DATA SHEET

- Central Heating
- SHWLV (Large Volumes)
- Swimming Pool Heating

ENERGIE®
THERMODYNAMIC SOLAR ENERGY

Contra international

SPECIFICATIONS

Eco 750 / Eco 1000 / Solar Block Ener 4

Technical Data	Description
THERMODYNAMIC SOLAR PANEL	Height = 800 mm; Length = 2000 mm; Thickness = 20 mm; Weight aprox. 8 kg Anodized Aluminium 30 microns.
Number of Panels	4; Total Weight = 32 kg.
Absorber Area = Aperture Area	6,4 m^2
THERMODYNAMIC GROUP	
Galvanized and Plastic Coated Box with Soundproof Insulation and Anti-Vibration blocks	Height = 880 mm, Width = 630 mm, Depth = 430 mm; Weight 50 kg aprox.
Power Input	Three phased version 400V or mono phased version 230V, 50 Hz
Scroll Compressor	Absorbed Power 0,9 - 1,8 kW ; Thermal Power 3,6 - 7,3 kW
Noise Power (one meter from thermodynamic group)	51 dB(A)
Gas Type	R407c; System Load= 1,5 kg
Liquid Line	EN 12735-1 Dehydrated Copper, Ø 1/2”
Aspiration Line	EN 12735-1 Dehydrated Copper, Ø 3/4”
Thermal Expansion Valve	Danfoss
Filter Drier	Yes
Oil Separator	Yes
Liquid Receiver	Yes
Moisture Indicator	Yes
Pressure Switch (HP and LP)	Yes; HP = 25bar max.; LP = 1,5bar min.
Digital Thermostat	Yes
Mechanical Thermostat	Yes
Thermal Relay	Yes
Phases Detector (3 phased only)	Yes
Carter Electrical Heater	Yes
Digital Command Panel	Yes
Electric Output for Water Pump	Yes
Thermostat Electrical Input	Yes
Water Pump	No
Stainless Steel Brazed Plate Heat Exchanger	Central Heating (Min. flow 0.5 m^3/h.; Pressure Drop = 2,5 mH_2O)
Titanium Heat Exchanger	Swimming Pool (Model 100-40)
Finned Tube Heat Exchanger	SHWLV (Models ECO 750 and ECO 1000)

* The electrical power input corresponds to the electrical consumption based on water temperature in the interval between 30 and 50ºC, and produced thermal power to the amount of solar radiation that hits the panel.

ECO 1500 / Solar Block Ener 6

Technical Data	Description
THERMODYNAMIC SOLAR PANEL	Height = 800 mm; Length = 2000 mm; Thickness = 20 mm; Weight aprox. 8 kg Anodized Aluminium 30 microns.
Number of Panels	6; Total Weight = 48 kg
Absorber Area = Aperture Area	9,6 m^2
THERMODYNAMIC GROUP	
Galvanized Plastic Coated Box with Soundproof Insulation and Anti-Vibration Blocks	Height = 880 mm, Width = 630 mm, Depth = 430 mm; Weight 60 kg aprox.
Power Input	Three phased version 400V or mono phased version 230V, 50 Hz
Scroll Compressor	Absorbed Power 1,2 - 2,2 kW ; Thermal Power 4,9 - 9,7 kW
Noise Power (one meter from thermodynamic group)	51 dB(A)
Gas Type	R407c; System Load = 1,6 kg
Liquid Line	EN 12735-1 Dehydrated Copper, Ø 1/2”
Aspiration Line	EN 12735-1 Dehydrated Copper, Ø 3/4”
Thermal Expansion Valve	Danfoss
Filter Drier	Yes
Oil Separator	Yes
Liquid Receiver	Yes
Moisture Indicator	Yes
Pressure Switch (HP and LP)	Yes; HP = 25bar max.; LP = 1,5bar min.
Digital Thermostat	Yes
Mechanical Thermostat	Yes
Thermal Relay	Yes
Phases Detector (3 phased only)	Yes
Carter Electrical Resistance	Yes
Digital Command Panel	Yes
Electric Output for Water Pump	Yes
Thermostat Electrical Input	Yes
Water Pump	No
Stainless Steel Brazed Plate Heat Exchanger	Central Heating (Min. flow 0.7 m^3/h.; Pressure Drop = 2,5 mH_2O)
Titanium Heat Exchanger	Swimming Pool (Model 100-40)
Finned Tube Heat Exchanger	SWHLV (Model ECO 1500)

* The electrical power input corresponds to the electrical consumption based on water temperature in the interval between 30 and 50ºC, and produced thermal power to the amount of solar radiation that hits the panel.

ECO 2000 / Solar Block Ener 8

Technical Data	Description
THERMODYNAMIC SOLAR PANEL	Height = 800 mm; Length = 2000 mm; Thickness = 20 mm; Weight aprox. 8 kg Anodized Aluminium 30 microns.
Number of Panels	8; Total Weight = 64 kg
Absorber Area = Aperture Area	12,8 m^2
THERMODYNAMIC GROUP	
Galvanized Plastic Coated Box with Soundproof Insulation and Anti-Vibration Blocks	Height = 880 mm, Width = 630 mm, Depth = 430 mm; Weight 70 kg aprox.
Power Input	Three phased version 400V or mono phased version 230V, 50 Hz
Scroll Compressor	Absorbed Power 1,4 - 2,6 kW ; Thermal Power 5,5 - 11,3 kW
Noise Power (one meter from thermodynamic group)	52 dB(A)
Gas Type	R407c; System Load = 1,8 kg
Liquid Line	EN 12735-1 Dehydrated Copper, Ø 1/2”
Aspiration Line	EN 12735-1 Dehydrated Copper, Ø 3/4”
Thermal Expansion Valve	Danfoss
Filter Drier	Yes
Oil Separator	Yes
Liquid Receiver	Yes
Moisture Indicator	Yes
Pressure Switch (HP and LP)	Yes; HP = 25bar max.; LP = 1,5bar min.
Digital Thermostat	Yes
Mechanical Thermostat	Yes
Thermal Relay	Yes
Phases Detector (3 phased only)	Yes
Carter Electrical Resistance	Yes
Digital Command Panel	Yes
Electric Output for Water Pump	Yes
Thermostat Electrical Input	Yes
Water Pump	No
Stainless Steel Brazed Plate Heat Exchanger	Central Heating (Min. flow 0.8 m^3/h.; Pressure Drop = 2,7 mH_2O)
Titanium Heat Exchanger	Swimming Pool (Model 100-40)
Finned Tube Heat Exchanger	SWHLV (Model ECO 1500)

* The electrical power input corresponds to the electrical consumption based on water temperature in the interval between 30 and 50ºC, and produced thermal power to the amount of solar radiation that hits the panel.

