DIAMOND®
Self Contained

Central Self-Contained
Air Conditioner 20 to 40 TR - Air or Water
Remote Condenser CRCE/CRCB
60 Hz

April, 2004

PKG-PRC001-EN

Introduction

Self Contained Diamond®

Developed for commercial and industrial markets. All Self-Contained Diamond models were designed to provide simple installation and maintenance.

Coil with 3/8" tubes
High efficiency TRANE Wavy-3B coils with 3/8" tubes

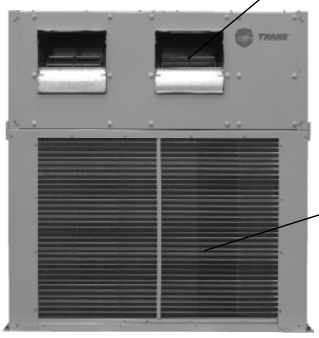
Class G0 Filtro
Standard

Panel in Galvanized Steel
Standard

Self Contained Genius

Compressors Scroll
With 64% less moving parts than a reciprocating compressor .

Forward-Curved Fan - Standard
Static Pressure (Optional)



Filtering (Optional)
Use of filters in coils

Remote Condenser CRCE

Panel in Galvanized Steel
Standard

Forward-Curved Fan - Standard
Static Pressure (Optional)

Remote Condenser CRCB

Contents

Features and Benefits

Combinations Self Contained Diamond

SAVE
Shell and Tube Air-Cooled Condenser

SIVE *w/ Remote Air Cond. CRCE*

SIVE *w/ Remote Air Cond. CRCB*

TRANE, a worldwide leader company in air conditioning equipment and system technology, had developed the most advanced Self in the market:

DIAMOND

The *Diamond* line was designed to meet the strict demands of the international market concerning durability, finish, safety, noise level and power consumption. The main features are:

- Capacities from 20 to 40 TR;

- 2 lines:
- SAVE, 20 to 40 TR, with water-cooled condenser;
- SIVE, 20 to 35 TR, with remote air-cooled condenser;

- 3 Control options: Standard Thermostat, Programable Thermostat, Microprocessed Control (ReliaTel®);

- Operates in the most extreme conditions required by *ARI (American Refrigeration Institute)* tests;

- Exclusive condensed water pan design. This pan was designed in such a way to prevent water accumulation, avoiding the formation of fungus and bacteria. The *Diamond* pan meets the ASHRAE standards for IAQ - Indoor Air Quality;

- Transmission options; one of them allows up to 70 mmca of external static pressure available

-Filtering (Standard, Simple or Double);

- 3 Heating options (Optional);

- Compressors Scroll;

- Independent refrigerating circuits;

- Capacity stages 100% and 50% (for machines equipped with one or two compressors, respectively);

- Forward-curved centrifugal fans;;

- Washable air filters, with electrostatic fabric, class ABNT G0, fixed in a steel wire frame

- Advanced protection and safety devices;

Trane Automation System

Programmable Thermostat

ReliaTel®

Standard Thermostat

Legend 01 - Line Description - Self Contained Diamond.

Capacity (TR)	Self Contained Water-Cooled Condenser Shell and Tube	Self Contained Air-Cooled Condenser Remote
20	SAVE200	SIVE200 + 2 x CRCB100 or 2 x CRCE100
25	SAVE250	SIVE250 + 2 x CRCB125 or 2 x CRCE125
30	SAVE300	SIVE300 + CRCB125 + CRCB150 or CRCE125 + CRCE150
35	SAVE350	SIVE350 + 2 x CRCB150 or 2 x CRCE150
40	SAVE400	Not available in this capacity

Model Description

Legend 02 - Model description for units SAVE 200 to 400 and SIVE 200 to 350.

S A V E	**2 5 0**	**A**	**A**	**S**	**0**	**1**	**A**	**0**	**0**	**0**
1, 2, 3, 4	5 , 6 , 7	8	9	10	11	12	13	14	15	16

Digits 1,2,3 and 4 - Modelo
SAVE Self Contained Water-Cooled Condenser
SIVE Remote Self Contained Air-Cooled Condenser.

Digits 5, 6 and 7 - Nominal Capacity (TR)
200 = 20 TR
250 = 25 TR
300 = 30 TR
350 = 35 TR
400 = 40 TR (only SAVE)

Digit 8 - Power Supply , Frequency and Command Voltage **
A = 220V / 60Hz / 3ph - Command 220V
B = 380V / 60Hz / 3ph - Command 220V
C = 440V / 60Hz / 3ph - Command 220V
3 = 220V / 60 Hz / 3ph - Command 24V
H = 380V / 60Hz / 3ph - Command 24V
4 = 440V / 60 Hz / 3ph - Command 24V
K= 380V / 50Hz / 3ph - Command 24V
*** Command voltage 24 V is optional for 60-Hz models.*

Digit 9 - Transmission Option
for **SAVE 200 to 400 and SIVE 200 to 350**
A = Option "A"
B = Option"B"
F = Option "F"
Y = Option "I"

for **SAVE 200 to 250 and SIVE 200 to 250**
C = Option "C"
D = Option "D"
G = Option"G"
J = Option "J"
M = Option "M"

for **SAVE 300 to 400 and SIVE 300 to 350**
E = Option "E"
H = Option "H"
K = Option "K"
L = Option "L"
N = Option "N"
W = Option "O"
P = Option "P"
Q = Option "Q"
R = Option "R"

Digit 10 - Controls
0 = No thermostat
S = Standard
P = Programmable
U = RTRM
K = RTRM + RTCI

Digit 11 - Heating and Capacitors
0 = No heating
1 = Heating 1 / No capacitor
2 = Heating 2 / No capacitor
3 = Heating 3 / No capacitor
A = Capacitor
B = Heating 1 / Capacitor
C = Heating 2 / Capacitor
D = Heating 3 / Capacitor

Digit 12 - Filtering
1 = Filter G0 / No Flat Filter
2 = Filter G1 Metal / No Flat Filter
D = Filter G1 + G3 Glass Wool / Flat Filter 2"
G = Filter G0 + G3 Glass Wool / Flat Filter 2"
H = Filter G3 Glass Wool / Flat Filter 2"

Digit 13 - Condenser Type

for Self Contained **SAVE**
0 = Water-Cooled Condenser (shell & tube)

for Self Contained **SIVE**
4 = Remote Cond. CRCB Standard
5 = Remote Cond. CRCB 2,5 mmca PED
6 = Remote Cond. CRCB 5,0 mmca PED
7 = Remote Cond. CRCE Standard
8 = Remote Cond. CRCE 2,5 mmca PED
9 = Remote Cond. CRCE 5,0 mmca PED
D = Remote Cond. CRCB Standard / Cond. Control
E = Remote Cond. CRCB 2,5 mmca PED/Cond. Control
F = Remote Cond. CRCB 5,0 mmca PED/Cond. Control
G = Remote Cond. CRCE Standard/Cond. Control
H = Remote Cond. CRCE 2,5 mmca PED/Cond. Control
J = Remote Cond. CRCE 5,0 mmca PED/Cond. Control

Digit 14 - Service Digit
B = Versión "B"

Digit 15 and 16 - Accessories and Options
00 = Accessories and Options.

Legend 03 - Model description for units CRCE 050 to 150 for use with SIVE.

C R C E	**0 5 0**	**K**	**1**	**0**	**0**	**0**	**0**	**0 0 0**
1, 2, 3 4	5, 6, 7	8	9	10	11	12	13	14, 15,16

Digits 1, 2, 3 and 4 - Model
CRCE - Remote Condenser CRCE

Digits 5, 6 and 7 - Nominal Capacity
050 = 5.0 TR
075 = 7.5 TR
100 = 10 TR
125 = 12.5 TR
150 = 15 TR

Digit 8 - Power Supply and Command Voltage
3 = 220V / 60Hz / 3ph - Command 220V
K = 380 V / 60 Hz / 3ph - Command 220 V
4 = 440 V / 60 Hz / 3ph - Command 220 V
Q= 220V / 50 Hz / 3ph - Command 220 V
H = 380V / 50Hz / 3ph - Command 220V

Digit 9 - Number of Refrigerating Circuits

1 = 1 Refrigerating Circuit
2 = 2 Refrigerating Circuits

Digit 10 - Static Pressure and Filtering
0 = 0 mmca / No Filters
1 = 0 mmca / G1 3 Screens
2 = 0 mmca / G2 Glass Wool
3 = 2,5 mmca / No Filters
4 = 2,5 mmca / G1 3 Screens
5 = 2,5 mmca / G2 Glass Wool
6 = 5 mmca / No Filters
7 = 5 mmca / G1 3 Screens
8 = 5 mmca / G2 Glass Wool

Digit 11 - Tubing Configuration
0 = Standard
B = With Liquid Tank
D = With CTCDS

Digit 12 - Packing
0 = Standard Packing
1 = Special Packing

Digit 13 - Service Digit
A = Services

Digits 14, 15 and 16 - Accessories
According to specific accessory table, under request.

General Data

SAVE/SIVE/CRCB

Table 1 - General Data - Self Contained Diamond 200 to 400.

Model		SAVE / SIVE 200	SAVE / SIVE 250	SAVE / SIVE 300	SAVE / SIVE 350	SAVE 400
Nominal Cap. (1)	TR	20	25	30	35	40
Power Voltage	Volts	220 or 380 or 440 V				
Frequency	Hz	60 Hz				
Phase		Three-Phase - 3F				
Refrigerant		R-22 (Standard) / R-407C(2)(Optional)				
No. Circuits		2	2	2	2	2
Dimensions						
Lenght	mm	1880	1880	2470	2470	2470
Depth	mm	850	850	980	980	980
Height	mm	2000	2000	2000	2000	2000
Equipment Weight (3)						
Self Contained SAVE	kg	730	745	970	1030	1060
Self Contained SIVE	kg	600	668	800	860	-------
Compressor						
Type		Scroll				
Quantity		2	2	2	2	2
Capacity (4)		10	10	10 / 15	15	15 / 20
Evaporator Coil						
Rows		3	4	4	4	4
FPF (Fins per foot)		144	144	144	144	144
Finned type		Corrugated aluminum fins				
Finned face area	m^2	1,71	1,71	2,37	2,45	2,45
Evaporator Fan						
Quantity		2	2	2	2	2
Type		Centrifugal				
Diam. x Lenght	mm	381x 381	381x 381	457 x 486	457 x 486	457 x 486
Standard Option	HP	3,0	3,0	3,0	3,0	3,0
Option 1	HP	5,0	5,0	5,0	5,0	5,0
Option 2	HP	7,5	7,5	7,5	7,5	7,5
Option 3	HP	10,0	10,0	10,0	10,0	10,0
Option 4	HP	------	------	15,0	15,0	15,0
Minimum Air Flow	m^3/h	10800	10800	14400	14400	14400
Maximum Air Flow	m^3/h	19400	19400	27000	27000	27000

Water-Cooled Condenser (Shell&Tube) - SAVE						
Minimum Air Flow	m^3/h	5,5	6,8	8,2	9,5	11
Maximum Air Flow	m^3/h	16	20	23,8	27,8	31,8
Maximum Pressure Loss	mca	12	12	12	12	12

Remote (w/ SIVE) and Built-In (w/ SRVE) Air-Cooled Condenser CRCB						
Model		**CRCB050**	**CRCB075**	**CRCB100**	**CRCB125**	**CRCB150**
Nominal Cap. (1)	TR	5	7,5	10	12,5	15
Coil						
Rows		4	4	4	4	4
FPF (Fins per foot)		168	168	168	168	168
Finned type		Aletas de alumínio corrugadas				
Finned face area	m^2	0,54	0,83	0,99	1,38	1,72
Fan						
Quantity		1	1	2	2	2
Type		Centrifugal				
Diam. x Lenght	mm	321x 321	321x 321	270 x 270	321x 321	321x 321
Motor	HP	1	3	3	4	5
Air Flow	m^3/h	5450	8315	9935	13930	17320
Dimensions - Remote Condenser - CRCB						
Lenght	mm	987	1241	1341	1646	1646
Depth	mm	631	631	631	714	714
Height	mm	890	890	941	1018	1247
Net Weight	kg	93	124	139	180	212

Note:
(1) Capacity as per ARI 210.
(2) Refrigerant R-407C is not available to the line Self Contained Diamond - SAVE (Water-Cooled Condenser - Shell&Tube).
(3) Equipment weight refers to the Standard machine.

General Data

CRCE

Table 2 - General Data - Condensing Unit CRCE 050 to 150 for use w/ SIVE.

Model		050	075	100		125		150	
Nominal Cap. (1)	TR	5	7,5	10		12,5		15	
Lenght	mm	993	1217	1491		1712		1712	
Depth	mm	560	560	560		560		560	
Height	mm	1393	1494	1545		1620		1849	
Coil									
Rows		4	4	4		4		4	
FPF (Fins per foot)	ft	168	168	168		168		168	
Finned face area	m^2	0,55	0,83	0,99		1,39		1,72	
Fan Motor									
Quantity		1	1	2		2		2	
Motor	HP	1,5	3	4		4		5	
No. Phase		3	3	3		3		3	
Nominal Power	kW	1,22	2,23	2 x 2,93		2 x 2,93		2 x 3,54	
RLA (3)	A	4,14	7,32	2 x 9,28		2 x 9,28		2 x 11,61	
FLA (4)	A	5,18	9,15	2 x 11,6		2 x 11,6		2 x 14,51	
LRA (5)	A	17,85	60,45	98,6		98,6		125,06	
Rotation / No. Poles	RPM	1700 / 4	1710 / 4	1720 / 4		1720 / 4		1730 / 4	
Air Flow	m^3/h	5500	8250	9950		13770		15750	
Gauges									
Number of circuits		1	1	1	2	1	2	1	2
Liquid Line	pol.	1/2"	1/2"	5/8"	1/2"	5/8"	1/2"	7/8"	1/2"
Discharge Line	pol.	5/8"	3/4"	7/8"	5/8"	1 1/8"	C1: 3/4" C2: 5/8"	1 1/8"	3/4"
Equip.Weight (2)	kg	148	170	233	236	276	278	315	320

Note:
(1) Capacity as per ARI 210.
(2) Equipment weight refers to the Standard machine.
(3) RLA = Rated Load Amps (A);
(4) FLA = Full Load Amps (A);
(5) LRA = Locked Rotor Amps (A).

Filtering

The standard filtering is the electrostatic fabric filter, with the ABNT G0 filtering level.
Optionally, machines can be manufactured with other filtering levels, double filtering and double filtering using flat filter. The models without flat filter have two frames; a 8-mm-thick frame and a 1"-thick frame. Models with flat filter have two 2"-thick frames each.

The motors for each transmission option are listed in the general data tables (*page 6*) or in the performance tables of the transmission options associated to the standard filtering (ABNT G0), *pages 9 and 10*.
In this item, consider that in each air flow, the established rotation (RPM) allows the maximum external static pressure shown. For these charts, the air filtering option GO was the one considered.

For other filtering options, there will be a drop of the available external static pressure, corresponding to the difference of pressure between the desired option and the G0-filter pressure loss. The table below shows the pressure loss values for the many filtering options, for models with and without flat filter:

Table 03 - Pressure loss (mmca) with filtering

		WITHOUT FLAT FILTER		WITH FLAT FILTER - 2"		
		Filtering		Filter	Filter	Filter
Nominal Cap. (TR)	Air Flow (m^3/h)	G0	G1	G1+G3	G0+G3	G3
		Digit Model Number		Digit Model Number		
		1	2	D	G	H
20 to 25	10.800	1,3	2,5	6,4	5,2	3,9
	12.600	1,6	3,2	8,1	6,5	4,9
	14.400	2,1	3,9	9,9	8,1	6
	16.200	2,7	4,5	11,7	9,9	7,2
	18.000	3,5	5,2	13,5	11,8	8,3
	19.400	4	5,7	14,9	13,2	9,2
30 to 40	14.400	1,2	2,5	6,2	4,9	3,7
	16.200	1,4	2,9	7,3	5,8	4,4
	18.000	1,7	3,3	8,4	6,8	5,1
	19.800	2	3,4	9,3	7,9	5,9
	21600	2,4	4,2	10,9	9,1	6,7
	23.400	3	4,8	12,3	10,5	7,5
	25.200	3,5	5,2	13,5	11,8	8,3
	27.000	4	5,7	14,9	13,2	9,2

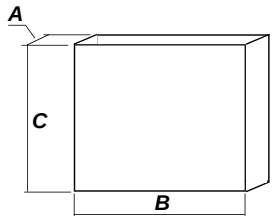
Note:
(1) Pressure loss unit : mmca
(2) Description of filters WITHOUT FLAT FILTER.
- Filter G0 = Washable electrostatic fabric filter adapted to a 8-mm-thick frame.
- Filter G1 = Washable metal filter with 5 1"-thick metal screen layers .
- Filter G3 = Throwaway 1"-thick glass wool filter .
(3) Description of filters WITH FLAT FILTER.
- Filter G1 = Washable filter with 3 2"-thick metal screen layers .
- Filter G2 = Washable filter with 5 2"-thick metal screen layers .
- Filter G3 = Throwaway 2"-thick glass wool filter.

