

# MARK4

*The New Generation of solar systems*



**DESIGN**

**DURABILITY**

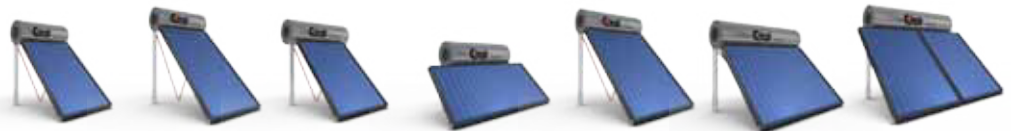
**EFFICIENCY**

NRL has always prided itself on being an innovator in the field of solar energy. It was the pioneer in Europe in introducing and publicizing the tremendous benefits of solar energy. Today, It remains at the forefront of the industry, servicing solar thermal requirements on a global basis.

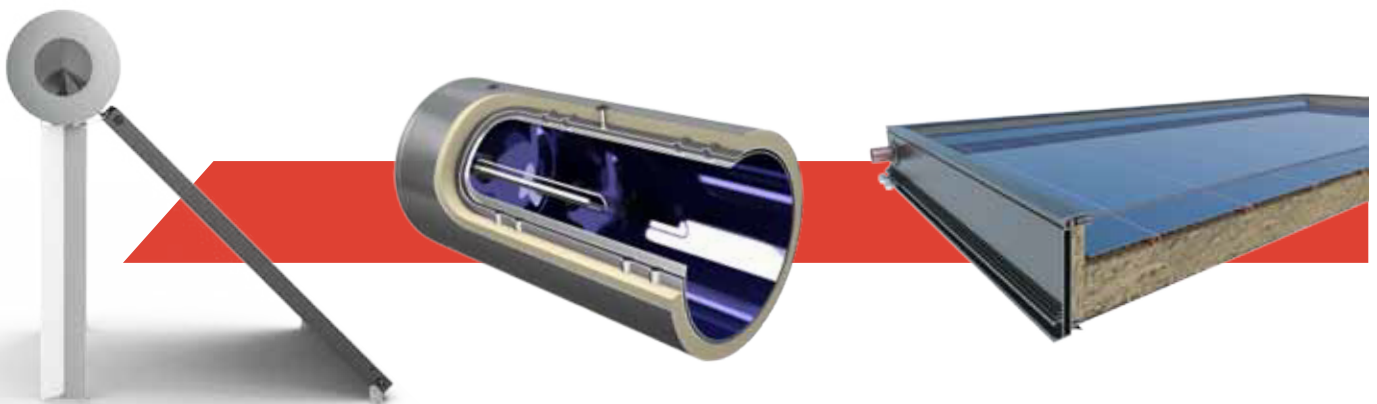
We secure raw materials of the highest quality, while continuing to invest in both the latest technology and our state of the art production facilities in order to maximize the performance of every new generation product we create.

We are proud to introduce our latest innovation, the Mark 4 thermosyphonic system. The Mark4 model has a novel design that centers on efficiency and value for money – issues; it produces exceptional performance and consequently enhanced financial savings for you

# MARK4



	160/2,1	160/2,6	200/2,1	200/2,6H	200/3	300/3H	300/4,2
Number of persons:	3-4	4-5	4-5	4-5	5-6	6-7	7-8
<b>Collector</b>							
Gross / Aperture area (m²)	2,13 / 1,96	2,64 / 2,44	2,13 / 1,96	2,64 / 2,44	3,06 / 2,85	3,06 / 2,85	4,26 / 3,92
Absorber surface treatment	High selective (TINOX) with copper harp (1 copper tube per 10cm)						
Absorber welding	Ultrasonic						
Absorption coefficient	a>95%						
Emission coefficient	e<3,5%						
Casing material	Double-wall electrostatically painted aluminium						
Insulation	Rock wool of 50kg/m³ density and 40mm thickness						
Glass cover	Tempered 3,2mm – low iron (>91,5%)						
Collector production method	Compressed aluminium frame						
Thermal losses coefficient	a1 = 3,56						
Output power (G=1000 W/m², Δt=10K)	1399 W	1744 W	1399W	1744 W	2040 W	2040 W	2798 W
Certification	Solar KeyMark, SRCC						
<b>Tank</b>							
Volume (L)	155,9	155,9	201,7	201,7	201,7	275,1	275,1
Inner tank design	By Interdomo (with deep side cups and internal welding that ensure perfect enameling)						
Tank/heat exchanger material	DC-03 2,5mm steel / DC-03 1,5mm steel (DIN 10130)						
Welding method	Robotized with double quality control at 15 bar						
Corrosion protection	Direct enameling (DIN 4753/3)						
Cathodic protection	Magnesium bar (DIN 4753/6)						
Anti-Frost protection	Propylene glycol Calpak Nox						
Insulation	Injected PU foam without CFC (43 kg/m³ density and 45mm thickness)						
Accessories included	Inox flange with electric immersion heater 3,5 Kw, safety and non-return valve, venting valve						
Connecting pipes	Inox flexible pipes 316L DN16 with threads of ¾" at 30° inclination for improved jet						
Connection with diesel/gas burner	With an additional integrated heat exchanger (Trien models)						
Flat / inclined roof support material	Aluminium / Galvanised steel						
Certification	email (enamel quality mark), ROHS (hygienic DHW), CE						
<b>Dimensions</b>							
Height-Width-Length (mm)	1700, 1684, 1230	1989, 1977, 1230	1700, 1684, 1530	1450, 1350, 2200	1911, 1896, 1500	1600, 1500, 2100	1700, 1684, 2460



**Quality Marks:**



**Laboratories:**



**Certification bodies:**



**Industry Federations:**





## **M4** flat plate collector

### **Sturdy and clean-cut structure**

When we started designing from scratch the new M4 model we had only one thing in mind; a flat plate collector that would redefine the standards of sturdiness and durability. Having done so, the M4 is definitely the collector that will boost your sales in the field of selective collectors.

## Innovative characteristics

### Double wall-frame profiles for increased strength and insulation:

The anodized double-walled aluminium profile offers increased durability and enhanced insulation.

### Boltless construction for ease of assembly and clean look:

The glass and aluminium base are compressed so as to form a sturdy totality with a prism-like facade.

### Integrated support attachments for ease of installation and universal compatibility:

This collector can easily and safely be adjusted on different types of inclined or flat roof supports. In addition, its specially designed elastomeric and engineering plastic parts ensure complete sealing protection



## Technical Specifications

		M4-210	M4-260	M4-260H	M4-300
Dimensions	Length (mm)	1711	2121	1244	2021
	Width (mm)	1244	1244	2121	1514
	Height (mm)	86	86	86	86
	Weight (kg)	36	42	42	48
Aperture Area (m <sup>2</sup> )		1,96	2,44	2,44	2,85
Absorber surface treatment		High Selective			
Absorber material		Copper Harp / Aluminium Surface			
Absorber welding		Ultrasonic			
Absorption coefficient		$a > 95\%$			
Emmission coefficient		$e < 3,5\%$			
Casing material		Double-wall Marine grade anodized aluminium			
Insulation		Rock wool 50 kg/m <sup>3</sup>			
Glass cover		Tempered 3,2mm - Low-iron (>91,5%)			