ECO 3000 / Solar Block Ener 12

Technical Data	Description
THERMODYNAMIC SOLAR PANEL	Height = 800 mm; Length = 2000 mm; Thickness = 20 mm; Weight aprox. 8 kg Anodized Aluminium 30 microns.
Number of Panels	12; Total Weight = 96 kg
Absorber Area = Aperture Area	19,2 m^2
THERMODYNAMIC GROUP	
Galvanized Plastic Coated Box with Soundproof Insulation and Anti-Vibration Blocks	Height = 880 mm, Width = 630 mm, Depth = 430 mm; Weight 80 kg aprox.
Power Input	Three phased version 400V or mono phased version 230V, 50 Hz
Scroll Compressor	Absorbed Power 1,9 - 3,1 kW ; Thermal Power 9,2 - 16,7 kW
Noise Power (one meter from thermodynamic group)	52 dB(A)
Gas Type	R407c; System Load = 2,0 kg
Liquid Line	EN 12735-1 Dehydrated Copper, Ø 1/2”
Aspiration Line	EN 12735-1 Dehydrated Copper, Ø 7/8”
Thermal Expansion Valve	Danfoss
Filter Drier	Yes
Oil Separator	Yes
Liquid Receiver	Yes
Moisture Indicator	Yes
Pressure Switch (HP and LP)	Yes; HP = 25bar max.; LP = 1,5bar min.
Digital Thermostat	Yes
Mechanical Thermostat	Yes
Thermal Relay	Yes
Phases Detector (3 phased only)	Yes
Carter Electrical Resistance	Yes
Digital Command Panel	Yes
Electric Output for Water Pump	Yes
Thermostat Electrical Input	Yes
Water Pump	No
Stainless Steel Brazed Plate Heat Exchanger	Central Heating (Min. flow 1,0 m^3/h.; Pressure Drop = 3,0 mH_2O)
Titanium Heat Exchanger	Swimming Pool (Model 100-70)
Finned Tube Heat Exchanger	SWHLV (Model ECO 3000)

* The electrical power input corresponds to the electrical consumption based on water temperature in the interval between 30 and 50ºC, and produced thermal power to the amount of solar radiation that hits the panel.

ECO 3000 B / Solar Block Ener 16

Technical Data	Description
THERMODYNAMIC SOLAR PANEL	Height = 800 mm; Length = 2000 mm; Thickness = 20 mm; Weight = 8 kg aprox. Anodized Aluminium 30 microns.
Number of Panels	16; Total Weight = 128 kg
Absorber Area = Aperture Area	26,6 m^2
THERMODYNAMIC GROUP	
Galvanized Plastic Coated Box with Soundproof Insulation and Anti-Vibration Blocks	Height = 880 mm; Width = 750 mm; Depth = 500 mm; Weight 100 kg aprox.
Power Input	Three phased version 400V or mono phased version 230V, 50 Hz
Scroll Compressor	Absorbed Power 3,2 - 5,2 kW ; Thermal Power 14,2 - 24,2 kW
Noise Power (one meter from thermodynamic group)	54 dB(A)
Gas Type	R407c; System Load = 2,8 kg
Liquid Line	EN 12735-1 Dehydrated Copper, Ø 3/4”
Aspiration Line	EN 12735-1 Dehydrated Copper, Ø 7/8”
Thermal Expansion Valve	Danfoss
Filter Drier	Yes
Oil Separator	Yes
Liquid Receiver	Yes
Moisture Indicator	Yes
Pressure Switch (HP and LP)	Yes; HP = 25bar max.; LP = 1,5bar min.
Digital Thermostat	Yes
Mechanical Thermostat	Yes
Thermal Relay	Yes
Phases Detector (3 phased only)	Yes
Carter Electrical Resistance	Yes
Digital Command Panel	Yes
Electric Output for Water Pump	Yes
Connections to External Thermostats	Yes
Water Pump	No
Stainless Steel Brazed Plate Heat Exchanger	Central Heating (Min. flow 1.5 m^3/h.; Pressure Drop = 3,5 mH_2O)
Titanium Heat Exchanger	Swimming Pool (Model 100-70)
Finned Tube Heat Exchanger	SWHLV (Model ECO 3000)

* The electrical power input corresponds to the electrical consumption based on water temperature in the interval between 30 and 50ºC, and produced thermal power to the amount of solar radiation that hits the panel.

ECO 4000 / Solar Block Ener 24

Technical Data	Description
THERMODYNAMIC SOLAR PANEL	Height = 800 mm; Length = 2000 mm; Thickness = 20 mm; Weight = 8 kg aprox. Anodized Aluminium 30 microns.
Number of Panels	24; Total Weight = 192 kg
Absorber Area = Aperture Area	38,4 m^2
THERMODYNAMIC GROUP	
Galvanized Plastic Coated Box with Soundproof Insulation and Anti-Vibration Blocks	Height = 880 mm; Width = 750 mm; Depth = 500 mm; Weight 120 kg aprox.
Power Input	Three phased version 400V or mono phased version 230V, 50 Hz
Scroll Compressor	Absorbed Power 4,2 - 6,0 kW ; Thermal Power 16,5 - 31,5 kW
Noise Power (one meter from thermodynamic group)	56 dB(A)
Gas Type	R407c; System Load = 3,0 kg
Liquid Line	EN 12735-1 Dehydrated Copper, Ø 3/4”
Aspiration Line	EN 12735-1 Dehydrated Copper, Ø 1 3/8”
Thermal Expansion Valve	Danfoss
Filter Drier	Yes
Oil Separator	Yes
Liquid Receiver	Yes
Moisture Indicator	Yes
Pressure Switch (HP and LP)	Yes; HP = 25bar max.; LP = 1,5bar min.
Digital Thermostat	Yes
Mechanical Thermostat	Yes
Thermal Relay	Yes
Phases Detector (3 phased only)	Yes
Carter Electrical Resistance	Yes
Command panel with light indicators	Yes
Electric Output for Water Pump	Yes
Thermostat Electrical Input	Yes
Water Pump	No
Stainless Steel Brazed Plate Heat Exchanger	Central Heating (Min. flow 2,8 m^3/h.; Pressure Drop = 5 mH_2O)
Titanium Heat Exchanger	Swimming Pool (Model 100-104)
Finned Tube Heat Exchanger	SWHLV (Model 4000)

