

POOL HEAT EXCHANGER

FOR SWIMMING POOL
AND SALT WATER
APPLICATIONS



Heat exchanger
Tailer

PVX HEAT EXCHANGER

FOR POOL AND SALT WATER APPLICATIONS

Titanium tube heat exchanger with a PVC shell is commonly used in swimming pool heat pumps, functioning either as an evaporator or a condenser. This configuration leverages the corrosion resistance of titanium and the durability of PVC, making it suitable for the chemically treated water in pools.

Evaporator:

Refrigerant Side: Low-pressure refrigerant enters the titanium tubes and absorbs heat from the pool water, causing it to evaporate.

Water Side: Pool water circulates through the PVC shell, transferring heat to the refrigerant, resulting in cooled water returning to the pool.

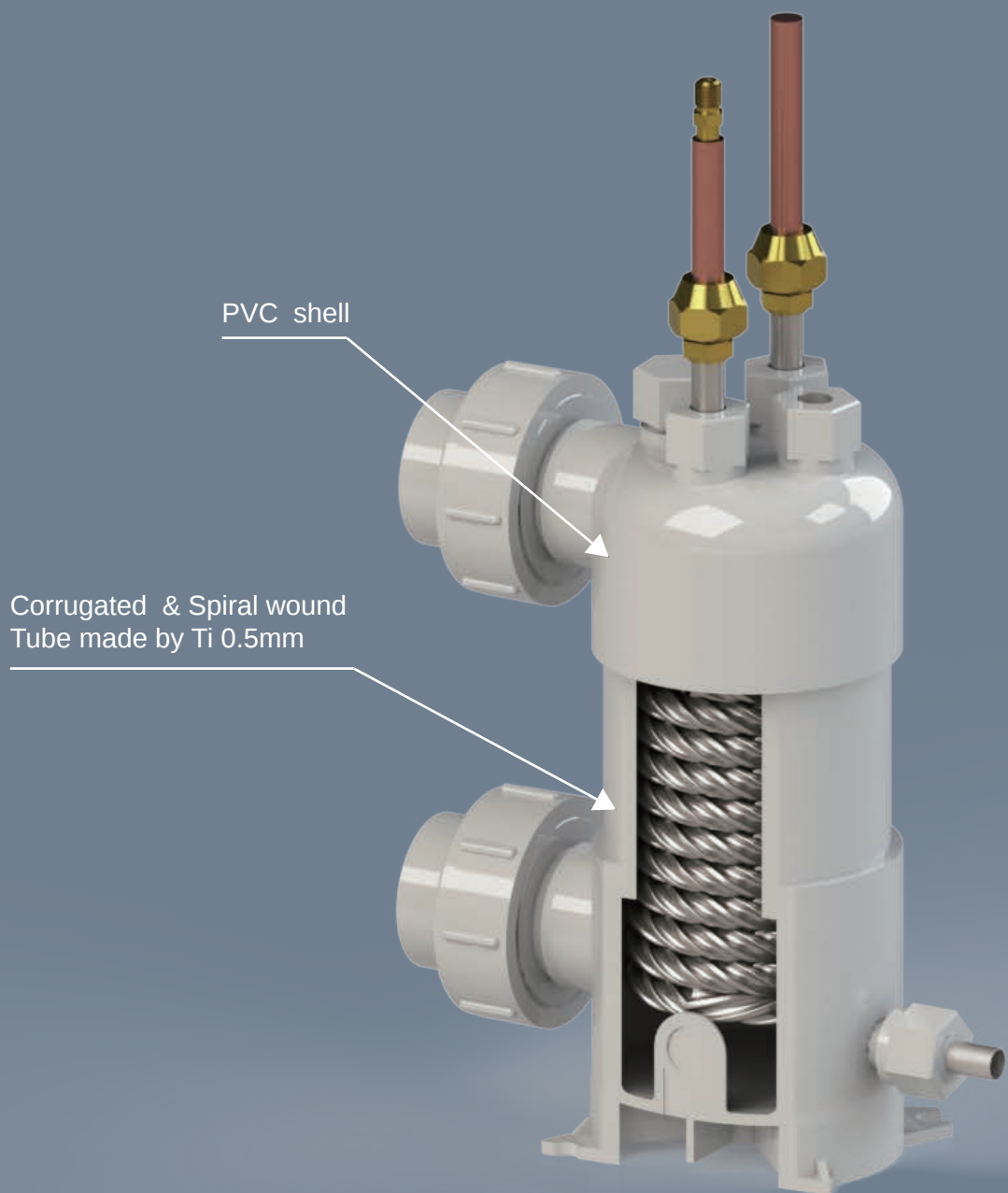
Condenser :

Refrigerant Side: High-pressure refrigerant gas enters the titanium tubes and releases heat, condensing into a liquid.

