

Condensers

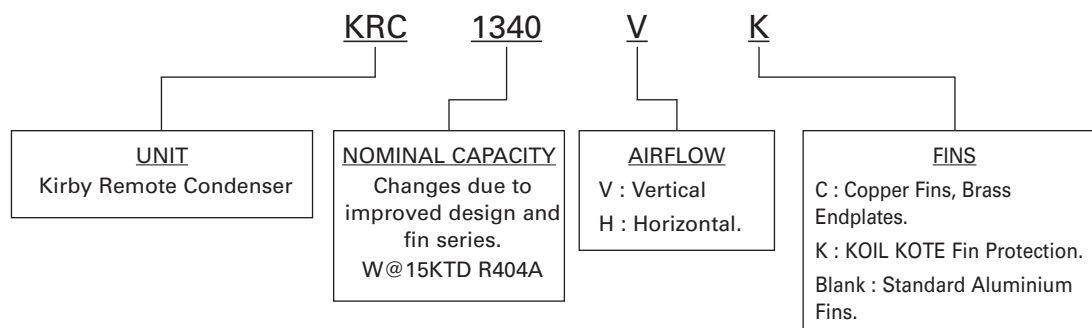
KRC REMOTE AIR COOLED CONDENSERS

Design Features

- Range from 10kW to 215kW (R404A @ 15KTD)
- Heavy duty (1.6mm) galvanized steel casing.
- Rifle bore tube for improved heat transfer.
- Header protection covers when circuiting is standard.
- Deep spun venturi for maximum fan performance.
- Positive air seal between all fans.
- Models KRC1072 onwards are pre-wired to junction box (high speed)
- End and coil divider plates have header clearance holes to allow for thermal expansion.
- 2 speed, 3 phase external rotor fans with internal thermal protection (from KRC106 onwards)
- Reduced sound levels due to 6 pole motors.

Optional Features

- Multiple circuits
- Sub-cooling circuits
- Twin circuit models joined to one connection
- KOIL KOTE fin protection
- Copper fins, brass end plates
- Painted external finish
- Single phase fan motors



Condensers – cont'd

KRC REMOTE AIR COOLED CONDENSERS

PERFORMANCE DATA – HIGH SPEED

PRODUCT NUMBER	BASIC CAPACITY W/K *	R404A/R507				SOUND POWER dB(A) **	BASIC CAPACITY W/K *	R22				SOUND POWER dB(A) **
		TOTAL HEAT OF REJECTION (WATTS) KTD						TOTAL HEAT OF REJECTION (WATTS) KTD				
		5	10	15	20			5	10	15	20	
SINGLE CIRCUIT - 350mm DIA FAN - 1380 RPM ONLY												
KRC62	679	3400	6790	10190	13580	77.0	647	3230	6470	9700	12940	77.0
KRC72	791	3960	7910	11870	15830		754	3770	7540	11310	15070	
KRC85	924	4620	9240	13870	18490		880	4400	8800	13210	17610	
KRC108	1176	5880	11760	17640	23520		1120	5600	11200	16800	22400	
KRC122	1338	6690	13380	20070	26760		1274	6370	12740	19120	25490	
SINGLE CIRCUIT - 500mm DIA FAN - 960 RPM												
KRC106	1250	6250	12500	18760	25010	75.8	1191	5950	11910	17860	23820	75.8
KRC115	1356	6780	13560	20330	27110		1291	6450	12910	19360	25820	
KRC133	1563	7820	15630	23450	31270	78.8	1489	7440	14890	22330	29780	78.8
KRC145	1704	8520	17040	25550	34070		1622	8110	16220	24340	32450	
KRC170	2000	10000	20000	30000	40000		1905	9520	19050	28570	38090	
KRC187	2201	11010	22010	33020	44030		2096	10480	20960	31450	41930	
KRC213	2505	12520	25050	37570	50090		2385	11930	23850	35780	47710	
SINGLE CIRCUIT - 630mm DIA FAN - 920 RPM												
KRC247	2750	13750	27500	41250	55000	84.1	2619	13090	26190	39280	52380	84.1
KRC290	3221	16100	32210	48310	64420		3067	15340	30670	46010	61350	
KRC318	3540	17700	35400	53100	70790		3371	16860	33710	50570	67420	
KRC357	3973	19870	39730	59600	79470		3784	18920	37840	56760	75680	
KRC411V KRC411H	4580	22900	45800	68700	91600	85.9	4362	21810	43620	65430	87240	85.9
KRC456V KRC456H	5072	25360	50720	76080	101440		4830	24150	48300	72460	96610	
KRC512V KRC512H	5696	28480	56950	85430	113910		5424	27120	54240	81360	108490	
KRC536V KRC536H	5965	29820	59650	89470	119300	87.1	5681	28400	56810	85210	113620	87.1
KRC608V KRC608H	6771	33850	67710	101560	135420		6448	32240	64480	96730	128970	
KRC670V KRC670H	7457	37280	74570	111850	149130		7102	35510	71020	106520	142030	
KRC704V KRC704H	7831	39160	78310	117470	156620		7458	37290	74580	111870	149170	
TWIN CIRCUIT - 630mm DIA FAN - 920 RPM												
KRC580V KRC580H	6442	32200	64420	96620	128840	87.1	6135	30680	61340	92020	122700	87.1
KRC636V KRC636H	7080	35400	70800	106200	141580		6742	33720	67420	101140	134840	
KRC714V KRC714H	7947	39740	79460	119200	158940		7568	37840	75680	113520	151360	
KRC823V KRC823H	9160	45800	91600	137400	183200	88.9	8724	43620	87240	130860	174480	88.9
KRC912V KRC912H	10144	50720	101440	152160	202880		9661	48300	96600	144920	193220	
KRC1024V KRC1024H	11391	56960	113900	170860	227820		10849	54240	108480	162720	216980	
KRC1072V KRC1072H	11930	59640	119300	178940	238600	90.2	11362	56800	113620	170420	227240	90.2
KRC1216V KRC1216H	13542	67700	135420	203120	270840		12897	64480	128960	193460	257940	
KRC1340V KRC1340H	14913	74560	149140	223700	298260		14203	71020	142040	213040	284060	
KRC1408V KRC1408H	15662	78320	156620	234940	313240		14917	74580	149160	223740	298340	

KRC62 to KRC357 are dual (horizontal & vertical) airflow as standard.

* Basic Capacity - given in Watts per degree TD based on 15KTD for ease of selection. Minimum actual TD is 3°.

