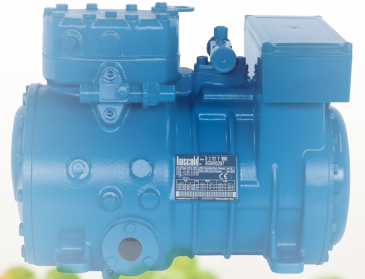




condensing unit

Technical Catalog

***Semi-Hermetic
ICU-SM/SL***



semi-hermetic CONDENSING UNIT

semi-hermetic split



ICU-HM/HL

Hermetic Split System for small and medium size cold rooms, low noise condensing unit and evaporator with accessories installed, supplied without piping. Thermostatic expansion valve, remote control panel. Suitable for outdoor use.

Cooling Capacity:
 MT = from 1103 W to 13100 W (-5 °C / +45 °C)
 LT = from 753 W to 3550 W (-30 °C / +45 °C)



ICU-SM/SL

Semi-Hermetic Split System for small and medium size cold rooms, low noise condensing unit and evaporator with accessories installed, supplied without piping. Thermostatic expansion valve, remote control panel. Suitable for outdoor use.

Cooling Capacity:
 MT = from 1960 W to 35530 W (-5 °C / +45 °C)
 LT = from 840 W to 17995 W (-30 °C / +45 °C)



ICU-CM/CL

Scroll Split System for small and medium size cold rooms, low noise condensing unit and evaporator with accessories installed, supplied without piping. Thermostatic expansion valve, remote control panel. Suitable for outdoor use.

Cooling Capacity:
 MT = from 4040 W to 26300 W (-5 °C / +45 °C)
 LT = from 2250 W to 12200 W (-30 °C / +45 °C)



ICU-TS

Shock Cooling Split System for small and medium size cold rooms, low noise condensing unit and evaporator with accessories installed, supplied without piping. Thermostatic expansion valve, remote control panel. Suitable for outdoor use.

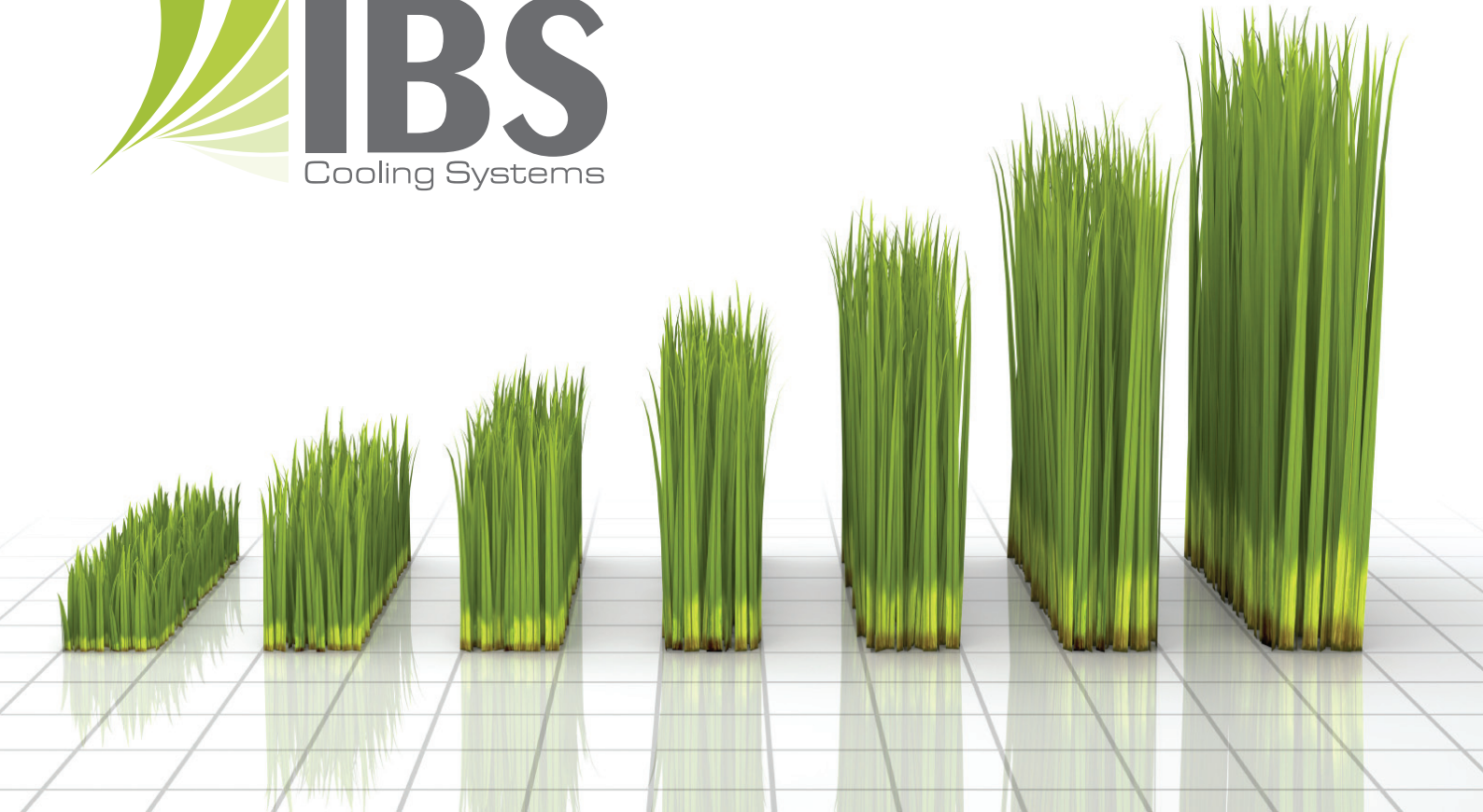
Cooling Capacity:
 LT = from 5970 W to 29500 W (-35 °C / +45 °C)



ICU-IM/IL

Industrial Split System for small and medium size cold rooms, low noise condensing unit and evaporator with accessories installed, supplied without piping. Thermostatic expansion valve, remote control panel. Suitable for outdoor use.

