



ACTIVATED CARBON TOWER



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About us

SÜMER was established in 1981 in Ankara to provide services in the medical device sector. It has aimed advancement since the day of its establishment both in medical, industrial and defense field by also taking growth and compliance with the contemporary technologies and protecting the environmental conditions. Our manufacturing takes place in an area of 25.000 m2 in Ankara Organized Industrial Zone, Türkiye.

SÜMER is following innovations through its research and development department and with its strong infrastructure.

SÜMER is strictly following the "Quality Management" principles and rules from the design of the products to the after-sale servicing.

SÜMER has been currently certificated for compliance with ISO 9001 quality management system, ISO 13485 medical device quality management system certificate and ISO 14001 environment management system certificate and with product certificates under MDD 93/42/EEC Medical Devices Directive, CE and PED 2014/68/EU Pressurized Equipment certificates.

SÜMER possesses the following certificates;
CE Certificates under the following directives:

- ISO 9001,
- ISO 13485,
- ISO 14001 Quality Management System,
- MDD 93/42/EEC Medical Devices,
- PED 2014/68/EU Pressurized Equipment

Our Vision

To make SÜMER a global brand in the field.

Our Mission

Our main task is to create designs with competition power in the global sense by taking the priorities of the sector into consideration and being respectful to the environment and people and giving the priority to the wishes and expectations of customers, and also to produce innovative technological products by meeting all the national and international legal requirements.

Our Basic Values

- We are bound up with the Ethical Rules,
- We are people-oriented,
- We respect environment,
- We are creative,
- We are customer-oriented,
- We are innovative,
- We are pro-active,
- We believe in the team spirit.



Benefits/Features

- Low maintenance
- Separate fill and drain ports allow for quicker carbon replacement
- Standalone units
- Includes pressure gauge
- PED coded vessel

Typical Applications

- Food and beverage
- Pharmaceutical - manufacturing and processing
- PSA processes
- Membrane processes
- Breathable Air/Oxygen
- Anywhere oil-free air stream is critical

Applications

- Automotive
- Electronics
- Food&beverage
- Chemical
- Petrochemical
- Plastics
- Paint
- General industrial application



Activated Carbon Tower

SÜMER CT series activated carbon adsorbers are perfect choice when it comes to delivering a continuous supply of high-quality compressed air. Any remaining oil-aerosols and oil vapors, including odors and tastes, are removed by the active surface area of the highly-porous activated carbon to produce high quality and clean compressed air.

Installed downstream of compressed air drying and pre-filtration components, they attain Class 1 (no higher than 0.01 mg/m³) residual oil content as per ISO 8573-1 to ensure dependable protection of sensitive production processes. They are therefore, the perfect choice for applications in the optical, surface technology, electronics, foodstuffs and pharmaceutical sectors.

SÜMER Carbon Towers are compact and designed to be free standing units and it does not need any maintenance. Pre-dried compressed air flows from top to bottom through a single vessel containing high-quality CarboTech activated carbon. Finally, the treated compressed air exits an after filter rated for solid particulates removal into the downstream compressed air network with an oil content of less than 0.003 mg/m³.

Generously-dimensioned flow diameters, together with flow diffusers, ensure even flow distribution with an exceptionally low-pressure loss no higher than 0.1 bar. As a result, the compressor discharge pressure of upstream compressors, as well as the energy costs for compressed air production, can be kept as low as possible.

The lifetime of the activated carbon filling can vary and is dependent on the contamination type, quantity, and the relative humidity of the supplied compressed air. However, the adsorber bed can last up to an excess of 10,000 working hours when properly maintained.



| Operating Range | |
|--|---|
| Site Selection | Frost-free indoor installation in a non-hazardous environment |
| Ambient Temperature | 2 to 50°C |
| Maximum Compressed Air Inlet Temperature | 50°C |
| Maximum Operating Pressure | 16 bar(g) |
| Medium | Compressed air, gaseous nitrogen and oxygen |

| Recommended Filtration Requirements | |
|-------------------------------------|--|
| Pre-filter | ISO8573-1:2010 Class 1.4.1 0.01 micron (W-P-G) 0.01 mg/m ³ oil carryover (H) At least +3 degree pressure dew point |
| After-filter | Solid particulates 1.0 micron (D) |

| Materials of Construction | |
|---------------------------|------------------------------------|
| Pressure Vessels | Normal steel, welded, Painted, PED |
| Adsorbing Material | 100% Activated Carbon |

Product Specification

Ordering and Performance Data

| Model | Flow Rate m3/h | Port Size | Max Pressure bar (g) | Max Temp. °C | Activated Carbon Amount (kg) |
|---------|----------------|-----------|----------------------|--------------|------------------------------|
| CT-120 | 120 | 3/4" | 16 | 50 | 12 |
| CT-250 | 250 | 1" | 16 | 50 | 25 |
| CT-375 | 375 | 1 1/2" | 16 | 50 | 38 |
| CT-500 | 500 | 1 1/2" | 16 | 50 | 50 |
| CT-750 | 750 | 2" | 16 | 50 | 75 |
| CT-1000 | 1.000 | 2" | 16 | 50 | 100 |
| CT-1500 | 1.500 | 2 1/2" | 16 | 50 | 150 |
| CT-2000 | 2.000 | 3" | 16 | 50 | 200 |
| CT-2500 | 2.500 | 3" | 16 | 50 | 250 |

Note-1: For larger flow rates, please consult factory.

Note-2: ISO 8573-1:2010 Class 1 met when recommended filtration is used.

Correction Factors

| Pressure | | Temperature | | | |
|----------|-----|-------------|--------------|--------------|--------------|
| psi | bar | 35°C (95°F) | 40°C (104°F) | 45°C (113°F) | 50°C (122°F) |
| 73 | 5 | 0.75 | 0.64 | 0.56 | 0.38 |
| 87 | 6 | 0.89 | 0.76 | 0.67 | 0.45 |
| 102 | 7 | 1.00 | 0.85 | 0.75 | 0.50 |
| 116 | 8 | 1.13 | 0.92 | 0.81 | 0.54 |
| 131 | 9 | 1.26 | 1.07 | 0.95 | 0.63 |
| 145 | 10 | 1.31 | 1.11 | 0.98 | 0.65 |
| 160 | 11 | 1.36 | 1.16 | 1.02 | 0.68 |
| 174 | 12 | 1.49 | 1.27 | 1.12 | 0.74 |
| 189 | 13 | 1.62 | 1.38 | 1.22 | 0.81 |
| 203 | 14 | 1.70 | 1.45 | 1.28 | 0.85 |
| 218 | 15 | 1.79 | 1.52 | 1.34 | 0.90 |

Dimensions and Weight

| Model | Height (mm) | Width (mm) | Weight (kg) |
|---------|-------------|------------|-------------|
| CT-120 | 1.100 | 300 | 37 |
| CT-250 | 1.000 | 350 | 65 |
| CT-375 | 1.350 | 350 | 85 |
| CT-500 | 1.600 | 350 | 108 |
| CT-750 | 1.600 | 425 | 143 |
| CT-1000 | 2.100 | 425 | 190 |
| CT-1500 | 2.000 | 550 | 265 |
| CT-2000 | 1.900 | 650 | 360 |
| CT-2500 | 2.150 | 650 | 440 |

Certificates and Brand Registry Documents

We believe that the way to the summit passes through high-quality and reliable manufacturing.





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 **sumer**
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