

**CUX – LARGE CO₂
COMMERCIAL
COOLERS**



**CUX
5
to
20 kW**

GENERAL

The CUX range of commercial unit coolers has been designed to meet all the latest requirements of the contractor and supermarket specifier

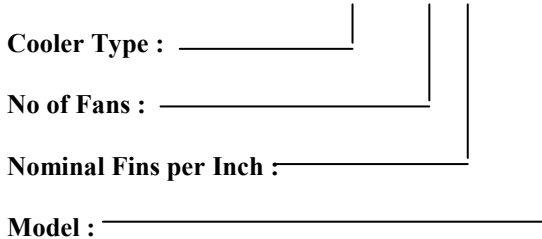
There are 12 basic models, which all use standard velocity 4 pole 1300 RPM motors

Two fin spacings 4.2mm and 6mm are offered to allow coverage of various evaporating temperatures and 2-tube thickness’ to cover Sub critical and Transcritical applications

The coils used have been designed to give optimum performance over all conditions, and are suitable for use with CO2

MODEL IDENTIFICATION CODES: -

CUX – 1 6 - 90



FEATURES

Transcritical

- ½ Coils :- Plain Copper tubing with Corrugated fins, Fin thickness 0.20mm
Tube thickness = 0.7mm
Tube centres 30mm x 30mm staggered pitch
- Stainless steel headers
- All coils pressure tested to 300 Bar , Max working
- Pressure 200 Bar

Sub critical

- ½ Coils :- Rifled Copper tubing with Corrugated fins, Fin thickness 0.20mm
Tube thickness = 0.35mm
Tube centres 30mm x 30mm staggered pitch
- 3/8 Coils :- Rifled Copper tubing with turbulated aluminium fins, Fin thickness 0.20mm
Tube thickness = 0.37mm
Tube centres 25mm x 25mm staggered pitch
- All coils pressure tested to 60 Bar, Max working
- Pressure 45 Bar

General

- Draw through high output design
- Electrostatic Powder Coated casework
- Flush to the ceiling mounted
- Easy change motors

- O/Cycle, Electric Defrost. All motors and heaters (where fitted) are wired to a common junction box for convenience

FAN MOTORS

Fans are high efficiency External rotor motors with Die-cast aluminium alloy enclosure complete with aluminium blades and capacitor start

IP54 rated with an operating range between –35°C to + 70°C. Maximum RH = 100%

All motors are single phase 230v – 50 Hz and come complete with an internal thermal protection device

Insulation class “F”

All mounted via a steel guard finished in Ral 5013

CAPACITY CORRECTION

To calculate the correct performance at a given condition you divide the catalogue capacity by the correction factor.

Example 1 CUX 14-150 Room at –18°C evap at -25°C R744

$$\text{Catalogue duty} = \frac{4.90 \text{ kW}}{1.29} = \underline{\underline{3.79 \text{ kW corrected duty}}}$$

Alternatively you can multiply your desired performance by the correction factor to select a model.

Example 2 Duty required 5.2 kW on R744 evaporating at –5°C with a 6°C TD

$$\text{Required duty} = 8.4 \text{ kW} \times 1.18 \text{ (Correction factor)}$$

The corrected duty is 9.91 kW (catalogue conditions)

Therefore the Cooler selection would be a CUX 26-330 Which has a catalogue duty of 9.9 kW.

