Air Cooled Condenser

Condenser

Soprano: 500, 630, 910mm fan
Heat exchange capacity (13~353kW)

Alto: 910mm fan
Heat exchange capacity (102~1092kW)

Customer Value

- Many materials and air flow directions are available for various application scenarios
- High heat exchange efficiency, and low operation cost
- Silent running
- Anti-corrosion treatment ensures long service life

Product Features

- Coil cover made of pre-coated galvanized steel sheet
- All models either have vertical or horizontal air flow directions
- Copper pipes designed for condensing process, with aluminum fins
- Fans are of Grade F, for double-speed optional, and with high efficiency shielding cases, extremely silent
- Alternative fins can be customized, to resist corrosion from salts or polluted atmosphere
- Unique materials and process assembly technologies, making the products efficient and simple

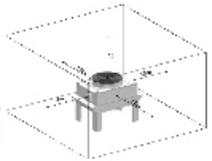
Model Naming Rule

SO	60	2	MD	B	6PH	SH
SOPRANO Condenser	Fan diameter 50=500mm 60=630mm 90=910mm	Fan quantity	Coil code MS= Single row MD= Double row	Coil model	Pole number	Airflow form SV= Vertical outlet SH= Horizontal outlet

AL	91	4	MS	C	6PH	SH
ALTO Condenser	Fan diameter 91=910mm	Fan quantity	Coil code MS= Single row MD= Double row	Coil model	Pole number	Airflow form SV= Vertical outlet SH= Horizontal outlet

Acoustic Performance

- In accordance with ISO9741 and ISO9744 Standards, sound power classes of vertical outlets of the condensers are tested in standard labs.
- Sound pressure intensity is calculated in accordance with EN 13487 Standard. Sound pressure intensity is based on that in the reference zones in the parallelepiped 1m away from the sound source and parallel to the envelope line.
- Due to sound reflection (against walls or frames, etc.) or environment factors, results obtained at installation site may be different from that in the manuals.
- In addition, sound level decrease function with distance as the independent variable is calculated with theoretical calculus.



Sound Power Correction by Fan Quantity

Fan Quantity	1	2	3	4	5	6	7	8	10	12	14
Correction Factor dB(A)	+0	+3	+5	+6	+7	+8	+9	+9	+10	+11	+12

For example, sound power for S060 4MSB Condenser with four 6PH fans is: 75+6=81dB(A)

Sound Pressure Level and Distance

Fan Distance (m)	5	10	20	30	40	50
Corrected dB(A)	+6	0	-6	-9.5	-12	-14

Fan and Motor

Fan Specifications 400V~3/50Hz

SOPRANO S050(Performance data for each fan)

Fan	Motor	Rotation Speed (rpm)	Wiring	Rated Power (kW)	Current (A)	Sound Power dB(A)
500 mm	4PH	1390	Delta	0.72	1.41	71
	4PL	1150	Star	0.55	0.95	68
	6PH	930	Delta	0.27	0.59	63
	6PL	800	Star	0.19	0.40	59
	8PH	680	Delta	0.15	0.40	54
	8PL	560	Star	0.09	0.18	50

SOPRANO S060(Performance data for each fan)

Fan	Motor	Rotation Speed (rpm)	Wiring	Rated Power (kW)	Current (A)	Sound Power dB(A)
630 mm	6PH	1330	Delta	1.25	2.48	75
	6PL	1070	Star	0.84	1.42	70
	8PH	890	Delta	0.60	1.20	67
	8PL	690	Star	0.40	0.68	61
	8PH	680	Delta	0.15	0.40	54

SOPRANO S090/ALTO AL91 (Performance data of EC fans)

Fan	Motor	Rotation Speed (rpm)	Wiring	Rated Power (kW)	Current (A)	Sound Power dB(A)
91 mm	6PH	885	Delta	2.48	5.15	77
	6PL	685	Star	1.57	2.90	71
	8PH	650	Delta	1.15	2.78	70
	8PL	475	Star	0.64	1.36	63
	12PH	420	Delta	0.41	1.13	59
	12PL	305	Star	0.21	0.48	50

