



JUH Heat Reclaim Unit Heaters

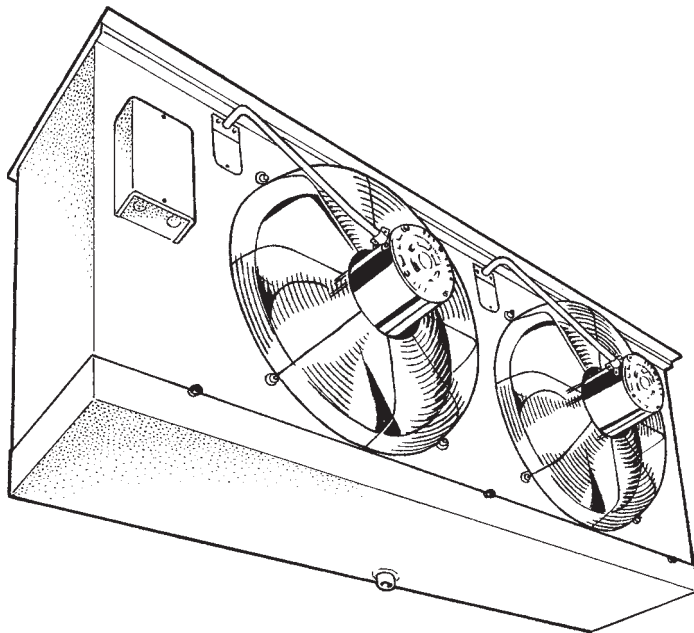
For Refrigeration Systems

Bulletin K90-JUH-PDI-10

1064634

Electrical Power: 115/1/60, 208-230/1/60,
208-230/3/60, 460/3/60,
575/3/60

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CONTENTS

PAGE

Nomenclature.....	Cover
Features.....	2
System Design.....	2
Circuit Arrangement.....	3
Specifications.....	3
Dimensional Data.....	Back

- Designed for Supermarkets, Convenience Stores, Restaurants, Refrigerated warehouses, arenas/curling rinks and institutions.
- Reclaims waste heat for use in shipping/receiving areas, storage, preparation and work areas.
- Heavy gauge all aluminum cabinet with plated and non-ferrous corrosion resistant fasteners throughout.
- Cleanable, durable textured aluminum cabinet.

- Thermally protected and permanently lubricated fan motor for long life and dependability.
- Compact size maximizes usable storage space.
- Stainless steel and nylon hardware eliminates rusting and stripping of fasteners.
- Corrosion resistant white polycarbonate fan guard.

JUH HEAT RECLAIM UNIT HEATERS

FEATURES

CABINET - Heavy gauge all aluminum construction for long life and minimum weight. Plated and non-ferrous corrosion resistant fasteners used throughout. Electrical connection box and all refrigerant connections on outside of cabinet.

COIL - Heat reclaim coil fabricated from 5/8" (16mm) O.D. copper tube mechanically expanded to provide a secure bond with rippled aluminum plate fins for optimum heat transfer. Coil circuited for minimum pressure drop and drainability to prevent logging of oil and liquid refrigerant. Coil assembly leak tested at 300 psig. dehydrated and sealed.

NUMBER OF COIL CIRCUITS - Standard models are supplied with two equal circuits. Other arrangements of two or three circuits are available.