Cooling Capacity:
 MT = from 42950 W to 105560 W (-5 °C / +45 °C)
 LT = from 20090 W to 31950 W (-30 °C / +45 °C)



About IBS

IBS likes to describe itself as a business based on a distinct work ethic, love of innovation, the will to invest, and above all on an unrivaled respect for its customers and their satisfaction. These business characteristics are also shared by the companies that work with IBS, in a technical-economic network that generates products and services in the commercial refrigeration sector. The remarkable growth of IBS's supply companies, from components to service providers, should be considered the most positive and stabilizing aspect of the modern development of IBS.

IBS is the leading company in cooling and servicing in Turkey.

We produce everykind of cooling equipments in a variety of system solutions and scale in many countries in Europe.

IBS with the brand name IBS is produced by the largest producer of this type of cooling systems in Turkey. The company has all their departments (development production administration etc.) beneath one roof and they meet the ISO 9001 -2000 standards.

We also develop special systems for special projects from heatrecovery upto automisation and temporization of any kind of product.

Products

We care for our customers for equipment ergonomy and for our inviorment. The future is energy and according to that point we use energy very efficient.

Our solutions includes Central Refrigeration Systems, Split Type Condensing Unit, Air Cooler, Turnkey Projects, Automation, Special Projects, 7/24 Service.



hermetic

Advantages

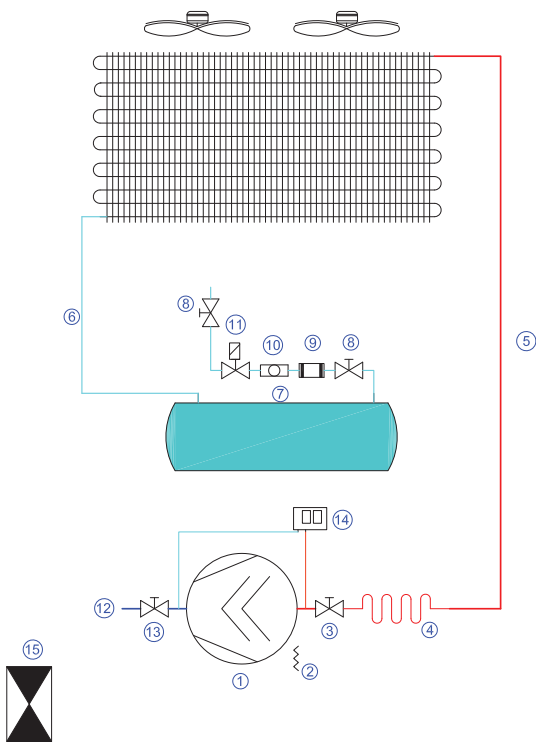
- Appropriate to standards
- High efficiency
- High quality components
- Full cabinet unit for outside applications
- Easy assembling and mounting
- Designed for easy maintenance and mounting
- Floor or wall mount opportunities
- Wide product range
- Complete, ready to install unit
- Special models/designs are also available

Technical specifications

- Electrostatic painted, steel galvanized unit
- Voltage protection relay
- Magneto-thermal switch on three phase models
- Contactor on all model range
- Crankcase heater
- Cu/Al Condenser
- Electronic fan speed control
- Liquid receiver
- Drier filter
- Gas flow gauge with humidity indicator
- Service/maintenance valve on liquid line
- LP/HP combined pressure on-off
- Integrated electric box
- Pressure relay valve
- Acoustic insulation
- Electric isolator
- Specially designed mounting brackets

Optional

- Electronic fan speed control
- Soundproofing kit
- Suction Line Accumulators
- Muffler
- Oil Separator



- | | |
|--------------------------------------|------------------------|
| 1. Compressor | 9. Filter |
| 2. Crankcase Heater | 10. Gas Flow Gauge |
| 3. Discharge Line Service Valve | 11. Solenoid Valve |
| 4. Discharge Line Vibration Absorber | 12. Suction Line |
| 5. Discharge Line | 13. Section Line Valve |
| 6. Condenser Return Line | 14. Pressure Control |
| 7. Liquid Tank | 15. Electrical Box |
| 8. Liquid Line Service Valve | |