OPTIONS

- Copper fins
- Vinyl coated fins
- Epoxy phenolic coated coil and fins
- Fan ring mounted peripheral heaters

Changes possible without prior notice

NOMINAL CAPACITIES (kW)

<u>MODEL</u>	R744 - 4.2mm
	STD
CUX 16-190	4.94 kW
CUX 26-330	9.90 kW
CUX 26-390	9.64 kW
CUX 36-470	13.77 kW
CUX 36-590	14.93 kW
CUX 46-780	20.05 kW
<u>MODEL</u>	R744 - 6mm
	STD
CUX 14-150	4.90 kW
CUX 24-250	8.50 kW
CUX 24-300	9.55 kW
CUX 34-380	12.27 kW
CUX 34-460	13.91 kW
CUX 44-590	18.64 kW

CORRECTION FACTORS

TD1 K	EVAPORATING TEMPERATURE (to)°C									
	+5	0	-5	-8	-10	-15	-20	-25	-30	-35
6	1.12	1.11	1.18	1.33	1.35	1.38	1.47	1.51	1.61	1.69
7	0.96	0.97	1.01	1.14	1.16	1.20	1.25	1.29	1.38	1.45
8	0.84	0.85	0.88	1.00	1.01	1.05	1.08	1.13	1.21	1.26
9	0.74	0.75	0.77	0.89	0.90	0.93	0.97	1.01	1.08	1.13
10	0.67	0.68	0.70	0.80	0.81	0.84	0.87	0.90	0.97	1.02

Motor Details

Model	Power Supply	Nominal Motor size - Each	Power Absorbed - Watts/Each
STD Velocity	230v 50 Hz 1 phase	150 Watts	230 Watts

Capacities

TD1 - The nominal capacities stated are based on -8°C evaporating temperature (to) and 8°C difference between air on and evaporating temperature (EN 328 Standard condition 2)

(to) – Evaporating temperature is the saturated temperature according to the pressure at the suction outlet.

Performance figures and correction factors quoted in this manual may change without notice. All figures are based on calculation only and are subject to test confirmation.

For pumped over feed systems refer to Rivacold for duties.

DIMENSIONS / CONNECTIONS / WEIGHTS

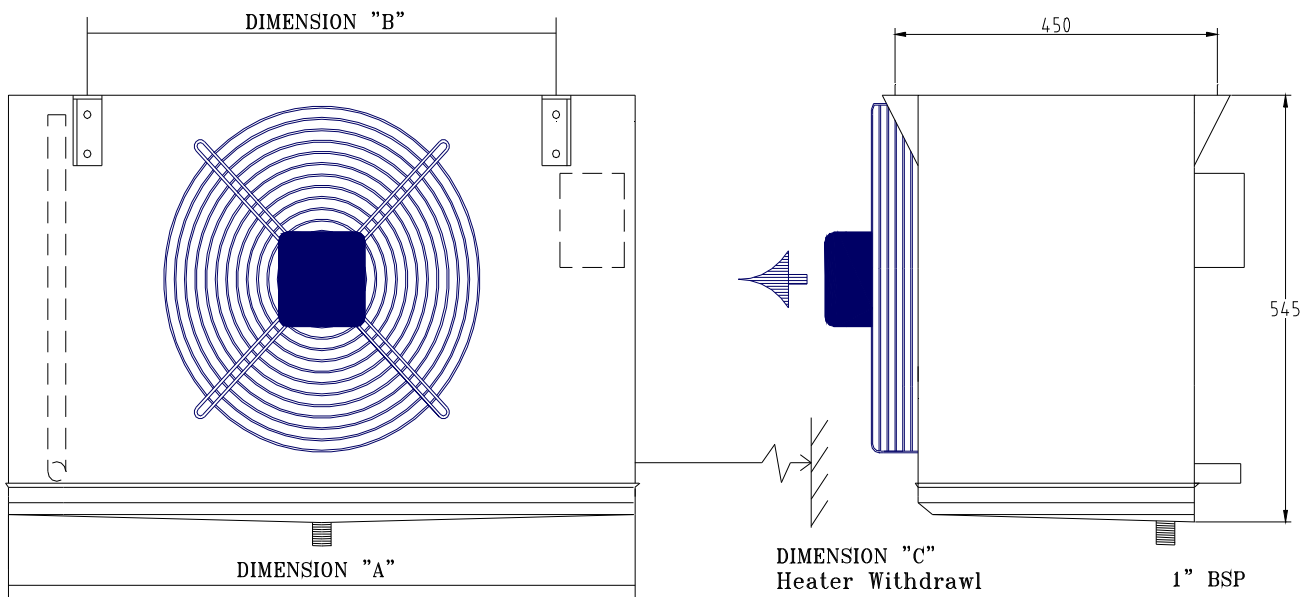
MODEL :-	DIMENSIONS :-			DRY WEIGHT KG	COIL SURFACE AREA m ²	INTERNAL VOLUME dm ³	FIN SPACING	CONNECTIONS	
	DIM "A"	DIM "B"	DIM "C"					INLET	OUTLET
CUX 16-190	875 mm	640 mm	685 mm	42	23	7.1	4.2 mm	½"	1 1/8"
CUX 26-330	1375 mm	1140 mm	1190 mm	69	31	9.2	4.2 mm	½"	1 1/8"
CUX 26-390	1375 mm	1140 mm	1190 mm	73	41	13.1	4.2 mm	½"	1 3/8"
CUX 36-470	1875 mm	1640 mm	1680 mm	86	45	13.7	4.2 mm	5/8"	1 3/8"
CUX 36-590	1875 mm	1640 mm	1680 mm	90	60	18.5	4.2 mm	5/8"	1 5/8"
CUX 46-780	2375 mm	2140 mm	2185 mm	129	79	23.2	4.2 mm	5/8"	1 5/8"

