

DTAOFc Series

Heatless Desiccant Air Dryers for the Oil & Gas Industry



Parker domnick hunter's DTAOFc Series of heatless desiccant dryers provide a continuous supply of dry, oil-free compressed air by automatically cycling the flow of air through two desiccant towers. Compressed air is dried through one tower while the other desiccant tower is being regenerated by a portion of the dried air. Cycling is controlled by a solid state controller.

The DTAOFc Series is designed specifically for oil, gas and related industries. The dryer provides instrument quality compressed air and is packaged for maximum reliability and long, trouble-free service life.

Considering the importance of filtration to dryer performance, Parker domnick hunter recommends that all DTAOFc Series dryers are ordered as a complete, factory assembled air treatment system. Standard equipment includes: properly sized, factory installed coalescing pre-filter and particulate after-filter with automatic float drain system and visual element condition indicators. Oversized filters are selected for longer element life and low pressure drop.



Rugged and Reliable for Years of Trouble Free Service



Contact Information:

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Features & Benefits:

- **Air quality - clean dry, oil-free meets ISO 8573.1 Class 1.2.1**
- **cETLus Listed**
- **Reliable solid state controller eliminates the problems associated with antiquated cam timers.**
- **Superior valve performance.**
 - **Four-way directional control valve has an average life expectancy of 150 million cycles even in the harshest environments (DTAOFc15 thru DTAOFc80).**
 - **High cycle independent air operated angle seat valves specifically designed for compressed air service (DTAOFc105 thru DTAOFc500).**
- **Easily classified to governing code requirements, such as OSHA, CSA, CRN, NEC, etc.**
- **Flexible packaging available. See optional equipment.**
- **Low power requirement - less than 20 watts @ 120V/1Ph/60Hz electrical input.**
- **Few moving parts - low maintenance**
- **Compact design, lightweight with minimal installation space required.**
- **Fully automatic - operates continuously without attention.**



ENGINEERING YOUR SUCCESS.

Standard Equipment

- ETL Listed
- Electric 120V/1Ph/60Hz
- Solid State Controller
- NEMA 4X Panel Enclosure
- Separate Tower Fill and Drain Ports
- Schedule 80, A106B Piping, 3000# A105 Fittings
- ASME Code (DTAOF105 thru DTAOF500)
- High Life Cycle Switching Valves
- Safety Relief Valves
- Locally Mounted Tank Pressure Gauges
- Purge Adjustment Valve
- Purge Exhaust Muffler(s) (OSHA Approved)
- 304 Stainless Steel Control Tubing & Parker Fittings
- Mounted Pre-Filter and After-Filter
- CRN Registered Tanks and Filters

Optional Equipment

- NEMA 7 Construction
 - Class 1, Div 1, Group C&D
 - Class 1, Div 2, Group C&D
- Low Ambient Packages
- Non-Yellow Metal Construction
 - Nickel Plated Safety Valve(s) and Exhaust Valve (DTAOF15 thru DTAOF80)
 - Stainless Steel Inlet and Exhaust Valves with Nickel Plated Safety Valves (DTAOF105 thru DTAOF500)
- DDS Energy Management System

Engineering Data Specifications

Flowrate scfm	Model	Pipe Size In/Out	Height in (mm)	Width in (mm)	Depth in (mm)	Pre-Filter	After-Filter
15	DTAOF15A1E	3/8"	47 1/8 (1197)	19 5/8 (498)	14 (356)	AA015BNFI	AR015BNMI
23	DTAOF23A1E	3/8"	47 1/8 (1197)	19 5/8 (498)	14 (356)	AA015BNFI	AR015BNMI
36	DTAOF36A1E	1/2"	67 1/4 (1708)	20 1/2 (521)	14 (356)	AA015CNFI	AR015CNMI
50	DTAOF50A1E	1/2"	68 1/8 (1730)	24 (610)	14 (356)	AA020CNFI	AR020CNMI
80	DTAOF80A1E	3/4"	68 1/8 (1730)	24 (610)	14 (356)	AA025DNFI	AR025DNMI
105	DTAOF105A1E	1"	80 5/8 (2048)	31 3/8 (797)	18 (457)	AA025ENFI	AR025ENMI
140	DTAOF140A1E	1"	80 5/8 (2048)	31 3/8 (797)	18 (457)	AA030ENFI	AR030ENMI
220	DTAOF220A1E	1 1/2"	81 7/8 (2080)	37 3/4 (959)	21 11/16 (551)	AA030GNFI	AR030GNMI
280	DTAOF280A1E	1 1/2"	81 7/8 (2080)	40 3/8 (1025)	21 11/16 (551)	AA035GNFI	AR035GNMI
360	DTAOF360A1E	1 1/2"	81 7/8 (2080)	40 3/8 (1025)	21 11/16 (551)	AA040GNFI	AR040GNMI
500	DTAOF500A1E	2"	CF	CF	CF	AA045HNFI	AR045HNMI

Max. Inlet Temperature	120°F (49°C)
Min. Inlet Temperature	50°F (10°C)
Max. Working Pressure	150 psi g (10.3 bar g)
Min. Working Pressure	80 psi g (5.5 bar g)
Dewpoint	-40°F (-40°C)
ISO Quality Class	8573.1 Class 1.2.1
Standard Electronics	120V/1Ph/60Hz
Controls	Solid State Board

- Pressure drop at rated flow: less than 5 psi (0.34 bar)
- Maximum inlet air or ambient air temperature 120°F (49°C)
- Maximum working pressure: 150 psi g (10.5 bar g) standard units for higher maximum working pressure are available.
- Minimum operating pressure: 80 psi g (5.5 bar g)

Correction Factors

Inlet Air Pressure

psi g	80	90	100	110	120	130	140	150
bar g	5.5	6.2	6.9	7.6	8.3	9.0	9.7	10.3
CF	.83	.91	1.00	1.09	1.18	1.27	1.37	1.43

Temperature

°F	100	105	110	115	120
°C	38	41	43	46	49
CF	1.00	0.85	0.74	0.64	0.56

EXAMPLE CALCULATIONS

DTAOF80 Corrected for 120 psi (8.3 bar)
 Corrected Capacity: = (Rated Capacity) X (psi Correction)
 = 80 scfm (2.27 Nm³/min) X (1.18)
 = 94.4 scfm (2.67 Nm³/min)