** To find Sound Pressure level dB(A) @ 3m, subtract 18 dB(A) from the Sound Power figures.

Condensers – cont'd

KRC REMOTE AIR COOLED CONDENSERS

PERFORMANCE DATA – LOW SPEED

PRODUCT NUMBER	BASIC CAPACITY W/K *	R404A/R507				SOUND POWER dB(A) **	BASIC CAPACITY W/K *	R22				SOUND POWER dB(A) **
		TOTAL HEAT OF REJECTION (WATTS) KTD						TOTAL HEAT OF REJECTION (WATTS) KTD				
		5	10	15	20			5	10	15	20	
SINGLE CIRCUIT - 500mm DIA FAN - 780 RPM												
KRC106	1067	5340	10670	16010	21340	72.7	1016	5080	10160	15240	20320	72.7
KRC115	1185	5920	11850	17770	23690		1128	5640	11280	16920	22570	
KRC133	1502	7510	15020	22530	30050	75.7	1431	7150	14310	21460	28620	75.7
KRC145	1586	7930	15860	23780	31710		1510	7550	15100	22650	30200	
KRC170	1830	9150	18300	27450	36600		1743	8710	17430	26140	34860	
KRC187	2099	10500	20990	31490	41990		1999	10000	19990	29990	39990	
KRC213	2189	10940	21890	32830	43780		2085	10420	20850	31270	41690	
SINGLE CIRCUIT - 630mm DIA FAN - 730 RPM												
KRC247	2329	11650	23290	34940	46590	77.9	2218	11090	22180	33280	44370	77.9
KRC290	2662	13310	26620	39930	53240		2535	12680	25350	38030	50710	
KRC318	2859	14290	28590	42880	57170		2723	13610	27230	40840	54450	
KRC357	3056	15280	30560	45850	61130		2911	14550	29110	43660	58220	
KRC411V	3872	19360	38720	58080	77440	79.7	3688	18440	36880	55320	73760	79.7
KRC411H												
KRC456V	4206	21030	42060	63090	84110		4005	20030	40050	60080	80110	
KRC456H												
KRC512V	4533	22670	45330	68000	90660		4317	21590	43170	64760	86350	
KRC512H												
KRC536V	5053	25260	50530	75790	101050	4812	24060	48120	72180	96240	80.9	
KRC536H												
KRC608V	5597	27980	55960	83950	111930	5330	26650	53300	79950	106600		
KRC608H												
KRC670V	6022	30110	60220	90330	120440	5735	28680	57350	86030	114710		
KRC670H												
KRC704V	6024	30120	60240	90360	120480	5737	28690	57370	86060	114750		
KRC704H												
TWIN CIRCUIT - 630mm DIA FAN - 730 RPM												
KRC580V	5324	26620	53240	79860	106480	80.9	5071	25360	50700	76060	101420	80.9
KRC580H												
KRC636V	5717	28580	57180	85760	114340		5445	27220	54460	81680	108900	
KRC636H												
KRC714V	6113	30560	61120	91700	122260		5822	29100	58220	87320	116440	
KRC714H												
KRC823V	7744	38720	77440	116160	154880	7376	36880	73760	110640	147520	82.7	
KRC823H												
KRC912V	8411	42060	84120	126180	168220	8011	40060	80100	120160	160220		
KRC912H												
KRC1024V	9067	45340	90660	136000	181320	8635	43180	86340	129520	172700		
KRC1024H												
KRC1072V	10105	50520	101060	151580	202100	9624	48120	96240	144360	192480	83.9	
KRC1072H												
KRC1216V	11193	55960	111920	167900	223860	10660	53300	106600	159900	213200		
KRC1216H												
KRC1340V	12044	60220	120440	180660	240880	11471	57360	114700	172060	229420		
KRC1340H												
KRC1408V	12048	60240	120480	180720	240960	11475	57380	114740	172120	229500		
KRC1408H												

KRC62 to KRC357 are dual (horizontal & vertical) airflow as standard.

* Basic Capacity - given in Watts per degree TD based on 15KTD for ease of selection. Minimum actual TD is 3°.

** To find Sound Pressure level dB(A) @ 3m, subtract 18 dB(A) from the Sound Power figures.

Condensers – cont'd

KRC REMOTE AIR COOLED CONDENSERS

SPECIFICATIONS

PRODUCT NUMBER	FAN DATA				MOTOR DATA				COIL DATA		APPROX. WEIGHT (kg)	
	DIA (mm)	QTY	AIR FLOW		VOLTS	AMPS/PHASE		FINS/ INCH	CONNECT'S(mm)		UNPACKED	PACKED
			HI-SPD	LO-SPD		HIGH	LOW		GAS	LIQUID		
SINGLE CIRCUIT												
KRC62	350	2	1300	N/A	240/1	1.2	N/A	8	15.9	12.7	29	34
KRC72	350	2	1220	N/A	240/1	1.2	N/A	8	15.9	12.7	31	36
KRC85	350	2	1340	N/A	240/1	1.2	N/A	8	15.9	12.7	34	39
KRC108	350	2	1370	N/A	240/1	1.2	N/A	10	19.0	15.9	43	48
KRC122	350	2	1230	N/A	240/1	1.2	N/A	10	19.0	15.9	46	51
KRC106	500	1	1135	990	415/3	0.72	0.45	10	19.0	15.9	48	53
KRC115	500	1	1090	925	415/3	0.72	0.45	10	19.0	15.9	51	56
KRC133	500	2	2430	2100	415/3	1.44	0.9	8	22.2	19.0	68	85
KRC145	500	2	2520	2200	415/3	1.44	0.9	8	22.2	19.0	70	87
KRC170	500	2	2415	2090	415/3	1.44	0.9	8	25.4	22.2	77	94
KRC187	500	2	2310	1980	415/3	1.44	0.9	8	25.4	22.2	83	101
KRC213	500	2	2140	1800	415/3	1.44	0.9	10	25.4	22.2	93	110
KRC247	630	2	4445	3330	415/3	2.2	1.3	8	28.6	25.4	109	133
KRC290	630	2	4205	3120	415/3	2.2	1.3	8	28.6	25.4	119	143
KRC318	630	2	4000	2790	415/3	2.2	1.3	8	31.8	28.6	129	153
KRC357	630	2	3680	2640	415/3	2.2	1.3	8	31.8	28.6	144	168
KRC411V	630	3	6130	4690	415/3	3.3	1.9	8	34.9	31.8	186	276
KRC411H											169	258
KRC456V	630	3	5815	4410	415/3	3.3	1.9	8	34.9	31.8	200	290
KRC456H											182	273
KRC512V	630	3	5325	3970	415/3	3.3	1.9	8	34.9	31.8	213	303
KRC512H											196	286
KRC536V	630	4	8480	7090	415/3	4.4	2.56	8	38.1	34.9	277	397
KRC536H											208	328
KRC608V	630	4	7970	6660	415/3	4.4	2.56	8	38.1	34.9	304	424
KRC608H											235	355
KRC670V	630	4	7510	6250	415/3	4.4	2.56	8	41.3	38.1	332	452
KRC670H											263	383
KRC704V	630	4	7150	5880	415/3	4.4	2.56	8	41.3	38.1	359	479
KRC704H											290	410
TWIN CIRCUIT												
KRC580V	630	4	8410	6240	415/3	4.4	2.56	8	2 x 28.6	2 x 25.4	266	386
KRC580H											251	371
KRC636V	630	4	8000	5580	415/3	4.4	2.56	8	2 x 31.8	2 x 28.6	286	406
KRC636H											271	391
KRC714V	630	4	7360	5280	415/3	4.4	2.56	8	2 x 31.8	2 x 28.6	316	436
KRC714H											301	421
KRC823V	630	6	12260	9380	415/3	6.6	3.84	8	2 x 34.9	2 x 31.8	352	532
KRC823H											337	517
KRC912V	630	6	11630	8820	415/3	6.6	3.84	8	2 x 34.9	2 x 31.8	380	560
KRC912H											365	545
KRC1024V	630	6	10650	7940	415/3	6.6	3.84	8	2 x 34.9	2 x 31.8	406	586
KRC1024H											391	571
KRC1072V	630	8	16960	14180	415/3	8.8	5.12	8	2 x 38.1	2 x 34.9	516	756
KRC1072H											501	741
KRC1216V	630	8	15940	13320	415/3	8.8	5.12	8	2 x 38.1	2 x 34.9	571	811
KRC1216H											556	796
KRC1340V	630	8	15020	12500	415/3	8.8	5.12	8	2 x 41.3	2 x 38.1	627	867
KRC1340H											612	852
KRC1408V	630	8	14300	11760	415/3	8.8	5.12	8	2 x 41.3	2 x 38.1	681	921
KRC1408H											666	906

415V Motors are 'Star-Delta' switchable and use internal thermal protection which must be wired to the motor contactor coil.