Table 04 - Filter dimensions (without flat filter)

DIAMOND WITHOUT FLAT FILTER			
Model	**Filter**	**A x B x C (mm)**	**Qty.**
200	G0	8 x 565 x 780	4
250	G1	8 x 563 x 520	6
300	G0	8 x 565 x 717	6
350/400	G1	8 x 563 x 537	8

Table 05 - Filter dimensions (with flat filter)

DIAMOND WITH FLAT FILTER			
Model	**Filter**	**A x B x C (mm)**	**Qty.**
200 / 250	G0	8 x 565 x 780	4
	G1	8 x 563 x 520	6
	G3	50 x 530 x 565	6
300 350/400	G0	8 x 565 x 717	6
	G1	8 x 563 x 537	8
	G3	50 x 545 x 565	8



Transmission Options Performance

Transmission Options

Depending on the combination Flow X Static pressure, there are transmission options that can be used in machine models with nominal capacity of 20 to 40 TR.

In order to know which transmission option should be used, refer to the transmission options performance chart. The list of options is shown in table 06. As the use of 3 belts for 15 HP motors is required and it is impossible to use adjustable 3-channel sheaves, the options with 15 HP motors have fixed sheaves.

The following tables in this catalog show the transmission options performance for each machine.

Table 06 - Transmission options

Option	Motor Cap. (HP)	PM (mm)	PV (mm)	Range RPM
A	3,0	76 to 90	12"	441- 523
B	3,0	76 to 90	10"	533 - 631
C	3,0	125 to 159	16"	538 - 685
D	3,0	125 to 159	14"	620 - 788
E	5,0	125 to 159	16"	538 - 685
F	5,0	125 to 159	14"	620 - 788
G	5,0	125 to 159	11"	793 - 1009
H	7,5	125 to 159	9"	620 - 788
Y	7,5	125 to 159	14"	793 - 1009
J	7,5	125 to 159	11"	987 - 1256
K	10,0	125 to 159	9"	620 - 788
L	10,0	125 a 159	14"	793 - 1009
M	10,0	125 a 159	9"	987 - 1256
N	15,0	160 ext	14"	752
W	15,0	170 ext	14"	802
P	15,0	190 ext	14"	903
Q	15,0	200 ext	14"	953
R	15,0	210 ext]	14"	1003

PM = Adjustment range for nominal diameter of evaporator motor sheave (mm)
PV = Nominal diameter of fan sheave (mm)

Consider that in each air flow, the rpm established allows the maximum static pressure shown. For this chart, the static pressures available take into account the G0 filter option.

For other filtering options, there will be a drop in the static pressure available, corresponding to the difference between the pressure loss for the desired option and the pressure loss for the G0 air filter. In these cases, refer to table 03, *page 08.*

Opçã

A
B
C
D
E
F
G
H
Y
J
K
L
M
N
W
P
Q
R

Table 07 - Transmission option performance - SAVE/SIVE 200.

Option	Flow	External static pressure with air filter G0 (mmca)																									
		5		10		15		20		25		30		35		40		45		50		55		60		65		70	
	(m3/h)	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	10800	508	1,14	579	1,40	646	1,69	702	2,00	780	2,40	830	2,70														
	11400	544	1,36	612	1,66	677	1,99	740	2,33	801	2,68																
A / B	12000	578	1,62	643	1,93	706	2,27	767	2,62																		
C / D	12600	610	1,90	673	2,22	732	2,56																				
Motor	13200	641	2,18	701	2,52																						
3,0 HP	13800	670	2,50																								
	14400	697	2,82																								
	10800													900	3,00	930	3,40	990	3,80	1030	4,00	1095	4,30				
	12000									824	2,98	879	3,35	931	3,70	979	4,05	1020	4,40								
F / G	13200					758	2,88	814	3,25	867	3,64	918	4,03	967	4,44												
Motor	14400			753	3,18	806	3,55	858	3,93	907	4,33																
5,0 HP	15600	748	3,48	799	3,87	849	4,26																				
	16800	795	4,00	830	4,40																						
	18000	820	4,52																								
	10800																							1120	4,90	1180	5,20	1210	5,66
	12233																			1090	5,10	1115	5,36	1180	6,00	1210	6,30		
Y / J	13666													981	4,73	1028	5,15	1073	5,57	1118	5,99	1160	6,70						
Motor	15100									928	4,77	975	5,20	1020	5,65	1064	6,13	1108	6,63										
7,5 HP	16533					880	4,60	920	5,31	970	6,51																		
	17966	820	5,00	880	5,45	915	5,90	970	6,51																				
	19400	885	6,00	908	6,51																								
	14400																					1179	7,14	1215	7,74	1256	8,14		
	15233																	1111	6,73	1154	7,26	1197	7,82	1230	8,34				
M	16066															1086	6,84	1129	7,37	1171	7,93	1214	8,52	1256	8,94				
Motor	16900													1075	6,80	1105	7,18	1150	8,18	1195	8,75	1230	9,24						
10 HP	17733									1000	6,81	1050	7,50	1090	7,87	1120	8,60	1170	8,99										
	18566							985	6,84	1015	7,33	1060	7,94	1110	8,60	1140	9,10												
	19400			915	6,79	970	7,29	1005	7,84	1050	8,39	1090	8,91																

Transmission Options Performance

Table 08 - Transmission option performance -SAVE/SIVE 250.

Option	Flow	5		10		15		20		25		30		35		40		45		50		55		60		65		70	
	(m3/h)	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	10800	529	1,21	599	1,48	665	1,78	710	2,07	800	2,48																		
	11400	566	1,46	633	1,76	698	2,09	760	2,44																				
A / B	12000	602	1,73	666	2,05	728	2,40																						
C / D	12600	634	2,02	696	2,35																								
Motor	13200	667	2,32	725	2,67																								
3,0 HP	13800	696	2,66																										
	14400	724	2,73																										
	10800											850	2,73	905	3,00	960	3,29	1000	3,71	1050	4,00	1100	4,39						
	12000							788	2,75	845	3,11	898	3,48	948	3,83	995	4,10												
F / G	13200					782	3,04	836	3,41	888	3,80	939	4,20																
Motor	14400			779	3,36	831	3,73	882	4,12																				
5,0 HP	15600	776	3,69	826	4,08	875	4,48																						
	16800	815	4,65																										
	18000	840	4,72																										
	10800																							1140	4,82	1195	5,27	1225	5,62
	12233																	1045	4,60	1100	5,15	1140	5,51	1190	6,04	1230	6,47		
Y / J	13666											954	4,50	1001	4,91	1048	5,33	1093	5,75	1140	6,36	1180	6,82						
Motor	15100							905	4,56	952	4,98	997	5,42	1042	5,89	1086	6,37	1129	6,89										
7,5 HP	16533			855	4,66	905	5,10	945	5,50	1000	6,00	1025	6,48																
	17966	865	5,29	902	5,69	955	6,10	1000	6,76																				
	19400	900	6,40																										
	14400																			1156	6,86	1199	7,40	1240	7,80				
	15233																	1133	7,00	1176	7,55	1210	8,04	1260	8,42				
M	16066															1110	7,13	1153	7,68	1195	8,25	1230	8,74						
Motor	16900											1050	6,82	1090	7,36	1130	7,98	1175	8,40	1210	8,94								
10 HP	17733									1020	7,10	1075	7,61	1110	8,19	1150	8,60	1195	9,16										
	18566					980	6,89	1025	7,57	1060	7,98	1095	8,37	1130	8,96														
	19400			945	6,84	995	7,37	1040	7,99	1075	8,44	1105	8,94																

Table 09 - Transmission option performance - SAVE/SIVE 300/350 and SAVE400.

External static pressure with air filter G0 (mmca)

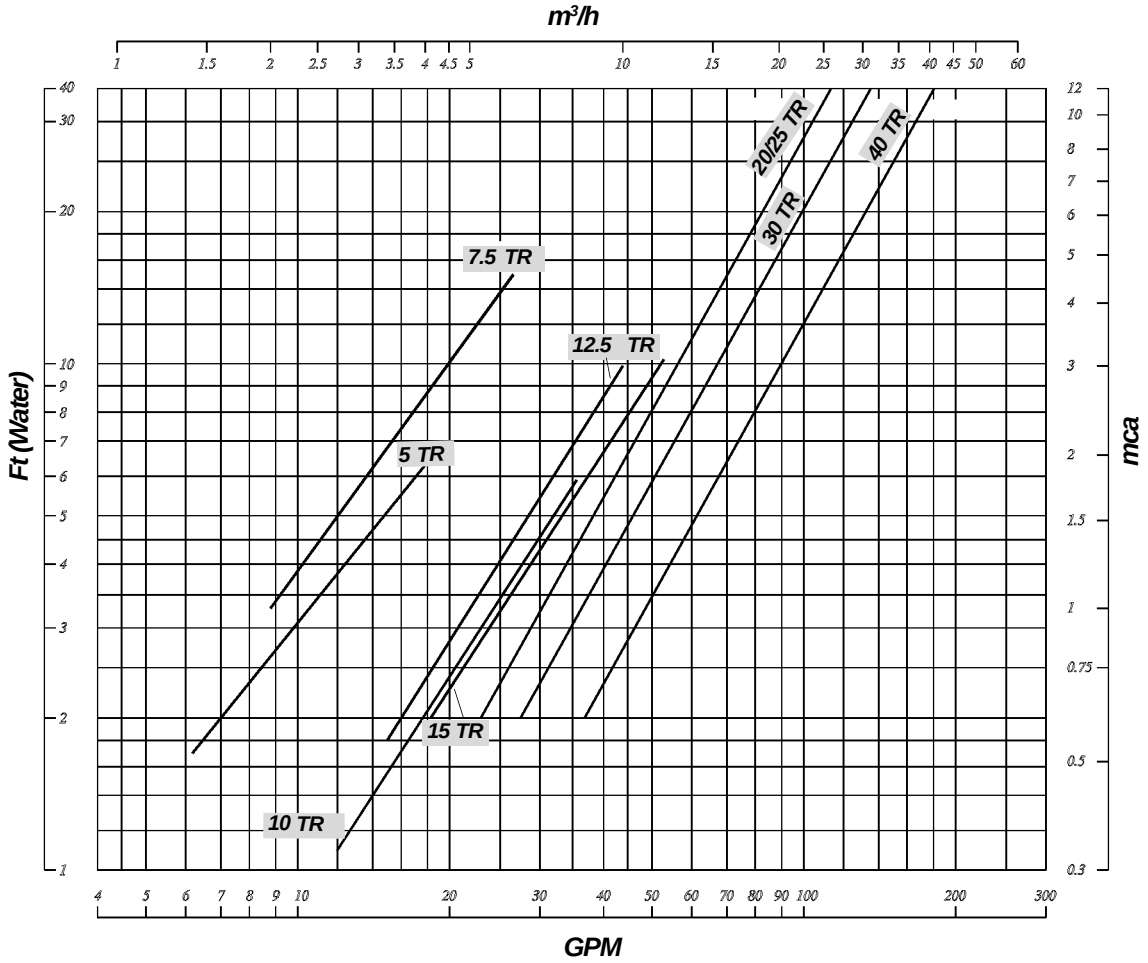
Option	Flow	5		10		15		20		25		30		35		40		45		50		55		60		65		70	
	(m3/h)	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	14400	496	1,96	549	2,30	598	2,64																						
	14700	504	2,05	555	2,40																								
A / B	15000	511	2,15	562	2,50																								
Motor	15300	518	2,25	5,69	2,60																								
3.0 HP	15600	524	2,34																										
	15900	532	2,46																										
	16200	538	2,56																										
	14400							644	2,97	687	3,31	727	3,66	766	4,03	803	4,41												
	15300			569	2,60	616	2,96	660	3,32	701	3,69	741	4,08	778	4,48														
E / F	16200			587	2,93	632	3,31	675	3,70	715	4,10																		
Motor	17100	559	2,91	606	3,31	650	3,71	691	4,13																				
5.0 HP	18000	580	3,30	625	3,72	667	4,15																						
	18900	602	3,75	645	4,20																								
	19800	621	4,21																										
	14400																	838	4,82	873	5,25	907	5,72	941	6,22	980	6,85		
	15900													786	4,80	822	5,24	856	5,71	890	6,20	923	6,71						
H / Y	17400									735	4,71	772	5,17	807	5,64	841	6,13	875	6,64										
Motor	18900					686	4,65	725	5,11	762	5,59	797	6,07	831	6,57														
7.5 HP	20400	634	4,55	675	5,04	714	5,52	751	6,01	787	6,51																		
	21900	668	5,49	707	6,00	744	6,51																						
	23400	700	6,00																										
	14400																											1005	7,41
	16500																					930	7,11	963	7,67	995	8,00	1020	8,67
K / L	18600															858	6,88	891	7,42	923	7,97	956	8,55	990	9,18	1020	9,63		
Motor	20700									794	6,72	828	7,23	860	7,75	892	8,29	924	8,86										
10 HP	22800					763	7,15	799	7,65	833	8,15	866	8,65	897	9,17														
	24900	740	7,64	780	8,29	805	9,07																						
	27000	795	9,30																										
	18600																											1050	10,42
N / W	20700																			954	9,45	985	10,07	1010	10,92	1030	11,65	1070	12,60
P / Q / R	22800															928	9,72	957	10,30	985	10,93	1010	12,30	1040	13,24	1075	14,10		
Motor	24900							845	9,80	885	10,42	905	11,20	930	11,65	970	12,33	995	14,00										
15 HP	27000			815	10,15	855	11,15	890	11,83	910	12,56	940	13,40	975	14,00														

Pressure Loss
Water-Cooled Condenser

Water-Cooled Condenser (SAVE)

The water-cooled condensing unit model SAVE uses a Shell & Tube condenser.
The hydraulic connection is supplied from factory on the right side but it can be changed in field, if necessary.
The water pressure drop curve is showed in the chart below:

Figure 01 - Shell & tube water-cooled condenser pressure loss (SAVE 20 to 40TR)



Cooling Capacity

SAVE

Table 10 - Cooling Capacity SAVE 200 (in thousands of kcal/h)

