

WATLOW'S RAPID SHIP PROGRAM FOR STANDARD TUBULAR HEATERS

FAST

CONVENIENT

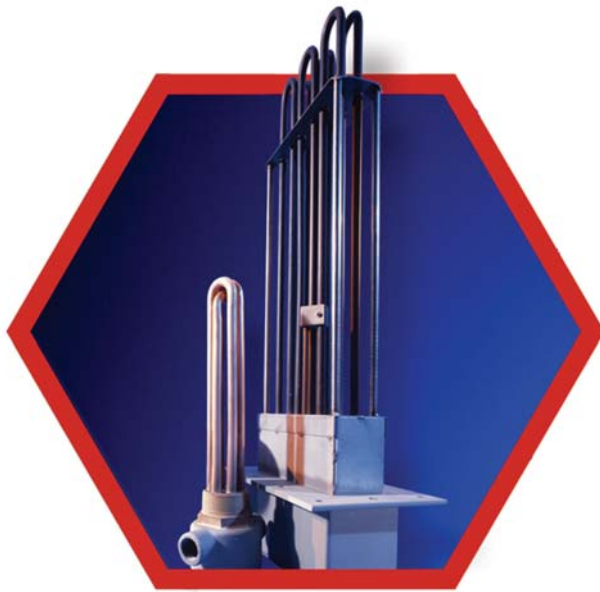
GUARANTEED



Watlow Introduces its RAPID SHIP Program for Standard Tubular Heaters

To help meet your immediate heating needs, Watlow is introducing its RAPID SHIP program for standard tubular heating elements. Many of Watlow's tried and true tubular assemblies such as WATROD, flange immersion heaters and circulation heaters can now be shipped Same Day, Next Day or Three Day. To remain competitive in our fast-paced world, you need a supplier who is committed to helping you succeed. Watlow shows its commitment through programs designed to get you what you need quickly.

Watlow has been designing and manufacturing tubular heaters for over 30 years. Watlow uses this experience and knowledge to design and manufacture high quality, high performance and reliable products. Watlow's tubular heaters are designed for direct immersion in liquids such as water, oils, solvents and process solutions, molten materials as well as air and gases. The heaters can be formed and shaped into various geometries for radiant heating and contact surface heating applications. Watlow's tubular assemblies are UL® and CSA component recognized.

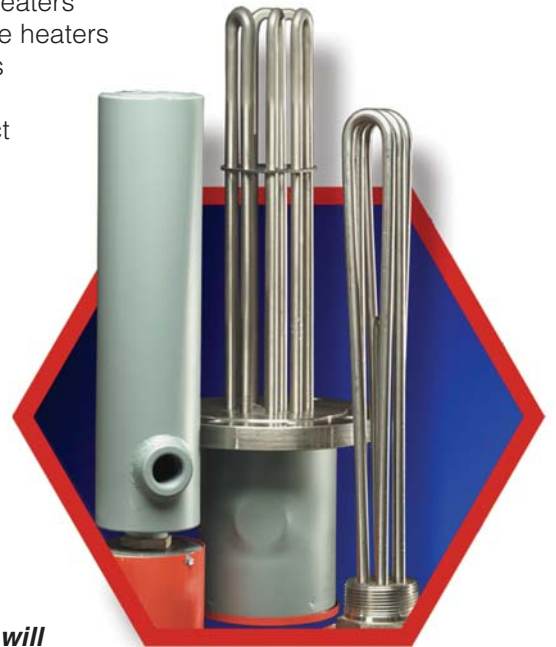


Watlow's RAPID SHIP program was designed with your heating needs in mind. We've listened to you and understand your need for product availability and quick delivery. As a result, we have chosen some of the most popular and most requested products for the program. The full product offering includes:

- Various WATROD heating elements
- Screw plug immersion heaters
- Flange immersion heaters
- Circulation heaters
- Over-the-side heaters
- Duct heaters including modular duct heaters
- Thermostats and accessories

We also offer late hour shipment and truck shipment. Please contact the factory for more details.

And the best part... we guarantee we will meet our promise shipping dates from our RAPID SHIP program or shipping is free!

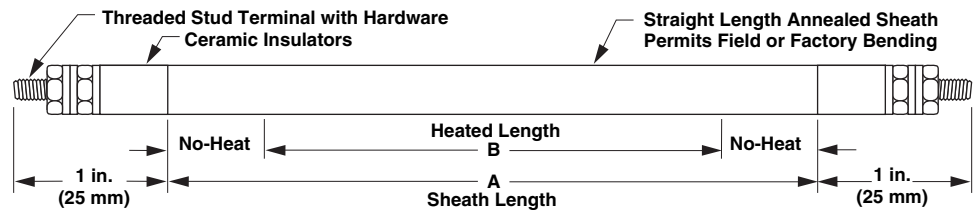


To receive a copy of our full catalog please call your local representative at 1-800-WATLOW2 or go to www.watlow.com.

Tubular and Process Assemblies

WATROD Heating Elements

Double-Ended WATROD



WATROD Description	Sheath A Dimension		Heated B Dimension		Watts	Code Number			Est. Net Weight	
	in.	(mm)	in.	(mm)		120V~(ac)	240V~(ac)	480V~(ac)	lbs	(kg)

Applications: Medium-Weight, Non-Circulating Oil, Heat-Transfer Oil

15 W/in² 0.475" Dia. Steel (2.3 W/cm ²) (12 mm)	29%	(759)	22%	(568)	500		RGSS29R10S		1.0	(0.5)
	38%	(975)	29%	(759)	667		RGSS38G10S	RGSS38G11S	1.3	(0.6)
	44%	(1137)	37%	(946)	833		RGSS44G10S	RGSS44G11S	1.7	(0.8)
	53%	(1356)	44%	(1137)	1000		RGSS53G10S	RGSS53G11S	1.9	(0.9)
	68%	(1737)	59%	(1514)	1333		RGSS68G10S	RGSS68G11S	2.1	(1.0)
	83%	(2118)	74%	(1892)	1667		RGSS83G10S	RGSS83G11S	2.5	(1.1)
	98%	(2499)	89%	(2273)	2000		RGSS98G10S	RGSS98G11S	3.0	(1.4)
	120%	(3057)	111%	(2842)	2500		RGSS120G10S	RGSS120G11S	3.9	(1.8)
142%	(3629)	134%	(3410)	3000		RGSS142R10S	RGSS142R11S	4.1	(1.9)	

Application: Air Heating

20 W/in² 0.430" Dia. Incoloy® (3.1 W/cm ²) (10.9 mm)	48%	(1238)	38%	(984)	1000		RCN48N10S	RCN48N11S	1.0	(0.5)
	58%	(1492)	48%	(1238)	1250		RCN58N10S	RCN58N11S	1.1	(0.5)
	73%	(1873)	63%	(1619)	1667			RCN73N11S	1.4	(0.7)
	91%	(2330)	81%	(2076)	2083			RCN91N11S	1.7	(0.8)

Applications: Caustic Solutions, Air Heating


23 W/in² Incoloy® 0.315" Dia. (3.6 W/cm ²) (8 mm)	29	(737)	22	(559)	500	RBN291S			0.4	(0.2)	
	40	(1016)	33	(839)	750	RBN401S			0.5	(0.3)	
	51	(1296)	44	(1118)	1000	RBN511S			0.7	(0.4)	
23 W/in² 0.475" Dia. Incoloy® (3.6 W/cm ²) (12 mm)	39	(991)	27	(686)	1000	RGNA391S	RGNA3910S	RGNA3911S	1.2	(0.6)	
	54	(1372)	42	(1067)	1500		RGNA5410S	RGNA5411S	1.6	(0.8)	
	69	(1753)	57	(1448)	2000		RGNA6910S	RGNA6911S	2.1	(1.0)	
	84	(2134)	72	(1829)	2500		RGNA8410S	RGNA8411S	2.5	(1.2)	
	99	(2515)	87	(2210)	3000		RGNA9910S	RGNA9911S	3.0	(1.4)	
	106	(2692)	94	(2388)	2778				RGNA10611S	3.2	(1.5)
	132	(3353)	120	(3048)	4167			RGNA13210S	RGNA13211S	4.0	(1.8)
157	(3988)	145	(3683)	5000		RGNA15710S	RGNA15711S	4.7	(2.2)		

Applications: Light Oils, Greases, Heat-Transfer Oils

23 W/in² 0.315" Dia. Steel (3.6 W/cm ²) (8 mm)	16	(406)	12	(305)	250	RBS161S	RBS1610S		0.2	(0.1)
	18	(457)	14	(356)	250	RBS181S			0.3	(0.2)
	21	(533)	17	(432)	350	RBS211S	RBS2110S		0.3	(0.2)
	23%	(594)	19%	(492)	375	RBS23G1S			0.3	(0.2)
	28%	(733)	24%	(632)	500	RBS28R1S			0.4	(0.2)
	29	(737)	24	(610)	500	RBS291S	RBS2910S		0.4	(0.2)
	42	(1067)	37	(940)	750	RBS421S	RBS4210S		0.6	(0.3)
	54	(1372)	49	(1245)	1000	RBS541S	RBS5410S		0.7	(0.4)
77	(1956)	72	(1829)	1500	RBS771S	RBS7710S		1.0	(0.5)	

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Notes:

- **Same Day Shipment** up to **15 pieces**. Over **15 pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
-  Truck Shipment only—To expedite shipment, evaluate whether Drop Ship is required.

Tubular and Process Assemblies

WATROD Heating Elements

Double-Ended WATROD

WATROD Description	Sheath A Dimension		Heated B Dimension		Watts	Code Number			Est. Net Weight	
	in.	(mm)	in.	(mm)		120V~(ac)	240V~(ac)	480V~(ac)	lbs	(kg)

Applications: Light Oils, Greases, Heat-Transfer Oils


23 W/in² 0.475" Dia. Steel (3.6 W/cm ²) (12 mm)	23	(584)	14	(356)	500	RGS231S	RGS2310S		0.7	(0.4)
	31	(787)	22	(559)	750	RGS311S	RGS3110S		1.0	(0.5)
	39	(991)	27	(686)	1000	RGS391S	RGS3910S	RGS3911S	1.2	(0.6)
	45	(1143)	36	(914)	1250	RGS451S	RGS4510S		1.4	(0.7)
	54	(1372)	42	(1067)	1500	RGS541S	RGS5410S	RGS5411S	1.6	(0.8)
	69	(1753)	57	(1448)	2000	RGS691S	RGS6910S	RGS6911S	2.1	(1.0)
	84	(2134)	72	(1829)	2500	RGS841S	RGS8410S	RGS8411S	2.5	(1.2)
	99	(2515)	87	(2210)	3000		RGS9910S	RGS9911S	3.0	(1.4)
	106	(2692)	90	(2286)	2778			RGS10611S	3.2	(1.5)
	132	(3353)	120	(3048)	4167		RGS13210S	RGS13211S	4.0	(1.8)
	144	(3658)	128	(3251)	3889			RGS14411S	4.3	(2.0)
	157	(3988)	145	(3683)	5000		RGS15710S	RGS15711S	4.7	(2.2)

Application: Air Heating

30 W/in² 0.260" Dia. Incoloy[®] (4.7 W/cm ²) (6.6 mm)	20	(508)	15	(381)	400		RAN2010S		0.2	(0.1)	
	25	(635)	20	(508)	500		RAN2510S		0.3	(0.2)	
	30	(762)	25	(635)	600		RAN3010S		0.3	(0.2)	
	35	(889)	30	(762)	800		RAN3510S		0.4	(0.2)	
	40	(1016)	35	(889)	900		RAN4010S		0.4	(0.2)	
	45	(1143)	40	(1016)	1000		RAN4510S		0.5	(0.3)	
	50	(1270)	45	(1143)	1200		RAN5010S		0.5	(0.3)	
	55	(1397)	50	(1270)	1200		RAN5510S		0.6	(0.3)	
	60	(1524)	55	(1397)	1400		RAN6010S		0.6	(0.3)	
	65	(1651)	60	(1524)	1600		RAN6510S		0.7	(0.4)	
	70	(1778)	65	(1651)	1800		RAN7010S		0.7	(0.4)	
	75	(1905)	70	(1778)	1800		RAN7510S		0.8	(0.4)	
	80	(2032)	75	(1905)	2000		RAN8010S		0.8	(0.4)	
	30 W/in² 0.315" Dia. Incoloy[®] (4.7 W/cm ²) (8 mm)	15	(381)	10	(254)	300		RBN1510S		0.2	(0.1)
		20	(508)	15	(381)	400		RBN2010S		0.3	(0.2)
25		(635)	20	(508)	600		RBN2510S		0.4	(0.2)	
30		(762)	25	(635)	800		RBN3010S		0.4	(0.2)	
35		(889)	30	(762)	900		RBN3510S		0.5	(0.3)	
40		(1016)	35	(889)	1000		RBN4010S		0.5	(0.3)	
45		(1143)	40	(1016)	1200		RBN4510S		0.6	(0.3)	
50		(1270)	45	(1143)	1400		RBN5010S		0.7	(0.4)	
55		(1397)	50	(1270)	1600		RBN5510S		0.7	(0.4)	
60		(1524)	55	(1397)	1800		RBN6010S		0.8	(0.4)	
65		(1651)	60	(1524)	1800		RBN6510S		0.8	(0.4)	
70		(1778)	65	(1651)	2000		RBN7010S		0.9	(0.5)	
75		(1905)	70	(1778)	2200		RBN7510S		1.0	(0.5)	
80		(2032)	75	(1905)	2400		RBN8010S		1.0	(0.5)	
90		(2286)	85	(2159)	2600		RBN9010S		1.2	(0.6)	
100	(2540)	95	(2413)	3000		RBN10010S		1.3	(0.6)		

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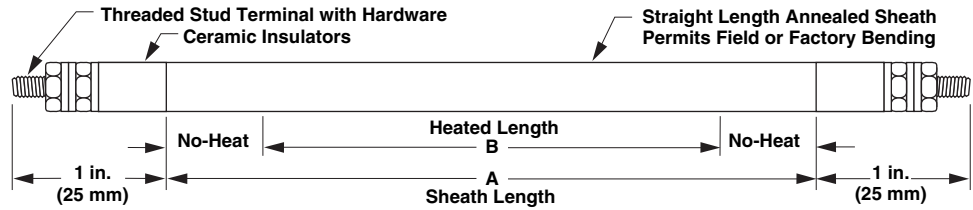
Notes:

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Tubular and Process Assemblies

WATROD Heating Elements

Double-Ended WATROD



WATROD Description	Sheath A Dimension		Heated B Dimension		Watts	Code Number			Est. Net Weight	
	in.	(mm)	in.	(mm)		120V~(ac)	240V~(ac)	480V~(ac)	lbs	(kg)

Application: Air Heating

30 W/in² 0.430" Dia. Incoloy[®] (4.7 W/cm ²) (10.9 mm)	15	(381)	10	(254)	400		RCN1510S		0.3	(0.2)
	20	(508)	15	(381)	600		RCN2010S		0.4	(0.2)
	25	(635)	20	(508)	800		RCN2510S		0.5	(0.3)
	30	(762)	25	(635)	1000		RCN3010S		0.6	(0.3)
	35	(889)	30	(762)	1200		RCN3510S		0.7	(0.4)
	40	(1016)	35	(889)	1400		RCN4010S	RCNX48N11S	0.8	(0.4)
	48 $\frac{3}{4}$	(1238)	38 $\frac{3}{4}$	(984)	1500		RCNX48N10S		1.0	(0.5)
	45	(1143)	40	(1016)	1600		RCN4510S		0.9	(0.5)
	50	(1270)	45	(1143)	1800		RCN5010S		1.0	(0.5)
	58 $\frac{3}{4}$	(1492)	48 $\frac{3}{4}$	(1238)	1917		RCNX58N10S	RCNX58N11S	1.1	(0.5)
	55	(1397)	50	(1270)	2000		RCN5510S	RCNX73N11S	1.0	(0.5)
	60	(1524)	55	(1397)	2200		RCN6010S		1.1	(0.5)
	65	(1651)	60	(1524)	2400		RCN6510S		1.2	(0.6)
	73 $\frac{3}{4}$	(1873)	63 $\frac{3}{4}$	(1619)	2500		RCN7010S		1.4	(0.7)
	70	(1778)	65	(1651)	2600				1.3	(0.6)
	75	(1905)	70	(1778)	2800		RCN7510S	RCNX91N11S	1.4	(0.7)
80	(2032)	75	(1905)	3000		RCN8010S	1.5		(0.7)	
91 $\frac{1}{4}$	(2330)	81 $\frac{1}{4}$	(2076)	3167			1.7		(0.8)	
90	(2286)	85	(2159)	3500		RCN9010S	1.7		(0.8)	
100	(2540)	95	(2413)	4000		RCN10010S		1.9	(0.9)	
110	(2794)	105	(2667)	4500		RCN11010S		2.1	(1.0)	
120	(3048)	115	(2921)	5000		RCN12010S		2.3	(1.1)	

Application: Radiant Heating

40 W/in² 0.375" Dia. Incoloy[®] (6.2 W/cm ²) (9.5 mm)	10 $\frac{1}{4}$	(260)	7 $\frac{1}{4}$	(184)	400	RDN10E1S			0.2	(0.1)
	16 $\frac{3}{8}$	(422)	13 $\frac{3}{8}$	(346)	650	RDN16L1S			0.3	(0.2)
	21 $\frac{1}{16}$	(535)	16 $\frac{1}{16}$	(427)	800	RDN21B1S	RDN21B10S		0.4	(0.2)
	27 $\frac{1}{8}$	(689)	22 $\frac{1}{8}$	(581)	1100	RDN27C1S	RDN27C10S		0.5	(0.3)
	32 $\frac{1}{8}$	(816)	27 $\frac{1}{8}$	(708)	1300		RDN32C10S	RDN32C11S	0.6	(0.3)
	42 $\frac{1}{2}$	(1089)	38 $\frac{1}{8}$	(981)	1800		RDN42R10S	RDN42R11S	0.8	(0.4)
	57 $\frac{1}{2}$	(1461)	53 $\frac{1}{4}$	(1353)	2500		RDN57J10S	RDN57J11S	1.1	(0.5)
	69 $\frac{1}{4}$	(1759)	65	(1651)	3000		RDN69E10S	RDN69E11S	1.3	(0.6)
	81 $\frac{1}{4}$	(2064)	77	(1956)	3600		RDN81E10S	RDN81E11S	1.6	(0.8)

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Notes:

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Tubular and Process Assemblies

WATROD Heating Elements

Double-Ended WATROD

WATROD Description	Sheath A Dimension		Heated B Dimension		Watts	Code Number			Est. Net Weight	
	in.	(mm)	in.	(mm)		120V~(ac)	240V~(ac)	480V~(ac)	lbs	(kg)

