

# 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  $0.01 \text{ mg/m}^3$  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  $0.003 \text{ mg/m}^3$ . 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**
- activated carbon adsorber **ECOTROC CTN/CTF** can be designed for higher capacity demands and for high-pressure applications up to 7,250 psi

### 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  $0.003 \text{ mg/m}^3$
- + 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.

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# A World Powered by Clean Energy

By providing both high-performance and innovative technological solutions for the purification of renewable gas and by offering a wide range of equipment for the conditioning, compression, and filtration of air and gas, Ivys is part of the great line of companies aiming to decarbonize the planet. A sustainable development model that integrates economic growth with social and environmental responsibility.

Our slogan, "Purely Driven," reflects our vision of a cleaner planet, our continued search for more efficient solutions, and our dedication to building an organization of excellence together that stays true to its values.

## Industrial Compressed Air and Gas Treatments are at the Core of Ivys' Technology

At Ivys, we design, engineer, manufacture, and service industrial equipment for compressed air dedicated to a wide variety of industrial applications around the world.



# 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/m<sup>3</sup>

\* 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/m<sup>3</sup>

\* 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/m<sup>3</sup>

\* 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

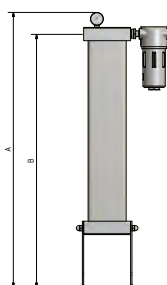
| Correction factors operating pressure |     |     |      |      |      |      |     |      |      |      |      |      |      |      |     |      |      |      |      |      |     |      |      |     |      |
|---------------------------------------|-----|-----|------|------|------|------|-----|------|------|------|------|------|------|------|-----|------|------|------|------|------|-----|------|------|-----|------|
| 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 |

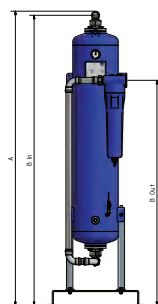
Multiply the capacity of the dryer by the correction factor in the table above and you will get the corrected capacity.

Higher inlet temperatures on request.

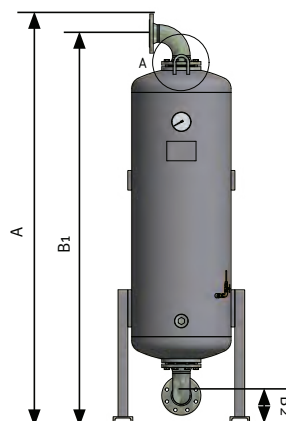
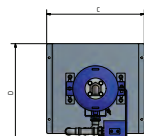
### Dimensional drawings



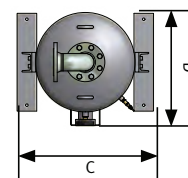
CTAP6 – CTAP65



CTN105 – CTN705



CTF915 – CTF3050



### Field of application

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

# Service

WE SUPPORT YOU FOR ALL YOUR  
EQUIPMENT NEEDS!

Ivys is committed to providing you with top-quality services and a complete range of replacement parts, and spares for your compressed air and gas equipment of all makes and models.

- ◆ Fully certified technicians on call
- ◆ Onsite commissioning
- ◆ Preventative maintenance
- ◆ Servicing and upgrading
- ◆ Replacements and spares for all makes and models

## AFTERMARKET SERVICES

- ◆ Custom Service/Maintenance Contracts
- ◆ Desiccants
- ◆ Parts — Filters, Separators, Elements, Drains, Hygrometers, Probes
- ◆ Training — Workshops, Webinars, Certification



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