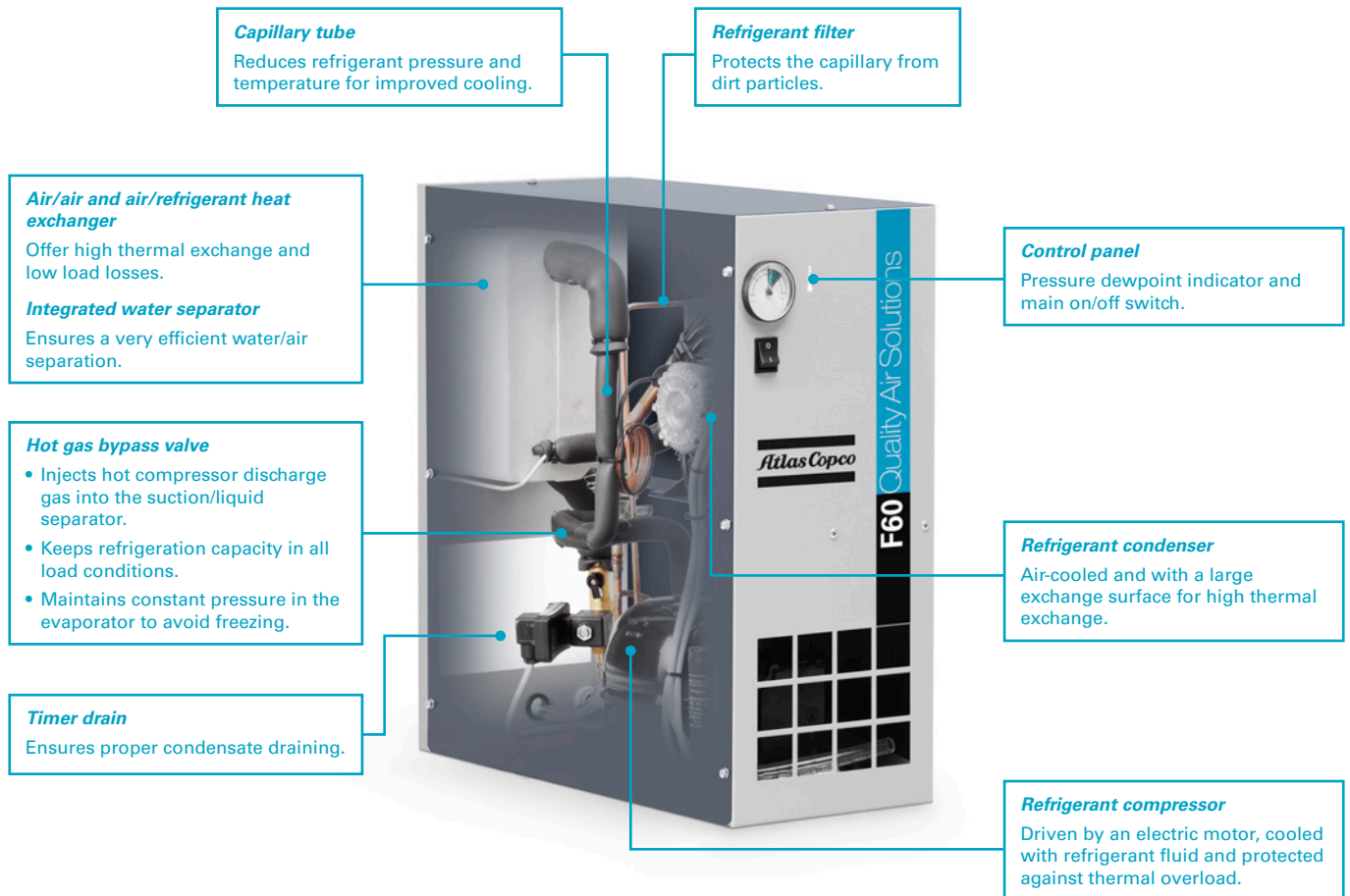




COMPRESSED AIR DRYERS

F series refrigerant dryers

Atlas Copco



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 m².
- 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

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	m ³ /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 conditions¹:

- 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

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.

ISO 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 ISO 8573-1 Class 5 air quality.

Quality classes	Particle size microns	Maximum pressure dewpoint		Maximum oil content (droplets, aerosols, and vapor ppm)	
		°C	°F	w/w	mg/m ³
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	-	-

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 $0.92 \times 0.82 \times 1.08 = 0.815$
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)

REFRIGERANT AIR DRYERS

FX 1-21



Atlas Copco



AIR TREATMENT, A CRUCIAL INVESTMENT

WHY YOU NEED QUALITY AIR

Compressed air contains oil, solid particles and water vapors. Together, they form an abrasive, often acidic, oily sludge. Without air treatment, this murky mix will enter the compressed air system, corroding pipe work, damaging pneumatic tools and potentially compromising final products.



THE COST OF POOR AIR QUALITY

Untreated compressed air can cause substantial problems and costs:

- Your air tools have less power, more failures and, ultimately, a shorter lifetime.
- Materials and products that come into contact with untreated air run the risk of contamination or damage.
- Compressed air pipe work will corrode, leading to leaks. For example, a small 3 mm leak causes a 3.7 kW per year loss. That means a waste of an estimated €1800.

ATLAS COPCO QUALITY AIR, THE SMART CHOICE

ATLAS COPCO FX: DEPENDABLE DRY AIR

To avoid condensation, compressed air must be dried. The Atlas Copco FX refrigerant dryer is a reliable, cost effective and easy to use solution. Available in 22 sizes (7-1236 l/s or 14-2516 cfm), the FX offers a pressure dew point as low as +3 °C/+37.4 °F for a wide range of applications and industries. The dryer can be used at different pressures and consumes hardly any processed compressed air.

A COMPLETE QUALITY AIR SYSTEM

Atlas Copco offers complete quality air systems that provide the clean, dry air that supports your operational needs.



FX: THE BENEFITS ADD UP

- Strong performance.
- Pressure dew point display.
- Straightforward reliability.
- Easy installation.
- Minimal maintenance.
- Significant cost savings.



A NAME YOU CAN TRUST

For more than 100 years, you have turned to Atlas Copco for the better compressors in the business. Our commitment to your operational objectives doesn't end there. Atlas Copco air treatment equipment is developed and tested in-house to offer you quality air with accuracy, reliability and efficiency. Why compromise using third party add-ons when you can extend the Atlas Copco peace of mind to your entire compressed air system?

FX

REFRIGERANT DRYERS

Quality air made easy

PRESSURE DEW POINT PRECISION

The FX comes in a wide range of sizes (7-1236 l/s or 14-2516 cfm) to offer a steady pressure dew point as low as +3 °C/+37.4 °F. Its easy to use digital display precision-measures and monitors the pressure dew point and dryer performance.



NEW: DIGITAL DISPLAY

- Pressure dew point: exact measurement and visual monitoring.
- Status: refrigerant compressor and fan.
- Alarms: high/low pressure dew point and probe failure.
- Service warning.

RELIABLE

Built according to the stringent Atlas Copco standards, the FX is made of high quality, generously sized components.

HOT ENVIRONMENTS

High ambient temperatures can put your equipment to the test. The FX range offers several high temperature models that ensure dependable performance in conditions up to 46 °C/115 °F.

Digital display: provides peace of mind through precise monitoring of pressure dew point.

Compact design for a small footprint.



Refrigerant separator: no chance of moisture entering the compressed air system.

Single electrical connection: allows for plug-and-play installation.

Hot gas bypass: ensures stable pressure dew point and eliminates the possibility of condensate freezing.

Easy access to key components for straightforward servicing.

Water separator: offers high efficiency for better pressure dew point.

YOUR CHOICE: STANDALONE OR INTEGRATED?

The FX comes as a standalone dryer and as part of the full feature version of many Atlas Copco compressors. Which one is best for you? It all depends on your requirements and priorities ...

Separate dryer:

- Plug-and-play installation.
- Single electrical connection.
- All units pre-commissioned.
- Self-regulating.
- Pressure dew point display with high/low pressure dew point alarm and status of refrigerant, compressor and fan.

Full feature:

- Saves space when footprint is a priority.
- Compressor and air treatment components are designed, built and tested to work together to provide optimal quality air.

SIGNIFICANT COST SAVINGS

- Increased reliability and lifetime of tools and equipment.
- Reduced pipe work leaks and thus a lower energy bill.
- Less equipment breakdowns and operational interruptions.
- Minimal chance of product damage as a result of moisture carryover.

TECHNICAL SPECIFICATIONS 50 Hz

FX REFRIGERANT DRYER RANGE 50 Hz

Model	Outlet pressure dew point +5 °C/41 °F				Outlet pressure dew point +3 °C/37 °F				Maximum working pressure		Electrical supply	Dimensions						Weight		Compressed air connections
	Inlet capacity		Pressure drop		Inlet capacity		Pressure drop					Length		Width		Height				
	l/s	cfm	bar	psi	l/s	cfm	bar	psi	bar	psi		mm	inch	mm	inch	mm	inch	kg	lb	
FX 1	7	14	0.20	2.88	6	13	0.15	2.18	16	232	230/1/50Hz	500	19.69	350	13.78	484	19.06	19	42	3/4" M
FX 2	12	24	0.33	4.79	10	21	0.25	3.63	16	232	230/1/50Hz	500	19.69	350	13.78	484	19.06	19	42	3/4" M
FX 3	16	35	0.33	4.79	14	30	0.25	3.63	16	232	230/1/50Hz	500	19.69	350	13.78	484	19.06	20	44	3/4" M
FX 4	23	49	0.33	4.79	20	42	0.25	3.63	16	232	230/1/50Hz	500	19.69	350	13.78	484	19.06	25	55	3/4" M
FX 5	35	74	0.40	5.75	30	64	0.30	4.35	16	232	230/1/50Hz	500	19.69	350	13.78	484	19.06	27	60	3/4" M
FX 6	45	95	0.42	6.14	39	83	0.32	4.64	13	189	230/1/50Hz	500	19.69	370	14.57	804	31.65	51	112	1" F
FX 7	58	122	0.50	7.29	50	106	0.38	5.51	13	189	230/1/50Hz	500	19.69	370	14.57	804	31.65	51	112	1" F
FX 8	69	146	0.24	3.45	60	127	0.18	2.61	13	189	230/1/50Hz	560	22.05	460	18.11	829	32.64	61	135	1 1/2" F
FX 9	79	167	0.33	4.79	68	144	0.25	3.63	13	189	230/1/50Hz	560	22.05	460	18.11	829	32.64	68	150	1 1/2" F
FX 10	100	211	0.24	3.45	87	184	0.18	2.61	13	189	230/1/50Hz	560	22.05	460	18.11	829	32.64	73	161	1 1/2" F
FX 11	125	264	0.26	3.84	108	229	0.20	2.90	13	189	230/1/50Hz	560	22.05	580	22.83	939	36.97	90	198	1 1/2" F
FX 12	148	313	0.36	5.18	128	271	0.27	3.92	13	189	230/1/50Hz	560	22.05	580	22.83	939	36.97	90	198	1 1/2" F
FX 13	192	407	0.33	4.79	167	354	0.25	3.63	13	189	400/3/50Hz	898	35.35	735	28.94	1002	39.45	128	282	2" F
FX 14	230	488	0.40	5.80	200	424	0.30	4.35	13	189	400/3/50Hz	898	35.35	735	28.94	1002	39.45	146	322	2" F
FX 15	288	611	0.40	5.80	250	530	0.30	4.35	13	189	400/3/50Hz	898	35.35	735	28.94	1002	39.45	158	348	2" F
FX 16	345	731	0.40	5.80	300	636	0.30	4.35	13	189	400/3/50Hz	898	35.35	735	28.94	1002	39.45	185	408	2" F
FX 17	424	899	0.28	4.07	400	848	0.25	3.63	13	189	400/3/50Hz	1082	42.59	1020	40.15	1560	61.41	325	717	3" F
FX 18	530	1124	0.34	4.89	500	1060	0.30	4.35	13	189	400/3/50Hz	1082	42.59	1020	40.15	1560	61.41	335	739	3" F
FX 19	618	1310	0.39	5.70	583	1236	0.35	5.08	13	189	400/3/50Hz	1082	42.59	1020	40.15	1560	61.41	350	772	3" F
FX 19.5	795	1685	0.28	4.07	750	1527	0.25	3.63	13	189	400/3/50Hz	1123	44.2	1020	40.15	1560	61.41	380	838	Flanged DN 125
FX 20	883	1872	0.34	4.89	833	1766	0.30	4.35	13	189	400/3/50Hz	2099	82.6	1020	40.15	1560	61.41	550	1213	Flanged DN 125
FX 21	1236	2516	0.28	4.07	1166	2374	0.25	3.63	13	189	400/3/50Hz	2099	82.6	1020	40.15	1560	61.41	600	1323	Flanged DN 125

OPTIONAL FILTER SELECTION

Model	Outlet pressure dew point +5 °C/41 °F		Outlet pressure dew point +3 °C/37 °F	
	Inlet capacity	Filter	Inlet capacity	Filter
	l/s		l/s	
FX 1	7	UD9+	6	UD9+
FX 2	12	UD15+	10	UD15+
FX 3	16	UD15+	14	UD15+
FX 4	23	UD25+	20	UD25+
FX 5	35	UD45+	30	UD45+
FX 6	45	UD45+	39	UD45+
FX 7	58	UD60+	50	UD60+
FX 8	69	UD100+	60	UD60+
FX 9	79	UD100+	68	UD100+
FX 10	100	UD100+	87	UD100+
FX 11	125	UD140+	108	UD140+
FX 12	148	UD180+	128	UD140+
FX 13	192	UD220+	167	UD180+
FX 14	230	UD310+	200	UD220+
FX 15	288	UD310+	250	UD310+
FX 16	345	UD425+	300	UD310+
FX 17	424	UD425+	400	UD425+
FX 18	530	UD550+	500	UD550+
FX 19	618	UD850+	583	UD850+
FX 19.5	795	UD850+	750	UD850+
FX 20	883	UD850+	833	UD850+
FX 21	1236	UD1400+	1166	UD1400+

REFERENCE CONDITIONS

Ambient temperature:	25 °C
Inlet temperature:	35 °C
Working pressure:	7 bar (g)

LIMITATIONS

Maximum ambient temperature:	43 °C*
Minimum ambient temperature:	5 °C
Maximum inlet temperature:	55 °C**

*46 °C for FX 1-16
**60 °C for FX 17-21

NOTES

Refrigerant types:	R134a for FX 1-5
	R404a for FX 6-12
	R410A for FX 13-16
	R404a for FX 17-21