ICU-SM Technical Specifications

Model (With Condenser)	Compressor Model	Cooling Capacity W						Current Max. A	Electrical Power kW (-10°C) 400 V / 3 / 50Hz	Sound Power dB	Condenser		Connection Suction line Discharge Line	Weight Kg	Cabin Type
		-5/+45	-5/+50	-10/+45	-10/+50	-15/+45	-15/+50				m²	Fan			
FRASCOLD / Semi-Hermetic Compressor / High Speed Fan															
ICU-SM 04.Z.F-4	A 0.5 4	1960	1960	1960	1770	1590	1420	3,4	1,08	43	9	1x350	5/8"	75	F 00
ICU-SM 05.Z.F-4	A.0.7 5	2890	2600	2380	2140	1930	1730	3,4	1,35	43	9	1x400	5/8"	75	F 00
ICU-SM 06.Z.F-4	A 1 6	3250	2940	2670	2410	2160	1940	5,1	1,63	44	9	1x450	5/8"	75	F 00
ICU-SM 07.Z.F-4	A 1.5 7	4160	3770	3410	3080	2750	2470	6,0	1,90	44	15	1x450	3/4"	90	F 11
ICU-SM 08.Z.F-4	A 1.5 8	4600	4160	3770	3400	3040	2730	6,3	2,19	44	15	1x450	3/4"	90	F 11
ICU-SM 09.Z.F-4	B 1.5 9	5160	4610	4170	3710	3330	2960	6,6	2,32	43	28	1x400	3/4"	116	F 21
ICU-SM 10.Z.F-4	B 2 10	5710	5150	4660	4200	3760	3390	8,2	2,81	44	28	1x450	7/8"	116	F 21
ICU-SM 11.Z.F-4	D 2 11	6750	6030	5490	4900	4420	3920	8,6	3,04	44	37	1x450	7/8"	116	F 21
ICU-SM 13.Z.F-4	D 2 13	8000	7260	6560	5930	5310	4800	10,5	4,00	48	37	1x500	7/8"	116	F 21
ICU-SM 15.Z.F-4	D 3 15	9200	8240	7590	6800	6200	5550	10,5	4,31	45	44	2x400	7/8"	160	F 31
ICU-SM 16.Z.F-4	D 3 16	9830	8860	8060	7260	6520	5860	11,3	4,55	45	58	2x400	7/8"	160	F 31
ICU-SM 18.Z.F-4	Q 4 19	10880	9820	9020	8150	7400	6710	12,2	4,89	47	58	2x450	1"1/8	160	F 41
ICU-SM 21.Z.F-4	Q 4 21	12560	11230	10120	9000	8040	7090	13,1	5,36	47	58	2x450	1"1/8	210	F 41
ICU-SM 25.Z.F-4	Q 5 25	14360	12920	11680	10470	9360	8340	19,4	7,14	51	58	2x500	1"1/8	210	F 41
ICU-SM 28.Z.F-4	Q 5 28	16720	15040	13740	12320	11140	9960	20,7	8,08	51	72	2x500	1"3/8	210	F 41
ICU-SM 33.Z.F-4	Q 7 33	19780	17780	16230	14570	13160	11800	26,7	9,14	47	88	2x500	1"3/8	268	F 41
ICU-SM 39.Z.F-4	S 10 39	24050	21890	19880	18080	16270	14760	37,2	12,09	53	87	4x500	1"3/8	295	F 61
ICU-SM 51.Z.F-4	S 15 51	30920	28080	25470	23070	20740	18730	45,0	14,58	53	145	4x500	1"5/8	295	F 61
ICU-SM 56.Z.F-4	S 20 56	35530	32090	29370	26470	23910	21470	51,9	15,84	53	174	4x500	1"5/8	600	F 61
ICU-SM 71.Z.F-4	V 25 71	42950	38540	34820	31160	27840	24810	57,0	18,92	53	2x116	4x500	2"1/8	600	E 4
ICU-SM 84.Z.F-4	V 30 84	51690	46490	42170	37830	33950	30380	62,7	22,04	53	2x145	4x500	2"1/8	600	E 4
ICU-SM 93.Z.F-4	V 32 93	55920	50090	45110	40270	35810	31850	66,6	23,42	53	2x174	4x500	2"1/8	600	E 4
ICU-SM 106.Z.F-4	Z 35 106	65460	58650	53290	47670	42880	38310	80,4	29,71	55	2x174	6x500	2"1/8	840	E 6