SOPRANO S090/ALTO AL91 (Performance data of EC fans)

Fan	Motor	Rotation Speed (rpm)	Wiring	Rated Power (kW)	Current (A)	Sound Power dB(A)
910 mm	6PH/6PL	450~885	EBM	2.10	3.20	79

*Motor parameters in this table are from EBM

Technical Parameters

Energy Efficiency Grade

Grade	Energy Consumption	R
A	Extremely low	R>110
B	Very low	70<R<110
C	Low	45<R<70
D	Medium	30<R<45
E	High	R<30

R=Heat Extraction Rate (ENV327Working Conditions) / Motor energy consumption

Heat Extraction Rate

Nominal Capacity in the manual is rated and calculated based on the temperature / pressure working conditions when refrigeration condensing gas starts to condensate (reaches dew point). As some refrigerant (R407A or R407C) has obvious temperature glide, the saturation vapor temperature and saturation liquid temperature are different. The heat of such refrigerant is rated and calculated at the same saturation vapor temperature rather the mean of the saturation vapor and liquid temperature.

Quick Select

If you multiply the Nominal Capacity with the factor below, you will get the Nominal Capacity in other working conditions (Correction factor only allows interpolation not extrapolation):

Working Medium Correction Factor:

Working Medium	R134a	R22	R404A	R507	R407A	R407C
F1	0.93	0.96	1.00	1.00	0.92	0.95

Temperature Difference ⊿T Correction Factor:

	⊿T	R134a	R22	R404A	R507	R407A	R407C
F2	R22,R507,R134a,R404a	0.53	0.67	0.90	1.00	1.13	1.33
	R407A,R407C	0.46	0.62	0.77	1.00	1.15	1.38

Temperature Difference ⊿T Correction Factor:

Altitude m	0	200	400	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600
F4	1	0.986	0.974	0.959	0.945	0.93	0.918	0.904	0.891	0.877	0.863	0.85	0.836	0.823

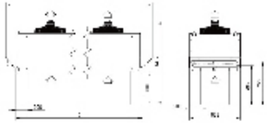
Fin spacing Correction Factor:

Fin Spacing 2.54mm	SOPRANO	ALTO
F5	0.95	0.96

SO 50 - Single Row

	Model		SO50 1M5A	SO50 1M5B	SO50 2M5A	SO50 2M5B	SO50 3M5A	SO50 3M5B
	Fan		1x Ø 500	1x Ø 500	2x Ø 500	2x Ø 500	3x Ø 500	3x Ø 500
4PH/4PL	Wiring		4PH 4PL	4PH 4PL	4PH 4PL	4PH 4PL	4PH 4PL	4PH 4PL
	Nominal Capacity R404A 40°C Tcond40°C -ΔT15K	kW	29 28	36 32	59 52	72 64	88 77	108 96
	Air Volume	m³/h	9665 5645	7665 6495	13330 11250	15330 12900	19995 16935	22995 19495
	Sound Pressure Level dB(A) 10m		52 48	52 48	55 51	55 51	57 52	57 52
	Energy Efficiency Grade		D C	C C	D C	C C	D C	C C
	Inlet Pipe		7/8"	7/8"	1"1/8	1"1/8	1"1/8	1"3/8
	Drain Pipe		7/8"	7/8"	1"1/8	1"1/8	1"1/8	1"3/8
6PH/6PL	Wiring		6PH 6PL	6PH 6PL	6PH 6PL	6PH 6PL	6PH 6PL	6PH 6PL
	Nominal Capacity R404A 40°C Tcond40°C -ΔT15K	kW	21 18	28 21	42 37	52 43	63 58	78 64
	Air Volume	m³/h	4300 3630	4900 4215	8600 7260	9660 8430	12900 10890	14970 12645
	Sound Pressure Level dB(A) 10m		38 35	38 35	41 38	40 38	42 39	42 39
	Energy Efficiency Grade		B B	B A	B B	B A	B B	B A
	Inlet Pipe		5/8"	7/8"	7/8"	1"1/8	1"1/8	1"1/8
	Drain Pipe		5/8"	7/8"	7/8"	1"1/8	1"1/8	1"1/8
8PH/8PL	Wiring		8PH 8PL	8PH 8PL	8PH 8PL	8PH 8PL	8PH 8PL	8PH 8PL
	Nominal Capacity R404A 40°C Tcond40°C -ΔT15K	kW	16 13	20 17	32 27	41 34	48 40	61 51
	Air Volume	m³/h	2935 2390	3635 2920	5870 4720	7270 5840	8805 7080	10905 8760
	Sound Pressure Level dB(A) 10m		32 29	32 29	35 32	35 32	37 34	38 34
	Energy Efficiency Grade		B A	A A	B A	A A	B A	A A
	Inlet Pipe		5/8"	5/8"	7/8"	7/8"	7/8"	1"1/8
	Drain Pipe		5/8"	5/8"	7/8"	7/8"	7/8"	1"1/8
	Surface Area	m²	49	73	97	146	146	220
	Refrigerant Circuit Volume	dm³	8	11	14	20	20	30
	Net Weight (without refrigerant)	kg	98	117	163	201	227	285
	Dimension	A mm	1168	1543	1920	2870	2871	3798
		C mm	814	1160	1588	2316	2317	3442

