

LSR Industrial Cooler

AFC Compact Systems



LSR 12 1 - 4 4D - 4 - EL CU/AL

Range	LSR
Height of case	12 tube high
No. of fans	1, 2, 3, 4
Coil depth No. of rows	4, 6
Fin spacing	4mm, 6mm
Fan speed	4D, 6D, 8D
Defrost	El = Electric defrost in coil and drain tray.
Coil materials	Cu/Al = Copper, Aluminium fin, Cu/Av = Copper tube, vinyl coated Aluminium fin (4mm only)

LSR Industrial Cooler



Features

- Versatile range of dual discharge coolers.
- Ideally suited to production/preparation stores.
- Robust construction, designed to withstand demanding applications.
- Easy access via hinged drainpan's and fan plate(s) for maintenance and cleaning.
- Fin design provides high surface area for frost build-up. Minimal refrigerant charge.

General

The LSR range of dual discharge coolers has been developed to meet the demands of general cold storage along with those associated with food production and preparation halls. The range is divided into 3 main sections based upon fan speed.

Refrigerant and Coil

Capacity data is shown for R404A, with correction factors provided for other common refrigerants. For refrigerants and fluids not shown, including ammonia and water/glycol mixes, please consult your supplier. The 'D' fin when fitted with extended inner surface tubes delivers high performance with competitive pricing. Within the catalogue we offer 4 and 6mm fin pitch variants, for other fin spacing's please consult your supplier.

Fans / Motors and Noise levels

The 4 pole (nominal 1340rpm) high speed, high velocity and higher noise level units are suitable for all temperatures although it should be noted that when operating above 0°C there is a high likelihood of moisture carry over. The 6 pole (nominal 930rpm) mid speed, velocity and noise units are suitable for all temperatures and offer the best compromise between noise and performance. The 8 pole (nominal 680rpm) offers the lowest noise, lowest speed, air velocity and noise and is particularly suited to production/preparation halls where operators work for prolonged periods.

Noise levels are quoted at a distance of 3m from the unit at an angle of 45° to the horizontal within a free field condition. The figures are supplied as a guide only, showing comparative noise levels between models and fan selections. If the application was noise sensitive we would advise the appointment of an independent noise consultant.

Air Throws and Pump Circulation

Air throws quoted within this catalogue are based on a terminal velocity of 0.25m/s in ideal conditions. Store layout, cooler location and discharge orientation can affect the air throw. Please refer to your supplier for further information. For Pump Circulation arranged as bottom feed for pump rates between 3:1 and 5:1. For other pump rates please refer to your supplier.

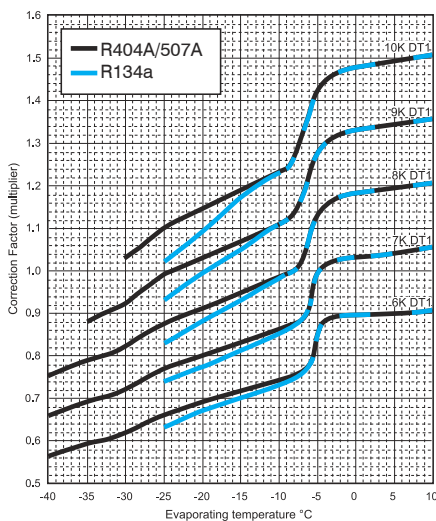
Defrost Options

Electric defrost coil and draintray Stainless steel heater elements with hermetically sealed terminals are pre-wired to a common junction box. Additional options available include double skinned and insulated drainpans, and isolator per fan.

Rating Conditions

The duties shown in this catalogue are at Eurovent Standard 7/C/001, Standard Condition 2 - (-8°C saturated suction temp. (dew point), 0°C air entering). Capacities are based on DT1 the difference between the entering air temperature and the saturated suction temperature at the outlet of the cooler.

LSR Cooler DT1 - WET



4 pole high speed

(low temperature, evaporating below -10°C)