* The electrical power input corresponds to the electrical consumption based on water temperature in the interval between 30 and 50ºC, and produced thermal power to the amount of solar radiation that hits the panel.

ECO 5000 / Solar Block Ener 32

Technical Data	Description
THERMODYNAMIC SOLAR PANEL	Height = 800 mm; Length = 2000 mm; Thickness = 20 mm; Weight = 8 kg aprox. Anodized Aluminium 30 microns.
Number of Panels	32; Total Weight = 256 kg
Absorber Area = Aperture Area	51,2 m^2
THERMODYNAMIC GROUP	
Galvanized Plastic Coated Box with Soundproof Insulation and Anti-vibration Blocks	Height = 880 mm; Width = 750 mm; Depth = 500 mm; Weight 120 kg aprox.
Power Input	Three phased version 400V or mono phased version 230V, 50 Hz
Scroll Compressor	Absorbed Power 5,7 - 8,3 kW ; Thermal Power 24,0 - 42,6 kW
Noise Power (one meter from thermodynamic group)	58 dB(A)
Gas Type	R407c; System Load = 3,5 kg
Liquid Line	EN 12735-1 Dehydrated Copper, Ø 7/8”
Aspiration Line	EN 12735-1 Dehydrated Copper, Ø 1 3/8”
Thermal Expansion Valve	Danfoss
Filter Drier	Yes
Oil Separator	Yes
Liquid Receiver	Yes
Moisture Indicator	Yes
Pressure Switch (HP and LP)	Yes; HP = 25bar max.; LP = 1,5bar min.
Digital Thermostat	Yes
Mechanical Thermostat	Yes
Thermal Relay	Yes
Phases Detector (3 phased only)	Yes
Carter Electrical Resistance	Yes
Digital Command Panel	Yes
Electric Output for Water Pump	Yes
Thermostat Electrical Input	Yes
Water Pump	No
Stainless Steel Brazed Plate Heat Exchanger	Central Heating (Min. flow 4,0 m^3/h.; Pressure Drop = 6 mH_2O)
Titanium Heat Exchanger	Swimming Pool (Model 100-104)
Finned Tube Heat Exchanger	SWHLV (Model ECO 5000)

* The electrical power input corresponds to the electrical consumption based on water temperature in the interval between 30 and 50ºC, and produced thermal power to the amount of solar radiation that hits the panel.

ECO 6000 / Solar Block Ener 40

Technical Data	Description
THERMODYNAMIC SOLAR PANEL	Height = 800 mm; Length = 2000 mm; Thickness = 20 mm; Weight = 8 kg aprox. Anodized Aluminium 30 microns.
Number of Panels	40; Total Weight = 320 kg
Absorber Area = Aperture Area	64 m^2
THERMODYNAMIC GROUP	
Galvanized Plastic Coated Box with Soundproof Insulation and Anti-vibration Blocks	Height = 880 mm; Width = 750 mm; Depth = 500 mm; Weight 120 kg aprox.
Power Input	Three phased version 400V or mono phased version 230V, 50 Hz
Scroll Compressor	Absorbed Power 7,1 - 10,1 kW ; Thermal Power 32,5 - 53,1 kW
Noise Power (one meter from thermodynamic group)	59 dB(A)
Gas Type	R407c; System Load = 5,5 kg
Liquid Line	EN 12735-1 Dehydrated Copper, Ø 7/8”
Aspiration Line	EN 12735-1 Dehydrated Copper, Ø 1 3/8”
Thermal Expansion Valve	Danfoss
Filter Drier	Yes
Oil Separator	Yes
Liquid Receiver	Yes
Moisture Indicator	Yes
Pressure Switch (HP and LP)	Yes; HP = 25bar max.; LP = 1,5bar min.
Digital Thermostat	Yes
Mechanical Thermostat	Yes
Thermal Relay	Yes
Phases Detector (3 phased only)	Yes
Carter Electrical Resistance	Yes
Digital Command Panel	Yes
Electric Output for Water Pump	Yes
Thermostat Electrical Input	Yes
Water Pump	No
Stainless Steel Brazed Plate Heat Exchanger	Central Heating (Min. Flow Rate 5,0 m^3/h.; Pressure Drop = 6 mH_2O)
Titanium Heat Exchanger	Swimming Pool (Model 100-104)
Finned Tube Heat Exchanger	SWHLV (Model 6000)

* The electrical power input corresponds to the electrical consumption based on water temperature in the interval between 30 and 50ºC, and produced thermal power to the amount of solar radiation that hits the panel.

