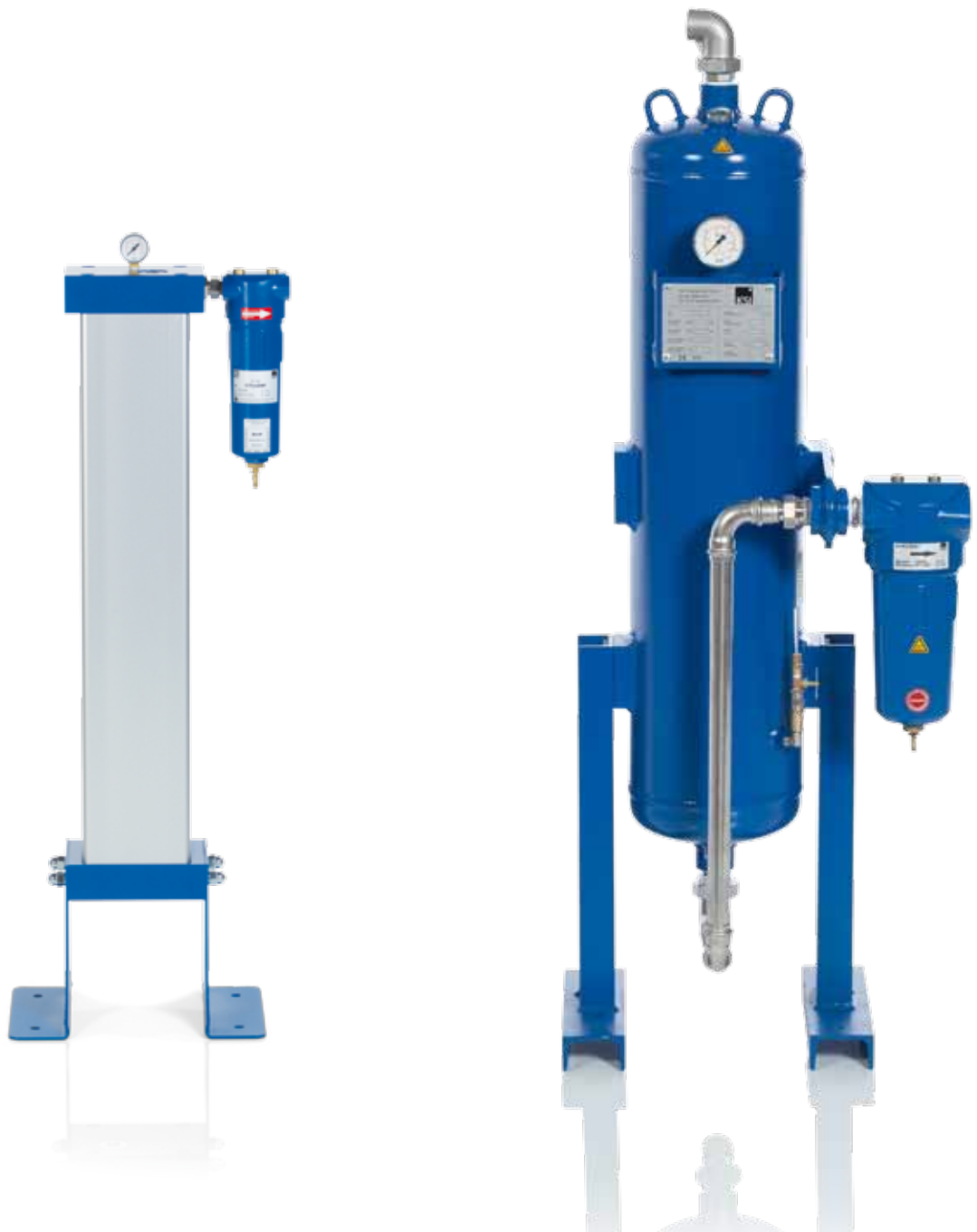


ECOTROC® ATC

High-End Activated Carbon Adsorber

Solution for adsorption of oil vapour from compressed air and gases

Activated carbon adsorbers are used in processes where high quality and safety needs to be guaranteed.



PRODUCT DATASHEET

ECOTROC® ATC · Activated carbon adsorber

When quality is everything

Oil aerosoles up to 0,01 mg/m³ can be extracted by filtration technology. If higher quality compressed air is required oil vapour can be adsorbed by a classical ECOTROC® activated carbon adsorber. The result is an exceptional high air quality with a residual oil content down to 0,003 mg/m³. The ECOTROC® ATC product group can be divided into the lighter ATC-APN aluminium version and the ATC standard welded version.

Function

Pre-filtration

The flow optimized pre-filter ECOCLEAN® SMA extracts solid and fluid components (oil aerosoles) from the compressed air/compressed gas according to ISO 8573.1 class 1.

Adsorption

The pre-filtered compressed air passes through a flow divider from the top end of the adsorption vessel through the activated carbon. Physically justified adhesion forces cause the adsorption of carbon hydroxides (oil vapour) onto the huge inner surface of the special activated carbon.