Fin spacing	Model	Capacity R404A	Motor details 400V - 3ph - 50Hz					Fan data (500mm diameter)			Connections		Internal volume	Surface area	Defrost heater loads at 400V	
			No. of fans	Total power input	FLC per fan	SC per fan	Speed	Air volume	Air throw	Noise level @3m	Inlet (2 off)	Outlet (2 off)			Coil	Tray
		kW	W	Amps	Amps	RPM	m ³ /s	m	dB(A)			dm ³	m ²	kW	kW	
4mm	LSR121-44-4D	12.7	1	700	1.50	5.0	1390	1.93	12	61	5/8"	1 1/8"	9.3	20.5	3.2	1.6
	LSR121-64-4D	14.6	1	700	1.50	5.0	1390	1.78	10	61	5/8"	1 1/8"	14.0	75.5	3.2	1.6
	LSR122-44-4D	25.4	2	1400	1.50	5.0	1390	3.86	12	64	5/8"	1 1/8"	17.5	101	6.4	3.2
	LSR122-64-4D	29.7	2	1400	1.50	5.0	1390	3.55	10	64	5/8"	1 1/8"	26.3	151	6.4	3.2
	LSR123-44-4D	38.2	3	2100	1.50	5.0	1390	5.78	12	66	5/8"	1 1/8"	25.7	151	9.5	4.8
	LSR123-64-4D	44.5	3	2100	1.50	5.0	1390	5.33	10	66	5/8"	1 1/8"	38.6	227	9.5	4.8
	LSR124-44-4D	50.9	4	2800	1.50	5.0	1390	7.71	12	67	7/8"	1 1/8"	32.6	202	12.7	6.4
LSR124-64-4D	59.3	4	2800	1.50	5.0	1390	7.10	10	67	7/8"	1 1/8"	48.8	303	12.7	6.4	
6mm	LSR121-46-4D	10.9	1	700	1.50	5.0	1390	2.15	14	61	1/2"	1 1/8"	9.3	34.5	3.2	1.6
	LSR121-66-4D	13.4	1	700	1.50	5.0	1390	2.07	12	61	5/8"	1 1/8"	14.0	51.5	3.2	1.6
	LSR122-46-4D	21.5	2	1400	1.50	5.0	1390	4.29	14	64	1/2"	1 1/8"	17.5	69	6.4	3.2
	LSR122-66-4D	27.3	2	1400	1.50	5.0	1390	4.13	12	64	5/8"	1 1/8"	26.3	103	6.4	3.2
	LSR123-46-4D	32.2	3	2100	1.50	5.0	1390	6.43	14	66	5/8"	1 1/8"	25.7	103	9.5	4.8
	LSR123-66-4D	40.9	3	2100	1.50	5.0	1390	6.20	12	66	5/8"	1 1/8"	38.6	155	9.5	4.8
	LSR124-46-4D	42.9	4	2800	1.50	5.0	1390	8.57	14	67	7/8"	1 1/8"	32.6	138	12.7	6.4
LSR124-66-4D	54.6	4	2800	1.50	5.0	1390	8.27	12	67	7/8"	1 1/8"	48.8	207	12.7	6.4	

Note: 4 pole coolers can be used in high temperature applications, however due to the high air velocity water carry over may occur. Energy rating is available from your local GEA Searle representative, or Selection software. Energy efficiency class does not take into account the cooler defrost

Refrigeration	R404A	R407A/F	R507A	R134a	R407C
Capacity factor (dew point, DT1)	1.00	1.18*	0.97	0.91	1.35*
Refrigerant charge density (kg/dm ³)	0.312	0.332	0.313	0.338	0.332

* Capacity factors for refrigerants with high glide apply only at the nominal rating condition. Refrigerant charge densities are based on 25% of the internal volume being liquid.

Fin spacing	Model	Capacity R404A	Motor details 400V - 3ph - 50Hz					Fan data (500mm diameter)			Connections		Internal volume	Surface area	Defrost heater loads at 400V	
			No. of fans	Total power input	FLC per fan	SC per fan	Speed	Air volume	Air throw	Noise level @3m	Inlet (2 off)	Outlet (2 off)			Coil	Tray
		kW	W	Amps	Amps	RPM	m ³ /s	m	dB(A)			dm ³	m ²	kW	kW	
4mm	LSR121-44-6D	9.5	1	250	0.75	1.65	930	1.29	9	53	5/8"	1 1/8"	9.3	50.5	3.2	1.6
	LSR121-64-6D	10.6	1	250	0.75	1.65	930	1.17	7	53	5/8"	1 1/8"	14.0	75.5	3.2	1.6
	LSR122-44-6D	19.1	2	500	0.75	1.65	930	2.59	9	56	5/8"	1 1/8"	17.5	101	6.4	3.2
	LSR122-64-6D	21.3	2	500	0.75	1.65	930	2.34	7	56	5/8"	1 1/8"	26.3	151	6.4	3.2
	LSR123-44-6D	28.6	3	750	0.75	1.65	930	3.88	9	58	5/8"	1 1/8"	25.7	151	9.5	4.8
	LSR123-64-6D	31.9	3	750	0.75	1.65	930	3.51	7	58	5/8"	1 1/8"	38.6	227	9.5	4.8
	LSR124-44-6D	38.1	4	1000	0.75	1.65	930	5.18	9	59	7/8"	1 1/8"	32.6	202	12.7	6.4
	LSR124-64-6D	42.7	4	1000	0.75	1.65	930	4.69	7	59	7/8"	1 1/8"	48.8	303	12.7	6.4
6mm	LSR121-46-6D	8.4	1	250	0.75	1.65	930	1.44	10	53	1/2"	1 1/8"	9.3	34.5	3.2	1.6
	LSR121-66-6D	10.2	1	250	0.75	1.65	930	1.39	9	53	5/8"	1 1/8"	14.0	51.5	3.2	1.6
	LSR122-46-6D	16.6	2	500	0.75	1.65	930	2.89	10	56	1/2"	1 1/8"	17.5	69	6.4	3.2
	LSR122-66-6D	20.7	2	500	0.75	1.65	930	2.79	9	56	5/8"	1 1/8"	26.3	103	6.4	3.2
	LSR123-46-6D	24.9	3	750	0.75	1.65	930	4.33	10	58	5/8"	1 1/8"	25.7	103	9.5	4.8
	LSR123-66-6D	31.1	3	750	0.75	1.65	930	4.18	9	58	5/8"	1 1/8"	38.6	155	9.5	4.8
	LSR124-46-6D	33.3	4	1000	0.75	1.65	930	5.77	10	59	7/8"	1 1/8"	32.6	138	12.7	6.4
	LSR124-66-6D	41.4	4	1000	0.75	1.65	930	5.57	9	59	7/8"	1 1/8"	48.8	207	12.7	6.4