Application: Process Water

48 W/in² 0.475" Dia. Incoloy® (7.4 W/cm ²) (12 mm)	23	(584)	14	(356)	1000	RGN231S	RGN2310S	RGN2311S	0.7	(0.4)
	30	(762)	21	(533)	1500	RGN301S	RGN3010S	RGN3011S	0.9	(0.5)
	39	(991)	27	(686)	2000	RGN391S	RGN3910S	RGN3911S	1.2	(0.6)
	44	(1118)	35	(889)	2500	RGN441S	RGN4410S	RGN4411S	1.3	(0.6)
	54	(1372)	42	(1067)	3000		RGN5410S	RGN5411S	1.6	(0.8)
	69	(1753)	57	(1448)	4000		RGN6910S	RGN6911S	2.1	(1.0)
	84	(2134)	72	(1829)	5000		RGN8410S	RGN8411S	2.5	(1.2)
	92	(2337)	76	(1930)	5556			RGN9211S	2.8	(1.3)
	99	(2515)	87	(2210)	6000		RGN9910S	RGN9911S	3.0	(1.4)
	149	(3785)	133	(3378)	9722			RGN14911S	4.5	(2.1)

Application: Hot Runner Molds (Manifolds)


60 W/in² 0.315" Dia. 316 SS (9.3 W/cm ²) (8 mm)	35	(889)	25	(635)	1500		RBR3510S		0.2	(0.1)
	44	(1118)	34	(864)	2000		RBR4410S		0.3	(0.2)
	52	(1321)	42	(1067)	2500		RBR5210S		0.3	(0.2)
	60	(1524)	50	(1270)	3000		RBR6010S		0.4	(0.2)
	69	(1753)	59	(1499)	3500		RBR6910S		0.4	(0.2)
	77	(1956)	67	(1702)	4000		RBR7710S		0.5	(0.3)
85	(2159)	75	(1905)	4500		RBR8510S		0.6	(0.3)	

Applications: Deionized Water, Demineralized Water

60 W/in² 0.475" Dia. 316 SS (9.3 W/cm ²) (12 mm)	20	(508)	11	(279)	1000	RGR201S	RGR2010S	RGR2011S	0.6	(0.3)
	26	(660)	17	(432)	1500	RGR261S	RGR2610S	RGR2611S	0.8	(0.4)
	34	(864)	22	(559)	2000		RGR3410S	RGR3411S	1.0	(0.5)
	40	(1016)	28	(711)	2500		RGR4010S	RGR4011S	1.2	(0.6)
	47	(1194)	31	(787)	2778			RGR4711S	1.4	(0.7)
	46	(1168)	34	(864)	3000		RGR4610S	RGR4611S	1.4	(0.7)
	57	(1448)	45	(1143)	4000		RGR5710S	RGR5711S	1.7	(0.8)
	68	(1727)	56	(1422)	5000		RGR6810S	RGR6811S	2.1	(1.0)
	79	(2007)	67	(1702)	6000		RGR7910S	RGR7911S	2.4	(1.1)
	105	(2667)	93	(2362)	8333			RGR10511S	3.2	(1.5)

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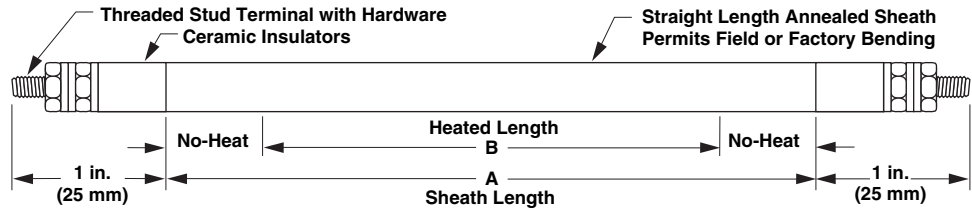
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Tubular and Process Assemblies

WATROD Heating Elements

Double-Ended WATROD



WATROD Description	Sheath A Dimension		Heated B Dimension		Watts	Code Number			Est. Net Weight	
	in.	(mm)	in.	(mm)		120V~(ac)	240V~(ac)	480V~(ac)	lbs	(kg)

Application: Clean Water

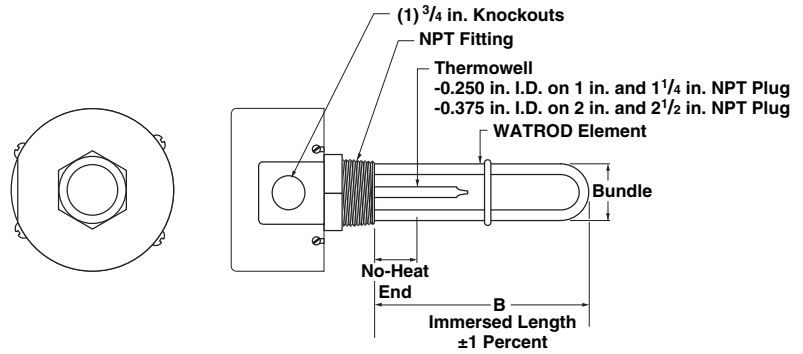
60 W/in² 0.315" Dia. Copper (9.3 W/cm ²) (8 mm)	12	(305)	8	(203)	500	RBC121S	RBC1210S		0.2	(0.1)
	16	(406)	12	(305)	750	RBC161S	RBC1610S		0.2	(0.1)
	19%	(505)	12%	(327)	750	RBC19R1S			0.3	(0.2)
	20	(508)	16	(406)	1000	RBC201S	RBC2010S		0.3	(0.2)
	23%	(603)	16%	(425)	1000	RBC23N1S			0.3	(0.2)
	24	(610)	20	(508)	1250	RBC241S	RBC2410S		0.3	(0.2)
	27%	(705)	20%	(527)	1250	RBC27N1S			0.4	(0.2)
	33	(838)	26	(660)	1500	RBC331S	RBC3310S		0.5	(0.3)
	41	(1041)	34	(864)	2000	RBC411S	RBC4110S		0.6	(0.3)
	50	(1270)	43	(1092)	2500	RBC501S	RBC5010S		0.7	(0.4)
58	(1473)	51	(1295)	3000	RBC581S	RBC5810S		0.8	(0.4)	
74	(1880)	67	(1702)	4000		RBC7410S		1.0	(0.5)	
60 W/in² 0.475" Dia. Copper (9.3 W/cm ²) (12 mm)	20	(508)	11	(279)	1000	RGC201S	RGC2010S		0.6	(0.3)
	26	(660)	17	(432)	1500	RGC261S	RGC2610S	RGC2611S	0.8	(0.4)
	34	(864)	22	(559)	2000	RGC341S	RGC3410S	RGC3411S	1.0	(0.5)
	40	(1016)	28	(711)	2500	RGC401S	RGC4010S	RGC4011S	1.2	(0.6)
	46	(1169)	34	(864)	3000		RGC4610S	RGC4611S	1.4	(0.7)
	47	(1194)	31	(787)	2778			RGC4711S	1.4	(0.7)
	57	(1448)	45	(1143)	4000		RGC5710S	RGC5711S	1.7	(0.8)
	68	(1727)	56	(1422)	5000		RGC6810S	RGC6811S	2.1	(1.0)
	78	(1981)	62	(1575)	5556			RGC7811S	2.4	(1.1)
	79	(2007)	67	(1702)	6000		RGC7910S	RGC7911S	2.4	(1.1)
105	(2661)	93	(2362)	8333			RGC10511S	3.2	(1.5)	

Notes:

- **Next Day Shipment** on all **copper elements** up to **15 pieces**. Over **15 pieces**, please contact factory for RAPID SHIP details. Items for Next Day Shipment must be ordered by 12 p.m. CST.
- Truck Shipment only—To expedite shipment, evaluate whether Drop Ship is required.

Tubular and Process Assemblies

Screw Plug Immersion Heaters



1-inch NPT Screw Plug – WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.		Est. Ship. Weight lbs (kg)
			120V~(ac) 1-Phase	240V~(ac) 1-Phase	

Application: Clean Water

60 W/in ² Brass Plug 1-Copper (9.3 W/cm ²)	0.5	4 ½ (114)	BCC4J1	BCC4J10	3 (2)
	0.75	6 ½ (165)	BCC6J1	BCC6J10	3 (2)
	1.0	6 ¾ (168)	BCC6L1	BCC6L10	3 (2)
	1.25	8 (203)	BCC8A1	BCC8A10	4 (2)
	1.5	10 ¾ (270)	BCC10L1	BCC10L10	4 (2)
	2.0	12 ½ (318)	BCC12J1	BCC12J10	5 (3)
	2.5	14 ¾ (375)	BCC14N1	BCC14N10	5 (3)
	3.0	16 ¾ (426)	BCC16N1	BCC16N10	6 (3)
	4.0	21 (533)		BCC21A10	6 (3)

Applications: Lightweight Oils, Degreasing Solutions, Heat Transfer Oils

23 W/in ² Steel Plug 1-Steel (3.6 W/cm ²)	0.25	6 ½ (165)	BCS6J1	BCS6J10	3 (2)
	0.35	9 ¼ (235)	BCS9E1	BCS9E10	4 (2)
	0.5	9 ¾ (238)	BCS9G1	BCS9G10	4 (2)
	0.75	13 ½ (343)	BCS13J1	BCS13J10	5 (3)
	1.0	16 ¾ (425)	BCS16N1	BCS16N10	6 (3)
	1.5	23 ¾ (603)	BCS23N1	BCS23N10	7 (4)

Note:

- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.

Tubular and Process Assemblies

Screw Plug Immersion Heaters

1¼-inch NPT Screw Plug – WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.			Est. Ship. Weight lbs (kg)
			120V~(ac) 1-Phase	120/240V~(ac) 1-Phase	240V~(ac) 1-Phase	

Application: Clean Water

60 W/in² Brass Plug 1-Copper (9.3 W/cm ²)	0.5	4% (111)	BDC4G1		BDC4G10	3 (2)
	0.75	6% (162)	BDC6G1		BDC6G10	3 (2)
60 W/in² ④ Brass Plug 2-Copper (9.3 W/cm ²)	1.0	4% (111)		BEC4G6		4 (2)
	1.5	6% (162)		BEC6G6		4 (2)
	2.0	8½ (216)		BEC8J6		5 (3)
	2.5	10¼ (273)		BEC10N6		5 (3)
	3.0	15 (381)		BEC15A6		6 (3)
	4.0	19 (483)			BEC19A10	7 (4)
	5.0	23½ (597)			BEC23J10	8 (4)
6.0	27½ (699)			BEC27J10	9 (4)	

Applications: Lightweight Oils, Degreasing Solutions, Heat Transfer Oils

23 W/in² ④ Steel Plug 2-Steel (3.6 W/cm ²)	0.5	6% (162)		BES6G6		4 (2)
	0.5	7% (187)		BES7G6		4 (2)
	0.7	8% (225)		BES8R6		5 (3)
	0.75	10⅙ (256)		BES10B6		5 (3)
	1.0	12¼ (324)		BES12N6		6 (3)
	1.5	19% (492)		BES19G6		7 (4)
	2.0	25% (645)		BES25G6		8 (4)
3.0	36% (937)		BES36R6		9 (4)	

Applications: Forced Air and Gases, Caustic Solutions, Degreasing Solutions

23 W/in² ④ 304 SS Plug 2-Incoloy® (3.6 W/cm ²)	1.0	13% (340)		BEN13G6		6 (3)
	1.5	19 (483)		BEN19A6		7 (4)
	2.0	24% (619)		BEN24G6		8 (4)

Notes:

- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- ④ Wired for higher voltage.

Tubular and Process Assemblies

Screw Plug Immersion Heaters

2-inch NPT Screw Plug – WATROD Element (Note: Will not fit into a two-inch pipe)

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.					Est. Ship. Weight lbs (kg)
			120V~(ac) 1-Phase	120/240V~(ac) 1-Phase	240/480V~(ac) 1-Phase	240V~(ac) 3-Phase	480V~(ac) 3-Phase	

Application: Clean Water

60 W/in² ④ Brass Plug 2-Copper (9.3 W/cm ²)	2.0	8 ½ (206)		BGC78C6	BGC78C7			4 (2)
	3.0	11 ½ (283)		BGC711C6	BGC711C7			5 (3)
	4.0	15 ½ (384)		BGC715C6	BGC715C7			6 (3)
	5.0	18 ½ (460)		BGC718C6	BGC718C7			6 (3)
	6.0	21 ½ (537)			BGC721C7			7 (4)
	8.0	26 ½ (676)			BGC726L7			7 (4)
	10.0	32 ½ (816)			BGC732C7			8 (4)
60 W/in² Brass Plug 3-Copper (9.3 W/cm ²)	3.0	8 ½ (206)	BHC78C1			BHC78C3	BHC78C13 ③	5 (3)
	4.5	11 ½ (283)	BHC711C1			BHC711C3	BHC711C13 ③	6 (3)
	6.0	15 ½ (384)				BHC715C3	BHC715C5	7 (4)
	7.5	18 ½ (460)				BHC718C3	BHC718C5	7 (4)
	9.0	21 ½ (537)				BHC721C3	BHC721C5	8 (4)
	12.0	26 ½ (676)				BHC726L3	BHC726L5	8 (4)
	15.0	32 ½ (816)				BHC732C3	BHC732C5	9 (4)

Application: Process Water

48 W/in² ④ 304 SS Plug 2-Incoloy® (7.5 W/cm ²)	2.0	9 ¾ (248)		BGN79N6	BGN79N7			4 (2)
	3.0	13 ¾ (337)		BGN713E6	BGN713E7			5 (3)
	4.0	17 ¾ (451)		BGN717N6	BGN717N7			6 (3)
	5.0	20 ¾ (514)		BGN720E6	BGN720E7			7 (4)
	6.0	25 ¾ (641)			BGN725E7			7 (4)
	8.0	32 ¾ (832)			BGN732N7			8 (4)
	10.0	40 ¾ (1022)			BGN740E7			9 (4)
48 W/in² ⑤ 304 SS Plug 3-Incoloy® (7.5 W/cm ²)	3.0	9 ¾ (248)	BHN79N1			BHN79N3	BHN79N5	5 (3)
	4.5	13 ¾ (337)	BHN713E1			BHN713E3	BHN713E5	6 (3)
	6.0	17 ¾ (451)				BHN717N3	BHN717N5	7 (4)
	7.5	20 ¾ (514)				BHN720E3	BHN720E5	8 (4)
	9.0	25 ¾ (641)				BHN725E3	BHN725E5	9 (4)
	12.0	32 ¾ (832)				BHN732N3	BHN732N5	9 (4)
	15.0	40 ¾ (1022)				BHN740E3	BHN740E5	10 (5)
	18.0	47 ¾ (1213)				BHN747N3	BHN747N5	11 (5)

CONTINUED

Notes:

- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- ③ Must be operated three-phase only.
- ④ Wired for higher voltage.
- ⑤ 240V~(ac) can be wired wye and operated at 480V~(ac) three-phase to produce ½ more kW and watt density.

Tubular and Process Assemblies

Screw Plug Immersion Heaters

2-inch NPT Screw Plug – WATROD Element (Note: Will not fit into a two-inch pipe)

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.					Est. Ship.	
			120V~(ac) 1-Phase	120/240V~(ac) 1-Phase	240/480V~(ac) 1-Phase	240V~(ac) 3-Phase	480V~(ac) 3-Phase	Weight lbs (kg)	

Applications: Forced Air and Gases, Caustic Solutions, Degreasing Solutions

23 W/in ² ⑤ ⑥ 304 SS Plug 3-Incoloy® (3.6 W/cm ²)	3.0	17 ¼ (451)	BHNA17N1			BHNA17N3	BHNA17N5	7 (4)
	4.5	25 ¼ (641)	BHNA25E1			BHNA25E3	BHNA25E5	9 (4)
	6.0	32 ¼ (832)				BHNA32N3	BHNA32N5	9 (4)
	7.5	40 ¼ (1022)				BHNA40E3	BHNA40E5	10 (5)
	9.0	47 ¼ (1213)				BHNA47N3	BHNA47N5	11 (5)
	12.5	64 ¼ (1632)				BHNA64E3	BHNA64E5	15 (7)
	15.0	76 ¼ (1950)				BHNA76E3	BHNA76E5	18 (9)

Applications: Lightweight Oils, Degreasing Solutions, Heat Transfer Oils

23 W/in ² ④ Steel Plug 2-Steel (3.6 W/cm ²)	1.0	9 ½ (241)		BGS79J6	BGS79J7			4 (2)
	1.5	13 ½ (343)		BGS713J6	BGS713J7			5 (3)
	2.0	17 ½ (445)		BGS717J6	BGS717J7			6 (3)
	2.5	20 ½ (521)		BGS720J6	BGS720J7			7 (4)
	3.0	25 (635)		BGS725A6	BGS725A7			7 (4)
	4.0	32 ½ (826)		BGS732J6	BGS732J7			8 (4)
	5.0	40 (1016)		BGS740A6	BGS740A7			9 (4)
23 W/in ² Steel Plug 3-Steel (3.6 W/cm ²)	6.0	47 ½ (1207)			BGS747J7			10 (5)
	1.5	9 ½ (241)	BHS79J1			BHS79J3	BHS79J13 ③	5 (3)
	3.0	17 ½ (445)	BHS717J1			BHS717J3	BHS717J5	7 (4)
	4.5	25 (635)	BHS725A1			BHS725A3	BHS725A5	9 (4)
	6.0	32 ½ (826)				BHS732J3	BHS732J5	12 (6)
	7.5	40 (1016)				BHS740A3	BHS740A5	13 (6)
	9.0	47 ½ (1207)				BHS747J3	BHS747J5	13 (6)
12.5	64 (1626)				BHS764A3	BHS764A5	17 (8)	

Applications: Medium Weight Oils, Heat Transfer Oils, Liquid Paraffin

16 W/in ² ③ 304 SS Plug 3-Incoloy® (2.5 W/cm ²)	1.0	9 ¼ (248)				BHN79N12	BHN79N13	5 (3)
	1.5	13 ¼ (337)				BHN713E12	BHN713E13	6 (3)
	2.0	17 ¼ (451)				BHN717N12	BHN717N13	7 (4)
	2.5	20 ¼ (514)				BHN720E12	BHN720E13	8 (4)
	3.0	25 ¼ (641)				BHN725E12	BHN725E13	9 (4)
	4.0	32 ¼ (832)				BHN732N12	BHN732N13	9 (4)
	5.0	40 ¼ (1022)				BHN740E12	BHN740E13	10 (5)
15 W/in ² Steel Plug 3-Steel (2.3 W/cm ²)	6.0	47 ¼ (1213)				BHN747N12	BHN747N13	11 (5)
	1.5	13 ¼ (337)				BHSS13E3	BHSS13E13 ③	6 (4)
	2.0	17 ½ (445)				BHSS17J3	BHSS17J5	7 (4)
	2.5	20 ½ (521)				BHSS20J3	BHSS20J5	8 (4)
	3.0	25 (635)				BHSS25A3	BHSS25A5	9 (4)
	4.0	32 ½ (826)				BHSS32J3	BHSS32J5	12 (6)
	5.0	40 (1016)				BHSS40A3	BHSS40A5	13 (6)
	6.0	47 ½ (1207)				BHSS47J3	BHSS47J5	13 (6)
	7.5	58 ½ (1486)				BHSS58J3	BHSS58J5	16 (8)
9.0	69 ¼ (1772)				BHSS69N3	BHSS69N5	20 (9)	

Notes:

- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- ③ Must be operated three-phase only.
- ④ Wired for higher voltage.
- ⑤ 240V~(ac) can be wired wye and operated at 480V~(ac) three-phase to produce ½ more kW and watt density.
- ⑥ Can be rewired wye to produce ½ of original kW and watt density (three-phase only).

