General Contents

AC Single fans row version
ACD Double fans row version
ACV V version

Certifications and reliability

The Alfa Laval quality system is in accordance with ISO 9001.
All products are manufactured to CE rules.
All series of air cooled condensers have performance certified by Eurovent “Certify All”.

Nominal conditions

The nominal capacities indicated in the catalogue refer to standard ENV 327 (R404A, Tair= 25°C, Tcond= 40°C, ΔTsubcool< 3K, ΔTsuperheat= 25K).
To obtain the condensing capacity (Qc), from the cooling capacity (Qf) or for different conditions, use following selection method or our program PALLADIO:

$$Qc = Qf \times Fr \times F1 \times F2 \times F3 \times F4 \times F5$$

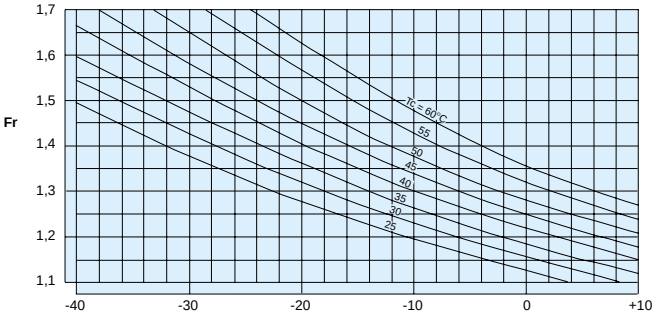


Diagram text: Fr= Factor function of condensing temperature (Tc) and evaporating temperature (Te).

Compressor	Open	Semi-hermetic	Hermetic
Factor F1	1	1,08	1,14

Refrigerant	R22	R404A/R507	R134a	R407C
Factor F2	1,04	1	1,08	1,16

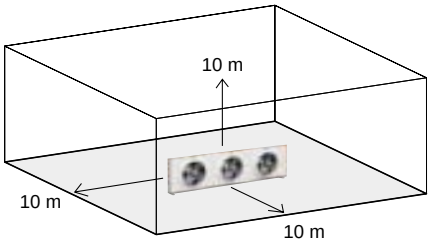
Factor F3= 15/ΔT

Altitude m	0	500	1000	1500	2000
Factor F4	1	1,028	1,06	1,09	1,12

Fins material	Al	Al painted	Cu
Factor F5	1	1,03	0,97

Noise level

The noise pressure level shown in the table, is the weighted average of the values measured at 10 m, on the parallelepiped surface with reflecting plain.
Any background noise and the acoustical conditions of the site installation, can usually influence +/- 3 dB(A).



Noise pressure level correction for distance different of 10 m.

Distance (m)	2	3	4	5	7	10	15	20	30	40	50	60	80
Correction (dB)	11	8,5	7	5	2,5	0	-3	-5,5	-9	-11	-12	-14	-16

Increasing of noise pressure level according to number of installed units.

N° units	2	3	4	5	6	7	8	9	10
d(A)	3	5	6	7	8	8,5	9	9,5	10

Noise power level Lw per fan motor:

Fan model	Speed rpm		Total Lw dB(A)		Lw -spectrum in octave band dB(A) - per fan															
					63Hz		125Hz		250Hz		500Hz		1000Hz		2000Hz		4000Hz		8000Hz	
Connection	Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y	Δ	Y
ACS 400	1440	-	69	-	-	-	64	-	63	-	62	-	57	-	57	-	52	-	44	-
ACL 400	940	-	59	-	-	-	38	-	49	-	50	-	49	-	47	-	45	-	36	-
ACS 500	1326	1060	80	74	-	-	57	55	56	54	55	50	53	51	55	52	50	46	44	40
ACL 500	842	624	71	61	-	-	50	-	53	47	48	26	44	30	43	30	36	23	29	18
ACQ 500	614	455	61	58	-	-	41	34	40	42	39	34	37	31	35	25	27	17	18	16
ACS 630	1340	1070	90	84	-	-	68	66	76	72	78	74	83	77	81	76	78	72	70	65
ACL 630	900	690	77	71	-	-	62	55	69	63	72	65	75	68	72	63	64	56	58	50
ACQ 630	650	480	70	62	-	-	51	48	60	55	63	58	65	59	60	53	53	47	46	45
ACR 630	430	330	60	54	-	-	46	45	53	47	54	51	53	49	48	43	43	40	42	41
ACS 800	880	660	83	76	54	41	69	56	67	62	74	69	78	74	79	72	72	64	62	54
ACL 800	680	530	76	71	42	35	57	49	62	57	69	63	74	68	72	63	65	55	55	45
ACQ 800	440	340	66	60	32	27	47	42	57	48	59	54	63	56	58	51	50	43	39	34
ACR 800	380	240	63	52	32	27	47	42	54	44	57	47	59	48	55	42	47	34	35	26
ACS 900	860	660	85	79	56	58	72	70	79	73	82	76	84	79	82	76	79	73	73	66
ACL 900	640	440	78	70	57	50	68	62	73	68	76	70	77	70	76	70	73	67	66	60
ACQ 900	440	330	68	62	50	40	57	49	61	58	64	57	67	60	61	53	52	45	43	35
ACR 900	390	250	65	53	53	39	56	46	59	45	59	46	61	49	56	44	48	35	38	22

Test

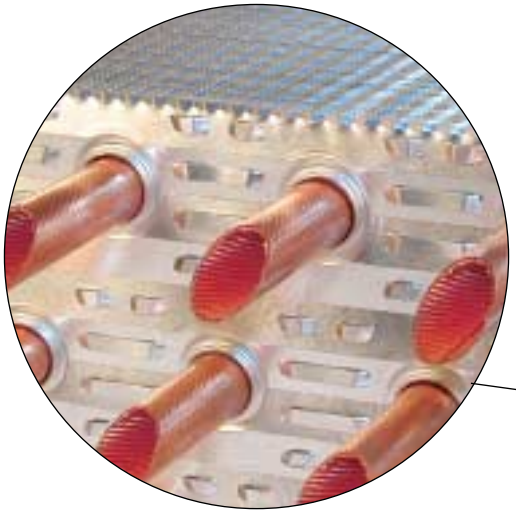
Each heat exchanger undergoes a pressure and leaking test with dry air at 31 bar, and finally supplied with a nitrogen pre-charge.

Guarantee

All our products are guaranteed against defects for a period of 24 months from date of shipment. If the defect should develop within the guarantee period, return the equipment or the parts free to our factory where they will be repaired or replaced, according to our judgment. We don't take responsibility for damage caused by misuse or inappropriate installation of our products. Our brochure is subjected to technical modifications without prior notice.

Air Cooled Condensers AC

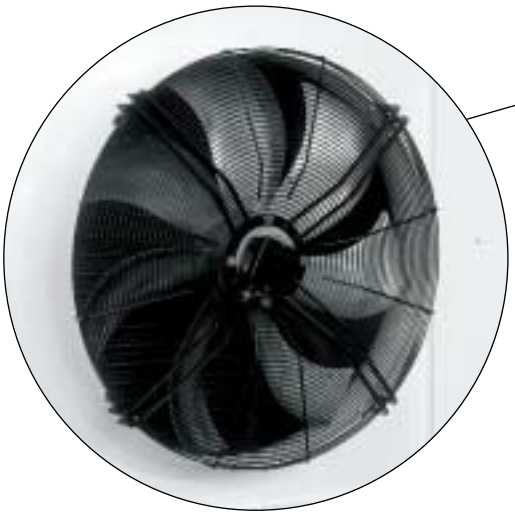
- Application: refrigeration and air conditioning
- Range capacity 10 ÷ 340 kW



Heat exchanger

Innovative heat exchanger gives excellent heat transfer with minimized refrigerant charge, thanks to the new fins corrugation, developed by Alfa Laval, combined with advanced cross fin tubes.

Heat exchanger manufactured from aluminum fins and copper tubes with nominal diameter 3/8”, for series with 400 and 500 mm fan diameter, and nominal diameter 1/2" for series with 630, 800 and 910 mm fan diameter. The fin spacing is 2.1 mm.