ICU-SM 126.Z.F-4	Z 40 126	76480	68350	62140	55400	49830	44350	92,1	31,60	55	2x218	6x500	2"5/8	840	E 6
ICU-SM 154.Z.F-4	Z 50 154	93600	84190	76150	68330	61060	54600	117,3	39,96	56	2x222	8x500	2"5/8	950	E 8
ICU-SM 168.Z.F-4	W 50 168	105560	94660	86160	77170	69420	62110	128,4	44,44	57	2x285	10x500	2"5/8	1090	E 10
BITZER / Semi-Hermetic Compressor / High Speed Fan															
ICU-SM 04.Z.B-4	2KC-05.2	2240	1960	1785	1550	1390	1200	3,3	1,01	43	9	1x350	5/8"	75	F 00
ICU-SM 05.Z.B-4	2JC-07.2	2990	2660	2425	2150	1940	1710	4,2	1,35	43	9	1x400	5/8"	75	F 00
ICU-SM 07.Z.B-4	2HC-2.2	3810	3430	3110	2790	2495	2230	5,8	1,87	44	15	1x450	5/8"	90	F 11
ICU-SM 08.Z.B-4	2GC-2.2	4460	4010	3645	3270	2940	2630	6,2	2,15	44	15	1x450	3/4"	90	F 11
ICU-SM 09.Z.B-4	2FC-3.2	5345	4760	4375	3890	3535	3130	7,3	2,56	44	28	1x450	3/4"	116	F 21
ICU-SM 11.Z.B-4	2EC-3.2	6655	5950	5440	4850	4385	3890	7,2	3,04	43	37	1x450	3/4"	116	F 21
ICU-SM 13.Z.B-4	2DC-3.2	7935	7110	6490	5800	5230	4650	10,3	3,87	48	37	1x500	7/8"	116	F 21
ICU-SM 16.Z.B-4	2CC-4.2	9940	8920	8120	7270	6540	5830	10,8	4,12	45	58	2x400	7/8"	160	F 31
ICU-SM 18.Z.B-4	4FC-3.2	11055	9970	9050	8150	7305	6560	12,3	4,98	47	58	2x450	7/8"	210	F 41
ICU-SM 23.Z.B-4	4EC-4.2	13455	12060	11050	9890	8960	8000	17,4	6,64	51	58	2x500	7/8"	210	F 41
ICU-SM 27.Z.B-4	4DC-5.2	16685	15060	13685	12340	11085	9970	20,2	7,73	51	72	2x500	7/8"	210	F 41
ICU-SM 33.Z.B-4	4CC-6.2	19800	17700	16275	14550	13225	11810	22,6	9,06	47	88	2x500	1"1/8	268	F 41
ICU-SM 39.Z.B-4	4TCS-8.2			20805	18810	16895	15220	30,5	12,37	53	87	4x500	1"1/8	295	F 61
ICU-SM 47.Z.B-4	4PCS-15.2	30425	27650	24925	22600	20155	18210	44,5	13,30	53	145	4x500	1"1/8	295	F 61
ICU-SM 56.Z.B-4	4NCS-20.2	35425	32000	29100	26250	23650	21300	50,5	15,26	53	174	4x500	1"3/8	600	F 61
ICU-SM 63.Z.B-4	4J-22.2	39100	35500	32100	29100	26075	23600	52,5	17,43	53	2 x 87	4x500	1"3/8	600	E 4
ICU-SM 74.Z.B-4	4H-25.2	45400	41250	37325	33850	30325	27450	58,5	19,87	53	2 x 116	4x500	1"3/8	600	E 4
ICU-SM 84.Z.B-4	4G-30.2	52175	47450	42950	39000	34925	31650	66,5	22,74	53	2 x 145	4x500	1"5/8	600	E 4
ICU-SM 95.Z.B-4	6J-33.2	58700	53300	48200	43700	39150	35400	73,5	23,96	53	2 x 174	4x500	1"5/8	600	E 4
ICU-SM 110.Z.B-4	6H-35.2	68150	61900	56000	50800	45525	41200	81,2	29,94	55	2 x 174	6x500	2"1/8	840	E 6
ICU-SM 126.Z.B-4	6G-40.2	78300	71200	64450	58500	52450	47500	98,2	34,14	55	2x218	6x500	2"1/8	840	E 6
ICU-SM 151.Z.B-4	6F-50.2	93500	84900	76850	69700	62500	56600	118,9	41,92	56	2x222	8x500	2"1/8	950	E 8

Model Designation

ICU	S	M	39	Z	F	4
1	2	3	4	5	6	7

- Production Serie
- Compressor Make Model
H: Hermetic **C:** Scroll **S:** Semi-Hermetic
- Application Temperature
M: -5/+5°C **L:** -15 / -25°C
- Total Displacement

- Refrigerant
E: R 22 **Z:** R 404 A **Y:** R 134 A
- Compressor Make
B: Bitzer **F:** Frascold **T:** Tecumseh **C:** Copeland **BS:** Bristol **S:** Sanyo
- Fan Speed
4: 1400 d/d **6:** 900 d/d **8:** 660 d/d **12:** 330 d/d

ICU-SL Technical Specifications

Model (With Condenser)	Compressor Model	Cooling Capacity W						Current Max. A	Electrical Power kW (-30°C) 400 V / 3 / 50Hz	Sound Power dB	Condenser		Connection Suction line Discharge Line	Weight Kg	Cabin Type
		-25/+45	-25/+50	-30/+45	-30/+50	-35/+45	-35/+50				m ²	Fan			
BITZER / Semi-hermetic / High Speed Fan															
ICU-SL 05.Z.B-4	2IC-07.2	1150	1000	840	720	577	480	2,7	0,89	43	9	1x350	5/8"	75	F 00
ICU-SL 07.Z.B-4	2HC-2.2	1510	1330	1122	975	790	670	3,5	1,10	43	9	1x400	5/8"	75	F 00
ICU-SL 09.Z.B-4	2FC-2.2	2180	1910	1640	1420	1180	1000	4,4	1,76	44	15	1x450	3/4"	90	F 11
ICU-SL 11.Z.B-4	2EC-2.2	2665	2330	2005	1730	1445	1220	5,3	1,99	44	15	1x450	7/8"	90	F 11
ICU-SL 13.Z.B-4	2DC-2.2	3150	2750	2375	2050	1710	1440	6,2	2,23	44	28	1x450	7/8"	116	F 21
ICU-SL 16.Z.B-4	2CC-3.2	3995	3510	2990	2590	2130	1800	7,4	2,70	43	28	1x450	7/8"	116	F 21
ICU-SL 18.Z.B-4	4FC-3.2	4505	4000	3395	2990	2450	2120	8,6	3,39	44	37	1x500	7/8"	116	F 22
ICU-SL 23.Z.B-4	4EC-4.2	5590	4950	4250	3730	3115	2700	9,5	3,47	45	44	2x400	1"1/8	210	F 41
ICU-SL 27.Z.B-4	4DC-5.2	6885	6140	5225	4620	3815	3330	11,9	4,56	47	58	2x450	1"1/8	210	F 41
ICU-SL 33.Z.B-4	4CC-6.2	8300	7370	6350	5610	4695	4110	15,2	6,25	51	58	2x500	1"1/8	210	F 41
ICU-SL 39.Z.B-4	4TCS-8.2	10615	9450	8135	7170	6020	5230	16,9	6,28	51	87	2x450	1"3/8	210	F 61
ICU-SL 47.Z.B-4	4PCS-10.2	12540	11210	9550	8460	7010	6120	20,0	7,82	52	87	2x500	1"3/8	268	F 61
ICU-SL 56.Z.B-4	4NCS-12.2	14890	13310	11450	10170	8530	7510	24,4	10,41	53	116	4x500	1"5/8	295	F 61
ICU-SL 63.Z.B-4	4J-13.2	17120	15310	13000	11730	9895	8670	27,5	12,00	53	116	4x500	1"5/8	295	F 61
ICU-SL 74.Z.B-4	4H-15.2	20015	17930	15515	13800	11670	10260	32,5	13,81	53	145	4x500	1"5/8	295	F 61
ICU-SL 84.Z.B-4	4G-20.2	23125	20750	17995	16040	13590	11990	37,0	15,50	53	174	4x500	2"1/8	600	F 62
ICU-SL 95.Z.B-4	6J-22.2	25700	23000	19855	17610	14850	13010	40,7	16,57	53	2x116	4x500	2"1/8	600	E 4
ICU-SL 110.Z.B-4	6H-25.2	30025	26900	23275	20700	17510	15400	47,5	19,12	53	2x141	4x500	2"1/8	600	E 4
ICU-SL 126.Z.B-4	6G-30.2	34725	31150	26975	24050	20395	17990	54,3	21,28	53	174x2	4x500	2"1/8	600	E 4
ICU-SL 151.Z.B-4	6F-40.2	41225	36950	31950	28400	24025	21150	66,4	25,84	55	174x2	6x500	2"1/8	840	E 6
FRASCOLD / Semi-hermetic / High Speed Fan															
ICU-SL 06.Z.F-4	A 1 6	970	860	720	630	510	430	3,43	0,88	43	9	1x350	5/8"	75	F 00
ICU-SL 07.Z.F-4	A 1 5 7	1680	1480	1250	1090	890	750	4,28	1,08	43	9	1x400	5/8"	75	F 00
ICU-SL 08.Z.F-4	A 1 5 8	1860	1630	1380	1190	970	810	5,53	1,36	44	9	1x450	5/8"	75	F 00
ICU-SL 09.Z.F-4	B 1 5 9	2050	1810	1580	1390	1200	1060	6,13	1,74	44	15	1x450	3/4"	90	F 11
ICU-SL 11.Z.F-4	D 2 11	2710	2390	2040	1780	1470	1260	7,24	2,09	44	15	1x450	3/4"	90	F 11
ICU-SL 13.Z.F-4	D 2 13	3330	3010	2570	2320	1940	1750	7,97	2,48	43	28	1x450	7/8"	116	F 21
ICU-SL 15.Z.F-4	D 2 15	3730	3370	2890	2620	2190	1970	8,73	2,85	44	37	1x450	7/8"	116	F 21
ICU-SL 16.Z.F-4	D 3 16	4050	3600	3060	2700	2220	1930	10,08	2,91	44	37	1x450	7/8"	116	F 21
ICU-SL 18.Z.F-4	Q 4 19	4690	4230	3680	3310	2830	2540	11,72	3,14	48	37	1x500	7/8"	116	F 22
ICU-SL 25.Z.F-4	Q 4 25	5650	4970	4210	3670	3010	2560	12,92	3,81	45	44	2x450	1"1/8	160	F 41
ICU-SL 28.Z.F-4	Q 5 28	6970	6190	5320	4700	3930	3440	15,29	4,76	47	58	2x450	1"3/8	160	F 41
ICU-SL 33.Z.F-4	Q 5 33	8380	7540	6530	5870	4970	4450	20,05	6,35	51	58	2x500	1"3/8	160	F 41
ICU-SL 39.Z.F-4	S 7 39	10530	9490	8220	7370	6250	5540	23,77	7,37	51	87	4x450	1"3/8	160	F 61
ICU-SL 51.Z.F-4	S 10 51	13580	12200	10530	9390	7930	6970	28,40	8,96	51	116	4x450	1"3/8	268	F 61
ICU-SL 56.Z.F-4	S 15 56	15080	13480	11610	10290	8640	7530	40,15	10,99	53	116	4x500	1"5/8	295	F 61
ICU-SL 71.Z.F-4	V 15 71	18540	16590	14300	12680	10670	9310	45,28	13,23	51	145	4x500	1"5/8	600	F 62
ICU-SL 84.Z.F-4	V 20 84	20920	18490	16140	14290	12120	10750	51,36	14,70	53	174	4x500	1"5/8	600	F 62
ICU-SL 106.Z.F-4	Z 25 106	26600	23570	20090	17730	14670	12870	60,00	18,21	53	2x116	4*500	2"1/8	600	E4
ICU-SL 126.Z.F-4	Z 30 126	30860	27280	23470	20660	17270	15100	63,98	19,96	53	2x145	4x500	2"1/8	600	E4
ICU-SL 154.Z.F-4	Z 40 154	41110	36840	31740	28200	23760	20810	90,37	26,89	55	2x174	6x500	2"5/8	840	E 6

Model Designation

ICU	S	L	39	Z	F	4
1	2	3	4	5	6	7

1 Production Serie

2 Compressor Make Model
H: Hermetic **C:** Scroll **S:** Semi-Hermetic
3 Application Temperature
M: -5/+5 °C **L:** -15 / -25 °C