Final filtration

The compressed air reaches the bottom end of the adsorption vessel after flowing through the whole activated carbon bed and enters the ECOCLEAN® DMF final filter for the final filtration of residual particles. Afterwards, high purity compressed air is available for further use.

Delivery Scope and Performance Levels

ECOTROC® ATC-APN 1 – 10

Activated carbon adsorber ready for connection

including

- ECOCLEAN® DMF post-filter
- Pressure gauges

Volume flow: up to 110 m³/h*

Residual oil content: down to < 0.003 mg/m³

* referenced to 1 bar (abs.) 20°C at 7 bar operating pressure

ECOTROC® ATC 155 – 305

Activated carbon adsorber ready for connection

including

- Pressure gauges
- Oil test indicator

Volume flow: up to 3050 m³/h*

Residual oil content: down to < 0.003 mg/m³

* referenced to 1 bar (abs.) 20°C at 7 bar operating pressure

ECOTROC® ATC 15 – 110

Activated carbon adsorber ready for connection

including

- ECOCLEAN® DMF post-filter
- Pressure gauges
- Oil test indicator

Volume flow: up to 1200 m³/h*

Residual oil content: down to < 0.003 mg/m³

* referenced to 1 bar (abs.) 20°C at 7 bar operating pressure



PRODUCT DATASHEET

ECOTROC® ATC - Activated carbon adsorber

Type	Capacity*		Dimensions (mm)					Connection	Connection	Weight
	m ³ /h	cfm	A	B(1)	B(2)	C	D	Inlet	Outlet	kg
ATC-APN 1	5	3	593	535	258	258	180	3/8"	3/8"	7
ATC-APN 2	10	6	693	635	258	258	180	3/8"	3/8"	9
ATC-APN 3	20	12	793	735	258	258	180	3/8"	3/8"	10
ATC-APN 4	35	21	835	767	318	318	210	3/8"	3/8"	16
ATC-APN 6	50	29	935	867	318	318	210	3/8"	3/8"	18
ATC-APN 7	60	35	1035	967	318	358	210	3/8"	1/2"	19
ATC-APN 8	70	41	930	860	378	378	250	1/2"	1/2"	27
ATC-APN 9	90	53	1070	1000	378	378	250	1/2"	1/2"	30
ATC-APN 10	110	65	1250	1120	378	378	250	1/2"	1/2"	35
ATC 15	150	88	1186	1131	715	503	404	1"	1"	71
ATC 18	180	106	1346	1291	715	503	404	1"	1"	77
ATC 22	210	124	1466	1411	715	503	404	1"	1"	83
ATC 34	340	200	1461	1396	950	489	606	1 1/2"	1 1/2"	138
ATC 45	480	283	1561	1496	950	489	606	1 1/2"	1 1/2"	182
ATC 55	600	353	2021	1956	950	489	606	1 1/2"	1 1/2"	199
ATC 75	820	483	1724	1649	1155	622	732	2"	2"	319
ATC 90	1000	589	2024	1949	1155	622	732	2"	2"	389
ATC 110	1200	706	2085	2049	1155	622	732	2"	2"	416
ATC 155	1550	912	2112	2012	158	698	700	DN 80	DN 80	375
ATC 185	1850	1088	2122	2022	148	749	700	DN 80	DN 80	435
ATC 205	2050	1206	2133	2033	137	800	726	DN 80	DN 80	494
ATC 245	2450	1442	2328	2218	222	865	850	DN 100	DN 100	570
ATC 305	3050	1794	2340	2230	210	926	853	DN 100	DN 100	695

*refer to 1 bar (abs.) and 20°C at 7 bar g operating pressure, 35°C inlet temperature

Higher volume flow / higher operating pressure on demand

Correction factors

Correction factors operating pressure	
bar g	4 4,5 5 5,5 6 6,5 7 7,5 8 8,5 9 9,5 10 10,5 11 11,5 12 12,5 13 13,5 14 14,5 15 15,5 16
F(p)	0,6 0,7 0,74 0,82 0,89 0,97 1 1,08 1,11 1,16 1,22 1,29 1,36 1,42 1,5 1,57 1,63 1,69 1,75 1,83 1,9 1,96 2,03 2,1 2,14

Correction factors inlet temperature	
°C	<25 25 30 35 38 40 45 48 50
F(t)	1,2 1,1 1,09 1 0,84 0,78 0,72 0,65 0,58

Please multiply the dryer's capacity with the correction factors in the table above to get the correct capacity.

