

ECOTROC CT

High-end Activated Carbon Adsorber



Solutions for adsorption of oil vapour
from compressed air and gases



When quality is the decisive factor

Oil aerosoles up to 0.01 mg/m^3 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 exceptionally high air quality with a residual oil content down to 0.003 mg/m^3 . The **ECOTROC CT** product group can be divided into the lighter **CTAP** aluminium version, **CTN** standard welded version and the **CTF** version with flange connection.

Versions and options

- **ECOTROC CTAP** for volume flows from 5 cfm up to 65 cfm
- **ECOTROC CTN** for volume flows from 105 cfm up to 705 cfm
- **ECOTROC CTF** for volume flows from 915 cfm up to 1,800 cfm
- activated carbon adsorber **ECOTROC CT** can be combined with KSI desiccant dryers **ECOTROC DD** to the system solution called **ECOTROC DDO**

The ECOTROC CT Plus-Effects +++

- + optimized adsorption of oil vapour (hydrocarbons)
- + highly activated carbon for air and gases ensures maximum efficiency
- + optimized volume flow diversion through the whole activated carbon bed
- + residual oil content up to maximum 0.003 mg/m^3
- + oil indicator monitors the saturation stage, standard from model **CTN105** and larger (optional for **CTAP**)
- + 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.

- activated carbon adsorber **ECOTROC CTN/CTF** can be designed for higher capacity demands and for high-pressure applications up to 7,250 psi

ECOTROC CT

High-end Activated Carbon Adsorber



Effective 3-stage-process

1. Prefiltration

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

2. Adsorption

The pre-filtered compressed air passes through a diffuser from the top end of the desiccant vessel through the activated carbon. Physical adhesion power cause the adsorption of hydrocarbons (oil vapour) onto the large inner surface of the special activated carbon.

3. Postfiltration

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

Scope of supply and performance levels

ECOTROC CTAP6 – 65

ready-to-use activated carbon adsorber

including

- postfilter **KSI ECOCLEAN DMF**
- pressure gauge for displaying the operating pressure
- capacity volume flow: up to 65 cfm*
- residual oil content up to: < 0.003 mg/m³

* calculated at 14,5 psi (abs.) and 68°F at 101,5 psi working pressure

ECOTROC CTN105 – 705

ready-to-use activated carbon adsorber

including

- postfilter **KSI ECOCLEAN DMF**
- pressure gauge for displaying the operating pressure
- oil test indicator
- capacity volume flow: up to 705 cfm*
- residual oil content up to: < 0.003 mg/m³

* calculated at 14,5 psi (abs.) and 68°F at 101,5 psi working pressure



ECOTROC CTF915 – 3050

ready-to-use activated carbon adsorber

including

- pressure gauge for displaying the operating pressure
- oil test indicator
- capacity volume flow: up to 1,800 cfm*
- residual oil content up to: < 0.003 mg/m³