Condensers – cont'd

KRC REMOTE AIR COOLED CONDENSERS

DIMENSIONS

PRODUCT NUMBER	L	H	D (1)	B	E	F	G	W	SHIPPING VOL. m ³
SINGLE CIRCUIT									
KRC62	945	418	300	926	680	926	-	470	0.247
KRC72	945	418	300	926	680	926	-	470	0.247
KRC85	945	520	300	926	680	926	-	572	0.299
KRC108	945	622	320	926	702	926	-	674	0.351
KRC122	945	622	320	926	702	926	-	674	0.351
KRC106	945	622	353	926	733	926	-	674	0.373
KRC115	945	622	353	926	733	926	-	674	0.373
KRC133	1245	770	415	1209	918	1209	-	850	0.692
KRC145	1245	872	415	1209	918	1209	-	952	0.692
KRC170	1245	872	415	1209	918	1209	-	952	0.692
KRC187	1245	872	415	1209	918	1209	-	952	0.692
KRC213	1245	872	415	1209	918	1209	-	952	0.692
KRC247	1642	925	432	1552	926	1552	-	1008	1.014
KRC290	1642	925	432	1552	926	1552	-	1008	1.014
KRC318	1642	925	432	1552	926	1552	-	1008	1.014
KRC357	1642	925	432	1552	926	1552	-	1008	1.014
KRC411V	2370	925	432	2193	1040	2087	-	925	2.550
KRC411H				2322		2295			2.550
KRC456V	2370	925	432	2193	1040	2087	-	925	2.550
KRC456H				2322		2295			2.550
KRC512V	2370	925	432	2193	1040	2087	-	925	2.550
KRC512H				2322		2295			2.550
KRC536V	3142	1028	510	2946	1129	2840	1478	1026	4.340
KRC536H				3100		3072	1476		4.340
KRC608V	3142	1028	510	2946	1129	2840	1478	1026	4.340
KRC608H				3100		3072	1476		4.340
KRC670V	3142	1028	510	2946	1129	2840	1478	1026	4.340
KRC670H				3100		3072	1476		4.340
KRC704V	3142	1028	510	2946	1129	2840	1478	1026	4.340
KRC704H				3100		3072	1476		4.340
TWIN CIRCUIT									
KRC580V	1642	1855	432	1460	1040	1354	-	1853	3.530
KRC580H				1590		1562			3.530
KRC636V	1642	1855	432	1460	1040	1354	-	1853	3.530
KRC636H				1590		1562			3.530
KRC714V	1642	1855	432	1460	1040	1354	-	1853	3.530
KRC714H				1590		1562			3.530
KRC823V	2370	1855	432	2193	1040	2087	-	1853	4.940
KRC823H				2322		2295			4.940
KRC912V	2370	1855	432	2193	1040	2087	-	1853	4.940
KRC912H				2322		2295			4.940
KRC1024V	2370	1855	432	2193	1040	2087	-	1853	4.940
KRC1024H				2322		2295			4.940
KRC1072V	3142	2059	582	2946	1129	2840	1478	2056	8.020
KRC1072H				3100		3072	1476		8.020
KRC1216V	3142	2059	582	2946	1129	2840	1478	2056	8.020
KRC1216H				3100		3072	1476		8.020
KRC1340V	3142	2059	582	2946	1129	2840	1478	2056	8.020
KRC1340H				3100		3072	1476		8.020
KRC1408V	3142	2059	582	2946	1129	2840	1478	2056	8.02
KRC1408H				3100		3072	1476		8.02

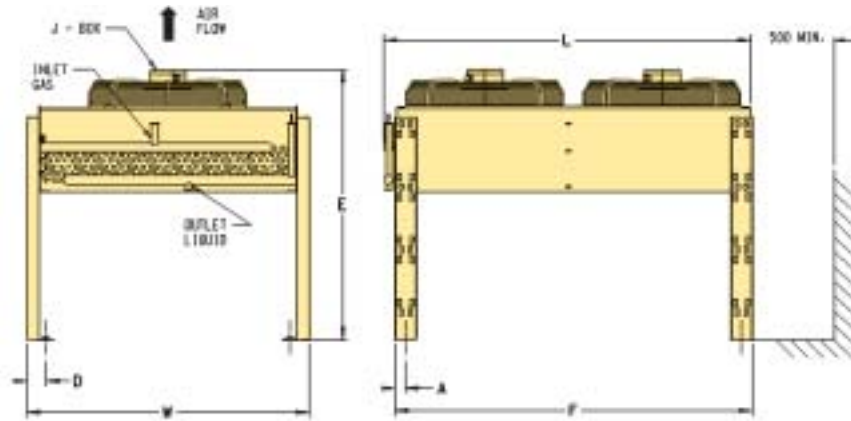
SECTION 4

Condensers – cont'd

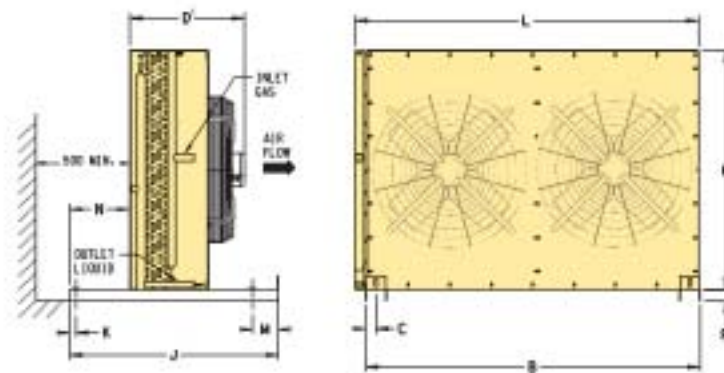
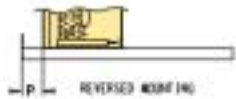
DIMENSIONAL DATA

KRC62 TO KRC357

VERTICAL AIR FLOW



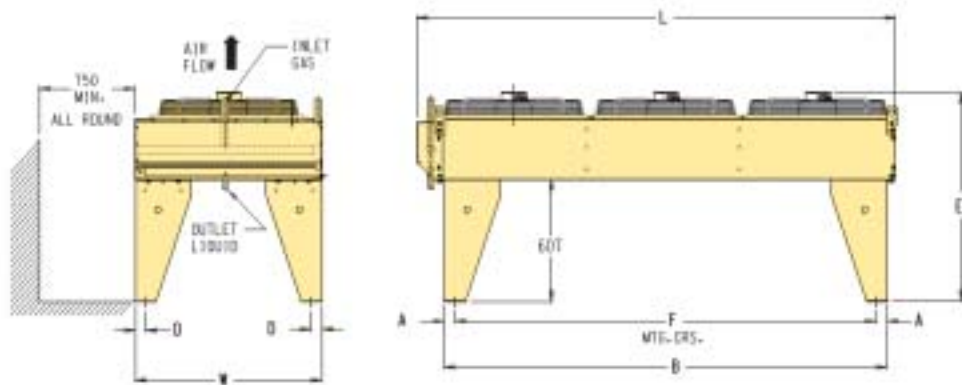
HORIZONTAL AIR FLOW



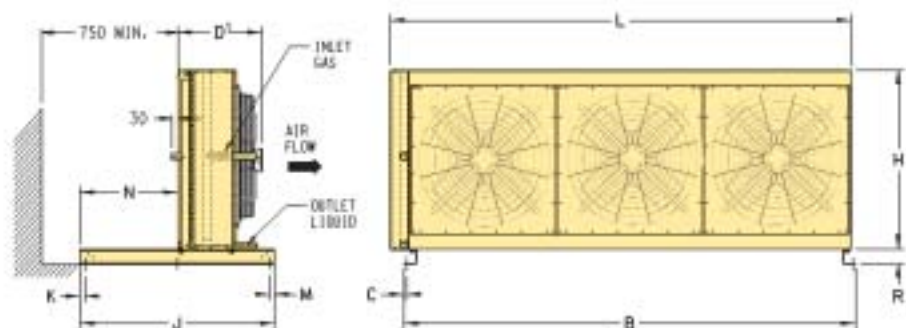
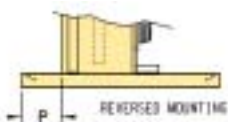
Note: Both BAC163 and BAC176 are single 500mm DIA models.