Dimension data tolerance is +/-10mm. Weight data tolerance is +/-15kg. The value is related to the part options selected.

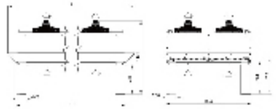


Technical Parameters

SO 50 - Double Row

	Model		SO50 2M0A	SO50 2M0B	SO50 4M0A	SO50 4M0B	SO50 6M0A	SO50 6M0B
	Fan		2 x Ø 500	2 x Ø 500	4 x Ø 500	4 x Ø 500	6 x Ø 500	6 x Ø 500
4PH/4PL	Wiring		4PH 4PL	4PH 4PL	4PH 4PL	4PH 4PL	4PH 4PL	4PH 4PL
	Nominal Capacity R404A 40°C Tcond40°C -ΔT15K	kW	59 52	72 64	117 103	144 128	175 154	216 191
	Air Volume	m³/h	13330 11250	15330 12900	26660 22500	30660 25800	39990 33870	45990 38870
	Sound Pressure Level dB(A) 10m		55 51	55 51	58 54	58 54	60 55	60 55
	Energy Efficiency Grade		D C	C C	D C	C C	D C	C C
	Inlet Pipe		2x7/8"	2x7/8"	2x1"1/8	2x1"1/8	2x1"1/8	2x1"3/8
	Drain Pipe		2x7/8"	2x7/8"	2x1"1/8	2x1"1/8	2x1"1/8	2x1"3/8
6PH/6PL	Wiring		6PH 6PL	6PH 6PL	6PH 6PL	6PH 6PL	6PH 6PL	6PH 6PL
	Nominal Capacity R404A 40°C Tcond40°C -ΔT15K	kW	42 37	52 43	84 74	104 86	126 111	156 129
	Air Volume	m³/h	8600 7260	9660 8430	17200 14520	19660 16860	25800 21780	29940 25260
	Sound Pressure Level dB(A) 10m		41 38	40 38	43 41	43 40	45 42	45 42
	Energy Efficiency Grade		B B	B A	B B	B A	B B	B A
	Inlet Pipe		2x5/8"	2x7/8"	2x 7/8"	2x1"1/8	2x1"1/8	2x1"1/8
	Drain Pipe		2x5/8"	2x7/8"	2x 7/8"	2x1"1/8	2x1"1/8	2x1"1/8
8PH/8PL	Wiring		8PH 8PL	8PH 8PL	8PH 8PL	8PH 8PL	8PH 8PL	8PH 8PL
	Nominal Capacity R404A 40°C Tcond40°C -ΔT15K	kW	32 27	41 34	83 54	81 68	95 80	122 102
	Air Volume	m³/h	5870 4720	7270 5840	11740 9440	14540 11680	17610 14160	21810 17520
	Sound Pressure Level dB(A) 10m		35 32	35 32	38 35	38 35	39 37	39 37
	Energy Efficiency Grade		B A	A A	B A	A A	B A	A A
	Inlet Pipe		2x5/8"	2x5/8"	2x 7/8"	2x7/8"	2x7/8"	2x1"1/8
	Drain Pipe		2x5/8"	2x5/8"	2x 7/8"	2x7/8"	2x7/8"	2x1"1/8
	Surface Area	m²	98	146	194	292	292	440
	Refrigerant Circuit Volume	dm³	15	21	28	41	41	60
	Net Weight (without refrigerant)	kg	162	195	292	348	390	496
	Dimension	A mm	1168	1543	1920	2870	2871	3798
		C mm	814	1160	1588	2316	2317	3442

