



S-SERIES AIR COOLED CONDENSERS



**PRZEDSIĘBIORSTWO PRODUKCJI URZĄDZEŃ
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Application:

S-series air cooled condensers with fan diameter of 200, 250, 300, 350, 450, 500, or 630mm and capacities between 1.4kW and 104.37kW are dedicated to Freon cooling systems.

The capacities in the tables are calculated for R 404A with ambient temperature at 25°C, condensation point at 40°C, and temperature difference $\Delta t = 15K$.

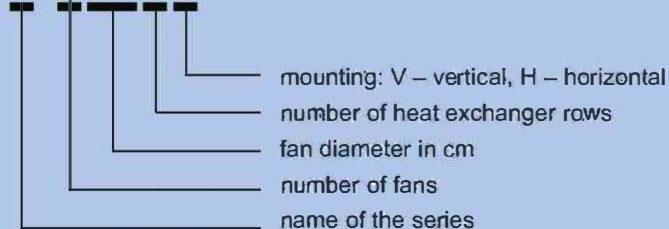
Design:

The condenser coils are built with 3/8" internally finned copper tubes mechanically expanded inside aluminium fins which are equipped with flanges covering the whole fin spacing distance, thus ensuring perfect thermal contact. All coils are tested at 30 bar pressure and filled with dry nitrogen to a slight overpressure. Galvanized steel casing (painted with RAL 9016 or another requested colour as an option). The condensers are designed to be mounted vertically, and condensers type 450, 500, and 630 may be delivered in the horizontal mounting version with vertical air flow. All condenser fans are protected by a safety mesh and adjusted to 230V-50Hz power supply.

Fan characteristics:

- $\varnothing 200$ – 40W/230V – 1300rpm
- $\varnothing 250$ – 65W/230V – 1300rpm
- $\varnothing 300$ – 135W/230V – 2500rpm
- $\varnothing 350$ – 140W/230V – 1380rpm
- $\varnothing 450$ – 250W/230V – 1350rpm
- $\varnothing 500$ – 420W/230V – 1300rpm
- $\varnothing 630$ – 940W/400V/2.0A/1400rpm

S-3633V



Power calculation for the required working conditions:

$$Q_{rz} = Q_{st} * Wk * Wo * Wr * Wh * Wm$$

Q_{rz} - real capacity of the condenser in the required conditions

Q_{st} - condenser capacity from the table (standard working conditions)

Wk - correction coefficient for different cooling agents

Cooling agent			
R404A; R507	R22	R134a	R407C
1,00	0,96	0,93	0,87

Wo - correction coefficient for different ambient temperatures

Ambient temperature							
15°C	20°C	25°C	30°C	35°C	40°C	45°C	50°C
1,03	1,02	1	0,99	0,97	0,95	0,94	0,93

Wr - correction coefficient for the difference between the condensation point and ambient temperature

Wr \ $\Delta t(K)$	8	9	10	11	12	13	14	15	16	17	18	19	20
R22; R134a; R404A; R507	0,53	0,60	0,67	0,73	0,80	0,87	0,93	1,00	1,07	1,13	1,20	1,27	1,33
R407C	0,46	0,54	0,62	0,69	0,77	0,85	0,93	1,00	1,08	1,15	1,23	1,31	1,38

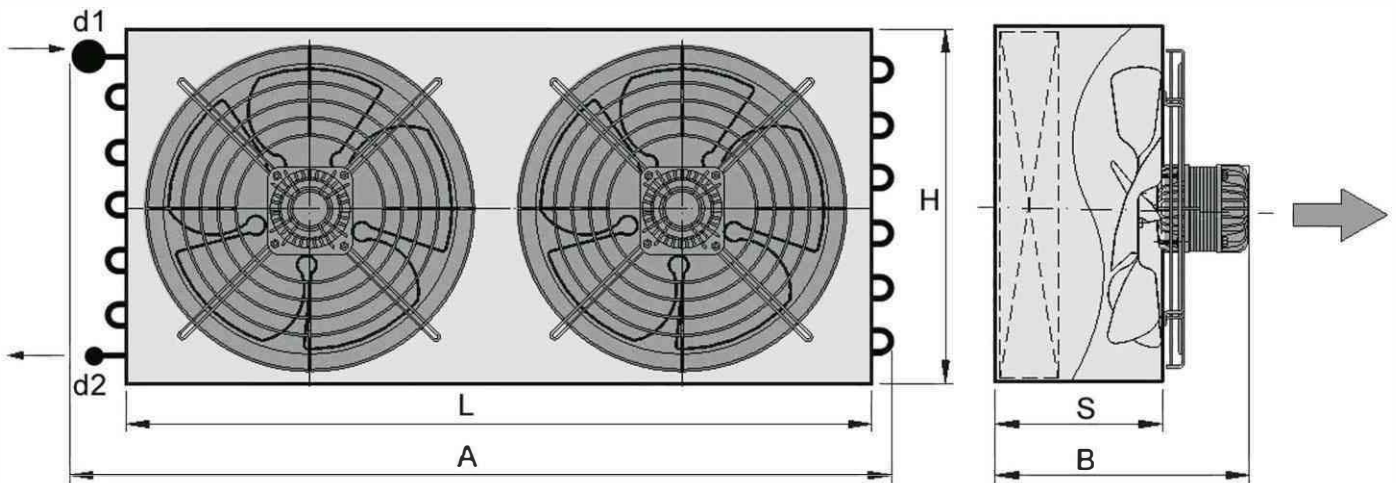
Wh - correction coefficient for different elevations above sea level

Elevation	0	600	800	1000	1200	1400	1600	1800	2000
Wh	1,00	0,96	0,94	0,93	0,91	0,90	0,88	0,87	0,85

Wm - correction coefficient for different fin materials

Material	Aluminium	Epoxy-coated aluminium	Copper
Wm	1,00	0,97	1,03

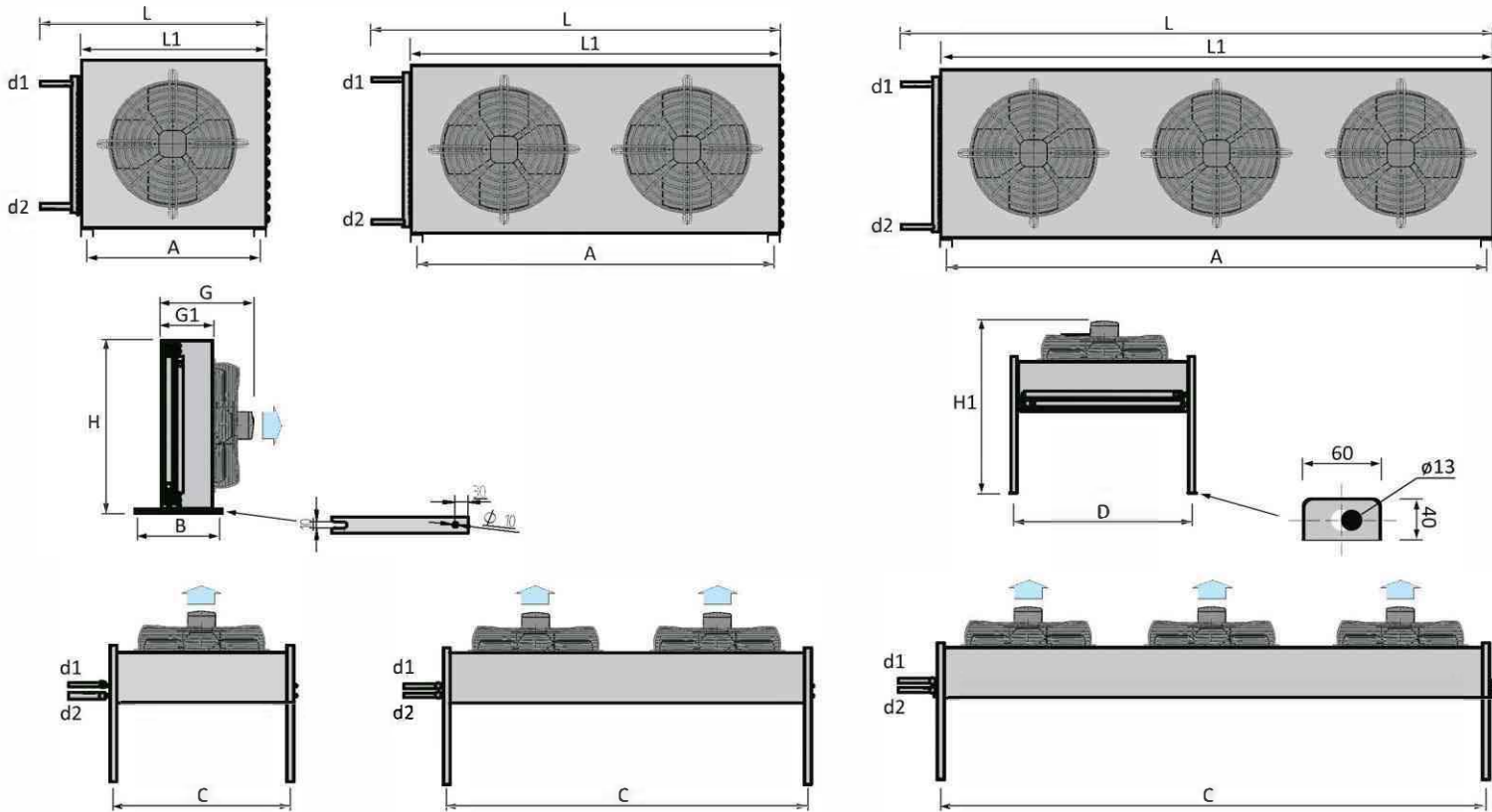
Technical data Condensers with $\varnothing 200$, $\varnothing 250$, $\varnothing 300$, and $\varnothing 350$ fans



No.	Condenser type	Capacity for R-404A [W]	No. of fans – air flow [pcs] [m ³ /h]	Dimensions [mm]				Inlet d1 Outlet d2 [mm]	Weight [kg]	Noise 5 m away [dB]
				H	L	A	B - S			
1	S-1202	1400	1-390	260	360	460	175-115	10-10	6	21
2	S-1252	2330	1-770	310	410	510	210-135	10-10	7	32
3	S-2202	2730	2-780	260	710	810	175-115	10-10	11	24
4	S-1253	2890	1-700	310	410	510	230-155	10-10	9	32
5	S-2252	4550	2-1540	310	810	920	210-135	10-10	12	35
6	S-1302	4730	1-1780	410	510	630	230-150	12-10	12	33
7	S-2253	5700	2-1400	310	810	920	230-155	12-10	14	41
8	S-1352	5850	1-2180	460	560	670	250-170	12-10	16	40
9	S-1303	6220	1-1690	430	510	630	255-175	12-10	14	40
10	S-1353	7580	1-2050	460	560	670	270-190	12-10	18	40
11	S-2302	9190	2-3560	430	1010	1130	230-150	16-12	24	41
12	S-2352	11360	2-4360	460	1110	1230	250-170	16-12	25	43
13	S-2303	12180	2-3380	430	1010	1130	255-175	16-12	28	41
14	S-2353	14880	2-4100	460	1110	1230	170-190	16-12	40	43

Technical data

Condensers with $\varnothing 450$, $\varnothing 500$ and $\varnothing 630$ fans



No.	Condenser type	Capacity for R-404A [W]	air flow [m ³ /h]	Dimensions [mm]								Inlet d1 Outlet d2 [mm]	Weight [kg]	Noise 5 m - 10 m away [dB]
				H	L - L1	G - G1	A	B	C	D	H1			
1	S-1452	9480	4080	630	730 - 610	295-205	560	265	540	670	745	16-12	25	46-40
2	S-1453	12440	3750	630	730 - 610	320-230	560	290	540	670	770	16-12	30	46-40
3	S-1502	15520	6200	830	940 - 810	315-225	760	285	740	870	815	18-16	45	50-44
4	S-2452	18370	8160	630	1340 - 1210	295-205	1160	265	1140	670	745	18-16	50	49-43
5	S-1503	20360	5800	830	940 - 810	335-245	760	305	740	870	835	22-16	50	50-44
6	S-1632	23120	10160	930	1140 - 1010	370-270	960	340	940	970	1000	22-16	60	56-50
7	S-1504	23500	5450	830	940 - 810	355-265	760	325	740	870	855	22-16	55	50-44
8	S-2453	24150	7500	630	1340 - 1210	320-230	1160	290	1140	670	770	22-16	55	49-43
9	S-2502	30150	12400	830	1740 - 1610	315-225	1560	285	1540	870	815	22-16	65	53-47
10	S-1633	30960	9660	930	1140 - 1010	390-290	960	360	940	970	1020	22-16	65	56-50
11	S-1634	36330	9130	930	1140 - 1010	415-315	960	385	940	970	1045	28-22	80	56-50
12	S-2503	39700	11600	830	1750 - 1610	335-245	1560	305	1540	870	835	28-22	75	53-47
13	S-2632	44730	20320	930	2140 - 2010	370-270	1960	340	1940	970	1000	28-22	110	59-53
14	S-2504	45980	10900	830	1750 - 1610	355-265	1560	325	1540	870	855	28-22	100	53-47
15	S-2633	60080	19320	930	2150 - 2010	390-290	1960	360	1940	970	1020	35-28	125	59-53
16	S-3632	66220	30480	930	3150 - 3010	335-245	2960	305	2940	970	1005	35-28	160	61-55
17	S-2634	70760	18260	930	2150 - 2010	415-315	1960	385	1940	970	1045	35-28	140	59-53
18	S-3633	88760	28980	930	3160 - 3010	390-290	2960	360	2940	970	1020	42-35	180	61-55
19	S-3634	104370	27390	930	3160 - 3010	415-315	2960	385	2940	970	1045	42-35	200	61-55