Tubular and Process Assemblies

Screw Plug Immersion Heaters

2½-inch NPT Screw Plug – WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.			Est. Ship. Weight lbs (kg)
			120V~(ac) 1-Phase	240V~(ac) 3-Phase	480V~(ac) 3-Phase	

Applications: Deionized Water, Demineralized Water

60 W/in ² 316 SS Plug	3.0	7% (194)	BLR77L1	BLR77L3	BLR77L5	6 (3)
3-316 SS Passivated (9.3 W/cm ²)	4.5	10% (270)	BLR710L1	BLR710L3	BLR710L5	7 (4)
	6.0	14% (372)		BLR714L3	BLR714L5	9 (4)
	7.5	17% (448)		BLR717L3	BLR717L5	9 (4)
	9.0	20% (524)		BLR720L3	BLR720L5	11 (5)
	12.0	26% (664)		BLR726C3	BLR726C5	12 (6)
	15.0	31% (803)		BLR731L3	BLR731L5	14 (7)
	18.0	37% (943)		BLR737C3	BLR737C5	15 (7)

Note:

- **Next Day Shipment on Deionized Water** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Next Day Shipment must be ordered by 12 p.m. CST.

2½-inch NPT Screw Plug – WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.			Est. Ship. Weight lbs (kg)
			120V~(ac) 1-Phase	240V~(ac) 3-Phase	480V~(ac) 3-Phase	

Application: Clean Water

60 W/in ² Brass Plug	3.0	7% (194)	BLC77L1	BLC77L3	BLC77L13	6 (3)
3-Copper (9.3 W/cm ²)	4.5	10% (270)	BLC710L1	BLC710L3	BLC610K13	7 (4)
	6.0	14% (371)		BLC714L3	BLC714L5	9 (4)
	7.5	17% (448)		BLC717L3	BLC717L5	9 (4)
	9.0	20% (524)		BLC720L3	BLC720L5	11 (5)
	12.0	26% (664)		BLC726C3	BLC726C5	12 (6)
	15.0	31% (803)		BLC731L3	BLC731L5	14 (7)
	18.0	37% (943)		BLC737C3	BLC737C5	15 (7)

Application: Process Water

48 W/in ² 304 SS Plug	3.0	9% (238)	BLN79G1	BLN79G3	BLN79G5	6 (3)
3-Incoloy® (7.5 W/cm ²)	4.5	12% (327)	BLN712R1	BLN712R3	BLN712R5	7 (4)
	6.0	17% (441)		BLN717G3	BLN717G5	9 (4)
	7.5	19% (505)		BLN719R3	BLN719R5	11 (5)
	9.0	24% (632)		BLN724R3	BLN724R5	12 (6)
	12.0	32% (822)		BLN732G3	BLN732G5	14 (7)
	15.0	39% (1013)		BLN739R3	BLN739R5	15 (7)
	18.0	47% (1203)		BLN747G3	BLN747G5	17 (8)

CONTINUED

Note:

- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.

Tubular and Process Assemblies

Screw Plug Immersion Heaters

2½-inch NPT Screw Plug – WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.			Est. Ship. Weight lbs (kg)
			120V~(ac) 1-Phase	240V~(ac) 3-Phase	480V~(ac) 3-Phase	

Applications: Forced Air and Gases, Caustic Solutions, Degreasing Solutions

23 W/in² ⑤⑥ 304 SS Plug 3-Incoloy® (3.6 W/cm ²)	3.0	17% (441)	BLNA17G1	BLNA17G3	BLNA17G5	9 (4)
	4.5	24% (632)		BLNA24R1	BLNA24R3	BLNA24R5
	6.0	32% (822)		BLNA32G3	BLNA32G5	14 (7)
	7.5	39% (1013)		BLNA39R3	BLNA39R5	15 (7)
	9.0	47% (1203)		BLNA47G3	BLNA47G5	17 (8)
	12.5	63% (1622)		BLNA63R3	BLNA63R5	20 (9)
15.0	76% (1940)		BLNA76G3	BLNA76G5	23 (11)	

Applications: Lightweight Oils, Degreasing Solutions, Heat Transfer Oils

23 W/in² ⑥ Steel Plug 3-Steel (3.6 W/cm ²)	3.0	17% (438)	BLS717E1	BLS717E3	BLS717E5	9 (4)
	4.5	24% (629)		BLS724N1	BLS724N3	BLS724N5
	6.0	32% (819)		BLS732E3	BLS732E5	14 (7)
	7.5	39% (1010)		BLS739N3	BLS739N5	15 (7)
	9.0	47% (1200)		BLS747E3	BLS747E5	17 (8)
	12.5	63% (1619)		BLS763N3	BLS763N5	20 (9)
15.0	76% (1937)		BLS776E3	BLS776E5	27 (13)	

Applications: Medium Weight Oils, Heat Transfer Oils, Liquid Paraffin

16 W/in² ③ 304 SS Plug 3-Incoloy® (2.5 W/cm ²)	1.0	9% (238)		BLN79G12	BLN79G13	6 (3)
	1.5	12% (327)		BLN712R12	BLN712R13	7 (4)
	2.0	17% (441)		BLN717G12	BLN717G13	9 (4)
	2.5	19% (505)		BLN719R12	BLN719R13	11 (5)
	3.0	24% (632)		BLN724R12	BLN724R13	12 (6)
	4.0	32% (822)		BLN732G12	BLN732G13	14 (7)
	5.0	39% (1013)		BLN739R12	BLN739R13	15 (7)
	6.0	47% (1203)		BLN747G12	BLN747G13	17 (8)

Applications: Bunker C and #6 Fuel Oils

8 W/in² ③ Steel Plug 3-Steel (1.3 W/cm ²)	1.0	17% (438)		BLS717E12	BLS717E13	9 (4)
	1.5	24% (629)		BLS724N12	BLS724N13	12 (6)
	2.0	32% (819)		BLS732E12	BLS732E13	14 (7)
	2.5	39% (1010)		BLS739N12	BLS739N13	15 (7)
	3.0	47% (1200)		BLS747E12	BLS747E13	17 (8)
	4.0	63% (1619)		BLS763N12	BLS763N13	20 (9)
	5.0	76% (1937)		BLS776E12	BLS776E13	23 (11)

Notes:

- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- ③ Must be operated three-phase only.
- ⑤ 240V~(ac) can be wired wye and operated at 480V~(ac) three-phase to produce ½ more kW and watt density.
- ⑥ Can be rewired wye to produce ½ of original kW and watt density (three-phase only).

Tubular and Process Assemblies

Screw Plug Immersion Heaters

Build-a-Code

Screw Plug

Base Code Number ① _____

(Includes general purpose terminal enclosure (NEMA 1))

Terminal Enclosure Type _____

S = General purpose (NEMA 1)

W = Moisture resistant (NEMA 4)

E = Explosion resistant (NEMA 7)

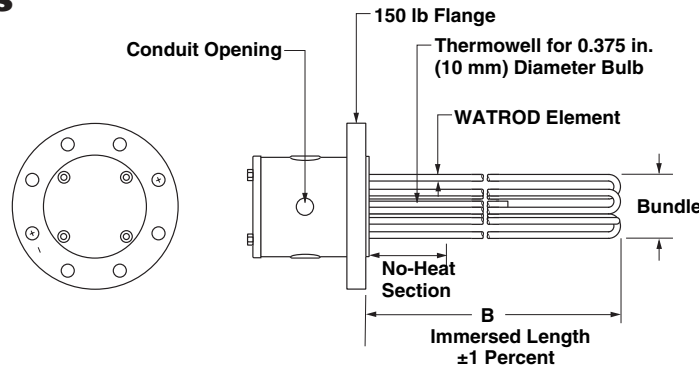
E/W = Explosion/moisture resistant (NEMA 7/4)

Thermostat ② or Thermocouple ④ _____

- ① Screw plug immersion heaters are supplied with a general purpose terminal enclosure (NEMA 1). A thermostat will not fit inside the standard 2⁵/₈ inch (67 mm) tall general purpose terminal enclosure. If a thermostat is required, a taller terminal enclosure will be supplied.
- ② Thermostat code numbers are shown in the *Thermostat Stock* chart on page 45. Check the temperature sensing bulb O.D. to be certain it will fit into the thermowell's I.D.
- ④ Specify Type J or K thermocouple. If overtemp thermocouple specify orientation horizontal, vertical up or vertical down.

Tubular and Process Assemblies

Flange Immersion Heaters



3-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs (kg)	

Application: Clean Water

60 W/in ² Steel Flange 3-Copper (9.3 W/cm ²)	6	15½ (394)	FMC715J10	1	FMC715J3	1	FMC715J11	1	FMC715J5	1	22 (10)
	9	21½ (546)	FMC721J10	1	FMC721J3	1	FMC721J11	1	FMC721J5	1	25 (12)
	12	27 (686)			FMC727A3	1	FMC727A11	1	FMC727A5	1	27 (13)
	15	32½ (826)			FMC732J3	1	FMC732J11	1	FMC732J5	1	28 (13)
	18	38 (965)			FMC738A3	1	FMC738A11	1	FMC738A5	1	30 (14)
	25	51 (1295)					FMC751A11	1	FMC751A5	1	34 (16)

Application: Process Water

48 W/in ² ⑤⑥ Steel Flange 3-Incoloy® (7.5 W/cm ²)	4.5	13½ (343)	FMN713J10	1	FMN713J3	1	FMN713J11	1	FMN713J5	1	22 (10)
	6	18 (457)	FMN718A10	1	FMN718A3	1	FMN718A11	1	FMN718A5	1	23 (11)
	7.5	20½ (521)	FMN720J10	1	FMN720J3	1	FMN720J11	1	FMN720J5	1	25 (12)
	9	25½ (648)	FMN725J10	1	FMN725J3	1	FMN725J11	1	FMN725J5	1	27 (13)
	12	33 (838)			FMN733A3	1	FMN733A11	1	FMN733A5	1	28 (13)
	15	40½ (1029)			FMN740J3	1	FMN740J11	1	FMN740J5	1	30 (14)
18	48 (1219)			FMN748A3	1	FMN748A11	1	FMN748A5	1	32 (15)	

Applications: Forced Air and Gases, Caustic Solutions, Degreasing Solutions

23 W/in ² ⑤⑥ Steel Flange 3-Incoloy® (3.6 W/cm ²)	3	18 (457)	FMNA18A10	1	FMNA18A3	1	FMNA18A11	1	FMNA18A5	1	23 (11)
	4.5	25½ (648)	FMNA25J10	1	FMNA25J3	1	FMNA25J11	1	FMNA25J5	1	27 (13)
	6	33 (838)	FMNA33A10	1	FMNA33A3	1	FMNA33A11	1	FMNA33A5	1	28 (13)
	7.5	40½ (1029)	FMNA40J10	1	FMNA40J3	1	FMNA40J11	1	FMNA40J5	1	30 (14)
	9	48 (1219)	FMNA48A10	1	FMNA48A3	1	FMNA48A11	1	FMNA48A5	1	32 (15)
	12.5	64½ (1638)			FMNA64J3	1	FMNA64J11	1	FMNA64J5	1	37 (17)
15	77 (1956)			FMNA77A3	1	FMNA77A11	1	FMNA77A5	1	42 (19)	

Applications: Lightweight Oils, Degreasing Solutions, Heat Transfer Oils

23 W/in ² Steel Flange 3-Steel (3.6 W/cm ²)	3	18 (457)	FMS718A10	1	FMS718A3	1	FMS718A11	1	FMS718A5	1	23 (11)
	4.5	25½ (648)	FMS725J10	1	FMS725J3	1	FMS725J11	1	FMS725J5	1	27 (13)
	6	33 (838)	FMS733A10	1	FMS733A3	1	FMS733A11	1	FMS733A5	1	28 (13)
	7.5	40½ (1029)	FMS740J10	1	FMS740J3	1	FMS740J11	1	FMS740J5	1	30 (14)
	9	48 (1219)	FMS748A10	1	FMS748A3	1	FMS748A11	1	FMS748A5	1	32 (15)
	12.5	64½ (1638)			FMS764J3	1	FMS764J11	1	FMS764J5	1	37 (17)
15	77 (1956)			FMS777A3	1	FMS777A11	1	FMS777A5	1	42 (19)	

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Notes:

- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- ⑤ 240V~(ac) can be wired wye and operated at 480V~(ac) three-phase to produce ½ more kW and watt density.
- ⑥ Can be rewired wye to produce ½ of original kW and watt density (three-phase only).

Tubular and Process Assemblies

Flange Immersion Heaters

3-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs	(kg)
16 W/in²③ Steel Flange 3-Incoloy® (2.5 W/cm ²)	1.5	13½ (343)			FMN713J12	1				FMN713J13	1	22 (10)
	2	18 (457)			FMN718A12	1				FMN718A13	1	23 (11)
	2.5	20½ (521)			FMN720J12	1				FMN720J13	1	25 (12)
	3	25½ (648)			FMN725J12	1				FMN725J13	1	27 (13)
	4	33 (838)			FMN733A12	1				FMN733A13	1	30 (14)
	5	40½ (1029)			FMN740J12	1				FMN740J13	1	30 (14)
	6	48 (1219)			FMN748A12	1				FMN748A13	1	33 (15)

Applications: Medium Weight Oils, Heat Transfer Oils, Liquid Paraffin

8 W/in²③ Steel Flange 3-Steel (1.3 W/cm ²)	2	33 (838)			FMS733A12	1				FMS733A13	1	28 (13)
	3	48 (1219)			FMS748A12	1				FMS748A13	1	32 (15)
	4	64½ (1638)			FMS764J12	1				FMS764J13	1	37 (17)
	5	77 (1956)			FMS777A12	1				FMS777A13	1	42 (19)

Notes:

- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- ③ Must be operated three-phase only.

4-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs	(kg)
60 W/in² Steel Flange 6-Copper (9.3 W/cm ²)	12	15½ (394)	FOC715J10	2	FOC715J3	1	FOC715J11	1	FOC715J5	1	31 (14)	
	18	21½ (546)	FOC721J10	2	FOC721J3	1	FOC721J11	1	FOC721J5	1	34 (16)	
	24	27 (686)	FOC727A10	2	FOC727A3	2	FOC727A11	1	FOC727A5	1	36 (17)	
	30	32½ (826)			FOC732J3	2	FOC732J11	2	FOC732J5	1	39 (18)	
	36	38 (965)			FOC738A3	2	FOC738A11	2	FOC738A5	1	43 (20)	
	50	51 (1295)							FOC751A5	2	48 (22)	

Application: Process Water

48 W/in²⑤ Steel Flange 6-Incoloy® (7.5 W/cm ²)	9	13½ (343)	FON713J10	1	FON713J3	1	FON713J11	1	FON713J5	1	29 (14)
	12	18 (457)	FON718A10	2	FON718A3	1	FON718A11	1	FON718A5	1	32 (15)
	15	20½ (521)	FON720J10	2	FON720J3	1	FON720J11	1	FON720J5	1	34 (16)
	18	25½ (648)	FON725J10	2	FON725J3	1	FON725J11	1	FON725J5	1	36 (17)
	24	33 (838)	FON733A10	2	FON733A3	2	FON733A11	1	FON733A5	1	39 (18)
	30	40½ (1029)			FON740J3	2	FON740J11	2	FON740J5	1	43 (20)
	36	48 (1219)			FON748A3	2	FON748A11	2	FON748A5	1	48 (22)

CONTINUED

Notes:

- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- ⑤ 240V~(ac) can be wired wye and operated at 480V~(ac) three-phase to produce ½ more kW and watt density.

Tubular and Process Assemblies

Flange Immersion Heaters

4-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs (kg)	

Applications: Forced Air and Gases, Caustic Solutions, Degreasing Solutions

23 W/in² Steel Flange	6	18 (457)	FONA18A10	1	FONA18A3	1	FONA18A11	1	FONA18A5	1	32 (15)
	9	25½ (648)	FONA25J10	1	FONA25J3	1	FONA25J11	1	FONA25J5	1	36 (17)
6-Incoloy® (3.6 W/cm²)	12	33 (838)	FONA33A10	2	FONA33A3	1	FONA33A11	1	FONA33A5	1	39 (18)
	15	40½ (1029)	FONA40J10	2	FONA40J3	1	FONA40J11	1	FONA40J5	1	43 (20)
	18	48 (1219)	FONA48A10	2	FONA48A3	1	FONA48A11	1	FONA48A5	1	48 (22)
	25	64½ (1638)			FONA64J3	2	FONA64J11	2	FONA64J5	1	53 (24)
	30	77 (1956)			FONA77A3	2	FONA77A11	2	FONA77A5	1	61 (28)

Applications: Lightweight Oils, Degreasing Solutions, Heat Transfer Oils

23 W/in² Steel Flange	6	18 (457)	FOS718A10	1	FOS718A3	1	FOS718A11	1	FOS718A5	1	32 (15)
	9	25½ (648)	FOS725J10	1	FOS725J3	1	FOS725J11	1	FOS725J5	1	36 (17)
6-Steel (3.6 W/cm²)	12	33 (838)	FOS733A10	2	FOS733A3	1	FOS733A11	1	FOS733A5	1	39 (18)
	15	40½ (1029)	FOS740J10	2	FOS740J3	1	FOS740J11	1	FOS740J5	1	43 (20)
	18	48 (1219)	FOS748A10	2	FOS748A3	1	FOS748A11	1	FOS748A5	1	48 (22)
	25	64½ (1638)			FOS764J3	2	FOS764J11	2	FOS764J5	1	53 (24)
	30	77 (1956)			FOS777A3	2	FOS777A11	2	FOS777A5	1	61 (28)

Applications: Medium Weight Oils, Heat Transfer Oils, Liquid Paraffin

16 W/in² Steel Flange	3	13¾ (343)			FON713J12	1			FON713J13	1	29 (14)
	4	18 (457)			FON718A12	1			FON718A13	1	32 (15)
6-Incoloy® (2.5 W/cm²)	5	20½ (521)			FON720J12	1			FON720J13	1	34 (16)
	6	25½ (648)			FON725J12	1			FON725J13	1	36 (17)
	8	33 (838)			FON733A12	1			FON733A13	1	39 (18)
	10	40½ (1029)			FON740J12	1			FON740J13	1	43 (20)
	12	48 (1219)			FON748A12	1			FON748A13	1	48 (22)

Applications: Bunker C and #6 Fuel Oils

8 W/in² Steel Flange	5	40½ (1029)			FOS740J12	1			FOS740J13	1	43 (20)
	6	48 (1219)			FOS748A12	1			FOS748A13	1	48 (22)
6-Steel (1.3 W/cm²)	8	64½ (1638)			FOS764J12	1			FOS764J13	1	53 (24)
	10	77 (1956)			FOS777A12	1			FOS777A13	1	61 (28)

Notes:

- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- ③ Must be operated three-phase only.
- ⑤ 240V~(ac) can be wired wye and operated at 480V~(ac) three-phase to produce ½ more kW and watt density.
- ⑥ Can be rewired wye to produce ½ of original kW and watt density (three-phase only).