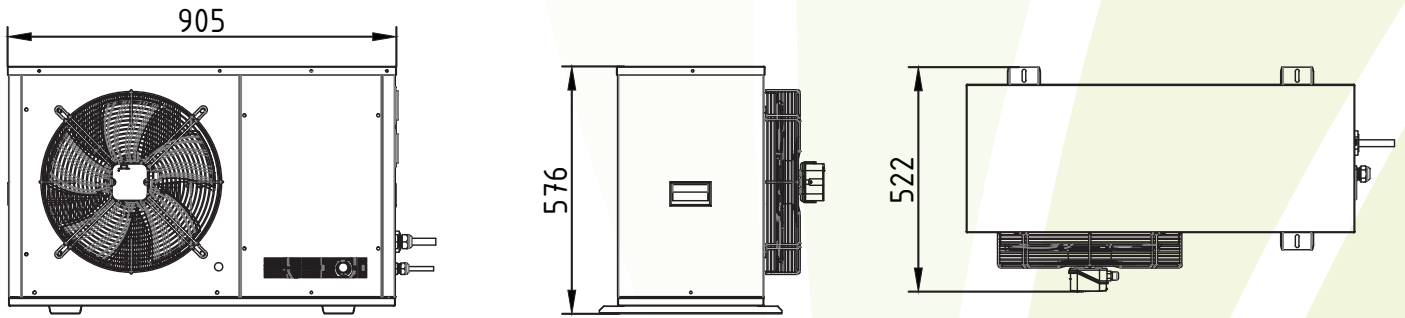
4 Total Displacement

5 Refrigerant
E: R 22 **Z:** R 404 A **Y:** R 134 A

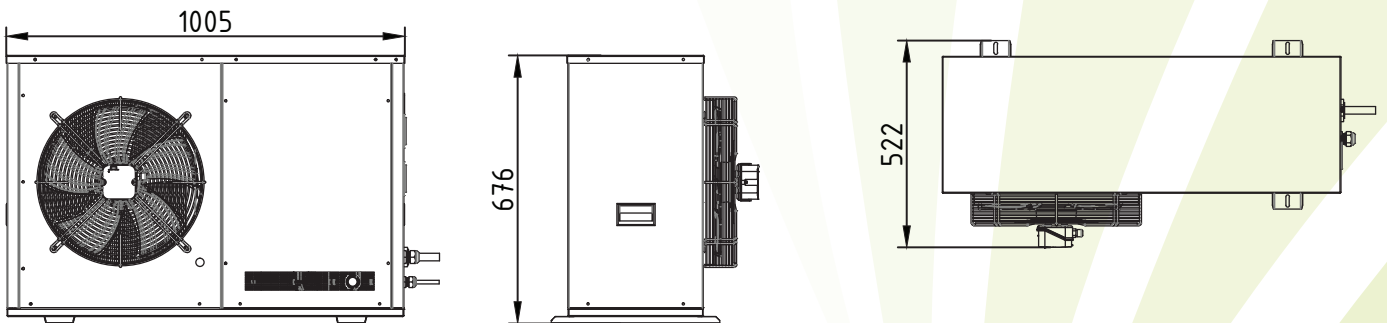
6 Compressor Make
B: Bitzer **F:** Frascold **T:** Tecumseh **C:** Copeland **BS:** Bristol **S:** Sanyo

7 Fan Speed
4: 1400 d/d **6:** 900 d/d **8:** 660 d/d **12:** 330 d/d

F00



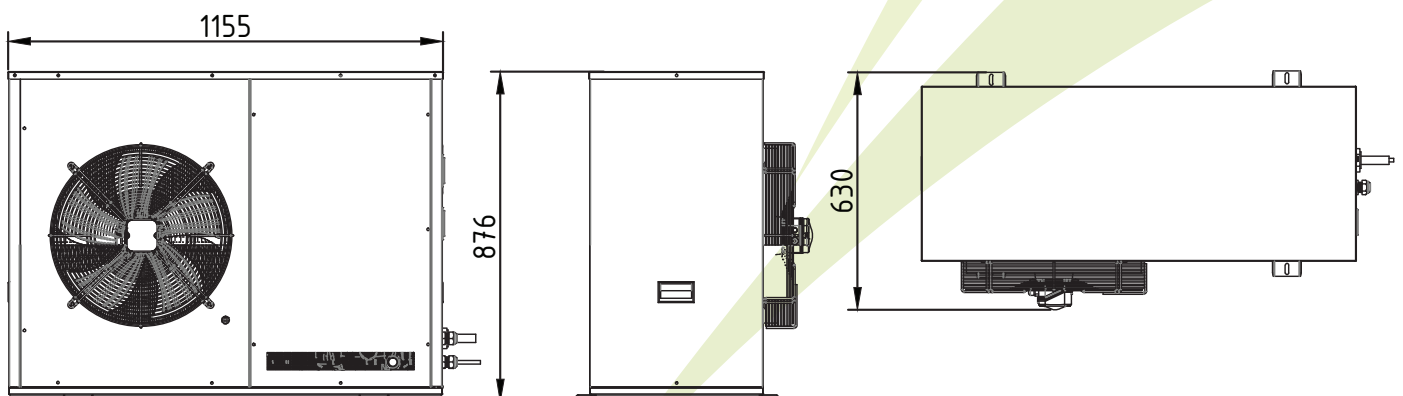
F11



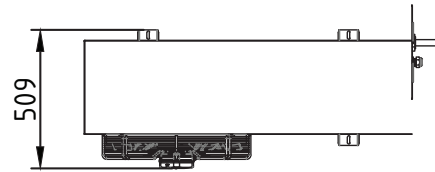
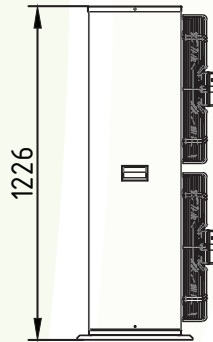
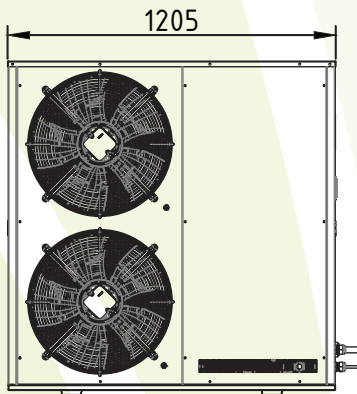
F21