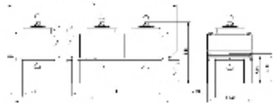
Dimension data tolerance is +/-10mm. Weight data tolerance is +/-15kg. The value is related to the part options selected.



SO 60 - Single Row

	Model		SO60 1M5B	SO60 1M5C	SO60 2M5B	SO60 2M5C	SO60 3M5B	SO60 3M5C	SO60 4M5B	SO60 4M5C
	Fan		1 x Ø 630	1x Ø 630	2 x Ø 630	2 x Ø 630	3 x Ø 630	3x Ø 630	4 x Ø 630	4x Ø 630
4PH/4PL	Wiring		6PH 6PL	6PH 6PL	6PH 6PL	6PH 6PL	6PH 6PL	6PH 6PL	6PH 6PL	6PH 6PL
	Nominal Capacity R404A40°C Tcond40°C -ΔT15K	kW	45 39	54 49	89 77	109 99	134 116	161 147	179 154	215 197
	Air Volume	m³/h	18990 8490	11990 9745	25980 19620	22640 19460	30630 25230	35370 30235	41990 33840	47190 38890
	Sound Pressure Level dB(A) 10m		52 47	52 47	55 50	55 49	57 51	57 51	59 52	58 52
	Energy Efficiency Grade		D C	D C	D C	D C	D C	D C	D C	D C
	Inlet Pipe		7/8"	7/8"	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8	2"1/8
	Drain Pipe		7/8"	7/8"	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8	2"1/8
8PH/8PL	Wiring		8PH 8PL	8PH 8PL	8PH 8PL	8PH 8PL	8PH 8PL	8PH 8PL	8PH 8PL	8PH 8PL
	Nominal Capacity R404A 40°C Tcond40°C -ΔT15K	kW	34 29	43 36	69 58	87 73	103 86	130 108	137 115	173 145
	Air Volume	m³/h	7160 5850	8755 6880	14020 11500	17520 13780	21490 16950	26280 20670	28040 22880	35040 27560
	Sound Pressure Level dB(A) 10m		40 34	40 34	43 37	43 37	45 39	45 39	46 40	46 40
	Energy Efficiency Grade		C B	B B	C B	B B	C B	B B	C B	B B
	Inlet Pipe		7/8"	7/8"	1"1/8	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8
	Drain Pipe		7/8"	7/8"	1"1/8	1"3/8	1"3/8	1"5/8	1"5/8	1"5/8
	Surface Area	m²	96	127	190	254	286	381	381	508
	Refrigerant Circuit Volume	dm³	14	19	27	35	41	53	53	72
	Net Weight (without refrigerant)	kg	141	163	247	297	351	428	468	526
	Dimension	A mm	1543	1918	2870	3420	3796	4921	4922	6422
		C mm	1189	1564	2316	3066	3442	4567	4568	6068
		F mm	-	-	-	-	-	-	2286	3036

Dimension data tolerance is +/-10mm. Weight data tolerance is +/-15kg. The value is related to the part options selected.

