LUXURY POOL & JACUZZI HEATING SOLUTIONS

Smaart Jacuzzi Heat Pump Product Catalogue

Energy-efficient air-source heat pump technology for swimming pools, Jacuzzis, spas and resort facilities — delivering warm, perfectly-conditioned water with up to 80% energy savings vs electric heaters.



220 kW
Max Capacity

80%
Energy Savings

COP 5.0
Peak Efficiency

Titanium
Heat Exchanger

60°C
Output Water Temp

Sunniva Encon | Copeland / Panasonic Compressor | Titanium Heat Exchanger | Astral UPVC | Weld-On 705

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01

Jacuzzi Heat Pump Unit

The Sunniva Encon SE-SP Series air-source heat pump — extracting free heat from ambient air and delivering it to your pool or Jacuzzi at a fraction of the running cost of electric or gas heaters.

Where This System Is Deployed

Anywhere warm, perfectly-conditioned water is expected year-round — from boutique hotel Jacuzzis to large resort pools. The Smaart Jacuzzi Heat Pump replaces energy-hungry electric heaters with clean, efficient air-source technology.

- Swimming Pools
- Jacuzzi & Hot Tubs
- Luxury Resorts & Spas
- Villas & Bungalows
- Hotels & Hospitality
- Sports & Wellness Centres

SUNNIVA ENCON — SE-SP SERIES

Swimming Pool & Jacuzzi Heat Pump

Air Source Heat Pump (Monoblock) — 11 kW to 220 kW



Parameter	Specification
Brand	Sunniva Encon
Type	Air Source Heat Pump (Monoblock)
Model Series	SE-SP Series (SE-SP-11U to SE-SP-220V)
Capacity Range	11 kW to 220 kW
Compressor	Scroll Compressor (Copeland / Panasonic)
Heat Exchanger	Titanium tube in PVC shell
Evaporator	Blue fin coated coil
Expansion Device	Electronic / Thermostatic valve
Fan Type	Axial fan (low noise)
Body Material	Powder-coated Mild Steel
Output Water Temperature	Up to 45–60°C
COP (Efficiency)	3.0 – 5.0 (model dependent)
Energy Saving	Up to 70–80% vs electric heaters
Control System	Digital Smart Controller
WiFi Control	Optional
Defrost System	Intelligent defrost (optional)
Safety Features	High/Low pressure protection, voltage protection
Installation	Outdoor / Plant room
Operation	Fully automatic, all-weather

★ KEY FEATURES

- Titanium heat exchanger — fully corrosion resistant against pool chemicals & salt water
- Scroll compressor (Copeland / Panasonic) for whisper-quiet, highly efficient operation
- Digital smart controller with optional WiFi remote monitoring
- All-weather operation with intelligent auto-defrost system
- Suitable for Jacuzzi, swimming pools, resorts, spas & villas
- Compact monoblock — outdoor or plant room installation
- High/low pressure protection & voltage protection built-in

Performance at a Glance

Metric	Value
Peak Coefficient of Performance	COP 5.0
Energy Saving vs Electric Heater	80%
Max Output Water Temperature	60°C

How the Heat Pump Works — Refrigeration Cycle

Stage	What Happens
1. Evaporation	Ambient air passes over the evaporator coil. Refrigerant liquid absorbs heat from the air and evaporates into a low-pressure gas.
2. Compression	The scroll compressor compresses the refrigerant gas, raising both its temperature and pressure significantly.
3. Condensation	Hot compressed gas passes through the titanium heat exchanger, transferring heat energy into the pool water. Gas condenses to liquid.
4. Expansion	Electronic expansion valve drops refrigerant pressure, cooling it back down. The cycle repeats continuously and automatically.

SYSTEM HIGHLIGHTS

- ✔ Low Noise — axial fan, silent operation
- ✔ 3–5× ROI — COP energy return ratio
- ✔ Titanium — saltwater & chemical safe
- ✔ WiFi Ready — optional smart remote control
- ✔ All-Weather — intelligent defrost system
- ✔ Full Safety — pressure & voltage protection

02

System Piping

Astral UPVC pressure pipe — lead-free, 100% corrosion-free and UV-resistant, certified for pool, Jacuzzi and water treatment applications up to 60°C.

ASTRAL — AQUARIUS / AQUARIUS+ SERIES

UPVC Pressure Pipe

Lead Free UPVC — IS 4985 / ASTM D1785 Certified



Parameter	Specification
Brand	Astral
Material	Lead Free UPVC (Rigid PVC)
Standard	IS 4985 / ASTM D1785 / ASTM D1784
Pipe Class	SCH 40 / SCH 80
Pressure Classes	Class 2.5, 4, 6, 8, 10 kg/cm²
Size Range	20 mm to 400 mm
Industrial Size Range	15 mm to 300 mm (½"–12")
Standard Length	3 m / 6 m
Max Service Temperature	Up to 60°C
Jointing Type	Solvent Cement / Ring Fit
Corrosion Resistance	100% Rust Free
UV Resistance	Yes
Tensile Strength	~45–55 N/mm²
Quality Standard	ISO 9001:2015

★ HIGHLIGHTS

- 60°C max service temperature
- Rust free — 100% corrosion resistant
- SCH 40/80 — dual pressure ratings
- 20–400 mm — complete size range
- UV resistant — all-weather outdoor use

03

UPVC Valves & Fittings

Complete Astral UPVC fitting range plus Weld-On 705 solvent cement — chemical-resistant, PN16-rated and ISO-certified for all Jacuzzi and pool piping connections.