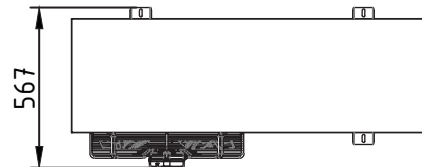
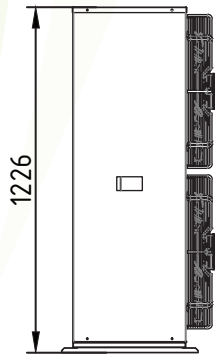
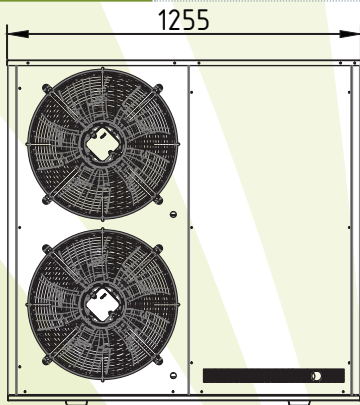
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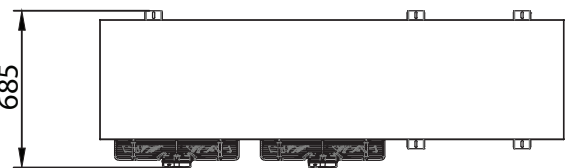
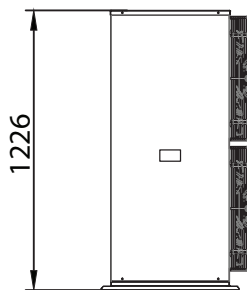
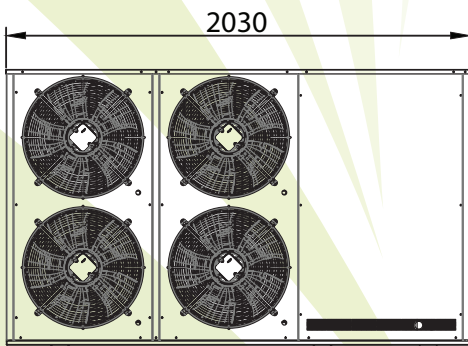
F31



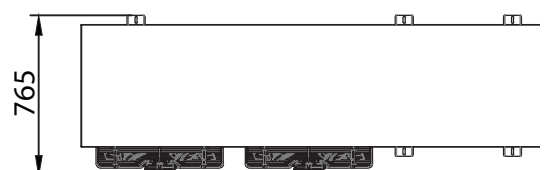
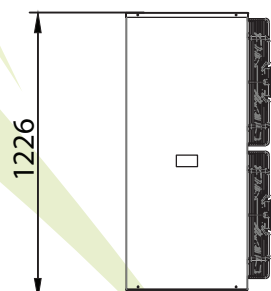
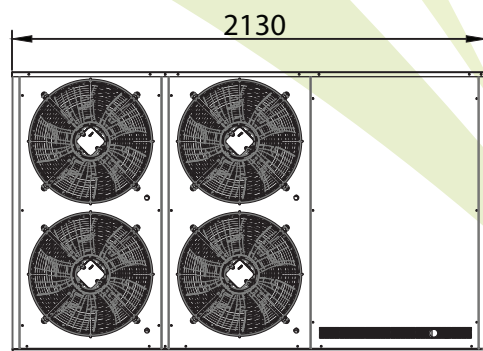
F41



