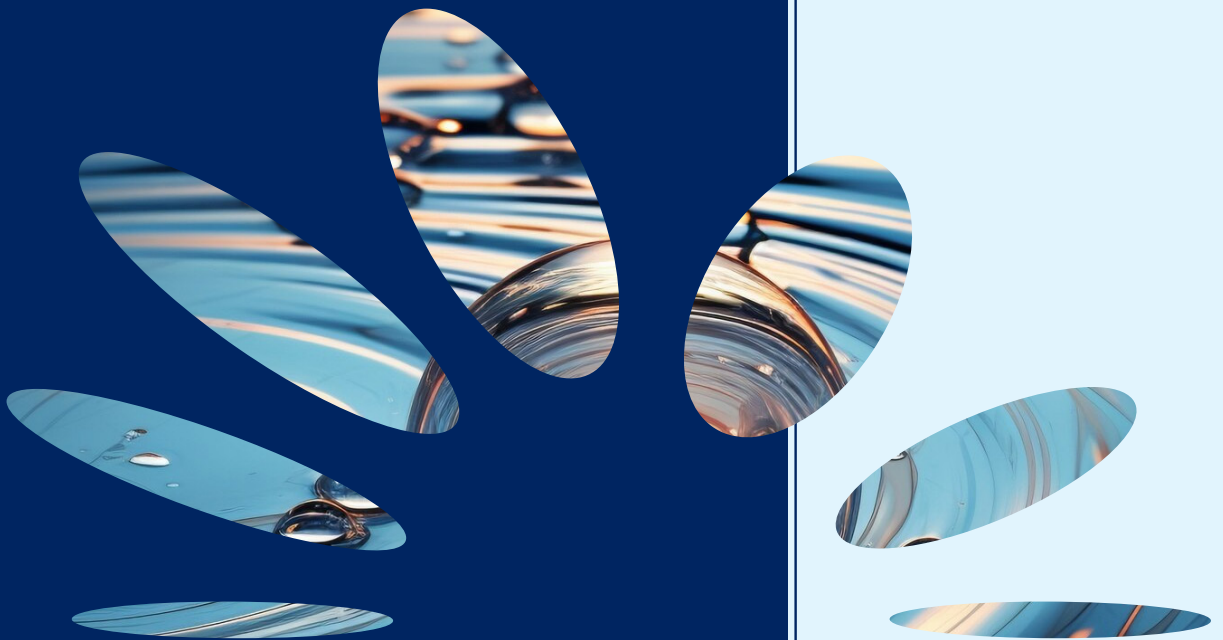


# PRODUCT CATALOG



**Chromagen**<sup>™</sup>  
Hot Water Solutions



## Introduction

### Chromagen Hot Water Solutions

Chromagen is a pioneer in the production of hot water solutions since 1962, with vast experience and a solid presence in over 40 countries around the world, and continuously expanding. Chromagen is positioned within the top 10 largest flat plate collectors manufacturers world-wide.

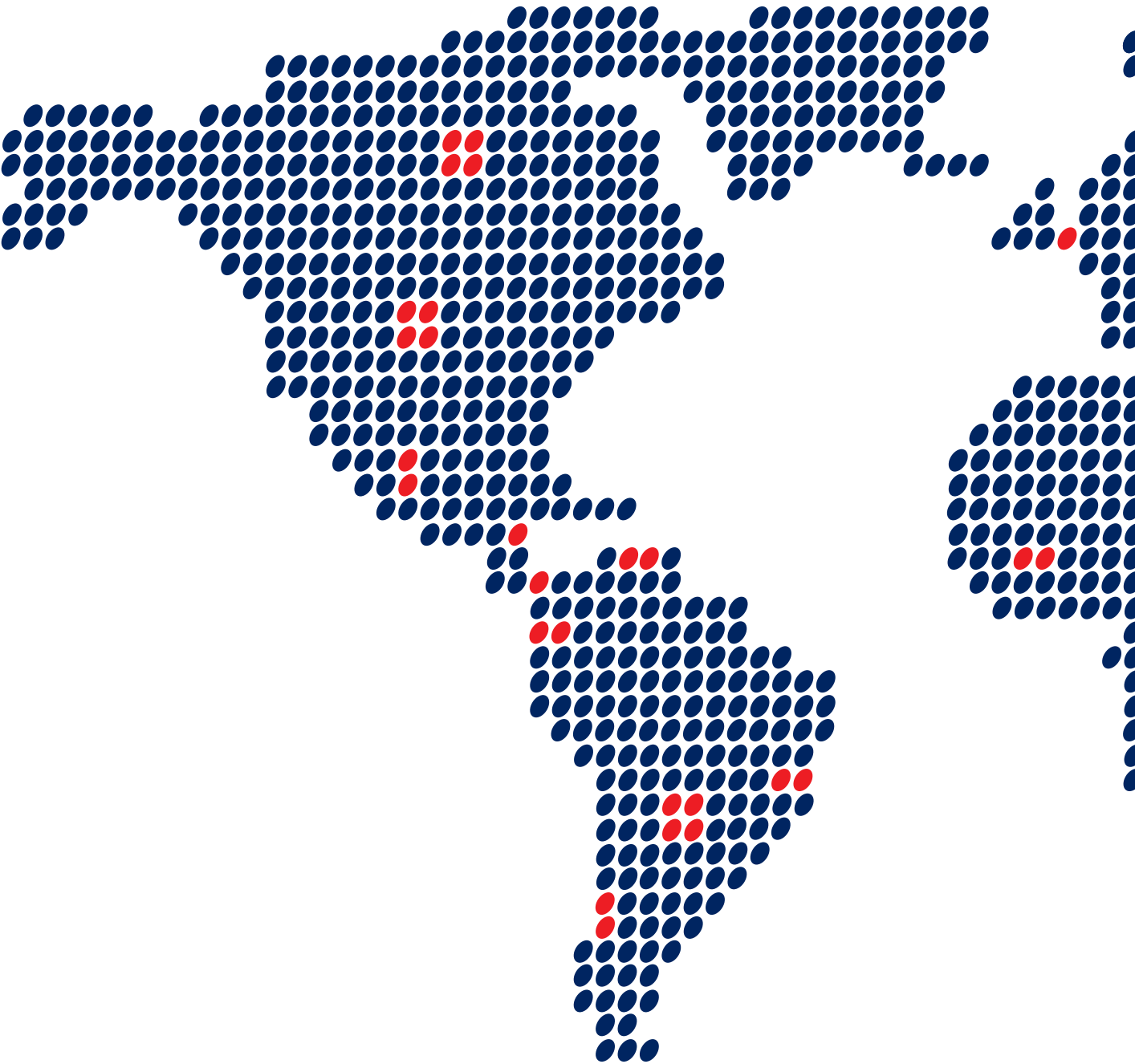
At Chromagen, we are proud of our high-quality hot water solutions and long-lasting products, using the highest raw material quality, complying with all international standards. Chromagen's projects department provides complete hot water solution that is tailor made applications for residential and commercial projects.

#### **Hot water projects and solutions**

Chromagen leads hot water projects world-wide, including multi-story apartment buildings and hundreds of hotels, hospitals, industrial plants, motor camps, sport clubs, spa and more. Chromagen's engineering department provides complete hot water heating solutions that are individually handled and planned. This department analyzes the project data, drafts preliminary design and ROI calculations, quotations, detailed engineering planning, installation, supervision and after-sale technical support.

#### **Quality strategy**

Chromagen meets the highest international standards and superb quality control. Our management scheme complies with ISO 9001 and IQNet standards. Chromagen systems and components conform with the European standards EN12975 for solar collectors & EN 12976 for solar thermal systems, International standards ISO 9806, Israeli standard, SRCC USA, Environmental standard ISO 14001, Health & Safety standard OHSaS 18001, Australian, European standards and more.





