



# **DUAL TUBE COILS**

**HIGH EFFICIENCY TUBE-IN-TUBE  
HEAT EXCHANGERS**

**WATER • STEAM • PROCESS LIQUID/GAS**

**[www.sentry-equip.com](http://www.sentry-equip.com)**

BACKED BY  
OVER 75 YEARS OF  
HEAT TRANSFER  
EXPERIENCE

# High Performance Tube-In-Tube Heat Exchanger For A Variety of Applications

Sentry Dual Tube Coils (DTC) are spirally wound, full counter flow heat exchangers well suited for a variety of applications where low flow rates of high temperature and/or high pressure fluids need cooling or heating.

## Rugged and Adaptable Design

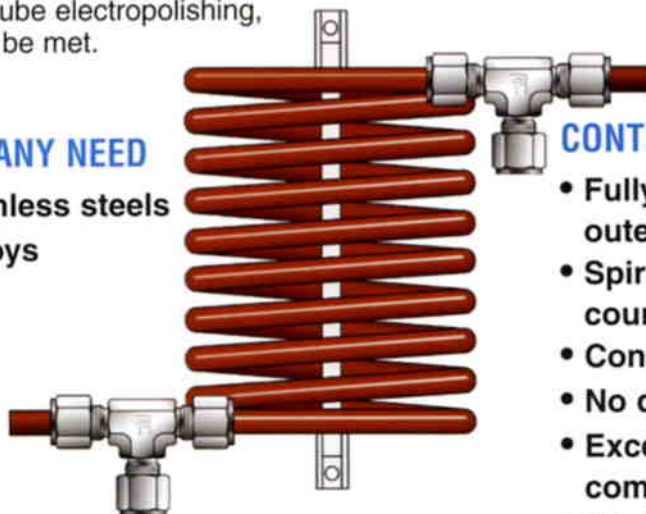
The sturdy tube within a tube concept uses heavy duty terminal fittings to provide for a plain tube end interface for the inner tube and a compression connection for the outer tube. The plain end of the inner tube is easily adapted to a variety of connections including compression, threaded, socket weld, sanitary clamp, etc. The tube within a tube design also provides for high pressure/temperature capabilities on both sides of the heat exchanger, giving greater application flexibility.

## Single Continuous Tube

The single continuous inner tube increases reliability and cleanliness and allows the unit to be completely drainable. In conjunction with appropriate end fittings and optional inner tube electropolishing, sanitary requirements can be met.

## MATERIALS TO MEET ANY NEED

- 300 & 400 grade stainless steels
- Copper & copper alloys
- Nickel alloys
- Titanium
- Zirconium
- PTFE



## CONTINUOUS TUBE-IN-TUBE

- Fully drainable inner and outer coil
- Spiral wound for maximum counterflow efficiency
- Constant fluid velocity
- No dead spots or crevices
- Excellent for multi-phase/multi-component fluids & slurries
- Highly resistant to thermal and hydraulic shock

## Wide Variety of Materials Available

Stock materials include Copper, 316 Stainless Steel and Inconel® Hastelloy® (various grades), Titanium, Zirconium, PTFE and a variety of other nickel and stainless steel alloys are available.

## Simple Installation

A two-hole mounting bracket permits the DTC to be easily mounted in a variety of locations & orientations.

## Custom configurations and options

Standard sizes for 1/4", 3/8" and 1/2" inner tubes are available with a variety of materials, physical arrangements, coil lengths, and end connections. Custom inner tube sizes are available up to 1". Sanitary units are available in all sizes.

**DTC - Just One of a Broad Line of Compact Heat Exchangers By Sentry**

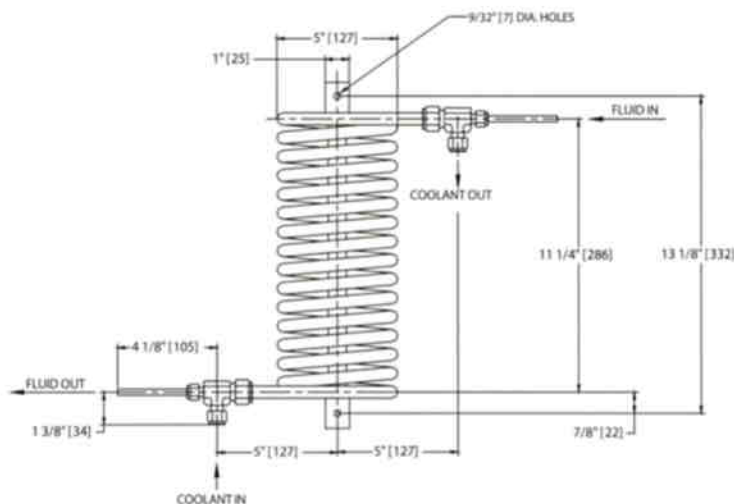
*To learn more about Sentry Equipment and download referenced bulletins visit us at:*