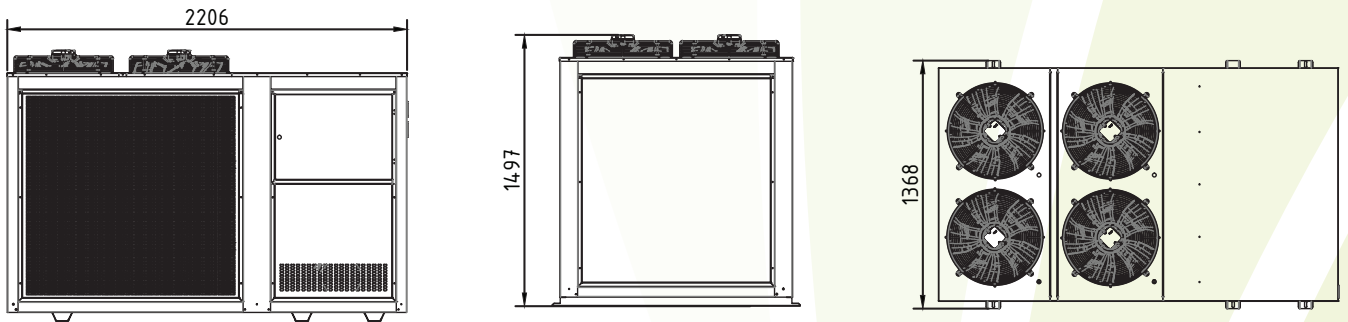
F61



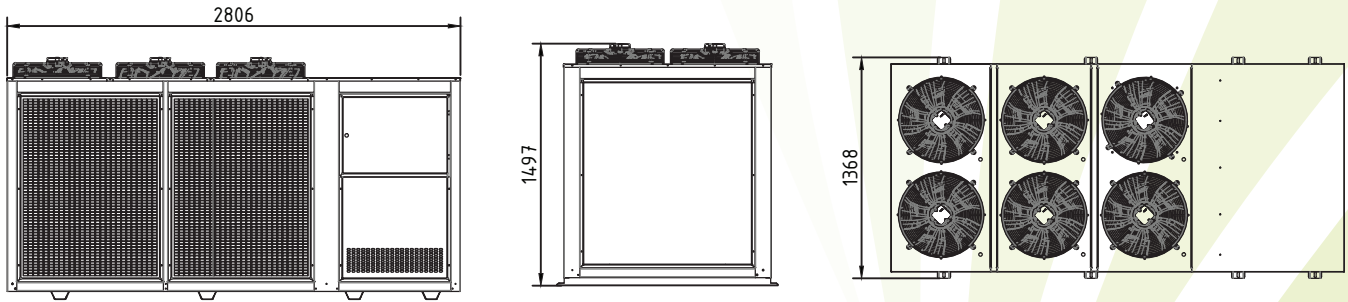
F62



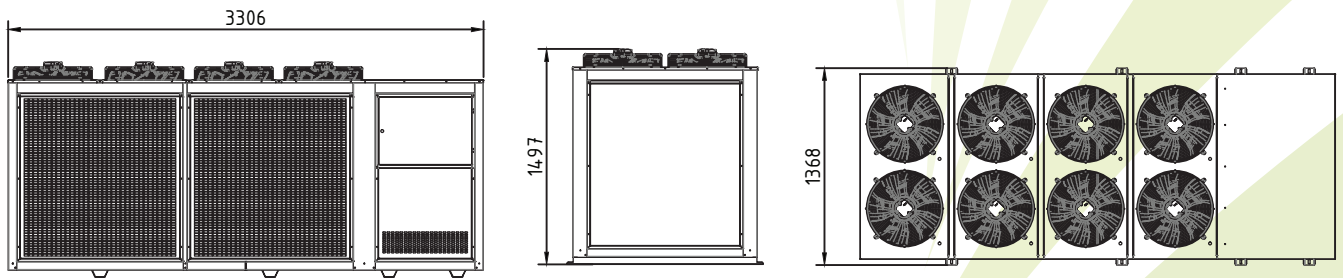
E4



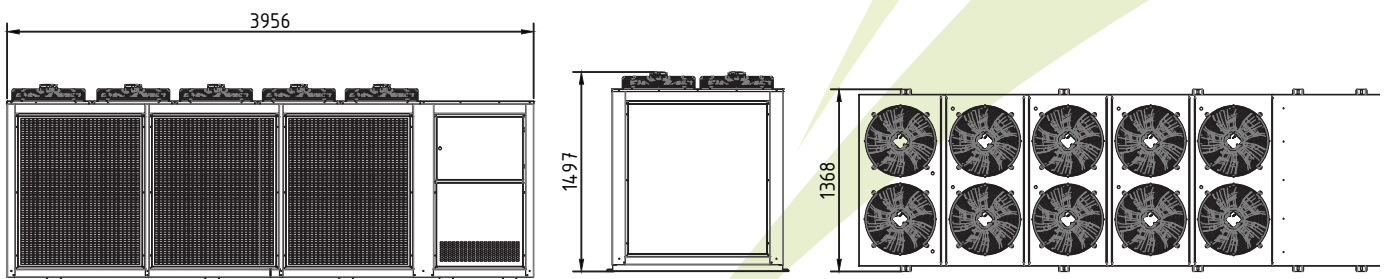
E6

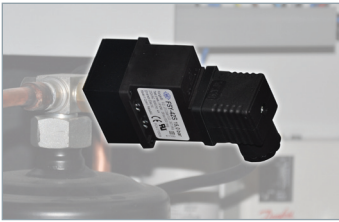


E8



E10





Fan Speed Control



Combine Pressure Control



Safety Switch



Liquid Indicators Unit



Solenoid Valves



Fan



Pressure Manometer



Helical Oil Separators



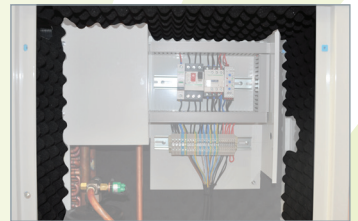
Vibration Eliminators



Vertical Liquid Receivers



Easy to Carry



Acoustic Insulation



Connection



Electrical Board



Efficient use of Condanser



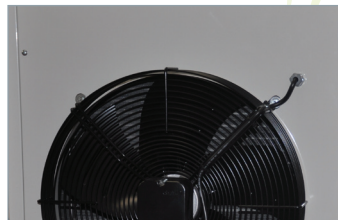
Suction Line Accumulators



Easy Installation Equipment



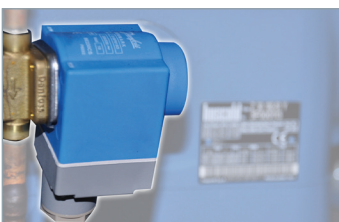
Sound Jacket



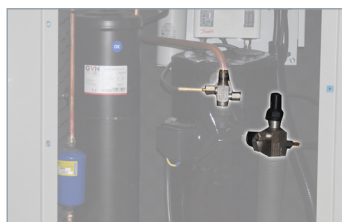
Cabinet Unit for Outside Applications



Filter Driers



Selenoid Valves



Rotolock Valves



Subcooling



Pressure Switch



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