

# Cycling Refrigerated Compressed Air Dryers

# G5



G5



## Why choose a Cycling Refrigerated Dryer?

### The Cold Hard Facts

Although all refrigerated dryers use the same basic principal to condense and remove moisture from compressed air, there are two different types of systems used to do this, cycling and non-cycling.

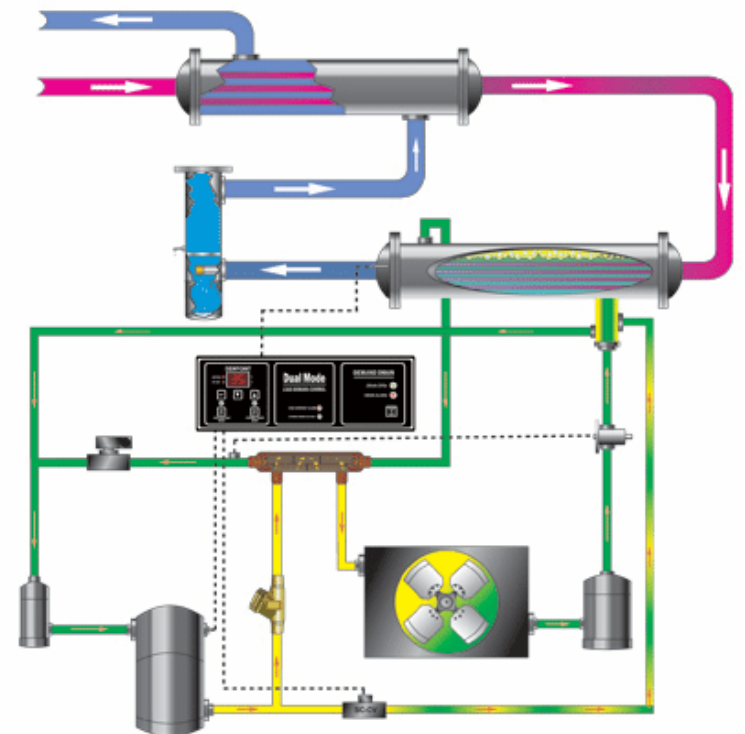
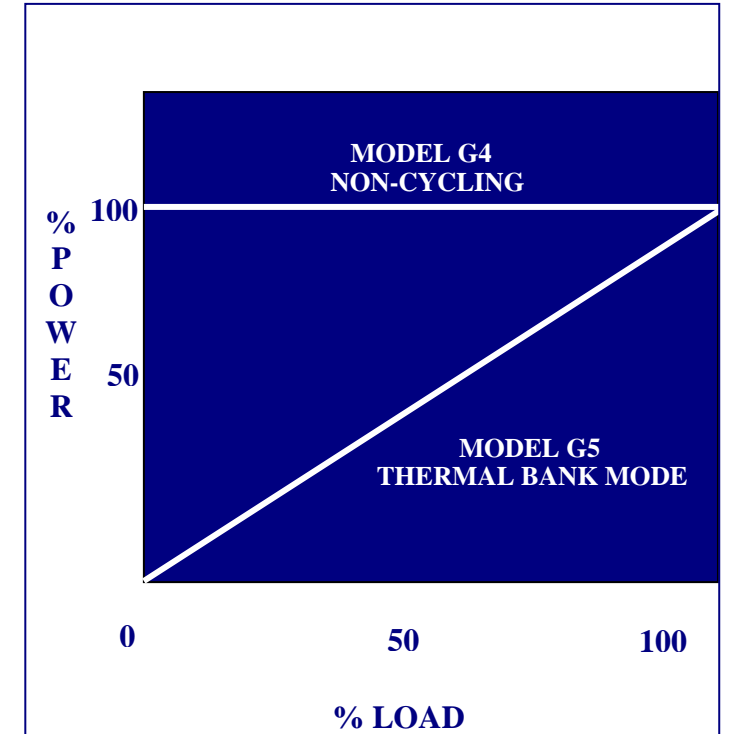
**G4 Non-cycling dryers** utilize a hot-gas bypass valve to simulate a load on the refrigeration system during downturns in compressed air usage. Because of this, they consume power at a constant rate regardless of how much compressed air is being used.

**G5 "Cycling Dryers"** energy consumption is proportional to the actual compressed air load. Although the initial investment is slightly higher than non-cycling dryers, the cost is recovered in energy savings.

### Two energy saving modes are included:

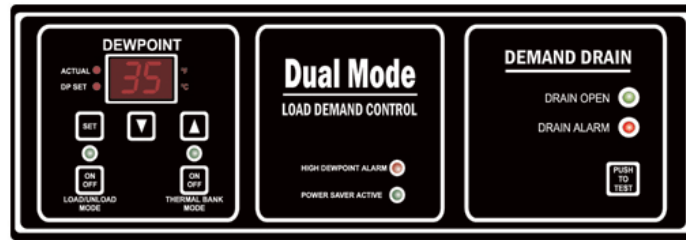
**Load/Unload Mode** switches compressor to an unloaded condition when dew point temperature set point is achieved. Approximately 50% energy savings can be realized while maintaining a tight dew point.

**Thermal Bank Mode** maximizes energy savings when less than full air flow is expected. If the dew point temperature falls to the low set point, cold storage is generated in the evaporator and the refrigeration compressor is switched off. When the set point rises to upper set point the refrigeration compressor switches on. Maximum energy is saved and dew point fluctuation is not as much as a conventional thermal mass style dryer.