4-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs (kg)	

Application: Deionized Water, Demineralized Water

60 W/in² 316 SS Flange	12	16 (406)	FOR716A10	1	FOR716A3	1	FOR716A11	1	FOR716A5	1	31 (14)
	18	22 (559)	FOR722A10	2	FOR722A3	1	FOR722A11	1	FOR722A5	1	34 (16)
6-316 SS (9.3 W/cm²)	24	27½ (699)	FOR727J10	2	FOR727J3	2	FOR727J11	1	FOR727J5	1	36 (17)
	30	33 (838)			FOR733A3	2	FOR733A11	2	FOR733A5	1	39 (18)
Passivated	36	38½ (978)			FOR738J3	2	FOR738J11	2	FOR738J5	1	43 (20)
	50	51½ (1308)							FOR751J5	2	53 (25)
	60	61 (1549)							FOR761A5	2	56 (26)

Note:

- **Next Day Shipment on Deionized Water** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Next Day Shipment must be ordered by 12 p.m. CST.

Tubular and Process Assemblies

Flange Immersion Heaters

5-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.								Est. Ship. Weight	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	lbs	(kg)

Application: Clean Water

60 W/in ² Steel Flange 6-Copper (9.3 W/cm ²)	12	15 ½ (394)	FNC715J10	2	FNC715J3	1	FNC715J11	1	FNC715J5	1	35 (16)
	18	21 ½ (546)	FNC721J10	2	FNC721J3	1	FNC721J11	1	FNC721J5	1	38 (18)
	24	27 (686)	FNC727A10	3	FNC727A3	2	FNC727A11	3	FNC727A5	1	40 (19)
	30	32 ½ (826)			FNC732J3	2	FNC732J11	2	FNC732J5	1	43 (20)
	36	38 (965)			FNC738A3	2	FNC738A11	2	FNC738A5	1	47 (22)
	50	51 (1295)							FNC751A5	2	52 (24)
60 W/in ² Steel Flange 9-Copper (9.3 W/cm ²)	60	60 ½ (1537)							FNC760J5 [Ⓜ]	2	56 (26)
	18	15 ½ (394)	FNC715J10X	3	FNC715J3X	1	FNC715J11X	1	FNC715J5X	1	38 (18)
	27	21 ½ (546)	FNC721J10X	3	FNC721J3X	3	FNC721J11X	3	FNC721J5X	1	42 (19)
	36	27 (686)			FNC727A3X	3	FNC727A11X	3	FNC727A5X	1	45 (21)
	45	32 ½ (826)			FNC732J3X	3	FNC732J11X	3	FNC732J5X	3	48 (22)
	54	38 (965)			FNC738A3X	3	FNC738A11X	3	FNC738A5X	3	53 (24)
75	51 (1295)							FNC751A5X	3	60 (28)	

Application: Process Water

48 W/in ² Steel Flange 6-Incoloy [®] (7.5 W/cm ²)	9	13 ½ (343)	FNN713J10	1	FNN713J3	1	FNN713J11	1	FNN713J5	1	33 (15)
	12	18 (457)	FNN718A10	2	FNN718A3	1	FNN718A11	1	FNN718A5	1	36 (17)
	15	20 ½ (521)	FNN720J10	2	FNN720J3	1	FNN720J11	1	FNN720J5	1	38 (18)
	18	25 ½ (648)	FNN725J10	2	FNN725J3	1	FNN725J11	1	FNN725J5	1	40 (19)
	24	33 (838)	FNN733A10	3	FNN733A3	2	FNN733A11	3	FNN733A5	1	43 (20)
	30	40 ½ (1029)			FNN740J3	2	FNN740J11	2	FNN740J5	1	47 (22)
48 W/in ² Steel Flange 9-Incoloy [®] (7.5 W/cm ²)	36	48 (1219)			FNN748A3	2	FNN748A11	2	FNN748A5	1	52 (24)
	14	13 ½ (343)	FNN713J10X	3	FNN713J3X	1	FNN713J11X	1	FNN713J5X	1	35 (16)
	18	18 (457)	FNN718A10X	3	FNN718A3X	1	FNN718A11X	1	FNN718A5X	1	39 (18)
	23	20 ½ (521)	FNN720J10X	3	FNN720J3X	3	FNN720J11X	1	FNN720J5X	1	42 (19)
	27	25 ½ (648)	FNN725J10X	3	FNN725J3X	3	FNN725J11X	3	FNN725J5X	1	45 (21)
	36	33 (838)			FNN733A3X	3	FNN733A11X	3	FNN733A5X	1	48 (22)
45	40 ½ (1029)			FNN740J3X	3	FNN740J11X	3	FNN740J5X	3	53 (24)	
54	48 (1219)			FNN748A3X	3	FNN748A11X	3	FNN748A5X	3	60 (28)	

Applications: Forced Air and Gases, Caustic Solutions, Degreasing Solutions

23 W/in ² Steel Flange 6-Incoloy [®] (3.6 W/cm ²)	6	18 (457)	FNNA18A10	1	FNNA18A3	1	FNNA18A11	1	FNNA18A5	1	36 (17)
	9	25 ½ (648)	FNNA25J10	1	FNNA25J3	1	FNNA25J11	1	FNNA25J5	1	40 (19)
	12	33 (838)	FNNA33A10	2	FNNA33A3	1	FNNA33A11	1	FNNA33A5	1	43 (20)
	15	40 ½ (1029)	FNNA40J10	2	FNNA40J3	1	FNNA40J11	1	FNNA40J5	1	47 (22)
	18	48 (1219)	FNNA48A10	2	FNNA48A3	1	FNNA48A11	1	FNNA48A5	1	52 (24)
	25	64 ½ (1638)			FNNA64J3	2	FNNA64J11	2	FNNA64J5	1	57 (26)
30	77 (1956)			FNNA77A3	2	FNNA77A11	2	FNNA77A5	1	65 (28)	

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Notes:

- Same Day Shipment up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- [Ⓜ] 240V~(ac) can be wired wye and operated at 480V~(ac) three-phase to produce ½ more kW and watt density.
- [Ⓜ] Can be rewired wye to produce ½ of original kW and watt density (three-phase only).

Tubular and Process Assemblies

Flange Immersion Heaters

5-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.								Est. Ship. Weight lbs (kg)
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	

Applications: Forced Air and Gases, Caustic Solutions, Degreasing Solutions

23 W/in² Steel Flange 9-Incoloy® (3.6 W/cm ²)	9	18 (457)	FNNA18A10X	1	FNNA18A3X	1	FNNA18A11X	1	FNNA18A5X	1	39 (18)
	14	25½ (648)	FNNA25J10X	3	FNNA25J3X	1	FNNA25J11X	1	FNNA25J5X	1	45 (21)
	18	33 (838)	FNNA33A10X	3	FNNA33A3X	1	FNNA33A11X	1	FNNA33A5X	1	48 (22)
	23	40½ (1029)	FNNA40J10X	3	FNNA40J3X	3	FNNA40J11X	1	FNNA40J5X	1	53 (24)
	27	48 (1219)	FNNA48A10X	3	FNNA48A3X	3	FNNA48A11X	3	FNNA48A5X	1	60 (28)
	38	64½ (1638)			FNNA64J3X	3	FNNA64J11X	3	FNNA64J5X	1	68 (31)
	45	77 (1956)			FNNA77A3X	3	FNNA77A11X	3	FNNA77A5X	3	78 (36)

Applications: Lightweight Oils, Degreasing Solutions, Heat Transfer Oils

23 W/in² Steel Flange 6-Steel (3.6 W/cm ²)	6	18 (457)	FNS718A10	1	FNS718A3	1	FNS718A11	1	FNS718A5	1	36 (17)
	9	25½ (648)	FNS725J10	1	FNS725J3	1	FNS725J11	1	FNS725J5	1	40 (18)
	12	33 (838)	FNS733A10	2	FNS733A3	1	FNS733A11	1	FNS733A5	1	43 (20)
	15	40½ (1029)	FNS740J10	2	FNS740J3	1	FNS740J11	1	FNS740J5	1	47 (22)
	18	48 (1219)	FNS748A10	2	FNS748A3	3	FNS748A11	1	FNS748A5	1	52 (24)
	25	64½ (1638)			FNS764J3	2	FNS764J11	2	FNS764J5	1	57 (26)
	30	77 (1956)			FNS777A3	2	FNS777A11	2	FNS777A5	1	65 (30)

Applications: Medium Weight Oils, Heat Transfer Oils, Liquid Paraffin

16 W/in² Steel Flange 6-Incoloy® (2.5 W/cm ²)	3	13½ (343)			FNN713J12	1			FNN713J13	1	36 (17)
	4	18 (457)			FNN718A12	1			FNN718A13	1	40 (18)
	5	20½ (521)			FNN720J12	1			FNN720J13	1	43 (20)
	6	25½ (648)			FNN725J12	1			FNN725J13	1	47 (22)
	8	33 (838)			FNN733A12	1			FNN733A13	1	52 (24)
	10	40½ (1029)			FNN740J12	1			FNN740J13	1	57 (26)
	12	48 (1219)			FNN748A12	1			FNN748A13	1	65 (30)
16 W/in² Steel Flange 9-Incoloy® (2.5 W/cm ²)	4.5	13½ (343)			FNN713J12X	1			FNN713J13X	1	39 (18)
	6	18 (457)			FNN718A12X	1			FNN718A13X	1	45 (21)
	7.5	20½ (521)			FNN720J12X	1			FNN720J13X	1	48 (22)
	9	25½ (648)			FNN725J12X	1			FNN725J13X	1	53 (24)
	12	33 (838)			FNN733A12X	1			FNN733A13X	1	60 (28)
	15	40½ (1029)			FNN740J12X	1			FNN740J13X	1	68 (31)
	18	48 (1219)			FNN748A12X	1			FNN748A13X	1	78 (36)

CONTINUED

Notes:

- Same Day Shipment up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- ③ Must be operated three-phase only.

Tubular and Process Assemblies

Flange Immersion Heaters

5-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs (kg)	

Applications: Bunker C and #6 Fuel Oils

8 W/in²③	5	40½ (1029)			FNS740J12	1			FNS740J13	1	47 (22)
Steel Flange	6	48 (1219)			FNS748A12	1			FNS748A13	1	52 (24)
6-Steel	8	64½ (1638)			FNS764J12	1			FNS764J13	1	57 (26)
(1.3 W/cm ²)	10	77 (1956)			FNS777A12	1			FNS777A13	1	65 (30)
8 W/in²③	7.5	40½ (1029)			FNS740J12X	1			FNS740J13X	1	53 (24)
Steel Flange	9	48 (1219)			FNS748A12X	1			FNS748A13X	1	60 (28)
9-Steel	12	64½ (1638)			FNS764J12X	1			FNS764J13X	1	68 (31)
(1.3 W/cm ²)	15	77 (1956)			FNS777A12X	1			FNS777A13X	1	78 (36)

Notes:

- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- ③ Must be operated three-phase only.

6-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs (kg)	

Applications: Bunker C and #6 Fuel Oils

8 W/in²③	8	32¾ (835)			FPS732R12	1			FPS732R13	1	85 (39)
Steel Flange	10	40¾ (1026)			FPS740G12	1			FPS740G13	1	92 (42)
12-Steel	12	47¾ (1216)			FPS747R12	1			FPS747R13	1	100 (46)
(1.3 W/cm ²)	16.5	64¾ (1635)			FPS764G12	1			FPS764G13	1	110 (50)
	20	76¾ (1953)			FPS776R12	2			FPS776R13	1	118 (54)
8 W/in²③	10	32¾ (835)			FPS732R12X	1			FPS732R13X	1	90 (41)
Steel Flange	12.5	40¾ (1026)			FPS740G12X	1			FPS740G13X	1	98 (45)
15-Steel	15	47¾ (1216)			FPS747R12X	1			FPS747R13X	1	108 (49)
(1.3 W/cm ²)	21	64¾ (1635)			FPS764G12X	5			FPS764G13X	1	120 (55)
	25	76¾ (1953)			FPS776R12X	5			FPS776R13X	1	131 (60)

Application: Clean Water

60 W/in²	24	15% (391)	FPC715G10	3	FPC715G3	2	FPC715G11	2	FPC715G5	1	73 (33)
Steel Flange	36	21% (543)	FPC721G10	4	FPC721G3	2	FPC721G11	2	FPC721G5	1	78 (36)
12-Copper	48	26% (683)			FPC726R3	4	FPC726R11	3	FPC726R5	2	81 (37)
(9.3 W/cm ²)	60	32% (822)			FPC732G3	4	FPC732G11	3	FPC732G5	2	85 (39)
	72	37% (962)			FPC737R3	4			FPC737R5	2	92 (42)
	100	50% (1292)							FPC750R5	4	100 (45)
	120	60% (1534)							FPC760G5②	4	110 (50)
60 W/in²	30	15% (391)	FPC715G10X	3	FPC715G3X	5	FPC715G11X	3	FPC715G5X	1	76 (35)
Steel Flange	45	21% (543)	FPC721G10X	5	FPC721G3X	5	FPC721G11X	3	FPC721G5X	5	82 (38)
15-Copper	60	26% (683)			FPC726R3X	5	FPC726R11X	3	FPC726R5X	5	85 (39)
(9.3 W/cm ²)	75	32% (822)			FPC732G3X	5	FPC732G11X	5	FPC732G5X	5	90 (41)
	90	37% (962)			FPC737R3X	5			FPC737R5X	5	98 (45)
	125	50% (1292)							FPC750R5X	5	108 (49)

CONTINUED

Notes:

- **Same Day Shipment** up to **two pieces**. Over **two pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- ③ Must be operated three-phase only.

Tubular and Process Assemblies

Flange Immersion Heaters

6-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs (kg)	

Application: Process Water

48 W/in² Steel Flange 12-Incoloy[®] (7.5 W/cm ²)	18	13% (340)	FPN713G10	2	FPN713G3	1	FPN713G11	1	FPN713G5	1	73 (33)
	24	17% (454)	FPN717R10	3	FPN717R3	2	FPN717R11	2	FPN717R5	1	75 (34)
	30	20% (518)	FPN720G10	3	FPN720G3	2	FPN720G11	2	FPN720G5	1	78 (36)
	36	25% (645)	FPN725G10	4	FPN725G3	2	FPN725G11	2	FPN725G5	1	81 (37)
	48	32% (835)			FPN732R3	4	FPN732R11	3	FPN732R5	2	85 (39)
	60	40% (1026)			FPN740G3	4	FPN740G11	3	FPN740G5	2	92 (42)
	72	47% (1216)			FPN747R3	4			FPN747R5	2	100 (46)
48 W/in² Steel Flange 15-Incoloy[®] (7.5 W/cm ²)	23	13% (340)	FPN713G10X	3	FPN713G3X	5	FPN713G11X	1	FPN713G5X	1	76 (35)
	30	17% (454)	FPN717R10X	3	FPN717R3X	5	FPN717R11X	3	FPN717R5X	1	78 (36)
	38	20% (518)	FPN720G10X	5	FPN720G3X	5	FPN720G11X	3	FPN720G5X	1	82 (38)
	45	25% (645)	FPN725G10X	5	FPN725G3X	5	FPN725G11X	3	FPN725G5X	5	85 (39)
	60	32% (835)			FPN732R3X	5	FPN732R11X	3	FPN732R5X	5	90 (41)
	75	40% (1026)			FPN740G3X	5	FPN740G11X	5	FPN740G5X	5	98 (45)
	90	47% (1216)			FPN747R3X	5			FPN747R5X	5	108 (49)

Applications: Forced Air and Gases, Caustic Solutions, Degreasing Solutions

23 W/in² Steel Flange 12-Incoloy[®] (3.6 W/cm ²)	12	17% (454)	FPNA17R10	2	FPNA17R3	1	FPNA17R11	1	FPNA17R5	1	75 (34)
	18	25% (645)	FPNA25G10	2	FPNA25G3	1	FPNA25G11	1	FPNA25G5	1	81 (37)
	24	32% (835)	FPNA32R10	3	FPNA32R3	2	FPNA32R11	2	FPNA32R5	1	85 (39)
	30	40% (1026)	FPNA40G10	3	FPNA40G3	2	FPNA40G11	1	FPNA40G5	1	92 (42)
	36	47% (1216)	FPNA47R10	4	FPNA47R3	2	FPNA47R11	2	FPNA47R5	1	100 (46)
	50	64% (1635)			FPNA64G3	4	FPNA64G11	3	FPNA64G5	2	110 (50)
	60	76% (1953)			FPNA76R3	4	FPNA76R11	3	FPNA76R5	2	118 (54)
23 W/in² Steel Flange 15-Incoloy[®] (3.6 W/cm ²)	15	17% (454)	FPNA17R10X	3	FPNA17R3X	1	FPNA17R11X	1	FPNA17R5X	1	78 (36)
	23	25% (645)	FPNA25G10X	3	FPNA25G3X	5	FPNA25G11X	1	FPNA25G5X	1	85 (39)
	30	32% (835)	FPNA32R10X	3	FPNA32R3X	5	FPNA32R11X	3	FPNA32R5X	1	90 (41)
	38	40% (1026)	FPNA40G10X	5	FPNA40G3X	5	FPNA40G11X	3	FPNA40G5X	1	98 (45)
	45	47% (1216)	FPNA47R10X	5	FPNA47R3X	5	FPNA47R11X	3	FPNA47R5X	5	108 (49)
	63	64% (1635)			FPNA64G3X	5	FPNA64G11X	3	FPNA64G5X	5	120 (55)
	75	76% (1953)			FPNA76R3X	5	FPNA76R11X	5	FPNA76R5X	5	131 (60)

Applications: Lightweight Oils, Degreasing Solutions, Heat Transfer Oils

23 W/in² Steel Flange 12-Steel (3.6 W/cm ²)	12	17% (454)	FPS717R10	2	FPS717R3	1	FPS717R11	1	FPS717R5	1	75 (34)
	18	25% (645)	FPS725G10	2	FPS725G3	1	FPS725G11	1	FPS725G5	1	81 (37)
	24	32% (835)	FPS732R10	3	FPS732R3	2	FPS732R11	2	FPS732R5	1	85 (39)
	30	40% (1026)	FPS740G10	3	FPS740G3	2	FPS740G11	2	FPS740G5	1	92 (42)
	36	47% (1216)	FPS747R10	4	FPS747R3	2	FPS747R11	2	FPS747R5	1	100 (46)
	50	64% (1635)			FPS764G3	4	FPS764G11	3	FPS764G5	2	110 (50)
	60	76% (1953)			FPS776R3	4	FPS776R11	3	FPS776R5	2	118 (54)
23 W/in² Steel Flange 15-Steel (3.6 W/cm ²)	15	17% (454)	FPS717R10X	3	FPS717R3X	1	FPS717R11X	1	FPS717R5X	1	78 (36)
	23	25% (645)	FPS725G10X	3	FPS725G3X	5	FPS725G11X	1	FPS725G5X	1	85 (39)
	30	32% (835)	FPS732R10X	3	FPS732R3X	5	FPS732R11X	3	FPS732R5X	1	90 (41)
	38	40% (1026)	FPS740G10X	5	FPS740G3X	5	FPS740G11X	3	FPS740G5X	1	98 (45)
	45	47% (1216)	FPS747R10X	5	FPS747R3X	5	FPS747R11X	3	FPS747R5X	5	108 (49)
	63	64% (1635)			FPS764G3X	5	FPS764G11X	3	FPS764G5X	5	120 (55)
	75	76% (1953)			FPS776R3X	5	FPS776R11X	5	FPS776R5X	5	131 (60)

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Notes:

- **Same Day Shipment** up to **two pieces**. Over **two pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- ⑤ 240V~(ac) can be wired wye and operated at 480V~(ac) three-phase to produce ⅓ more kW and watt density.
- ⑥ Can be rewired wye to produce ⅓ of original kW and watt density (three-phase only).

