



Refrigerated Gas Cooling Units

GCU SERIES





Improving Productivity

GCU Series

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
- 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 to 0.01 micron 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

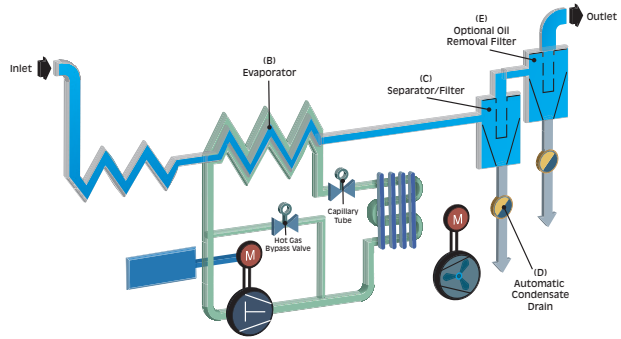
- User-friendly operator interface with 10 language display
- Demand drain push-to-test button
- Operator alert indicates service required or system fault
- Features “schedule mode”- enables users to schedule unit operation in accordance with their work schedule
- Automatic service intervals can be set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



Product Specifications

How it Works

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 ¹		Voltages	Power ²	Connection ³	Dimensions			Weight	Pressure Drop with Integrated 3 Micron HF Series Grade 9 Separator/Filter	
	scfm	nm ³ /h				H	W	D		psig	bar
GCU-0.5	50	85	100-115/1/50-60	0.93	1" NPT	38	26	20	251	0.8	0.05
GCU-0.75	70	119	208-240/1/50-60	1.28	1" NPT	38	26	20	273	1.0	0.06
GCU-1.0	100	170	208-230/3/60 460/3/60	1.26	1-1/2" NPT	39	32	32	425	0.6	0.04
GCU-1.5	160	272		1.96	1-1/2" NPT	39	32	32	463	1.6	0.11
GCU-2.0	200	340	380-420/3/50	2.03	2" NPT	58	32	42	684	0.7	0.04
GCU-2.5	240	408	575/3/60	2.91	2-1/2" NPT	58	32	42	691	0.8	0.05
GCU-3.5	330	561		4.12	2-1/2" NPT	58	32	42	734	1.0	0.06

Models GCU-0.5 - 0.75: standard internal HF Snap Trap [dryer MOP 250 psig (17.6 bar), Models GCU-1.0 - 3.5: utilize electric demand drains as standard [MOP 232 psig (16.3 bar)]
Maximum inlet temperature: 120°F (49°C)

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

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

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

³ 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 nm³/h) model when the compressed air at the inlet is 150 psig (10.5 bar) and 100°F (38°C), and the ambient temperature is 90°F (32°C)? **Answer:** 200 scfm (340 nm³/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 nm³/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



Global locations

SPX USA

Hankison Headquarters

1000 Philadelphia Street
Canonsburg, PA 15317-1700 USA
P: (724) 745-1555
F: (724) 745-6040
E: hankison.sales@spx.com

Hankison Rental Northeast

100 Commerce Drive, Suite 40
Washington, PA 15301
P: (724) 225-1470
F: (724) 222-1317
E: rentaldryers@dehydration.spx.com

Hankison Rental Southwest

1486 Champion Drive
Terrell, TX 75160 U.S.A.
P: (800) 379-3711
F: (972) 563-9991
E: rentaldryers@dehydration.spx.com

SPX Canada

Hankison Canada

1415 California Avenue
Brockville, ON, Canada k6v 7h7
T: (800) 267-3884
F: (800) 318-0952
E: hankison.sales@spx.com

SPX South America

Hankison Brazil

Rua Joao Daprat, 231 b
09600-010-SÃO Bernardo Do Campo, SP
Brazil
T: +55 (11) 2166-4050
F: +55 (11) 2166-4070

SPX Europe

Hankison Ireland

Killarney, Co Kerry
Ireland
T: (+353) 6466-33322
F: (+353) 6466-33371

Hankison Netherlands

Munnikenheiweg 41
Postbus 570
4870 NE Eitten-Leur
Netherlands
T: (+31) 76-5085800
F: (+31) 76-5085800

Hankison Germany

Konrad-Zuse-Str. 25
D-47445 Moers Germany
T: (+49) 2841-8190
F: (+49) 2841-87112
E: csc@dehydration.spx.com

SPX India

SPX India PVT, LTD
Manufacturing G-72/73
Riico Industrial Area
Mansarovar, RAJASTHAN
Jaipur 302 020
India
T: (+91) 141-2396759
F: (+91) 141-2395048

SPX Asia Pacific

SPX China

5th Floor, Park Center,
No.1568 Huashan Road, Shanghai China
T: +86 (021) 2208-5840
F: +86 (021) 2208-5866

SPX Korea

#940-1 Yerim-Ri
Jeonggwan-Myeon
Gijang-Gun
Busan
Rep. of Korea
T: +82 (51) 728-5360
F: +82 (51) 728-5359

Based in Charlotte, North Carolina, SPX Corporation (NYSE: SPW) is a global Fortune 500 multi-industry manufacturing leader.

For more information, please visit www.spx.com

SPX FLOW TECHNOLOGY

1000 Philadelphia Street
Canonsburg, PA 15317-1700 USA
P: (724) 745-1555
F: (724) 745-6040
E: hankison.sales@spx.com

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