PSB G5 refrigerated air dryers are equipped with a Digital Readout of the actual temperature of the compressed air measured at the evaporator discharge.

### G5 Standard Instrumentation



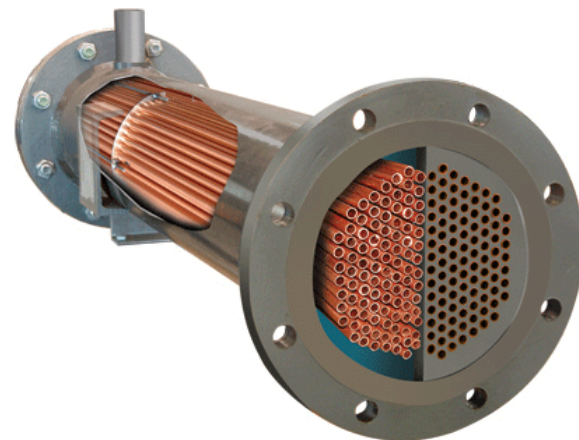
- Digital Dew Point Temperature Readout
- Load/Unload Mode Selector Switch
- Thermal Bank Mode Selector Switch
- Mode Indicator Light
- Adjustable Dew Point Control
- Power Saver Active Light
- High Dew Point Alarm
- Demand Drain Controller with Alarm and Dry Contacts

Diagnostic Code Display Panel includes Shutdowns with common Alarm and a Dry Contact Alarm for:

- ➔ High Dew Point
- ➔ Low Freon Level
- ➔ Low Refrigerant Pressure
- ➔ High Refrigerant Pressure
- ➔ Sensor Fault

### Shell and Tube Heat Exchangers:

- Standard on all G5 Units
- Inlet air flows through smooth, straight tubes
- Grooved tubesheets provide leak proof design and high mechanical strength
- Removable heat exchanger end bonnets – allows for inspection and cleaning, if required
- Evaporator shell flooded with refrigerant for optimum performance



### G5 Standard Equipment

- Digital Diagnostics Display
- Digital Dew Point Readout
- Adjustable Dew Point Control
- High Dew Point Alarm
- Demand Drain controller with Alarm and Dry Contacts
- Drain Open and Drain Alarm Lights
- Gauge, Air Pressure In (G5-330 to G5-3000)
- Gauge, Air Pressure Out (G5-330 to G5-3000)
- Load/Unload Mode Selector Switch
- Light, Mode Indicator
- Light, Power Saver Active
- Thermal Bank Mode Selector Switch

### G5 SPECIFICATIONS

Model	Cooling media	SCFM Capacity	Ref. H.P.	Electrical Connection V/Ph/Hz	Connection Air In/Out	Shipping Weight lbs	Dimensions - Inches		
							L	W	H
G5-80	R134a	80	1/2	115/1/60	1" NPT	224	35	20	32
G5-100	R134a	100	3/4	115/1/60	1 1/2" NPT	241	35	20	32
G5-130	R134a	130	3/4	115/1/60	1 1/2" NPT	265	35	20	32
G5-165	R134a	165	3/4	115/1/60	1 1/2" NPT	265	35	20	32
G5-220	R134a	210	1	230/1/60	2" NPT	390	47	22	38
G5-250	R134a	250	1 1/2	230/1/60	2" NPT	480	47	22	38
G5-330	R134a	315	1 1/2	230/1/60	2" NPT	715	55	28	52
G5-400	R134a	400	2	460/3/60	2 1/2" NPT	925	55	28	52
G5-500	R134a	500	3	460/3/60	2 1/2" NPT	940	55	28	52
G5-650	R134a	625	3	460/3/60	2 1/2" NPT	940	55	28	52
G5-800	R404	800	4	460/3/60	3" FLG	1620	69	33	63
G5-1000	R404	1050	5	460/3/60	3" FLG	1800	69	33	61
G5-1200	R404	1250	5	460/3/60	3" FLG	1850	74	41	61
G5-1500	R404	1600	7 1/2	460/3/60	4" FLG	2200	78	48	63
G5-2000	R404	2050	10	460/3/60	6" FLG	3000	102	54	68
G5-2500	R404	2500	15	460/3/60	6" FLG	3370	102	54	67
G5-3000	R404	3050	15	460/3/60	6" FLG	4015	108	66	83

#### SCFM Ratings:

Working pressure	100 psig
Inlet air temperature	100°F
Ambient temperature	100°F
Pressure dew point	33-39°F

Electricals: contact factory for optional voltages

#### CORRECTION FACTORS: Multiply (cf) by standard dryer capacities

INLET AIR TEMP. °F	INLET AIR PRESSURE		AMBIENT AIR TEMP.	
	(cf)	psig	(cf)	°F (cf)
80	1.50	50	0.80	
90	1.22	75	0.90	90 1.05
100	1.00	100	1.00	100 1.00
110	0.83	125	1.02	110 0.90
120	0.69	150	1.05	

#### Refrigerant Condenser:

- G5-80 through G5-330: Air-cooled is standard  
Water-cooled is optional
- G5-440 through G5-1200: Air-cooled is standard  
Water-cooled is no charge
- G5-1500 through G5-3000: Water-cooled is standard  
Air-cooled is no charge