[www.sentry-equip.com](http://www.sentry-equip.com)

# DTC-4

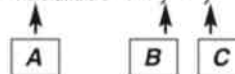
## Specifications - 4 Series

Model No.	Inner Tube Design	Outer Design	Inner Tube Material	Outer Tube Material	H.T. Area	Weight	Part Number
DTC-CUA/CUA-4-1-1	2000 psig @300°F 137 bar @148°C	700 psig @300°F 48 bar @148°C	1/4"O.D. Copper	1/2"O.D. Copper	1.26 ft <sup>2</sup> 0.12 m <sup>2</sup>	12 lbs 5.5 kg	7-02671A
DTC-SSA/CUA-4-1-1	4900 psig @1000°F 337 bar @537°C	700 psig @300°F 48 bar @148°C	1/4"O.D. 316SS	1/2"O.D. Copper	1.26 ft <sup>2</sup> 0.12 m <sup>2</sup>	12 lbs 5.5 kg	7-02671B
DTC-IN1/CUA-4-1-1	5450 psig @1100°F 375 bar @593°C	700 psig @300°F 48 bar @148°C	1/4"O.D. Inconel	1/2"O.D. Copper	1.26 ft <sup>2</sup> 0.12 m <sup>2</sup>	12 lbs 5.5 kg	7-02671C
DTC-SSA/SSB-4-1-1	4900 psig @1000°F 337 bar @537°C	2300 psig @1000°F 158 bar @537°C	1/4"O.D. 316SS	1/2"O.D. 316SS	1.26 ft <sup>2</sup> 0.12 m <sup>2</sup>	12 lbs 5.5 kg	7-02671D
DTC-IN1/SSB-4-1-1	5450 psig @1100°F 375 bar @593°C	2300 psig @1000°F 158 bar @537°C	1/4"O.D. Inconel	1/2"O.D. 316SS	1.26 ft <sup>2</sup> 0.12 m <sup>2</sup>	12 lbs 5.5 kg	7-02671E



### DTC - 4 - Notes

1. DTC Model Numbers - DTC - XXX/XXX- 4 - y - y



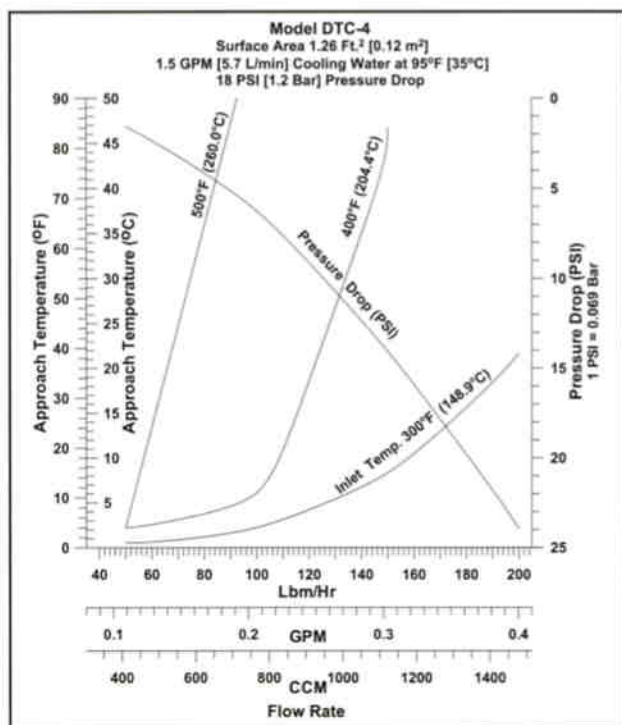
- A** Inner tube/outer tube material in a three letter format in 4 categories  
 CU\_ = copper & copper alloys  
 SS\_ = stainless steel alloys  
 IN\_ =nickel alloys  
 XXX = Other  
 Third character denotes specific details, e.g. SSA = SA249 316SS, .042 wall.
- B** Inner Tube end connection type
- C** End connection orientation

2. Customer Connections:

- 1/4" OD. inner tube (plain end)
- 3/8" O.D. coolant (compression)

3. Performance data shows approach temperature (outer tube inlet + approach temp. = inner tube outlet temp) for three inner tube inlet temperatures and various flow rates. Data based on thermal properties of water. Cooling water 95°F (35°C) @ 1.5 GPM (5.7 L/min). Pressure drop < 18 psi (1.2 bar). Consult factory for other fluids flow, rates and pressure drops.

