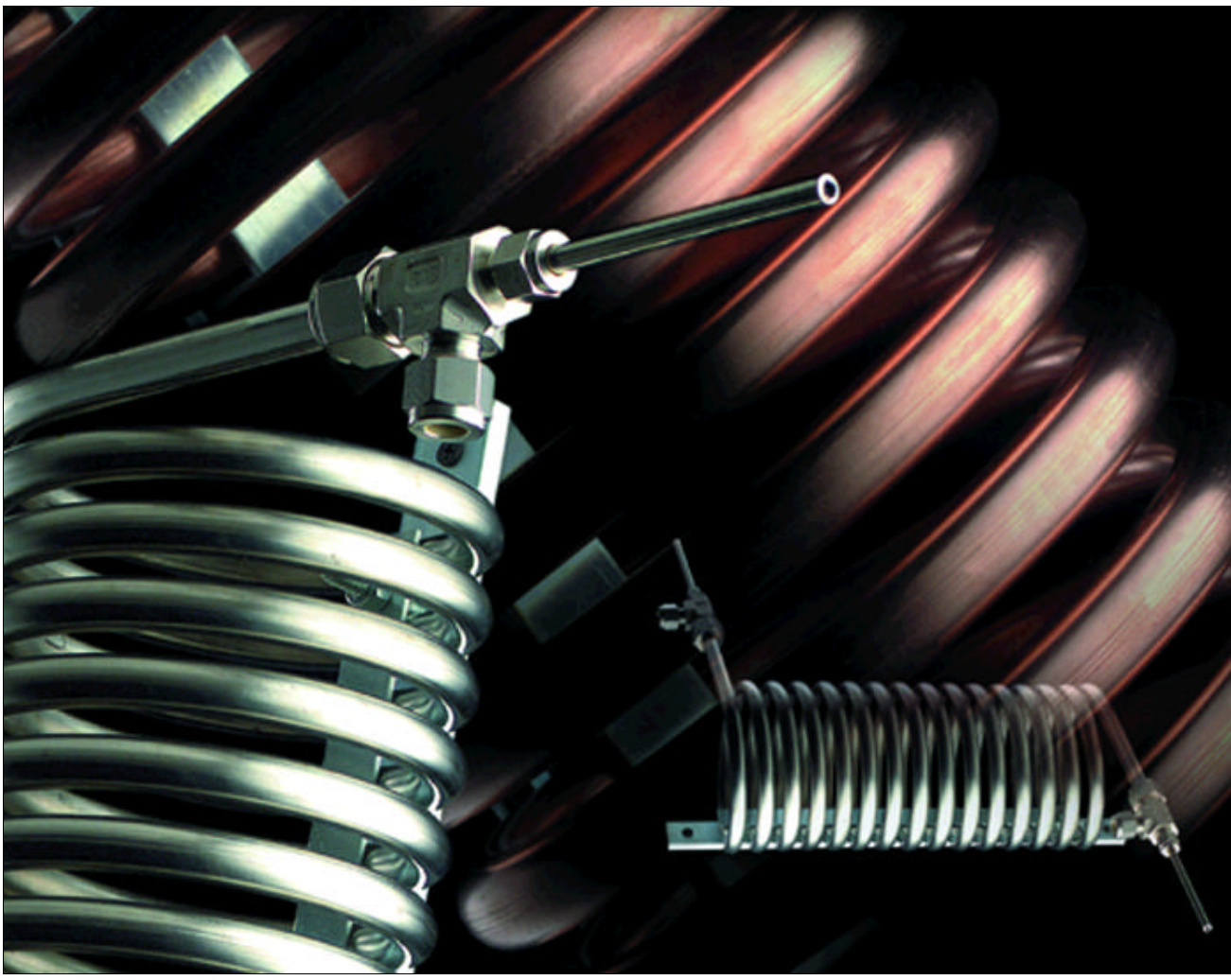
Parker Instrumentation

TECNI-AR
Seu caminho
Para automação

Dual Heat Transfer Coils

Catalog 4295
Revised, December 1997



Parker Dual Heat Transfer Coils

Introduction

Parker Dual Heat Transfer Coils have been made at the Instrumentation Connectors Division in Huntsville, Alabama since the early 70's. These unique and reliable heat exchangers assure maximum thermal efficiency for cooling high temperature, high pressure fluid samples.