ASTRAL

UPVC Ball Valve

PN16 · Full Bore · ISO 9001



Parameter	Specification
Brand	Astral
Material	UPVC
Standard	SCH 40 / SCH 80
Nominal Pressure	PN 10 / PN 16
Size Range	15 mm – 50 mm (½″ – 2″)
Operation	Manual Lever (Quarter Turn)
Ball Material	UPVC / PTFE Coated
Seat / Seal	PTFE / EPDM or FKM
Temperature Range	0 to 60°C
Flow Type	Full Bore

ASTRAL — 3-PIECE

UPVC Union

PN16 · 3-Piece



Parameter	Specification
Type	3-Piece (Nut + Body + Tail Pieces)
Material	UPVC
Standard	ASTM D1785 / SCH 40 / SCH 80
Pressure Rating	PN 10 / PN 16
Size Range	15 mm – 100 mm (½″ – 4″)
Connection	Socket (Solvent Weld) / Threaded
Seal Type	EPDM / NBR O-Ring
Temperature Range	0 to 60°C
Reusability	Yes — multiple times detachable

PRINCE PIPES

PVC MTA

BSP · 10 Bar



Parameter	Specification
Brand	Prince Pipes & Fittings Ltd.
Material	uPVC / PVC
Thread Type	BSP
Connection	Socket (solvent weld) × Male Thread
Size Range	15 mm to 110 mm
Common Sizes	20 mm (½″), 25 mm (¾″), 32 mm (1″)
Pressure Class	SCH 40 / SCH 80 / 6–10 kg/cm²
Working Pressure	Up to 10 bar
Temperature Range	0°C to 60°C

ASTRAL — FEMALE THREADED ADAPTER

UPVC FTA

BSP/NPT · Brass Insert

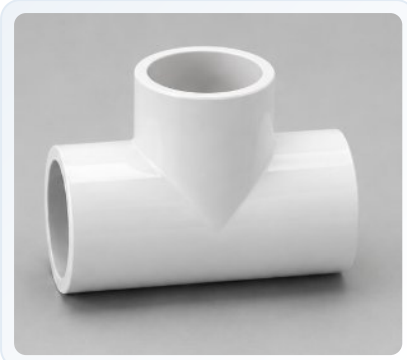


Parameter	Specification
Material	Lead Free UPVC with Brass Insert
Standard	ASTM F1498 / ASTM D2467
Pipe Compatibility	SCH 40 / SCH 80
Size Range	15 mm to 100 mm (½″ to 4″)
Connection	Socket × Female Thread
Thread Type	BSP / NPT
Pressure Rating	PN10 / PN16
Max Temperature	Up to 60°C
Thread Insert	Brass

ASTRAL — EQUAL / REDUCING

UPVC Tee

PN16 · 90° Branch



Parameter	Specification
Type	Equal Tee / Reducing Tee
Material	Lead Free UPVC
Standard	ASTM D2466 / ASTM D2467
Size Range	15 mm to 300 mm
Connection	Socket (Solvent Weld)
Pressure Rating	PN10 / PN16
Max Temperature	Up to 60°C
Flow Pattern	90° Branch Connection
Corrosion Resistance	100% Rust Free

ASTRAL

UPVC Bush (Reducer)

PN16 · 16 Bar



Parameter	Specification
Type	Flush / Socket Reducer Bush
Material	Lead Free UPVC
Standard	ASTM D2467 (SCH 80), ASTM D2466 (SCH 40)
Size Range	15 mm to 300 mm
Typical Sizes	25×20, 32×25, 50×40, 63×50 mm
Connection	Spigot × Socket
Pressure Rating	PN10 / PN16
Working Pressure	Up to 16 bar
Max Temperature	Up to 60°C

ASTRAL — 90° / 45°

UPVC Elbow

90° / 45° · UV Resistant



Parameter	Specification
Type	90° Elbow / 45° Elbow
Material	Lead Free UPVC
Standard	ASTM D2466 (SCH 40), ASTM D2467 (SCH 80)
Size Range	15 mm to 300 mm
Connection	Socket (Solvent Weld) / Threaded
Pressure Rating	PN10 / PN16
Max Temperature	Up to 60°C
Bend Radius	Standard / Long Radius
UV & Corrosion Resistance	Yes — 100% Rust Free

WELD-ON 705

UPVC Solvent Cement

ASTM D2564 · Fast Set



Parameter	Specification
Brand / Model	Weld-On 705
Packing Size	473 ml (Pint)
Colour	Clear
Setting Type	Fast Setting
Pipe Size Range	Up to 6″ dia
Pipe Schedule	SCH 40 / SCH 80
Standard	ASTM D2564
Initial Setting Time	1–2 minutes
Full Cure Time	24 hours
Max Temperature	Up to 60°C

Luxury Jacuzzi & Pool Heating Solutions | Powered by Air-Source Heat Pump Technology

KEY BRANDS

Sunniva Encon · Copeland
Panasonic · Astral UPVC
Prince Pipes · Weld-On

SYSTEM CATEGORIES

Jacuzzi Heat Pump
UPVC Piping System
Valves & Fittings

MANUFACTURED BY

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