

REPRESENTATIVES*



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force line

PRODUCT CATALOG
COMMERCIAL REFRIGERATION
FORCED AIR EVAPORATORS

Serraff Management is guided by the search for continuous improvement and relies on an ISO 9001 Quality Management System that systematically standardizes, monitors, inspects and reviews its practices.

Heat Exchange Solutions



Serraff is not limited to supplying heat exchangers: we are committed to combining technology and human potential to meet special market needs. In this

way, we are always ready to meet specific and personalized demands. Serraff goes far beyond producing and supplying finned heat exchangers and

forced air evaporators to the refrigeration and air conditioning sector: Serraff is a provider of heat exchange solutions.

Mission

Meet the needs of the various heat exchange markets while selling, developing and producing competitive and innovative products and services.

Vision

To be recognized as a benchmark for business performance in the thermal exchange market.



Force is the line of forced air evaporators resulting from meticulous work from its design to manufacture, which covers aspects related to quality, safety, functionality and thermomechanical efficiency. Developed with differentials and features that aim to meet and adapt to the needs of customers.

Advantages

- Certified components that provide product quality.
- Produced with lightweight materials that facilitate handling.
- Modern and simple architecture that maintains harmony in its various applications.
- Functional testing of components and models.
- Easy installation in the cooling system where it will be used.
- High efficiency with low noise.

Features

- Designed using an internationally approved computer program.
- Serraff standard and quality.

Forced air evaporators



forceDual



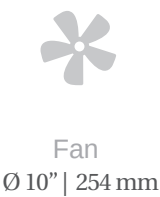
forceTrend

Applications

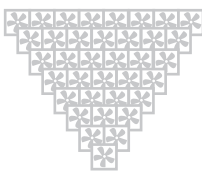
- Cold rooms;
- Preparation chambers;
- Special chambers;
- Walk-in;
- Air-conditioned environments.



General Features



Fan
Ø 10" | 254 mm



Design concept
in modules
1 to 8 modules



Housing
White* and Black*
*Aluminum with epoxy
electrostatic painting



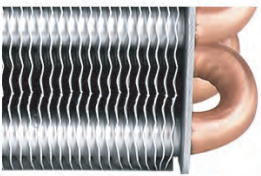
Consult our sales team and
see other possible application
conditions

Defrost process



E – electric (electric resistor)

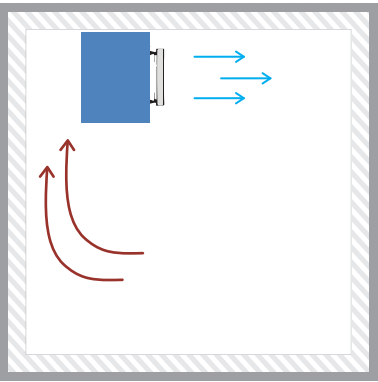
Evaporator



- Tube: Copper 1/2 ”
- Fin: Aluminum
- Self-spaced: 6.35 mm (4 fins per inch)
- Header: Aluminum.

Air movement

Illustration of application on the
ceiling and on one side of the chamber



Side view image

General Features

Fan							Resistor			
Model	Defrost	Number of fans	Air Flow (m³/h)	Voltage (V)	Current (A)	Power (W)	Quantity	Voltage (V)	Current (A)	Power (W)
FT 25130	E	1	1100	220	0,51	112	2	220	2,73	600
FT 25220		2	2300	220	1,02	224	2	220	5,45	1200
FT 25230		2	2200	220	1,02	224	2	220	5,45	1200
FT 25320		3	3450	220	1,53	336	2	220	8,18	1800
FT 25330		3	3300	220	1,53	336	2	220	8,18	1800
FT 25420		4	4600	220	2,04	448	2	220	10,91	2400
FT 25430		4	4400	220	2,04	448	2	220	10,91	2400
FT 25530		5	5500	220	2,55	560	2	220	13,64	3000
FT 25630		6	6600	220	3,05	672	2	220	16,36	3600
FT 25730		7	7700	220	3,56	784	2	220	19,09	4200
FT 25830		8	8800	220	4,07	896	2	220	21,82	4800

E - Electric defrost process (resistor)

Sizing Characteristics

Model	Defrost		A (mm)	B (mm)	C (mm)
FT 25130	E	10"	383	245	509
FT 25220		10"	383	245	818
FT 25230		10"	383	245	818
FT 25320		10"	383	245	1132
FT 25330		10"	383	245	1132
FT 25420		10"	383	245	1445
FT 25430		10"	383	245	1445
FT 25530		10"	383	245	1757
FT 25630		10"	383	245	2070
FT 25730		10"	383	245	2382
FT 25830		10"	383	245	2693