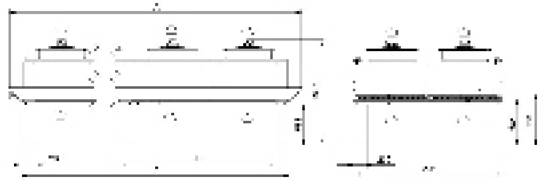


Technical Parameters

SO 60 - Double Row

			SO60 2MDB		SO60 2MDC		SO60 4MDB		SO60 4MDC		SO60 6MDB		SO60 6MDC	
	Fan		2 x Ø 630		2 x Ø 630		4 x Ø 630		4 x Ø 630		6x Ø 630		6x Ø 630	
6PH/6PL	Wiring		6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL
	Nominal Capacity R404A 40°C Tcond40°C–ΔT15K	kW	90	77	108	90	179	155	215	197	268	231	322	295
	Air Volume	m³/h	20580	16820	23850	19480	41160	33640	47160	38880	61740	50460	70740	58470
	Sound Pressure Level dB(A) 10m		55	50	55	50	58	52	58	52	60	54	60	54
	Energy Efficiency Grade		D	C	D	C	D	C	D	C	D	C	D	C
	Inlet Pipe		2x7/8"		2x7/8"		2x1"3/8		2x1"3/8		2x1"5/8		2x1"5/8	
	Drain Pipe		2x7/8"		2x7/8"		2x1"3/8		2x1"3/8		2x1"5/8		2x1"5/8	
8PH/8PL	Wiring		8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL
	Nominal Capacity R404A 40°C Tcond40°C–ΔT15K	kW	69	58	87	73	137	115	173	145	205	172	259	217
	Air Volume	m³/h	14320	11300	17520	13780	28640	22600	35040	27560	42960	33900	52560	41340
	Sound Pressure Level dB(A) 10m		43	37	43	37	46	40	46	40	48	41	47	41
	Energy Efficiency Grade		C	B	B	B	C	B	B	B	C	B	B	B
	Inlet Pipe		2x7/8"		2x7/8"		2x1"1/8		2x1"3/8		2x1"3/8		2x1"5/8	
	Drain Pipe		2x7/8"		2x7/8"		2x1"1/8		2x1"3/8		2x1"3/8		2x1"5/8	
	Surface Area	m²	190		254		381		508		572		761	
	Refrigerant Circuit Volume	dm³	27		35		54		70		82		106	
	Net Weight (without refrigerant)	kg	243		283		438		523		630		760	
	Dimension	A mm	1543		1918		2670		3420		3796		4921	
		C mm	1169		1564		2316		3066		3442		4546	
		F mm	-		-		-		-		-		-	

Dimension data tolerance is +/-10mm. Weight data tolerance is +/-15kg. The value is related to the part options selected.



