

**SPECIFICATION / DATA**



**SPECIFICATION &  
DATA SHEET**

**55-60°C**

**RGB DOMESTIC RANGE  
RE-CIRCULATING  
HEAT PUMPS**

**INNOVATION  
SATISFACTION  
INTEGRITY  
INVOLVEMENT**

**GREENBRO**   
ENDORSED BY NATURE®

**55-60°C** RGB RANGE  
DOMESTIC

**“EXPERIENCE THE ECO-EFFICIENT  
COMFORT OF GREENBRO HEAT  
PUMP SOLUTIONS!”**



**GREENBRO**   
ENDORSED BY NATURE®

# INDEX

## RGB DOMESTIC RANGE RE-CIRCULATING HEAT PUMPS

OVERVIEW	PAGE 2
INNOVATIVE FEATURES & BENEFITS	PAGE 2,3,5
TECHNICAL SPECIFICATION RGB - S RANGE 3.5KW - 5.2KW	PAGE 6
TECHNICAL SPECIFICATION RGB - S RANGE 7.2KW - 9KW	PAGE 7
DIMENTIONAL DATA RGB - S RANGE 3.5KW - 9KW	PAGE 8
INSTALLATION PARTS LIST	PAGE 9



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## OVERVIEW

### WHY GREENBRO IS YOUR TRUSTED PARTNER IN MAINTENANCE AND SUPPLY OF HOT WATER EQUIPMENT

Greenbro South Africa (Pty) Ltd stands out in the industry for several compelling reasons. At Greenbro South Africa, we excel not only in maintaining and repairs but also in enhancing and installing mechanical hot water equipment.

Our commitment to excellence, reliability, and innovation ensures that our services and products consistently meet and exceed industry standards.

With our commitment to excellence and cutting-edge technology, we deliver solutions that exceed expectations and provide lasting value.

Our heat pumps are equipped with a range of innovative features designed to optimize performance and enhance user experience.

## INNOVATIVE FEATURES & BENEFITS



### SUPERIOR QUALITY MATERIALS & COMPONENTS

Our heat pumps are manufactured using the highest standard of materials and components available in the industry. We prioritize quality at every stage of production, from sourcing materials to the assembly process, ensuring that each unit meets our stringent quality control measures.



### SUSTAINABLE COMPRESSOR DESIGN

Our heat pumps feature a sustainable compressor design that maximizes energy efficiency while minimizing environmental impact. This design ensures reliable operation while reducing energy consumption, saving you money on utility bills.



### CUTTING EDGE TECHNOLOGY THAT WILL SUITE ANY PROJECT

Our heat pumps are equipped with a new touchscreen controller that offers intuitive operation and advanced functionality. This controller is Wi-Fi enabled, allowing for remote access and control via smartphone or tablet. Additionally, our heat pumps are compatible with Building Management Systems (BMS), facilitating seamless integration into commercial and industrial environments.



### HIGH EFFICIENCY TUBE & SHELL HEAT EXCHANGER

Our range of heat pumps are engineered with a high-efficiency tube and shell heat exchanger, making it a durable and reliable solution for various heating applications, particularly in environments where corrosion, hard water, high pressure, and unexpected freezes are common concerns. This design maximizes heat transfer efficiency and overall performance, resulting in faster heating times, improved system reliability, and reduced operating costs.

## INNOVATIVE FEATURES & BENEFITS

### SMART CONTROLLER CAPABILITIES

**WI-FI ENABLED:** Connect to Smart App via your mobile device.



LCD Controller



Smart Life App



### CASING OPTIONS

#### STANDARD CASING

Our heat pump casing is meticulously crafted to ensure durability and resistance to rust, employing a multi-step process to provide long-lasting protection. Constructed from 1.2-1.5mm galvanized plate, our casing boasts a robust foundation.

The galvanized plate undergoes a meticulous zinc coating application, with a targeted thickness ranging between 60-80 microns. This initial layer serves as a formidable barrier against corrosion. Following the zinc application, an anti-rust paint is skillfully sprayed, adding an additional 40-60 microns to enhance the casing's defense mechanisms.