* calculated at 14,5 psi (abs.) and 68°F at 101,5 psi working pressure

Specifications

Type	Capacity*		Dimensions (inch)				Connection		Weight	Grp.
	cfm		A	B	C	D	Inlet	Outlet	lbs	
CTAP6	6		27.32	25.00	9.69	7.09	3/8"	3/8"	18	320
CTAP12	12		31.26	28.94	9.69	7.09	3/8"	3/8"	20	320
CTAP20	20		32.76	30.20	12.32	8.27	3/8"	3/8"	35	320
CTAP30	30		36.73	34.13	12.32	8.27	3/8"	3/8"	37	320
CTAP35	35		40.67	38.07	12.32	8.27	1/2"	1/2"	49	320
CTAP40	40		36.65	33.86	14.80	9.84	1/2"	1/2"	57	320
CTAP55	55		42.17	39.37	14.80	9.84	1/2"	1/2"	66	320
CTAP65	65		49.25	46.46	15.75	9.84	1/2"	1/2"	71	320
CTN105	105		54.41	53.62	27.4	22.64	1"	1"	198	325
CTN125	125		59.29	58.5	27.4	22.64	1"	1"	276	325
CTN200	200		60.63	59.49	27.4	27.56	1 1/2"	1 1/2"	353	325
CTN285	285		64.53	63.39	27.4	27.56	1 1/2"	1 1/2"	375	325
CTN350	350		82.64	81.5	27.4	27.56	1 1/2"	1 1/2"	463	325
CTN480	480		74.45	70.2	33.86	33.27	2"	2"	761	325
CTN590	590		83.43	82.01	33.86	33.27	2"	2"	882	325
CTN705	705		87.36	85.94	33.86	33.27	2"	2"	926	325
CTF915	915		83.15	79.21	27.48	27.56	DN 80	DN 80	827	325
CTF1090	1090		83.54	79.61	29.49	27.56	DN 80	DN 80	959	325
CTF2050	1210		83.98	80.04	31.50	28.58	DN 80	DN 80	1089	325
CTF2450	1445		91.65	87.32	34.06	33.46	DN 100	DN 100	1257	325
CTF3050	1800		92.13	87.80	36.46	33.58	DN 100	DN 100	1532	325

*calculated at 14.5 psi (abs.) and 68°F at 101.5 psi working pressure

Corrections factors

Correction factors operating pressure																									
psi	58	65	73	80	87	94	102	109	116	123	131	138	145	152	160	167	174	181	189	196	203	210	218	225	232
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									
°F	<77	77	86	95	100,4	104	113	118,4	122
F(t)	1,2	1,1	1,09	1	0,84	0,78	0,72	0,65	0,58

Multiply the capacity of the dryer by the correction factor in the table above and you will get the corrected capacity.

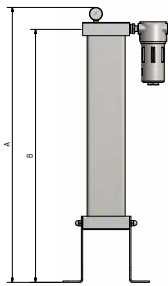
Higher inlet temperatures on request.

ECOTROC CT

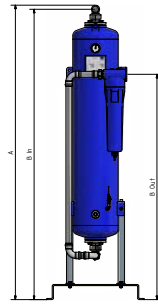
High-end Activated Carbon Adsorber



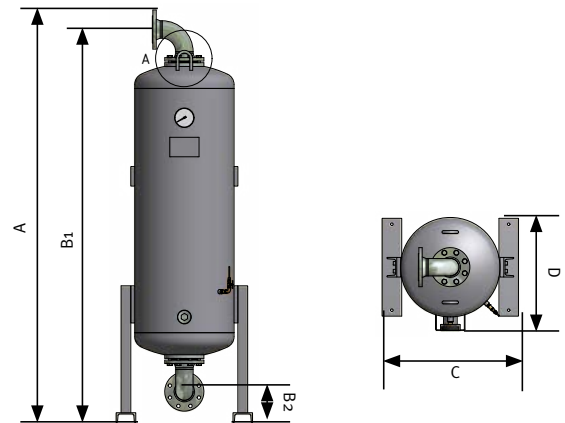
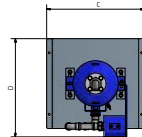
Dimensional drawings



CTAP6 – CTAP65



CTN105 – CTN705



CTF915 – CTF3050

Field of application

Field of application	Installation inside non-aggressive atmosphere
Residual oil amount at 68°F	0.003 mg/m ³
Relative humidity	100% (under the precondition of an upstream refrigeration dryer)
Ambient temperature max.	122°F
Ambient temperature min.	+35.6°F
Operating pressure	232 psi (CTAP65: 195.75 psi)
Medium	compressed air and gases

*calculated at 14.5 psi (abs.) and 68°F at 101.5 psi working 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 CT 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 (categoric IV)

North America

CRN (certificates on request)

according to classification

CTAP6 - 20 par. 3 art. 4

DGRL 2014/68/EU

CTAP30 - 65 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