SO 90 - Single Row

			SO90 1MSC		SO90 1MSD		SO90 1MSE		SO90 2MSC		SO90 2MSD		SO90 2MSE		SO90 3MSC		SO90 3MSD	
	Fan		1x Ø910		1x Ø910		1x Ø910		2x Ø910		2x Ø910		2x Ø910		3x Ø910		3x Ø910	
6PH/6PL	Wiring		6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL
	Nominal Capacity R404A 40°C Tcond40°C–ΔT15K	kW	45	39	54	49	69	77	108	90	134	116	161	147	179	154	215	197
	Air Volume	m³/h	10090	8410	11790	9745	20580	16820	23580	19480	30870	25230	35370	29235	41160	33640	47160	38880
	Sound Pressure Level dB(A) 10m		52	47	52	47	55	50	55	49	57	51	57	51	58	52	58	52
	Energy Efficiency Grade		D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C
	Inlet Pipe		7/8"		7/8"		1"3/8		1"3/8		1"5/8		1"5/8		1"5/8		2"1/8	
	Drain Pipe		7/8"		7/8"		1"3/8		1"3/8		1"5/8		1"5/8		1"5/8		2"1/8	
8PH/8PL	Wiring		8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL
	Nominal Capacity R404A 40°C Tcond40°C–ΔT15K	kW	34	29	43	36	69	58	87	73	103	86	130	108	137	115	173	145
	Air Volume	m³/h	7160	5650	8760	6890	14320	11300	17520	13780	21460	16950	26280	20670	28640	22600	35040	27560
	Sound Pressure Level dB(A) 10m		40	34	40	34	43	37	43	37	45	39	45	38	46	40	46	40
	Energy Efficiency Grade		C	B	B	B	C	B	B	B	C	B	B	B	C	B	B	B
	Inlet Pipe		7/8"		7/8"		1"1/8		1"3/8		1"3/8		1"5/8		1"5/8		1"5/8	
	Drain Pipe		7/8"		7/8"		1"1/8		1"3/8		1"3/8		1"5/8		1"5/8		1"5/8	
12PH/12PL	Wiring		12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL
	Nominal Capacity R404A 40°C Tcond40°C–ΔT15K	kW	63	48	68	51	73	55	126	96	136	103	146	110	189	144	204	155
	Air Volume	m³/h	12650	8480	13095	9135	13530	9515	25300	17600	26070	18270	27060	19030	37950	26400	39105	27405
	Sound Pressure Level dB(A) 10m		34	26	34	26	34	26	37	29	37	29	37	28	39	30	39	30
	Energy Efficiency Grade		A	A	A	A	A	A	A	A	A	A	A	A	A	A	A	A
	Inlet Pipe		1"1/8		1"1/8		1"3/8		1"5/8		1"5/8		1"5/8		2"1/8		2"1/8	
	Drain Pipe		1"1/8		1"1/8		1"3/8		1"5/8		1"5/8		1"5/8		2"1/8		2"1/8	
	Surface Area	m²	195		244		293		390		488		586		586		732	
	Refrigerant Circuit Volume	dm³	29		38		44		60		72		85		87		105	
	Net Weight (without refrigerant)	kg	251		289		319		469		542		610		681		794	
	Dimension	A mm	1918		2293		2668		3420		4170		4920		4921		6046	
		C mm	1564		1939		2314		3066		3816		4566		4567		5692	

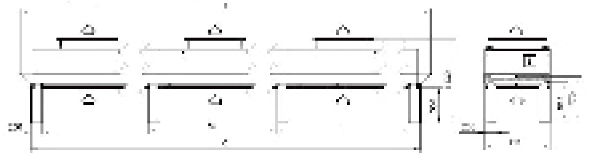
Dimension data tolerance is +/-10mm. Weight data tolerance is +/-15kg. The value is related to the part options selected.