To complete the protective ensemble, a second round of spraying is executed with our distinct dark grey color, contributing an additional 50-60 microns. This final coating not only serves an aesthetic purpose but also reinforces the casing's resilience against environmental elements.

Our comprehensive spray process not only delivers a visually appealing dark grey finish but, more importantly, ensures the heat pump casing's steadfast resistance to rust, thereby prolonging its service life and ensuring optimal performance even in challenging conditions.

#### STAINLESS STEEL 304

Stainless steel is renowned for its exceptional durability and resistance to corrosion, making it an ideal choice for applications where environmental factors may pose challenges. The 304 stainless steel casing ensures that our heat pumps remain robust and reliable, even in demanding conditions, providing long-lasting performance and peace of mind to our customers.

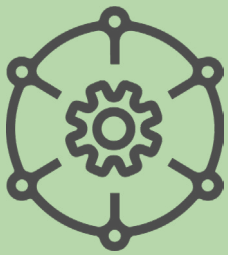
#### STAINLESS STEEL 316

This 316 stainless steel is renowned for its superior corrosion resistance, particularly in harsh environments where exposure to moisture, chemicals, and other corrosive elements is prevalent. The exceptional strength and durability of 316 stainless steel make it an ideal choice for applications where structural integrity is paramount.

## INNOVATIVE FEATURES & BENEFITS

### GREENBRO RGB RANGE HEAT PUMPS

## THE IDEAL SOLUTION FOR ANY APPLICATION



#### UNRIVALLED VERSATILITY

Whether it's residential, commercial, or industrial, the Greenbro RGB Range caters to every heating requirement with ease.

From heating water for domestic use to large-scale facilities, our heat pumps adapt seamlessly to various applications, providing consistent and dependable performance across the board.



#### PERFORMANCE

Meticulously engineered to excel across diverse applications our RGB Range is designed to prioritize safety, efficiency, and reliability. With a maximum water temperature setpoint of 55°C-60°C, offering versatility and performance for a wide array of heating needs.

Our RGB Range is engineered for maximum energy efficiency, helping reduce operational costs and environmental impact.



#### SLEEK DESIGN

Our heat pumps boast compact and versatile dimensions, making them suitable for various installation scenarios.

Whether you're working with limited space or seeking to optimize layout efficiency in a commercial or industrial facility, Greenbro heat pumps offer flexibility without compromising on performance.

With dimensions tailored for ease of installation and maintenance, our heat pumps adapt effortlessly to diverse requirements, ensuring hassle-free integration into any space.

The sleek and modern design of our heat pumps sets them apart from traditional heating equipment. Featuring clean lines, smooth surfaces, and a charcoal grey finish, our heat pumps enhance the visual appeal of their surroundings, adding a touch of contemporary flair to the environment.

# TECHNICAL SPECIFICATION

## RGB DOMESTIC RANGE / 3.5kW - 5.2kW Re-circulating Heat Pump Specification

OPERATIONAL DATA					
		RGB-003-S		RGB-005-S	
OPERATING DATA	<b>Heating Capacity</b>	kW	3.6	5.2	
	<b>Power</b>	Power Supply	Ph-V-Hz	220V/1PH/50HZ	220V/1PH/50HZ
		Rated Input Consumption	kW	0.9	1.2
		Max Input Consumption	kW	1.3	1.9
		Rated Input Current	A	3.97	5.6
		Max Input Current	A	6	9
		Starting Current	A	18	28
		COP	W/W	3.89	3.91
	<b>Max Water Temp Setpoint</b>	°C	55	55	
	<b>Max Outlet Water Temp</b>	°C	60	60	
<b>Hot Water Yield</b>	L/h	75	107		
<b>Recommended Water Flow</b>	m³/h	0.8	1.1		
<b>Working Temp (Ambient)</b>	°C	-15°C~43°C	-15°C~43°C		