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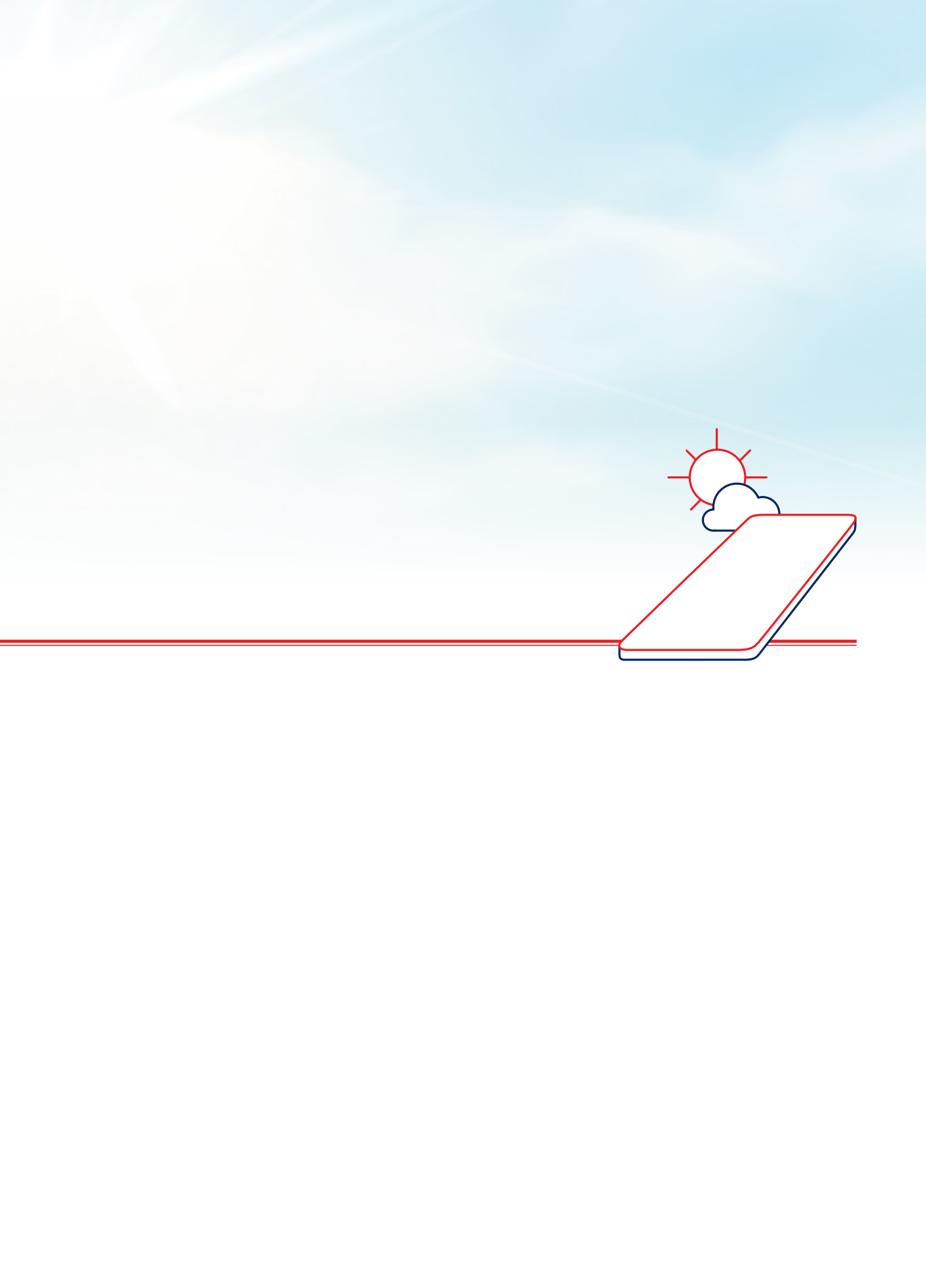
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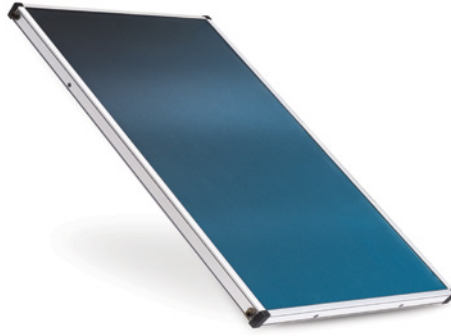
# 1 Flat-Plate Collectors

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# Introduction



Chromagen manufactures Flat-Plate Solar Collectors using state of the art technology.

- Full plate aluminum absorbers with an ultra selective sputtering or selective paint coating
- Anodized aluminum or galvanized steel casing
- Copper tubes, which are standard in all Chromagen collectors

## Advantages

- Highest quality design
- Excellent heat transfer through the laser welded technology
- Tempered glass
- Advanced sputtering / selective-paint coating technology
- Long collector life span
- Wide variety of international certifications
- Installation on all types of roofs
- Clean energy generated, for free, from the sun

# Chromagen Collectors Specifications

Collector Size	Y		K		D	
Risers diameter (mm)	8	16	8	16	8	16
Gross area (m <sup>2</sup> )	1.41		1.65		2.02	
Aperture area (m <sup>2</sup> )	1.25		1.52		1.85	
Length (cm)	181		181		189	
Width (cm)	78		91		107	
Weight (Kg)	21	23	26	28	30	33
Fluid capacity (L)	0.8	2.2	1	2.7	1.2	3.2
Thickness (cm)	9					

Collector Size	E		F		Z	
Risers diameter (mm)	8	16	8	16	8	16
Gross area (m <sup>2</sup> )	2.34		2.77		3.12	
Aperture area (m <sup>2</sup> )	2.15		2.56		2.93	
Length (cm)	218		218		246	
Width (cm)	107		127		127	
Weight (Kg)	34	37	39	43	46	54
Fluid capacity (L)	1.3	3.6	1.5	4.1	2.1	6.8
Thickness (cm)	9					

- Collector's test pressure: 12 bar
- Maximum collector operation pressure: 8 bar

## Pro Collectors

Absorber coating	Frame type	Size	Designation	CN
Selective paint	Aluminum	D	QA-D	CDBXCXXQ07TE
		E	QA-E	CEBXCXXQ07TE
		F	QA-F	CFBXCXXQ08TE
	Galvanized Steel	Y	QR-Y	CYRXCXXQ05TE
		K	QR-K	CKRXCXXQ06TE
		D	QR-D	CDRXCXXQ07TE
		E	QR-E	CERXCXXQ07TE
		F	QR-F	CFRXCXXQ08TE

## Comfort Collectors

Absorber coating	Frame type	Size	Designation	CN
Sputtering	Aluminum	D	PA-D	CDBXCXXP07TE
		E	PA-E	CEBXCXXP07TE
		F	PA-F	CFBXCXXP08TE
	Galvanized Steel	K	PR-K	CKRXCXXP06TE
		D	PR-D	CDRXCXXP07TE
		E	PR-E	CERXCXXP07TE
		F	PR-F	CFRXCXXP08TE
		Z	PR-Z	ZFRXCXXP14TE

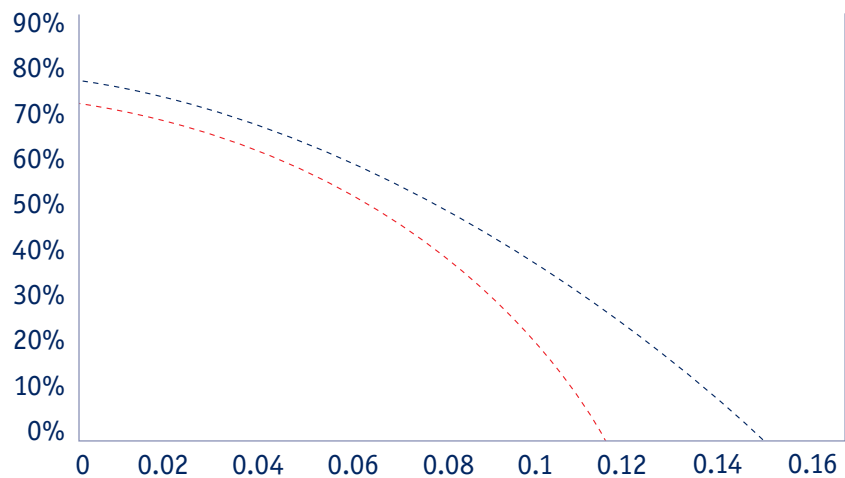
- Due to on-going development, specifications are subject to change without notice
- The above represents the average dimensions and weights of produced products

# Additional Specifications

<b>Coating Absorption</b>	Sputtering 95%; Selective Paint 90%
<b>Coating Emission</b>	Sputtering 5%; Selective Paint 45%
<b>Glazing</b>	Tempered glass 3.2 mm
<b>Light Transmission</b>	91%
<b>Piping Connections</b>	Four BSP female brass connection /clear cut edge
<b>Thermal Insulation</b>	23 mm polyurethane foam + glass wool (for highly selective coatings only)
<b>Back Plate</b>	Black polypropylene sheet
<b>Aluminum Foil</b>	Attached to the polyurethane foam