Water Side: Cooler pool water in the PVC shell absorbs the heat from the refrigerant, warming the water before it returns to the pool.

Advantages:

- **Corrosion Resistance:** Titanium's resistance to corrosion ensures longevity, even with exposure to chlorinated or saltwater pools.
- **Durability:** The combination of titanium and PVC provides a robust structure capable of withstanding pool environments.
- **Efficiency:** The design facilitates effective heat transfer, enhancing the performance of the heat pump.



BENEFITS OF USING PVX TI TUBE HEAT EXCHANGERS

We provides a comprehensive range of compact PVX Ti tube heat exchanger to endure the demanding conditions.



High Heat Transfer Efficiency

Titanium's thermal conductivity ensures effective heat transfer between fluids, further boosted by fluted or rifled tube designs.



Environmental Benefits

Titanium and PVC are recyclable, promoting eco-friendliness. PVC's low thermal conductivity minimizes heat loss, boosting efficiency.



Exceptional Corrosion Resistance

Titanium resists corrosion from chemicals, chlorine, and saltwater, while PVC withstands pool chemicals and acidic conditions, ensuring durability.



Low Maintenance Requirements

Titanium and PVC resist fouling and scaling, reducing cleaning needs and maintenance costs while remaining easy to maintain.



Lightweight

Titanium's strength and lightness reduce heat exchanger weight without sacrificing durability, while PVC offers a sturdy, easy-to-install shell.



Safety and Non-Toxicity

Both titanium and PVC are non-toxic materials, ensuring safety for applications involving drinking water, swimming pools, and food-grade processes.

OPERATIONAL CONDITIONS

TEMPERATURE RANGE

TI tube side — FROM -50°C (-58°F) TO 150°C (302°F)

PVC shell side — FROM -10°C (14 °F) TO 35°C (95 °F)

PRESSURE RANGE

TI tube side — Max 45 BAR

PVC shell side — Max 5 BAR

MEDIA IN SHELL

- Swimming pool water
- Salt water
- Plating Solutions
- Ethylene Glycol & Propylene Glycol

MEDIA IN TUBES

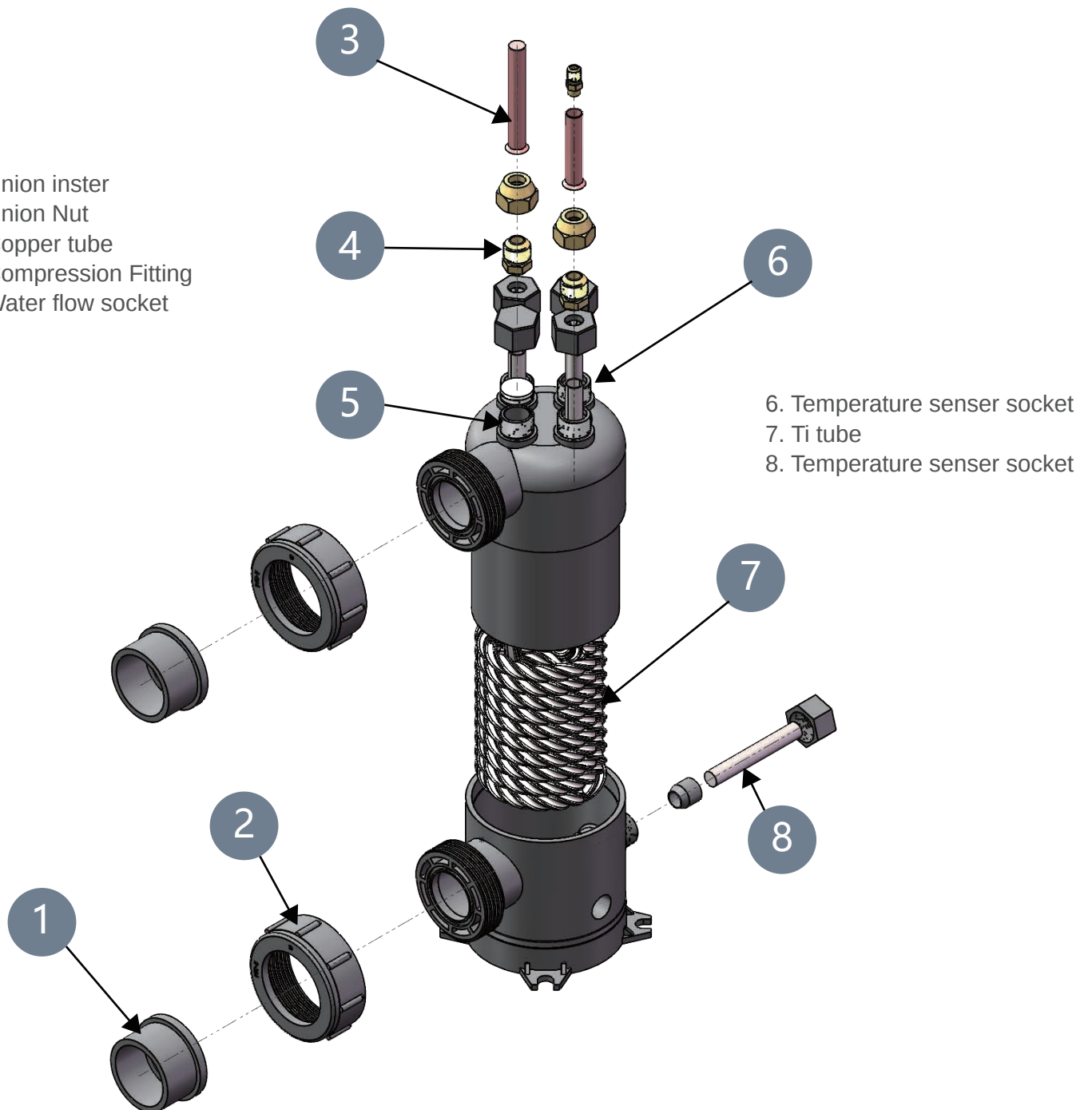
- R22、R134a、R404a、R407c、R410a、R417a、R600a、etc.