4. Dimensions for specific materials may vary.

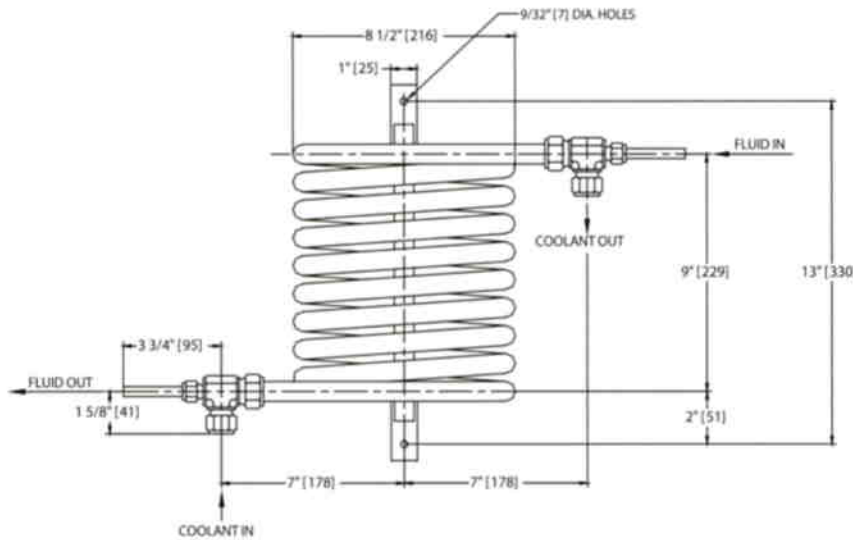


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# DTC-6

## Specifications - 6 Series

Model No.	Inner Tube Design	Outer Tube Design	Inner Tube Material	Outer Tube Material	H.T. Area	Part Weight	Number
DTC-CUA/CUB-6-1-1	1250 psig @300°F 86 bar @148°C	700 psig @300°F 48 bar @148°C	3/8" O.D. Copper	3/4" O.D. Copper	1.90 ft <sup>2</sup> 0.18 m <sup>2</sup>	16 lbs. 7.3 kg	7-02672A
DTC-SSC/CUB-6-1-1	5100 psig @1000°F 351 bar @537°C	700 psig @300°F 48 bar @148°C	3/8" O.D. 316SS	3/4" O.D. Copper	1.90 ft <sup>2</sup> 0.18 m <sup>2</sup>	16 lbs. 7.3 kg	7-02672B
DTC-IN1/CUB-6-1-1	3800 psig @1100°F 262 bar @593°C	700 psig @300°F 48 bar @148°C	3/8" O.D. Inconel	3/4" O.D. Copper	1.90 ft <sup>2</sup> 0.18 m <sup>2</sup>	16 lbs. 7.3 kg	7-02672C
DTC-SSC/SSC-6-1-1	5100 psig @1000°F 351 bar @537°C	2300 psig @1000°F 158 bar @537°C	3/8" O.D. 316SS	3/4" O.D. 316SS	1.90 ft <sup>2</sup> 0.18 m <sup>2</sup>	16 lbs. 7.3 kg	7-02672D
DTC-IN1/SSC-6-1-1	3800 psig @1100°F 262 bar @593°C	2300 psig @1000°F 158 bar @537°C	3/8" O.D. Inconel	3/4" O.D. 316SS	1.90 ft <sup>2</sup> 0.18 m <sup>2</sup>	16 lbs. 7.3 kg	7-02672E



### DTC - 6 - Notes

1. DTC Model Numbers - DTC - XXX/XXX- 6 - y - y



**A** Inner tube/outer tube material in a three letter format in 4 categories  
 CU\_ = copper & copper alloys  
 SS\_ = stainless steel alloys  
 IN\_ = nickel alloys  
 XXX = Other  
 Third character denotes specific details,  
 e.g. SSA = SA249 316SS, .042 wall