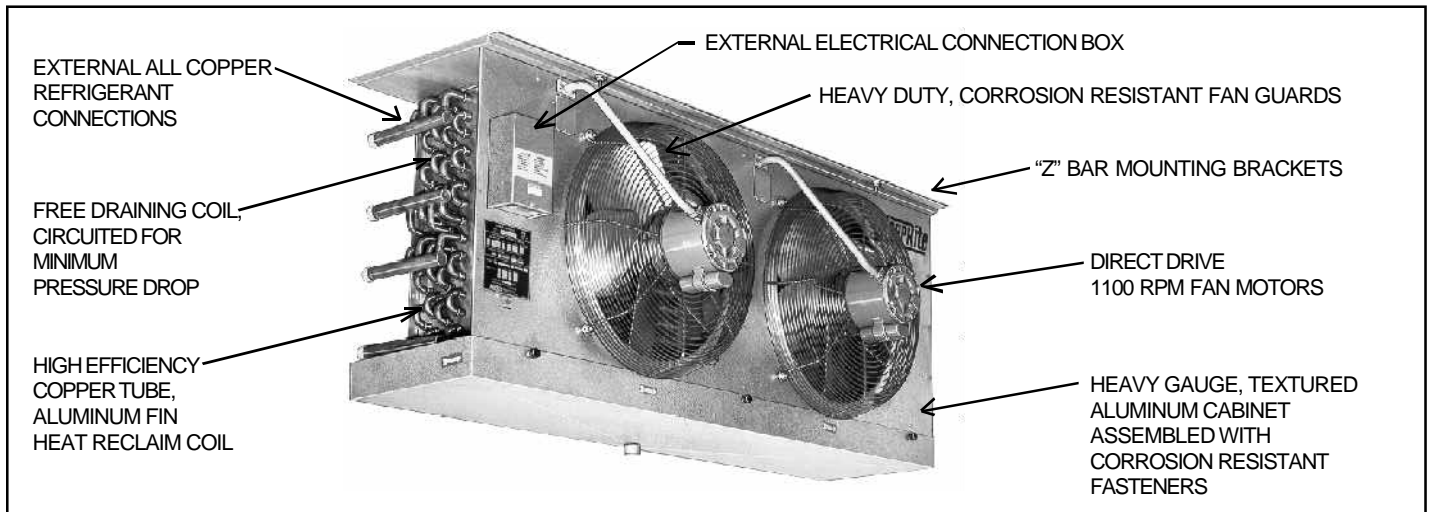
FANS - Aluminum fans. Die formed venturi fan discharge provides quiet, efficient operation with maximum air throw.

MOTORS - Permanently lubricated, totally enclosed motors feature thermal protection and current overload sensors for maximum life and dependability. Direct drive arrangement eases service and allows operation of the unit in case of partial motor failure. Available for 575/3/60, 460/3/60, 208/3/60, 208-230/1/60 or 115/1/60 entering electrical service.

FAN GUARD/MOTOR MOUNTS - Heavy gauge steel wire fan guard/motor mounts are zinc plated for corrosion protection.

WIRING - Moisture and fungus resistant wiring harness. All electrical connections at one location.

INSTALLATION FEATURES - "Z" bar mounting brackets with mounting holes on 8" (203mm) centers allows installation to varied joist centers or ceiling panel lengths. External electrical connection box and refrigeration connections simplify installation.



SYSTEM DESIGN

JUH Heat reclaim units may be used in series or parallel with an outside condenser.

Parallel piping is used when the heat reclaim system is to recover 100% of the system total heat of rejection. A three-way valve in the discharge line directs the refrigerant flow either to the outside condenser or to the heat reclaim unit. See Fig. 1

Series piping is used when the amount of heat to be recovered is less than the total heat of rejection. A three-way valve controls refrigerant flow. A by-pass arrangement with a balancing globe valve, is used to prevent excessive refrigerant pressure drop in the heat reclaim unit. See Fig. 2.

Check valves prevent refrigerant back flow to the coil not in use.

Figure 1 - JUH Heat Reclaim Unit piping arrangement when total heat of rejection does not exceed capacity of heat reclaim unit.

