



LDF Air Cooler

The LDF range consists of 6 ceiling mounted "blowthrough" unit coolers ranging from 1.8kW to 8.5kW, and are suitable for both high and low temperature applications. With multiple fin spacing available, various defrost options and a low profile, the cooler is ideally suited to preparation rooms and chill areas.

Coils

The coils in the LDF range utilise GEA Searle's 'D' fin with extended inner surface copper tube (internal surface area 90% greater than equivalent plain tubes), providing a highly efficient cooler fin. The unique coil geometry provides a high secondary surface on which to deposit frost and extend the periods between defrost cycles.

As an additional benefit, the coil design requires a low refrigerant charge. There are 2 fin spacings available 6mm (4 fins per inch) and 8mm (3 fins per inch). Searle manufactures the coil end plates from galvanised steel.

Fans/Motors

All units use 5 blade, 315mm axial fansets operating at a fan speed of 1380 rpm, complete with wire mesh guard. The motors have internal thermal protection and are fully tested in Searle's Research & Development laboratory. The fanset is suitable for use with a Triac speed controller, which is available as an option.

Casework

LDF coolers are manufactured from 1.2mm pre-galvanised sheet steel and electrostatically powder coated on both internal and external surfaces. Once baked and cured at 180°C it ensures an even and durable coating, offering maximum protection and a cleanable surface that can be simply wiped at servicing to retain a fresh appearance for many years.

Defrost Options

These units can be defrosted using off-cycle defrost, if the air temperature is greater than 3°C - typically in 45 minutes. Alternatively electric defrost elements can be employed and are available throughout the range.



These consist of 2 defrost elements in the coil (U-bend type, except LDF6 which uses 4 x straight elements) and 1 U-bend element in the drain tray (LDF5 and LDF 6 use 2 x straight elements). The standard heater wiring is for single phase, however LDF 5 and LDF 6 can be wired to a terminal box to suit single or three phase supply.

		LDF	2	6	AV
Range	LDF				
Model	1,2,3,4,5,6				
Fin Spacing	6mm, 8mm				
Fin Material	Blank = Aluminium AV = Vinyl Coated Aluminium CU = Copper				

Options

- Circuiting for glycol
- Alternative fin materials:
- Vinyl coated aluminium
- Copper
- Electro-tinned copper

Applications

The low silhouette LDF cooler provides a neat installation with good positioning of drain lines for the following application areas:

- Preparation rooms
- Chill rooms
- Produce / Flower storage

The low air velocity and blow-through design create a comfortable working environment for all types of preparation work. Due to the low profile and ceiling mounting location, the cooler occupies less space resulting in less likelihood of damage during room loading. For servicing, defrost elements and fansets are easily removed and for customer peace of mind, the LDF is covered by Searle's full technical support and warranty.



Selection Data

Model	R404A	R134a	Number of fans	Fan diameter	Fan speed	Air Volume	Air throw (***)	Noise level (**)	Total Power Input †	Total F.L.C	Surface area	Internal volume	Electric Defrost
	kW*	kW*		mm	rpm	m ³ /S	m	dBA	W	A	m ²	dm ³	W
1 - 6	2.29	2.08	1	315	1380	0.42	13	54	120	0.57	8.39	2.24	1590
2 - 6	2.81	2.56	1	315	1380	0.39	13	54	120	0.57	12.59	3.35	1590
3 - 6	4.63	4.21	2	315	1380	0.84	15	57	240	1.14	16.78	4.18	3180
4 - 6	5.62	5.12	2	315	1380	0.78	15	57	240	1.14	25.17	6.27	3180
5 - 6	7.02	6.39	3	315	1380	1.26	16	59	360	1.71	25.17	6.12	4800
6 - 6	8.48	7.72	3	315	1380	1.17	16	59	360	1.71	37.76	9.18	4800
1 - 8	1.84	1.68	1	315	1380	0.44	13	54	120	0.57	6.46	2.24	1590
2 - 8	2.34	2.13	1	315	1380	0.41	13	54	120	0.57	9.69	3.35	1590
3 - 8	3.76	3.42	2	315	1380	0.88	15	57	240	1.14	12.92	4.18	3180
4 - 8	4.77	4.34	2	315	1380	0.82	15	57	240	1.14	19.38	6.27	3180
5 - 8	5.70	5.19	3	315	1380	1.33	16	59	360	1.71	19.38	6.12	4800
6 - 8	7.18	6.53	3	315	1380	1.23	16	59	360	1.71	29.07	9.18	4800

Notes:

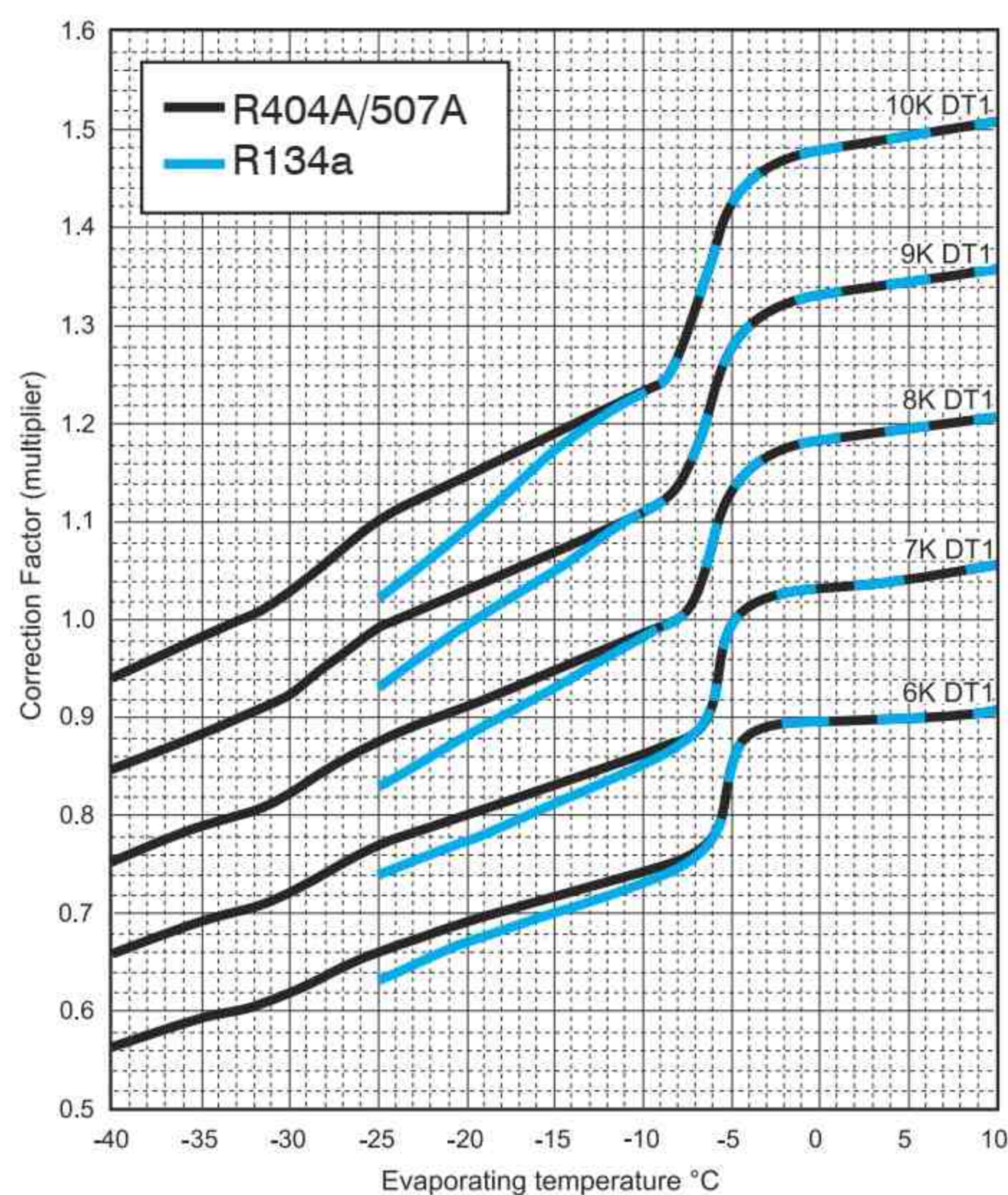
Rating Conditions

- * 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
- The duties shown in this catalogue are at EN 328 Standard Condition 2 (-8°C saturated suction temperature, 0°C air entering). Correction factors are provided for calculating duties at other conditions and with alternative refrigerants.
- ** Noise levels are based on free field conditions at a distance of 3m. Actual noise levels will depend upon cold store construction, store loading and the number of coolers installed.
- *** Terminal air velocity 0.25m/s, free air conditions at 10°C. Air throw cannot be considered on absolute value because many factors have a substantial effect on the distance achieved.
- † Total Power Input at Standard Condition 2 (-8°C saturated suction temperature, 0°C air entering).