CUX 14-150	875 mm	640 mm	685 mm	39	19	11.3	6 mm	½"	1 1/8"
CUX 24-250	1375 mm	1140 mm	1190 mm	68	27	14.1	6 mm	½"	1 1/8"
CUX 24-300	1375 mm	1140 mm	1190 mm	70	36	18.3	6 mm	½"	1 1/8"
CUX 34-380	1875 mm	1640 mm	1680 mm	89	39	19.2	6 mm	½"	1 3/8"
CUX 34-460	1875 mm	1640 mm	1680 mm	92	52	26.4	6 mm	5/8"	1 3/8"
CUX 44-590	2375 mm	2140 mm	2185 mm	130	68	34.2	6 mm	5/8"	1 5/8"

AIR VOLUMES / FANS / DEFROST

MODEL :-	AIR VOLUMES :-	AIR THROW :-	MOTOR FLC :-	DEFROST LOADS :-			
				GAS		ELECTRIC	
				Watts	Amps	Watts	Amps
CUX 16-190	2540 m ³ /hr	16 Metres	0.90 Amps	250	1.09	2650	11.52
CUX 26-330	5456 m ³ /hr	18 Metres	1.80 Amps	400	1.74	6000	26.09
CUX 26-390	4865 m ³ /hr	18 Metres	1.80 Amps	400	1.74	6000	26.09
CUX 36-470	8360 m ³ /hr	21 Metres	3.04 Amps	525	2.28	8125	35.00
CUX 36-590	7299 m ³ /hr	21 Metres	3.04 Amps	525	2.28	8125	35.00
CUX 46-780	9731 m ³ /hr	25 Metres	4.05 Amps	650	2.28	10650	46.30

CUX 14-150	2678 m ³ /hr	16 Metres	0.90 Amps	250	1.09	2650	11.52
CUX 24-250	5796 m ³ /hr	18 Metres	1.80 Amps	400	1.74	6000	26.09
CUX 24-300	5356 m ³ /hr	18 Metres	1.80 Amps	400	1.74	6000	26.09
CUX 34-380	8100 m ³ /hr	21 Metres	3.00 Amps	525	2.28	8125	35.00
CUX 34-460	8034 m ³ /hr	21 Metres	3.00 Amps	525	2.28	8125	35.00
CUX 44-590	10712 m ³ /hr	25 Metres	4.05 Amps	650	2.28	10650	46.30



Minimum mounting distance from rear wall is 300mm



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