EXTERNAL TECHNICAL DRAWING

Thermodynamic Group

Front | Back

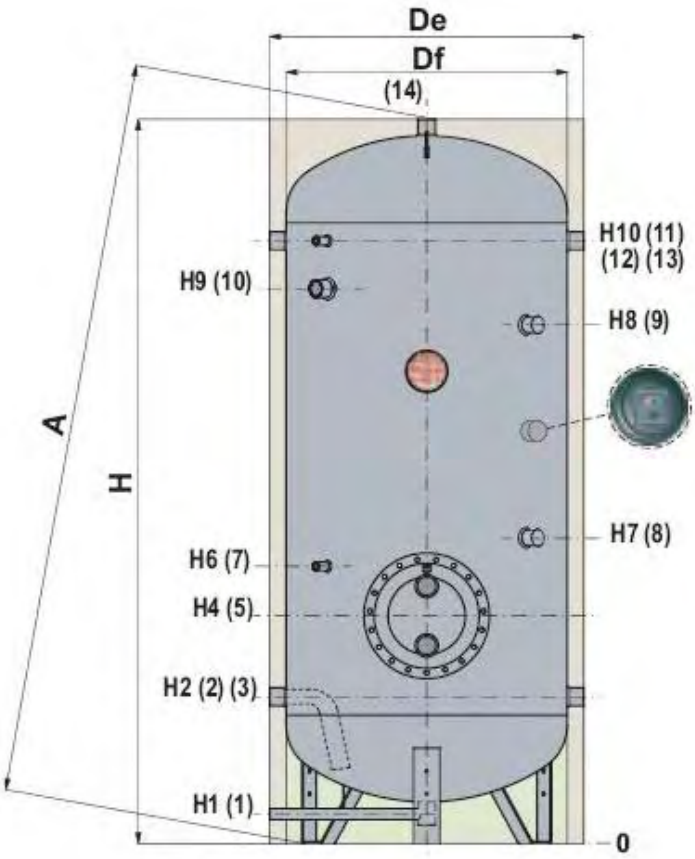
Units (mm)

Model	A	B	C
Solar Block Ener 4 to 16	880	630	430
Solar Block Ener 24 to 40	880	750	500

Nº	Description
1	Aspiration Line
2	Liquid Line
3	Heat Exchanger Connection (SHW or Swimming Pool)
4	Inlet (Water circuit)
5	Outlet (Water circuit)
6	Electrical Connections