Available in copper, stainless steel and other materials upon request, the Parker Dual Heat Transfer Coils are manufactured with tube stub ends. This permits the user to choose from a broad range of end connections such as Parker CPI™, A-LOK®, Weld-lok, Automatic Buttweld, UltraSeal, VacuSeal and 37° flared fittings.

Parker Dual Heat Transfer Coils: Easy to install, efficient and excellent for a variety of applications.

⚠ WARNING

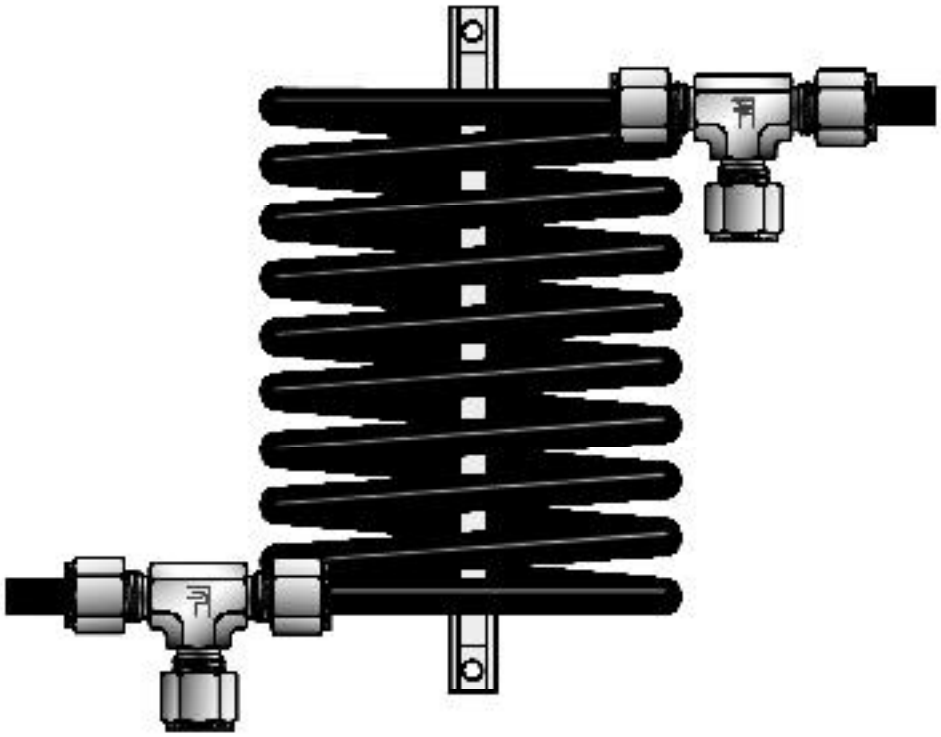
FAILURE, IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTYDAMAGE.

This document and other information from Parker Hannifin Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitation, product features, specifications, designs, availability and pricing, are subject to change by Parker Hannifin Corporation and its subsidiaries at any time without notice.

Offer of Sale

The items described in this document are hereby offered for sale by Parker Hannifin Corporation, its subsidiaries or its authorized distributors. This offer and its acceptance are governed by the provisions stated in the "Offer of Sale".



Features

Parker Dual Heat Transfer Coils are rugged, high efficiency, counter-flow heat exchangers for cooling high temperature, high pressure fluid samples such as boiler steam, boiler feed water, superheat steam, hot chemical solutions and other process fluids.

Applications

They allow the operator to withdraw uncontaminated samples of a process fluid for laboratory testing at room temperature. Coils can also be used in continuous sampling systems for on-line process control.