- Recommended flow rate: 20-50L/h per m<sup>2</sup>

## Collector Efficiency Curve



$$X = (T_m - T_a) / G$$

$$T_m = \text{Water temp: } (T_{out} + T_{in}) / 2$$

$$T_a = \text{Ambient temp}$$

$$G = \text{Instantaneous solar radiation}$$

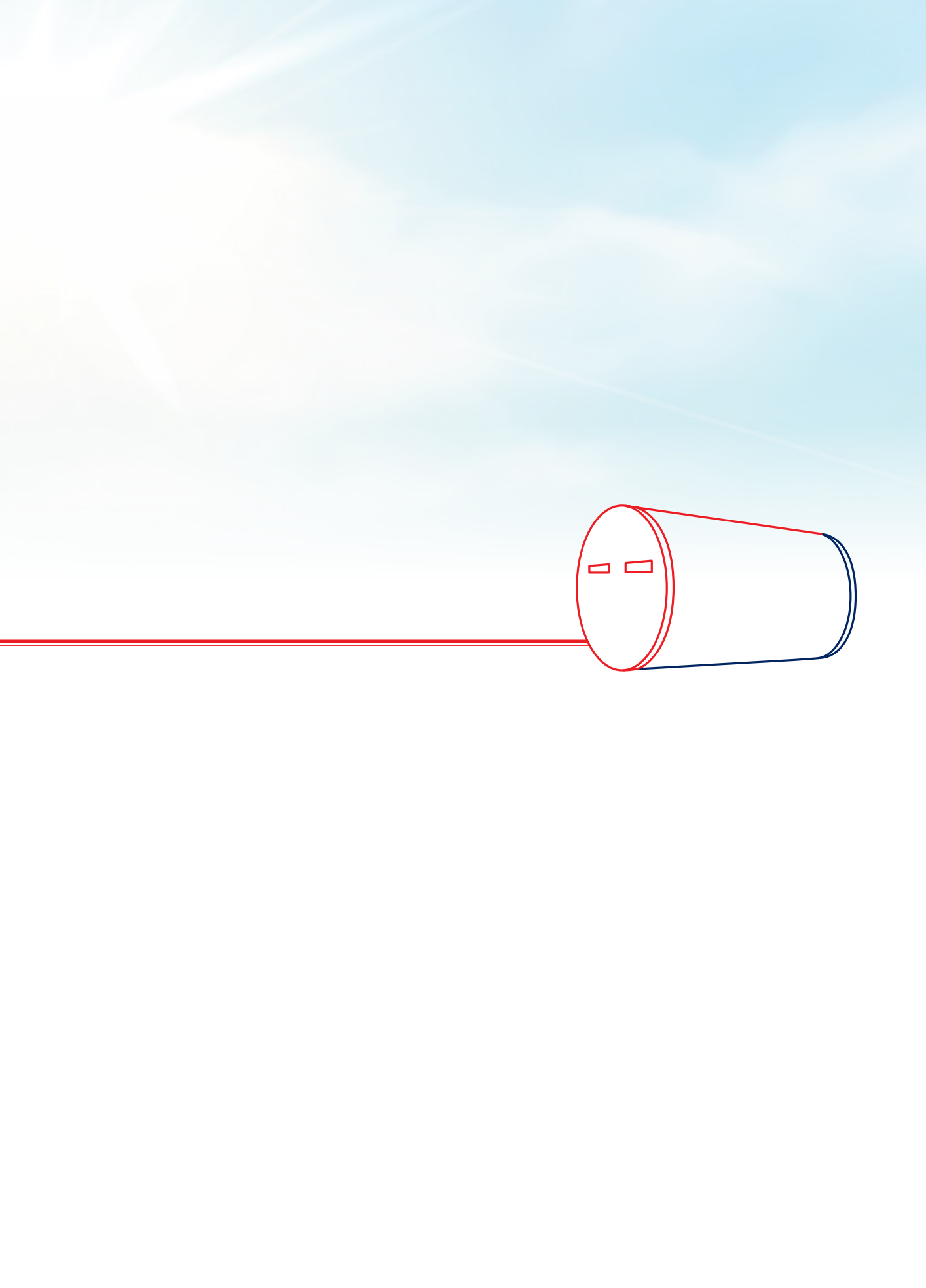
---- Sputtering

---- Selective paint



# 2 Tanks

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# Tanks Introduction

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Chromagen produces tanks designed to store hot water for residential and commercial use.

The inner enamel coating is applied by vacuum technology and produced with superior-quality enamel that fully coats the entire inner surface. The injected polyurethane foam insulates the tank from the ambient air.

Chromagen's produces horizontal and vertical water tanks with or without heat exchangers, that may be installed in thermosiphon or forced circulation systems. All tanks are available with an electric back up.

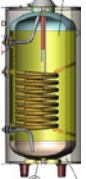
### **Advantages:**

- Highest quality design
- Large variety of products for different requirements
- Highest quality glass-enamel coating
- Sacrificial anode for anti-corrosion protection
- Optimal insulation and heat retention
- Extreme product durability
- Long tank life span
- Wide variety of international certifications