		Condenser Entering Air Temperature (ºC)																											
		24.0									29.5									35.0									
Air	TEAE	Evaporator Entering Air Temperature (ºC)																											
Flow	(BS)	16.0			19.5			23.0			16.0			19.5			23.0			16.0			19.5			23.0		
(m3/h)	(ºC)	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h
	24,0	57,4	44,9	12,3	64,2	35,4	13,5	71,5	25,6	14,8	55,6	44,0	12,2	62,1	34,5	13,4	69,2	24,7	14,7	53,6	43,1	12,2	59,9	33,5	13,3	66,8	23,8	14,6
10800	27,0	57,4	52,6	12,3	64,1	43,1	13,4	71,4	33,3	14,8	55,6	51,7	12,2	62,1	42,2	13,4	69,1	32,5	14,6	53,7	50,6	12,2	59,9	41,3	13,3	66,7	31,5	14,5
	29,5	58,2	58,0	12,4	64,1	49,5	13,4	71,3	39,7	14,8	56,6	56,6	12,4	62,0	48,6	13,3	69,1	38,9	14,6	55,0	55,0	12,4	59,8	47,7	13,3	66,7	37,9	14,5
	32,0	60,7	60,7	12,8	64,0	55,9	13,4	71,3	46,1	14,7	59,2	59,2	12,8	62,0	55,0	13,4	69,0	45,2	14,6	57,5	57,5	12,9	59,9	54,0	13,3	66,6	44,3	14,5
	24,0	59,6	49,4	12,7	66,5	37,9	13,9	74,0	26,3	15,2	57,7	48,5	12,6	64,4	37,0	13,8	71,6	25,4	15,1	55,5	47,5	12,5	62,0	36,1	13,7	69,0	24,5	14,9
13600	27,0	60,0	58,2	12,7	66,5	47,2	13,9	73,9	35,6	15,2	58,2	57,0	12,7	64,3	46,3	13,8	71,5	34,7	15,1	56,3	55,7	12,6	62,0	45,3	13,7	68,9	33,7	14,9
	29,5	62,2	62,2	13,2	66,4	54,9	13,9	73,8	43,2	15,2	60,6	60,6	13,1	64,2	54,0	13,8	71,4	42,3	15,1	58,8	58,8	13,1	61,9	53,0	13,7	68,9	41,4	14,9
	32,0	65,1	65,1	13,6	66,7	62,3	13,9	73,8	50,9	15,2	63,4	63,4	13,6	64,6	61,2	13,8	71,4	50,0	15,1	61,6	61,6	13,6	62,4	60,1	13,8	68,8	49,0	14,9
	24,0	61,5	54,3	13,0	68,5	40,7	14,2	76,0	27,0	15,6	59,5	53,3	12,9	66,2	39,8	14,1	73,5	26,1	15,4	57,3	52,3	12,8	63,7	38,8	14,0	70,8	25,2	15,3
17000	27,0	62,9	62,9	13,2	68,5	51,7	14,2	76,0	38,0	15,6	61,2	61,2	13,2	66,2	50,8	14,1	73,5	37,1	15,4	59,3	59,3	13,2	63,7	49,8	14,0	70,7	36,1	15,3
	29,5	66,0	66,0	13,8	68,5	60,8	14,2	75,9	47,1	15,6	64,2	64,2	13,8	66,2	59,8	14,1	73,4	46,2	15,4	62,3	62,3	13,7	63,8	58,7	14,0	70,7	45,2	15,3
	32,0	69,1	69,1	14,4	69,4	68,5	14,4	75,9	56,1	15,6	67,3	67,3	14,3	67,4	67,0	14,3	73,3	55,2	15,4	65,3	65,3	14,3	65,3	65,3	14,3	70,6	54,3	15,2
	24,0	62,6	57,4	13,2	69,6	42,5	14,4	77,2	27,5	15,8	60,5	56,4	13,1	67,2	41,6	14,3	74,5	26,6	15,6	58,3	55,2	13,0	64,7	40,6	14,2	71,8	25,6	15,4
19400	27,0	64,9	64,9	13,6	69,5	54,7	14,4	77,1	39,6	15,8	63,1	63,1	13,6	67,2	53,7	14,3	74,5	38,7	15,6	61,1	61,1	13,5	64,6	52,7	14,1	71,7	37,7	15,4
	29,5	68,2	68,2	14,2	69,7	64,5	14,5	77,0	49,6	15,8	66,3	66,3	14,1	67,4	63,4	14,3	74,4	48,7	15,6	64,2	64,2	14,1	65,0	62,2	14,2	71,6	47,7	15,4
	32,0	71,4	71,4	14,8	71,4	71,4	14,8	77,0	59,6	15,8	69,5	69,5	14,7	69,4	69,4	14,7	74,4	58,7	15,6	67,4	67,4	14,6	67,3	67,3	14,6	71,6	57,7	15,4

Table 11 - Cooling Capacity SAVE 250 (in thousands of kcal/h)

		Condenser Entering Air Temperature (ºC)																											
		24.0									29.5									35.0									
Air	TEAE	Evaporator Entering Air Temperature (ºC)																											
Flow	(BS)	16.0			19.5			23.0			16.0			19.5			23.0			16.0			19.5			23.0		
(m3/h)	(ºC)	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h
	24,0	63,0	49,7	12,7	70,4	38,6	14,0	78,3	27,4	15,4	60,9	48,7	12,6	68,0	37,6	13,9	75,7	26,5	15,2	58,6	47,6	12,6	65,5	36,6	13,8	73,0	25,5	15,1
10800	27,0	63,2	57,5	12,8	70,3	46,6	14,0	78,3	35,4	15,3	61,2	56,4	12,7	68,0	45,6	13,9	75,7	34,4	15,2	59,0	55,2	12,6	65,4	44,5	13,8	72,9	33,4	15,1
	29,5	64,8	63,7	13,1	70,2	55,0	14,0	78,2	43,7	15,3	63,1	61,9	13,0	67,9	54,0	13,9	75,6	42,8	15,2	61,2	60,1	13,0	65,4	52,9	13,8	72,8	41,7	15,1
	32,0	67,8	66,6	13,6	70,4	62,2	14,0	78,1	51,1	15,3	66,0	64,8	13,6	68,1	61,2	13,9	75,6	50,1	15,2	64,1	62,9	13,5	65,7	60,0	13,8	72,8	49,1	15,1
	24,0	65,4	55,1	13,1	72,9	41,7	14,4	81,0	28,2	15,8	63,2	54,1	13,1	70,4	40,7	14,3	78,2	27,3	15,6	60,8	52,9	13,0	67,7	39,7	14,2	75,3	26,3	15,5
13600	27,0	66,2	63,8	14,3	72,8	51,4	14,4	80,9	37,8	15,8	64,1	62,5	13,2	70,3	50,3	14,3	78,2	36,8	15,6	62,0	60,8	13,2	67,6	49,3	14,1	75,2	35,8	15,5
	29,5	69,5	68,2	13,8	72,9	61,5	14,4	80,9	48,0	15,8	67,6	66,3	13,8	70,4	60,4	14,3	78,1	47,0	15,6	65,4	64,3	13,8	67,8	59,3	14,2	75,1	46,0	15,4
	32,0	72,7	71,4	14,4	73,6	69,7	14,6	80,8	56,9	15,8	70,8	69,5	14,3	71,2	68,4	14,4	78,0	55,9	15,6	68,6	67,4	14,3	68,8	66,9	14,3	75,1	54,9	15,4
	24,0	67,6	61,0	13,5	75,0	45,2	14,8	83,2	29,1	16,2	65,3	59,8	13,4	72,3	44,2	14,6	80,2	28,1	16,0	62,8	58,5	13,3	69,5	43,1	14,5	77,1	27,1	15,8
17000	27,0	69,7	68,5	13,9	74,9	56,7	14,8	83,1	40,6	16,2	67,7	66,5	13,8	72,3	55,7	14,6	80,2	39,6	16,0	65,5	64,3	13,8	69,5	54,6	14,5	77,1	38,6	15,8
	29,5	73,7	72,4	14,6	75,3	68,4	14,8	83,0	52,7	16,2	71,6	70,3	14,5	72,8	67,3	14,7	80,1	51,7	16,0	69,3	68,0	14,4	70,1	65,9	14,6	77,0	50,7	15,8
	32,0	77,3	75,9	15,2	77,2	75,8	15,2	83,0	63,4	16,2	75,1	73,7	15,1	75,0	73,7	15,1	80,1	62,4	16,0	72,7	71,4	15,0	72,7	71,4	15,0	77,0	61,3	15,8
	24,0	68,9	64,5	13,8	76,1	47,4	15,0	84,3	29,6	16,4	66,6	63,2	13,6	73,3	46,4	14,8	81,3	28,7	16,2	64,1	61,7	13,5	70,4	45,3	14,6	78,1	27,6	16,0
19400	27,0	71,9	70,6	14,3	76,0	60,2	15,0	84,2	42,4	16,4	69,8	68,5	14,2	73,3	59,2	14,8	81,2	41,4	16,2	67,5	66,2	14,1	70,4	58,1	14,6	78,1	40,4	15,9
	29,5	76,1	74,7	15,0	76,8	72,6	15,1	84,2	55,8	16,4	73,8	72,5	14,9	74,3	71,2	15,0	81,2	54,9	16,1	71,4	70,1	14,8	71,6	69,6	14,8	78,0	53,8	15,9
	32,0	79,8	78,3	15,6	79,8	78,3	15,6	84,2	67,7	16,4	77,5	76,1	15,5	77,4	76,0	15,5	81,2	66,6	16,1	75,0	73,6	15,4	75,0	73,6	15,4	78,1	65,5	16,0

Note:
(1) TEAE = Evaporator entering air temperature
(2) BS =Dry Bulb
(3) BU = Wet Bulb
(4) VAC = Condenser Air Flow (m^3/h)
(5) The values indicated refer to a " Delta T" of water in condenser of 5.5º C. For a different " Delta T", correct the values according to the correction factor table on the right.
(6) Capacities are gross capacities and do not include the effect of heat from the evaporator motor . For net capacities, substract this effect.
(7) Heat generated by evaporator motor can be approx. obtained according to the formula BHP x 0,88 = MKcal/h
(8) Total gross and sensible capacities in MKcal/h.
(9) Capacity according to ARI 210.

Delta T Water (ºC)	Correction factors		
	VAC (m3/h)	Total cap. (kcal/h)	Sens.cap. (kcal/h)
2.5	2.21	101	101
4.0	139	101	101
5.5	100	100	100
7.0	0.79	0.99	100
8.5	0.66	0.99	100
10.0	0.56	0.98	0.99

Cooling Capacity

SAVE

Table 12 - Cooling Capacity SAVE 300 (in thousands of kcal/h)

		Condenser Entering Air Temperature (ºC)																											
		24.0									29.5									35.0									
Air	TEAE	Evaporator Entering Air Temperature (ºC)																											
Flow	(BS)	16.0			19.5			23.0			16.0			19.5			23.0			16.0			19.5			23.0		
(m3/h)	(ºC)	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h
	24,0	78,6	62,6	16,5	88,1	48,6	18,2	98,5	34,4	20,1	76,0	61,4	16,3	85,3	47,4	18,0	95,4	33,3	19,8	73,3	60,1	16,2	82,3	46,2	17,8	92,1	32,1	19,6
14400	27,0	79,1	73,6	16,6	88,0	60,0	18,2	98,4	45,8	20,0	76,7	72,2	16,4	85,2	58,8	18,0	95,3	44,7	19,8	74,1	70,7	16,3	82,2	57,5	17,8	92,0	43,5	19,6
	29,5	81,4	79,8	17,0	88,0	69,5	18,2	98,4	55,3	20,0	79,3	77,8	16,9	85,1	68,3	18,0	95,3	54,1	19,8	77,1	75,6	16,9	82,2	67,0	17,8	91,9	52,9	19,5
	32,0	85,3	83,7	17,7	88,3	78,7	18,2	98,3	64,7	20,0	83,1	81,5	17,6	85,6	77,4	18,0	95,2	63,5	19,8	80,8	79,3	17,6	82,7	76,0	17,9	91,8	62,3	19,5
	24,0	83,2	73,4	17,3	92,8	54,9	19,0	103,4	36,1	20,9	80,4	72,1	17,1	89,7	53,7	18,8	100,0	34,9	20,6	77,5	70,6	16,9	86,4	52,4	18,6	96,4	33,7	20,4
20400	27,0	85,9	84,2	17,8	92,7	70,1	19,0	103,4	51,3	20,9	83,5	81,9	17,7	89,6	68,9	18,8	99,9	50,1	20,6	81,0	79,4	17,6	86,3	67,6	18,6	96,3	48,9	20,3
	29,5	90,3	88,6	18,5	93,1	82,5	19,1	103,3	63,9	20,9	87,8	86,1	18,5	90,1	81,1	18,8	99,9	67,9	20,6	85,2	83,6	18,4	86,9	79,6	18,6	96,2	61,5	20,3
	32,0	94,8	92,9	19,4	94,9	92,6	19,4	103,2	76,4	20,9	92,2	90,5	19,2	92,2	90,4	19,2	99,8	75,2	20,6	89,5	87,8	19,2	89,5	87,8	19,1	96,2	74,0	20,3
	24,0	85,1	78,6	17,6	94,5	58,1	19,3	105,3	36,9	21,2	82,3	77,1	17,4	91,3	56,9	19,1	101,7	35,7	20,9	79,4	75,4	17,3	87,9	55,6	18,8	98,0	34,5	20,7
23800	27,0	89,3	87,6	18,4	94,5	75,4	19,3	105,2	54,1	21,2	86,8	85,1	18,3	91,3	74,1	19,1	101,6	52,9	20,9	84,1	82,5	18,1	87,9	72,8	18,9	97,9	51,7	20,6
	29,5	94,0	92,2	19,2	95,3	88,7	19,5	105,1	68,4	21,2	91,4	89,6	19,1	92,3	87,1	19,3	101,6	67,2	20,9	88,6	86,9	19,0	89,1	85,4	19,0	97,8	65,9	20,6
	32,0	98,7	96,8	20,1	98,7	96,8	20,1	105,1	82,5	21,2	96,0	94,2	19,9	96,0	94,2	19,9	101,6	81,3	20,9	93,1	91,4	19,8	93,1	91,3	19,8	97,9	80,0	20,6
	24,0	86,8	82,8	17,9	95,8	61,0	19,6	106,6	37,6	21,5	84,0	81,1	17,8	92,5	59,7	19,3	103,1	36,4	21,2	81,1	79,0	17,6	89,0	58,5	19,0	99,1	35,2	20,8
27000	27,0	91,9	90,2	18,9	95,8	80,0	19,6	106,5	56,6	21,5	89,3	87,6	18,7	92,6	78,6	19,3	102,9	55,4	21,1	86,5	84,9	18,6	89,2	77,2	19,1	99,0	54,1	20,8
	29,5	96,8	95,0	19,7	97,3	93,6	19,8	106,4	72,9	21,5	94,1	92,3	19,6	94,3	91,7	19,6	102,8	71,1	21,1	91,2	89,5	19,4	91,2	89,4	19,4	99,0	69,9	20,8
	32,0	101,8	99,9	20,6	101,7	99,8	20,6	106,5	87,9	21,5	99,0	97,1	20,4	98,9	97,0	20,4	103,0	86,6	21,2	95,9	94,1	20,3	95,9	94,1	20,3	99,2	85,2	20,9

Table 13 - Cooling Capacity SAVE 350 (in thousands of kcal/h)