Technical Parameters

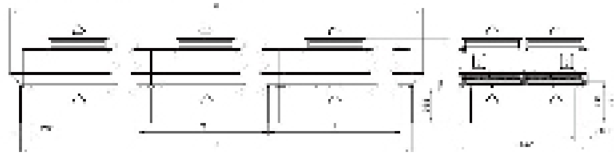
AL91 - Single Row

			AL91 3MSC		AL91 3MSD		AL91 3MSE		AL91 4MSC		AL91 4MSD		AL91 4MSE		AL91 5MSC		AL91 5MSD		AL91 5MSE		AL91 6MSC		AL91 6MSD	
	Fan		3x Ø910		3x Ø910		3x Ø910		4x Ø910		4x Ø910		4x Ø910		5x Ø910		5x Ø910		5x Ø910		6x Ø910		6x Ø910	
6PH/6PL	Wiring		6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL
	Nominal Capacity R404A 40°C Tcond40°C–ΔT15K	kW	234	190	273	231	328	275	389	353	364	304	424	356	373	316	455	385	543	459	444	378	546	462
	Air Volume	m³/h	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Sound Pressure Level dB(A) 10m		64	57	64	57	64	57	66	58	66	59	65	58	67	58	67	59	67	58	67	60	67	60
	Energy Efficiency Grade		D	D	B	C	D	C	B	D	B	C	D	C	B	D	B	C	D	C	B	D	D	C
	Inlet Pipe		2"5/8		2"5/8		3"1/8		3"1/8		2"5/8		3"1/8		3"1/8		2"5/8		3"1/8		3"1/8		2"5/8	
	Drain Pipe		2"5/8		2"5/8		3"1/8		3"1/8		2"5/8		3"1/8		3"1/8		2"5/8		3"1/8		3"1/8		2"5/8	
8PH/8PL	Wiring		8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL
	Nominal Capacity R404A 40°C Tcond40°C–ΔT15K	kW	182	153	214	178	253	207	242	204	285	237	327	276	293	255	356	305	421	344	358	308	427	355
	Air Volume	m³/h	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Sound Pressure Level dB(A) 10m		50	41	50	40	50	40	51	42	51	44	51	41	52	42	52	42	51	42	52	43	52	43
	Energy Efficiency Grade		C	B	C	B	B	B	C	B	C	B	B	B	C	B	C	B	C	B	C	B	C	B
	Inlet Pipe		2"5/8		2"5/8		3"1/8		3"1/8		2"5/8		3"1/8		3"1/8		2"5/8		3"1/8		3"1/8		2"5/8	
	Drain Pipe		2"5/8		2"5/8		3"1/8		3"1/8		2"5/8		3"1/8		3"1/8		2"5/8		3"1/8		3"1/8		2"5/8	
12PH/12PL	Wiring		12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL
	Nominal Capacity R404A 40°C Tcond40°C–ΔT15K	kW	131	102	152	119	169	138	175	138	202	158	240	184	218	178	253	198	308	230	262	203	283	237
	Air Volume	m³/h	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Sound Pressure Level dB(A) 10m		39	30	39	30	39	30	40	31	40	31	40	31	41	32	40	32	40	32	41	33	41	33
	Energy Efficiency Grade		B	A	A	A	A	A	B	A	A	A	A	A	B	A	A	A	A	A	B	A	A	A
	Inlet Pipe		1"5/8		2"5/8		2"1/8		2"1/8		2"5/8		2"1/8		2"5/8		2"5/8		2"5/8		2"5/8		2"5/8	
	Drain Pipe		1"5/8		2"5/8		2"1/8		2"1/8		2"5/8		2"1/8		2"5/8		2"5/8		2"5/8		2"5/8		2"5/8	
	Surface Area	m²	498		623		748		665		831		997		831		1039		1246		997		1246	
	Refrigerant Circuit Volume	dm³	68		84		101		91		111		132		111		137		162		132		162	
	Net Weight (without refrigerant)	kg	557		654		740		742		873		985		989		1098		1233		1089		1295	
	Dimension	A mm	4921		6046		7171		6422		7922		9422		7924		9799		11674		9425		11676	
		C mm	4567		5692		6817		6068		7568		9068		7570		9444		11320		9072		11322	
		F mm	-		-		2295		3036		3786		4536		3036		3787		4536		3037		3787	
		G mm	-		-		-		-		-		-		1582		1876		2252		3083		3753	

Dimension data tolerance is +/-10mm. Weight data tolerance is +/-15kg. The value is related to the part options selected.



