

WRC REMOTE CONDENSERS

Powerful technology
delivering powerful savings



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Introduction

The WRC Remote Condenser range is ideal for commercial central plant refrigeration and air conditioning installations requiring low noise and improved energy savings.

WRC remote condensers feature a specially optimised coil surface to fan ratio. This ensures even air distribution at reduced pressure drop across a wide fan speed range, which in turn reduces electricity consumption and overarching operating costs.

Features & Benefits

The WRC Remote Condenser range offers:

- All fan motors are factory pre-wired back to junction box for ease of installation.
- Single and double coil variations available.
- Floating coil technology and rifle bore tube for improved reliability and performance
- Blue Kote fin protection supplied as standard, with heavy duty coil coating available
- Crisp painted steel casing and end plates to enhance durability and extend service life
- Vertical or horizontal air discharge achieved across all models
- High wind kit install components are standard on all EC models

WRC Remote Condensers can be configured to the following special applications:

- Dry coolers
- Glycol
- Oil coolers
- 6 Pole AC Fans

BRGC Remote Condensers - Nomenclature

WRC	V	2	2	6	D	EC	B
		Number of Fans				Air Discharge Enhancement B = AxiBlade Diffuser	
		Number of Modules				Fan Type EC = Electronically Commutated	
Airflow Configuration Absent = Shipped as Horizontal Airflow V = Shipped as Vertical Airflow (Dual Coils Only)				Coil Block Variant/Module: Size D = 1400mm			
Manufacturer Brand WRC = WRC Remote Condenser				Number of Coil Rows			

PRODUCT NUMBER	CAPACITY WATTS/K, 25°C AMBIENT , 40°C COND. 0°C SUBCOOLING, 65°C DISCH.GAS					
	R448A	R513A	R448A	R513A	R448A	R513A
	1100 RPM		680 RPM		440 RPM	
SINGLE COIL MODELS						
WRC124DECB	8,950	9,553	6,542	6,983	4,687	5,003
WRC126DECB	10,377	11,077	7,013	7,486	4,762	5,083
WRC134DECB	13,425	14,330	9,812	10,474	7,030	7,504
WRC136DECB	15,566	16,616	10,520	11,229	7,142	7,624
WRC144DECB	17,900	19,106	13,083	13,965	9,373	10,005
WRC146DECB	20,755	22,154	14,026	14,972	9,523	10,165
WRC154DECB	22,375	23,883	16,354	17,456	11,717	12,507
WRC156DECB	25,944	27,693	17,533	18,715	11,904	12,706
DOUBLE COIL MODELS						
WRCV224DECB	17,900	19,106	13,083	13,965	9,373	10,005
WRCV226DECB	20,755	22,154	14,026	14,972	9,523	10,165
WRCV234DECB	26,850	28,660	19,625	20,948	14,060	15,008
WRCV236DECB	31,132	33,231	21,040	22,458	14,285	15,248
WRCV244DECB	35,799	38,213	26,166	27,930	18,747	20,011
WRCV246DECB	41,510	44,308	28,053	29,944	19,046	20,330
WRCV254DECB	44,749	47,766	32,708	34,913	23,434	25,014
WRCV256DECB	51,887	55,385	35,066	37,430	23,808	25,413

*Refrigerant Capacity Correction Factor for R407F (Ratio to R404A): 0.89. Divide the calculated THR by the appropriate factor to find the required THR at rating condition. 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.