Available in different frame colors



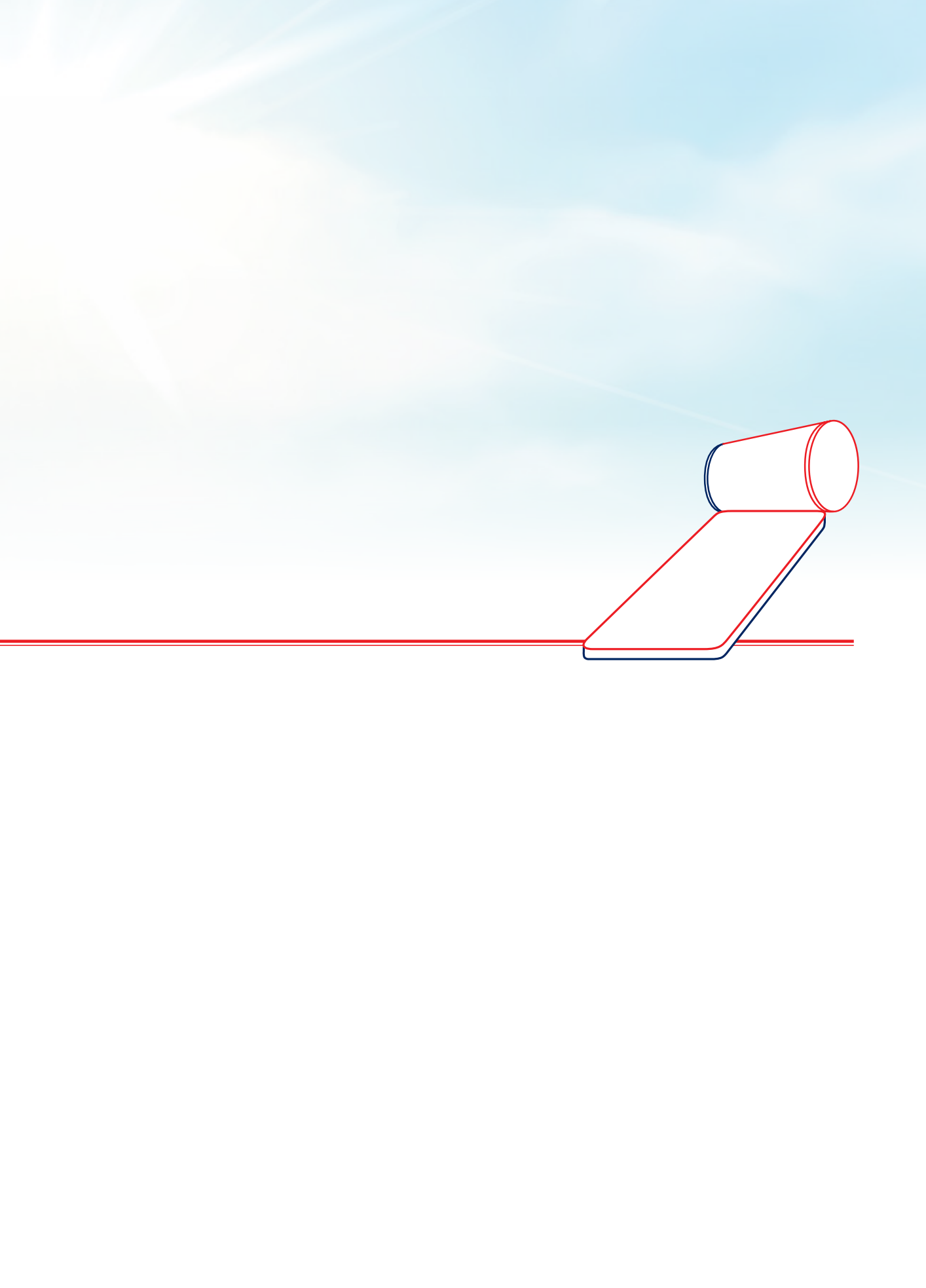
# Tanks Specifications

Type	Drawing	Capacity (Liters)	Dimensions HxD (mm)	Catalog Number	Weight (KG)	Electric Power (KW)
Solar Vertical		80	650X560	SV80WR	37	2.5/None
		120	860X560	SV120WR	46	
		150	1020x560	SV150WR	53	
		200	1270x560	SV200WR	65	
		300	1442x650	SV300NR	91	
Solar Horizontal		120	860x560	SH120WR	46	
		120	1250x477	SH120WR	50	
		150	1020x560	SH150WR	53	
		200	1270x560	SH200WR	65	
		300	1442x650	SH300NR	91	
Double Jacket Horizontal		120	1250x477	EH120NM	74	2/2.5/ None
		150	1020x585	EH150WM	75	
		200	1270x585	EH200WM	93	
		300	1442x690	EH300NM	133	
Spiral Vertical		120	860x585	EV120WS	74	2.5/None
		120	1250x477	EV120NS	78	
		150	1020x560	EV150WS	75	
		150	1480X477	EV150NS	73	
		200	1280x585	EV200WS	90	
		200	1280x560	EV200WS	90	
		300	1442x650	EV300NS	133	
Electric		30	670x360	EV030NR	23	2/2.5
		45	850x360	EV045NR	29	
		60	740X477	ED060NR	31	
		80	930X477	ED080NR	40	
		120	860X565	ED120WR	46	
		120	1260X477	ED120NR	50	
		150	1020X585	ED150NR	65	
		200	1280x585	ED200WR	91	
		300	1442x650	EV300NR	100	

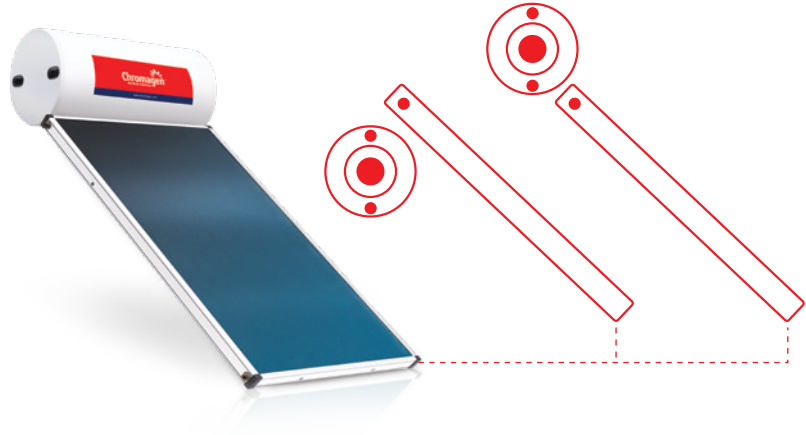
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# 3 Thermosiphon Systems

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# Thermosiphon Systems - Open Loop, High/ Low Profile



## Thermosiphon Systems (TS)

TS rely on natural convection to move hot fluid from the collector to the tank without the use of electric-powered pumps. These systems are easy to maintain, less expensive to install and generally more efficient than Forced Circulation (FC) systems. The below systems include the following prefabricated kit: tank, collector/s and a connecting kit.

### Open Loop, High Profile

In high profile installations the storage tank must be placed above the collector.

### Open Loop, Low Profile

In low profile installations the bottom of the storage tank must be placed on or above the upper third part of the collector. The low profile configuration provides a more aesthetic installation.

## Pro Thermosiphon System - Open Loop, High/ Low Profile

Users	Vol. (L)	Tank	Collector	Collector Area* (G / A)	Connecting Kit
x3-4	120	SH120NM	QR-K	1.65 / 1.52	IKITOL0010
x3-4	120	SH120NM	QR-D	2.02 / 1.85	IKITOL0010
x4-5	150	SH150WM	QR-D	2.02 / 1.85	IKITOL0010
x4-5	150	SH150WM	QR-E	2.34 / 2.15	IKITOL0010
x5-6	200	SH200WM	QR-F	2.77 / 2.56	IKITOL0010
x6+	300	SH300WM	2x QR-D	4.04 / 3.7	IKITOL0020
x6+	300	SH300WM	2x QR-E	4.68 / 4.3	IKITOL0020

\* Collector Area = Gross / Aperture (Net)

## Comfort Thermosiphon System - Open Loop, High/ Low Profile

Users	Vol.(L)	Tank	Collector	Collector Area (G / A)	Connecting Kit
x3-4	120	SH120NM	PA-K	1.65/ 1.52	IKITOL0010
x3-4	120	SH120NM	PA-D	2.02/ 1.85	IKITOL0010
x4-5	150	SH150WM	PA-D	2.02/ 1.85	IKITOL0010
x4-5	150	SH150WM	PA-E	2.34/ 2.15	IKITOL0010
x5-6	200	SH200WM	PA-F	2.77/ 2.56	IKITOL0010
x6+	300	SH300NM	2x PA-D	4.04 / 3.7	IKITOL0020
x6+	300	SH300NM	2x PA-E	4.68 / 4.3	IKITOL0020

## Thermosiphon Systems - Closed Loop, High Profile

### Thermosiphon System - Closed Loop, High Profile

Closed-loop systems prevent freezing and scale buildup. The below systems include the following prefabricated kit: tank, collector/s and a connecting kit.

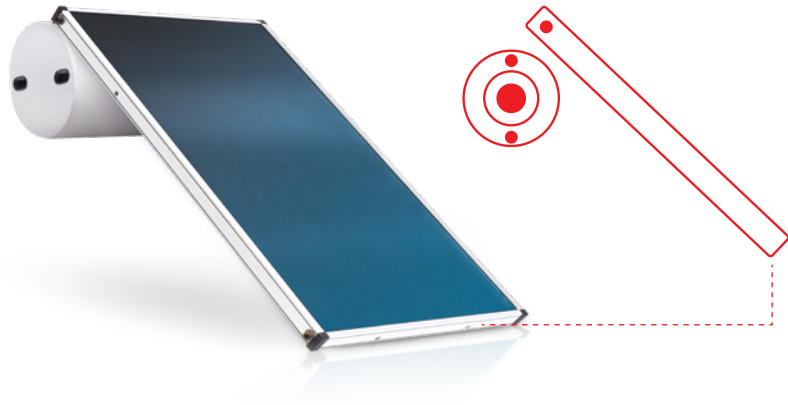
### Pro Thermosiphon System - Closed Loop, High Profile

Users	Vol.(L)	Tank	Collector	Collector Area (G / A)	Connecting Kit
x3-4	120	EH120WM	QR-K	1.65 / 1.52	IKITCL0370
x3-4	120	EH120WM	QR-D	2.02 / 1.85	IKITCL0370
x4-5	150	EH150WM	QR-D	2.02 / 1.85	IKITCL0370
x4-5	150	EH150WM	QR-E	2.34 / 2.15	IKITCL0370
x5-6	200	EH200WM	QR-F	2.77 / 2.56	IKITCL0370
x6+	300	EH300NM	2x QR-D	4.04 / 3.7	IKITCL0380
x6+	300	EH300NM	2x QR-E	4.68 / 4.3	IKITCL0380

## Comfort Thermosiphon System - Closed Loop, High Profile

Users	Vol.(L)	Tank	Collector	Collector Area (G / A)	Connecting Kit
x3-4	120	EH120NM	PA-K	1.65 / 1.52	IKITCL0370
x3-4	120	EH120WM	PA-D	2.02 / 1.85	IKITCL0370
x4-5	150	EH150WM	PA-D	2.02 / 1.85	IKITCL0370
x4-5	150	EH150WM	PA-E	2.34 / 2.15	IKITCL0370
x5-6	200	EH200WM	PA-F	2.77 / 2.56	IKITCL0370
x6+	300	EH300NM	2x PA-D	4.04 / 3.7	IKITCL0380
x6+	300	EH300NM	2x PA-E	4.68 / 4.3	IKITCL0380

# Thermosiphon Systems - Closed Loop, Low Profile



The below systems include the following prefabricated kit: tank, collector/s, a connecting kit and an expansion tank.