AL91 - Double Row

			AL91 4MDC		AL91 4MDD		AL91 4MDE		AL91 6MDC		AL91 6MDD		AL91 6MDE		AL91 8MDC		AL91 8MDD		AL91 8MDE		AL91 10MDC		AL91 10MDD		AL91 10MDE		AL91 12MDC		AL91 12MDD	
	Fan		4x Ø910		4x Ø910		4x Ø910		6x Ø910		6x Ø910		6x Ø910		8x Ø910		8x Ø910		8x Ø910		10x Ø910		10x Ø910		10x Ø910		12x Ø910		12x Ø910	
6PH/6PL	Wiring		6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL	6PH	6PL
	Nominal Capacity R404A 40°C Tcond40°C–ΔT15K	kW	280	254	384	299	424	365	446	388	546	482	652	533	568	506	736	615	858	732	745	630	918	770	1086	915	895	758	1062	824
	Air Volume	m³/h	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Sound Pressure Level dB(A) 10m		60	53	60	53	60	53	62	54	62	54	62	54	63	55	63	55	63	55	64	55	64	56	64	56	65	57	64	57
	Energy Efficiency Grade		D	D	B	C	D	C	D	D	B	C	D	C	D	D	B	C	D	C	D	D	B	C	D	C	B	D	B	C
	Inlet Pipe		2x1"5/8		2x2"1/8		2x2"1/8		2x2"1/8		2x2"1/8		2x2"1/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8	
	Drain Pipe		2x1"5/8		2x2"1/8		2x2"1/8		2x2"1/8		2x2"1/8		2x2"1/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8	
8PH/8PL	Wiring		8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL	8PH	8PL
	Nominal Capacity R404A 40°C Tcond40°C–ΔT15K	kW	232	204	285	239	328	276	284	308	420	356	508	414	484	408	578	474	674	552	596	518	712	582	840	688	738	612	884	710
	Air Volume	m³/h	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Sound Pressure Level dB(A) 10m		51	42	51	42	51	42	53	43	53	42	53	43	54	45	54	44	54	44	55	46	55	45	54	45	55	46	55	46
	Energy Efficiency Grade		C	B	C	B	B	B	C	B	C	B	B	B	C	B	C	B	B	B	C	B	C	B	B	B	C	B	C	B
	Inlet Pipe		2x1"5/8		2x1"5/8		2x1"5/8		2x2"1/8		2x2"1/8		2x2"1/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8	
	Drain Pipe		2x1"5/8		2x1"5/8		2x1"5/8		2x2"1/8		2x2"1/8		2x2"1/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8		2x2"5/8	
12PH/12PL	Wiring		12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL	12PH	12PL
	Nominal Capacity R404A 40°C Tcond40°C–ΔT15K	kW	176	138	202	159	240	184	262	204	304	238	360	276	350	272	404	295	460	358	436	348	505	395	608	480	524	408	606	474
	Air Volume	m³/h	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	Sound Pressure Level dB(A) 10m		40	32	40	31	40	31	42	33	42	33	41	33	43	34	43	34	42	34	44	35	43	35	43	35	44	36	44	36
	Energy Efficiency Grade		B	A	A	A	A	A	B	A	A	A	A	A	B	A	A	A	A	A	B	A	A	A	A	A	B	A	A	A
	Inlet Pipe		2x1"5/8		2x1"5/8		2x1"5/8		2x1"5/8		2x2"1/8		2x2"1/8		2x2"5/8		2x2"1/8		2x2"5/8		2x2"5/8		2x2"1/8		2x2"5/8		2x2"5/8		2x2"5/8	
	Drain Pipe		2x1"3/8		2x1"5/8		2x1"5/8		2x1"5/8		2x2"1/8		2x2"1/8		2x2"5/8		2x2"1/8		2x2"5/8		2x2"5/8		2x2"1/8		2x2"5/8		2x2"5/8		2x2"5/8	
	Surface Area	m²	665		831		997		997		1246		1495		1330		1662		1994		1662		2077		2492		1994		2492	
	Refrigerant Circuit Volume	dm³	93		117		137		137		168		202		181		222		269		222		273		324		269		324	
	Net Weight (without refrigerant)	kg	685		795		894		1080		1199		1380		1339		1548		1740		1697		1828		2169		1973		2267	
	Dimension	A mm	3420		4170		4920		4921		6046		7171		6422		7922		9422		7924		9799		11674		9425		11676	
		C mm	3066		3816		4566		4567		5692		6817		6068		7568		9068		7570		9445		11320		9072		11322	
		F mm	-		-		-		-		-		2295		3036		3786		4536		3036		3787		4536		3037		3787	
		G mm	-		-		-		-		-		-		-		-		-		1582		1876		2282		3083		3753	

Dimension data tolerance is +/-10mm. Weight data tolerance is +/-15kg. The value is related to the part options selected.