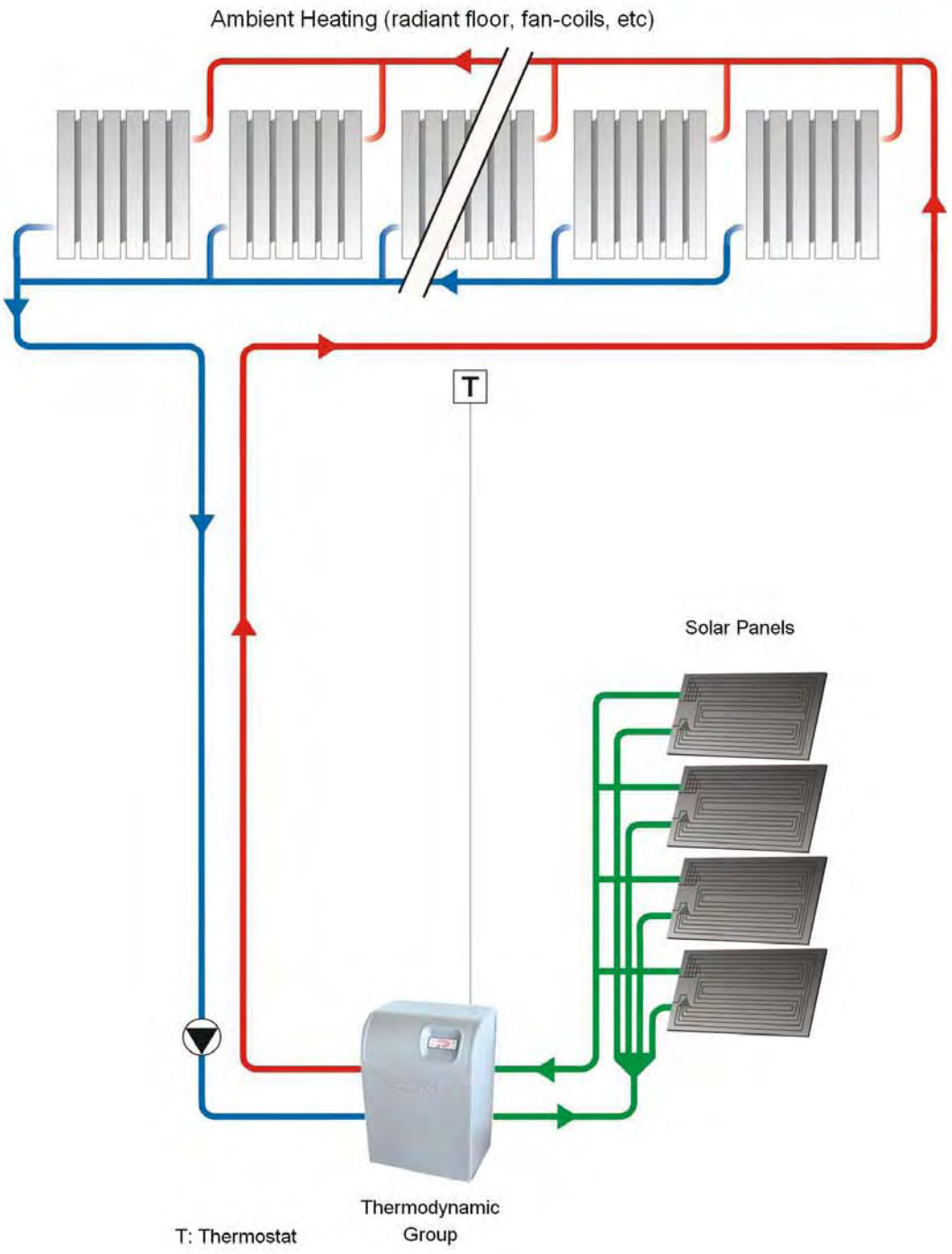
Hot Water Cylinder

General View

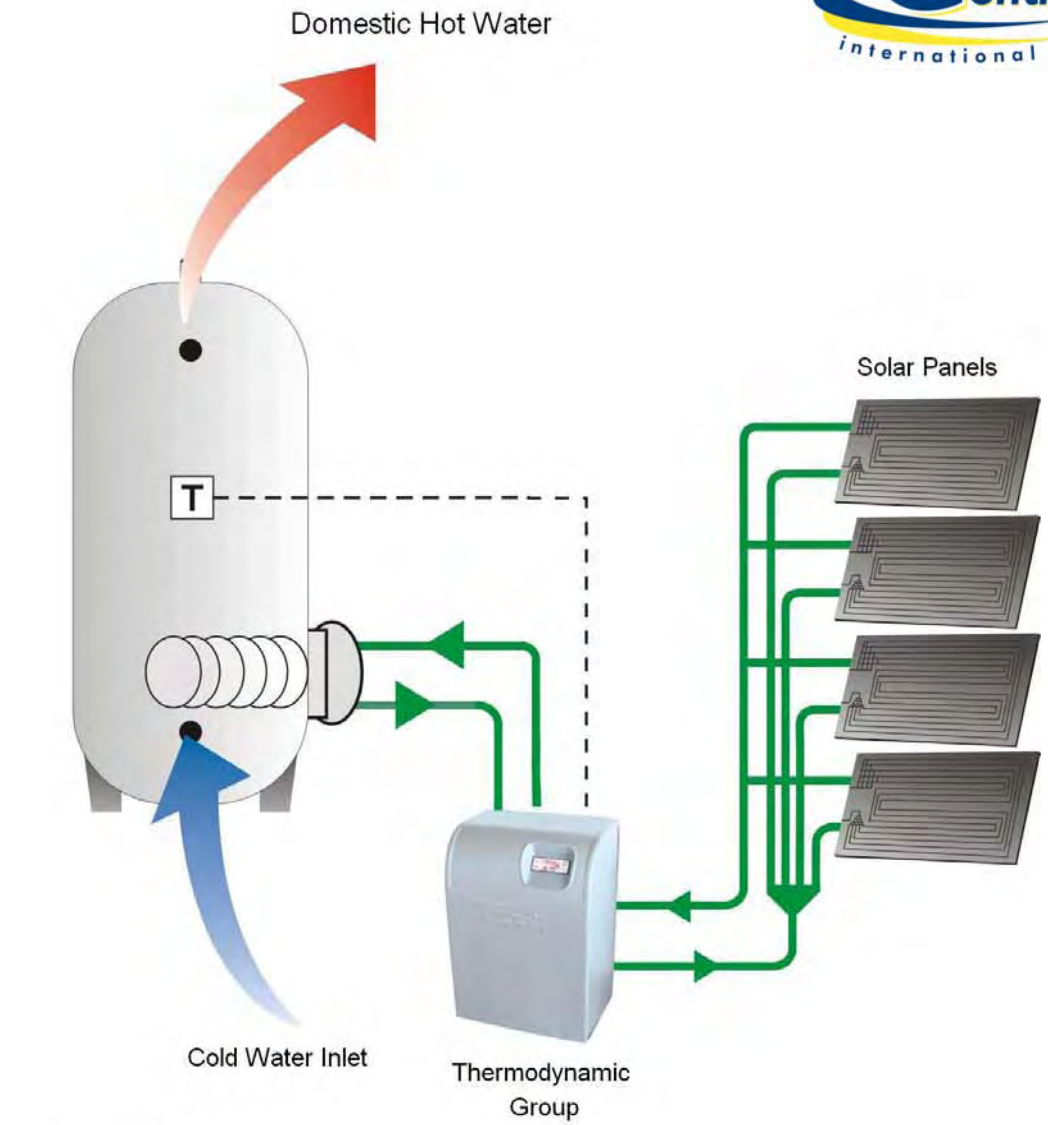


	Connections
1	Sewer 3/4'' (<1000lt) 1'' (>100lt) Gas F
2	Cold Water Inlet
3	Heat Exchanger Connection (Extra)
5	Service Flange
7	Thermostat Connection ½'' Gas F
8	Magnesium Anode 1'' ¼ Gas F
9	Magnesium Anode 1'' ¼ Gas F (Cap.>1500 l)
10	Electrical Resistor Connection1''1/2 Gas F
11	Recirculation
12	Thermostat Connection ½'' Gas F
13	Heat Exchanger Connection (Extra)
14	Hot Water Outlet