## Pro Thermosiphon System - Closed Loop, Low Profile

Users	Vol. (L)	Tank	Collector	Collector Area (G/A)	Connecting Kit	Exp. Tank
x3-4	120	EH120NM	QR-K	1.65 / 1.52	IKITCL0200	5 L
x3-4	120	EH120NM	QR-D	2.02 / 1.85	IKITCL0200	5 L
x4-5	150	EH150WM	QR-D	2.02 / 1.85	IKITCL0200	5 L
x4-5	150	EH150WM	QR-E	2.34 / 2.15	IKITCL0200	5 L
x5-6	200	EH200WM	QR-F	2.77 / 2.56	IKITCL0200	5 L
x6+	300	EH300NM	2x QR-D	4.04 / 3.7	IKITCL0190	8 L
x6+	300	EH300NM	2x QR-E	4.68 / 4.3	IKITCL0190	8 L

## Comfort Thermosiphon System - Closed Loop, Low Profile

Users	Vol. (L)	Tank	Collector	Collector Area (G/A)	Connecting Kit	Exp. Tank
x3-4	120	EH120NM	PA-K	1.65 / 1.52	IKITCL0200	5 L
x3-4	120	EH120NM	PA-D	2.02 / 1.85	IKITCL0200	5 L
x4-5	150	EH150WM	PA-D	2.02 / 1.85	IKITCL0200	5 L
x4-5	150	EH150WM	PA-E	2.34 / 2.15	IKITCL0200	5 L
x5-6	200	EH200WM	PA-F	2.77 / 2.56	IKITCL0200	5 L
x6+	300	EH300NM	2x PA-D	4.04 / 3.7	IKITCL0190	8 L
x6+	300	EH300NM	2x PA-E	4.68 / 4.3	IKITCL0190	8 L

\* Collector Area = Gross / Aperture (Net)

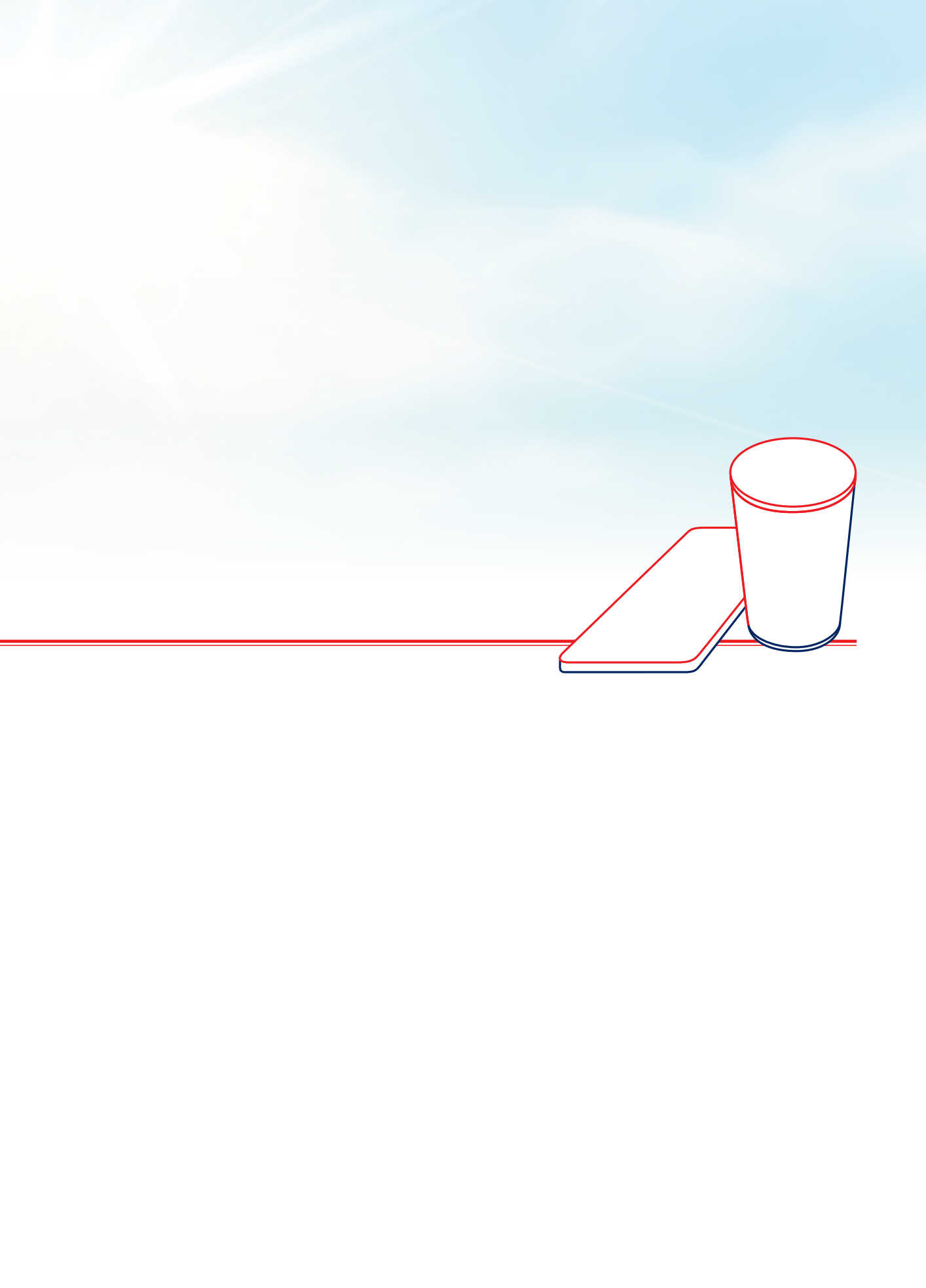
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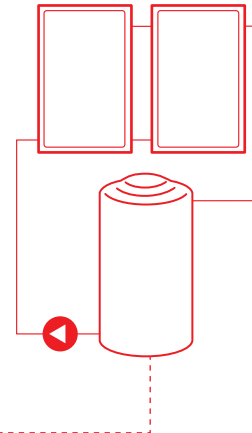
# 4 Forced Circulation Systems

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# Forced Circulation Systems



## Forced Circulation Systems (FC)

FC uses electrical pumps, valves and controllers to circulate water or other heat-transfer fluids through the collectors. FC enables high flexibility in the positioning of the systems' components: storage tanks do not need to be installed above or close to the collectors. The below systems include the following prefabricated kit: tank, collector/s, a connecting kit and an expansion tank.

## Pro Forced Circulation Systems

Users	Vol. (L)	Tank	Spiral	Collector	Collector Area* (G/A)	Connecting Kit (inc. pump)	Exp. Tank
x3-4	120	EV120WS	1	QR-K	1.65 / 1.52	IKITCL0181	5 L
x3-4	120	EV120WS	1	QR-D	2.02 / 1.85	IKITCL0181	5 L
x4-5	150	EV150WS	1	QR-D	2.02 / 1.85	IKITCL0181	5 L
x4-5	150	EV150WS	1	QR-E	2.34 / 2.15	IKITCL0181	5 L
x5-6	200	EV200WS	1	QR-F	2.77 / 2.56	IKITCL0181	5 L
x6+	300	EV300NS	1	2x QR-D	4.04 / 3.7	IKITCL0180	8 L
x6+	300	EV300NS	1	2x QR-E	4.68 / 4.3	IKITCL0180	8 L

\* Collector Area = Gross / Aperture (Net)

## Comfort Forced Circulation Systems

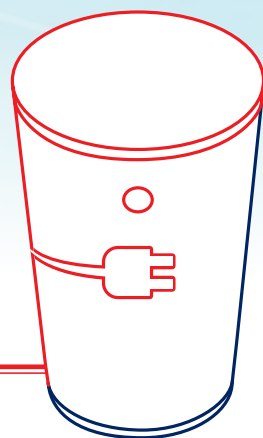
Users	Vol. (L)	Tank	Spiral	Collector	Collector Area* (G/A)	Connecting Kit (inc. pump)	Exp. Tank
x3+	120	EV120WS	1	PA-K	1.65 / 1.52	IKITCLO181	5 L
x3+	120	EV120WS	1	PA-D	2.02 / 1.85	IKITCLO181	5 L
x4-5	150	EV150WS	1	PA-D	2.02 / 1.85	IKITCLO181	5 L
x4-5	150	EV150WS	1	PA-E	2.34 / 2.15	IKITCLO181	5 L
x5-6	200	EV200WS	1	PA-F	2.77 / 2.56	IKITCLO181	5 L
x6+	300	EV300NS	1	2xPA-D	4.04 / 3.7	IKITCLO180	8 L
x6+	300	EV300NS	1	2xPA-E	4.68 / 4.3	IKITCLO180	8 L

\* Collector Area = Gross / Aperture (Net)

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# 5 Electric Tanks

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# Electric Tanks Introduction

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Chromagen manufactures electric tanks designed to store hot water for residential use. The inner enamel coating is applied by vacuum technology and produced with superior quality. The polyurethane tanks insulations assure minimal heat losses.

Chromagen's produces residential vertical water tanks with or without heat exchangers. All tanks are available with an electric back up.