		Condenser Entering Air Temperature (ºC)																											
		24.0									29.5									35.0									
Air	TEAE	Evaporator Entering Air Temperature (ºC)																											
Flow	(BS)	16.0			19.5			23.0			16.0			19.5			23.0			16.0			19.5			23.0		
(m3/h)	(ºC)	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h
	24,0	88,7	67,5	18,8	99,5	53,5	20,7	111,3	39,2	22,8	85,8	66,1	18,7	96,4	52,1	20,6	107,8	37,9	22,6	82,8	64,6	18,5	93,0	50,7	20,4	104,1	36,5	22,4
14400	27,0	88,8	78,9	18,8	99,4	64,9	20,7	111,2	50,6	22,8	86,0	77,4	18,7	96,3	63,5	20,5	107,7	49,3	22,6	83,1	75,8	18,6	92,9	62,1	20,4	104,0	47,9	22,4
	29,5	90,0	87,3	19,0	99,4	74,4	20,7	111,1	60,1	22,8	87,4	85,4	18,9	96,2	73,0	20,5	107,6	58,8	22,6	84,8	83,2	18,9	92,8	71,6	20,4	103,9	57,4	22,3
	32,0	93,7	91,9	19,7	99,4	83,9	20,7	111,0	69,6	22,8	91,3	89,6	19,6	96,3	82,5	20,5	107,5	68,2	22,6	88,8	87,1	19,6	93,0	81,0	20,4	103,8	66,8	22,3
	24,0	94,4	78,8	19,8	105,5	60,0	21,8	117,7	41,0	23,9	91,2	77,2	19,6	102,0	58,6	21,6	113,8	39,6	23,7	87,9	75,7	19,5	98,3	57,1	21,3	109,7	38,2	23,4
20400	27,0	95,8	92,6	20,1	105,5	75,2	21,8	117,6	56,2	24,0	92,9	90,5	19,9	101,9	73,8	21,6	113,7	54,9	23,7	89,9	88,2	19,8	98,2	72,3	21,3	109,6	53,4	23,4
	29,5	100,0	98,1	20,8	105,5	87,9	21,8	117,5	68,9	23,9	97,3	95,5	20,7	102,0	86,4	21,6	113,6	67,5	23,6	94,5	92,7	20,6	98,4	84,9	21,4	109,5	66,1	23,4
	32,0	104,8	102,8	21,7	106,4	99,6	21,9	117,4	81,5	23,9	102,1	100,1	21,6	103,1	97,9	21,8	113,5	80,1	23,6	99,1	97,2	21,5	99,7	96,0	21,6	109,4	78,6	23,3
	24,0	96,7	84,4	20,2	107,8	63,3	22,2	120,0	41,8	24,4	93,4	82,8	20,0	104,1	61,8	21,9	116,0	40,5	24,1	90,0	81,1	19,8	100,3	60,3	21,7	111,7	39,0	23,7
23800	27,0	99,4	97,5	20,7	107,7	80,6	22,2	119,9	59,1	24,4	96,6	94,8	20,6	104,0	79,1	21,9	115,9	57,7	24,0	93,6	91,8	20,5	100,2	77,6	21,7	111,6	56,2	23,7
	29,5	104,4	102,4	21,6	108,0	94,7	22,3	119,8	73,4	24,3	101,5	99,6	21,5	104,4	93,1	22,0	115,8	72,0	24,0	98,5	96,6	21,4	100,7	91,4	21,8	111,6	70,5	23,7
	32,0	109,5	107,4	22,5	109,8	106,9	22,6	119,8	87,6	24,4	106,5	104,5	22,4	106,6	104,3	22,4	115,7	86,2	24,0	103,4	101,4	22,3	103,4	101,4	22,2	111,5	84,8	23,7
	24,0	98,5	89,2	20,6	109,5	66,2	22,5	121,8	42,6	24,7	95,1	87,5	20,3	105,7	64,7	22,2	117,6	41,2	24,4	91,7	85,7	20,2	101,7	63,2	21,9	113,2	39,7	24,0
27000	27,0	102,6	100,6	21,3	109,4	85,3	22,5	121,7	61,6	24,7	99,6	97,8	21,1	105,6	83,8	22,2	117,5	60,2	24,3	96,5	94,7	21,0	101,7	82,3	21,9	113,2	58,8	24,0
	29,5	107,9	105,8	22,2	110,0	100,4	22,6	121,6	77,4	24,7	104,8	102,8	22,1	106,4	98,7	22,4	117,4	76,0	24,3	101,6	99,7	21,9	102,7	96,7	22,1	113,1	74,5	23,9
	32,0	113,2	111,0	23,2	113,1	111,0	23,2	121,5	93,1	24,7	110,0	108,0	23,0	110,0	107,9	22,9	117,4	91,7	24,3	106,7	104,7	22,9	106,7	104,7	22,8	113,1	90,2	23,9

Note:
(1) TEAE = Evaporator entering air temperature
(2) BS =Dry Bulb
(3) BU = Wet Bulb
(4) VAC = Condenser Air Flow (m^3/h)
(5) The values indicated refer to a " Delta T" of water in condenser of 5.5º C. For a different " Delta T", correct the values according to the correction factor table on the right.
(6) Capacities are gross capacities and do not include the effect of heat from the evaporator motor . For net capacities, substract this effect.
(7) Heat generated by evaporator motor can be approx. obtained according to the formula BHP x 0,88 = MKcal/h
(8) Total gross and sensible capacities in MKcal/h.
(9) Capacity according to ARI 210.

Delta T Water (ºC)	Correction factors		
	VAC (m3/h)	Total cap. (kcal/h)	Sens.cap. (kcal/h)
2.5	2.21	101	101
4.0	139	101	101
5.5	100	100	100
7.0	0.79	0.99	100
8.5	0.66	0.99	100
10.0	0.56	0.98	0.99

Cooling Capacity

SAVE

Table 14 - Cooling Capacity SAVE 400 (in thousands of kcal/h)

		Condenser Entering Air Temperature (ºC)																											
		24.0									29.5									35.0									
Air	TEAE	Evaporator Entering Air Temperature (ºC)																											
Flow	(BS)	16.0			19.5			23.0			16.0			19.5			23.0			16.0			19.5			23.0		
(m3/h)	(ºC)	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h	Total Cap.	Sens. Cap.	VAC m3/h
	24,0	97,8	72,1	20,9	109,7	58,0	23,1	122,7	43,7	25,4	94,9	70,6	20,9	106,4	56,6	22,9	119,1	42,3	25,2	91,7	69,0	20,8	102,9	55,0	22,8	115,2	40,8	25,0
14400	27,0	97,8	83,6	20,9	109,6	69,5	23,1	122,6	55,2	25,4	94,9	82,1	20,9	106,3	68,0	22,9	119,0	53,7	25,2	91,8	80,4	20,8	102,8	66,5	22,8	115,1	52,2	25,0
	29,5	98,5	92,7	21,1	109,5	79,1	23,1	122,5	64,7	25,4	95,7	91,0	20,9	106,3	77,6	22,9	118,9	63,2	25,2	92,7	89,1	20,9	102,7	76,0	22,8	115,0	61,7	24,9
	32,0	101,1	99,2	21,5	109,5	88,6	23,0	122,4	74,1	25,3	98,7	96,8	21,5	106,2	87,1	22,9	118,8	72,7	25,1	96,1	94,2	21,6	102,8	85,4	22,8	114,9	71,1	24,9
	24,0	104,7	83,6	22,2	117,1	64,7	24,4	130,6	45,6	26,8	101,4	82,0	22,0	113,4	63,2	24,2	126,5	44,2	26,5	97,8	80,4	21,9	109,5	61,6	24,0	122,1	42,6	26,3
20400	27,0	105,4	98,4	22,3	117,0	80,1	24,4	130,4	60,9	26,8	102,3	96,6	22,2	113,3	78,5	24,2	126,4	59,4	26,5	98,9	94,5	22,1	109,4	76,9	24,0	122,0	57,8	26,3
	29,5	108,6	106,6	22,8	116,9	92,8	24,4	130,4	73,6	26,8	105,9	103,9	22,8	113,3	91,2	24,2	126,3	72,1	26,5	102,9	100,9	22,8	109,4	89,5	24,0	121,9	70,5	26,2
	32,0	113,7	111,5	23,8	117,4	105,1	24,4	130,3	86,2	26,7	110,9	108,8	23,7	113,9	103,4	24,3	126,2	84,7	26,5	107,8	105,7	23,7	110,1	101,5	24,1	121,8	83,1	26,2
	24,0	107,3	89,4	22,6	119,9	68,1	24,9	133,5	46,5	27,3	103,9	87,8	22,5	116,0	66,6	24,6	129,3	45,0	27,0	100,2	86,1	22,3	111,9	64,9	24,4	124,7	43,5	26,7
23800	27,0	108,9	105,0	22,9	119,8	85,4	24,9	133,4	63,8	27,3	105,8	102,8	22,8	115,9	83,9	24,6	129,1	62,3	26,9	102,5	100,1	22,7	111,8	82,2	24,4	124,6	60,7	26,7
	29,5	113,7	111,5	23,8	119,8	99,7	24,9	133,3	78,1	27,3	110,7	108,6	23,7	116,0	98,2	24,6	129,0	76,6	26,9	107,5	105,5	23,6	112,0	96,4	24,4	124,5	75,0	26,7
	32,0	119,0	116,8	24,7	120,9	113,0	25,0	133,2	92,4	27,3	116,0	113,8	24,6	117,3	111,1	24,9	128,9	90,9	26,9	112,7	110,6	24,6	113,5	108,9	24,7	124,4	89,3	26,7
	24,0	109,4	94,5	23,0	122,0	71,1	25,3	135,7	47,3	27,7	105,9	92,8	22,8	118,0	69,5	25,0	131,3	45,8	27,4	102,1	91,0	22,7	113,7	67,8	24,8	126,6	44,2	27,1
27000	27,0	112,2	109,6	23,5	121,9	90,2	25,3	135,6	66,4	27,7	109,0	106,9	23,4	117,9	88,6	24,9	131,2	64,9	27,3	105,7	103,7	23,3	113,6	86,9	24,7	126,5	63,3	27,1
	29,5	117,6	115,4	24,5	122,1	105,8	25,3	135,5	82,2	27,7	114,5	112,3	24,4	118,2	104,1	25,0	131,1	80,7	27,3	111,2	109,0	24,3	114,1	102,3	24,8	126,4	79,1	27,0
	32,0	123,3	120,9	25,5	123,9	119,3	25,6	135,4	98,0	27,7	120,1	117,8	25,3	120,4	116,9	25,4	131,0	96,4	27,3	116,6	114,4	25,3	116,7	114,0	25,3	126,3	94,8	27,0

Note:
(1) TEAE = Evaporator entering air temperature
(2) BS =Dry Bulb
(3) BU = Wet Bulb
(4) VAC = Condenser Air Flow (m^3/h)
(5) The values indicated refer to a " Delta T" of water in condenser of 5.5º C. For a different " Delta T", correct the values according to the correction factor table on the right.
(6) Capacities are gross capacities and do not include the effect of heat from the evaporator motor . For net capacities, substract this effect.
(7) Heat generated by evaporator motor can be approx. obtained according to the formula BHP x 0,88 = MKcal/h
(8) Total gross and sensible capacities in MKcal/h.
(9) Capacity according to ARI 210.

Delta T Water (ºC)	Correction factors		
	VAC (m3/h)	Total cap. (kcal/h)	Sens.cap. (kcal/h)
2.5	2.21	101	101
4.0	139	101	101
5.5	100	100	100
7.0	0.79	0.99	100
8.5	0.66	0.99	100
10.0	0.56	0.98	0.99

Cooling Capacity

SIVE w/CRCB

Table 15 - Cooling Capacity SIVE 200 w/ 2x CRCB 100 (in thousands of kcal/h)

		Condenser Entering Air Temperature (ºC)																					
		29.5						35.0						40.5						46.0			
Air	TEAE	Evaporator Entering Air Temperature - BU (ºC)																					
Flow	(BS)	16.0		19.5		23.0		16.0		19.5		23.0		16.0		19.5		23.0		16.0		19.5		23.0	
(m3/h)	(ºC)	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.
	24.0	52,8	41,3	58,8	32,4	65,3	23,4	50,7	40,2	56,4	31,4	62,6	22,4	48,4	39,1	53,8	30,2	59,7	21,3	45,8	37,9	51,0	29,1	56,6	20,1
10800	27.0	52,8	48,4	58,8	39,5	65,2	30,5	50,7	47,3	56,4	38,5	62,5	29,4	48,4	46,0	53,8	37,4	59,6	28,3	46,0	44,6	51,0	36,1	56,5	27,2
	29.5	53,4	53,3	58,7	45,4	65,1	36,3	51,6	51,6	56,3	44,3	62,5	35,3	49,7	49,7	53,8	43,2	59,6	34,2	47,6	47,6	50,9	42,0	56,5	33,0
	32.0	55,7	55,7	58,7	51,3	65,1	42,2	53,9	53,9	56,3	50,2	62,4	41,1	51,9	51,9	53,7	49,0	59,5	40,0	49,8	49,8	51,0	47,7	56,4	38,9
	24.0	54,8	45,3	60,9	34,7	67,4	23,9	52,5	44,2	58,3	33,6	64,5	22,9	50,0	43,0	55,5	32,5	61,4	21,8	47,3	41,8	52,5	31,3	58,1	20,7
13600	27.0	55,0	53,4	60,8	43,2	67,3	32,4	52,9	52,0	58,3	42,1	64,5	31,4	50,6	50,4	55,5	40,9	61,4	30,2	48,3	48,3	52,5	39,7	58,1	29,1
	29.5	57,0	57,0	60,8	50,2	67,2	39,4	55,0	55,0	58,2	49,1	64,4	38,4	52,9	52,9	55,5	47,9	61,3	37,3	50,6	50,6	52,5	46,7	58,0	36,1
	32.0	59,5	59,5	60,9	57,0	67,2	46,4	57,5	57,5	58,4	55,8	64,4	45,3	55,3	55,3	55,8	54,3	61,3	44,2	52,9	52,9	53,1	52,6	58,0	43,0
	24.0	56,4	49,6	62,6	37,1	69,1	24,6	54,0	48,5	59,9	36,1	66,1	23,5	51,4	47,3	57,0	34,9	62,9	22,4	48,6	45,9	53,8	33,7	59,4	21,2
17000	27.0	57,5	57,5	62,5	47,1	69,1	34,5	55,5	55,5	59,8	46,0	66,0	33,5	53,2	53,2	56,9	44,9	62,8	32,3	50,8	50,8	53,8	43,6	59,4	31,2
	29.5	60,2	60,2	62,5	55,4	69,0	42,8	58,1	58,1	59,8	54,2	66,0	41,7	55,8	55,8	57,0	53,0	62,8	40,6	53,3	53,3	54,0	51,5	59,3	39,4
	32.0	63,0	63,0	63,2	62,5	69,0	51,0	60,8	60,8	60,8	60,7	65,9	49,9	58,4	58,4	58,4	58,4	62,7	48,8	55,8	55,8	55,8	55,8	59,3	47,6
	24.0	57,3	52,4	63,5	38,7	70,0	24,9	54,9	51,2	60,7	37,6	66,9	23,9	52,2	49,8	57,7	36,5	63,6	22,8	49,5	48,2	54,5	35,2	60,1	21,6
19400	27.0	59,3	59,3	63,4	49,7	70,0	35,9	57,1	57,1	60,6	48,6	66,9	34,8	54,8	54,8	57,7	47,4	63,6	33,7	52,2	52,2	54,4	46,2	60,0	32,5
	29.5	62,1	62,1	63,5	58,6	69,9	45,0	59,9	59,9	60,8	57,4	66,8	43,9	57,4	57,4	57,9	56,0	63,5	42,8	54,8	54,8	54,9	54,2	60,0	41,6
	32.0	64,9	64,9	64,9	64,9	69,9	54,0	62,6	62,6	62,6	62,6	66,8	52,9	60,1	60,1	60,1	60,1	63,5	51,8	57,4	57,4	57,3	57,3	60,0	50,6

Table 16 - Cooling Capacity SIVE 250 w/ 2 x CRCB 125 (in thousands of kcal/h)