Rugged Construction

The sturdy tube within a tube design features heavy duty forged terminal fittings.

Tube End Extensions

Permits the installer the flexibility to utilize any connection to hook up the inner tube.

Simple Installation

Convenient two-hole mounting bracket permits coil to be located near the point of measurement.

No Break In Inner Tube

Terminal fittings are designed to permit the inner tube to go through in one piece, like a thermocouple connection.

Forced Counterflow

Insures maximum terminal efficiency.

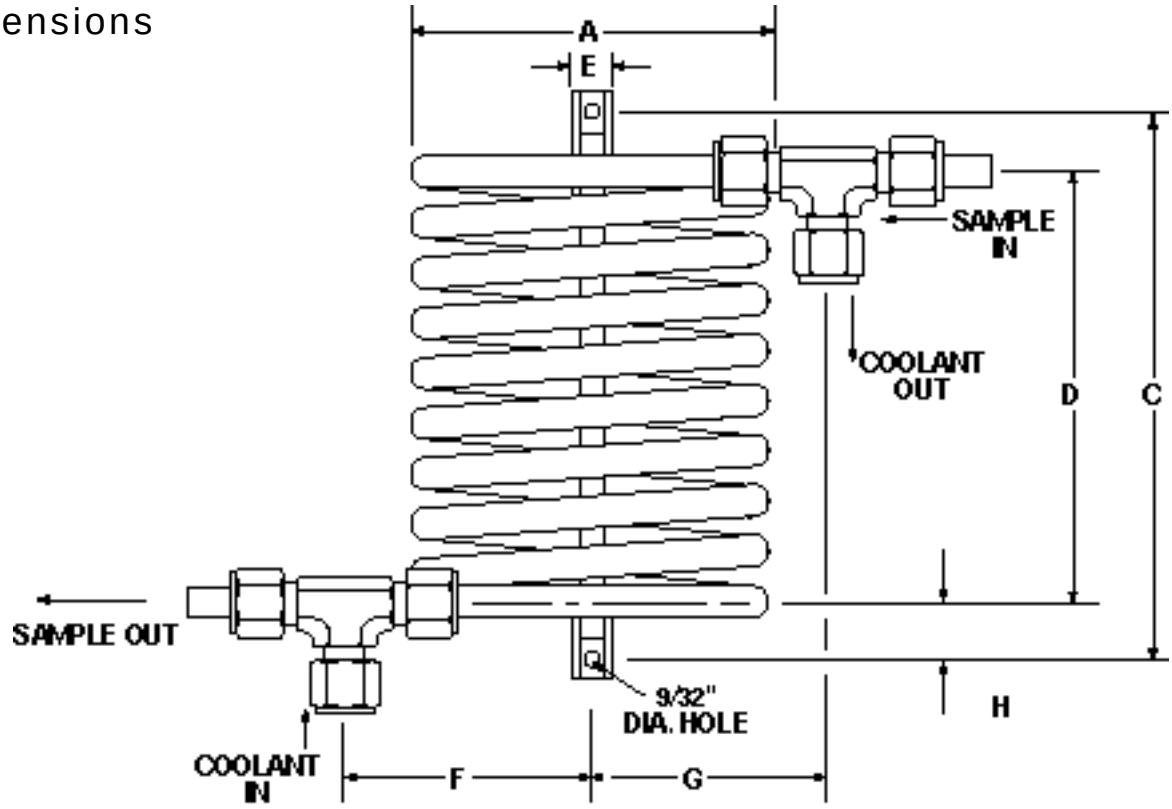
ASME Code Design

Pressure and temperature ratings conform to the applicable ASME Boiler Code allowable stress values.

TECNI-AR Ltda
www.tecni-ar.com.br
Tel: (31)3362-2400

Parker Hannifin Corporation
Instrumentation Connectors Division
Huntsville, Alabama

Dimensions



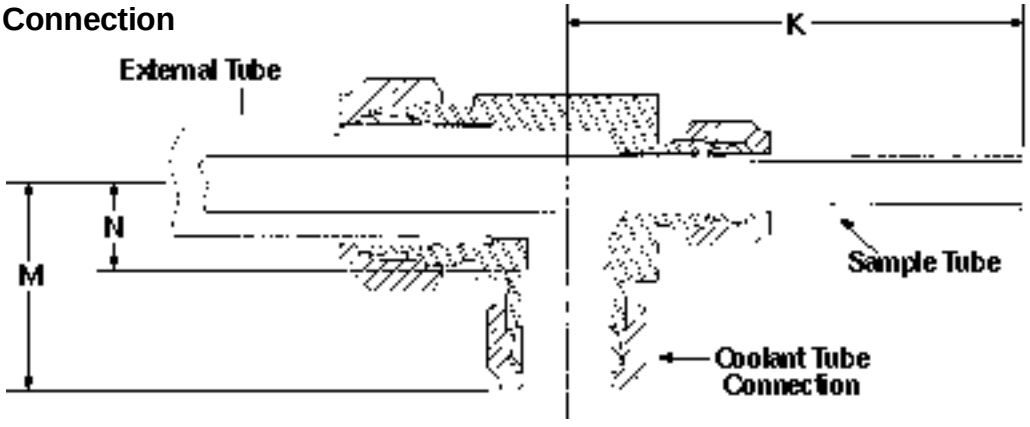
Installation Dimensions

Inches																
	Sample Tube			External Tube		Coolant Tube		No. of Coils	Weight Lbs.	Dimensions						
Size	O.D.	Wall Thick.	Area Sq. Ft.	O.D.	Wall Thick.	O.D.	Max. Wall			A†	C	D†	E	F†	G†	H†
–4	1/4	.049	.80	1/2	.049	3/8	.065	15	12	5	13-1/16	11-1/4	1	5	5	7/8
–6	3/8	.049	1.44	3/4	.065	5/8	.083	9	16	8-1/2	13	9	1	7	7	2
–8	1/2	.065	1.93	1	.083	3/4	.095	10	30	8	16-7/16	13-3/4	1-1/2	6-3/4	6-3/4	1-7/8

Type of Connection	Inches					
	Size	Sample Tube O.D.	Coolant Tube O.D.	K†	M†	N†
Tube End Extension	–4	1/4	3/8	4.13	1.26	.57
	–6	3/8	5/8	3.75	1.57	.59
	–8	1/2	3/4	4.63	1.67	.69

† Average value

Terminal Connection



Sizing and Design Data

How to order

The correct part number is easy to arrive at by following the procedure below.

Part No. DHTC

MATERIAL
CU = Copper coils – both inner and outer
SS = Type 316 Stainless Steel inner coil – Copper outer coil
IN = Alloy 600 inner coil – Copper outer coil

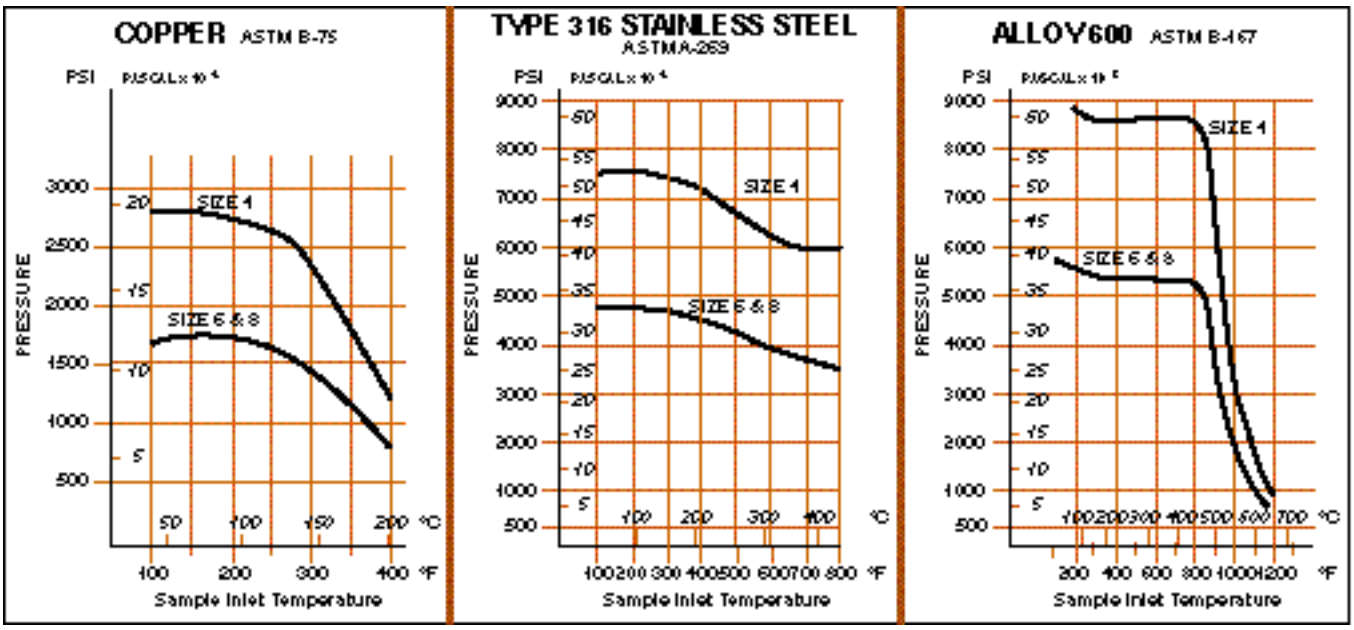
SIZE OF INNER COIL
–4 = 1/4" O.D.
–6 = 3/8" O.D.
–8 = 1/2" O.D.

Typical Sample Capacity of Saturated Steam

DHTC Size	Lbs./Hr. Steam Sample — Inner Coil Material: Copper — 200 Psia 390°F	Lbs./Hr. Steam Sample — Inner Coil Material: Stainless Steel & Alloy 600 — 200 Psia 390°F	1000 Psia 540°F	2500 Psia 665°F	3500 Psia 730°F	Cooling Water Flow, GPM ΔP=15psi	Max. Outer Coil Pressure Psi (Up TO 200°F)
4	80	80	81	89	94	1.8	1200
6	202	188	203	223	236	4.5	1100
8	305	200	270	496	525	10	1000

Maximum Pressure / Temperature Rating of Sample Side Tube

Based on ASME Section VIII Allowable Stress Values



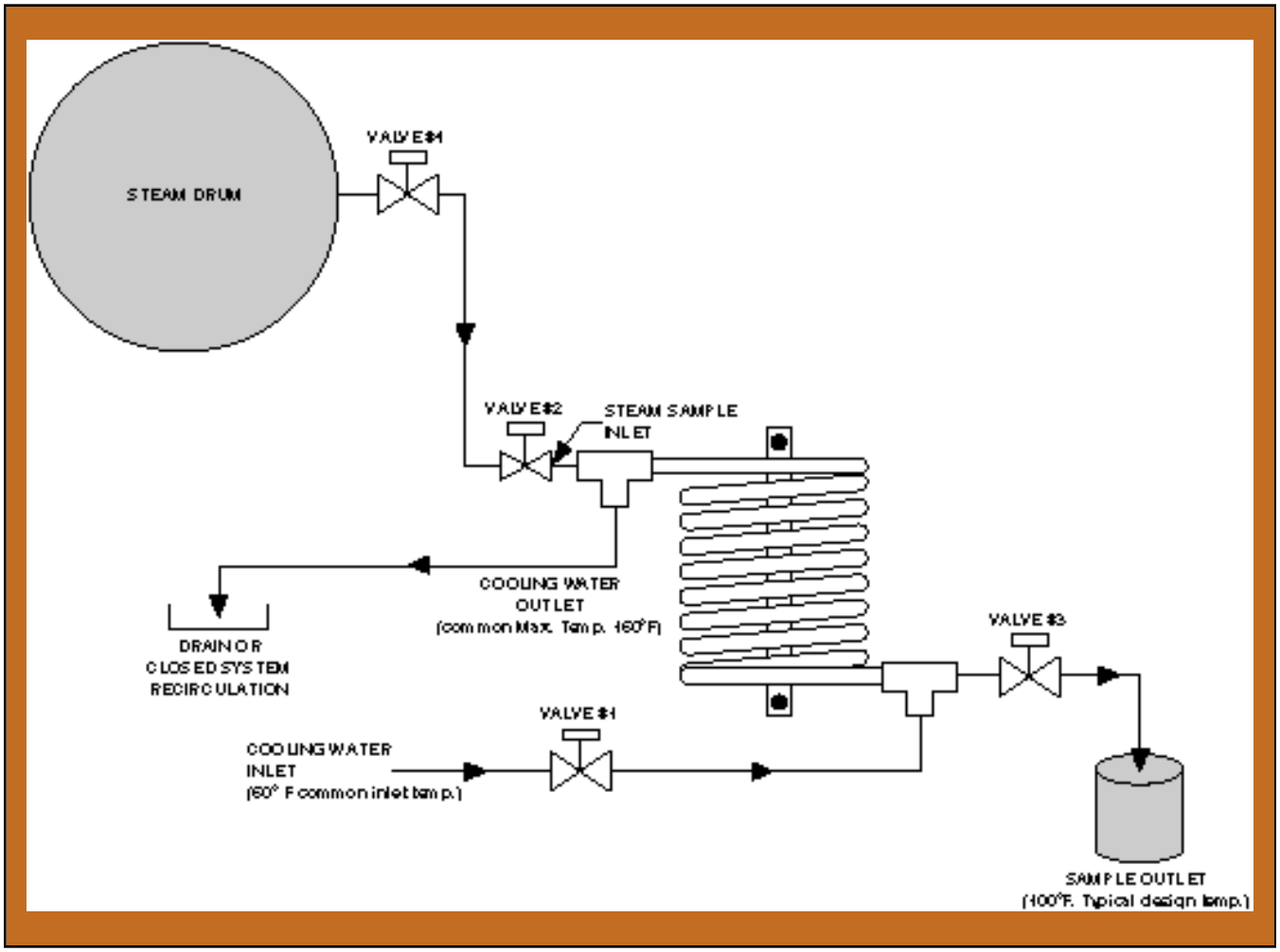
Availability

Copper Sample Tube: Available in 1/4", 3/8" and 1/2" with tube end extension.

Stainless Steel Sample Tube: Available in 1/4", 3/8" and 1/2" with tube end extension.

Alloy 600 Sample Tube: Available in 1/4", 3/8" and 1/2" with tube end extension.

Typical Installation Diagram



Start Up Sequence

(All Valves Closed)

A. Open cooling water valve #1.

B. After adequate cooling water flow is established, gradually open valve #4, then sample intlet valve #2.

C. Gradually open sample outlet valve #3 until desired sample flow rate is obtained (without exceeding suitable sample temperature).

D. The position of sample outlet valve #3 should be maintained for all future sampling.

Shut-Off Sequence

A. Close sample inlet valve #2.

B. Close cooling water intlet valve #1.

Sampling Sequence

A. Open cooling water inlet valve #1.

B. After adequate cooling water flow is established, gradually open sample inlet valve #2 (keeping sample outlet valve #3 at its previously determined setting).

Note: Always open cooling water first and shut it off last. (It is good practice to occasionally cycle valve #4 so that when needed, it will be operable.)

Alloy 600 tubing is recommended for DHTC applications where halides may be present in the media.