IMPORTANT NOTES FOR INSTALLATION

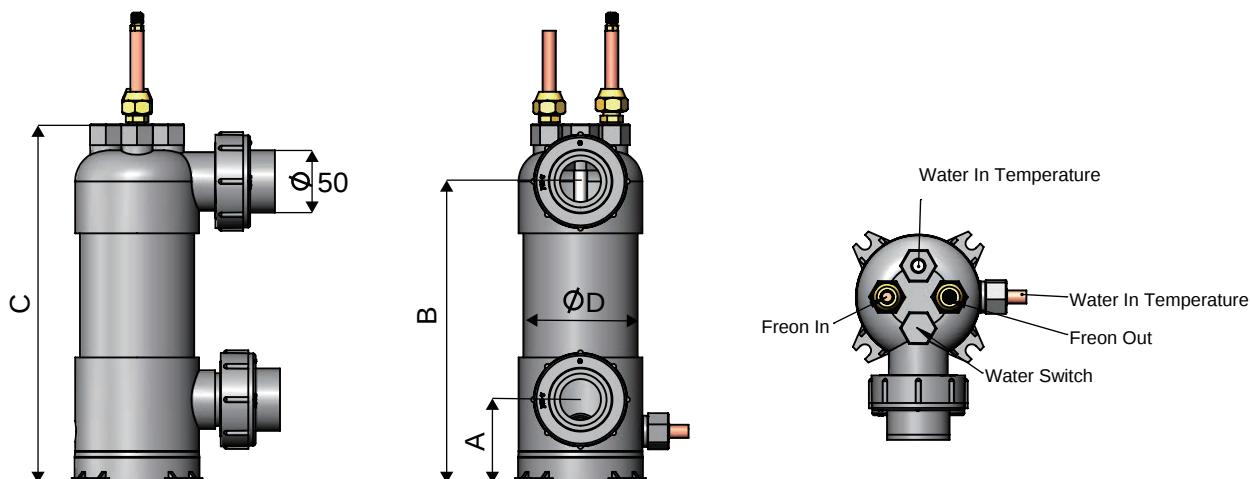
- Please purge air from water system, and ensure the work pressure not exceed the max pressure.
- Please keep the water clean, suggest to install filter and clean the system regularly.
- Please drain off water when the machine stopped during the colds season to avoid freezing.

PVX HEAT EXCHANGER PARTS DIAGRAM

- 1. Union inster
- 2. Union Nut
- 3. Copper tube
- 4. Compression Fitting
- 5. Water flow socket



TECHNICAL PARAMETERS



Model	Capacity KW	Waterflow m³/h	A mm	B mm	C mm	D mm	Tube OD mm	Tube length M
PVX-38	3.8	1.8	80	250	310	φ110	12.7	3
PVX-45	4.5	2	80	290	350	φ110	12.7	4.9
PVX-95	9.5	4.2	80	370	430	φ110	12.7	6.5
PVX-120	12	5.5	80	365	430	φ160	12.7	8.4
PVX-140	14	6.2	80	445	510	φ160	12.7	10.5
PVX-170	17	7.5	80	440	510	φ200	16	9.8
PVX-210	21	9.2	80	460	530	φ200	19	10
PVX-250	25	12	80	550	620	φ200	19	12.5
PVX-300	30	14	80	630	700	φ200	19	15
PVX-360	36	15	80	710	780	φ200	19	17

HOW IT WORKS IN HEAT RECOVERY FROM AIR CONDITIONER TO HEAT POOL

