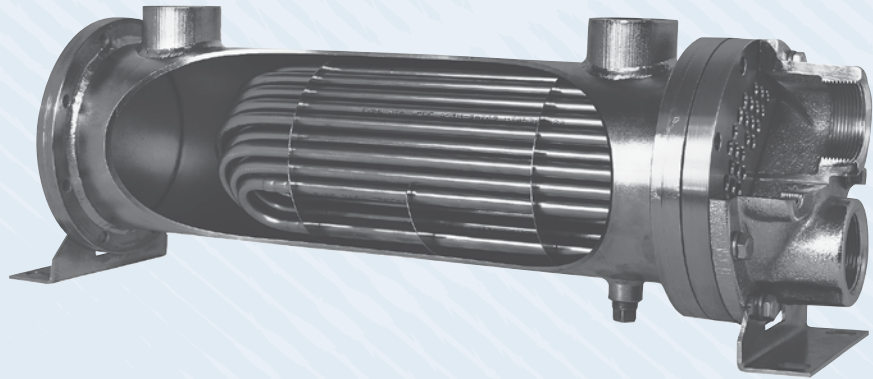


# FLUID COOLING | Shell & Tube UC/UCV Series

## COPPER & STEEL CONSTRUCTION

### Features

- Steam & Large Temperature Differentials
- Removable Tube Bundle for Servicing
- Reduces Thermal Expansion Stresses
- 3/8" Tubes
- Built-In Expansion Chamber
- Threaded or Flanged Connections
- Mounting Brackets Included
- Steel Shell Assembly



### OPTIONS

- Wide Variety of Materials Available
- Custom Sizes/Designs
- Stainless Steel Hardware and Mounting

### Ratings

#### UC SERIES

- Maximum Shell Pressure** 250 psi
- Maximum Tube Side Pressure** 150 psi
- Maximum Temperature** 400° F

#### UCV SERIES

- Maximum Shell Pressure**  
600, 800, 1000 250 psi  
1200, 1700 150 psi
- Maximum Tube Side Pressure** 150 psi
- Maximum Temperature** 400° F

### Materials UC/UCV Series

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

### Materials USSC/USSCV Series

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

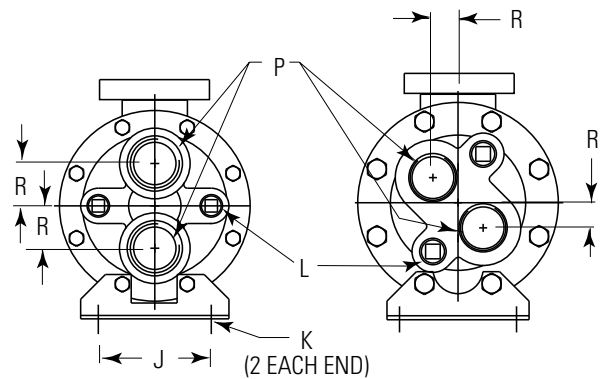
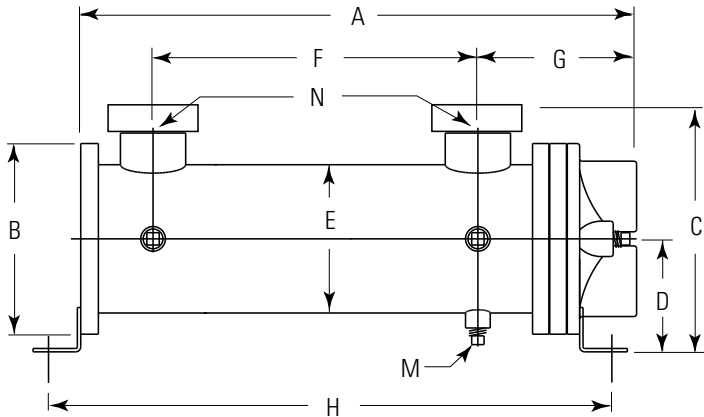
## How to Order

