

# Solar Water Heater (FPC)



Model :  
Uratom FPC



Save Electricity



Save Money



High Thermal Efficiency



MNRE Approved

## Technical Specifications of Tank

|                 |  |
|-----------------|--|
| Capacity        | Equal to system capacity.  |
| Material        | SS 304 Non magnetic stainless steel or epoxy coated G.I.                 |
| Welding         | TIG welding (Argon inert gas welding) for SS304.                         |
| Thickness       | Suitable for tank capacity.  |
| Insulation      | Glasswool sheets 100 mm thick.   |
| Cladding        | PP Powder-coated G.I. sheets / Aluminum Cladding.                        |
| Back up         | Electrical coil of 2 KW (Optional).                                      |
| Pressure rating | 0.5 Kg/cm.2 for normal systems; 3.5 - 5 kg/cm.2 for pressurized systems. |

## Technical Specifications of Collector

|   |   |
|---|---|
| Brand                                   | "URATOM"  |
| Overall size                            | 2030 mm x 1030 mm x 95 mm.  |
| No. of fins per collector               | 9   |
| Absorber area                           | Approx. 2.06 sq.m   |
| Absorber coating                        | NALSUN Solar selective coating on copper (black chrome on copper with or without nickel undercoating).                                    |
| Absorptivity                            | 0.92 - 0.96   |
| Emissivity                              | 0.10 - 0.15   |
| Temperature tolerance of coating        | More than 200°C   |
| Absorber sheet (Copper)                 | 0.12 mm thick x 1900mm L x 155mm W  |
| Riser (Copper tube)                     | O. D. 12.7mm x 0.5 mm thick x 1922 mm L   |
| Bonding between riser Tube and absorber | Ultrasonic welding.   |
| Bonding between riser Tube and header   | Copper brazing.   |
| Hydraulic Test pressure                 | 5 kg/ sq.cm.  |
| Rated pressure                          | 2.5 Kg/ sq. cm.   |
| End connections                         | Brass flared Flanges of threaded 1" BSP.  |
| Collector box                           | Specially Extruded Aluminum sections.   |
| Box-back sheet joint                    | Pop riveted.  |
| Box-corner joints                       | Screwed.  |
| Back sheet                              | Aluminum sheet 0.6 / 0.7 mm thick.  |
| Reflector                               | Aluminum foil 0.02 / 0.05 mm thick.   |
| Glazing                                 | Toughened & tempered glass 4 mm thick-free From bubbles and scratches.  |
| Transmittance                           | > 0.82  |
| Sealing                                 | Silicone sealant.   |
| Back Insulation                         | Resin bonded Rockwool 50 mm thick. $R=1.67 \text{ M}^2 \cdot ^\circ\text{C} / \text{W}$ , $K=0.052 \text{ W} / \text{M}^2 \cdot \text{k}$ |
| Side insulation                         | Resin bonded Rockwool 25 mm thick.  |
| Grommets & gaskets                      | EPDM rubber.  |
| Thermal performance                     | $\text{FRUL} \leq 6 \text{ W} / \text{M}^2 \cdot ^\circ\text{C}$ , $\text{FR (T\&) } \geq 0.65$   |

