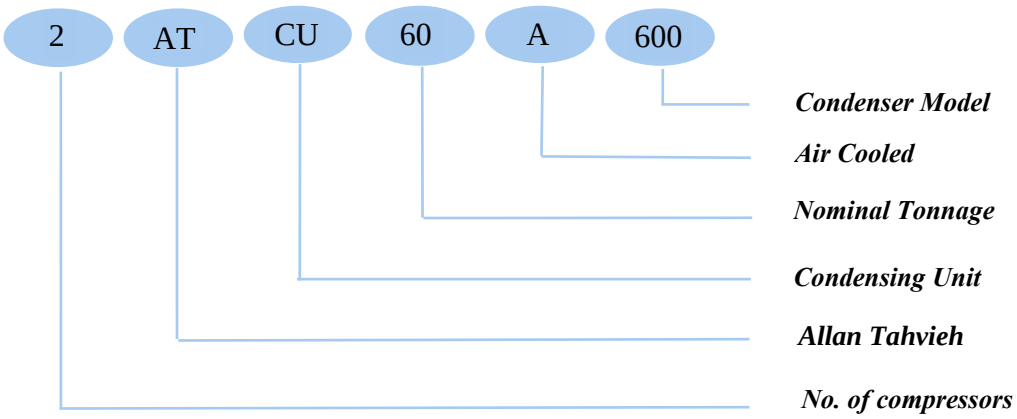
Condensing Unit

Contents

Nomenclature



Features

Allan Tahvieh reciprocating air cooled condensing units are available in capacity range of 5 to 240 tons of refrigeration with single, double and quad compressor configurations.

In all Allan Tahvieh Condensing Units the frames are made of galvanized steel sheets while the chassis and body panels are made from galvanized steel sheet s in appropriate thicknesses and completely painted in the proper thickness.

The system includes compressor(s), electrical panel, air cooled condenser coils, the fan and corresponding electric motor, different types of valves and corresponding piping.

The coils for this section are installed in a flat position while for the higher capacity models the coils are installed in a slant in order for the coils to occupy less space.

The coils include 3/8 copper tubes aluminum or copper finned (as per request) in 8, 10, 12 or 14 FPI. In normal climates aluminum fining is used while for more demanding climates copper fining could be used. In cases where corrosion is a concern, the coils are coated with protective coating.

An electrical panel which includes all electrical and control components of the condensing unit is installed on this system.

Compressors are by DWM Copland which happens to be one of the best and the most reliable brands. Raw materials such as copper tubes, fittings and valves are supplied by well-respected manufactures. Electrical safety measures such as three phase controller and circuit breakers are available on all units.

Safety controls installed on all units include high and low pressure switches, compressor oil pressure safety switch. That mentioned above, are all chosen from the most recognized controls manufacturers in the Air Conditioning Industry.

Fans installed are axial type directly coupled with 380V/3Ø/50Hz, Ins.Cl.F and IP–55 electric motors. Refrigerants such as R-22, R-407c or R-134a may be used. The coils are available in 3 or 4 rows configurations.

Selection Procedure

Given:

Cooling load = 535000 Btu/hr
Refrigerant = R22
Evap. Temperature = 45ºF
Condensing Temperature = 125 ºF
Ambient Temperature = 105 ºF
Coil Fins Per Inch = 12
Fin Material = Aluminum

Select Suitable Unit To Satisfy The Above Conditions:

Entering table1 @ 45ºF Evap. Temperature and 125ºF Condensing Temperature, select unit 1ATPU-60A producing 587000 Btu/hr of Cooling Capacity.
From table1, we also determine the THR to be 702000 Btu/hr.
T.D.= Condensing Temperature - Ambient Temperature = 125 – 105 = 20ºF.
By refer to table4A, Air Cooled Condenser Model is selected ATAC-600.
Dimensions of unit are given from Page20.
Electrical specifications from Page27 and Page28 are determined.
System KW Input = 1×58.7 + 8×1.08 = 67.34KW
System FLA = 96 + 12.8 = 108.8 A

Performance Tables

Air Cooled Condensing Unit (Refrigerant: R22)

Table 1

Model	Evap. Temp (°F)	Condensing Temperature (°F)								
		115			120			125		
		TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)
1ATCU-5A	40	59.2	4.4	70.8	56.9	4.6	69.2	54.7	4.8	67.7
	45	65.9	4.5	77.5	63.5	4.7	75.9	61.2	4.9	74.3
	50	73.2	4.6	84.7	70.5	4.8	82.9	68	5	81
1ATCU-7.5A	40	103.6	7.5	121.6	99.8	7.8	119	96.3	8.2	116.7
	45	114.6	7.6	132.6	111	7.9	131	107	8.4	127
	50	127	7.7	144.6	122.5	8	141.6	118.5	8.5	138.7
1ATCU-10A	40	122	8.8	143	117.5	9.2	141	113	9.6	137
	45	135	8.9	156	130	9.4	152.6	125.5	9.9	149.7
	50	149	9	169.6	143.5	9.6	167	138.5	10	162.7
1ATCU-15A	40	160.6	11.9	188.6	155	12.5	186	150	13	181.7
	45	178	12.2	206	171	12.8	202	165.5	13.4	197
	50	194.6	12.3	223	188.5	12.9	219	182	13.6	214
1ATCU-20A	40	173.6	13.8	207	167	14.4	203	160.5	14.9	197.7
	45	193	14	226	185	14.7	221	178.5	15.3	216
	50	213	14.3	246	205	14.9	239	197.5	15.7	235
1ATCU-25A	40	224	17.7	266	215	18.4	261	208	19	256
	45	248	18	289	238	18.9	285	230	19.7	279
	50	273	18.5	315	263	19.4	309	254	20.2	303
1ATCU-30A	40	268	21.3	316	258	22	309	248	22.9	303
	45	297	21.9	345	286	22.8	338	276	23.7	331
	50	328	22.4	376	317	23.4	368	306	24.4	359
1ATCU-35A	40	323	27.2	386	311	28.3	378	300	29.3	369
	45	357	27.9	419	344	29	411	332	30.2	403
	50	394	28.5	455	380	29.8	447	367	31	438
1ATCU-40A	40	388	32.2	461	373	33.5	452	359	34.7	443
	45	429	33	504	415	34.5	494	400	35.9	484
	50	476	33.9	548	459	35.4	538	444	36.9	527
1ATCU-50A	40	472.7	37.9	558.5	457	39.5	547.9	441.8	41	537.8
	45	525	38.8	608.9	507.2	40.5	597.5	490.6	42	586.4
	50	579.5	39.4	663	561	41.2	649.7	543	43	637.6
1ATCU-60A	40	566	45.5	669	547	47.3	656	529	49	644
	45	628	46.7	729	607	48.7	716	587	50.6	703
	50	694	47.7	794	671	49.9	779	650	51.9	765

Notes:

TC= Total Cooling Capacity
WC= Compressor Kilowatt Input
THR= Condenser Total Heat Rejection (Btu/hr)
KBH = 1000 Btu/hr

Performance Tables

Air Cooled Condensing Unit (Refrigerant: R22)

Table 1 (Cont.)

Model	Evap. Temp (ºF)	Condensing Temperature (ºF)					
		130			135		
		TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)
1ATCU-5A	40	52.6	4.9	65.9	50.3	5.2	64.3
	45	58.9	5	72.4	56.4	5.3	70.7
	50	65.6	5.3	79.3	62.9	5.5	77.5
1ATCU-7.5A	40	92.9	8.5	114	89.2	8.8	111.6
	45	105	8.7	124.6	99.2	9	121.6
	50	115	8.9	135.6	110	9.3	132.6
1ATCU-10A	40	110	9.9	135	104.6	10.4	131
	45	122	10.3	147	117	10.8	143
	50	133.6	10.6	159	128.6	10.9	155.6
1ATCU-15A	40	144.5	13.6	179	139.6	14	174.6
	45	161	13.9	194	155	14.5	189.6
	50	177	14.3	209	171	14.9	206
1ATCU-20A	40	154.6	15.4	194	149	15.9	189
	45	171.6	15.9	211	164.6	16.5	206
	50	191	16.3	229	182.6	16.9	225
1ATCU-25A	40	201	19.7	249	192.6	20.3	245
	45	223	20.4	273	215	20.9	367
	50	246	20.9	297	237	21.7	289
1ATCU-30A	40	239	23.6	296	231	24.3	289
	45	266	24.5	323	257	25.3	315
	50	296	25.3	352	285	26	344
1ATCU-35A	40	289	30.3	363	279	31.3	355
	45	321	31.3	395	309	32.4	386
	50	355	32.3	429	342	33.5	419
1ATCU-40A	40	347	35.9	433	334	37	422
	45	387	37.2	474	372	38.5	463
	50	429	38.4	516	413	39.8	505
1ATCU-50A	40	427.2	42.5	527.7	413.2	43.9	519
	45	474.8	43.8	575.4	459.2	45.4	564.8
	50	525.5	44.9	625.7	508.7	46.6	614.2
1ATCU-60A	40	511	50.8	632	495	52.6	621
	45	568	52.6	689	549	54.5	677
	50	629	54	751	609	56.3	737

Notes:

TC= Total Cooling Capacity
WC= Compressor Kilowatt Input
THR= Condenser Total Heat Rejection (Btu/hr)
KBH = 1000 Btu/hr

Performance Tables

Air Cooled Condensing Unit (Refrigerant: R22)

Table 1 (Cont.)

Model	Evap. Temp (°F)	Condensing Temperature (°F)								
		115			120			125		
		TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)
2ATCU-10A	40	118.2	8.6	141.4	113.8	9	138.2	109.2	9.4	135
	45	131.7	8.9	154.9	127	9.2	151.7	122.2	9.7	148.3
	50	146.3	9	169.3	141	9.4	165.7	137	10	163
2ATCU-15A	40	208	14.9	244	199.6	15.4	239	192.5	16.3	234
	45	229	15	266	222	15.8	261	215	16.7	255
	50	255	15.3	289	245	16	284	238	16.9	278
2ATCU-20A	40	245	17.5	287	235	18.4	281	227	19	275
	45	271	17.9	313	260	18.6	306	252	19.7	299
	50	299	18	339	287	19	333	278	20	326
2ATCU-30A	40	322	23.9	378	310	24.8	371	301	26	364
	45	355	24.3	411	342	25.4	403	332	26.7	395
	50	389	24.5	445	377	25.8	437	365	27	429
2ATCU-40A	40	348	27.5	413	334	28.6	405	322	29.7	396
	45	385	28	451	370	29.2	441	358	30.5	431
	50	425	28.5	491	410	29.8	479	396	31.3	469
2ATCU-50A	40	447	35.3	531	430	36.6	521	417	38	511
	45	495	36	579	476	37.6	569	461	39.3	557
	50	545	36.9	629	526	38.6	617	509	40.3	605
2ATCU-60A	40	535	42.5	631	516	44	617	497	45.7	605
	45	593	43.7	689	572	45.4	675	553	47.3	661
	50	655	44.7	751	634	46.6	735	613	48.7	719
2ATCU-70A	40	645	54.3	771	622	56.4	755	601	58.5	738
	45	713	55.7	839	688	58	821	665	60.3	804
	50	787	56.9	909	760	59.4	893	735	62	875
2ATCU-80A	40	775	64.3	921	746	66.8	903	719	69.3	885
	45	859	66	1007	830	68.8	987	801	71.7	966
	50	951	67.7	1097	918	70.6	1075	889	73.7	1052
2ATCU-100A	40	946	75.9	1116.9	914	78.8	1095.9	883.7	83	1075.4
	45	1049	77.5	1217.7	1014.4	80.8	1194.9	981.3	85	1172.6
	50	1158.9	78.7	1325	1122	82.2	1299.3	1087	87	1276
2ATCU-120A	40	1131	90.9	1336	1094	94.4	1311	1059	99	1287
	45	1255	93.3	1459	1214	97.2	1431	1175	101	1405
	50	1387	95.3	1589	1342	99.6	1559	1301	103.9	1529

Notes:

TC= Total Cooling Capacity
WC= Compressor Kilowatt Input
THR= Condenser Total Heat Rejection (Btu/hr)
KBH = 1000 Btu/hr

Performance Tables

Air Cooled Condensing Unit (Refrigerant: R22)

Table 1 (Cont.)

Model	Evap. Temp (°F)	Condensing Temperature (°F)					
		130			135		
		TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)
2ATCU-10A	40	104.9	9.9	131.7	100.5	10.3	128.5
	45	117.5	10	144.7	112.7	10.5	141.3
	50	130.9	10.5	158.5	125.9	10.9	154.9
2ATCU-15A	40	185.4	16.8	228	178.2	17.4	223
	45	207	17.3	249	198.3	18	243
	50	229	17.7	272	221	18.5	266
2ATCU-20A	40	219	19.9	269	209	20.7	263
	45	243	20.5	293	233	21.5	287
	50	268	21	319	258	21.9	312
2ATCU-30A	40	289	27	357	279	28	349
	45	321	27.9	387	309	28.9	379
	50	353	28.5	419	341	29.7	411
2ATCU-40A	40	309	30.7	387	297	31.7	377
	45	344	31.7	421	329	32.9	411
	50	381	32.5	459	367	33.9	449
2ATCU-50A	40	401	39.4	499	386	40.5	489
	45	445	40.7	545	429	41.9	732
	50	491	41.7	593	473	43.3	579
2ATCU-60A	40	479	47	591	461	48.5	577
	45	533	48.9	645	513	50.5	629
	50	591	50.4	703	569	52	687
2ATCU-70A	40	579	60.5	725	557	62.5	709
	45	641	62.7	789	617	64.7	771
	50	709	64.5	857	683	66.9	839
2ATCU-80A	40	693	71.7	865	667	74	845
	45	773	74.3	947	743	76.8	925
	50	857	76.7	1031	825	79.4	1009
2ATCU-100A	40	854.5	84.9	1055.3	826.3	87.9	1037
	45	949	87.5	1150.7	918.3	90.7	1129.5
	50	1050.9	89.7	1251.5	1017.3	93	1228.3
2ATCU-120A	40	1023	101.5	1263	988	105	1241
	45	1137	106	1379	1098	108.9	1353
	50	1259	109	1501	1216	112.5	1473

Notes:

TC= Total Cooling Capacity
WC= Compressor Kilowatt Input
THR= Condenser Total Heat Rejection (Btu/hr)
KBH = 1000 Btu/hr

Performance Tables

Air Cooled Condensing Unit (Refrigerant: R22)

Table 1 (Cont.)

Model	Evap. Temp (°F)	Condensing Temperature (°F)								
		115			120			125		
		TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)
4ATCU-80A	40	695	54.9	825	669	57.3	809	643	59.3	727
	45	769	56	901	741	58.5	881	715	60.9	789
	50	849	56.9	981	821	59.7	957	791	62.5	857
4ATCU-100A	40	894	70.5	1061	861	73.3	1041	833	76	791
	45	989	72	1157	953	75.3	1137	921	78.5	861
	50	1089	73.7	1257	1053	77.3	1233	1017	80.5	937
4ATCU-120A	40	1069	84.9	1261	1033	88	1233	993	91.3	1021
	45	1185	87.3	1377	1145	90.9	1349	1105	94.5	1113
	50	1309	89.3	1501	1269	93.3	1469	1225	97.3	1209
4ATCU-140A	40	1289	108.5	1541	1245	112.9	1509	1201	116.9	1209
	45	1425	111.3	1677	1377	116	1641	1329	120.5	1321
	50	1573	113.7	1817	1521	118.9	1785	1469	124	1437
4ATCU-160A	40	1549	128.5	1841	1493	133.7	1805	1437	138.5	1477
	45	1717	132	2013	1661	137.7	1973	1601	143.3	1609
	50	1901	135.3	2193	1837	141.3	2149	1777	147.3	1749
4ATCU-200A	40	1891	151.7	2235	1829	157.7	2193	1768	165	1769
	45	2097	154.9	2436	2029	161.7	2391	1963	169	1933
	50	2319	157.3	2649	2245	164.5	2599	2173	173	2105
4ATCU-240A	40	2261	181.7	2673	2189	188.9	2621	2117	197	2151
	45	2509	186.5	2917	2429	194.5	2861	2349	203	2346
	50	2773	190.5	3177	2685	199.3	3117	2601	207.7	2551

Notes:

TC= Total Cooling Capacity
WC= Compressor Kilowatt Input
THR= Condenser Total Heat Rejection (Btu/hr)
KBH = 1000 Btu/hr

Performance Tables

Air Cooled Condensing Unit (Refrigerant: R22)

Table1 (Cont.)

Model	Evap. Temp (ºF)	Condensing Temperature (ºF)					
		130			135		
		TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)
4ATCU-80A	40	619	61.3	773	593	63.3	753
	45	687	63.3	841	659	65.7	821
	50	761	64.9	917	731	67.7	897
4ATCU-100A	40	801	78.5	997	771	80.9	977
	45	889	81.3	1089	857	83.9	1465
	50	981	83.3	1185	945	86.5	1157
4ATCU-120A	40	957	94	1181	921	96.9	1153
	45	1065	97.7	1289	1025	100.9	1257
	50	1181	100.9	1405	1137	104	1373
4ATCU-140A	40	1157	120.8	1448	1112	124.8	1416
	45	1281	125.2	1576	1232	129.2	1540
	50	1417	128.8	1712	1364	133.6	1676
4ATCU-160A	40	1385	143.3	1729	1332	148	1689
	45	1545	148.4	1892	1484	153.6	1848
	50	1713	153.2	2060	1648	158.8	2016
4ATCU-200A	40	1709	169.6	2110	1652	175.6	2072
	45	1899	174.8	2301	1836	181.2	2259
	50	2103	179.3	2504	2035	186	2457
4ATCU-240A	40	2045	202.9	2525	1977	211	2481
	45	2273	211	2757	2197	217.7	2705
	50	2517	217	3001	2433	224.9	2945

Notes:

TC= Total Cooling Capacity
WC= Compressor Kilowatt Input
THR= Condenser Total Heat Rejection (Btu/hr)
KBH = 1000 Btu/hr

Performance Tables

Air Cooled Condensing Unit (Refrigerant: R134a)

Table 3

Model	Evap. Temp (°F)	Condensing Temperature (°F)								
		115			120			125		
		TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)
1ATCU-5A	40	62.8	4.9	75.4	60.2	5.2	73.4	57.7	5.3	71.5
	45	70.7	5	83.3	67.9	5.3	81.1	65	5.5	79
	50	79.3	5.2	91.8	76.2	5.4	89.5	73.2	5.7	87.2
1ATCU-7.5A	40	75.6	5.9	90.8	72.6	6.2	88.5	69.5	6.4	86.2
	45	85	6	101	81.6	6.4	97.6	78.2	6.6	95
	50	96	6.2	111	91.4	6.5	107.6	87.7	6.8	104.6
1ATCU-10A	40	116	8.9	135.6	110	9.2	131.6	104.6	9.5	127.6
	45	128.6	9.2	149.6	124	9.6	145	117.6	9.9	140.6
	50	143.6	9.5	165	137.7	9.9	159.6	131.6	10.3	154.5
1ATCU-15A	40	143	11.2	168	136	11.7	162.6	131	12	159
	45	161	11.5	184.6	153.7	11.9	179.6	148	12.5	174.6
	50	179.5	11.8	204	172	12.3	199	166	12.9	192.6
1ATCU-20A	40	204	18.3	246	194.7	18.9	239	187	19.4	234
	45	228	19	272	219	19.7	265	209	20.3	258
	50	254	19.8	299	245	20.5	291	235	21.3	284
1ATCU-30A	40	252	21.9	299	241	22.7	291	231	23.4	283
	45	283	22.9	329	271	23.8	322	259	24.4	313
	50	316	23.9	364	304	24.8	355	291	25.6	345
1ATCU-40A	40	302	24.6	353	291	25.4	344	279	28.2	336
	45	339	25.5	389	327	26.4	379	315	27.2	371
	50	379	26.2	428	366	27.2	419	353	28.2	409
1ATCU-50A	40	349	30	414	338	30.9	405	325	31.9	395
	45	393	31.3	457	379	32.3	447	367	33.2	437
	50	441	32.3	504	426	33.4	493	412	34.5	482
1ATCU-60A	40	412	34.7	485	396	35.7	472	379	36.6	459
	45	461	36	535	444	37.3	522	427	38.3	508
	50	514	37.3	587	496	38.6	573	47	39.8	558

Notes:

TC= Total Cooling Capacity
WC= Compressor Kilowatt Input
THR= Condenser Total Heat Rejection (Btu/hr)
KBH = 1000 Btu/hr

Performance Tables

Air Cooled Condensing Unit (Refrigerant: R134a)

Table 3 (Cont.)

Model	Evap. Temp (°F)	Condensing Temperature (°F)								
		130			135			140		
		TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)
1ATCU-5A	40	55	5.5	69.4	52.5	5.7	67.4	49.9	5.8	65.2
	45	62.4	5.7	76.8	59.4	5.9	74.6	56.5	6	72.3
	50	71	5.9	84.7	66.9	6	82.4	63.8	6.3	79.8
1ATCU-7.5A	40	66.5	6.7	83.7	63.3	6.9	81.4	60.3	7	78.9
	45	74.8	6.9	92.4	71.4	7	89.8	67.9	7.3	87
	50	83.9	7	101.6	80.3	7.3	98.9	76.5	7.6	95.9
1ATCU-10A	40	99.7	9.8	123.6	94.9	10	119	89.6	10.4	116
	45	113	10.3	136	106.7	10.8	131.6	102	10.8	128
	50	125.6	10.5	150	119.5	10.9	145	113.5	11.2	140
1ATCU-15A	40	124	12.4	153.5	118	12.8	148.5	112.5	13.1	144
	45	140.6	12.9	169.6	133.5	13.4	164.5	127	13.7	159.6
	50	158	13.3	187	150.5	13.8	181.5	143.5	14.2	176
1ATCU-20A	40	179	19.9	228	171	20.4	221	162.6	20.9	215
	45	201	20.9	251	191.6	21.5	245	184	22	238
	50	225	21.9	277	216	22.6	269	206	23.3	262
1ATCU-30A	40	221	23.9	275	211	24.6	267	201	25	259
	45	249	25.2	304	238	25.9	296	227	26.5	287
	50	279	26.4	336	267	27.2	326	255	27.9	317
1ATCU-40A	40	269	26.9	328	259	27.6	319	249	28.3	312
	45	304	28	362	292	28.9	354	281	29.7	345
	50	339	29	399	328	31	389	316	30.9	379
1ATCU-50A	40	313	32.7	386	302	33.5	377	289	34.3	368
	45	353	34.2	427	341	35	417	328	35.9	407
	50	397	35.6	471	383	36.7	459	369	37.6	449
1ATCU-60A	40	364	37.4	446	347	38.3	433	331	38.9	419
	45	409	39.3	494	393	40.3	479	375	41	465
	50	459	40.9	544	439	41.9	528	421	43	513

Notes:

TC= Total Cooling Capacity
WC= Compressor Kilowatt Input
THR= Condenser Total Heat Rejection (Btu/hr)
KBH = 1000 Btu/hr

Performance Tables

Air Cooled Condensing Unit (Refrigerant: R134a)

Table 3 (Cont.)

Model	Evap. Temp (°F)	Condensing Temperature (°F)								
		115			120			125		
		TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)
2ATCU-10A	40	125.5	9.9	150.7	120.3	10.3	146.7	115.3	10.5	142.9
	45	141.3	10	166.5	135.7	10.5	162.3	131	10.9	159
	50	158.5	10.3	183.5	152.3	10.7	178.9	146.3	11.3	174.4
2ATCU-15A	40	152	11.9	181.5	146	12.3	176.9	138.9	12.7	172.3
	45	169.9	12	201	164	12.7	196	156.3	13	191
	50	191	12.3	221	182.7	12.8	216	175.3	13.5	209
2ATCU-20A	40	231	17.7	272	221	18.2	264	209	18.9	256
	45	258	18.3	299	247	19	291	236	19.7	282
	50	288	18.9	329	276	19.6	319	264	20.5	308.9
2ATCU-30A	40	285	22.3	335	273	23.3	326	261	24	317
	45	321	22.9	369	308	23.9	359	295	24.9	349
	50	359	23.5	407	345	24.5	397	331	25.7	386
2ATCU-40A	40	407	36.5	491	389	37.7	478	373	38.7	467
	45	455	38	543	437	39.3	529	419	40.5	515
	50	507	39.5	597	489	40.9	581	469	42.5	567
2ATCU-60A	40	503	43.9	597	481	45.3	581	461	46.7	565
	45	565	45.9	659	541	47.5	643	519	48.9	625
	50	631	47.7	727	607	49.5	709	581	51	689
2ATCU-80A	40	602	49	705	581	50.7	687	559	56.3	671
	45	677	50.9	777	653	52.7	759	629	54.3	741
	50	757	52.3	855	731	54.3	837	705	56.3	817
2ATCU-100A	40	699	60	827	675	61.9	809	649	63.7	789
	45	785	62.5	913	759	64.5	893	733	66.3	873
	50	881	64.5	1007	851	66.7	985	823	68.9	963
2ATCU-120A	40	823	69.3	969	791	71.3	943	759	73	917
	45	921	72	1069	887	74.5	1043	853	76.5	1015
	50	1027	74.5	1173	991	77	1145	953	79.5	1115

Notes:

TC= Total Cooling Capacity
WC= Compressor Kilowatt Input
THR= Condenser Total Heat Rejection (Btu/hr)
KBH = 1000 Btu/hr

Performance Tables

Air Cooled Condensing Unit (Refrigerant: R134a)

Table 3 (Cont.)

Model	Evap. Temp (°F)	Condensing Temperature (°F)								
		130			135			140		
		TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)
2ATCU-10A	40	111	10.9	138.7	104.9	11.3	134.7	99.7	11.5	130.3
	45	124.5	11.3	153.7	118.7	11.7	149	112.9	12	144.5
	50	141	11.7	169.5	133.7	12	164.7	127.5	12.5	159.5
2ATCU-15A	40	132.7	13.3	167.5	126.5	13.7	162.7	120.6	14	157.9
	45	149.5	13.7	184.9	142.7	14	179.5	135.9	14.5	174
	50	167.9	14	204	160.3	14.5	197.7	152.9	15	191.7
2ATCU-20A	40	199.3	19.5	248	189.3	20	239	179	20.7	231
	45	225	20.5	273	214	21	264	203	21.5	255
	50	252	21	301	239	21.9	291	228	22.5	281
2ATCU-30A	40	249	24.9	308	237	25.7	298	226	26.3	289
	45	282	25.8	339	268	26.7	329	255	27.5	319
	50	317	26.7	375	302	27.7	364	288	28.5	353
2ATCU-40A	40	357	39.9	455	341	40.7	441	326	41.7	429
	45	401	41.7	501	384	42.9	489	367	44	475
	50	449	43.7	553	431	45	537	411	46.3	523
2ATCU-60A	40	441	47.9	548	421	49	533	401	50	517
	45	497	50.3	607	475	51.7	591	453	52.9	573
	50	557	52.7	671	533	54.3	651	509	55.7	633
2ATCU-80A	40	539	53.7	655	517	55	639	497	56.5	623
	45	607	56	723	583	57.7	707	561	59.3	689
	50	679	58	797	655	60	779	631	61.9	759
2ATCU-100A	40	625	65.3	771	603	66.9	753	579	68.5	735
	45	705	68.3	853	681	70	833	655	71.9	813
	50	793	71	941	765	73	919	737	75	899
2ATCU-120A	40	727	74.7	891	693	76.3	865	661	77.7	837
	45	819	78.5	987	783	80.3	957	749	81.9	929
	50	917	81.9	1087	879	83.9	1055	841	85.9	1025

Notes:

TC= Total Cooling Capacity
WC= Compressor Kilowatt Input
THR= Condenser Total Heat Rejection (Btu/hr)
KBH = 1000 Btu/hr

Performance Tables

Air Cooled Condensing Unit (Refrigerant: R134a)

Table 3 (Cont.)

Model	Evap. Temp (°F)	Condensing Temperature (°F)								
		115			120			125		
		TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)
4ATCU-80A	40	813	72.9	981	779	75.3	957	745	77.3	933
	45	909	76	1085	873	78.5	1057	837	80.9	1029
	50	1013	78.9	1193	977	81.7	1161	937	84.9	1133
4ATCU-120A	40	1005	87.7	1193	961	90.5	1161	921	93.3	1129
	45	1129	91.7	1317	1081	94.9	1285	1037	97.7	1249
	50	1261	95.3	1453	1213	98.9	1417	1161	102	1377
4ATCU-160A	40	1205	98	1409	1161	101.3	1373	1409	112.5	1633
	45	1353	101.7	1553	1305	105.3	1517	1257	108.5	1481
	50	1513	104.5	1709	1461	108.5	1673	1409	112.5	1633
4ATCU-200A	40	1397	121	1653	1349	123.7	1617	1297	127.3	1577
	45	1569	124.9	1825	1517	128.9	1785	1465	132.5	1745
	50	1761	128.9	2013	1701	133.3	1969	1645	137.7	1925
4ATCU-240A	40	1645	138.5	1937	1581	142.5	1885	1517	146	1833
	45	1841	144	2137	1773	148.9	2085	1705	152.9	2029
	50	2053	148.9	2345	1981	155	2289	1905	158.9	2229

Model	Evap. Temp (°F)	Condensing Temperature (°F)								
		130			135			140		
		TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)	TC (KBH)	WC (KW)	THR (KBH)
4ATCU-80A	40	713	79.7	909	681	81.3	881	651	83.3	857
	45	801	83.3	1001	767	85.7	977	733	88	949
	50	897	87.3	1105	861	90	1073	821	92.5	1045
4ATCU-120A	40	881	95.7	1097	841	98	1065	801	100	1033
	45	993	100.5	1213	949	103.3	1181	905	105.7	1145
	50	1113	105.3	1341	1065	108.5	1301	1017	111.3	1265
4ATCU-160A	40	1077	107.3	1309	1033	110	1277	993	112.9	1245
	45	1213	112	1445	1165	115.3	1413	1121	118.5	1377
	50	1357	117	1593	1309	121	1557	1261	123.7	1517
4ATCU-200A	40	1249	130.5	1541	1205	133.7	1505	1158	136.9	1469
	45	1409	136.5	1705	1361	141	1665	1308	143.7	1625
	50	1585	142	1881	1529	147	1837	1473	150	1797
4ATCU-240A	40	1453	149.3	1781	1385	152.5	1729	1321	155.3	1673
	45	1637	156.9	1973	1565	160.5	1913	1497	163.7	1857
	50	1833	163.7	2173	1757	167.7	2109	1681	171.7	2049

Notes:

TC= Total Cooling Capacity
WC= Compressor Kilowatt Input
THR= Condenser Total Heat Rejection (Btu/hr)
KBH = 1000 Btu/hr

Total Heat Rejection for R22 [KBH]

Aluminum Fin

Table 4A

Model	TD (ºF)				
	10	15	20	25	30
ATAC-075	29.1	45.6	63.4	82.2	101.9
ATAC-110	68.7	108.7	151.6	196.7	243.3
ATAC-150	76.8	121.5	169.7	220.8	274.4
ATAC-225	150.1	242.6	343.1	449.1	559.1
ATAC-300	169.9	271.2	380.1	494.3	612.2
ATAC-375	216.3	344.6	482.1	626.2	774.9
ATAC-450	252.5	403.3	565.5	735.7	911.5
ATAC-600	302.9	479.7	670.8	873.6	1085.9
ATAC-750	432.5	688.9	963.9	1252.2	1549.8
ATAC-900	504.9	806.5	1130.8	1471.2	1822.8
ATAC-1150	608.9	962.9	1339.6	1732.3	2136.2
ATAC-1150S	730.8	1155.7	1607.5	2078.7	2563.4
2xATAC-600	953.1	1514.7	2110.1	2727.6	3359.2
2xATAC-750	1023.3	1612.9	2233.8	2875.5	3530.8
2xATAC-900	1137.2	1770.9	2431.7	3110.7	3801.8
2xATAC-900S	1364.6	2125.2	2917.9	3732.8	4562.1
2xATAC-1150	1231.8	1914.3	2624.3	3353.1	4094.6
2xATAC-1150S	1478.1	2297.1	3149.1	4023.7	4913.5

Table A

No. of FPI	Correction Factor
8	0.79
10	0.91
12	1.00

Table B

Altitude(ft)	Adjustment Factor
0	1.00
1000	1.02
2000	1.03
3000	1.05
4000	1.07
5000	1.08
6000	1.10

Note:

KBH=1000 Btu/hr

Max Condensing Temperature= 135ºF

Above given values are based on sea level altitude and 12 Fins per Inch coil. For different altitude and coil FPI (8 and 10), multiply THR value by the appropriate correction factor in Table A and divide by correction factor in Table B.

Total Heat Rejection for R22 [KBH]

Copper Fin

Table 4B

Model	TD (ºF)				
	10	15	20	25	30
ATAC-075	29.6	46.4	64.6	83.9	104.2
ATAC-110	69.8	110.7	154.5	200.6	248.3
ATAC-150	78.1	123.8	173.1	225.6	280.5
ATAC-225	153.2	248.2	351.6	460.8	573.9
ATAC-300	172.9	276.6	388.1	505.1	625.8
ATAC-375	220.1	351.1	491.8	639.3	791.7
ATAC-450	257.1	411.4	577.4	751.8	931.9
ATAC-600	308.2	488.9	684.6	892.7	1110.6
ATAC-750	440.1	702.1	983.5	1278.5	1583.2
ATAC-900	513.9	822.6	1154.7	1503.5	1863.8
ATAC-1150	618.6	979.4	1363.5	1764.1	2176.2
ATAC-1150S	742.3	1175.3	1636.2	2116.9	2611.4
2xATAC-600	968.8	1541.6	2149.3	2779.5	3423.9
2xATAC-750	1038.2	1637.8	2269.6	2922.6	3589.3
2xATAC-900	1150.5	1792.7	2462.4	3150.5	3850.8
2xATAC-900S	1380.6	2151.2	2954.9	3780.6	4620.9
2xATAC-1150	1245.6	1936.7	2655.8	3393.9	4144.8
2xATAC-1150S	1494.7	2323.9	3186.9	4072.8	4973.7

Table A

No. of FPI	Correction Factor
8	0.79
10	0.91
12	1.00

Table B

Altitude(ft)	Adjustment Factor
0	1.00
1000	1.02
2000	1.03
3000	1.05
4000	1.07
5000	1.08
6000	1.10

Note:

KBH=1000 Btu/hr

Max Condensing Temperature= 135ºF

Above given values are based on sea level altitude and 12 Fins per Inch coil. For different altitude and coil FPI (8 and 10), multiply THR value by the appropriate correction factor in Table A and divide by correction factor in Table B.

Total Heat Rejection for R134a [KBH]

Aluminum Fin

Table 6A

Model	TD (ºF)				
	10	15	20	25	30
ATAC-075	32.6	50.1	68.3	87.1	106.6
ATAC-110	74.5	115.1	157.5	201.5	246.7
ATAC-150	84.9	131.1	179.5	229.8	281.8
ATAC-225	162.2	254.2	351.8	453.9	559.7
ATAC-300	182.9	284.6	391.1	501.7	615.7
ATAC-375	233.1	361.7	496.5	636.5	780.5
ATAC-450	272.3	423.3	581.9	746.9	916.9
ATAC-600	335.5	518.2	709.8	909.2	1115.5
ATAC-750	466.1	723.2	992.9	1272.8	1560.8
ATAC-900	544.5	846.5	1163.9	1493.8	1833.7
ATAC-1150	654.3	1010.3	1381.1	1763.9	2156.3
ATAC-1150S	785.1	1212.3	1657.3	2116.7	2587.5
2xATAC-600	1011.8	1568.9	2150.5	2750.2	3363.9
2xATAC-750	1084.5	1672.2	2281.7	2907.7	3546.3
2xATAC-900	1200.4	1836.5	2489.9	3156.6	3833.7
2xATAC-900S	1440.5	2203.8	2987.9	3787.9	4600.4
2xATAC-1150	1299.1	1984.8	2687.9	3404.6	4131.6
2xATAC-1150S	1558.9	2381.7	3225.5	4085.5	4957.9

Table A

No. of FPI	Correction Factor
8	0.79
10	0.91
12	1.00

Table B

Altitude(ft)	Adjustment Factor
0	1.00
1000	1.02
2000	1.03
3000	1.05
4000	1.07
5000	1.08
6000	1.10

Note:

KBH=1000 Btu/hr

Max Condensing Temperature= 145ºF

Above given values are based on sea level altitude and 12 Fins per Inch coil. For different altitude and coil FPI (8 and 10), multiply THR value by the appropriate correction factor in Table A and divide by correction factor in Table B.

Total Heat Rejection for R134a [KBH]

Copper Fin

Table 6B

Model	TD (ºF)				
	10	15	20	25	30
ATAC-075	33.2	51.1	69.6	88.9	108.9
ATAC-110	45.8	70.1	95.5	121.6	148.6
ATAC-150	86.5	133.7	183.2	234.7	287.9
ATAC-225	165.7	259.9	360.3	465.4	574.1
ATAC-300	186.4	290.1	398.9	512.3	629.1
ATAC-375	237.3	368.5	506.3	649.5	796.8
ATAC-450	277.4	431.7	593.9	762.9	936.9
ATAC-600	341.8	528.5	724.4	928.6	1140.1
ATAC-750	474.5	736.9	1012.5	1298.8	1593.4
ATAC-900	554.7	863.2	1187.9	1525.6	1873.7
ATAC-1150	664.9	1027.3	1405.2	1795.5	2195.5
ATAC-1150S	797.9	1232.7	1686.2	2154.6	2634.6
2xATAC-600	1028.6	1596.4	2189.3	2801.2	3427.1
2xATAC-750	1100.4	1697.7	2317.5	3141.2	3603.7
2xATAC-900	1214.6	1858.8	2520.7	3196.3	3882.1
2xATAC-900S	1457.5	2230.5	3024.8	3835.5	4658.5
2xATAC-1150	1313.8	2007.8	2719.6	3445.2	4181.3
2xATAC-1150S	1576.5	2409.3	3263.5	4134.2	5017.5

Table A

No. of FPI	Correction Factor
8	0.79
10	0.91
12	1.00

Table B

Altitude(ft)	Adjustment Factor
0	1.00
1000	1.02
2000	1.03
3000	1.05
4000	1.07
5000	1.08
6000	1.10

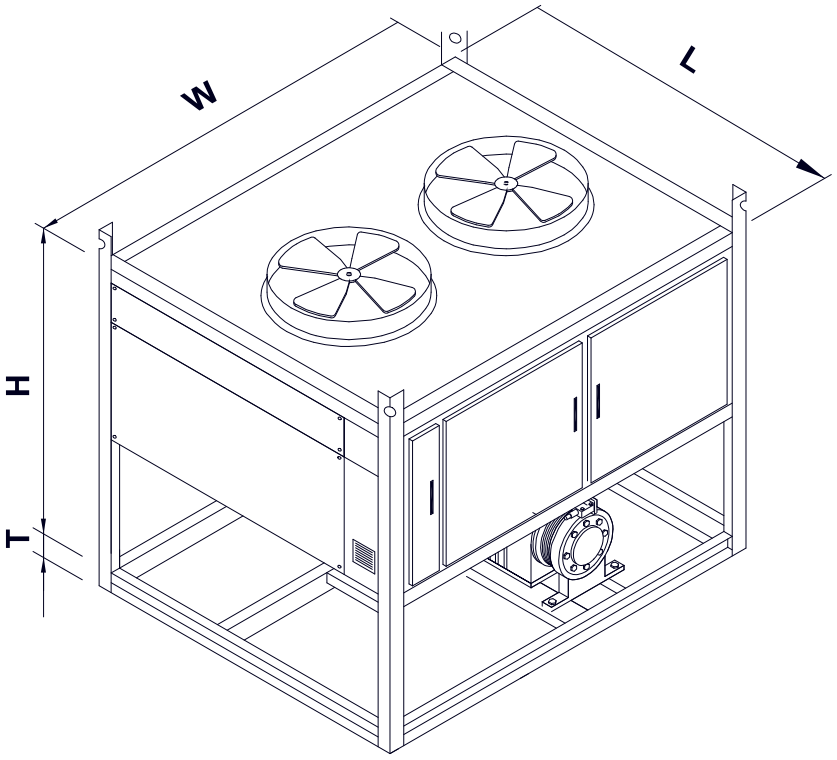
Note:

KBH=1000 Btu/hr

Max Condensing Temperature= 145ºF

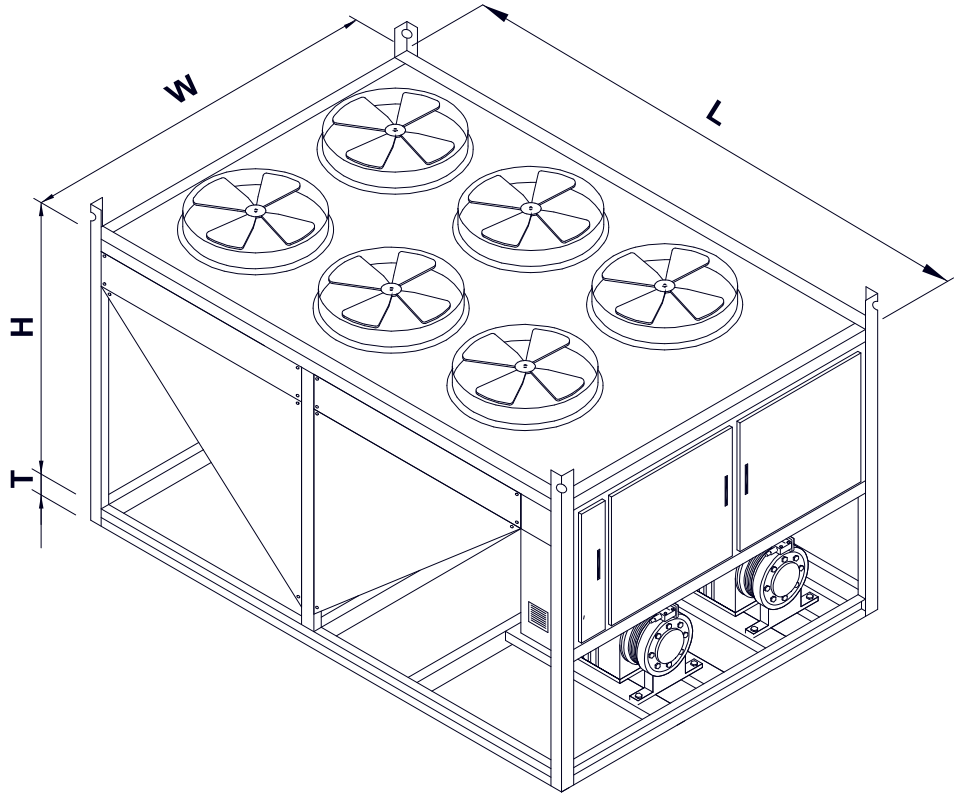
Above given values are based on sea level altitude and 12 Fins per Inch coil. For different altitude and coil FPI (8 and 10), multiply THR value by the appropriate correction factor in Table A and divide by correction factor in Table B.

Dimensions



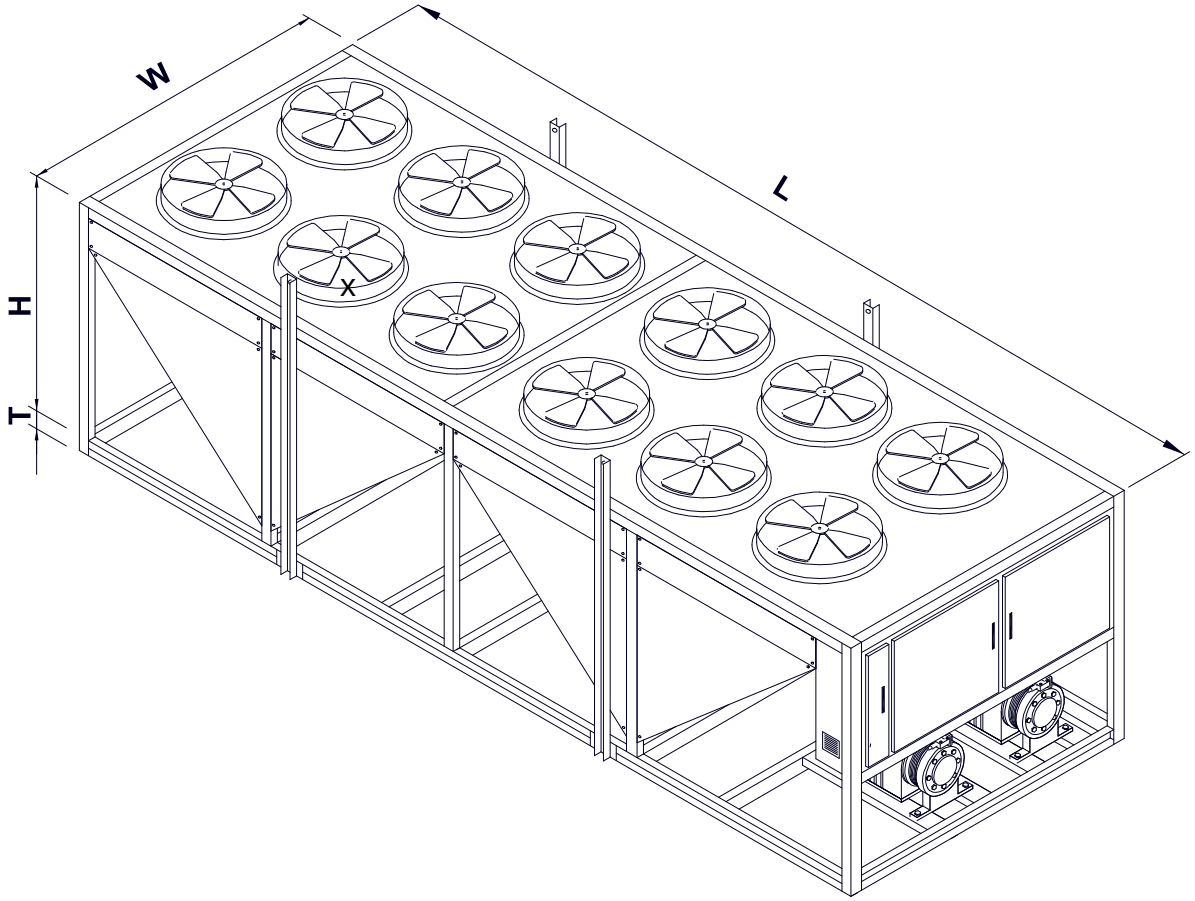
Condenser Model	Coil Type	L(cm)	W(cm)	H(cm)	T(cm)
ATAC-075	F-TYPE	115	120	131	10
ATAC-110	FTYPE	145	210	131	10
ATAC-150	F-TYPE	145	210	131	10

Dimensions



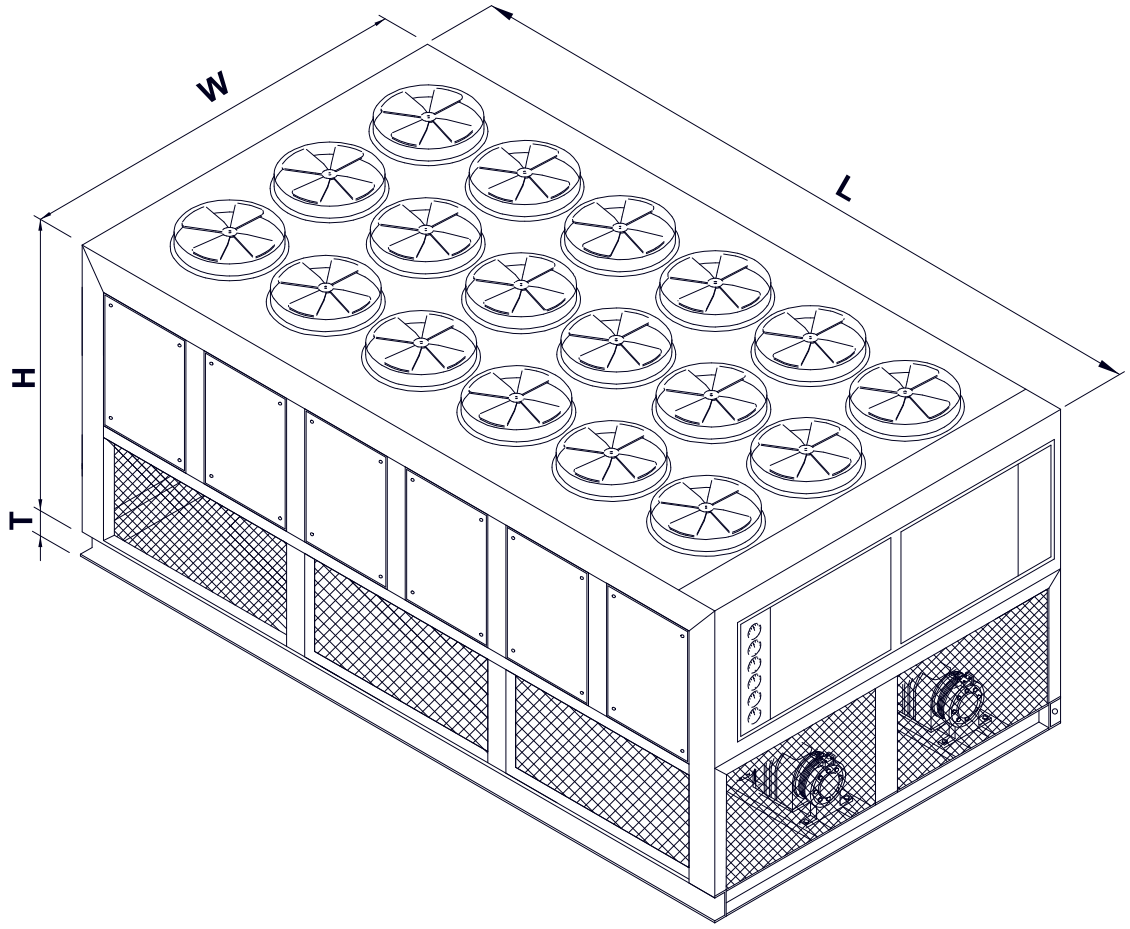
Condenser Model	Coil Type	L(cm)	W(cm)	H(cm)	T(cm)
ATAC-225	V-TYPE	213	210	136	12
ATAC-300	V-TYPE	213	210	136	12
ATAC-375	V-TYPE	302	210	136	12
ATAC-450	V-TYPE	302	210	166	12
ATAC-600	V-TYPE	411	210	161	14

Dimensions



Condenser Model	Coil Type	L(cm)	W(cm)	H(cm)	T(cm)
ATAC-750	W-TYPE	594	210	166	14
ATAC-900	W-TYPE	594	210	166	16
ATAC-1150	W-TYPE	594	210	166	16

Dimensions



Condenser Model	Coil Type	L(cm)	W(cm)	H(cm)	T(cm)
2xATAC-600	W-TYPE	601	330	202	16
2xATAC-750	W-TYPE	601	330	217	16
2xATAC-900	W-TYPE	671	330	272	18
2xATAC-1150	W-TYPE	701	330	292	18

Condensing Technical Data

Model	Refrigerant Charge(Kg)			Oil			Weight(Kg)		Connection (Inch)	
	R22	R407c	R134a	Charge (US.Gals)	Type		Net	Oper.	LL	SL
					R22	R22,R407c				
1ATCU-5	1.5	1.5	1.6	0.65	3 GS	Polyolester	280	296	5/8	1 3/8
1ATCU-7.5	2	1.9	2.1	1	3 GS	Polyolester	320	336	7/8	1 3/8
1ATCU-10	3.5	3.4	3.7	1	3 GS	Polyolester	355	380	7/8	1 3/8
1ATCU-15	5	4.9	5.3	1	3 GS	Polyolester	458	506	7/8	1 5/8
1ATCU-20	6.5	6.3	6.8	1	3 GS	Polyolester	465	521	7/8	1 1/5
1ATCU-25	8	7.8	8.4	1.1	3 GS	Polyolester	475	535	1 1/8	2 1/8
1ATCU-30	18	17.5	18.9	1.1	3 GS	Polyolester	522	594	1 1/8	2 1/8
1ATCU-35	11	10.7	11.6	1.1	3 GS	Polyolester	625	730	1 1/8	2 1/8
1ATCU-40	12.5	12.1	13.1	2	3 GS	Polyolester	667	770	1 1/8	2 1/8
1ATCU-50	15.5	15.0	16.3	2	3 GS	Polyolester	735	874	1 3/8	2 5/8
1ATCU-60	19	18.4	20.0	2	3 GS	Polyolester	842	980	1 3/8	3 1/8
						Polyolester				
2ATCU-10	3.2	3.1	3.4	1.3	3 GS	Polyolester	460	385	2x5/8	2x1 3/8
2ATCU-15	4.5	4.4	4.7	2	3 GS	Polyolester	561	610	2x7/8	2x1 3/8
2ATCU-20	7.6	7.4	8.0	2	3 GS	Polyolester	655	726	2x7/8	2x1 3/8
2ATCU-30	10	9.7	10.5	2	3 GS	Polyolester	678	750	2x7/8	2x1 5/8
2ATCU-40	13	12.6	13.7	2	3 GS	Polyolester	793	897	2x7/8	2x1 5/8
2ATCU-50	16	15.5	16.8	2.2	3 GS	Polyolester	870	1000	2x1 1/8	2x2 1/8
2ATCU-60	36	34.9	37.8	2.2	3 GS	Polyolester	925	1055	2x1 1/8	2x2 1/8
2ATCU-70	22	21.3	23.1	2.2	3 GS	Polyolester	1025	1190	2x1 1/8	2x2 1/8
2ATCU-80	25	24.3	26.3	4	3 GS	Polyolester	1180	1402	2x1 1/8	2x2 1/8
2ATCU-100	31	30.1	32.6	4	3 GS	Polyolester	1370	1670	2x1 3/8	2x2 5/8
2ATCU-120	38	36.9	39.9	4	3 GS	Polyolester	1580	1861	2x1 3/8	2x3 1/8
						Polyolester				
4ATCU-80	26	25.2	27.3	4	3 GS	Polyolester	1490	1852	4x7/8	4x1 1/5
4ATCU-100	32	31.0	33.6	4.4	3 GS	Polyolester	1610	2012	4x1 1/8	4x2 1/8
4ATCU-120	72	69.8	75.6	4.4	3 GS	Polyolester	1680	2050	4x1 1/8	4x2 1/8
4ATCU-140	44	42.7	46.2	4.4	3 GS	Polyolester	1868	2311	4x1 1/8	4x2 1/8
4ATCU-160	50	48.5	52.5	8	3 GS	Polyolester	2012	2480	4x1 1/8	4x2 1/8
4ATCU-200	62	60.1	65.1	8	3 GS	Polyolester	2350	2980	4x1 3/8	4x2 5/8
4ATCU-240	76	73.7	79.8	8	3 GS	Polyolester	2770	3480	4x1 3/8	4x3 1/8

Note:

System Total Operation Charge = Condensing Operating Charge + Air Cooled Condenser Operating
Total Weight= Condensing Weight + Condenser Weight
LL: Liquid Line SL: Suction Line

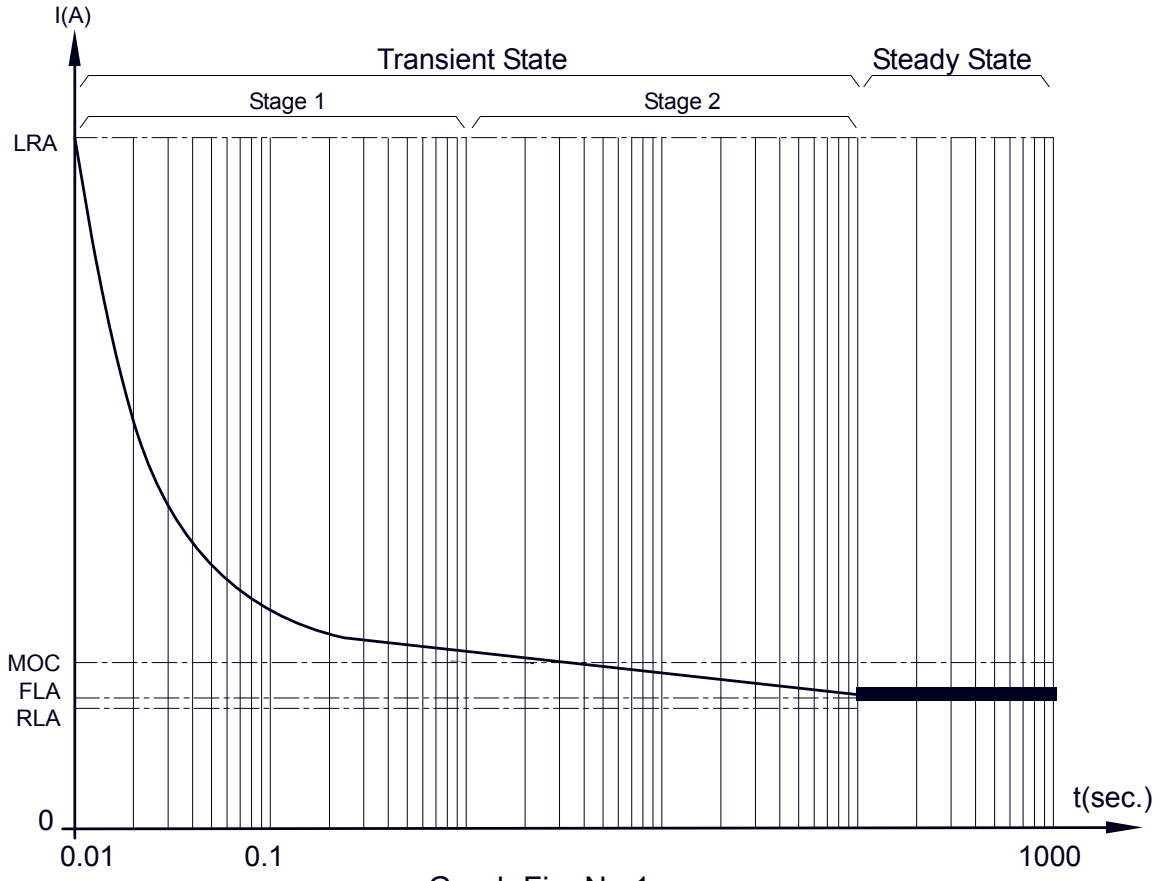
Condenser Technical Data

Condenser Model	Propeller Fan						Coil		Refrigerant				No. of Circuit	Unit Weight (Kg)	Electrical Data	
	No.	DIA (mm)	RPM	Power (KW)	Current (Ampere)	Total CFM	Rows Deep	Total CFA (Sq.ft)	Charge R22 (Kg)	Charge R407c (Kg)	Charge R134a (Kg)	Pump Down Capacity (Kg)			Total Ampere	Total Input KW
ATAC-075	1	630	900	0.45	1.5	6300	3	7.8	5	4.9	5.3	12	1	210	1.50	0.64
ATAC-110	2	630	900	0.45	1.5	12600	3	19.2	7	6.8	7.4	22	1,2	325	3.00	1.28
ATAC-150	2	700	900	1.2	3.1	16000	3	20.3	9	8.7	9.5	31	1,2	350	6.20	2.60
ATAC-225	4	700	900	1.2	3.1	32000	3	34.8	13	12.6	13.7	46	1,2	540	12.4	5.20
ATAC-300	4	700	900	1.2	3.1	32000	3	44.5	18	17.5	18.9	60	1,2	670	12.4	5.20
ATAC-375	5	700	900	1.2	3.1	40000	3	58.1	22	21.3	23.1	71	1,2	1030	15.5	6.50
ATAC-450	6	700	900	1.2	3.1	48000	3	65.8	27	26.2	28.4	90	1,2	1190	18.6	7.80
ATAC-600	8	700	900	1.2	3.1	64000	3	79.4	35	34.0	36.8	120	1,2	1680	24.8	10.4
ATAC-750	10	700	900	1.2	3.1	80000	3	116.2	44	42.7	46.2	150	1,2	2000	31.0	13.0
ATAC-900	12	700	900	1.2	3.1	96000	3	131.7	53	51.4	55.7	185	1,2,4	2350	37.2	15.6
ATAC-1150	12	700	900	1.2	3.1	81600	4	131.7	70	67.9	73.5	240	1,2,4	2690	37.2	15.6
ATAC-1150S	12	700	900	1.2	3.1	81600	4	131.7	70	67.9	73.5	240	1,2,4	2710	37.2	15.6
2xATAC-600	18	800	900	1.5	3.5	144000	4	199.4	71	68.9	74.6	256	1,2,4	4200	63	36
2xATAC-750	18	800	900	1.5	3.5	144000	4	237.3	96	93.1	100.8	310	1,2,4	4800	63	36
2xATAC-900	18	800	900	1.5	3.5	144000	4	313.3	110	106.7	115.5	380	1,2,4	5100	63	36
2xATAC-900S	18	800	900	1.5	3.5	153000	4	313.3	110	106.7	115.5	380	1,2,4	5160	63	36
2xATAC-1150	18	800	900	1.5	3.5	153000	4	351.3	130	126.1	136.5	450	1,2,4	5450	63	36
2xATAC-1150S	18	800	900	1.5	3.5	153000	4	351.3	130	126.1	136.5	450	1,2,4	5490	63	36

Note:

System Total Operation Charge = Condensing Operating Charge + Air Cooled Condenser Operating
Total Weight= Condensing Weight + Condenser Weight
System Total Power Input = Condensing Power Input + Air Condenser Power Input
System Total Ampere = Condensing Total Ampere + Air Condenser Total Ampere

Electrical Schematic Curve at the Start-Up (Per Compressor)



Graph Fig. No.1

Locked Rotor Amps (LRA): Peak of transient electrical current at the instant of compressor motor start-up. (stage1)

Maximum Operating Current (MOC): Maximum electrical current tolerates by compressor motor. This current exists only when the system has been idle (warm evaporator, condenser & connecting piping) & lasts for a short period until the system reaches the steady state condition. Other wise the stage 2 of transient state on the graph can be ignored.

Full Load Amps (FLA): Maximum electrical drawn at the most undesirable system working condition under steady state operation.

Rated Load Amps (RLA): Nominal electrical current drawn at normal working condition under steady state operation.

Note: Because of the part winding start method for Condensing Units equipped with 50 hp and higher compressors and Condensing Units that utilize unloaders the transient stage is drastically reduced and its curve differs from the above.

Condensing Electrical Data (R22)

Model	Condensing Electrical Data (Refrigerant: R22)						
	Per Compressor					Total	
	HP	RLA	FLA	MOC	LRA	KW	FLA
1ATCU-5	5	8.8	9.8	10.3	55	5.6	9.8
1ATCU-7.5	7.5	15.5	17.3	18	106	9.6	17.3
1ATCU-10	10	18.1	20.3	21.3	121	11.4	20.3
1ATCU-15	15	24.3	27.4	28.8	129	15.4	27.4
1ATCU-20	20	27.3	30.3	31.6	175	17.5	30.3
1ATCU-25	25	33.7	37.7	42.4	199	22.3	37.7
1ATCU-30	30	40.3	45.1	48	221	26.8	45.1
1ATCU-35	35	53.3	60	63.6	304	34.6	60
1ATCU-40	40	61.3	68.9	75.3	304	41.9	68.9
1ATCU-50	50	72.6	80.9	91.6	444	46.9	80.9
1ATCU-60	60	89.9	96	106	476	58.2	96
2ATCU-10	5	8.8	9.8	10.3	55	11.2	19.6
2ATCU-15	7.5	15.5	17.3	18	106	19.2	34.6
2ATCU-20	10	18.1	20.3	21.3	121	22.8	40.6
2ATCU-30	15	24.3	27.4	28.8	129	46.6	54.8
2ATCU-40	20	27.3	30.3	31.6	175	35	60.6
2ATCU-50	25	33.7	37.7	42.4	199	44.6	75.4
2ATCU-60	30	40.3	45.1	48	221	53.6	90.2
2ATCU-70	35	53.3	60	63.6	304	69.2	120
2ATCU-80	40	61.3	68.9	75.3	384	82.2	137.8
2ATCU-100	50	72.6	80.9	91.6	444	93.8	161.8
2ATCU-120	60	89.9	96	106	476	116.4	192
4ATCU-80	20	27.3	30.3	31.6	175	70	121.2
4ATCU-100	25	33.7	37.7	42.4	199	89.2	150.8
4ATCU-120	30	40.3	45.1	48	221	107.2	180.4
4ATCU-140	35	53.3	60	63.6	304	138.4	240
4ATCU-160	40	61.3	68.9	75.3	384	164.4	275.6
4ATCU-200	50	72.6	80.9	91.6	444	187.6	323.6
4ATCU-240	60	89.9	96	106	476	232.8	384

System Cable Size	
System Total Ampere (up to)	Cable Size (mm)
20 A	4x2.5
30 A	4x4
40 A	4x6
50 A	4x10
70 A	4x16
90 A	3x25/16
110 A	3x35/16
140 A	3x50/25
170 A	3x70/35
210 A	3x95/50
240 A	3x120/70
280 A	3x150/70
320 A	3x185/95
370 A	3x240/120
420 A	2x(3x95/50)
490 A	2x(3x120/70)
560 A	2x(3x150/70)
640 A	2x(3x185/95)
700 A	2x(3x240/120)

Note:

LRA: Locked Rotor Amps
MOC: Maximum Operating Current
FLA: Full Load Amps
RLA: Rated Load Amps
Cable sizes are based on copper conductor at maximum ambient temperature of 40ºC and maximum distance of 70 meter.
System Total Power Input = Condensing Power Input + Air Condenser Power Input
System Total Ampere = Condensing Total Ampere + Air Condenser Total Ampere
For system wire sizing add the Condensing total ampere and air condenser total ampere.

Condensing Electrical Data (R134)

Model	Condensing **Electrical Data (Refrigerant: R134a)**						
	Per Compressor					Total	
	HP	RLA	FLA	MOC	LRA	KW	FLA
1ATCU-5	5	10.5	11.6	15.9	55	6.5	11.6
1ATCU-7.5	7.5	12.4	13.6	18.3	70	7.9	13.6
1ATCU-10	10	18	19.9	20.5	104	11.7	19.9
1ATCU-15	15	23.5	26.2	27	156	14.9	26.2
1ATCU-20	20	35.8	40.9	41.9	175	26.4	40.9
1ATCU-30	30	43.2	49.9	51	221	29.6	49.9
1ATCU-40	40	56.1	61.9	63	357	32.6	61.9
1ATCU-50	50	68.2	75.5	77	458	39.7	75.5
1ATCU-60	60	80.4	88.1	88.2	476	45.3	88
2ATCU-10	5	10.5	11.6	15.9	55	13	23.2
2ATCU-15	7.5	12.4	13.6	18.3	70	15.8	27.2
2ATCU-20	10	18	19.9	20.5	104	23.4	39.8
2ATCU-30	15	23.5	26.2	27	156	29.8	52.4
2ATCU-40	20	35.8	40.9	41.9	175	49.2	81.8
2ATCU-60	30	43.2	49.9	51	221	59.2	99.8
2ATCU-80	40	56.1	61.9	63	357	65.2	123.8
2ATCU-100	50	68.2	75.5	77	458	79.4	151
2ATCU-120	60	80.4	88.1	88.2	476	90.6	176
4ATCU-80	20	35.8	40.9	41.9	175	98.4	163.6
4ATCU-120	30	43.2	49.9	51	221	118.4	199.6
4ATCU-160	40	56.1	61.9	63	357	130.4	274.6
4ATCU-200	50	68.2	75.5	77	458	158.8	302
4ATCU-240	60	80.4	88.1	88.2	476	181.2	352.4

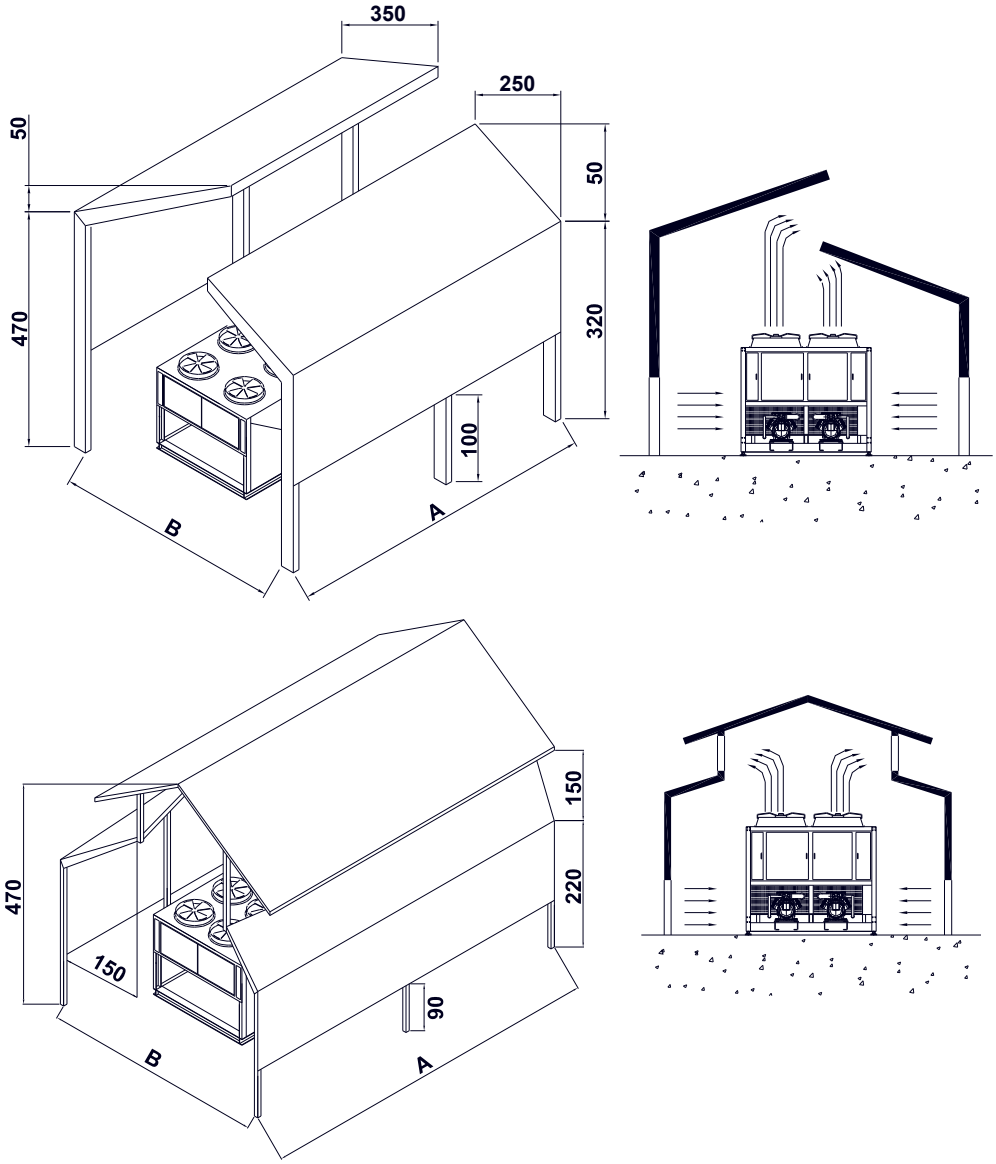
System Cable Size	
System Total Ampere (up to)	Cable Size (mm)
20 A	4x2.5
30 A	4x4
40 A	4x6
50 A	4x10
70 A	4x16
90 A	3x25/16
110 A	3x35/16
140 A	3x50/25
170 A	3x70/35
210 A	3x95/50
240 A	3x120/70
280 A	3x150/70
320 A	3x185/95
370 A	3x240/120
420 A	2x(3x95/50)
490 A	2x(3x120/70)
560 A	2x(3x150/70)
640 A	2x(3x185/95)
700 A	2x(3x240/120)

Note:

LRA: Locked Rotor Amps
MOC: Maximum Operating Current
FLA: Full Load Amps
RLA: Rated Load Amps
Cable sizes are based on copper conductor at maximum ambient temperature of 40ºC and maximum distance of 70 meter.
System Total Power Input = Condensing Power Input + Air Condenser Power Input
System Total Ampere = Condensing Total Ampere + Air Condenser Total Ampere
For system wire sizing add the Condensing total ampere and air condenser total ampere.

Schematic Drawing of Suggested Shelter

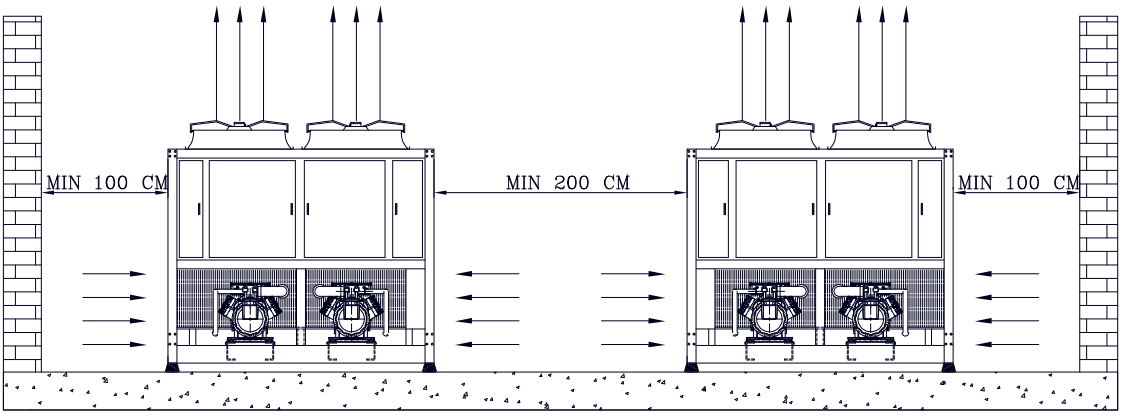
The following points must be observed:
1- The unit is to be installed where adequate amount of fresh air is available for circulation over the unit and the least amount of direct exposure and air obstructions are present where necessary a shelter shall be constructed.
2- Sufficient free space must be considered for air intake and air discharge of each installed unit.
3- Adequate space for servicing must also be available (see Recommended Service Area).

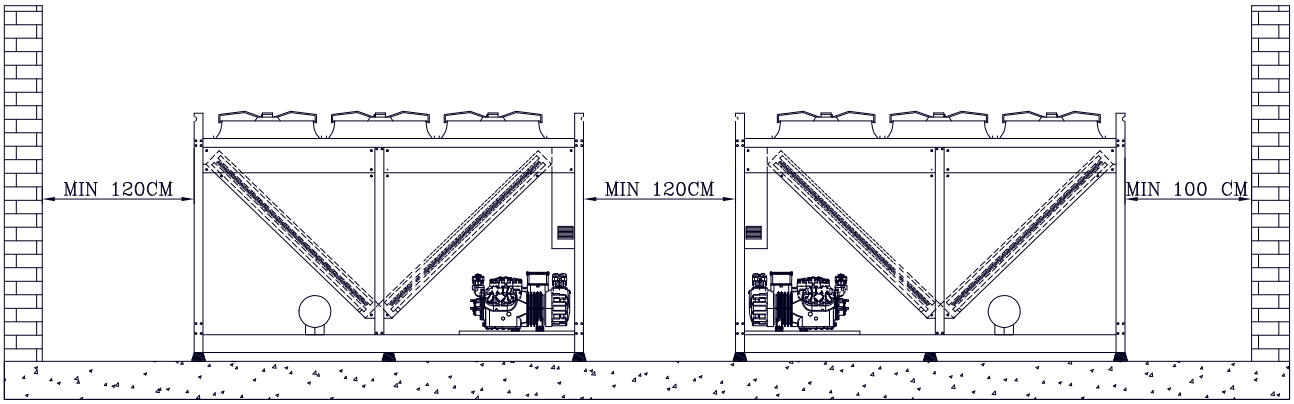


Model	ATAC-075	ATAC-110	ATAC-150	ATAC-225	ATAC-300	ATAC-375	ATAC-450	ATAC-600	ATAC-750	ATAC-900	ATAC-1150
A	215	341	341	413	413	501	501	611	701	701	701
B	320	410	410	410	410	410	410	410	450	450	450

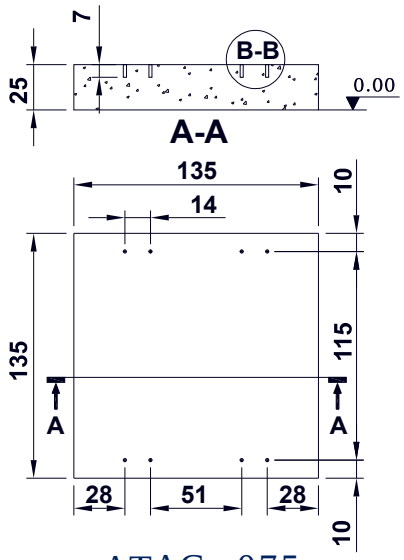
Note:
All Dimensions are in cm

Installation Recommendations

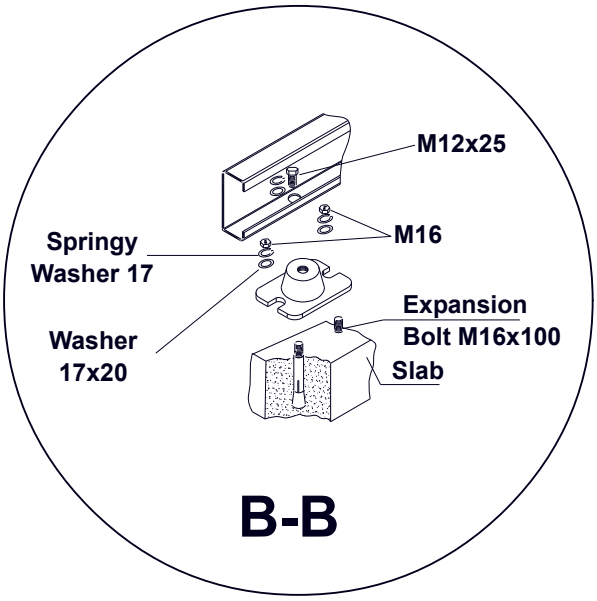


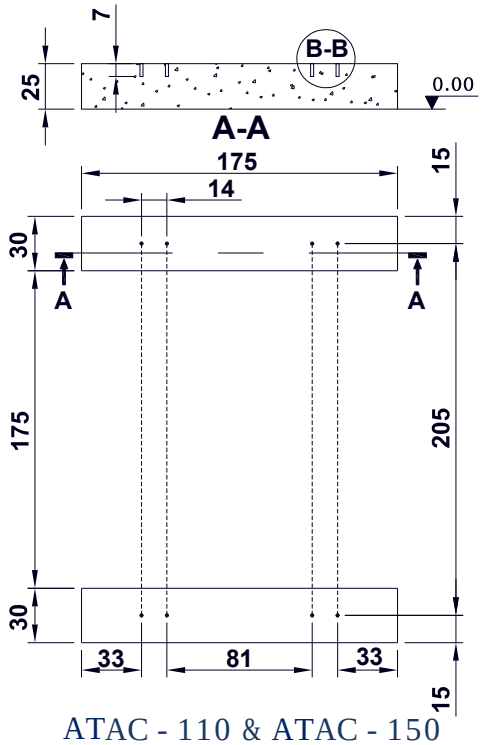


Armored Cement Foundation

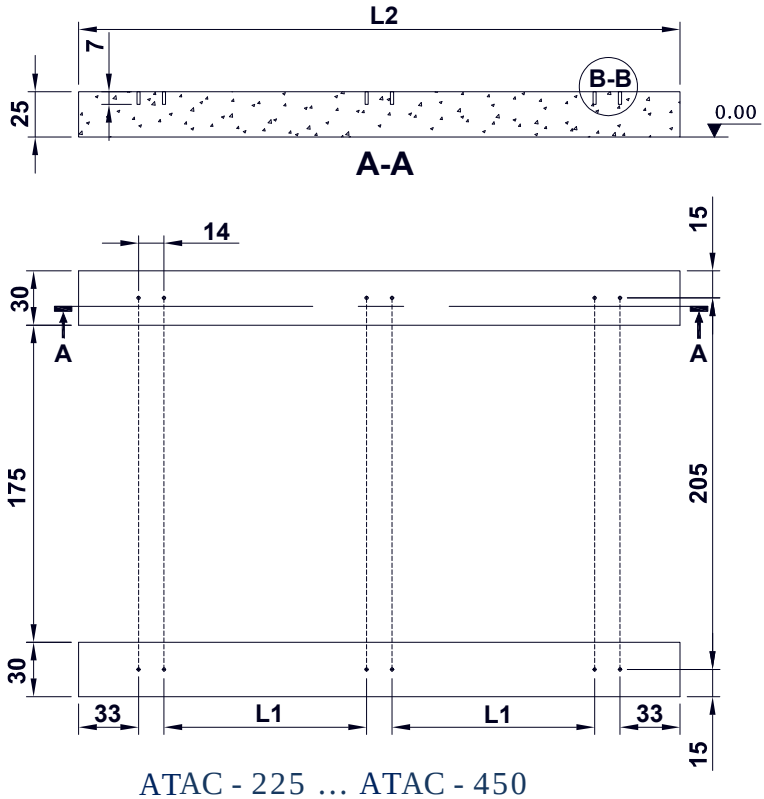


ATAC - 075





ATAC - 110 & ATAC - 150

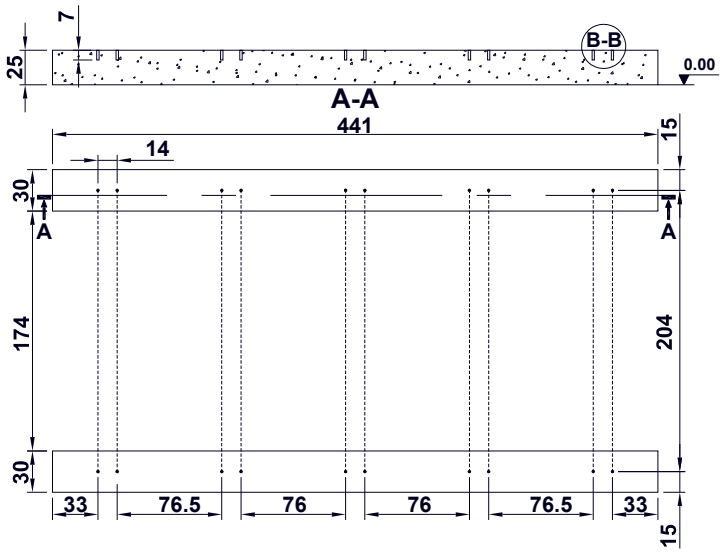


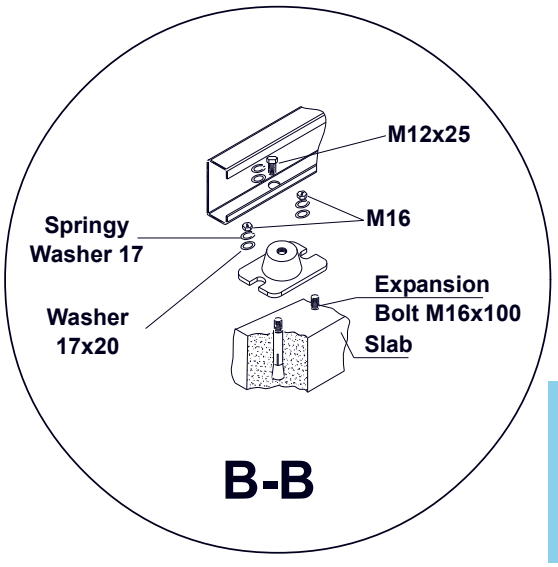
ATAC - 225 ... ATAC - 450

Model	L1	L2
ATAC-225&300	67.5	243
ATAC-375&450	112	332

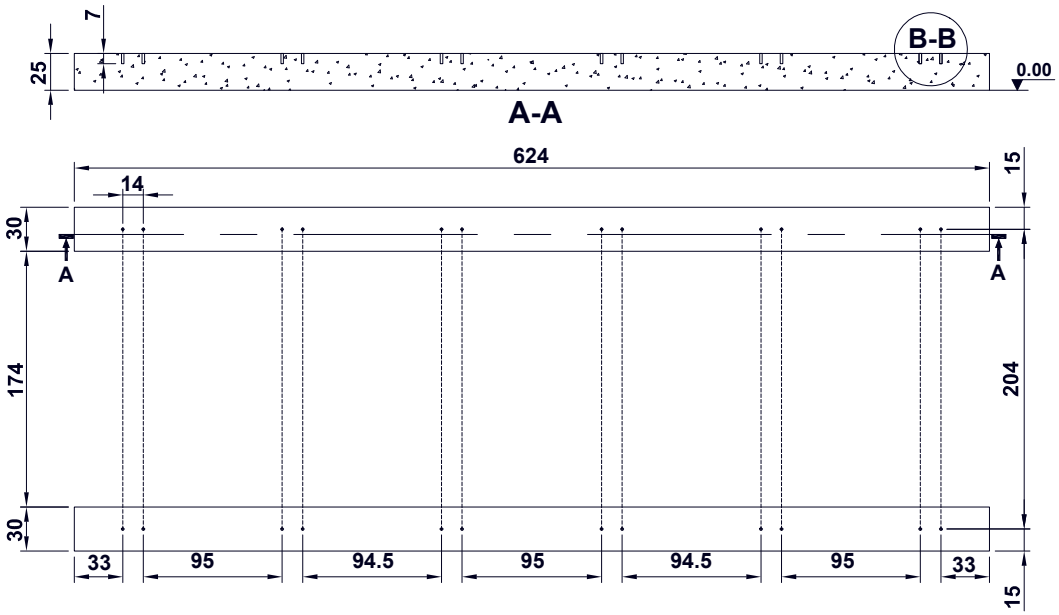
Note:
All dimensions are in cm.

Armored Cement Foundation (Cont.)





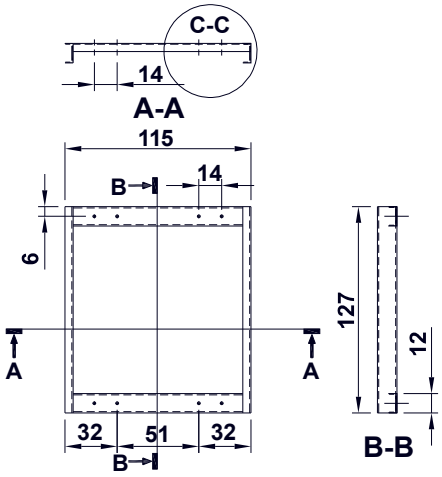
ATAC - 600

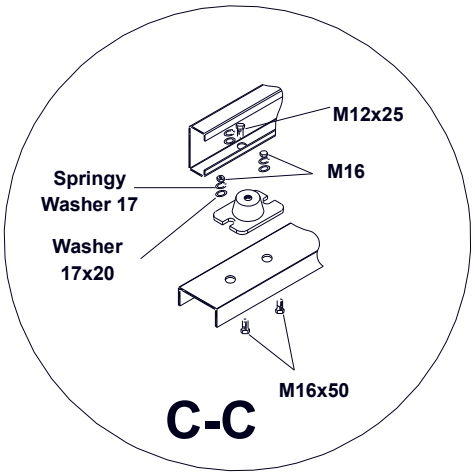


ATAC - 750 ... ATAC - 1150

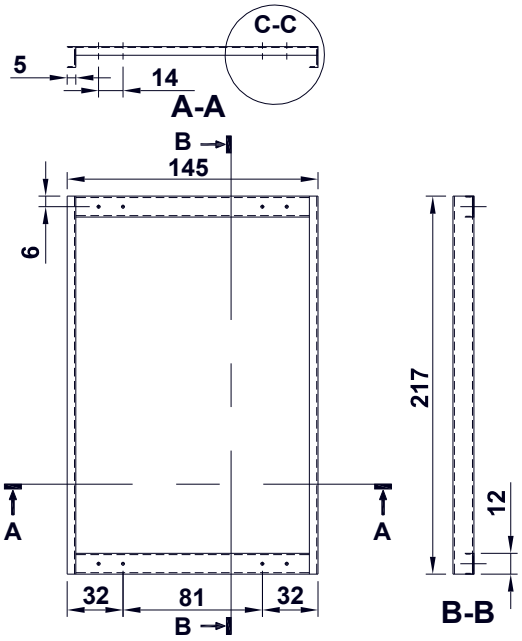
NOTE:
All dimensions are in cm.

Steel Foundation

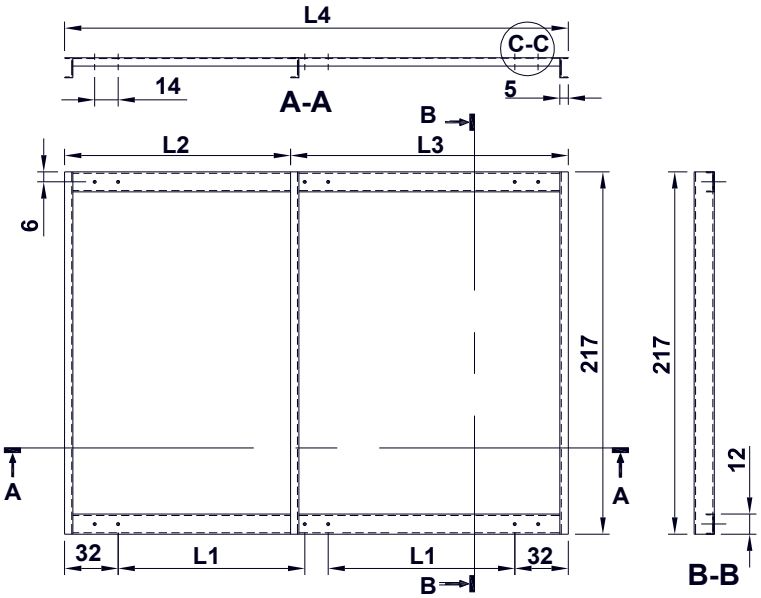




ATAC - 075



ATAC - 110 & ATAC - 150



ATAC - 225 ... ATAC - 450

Model	L1	L2	L3	L4
ATAC-225&300	67.5	96	117	213
ATAC-375&450	112	136	166	302

Note:

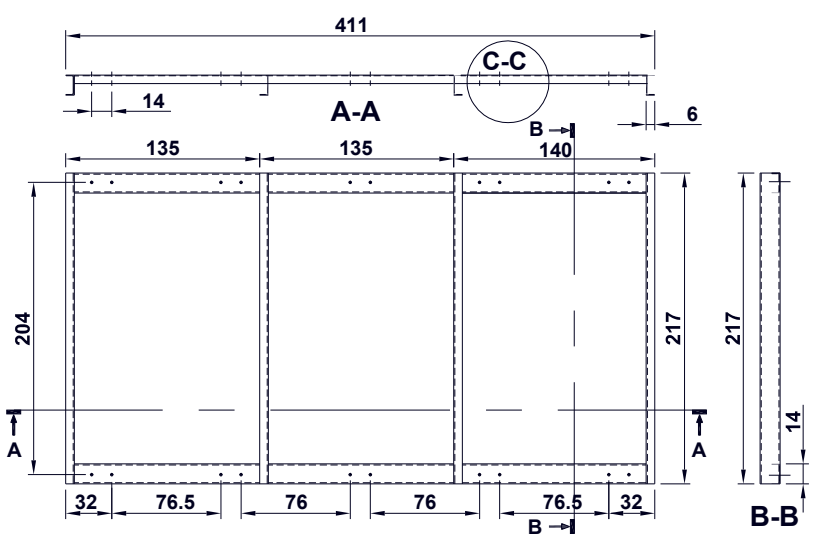
-All dimensions are in cm.

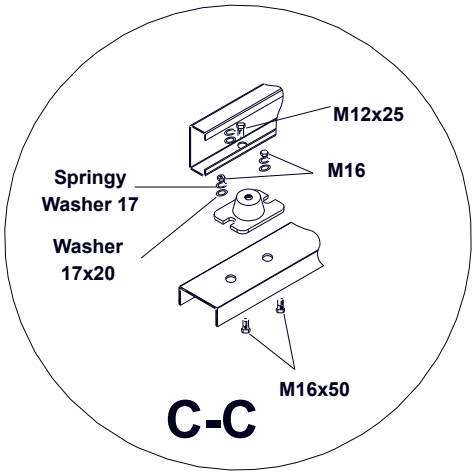
-Each unit must be installed completely level by itself and with respect to other connecting unit when installed on the ground suitable concrete pad is mandatory to account for possible unit settling there by damaging related piping.

-For roof installation sufficient structural strength of building is required rubber vibration dampers are recommended beneath the feet to prevent possible vibration transmission to the building structure.

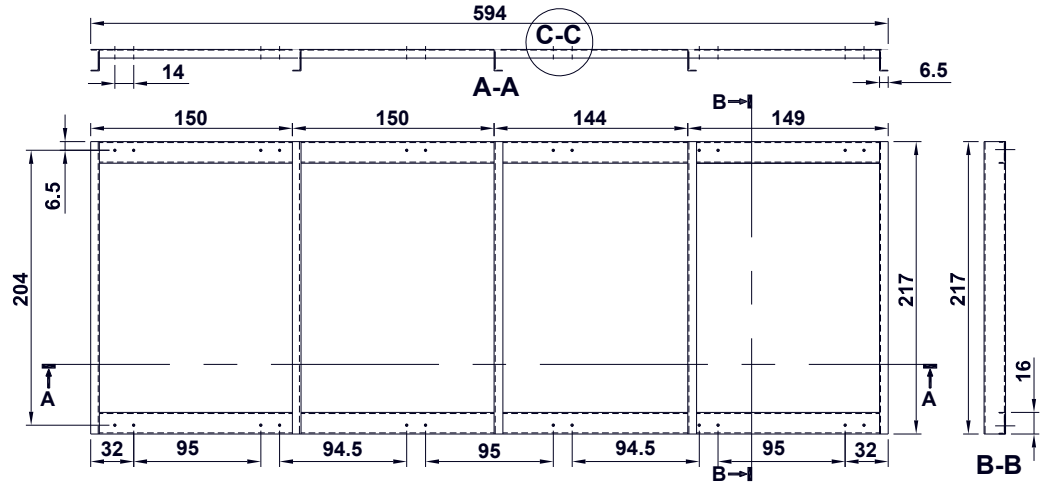
-Considering the installation location conditions foundation or metal frame support is available upon request

Steel Foundation (cont.)





ATAC - 600



ATAC - 750 ... ATAC - 1150

Note:

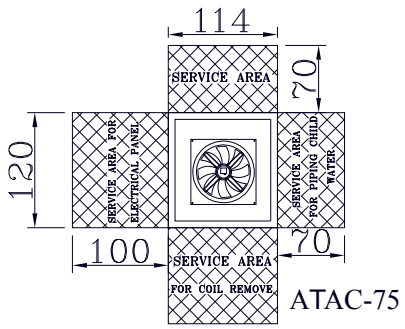
-All dimensions are in cm.

-Each unit must be installed completely level by itself and with respect to other connecting unit when installed on the ground suitable concrete pad is mandatory to account for possible unit settling there by damaging related piping.

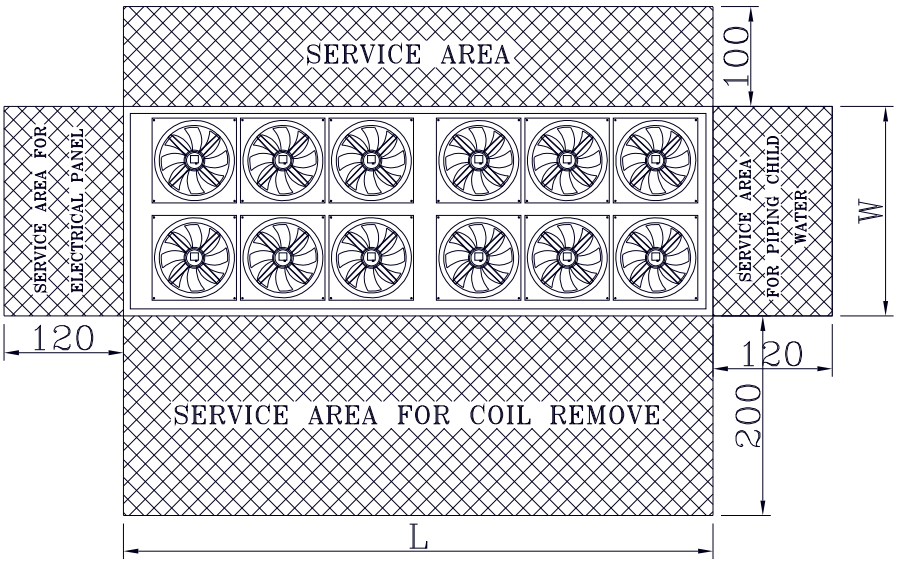
-For roof installation sufficient structural strength of building is required rubber vibration dampers are recommended beneath the feet to prevent possible vibration transmission to the building structure.

-Considering the installation location conditions foundation or metal frame support is available upon request.

Service Area Recommendations



ATAC-75



ATAC-110,...,1150

Model	ATAC-110	ATAC-150	ATAC-225	ATAC-300	ATAC-375	ATAC-450	ATAC-600	ATAC-750	ATAC-900	ATAC-1150
L	144	144	212	212	301	301	410	593	593	593
W	210	210	210	210	210	210	210	210	210	210

Notes:

All dimensions are in cm.

Do not place units near hot air or steam exhaust.

Place units so that condenser air is not re-circulated.