- Water storage tank made of cold rolled steel. The thermal tank is shaped in special patterns by robot welding process, thus achieving:
  - A) Perfect enamel application
  - B) Avoid the deformation of the internal tank as well as the enamel erosion in case of high pressure.
- Anti-corrosion internal layer of enamel powder baked at 860°C, according to DIN 4753 standard, for protection against electrolysis. The enameling is done in our high-tech industrial facilities. The water tanks are checked individually upon exit from the enameling unit, assuring the top quality of the enamel.
- Hot water outlet (consumption): stainless steel ½" BSP male threaded pipe end with plastic adapter.
- Cold water inlet (supply): special shaped ½" BSP male threaded divider, for even water stratum.
- 10 bar non-return valve for safe and controlled hydraulic pressure relief.

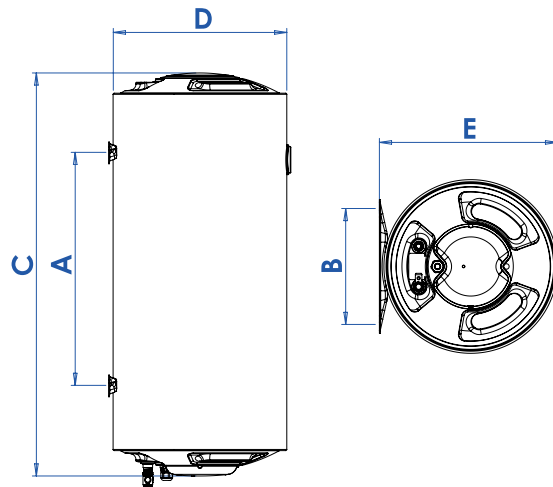
- Steel pressed neck for the heating element without welding, with internal incision for easy and quick heating element installation. no need for special tools (locknuts). Extraction and re-installation of the heating element in less than one minute.
- Full bodied gasket for sealing the heating element from the thermal tank, thus protecting the heating element flange from electrolysis and corrosion.
- Heating element rated according to the country of destination local regulations. It can be pulled away from the flange.
- Heat exchanger with 3/4" BSP male threaded pipe ends, made of steel pipe. Large exchange surface for use of the heating produced by central heating systems during the winter (optional).
- Cathode protection by magnesium anode 22x300 mm < 60 lt and 22x500 mm > 80 lt for effective internal protection against corrosion and mineral deposits caused by electrolytic reactions.
- Internal adjustable thermostat with bipolar protection and auxiliary fuse.
- Protective cover for the electrical section designed for easy access. It locks with just one screw. Ventilation holes specially designed for safe water vapor aspiration.
- Sealed entry of the heating element connection cable, with a rubber collar on the cable.
- Operation indication light.
- Thermal insulation: ecological high-density (40Kg/m<sup>3</sup>) expanded polyurethane ensures minimum heat loss, maintaining the hot water temperature.
- Insulation thermal conductivity:  $\lambda=0.023$  W/m K (DIN 56612, measured at 10°C) (DIN EN ISO 845, DIN 53 421, ISO 4590, DIN ISO 2796).
- External housing with electrostatically robotized painted steel for protection against corrosion.
- Side plastic caps
- Thermometer
- Mounting: vertical, horizontal or floor.
- Packed in carton boxes for safe and easy storage - transportation.
- CE Marking: compliance with European health, safety & environmental protection legislation
- Energy Labeled (ERP): D C

# Electric Tanks Specifications

Electric Water Heaters	Real Capacity	Weight	Electroboiler With Heat Exchanger	Heat Exchanger Surface	Heat Exchanger Power (80°C)
8 L	6.9 L	6 Kg	-	-	-
20 L	17.6 L	11 Kg	-	-	-
40 L	36.4 L	15 Kg	-	-	-
50 L	45.6 L	18 Kg	-	-	-
60 L	55.6 L	19 Kg	60 L	0.25m <sup>2</sup>	9.3 Kw
80 L	74.4 L	20 Kg	80 L	0.25m <sup>2</sup>	9.3 Kw
100 L	90.9 L	25 Kg	100 L	0.25m <sup>2</sup>	9.3 Kw
120 L	107.9 L	30 Kg	120 L	0.25m <sup>2</sup>	9.3 Kw
150 L	149.2 L	49 Kg	150 L	0.50m <sup>2</sup>	14.8 Kw
200 L	190.1 L	50 Kg	200 L	0.50m <sup>2</sup>	14.8 Kw

Electric Water Heaters	Continuous Flow Rate (ΔT 35-80°C)	Heating Time (ΔT 45-80°C)	A	B	C	D	E
8 L	-	-	23	19	43	23	24
20 L	-	-	25	26	51	32	33
40 L	-	-	18	26	56	43	44
50 L	-	-	18	26	61	43	44
60 L	228 L/hr	11 min	27	26	69	43	44
80 L	228 L/hr	17 min	43	26	84	43	44
100 L	228 L/hr	28 min	58	26	99	43	44
120 L	228 L/hr	36 min	73	26	119	43	44
150 L	363 L/hr	38 min	105	26	145	43	44
200 L	363 L/hr	45 min	76	26	133	52	54

- Due to on-going development, specifications are subject to change without notice.
- The above represents the average dimensions and weights of produced products

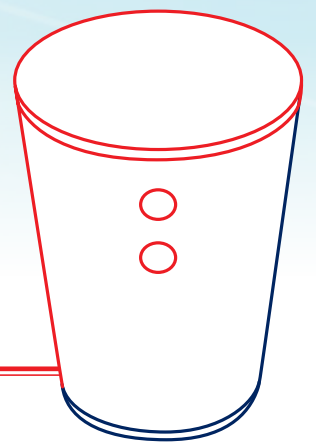






# 6 Commercial Tanks

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# Commercial Tanks Introduction



Chromagen produces commercial tanks designed to store hot water for commercial use. The inner enamel coating is applied by vacuum technology and produced with superior quality. The tanks insulations assure minimal heat losses from the ambient air.

Chromagen's produces commercial vertical water tanks with or without heat exchangers that may be installed in forced circulation systems. All tanks may be available with an electric back up.

# Commercial Tanks Specifications

## Forced Circulation Tanks – No Heat Exchanger

Tank Size	1,000	1,500	2,000
Weight (Kg)	302	350	480
D&H	2,062x1,010	2,250x1,120	2,500x1,260

## Forced Circulation Tanks - Single Heat Exchanger

Tank Size	1,000	1,500	2,000
Weight (Kg)	340	460	550
D&H	2,062x1,006	2,250x1,116	2,500x1,272

## Forced Circulation Tanks - Double Heat Exchanger

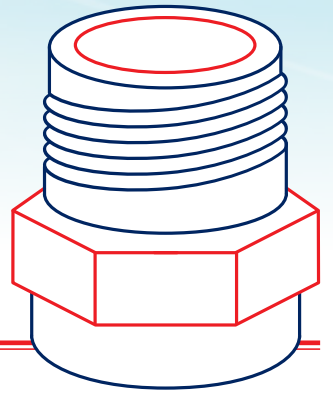
Tank Size	1,000	1,500	2,000
Weight (Kg)	360	450	570
D&H	2,065x1,010	2,247x1,116	2,500x1,272

- Due to on-going development, specifications are subject to change without notice.
- The above represents the average dimensions and weights of produced products.
- 3000 L, 4000 L and 5000 L tanks are available.



# 7 Accessories

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## Connecting Kits

The systems are installed with the connecting kit elements and piping. The connecting kit is matched to the system chosen by the customer. A forced circulation system full connecting kit includes plumbing parts, pump, control and valves.

Catalog no.	Description
IKITOL0010	Connecting kit for O/L system - 1 collector + copper pipe
IKITOL0020	Connecting kit for O/L system - 2 collectors + copper pipe
IKITOL0014	Connecting Kit for O/L system 1 collector, no piping
IKITOL0024	Connecting Kit for O/L system 2 collectors, no piping
IKITCL0370	Connecting Kit for C/L 150/200 L TS system
IKITCL0380	Connecting Kit for C/L 300 L TS system
IKITCL0181	Connecting Kit for C/L 150/200L FC system for 1 collector
IKITCL0180	Connecting Kit for C/L 300L FC system for 2 collectors

## Pumps



Pumps are used for different types of installations. Chromagen carries a different variety of pumps which are tested and approved for the use with solar thermal systems.

Catalog no.	Description
IPMPGRN021	Circulating pump UPS 25-20
IPMPGRN030	Circulating pump UPS 25-65
IPMPGRN031	Circulating pump UPS 25-6
IPMPGRN041	Circulating pump UPS 32-80
IPMPWI3010	Circulating pump 30/10



## Thermostatic Controls

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Different controllers are used for different types of installations, depending on the complexity of the system. Chromagen supplies solar systems, which includes thermostatic control. Chromagen tests and approves each thermostatic control unit.