Tubular and Process Assemblies

Flange Immersion Heaters

6-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs	(kg)

Applications: Medium Weight Oils, Heat Transfer Oils, Liquid Paraffin

16 W/in ² ⓐ Steel Flange 12-Incoloy® (2.5 W/cm ²)	6	13% (340)			FPN713G12	1				FPN713G13	1	73 (33)
	8	17% (454)			FPN717R12	1				FPN717R13	1	75 (34)
	10	20% (518)			FPN720G12	1				FPN720G13	1	78 (36)
	12	25% (645)			FPN725G12	1				FPN725G13	1	81 (37)
	16	32% (835)			FPN732R12	1				FPN732R13	1	85 (39)
	20	40% (1026)			FPN740G12	2				FPN740G13	1	92 (42)
	24	47% (1216)			FPN747R12	2				FPN747R13	1	100 (46)
16 W/in ² ⓐ Steel Flange 15-Incoloy® (2.5 W/cm ²)	7.5	13% (340)			FPN713G12X	1				FPN713G13X	1	76 (35)
	10	17% (454)			FPN717R12X	1				FPN717R13X	1	78 (36)
	12.5	20% (518)			FPN720G12X	1				FPN720G13X	1	82 (38)
	15	25% (645)			FPN725G12X	1				FPN725G13X	1	85 (39)
	20	32% (835)			FPN732R12X	5				FPN732R13X	1	90 (41)
	25	40% (1026)			FPN740G12X	5				FPN740G13X	1	98 (45)
	30	47% (1216)			FPN747R12X	5				FPN747R13X	1	108 (49)

Notes:

- **Same Day Shipment** up to **two pieces**. Over **two pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- ⓐ Must be operated three-phase only.

6-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs	(kg)

Application: Deionized Water, Demineralized Water

60 W/in ² 316 SS Flange 12-316 SS (9.3 W/cm ²) Passivated*	24	15% (400)	FPR715N10	3	FPR715N3	2	FPR715N11	2	FPR715N5	1	73 (33)
	36	21% (552)	FPR721N10	4	FPR721N3	2	FPR721N11	3	FPR721N5	1	78 (36)
	48	27% (692)			FPR727E3	4	FPR727E11	3	FPR727E5	2	81 (37)
	60	32% (832)			FPR732N3	4	FPR732N11	3	FPR732N5	2	85 (39)
	72	38% (972)			FPR738E3	4			FPR738E5	2	92 (42)
	100	51% (1302)							FPR751E5	4	100 (46)
120	60% (1543)							FPR760N5	4	110 (50)	
60 W/in ² 316 SS Flange 15-316 SS (9.3 W/cm ²) Passivated*	30	15% (400)	FPR715N10X	3	FPR715N3X	5	FPR715N11X	3	FPR715N5X	1	76 (35)
	45	21% (552)	FPR721N10X	5	FPR721N3X	5	FPR721N11X	3	FPR721N5X	5	82 (38)
	60	27% (692)			FPR727E3X	5	FPR727E11X	3	FPR727E5X	5	85 (39)
	75	32% (832)			FPR732N3X	5	FPR732N11X	5	FPR732N5X	5	90 (41)
	90	38% (972)			FPR738E3X	5			FPR738E5X	5	98 (45)
	125	51% (1302)							FPR751E5X	5	108 (49)
150	60% (1543)							FPR760N5X	5	120 (55)	

Notes:

- **Next Day Shipment on Deionized Water** up to **two pieces**. Over **two pieces**, please contact factory for RAPID SHIP details. Items for Next Day Shipment must be ordered by 12 p.m. CST.
- *Passivated requires Next Day Shipment.

Tubular and Process Assemblies

Flange Immersion Heaters

8-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.								Est. Ship. Weight	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	lbs	(kg)

Application: Clean Water

60 W/in² Steel Flange 18-Copper (9.3 W/cm ²)	50	21 $\frac{3}{8}$ (553)			FRC721N3	3	FRC721N11	3	FRC721N5	2	118 (54)
	75	29 $\frac{3}{8}$ (756)			FRC729N3	6			FRC729N5	2	126 (58)
	100	37 $\frac{3}{8}$ (946)			FRC737E3	6			FRC737E5	3	130 (59)
	125	45 $\frac{3}{8}$ (1149)			FRC745E3	6			FRC745E5	6	132 (60)
	150	52 $\frac{3}{8}$ (1340)							FRC752N5	6	137 (63)
	175	60 $\frac{3}{8}$ (1543)							FRC760N5	6	144 (66)
	200	68 $\frac{3}{8}$ (1734)							FRC768E5	6	149 (68)

Application: Process Water

48 W/in² Steel Flange 18-Incoloy[®] (7.5 W/cm ²)	50	25 $\frac{3}{8}$ (654)			FRN725N3	3	FRN725N11	3	FRN725N5	2	121 (55)
	75	35 $\frac{3}{8}$ (908)			FRN735N3	6			FRN735N5	2	130 (59)
	100	44 $\frac{3}{8}$ (1124)			FRN744E3	6			FRN744E5	3	132 (60)
	125	54 $\frac{1}{16}$ (1389)			FRN754M3	6			FRN754M5	6	140 (64)
	150	63 $\frac{1}{16}$ (1617)							FRN763M5	6	145 (66)
	175	73 $\frac{3}{16}$ (1859)							FRN773D5	6	151 (69)
	200	82 $\frac{1}{16}$ (2100)							FRN782M5	6	157 (72)
48 W/in² Steel Flange 24-Incoloy[®] (7.5 W/cm ²)	67	26 $\frac{3}{16}$ (665)			FRN726D3X	4	FRN726D11X	3	FRN726D5X	2	129 (59)
	100	36 $\frac{3}{16}$ (919)			FRN736D3X	8			FRN736D5X	4	142 (65)
	133	44 $\frac{1}{16}$ (1135)			FRN744M3X	8			FRN744M5X	4	147 (67)
	167	54 $\frac{1}{16}$ (1389)			FRN754M3X	8			FRN754M5X	8	158 (72)
	200	63 $\frac{1}{16}$ (1618)							FRN763M5X	8	166 (76)
	233	73 $\frac{3}{16}$ (1859)							FRN773D5X	8	175 (80)
	267	82 $\frac{1}{16}$ (2100)							FRN782M5X	8	184 (84)

Application: Forced Air and Gases, Caustic Solutions, Degreasing Solutions

23 W/in² Steel Flange 18-Incoloy[®] (3.6 W/cm ²)	30	32 $\frac{3}{8}$ (832)	FRNA32N10	3	FRNA32N3	2	FRNA32N11	2	FRNA32N5	1	130 (59)
	40	43 $\frac{3}{8}$ (1099)			FRNA43E3	3	FRNA43E11	2	FRNA43E5	2	132 (60)
	50	51 $\frac{1}{16}$ (1313)			FRNA51M3	3	FRNA51M11	3	FRNA51M5	2	137 (63)
23 W/in² Steel Flange 24-Incoloy[®] (3.6 W/cm ²)	40	33 $\frac{3}{16}$ (843)	FRNA33D10X	4	FRNA33D3X	4	FRNA33D11X	2	FRNA33D5X	2	142 (65)
	53	43 $\frac{1}{16}$ (1110)			FRNA43M3X	4	FRNA43M11X	3	FRNA43M5X	2	147 (67)
	67	51 $\frac{1}{16}$ (1313)			FRNA51M3X	4	FRNA51M11X	3	FRNA51M5X	2	154 (70)

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Notes:

- **Next Day Shipment** up to **two pieces**. Over **two pieces**, please contact factory for RAPID SHIP details. Items for Next Day Shipment must be ordered by 12 p.m. CST.
- Truck Shipment only—To expedite shipment, evaluate whether Drop Ship is required.
- ⑤ 240V~(ac) can be wired wye and operated at 480V~(ac) three-phase to produce $\frac{1}{3}$ more kW and watt density.
- ⑥ Can be rewired wye to produce $\frac{1}{3}$ of original kW and watt density (three-phase only).

Tubular and Process Assemblies

Flange Immersion Heaters

8-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Immersed B Dimension in. (mm)	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs	(kg)

Applications: Lightweight Oils, Degreasing Solutions, Heat Transfer Oils

23 W/in ² Steel Flange 18-Steel (3.6 W/cm ²)	30	32 ³ / ₁₆ (832)	FRS732N10	3	FRS732N3	2	FRS732N11	2	FRS732N5	1	130 (59)
	40	43 ¹ / ₁₆ (1099)			FRS743E3	3	FRS743E11	2	FRS743E5	2	132 (60)
	50	51 ¹ / ₁₆ (1313)			FRS751M3	3	FRS751M11	3	FRS751M5	2	137 (63)
	60	62 ³ / ₁₆ (1580)			FRS762D3	6	FRS762D11	3	FRS762D5	2	154 (70)
	70	70 ¹ / ₁₆ (1795)			FRS770M3	6	FRS770M11	6	FRS770M5	2	160 (73)
	80	79 ¹ / ₁₆ (2024)			FRS779M3	6	FRS779M5	3	FRS779M5	3	172 (78)
23 W/in ² Steel Flange 24-Steel (3.6 W/cm ²)	40	33 ³ / ₁₆ (843)	FRS733D10X	4	FRS733D3X	4	FRS733D11X	2	FRS733D5X	2	142 (65)
	53	43 ¹ / ₁₆ (1110)			FRS743M3X	4	FRS743M11X	3	FRS743M5X	2	147 (67)
	67	51 ¹ / ₁₆ (1313)			FRS751M3X	4	FRS751M11X	3	FRS751M5X	2	154 (70)
	80	62 ³ / ₁₆ (1580)			FRS762D3X	8	FRS762D11X	4	FRS762D5X	4	166 (76)
	93	70 ¹ / ₁₆ (1796)			FRS770M3X	8	FRS770M11X	6	FRS770M5X	4	175 (80)
	107	79 ¹ / ₁₆ (2024)			FRS779M3X	8	FRS779M5X	4	FRS779M5X	4	181 (82)

Applications: Medium Weight Oils, Heat Transfer Oils, Liquid Paraffin

16 W/in ² ③ Steel Flange 18-Incoloy® (2.5 W/cm ²)	17	25 ³ / ₁₆ (654)			FRN725N12	1			FRN725N13	1	121 (55)
	25	35 ³ / ₁₆ (908)			FRN735N12	2			FRN735N13	1	130 (59)
	33	44 ¹ / ₁₆ (1124)			FRN744E12	2			FRN744E13	1	132 (60)
	42	54 ¹ / ₁₆ (1389)			FRN754M12	3			FRN754M13	2	140 (64)
	50	63 ¹ / ₁₆ (1618)							FRN763M13	2	145 (66)
	58	73 ³ / ₁₆ (1859)							FRN773D13	2	151 (69)
67	82 ¹ / ₁₆ (2100)							FRN782M13	2	157 (72)	
16 W/in ² ③ Steel Flange 24-Incoloy® (2.5 W/cm ²)	23	26 ³ / ₁₆ (665)			FRN726D12X	2			FRN726D13X	1	129 (59)
	33	36 ³ / ₁₆ (919)			FRN736D12X	2			FRN736D13X	1	142 (65)
	44	44 ¹ / ₁₆ (1135)			FRN744M12X	4			FRN744M13X	2	147 (67)
	56	54 ¹ / ₁₆ (1389)			FRN754M12X	4			FRN754M13X	2	158 (72)
	67	63 ¹ / ₁₆ (1618)							FRN763M13X	2	166 (76)
	77	73 ³ / ₁₆ (1859)							FRN773D13X	2	175 (80)
89	82 ¹ / ₁₆ (2100)							FRN782M13X	4	184 (84)	

Applications: Bunker C and #6 Fuel Oils

8 W/in ² ③ Steel Flange 18-Steel (1.3 W/cm ²)	12.5	43 ³ / ₁₆ (1099)			FRS743E12	1			FRS743E13	1	132 (60)
	16.5	51 ¹ / ₁₆ (1313)			FRS751M12	1			FRS751M13	1	137 (62)
	20	62 ³ / ₁₆ (1580)			FRS762D12	2			FRS762D13	1	145 (66)
	24	70 ¹ / ₁₆ (1795)			FRS770M12	2			FRS770M13	1	151 (69)
	27	79 ¹ / ₁₆ (2024)			FRS779M12	2			FRS779M13	1	155 (71)
8 W/in ² ③ Steel Flange 24-Steel (1.3 W/cm ²)	17	43 ¹ / ₁₆ (1110)			FRS743M12X	1			FRS743M13X	1	147 (67)
	22	51 ¹ / ₁₆ (1313)			FRS751M12X	2			FRS751M13X	1	154 (70)
	27	62 ³ / ₁₆ (1580)			FRS762D12X	2			FRS762D13X	1	166 (76)
	32	70 ¹ / ₁₆ (1796)			FRS770M12X	2			FRS770M13X	1	175 (80)
	36	79 ¹ / ₁₆ (2024)			FRS779M12X	2			FRS779M13X	1	181 (82)

Notes:

- Next Day Shipment up to **two pieces**. Over **two pieces**, please contact factory for RAPID SHIP details. Items for Next Day Shipment must be ordered by 12 p.m. CST.
- Truck Shipment only—To expedite shipment, evaluate whether Drop Ship is required.
- ③ Must be operated three-phase only.

Tubular and Process Assemblies

Flange Immersion Heaters

Build-a-Code

Flange Immersion Heater Base Code Number^①

(Includes general purpose enclosure without thermostat)

Terminal Enclosure Type

- S = General purpose (NEMA 1)
- W = Moisture resistant (NEMA 4)
- E = Explosion resistant (NEMA 7)
- E/W = Explosion/moisture resistant (NEMA 7/4)

Thermostat^②

Thermocouple^③

- J = Type J
- K = Type K

- ① Flange immersion heaters are supplied with a standard, general purpose (NEMA 1) terminal enclosure. A thermostat will not fit the standard general purpose terminal enclosure on 2, 2½ and 3-inch flange sizes.
- ② Thermostat code numbers are shown in the *Thermostat Stock* chart on page 45. Check the temperature sensing bulb O.D. to be certain it will fit into the thermowell's I.D.
- ③ Specify Type J or K thermocouple. If overtemp thermocouple specify orientation horizontal, vertical up or vertical down.

Tubular and Process Assemblies

Circulation Heaters

1½-inch NPT

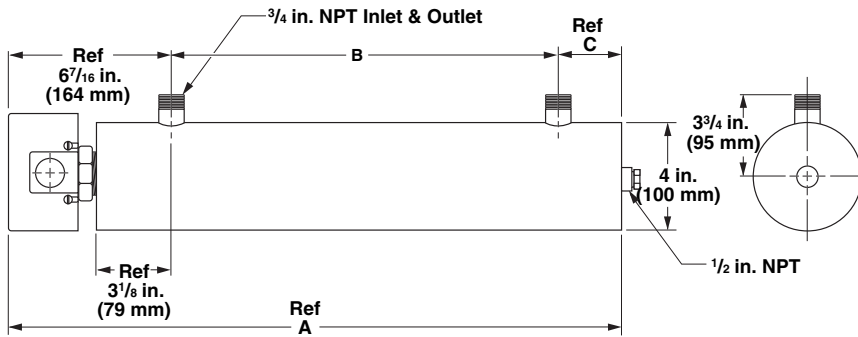


Fig. No.	A Dimension in. (mm)	B Dimension in. (mm)	C Dimension in. (mm)
1.1	24 5/8 (625)	15 (381)	3 1/2 (79)
1.2	32 1/2 (829)	23 (584)	3 (76)
1.3	42 1/2 (1083)	32 (813)	4 (102)
1.4	63 1/2 (1616)	53 (1346)	4 (102)

1½-inch NPT Screw Plug—WATROD Element

WATROD Description	kW	Fig. No.	Code No.		Est. Ship.	
			120/240V~(ac) 1-Phase	240V~(ac) 1-Phase	Weight lbs	(kg)

Application: Clean Water

60 W/in ² ④	3.0	1.1	CBEC15A6		23	(11)
Steel Tank	4.0	1.1		CBEC19A10	29	(14)
2-Copper	5.0	1.2		CBEC23J10	29	(14)
(9.3 W/cm ²)	6.0	1.2		CBEC27J10	31	(14)

Applications: Forced Air and Gases, Caustic Solutions, Degreasing Solutions

23 W/in ² ④	1.0	1.1	CBEN13G6		21	(10)
Steel Tank	1.5	1.1	CBEN19A6		29	(14)
2-Incoloy®	2.0	1.2	CBEN24G6		29	(14)
(3.6 W/cm ²)						

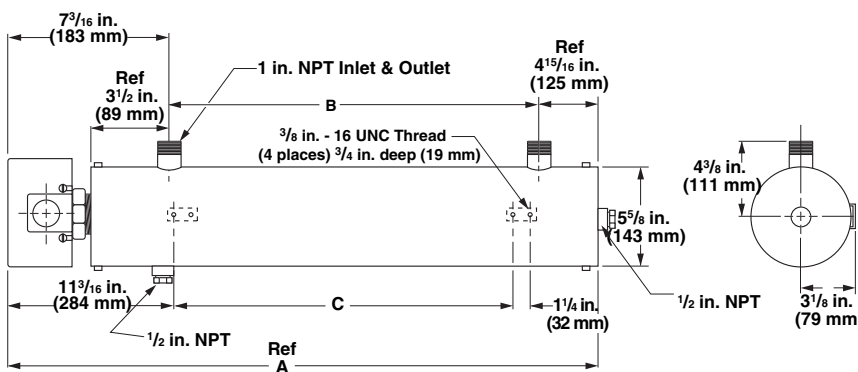
Applications: Lightweight Oils, Degreasing Solutions, Heat Transfer Oils

23 W/in ² ④	1.5	1.1	CBES19G6		29	(14)
Steel Tank	2.0	1.2	CBES25G6		29	(14)
2-Steel						
(3.6 W/cm ²)						

Notes:

- Same Day Shipment up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- ④ Wired for higher voltage.

