

# WATER COOLED REMOVABLE U-TUBE BUNDLE/UC/UCV SERIES

**STEAM & LARGE TEMPERATURE DIFFERENTIALS**

**REMOVABLE TUBE BUNDLE FOR SERVICING**

**REDUCES THERMAL EXPANSION STRESSES**



- Built-In Expansion Chamber
- Threaded or Flanged Connections
- Mounting Brackets Included
- Steel Shell Assembly

**OPTIONS:**

- ASME Code Design
- Wide Variety of Materials Available
- Custom Sizes/Designs
- Stainless Steel Hardware and Mounting Brackets

**UC/UCV**  
water cooled

**MATERIALS**

**UC/UCV SERIES**

- Tubes** - Copper
- Tube Sheets** - Steel
- Shell** - Steel
- Shell Connections** - Steel
- Baffles** - Steel
- End Bonnets** - Cast Iron
- Mounting Brackets** - Steel
- Gaskets** - Non-Asbestos Fiber/Nitrile Rubber
- Nameplate** - Aluminum Foil

**USSC/USSCV SERIES**

- Tubes** - 316 Stainless Steel
- Tube Sheets** - 316L Stainless Steel
- Shell** - 316L Stainless Steel
- Shell Connections** - 316L Stainless Steel
- Baffles** - 316 Stainless Steel
- End Bonnets** - 316 Stainless Steel
- Mounting Brackets** - Steel
- Gaskets** - Non-Asbestos Fiber/Nitrile Rubber
- Nameplate** - Aluminum Foil

**RATINGS**

**UC SERIES**

- Maximum shell side pressure** - 250 psi
- Maximum tube side pressure** - 150 psi
- Maximum temperature** - 400°F

**UCV SERIES**

- Maximum shell side pressure** - (600, 800, 1000) - 250 psi (1200, 1700) - 150 psi
- Maximum tube side pressure** - 150 psi
- Maximum temperature** - 400°F

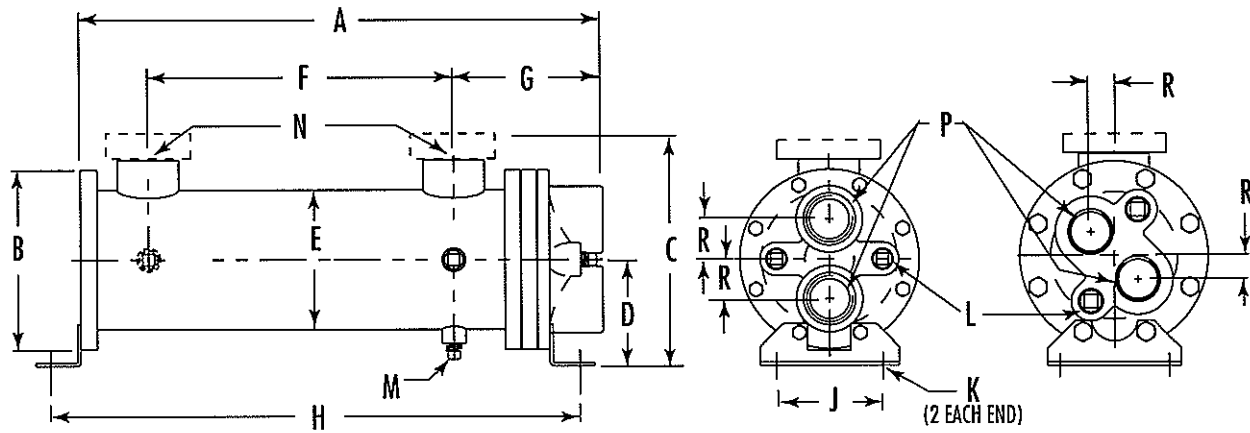
**HOW TO ORDER**

<b>MODEL SERIES</b>	<b>MODEL SIZE SELECTED</b>	<b>BAFFLE SPACING</b>	<b>TUBE DIAMETER CODE</b>	<b>TUBESIDE PASSES</b>	<b>COOLING TUBE MATERIAL</b>	<b>END BONNET MATERIAL</b>	<b>TUBESHEET MATERIAL</b>	<b>ZINC ANODES</b>	
UC/USSC UCA/USSCA UCV/USSCV				T - TWO PASS F - FOUR PASS	BLANK - COPPER CN - Cu - Ni SS - STAINLESS STEEL	BLANK - CAST IRON B - BRONZE SB - STAINLESS STEEL	BLANK - STEEL W - Cu-Ni S - STAINLESS STEEL	BLANK - NONE Z - ZINC ANODES	

UC/USSC = NPT Shell Connections; NPT Tube Connections  
 UCA/USSCA = ASME/ANSI Flange Shell Connections, NPT Tube Connections  
 UCV/USSCV = 1000 and Smaller: Inlet and Outlet NPT Shell Connections Rotated 180°, NPT Tube Side Connections  
 UCV/USSCV = 1200 and Larger: ASME/ANSI Flange Inlet and NPT Outlet Shell Connections Rotated 180°, NPT Tube Side Connections

# DIMENSIONS AND SURFACE AREAS

## UC TWO PASS



MODEL	A	B DIA	C		D	E DIA	F	G	H	J	K	L NPT	M NPT	N NPT	P NPT	R	FT <sup>2</sup> SURFACE AREA
			NPT	ASME* FLANGE													
612	17.22	4.50	5.38	6.75	2.75	3.25	11.25	4.03	17.66	3.25	.44 DIA	(2) .38	(3) .25	1.00	1.00	—	2.4
624	29.22						23.25		29.66								4.7
812	19.47	6.00	6.75	8.25	3.50	4.25	12.38	4.97	19.65	3.50	.44 DIA	(2) .38	(3) .25	1.50	1.25	0.75	4.0
824	31.47						24.38		31.65								7.9
836	43.47						36.38		43.65								11.9
1012	19.68	6.75	7.75	9.25	4.00	5.25	11.50	5.62	19.94	4.00	.50 x .75 SLOT	(2) .38	(3) .38	1.50	1.50	1.50	7.4
1024	31.68						23.50		31.94								14.5
1036	43.68						35.50		43.94								21.5
1218	26.22	7.75	8.75	10.38	4.50	6.25	17.38	5.89	26.12	5.00	.50 x .75 SLOT	(2) .50	(3) .38	2.00	2.00	1.10	15.3
1224	32.22						23.38		32.12								21.1
1236	44.22						35.38		44.12								31.3
1248	56.22						47.38		56.12								41.6
1724	34.69	10.50	11.58	13.00	5.75	8.62	23.00	7.81	34.27	7.00	.62 x .88 SLOT	(2) .50	(3) .38	3.00	2.50	2.25	47.7
1736	46.69						35.00		46.27								70.1
1748	58.69						47.00		58.27								92.5
1760	70.69						59.00		70.27								114.8

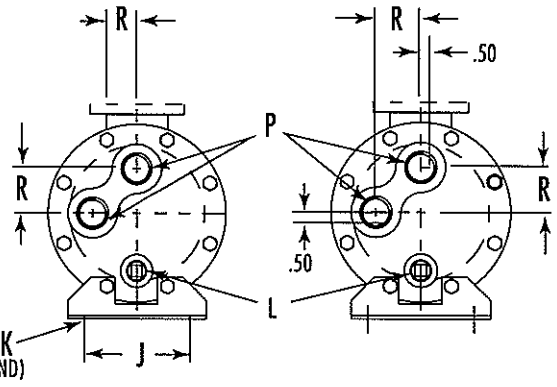
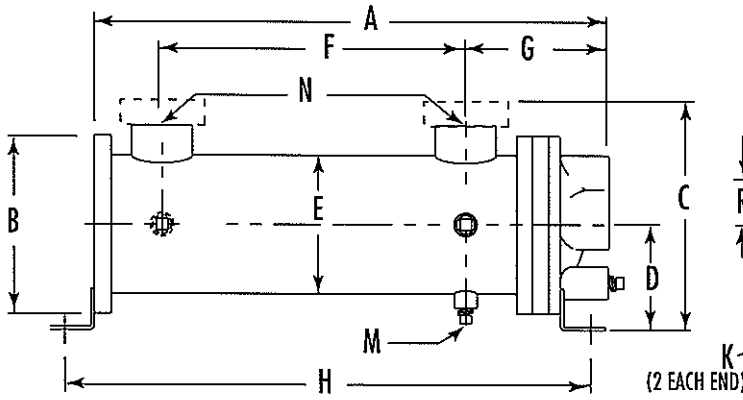
NOTE: We reserve the right to make reasonable design changes without notice.  
All dimensions are in inches.

\* 150# ASME/ANSI Flange (Optional)

water cooled  
UC/UCV

# DIMENSIONS AND SURFACE AREAS

## UC FOUR PASS



ALL MODELS EXCEPT  
UC - 1700

UC - 1700

MODEL	A	B DIA	C ASME* FLANGE		D	E DIA	F	G	H	J	K	L NPT	M NPT	N NPT	P NPT	R	FT <sup>2</sup> SURFACE AREA
612	17.20	4.50	5.38	6.75	2.75	3.25	11.25	4.01	17.66	3.25	.44 DIA	-	(3)	1.00	.75	1.00	2.4
624	29.20						23.25		29.66								4.7
812	19.47	6.00	6.75	8.25	3.50	4.25	12.38	4.97	19.65	3.50	.44 DIA	(2)	(3)	1.50	.75	1.25	4.0
824	31.47						24.38		31.65								7.9
836	43.47						36.38		43.65								11.9
1012	19.50						11.50		19.95								7.4
1024	31.50	6.75	7.75	9.25	4.00	5.25	23.50	5.43	31.95	4.00	.50 x .75 SLOT	(2)	(3)	1.50	1.00	1.69	14.5
1036	43.50						35.50		43.95								21.5
1218	26.22	7.75	8.75	10.38	4.50	6.25	17.38	5.89	26.12	5.00	.50 x .75 SLOT	(2)	(3)	2.00	1.50	2.00	15.3
1224	32.22						23.38		32.12								21.1
1236	44.22						35.38		44.12								31.3
1248	56.22						47.38		56.12								41.6
1724	34.69	10.50	11.58	13.00	5.75	8.62	23.00	7.81	34.27	7.00	.62 x .88 SLOT	(2)	(3)	3.00	2.00	2.50	47.7
1736	46.69						35.00		46.27								70.1
1748	58.69						47.00		58.27								92.5
1760	70.69						59.00		70.27								114.8

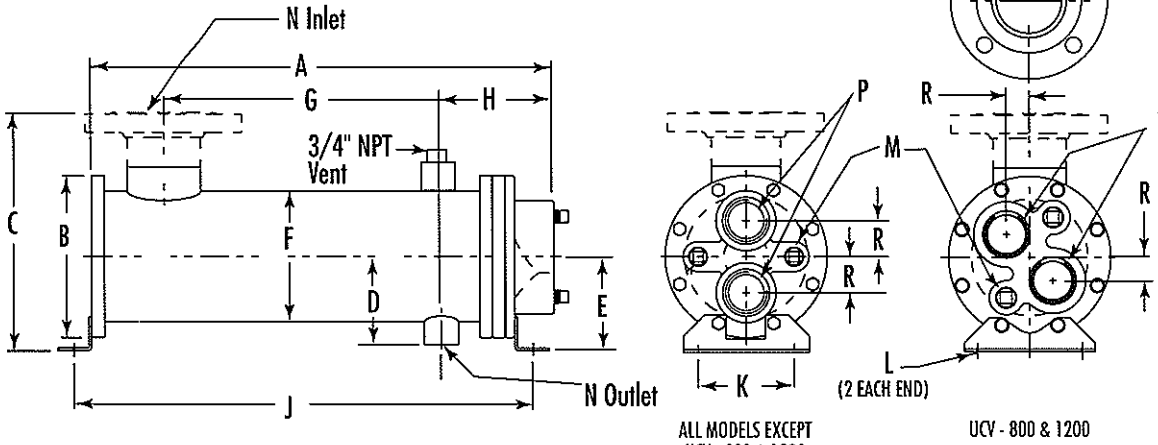
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\* 150# ASME/ANSI Flange (Optional)

UC/UCV  
water cooled

# DIMENSIONS AND SURFACE AREAS

## UCV TWO PASS



MODEL	A	B DIA	C	D	E	F DIA	G	H	J	K	L	M NPT	N INLET	N OUTLET	P NPT	R	FT <sup>2</sup> SURFACE AREA
612	17.22	4.50	5.25	2.62	2.75	3.25	11.00	4.00	17.66	3.25	.44 DIA	(2) .38	1.25	.75	1.00	-	2.4
624	29.22						23.00		29.66								4.7
812	19.47	6.00	6.75	3.15	3.50	4.25	12.38	4.60	19.65	3.50	.44 DIA	(2) .38	1.50	.75	1.25	0.75	4.0
824	31.47						24.38		31.65								7.9
836	43.47						36.38		43.65								11.9
1012	19.68	6.75	7.77	3.70	4.00	5.25	11.50	5.37	19.94	4.00	.50 x .75 SLOT	(2) .38	2.00	1.00	1.50	1.50	7.4
1024	31.68						23.50		31.94								14.5
1036	43.68						35.50		43.94								21.5
1218	26.22	7.75	11.38	4.22	4.50	6.25	17.38	5.38	26.12	5.00	.50 x .75 SLOT	(2) .50	3.00*	1.00	2.00	1.10	15.3
1224	32.22						23.38		32.12								21.1
1236	44.22						35.38		44.12								31.3
1248	56.22						47.38		56.12								41.6
1724	34.69	10.50	14.00	5.58	5.75	8.62	23.00	7.31	34.27	7.00	.62 x .88 SLOT	(2) .50	4.00*	1.50	2.50	2.25	47.7
1736	46.69						35.00		46.27								70.1
1748	58.69						47.00		58.27								92.5
1760	70.69						59.00		70.27								114.8

NOTE: We reserve the right to make reasonable design changes without notice.  
All dimensions are in inches.

\* 150# ASME/ANSI Flange Standard

**For more information or to purchase these products, please contact:**

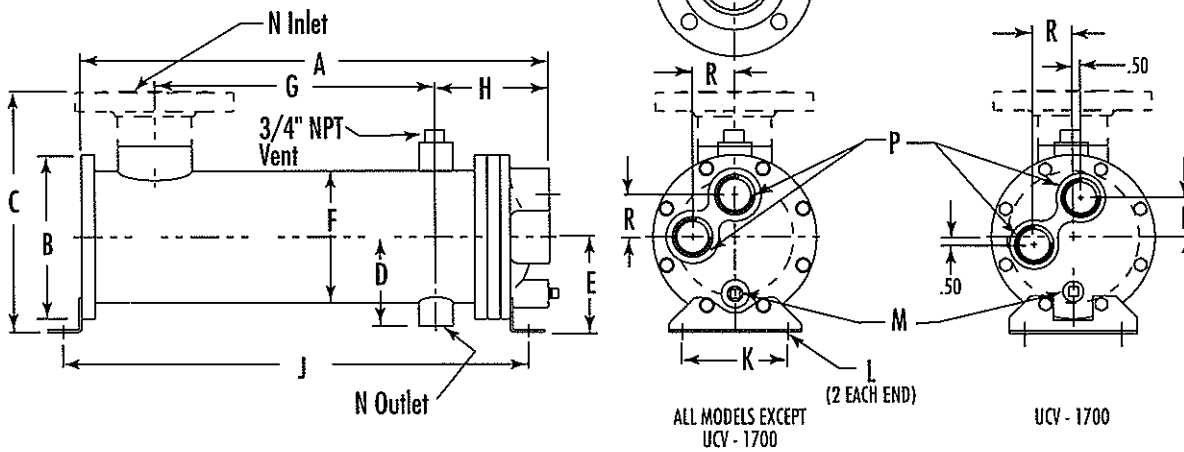
**HYDROTHRIFT CORPORATION  
(800) 772-0493**

[www.hydrothrift.com](http://www.hydrothrift.com)  
[sales@hydrothrift.com](mailto:sales@hydrothrift.com)

water cooled  
UCV/UCV

# DIMENSIONS AND SURFACE AREAS

## UCV FOUR PASS



MODEL	A	B DIA	C	D	E	F DIA	G	H	J	K	L	M NPT	N INLET	N OUTLET	P NPT	R	FT <sup>2</sup> SURFACE AREA
612	17.20	4.50	5.25	2.62	2.75	3.25	11.00	3.98	17.66	3.25	.44 DIA	(2) .38	1.25	.75	.75	1.00	2.4
624	29.20						23.00		29.66								4.7
812	19.47	6.00	6.75	3.15	3.50	4.25	12.38	4.60	19.65	3.50	.44 DIA	(2) .38	1.50	.75	.75	1.25	4.0
824	31.47						24.38		31.65								7.9
836	43.47						36.38		43.65								11.9
1012	19.50	6.75	7.77	3.70	4.00	5.25	11.50	5.18	19.95	4.00	.50 x .75 SLOT	(2) .38	2.00	1.00	1.00	1.69	7.4
1024	31.50						23.50		31.95								14.5
1036	43.50						35.50		43.95								21.5
1218	26.22	7.75	10.38	4.22	4.50	6.25	17.38	5.38	26.12	5.00	.50 x .75 SLOT	(2) .38	3.00*	1.00	1.50	2.00	15.3
1224	32.22						23.38		32.12								21.1
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1248	56.22						47.38		56.12								41.6
1724	34.69	10.50	13.00	5.58	5.75	8.62	23.50	7.31	34.27	7.00	.62 x .88 SLOT	(2) .38	4.00*	1.50	2.00	2.50	47.7
1736	46.69						35.50		46.27								70.1
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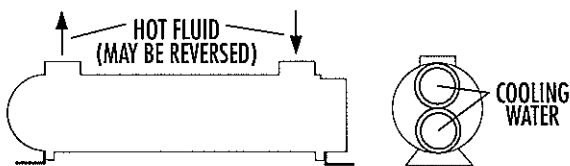
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## UC APPLICATIONS

U-Tube Heat Exchangers allow the shell and tube bundle to expand and contract independently with temperature fluctuation. This reduces temperature dependent stresses so they are ideal in applications with large temperature differentials. Some typical examples for **UC** units include quench oil coolers, liquid to liquid heaters, and barrel oil coolers for plastic extrusion machines. The removable bundle design allows for easier cleaning of the shell side cavity when the bundle is removed.

## PIPING HOOK-UP



Specific applications may have different piping arrangements.  
Contact factory for assistance.

## UCV APPLICATIONS

U-Tube Heat Exchangers allow the shell and tube bundle to expand and contract independently with temperature fluctuation. This reduces temperature dependent stresses so they are ideal in applications with large temperature differentials. Some typical examples for **UCV** units include steam to liquid heaters, vapor condensers, and steam condensers. The removable bundle design allows for easier cleaning of the shell side cavity when the bundle is removed.

## PIPING HOOK-UP