PRODUCT NUMBER	MOTOR DATA		UNIT DATA		FAN DATA					COIL DATA		
	POWER SUPPLY (V / PH)	TOTAL AMPS/ PHASE	TOTAL WATTS	TOTAL AMPS/ PHASE	NO. OF FANS	DIAMETER (MM)	AIRFLOW (L/S)			REFRIGERANT CHARGE (KG)	CONNECTIONS (MM)	
		100% SPEED					1100 RPM	680 RPM	440 RPM	R448A	GAS	LIQUID
SINGLE COIL MODELS												
WRC124DECB	415/3	4.4	5,800	8.8	2	800	12,980	7,760	4,860	42	54.4	54.4
WRC126DECB	415/3	4.4	5,800	8.8	2	800	11,772	6,900	4,060	61	54.4	54.4
WRC134DECB	415/3	4.4	8,700	13.2	3	800	19,470	11,640	7,290	63	66.7	66.7
WRC136DECB	415/3	4.4	8,700	13.2	3	800	17,658	10,350	6,090	91	66.7	66.7
WRC144DECB	415/3	4.4	11,600	17.6	4	800	25,960	15,520	9,720	82	66.7	66.7
WRC146DECB	415/3	4.4	11,600	17.6	4	800	23,544	13,800	8,120	119	66.7	66.7
WRC154DECB	415/3	4.4	14,500	22.0	5	800	32,450	19,400	12,150	101	66.7	66.7
WRC156DECB	415/3	4.4	14,500	22.0	5	800	29,430	17,250	10,150	146	66.7	66.7
DOUBLE COIL MODELS												
WRCV224DECB	415/3	4.4	11,920	18.0	4	800	25,960	15,520	9,720	85	2 x 54.4	2 x 54.4
WRCV226DECB	415/3	4.4	11,920	18.0	4	800	23,544	13,800	8,120	122	2 x 54.4	2 x 54.4
WRCV234DECB	415/3	4.4	17,880	27.0	6	800	38,940	23,280	14,580	127	2 x 66.7	2 x 66.7
WRCV236DECB	415/3	4.4	17,880	27.0	6	800	35,316	20,700	12,180	182	2 x 66.7	2 x 66.7
WRCV244DECB	415/3	4.4	23,840	36.0	8	800	51,920	31,040	19,440	163	2 x 66.7	2 x 66.7
WRCV246DECB	415/3	4.4	23,840	36.0	8	800	47,088	27,600	16,240	237	2 x 66.7	2 x 66.7
WRCV254DECB	415/3	4.4	29,800	45.0	10	800	64,900	38,800	24,300	201	2 x 66.7	2 x 66.7
WRCV256DECB	415/3	4.4	29,800	45.0	10	800	58,860	34,500	20,300	292	2 x 66.7	2 x 66.7

CAPACITY-AMBIENT CORRECTION FACTORS							
AMB°C	15	20	25	30	35	40	45
Factor	0.987	0.994	1.000	1.006	1.011	1.016	1.019

Divide the calculated THR at required ambient by the appropriate factor to find the required THR at the rating condition

ALTITUDE CORRECTION FACTOR (K2)							
AMB°C	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					
S/C	KTD				
K	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 cooling as per usual rating condition. Please refer to Project Engineering for the required circuiting details.

* Integral subcooling is define 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 exists 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 sepaate subcooling factors above.

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.

Total Heat Of Rejection

For other ambients and subcooling refer to correction factors given. Capacity will vary only slightly with the 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, i.e 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