GENERAL & PARTS DATA					
		RGB-003-S		RGB-005-S	
GENERAL & PARTS DATA	<b>Compressor</b>	Model		KN104VGMMC	PA160X2C-4FT
		Type / Brand		Rotary / Mitsubishi	Rotary / Toshiba
		Compressor Qty	PCS	1	1
		Rated Current	A	4.1	6.25
		Locked Rotor Amp	A	18	28
		Thermal Protector		Inner	Inner
		Capacitor	µF	25	35
	<b>Fan Motor</b>	Model		YDK-20A-6-2 / HELONG	YDK-25-6-2 / HELONG
		Input	W	65	70
		Capacitor	µF	2	2
		Speed	r/min	870/430	820/450
		Diameter of Fans	mm	320	400
		Fan Motor Qty	PCS	1	1
	<b>Heat Exchanger</b>	Type		Copper Tube in Shell	Copper Tube in Shell
		Qty	PCS	1	1
		Diameter of Copper Pipe	mm	16	19
	<b>Evaporator</b>	Length	m	2.4	2.63
		Fin Spacing	mm	1.6	1.6
	<b>Four-Way Valve</b>	Fin Type		Hydrophilic Aluminum	Hydrophilic Aluminum
		Tube Outer Diameter & Type	mm	Ø9.52 Innergroove Tube	Ø9.52 Innergroove Tube
	<b>AC Contactor</b>	Model / Brand		STF-0108G / Saginomiya	STF-0108G / Saginomiya
	<b>Expansion Device</b>	Model / Brand		Relay	Relay
	<b>Water Pump</b>	Type		Capillary Tube	Capillary Tube
		Model / Brand		UPS015-60 / Grundfos	UPS015-60 / Grundfos
	<b>Wire Controller</b>	GPD20-6SP / XINHU		GPD20-6SP / XINHU	GPD20-6SP / XINHU
		Type		Intelligent & LCD	Intelligent & LCD
		Part Number		Q01T0093	Q01T0093
		The Length of Control Cable	m	12	12
<b>Water System</b>	Set Temp.	°C	25~55	25~55	
	Materials of Water Pipe		Copper	Copper	
	Water Flow	m³/h	0.8	1.1	
	Water Pressure Differential	Kpa	60	50	
	Water Inlet Connection Size	mm	3/4" (DN20)	3/4" (DN20)	
<b>Refrigerant</b>	Water Outlet Connection Size	mm	3/4" (DN20)	3/4" (DN20)	
	Gas Type		(R410A)	(R410A)	
<b>Sound Pressure Level (1m)</b>	Gas Weight	g	650	850	
		dB(A)	52	53	
	Dimension(L*W*H)	mm	935 x 297 x 595	935 x 297 x 595	
<b>Dimensions</b>	Packing(L*W*H)	mm	1060 x 380 x 630	1060 x 380 x 630	
	NG/WG	kg	40 / 48	55 / 65	

Testing condition: ambient Dry/Wet Bulb Temp.: 20°C / 15°C; Water Inlet / Outlet Temp.: 15°C / 55°C



# TECHNICAL SPECIFICATION

## RGB DOMESTIC RANGE / 7.2kW - 9kW Re-circulating Heat Pump Specification

OPERATIONAL DATA					
		RGB-007-S		RGB-009-S	
OPERATING DATA	Heating Capacity	kW	7.2	9	
	Power	Power Supply	Ph-V-Hz	220V/1PH/50HZ	220V/1PH/50HZ
		Rated Input Consumption	kW	1.8	2.3
		Max Input Consumption	kW	2.7	3.35
		Rated Input Current	A	8.5	11.17
		Max Input Current	A	12	16
		Starting Current	A	35	46
	COP	W/W	4.02	3.92	
	Max Water Temp Setpoint	°C	55	55	
	Max Outlet Water Temp	°C	60	60	
	Hot Water Yield	L/h	155	200	
	Recommended Water Flow	m³/h	1.5	1.9	
Working Temp (Ambient)	°C	-15°C~43°C	-15°C~43°C		