<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>	-	<input type="text"/>		
<b>Model Series</b> UC/USSC UCA/USSCA UCV/USSCV		<b>Model Size Selected</b>		<b>Baffle Spacing</b>		<b>Tube Diameter</b>		<b>Tubeside Passes</b> T - Two Pass F - Four Pass		<b>Cooling Tube Material</b> Blank - Copper CN - CuNi SS - Stainless Steel		<b>End Bonnet Material</b> Blank - Cast Iron B - Bronze SB - Stainless Steel		<b>Tube Sheet Material</b> Blank - Steel W - CuNi S - Stainless Steel		<b>Zinc Anodes</b> Blank - None Z - Zinc

- 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

## UC Two Pass



All models except  
UC-800 & UC-1200 Series

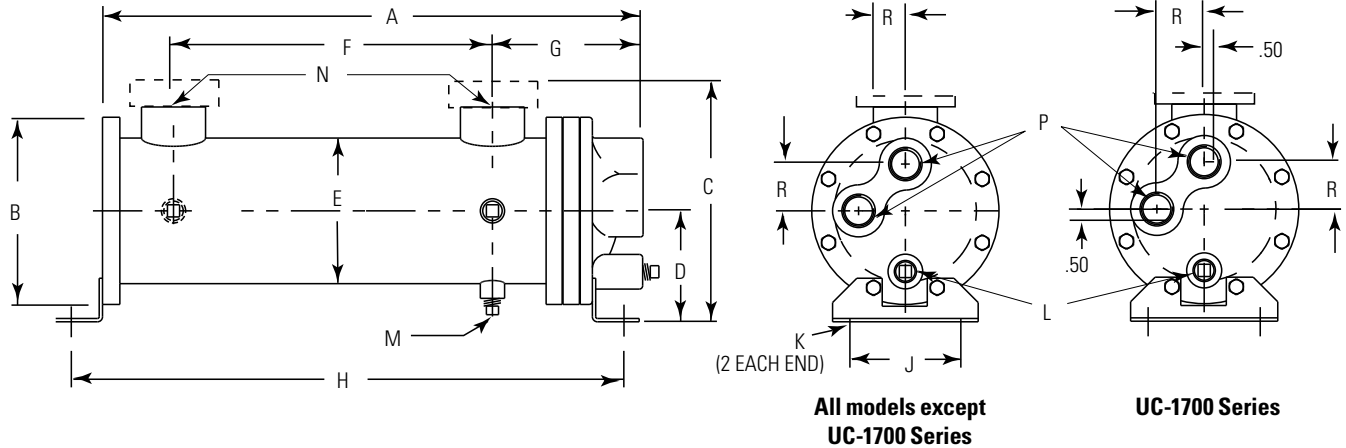
UC-800 &  
UC-1200 Series

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
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
836	43.47	6.75	7.75	9.25	4.00	5.25	36.38	5.62	43.65	4.00	.50 x .75 SLOT	(2) .38	(3) .38	1.50	1.50	1.50	11.9
1012	19.68						11.50										19.94
1024	31.68	7.75	8.75	10.38	4.50	6.25	23.50	5.89	31.94	5.00	.50 x .75 SLOT	(2) .50	(3) .38	2.00	2.00	1.10	14.5
1036	43.68						35.50										43.94
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
1236	44.22	10.50	11.58	13.00	5.75	8.62	35.38	7.81	44.12	7.00	.62 x .88 SLOT	(2) .50	(3) .38	3.00	2.50	2.25	31.3
1248	56.22						47.38										56.12
1724	34.69	10.50	11.58	13.00	5.75	8.62	23.50	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						35.50										46.27
1748	58.69	10.50	11.58	13.00	5.75	8.62	47.50	7.81	58.27	7.00	.62 x .88 SLOT	(2) .50	(3) .38	3.00	2.50	2.25	92.5
1760	70.69						59.50										70.27

\*150# ASME/ANSI Flange (Optional). NOTE: We reserve the right to make reasonable design changes without notice. Consult factory. All dimensions are inches.

# Dimensions

## UC Four Pass



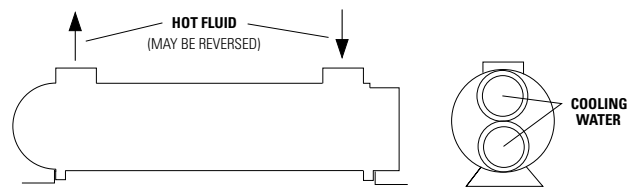
MODEL	A	B DIA	C		D	E DIA	F	G	H	J	K	L NPT	M NPT	N NPT	P NPT	R	FT <sup>2</sup> SURFACE AREA
			NPT	ASME* FLANGE													
612	17.20	4.50	5.38	6.75	2.75	3.25	11.25	4.01	17.66	3.25	.44 DIA	—	(3)	1.00	.75	1.00	2.4
624	29.20						23.25		29.66			—	.25				4.7
812	19.47	6.00	6.75	8.25	3.50	4.25	12.00	4.97	19.65	3.50	.44 DIA	(2) .38	(3) .25	1.50	.75	1.25	4.0
824	31.47						24.00		31.65								7.9
836	43.47						36.00		43.65								11.9
1012	19.50	6.75	7.75	9.25	4.00	5.25	11.50	5.43	19.95	4.00	.50 x .75 SLOT	(2) .38	(3) .38	1.50	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						17.38		26.12								15.3
1224	32.22	7.75	8.75	10.38	4.50	6.25	23.38	5.89	32.12	5.00	.50 x .75 SLOT	(2) .38	(3) .38	2.00	1.50	2.00	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	23.50	7.81	34.27	7.00	.62 x .88 SLOT	(2) .38	(3) .38	3.00	2.00	2.50	47.7
1736	46.69						35.50		46.27								70.1
1748	58.69						47.50		58.27								92.5
1760	70.69						59.50		70.27								114.8

\*150# ASME/ANSI Flange (Optional). NOTE: We reserve the right to make reasonable design changes without notice. Consult factory. All dimensions are inches.

## 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.

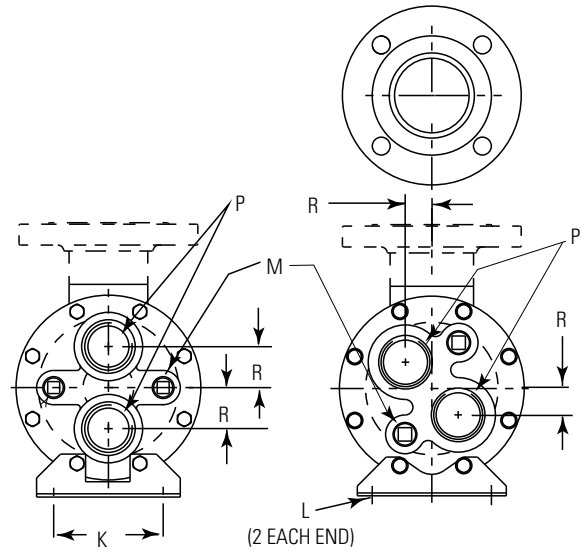
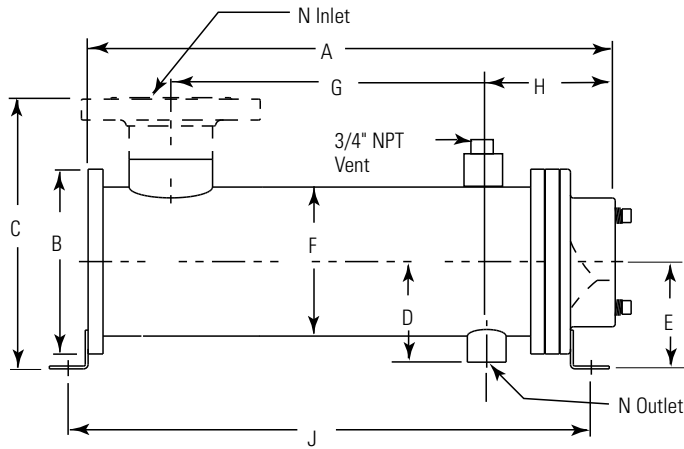
## Piping Hook-up



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

# Dimensions

## UCV Two Pass



All models except  
UCV-800 & UCV-1200 Series

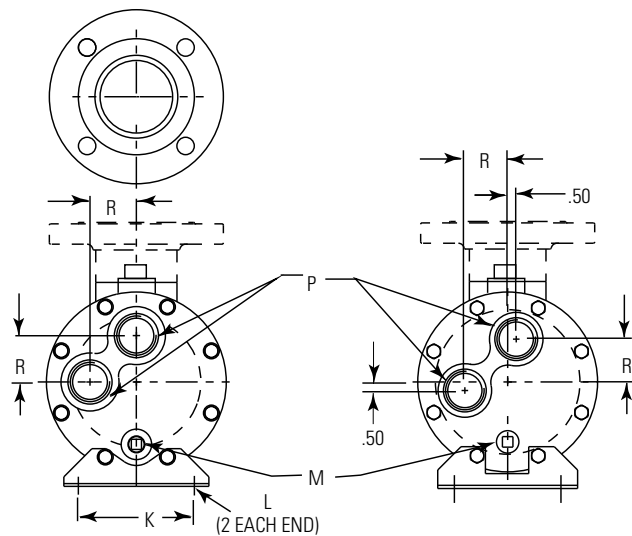
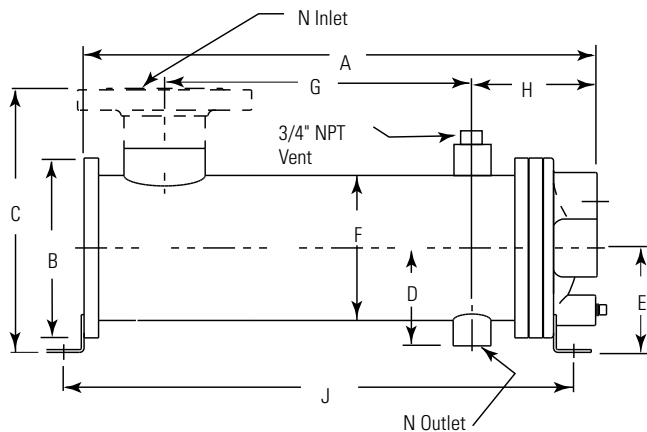
UCV-800 &  
UC-1200 Series

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	12.00	4.60	19.65	3.50	.44 DIA	(2) .38	1.50	.75	1.25	0.75	4.0
824	31.47						24.00		31.65								7.9
836	43.47						36.00		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	10.50	14.00	5.58	5.75	8.62	47.38	7.31	56.12	7.00	.62 x .88 SLOT	(2) .50	4.00*	1.50	2.50	2.25	41.6
1724	34.69						23.00		34.27								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													

\*150# ASME/ANSI Flange. NOTE: We reserve the right to make reasonable design changes without notice. Consult factory. All dimensions are inches.

# Dimensions

## UCV Four Pass



All models except  
UCV-1700 Series

UCV-1700 Series

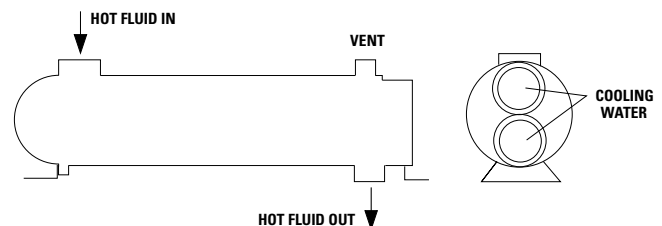
MODEL	A	B DIA	C	D	E	F DIA	G	H	J	K	L	M NPT	N INLET	N OUTLET	P NPT	R	FT <sup>2</sup> SURFACE AREA
612	17.20	4.50	5.25	2.62	2.75	3.25	11.00	3.98	17.66	3.25	.44 DIA	(2) .38	1.25	.75	.75	1.00	2.4
624	29.20						23.00		29.66								4.7
812	19.47	6.00	6.75	3.15	3.50	4.25	12.38	4.60	19.65	3.50	.44 DIA	(2) .38	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
1236	44.22						35.38		44.12								31.3
1248	56.22	10.50	13.00	5.58	5.75	8.62	47.38	7.31	56.12	7.00	.62 x .88 SLOT	(2) .38	4.00*	1.50	2.00	2.50	41.6
1724	34.69						23.00		34.27								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													

\*150# ASME/ANSI Flange. NOTE: We reserve the right to make reasonable design changes without notice. Consult factory. All dimensions are inches.

## 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. A typical example for **UCV** units is steam to liquid heaters. 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. Consult factory for assistance.