2½-inch NPT



2½-inch NPT Screw Plug

Fig. No.	A Dimension in. (mm)	B Dimension in. (mm)	C Dimension in. (mm)
2.1	34 1/16 (881)	22 1/2 (572)	16 1/2 (419)
2.2	44 1/16 (1135)	32 1/2 (1129)	26 1/2 (673)
2.3	57 3/16 (1453)	45 (1143)	39 (991)
2.4	63 1/16 (1618)	51 1/2 (1308)	46 1/2 (1181)
2.5	34 1/16 (881)	22 1/2 (572)	16 1/2 (419)
2.6	44 1/16 (1135)	32 1/2 (1129)	26 1/2 (673)
2.7	57 3/16 (1453)	45 (1143)	39 (991)

Note:

- Same Day Shipment up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.

Tubular and Process Assemblies

Circulation Heaters

2½-inch NPT Screw Plug—WATROD Element

WATROD Description	kW	Fig. No.	Code No.		Est. Ship. Weight lbs (kg)
			240V~(ac) 3-Phase	480V~(ac) 3-Phase	

Application: Clean Water

60 W/in ²	6.0	2.5	CBLC714L3	CBLC714L5	24 (11)
Steel Tank	7.5	2.5	CBLC717L3	CBLC717L5	24 (11)
3-Copper	9.0	2.5	CBLC720L3	CBLC720L5	26 (12)
(9.3 W/cm ²)	12.0	2.6	CBLC726C3	CBLC726C5	27 (13)
	15.0	2.6	CBLC731L3	CBLC731L5	29 (14)
	18.0	2.7	CBLC737C3	CBLC737C5	30 (14)

Application: Deionized Water, Demineralized Water*

60 W/in ²	6.0	2.5	CBLR714L3	CBLR714L5	24 (11)
316 SS Tank	7.5	2.5	CBLR717L3	CBLR717L5	24 (11)
3-316 SS	9.0	2.5	CBLR720L3	CBLR720L5	26 (12)
(9.3 W/cm ²)	12.0	2.6	CBLR726C3	CBLR726C5	27 (13)
Passivated	15.0	2.6	CBLR731L3	CBLR731L5	29 (14)
	18.0	2.7	CBLR737C3	CBLR737C5	30 (14)

Application: Process Water

48 W/in ²	6.0	2.5	CBLN717G3	CBLN717G5	24 (11)
Steel Tank	7.5	2.5	CBLN719R3	CBLN719R5	26 (12)
3-Incoloy®	9.0	2.5	CBLN724R3	CBLN724R5	27 (13)
(7.5 W/cm ²)	12.0	2.6	CBLN732G3	CBLN732G5	29 (14)
	15.0	2.7	CBLN739R3	CBLN739R5	31 (14)
	18.0	2.7	CBLN747G3	CBLN747G5	32 (15)

Applications: Forced Air and Gases, Caustic Solutions, Degreasing Solutions

23 W/in ² ⑤⑥	3.0	2.5	CBLNA17G3	CBLNA17G5	24 (11)
Steel Tank	4.5	2.6	CBLNA24R3	CBLNA24R5	27 (13)
3-Incoloy®	6.0	2.6	CBLNA32G3	CBLNA32G5	29 (14)
(3.6 W/cm ²)	7.5	2.7	CBLNA39R3	CBLNA39R5	31 (14)
	9.0	2.7	CBLNA47G3	CBLNA47G5	32 (15)

Applications: Lightweight Oils, Degreasing Solutions, Heat Transfer Oils

23 W/in ² ⑥	3.0	2.5	CBLS717E3	CBLS717E5	24 (11)
Steel Tank	4.5	2.5	CBLS724N3	CBLS724N5	27 (13)
3-Steel	6.0	2.6	CBLS732E3	CBLS732E5	29 (14)
(3.6 W/cm ²)	7.5	2.7	CBLS739N3	CBLS739N5	31 (14)
	9.0	2.7	CBLS747E3	CBLS747E5	32 (15)

Applications: Medium Weight Oils, Heat Transfer Oils, Lube Oils, Liquid Paraffin

16 W/in ² ③	2.0	2.5	CBLN717G12	CBLN717G13	24 (11)
Steel Tank	2.5	2.5	CBLN719R12	CBLN719R13	26 (12)
3-Incoloy®	3.0	2.5	CBLN724R12	CBLN724R13	27 (13)
(2.5 W/cm ²)	4.0	2.6	CBLN732G12	CBLN732G13	29 (14)
	5.0	2.7	CBLN739R12	CBLN739R13	31 (14)
	6.0	2.7	CBLN747G12	CBLN747G13	32 (15)

Applications: Bunker C and #6 Fuel Oils

8 W/in ² ③	2.0	2.6	CBLS732E12	CBLS732E13	29 (14)
Steel Tank	3.0	2.7	CBLS747E12	CBLS747E13	32 (15)
3-Steel					
(1.3 W/cm ²)					

Notes:

- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- ③ Must be operated three-phase only.
- ⑤ 240V~(ac) can be wired wye and operated at 480V~(ac) three-phase to produce ⅓ more kW and watt density.
- ⑥ Can be rewired wye to produce ⅓ of original kW and watt density (three-phase only).
- ***Next Day Shipment on Deionized Water** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Next Day Shipment must be ordered by 12 p.m. CST.

Tubular and Process Assemblies

Circulation Heaters

3-inch Flange

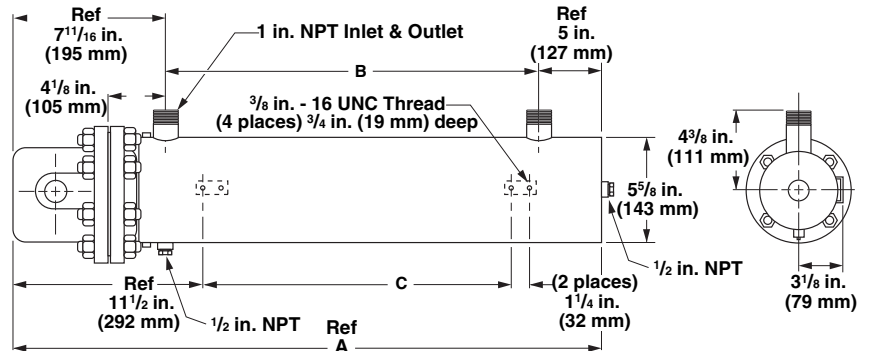


Fig. No.	A Dimension in. (mm)	B Dimension in. (mm)	C Dimension in. (mm)
3.1	35 ³ / ₁₆ (894)	22 ¹ / ₂ (573)	16 ¹ / ₂ (419)
3.2	45 ³ / ₁₆ (1148)	32 ¹ / ₂ (826)	26 ¹ / ₂ (673)
3.3	57 ¹ / ₁₆ (1465)	45 (1143)	39 (991)

3-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Fig. No.	Code No.				Est. Ship. Weight lbs (kg)
			240V~(ac) 1-Phase	240V~(ac) 3-Phase	480V~(ac) 1-Phase	480V~(ac) 3-Phase	

Application: Clean Water

60 W/in ²	6.0	3.1	CFMC715J10	CFMC715J3	CFMC715J11	CFMC715J5	66 (30)
Steel Tank	9.0	3.1	CFMC721J10	CFMC721J3	CFMC721J11	CFMC721J5	70 (32)
3-Copper	12.0	3.2		CFMC727A3	CFMC727A11	CFMC727A5	80 (37)
(9.3 W/cm ²)	15.0	3.2		CFMC732J3	CFMC732J11	CFMC732J5	96 (44)
	18.0	3.3		CFMC738A3	CFMC738A11	CFMC738A5	98 (45)

Application: Process Water

48 W/in ² ⑤	6.0	3.1	CFMN718A10	CFMN718A3	CFMN718A11	CFMN718A5	68 (31)
Steel Tank	7.5	3.1	CFMN720J10	CFMN720J3	CFMN720J11	CFMN720J5	70 (32)
3-Incoloy®	9.0	3.2	CFMN725J10	CFMN725J3	CFMN725J11	CFMN725J5	78 (36)
(7.5 W/cm ²)	12.0	3.2		CFMN733A3	CFMN733A11	CFMN733A5	96 (44)
	15.0	3.3		CFMN740J3	CFMN740J11	CFMN740J5	100 (46)
	18.0	3.3		CFMN748A3	CFMN748A11	CFMN748A5	107 (49)

Applications: Forced Air and Gases, Caustic Solutions, Degreasing Solutions

23 W/in ² ⑤⑥	3.0	3.1	CFMNA18A10	CFMNA18A3	CFMNA18A11	CFMNA18A5	68 (31)
Steel Tank	4.5	3.2	CFMNA25J10	CFMNA25J3	CFMNA25J11	CFMNA25J5	78 (36)
3-Incoloy®	6.0	3.2	CFMNA33A10	CFMNA33A3	CFMNA33A11	CFMNA33A5	96 (44)
(3.6 W/cm ²)	7.5	3.3	CFMNA40J10	CFMNA40J3	CFMNA40J11	CFMNA40J5	100 (46)
	9.0	3.3	CFMNA48A10	CFMNA48A3	CFMNA48A11	CFMNA48A5	107 (49)

CONTINUED

Notes:

- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- Truck Shipment only—To expedite shipment, evaluate whether Drop Ship is required.
- ⑤ 240V~(ac) can be wired wye and operated at 480V~(ac) three-phase to produce 1/3 more kW and watt density.
- ⑥ Can be rewired wye to produce 1/3 of original kW and watt density (three-phase only).

Tubular and Process Assemblies

Circulation Heaters

3-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Fig. No.	Code No.				Est. Ship. Weight lbs (kg)
			240V~(ac) 1-Phase	240V~(ac) 3-Phase	480V~(ac) 1-Phase	480V~(ac) 3-Phase	

Applications: Lightweight Oils, Degreasing Solutions, Heat Transfer Oils

23 W/in ²	3.0	3.1	CFMS718A10	CFMS718A3	CFMS718A11	CFMS718A5	68 (31)
Steel Tank	4.5	3.1	CFMS725J10	CFMS725J3	CFMS725J11	CFMS725J5	78 (36)
3-Steel	6.0	3.2	CFMS733A10	CFMS733A3	CFMS733A11	CFMS733A5	96 (44)
(3.6 W/cm ²)	7.5	3.3	CFMS740J10	CFMS740J3	CFMS740J11	CFMS740J5	100 (46)
	9.0	3.3	CFMS748A10	CFMS748A3	CFMS748A11	CFMS748A5	107 (49)


Applications: Medium Weight Oils, Heat Transfer Oils, Lube Oils, Liquid Paraffin

16 W/in ² ③	2.0	3.1		CFMN718A12		CFMN718A13	68 (31)
Steel Tank	2.5	3.1		CFMN720J12		CFMN720J13	70 (32)
3-Incoloy®	3.0	3.2		CFMN725J12		CFMN725J13	78 (36)
(2.6 W/cm ²)	4.0	3.2		CFMN733A12		CFMN733A13	96 (44)
	5.0	3.3		CFMN740J12		CFMN740J13	100 (46)
	6.0	3.3		CFMN748A12		CFMN748A13	107 (49)

Applications: Bunker C and #6 Fuel Oils

8 W/in ² ③	2.0	3.2		CFMS733A12		CFMS733A13	96 (44)
Steel Tank	3.0	3.3		CFMS748A12		CFMS748A13	107 (49)
3-Steel							
(1.3 W/cm ²)							

Notes:

- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
-  Truck Shipment only—To expedite shipment, evaluate whether Drop Ship is required.
- ③ Must be operated three-phase only.

Tubular and Process Assemblies

Circulation Heaters

4-inch Flange

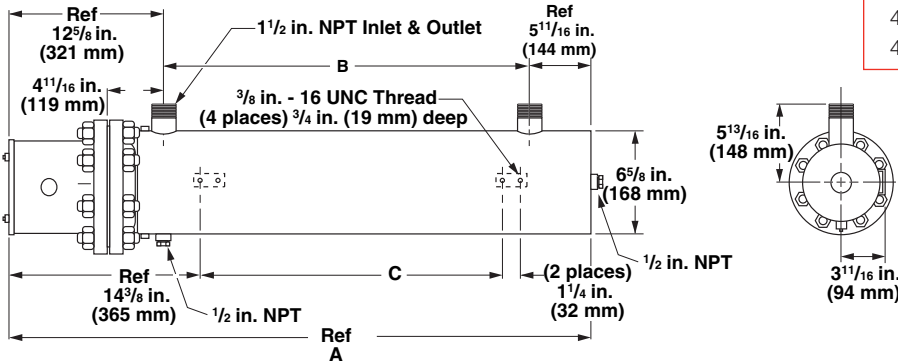


Fig. No.	A Dimension in. (mm)	B Dimension in. (mm)	C Dimension in. (mm)
4.1	38 ¹⁵ / ₁₆ (989)	20 ¹ / ₂ (521)	17 (432)
4.2	49 ⁷ / ₁₆ (1256)	31 (787)	27 ¹ / ₂ (699)
4.3	70 ⁷ / ₁₆ (1789)	52 (1321)	48 ¹ / ₂ (1232)
4.4	91 ⁷ / ₁₆ (2326)	73 (1854)	66 (1676)

4-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Fig. No.	Code No.								Est. Ship. Weight	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	lbs	(kg)

Application: Clean Water

60 W/in ²	12	4.1	CFOC715J10	2	CFOC715J3	1	CFOC715J11	1	CFOC715J5	1	124 (57)
Steel Tank	18	4.1	CFOC721J10	2	CFOC721J3	1	CFOC721J11	1	CFOC721J5	1	127 (58)
6-Copper	24	4.2	CFOC727A10	2	CFOC727A3	2	CFOC727A11	1	CFOC727A5	1	160 (73)
(9.3 W/cm ²)	30	4.2			CFOC732J3	2	CFOC732J11	2	CFOC732J5	1	163 (74)
	36	4.3			CFOC738A3	2	CFOC738A11	2	CFOC738A5	1	229 (104)

Application: Process Water

48 W/in ²	9	4.1	CFON713J10	1	CFON713J3	1	CFON713J11	1	CFON713J5	1	122 (56)
Steel Tank	12	4.1	CFON718A10	2	CFON718A3	1	CFON718A11	1	CFON718A5	1	125 (57)
6-Incoloy®	15	4.1	CFON720J10	2	CFON720J3	1	CFON720J11	2	CFON720J5	1	127 (58)
(7.5 W/cm ²)	18	4.1	CFON725J10	2	CFON725J3	1	CFON725J11	1	CFON725J5	1	160 (73)
	24	4.2	CFON733A10	2	CFON733A3	2	CFON733A11	1	CFON733A5	1	163 (74)
	30	4.3			CFON740J3	2	CFON740J11	2	CFON740J5	1	229 (104)
	36	4.3			CFON748A3	2	CFON748A11	2	CFON748A5	1	234 (107)

Applications: Forced Air and Gases, Caustic Solutions, Degreasing Solutions

23 W/in ² ⑤⑥	6	4.1	CFONA18A10	1	CFONA18A3	1	CFONA18A11	1	CFONA18A5	1	125 (57)
Steel Tank	9	4.1	CFONA25J10	1	CFONA25J3	1	CFONA25J11	1	CFONA25J5	1	160 (73)
6-Incoloy®	12	4.2	CFONA33A10	2	CFONA33A3	1	CFONA33A11	1	CFONA33A5	1	163 (74)
(3.6 W/cm ²)	15	4.3	CFONA40J10	2	CFONA40J3	1	CFONA40J11	1	CFONA40J5	1	229 (104)
	18	4.3	CFONA48A10	2	CFONA48A3	1	CFONA48A11	1	CFONA48A5	1	234 (107)
	25	4.4			CFONA64J3	2	CFONA64J11	2	CFONA64J5	1	298 (136)
	30	4.4			CFONA77A3	2	CFONA77A11	2	CFONA77A5	1	306 (139)

CONTINUED

Notes:

- Same Day Shipment up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- Truck Shipment only—To expedite shipment, evaluate whether Drop Ship is required.
- ⑤ 240V~(ac) can be wired wye and operated at 480V~(ac) three-phase to produce 1/3 more kW and watt density.
- ⑥ Can be rewired wye to produce 1/3 of original kW and watt density (three-phase only).