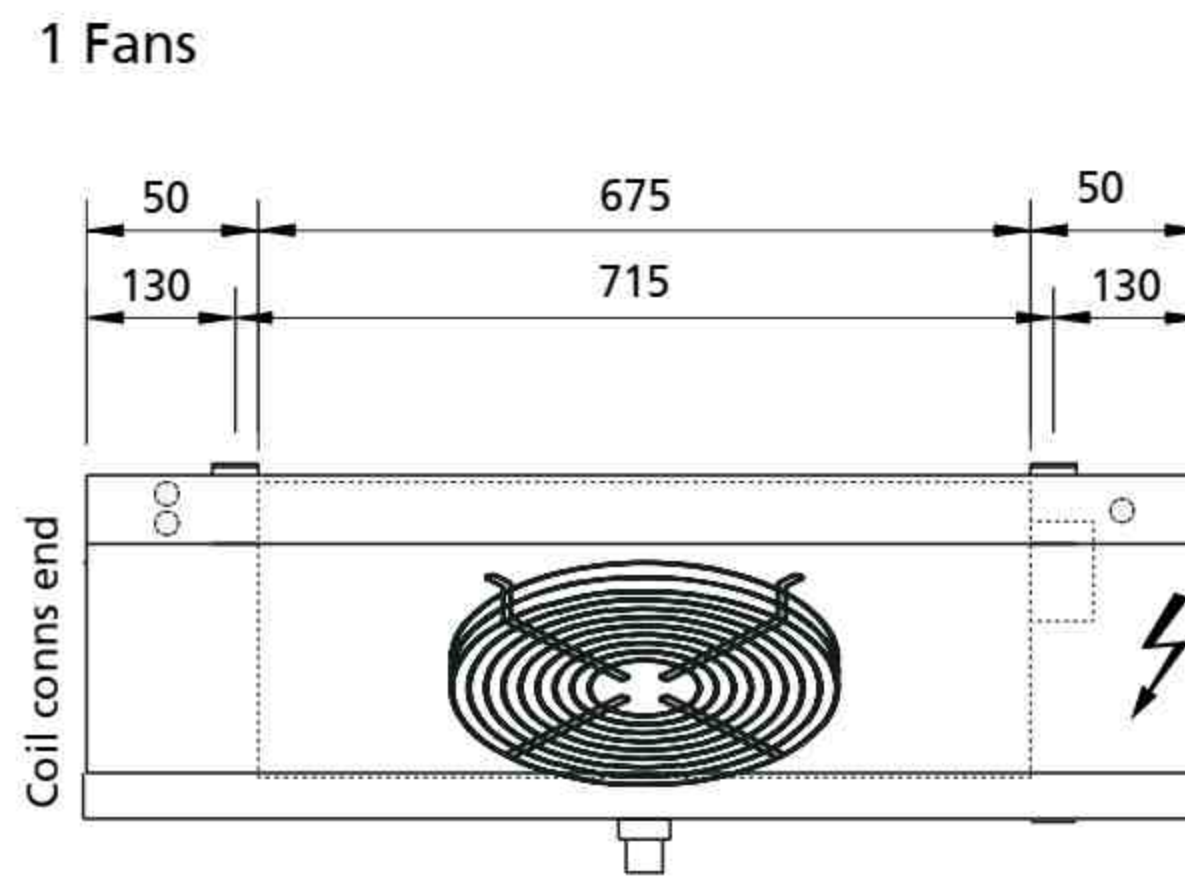
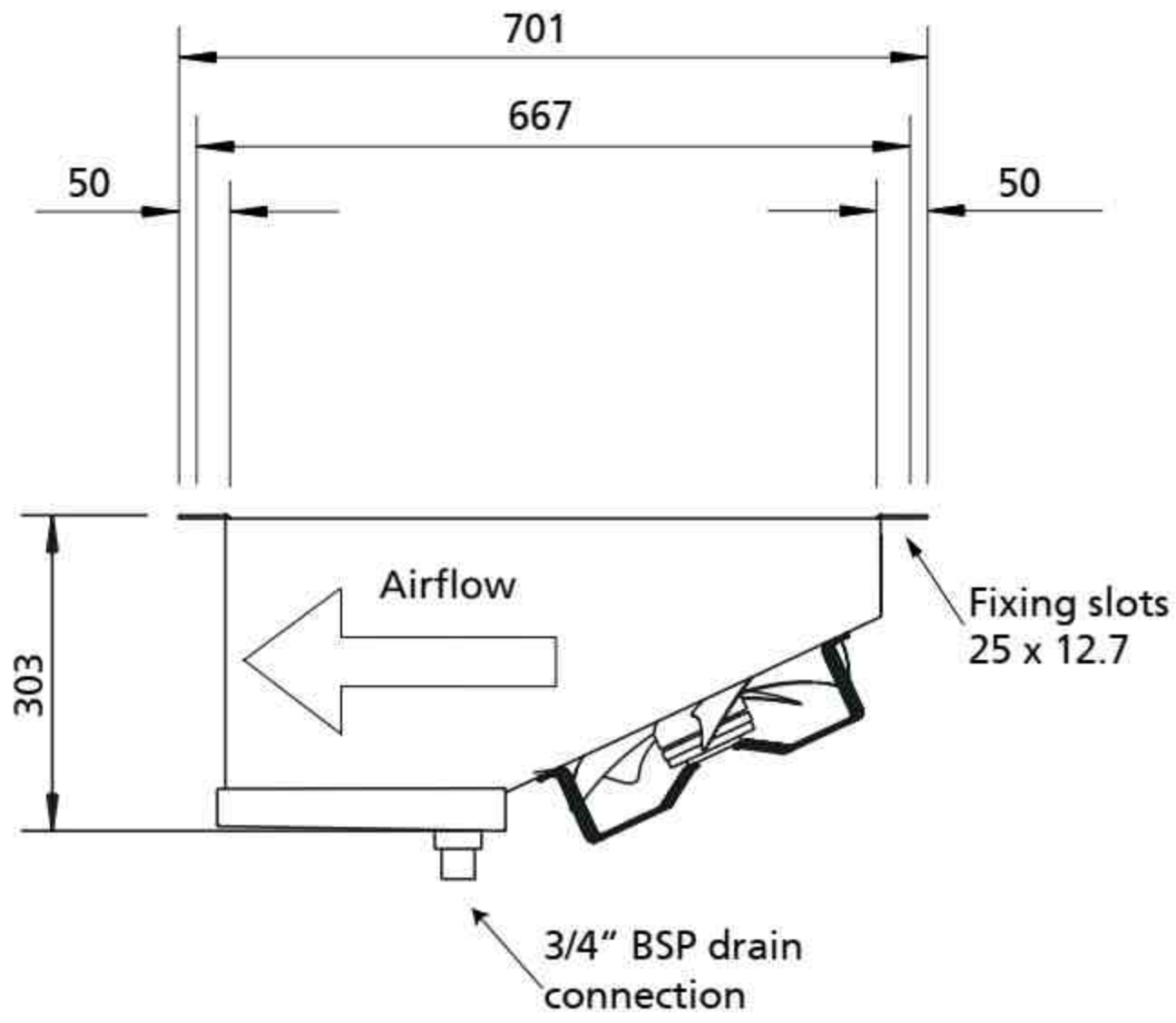
Refrigerant	R404A	R507A	R134a	R407A	R407C
Capacity Factor (dew point, DT1)	1.00	0.97	0.91	1.18 ■	0.35 ■
Capacity Factor (MID point, DT1)	-	-	-	0.91	1.01
Refrigerant charge Density (kg/dm ³)	0.312	0.338	0.313	0.332	0.332

