AIRTEK

PREMIUM PRODUCTS FOR INDUSTRY

BV Series

Heatless Desiccant Air Dryers

BV Series
Desiccant Air Dryers

The Airtek BV Series Heatless Dryer provides a simple, reliable, and economical method for removing water vapor from compressed air. Capable of achieving a dew point of -40º F, the BV Series is ideal for applications where compressed air lines are exposed to sub freezing ambient temperatures, or where special processes require air at an extremely low relative humidity. This "no frills" unit provides instrument quality air and is designed for maximum reliability and long, trouble free service.

Dryer Operation

Two desiccant towers are filled with activated alumina, a spherical shaped hygroscopic material, selected for its uniform size, shape and high surface area to volume ratio. As saturated air flows up through the "on line" tower, its moisture content adheres to the surface of the activated alumina beads. The dry (-40º F dew point) air is then discharged from the tower into the distribution system. After three minutes of operation on one tower the flow is switched to the other tower through the use of a timed system of directional valves. A portion of the dried compressed air is diverted through an orifice, expanded to atmospheric pressure, and directed into the off line, or regenerating tower where the moisture accumulated during the drying cycle is stripped off and purged to the atmosphere.

The use of a coalescing type prefilter is necessary to protect the activated alumina from oil contamination. A particular after filter is recommended to prevent desiccant dust from migrating downstream.

Heatless dryers in general are the most reliable and least expensive of all desiccant type dryers, operate with the fewest moving parts, and have the longest desiccant life expectancy.

Features

- **CyceLoc controller permits wiring interface with air compressor, shutting down dryer when compressor is not running, preventing the unnecessary use of compressed air. Dryer starts back up at proper spot in its cycle.**
- **Clean, dry oil free air meets ISO 8573.1 Class 1.2.1**
- **Low power requirement - less than 20 watts @120v / 1Ph / 60Hz**
- **Few moving parts - low maintenance**
- **Reliable solid state controller eliminates problems associated with antiquated cam timers.**
- **Fully automatic - operates continuously without attention**
- **Separate fill and drain ports**
- **Purge exhaust mufflers**

Available Equipment

Standard Equipment

- Electric 120v /1 ph / 60 Hz
- Solid State Controller
- NEMA 4 Control
- CycleLoc™ Demand Controls
- CRN Registered
- ASME Code (BV105 thru BV750)
- High Life Cycle Switching Valves
- Safety Relief Valves
- Locally Mounted Tank Pressure Gauges
- Purge Exhaust Muffler(s)
- Control Air Filter
- Separate Tower Fill and Drain Ports
- Stainelss Steel Diffuser Screens

Optional Equipment

- Filters
- Low Ambient Package
- Filters Mounted

Engineering Data Specifications

BV Dryer			Recommended Filtration			Dryer with Recommended Filters Mounted			
MODEL	Flow Rate @ 100 PSIG SCFM (Nm^3/min@6.9 Bar)	Approximate Purge SCFM (Nm^3/min)	Pre-Filter	After-Filter	Pipe Size In/Out	Length (mm)	Width (mm)	Height (mm)	Weight Lbs (Kg)
BV-12	12 (.34)	1.8 (.05)	JW0020-C	JW0020-F	3/8"	20" (508)	17" (432)	47" (1194)	97 (44)
BV-20	20 (.57)	3.5 (.10)	JW0020-C	JW0020-F	3/8"	20" (508)	17" (432)	47" (1194)	101 (46)
BV-36	36 (1)	5.4 (.15)	JW0050-C	JW0050-F	1/2"	20" (508)	18" (457)	67" (1702)	140 (64)
BV-50	50 (1.4)	7.5 (.21)	JW0050-C	JW0050-F	1/2"	21" (533)	19" (483)	52" (1321)	171 (78)
BV-80	80 (2.3)	12 (.34)	JW0085-C	JW0085-F	3/4"	22" (559)	20" (508)	67" (1702)	207 (94)
BV-105	105 (3)	16 (.45)	JW0150-C	JW0150-F	1"	36" (914)	28" (711)	79" (2007)	390 (177)
BV-160	160 (4.5)	24 (.68)	JW0150-C	JW0150-F	1"	36" (914)	28" (711)	79" (2007)	476 (216)
BV-220	220 (6.2)	33 (.93)	JW0200-C	JW0200-F	1 1/2"	44" (1118)	30" (762)	79" (2007)	704 (319)
BV-280	280 (8)	42 (1.2)	JW0300-C	JW0300-F	1 1/2"	44" (1118)	30" (762)	79" (2007)	746 (338)
BV-360	360 (10.2)	54 (1.5)	JW0300-C	JW0300-F	1 1/2"	44" (1118)	30" (762)	79" (2007)	746 (338)
BV-525	525 (14.8)	79 (2.2)	JLA-800-C	JLA-650-F	2"	47" (1194)	31" (787)	85" (2159)	1126 (510)
BV-650	650 (18.4)	98 (2.8)	JLA-800-C	JLA-650-F	2"	47" (1194)	31" (787)	85" (2159)	1156 (524)
BV-750	750 (21.2)	113 (3.2)	JLA-800-C	JLA-650-F	2"	50" (1270)	32" (813)	86" (2184)	1126 (556)

Maximum Inlet Temperature	120°F	49°C
Minimum Inlet Temperaure	40°F	4°C
Maximum Working Pressure	150 psig	10.3 barg
Minimum Working Pressure	50 psig	3.5 barg
Dew Point	-40°F	-40°C
ISO Quality Class	8573.1 Class 1.2.1	
Standard Electronics	120v / 1ph / 60 Hz	
Controls	Solid State Board	

INLET AIR PRESSURE CORRECTION											
PSI BAR	50 3.5	60 4.1	70 4.9	80 5.5	90 6.2	100 6.9	110 7.6	120 8.3	130 9.0	140 9.7	150 10.3
FACTOR	.56	.65	.74	.83	.91	1	1.09	1.18	1.27	1.37	1.43

AIRTEK
PREMIUM PRODUCTS FOR INDUSTRY

4087 Walden Avenue
Lancaster, New York 14086
Ph. 716.685.4040 Fx.716.685.1010

Email: airtek@airtek.com

Member

www.airtek.com