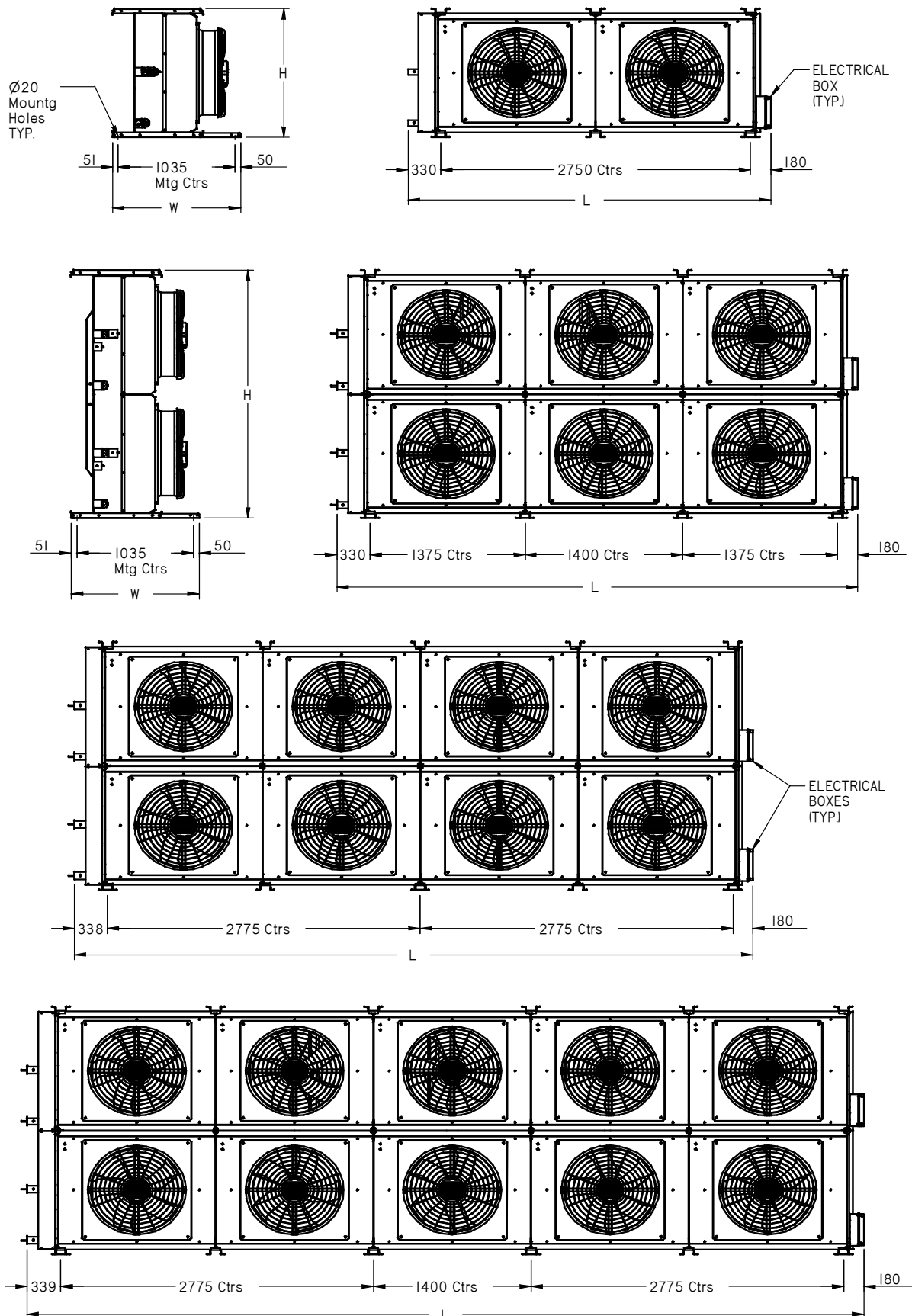
Determination of sound power level in accordance to DIN EN 13487 with the procedure according to DIN EN ISO 9614-1. To find Sound Pressure Level (dBA) @ 3m distance, subtract 17.5dB from Sound Power figure. This is an estimate of the average Sound Pressure @ 3m, values may vary depending on locatin around unit.

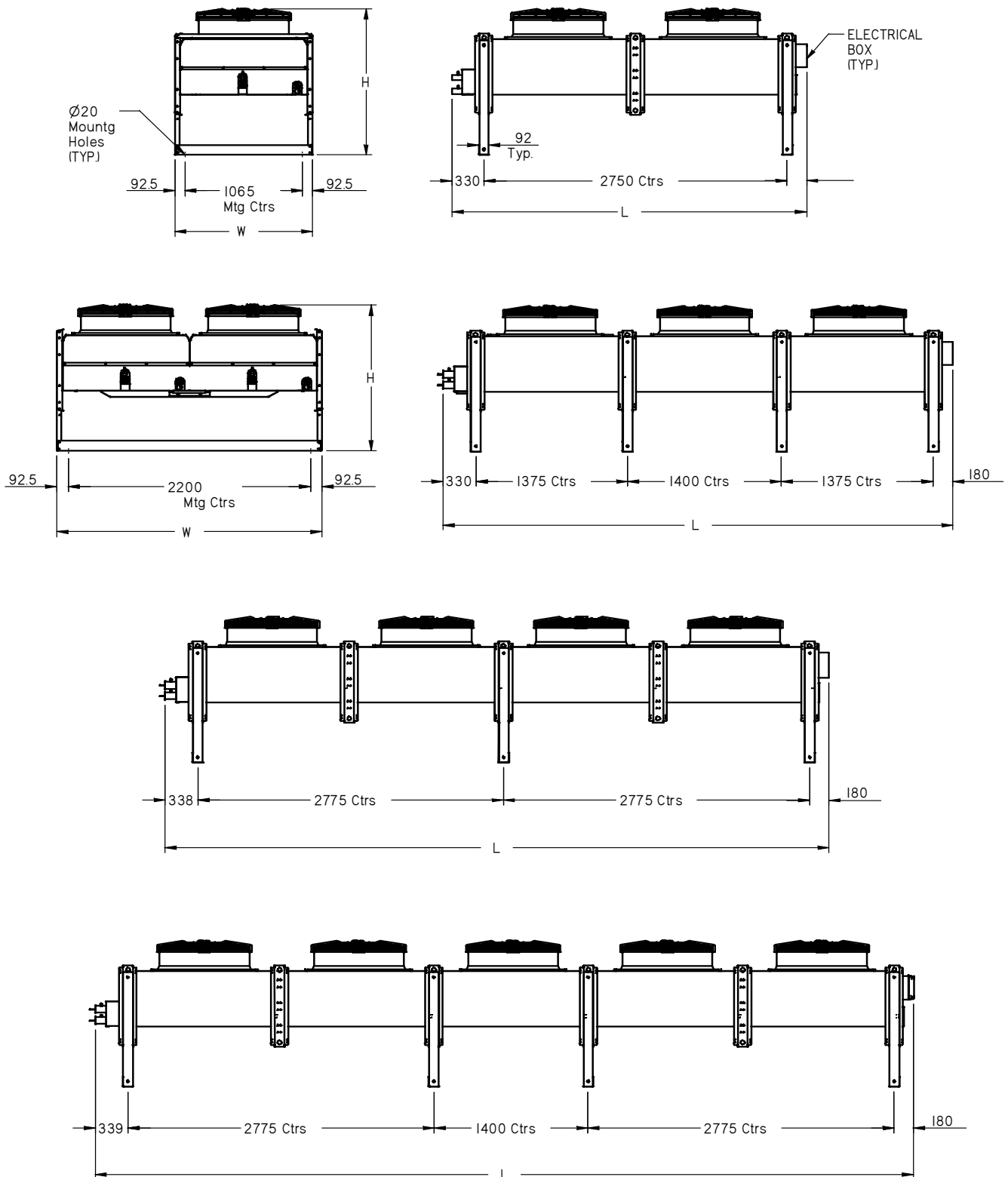
PRODUCT NUMBER	FAN SPEED	SOUND POWER	SOUND PRESSURE	DB(A) OCTAVE BAND (HZ) LINEAR SOUND SPECTRUM							
	RPM	dB(A)	dB(A)	100	125	250	500	1000	2000	4000	8000
SINGLE COIL MODELS											
WRC124DECB	440	67	35	61.8	60.7	57.8	56.6	53.5	49.9	47.7	40.9
	680	76	44	71.8	74.5	70.3	66.8	64.1	62.1	56.3	52.8
	1090	88	56	77.9	87.1	80.6	78.5	79.3	79.0	73.3	67.2
WRC126DECB	440	71	39	64.8	62.4	58.8	58.2	55.2	50.2	49.2	44.2
	680	77	45	75.3	76.6	71.5	68.7	66.2	62.5	58.1	57.1
	1090	90	58	81.5	89.1	81.7	80.4	81.5	79.1	75.2	72.3
WRC134DECB	440	69	37	63.6	62.5	59.6	58.4	55.3	51.7	49.5	42.7
	680	78	46	73.6	76.3	72.1	68.6	65.9	63.9	58.1	54.6
	1090	90	58	79.7	88.9	82.4	80.3	81.1	80.8	75.1	69.0
WRC136DECB	440	72	40	66.6	64.2	60.6	60.0	57.0	52.0	51.0	46.0
	680	79	47	77.1	78.4	73.3	70.5	68.0	64.3	59.9	58.9
	1090	91	60	83.3	90.9	83.5	82.2	83.3	80.9	77.0	74.1
WRC144DECB	440	70	38	61.8	60.7	57.8	56.6	53.5	49.9	47.7	40.9
	680	79	47	71.8	74.5	70.3	66.8	64.1	62.1	56.3	52.8
	1090	91	59	77.9	87.1	80.6	78.5	79.3	79.0	73.3	67.2
WRC146DECB	440	74	42	64.8	62.4	58.8	58.2	55.2	50.2	49.2	44.2
	680	80	48	75.3	76.6	71.5	68.7	66.2	62.5	58.1	57.1
	1090	93	61	81.5	89.1	81.7	80.4	81.5	79.1	75.2	72.3
WRC154DECB	440	71	39	65.8	64.7	61.8	60.6	57.5	53.9	51.7	44.9
	680	80	48	75.8	78.5	74.3	70.8	68.1	66.1	60.3	56.8
	1090	92	60	81.9	91.1	84.6	82.5	83.3	83.0	77.3	71.2
WRC156DECB	440	75	43	68.8	66.4	62.8	62.2	59.2	54.2	53.2	48.2
	680	81	49	79.3	80.6	75.5	72.7	70.2	66.5	62.1	61.1
	1090	94	62	85.5	93.1	85.7	84.4	85.5	83.1	79.2	76.3