TECHNICAL SPECIFICATIONS 60 Hz

FX REFRIGERANT DRYER RANGE 60 Hz

Model	Outlet pressure dew point +5 °C/41 °F				Outlet pressure dew point +3 °C/37 °F				Maximum working pressure		Electrical supply	Dimensions						Weight		Compressed air connections
	Inlet capacity		Pressure drop		Inlet capacity		Pressure drop					Length		Width		Height				
	l/s	cfm	bar	psi	l/s	cfm	bar	psi	bar	psi		mm	inch	mm	inch	mm	inch	kg	lb	
FX 1	7	14	0.20	2.88	6	13	0.15	2.18	16	232	115-230/1/60Hz	500	19.7	350	13.8	484	19.1	19	42	3/4" NPT
FX 2	12	24	0.33	4.79	10	21	0.25	3.63	16	232	115-230/1/60Hz	500	19.7	350	13.8	484	19.1	19	42	3/4" NPT
FX 3	16	35	0.33	4.79	14	30	0.25	3.63	16	232	115-230/1/60Hz	500	19.7	350	13.8	484	19.1	20	44	3/4" NPT
FX 4	23	49	0.33	4.79	20	42	0.25	3.63	16	232	115-230/1/60Hz	500	19.7	350	13.8	484	19.1	25	55	3/4" NPT
FX 5	35	74	0.40	5.75	30	64	0.30	4.35	16	232	115-230/1/60Hz	500	19.7	350	13.8	484	19.1	27	60	3/4" NPT
FX 6	45	95	0.42	6.14	39	83	0.32	4.64	13	189	115-230/1/60Hz	500	19.7	370	14.6	804	31.7	51	112	1" NPT
FX 7	58	122	0.50	7.29	50	106	0.38	5.51	13	189	115-230/1/60Hz	500	19.7	370	14.6	804	31.7	51	112	1" NPT
FX 8	69	146	0.24	3.45	60	127	0.18	2.61	13	189	115-230/1/60Hz	560	22.0	460	18.1	829	32.6	61	135	1 1/2" NPT
FX 9	79	167	0.33	4.79	68	144	0.25	3.63	13	189	115-230/1/60Hz	560	22.0	460	18.1	829	32.6	68	150	1 1/2" NPT
FX 10	100	211	0.24	3.45	87	184	0.18	2.61	13	189	115-230/1/60Hz	560	22.0	460	18.1	829	32.6	73	161	1 1/2" NPT
FX 11	125	264	0.26	3.84	108	229	0.20	2.90	13	189	230/1/60Hz	560	22.0	580	22.8	939	37.0	90	198	1 1/2" NPT
FX 12	148	313	0.36	5.18	128	271	0.27	3.92	13	189	230/1/60Hz	560	22.0	580	22.8	939	37.0	90	198	1 1/2" NPT
FX 13	192	407	0.26	3.77	167	354	0.20	2.90	13	189	460/3/60Hz	898	35.35	735	28.9	1002	36.4	173	381	2" NPT
FX 14	230	488	0.33	4.79	200	424	0.25	3.63	13	189	460/3/60Hz	898	35.35	735	28.9	1002	36.4	178	392	2" NPT
FX 15	288	611	0.46	6.67	250	530	0.35	5.08	13	189	460/3/60Hz	898	35.35	735	28.9	1002	36.4	183	404	2" NPT
FX 16	345	731	0.46	6.67	300	636	0.35	5.08	13	189	460/3/60Hz	898	35.35	735	28.9	1002	36.4	183	404	2" NPT
FX 17	424	899	0.28	4.07	400	848	0.25	3.63	13	189	460/3/60Hz	1082	42.59	1020	40.15	1560	61.41	325	717	3" NPT
FX 18	530	1124	0.34	4.89	500	1060	0.30	4.35	13	189	460/3/60Hz	1082	42.59	1020	40.15	1560	61.41	335	739	3" NPT
FX 19	618	1310	0.39	5.70	583	1236	0.35	5.08	13	189	460/3/60Hz	1082	42.59	1020	40.15	1560	61.41	350	772	3" NPT
FX 19.5	795	1685	0.28	4.07	750	1527	0.25	3.63	13	189	460/3/60Hz	1123	44.2	1020	40.15	1560	61.41	380	838	Flanged DN 125
FX 20	883	1872	0.34	4.89	833	1766	0.30	4.35	13	189	460/3/60Hz	2099	82.6	1020	40.15	1560	61.41	550	1213	Flanged DN 125
FX 21	1187	2516	0.28	4.07	1120	2374	0.25	3.63	13	189	460/3/60Hz	2099	82.6	1020	40.15	1560	61.41	600	1323	Flanged DN 125

OPTIONAL FILTER SELECTION

Model	Outlet pressure dew point +5 °C/41 °F		Outlet pressure dew point +3 °C/37 °F	
	Inlet capacity	Filter	Inlet capacity	Filter
	cfm		cfm	
FX 1	14	UD9+	13	UD9+
FX 2	24	UD15+	21	UD15+
FX 3	35	UD15+	30	UD15+
FX 4	49	UD25+	42	UD25+
FX 5	74	UD45+	64	UD45+
FX 6	95	UD45+	83	UD45+
FX 7	122	UD60+	106	UD60+
FX 8	146	UD100+	127	UD60+
FX 9	167	UD100+	144	UD100+
FX 10	211	UD100+	184	UD100+
FX 11	264	UD140+	229	UD140+

COMMITTED TO SUSTAINABLE PRODUCTIVITY

We stand by our responsibilities towards our customers, towards the environment and the people around us.
We make performance stand the test of time. This is what we call – Sustainable Productivity.



2935 0880 45 © 2015, Atlas Copco Airpower NV, Belgium. All rights reserved.
Designs and specifications are subject to change without notice or obligation.
Read all safety instructions in the manual before usage.

Atlas Copco