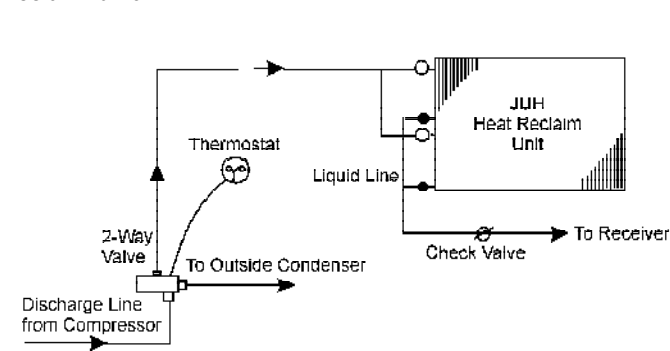
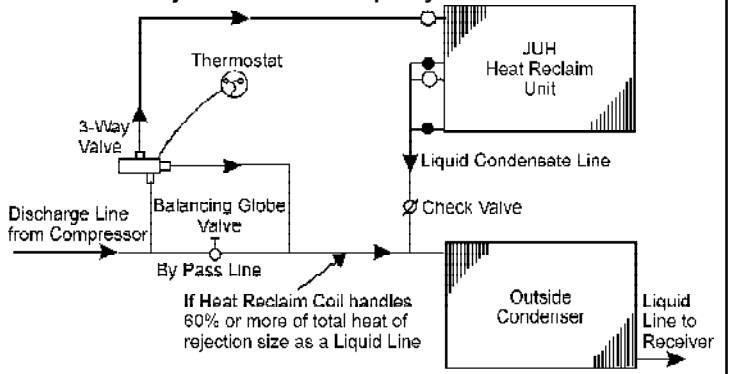


Figure 2 - JUH Heat Reclaim Unit piping arrangement when total heat of rejection exceeds capacity of heat reclaim unit.



JUH HEAT RECLAIM UNIT HEATERS

CIRCUITING ARRANGEMENT

Each JUH Heat Reclaim Unit has a total of 16 "face tubes". Five (5) different circuiting arrangements are available, consisting of various combinations of 4, 6, 8, 10 and 12 tube circuits, totalling 16 tubes.

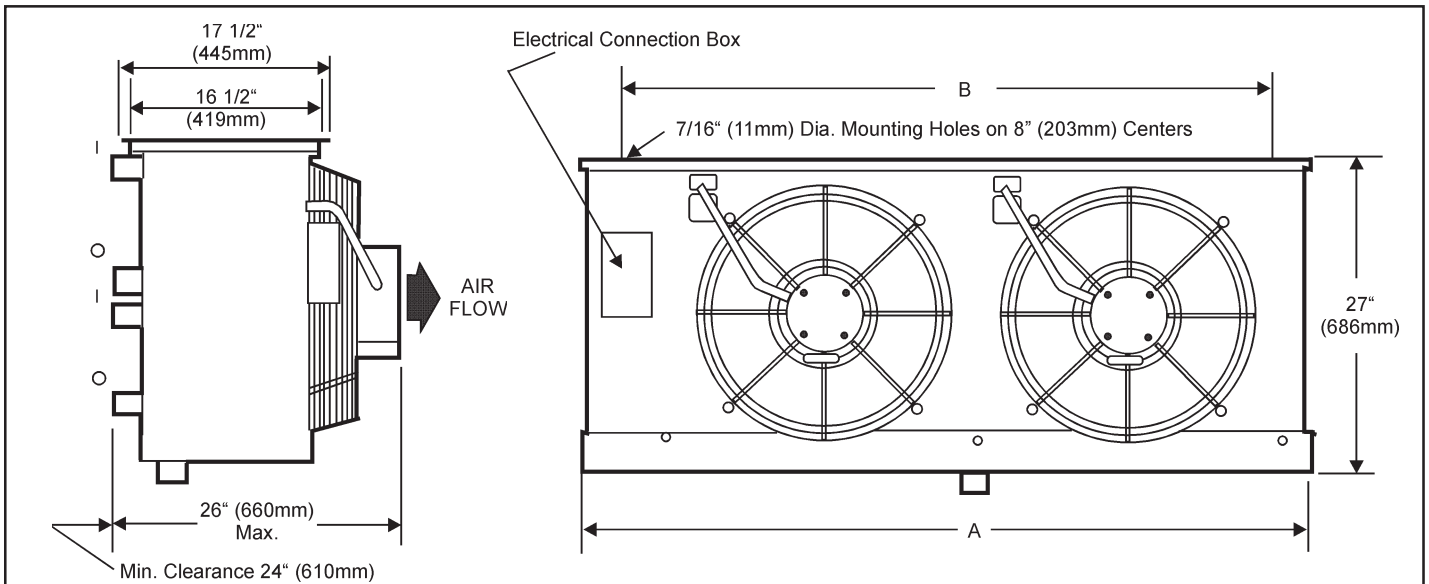
- (1) 2 - 8 face tube circuits (standard models)
- (2) 1 - 6 face tube circuit and 1 - 10 face tube circuit
- (3) 1 - 4 face tube circuit and 1 - 12 face tube circuit
- (4) 1 - 4 face tube circuits and 2 - 6 face tube circuits
- (5) 2 - 4 face tube circuits and 1 - 8 face tube circuit

