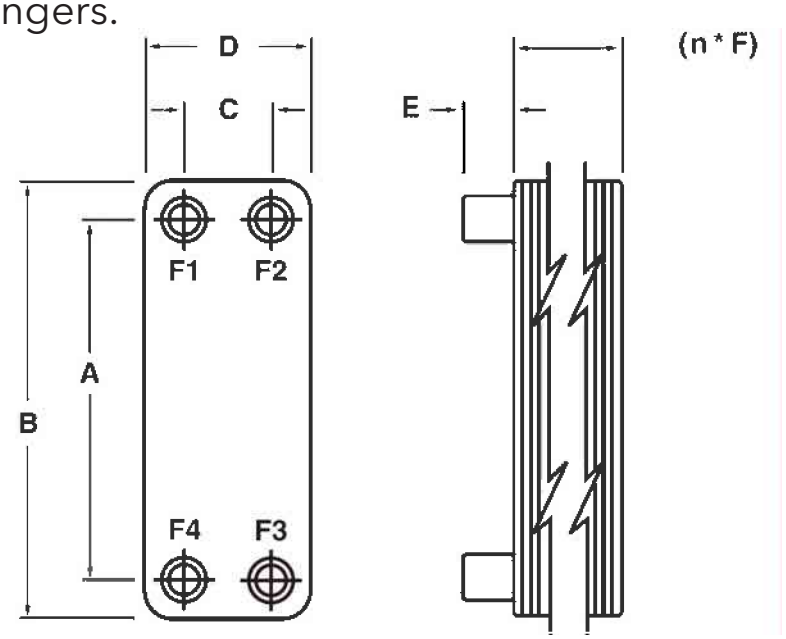
Copper Heat Exchangers.



Model Type	a	b	c	d	e	f	g	Connection	Volume Liter/channel	Weight (kgs.)	Max. # of plates
BP400	171.8	214.5	41.9	80.7	24.1	1.98	10.2	G3/4"	0.029	.06 x n + 1.18	50
BP405	354.8	397.5	41.9	80.7	24.1	1.98	10.2	G3/4"	0.059	0.11 x n + 1.60	75
BP410	249.7	309.6	50	112	24.1	2.462	10.2	G1"	0.060	0.13 x n + 1.60	150
BP411	249.7	309.6	50	112	24.1	2.462	10.2	G1"	0.060	0.13 x n + 1.60	150
BP412	249.7	309.6	50	112	24.1	2.462	10.2	G1"	0.060	0.13 x n + 1.60	150
BP415	465.7	525.4	50	112	24.1	2.462	10.2	G1"	0.103	0.23 x n + 2.04	150
BP422	518.5	616.8	91.9	190	48.2	2.921	10.2	G2"	0.266	0.44 x n + 7.00	200
BP423	518.5	616.8	91.9	190	48.2	2.921	10.2	G2"	0.266	0.44 x n + 7.00	200
BP424	518.5	616.8	91.9	190	48.2	2.921	10.2	G2"	0.266	0.44 x n + 7.00	200
BP432	622.3	892.1	211	430	88.8	2.898	31.02	DN 80 PN 25	0.815	0.95 x n + 71.70	250
BP433	863.5	1194	256	515	88.8	2.898	31.02	DN 100 PN 25	1.220	1.47 x n + 111.60	250
BP434	863.5	1194	256	515	88.8	2.898	31.02	DN 100 PN 25	1.220	1.47 x n + 111.60	250
BP435	863.5	1194	256	515	88.8	3.909	31.02	DN 100 PN 25	1.220	1.47 x n + 111.60	180

Dimensions in mm

n = number of plates

Typical Connection Locations **(Side-1: F1 & F4, Side-2: F2 & F3)**

Sensible Application (liquids or gases - no phase change)

1) For all models the F2 - F3 side has one extra channel, ie. BP 410-10 has 4 channels on the F1 - F4 side and 5 on the F2 - F3 side.
2) Liquid applications should be plumbed in a counter-current, parallel, flow arrangement, (for example: Hot in at F1/Hot out at F4; Cold in at F3/Cold out at F2). Hot and cold side and in and out locations aren't critical as long as the piping is in a counter-current, parallel, flow arrangement. Unit may be mounted in any orientation.
3) Connections may be on the front (ie. F1, F2, F3, F4) or back (ie. B1, B2, B3, B4) of the unit.

Phase Change Applications

1) Units should be mounted in the vertical direction, similar to the figure above and plumbed with the vapor connection up and the liquid connection down on the phase change side see below.

