Deltech

deltech-spx.com

Refrigerated Air Drying Technologies

HG Series

HGE Series

SPX Air Treatment

HG/HGE Series Dryers Improve Productivity

Since 1961, Deltech has delivered technologies that efficiently remove contaminants from compressed air systems. Properly treated compressed air increases productivity and minimizes downtime. Maintenance costs are slashed as improved air quality extends service intervals. Process cleanliness is assured.

Facilities with small-to-medium sized air systems simply want dry air, reliability and an affordable price. Deltech responds with the HG and HGE Series non-cycling refrigerated air dryers that keep your air system at a dry, 38°F (+3°C) pressure dew point, from 10 through 500 scfm.

Durability Delivered in the Smallest Package in its Class

HG and HGE Series dryers are built to last and take up as little space as possible. Sturdy sheet steel is formed and protected by an epoxy-based powder coat finish. Reliable reciprocating refrigeration systems use environmentally friendly R-134a refrigerant. Known for its ability to maintain stable temperatures, R-134a protects the integrity of the 38°F (+3°C) pressure dew point.

How it works...

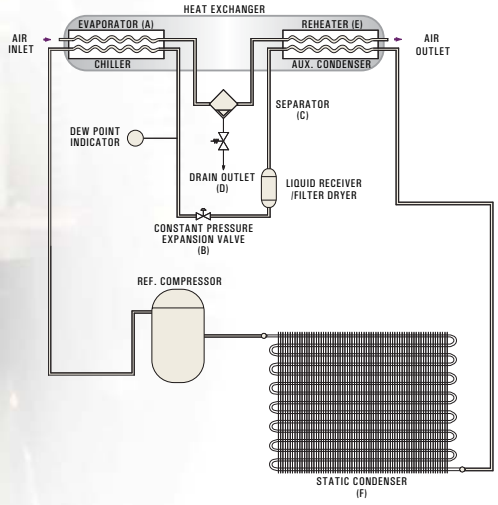
Models HG10 through HG50

Warm saturated air enters the Evaporator (A) where it is cooled by refrigerant being controlled by a Constant Pressure Expansion Valve (B). Water vapor condenses into a liquid for removal at the moisture separator (C) by an Automatic Drain (D). The cold, dry air is reheated as it passes through the Reheater (E), to prevent pipeline sweating. The Static Condenser (F) eliminates the need for a cooling fan and simplifies the system.

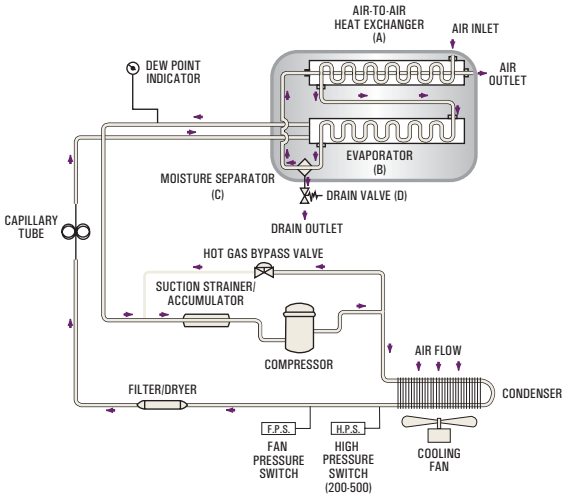
Models HGE75 through HGE500

Warm saturated air enters the air-to-air heat exchanger (A) where it is precooled by the outgoing chilled air, and then passes through the evaporator (B) where it is further cooled by the refrigeration system. Water vapor condenses into liquid droplets to be removed by the Moisture Separator (C) then, discharged from the dryer by an automatic drain (D). Chilled dry air returns through the air-to-air heat exchanger (A) where it is reheated before exiting the dryer.

HG10 - HG50



HGE75 - HGE500



HG and HGE Series - Standard Features

- Time saving package is easy to install. Simply connect the pipes and plug in the power cord (models HGE200-500 are hard-wired)
- Fully automatic operation adapts to your system needs without complicated controls
- Long service life is assured as every unit comes pre-assembled with quality components
- Maximum moisture is removed to a steady 38°F pressure dew point - every day
- On/off switch illuminates when compressor is on
- Colored dew point indication verifies performance (HG25-HGE500)

HG Series - Models through 50 scfm

- Static condenser recycles waste heat to eliminate cold, sweaty pipes
- Integral Moisture Separator
- Timer operated drain with isolation valve/strainer (float drain on HG10)
- Models HG10 and HG15 are designed to adapt to most popular HVAC installations

HGE Series - Models from 75 to 500 scfm

- Integral 304 stainless steel heat exchanger, mesh demister and, moisture separator for long life
- Timer operated drain includes isolation valve/strainer to protect valve from rust and scale
- Panel mounted drain timer controls (HGE200-500)
- LED style dew point indicator (HGE200-500)
- Panel filter captures ambient dirt and dust to keep condenser clean (HGE100-500)

