COMPRESSED AIR DRYERS

F series refrigerant dryers

Capillary tube
Reduces refrigerant pressure and temperature for improved cooling.

Refrigerant filter
Protects the capillary from dirt particles.

Air/air and air/refrigerant heat exchanger
Offer high thermal exchange and low load losses.

Integrated water separator
Ensures a very efficient water/air separation.

Control panel
Pressure dewpoint indicator and main on/off switch.

Hot gas bypass valve
- Injects hot compressor discharge gas into the suction/liquid separator.
- Keeps refrigeration capacity in all load conditions.
- Maintains constant pressure in the evaporator to avoid freezing.

Refrigerant condenser
Air-cooled and with a large exchange surface for high thermal exchange.

Timer drain
Ensures proper condensate draining.

Refrigerant compressor
Driven by an electric motor, cooled with refrigerant fluid and protected against thermal overload.

THE COMPACT AND EFFICIENT DRY AIR SOLUTION

The Atlas Copco F series refrigerant dryers keep your compressed air system in optimal shape, removing humidity efficiently and reliably. With a stable pressure dewpoint as low as 7 °C, these compact, low maintenance dryers are compatible with most compressor technologies and applications.

FEATURES AND BENEFITS

Strong performance & reliability
- Stable pressure dewpoint as low as 7 °C.
- Simple and proven design.
- Quality components.

Quick installation & easy operation
- Compact footprint of only 0.13 m^2.
- Simple vertical design.
- Quick plug-and-play installation.
- Dewpoint indicator to verify air quality.

Cost savings
- Efficient cooling system ensures low energy costs.
- Increased lifetime of tools and equipment.
- Fewer repairs to tools, machines and pipe work.

Low maintenance
- Long service intervals.
- Easy access to key components.

WHY DRY COMPRESSED AIR

The air that leaves a compressor reaches 100% humidity. Aftercoolers and drains are the first line of defense against water in your system. Atlas Copco dryers eliminate the residual humidity to achieve absolutely dry air for applications that require advanced air quality.

RECOMMENDED APPLICATIONS

- Pneumatic tools and equipment
- Pneumatic control systems
- Painting
- Packaging
- Injection molding
- Car mechanics
- Tire inflation

REFRIGERANT DRYERS

Refrigerant dryers use a refrigerant gas to cool compressed air. This allows them to first condense and then remove the humidity in the air.

IS0 8573-1 CLASS 5 QUALITY

Thanks to their 7 °C/45 °F pressure dewpoint, Atlas Copco F dryers can be used for applications that require IS0 8573-1 Class 5 air quality.

Quality classes	Particle size	Maximum pressure dewpoint		Maximum oil content (droplets, aerosols, and vapor ppm)	
	microns	°C	°F	w/w	mg/m³
0	as specified	as specified		as specified	
1	0.1	-70	-94	0.008	0.01
2	1	-40	-40	0.08	0.1
3	5	-20	-4	0.8	1
4	15	3	38	4	5
5	**40**	**7**	**45**	**21**	**25**
6	-	10	50	-	-

TECHNICAL SPECIFICATIONS

Type	Maximum working pressure		Air treatment capacity[1]			Nominal electrical power [1]	Voltage	Connection size inlet/outlet	Dimensions (L x W x H)		Weight		Refrigerant
	bar	psi	l/s	m³/h	cfm	W	V/ph/Hz	inch	mm	inch	kg	lbs	
F 5	16	232	5	18	10.6	126	230/1/50	3/4" M	233x559x561	9x22x22	19	42	R134a
F 10	16	232	10	36	21.2	126	230/1/50	3/4" M	233x559x561	9x22x22	19	42	R134a
F 15	16	232	15	54	31.8	163	230/1/50	3/4" M	233x559x561	9x22x22	19	42	R134a
F 20	16	232	20	72	42.4	228	230/1/50	3/4" M	233x559x561	9x22x22	20	44	R134a
F 30	16	232	30	108	63.6	293	230/1/50	3/4" M	233x559x561	9x22x22	25	55	R134a
F 40	16	232	40	144	84.8	380	230/1/50	3/4" M	233x559x561	9x22x22	27	60	R134a
F 50	16	232	50	180	105.9	419	230/1/50	1" F	233x559x561	9x22x22	30	66	R134a
F 60	16	232	60	216	127.1	664	230/1/50	1" F	310x706x994	12x28x39	52	115	R404A
F 70	13	188	70	252	148.3	767	230/1/50	1 1/2" F	310x706x994	12x28x39	57	126	R404A
F 90	13	188	90	324	190.7	865	230/1/50	1 1/2" F	310x706x994	12x28x39	59	130	R404A
F 110	13	188	110	396	233.1	1028	230/1/50	1 1/2" F	310x706x994	12x28x39	80	176	R404A
F 130	13	188	130	468	275.5	1242	230/1/50	1 1/2" F	310x706x994	12x28x39	80	176	R404A

Reference conditions[1]:

- Operating pressure: 7 bar/100 psi
- Operating temperature: 35 °C/95 °F
- Room temperature: 25 °C/77 °F

- Pressure dewpoint: 7 °C (+/- 1)/45 °F (+/- 1.8)
- Also available in 60Hz
- UL-approved 115V/1ph (F 5-50) and 230V/1ph (F 60-130)

Limit conditions:

- Working pressure: 16 bar (F 5-60)
  13 bar (F 70-130)
- Inlet temperature: 50 °C/122 °F
- Min./max. ambient temperature: 5 °C/46 °F - 40 °C/104 °F

Correction factors:

Correction factors for different ambient temperatures												
Ambient temperature °C	25	30	35	40								
Multiplication factor (A)	1	0.92	0.84	0.8								
Correction factors for different inlet temperatures												
Inlet temperature °C	25	30	35	40	45	50						
Multiplication factor (B)	1.57	1.24	1	0.82	0.69	0.54						
Correction factors for different inlet pressures												
Inlet pressure (bar)	5	6	7	8	9	10	11	12	13	14	15	16
Multiplication factor (C)	0.9	0.96	1	1.03	1.06	1.08	1.1	1.12	1.13	1.15	1.2	1.2

EXAMPLE:

Customer demand: 50 l/s
@ 30 °C ambient temperature
@ 40 °C inlet temperature
@ 10 bar pressure

Ambient factor (A) = 0.92
Inlet temperature (B) = 0.82
Working pressure (C) = 1.08
K factor 0.92 x 0.82 x 1.08 = 0.815
Required dryer size: 50/0.815 = 61.3 l/s

Possible dryer:

F 60 nominal flow 60 l/s (Recommended)

F 70 nominal flow 70 l/s (Oversized)

Atlas Copco

LLOYD'S REGISTER · LRQA
ISO 9001 · ISO 14001
OHSAS 18001

www.atlascopco.com

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