GENERAL & PARTS DATA					
		RGB-007-S		RGB-009-S	
GENERAL & PARTS DATA	Compressor	Model	KN104VGMMC	PA290X3CS-4MU1	
		Type / Brand	Rotary / Mitsubishi	Rotary / Toshiba	
		Compressor Qty	PCS	1	1
		Rated Current	A	4.1	11.4
		Locked Rotor Amp	A	18	61
		Thermal Protector		Inner	Inner
		Capacitor	µF	50	50
	Fan Motor	Model		YDK-20A-6-2 / HELONG	YDK-40B-6-2 / HELONG
		Input	W	65	100
		Capacitor	µF	2	3
		Speed	r/min	870/430	900/500
		Diameter of Fans	mm	320	420
		Fan Motor Qty	PCS	1	1
	Heat Exchanger	Type		Copper Tube in Shell	Copper Tube in Shell
		Qty	PCS	1	1
		Diameter of Copper Pipe	mm	16	19
		Length	m	2.4	4.1
	Evaporator	Fin Spacing	mm	1.6	1.6
		Fin Type		Hydrophilic Aluminum	Hydrophilic Aluminum
	Four-Way Valve	Tube Outer Diameter & Type	mm	Ø9.52 Innergroove Tube	Ø9.52 Innergroove Tube
	AC Contactor	Model / Brand		STF-0108G / Saginomiya	STF-0218G / Saginomiya
	Expansion Device	Model / Brand		Relay	Relay
	Water Pump	Type		Capillary Tube	Capillary Tube
		Model / Brand		UPS015-60 / Grundfos	UPS015-60 / Grundfos
	Wire Controller			GPD20-6SP / XINHU	GPD20-6SP / XINHU
		Type		Intelligent & LCD	Intelligent & LCD
		Part Number		Q01T0093	O01T0089
		The Length of Control Cable	m	12	12
Water System	Set Temp.	°C	25~55	25~55	
	Materials of Water Pipe		Copper	Copper	
	Water Flow	m³/h	0.8	1.5	
	Water Pressure Differential	Kpa	60	60	
	Water Inlet Connection Size	mm	3/4" (DN20)	3/4" (DN20)	
Refrigerant	Water Outlet Connection Size	mm	3/4" (DN20)	3/4" (DN20)	
	Gas Type		(R410A)	(R410A)	
Sound Pressure Level (1m)	Gas Weight	g	650	950	
		dB(A)	52	54	
	Dimension(L*W*H)	mm	935 x 297 x 595	935 x 297 x 595	
Dimensions	Packing(L*W*H)	mm	1060 x 380 x 630	1060 x 380 x 630	
	NG/WG	kg	40 / 48	65 / 79	

Testing condition: ambient Dry/Wet Bulb Temp.: 20°C / 15°C; Water Inlet / Outlet Temp.: 15°C / 55°C