Fan motors

High efficiency fans with low power consumption are used. Five different fan diameters available: 400, 500, 630, 800 and 910 mm with three-phase motors 400V-50Hz. The motors are with external rotor, made in accordance with VDE 0530/12.84. Protection class IP 54 according to DIN 40050. Integrated thermal protection by thermo contacts provides reliable protection against thermal overload.

New bell mouths optimize the performance of the fan motors and minimize the noise level.

- 165 standard models
- Single fan row

Frame and Casework

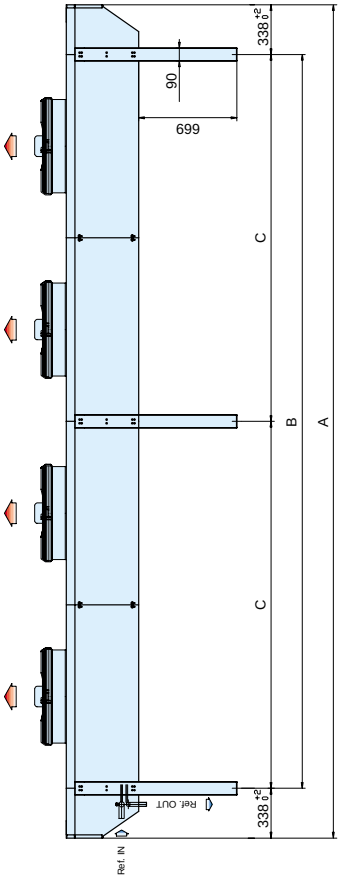
Casework made with galvanized steel sheets pre-painted with epoxy finish, RAL 9002. New design frame provides high rigidity also for heavy applications. New system protects perfectly the heat exchanger tubes during transportation and operation against vibrations and thermal expansion. Supports manufactured from stainless steel AISI 304 or galvanized steel, with optimized length to permit a uniform air suction in the coil.

Optionals

- Heat exchanger epoxy coating
- Heat exchanger with cataphoresy treatment
- Fan motors cabling
- Fan speed control
- Fan step control
- Safety switches
- Air filter for heat exchanger
- Motors 3ph/480V-60Hz
- Motors 1ph/400V-50Hz
- Explosion-proof fan motors
- Customized fin spacing
- Multi circuiting