**B** Inner Tube end connection type

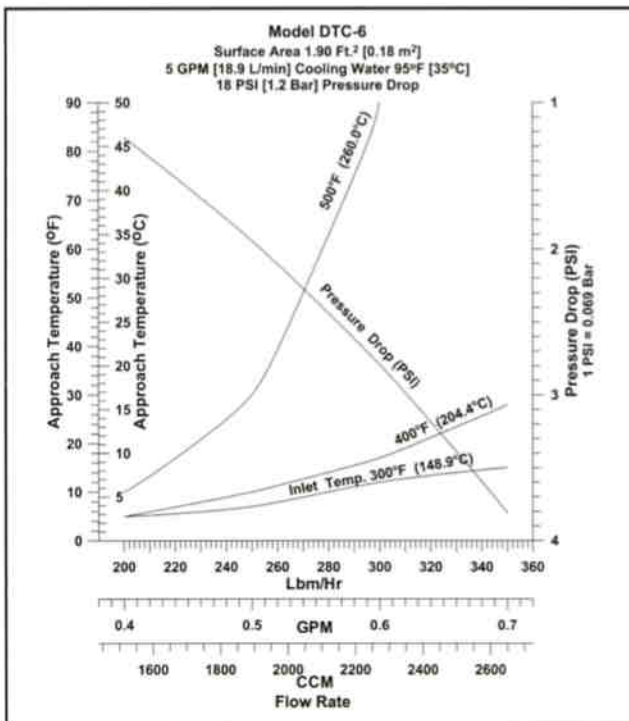
**C** End connection orientation

2. Customer Connections:

- 3/8" O.D. inner tube (plain end)
- 5/8" O.D. coolant (compression)

3. Performance data shows approach temperature (outer tube inlet + approach temp. = inner tube outlet temp) for three inner tube inlet temperatures and various flow rates. Data based on thermal properties of water. Cooling water 95°F(35°C) @5 GPM (18.9 L/min). Pressure drop<18 psi (1.2 bar). Consult factory for other fluids, flow rates and pressure drops.

4. Dimensions for specific materials may vary.

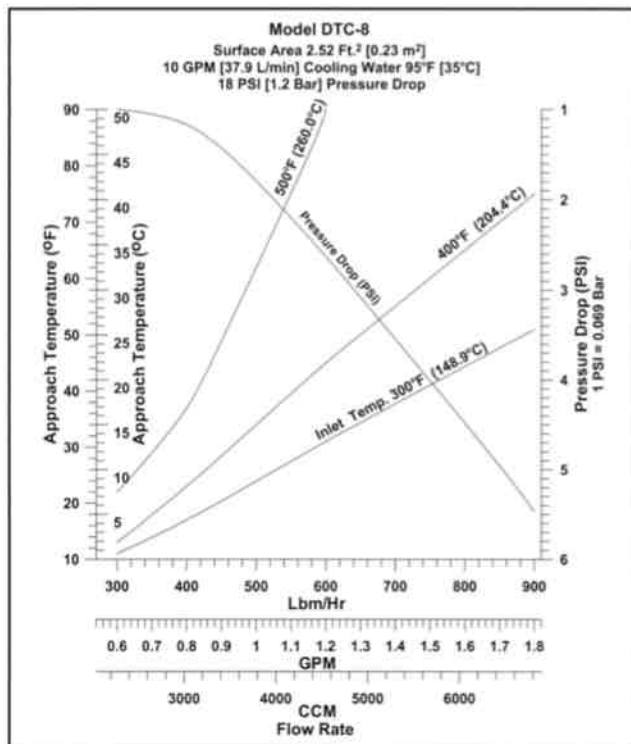
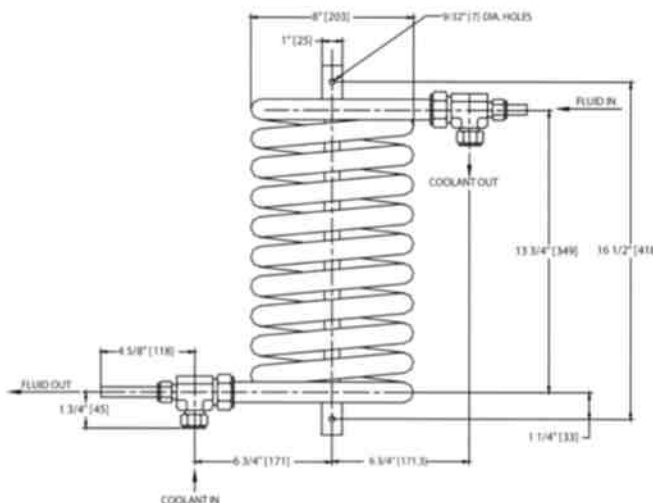