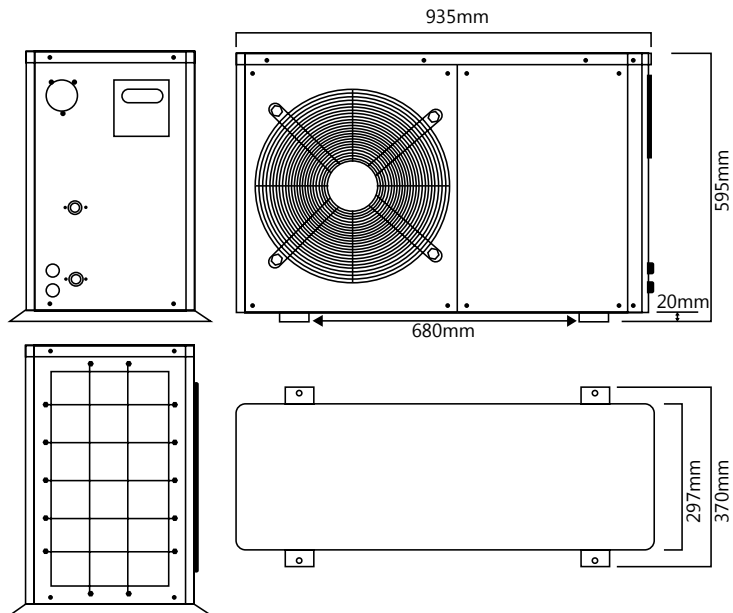


## DIMENSIONAL DATA

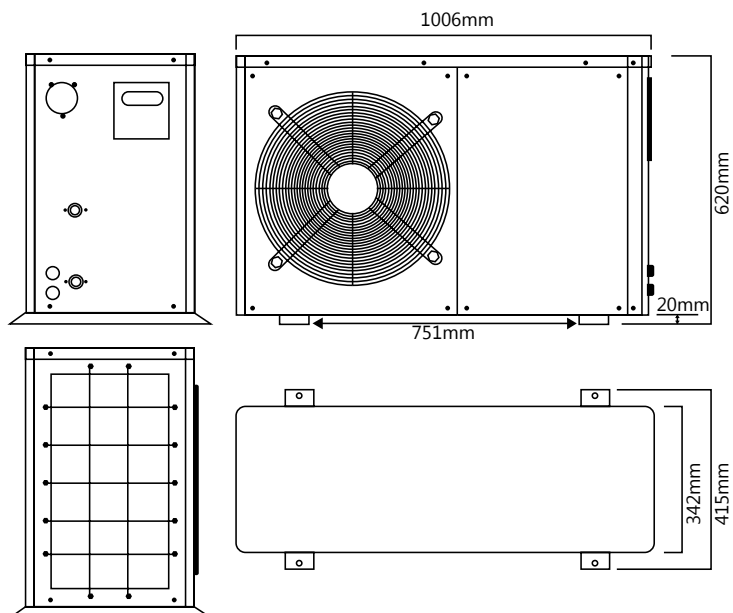
RGB-003-V / 3.6kW

RGB-005-V / 5.2kW

RGB-007-V / 7.2kW



RGB-009-V / 9kW



## INSTALLATION PARTS LIST

### WHAT IS REQUIRED?

Apart from the plumbing / piping, below is a list of items that you may require when installing a domestic heat pump.

#### STRAINER



Due to the sensitive nature of the heat pumps with regards to optimum required water flow rate, it is of the utmost importance to minimize restrictions where possible.

#### LEVER BALL VALVE



Lever ball valves are required to isolate the heat pump. Must be the full bore type.

#### DUAL DRAIN-COCK



In Greenbro units the sensor is fitted inside the geyser. These units will require a probe pocket on the drain-cock, unless the geyser manufacturer has made provision for a probe pocket on the geyser itself.

#### BANJO VALVE



To be used on retrofit installations. It makes available an extra port on the geyser to use for the heat pump installation. On new geyser heat pump installations we recommend the use of a heat pump compatible geyser. In such a case no banjo valve will be required.

#### GALVANISED BRACKETS



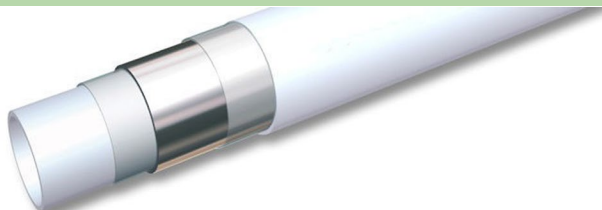
Brackets are preferred to be of the galvanized type especially in coastal regions and must have a bearing weight capable to handle the weight of the heat pump. Preferably 3 times the weight of the unit.

#### CONEX REDUCER



22mmx15mm conex reducer This fitting is to be used when installing the pex pipe diffuser into the tank.

#### DIFFUSER PIPE (PEX-AL-PEX)



The use of the PEX diffuser pipe will be needed on all retrofit installations. The purpose of this pipe is to prevent major upset of the stratification layers but more importantly to prevent short cycling between the outlet of the unit where it is connected to the geyser and the hot water outlet to building. These two ports will on most vessels be very close to each other. The diffuser pipe used must be rated to operate in high temperature conditions and must not lose its rigidity.

**THANK YOU FOR CONSIDERING  
GREENBRO SOUTH AFRICA.**

**WE LOOK FORWARD TO THE  
PROSPECT OF WORKING  
TOGETHER.**



ENDORSED BY NATURE®

**Domestic and Commercial Mechanical Hot Water  
Plantroom Specialists**

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