		Condenser Entering Air Temperature (ºC)																					
		29.5						35.0						40.5						46.0			
Air	TEAE	Evaporator Entering Air Temperature - BU (ºC)																					
Flow	(BS)	16.0		19.5		23.0		16.0		19.5		23.0		16.0		19.5		23.0		16.0		19.5		23.0	
(m3/h)	(ºC)	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.
	24.0	60,7	47,7	67,8	37,1	75,3	26,4	58,4	46,6	65,2	36,0	72,5	25,4	55,9	45,4	62,4	34,9	69,4	24,2	53,2	44,1	59,4	33,7	66,0	23,0
10800	27.0	60,9	56,0	67,7	45,6	75,3	34,9	58,6	54,8	65,1	44,5	72,4	33,8	56,2	53,5	62,3	43,4	69,3	32,7	53,7	51,9	59,4	42,1	66,0	31,5
	29.5	62,2	61,1	67,7	52,7	75,2	41,9	60,3	59,2	65,1	51,6	72,3	40,9	58,2	57,2	62,3	50,4	69,3	39,7	56,0	55,0	59,3	49,1	65,9	38,5
	32.0	65,0	63,8	67,7	59,6	75,2	48,9	63,1	61,9	65,2	58,5	72,3	47,8	60,9	59,8	62,5	57,2	69,2	46,7	58,6	57,5	59,6	55,8	65,9	45,5
	24.0	63,0	52,7	70,2	40,0	77,8	27,1	60,5	51,6	67,4	38,9	74,8	26,1	57,9	50,3	64,4	37,7	71,5	24,9	55,0	49,0	61,2	36,5	68,0	23,8
13600	27.0	63,8	61,9	70,1	50,2	77,8	37,4	61,5	60,3	67,3	49,1	74,7	36,3	59,2	58,2	64,4	47,9	71,4	35,1	56,8	55,8	61,2	46,7	67,9	33,9
	29.5	66,6	65,4	70,1	58,7	77,7	45,8	64,4	63,3	67,3	57,6	74,7	44,7	62,1	61,0	64,4	56,3	71,4	43,6	59,6	58,6	61,3	55,0	67,9	42,4
	32.0	69,7	68,4	70,6	66,6	77,6	54,2	67,5	66,3	68,0	65,2	74,6	53,2	65,1	63,9	65,3	63,5	71,3	52,0	62,5	61,4	62,5	61,4	67,8	50,8
	24.0	65,0	58,1	72,1	43,1	79,9	27,9	62,4	56,9	69,2	42,0	76,6	26,8	59,7	55,5	66,1	40,8	73,2	25,7	56,8	53,9	62,7	39,5	69,5	24,5
17000	27.0	67,2	66,0	72,1	55,3	79,8	40,1	65,0	63,8	69,1	54,2	76,6	39,0	62,5	61,4	66,0	53,0	73,1	37,8	59,9	58,8	62,7	51,7	69,4	36,6
	29.5	70,5	69,3	72,3	65,2	79,8	50,2	68,2	67,0	69,4	63,9	76,5	49,1	65,7	64,5	66,5	62,4	73,1	47,9	62,9	61,8	63,3	60,8	69,4	46,7
	32.0	73,9	72,5	73,8	72,5	79,7	60,2	71,5	70,2	71,4	70,2	76,5	59,1	68,8	67,6	68,8	67,6	73,0	57,9	66,0	64,9	66,0	64,8	69,4	56,7
	24.0	66,2	61,5	73,2	45,2	80,9	28,4	63,6	60,1	70,2	44,0	77,6	27,3	60,8	58,5	66,9	42,8	74,1	26,2	57,9	56,6	63,5	41,6	70,3	24,9
19400	27.0	69,3	68,1	73,1	58,7	80,9	41,9	66,9	65,7	70,1	57,5	77,6	40,8	64,4	63,2	66,9	56,3	74,0	39,6	61,6	60,5	63,5	54,9	70,2	38,4
	29.5	72,7	71,4	73,6	69,1	80,8	53,0	70,3	69,0	70,8	67,6	77,5	51,9	67,7	66,4	67,8	65,8	74,0	50,8	64,8	63,6	64,7	63,6	70,2	49,5
	32.0	76,2	74,9	76,2	74,8	80,7	64,1	73,7	72,4	73,7	72,3	77,4	63,0	71,0	69,7	70,9	69,6	74,0	61,8	68,0	66,8	68,0	66,8	70,2	60,5

Note:
(1) TEAE = Evaporator entering air temperature
(2) BS =Dry Bulb
(3) BU = Wet Bulb
(4) Capacities are gross capacities and do not include the effect of heat from the evaporator motor . For net capacities, substract this effect.
(5) Heat generated by evaporator motor can be approx. obtained according to the formula BHP x 0,88 = MKcal/h
(6) Total gross and sensible capacities in MKcal/h.
(7) Capacity according to ARI 210.
(8) For units SIVE with CRCE, contact the Marketing department of Trane do Brasil.

Cooling Capacity

SIVE w/CRCB

Table 17 - Cooling Capacity SIVE 300 w/ CRCB 125 + CRCB150 (in thousands of kcal/h)

		Condenser Entering Air Temperature (ºC)																					
		29.5						35.0						40.5						46.0			
Air	TEAE	Evaporator Entering Air Temperature - BU(ºC)																					
Flow	(BS)	16.0		19.5		23.0		16.0		19.5		23.0		16.0		19.5		23.0		16.0		19.5		23.0	
(m3/h)	(ºC)	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.
	24.0	74,2	59,3	82,9	45,9	92,3	32,3	62,4	57,9	79,7	44,5	88,7	31,0	68,1	56,5	76,2	43,1	84,9	29,6	64,8	54,9	72,5	41,6	80,7	28,2
14400	27.0	74,5	69,8	82,8	56,8	92,2	43,1	71,8	68,2	79,6	55,4	88,6	41,8	68,8	66,4	76,1	54,0	84,7	40,4	65,8	64,3	72,4	52,5	80,6	38,9
	29.5	76,8	75,3	82,8	65,8	92,2	52,1	74,4	73,0	79,5	64,5	88,6	50,8	71,8	70,4	76,1	63,0	84,7	49,4	69,0	67,7	72,4	61,4	80,6	47,9
	32.0	80,4	78,9	83,0	74,6	92,1	61,1	77,9	76,4	79,8	73,1	88,5	59,7	75,2	73,8	76,5	71,4	84,6	58,3	72,3	70,9	73,0	69,6	80,5	56,9
	24.0	78,2	69,3	87,0	51,6	96,6	33,7	75,0	67,7	83,4	50,2	92,6	32,4	71,7	66,1	79,6	48,8	88,4	31,0	68,2	64,2	75,6	47,3	84,0	29,5
20400	27.0	80,7	79,2	86,9	66,0	96,5	48,1	77,9	76,5	83,4	64,6	92,5	46,7	75,0	73,6	79,5	63,2	88,3	45,3	71,9	70,5	75,6	61,6	83,9	43,8
	29.5	84,7	83,1	87,1	77,7	96,4	60,0	81,9	80,4	83,7	76,2	92,5	58,6	78,8	77,4	80,1	74,4	88,3	57,2	75,6	74,2	76,2	72,5	83,8	55,7
	32.0	88,8	87,1	88,8	87,0	96,4	71,8	85,9	84,2	85,8	84,2	92,4	70,5	82,7	81,2	82,7	81,2	88,2	69,1	79,4	77,9	79,3	77,8	83,8	67,5
	24.0	79,9	74,0	88,5	54,6	98,1	34,4	76,7	72,3	84,8	53,2	94,0	33,0	73,4	70,4	80,9	51,7	89,7	31,7	69,9	68,1	76,8	50,1	85,1	30,2
23800	27.0	83,7	82,1	88,4	70,8	98,0	50,6	80,8	79,3	84,7	69,4	93,9	49,2	77,7	76,3	80,9	67,3	89,6	47,8	74,4	73,0	76,8	66,2	85,0	46,4
	29.5	88,0	86,3	89,1	83,4	98,0	64,1	84,9	83,3	85,6	81,5	93,9	62,7	81,7	80,2	82,0	79,4	89,5	61,2	78,3	76,8	78,3	76,7	85,0	59,7
	32.0	92,2	90,5	92,2	90,5	97,9	77,4	89,1	87,5	89,1	87,5	93,8	76,0	85,8	84,2	85,8	84,2	89,5	74,5	82,2	80,7	82,2	80,7	85,1	72,9
	24.0	81,3	77,8	89,7	57,2	99,3	35,0	78,2	75,8	85,9	55,7	95,1	33,7	74,9	73,4	81,8	54,2	90,7	32,3	71,5	70,2	77,6	52,7	86,0	30,8
27000	27.0	86,1	84,5	89,6	75,0	99,2	52,9	83,0	81,5	85,9	73,5	95,0	51,5	79,8	78,3	81,9	71,9	90,6	50,1	76,3	74,9	77,8	70,1	85,9	48,6
	29.5	90,5	88,8	90,8	87,8	99,1	67,7	87,3	85,7	87,4	85,4	94,9	66,3	84,0	82,4	83,9	82,3	90,5	64,8	80,4	78,9	80,3	78,8	85,9	63,3
	32.0	94,9	93,2	94,9	93,1	99,1	82,3	91,7	90,0	91,6	89,9	95,0	80,9	88,2	86,5	88,1	86,5	90,7	79,2	84,4	82,8	84,4	82,8	86,1	77,5

Table 18 - Cooling Capacity SIVE 350 w/ 2 x CRCB 150 (in thousands of kcal/h)

		Condenser Air Entering Temperature (ºC)																					
		29.5						35.0						40.5						46.0			
Air	TEAE	Evaporator Entering Air Temperature - BU(ºC)																					
Flow	(BS)	16.0		19.5		23.0		16.0		19.5		23.0		16.0		19.5		23.0		16.0		19.5		23.0	
(m3/h)	(ºC)	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.	Total Cap.	Sens. Cap.
	24.0	83,7	64,0	93,7	50,5	104,4	36,8	80,5	62,4	90,1	49,0	100,4	35,2	77,1	60,7	86,3	47,3	96,1	33,7	73,5	59,0	82,2	45,6	91,6	32,0
14400	27.0	83,8	74,8	93,6	61,4	104,3	47,6	80,6	73,2	90,0	59,9	100,3	46,1	77,3	71,4	86,2	58,2	96,0	44,5	73,8	69,5	82,2	56,5	91,5	42,9
	29.5	84,8	82,7	93,6	70,5	104,2	56,7	81,9	59,2	90,0	68,9	100,2	55,1	79,1	77,7	86,2	67,3	95,9	53,5	76,2	74,7	82,1	65,5	91,4	51,9
	32.0	88,4	86,7	93,5	79,5	104,1	65,6	85,7	84,1	90,0	77,9	100,1	64,1	82,8	81,3	86,2	76,2	95,9	62,5	79,8	78,3	82,3	74,3	91,4	60,8
	24.0	88,8	74,2	99,0	56,4	109,9	38,3	85,2	72,6	95,0	54,8	105,5	36,8	81,4	70,8	90,8	53,1	100,8	35,1	77,5	69,0	86,3	51,4	95,8	33,4
20400	27.0	89,9	87,2	98,9	70,8	109,8	52,7	86,7	84,9	94,9	69,2	105,3	51,1	83,5	81,9	90,7	67,5	100,7	49,5	80,1	78,6	86,2	65,8	95,7	47,8
	29.5	94,0	92,2	98,9	82,8	109,7	64,6	90,9	89,2	94,9	81,1	105,3	63,1	87,6	86,0	90,8	79,4	100,6	61,4	84,1	82,5	86,4	77,4	95,7	59,7
	32.0	98,3	96,5	99,6	93,9	109,6	76,5	95,2	93,4	95,9	91,8	105,2	74,9	91,8	90,1	92,0	89,4	100,5	73,3	88,2	86,5	88,1	86,5	95,6	71,6
	24.0	90,8	79,4	101,0	59,4	111,9	39,1	87,1	77,7	96,8	57,7	107,3	37,5	83,2	75,8	92,4	56,0	102,5	35,9	79,2	73,7	87,8	54,3	97,4	34,2
23800	27.0	93,3	91,5	100,9	75,6	111,8	55,3	90,1	88,4	96,7	74,0	107,2	53,7	86,7	85,1	92,4	72,3	102,4	52,0	83,1	81,5	87,7	70,5	97,3	50,4
	29.5	97,8	96,0	101,0	89,0	111,8	68,7	94,6	92,8	97,0	87,2	107,2	67,2	91,1	89,4	92,7	85,2	102,3	65,5	87,3	85,7	88,3	83,1	97,2	63,8
	32.0	102,5	100,5	102,6	100,0	111,7	82,1	99,1	97,2	99,0	97,2	107,1	80,5	95,5	93,7	95,4	93,6	102,2	78,9	91,6	89,9	91,6	89,9	97,1	77,2
	24.0	92,4	83,9	102,4	62,0	113,4	39,7	88,6	81,9	98,1	60,3	108,7	38,1	84,7	79,9	93,6	58,6	103,7	36,5	80,6	77,5	88,9	56,9	98,5	34,8
27000	27.0	96,1	94,3	102,4	79,9	113,4	57,6	92,8	91,0	98,1	78,2	108,6	56,0	89,2	87,6	93,6	76,5	103,6	54,3	85,4	83,9	88,9	74,7	98,4	52,6
	29.5	100,9	99,0	102,8	94,2	113,3	72,4	97,4	95,6	98,7	92,2	108,5	70,8	93,8	92,0	94,4	90,0	103,6	69,1	89,8	88,2	90,1	87,4	98,3	67,4
	32.0	105,7	103,7	105,6	103,7	113,2	87,1	102,1	100,2	102,1	100,2	108,4	85,5	98,3	96,5	98,3	96,4	103,5	83,8	94,3	92,5	94,2	92,5	98,3	82,1

Note:
(1) TEAE = Evaporator entering air temperature
(2) BS =Dry Bulb
(3) BU = Wet Bulb
(4) Capacities are gross capacities and do not include the effect of heat from the evaporator motor . For net capacities, substract this effect.
(5) Heat generated by evaporator motor can be approx. obtained according to the formula BHP x 0,88 = MKcal/h
(6) Total gross and sensible capacities in MKcal/h.
(7) Capacity according to ARI 210.
(8) For units SIVE with CRCE, contact the Marketing department of Trane do Brasil.

Electrical Data

60 Hz

Table 19 - Electrical Data - SAVE 200 to 400 (20 to 40 TR) - 220V / 60 Hz

Model	Voltage	Compressor						Evaporator Motor						Total Cons.		Total Current		
	Volts	TR	kw (nom.)	kw (max.)	RLA	FLA	LRA	HP	kw (nom.)	kw (max.)	RLA	FLA	LRA	kw (Nom.)	kw (Max.)	RLA	FLA	LRA
200 / 250	220V	10,00	8,64	10,77	29,80	35,35	265,00	3,00	2,26	2,82	7,32	9,15	60,48	10,90	13,59	37,12	44,50	325,48
		10,00	8,64	10,77	29,80	35,35	265,00	5,00	3,58	4,48	11,61	14,51	110,57	12,22	15,25	41,41	49,86	375,57
								7,50	5,18	6,48	16,58	20,73	155,48	13,82	17,25	46,38	56,08	420,48
								10,00	6,73	8,42	21,04	26,30	205,14	15,37	19,19	50,84	61,65	470,14
300	220V	15,00	12,86	16,05	42,46	50,47	380,00	3,00	2,26	2,82	7,32	9,15	60,48	10,90	13,59	37,12	44,50	325,48
		10,00	8,64	10,77	29,80	35,35	265,00	5,00	3,58	4,48	11,61	14,51	110,57	12,22	15,25	41,41	49,86	375,57
								7,50	5,18	6,48	16,58	20,73	155,48	13,82	17,25	46,38	56,08	420,48
								10,00	6,73	8,42	21,04	26,30	205,14	15,37	19,19	50,84	61,65	470,14
								15,00	10,19	12,74	30,40	38,00	318,06	18,83	23,51	60,20	73,35	583,06
350	220V	15,00	12,86	16,05	42,46	50,47	380,00	3,00	2,26	2,82	7,32	9,15	60,48	10,90	13,59	37,12	44,50	325,48
		15,00	12,86	16,05	42,46	50,47	380,00	5,00	3,58	4,48	11,61	14,51	110,57	12,22	15,25	41,41	49,86	375,57
								7,50	5,18	6,48	16,58	20,73	155,48	13,82	17,25	46,38	56,08	420,48
								10,00	6,73	8,42	21,04	26,30	205,14	15,37	19,19	50,84	61,65	470,14
								15,00	10,19	12,74	30,40	38,00	318,06	18,83	23,51	60,20	73,35	583,06
400	220V	2 x 10.00	17,28	21,54	59,60	70,70	530,00	3,00	2,26	2,82	7,32	9,15	60,48	10,90	13,59	37,12	44,50	325,48
		15,00	12,86	16,05	42,46	50,47	380,00	5,00	3,58	4,48	11,61	14,51	110,57	12,22	15,25	41,41	49,86	375,57
								7,50	5,18	6,48	16,58	20,73	155,48	13,82	17,25	46,38	56,08	420,48
								10,00	6,73	8,42	21,04	26,30	205,14	15,37	19,19	50,84	61,65	470,14
								15,00	10,19	12,74	30,40	38,00	318,06	18,83	23,51	60,20	73,35	583,06

Table 20 - Electrical Data - SIVE 200 to 350 (20 to 35 TR) w/ CRCB 050 to 150 - 220V / 60 Hz

Model	Voltage	Compressor						Condenser Motor						Evaporator Motor						Total Cons.		Total Current		
	Volts	TR	kw (nom.)	kw (max.)	RLA	FLA	LRA	HP	kw (nom.)	kw (max.)	RLA	FLA	RLA	HP	kw (nom.)	kw (max.)	RLA	FLA	LRA	kw (Nom.)	kw (Max.)	RLA	FLA	LRA
200/250	220V	10	9,8	13,9	32,7	44,0	265,0	4,0	2,9	3,7	9,5	11,9	86,9	3,0	2,3	2,8	7,3	9,2	60,5	15,0	20,4	49,5	65,1	412,4
		10	9,8	13,9	32,7	44,0	265,0	4,0	2,9	3,7	9,5	11,9	86,9	5,0	3,6	4,5	11,6	14,5	110,6	16,3	22,0	53,8	70,4	462,4
														7,5	5,2	6,5	16,6	20,7	155,5	17,9	24,0	58,8	76,6	507,4
														10,0	6,7	8,4	21,0	26,3	205,1	19,5	26,0	63,2	82,2	557,0
300	220V	15	14,5	20,3	46,5	61,7	380,0	5,0	3,6	4,5	11,6	14,5	110,6	3,0	2,3	2,8	7,3	9,2	60,5	15,0	20,4	49,5	65,1	412,4
		10	9,8	13,9	32,7	44,0	265,0	4,0	2,9	3,7	9,5	11,9	86,9	5,0	3,6	4,5	11,6	14,5	110,6	16,3	22,0	53,8	70,4	462,4
														7,5	5,2	6,5	16,6	20,7	155,5	17,9	24,0	58,8	76,6	507,4
														10,0	6,7	8,4	21,0	26,3	205,1	19,5	26,0	63,2	82,2	557,0
														15,0	10,2	12,7	30,4	38,0	318,1	22,9	30,3	72,6	93,9	669,9
350	220V	15	14,5	20,3	46,5	61,7	380,0	5,0	3,6	4,5	11,6	14,5	110,6	3,0	2,3	2,8	7,3	9,2	60,5	15,0	20,4	49,5	65,1	412,4
		15	14,5	20,3	46,5	61,7	380,0	5,0	3,6	4,5	11,6	14,5	110,6	5,0	3,6	4,5	11,6	14,5	110,6	16,3	22,0	53,8	70,4	462,4
														7,5	5,2	6,5	16,6	20,7	155,5	17,9	24,0	58,8	76,6	507,4
														10,0	6,7	8,4	21,0	26,3	205,1	19,5	26,0	63,2	82,2	557,0
														15,0	10,2	12,7	30,4	38,0	318,1	22,9	30,3	72,6	93,9	669,9

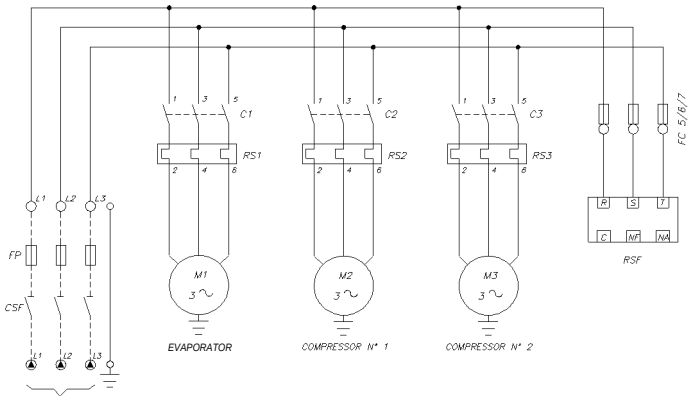
Note:
(1) RLA = Rated Load Amps (A)
(2) FLA = Full Load Amps (A)
(3) LRA = Locked Rotor Amps (A).
(4) HP = Nominal Motor Power (HP)
(5) RLA, FLA and LRA values in 380V, current in 220V should be divided by 1,73.
(6) RLA, FLA and LRA values in 440V, current in 220V should be divided by 2.
(7) Data according to conditions in standard ARI 210.
(8) Voltage variation: +/- 10%
(9) To determinate the size of electrical wiring, the Rated Load Amps in the table above should be used.
(10) For units SIVE w/ CRCE, refer to page 07 in this manual for the value composition or contact Trane do Brasil .

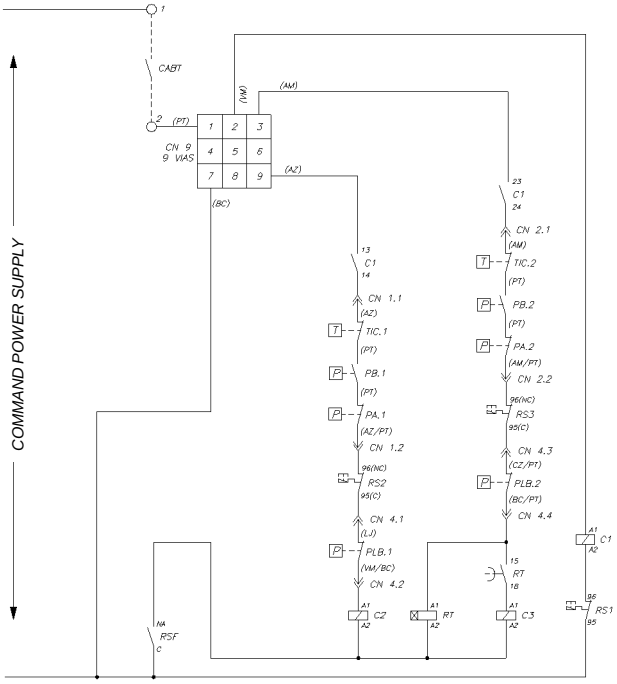
Wiring Diagram

SAVE

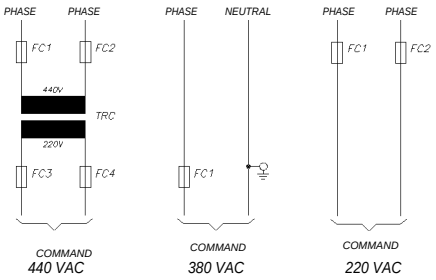
Figure 02 - Power and command wiring diagram - SAVE 200 to 350 - 60 Hz

Power and command wiring diagram - SAVE 200 to 350



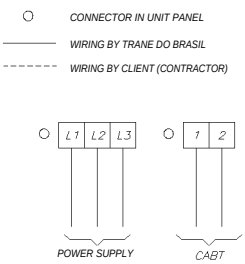


Command power supply option



Legend

MR/PT	*Brown cable with black strip*
M R	*Brown cable*
V M	*Red cable*
BC	*White cable*
PT	*Black cable*
AZ/PT	*Blue cable with black strip*
AZ	*Blue cable*
CABT	*Tower pump auxiliary contact*
IOL	*Internal compressor thermostat*
PB	*Low pressure switch*
PA	*High pressure switch*
CN	*Multi-path connector*
TRC	*Command transformer*
RS	*Overload relay*
C	*Power contactor*
M	*Motor*
FC	*Command fuse*
FP	*Power fuse*
CSF	*Power disconnect switch*

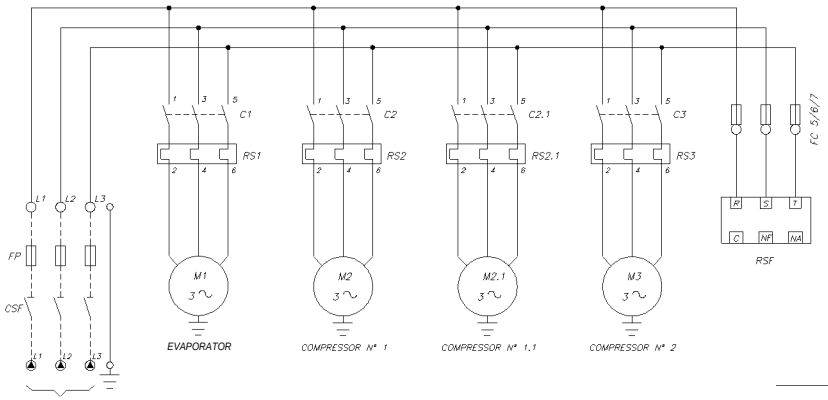


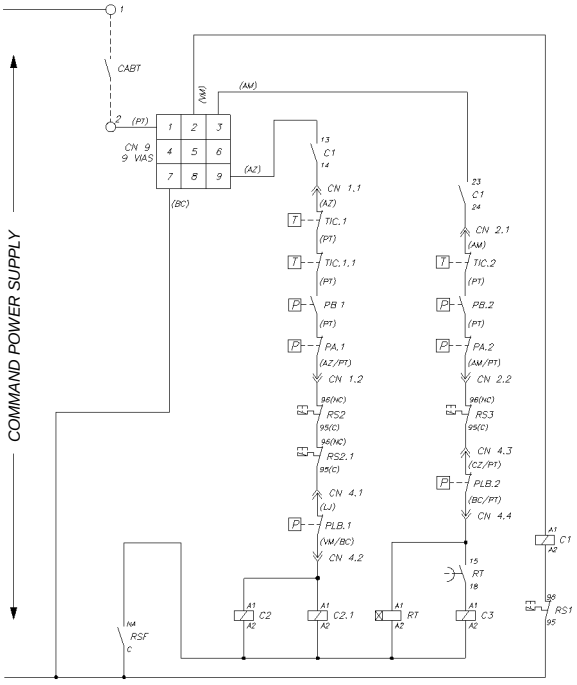
Wiring Diagram

SAVE

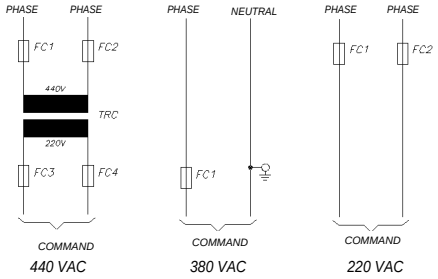
Figure 03 - Power and command wiring diagram - SAVE 400 - 60 Hz

Power and command wiring diagram - SAVE 400





Command power supply option



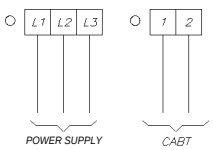
Legend

MR/PT	*Brown cable with black strip*
M R	*Brown cable*
V M	*Red cable*
B C	*White cable*
PT	*Black cable*
AZ/PT	*Blue cable with black strip*
AZ	*Blue cable*
CABT	*Tower pump auxiliary contact*
IOL	*Internal compressor thermostat*
PB	*Low pressure switch*
PA	*High pressure switch*
CN	*Multi-path connector*
TRC	*Command transformer*
RS	*Overload relay*
C	*Power contactor*
M	*Motor*
FC	*Command fuse*
FP	*Power fuse*
CSF	*Power disconnect switch*

CONNECTOR IN UNIT PANEL

WIRING BY TRANE DO BRASIL

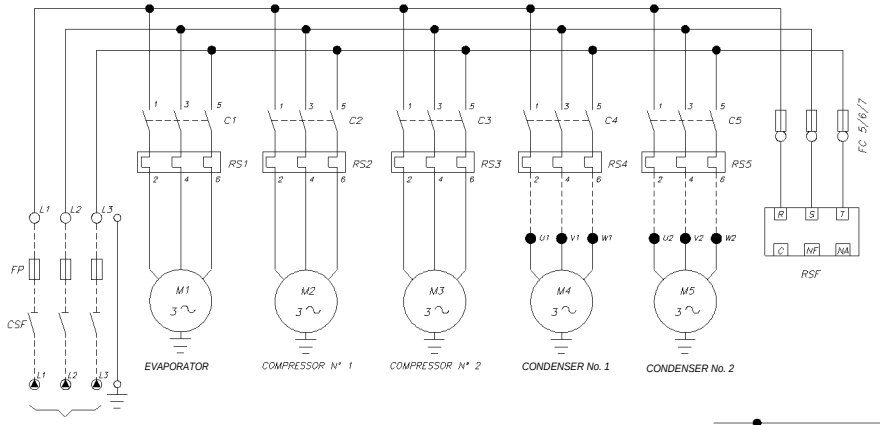
WIRING BY CLIENT (CONTRACTOR)

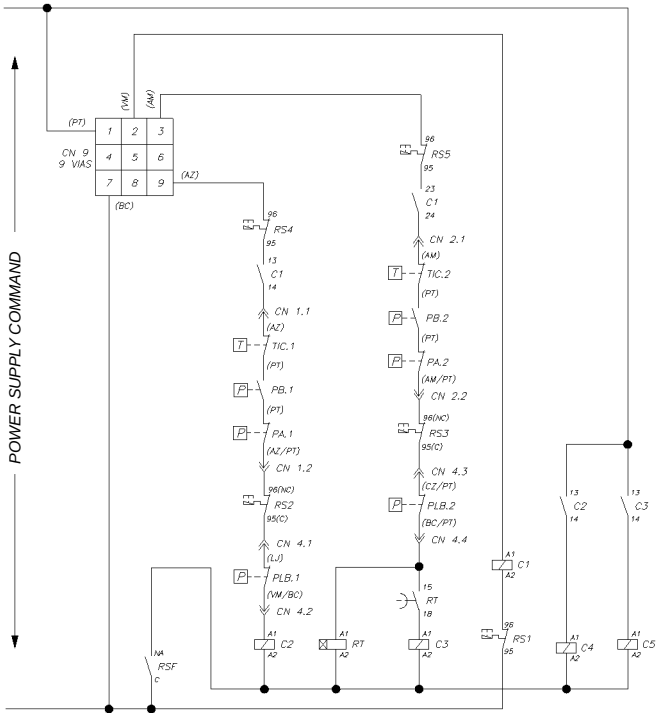


Wiring Diagram

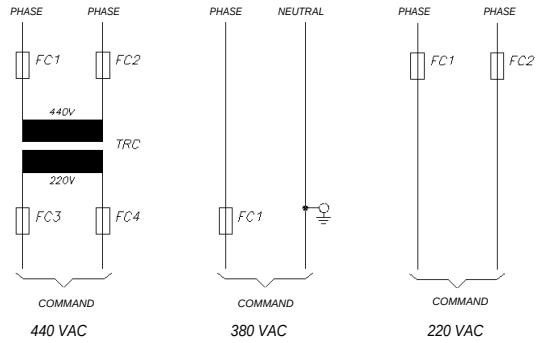
SIVE

Figure 04 - Power and command wiring diagram - SIVE 200 to 350 - 60 Hz



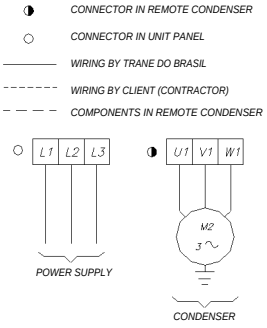


Command power supply option



Legend

MR/PT	Brown cable with black strip
M R	Brown cable
V M	Red cable
BC	White cable
PT	Black cable
AZ/PT	Blue cable with black strip
AZ	Blue cable
CABT	Tower pump auxiliary contact
IOL	Internal compressor thermostat
PB	Low pressure switch
PA	High pressure switch
CN	Multi-path connector
TRC	Command transformer
RS	Overload relay
C	Power contactor
M	Motor
FC	Command fuse
FP	Power fuse
CSF	Power disconnect switch



Self Contained DIAMOND features 3 control options:

Standard Thermostat

All units are supplied with a control thermostat. This thermostat can be installed remotely or at the equipment, according to customer needs.

Programmable Thermostat (TP)

TP is indicated for small facilities, with few devices. TP programming is very simple! TP has a liquid crystal display that allows the visualization of time, day of the week, program selected and room temperature. Up to 4 different setpoints can be programmed for each day of the week. Through the "timed-override" key, the user can extend the equipment operation beyond the programmed schedules. The main advantage of TP is the power economy, as the devices turn on and off at the programmed times.