Tubular and Process Assemblies

Circulation Heaters

4-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Fig. No.	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs	(kg)

Applications: Lightweight Oils, Degreasing Solutions, Heat Transfer Oils

23 W/in²	6	4.1	CFOS718A10	1	CFOS718A3	1	CFOS718A11	1	CFOS718A5	1	125 (57)
Steel Tank	9	4.1	CFOS725J10	1	CFOS725J3	1	CFOS725J11	1	CFOS725J5	1	160 (73)
6-Steel	12	4.2	CFOS733A10	2	CFOS733A3	1	CFOS733A11	1	CFOS733A5	1	163 (74)
(3.6 W/cm ²)	15	4.3	CFOS740J10	2	CFOS740J3	1	CFOS740J11	1	CFOS740J5	1	229 (104)
	18	4.3	CFOS748A10	2	CFOS748A3	1	CFOS748A11	1	CFOS748A5	1	234 (107)
	25	4.4			CFOS764J3	2	CFOS764J11	2	CFOS764J5	1	298 (136)
	30	4.4			CFOS777A3	2	CFOS777A11	2	CFOS777A5	1	306 (139)


Applications: Medium Weight Oils, Heat Transfer Oils, Liquid Paraffin

16 W/in²③	3	4.1			CFON713J12	1			CFON713J13	1	122 (56)
Steel Tank	4	4.1			CFON718A12	1			CFON718A13	1	125 (57)
6-Incoloy®	5	4.1			CFON720J12	1			CFON720J13	1	127 (58)
(2.6 W/cm ²)	6	4.1			CFON725J12	1			CFON725J13	1	160 (73)
	8	4.2			CFON733A12	1			CFON733A13	1	163 (74)
	10	4.3			CFON740J12	2			CFON740J13	1	229 (104)
	12	4.3			CFON748A12	1			CFON748A13	1	234 (107)

Applications: Bunker C and #6 Fuel Oils

8 W/in²③	5	4.3			CFOS740J12	1			CFOS740J13	1	229 (104)
Steel Tank	6	4.3			CFOS748A12	1			CFOS748A13	1	234 (106)
6-Steel	8	4.4			CFOS764J12	1			CFOS764J13	1	298 (135)
(1.3 W/cm ²)	10	4.4			CFOS777A12	1			CFOS777A13	1	306 (139)

Notes:

- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
-  Truck Shipment only—To expedite shipment, evaluate whether Drop Ship is required.
- ③ Must be operated three-phase only.


4-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Fig. No.	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs	(kg)

Application: Deionized Water, Demineralized Water

60 W/in²	12	4.1	CFOR716A10	1	CFOR716A3	1	CFOR716A11	1	CFOR716A5	1	124 (57)
316 SS Tank	18	4.1	CFOR722A10	2	CFOR722A3	1	CFOR722A11	1	CFOR722A5	1	127 (58)
6-316 SS	24	4.2	CFOR727J10	2	CFOR727J3	2	CFOR727J11	1	CFOR727J5	1	160 (73)
(9.3 W/cm ²)	30	4.2			CFOR733A3	2	CFOR733A11	2	CFOR733A5	1	163 (74)
Passivated	36	4.3			CFOR738J3	2	CFOR738J11	2	CFOR738J5	1	229 (104)
	50	4.3							CFOR751J5	2	234 (106)

Notes:

- **Next Day Shipment on Deionized Water** up to **five pieces**. Over **five pieces**, please contact factory for Rapid Ship details. Items for Next Day Shipment must be ordered by 12 p.m. CST.
-  Truck Shipment only—To expedite shipment, evaluate whether Drop Ship is required.

Tubular and Process Assemblies

Circulation Heaters

5-inch Flange

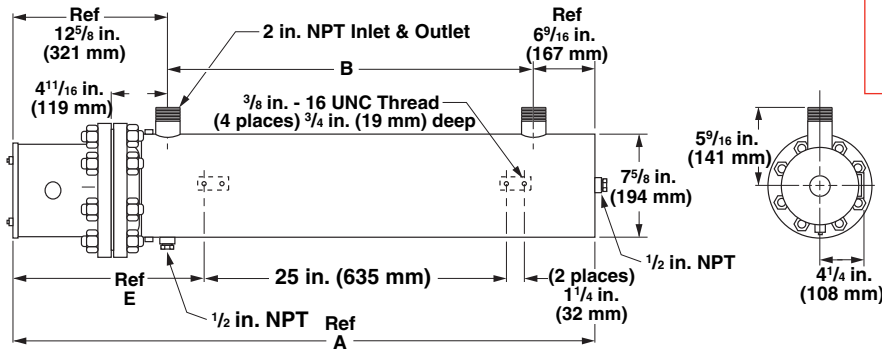


Fig. No.	A Dimension in. (mm)	B Dimension in. (mm)	E Dimension in. (mm)
5.1	49 7/16 (1249)	30 (762)	14 1/8 (378)
5.2	56 7/16 (1427)	37 (940)	18 7/16 (471)
5.3	67 1/16 (1719)	48 1/2 (1232)	24 15/16 (633)
5.4	81 1/16 (2059)	61 7/8 (1572)	30 7/8 (784)
5.5	94 1/16 (2389)	74 7/8 (1902)	37 15/16 (964)

5-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Fig. No.	Code No.								Est. Ship. Weight	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	lbs	(kg)

Application: Clean Water

60 W/in ² Steel Tank	24	5.1	CFNC727A10	3	CFNC727A3	2	CFNC727A11	3	CFNC727A5	1	140 (64)
6-Copper (9.3 W/cm ²)	30	5.1			CFNC732J3	2	CFNC732J11	2	CFNC732J5	1	142 (65)
	36	5.2			CFNC738A3	2	CFNC738A11	2	CFNC738A5	1	160 (73)
	50	5.3							CFNC751A5	2	180 (82)
60 W/in ² Steel Tank	36	5.1			CFNC727A3X	3	CFNC727A11X	3	CFNC727A5X	1	145 (66)
9-Copper (9.3 W/cm ²)	45	5.1			CFNC732J3X	3	CFNC732J11X	3	CFNC732J5X	3	147 (67)
	54	5.2			CFNC738A3X	3	CFNC738A11X	3	CFNC738A5X	3	166 (76)
	75	5.3						CFNC751A5X	3	188 (86)	

Application: Process Water

48 W/in ² Steel Tank	24	5.1	CFNN733A10	3	CFNN733A3	2	CFNN733A11	3	CFNN733A5	1	145 (66)
6-Incoloy® (7.5 W/cm ²)	30	5.2			CFNN740J3	2	CFNN740J11	2	CFNN740J5	1	167 (76)
	36	5.3			CFNN748A3	2	CFNN748A11	2	CFNN748A5	1	180 (82)
48 W/in ² Steel Tank	36	5.1			CFNN733A3X	3	CFNN733A11X	3	CFNN733A5X	1	150 (68)
9-Incoloy® (7.5 W/cm ²)	45	5.2			CFNN740J3X	3	CFNN740J11X	3	CFNN740J5X	3	173 (79)
	54	5.3			CFNN748A3X	3	CFNN748A11X	3	CFNN748A5X	3	188 (86)

CONTINUED

Notes:

- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- Truck Shipment only—To expedite shipment, evaluate whether Drop Ship is required.
- ⑤ 240V~(ac) can be wired wye and operated at 480V~(ac) three-phase to produce 1/3 more kW and watt density.

Tubular and Process Assemblies

Circulation Heaters

5-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Fig. No.	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs	(kg)

Applications: Forced Air and Gases, Caustic Solutions, Degreasing Solutions

23 W/in² ⑥ Steel Tank 6-Incoloy® (3.6 W/cm ²)	9	5.1	CFNNA25J10	1	CFNNA25J3	1	CFNNA25J11	1	CFNNA25J5	1	140 (64)
	12	5.2	CFNNA33A10	2	CFNNA33A3	1	CFNNA33A11	1	CFNNA33A5	1	145 (66)
	15	5.2	CFNNA40J10	2	CFNNA40J3	1	CFNNA40J11	1	CFNNA40J5	1	167 (76)
	18	5.3	CFNNA48A10	2	CFNNA48A3	1	CFNNA48A11	1	CFNNA48A5	1	180 (82)
	25	5.4			CFNNA64J3	2	CFNNA64J11	2	CFNNA64J5	1	195 (89)
30	5.5			CFNNA77A3	2	CFNNA77A11	2	CFNNA77A5	1	220 (100)	
23 W/in² ③ Steel Tank 9-Incoloy® (3.6 W/cm ²)	14	5.1	CFNNA25J10X	3	CFNNA25J3X	1	CFNNA25J11X	1	CFNNA25J5X	1	140 (66)
	18	5.2	CFNNA33A10X	3	CFNNA33A3X	1	CFNNA33A11X	1	CFNNA33A5X	1	145 (68)
	23	5.2	CFNNA40J10X	3	CFNNA40J3X	3	CFNNA40J11X	1	CFNNA40J5X	1	167 (79)
	27	5.3	CFNNA48A10X	3	CFNNA48A3X	3	CFNNA48A11X	3	CFNNA48A5X	1	180 (86)
	38	5.4			CFNNA64J3X	3	CFNNA64J11X	3	CFNNA64J5X	1	195 (94)
45	5.5			CFNNA77A3X	3	CFNNA77A11X	3	CFNNA77A5X	3	220 (106)	

Applications: Lightweight Oils, Degreasing Solutions, Heat Transfer Oils

23 W/in² ③ Steel Tank 6-Steel (3.6 W/cm ²)	12	5.2	CFNS733A10	2	CFNS733A3	1	CFNS733A11	1	CFNS733A5	1	145 (66)
	15	5.2	CFNS740J10	2	CFNS740J3	1	CFNS740J11	1	CFNS740J5	1	167 (76)
	18	5.3	CFNS748A10	2	CFNS748A3	3	CFNS748A11	1	CFNS748A5	1	180 (82)
	25	5.4			CFNS764J3	2	CFNS764J11	2	CFNS764J5	1	195 (89)
	30	5.5			CFNS777A3	2	CFNS777A11	2	CFNS777A5	1	220 (100)
23 W/in² ③ Steel Tank 9-Steel (3.6 W/cm ²)	18	5.2	CFNS733A10X	3	CFNS733A3X	1	CFNS733A11X	1	CFNS733A5X	1	150 (68)
	23	5.2	CFNS740J10X	3	CFNS740J3X	3	CFNS740J11X	1	CFNS740J5X	1	173 (79)
	27	5.3	CFNS748A10X	3	CFNS748A3X	1	CFNS748A11X	3	CFNS748A5X	1	188 (86)
	38	5.4			CFNS764J3X	3	CFNS764J11X	3	CFNS764J5X	1	206 (94)
	45	5.5			CFNS777A3X	3	CFNS777A11X	3	CFNS777A5X	3	233 (106)


Applications: Medium Weight Oils, Heat Transfer Oils, Liquid Paraffin

16 W/in² ③ Steel Tank 6-Incoloy® (2.6 W/cm ²)	8	5.1			CFNN733A12	1			CFNN733A13	1	145 (66)
	10	5.2			CFNN740J12	1			CFNN740J13	1	167 (76)
	12	5.3			CFNN748A12	1			CFNN748A13	1	180 (82)
16 W/in² ③ Steel Tank 9-Incoloy® (2.6 W/cm ²)	12	5.1			CFNN733A12X	1			CFNN733A13X	1	150 (68)
	15	5.2			CFNN740J12X	1			CFNN740J13X	1	173 (79)
	18	5.3			CFNN748A12X	1			CFNN748A13X	1	188 (86)

Applications: Bunker C and #6 Fuel Oils

8 W/in² ③ Steel Tank 6-Steel (1.3 W/cm ²)	5	5.2			CFNS740J12	1			CFNS740J13	1	167 (76)
	6	5.3			CFNS748A12	1			CFNS748A13	1	180 (82)
	8	5.4			CFNS764J12	1			CFNS764J13	1	195 (89)
	10	5.5			CFNS777A12	1			CFNS777A13	1	220 (100)
8 W/in² ③ Steel Tank 9-Steel (1.3 W/cm ²)	7.5	5.2			CFNS740J12X	1			CFNS740J13X	1	173 (79)
	9	5.3			CFNS748A12X	1			CFNS748A13X	1	188 (86)
	12	5.4			CFNS764J12X	1			CFNS764J13X	1	206 (94)
	15	5.5			CFNS777A12X	1			CFNS777A13X	1	233 (106)

Notes:

- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
-  Truck Shipment only—To expedite shipment, evaluate whether Drop Ship is required.
- ③ Must be operated three-phase only.
- ⑤ 240V~(ac) can be wired wye and operated at 480V~(ac) three-phase to produce ⅔ more kW and watt density.
- ⑥ Can be rewired wye to produce ⅓ of original kW and watt density (three-phase only).

Tubular and Process Assemblies

Circulation Heaters

6-inch Flange

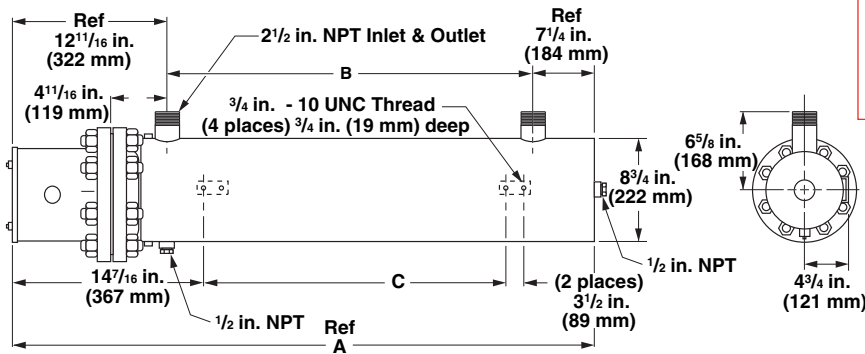


Fig. No.	A Dimension in. (mm)	B Dimension in. (mm)	C Dimension in. (mm)
6.1	40 ⁷ / ₁₆ (1027)	20 ¹ / ₂ (521)	17 (432)
6.2	50 ¹⁵ / ₁₆ (1294)	31 (787)	27 ¹ / ₂ (699)
6.3	71 ¹⁵ / ₁₆ (1827)	52 (1321)	48 ¹ / ₂ (1232)
6.4	92 ¹⁵ / ₁₆ (2361)	73 (1854)	66 (1676)

6-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Fig. No.	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs	(kg)

Application: Clean Water

60 W/in ² Steel Tank 12-Copper (9.3 W/cm ²)	24	6.1	CFPC715G10	3	CFPC715G3	2	CFPC715G11	2	CFPC715G5	1	212 (97)
	36	6.1	CFPC721G10	4	CFPC721G3	2	CFPC721G11	2	CFPC721G5	1	217 (99)
	48	6.2			CFPC726R3	4	CFPC726R11	3	CFPC726R5	2	222 (101)
	60	6.2			CFPC732G3	4	CFPC732G11	3	CFPC732G5	2	226 (103)
	72	6.3			CFPC737R3	4			CFPC737R5	2	290 (132)
	100	6.3							CFPC750R5	4	298 (136)
120	6.4							CFPC760G5	4	360 (164)	
60 W/in ² Steel Tank 15-Copper (9.3 W/cm ²)	30	6.1	CFPC715G10X	3	CFPC715G3X	5	CFPC715G11X	3	CFPC715G5X	1	215 (98)
	45	6.1	CFPC721G10X	5	CFPC721G3X	5	CFPC721G11X	3	CFPC721G5X	5	223 (102)
	60	6.2			CFPC726R3X	5	CFPC726R11X	3	CFPC726R5X	5	226 (103)
	75	6.2			CFPC732G3X	5	CFPC732G11X	5	CFPC732G5X	5	288 (131)
	90	6.3			CFPC737R3X	5			CFPC737R5X	5	296 (134)
	125	6.3							CFPC750R5X	5	306 (139)

Application: Process Water

48 W/in ² ⑤ Steel Tank 12-Incoloy® (7.5 W/cm ²)	18	6.1	CFPN713G10	2	CFPN713G3	1	CFPN713G11	1	CFPN713G5	1	212 (97)
	24	6.1	CFPN717R10	3	CFPN717R3	2	CFPN717R11	2	CFPN717R5	1	214 (97)
	30	6.1	CFPN720G10	3	CFPN720G3	2	CFPN720G11	2	CFPN720G5	1	217 (99)
	36	6.1	CFPN725G10	4	CFPN725G3	2	CFPN725G11	2	CFPN725G5	1	222 (101)
	48	6.2			CFPN732R3	4	CFPN732R11	3	CFPN732R5	2	226 (103)
	60	6.3			CFPN740G3	4	CFPN740G11	3	CFPN740G5	2	290 (132)
72	6.3			CFPN747R3	4			CFPN747R5	2	298 (136)	
48 W/in ² Steel Tank 15-Incoloy® (7.5 W/cm ²)	23	6.1	CFPN713G10X	3	CFPN713G3X	5	CFPN713G11X	1	CFPN713G5X	1	215 (98)
	30	6.1	CFPN717R10X	3	CFPN717R3X	5	CFPN717R11X	3	CFPN717R5X	1	217 (99)
	38	6.1	CFPN720G10X	5	CFPN720G3X	5	CFPN720G11X	3	CFPN720G5X	1	223 (102)
	45	6.1	CFPN725G10X	5	CFPN725G3X	5	CFPN725G11X	3	CFPN725G5X	5	226 (103)
	60	6.2			CFPN732R3X	5	CFPN732R11X	3	CFPN732R5X	5	288 (131)
	75	6.3			CFPN740G3X	5	CFPN740G11X	5	CFPN740G5X	5	296 (135)
90	6.3			CFPN747R3X	5			CFPN747R5X	5	306 (139)	

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Notes:

- **Same Day Shipment** up to **two pieces**. Over **two pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- **Truck Shipment only**—To expedite shipment, evaluate whether Drop Ship is required.
- ⑤ 240V~(ac) can be wired wye and operated at 480V~(ac) three-phase to produce 1/3 more kW and watt density.