KRC411 TO KRC512

VERTICAL AIR FLOW



HORIZONTAL AIR FLOW



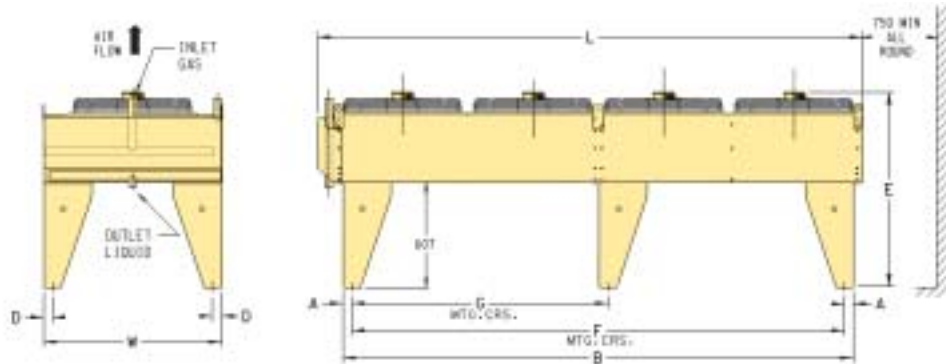
Note: For vertical air flow add suffix 'V', for horizontal air flow add suffix 'H'.

Condensers – cont'd

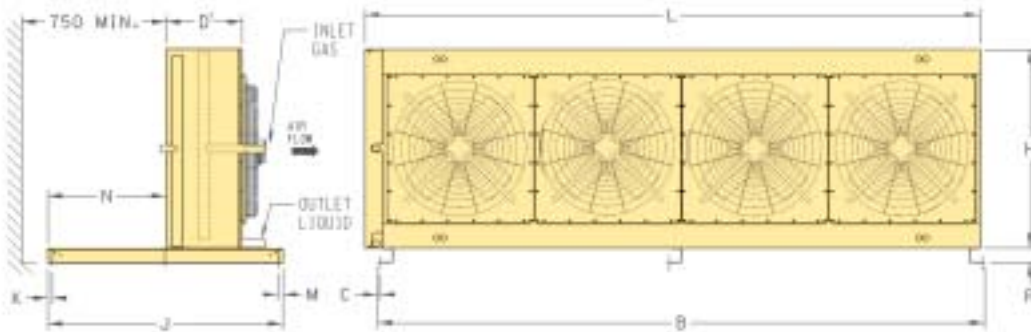
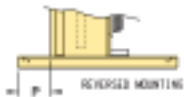
DIMENSIONAL DATA

KRC536 TO KRC704

VERTICAL AIR FLOW



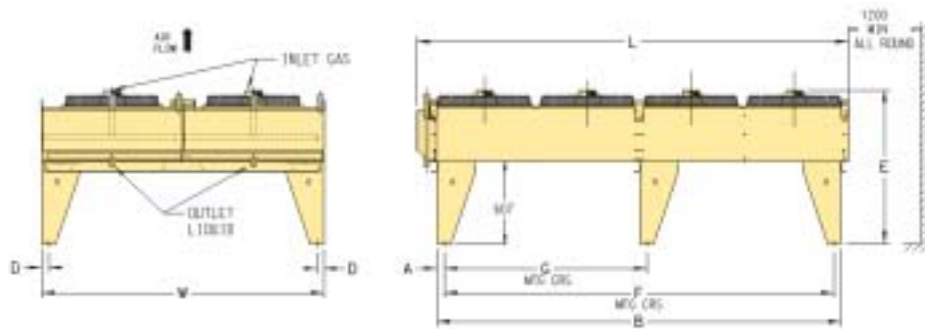
HORIZONTAL AIR FLOW



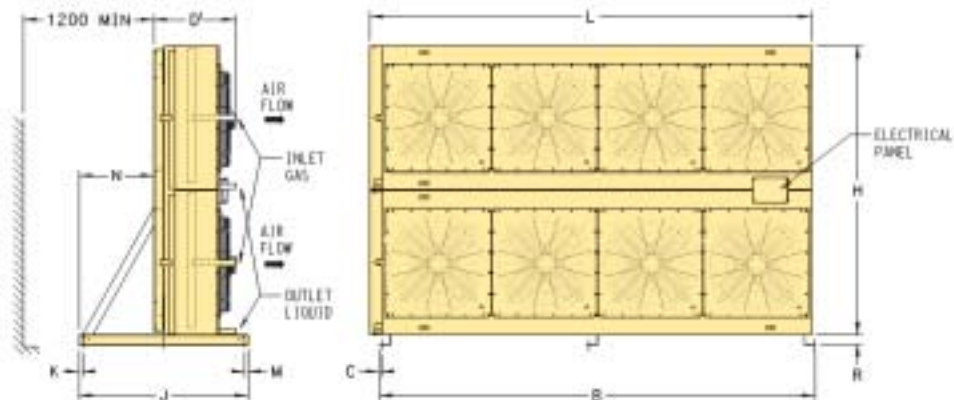
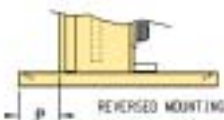
Note: For vertical air flow add suffix 'V', for horizontal air flow add suffix 'H'.

KRC580 TO KRC1408

VERTICAL AIR FLOW



HORIZONTAL AIR FLOW



Note: For vertical air flow add suffix 'V', for horizontal air flow add suffix 'H'.

Condensers – cont'd

WRC AIR COOLED CONDENSERS

Design Features

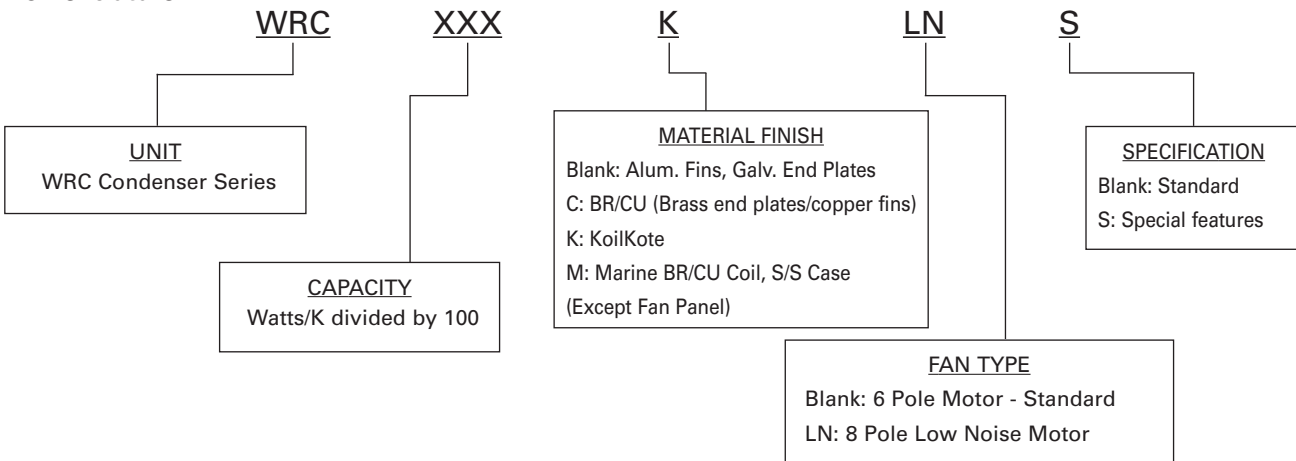
- Floating coil technology with 'split length fins' improving life of the condenser
- Vertical or horizontal air discharge
- Range from 9.8kW to 61.3kW (R404A @ 1KTD)
- Attractive painted steel casing
- Rifle bore tube for improved heat transfer
- 2 speed, 3 phase external rotor fans with internal thermal protection
- Fan speed selection for low noise and power consumption consideration:
 - 6 Pole - Standard (880/660 R.P.M.)
 - 8 Pole - Low noise and reduced power consumption (680/530 R.P.M.)
- Dual refrigerant circuits
- Header protection covers when circuiting is standard
- Positive air seal between all fans
- Fans are pre-wired to (IP55) junction box



Optional Features

- Multiple circuits
- Sub-cooling circuits
- Twin circuit models joined to one connection
- Fin protection coating
- Copper fins, brass end plates
- Special application on request (Dry coolers/oil coolers/pre-cooler modules)

Nomenclature



Special Unit Options

- Header split - 2 circuits
- Header Split - more than 2 circuits
- Coil split requiring re-circuiting
- Glycol circuiting / Dry cooler

Note: All units are shipped in the horizontal discharge position; refer installation instructions for details.