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# DTC-8

## Specifications - 8 Series

Model No.	Inner Tube Design	Outer Tube Design	Inner Tube Material	Outer Tube Material	H.T. Area	Weight	Part Number
DTC-CUB/CUC-8-1-1	1250 psig @ 300°F 86 bar @ 148°C	700 psig @ 300°F 48 bar @ 148°C	1/2" O.D. Copper	1" O.D. Copper	2.52 ft <sup>2</sup> 0.23 m <sup>2</sup>	30 lbs. 13.6 kg	7-02673A
DTC-SSB/CUC-8-1-1	2400 psig @ 1000°F 165 bar @ 537°C	700 psig @ 300°F 48 bar @ 148°C	1/2" O.D. 316SS	1" O.D. Copper	2.52 ft <sup>2</sup> 0.23 m <sup>2</sup>	30 lbs. 13.6 kg	7-02673B
DTC-IN7/CUC-8-1-1	4000 psig @ 900°F 275 bar @ 482°C	700 psig @ 300°F 48 bar @ 148°C	1/2" O.D. Inconel	1" O.D. Copper	2.52 ft <sup>2</sup> 0.23 m <sup>2</sup>	30 lbs. 13.6 kg	7-02673x
DTC-SSB/SSD-8-1-1	2400 psig @ 1000°F 165 bar @ 537°C	2300 psig @ 1000°F 158 bar @ 537°C	1/2" O.D. 316SS	1" O.D. 316SS	2.52 ft <sup>2</sup> 0.23 m <sup>2</sup>	30 lbs. 13.6 kg	7-02673D
DTC-IN7/SSD-8-1-1	4000 psig @ 900°F 276 bar @ 482°C	2300 psig @ 1000°F 158 bar @ 537°C	1/2" O.D. Inconel	1" O.D. 316SS	2.52 ft <sup>2</sup> 0.23 m <sup>2</sup>	30 lbs. 13.6 kg	7-02673Y



### DTC - 8 - Notes

1. DTC Model Numbers - DTC - XXX/XXX- 8 - y - y



**A** Inner tube/outer tube material in a three letter format in 4 categories  
 CU\_ = copper & copper alloys  
 SS\_ = stainless steel alloys  
 IN\_ = nickel alloys  
 XXX = Other  
 Third character denotes specific details,  
 e.g. SSA = SA249 316SS, .042 wall.

**B** Inner Tube end connection type

**C** End connection orientation

2. Customer Connections:

- 1/2" O.D. inner tube (plain end)
- 3/4" O.D. coolant (compression)

3. Performance data shows approach temperature (outer tube inlet + approach temp. = inner tube outlet temp) for three inner tube inlet temperatures and various flow rates. Data based on thermal properties of water. Cooling water 95°F(35°C) @ 10 GPM (37.9 L/min). Pressure drop < 18 psi (1.2 bar). Consult factory for other fluids, flow rates and pressure drops.

4. Dimensions for specific materials may vary.

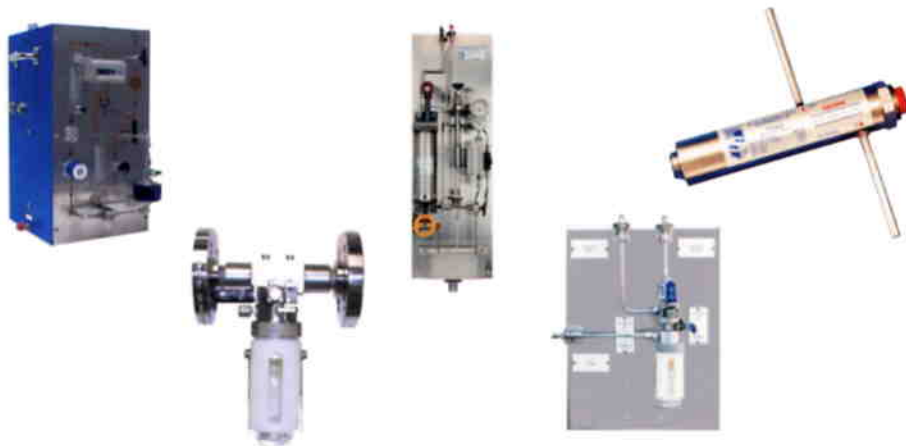
**SENTRY Equipment Corp**

## BROAD VARIETY OF COMPACT HEAT EXCHANGERS



Sentry can provide tube-in-tube, helical coil, spiral tube, brazed/gasketed plate and special shell and tube heat exchangers in a variety of configurations.

## SAMPLING COMPONENTS AND SYSTEMS



Sentry is the world leader in sampling components and systems for the power and process industries. Ask for bulletins 1.41.2 & 1.5.2 for more details.

### Every Employee an Owner, Every Customer a Commitment



#### **SENTRY Equipment Corp**

856 E. Armour Rd.  
PO Box 127  
Oconomowoc, WI 53066 USA  
Phone: 262-567-7256  
Fax: 262-567-4523

**E-mail:**  
sales@sentry-equip.com

**Website:**  
www.sentry-equip.com

For further information, contact: