



**REFRIGERATED GAS COOLING UNITS**

GCU SERIES



## **GCU SERIES REFRIGERATED GAS COOLING UNITS** **IMPROVING PRODUCTIVITY**

Since 1948 Hankison has been a trusted brand name known for providing innovative compressed air treatment solutions. The GCU Series non-cycling refrigerated gas cooling units are a key component for processes requiring gas cooling by offering the right combination of technology and simplicity.

Temperature sensitive applications such as surface cooling of glass molds and hot metal parts benefit from a stable supply of cool, clean process air. Blow-off operations gain efficiency by removing excess oils, dust and liquids with GCU cooling units.



### **Built for Performance and Reliability**

- 316 stainless steel brazed plate heat exchangers- No pre-filtration required
- Employs environmentally friendly HFC refrigerants
- Unique cabinet design promotes ease of access and installation
- Consistent 40°F (4.4°C) exiting gas temperature

### **Integral Filtration**

- Standard filter/separator removes particles down to 3 micron in size and liquid to 5 ppm w/w
- Optional high efficiency filtration removes solid particles 0.01 micron in size and remaining oil content to 0.008 ppm/w

### **User-Friendly Instrumentation**

- Power on light
- On/off switch
- Refrigerant fault alarm
- Gas temperature indicator

### **emm™ Energy Management Monitor**

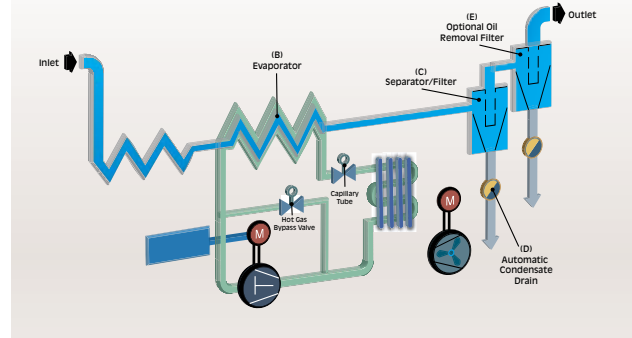
- User-friendly operator interface with 10 language display
- Demand drain push-to-test button
- Operator alert light indicates service required or system fault
- Features "schedule mode" - enables users to schedule unit operation in accordance with their work schedule
- Automatic service intervals can be set for preventative maintenance
- Remote monitoring available through the RS-232 port
- Standard NO and NC voltage-free alarm contacts

## GCU SERIES PRODUCT SPECIFICATIONS

### HOW IT WORKS

#### Models GCU-0.5 through GCU-3.5

Warm compressed air enters the air-to-refrigerant (evaporator) Heat Exchanger (B) where it is cooled by a hermetically sealed refrigeration system. As the air is cooled, water vapor condenses and is removed by the Separator/Filter (C) and discharged from the dryer by an Automatic Drain (D). Air then goes through a Oil Removal Filter (optional) (E). Clean, filtered air exits the cooling unit.



### GCU Series Product Specifications

Model	Rated Flow <sup>1</sup>		Voltages	Power <sup>2</sup>	Connection <sup>3</sup>	H		Dimensions W		D		Weight		Pressure Drop with Integrated 3 Micron HF Series Grade 9 Separator/Filter	
	scfm	nm <sup>3</sup> /h				in	mm	in	mm	in	mm	lbs	kg	psig	kg/cm <sup>2</sup>
GCU-0.5	50	85	100-115/1/50-60	0.93	1" NPT	38	965	29	737	20	508	251	114	0.8	0.05
GCU-0.75	70	119	208-240/1/50-60	1.28	1" NPT	38	965	29	737	20	508	273	124	1.0	0.06
GCU-1.0	100	170	208-230/3/60 460/3/60	1.26	1-1/2" NPT	39	991	34	864	32	813	425	193	0.6	0.04
GCU-1.5	160	272		1.96	1-1/2" NPT	39	991	34	864	32	813	463	210	1.6	0.11
GCU-2.0	200	340	380-420/3/50 575/3/60	2.03	2" NPT	46	1,168	35	889	32	813	571	259	0.7	0.04
GCU-2.5	240	408		2.91	2-1/2" NPT	58	1,473	32	813	42	1,067	691	313	0.8	0.05
GCU-3.5	330	561		4.12	2-1/2" NPT	58	1,473	32	813	42	1,067	734	333	1.0	0.06

Models GCU-0.5 - 0.75: standard internal HF Snap Trap [dryer MOP 250 psig (17.6 kg/cm<sup>2</sup>)], Models GCU-1.0 - 3.5: utilize electric demand drains as standard [MOP 232 psig (16.3 kg/cm<sup>2</sup>)]

Maximum inlet temperature: 120°F (49°C)

All models are certified to UL1995/CSA 22.2 No. 236-95

<sup>1</sup> Rated Flow Capacity - Standard conditions for rating gas coolers are: inlet air at 100 psig (7 kg/cm<sup>2</sup>) and 100°F (38°C) saturated, ambient air at 100°F (38°C), operating on 60 Hz power supply

<sup>2</sup> At 35°F (2°C) evaporator and 100°F (38°C) ambient

<sup>3</sup> BSP connections and DIN flanges available

### Capacity Correction Factors

To adjust gas cooler capacity for conditions other than rated, use Correction Factors from Tables 1 and 2.

**Example:** What is the capacity of a 200 scfm (340 nm<sup>3</sup>/h) model when the compressed air at the inlet is 150 psig (10.5 kg/cm<sup>2</sup>) and 100°F (38°C), and the ambient temperature is 90°F (32°C)?

**Answer:** 200 scfm (340 nm<sup>3</sup>/h) (rated flow from Product 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) = 240 scfm (408 nm<sup>3</sup>/h).

**Table 1 - Inlet Air Temperature & Pressure**

Inlet Pressure	Inlet Temperature			
	90°F 32°C	100°F 38°C	110°F 43°C	120°F 49°C
50	1.05	0.84	0.69	0.56
80	1.17	0.95	0.79	0.66
100	1.23	1.00	0.82	0.70
125	1.31	1.07	0.91	0.74
150	1.37	1.13	0.95	0.80
175	1.42	1.18	0.99	0.84
200	1.47	1.22	1.03	0.89
250	1.49	1.24	1.05	0.91

**Table 2 - Ambient Temperature**

Ambient Temperature	80°F 27°C	90°F 32°C	100°F 38°C	110°F 49°C
Multiplier	1.12	1.06	1.00	0.94



Hankison has built a global reputation for manufacturing quality compressed air treatment solutions. For over half a century Hankison has provided customers in the compressed air industry with the latest technology to produce superior results.

Hankison is dedicated to pursue the best solution in an expanding marketplace to manufacture new products that meet customer's performance, quality and energy savings requirements. We will continue to excel by providing the best service, sales support, and products to bring value to our customers.

## OUR GLOBAL NETWORK

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