Condensers – cont'd

STANDARD RANGE – 6 POLE

PRODUCT NUMBER	TOTAL HEAT OF REJECTION CAPACITY						NOISE LEVEL DATA dBa			FAN QTY	MOTOR DATA		
	HIGH SPEED			LOW SPEED			POWER LwA dBa	PRESS. LpA dBa 3m	NR No.		AMPS/PHASE		VOLTS- PHASE
	WATTS/K	AIRFLOW	L/S	WATTS/K	AIRFLOW	L/S					HI/LO SPD	HI/LO SPD	
	R404A	R22	L/S	R404A	R22	L/S	HI/LO SPD	HI/LO SPD	HI/LO SPD		HI SPD	LOW SPD	PHASE
SINGLE COIL													
WRC098	9840	9350	12290	8360	7950	10450				2	4	2.30	415-3
WRC112	11210	10650	11360	9190	8730	8440				2	4	2.30	415-3
WRC119	11860	11270	10620	9610	9130	7780	86/81	69/64	65/61	2	4	2.30	415-3
WRC123	12310	11690	10010	9850	9350	7260				2	4	2.30	415-3
WRC147	14750	14010	18440	12540	11910	15670				3	4	2.30	415-3
WRC167	16740	15900	17040	13730	13040	12660				3	4	2.30	415-3
WRC178	17760	16870	15730	14390	13660	11520	88/83	71/64	67/63	3	4	2.30	415-3
WRC185	18460	17540	15010	14770	14030	10880				3	4	2.30	415-3
WRC198	19790	18800	24580	16820	15980	20890				4	4	2.30	415-3
WRC225	22470	21350	22720	18430	17510	16880				4	4	2.30	415-3
WRC240	23970	22770	21250	19420	18440	15560	89/84	72/67	69/65	4	4	2.30	415-3
WRC247	24650	23420	20010	19720	18740	14510				4	4	2.30	415-3
WRC297	29710	28220	26560	24070	22860	19450				5	4	2.30	415-3
WRC307	30690	29160	25010	24550	23330	18130	90/85	73/68	69/65	5	4	2.30	415-3
DOUBLE COIL													
WRC197	19670	18690	24580	16720	15890	20890				4	4	2.30	415-3
WRC224	22420	21300	22720	18380	17470	16880				4	4	2.30	415-3
WRC237	23720	22530	21250	19210	18250	15560	89/84	72/67	69/65	4	4	2.30	415-3
WRC246	24630	23400	20010	19700	18720	14510				4	4	2.30	415-3
WRC295	29490	28020	36880	25070	23820	31350				6	4	2.30	415-3
WRC335	33480	31810	34080	27450	26080	25310				6	4	2.30	415-3
WRC355	35510	33730	31460	28760	27320	23030	91/86	74/68	70/66	6	4	2.30	415-3
WRC369	36920	35070	30020	29540	28060	21770				6	4	2.30	415-3
WRC396	39590	37610	49170	33650	31970	41790				8	4	2.30	415-3
WRC449	44940	42690	45450	36850	35010	33760				8	4	2.30	415-3
WRC479	47940	45540	42500	38830	36890	31120	92/87	75/70	72/68	8	4	2.30	415-3
WRC493	49290	46830	40020	39430	37460	29020				8	4	2.30	415-3
WRC594	59430	56460	53120	48140	45730	38890				10	4	2.30	415-3
WRC614	61380	58310	50030	49100	46650	36270	93/88	76/71	72/68	10	4	2.30	415-3

PERFORMANCE RATING BASIS

TOTAL HEAT OF REJECTION:

Based on zero subcooling at 32°C Ambient & 50°C Condensing, with 100°C inlet gas temperature assumed. For other ambients and subcooling refer to correction factors given. Capacity will vary only slightly with other suction and superheat conditions. KTD is defined as the saturated liquid temp at the condenser outlet minus the air on (amb.) temp. (Coils are in counterflow). Capacity is given for continuous full airflow, ie no fan cycling.

REFRIGERANT CONVERSION DATA:

Conversion factors are based on the latest thermodynamic data available from the refrigerant manufacturers.

UNIT INPUT WATTS AND RATED LOAD AMPS:

Based on external rotor motor manufacturers nominal rated values at maximum load conditions. Values may vary depending on power supply and coil configuration and cleanliness.

SOUND POWER LEVELS:

Tests are done with a Sound Intensity meter generally in accordance with the methods of ISO9614-1 (Intensity Methods) and AS1217.7-1985 (Survey Method). Preliminary data based on fan manufacturer's rated Sound Power figure.

To find Sound Pressure Level (dBA) @ 3m distance, subtract 17.5dB from Sound Power figure.

This is an estimate of the average Sound Pressure @ 3m, values may vary depending on location around unit.

Condensers – cont'd

LOW NOISE RANGE – 8 POLE

PRODUCT NUMBER	TOTAL HEAT OF REJECTION CAPACITY						NOISE LEVEL DATA dBa			FAN QTY	MOTOR DATA		
	HIGH SPEED			LOW SPEED			POWER LwA dBa	PRESS. LpA dBa 3m	NR No.		AMPS/PHASE		VOLTS- PHASE
	WATTS/K	AIRFLOW (l/s)		WATTS/K	AIRFLOW (l/s)						HI/LO SPD	HI/LO SPD	
	R404A	R22		R404A	R22								
SINGLE COIL													
WRC098LN	8430	8010	9420	7570	7190	7440	79/76	62/59	58/55	2	2.4	1.50	415-3
WRC112LN	9490	9020	8760	8190	7790	6850				2	2.4	1.50	415-3
WRC119LN	9880	9390	8150	8410	7990	6270				2	2.4	1.50	415-3
WRC123LN	9990	9490	7640	8380	7960	5810				2	2.4	1.50	415-3
WRC147LN	12640	12010	14130	11350	10780	11160	81/78	63/60	60/57	3	2.4	1.50	415-3
WRC167LN	14220	13510	13140	12270	11660	10270				3	2.4	1.50	415-3
WRC178LN	14860	14120	12230	12640	12020	9410				3	2.4	1.50	415-3
WRC185LN	15010	14260	11460	12600	11970	8720				3	2.4	1.50	415-3
WRC198LN	17060	16210	18840	15320	14560	14880	82/79	65/62	61/58	4	2.4	1.50	415-3
WRC225LN	19000	18050	17520	16400	15580	13700				4	2.4	1.50	415-3
WRC240LN	19790	18800	16300	16840	16000	12540				4	2.4	1.50	415-3
WRC247LN	19990	18990	15280	16780	15940	11620				4	2.4	1.50	415-3
WRC297LN	24730	23490	20380	21040	19990	15680	83/80	66/63	62/59	5	2.4	1.50	415-3
WRC307LN	25010	23760	19110	20990	19940	14540				5	2.4	1.50	415-3
DOUBLE COIL													
WRC197LN	16850	16010	18840	15130	14380	14880	82/79	65/62	61/58	4	2.4	1.50	415-3
WRC224LN	18970	18020	17520	16370	15550	13700				4	2.4	1.50	415-3
WRC237LN	19750	18760	16310	16810	15960	12550				4	2.4	1.50	415-3
WRC246LN	19980	18980	15280	16770	15930	11620				4	2.4	1.50	415-3
WRC295LN	25270	24010	28250	22690	21560	22310	84/81	66/63	63/60	6	2.4	1.50	415-3
WRC335LN	28430	27010	26280	24540	23310	20550				6	2.4	1.50	415-3
WRC355LN	29720	28230	24460	25290	24020	18810				6	2.4	1.50	415-3
WRC369LN	30020	28520	22930	25190	23930	17440				6	2.4	1.50	415-3
WRC396LN	34110	32400	37670	30630	29090	29750	85/82	68/65	65/62	8	2.4	1.50	415-3
WRC449LN	38010	36110	35040	32810	31170	27400				8	2.4	1.50	415-3
WRC479LN	39580	37600	32600	33680	32000	25080				8	2.4	1.50	415-3
WRC493LN	39990	37990	30570	33560	31880	23250				8	2.4	1.50	415-3
WRC594LN	49460	46990	40760	42090	39990	31350	86/83	69/66	62/62	10	2.4	1.50	415-3
WRC614LN	50020	47520	38210	41980	39880	29060				10	2.4	1.50	415-3