ReliaTel®

ReliaTel is the name given to second-generation microprocessed controls developed by Trane/American Standard. The control ReliaTel® is used in cooling units of the type self contained Diamond with capacity from 20 to 40 TR. The microprocessed controller was approved by our customers in thousands of applications worldwide. An unit using microprocessors offers superior comfort, incomparable trust and a much greater flexibility than conventional systems. ReliaTel® has greater flexibility, is more compact, has additional improvements for system reliability, among other advantages. A lot of what ReliaTel® does will be familiar to service technicians accustomed to the previous controllers. Tests and troubleshooting are similar and, in many cases, equal to the previous controllers. However, there are some significant differences, and it is important that the service professional uses the correct material for the unit in which the service is being executed.

ReliaTel®Refrigaration Module (RTRM)

Each Module ReliaTel® is a communication control. All ReliaTel units use a RTRM. It can be controlled directly by any of the following items:

- Zone Sensor Module
- Programmable Zone Sensor
- Conventional thermostat

Note:
Unlike the previous controller, a conventional thermostat does not require any type of interface. It can be connected directly to RTRM.

RTRM provides the primary unit control; these are its main features and benefits:

High Reliability: Reduction of electro-mechanical components in the Electric Frame.

Direct Digital Control: The Proportional-Integral control allows a much more accurate temperature control of the conditioned room (greater comfort and reduction of power consumption).

Test Mode: The controller allows to the operator to perform easy and fast tests in order to verify component operation (fans and compressors).

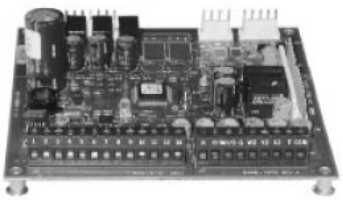
Easy Diagnoses Detection: The operator will be able to easily detect operational problems in the unit.

Elimination of Compressor Cycling: The controller allows a minimum period of 3 minutes with compressor turned-on and 3 minutes with compressor turned off, thus assuring the appropriate return of the oil to the compressor and preventing the compressor from burning out due to excessive cycling.

Compressor Operation Sequencing: The controller will sequence compressors according to the number of starts and operation hours of the compressors, in order to equalize their use.

Communication Interface Module COMM3/4 (RTCI)

Module RTCI allows the ICS (Integrated Comfort System) communication between a ReliaTel® unit and Trane ICS systems TRACER SUMMIT and TRACKER.



TRACKER

It is a microprocessed controller that automatically controls several devices divided in comfort zones and manages the illumination of your building, also allowing the sending of air conditioning system alarms to a central office at any hour of the day or night. The communication with the devices is made through a comm5 network (open protocol LON TALK). Several functions are possible:

Time Programming: In Tracker you can define the programming for the whole year, with up to 10 schedules. One or more devices may be included in a schedule, and temporary overrides are possible.

Interface with Operator: Using a touch-screen, with a visual interface that is very easy to operate. The operator will pass through the screens in an intuitive way, oriented by menus.

Software (optional): Allows local or remote access (dial-up or LAN) to Tracker. The operator can access all functions available in the display and also exclusive functions for digital output programming (MP503), alarm customization and printing. It is not necessary for basic system configuration.

Optimized Start: TRACKER analyzes the most economical way to turn on the devices, so that in the programmed time you have the temperature desired.

Demand Limit: Automatically controls the limits programmed for power consumption in the installation. An important economy along the years turns the cost of TRACKER irrelevant.

Control of Third-Party Devices: With controller ZN517 you can incorporate third-party devices to the TRACKER network, allowing their inclusion in time scheduling, alarm monitoring, etc.

Input/Output Control: With the I/O module MP503, you can configure by software additional functions of illumination control, visual and audible alarms, condensing pumps, towers, etc.

Auto-configuration Function: TRACKER, as soon as it is powered, recognizes all devices connected to the network and configure them in a standard schedule, which can be customized later.

Simple installation: Diamond and TRACKER are supplied from factory programmed and tested and the interconnection between them is made through a simple twisted-pair cable. For more details, refer to TRACKER-specific literature.

Alarm Log: Any occurrence is identified in the TRACKER panel and stored, and can be transmitted remotelly via telephone or LAN.

Varitrac

This is a Trane system for variable air flow, usually used in small facilities. The circulating air flow in the equipment is constant and supplied air flow in each room is variable, through the use variable air flow boxes. In order that the circulating air flow in the equipment is constant, there is(are) bypass duct(s) that returns to the equipment the air flow that was not supplied to the conditioned rooms. Varitrac Boxes have a microprocessed controller. This controller regulates the exact amount of air to be supplied to the room in order to maintain constant supply temperatures. Varitrac boxes are also required in the bypass duct(s) of the system. For the Varitrac system control, a controller called Central Control Panel (CCP) should be used. Speed and temperature sensors should be installed in the bypass duct. The controller programming is made by Trane.

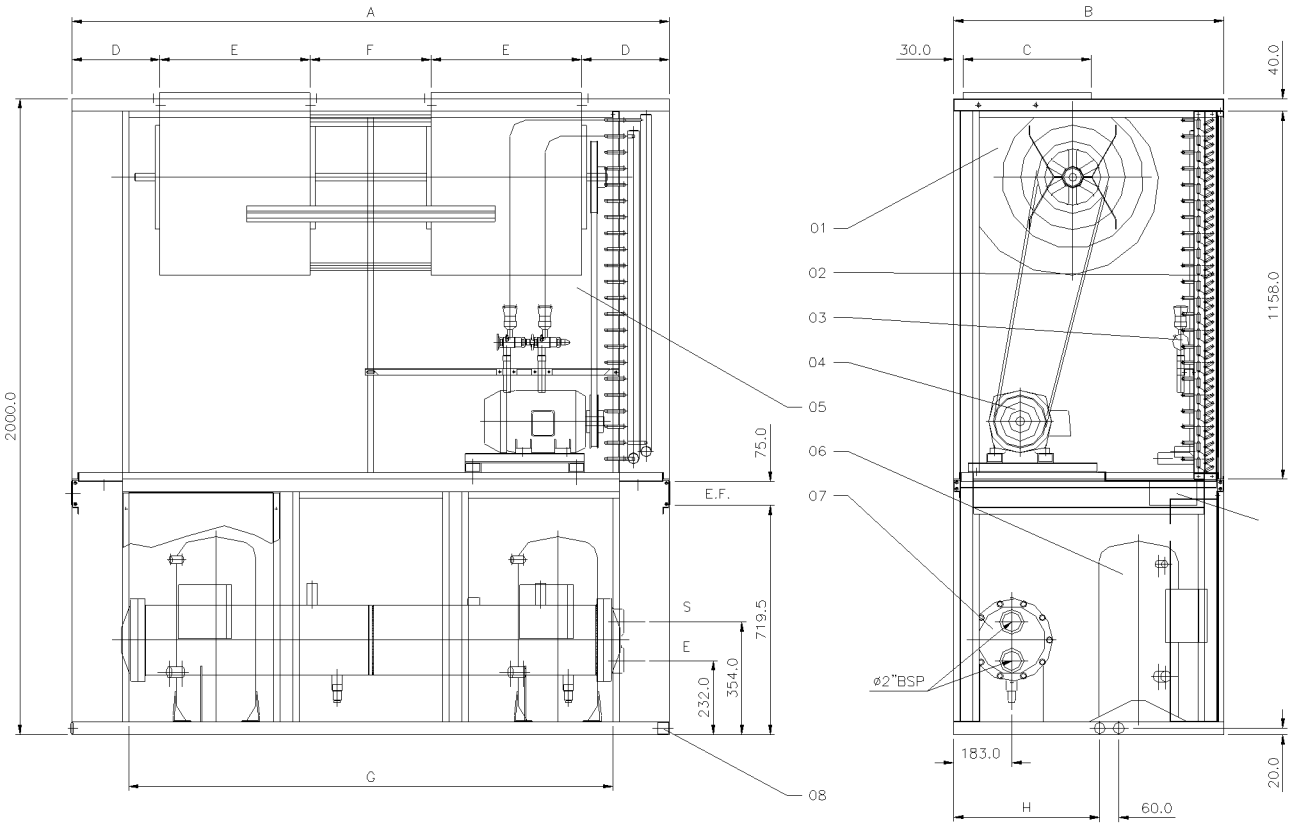
For more information about Trane automation system, contact the BASD team at Trane do Brasil:
Telephone 11-5014 -6300
E-mail: basd_brasil@trane.com

Programa Tracker (opcional)

TRACKER

Dimensions

Figure 05 - Dimensions SAVE 200 to 400.



1 Plenum with supply grill (Optional)
2 Heating resistance box (Optional)
3 Double-suction centrifugal fan (evaporator)
4 Three-phase electrical motor (evaporator)
5 Evaporator coil
6 Return grill (Optional)
7 Filters
8 Cable passage - diam. 46.5 mm - for power inlet (right/left)
9 Compressor Scroll
10 Drain diam. 1/2" BSP (left)
11 Cable passage - diam. 46.5 mm - for remote thermostat.
12 Left or right water inlet and outlet.
13 Electrical panel for electronic control Mod. 100/125/150 (Optional)
14 Normal electrical panel
15 Electrical panel for electronic control mod. 050/075 (Optional)
16 Shell and tube condenser

Table 21 - Dimensions SAVE 200 to 400.

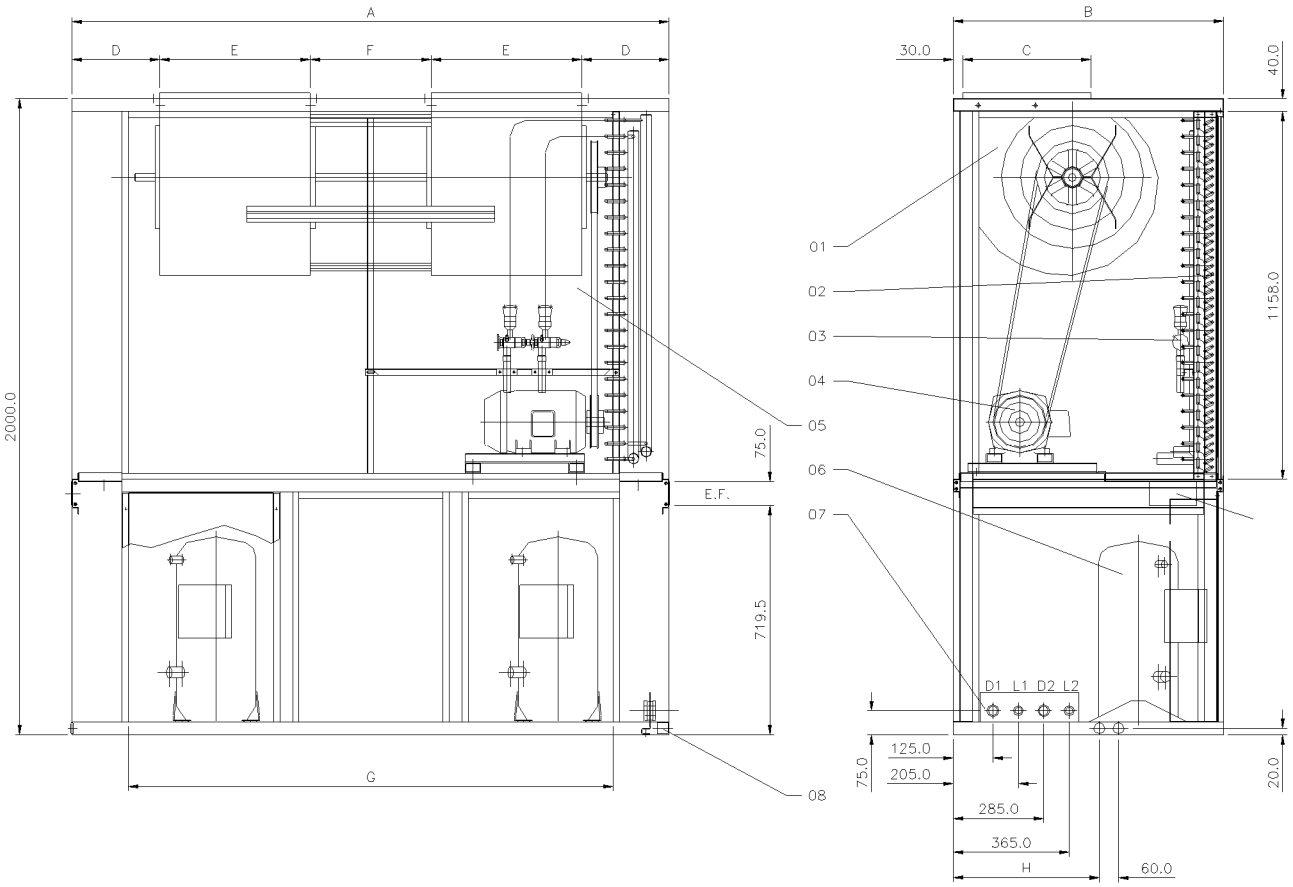
Model	A	B	C	D	E	F	G	H
200	1880	850	403	276,5	473	381	1524	510
250	1880	850	403	276,5	473	381	1524	510
300	2470	980	478	449,5	557	457	2114	590
350	2470	980	478	449,5	557	457	2114	590
400	2470	980	478	449,5	557	457	2114	590

Note:
Unit: mm

Dimensions

SIVE

Figure 06 - Dimensions SIVE 200 to 350.



1 Plenum with supply grill (Optional)
2 Heating resistance box (Optional)
(External heating command and power frame)
3 Double-suction centrifugal fan (evaporator)
4 Three-phase electrical motor (evaporator)
5 Evaporator coil
6 Return grill (Optional)
7 Filters
8 Cable passage - diam. 46,5 mm - for power inlet (right/left)
9 Double-suction centrifugal fan (condenser)
10 Compressor Scroll
11 Drain diam. 1/2" BSP (left).
12 Left or right water inlet and outlet.
13 Electrical panel for electronic control Mod. 100/125/150 (Optional)
14 Normal electrical panel
15 Electrical panel for electronic control mod. 050/075 (Optional)
16 Three-phase electrical motor (condenser)

Table 22 - Dimensions SIVE 200 to 350.

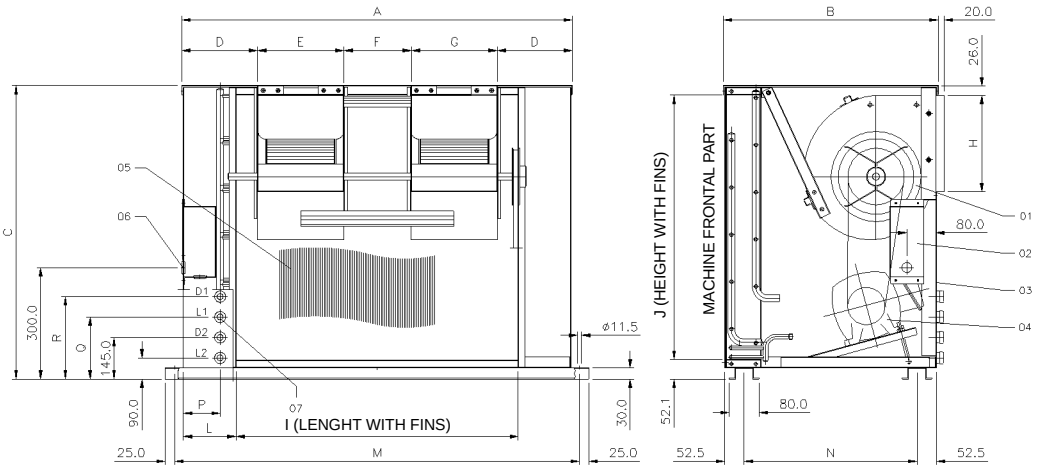
Model	A	B	C	D	E	F	G	H	D1	L1	D2	L2
200	1880	850	403	276,5	473	381	1524	510	7/8"	5/8"	7/8"	5/8"
250	1880	850	403	276,5	473	381	1524	510	1 1/8"	5/8"	1 1/8"	5/8"
300	2470	980	478	449,5	557	457	2114	590	1 1/8"	7/8"	1 1/8"	5/8"
350	2470	980	478	449,5	557	457	2114	590	1 1/8"	7/8"	1 1/8"	7/8"

Note:
Unit: mm

Dimensions

CRCB

Figure 07 - Dimensions CRCB 050 to 150.



