



*Making the
World a
Better Place*



Solar Water Heater Flat Plate Collector (FPC)

- AESTHETICALLY designed & engineered for strength and optimal performance to ensure maximum benefits.
- UNIQUE Absorber Plate -Copper fins ultrasonically welded to copper tubes. High efficient absorption rate of 95%
- UNIQUE Water Proof Construction
- UNIQUE case insulation - made of PU which toughens the case and prevents heat loss.
- UNIQUE No Corrosion features The underside of the collectors is made of polypropylene to prevent possibility of corrosion.
- UNIQUE Collector Insulation -ARINNA Collectors are insulated with Polyurethane and glass wool which gives an excellent performance and great mechanical strength.
- UNIQUE brass connectors to inter-connect collectors instead of Flanges where rubber gaskets need to be replaced over a period of time.

Come in different sizes vis. AR-9 (9 fins collectors in Copper/Alluminium) and AR-10 (10 fins collectors in Copper/Alluminium) each to suit different sites. All above collector sizes have been duly approved by the Bureau of Indian Standards.

Arinna AR9 Specifications:

Collector Frame	Extruded Aluminium, 1.4 mm thick
Gasket for Glass (Beeding)	EPDM - "U" type
Glazing (cover)	Toughened clear glass 4 mm thick
Casing	Aluminium Side Section 1.4mm Glazing Section 1.2mm
Insulation Thickness	25mm PU + 20mm glass wool
Bottom Insulation	25 mm PU + 20 mm glass wool
Side Insulation	25 mm PU + 20 mm glass wool
Collector Back Sheet	Polypropylene Sheet 0.5mm
Absorber Plate	Copper
Absorber Coating	Selective – NALSUN
Riser	Copper : Ø 12.7mm x t0.56±0.05mm
Inlet Header	Copper : Ø 25.4mm x t 0.7±0.05mm 2pcs
Reflective Foil	Aluminium
Grommet (sealing gasket)	EPDM Rubber
Fluid Content	2.65 L

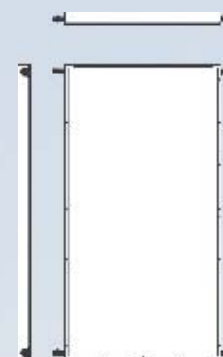
Features (USP –ARINNA Collectors):

- Aesthetically Designed & Engineered,
- Corrosion - resistant,
- Extruded alumn. sections with SS fasteners,
- 100% leak proof,
- Minimum heat loss (almost 0%)
- High transmissivity,
- Toughened & tempered glass,
- Moulded edges,
- Collector Box PUF & Glass Wool insulated,
- Brass Connectors instead of Flanges
- 4 mm toughened Glass

Part No.	Type
AR-09AIFPC	Solar Collector with Brass Adopter Union Type

Collector Size and Weight

Size	1992mmx1090mmx94mm Collector Area : 2.17 sq.mtr. Absorber Area : 2.01 sq.mtr.
Weight	35 Kgs (Dry)



Collector Size	: 2.17 sq.mtr.
Absorber area	: 2.01 sq.mtr
No. of Riser tubes per collector	: 9 per collector
No. of Absorber plate per collector	: 9 per collector
Absorptivity & Emissivity of absorber coating	: a > 95% - e < 12%
Cover transmission	: > 86%
Glass Size	: 1960 x 1058 x 4.0 mm Thk. =2.07368sq.mtr
Absorber riser bonding	: Ultrasonic/Laser welding
Collector efficiency at ambient temp.	: = 65%
Finish Powder Coating)	: Black for frame : Black for Glazing
Working Pressure	: 5 kg/cm2
Operating conditions	: T ≥ 5° C
Wind Velocity	: 80 km/hr.
(When mounted with steel structures and civil foundation as per RAF recommendation)	
Termination	: 4-Nos of 3/4" Outer Threads Brass Union Records with Adopter which is in Collector Assembly.

Arinna AR10 Specifications:

Collector Frame	Extruded Aluminium, 1.4 mm thick
Gasket for Glass (Beeding)	EPDM - "U" type
Glazing (cover)	Toughened clear glass 4 mm thick
Casing	Aluminium Side Section 1.4mm Glazing Section 1.2mm
Insulation Thickness	25mm PU + 20mm glass wool
Bottom Insulation	25 mm PU + 20 mm glass wool
Side Insulation	25 mm PU + 20 mm glass wool
Collector Back Sheet	Polypropylene Sheet 0.5mm
Absorber Plate	Copper
Absorber Coating	Selective – NALSUN
Riser	Copper : Ø 12.7mm x t0.56±0.05mm
Inlet Header	Copper : Ø 25.4mm x t 0.7±0.05mm 2pcs
Reflective Foil	Aluminium
Grommet (sealing gasket)	EPDM Rubber
Fluid Content	2.65 L

Features (USP –ARINNA Collectors):

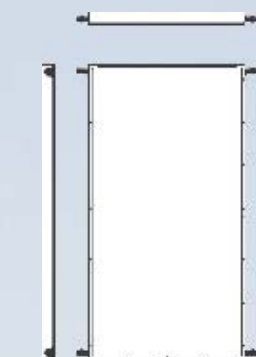
- Aesthetically Designed & Engineered,
- Corrosion - resistant,
- Extruded alumn. sections with SS fasteners,
- 100% leak proof,
- Minimum heat loss (almost 0%)
- High transmissivity,
- Toughened & tempered glass,
- Moulded edges,
- Collector Box PUF & Glass Wool insulated,
- Brass Connectors instead of Flanges
- 4 mm toughened Glass

Part No.	Type
AR-10AIFPC	Solar Collector with Brass Adopter Union Type

Collector Size and Weight

Size	1992mmx1260mmx94mm Collector Area : 2.51 sq.mtr. Absorber Area : 2.17 sq.mtr.
Weight	39 Kgs (Dry)

Collector Size	: 2.51 sq.mtr.
Absorber area	: 2.31 sq.mtr
No. of Riser tubes per collector	: 10 per collector
No. of Absorber plate per collector	: 10 per collector
Absorptivity & Emissivity of absorber coating	: a > 95% - e < 12%
Cover transmission	: > 86%
Glass Size	: 1960 x 1228 x 4.0 mm Thk. =2.41sq.mtr
Absorber riser bonding	: Ultrasonic/Laser welding
Collector efficiency at ambient temp.	: = 65%
Finish Powder Coating)	: Black for frame : Black for Glazing
Working Pressure	: 5 kg/cm2
Operating conditions	: T ≥ 5° C
Wind Velocity	: 80 km/hr.
(When mounted with steel structures and civil foundation as per RAF recommendation)	
Termination	: 4-Nos of 3/4" Outer Threads Brass Union Records with Adopter which is in



Different Variants:

A. THERMOSIPHON SYSTEM (models available are as follows)

- Non pressurize without heat exchanger
- Non pressurized with heat exchanger (good for hard water)
- Pressurized without heat exchanger
- Pressurized with heat exchanger (good for hard water).

B. FORCE CIRCULATION SYSTEM

- Recommended for 500 LPD system and above.
- Comes with circulation pump and control panel.
- Highly efficient systems.
- Controlled circulation of hot water.



Solar Water Heater

Evacuated Tube Collectors (ETC)

- ARINNA Evacuated Tube Collector is made of double layer borosilicate glass tubes evacuated for providing insulation. The outer wall of the inner tube is coated with selective absorbing material. This helps absorption of solar radiation and transfers the heat to the water which flows through the inner tube.
- ARINNA Designed the systems according to the requirement and the space of the installation location,
- Specially designed for hilly area where sun light is for limited hours.

Specification for 58 mm diameter X1800 mm length – Three Layer

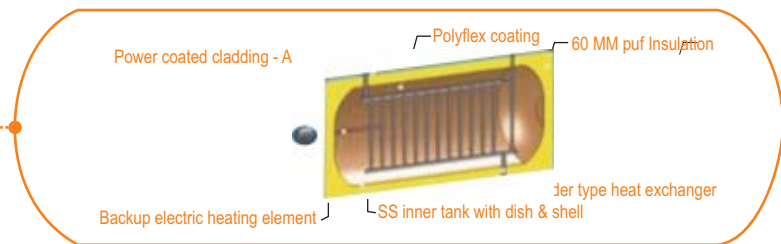
Length	: 1800 MM
Outer Tube Diameter	: 58MM
Inner Tube Diameter	: 48 MM
Glass Thickness	: 1.6 MM
Thermal Expansion	: 3.3×10^{-6} K
Material	: BOROSILICATE GLASS 3.3
Absorptive Coating	: GRADED SS-C/CU
Method Of Deposition	: DC REACTIVE SPUTTERING
Absorption	: $>92\%$ (AM 1.5)
Emmittance	: $<8\%$ W/(800C)
Vacuum	: $P < 5 \times 10^{-3}$ Pa
Temperature	: >600 C
Heat Loss	: <0.8 W/(M20C)



Benefits & Features

- High quality tubes made from borosilicate glass
- No clogging/choking
- Long lasting
- Better performance in winter and cloudy days
- Vacuum jacket insulation
- Heats water to a very high temperature
- Makes hot water available even on partially cloudy days
- High quality PUF insulation for maintaining high temperature of water inside the tank
- Compact
- Easy to install, operate and maintain
- Works efficiently with hard water
- SS hot water storage tank
- Powder coated GI stand
- Safe and environment friendly





Specifications:

Insulated SS Hot Water Tank

MOC SS 304



- BIS approved SS 304/316 grade used
- Puff insulation from all sides
- Food grade polyflex coating to prevent corrosion
- Hygenic and safe
- Easy to install

INDUSTRIAL TANKS					
S.No.	Volume	Diameter	Height without Stand	Shell Thickness	Diesh Thickness
1	1000L	37"	58"	NPX - 1.5 MM	NPX - 1.5 MM
				PX - 2 MM	PX - 3MM
2	1500L	42"	70"	NPX - 1.5 MM	NPX - 1.5 MM
				PX - 2 MM	PX - 3 MM
3	2000L	50"	70"	NPX - 1.5 MM	NPX - 2 MM
				PX - 3 MM	PX - 3 MM
4	3000L	57"	70"	NPX - 2 MM	NPX - 2 MM
				PX - 3 MM	PX - 4 MM
5	5000L	As per requirement		NPX - 3 MM	NPX - 3 MM
				PX - 4MM	PX - 5MM

DOMESTIC TANKS					
S.No.	Volume	Diameter	Height without Stand	Shell Thickness	Dish Thickness
1	100L	As per requirement		NPX - 1 MM	NPX - 1 MM
2	200L	600 mm	1230 mm	NPX - 1 MM	NPX - 1 MM
				PX - 2 MM	PX - 2MM
3	300L	700 mm	1230 mm	NPX - 1 MM	NPX - 1 MM
				PX - 2 MM	PX - 2 MM
4	500L	790 mm	1480 mm	NPX - 1 MM	NPX - 1 MM
				PX - 2MM	PX - 2MM

Street Light

The Solar Street Light system is specially designed for outdoor application in un-electrified remote rural areas as well as urban solar electrification to conserve energy. This system is an ideal application for campus and village street lighting. The system is provided with battery storage backup sufficient to operate the light for 12-14 hours daily. The system is provided with automatic ON/OFF time switch for dusk to down operation and overcharge / deep discharge prevention cut-off with LED indicators.

S. No	Product Description	S. No	Product Description
1	11 Watt CFL / 75AH Battery/ 75W SPV/ Pole, Battery Box, Mounting Str. & Wiring Accessories	6	15 Watt LED/75AH Battery/75W SPV/ Pole, Battery Box, Mounting Str. & Wiring Accessories
2	11 Watt CFL (2 Pc) / 100AH Battery/ 120W SPV/ Pole, Battery Box, Mounting Str. & Wiring Accessories	7	18 Watt LED/75AH Battery/75W SPV/ Pole, Battery Box, Mounting Str. & Wiring Accessories
3	6 Watt LED/ 40 AH Battery/ 40W SPV/ Pole, Battery Box, Mounting Str. & Wiring Accessories	8	24 Watt LED/100AH Battery/100W SPV/ Pole, Battery Box, Mounting Str. & Wiring Accessories
4	9 Watt LED/ 40 AH Battery/ 40W SPV/ Pole, Battery Box, Mounting Str. & Wiring Accessories	9	36 Watt LED/150AH Battery/150W SPV/ Pole, Battery Box, Mounting Str. & Wiring Accessories
5	12 Watt LED/ 60AH Battery/ 60W SPV/ Pole, Battery Box, Mounting Str. & Wiring Accessories	10	50 Watt LED/200AH Battery/180W SPV/ Pole, Battery Box, Mounting Str. & Wiring Accessories

Solar Power Plants

Solar power can be used in both large-scale applications and in smaller systems for the home. Businesses and industry can diversify their energy sources, improve efficiency and save money by choosing solar technologies for their electrical needs

1. Offgrid/Solar Power Packs/Solar Retrofit Systems

Capacity Range : 1 KWp - 100 KWp (300 W - 1 KWp also available on special request)

Product Features

- Solar Standalone systems
- No dependency on Electricity Board / DG sets
- No running cost
- No noise pollution
- Reliable, sturdy and efficient Inverters & Controllers
- Minimum maintenance cost

2. Grid Connected System

Capacity Range: 5 KWp - 1 MW

Product Features

- Green, Clean and Eco friendly
- Battery less Systems
- Power fed to Grid 220V 1Ph or 440V 3Ph or 11Kv
- Reliable, sturdy and efficient PCUs
- Negligible maintenance cost
- Highly efficient systems
- Integrated data, event and fault logging

3. Turnkey Projects

The main solutions and value processes that we can offer you on solar PV power projects of MW scale are:

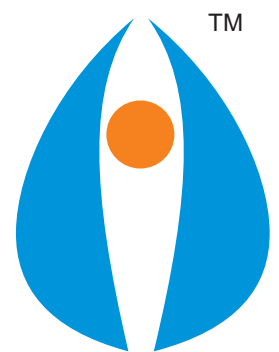
Complete execution of turn key projects-

- Planning
- Engineering
- Project Management (Execution)
- Supervision
- Maintenance & Servicing
- Continuous monitoring of Plant's performance
- Plants Evaluation, Optimization & Improvements





Certification & Achievements



ARINNA
Solar Energy Systems



Authorised Dealer Stamp

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