PERFORMANCE RATING BASIS

TOTAL HEAT OF REJECTION:

Based on zero subcooling at 32°C Ambient & 50°C Condensing, with 100°C inlet gas temperature assumed. For other ambients and subcooling refer to correction factors given. Capacity will vary only slightly with other suction and superheat conditions. KTD is defined as the saturated liquid temp at the condenser outlet minus the air on (amb.) temp. (Coils are in counterflow). Capacity is given for continuous full airflow, ie no fan cycling.

REFRIGERANT CONVERSION DATA:

Conversion factors are based on the latest thermodynamic data available from the refrigerant manufacturers.

UNIT INPUT WATTS AND RATED LOAD AMPS:

Based on external rotor motor manufacturers nominal rated values at maximum load conditions. Values may vary depending on power supply and coil configuration and cleanliness.

SOUND POWER LEVELS:

Tests are done with a Sound Intensity meter generally in accordance with the methods of ISO9614-1 (Intensity Methods) and AS1217.7-1985 (Survey Method). Preliminary data based on fan manufacturer's rated Sound Power figure.

To find Sound Pressure Level (dBA) @ 3m distance, subtract 17.5dB from Sound Power figure.

This is an estimate of the average Sound Pressure @ 3m, values may vary depending on location around unit.

Condensers – cont'd

SPECIFICATIONS - STANDARD RANGE

PRODUCT NUMBER	COIL DETAILS					UNIT DATA				APPROXIMATE WEIGHT kg	
	ROWS	F.P.I.	REFRIGERANT			TOTAL WATTS		RLA Amps/Ph			
			CHARGE	CONNECTIONS mm							
			R404A kg*	GAS	LIQUID	HI SPD	LOW SPD	HI SPD	LOW SPD	NETT	PACKED
SINGLE COIL											
WRC98	3	12	29	54.4	54.4	4000	2500	8.0	4.6	410	440
WRC112	4	12	37	54.4	54.4	4000	2500	8.0	4.6	430	460
WRC119	5	12	45	54.4	54.4	4000	2500	8.0	4.6	460	490
WRC123	6	12	53	54.4	54.4	4000	2500	8.0	4.6	500	530
WRC147	3	12	43	66.7	66.7	6000	3750	12.0	6.9	560	600
WRC167	4	12	55	66.7	66.7	6000	3750	12.0	6.9	610	650
WRC178	5	12	67	66.7	66.7	6000	3750	12.0	6.9	660	700
WRC185	6	12	79	66.7	66.7	6000	3750	12.0	6.9	710	750
WRC198	3	12	54	66.7	66.7	8000	5000	16.0	9.2	740	800
WRC225	4	12	70	66.7	66.7	8000	5000	16.0	9.2	820	880
WRC240	5	12	86	66.7	66.7	8000	5000	16.0	9.2	890	950
WRC247	6	12	102	66.7	66.7	8000	5000	16.0	9.2	960	1020
WRC297	5	12	106	76.3	76.3	10000	6250	20.0	11.5	1130	1200
WRC307	6	12	126	76.3	76.3	10000	6250	20.0	11.5	1210	1290
DOUBLE COIL											
WRC197	3	12	57	2 x 54.4	2 x 54.4	8000	5000	16.0	9.2	760	790
WRC224	4	12	73	2 x 54.4	2 x 54.4	8000	5000	16.0	9.2	810	840
WRC237	5	12	89	2 x 54.4	2 x 54.4	8000	5000	16.0	9.2	880	910
WRC246	6	12	105	2 x 54.4	2 x 54.4	8000	5000	16.0	9.2	950	980
WRC295	3	12	85	2 x 66.7	2 x 66.7	12000	7500	24.0	13.8	1070	1110
WRC335	4	12	109	2 x 66.7	2 x 66.7	12000	7500	24.0	13.8	1170	1210
WRC355	5	12	133	2 x 66.7	2 x 66.7	12000	7500	24.0	13.8	1270	1320
WRC369	6	12	157	2 x 66.7	2 x 66.7	12000	7500	24.0	13.8	1370	1420
WRC396	3	12	109	2 x 66.7	2 x 66.7	16000	10000	32.0	18.4	1420	1480
WRC449	4	12	141	2 x 66.7	2 x 66.7	16000	10000	32.0	18.4	1570	1630
WRC479	5	12	173	2 x 66.7	2 x 66.7	16000	10000	32.0	18.4	1700	1760
WRC493	6	12	204	2 x 66.7	2 x 66.7	16000	10000	32.0	18.4	1830	1890
WRC594	5	12	212	2 x 76.2	2 x 76.2	20000	12500	40.0	23.0	2130	2210
WRC614	6	12	252	2 x 76.2	2 x 76.2	20000	12500	40.0	23.0	2300	2380

* Pumpdown refrigerant charge 32°C ambient, 80% liquid, 20% vapour by volume

Condensers – cont'd

SPECIFICATIONS - LOW NOISE RANGE

PRODUCT NUMBER	COIL DETAILS					UNIT DATA				APPROXIMATE WEIGHT kg	
	ROWS	F.P.I.	REFRIGERANT			TOTAL WATTS		RLA Amps/Ph			
			CHARGE	CONNECTIONS mm							
			R404A kg*	GAS	LIQUID	HI SPD	LOW SPD	HI SPD	LOW SPD	NETT	PACKED
SINGLE COIL											
WRC98LN	3	12	29	54.4	54.4	2100	1540	4.8	3.0	410	440
WRC112LN	4	12	37	54.4	54.4	2100	1540	4.8	3.0	430	460
WRC119LN	5	12	45	54.4	54.4	2100	1540	4.8	3.0	460	490
WRC123LN	6	12	53	54.4	54.4	2100	1540	4.8	3.0	500	530
WRC147LN	3	12	43	66.7	66.7	3150	2310	7.2	4.5	560	600
WRC167LN	4	12	55	66.7	66.7	3150	2310	7.2	4.5	610	650
WRC178LN	5	12	67	66.7	66.7	3150	2310	7.2	4.5	660	700
WRC185LN	6	12	79	66.7	66.7	3150	2310	7.2	4.5	710	750
WRC198LN	3	12	54	66.7	66.7	4200	3080	9.6	6.0	740	800
WRC225LN	4	12	70	66.7	66.7	4200	3080	9.6	6.0	820	880
WRC240LN	5	12	86	66.7	66.7	4200	3080	9.6	6.0	890	950
WRC247LN	6	12	102	66.7	66.7	4200	3080	9.6	6.0	960	1020
WRC297LN	5	12	106	76.3	76.3	5250	3850	12.0	7.5	1130	1200
WRC307LN	6	12	126	76.3	76.3	5250	3850	12.0	7.5	1210	1290
DOUBLE COIL											
WRC197LN	3	12	57	2 x 54.4	2 x 54.4	4200	3080	9.6	6.0	760	790
WRC224LN	4	12	73	2 x 54.4	2 x 54.4	4200	3080	9.6	6.0	810	840
WRC237LN	5	12	89	2 x 54.4	2 x 54.4	4200	3080	9.6	6.0	880	910
WRC246LN	6	12	105	2 x 54.4	2 x 54.4	4200	3080	9.6	6.0	950	980
WRC295LN	3	12	85	2 x 66.7	2 x 66.7	6300	4620	14.4	9.0	1070	1110
WRC335LN	4	12	109	2 x 66.7	2 x 66.7	6300	4620	14.4	9.0	1170	1210
WRC355LN	5	12	133	2 x 66.7	2 x 66.7	6300	4620	14.4	9.0	1270	1320
WRC369LN	6	12	157	2 x 66.7	2 x 66.7	6300	4620	14.4	9.0	1370	1420
WRC396LN	3	12	109	2 x 66.7	2 x 66.7	8400	6160	19.2	12.0	1420	1480
WRC449LN	4	12	141	2 x 66.7	2 x 66.7	8400	6160	19.2	12.0	1570	1630
WRC479LN	5	12	173	2 x 66.7	2 x 66.7	8400	6160	19.2	12.0	1700	1760
WRC493LN	6	12	204	2 x 66.7	2 x 66.7	8400	6160	19.2	12.0	1830	1890
WRC594LN	5	12	212	2 x 76.2	2 x 76.2	10500	7700	24.0	15.0	2130	2210
WRC614LN	6	12	252	2 x 76.2	2 x 76.2	10500	7700	24.0	15.0	2300	2380