PRODUCT NUMBER	FAN SPEED	SOUND POWER	SOUND PRESSURE	DB(A) OCTAVE BAND (HZ) LINEAR SOUND SPECTRUM							
	RPM	dB(A)	dB(A)	100	125	250	500	1000	2000	4000	8000
DOUBLE COIL MODELS											
WRCV224DECB	440	70	38	64.8	63.7	60.8	59.6	56.5	52.9	50.7	43.9
	680	79	47	74.8	77.5	73.3	69.8	67.1	65.1	59.3	55.8
	1090	91	59	80.9	90.1	83.6	81.5	82.3	82.0	76.3	70.2
WRCV226DECB	440	74	42	67.8	65.4	61.8	61.2	58.2	53.2	52.2	47.2
	680	80	48	78.3	79.6	74.5	71.7	69.2	65.5	61.1	60.1
	1090	93	61	84.5	92.1	84.7	83.4	84.5	82.1	78.2	75.3
WRCV234DECB	440	72	40	66.6	65.5	62.6	61.4	58.3	54.7	52.5	45.7
	680	81	49	76.6	79.3	75.1	71.6	68.9	66.9	61.1	57.6
	1090	93	61	82.7	91.9	85.4	83.3	84.1	83.8	78.1	72.0
WRCV236DECB	440	75	43	69.6	67.2	63.6	63.0	60.0	55.0	54.0	49.0
	680	82	50	80.1	81.4	76.3	73.5	71.0	67.3	62.9	61.9
	1090	95	63	86.3	93.9	86.5	85.2	86.3	83.9	80.0	77.1
WRCV244DECB	440	73	41	64.8	63.7	60.8	59.6	56.5	52.9	50.7	43.9
	680	82	50	74.8	77.5	73.3	69.8	67.1	65.1	59.3	55.8
	1090	94	62	80.9	90.1	83.6	81.5	82.3	82.0	76.3	70.2
WRCV246DECB	440	77	45	67.8	65.4	61.8	61.2	58.2	53.2	52.2	47.2
	680	83	51	78.3	79.6	74.5	71.7	69.2	65.5	61.1	60.1
	1090	96	64	84.5	92.1	84.7	83.4	84.5	82.1	78.2	75.3
WRCV254DECB	440	74	52	68.8	67.7	64.8	63.6	60.5	56.9	54.7	47.9
	680	83	51	78.8	81.5	77.3	73.8	71.1	69.1	63.3	59.8
	1090	95	63	84.9	94.1	87.6	85.5	86.3	86.0	80.3	74.2
WRCV256DECB	440	78	46	71.8	69.4	65.8	65.2	62.2	57.2	56.2	51.2
	680	84	52	82.3	83.6	78.5	75.7	73.2	69.5	65.1	64.1
	1090	97	65	88.5	96.1	88.7	87.4	88.5	86.1	82.2	79.3

PRODUCT NUMBER	DIMENSIONS (MM)			DRY WEIGHT (KG)	
	WIDTH	HEIGHT	LENGTH	UNPACKED	PACKED
SINGLE COIL MODELS - HORIZONTAL AIRFLOW					
WRC124DECB	1,136	1,250	3,260	430	460
WRC126DECB	1,136	1,250	3,260	500	530
WRC134DECB	1,136	1,250	4,660	610	650
WRC136DECB	1,136	1,250	4,660	710	750
WRC144DECB	1,136	1,250	6,068	820	880
WRC146DECB	1,136	1,250	6,068	960	1,020
WRC154DECB	1,136	1,250	7,469	1,035	1,115
WRC156DECB	1,136	1,250	7,469	1,210	1,290
DOUBLE COIL MODELS - HORIZONTAL AIRFLOW					
WRCV224DECB	1,136	2,406	3,260	810	840
WRCV226DECB	1,136	2,406	3,260	950	980
WRCV234DECB	1,136	2,406	4,660	1,170	1,210
WRCV236DECB	1,136	2,406	4,660	1,370	1,420
WRCV244DECB	1,136	2,406	6,068	1,570	1,630
WRCV246DECB	1,136	2,406	6,068	1,830	1,890
WRCV254DECB	1,136	2,406	7,469	1,975	2,055
WRCV256DECB	1,136	2,406	7,469	2,300	2,380

PRODUCT NUMBER	DIMENSIONS (MM)				DRY WEIGHT (KG)	
	WIDTH	HEIGHT (MAX)	HEIGHT (MIN)	LENGTH	UNPACKED	PACKED
DOUBLE COIL MODELS - VERTICAL AIRFLOW						
WRCV224DECB	2,406	1,615	1,440	3,260	810	840
WRCV226DECB	2,406	1,615	1,440	3,260	950	980
WRCV234DECB	2,406	1,615	1,440	4,660	1,170	1,210
WRCV236DECB	2,406	1,615	1,440	4,660	1,370	1,420
WRCV244DECB	2,406	1,615	1,440	6,068	1,570	1,630
WRCV246DECB	2,406	1,615	1,440	6,068	1,830	1,890
WRCV254DECB	2,406	1,615	1,440	7,469	1,975	2,055
WRCV256DECB	2,406	1,615	1,440	7,469	2,300	2,380





A world map in a dark blue color. Numerous white location pins are scattered across the map, with a higher concentration in Europe and Asia. One pin in Europe is labeled with the 'SCM' logo.

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