Thermal Characteristics

Capacity (kcal/h)								Modules	Defrost	Model	Defrost	Modules	Capacity (W)							
Temperature (°C)													Temperature (°C)							
10	5	0	-5	-10	-15	-20	-25						10	5	0	-5	-10	-15	-20	-25
Refrigerant R-134a								Refrigerant R-134a												
886	861	831	797	759	733	717	706	1	E	FT 25130	E	1	1030	1001	966	927	882	852	834	821
1528	1480	1388	1296	1189	1118	1060	1025	2		FT 25220		2	1777	1721	1614	1507	1383	1300	1232	1192
1788	1742	1683	1608	1548	1505	1478	1462	2		FT 25230		2	2079	2025	1957	1870	1800	1750	1719	1700
2365	2206	2018	1840	1678	1509	1377	1333	3		FT 25320		3	2750	2565	2346	2140	1951	1755	1601	1550
3396	3233	3025	2813	2589	2380	2220	2134	3		FT 25330		3	3949	3759	3517	3271	3010	2768	2581	2481
3082	2963	2810	2631	2434	2298	2188	2125	4		FT 25420		4	3584	3445	3267	3059	2830	2672	2544	2471
4445	4255	4015	3759	3487	3250	3107	3007	4		FT 25430		4	5169	4948	4669	4371	4055	3779	3613	3496
5490	5277	4982	4592	4289	4073	3920	3792	5		FT 25530		5	6384	6136	5793	5340	4987	4736	4558	4409
6846	6527	6112	5698	5257	4837	4518	4388	6	FT 25630	6	7961	7590	7107	6625	6113	5624	5254	5102		
7364	7053	6623	6136	5793	5578	5452	5351	7	FT 25730	7	8563	8201	7701	7135	6736	6486	6339	6222		
8929	8603	8077	7499	7009	6609	6333	6122	8	FT 25830	8	10382	10004	9392	8720	8150	7685	7364	7119		
Refrigerant R-404A								Refrigerant R-404A												
1068	1030	980	926	878	854	845	839	1	E	FT 25130	E	1	1242	1198	1140	1077	1021	993	983	975
1599	1540	1451	1367	1279	1231	1194	1170	2		FT 25220		2	1859	1791	1687	1589	1487	1431	1388	1361
2114	2041	1948	1843	1768	1724	1703	1692	2		FT 25230		2	2458	2373	2265	2143	2056	2005	1980	1968
2529	2378	2199	2040	1877	1718	1619	1522	3		FT 25320		3	2941	2765	2557	2372	2183	1998	1882	1770
3581	3390	3179	2984	2781	2614	2516	2450	3		FT 25330		3	4164	3942	3696	3470	3234	3039	2926	2849
3216	3093	2925	2759	2587	2480	2423	2389	4		FT 25420		4	3739	3597	3401	3208	3008	2884	2817	2778
4678	4438	4199	3957	3705	3533	3422	3378	4		FT 25430		4	5439	5160	4883	4601	4308	4108	3979	3928
5759	5512	5203	4893	4606	4389	4301	4274	5		FT 25530		5	6697	6409	6050	5690	5356	5104	5001	4970
7203	6807	6404	6020	5619	5269	5099	4985	6	FT 25630	6	8376	7915	7447	7000	6534	6127	5929	5796		
8306	7888	7434	7002	6554	6181	6019	5933	7	FT 25730	7	9658	9172	8644	8142	7621	7187	6999	6899		
9239	8886	8352	7885	7398	7071	6886	6829	8	FT 25830	8	10743	10333	9712	9169	8602	8222	8007	7941		
Refrigerant R-410A								Refrigerant R-410A												
1039	976	919	870	830	808	798	793	1	E	FT 25130	E	1	1208	1135	1069	1012	965	940	928	922
1619	1562	1474	1391	1325	1283	1269	1260	2		FT 25220		2	1883	1816	1714	1618	1541	1492	1476	1465
2035	1927	1808	1695	1617	1567	1542	1524	2		FT 25230		2	2366	2241	2102	1971	1880	1822	1793	1772
2683	2542	2373	2230	2085	1934	1883	1848	3		FT 25320		3	3120	2956	2759	2593	2424	2249	2189	2149
3661	3449	3265	3080	2915	2781	2713	2669	3		FT 25330		3	4257	4010	3797	3581	3389	3234	3155	3103
3247	3134	2957	2793	2696	2620	2578	2540	4		FT 25420		4	3775	3644	3438	3248	3135	3046	2998	2953
4729	4499	4249	4010	3764	3637	3591	3577	4		FT 25430		4	5499	5231	4941	4663	4377	4229	4175	4159
5796	5536	5233	4940	4689	4558	4474	4396	5		FT 25530		5	6739	6437	6085	5744	5452	5300	5202	5112
7340	7001	6551	6095	5800	5587	5470	5408	6	FT 25630	6	8535	8141	7617	7087	6744	6497	6360	6288		
8408	7983	7539	7117	6711	6522	6424	6325	7	FT 25730	7	9777	9283	8766	8275	7803	7584	7470	7355		
9470	9002	8513	8036	7632	7411	7292	7179	8	FT 25830	8	11012	10467	9899	9344	8874	8617	8479	8348		
Consult us and see other possible application conditions (refrigerant, temperature range, etc.)																				
Calculation basis ΔT = 8 K, where ΔT = (T chamber - T boiling)																				

Consult us and see other possible application conditions (refrigerant, temperature range, etc.)

Calculation basis $\Delta T = 8 \text{ K}$, where $\Delta T = (T_{\text{chamber}} - T_{\text{boiling}})$