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Energy efficiency class does not take into account the cooler defrost

Refrigeration	R404A	R407A/F	R507A	R134a	R407C
Capacity factor (dew point, DT1)	1.00	1.18*	0.97	0.91	1.35*
Refrigerant charge density (kg/dm ³)	0.312	0.332	0.313	0.338	0.332

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8 pole high speed

(High and low temperatures)

Fin spacing	Model	Capacity R404A	Motor details 400V - 3ph - 50Hz					Fan data (500mm diameter)			Connections		Internal volume	Surface area	Defrost heater loads at 400V	
			No. of fans	Total power input	FLC per fan	SC per fan	Speed	Air volume	Air throw	Noise level @3m	Inlet (2 off)	Outlet (2 off)			Coil	Tray
		kW		W	Amps	Amps	RPM	m ³ /s	m	dB(A)			dm ³	m ²	kW	kW
4mm	LSR121-44-8D	7.6	1	130	0.42	1.4	680	0.93	7	47	5/8"	1 1/8"	9.3	50.5	3.2	1.6
	LSR121-64-8D	8.2	1	130	0.42	1.4	680	0.84	6	47	5/8"	1 1/8"	14.0	75.5	3.2	1.6
	LSR122-44-8D	15.1	2	260	0.42	1.4	680	1.87	7	50	5/8"	1 1/8"	17.5	101	6.4	3.2
	LSR122-64-8D	16.4	2	260	0.42	1.4	680	1.68	6	50	5/8"	1 1/8"	26.3	151	6.4	3.2
	LSR123-44-8D	22.7	3	390	0.42	1.4	680	2.80	7	52	5/8"	1 1/8"	25.7	151	9.5	4.8
	LSR123-64-8D	24.7	3	390	0.42	1.4	680	2.53	6	52	5/8"	1 1/8"	38.6	227	9.5	4.8
	LSR124-44-8D	30.1	4	520	0.42	1.4	680	3.74	7	53	7/8"	1 1/8"	32.6	202	12.7	6.4
LSR124-64-8D	32.9	4	520	0.42	1.4	680	3.37	6	53	7/8"	1 1/8"	48.8	303	12.7	6.4	
6mm	LSR121-46-8D	6.5	1	130	0.42	1.4	680	1.07	7	47	1/2"	1 1/8"	9.3	34.5	3.2	1.6
	LSR121-66-8D	8.0	1	130	0.42	1.4	680	1.03	6	47	5/8"	1 1/8"	14.0	51.5	3.2	1.6
	LSR122-46-8D	13.1	2	260	0.42	1.4	680	2.14	7	50	1/2"	1 1/8"	17.5	69	6.4	3.2
	LSR122-66-8D	16.1	2	260	0.42	1.4	680	2.06	6	50	5/8"	1 1/8"	26.3	103	6.4	3.2
	LSR123-46-8D	19.7	3	390	0.42	1.4	680	3.21	7	52	5/8"	1 1/8"	25.7	103	9.5	4.8
	LSR123-66-8D	24.2	3	390	0.42	1.4	680	3.09	6	52	5/8"	1 1/8"	38.6	155	9.5	4.8
	LSR124-46-8D	26.3	4	520	0.42	1.4	680	4.28	7	53	7/8"	1 1/8"	32.6	138	12.7	6.4
LSR124-66-8D	32.2	4	520	0.42	1.4	680	4.13	6	53	7/8"	1 1/8"	48.8	207	12.7	6.4	

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