Catalog no.	Description
ITMDIF0120	Differential Thermostat
ITMDIF0152	Differential Thermostat for individual Forced Circulation

## Electric Elements

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Chromagen tanks are supplied with an electric back up. An electric element inside the water tank is activated via thermostatic control.

Catalog no.	Description
PGUCBLM021	Electric heating element 2300 W, 850 mm
PGUCBLM030	Electric heating element, 2500 W, bent
PGUCBLM031	Electric heating element , 2500 W ,bent, 357 mm
PGUCBLY030	Electric heating element, 1500 W, straight
PGUCBLY040	Electric heating element, 2000 W, straight
PTRM036031	Thermostat 150 L – 200 L – 300 L
PTRM036050	Thermostat 36 cm 105^
PTRM036052	Thermostat 36 cm
PTRM045010	Thermostat, 45 cm yellow
PTRM045011	Thermostat 45 cm



## Valves



Catalog no.	Description
IBRZFF0010	Ball valve 1/2", female/female
IBRZMF0070	Ball valve 1/2", male/female
IBRZMF0100	Ball valve 1 1/4", male/female
IBRZMF0110	Ball valve 1 1/2", male/female
IBRZMF0200	Ball valve 1/2", male/female
IBRZOT2542	Mixing valve 3/4"
ISHSAL0010	Check valve 1/2" x 3/4", male/female
ISHSAL0020	Check valve linear, 1/2"
ISHSAL0030	Check valve linear, 3/4"
ISHSAL0040	Check valve linear, 1"
ISHSAL0050	Check valve linear, 1 1/4"
ISHSAL0070	Check valve 2"
ISHSAL0080	Thermosiphon valve 3/4" plug - low profile
ISHSAL0081	Thermosiphon valve 3/4 plug white - low profile
ISHSAL0100	Thermosiphon valve 1/2" plug - low profile
ISHSBI0010	Pressure relief valve 3 Atm., 1/2"
ISHSBI0015	Pressure relief valve 3 Atm. to 160 deg
ISHSBI0021	Safety Relief valve 8 bar 312480
ISHSBI0050	Pressure relief valve 8 Atm., 1/2"
ISHSBI0051	Pressure valve 3 Atm.
ISHSBI0101	Temperature 90°C 10 bar relief valve 3/4"x22 mm
ISHSBI0110	Pressure Relief Valve 1"

## Antifreeze Liquid

Catalog no.	Description
OCHEM00120	Propylene Glicol

## Magnesium Anodes

Catalog no.	Description
IKITAN0315	Anode 315/33 mm + accessories
PANODA0250	Anode 250/33 mm
PANODA0315	Anode 315/33 mm
PANODA0350	Anode 350/33 mm
PANODA1000	Anode 1050/26 mm
PANODA1200	Anode 1220/26 mm



## Pipe Fittings



Catalog no.	Description
IBSHBR0010	Bushing 1/2" x 3/4", brass
IBSHBR0060	Bushing 1/2" x 3/8", brass
IBSHBR0070	Bushing 3/4" x 1", brass
IBSHGV0010	Bushing 3/4" x 1/2", galvanized
IBSHGV0020	Bushing 1 x 1/2", galvanized
IBSHGV0030	Bushing 1 1/4 x 1/2", galvanized
IBSHGV0050	Bushing 2 x 1/2", galvanized
IBSHGV0060	Bushing 1 x 3/4", galvanized
IBSHGV0070	Bushing 1 1/4 x 3/4", galvanized
IBSHGV0080	Bushing 3/4 x 1 1/2", galvanized
IBSHGV0100	Bushing 1 x 1 1/4", galvanized
IMAAST0080	Bushing 3/4 male/female, 30 mm
IMAAST0095	Connector 3/4", 32 mm, hexagonal
IMAAST0120	Adaptor 1/2 x 3/4 32 mm, round
IMAHB00025	Connector 1/2" x 16 mm
IMUFG00080	Coupling 2 x 1 1/2" galvanized
IMUFGN0010	Coupling, galvanized 1/2"
IMUFGN0040	Coupling, galvanized 1 1/4"
IMUFGN0070	Coupling, galvanized 3/4"
IMUFGN0080	Steel coupling 3/4"
IMUFGN0100	Coupling 2" galvanized
INIPBR0010	Nipple, brass 3/4", 3 cm
INIPBR0011	Nipple, brass 3/4", 4 cm
INIPBR0015	Double brass nipple "1
INIPBR0016	Double brass nipple "1 1/4

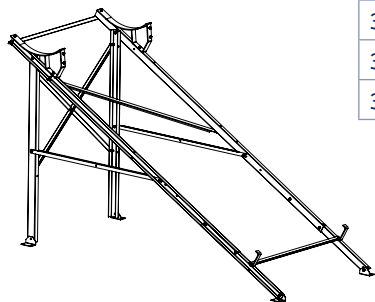
INIPBR0020	Nipple, brass, short 1/2"
INIPBR0030	Nipple, brass 1/2" to 3/4", short
INIPGV0020	Nipple 1/2" x 100 mm galvanized
INIPGV0041	Nipple 3/4" male/male, galvanized
INIPGV0051	Nipple 1" male/male, galvanized
INIPGV0060	Nipple, galvanized 1 1/4"
INIPGV0061	Nipple 1 1/4 x 8 cm
INIPGV0071	Double nipple 1 1/2 "
INIPGV0090	Nipple 3/4" x 300 mm Steel
INIPGV0133	Nipple, brass 3/4", double, painted, black
INIPGV0160	Nipple 1/2", galvanized, short
IRECVR0010	Brass union 3/4", for two collectors
IRECGV0010	Cone record 1"
IRECGV0020	Cone record 3/4"
IRECGV0040	Cone record 1 1/4" galvanized
IRECGV0060	Cone Record 2" galvanized
ITZLBR0020	Cross 3/4", brass
IZAVBR0020	Elbow 3/4", brass, male/male
IZAVBR0030	Elbow 3/4", brass, male/female
IZAVGN0020	Elbow 3/4", 90°, galvanized, male/male
IZAVGN0030	Elbow 1", galvanized
IZAVGN0040	Elbow 1 1/4" galvanized
IZAVGN0050	Elbow 1 1/2", galvanized
IZAVGS0030	Street elbow 1", male/female

## Expansion Tanks



Catalog no.	Description
IXPTNK0008	Expansion tank 8 L
IXPTNK0012	Expansion tank 12 L
IXPTNK0018	Expansion tank 18 L
IXPTNK0024	Expansion tank 24/25 L
IXPTNK0050	Expansion tank 50 L
IXPTNK0105	Expansion tank 105 L

## Stands



Collectors Angle	System Tank Volume	Collector	Stand CN
30° / 0°	120L (Diameter 585)	K	MAXFH1F20P
30° / 0°	150L (Diameter 585)	D/E	MAXFH1F30P
30° / 0°	200L (Diameter 585)	F	MAXFH1F45P
35° / 0°	300L (Diameter 690)	2 X D/E	MAXFH2E35P

# 8 Solutions

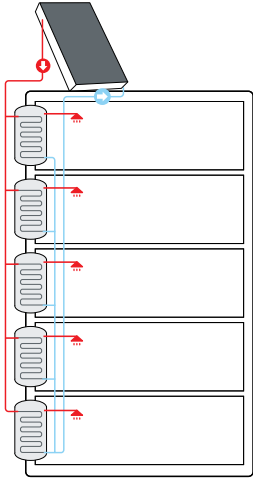
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# Apartment Building Hot water Solutions

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Combination of collector fields with individual water heating units for use in apartments, or a central heating system for water heating of an entire building.



**Jamaica** | Apartment Complex



**Nicaragua** | Complex



**Panama** | Apartment Complex

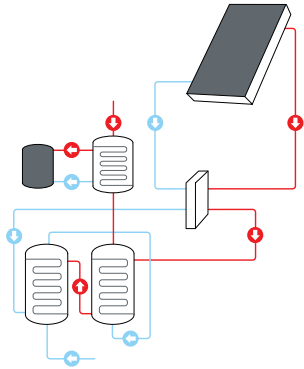


**Costa Rica** | Apartment Complex



# Hotels Hot water Solutions

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Integrating solar water heating solutions with existing heating systems for usage in hotels.