Central Heating

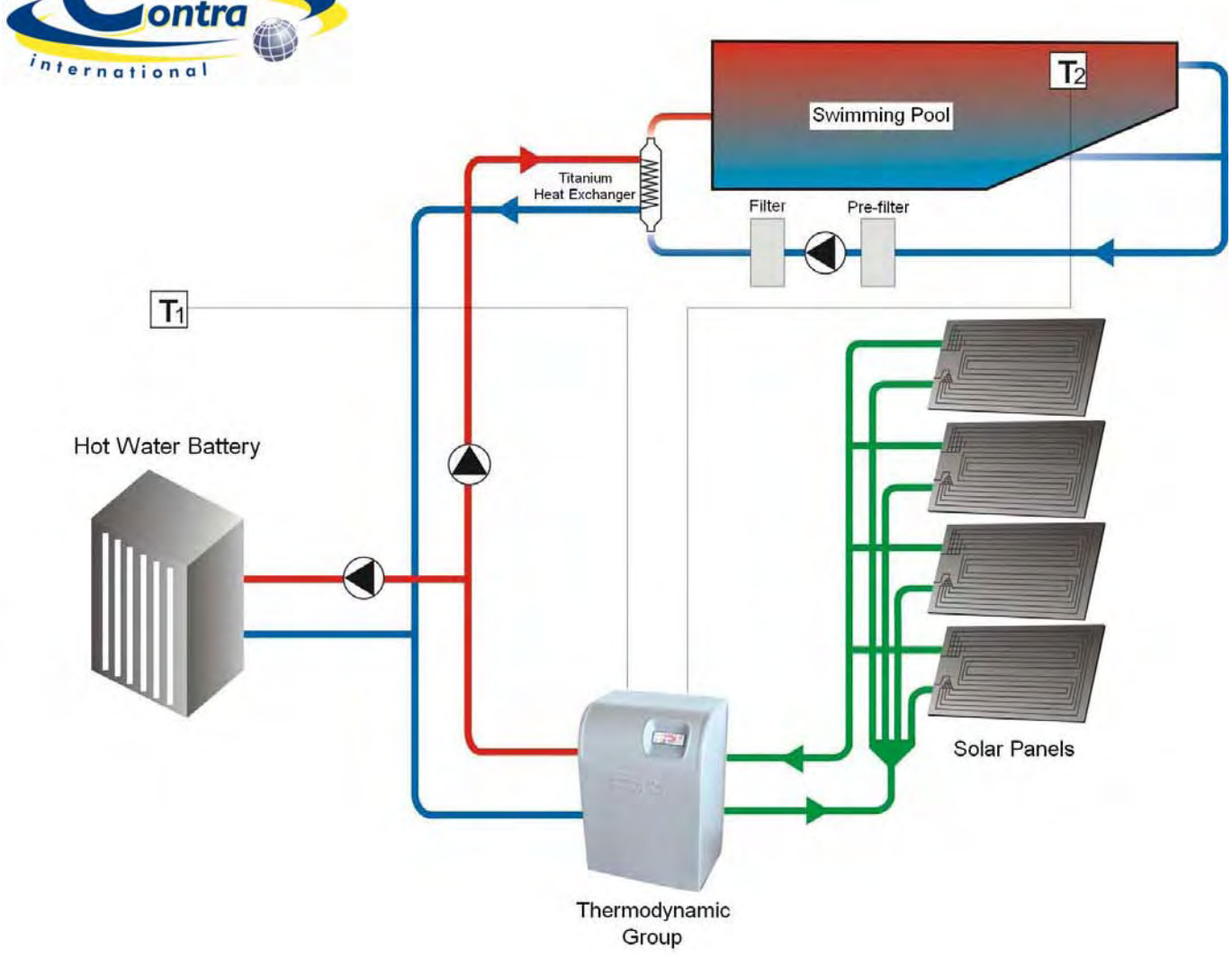


SHWLV (Sanitary Hot Water Large Volumes)



T: Thermostat

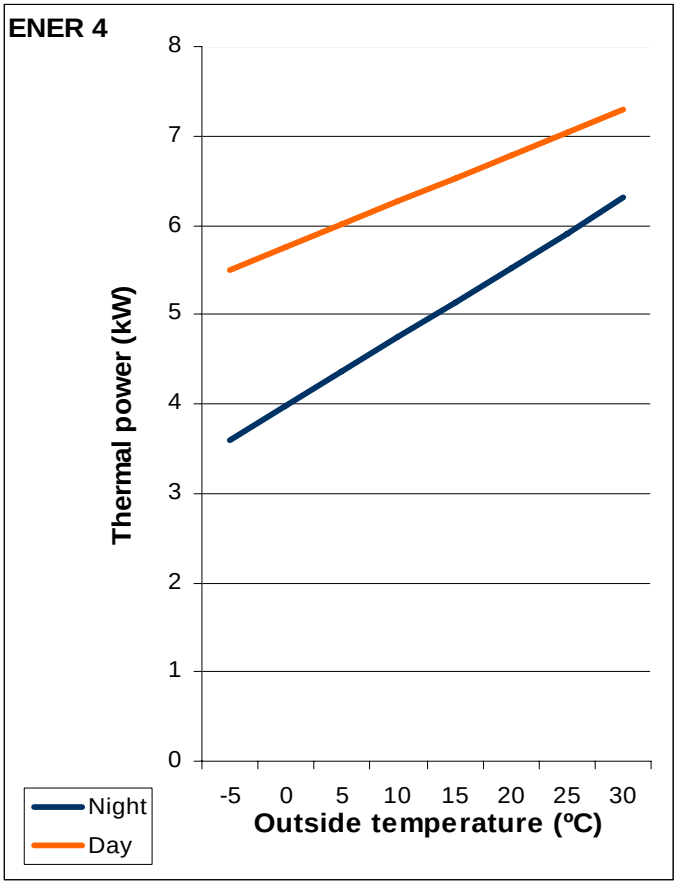
Swimming Pool Heating

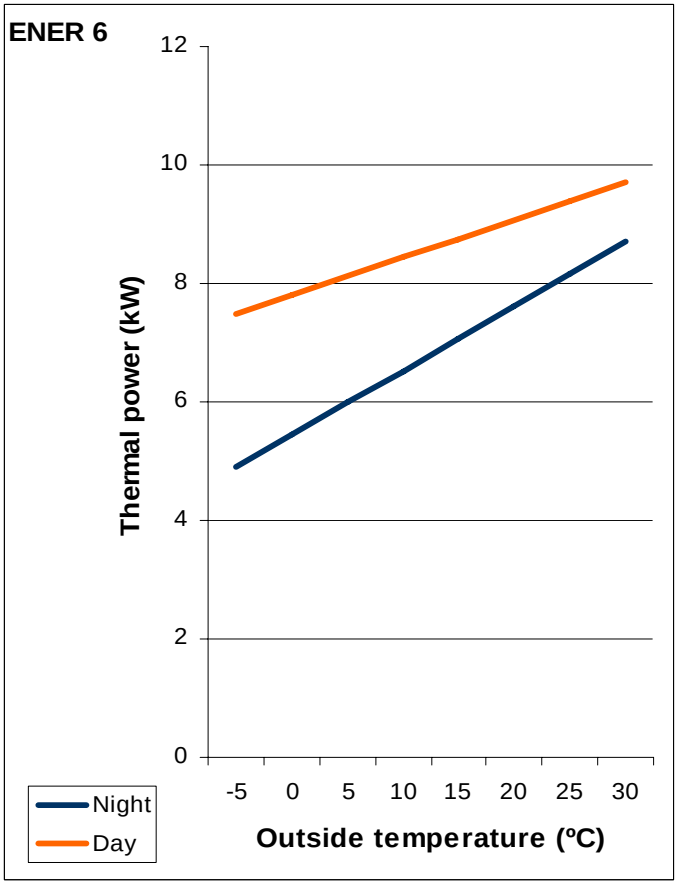


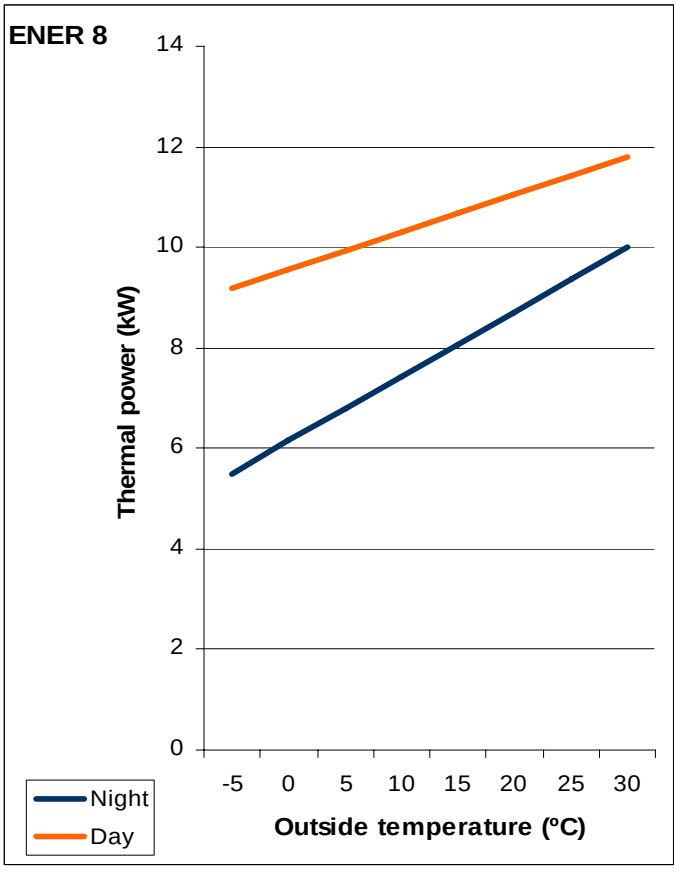
T1: Ambient Thermostat
T2: Swimming Pool Thermostat

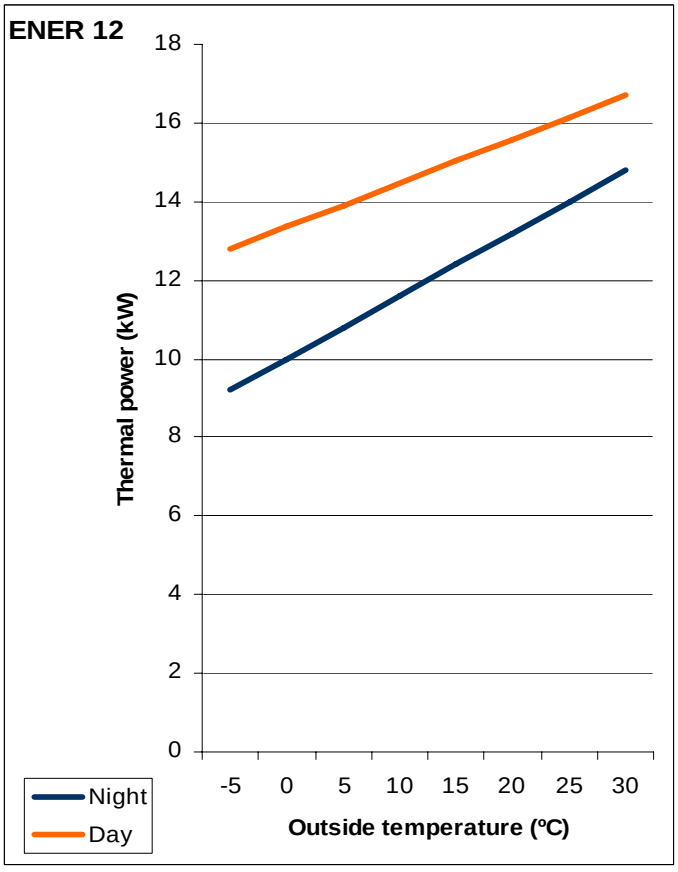
PERFORMANCE CHARTS

Solar Block Ener 4 to 12

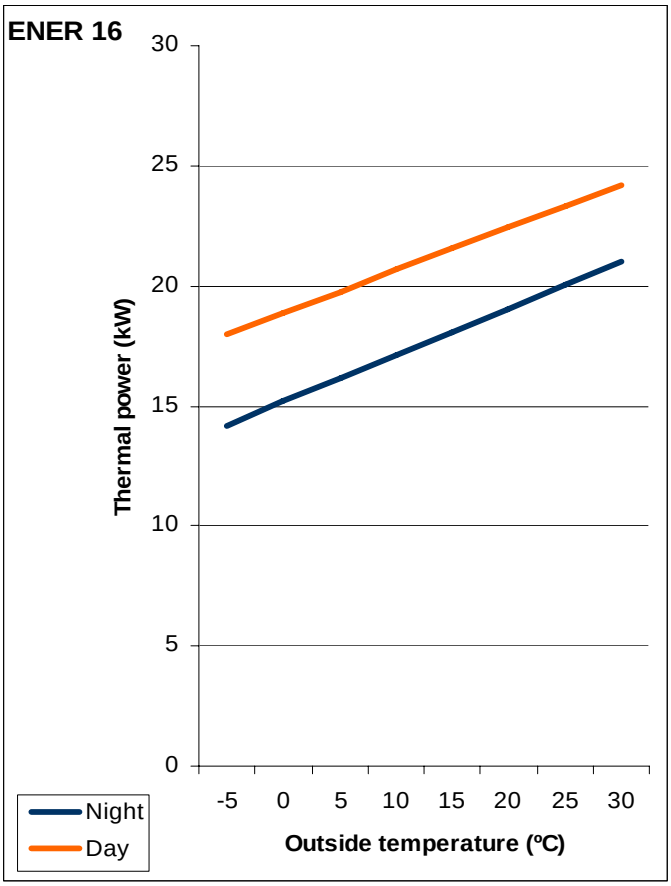


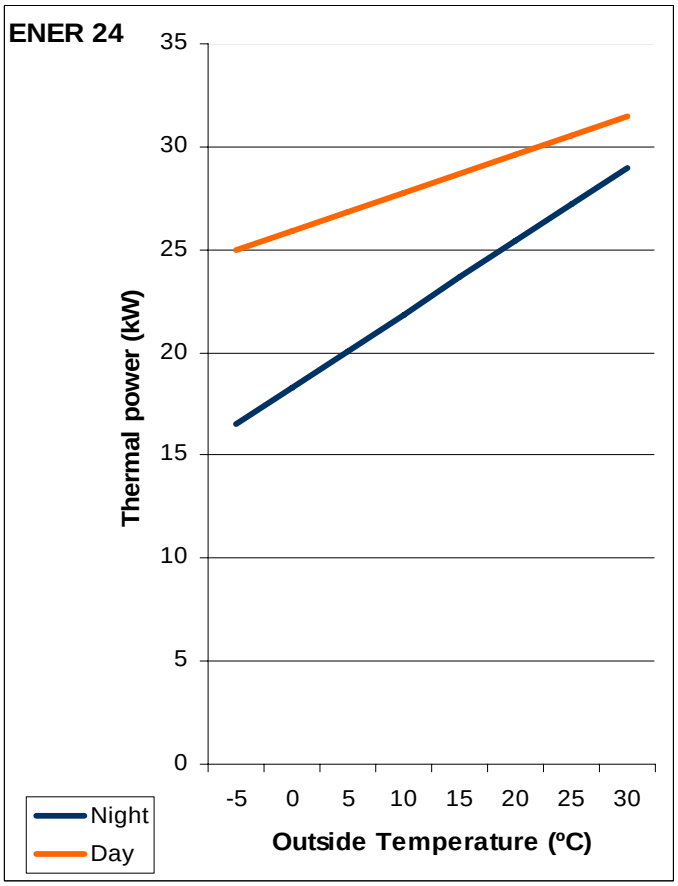


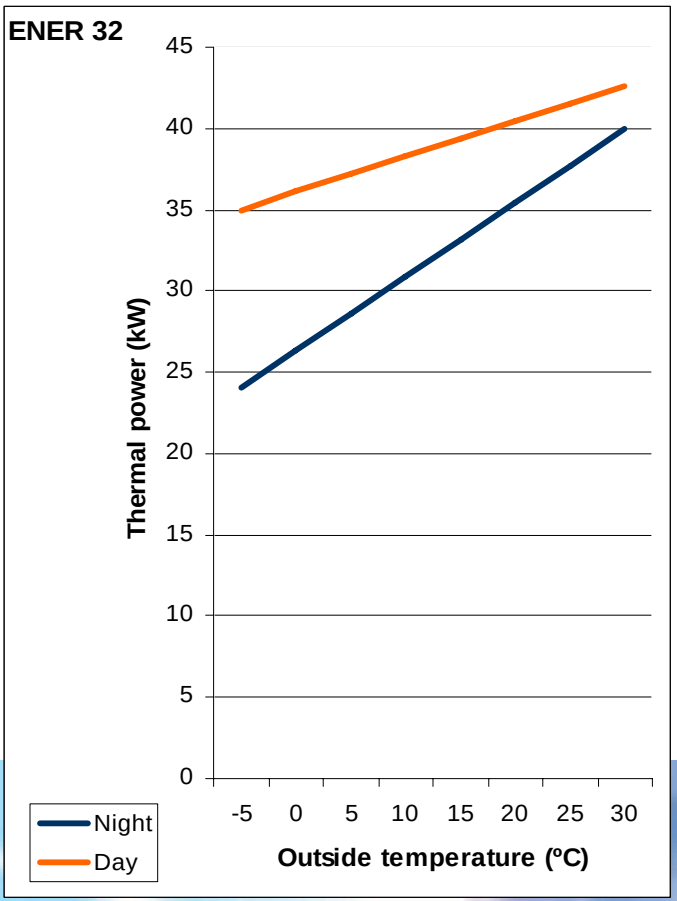


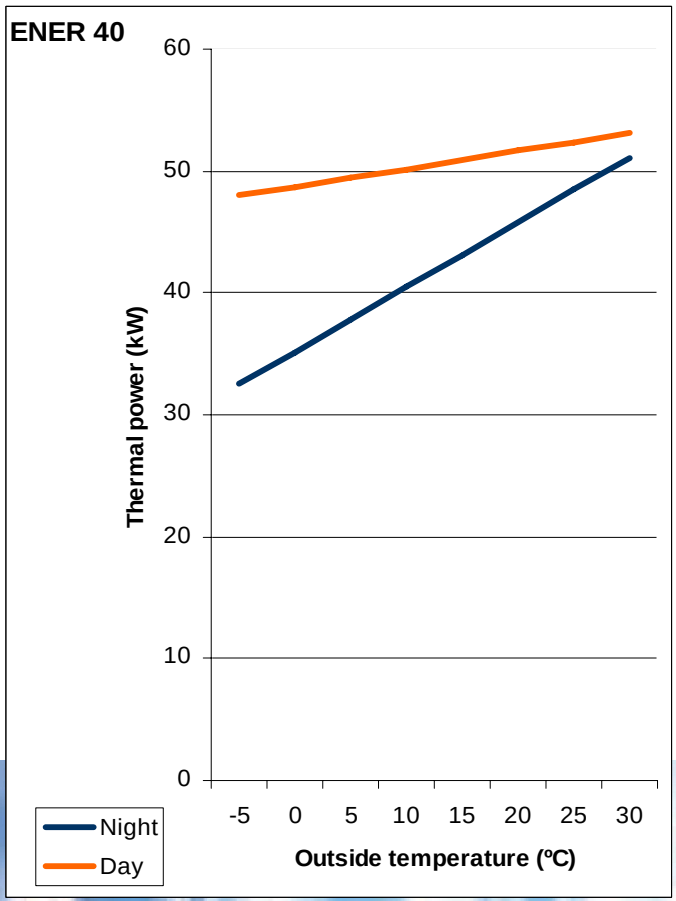


Solar Block Ener 16 to 40









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