1 Double-suction centrifugal fan (evaporator)
2 Terminal box
3 Maintenance cover
4 Three-phase electrical motor
5 Condensing coil
6 Cable passage- diam. 27 mm - for power inlet
7 Refrigeration connections (single position)

Table 23 - Dimensions CRCB 050 to 150.

Model	A	B	C	D	E	F	G	H	I	J	L	M	N	P	Q	R	∅ L1	∅ D1	∅ L2	∅ D2
050	987	631	890	295,5	396	----	----	341	762	711	110	1029	521	132	----	----	1/2"	5/8"	----	----
075	1241	631	890	422,5	396	----	----	341	1016	816,5	110	1283	521	132	----	----	1/2"	3/4"	----	----
100	1341	631	941	222,5	333	230	333	289	1143	863,5	97	1383	521	159	200	255	1/2"	5/8"	1/2"	5/8"
125	1646	714	1018	299,5	396	255	396	341	1473	940	84	1688	604	236	200	255	1/2"	3/4"	1/2"	5/8"
150	1646	714	1247	299,5	396	255	396	341	1473	1168,5	84	1688	604	236	200	255	1/2"	3/4"	1/2"	3/4"

Note:
Unit: mm

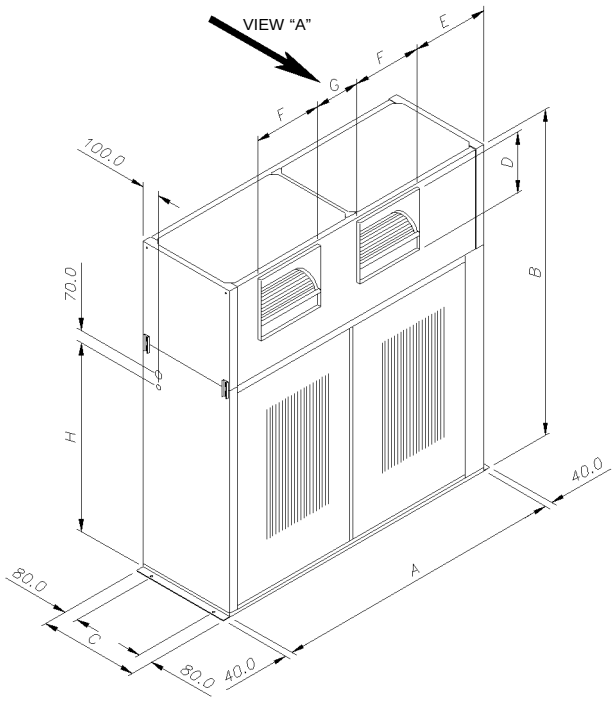
Dimensions

CRCE

Table 24 - Dimensions CRCE

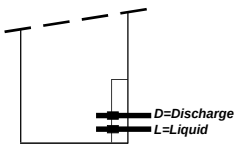
	Model				
Dimension	**050**	**075**	**100**	**125**	**150**
A	922	1146	1420	1640	1640
B	1373	1474	1525	1600	1829
C	560	560	560	560	560
D	341	341	290	341	341
E	374	480	402	432	432
F	386	386	326	386	386
G	----	----	230	255	255
H	778	879	930	1005	1234

Note:
Unit: mm

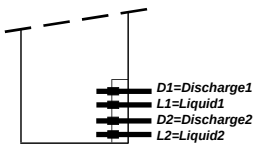


Tab. 25 - Connection dimensions CRCE

		Models CRCE							
		050	075	100C/1	100C/2	125C/1	125C/2	150C/1	150C/2
	D1	---	---	---	5/8"	---	3/4"	---	3/4"
	L1	---	---	---	1/2"	---	1/2"	---	1/2"
	D2/D	5/8"	3/4"	7/8"	5/8"	1 1/8"	5/8"	1 1/8"	3/4"
	L2 / L	1/2"	1/2"	5/8"	1/2"	5/8"	1/2"	7/8"	1/2"



System with 1 Circuit



System with 2 Circuits

Maintenance and Cleaning Clearances

Figure 08 - Recommended maintenance and cleaning clearances - Diamond 20 to 40TR

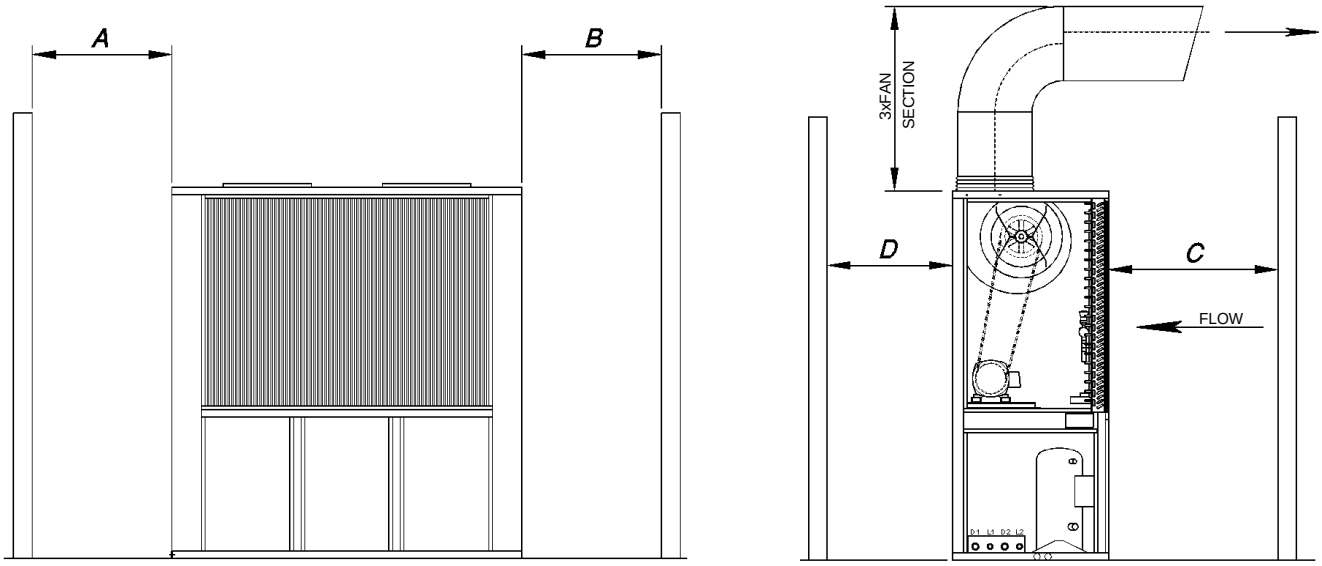


Table 26 - Dimensions - Diamond

Model	A	B	C	D
SAVE200/250	750	1880	1200	650
SAVE300/350/400	750	2470	1200	650
SIVE200/250	750	750	1200	650
SIVE300/350	750	750	1200	650

Note: Unit: mm

Figure 09 - Recommended maintenance and cleaning clearances CRCB and CRCE 5 to 15TR

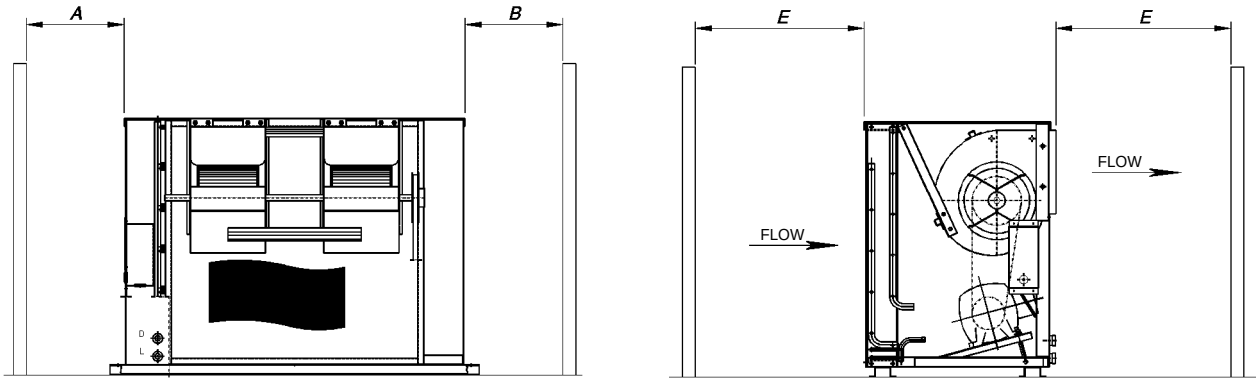


Table 27 - Dimensions CRCB/CRCE

Model	A	B	E
CRCB 100/125/150	750	750	2500
CRCE100/125/150	750	750	2500

Note:Unit: mm

Mechanical Specification

Cabinet

There are two cabinet sizes, one for 20 to 25 TR machines and the other for 30, 35 and 40 TR machines. The cabinet has inferior and superior trays, sustaining columns and removable covers fastened by screws. All fastenings are made through screws or rivets. Made in galvanized steel, with thermal-accoustic isolation Bidin, which, besides being an optimum thermal isolant , is also a good accoustic isolant and do not cause fiber hauling. For water condensation machines, (model SAVE), the hydraulic connections are supplied from factory on the right side, when facing the machine from the filter. This assembly can be reversed upon client request . This inversion can be made in field . For remote air condensation machines (model SIVE), refrigeration connections are supplied from factory on the left side and it is not possible to revert them in field. Power supply connections are located on the sides and are available on both sides. Drains are available on both sides. They are supplied from factory according to the following rule: the drain mounting side is the same as the refrigeration/hydraulic connection mounting side (usually on the right). Refrigeration connections of condensing units CRCB and CRCE are supplied from factory
mounted on the right side, when facing the unit in front of the coil. This assembly can be reversed upon client request.

Painting

The cabinet is supplied from factory painted in Trane gray. The parts are submitted to a modern phosphatization process and later to powder-painting with a POLYESTER-based resin, which provides Trane equipment with high resistance. After this process, the parts are cured in an oven at 200ºC, providing a final and resistant 85-micron coating.

Coils

All evaporator and condensing coils use 3/8"-OD tubes and high-efficiency aluminum fins, model Trane Wavy 3B, mounted in evaporator coils with 144 fins per foot and in condensing coils with 168 fins per foot.

The copper tubes are mechanically expanded to achieve a perfect contact between fin and tube. All coils are leak-tested. Evaporator coils are tested at a 300 PSIG pressure and condensing coils at 400 PSIG.
The condensed water pan has an exclusive design that meets ASHRAE standards for internal air quality.

Water-cooled condenser (SAVE)

The "Shell & Tube" water-cooled condensers are manufactured with copper tubes with integral fins, expanded on steel mirrors, with rifled holes, assuring perfect sealing, mounted in a steel case with cast iron covers, removable for easy cleaning, protected by finish coating. Designed, tested and checked according to ASME standards, for operating pressures of 300 PSIG on the refrigerating side and 150 PSIG on water side.

Compressor Scroll

These are very efficient compressors, that have no valves and are extremely resistant to slugging. They have 64% less moving parts than a reciprocal compressor with equal capacity. Their operation is extremely smooth and silent.

Compressor Scroll

Fans

Forward-curved type centrifugal fans, made in galvanized steel with statically- and dinamically-balanced rotors . The evaporator group is sized to supply up to 70 mmca of external static pressure.

Air filters

The standard unit is supplied with washable filters, of electrostatic fabric, class G0, fixed in a steel wire frame.

Protection and Safety Devices

The equipment is protected by high and low pressure switches with automatic reset and fixed adjustment, internal compressor thermostat with automatic reset, current overload relay for the compressor and thermal overload relay for fan motors.
Water-cooled condensers are protected by plug fuse.

Standard Thermostat

All units are supplied with a control thermostat. This thermostat can be installed remotely or at the equipment, according to customer needs.

Tests

The *DIAMOND* line is supplied from factory tested. The standard tests include visual inspection and basic production test.

Inspection Valves

All units have 1/4” NU Schrader inspection valves in liquid, suction and discharge lines.

Mechanical Specification

Remote Condenser CRCB / CRCE

CRCB / CRCE units are composed by heat exchanger and centrifugal fans . The unit CRCB is mounted in a single structural module. Units CRCE are basically composed by two modules: the heat exchanger module and the fan module, thus allowing the units CRCE the horizontal or vertical discharge option.

Cabinet

Units CRCB, CRCE are manufactured in galvanized steel panels, painted in Trane gray.

Painting

The cabinet of units CRCB and CRCE is supplied from factory painted in Trane gray. The parts are submitted to a modern phosphatization process and later to powder-painting with a POLYESTER-based resin, which provides Trane equipment with high resistance. After this process, the parts are cured in an oven at 200ºC, providing a final and resistant 85-micron coating.

Nominal Capacities

Units CRCB and CRCE have the following nominais capacities:

CRCB/CRCE 050 - 5.0 TR
CRCB/CRCE 075 - 7.5 TR
CRCB/CRCE 100 - 10.0 TR
CRCB/CRCE 125 - 12.5 TR
CRCB/CRCE 150 - 15.0 TR

Power Voltage

Units TRCE can be supplied with power voltage of 220 or 380 or 440 V, frequency of 50 or 60 Hz, three-phase and command voltage of 220 V, and optionally with command 24V.

CRCB

CRCE

Mechanical Specification

Opcionals

Return Grill
Grill in anodized aluminum profile with vertical fins. Vertical grills allow an excellent air distribution in the coil. Recommended for room machines.

Heating Resistances
The resistances have a galvanized steel structure and ∅ 85 mm stainless steel tubular resistance. The following tables show the available electrical heating options for each model.

Model (TR)	*AQ1* (kW)	*AQ2* (kW)	*AQ3* (kW)
20	9,0	18,0	27,0
25	9,0	18,0	27,0
30	12,0	24,0	36,0
35	12,0	24,0	36,0
40	15,0	30,0	45,0

Electrical Frame
Trane offers as an option electrical frames for heating resistances.

Important:
When electrical heating options are ordered, the frames are supplied separately and are coupled to the devices.

Service Valve
Service valve for liquid, suction and discharge lines.

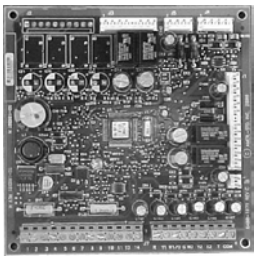
Condensing Pressure Controller
Set with pressure-controlled valves for condensing pressure control in machines with air condensation. The liquid tank completes this option.

Refrigerant R-407 C
Units offer as an option an alternative refrigerant, the R- 407C. However, Trane do Brasil shall be consulted for calculation of nominal capacity for devices operating with the alternative refrigerant.

Note: Refrigerant R-407C is not available for the line Self Contained Diamond - SAVE (Water-cooled condenser - Shell&Tube).

Power Supply Voltage
Self Contained Diamond units offer the following power supply voltages: 220V or 380V or 440 V, three-phase, 60 Hz. Trane also provides, as an option, the command voltage in 24 V.

Controls
Programmable Thermostat
Microprocessed control ReliaTel®
Tracker Controller



ReliaTel® Board

Programmable Thermostat

Packing
Special wood box packing.

Filtering
Simple: Washable metal filter with 3 layers.
Double: many double combinations can be made. Refer to table 3 in this catalogue (page 8).

Tests
Trane do Brasil offers the following in-factory tests: basic production test with inspector, operation test , with or without the presence of an inspector.

Liquid Sight Glass
Auxiliary component for maintenance, Indicates the presence of moisture in the equipment refrigeration piping.

Piping
Diamond units have as an option service valves in suction, liquid and discharge lines.

Capacitor
For power factor correction.

BUILT-IN AND REMOTE CONDENSER CRCB AND CRCE

Coil protection
For applications where a higher resistance against corrosion is required, coils can be made with copper tubes and copper fins or the special Yellow Fin protection. These options can lead to an increase in the standard delivery time of the equipment.

Static Pressure and Filtering
Units CRCB/CRCE and TRCE have as an option 2,5 mmca or 5,0 mmca static pressure, for special applications. Units also feature as an option a filtering system for condenser coils. The filtering options are:

- Class G1 filter - 3 screens
- Class G2 filter - glass wool.

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