Model	Capacity		Capacity 1/230V 50Hz	Air Flow		Lp		Motor (3/400V - 50Hz)		Motor (1/230V - 50Hz)	Fans	Surface	Tube volume	Dimensions			Conn. in	Conn. out	Weight	N° of feet
	kW		kW	m³/h		dB(A)					N°xD [mm]	m²	dm³	mm	mm	mm	mm	mm	kg	
	Δ	Y		Δ	Y	Δ	Y	Δ	Y					A	B	C	inlet	outlet		
ACS632A	71,8	64,1	-	31900	25800	62	56	P = 1900W • I = 3,2A • n = 1340 min-1	P = 1350W • I = 2,2A • n = 1070 min-1	-	2x630	177	17	3177	2500	-	35	28	233	4
ACS632B	93,6	81,8	-	30500	24400	62	56				2x630	265,5	24,7	3177	2500	-	42	28	257	4
ACS632C	105,5	90,4	-	29100	23200	62	56				2x630	353,9	33	3177	2500	-	42	28	281	4
ACS633A	111,8	100,2	-	48000	38800	64	58				3x630	267,3	25,5	4427	3750	-	42	28	328	4
ACS633B	141,2	123,2	-	45800	36700	64	58				3x630	400,9	37	4427	3750	-	54	35	367	4
ACS633C	159,1	135,9	-	43700	34900	64	58				3x630	534,5	49,5	4427	3750	-	54	35	403	4
ACS634A	144,8	129,2	-	64000	51700	65	59				4x630	357,6	34	5677	5000	2500	54	42	430	6
ACS634B	188,7	164,7	-	61100	49000	65	59				4x630	536,3	49	5677	5000	2500	54	42	477	6
ACS634C	205,2	175,2	-	58400	46500	65	59				4x630	715,1	65	5677	5000	2500	60	48	525	6
ACL632A	57,2	51,0	57,1	19700	16300	49	43	P = 690W • I = 1,25A • n = 900 min-1	P = 480W • I = 0,78A • n = 690 min-1	P = 780W • I = 3,5A • n = 900 min-1	2x630	177	17	3177	2500	-	35	28	233	4
ACL632B	69,3	60,2	69,1	18900	15400	49	43				2x630	265,5	24,7	3177	2500	-	42	28	257	4
ACL632C	75,5	63,9	75,0	18200	14600	49	43				2x630	353,9	33	3177	2500	-	42	28	281	4
ACL633A	86,0	76,7	85,9	29600	24500	51	45				3x630	267,3	25,5	4427	3750	-	42	28	328	4
ACL633B	102,6	89,6	102,2	28400	23200	51	45				3x630	400,9	37	4427	3750	-	54	35	367	4
ACL633C	113,9	96,4	113,2	27300	22000	51	45				3x630	534,5	49,5	4427	3750	-	54	35	403	4
ACL634A	113,7	102,1	113,6	39400	32600	52	46				4x630	357,6	34	5677	5000	2500	54	42	430	6
ACL634B	138,8	120,7	138,3	37900	30900	52	46				4x630	536,3	49	5677	5000	2500	54	42	477	6
ACL634C	148,0	126,6	147,2	36400	29400	52	46				4x630	715,1	65	5677	5000	2500	60	48	525	6
ACQ632A	46,8	40,6	46,7	14300	11500	42	34	P = 330W • I = 0,80A • n = 650 min-1	P = 190W • I = 0,38A • n = 480 min-1	P = 400W • I = 1,8A • n = 650 min-1	2x630	177	17	3177	2500	-	35	28	233	4
ACQ632B	55,1	45,9	54,9	13600	10800	42	34				2x630	265,5	24,7	3177	2500	-	42	28	257	4
ACQ632C	57,6	46,9	57,4	13000	10100	42	34				2x630	353,9	33	3177	2500	-	42	28	281	4
ACQ633A	69,5	60,7	69,3	21500	17200	44	36				3x630	267,3	25,5	4427	3750	-	42	28	328	4
ACQ633B	82,2	68,8	81,9	20500	16200	44	36				3x630	400,9	37	4427	3750	-	54	35	367	4
ACQ633C	84,9	69,7	84,6	19600	15200	44	36				3x630	534,5	49,5	4427	3750	-	54	35	403	4
ACQ634A	94,3	81,7	94,0	28600	23000	45	37				4x630	357,6	34	5677	5000	2500	54	42	430	6
ACQ634B	104,6	89,2	104,3	27400	21600	45	37				4x630	536,3	49	5677	5000	2500	54	42	477	6
ACQ634C	112,9	92,9	112,6	26200	20300	45	37				4x630	715,1	65	5677	5000	2500	60	48	525	6
ACR632A	35,6	30,0	-	9500	7500	32	26	P = 125W • I = 0,33A • n = 430 min-1	P = 85W • I = 0,14A • n = 330 min-1	-	2x630	177	17	3177	2500	-	35	28	233	4
ACR632B	39,8	32,6	-	9000	7000	32	26				2x630	265,5	24,7	3177	2500	-	42	28	257	4
ACR632C	40,7	32,3	-	8500	6600	32	26				2x630	353,9	33	3177	2500	-	42	28	281	4
ACR633A	53,3	45,1	-	14200	11200	34	28				3x630	267,3	25,5	4427	3750	-	42	28	328	4
ACR633B	59,7	48,7	-	13500	10500	34	28				3x630	400,9	37	4427	3750	-	54	35	367	4
ACR633C	60,4	48,2	-	12800	9900	34	28				3x630	534,5	49,5	4427	3750	-	54	35	403	4
ACR634A	71,6	60,3	-	18900	15000	35	29				4x630	357,6	34	5677	5000	2500	54	42	430	6
ACR634B	78,1	64,0	-	18000	14000	35	29				4x630	536,3	49	5677	5000	2500	54	42	477	6
ACR634C	80,6	64,3	-	17100	13200	35	29				4x630	715,1	65	5677	5000	2500	60	48	525	6