Correction Factors (multiply capacity by appropriate correction factor to give performance at chosen conditions)

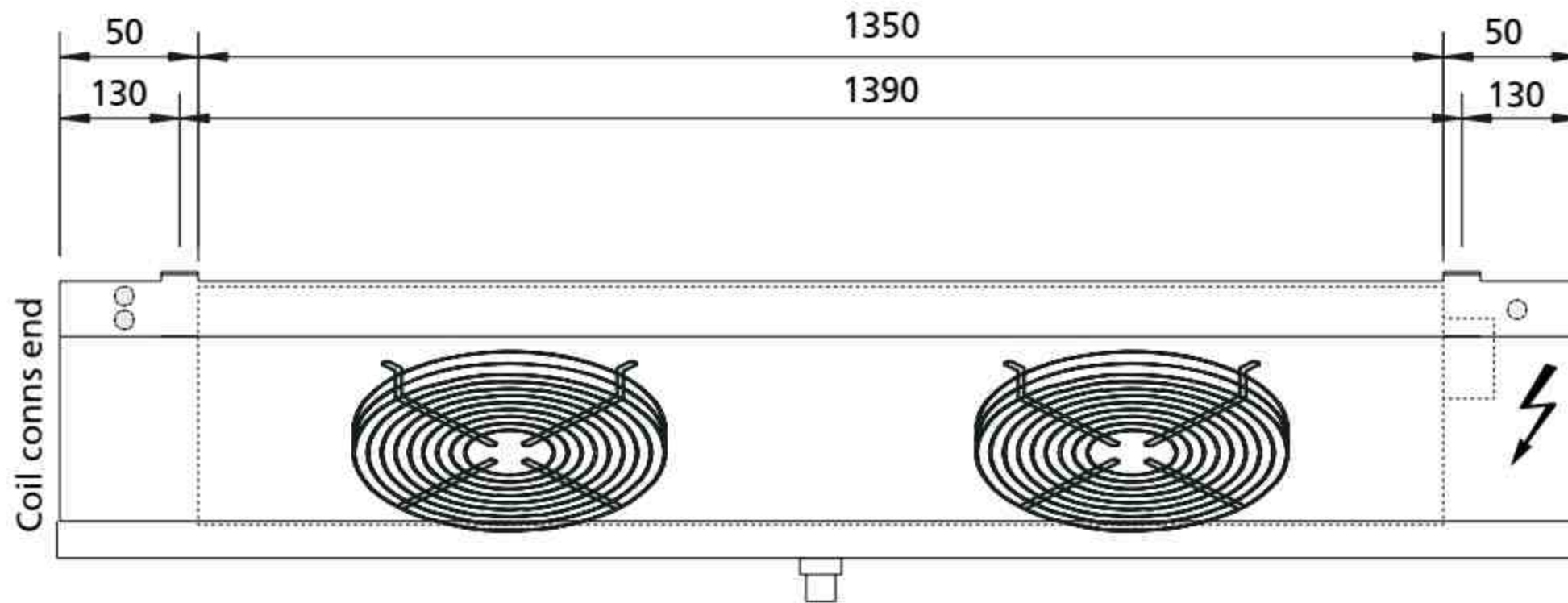
LDF Cooler DT1 - WET



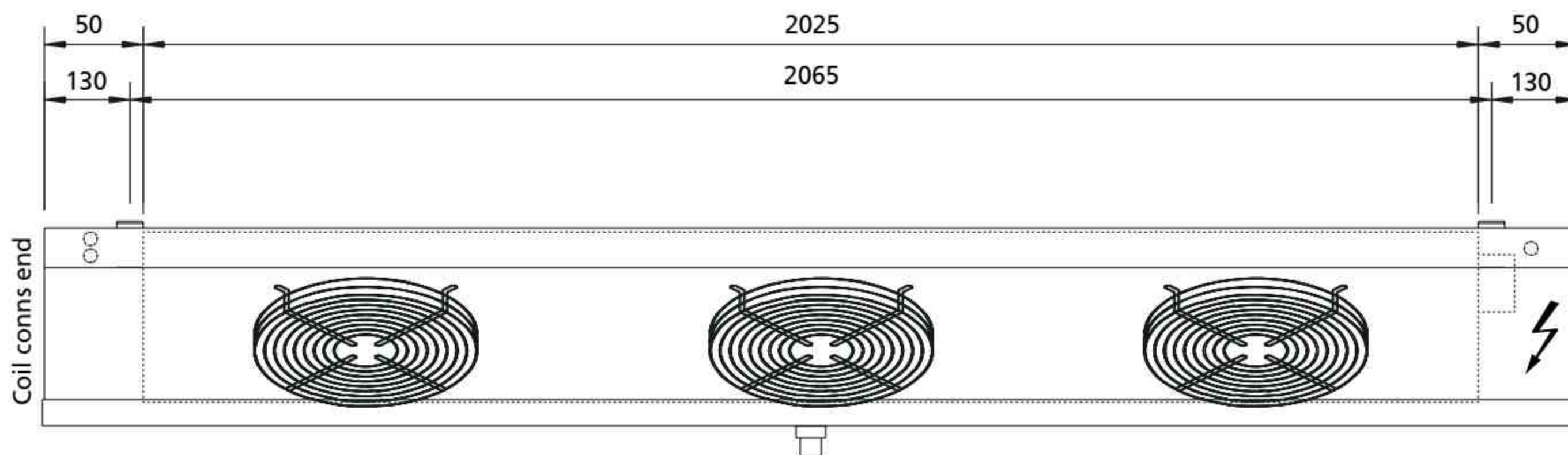
Dimensions



2 Fans



3 Fans



Note: All dimensions in mm

Model	Connections		Weight
	Inlet	Outlet	
	Inch	Inch	kg
1 - 6	1/2	5/8	31
2 - 6	1/2	5/8	34
3 - 6	1/2	7/8	48
4 - 6	1/2	7/8	53
5 - 6	1/2	7/8	66
6 - 6	1/2	1 1/8	73
1 - 8	1/2	5/8	30
2 - 8	1/2	5/8	33
3 - 8	1/2	7/8	47
4 - 8	1/2	7/8	52
5 - 8	1/2	7/8	65
6 - 8	1/2	1 1/8	72