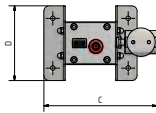
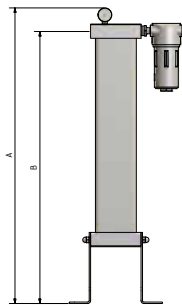
Higher inlet temperatures on demand

PRODUCTDATASHEET

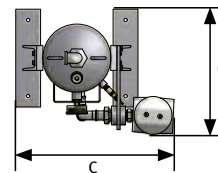
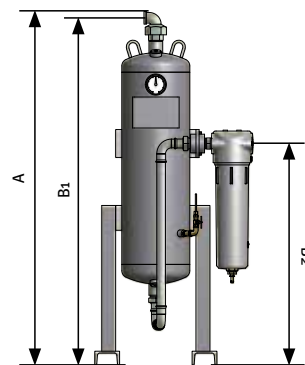
KSI Filtertechnik GmbH · Siemensring 54-56 · D-47877 Willich | Tel. +49 · 21 54 · 89 108-0 · Fax +49 · 21 54 · 89 108-282 | www.ksi.eu · mail@ksi.eu

Dimensional drawings

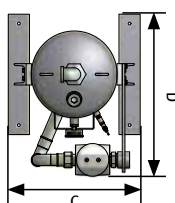
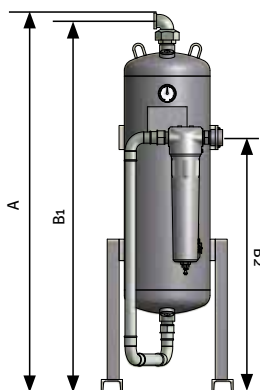
ATC-APN 1 – ATC-APN 10



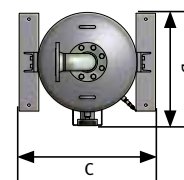
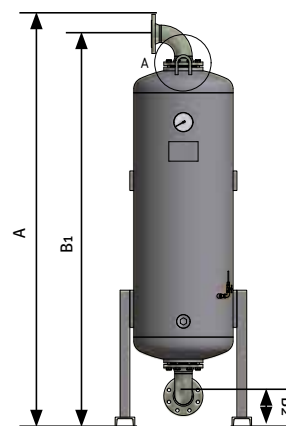
ATC 15 – ATC 22



ATC 34 – ATC 110



ATC 155 – ATC 305



PRODUCT DATASHEET

ECOTROC® ATC· Activated carbon adsorber

Field of application

Field of application	Installation inside in non-aggressive atmosphere
Residual oil amount at 20°C	0,003 mg/m ³
Relative humidity	100% (under the precondition of an upstream refrigeration dryer)
Ambient temperature max.	50°C
Ambient temperature min.	+2°C
Operating pressure	0 to 16 bar g (ATC-APN 10: max. 13,5 bar g)
Medium	Compressed air and gases

* refer to 1 bar (abs.) 20°C at 7 bar operating pressure

Technical features

According to Council directives 2014/29/EU on simple pressure vessels and directive 2014/68/EU on pressure equipment.

Dryers of KSI product line ECOTROC® ATC undergo a conformity assessment while construction according to annex I.

Following norms and manufacturing processes are basis for the production:

DIN EN ISO 12100, DIN EN 1050, DIN EN 50081, DIN EN 50082, DIN EN 60204, DIN EN ISO 9001:2008 (Total Quality Management), 2014/29/EU (Simple Pressure Vessels), 2014/68/EU (Pressure Equipment Directives), TR B'en (Technical Directives Pressure Vessels), GSG (Equipment Safety Act), 9. GSGV (9th Regulation for Equipment Safety), 2006/42/EG

Approvals for Pressure Equipment

EU	Approved for fluid group 2 according to Pressure Equipment Directive 2014/68/EU, module B+D (categorie IV)
Other	ASME
According to classification	ATC-APN 1 to 3 paragraph 3 article 4
DGRL 2014/68/EU	ATC-APN 4 to 10 category I
fluid group	2

Quality Management

Development/Production	DIN EN ISO 9001
-------------------------------	-----------------

Air purity class according to ISO 8573-1:2010

Solid particles	Class 2
Humidity (gaseous)	-
Total oil	Class 1

PRODUCT DATASHEET

ECOTROC® ATC - Activated carbon adsorber

Maintenance

Following regulations for maintenance guarantee a secure and trouble-free use and should be obeyed by the customer.

daily	Adsorber + filters:	Visual and function control
weekly/monthly	Oil indicator:	Measure residual oil
annual	Final-filterelement:	Exchange
	Activated carbon:	Exchange
	Sealings:	Exchange
	Sieves:	Clean, exchange if necessary

Versions and options

- **ECOTROC® ATC-APN** for volume flows from 5 m³/h up to 110 m³/h
- **ECOTROC® ATC** for volume flows from 150 m³/h up to 3050 m³/h
- Activated carbon adsorbers **ECOTROC® ATC** can be mounted ex works to a KSI adsorption dryer **ECOTROC® ATK** as a systematic solution labelled as **ECOTROC® ATO**
- Activated carbon adsorbers **ECOTROC® ATC** can be delivered in higher capacities and for middle and high pressure applications (up to 500 bar) on demand.

The ECOTROC® ATC Plus Effect +++

- + optimized adsorption of oil vapour (carbon hydroxides)
- + highly activated carbon for air and gases deliver maximum efficiency
- + optimized volume flow diversion through the whole activated carbon bed
- + residual oil amount up to maximum 0,003 mg/m³
- + oil indicator monitors the saturation stage, from models **ATC 15** onwards (optional for **ATC-APN**)
- + easy access to all components simplifies maintenance
- + 8.000 hours activated carbon life time*

*The activated carbon life time depends on the quality and the relative humidity of the medium as well as on the type of compressor.



ECOTROC® ATC are available for higher capacities on request