Features & Specifications

Product Features

Models	Refrigeration System													
	Lighted Compressor on/off switch	Dew Point Indicator	115v/60/1 grounded, 8 foot, power cord	Timer Operated Drain Valve, Isolation Valve, Strainer	Panel Mounted Drain Valve Adjustments	R-134a, HFC Refrigerant	Reciprocating Compressors	Copper Tube-on-Tube Heat Exchanger	Constant Pressure Expansion Valve	304ss Heat Exchanger, Demister and Moister Separator	Capillary Tube & Hot Gas Bypass Valve	Fan Cycling	High Pressure Cut-out Switch	CSA Approved
10 & 15	S	-	S	S*	-	S	S	S	S	-	-	-	-	S
25-50	S	S	S	S	-	S	S	S	S	-	-	-	-	S
75-150	S	S	S	S	-	S	S	-	-	S	S	S	-	S
200-500	S	S	-	S	S	S	S	-	-	S	S	S	S	S

* Float Drain is standard on Model HG10

Product Specifications

Model	Capacity[1]		Inlet/Outlet	Power Supply	Input Power[2]	Refrigerant	Height		Width		Depth		Shipping Weight	
	scfm	Nm³/min	npt, male		(kW)		inches	mm	inches	mm	inches	mm	lbs.	kg.
HG10	10	28	3/8	115/1/60	0.20	R134a	15	381	13	320	13	320	64	29
HG15	15	42	3/8	115/1/60	0.24	R134a	15	381	13	320	13	320	69	31
HG25	25	71	3/4	115/1/60	0.41	R134a	22	569	15	368	15	368	88	40
HG35	35	99	3/4	115/1/60	0.46	R134a	22	569	15	368	15	368	92	42
HG50	50	142	3/4	115/1/60	0.57	R134a	22	569	20	500	20	500	101	46
HGE75	75	212	3/4	115/1/60	0.72	R134a	20	510	19	480	21	526	110	50
HGE100	100	283	1	115/1/60	0.74	R134a	21	525	13	330	30	761	123	56
HGE125	125	354	1	115/1/60	0.76	R134a	21	525	13	330	30	761	133	60
HGE150	150	425	1	115/1/60	1.11	R134a	21	525	13	330	30	761	153	69
HGE200	200	566	1 1/2	460/3/60	1.42	R134a	30	762	17	437	36	904	183	83
HGE250	250	708	1 1/2	460/3/60	1.98	R134a	30	762	17	437	36	904	211	96
HGE300	300	850	1 1/2	460/3/60	2.05	R134a	30	759	20	518	38	953	218	99
HGE400	400	1133	2	460/3/60	2.50	R134a	30	759	21	541	38	953	232	105
HGE500	500	1416	2	460/3/60	3.06	R134a	32	800	25	640	41	1052	262	119

[1] Rated Flow Capacity - Conditions for rating dryers are in accordance with CAGI (Compressed Air and Gas Institute) Standard ADF 100: Refrigerated Compressed Air Dryers - Methods for Testing and Rating. Conditions for rating above dryers are: compressed air at dryer inlet: 100 psig (7kgf/cm²) and 100°F (38°C) saturated; ambient temperature: 100°F (38°C); operating on 60 Hz power supply. At rated conditions, pressure drop is less than 5 psi.

[2] At 35°F (2°C) evaporator and 100°F (38°C) ambient

Capacity Correction Factors

NOTE: The Maximum Inlet Air Pressure (M.I.A.P.) can vary. Please refer to the appropriate M.I.A.P. prior to using the following correction factor tables when re-sizing a given model.

To adjust dryer capacity for conditions other than rated, use Correction Factors (multipliers) from Tables 1 and 2.

Example: What is the capacity of a 500 scfm model when the compressed air at the inlet to the dryer is 150 psig and 100°F (38°C), and the ambient temperature is 90°F (32°C)?

Answer: 500 scfm (rated flow from Specifications Table) x 1.13 (correction factor for inlet temperature and pressure from Table 1) x 1.06 (correction factor for ambient temperature from Table 2) =599 scfm

Operating Conditions

HG Models	Max. Inlet Air Pressure	Min. Inlet Air Pressure	Max. Inlet Air Temp.	Min. Inlet Air Temp.	Max. Ambient Temp.	Min. Ambient Temp.
10-50	250 psig	30 psig	120°F	40°F	110°F	45°F
75-500	232 psig	10 psig	120°F	40°F	110°F	45°F

Table 1: Dryer Sizing Chart

Inlet Air Temp.		Inlet Air Pressure psig (bar) Correction Factor						
		80	100	125	150	175	200	250
°F	(°C)	(5.5)	(6.9)	(8.6)	(10.3)	(12.1)	(13.8)	(17.2)
90	(32)	1.17	1.23	1.31	1.37	1.42	1.47	1.49
100	(38)	0.95	1.00	1.07	1.13	1.18	1.22	1.24
110	(43)	0.79	0.82	0.91	0.95	0.99	1.03	1.05
120	(49)	0.66	0.70	0.74	0.80	0.84	0.89	0.91

Table 2: Correction Factor

Ambient Air Temperature		Correction Factor
°F	(°C)	
80	(27)	1.12
90	(32)	1.06
100	(38)	1.00
110	(43)	0.94

SPX DELTECH

Improvements and research are continuous at SPX Deltech. Specifications may change without notice.

Bulletin HGE10-500-NA1

SPX Air Treatment
1000 Philadelphia Street
Canonsburg, PA 15317-1700 U.S.A.
Phone: 724-745-8647 • Fax: 724-745-4967
Email: deltech.inquiry@airtreatment.spx.com
www.deltech-spx.com

SPX Air Treatment Canada
1415 California Avenue
Brockville, ON, Canada, K6V 7H7
Phone: 613-345-2280 • Fax: 613-345-7240
Email: deltech.inquiry@spxairtreatment.ca
www.deltech-spx.com