* Pumpdown refrigerant charge 32°C ambient, 80% liquid, 20% vapour by volume

Condensers – cont'd

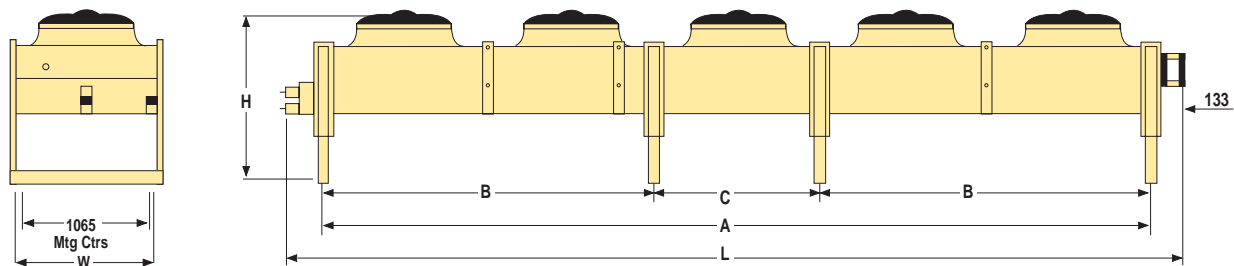
DIMENSIONS

PRODUCT NUMBER	H	L	W	A	B	C	SHIPPING VOLUME m ³
SINGLE COIL - VERTICAL AIR DISCHARGE							
WRC98	1410	3260	1250	2750	–	–	6.7
WRC112	1410	3260	1250	2750	–	–	6.7
WRC119	1410	3260	1250	2750	–	–	6.7
WRC123	1410	3260	1250	2750	–	–	6.7
WRC147	1410	4660	1250	4150	2775	1375	8.7
WRC167	1410	4660	1250	4150	2775	1375	8.7
WRC178	1410	4660	1250	4150	2775	1375	8.7
WRC185	1410	4660	1250	4150	2775	1375	8.7
WRC198	1410	6068	1250	5550	2775	–	11.7
WRC225	1410	6068	1250	5550	2775	–	11.7
WRC240	1410	6068	1250	5550	2775	–	11.7
WRC247	1410	6068	1250	5550	2775	–	11.7
WRC297	1410	7469	1250	6950	2775	1400	13.7
WRC307	1410	7469	1250	6950	2775	1400	13.7
SINGLE COIL - HORIZONTAL AIR DISCHARGE							
WRC98	1250	3260	1136	2750	–	–	6.7
WRC112	1250	3260	1136	2750	–	–	6.7
WRC119	1250	3260	1136	2750	–	–	6.7
WRC123	1250	3260	1136	2750	–	–	6.7
WRC147	1250	4660	1136	4150	2775	1375	8.7
WRC167	1250	4660	1136	4150	2775	1375	8.7
WRC178	1250	4660	1136	4150	2775	1375	8.7
WRC185	1250	4660	1136	4150	2775	1375	8.7
WRC198	1250	6068	1136	5550	2775	–	11.7
WRC225	1250	6068	1136	5550	2775	–	11.7
WRC240	1250	6068	1136	5550	2775	–	11.7
WRC247	1250	6068	1136	5550	2775	–	11.7
WRC297	1250	7469	1136	6950	2775	1400	13.7
WRC307	1250	7469	1136	6950	2775	1400	13.7
DOUBLE COIL - VERTICAL AIR DISCHARGE							
WRC197	1410	3260	2406	2750	–	–	11.2
WRC224	1410	3260	2406	2750	–	–	11.2
WRC237	1410	3260	2406	2750	–	–	11.2
WRC246	1410	3260	2406	2750	–	–	11.2
WRC295	1410	4660	2406	4150	2775	1375	15.2
WRC335	1410	4660	2406	4150	2775	1375	15.2
WRC355	1410	4660	2406	4150	2775	1375	15.2
WRC369	1410	4660	2406	4150	2775	1375	15.2
WRC396	1410	6068	2406	5550	2775	–	20.2
WRC449	1410	6068	2406	5550	2775	–	20.2
WRC479	1410	6068	2406	5550	2775	–	20.2
WRC493	1410	6068	2406	5550	2775	–	20.2
WRC594	1410	7469	2406	6950	2775	1400	24.2
WRC614	1410	7469	2406	6950	2775	1400	24.2
DOUBLE COIL - HORIZONTAL AIR DISCHARGE							
WRC197	2406	3260	1136	2750	–	–	11.2
WRC224	2406	3260	1136	2750	–	–	11.2
WRC237	2406	3260	1136	2750	–	–	11.2
WRC246	2406	3260	1136	2750	–	–	11.2
WRC295	2406	4660	1136	4150	2775	1375	15.2
WRC335	2406	4660	1136	4150	2775	1375	15.2
WRC355	2406	4660	1136	4150	2775	1375	15.2
WRC369	2406	4660	1136	4150	2775	1375	15.2
WRC396	2406	6068	1136	5550	2775	–	20.2
WRC449	2406	6068	1136	5550	2775	–	20.2
WRC479	2406	6068	1136	5550	2775	–	20.2
WRC493	2406	6068	1136	5550	2775	–	20.2
WRC594	2406	7469	1136	6950	2775	1400	24.2
WRC614	2406	7469	1136	6950	2775	1400	24.2

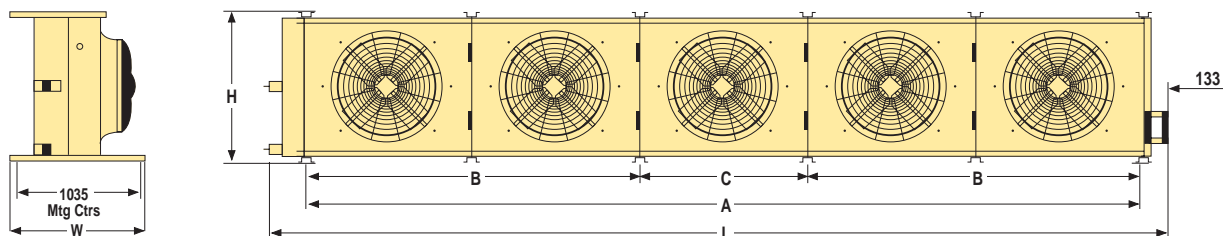
Condensers – cont'd

DIMENSIONAL DRAWINGS

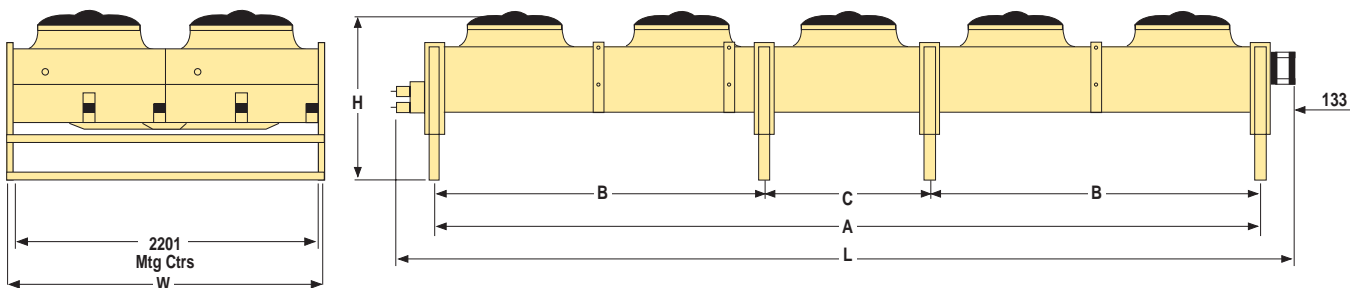
SINGLE COIL WITH VERTICAL AIR FLOW – WRC98 TO WRC307



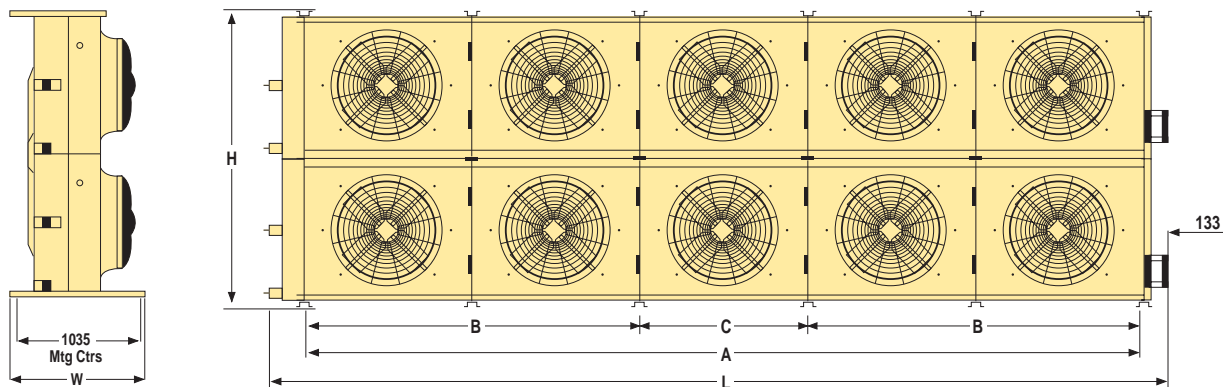
SINGLE COIL WITH HORIZONTAL AIR FLOW – WRC98 TO WRC307



DOUBLE COIL WITH VERTICAL AIR FLOW – WRC197 TO WRC614



DOUBLE COIL WITH HORIZONTAL AIR FLOW – WRC197 TO WRC614



SECTION 4

Condensers – cont'd

WRC CONDENSER CORRECTION FACTORS

AMBIENT CORRECTION FACTORS (K1)

AMB. °C.	15	20	25	30	35	40	45
FACTOR	0.979	0.986	0.992	0.998	1.003	1.008	1.013

Divide the calculated THR at required ambient by the appropriate factor to find the required THR at the rating condition (32°C)

ALTITUDE CORRECTION FACTOR (K2)

ALT. m	0	600	800	1000	1200	1400	1600
FACTOR	1	1.04	1.06	1.075	1.09	1.11	1.12

Multiply the calculated THR at altitude by the appropriate factor to find the required THR at the rating condition (sea level)

INTEGRAL SUBCOOLING CORRECTION FACTORS (K3)

S/C K	KTD				
	3	5	10	15	20
2	0.966	0.976	0.989	0.994	0.996
4		0.934	0.975	0.986	0.990
6			0.946	0.972	0.980
8			0.898	0.960	0.966

Multiply the rated THR at zero subcooling by the factor at the required KTD and degree of subcooling to give the new THR including subcooling

SEPARATE SUB-COOLING CORRECTION FACTORS

SUBCOOLING	2K	4K	6K	8K
FACTOR	0.96	0.950	0.930	0.910

Multiply the rated THR by the integral subcooling factor at the required subcooling (K), and then multiply by the separate subcooling factor to find the THR of the condensing only section. Use the condensing only THR as basis of selection. Condensing only THR implies zero subcooling as per usual rating condition. Please refer to Product Engineering for the required circuiting details.

*** Integral subcooling is defined as achieving the required degree of subcooling using the standard coil circuiting. In this case the subcooling is achieved at the end of each circuit and subcooled liquid exits the condenser to the receiver. For separate sub-cooling, there is a section of the coil used separately to subcool liquid coming from the receiver. This is available as an extra cost special circuiting option. The percentage of coil area required depends on the degree of subcooling and the design KTD. The factors listed for integral subcooling are used in conjunction with the separate subcooling factors above.**

REFRIGERANT CAPACITY CORRECTION FACTORS- Ratio to R404A (K4)

REFRIG.	R502	R134a	R22	R507	R407B	R407C
FACTOR	0.96	0.93	0.95	0.976	0.92	0.90

Divide the calculated THR by the appropriate factor to find the required THR at rating condition (R404A)
REFRIGERANT CORRECTION FACTORS - Factors are an average of all models and may vary slightly over the range of KTD, however the above figures are sufficiently accurate for most system selection purposes.

FIN CORRECTION FACTORS (K5)	Alum	1.00	Copper	1.03	K/Kote	0.995
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Divide the calculated THR by the factor to find the required THR at rating condition (Aluminium fin) Apply K/Kote Factor after applying fin mat'l factor if necessary.

PUMPDOWN CHARGE CONVERSION FACTORS TO R404A

REFRIG.	R22	R134a	R407C	R404A	R407B	R502	R507
FACTOR	1.22	1.24	1.13	1.00	1.13	1.22	1.05

RATIO OF OPERATING CHARGE @ -5°C SST & 40°C SCT TO PUMPDOWN CHARGE

REFRIG.	R22	R134a	R407C	R404A	R407B	R502	R507
FACTOR	0.24	0.21	0.26	0.34	0.32	0.30	0.35

Condensers – cont'd

WRC CONDENSER SOUND DATA

STANDARD RANGE - 6 POLE

FANS	SOUND POWER FREQUENCY SPECTRUM							SPL LwA
	125	250	500	1000	2000	4000	8000	
HIGH SPEED								
2	83	80	81	83	80	71	62	86
3	85	82	83	85	82	73	64	88
4	86	83	84	86	83	74	65	89
5	87	84	85	87	84	75	66	90
6	88	85	86	88	85	76	67	91
8	89	86	87	89	86	77	68	92
10	90	87	88	90	87	78	69	93
LOW SPEED								
2	78	77	76	79	72	63	54	81
3	80	79	78	81	74	65	56	83
4	81	80	79	82	75	66	57	84
5	82	81	80	83	76	67	58	85
6	83	82	81	84	77	68	59	86
8	84	83	82	85	78	69	60	87
10	85	84	83	86	79	70	61	88

LOW NOISE RANGE - 8 POLE

FANS	SOUND POWER FREQUENCY SPECTRUM							SPL LwA
	125	250	500	1000	2000	4000	8000	
HIGH SPEED								
2	76	77	75	76	71	63	57	79
3	78	79	77	78	73	65	59	81
4	79	80	78	79	74	66	60	82
5	80	81	79	80	75	67	61	83
6	81	82	80	81	76	68	62	84
8	82	83	81	82	77	69	63	85
10	83	84	82	83	78	70	64	86
LOW SPEED								
2	73	73	74	73	65	57	49	76
3	75	75	76	75	67	59	51	78
4	76	76	77	76	68	60	52	79
5	77	77	78	77	69	61	53	80
6	78	78	79	78	70	62	54	81
8	79	79	80	79	71	63	55	82
10	80	80	81	80	72	64	56	83