

# RVCX

## CO-AXIAL TUBE HEAT EXCHANGER

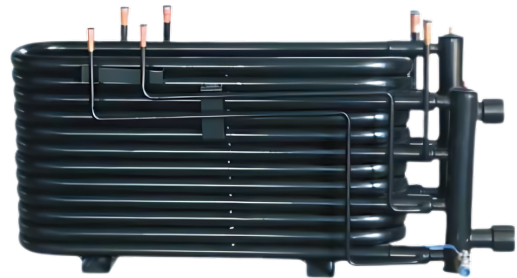
### INTRODUCTION

The RVG RVCX Series Coaxial Tube Heat Exchanger is an advanced heat transfer solution engineered for superior efficiency, durability, and adaptability across a wide range of HVAC and industrial applications.

Designed with a multi-start spiral inner tube, the RVCX series enhances heat transfer performance while ensuring excellent fluid distribution, oil return, and long-term operational stability.

### KEY DESIGN FEATURES

1. Advanced Multi-Start Spiral Technology
  - Inner tube designed with multi-start spiral grooves
  - Increases effective heat transfer area per unit length
  - Promotes uniform fluid distribution
  - Generates cyclonic flow, enhancing:
    - Condensation heat transfer
    - Boiling heat transfer
2. High Heat Transfer Efficiency
  - Enhanced internal surface creates micro-turbulence
  - Significantly improves heat transfer coefficient
  - Optimized for high-performance heat pump systems
  - Performance benchmarked using advanced laboratory testing
3. Robust Mechanical Design
  - Spiral structure increases tube strength and fracture resistance
  - Reduced deformation under pressure
  - Design Pressure:
    - Water side: 1.5 MPa
    - Refrigerant side: 4.2 MPa
4. Superior Oil Return Performance
  - Evenly distributed annular gap between inner and outer tubes
  - Ensures excellent oil return characteristics
  - Ideal for use as evaporators in refrigeration systems
5. Anti-Fouling & Anti-Freezing Performance
  - Spiral flow path prevents:
    - Scale deposition
    - Dirt accumulation
  - Undulating internal flow reduces freezing risk
  - Ensures stable long-term operation
6. High Durability & Leak Resistance
  - Optimized design with minimal welding points
  - High-quality welding ensures low leakage risk
  - Extended service life with corrosion-resistant materials



## MATERIAL FLEXIBILITY

The RVCX series offers a wide range of material options to suit different applications:

Inner Tube Options:

- Copper (Red Copper)
- Copper-Nickel Alloy
- Titanium-Nickel Alloy

Outer Tube Options:

- Copper
- Carbon Steel
- Stainless Steel

This flexibility enables use in corrosive, high-pressure, and specialized environments.



## REFRIGERANT COMPATIBILITY

Compatible with a wide range of refrigerants, including:

- R12
- R22
- R407C
- R410A

## PRODUCT DIMENSION DIAGRAM

The RVCX series is widely used across:

- Water-cooled condensers
- Water chillers
- Air-source and water/ground-source heat pumps
- Industrial heat recovery systems
- HVAC systems (residential & commercial)

With advanced material options, it is also suitable for:

- Food processing
- Pharmaceutical applications
- Specialized industrial processes

## DESIGN FLEXIBILITY

Available in multiple standard and custom configurations:

Standard Shapes:

- Round
- Trombone
- Rectangular

(Please Note: Rectangular is our Standard, other designs are based on project requirements)

Customization:

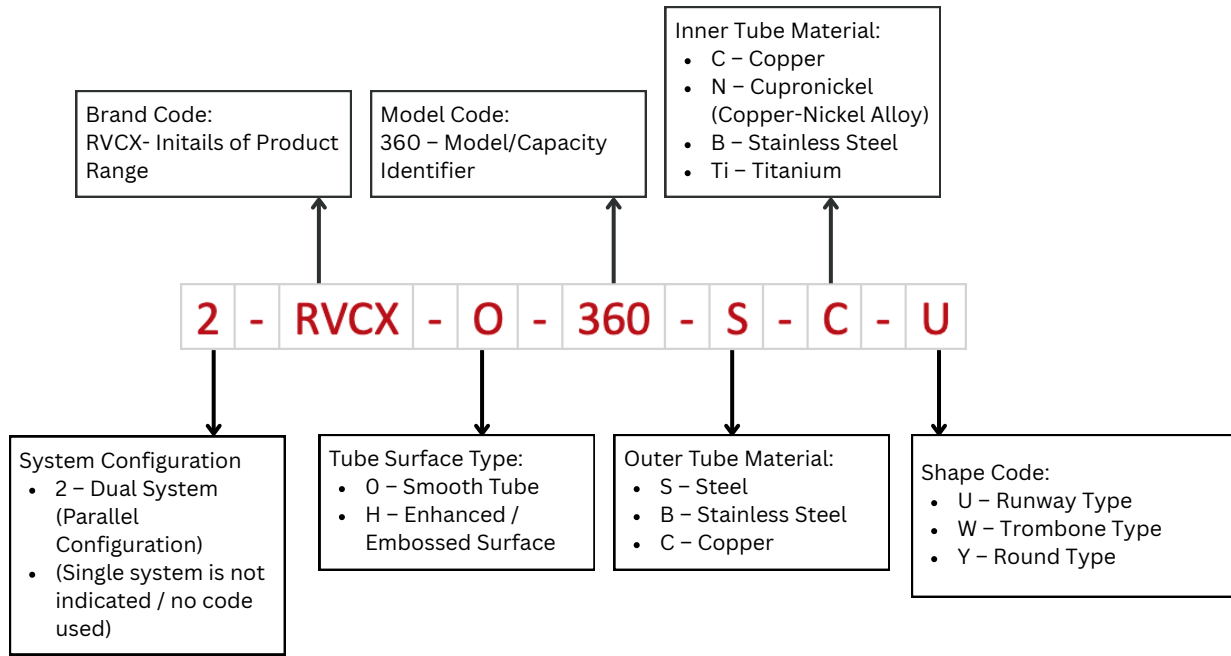
- Tailor-made dimensions
- Application-specific design
- Integration-ready configurations

## KEY ADVANTAGES

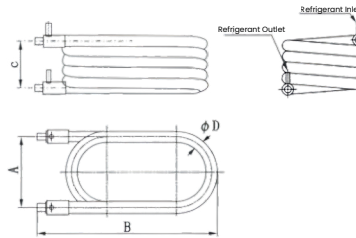
- High heat transfer efficiency
- Compact and space-saving design
- Excellent oil return (ideal for evaporators)
- Anti-fouling and easy maintenance
- Long service life
- Wide material and refrigerant compatibility
- Customizable for diverse applications



## NAMING RULE OF RVCX



## RUNWAY TYPE SERIES



Model	Nominal Cooling Capacity (kW)	Heat Transfer Capacity (kW)	Heat Transfer Capacity (~BTU/h)	Refrigerant	Inlet Water Temperature (°C)	Outlet Water Temperature (°C)	Condensing Temperature (°C)	Nominal Water Flow Rate (m³/h)	Water Pressure Drop (≤ kPa)
RVCX-0100SC-U	2.6	3.3	12000	R410a	30	35	40	0.6	25
RVCX-0150SC-U	4.0	5.1	18000					0.9	35
RVCX-0200SC-U	5.2	6.7	24000					1.1	45
RVCX-0250SC-U	6.5	8.3	30000					1.4	45
RVCX-0300SC-U	7.8	10.0	36000					1.7	45
RVCX-0400SC-U	10.4	13.3	46000					2.3	60
RVCX-0500SC-U	13.0	16.6	57000					2.9	45
RVCX-0600SC-U	15.6	20.0	70000					3.4	50
RVCX-0700SC-U	18.2	23.3	80000					4.0	65
RVCX-0800SC-U	20.8	26.6	90000					4.6	50
RVCX-01000SC-U	26.0	33.3	120000					5.7	60

Specification for R22, R407C, R134a, R404A, R417A are available on request.