Nominal capacities according to standard ENV327 (R404A, T_{air} = 25°C, T_{cond} = 40°C, ΔTSubcool < 3K, ΔTSuperheat = 25K)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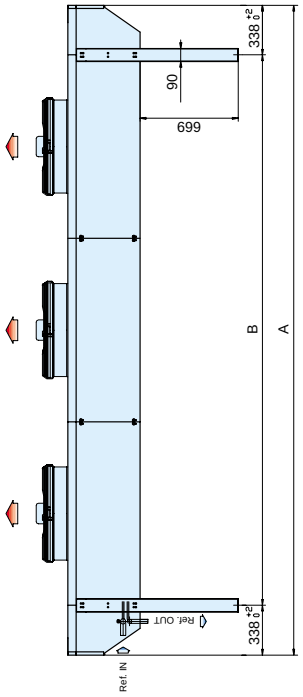
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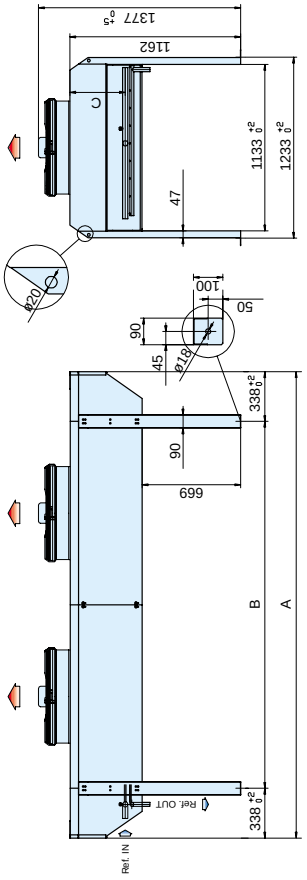
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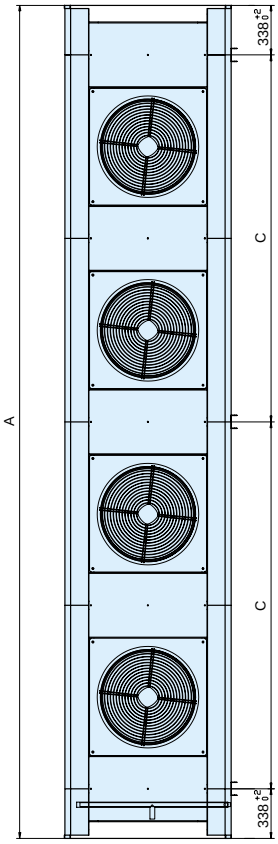
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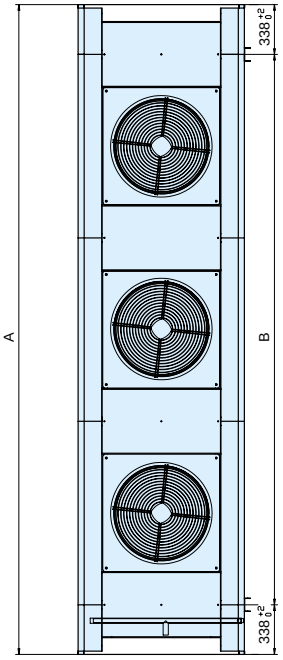
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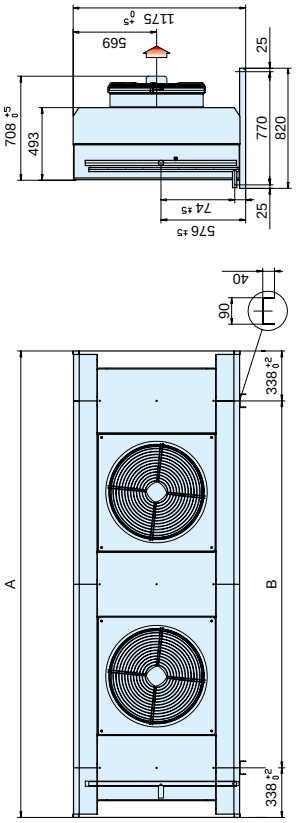
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