No other combinations are available.

JUH MODEL		JUH2-23	JUH2-30	JUH3-35	JUH3-45
HEAT RECLAIM CAPACITY PER CIRCUIT - MBH (kW) R-22 ⁽¹⁾					
4 FACE TUBE CIRCUIT	20°F (11°C) T.D. ⁽²⁾	14.3 (4.2)	17.8 (5.2)	21.4 (6.3)	26.6 (7.8)
	30°F (17°C) T.D. ⁽²⁾	21.5 (6.3)	26.7 (7.8)	32.1 (9.4)	39.8 (11.7)
	40°F (22°C) T.D. ⁽²⁾	28.6 (8.4)	35.5 (10.4)	42.8 (12.5)	53.1 (15.6)
	50°F (28°C) T.D. ⁽²⁾	35.8 (10.5)	44.4 (13.0)	53.5 (15.7)	66.4 (19.4)
6 FACE TUBE CIRCUIT	20°F (11°C) T.D. ⁽²⁾	21.5 (6.3)	26.6 (7.8)	32.1 (9.4)	39.8 (11.7)
	30°F (17°C) T.D. ⁽²⁾	32.2 (9.4)	40.0 (11.7)	48.2 (14.1)	59.7 (17.5)
	40°F (22°C) T.D. ⁽²⁾	42.9 (12.6)	53.3 (15.6)	64.1 (18.8)	79.6 (23.3)
	50°F (28°C) T.D. ⁽²⁾	53.7 (15.7)	66.6 (19.5)	80.2 (23.5)	99.5 (29.1)
8 FACE TUBE CIRCUIT	20°F (11°C) T.D. ⁽²⁾	26.8 (8.4)	35.5 (10.4)	42.8 (12.5)	53.1 (15.6)
	30°F (17°C) T.D. ⁽²⁾	42.9 (12.6)	53.3 (15.6)	64.2 (18.8)	79.6 (23.3)
	40°F (22°C) T.D. ⁽²⁾	57.2 (16.8)	71.0 (20.8)	85.5 (25.0)	106.1 (31.1)
	50°F (28°C) T.D. ⁽²⁾	71.6 (21.0)	88.8 (26.0)	106.9 (31.3)	132.7 (38.9)
10 FACE TUBE CIRCUIT	20°F (11°C) T.D. ⁽²⁾	35.8 (10.5)	44.4 (13.0)	53.5 (15.7)	66.4 (19.4)
	30°F (17°C) T.D. ⁽²⁾	53.6 (15.7)	66.6 (19.5)	80.3 (23.5)	99.5 (29.1)
	40°F (22°C) T.D. ⁽²⁾	71.5 (20.9)	88.8 (26.0)	106.9 (31.3)	132.6 (38.8)
	50°F (28°C) T.D. ⁽²⁾	89.5 (26.2)	111.0 (32.5)	133.6 (39.1)	165.9 (48.6)
12 FACE TUBE CIRCUIT	20°F (11°C) T.D. ⁽²⁾	42.9 (12.6)	53.3 (15.6)	64.2 (18.8)	79.7 (23.3)
	30°F (17°C) T.D. ⁽²⁾	64.4 (18.9)	80.0 (23.4)	96.3 (28.2)	119.4 (35.0)
	40°F (22°C) T.D. ⁽²⁾	85.8 (25.1)	106.5 (31.2)	128.3 (37.6)	159.2 (46.6)
	50°F (28°C) T.D. ⁽²⁾	107.4 (31.5)	133.2 (39.0)	160.4 (47.0)	199.1 (58.3)
CONNECTION SIZES - O.D.S. - IN. (MM)					
4 FACE TUBE CIRCUIT	INLET	1 1/8 (28.5)	1 1/8 (28.5)	1 1/8 (28.5)	1 1/8 (28.5)
	OUTLET	1 1/8 (28.5)	1 1/8 (28.5)	1 1/8 (28.5)	1 1/8 (28.5)
6 FACE TUBE CIRCUIT	INLET	1 1/8 (28.5)	1 1/8 (28.5)	1 1/8 (28.5)	1 1/8 (28.5)
	OUTLET	1 1/8 (28.5)	1 1/8 (28.5)	1 1/8 (28.5)	1 1/8 (28.5)
8 FACE TUBE CIRCUIT	INLET	1 1/8 (28.5)	1 1/8 (28.5)	1 1/8 (28.5)	1 3/8 (35.0)
	OUTLET	1 1/8 (28.5)	1 1/8 (28.5)	1 1/8 (28.5)	1 3/8 (35.0)
10 FACE TUBE CIRCUIT	INLET	1 1/8 (28.5)	1 1/8 (28.5)	1 3/8 (35.0)	1 3/8 (35.0)
	OUTLET	1 1/8 (28.5)	1 1/8 (28.5)	1 3/8 (35.0)	1 3/8 (35.0)
12 FACE TUBE CIRCUIT	INLET	1 1/8 (28.5)	1 3/8 (35.0)	1 3/8 (35.0)	1 5/8 (41.0)
	OUTLET	1 1/8 (28.5)	1 3/8 (35.0)	1 3/8 (35.0)	1 5/8 (41.0)