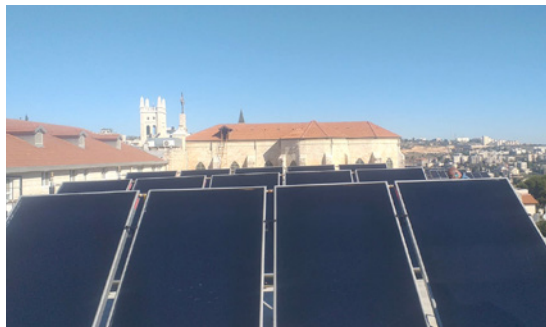
**Rwanda** | Hotel



**Tanzania** | Hotel



**Uganda** | Hotel

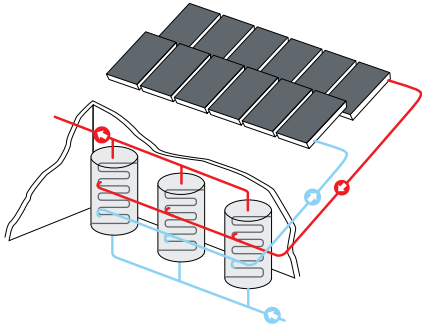


**Israel** | Hotel

# Industrial & Commercial Hot water Solutions

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Solar water heating solutions to provide continues hot water and pre-heating water for industrial processes and commercial projects.



**Trinidad** | Dormitories



**Ecuador** | Oil Factory



**Spain** | Food Factory

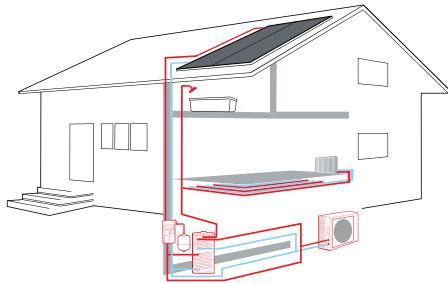


**Costa Rica** | Hotel

# Private Homes Hot water Solutions

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Combination of solar sanitary water heating and radiant heating systems for all hot water needs in private homes.



**Belize** | Private Home



**Tanzania** | Private Home



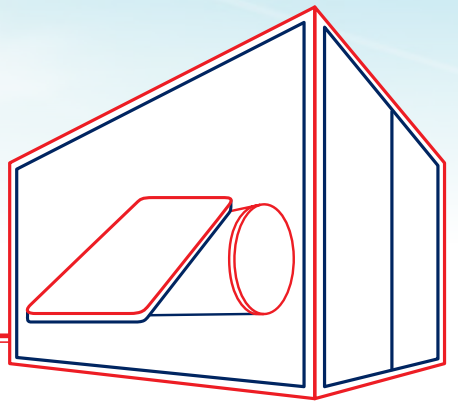
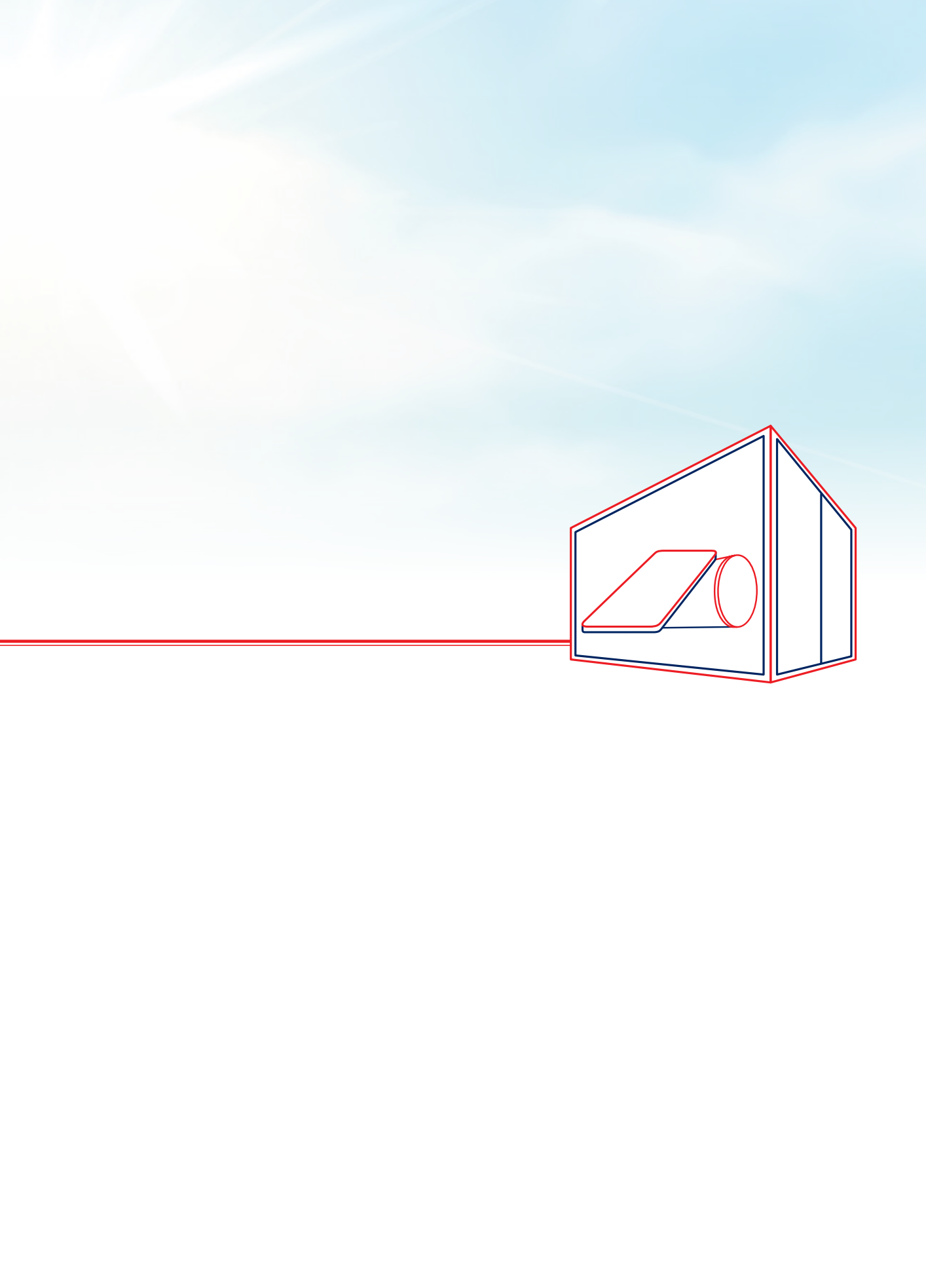
**Australia** | Private Home



**Guyana** | Apartments

# 9 Miscellaneous

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# Container Load Options

## Closed-Loop Systems – 20' Container\*

COL. / Tank	None	Y	K	D	E	F	2 x D	2 x E	2 x F
None		196	146	127	112	92			
100	88	64							
120	60		44	40	40				
150	60			40	40	36			
200	39			33	33	27	26		
300	35						22	22	20

## Closed-Loop Systems – 40' Container\*

COL. / Tank	None	Y	K	D	E	F	2 x D	2 x E	2 x F
None		414	336	282	257	222			
100	192	144							
120	132		108	100	100				
150	120			96	96	88			
200	84			84	70	62	56		
300	72						46	50	48

## Open-Loop Systems – 20' Container\*

COL. / Tank	None	Y	K	D	E	F	2 x D	2 x E	2 x F
None		196	146	127	112	92			
120	80	56	42	48	48				
150	80			48	36	40			
200	56			40	40	26	28		
300	35						20	22	21

\*Collectors without carton

## Open-Loop Systems – 40' Container

COL. / Tank	None	Y	K	D	E	F	2 x D	2 x E	2 x F
None		414	335	268	220	216			
120	200	132	104	110	110				
150	160			96	105	96			
200	116			82	80	76	58		
300	78						42	52	46

Quantities shown in the tables refer only to the calculation of tanks & collectors and are for indication only

## Warranty

- [a] During the Warranty Period, Chromagen shall, at Chromagen's policy, repair, replace or give credit for any component that is returned to an authorized service center and that is found by Chromagen to contain defects in material or workmanship and returned by distributor to Chromagen; and the extent of Chromagen liability shall not exceed the cost of repairing or replacing the defective item during the warranty period.
- [b] This Warranty does not cover defects or damages resulting from accident, inappropriate physical or operational environment, failure of electrical power, freezing, corrosion, scaling due to hard water, improper installation, maintenance, service, repair, transportation, storage, modification, operation, use, negligence or fault by any party other than Chromagen.
- [c] This Warranty shall run solely to and in favor of the distributor; and the distributor shall be responsible to its customers for all warranties that it makes.
- [d] This Warranty is the sole warranty given by Chromagen in respect of the products.
- [e] In no event shall Chromagen be liable for special, incidental, or consequential damages, or for damages arising out of the inability to utilize products for any purpose whatsoever.
- [f] For warranty period information, please contact Chromagen's distributor in your area, according to Chromagen International warranty.



# The Right Choice

EVERY HOUR  
EVERY DAY



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