Phase Change

Condensers	
Vapor In:	F1/B1
Condensate Out:	F4/B4
Liquid In:	F3/B3
Liquid Out:	F2/B2

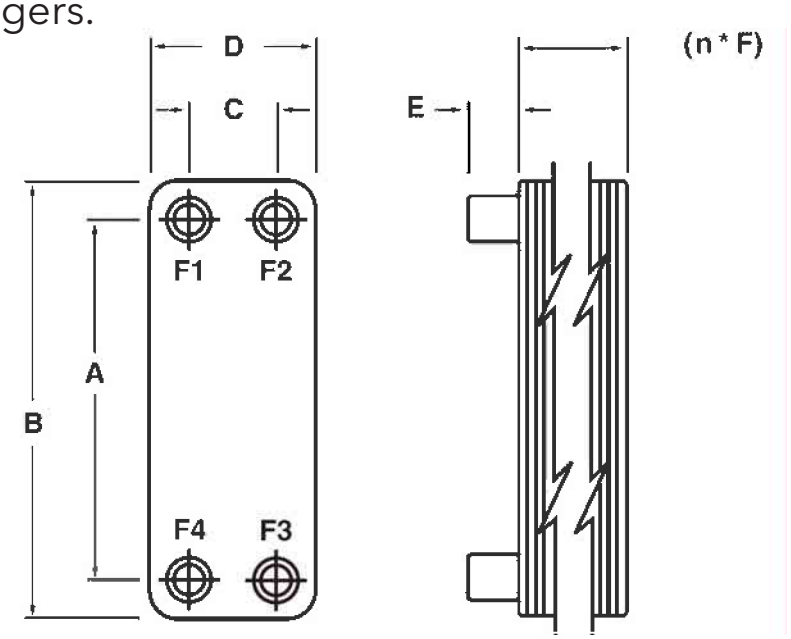
Standard Materials

Cover Plate:	ASTM 316L stainless steel
Channel Plates:	ASTM 316L stainless steel
Connections:	ASTM 316L stainless steel
Brazing Material:	Copper

Design Specifications Copper Brazed

Design Pressure:	30 Bar.
Design Temperature:	232°C.
	-190°C.

Nickel Heat Exchangers.



Model Type	a	b	c	d	e	f	g	Connection	Volume Liter/channel	Weight (kgs.)	Max. # of plates
BPN400	171.8	214.5	41.9	80.7	24.1	1.98	17	G3/4"	0.029	0.06 x n + 1.91	50
BPN410	249.7	309.6	50	112	24.1	2.462	17	G1"	0.060	0.13 x n + 3.08	150
BPN411	249.7	309.6	50	112	24.1	2.462	17	G1"	0.060	0.13 x n + 3.08	150
BPN412	249.7	309.6	50	112	24.1	2.462	17	G1"	0.060	0.13 x n + 3.08	150
BPN415	465.7	525.4	50	112	24.1	2.462	17	G1"	0.103	0.23 x n + 4.58	150
BPN422	518.5	616.8	91.9	190	48.2	2.921	17	G2"	0.266	0.44 x n + 9.62	200
BPN423	518.5	616.8	91.9	190	48.2	2.921	17	G2"	0.266	0.44 x n + 9.62	200
BPN424	518.5	616.8	91.9	190	48.2	2.921	17	G2"	0.266	0.44 x n + 9.62	200

Dimensions in mm

n = number of plates

Typical Connection Locations **(Side-1: F1 & F4, Side-2: F2 & F3)**

Sensible Application (liquids or gases - no phase change)

1) For all models the F2 - F3 side has one extra channel, ie. BP 410-10 has 4 channels on the F1 - F4 side and 5 on the F2 - F3 side.
2) Liquid applications should be plumbed in a counter-current, parallel, flow arrangement, (for example: Hot in at F1/Hot out at F4; Cold in at F3/Cold out at F2). Hot and cold side and in and out locations aren't critical as long as the piping is in a counter-current, parallel, flow arrangement. Unit may be mounted in any orientation.
3) Connections may be on the front (ie. F1, F2, F3, F4) or back (ie. B1, B2, B3, B4) of the unit.

Phase Change Applications

1) Units should be mounted in the vertical direction, similar to the figure above and plumbed with the vapor connection up and the liquid connection down on the phase change side see below.

Single Phase

Liquid to Liquid	
Hot In:	F1
Hot Out:	F4
Cold In:	F3
Cold Out:	F2

Standard Materials

Cover Plate:	ASTM 316L stainless steel
Channel Plates:	ASTM 316L stainless steel
Connections:	ASTM 316L stainless steel
Brazing Material:	Nickel

Design Specifications Copper Brazed

Design Pressure:	Model (400/41X) 30 Bar.
	Model (42X) 26.7 Bar.
Design Temperature:	232°C.
	-190°C.