NOTES: • For R12 use R22 ratings x .95. For R502, use R22 ratings x 0.98
 • TD = Condensing temperature minus entering air temperature

DIMENSIONAL DATA




JUH MODEL		JUH2-23	JUH2-30	JUH3-35	JUH3-45	
DIMENSIONAL DATA						
Overall Length	-A	In.	64 1/4	64 1/4	90 1/4	90 1/4
		mm	1632	1632	2292	2292
Outside Hanger Holes	-B	In.	56	56	80	80
		mm	1422	1422	2032	2032
Connection Sizes (O.D.S.) Standard Model	Inlet	In.	1 1/8	1 1/8	1 1/8	1 3/8
		mm	28.5	28.5	28.5	35
	Outlet	In.	1 1/8	1 1/8	1 1/8	1 3/8
		mm	28.5	28.5	28.5	35
Shipping Volume		Cu. Ft.	43.3	43.3	58.7	58.7
		Cu. m	1.22	1.22	1.66	1.66
Shipping Weight		Cu. Ft.	239	279	330	397
		Cu. m	108	127	150	180
ELECTRICAL DATA						
Fan Motors (1100 RPM)	Qty. & HP	2 - 1/4	2 - 1/4	3 - 1/4	3 - 1/4	
	Qty. & W	2 - 186	2 - 186	3 - 186	3 - 186	
Total FLA	575/3/60	0.92	0.92	1.38	1.38	
	460/3/60	1.04	1.04	1.56	1.56	
	208/230/3/60	2.80	2.80	4.20	4.20	
	208/230/1/60	2.80	2.80	4.20	4.20	
	115/1/60	5.60	5.60	8.40	8.40	
APPLICATION DATA						
Refrigerant Charge Per Face Tube R-22, R-502 ⁽¹⁾	Normal	lb.	9.8	14.6	14.3	21.5
		kg	4.44	6.62	6.49	9.75
	Limitrol	lb.	65.3	97.4	95.1	143.3
		kg	29.6	44.2	43.1	69.0
Air Flow	CFM	5000	4800	7500	7200	
	L/S	2360	2265	3540	3395	

NOTE: For R12 use R22 charge x 1.11



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