage free contacts for remote alarm / warning signals
Framework	Base frame with forklift slot holes
	Unit canopy
Additional features and options	Pre-setting of controller for imperial or metric usage
	Transportation protection

Limitations

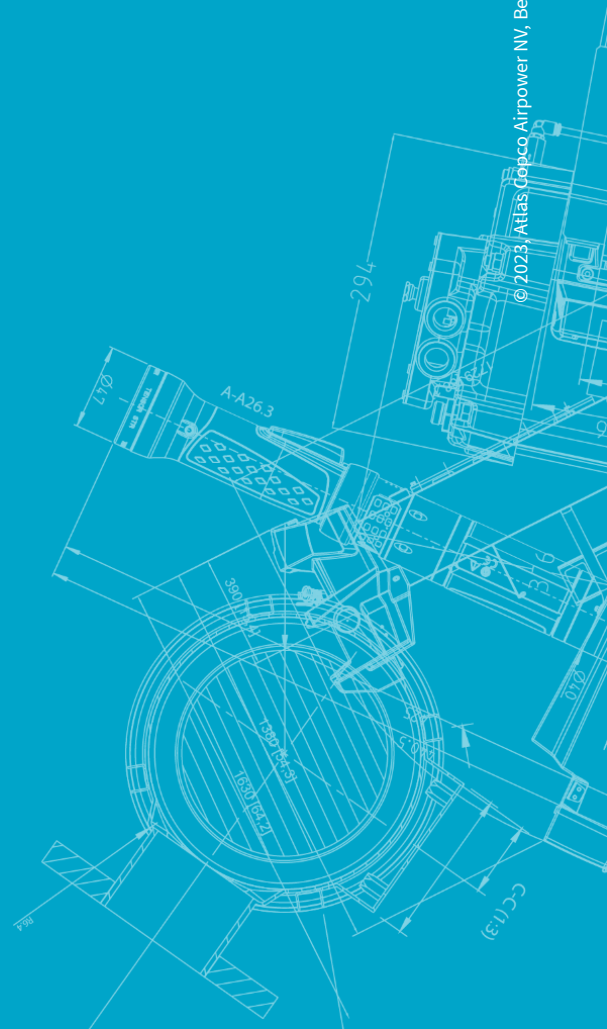
Limitations		
Max inlet temperature	degC / degF	70 / 158
Max inlet pressure	barg / psig	14 / 203
Max ambient temperature	degC / degF	46 / 115

Technical Specifications

Performance	Inlet flow			Power	Pressure drop	In/outlet connections (ISO/NPT)	Suggested prefilter	R410A		Dimensions					
	l/s	m ³ /hr	cfm					kg	ton CO ₂	Width		Length		Height	
	l/s	m ³ /hr	cfm	kW	mbar	DIN PN16 / ANSI150#	DD+	kg	ton CO ₂	mm	inch	mm	inch	mm	inch
FX400	400	1440	848	3.5	250	G/ NPT 3"	480	1.7	3.5	1019	40.1	1119	44.1	1399	55.1
FX500	500	1800	1059	3.7	250	G/ NPT 3"	630	3	6.3	1019	40.1	1109	43.7	1596	62.8
FX580	580	2099	1235	4.6	285	G/ NPT 3"	630	3.4	7.1	1019	40.1	1109	43.7	1596	62.8
FX750	750	2700	1589	6.1	230	DN100/4"	970	4.8	10	1019	40.1	1108	43.6	1826	71.9
FX830	830	2999	1765	6.5	285	DN100/4"	970	5.4	11.3	1019	40.1	1518	59.8	1826	71.9
FX1160	1160	4198	2471	7.3	290	DN100/4"	1260	5.8	12.1	1019	40.1	1518	59.8	1826	71.9
FX1400	1400	5040	2966	8.3	200	DN150/6"	1600	10	20.9	1469	57.8	1966	77.4	1826	71.9
FX1650	1650	5940	3496	10.2	240	DN150/6"	2100	11	23	1469	57.8	1966	77.4	1826	71.9
FX2000	2000	7200	4238	12.2	285	DN150/6"	2100	12	25.1	1469	57.8	1966	77.4	1833	72.2



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