Tubular and Process Assemblies

Circulation Heaters

6-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Fig. No.	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	lbs	(kg)

Applications: Forced Air and Gases, Caustic Solutions, Degreasing Solutions


23 W/in² Steel Tank 12-Incoloy® (3.6 W/cm ²)	12	6.1	CFPNA17R10	2	CFPNA17R3	1	CFPNA17R11	1	CFPNA17R5	1	214 (97)
	18	6.1	CFPNA25G10	2	CFPNA25G3	1	CFPNA25G11	1	CFPNA25G5	1	222 (101)
	24	6.2	CFPNA32R10	3	CFPNA32R3	2	CFPNA32R11	2	CFPNA32R5	1	226 (103)
	30	6.3	CFPNA40G10	3	CFPNA40G3	2	CFPNA40G11	2	CFPNA40G5	1	290 (132)
	36	6.3	CFPNA47R10	4	CFPNA47R3	2	CFPNA47R11	2	CFPNA47R5	1	298 (136)
	50	6.4			CFPNA64G3	4	CFPNA64G11	3	CFPNA64G5	2	360 (164)
	60	6.4			CFPNA76R3	4	CFPNA76R11	3	CFPNA76R5	2	368 (167)
23 W/in² Steel Tank 15-Incoloy® (3.6 W/cm ²)	15	6.1	CFPNA17R10X	3	CFPNA17R3X	1	CFPNA17R11X	1	CFPNA17R5X	1	217 (99)
	23	6.1	CFPNA25G10X	3	CFPNA25G3X	5	CFPNA25G11X	1	CFPNA25G5X	1	226 (103)
	30	6.2	CFPNA32R10X	3	CFPNA32R3X	5	CFPNA32R11X	3	CFPNA32R5X	1	288 (131)
	38	6.3	CFPNA40G10X	5	CFPNA40G3X	5	CFPNA40G11X	3	CFPNA40G5X	1	296 (135)
	45	6.3	CFPNA47R10X	5	CFPNA47R3X	5	CFPNA47R11X	3	CFPNA47R5X	5	306 (139)
	63	6.4			CFPNA64G3X	5	CFPNA64G11X	3	CFPNA64G5X	5	370 (168)
	75	6.4			CFPNA76R3X	5	CFPNA76R11X	5	CFPNA76R5X	5	381 (173)

Applications: Lightweight Oils, Degreasing Solutions, Heat Transfer Oils

23 W/in² Steel Tank 12-Steel (3.6 W/cm ²)	12	6.1	CFPS717R10	2	CFPS717R3	1	CFPS717R11	1	CFPS717R5	1	214 (97)
	18	6.1	CFPS725G10	2	CFPS725G3	1	CFPS725G11	1	CFPS725G5	1	222 (101)
	24	6.2	CFPS732R10	3	CFPS732R3	2	CFPS732R11	2	CFPS732R5	1	226 (103)
	30	6.3	CFPS740G10	3	CFPS740G3	2	CFPS740G11	2	CFPS740G5	1	290 (132)
	36	6.3	CFPS747R10	4	CFPS747R3	2	CFPS747R11	2	CFPS747R5	1	298 (136)
	50	6.4			CFPS764G3	4	CFPS764G11	3	CFPS764G5	2	360 (164)
	60	6.4			CFPS776R3	4	CFPS776R11	3	CFPS776R5	2	368 (167)
23 W/in² Steel Tank 15-Steel (3.6 W/cm ²)	15	6.1	CFPS717R10X	3	CFPS717R3X	1	CFPS717R11X	1	CFPS717R5X	1	217 (99)
	23	6.1	CFPS725G10X	3	CFPS725G3X	5	CFPS725G11X	1	CFPS725G5X	1	226 (103)
	30	6.2	CFPS732R10X	3	CFPS732R3X	5	CFPS732R11X	3	CFPS732R5X	1	288 (131)
	38	6.3	CFPS740G10X	5	CFPS740G3X	5	CFPS740G11X	3	CFPS740G5X	1	296 (135)
	45	6.3	CFPS747R10X	5	CFPS747R3X	5	CFPS747R11X	3	CFPS747R5X	5	306 (139)
	63	6.4			CFPS764G3X	5	CFPS764G11X	3	CFPS764G5X	5	370 (168)
	75	6.4			CFPS776R3X	5	CFPS776R11X	5	CFPS776R5X	5	381 (173)

CONTINUED

Notes:

- **Same Day Shipment** up to **two pieces**. Over **two pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
-  Truck Shipment only—To expedite shipment, evaluate whether Drop Ship is required.
- ⑤ 240V~(ac) can be wired wye and operated at 480V~(ac) three-phase to produce ⅓ more kW and watt density.
- ⑥ Can be rewired wye to produce ⅓ of original kW and watt density (three-phase only).

Tubular and Process Assemblies

Circulation Heaters

6-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Fig. No.	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs	(kg)

Applications: Medium Weight Oils, Heat Transfer Oils, Liquid Paraffin

16 W/in ² Steel Tank 12-Incoloy® (2.6 W/cm ²)	6	6.1			CFPN713G12	1			CFPN713G13	1	212 (97)
	8	6.1			CFPN717R12	1			CFPN717R13	1	214 (97)
	10	6.1			CFPN720G12	1			CFPN720G13	1	217 (99)
	12	6.1			CFPN725G12	1			CFPN725G13	1	222 (101)
	16	6.2			CFPN732R12	1			CFPN732R13	1	226 (103)
	20	6.3			CFPN740G12	2			CFPN740G13	1	290 (132)
	24	6.3			CFPN747R12	2			CFPN747R13	1	298 (136)
16 W/in ² Steel Tank 15-Incoloy® (2.6 W/cm ²)	7.5	6.1			CFPN713G12X	1			CFPN713G13X	1	215 (98)
	10	6.1			CFPN717R12X	1			CFPN717R13X	1	217 (99)
	12.5	6.1			CFPN720G12X	1			CFPN720G13X	1	223 (102)
	15	6.1			CFPN725G12X	1			CFPN725G13X	1	226 (103)
	20	6.2			CFPN732R12X	5			CFPN732R13X	1	288 (131)
	25	6.3			CFPN740G12X	5			CFPN740G13X	1	296 (135)
	30	6.3			CFPN747R12X	5			CFPN747R13X	1	306 (139)

Applications: Bunker C and #6 Fuel Oils

8 W/in ² Steel Tank 12-Steel (1.3 W/cm ²)	8	6.2			CFPS732R12	1			CFPS732R13	1	226 (103)
	10	6.3			CFPS740G12	1			CFPS740G13	1	290 (132)
	12	6.3			CFPS747R12	1			CFPS747R13	1	298 (136)
	16.5	6.4			CFPS764G12	1			CFPS764G13	1	360 (164)
	20	6.4							CFPS776R13	1	368 (167)
8 W/in ² Steel Tank 15-Steel (1.3 W/cm ²)	10	6.2			CFPS732R12X	1			CFPS732R13X		288 (131)
	12.5	6.3			CFPS740G12X	1			CFPS740G13X	1	296 (135)
	15	6.3			CFPS747R12X	1			CFPS747R13X	1	306 (139)
	21	6.4			CFPS764G12X	5			CFPS764G13X	1	370 (168)
	25	6.4			CFPS776R12X	5			CFPS776R13X	1	381 (173)

Notes:

- **Same Day Shipment** up to **two pieces**. Over **two pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- **Truck Shipment only**—To expedite shipment, evaluate whether Drop Ship is required.
- ③ Must be operated three-phase only.

6-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Fig. No.	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs	(kg)

Application: Deionized Water, Demineralized Water

60 W/in ² 316 SS Tank 12-316 SS (9.3 W/cm ²)	24	6.1	CFPR715N10	3	CFPR715N3	2	CFPR715N11	2	CFPR715N5	1	212 (97)
	36	6.1	CFPR721N10	4	CFPR721N3	2	CFPR721N11	3	CFPR721N5	1	217 (99)
	48	6.2			CFPR727E3	4	CFPR727E11	3	CFPR727E5	2	222 (101)
	60	6.2			CFPR732N3	4	CFPR732N11	3	CFPR732N5	2	226 (103)
	Passivated*	72	6.3			CFPR738E3	4			CFPR738E5	2
100		6.3						CFPR751E5	4	298 (136)	
120		6.4						CFPR760N5	4	360 (164)	
60 W/in ² 316 SS Tank 15-316 SS (9.3 W/cm ²)	30	6.1	CFPR715N10X	3	CFPR715N3X	5	CFPR715N11X	3	CFPR715N5X	1	215 (98)
	45	6.1	CFPR721N10X	5	CFPR721N3X	5	CFPR721N11X	3	CFPR721N5X	5	223 (102)
	60	6.2			CFPR727E3X	5	CFPR727E11X	3	CFPR727E5X	5	226 (103)
	75	6.2			CFPR732N3X	5	CFPR732N11X	5	CFPR732N5X	5	288 (131)
	Passivated*	90	6.3			CFPR738E3X	5			CFPR738E5X	5
125		6.3						CFPR751E5X	5	306 (139)	
150		6.4						CFPR760N5X	5	370 (168)	

Notes:

- **Next Day Shipment on Deionized Water** up to **two pieces**. Over **two pieces**, please contact factory for Rapid Ship details. Items for Next Day Shipment must be ordered by 12 p.m. CST.
- **Truck Shipment only**—To expedite shipment, evaluate whether Drop Ship is required.
- *Passivated requires Next Day Shipment.

Tubular and Process Assemblies

Circulation Heaters

8-inch Flange

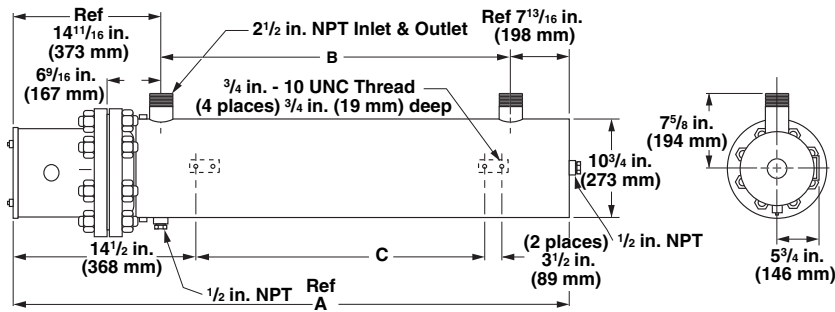


Fig. No.	A Dimension in. (mm)	B Dimension in. (mm)	C Dimension in. (mm)
7.1	47 ³ / ₁₆ (1199)	24 ¹ / ₁₆ (627)	21 ³ / ₁₆ (538)
7.2	55 ⁵ / ₁₆ (1402)	32 ¹ / ₁₆ (830)	29 ³ / ₁₆ (741)
7.3	62 ⁷ / ₁₆ (1580)	39 ¹ / ₁₆ (1008)	36 ⁵ / ₁₆ (919)
7.4	69 ¹³ / ₁₆ (1773)	47 ⁵ / ₁₆ (1202)	43 ¹³ / ₁₆ (1113)
7.5	79 ⁵ / ₁₆ (2014)	56 ¹³ / ₁₆ (1443)	53 ⁵ / ₁₆ (1354)
7.6	88 ⁵ / ₁₆ (2243)	65 ¹³ / ₁₆ (1672)	62 ⁵ / ₁₆ (1583)
7.7	98 ⁵ / ₁₆ (2497)	75 ¹³ / ₁₆ (1926)	72 ⁵ / ₁₆ (1837)

8-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Fig. No.	Code No.								Est. Ship. Weight lbs (kg)
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	

Application: Clean Water

60 W/in ² Steel Tank 18-Copper (9.3 W/cm ²)	50	7.1			CFRC721N3	3	CFRC721N11	3	CFRC721N5	2	340 (155)
	75	7.2			CFRC729N3	6			CFRC729N5	2	360 (164)
	100	7.3			CFRC737E3	6			CFRC737E5	3	385 (175)
	125	7.4			CFRC745E3	6			CFRC745E5	3	410 (186)
	150	7.5							CFRC752N5	6	440 (200)
	175	7.6							CFRC760N5	6	465 (211)
	200	7.7							CFRC768E5	6	510 (232)

Application: Process Water

48 W/in ² Steel Tank 18-Incoloy® (7.5 W/cm ²)	50	7.2			CFRN725N3	3	CFRN725N11	3	CFRN725N5	2	350 (159)
	75	7.3			CFRN735N3	6			CFRN735N5	2	380 (173)
	100	7.4			CFRN744E3	6			CFRN744E5	3	410 (186)
	125	7.5			CFRN754M3	6			CFRN754M5	6	445 (202)
	150	7.6							CFRN763M5	6	490 (223)
	175	7.7							CFRN773D5	6	530 (241)
	200	7.7							CFRN782M5	6	560 (254)
48 W/in ² Steel Tank 24-Incoloy® (7.5 W/cm ²)	67	7.2			CFRN726D3X	4	CFRN726D11X	3	CFRN726D5X	2	358 (163)
	100	7.3			CFRN736D3X	8			CFRN736D5X	4	392 (178)
	133	7.4			CFRN744M3X	8			CFRN744M5X	4	425 (193)
	167	7.5			CFRN754M3X	8			CFRN754M5X	8	463 (210)
	200	7.6							CFRN763M5X	8	511 (232)
	233	7.7							CFRN773D5X	8	554 (252)
	267	7.7							CFRN782M5X	8	587 (267)

Applications: Forced Air and Gases, Caustic Solutions, Degreasing Solutions

23 W/in ² Steel Tank 18-Incoloy® (3.6 W/cm ²)	30	7.2	CFRNA32N10	3	CFRNA32N3	2	CFRNA32N11	2	CFRNA32N5	1	370 (168)
	40	7.3			CFRNA43E3	3	CFRNA43E11	2	CFRNA43E5	2	410 (186)
	50	7.4			CFRNA51M3	3	CFRNA51M11	3	CFRNA51M5	2	440 (200)
23 W/in ² Steel Tank 24-Incoloy® (3.6 W/cm ²)	40	7.2	CFRNA33D10X	4	CFRNA33D3X	4	CFRNA33D11X	2	CFRNA33D5X	2	382 (174)
	53	7.3			CFRNA43M3X	4	CFRNA43M11X	3	CFRNA43M5X	2	425 (193)
	67	7.4			CFRNA51M3X	4	CFRNA51M11X	3	CFRNA51M5X	2	457 (207)

CONTINUED

Notes:

- Next Day Shipment up to **two pieces**. Over **two pieces**, please contact factory for RAPID SHIP details. Items for Next Day Shipment must be ordered by 12 p.m. CST.
- Truck Shipment only—To expedite shipment, evaluate whether Drop Ship is required.
- ⑤ 240V~(ac) can be wired wye and operated at 480V~(ac) three-phase to produce 1/3 more kW and watt density.
- ⑥ Can be rewired wye to produce 1/3 of original kW and watt density (three-phase only).

Tubular and Process Assemblies

Circulation Heaters

8-inch 150 lb ANSI Flange—WATROD Element

WATROD Description	kW	Fig. No.	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	No. of Circuits	240V~(ac) 3-Phase	No. of Circuits	480V~(ac) 1-Phase	No. of Circuits	480V~(ac) 3-Phase	No. of Circuits	Weight lbs	(kg)

Applications: Lightweight Oils, Degreasing Solutions, Heat Transfer Oils

23 W/in² Steel Tank 18-Steel (3.6 W/cm ²)	30.0	7.2	CFRS732N10	3	CFRS732N3	2	CFRS732N11	2	CFRS732N5	1	370 (168)
	40.0	7.3			CFRS743E3	3	CFRS743E11	2	CFRS743E5	2	410 (186)
	50.0	7.4			CFRS751M3	3	CFRS751M11	3	CFRS751M5	2	440 (200)
	60.0	7.5			CFRS762D3	6	CFRS762D11	3	CFRS762D5	2	480 (218)
	70.0	7.6			CFRS770M3	6	CFRS770M11	6	CFRS770M5	2	530 (241)
	80.0	7.7			CFRS779M3	6			CFRS779M5	3	610 (277)
23 W/in² Steel Tank 24-Steel (3.6 W/cm ²)	40.0	7.2	CFRS733D10X	4	CFRS733D3X	4	CFRS733D11X	2	CFRS733D5X	2	382 (174)
	53.0	7.3			CFRS743M3X	4	CFRS743M11X	3	CFRS743M5X	2	425 (193)
	67.0	7.4			CFRS751M3X	4	CFRS751M11X	3	CFRS751M5X	2	457 (208)
	80.0	7.5			CFRS762D3X	8	CFRS762D11X	4	CFRS762D5X	4	461 (209)
	93.0	7.6			CFRS770M3X	8	CFRS770M11X	6	CFRS770M5X	4	554 (252)
	107.0	7.7			CFRS779M3X	8			CFRS779M5X	4	636 (289)


Applications: Medium Weight Oils, Heat Transfer Oils, Liquid Paraffin

16 W/in² Steel Tank 18-Incoloy® (2.6 W/cm ²)	17.0	7.2			CFRN725N12	1			CFRN725N13	1	350 (159)
	25.0	7.3			CFRN735N12	2			CFRN735N13	1	380 (173)
	33.0	7.4			CFRN744E12	2			CFRN744E13	1	410 (186)
	42.0	7.5			CFRN754M12	3			CFRN754M13	2	445 (202)
	50.0	7.6							CFRN763M13	2	490 (223)
	58.0	7.7							CFRN773D13	2	530 (241)
67.0	7.7							CFRN782M13	2	560 (254)	
16 W/in² Steel Tank 24-Incoloy® (2.6 W/cm ²)	23.0	7.2			CFRN726D12X	2			CFRN726D13X	1	358 (163)
	33.0	7.3			CFRN736D12X	2			CFRN736D13X	1	392 (178)
	44.0	7.4			CFRN744M12X	4			CFRN744M13X	2	425 (193)
	56.0	7.5			CFRN754M12X	4			CFRN754M13X	2	463 (210)
	67.0	7.6							CFRN763M13X	2	511 (232)
	77.0	7.7							CFRN773D13X	2	554 (252)
89.0	7.7							CFRN782M13X	4	587 (267)	

Applications: Bunker C and #6 Fuel Oils

8 W/in² Steel Tank 18-Steel (1.3 W/cm ²)	12.5	7.3			CFRS743E12	1			CFRS743E13	1	410 (186)
	16.5	7.4			CFRS751M12	1			CFRS751M13	1	440 (200)
	20.0	7.5			CFRS762D12	2			CFRS762D13	1	480 (218)
	24.0	7.6			CFRS770M12	2			CFRS770M13	1	530 (241)
	27.0	7.7			CFRS779M12	2			CFRS779M13	1	610 (277)
8 W/in² Steel Tank 24-Steel (1.3 W/cm ²)	17.0	7.3			CFRS743M12X	1			CFRS743M13X	1	425 (193)
	22.0	7.4			CFRS751M12X	2			CFRS751M13X	1	457 (208)
	27.0	7.5			CFRS762D12X	2			CFRS762D13X	1	461 (209)
	32.0	7.6			CFRS770M12X	2			CFRS770M13X	1	554 (252)
	36.0	7.7			CFRS779M12X	2			CFRS779M13X	1	636 (289)

Notes:

- **Next Day Shipment** up to **two pieces**. Over **two pieces**, please contact factory for RAPID SHIP details. Items for Next Day Shipment must be ordered by 12 p.m. CST.
-  Truck Shipment only—To expedite shipment, evaluate whether Drop Ship is required.
- ③ Must be operated three-phase only.

Tubular and Process Assemblies

Circulation Heaters

Build-a-Code

Circulation Heater
Base Code Number _____

(Includes general purpose terminal enclosure (NEMA 1))

Terminal Enclosure Type _____

- S = General purpose (NEMA 1)
- W = Moisture resistant (NEMA 4)
- E = Explosion resistant (NEMA 7)
- E/W = Explosion/moisture resistant (NEMA 7/4)

Thermostat ① or Thermocouple ② _____

- ① Thermostat code numbers are shown in the *Thermostat Stock* chart on page 45. Check the temperature sensing bulb O.D. to be certain it will fit into the thermowell's I.D.
- ② Specify Type J or K thermocouple. If overtemp thermocouple specify orientation horizontal, vertical up or vertical down.

Booster Heaters

Description	kW	Phase	Code No. 120/240V~(ac)	Est. Ship. Weight	
				lbs	(kg)

Application: Aqueous Solutions

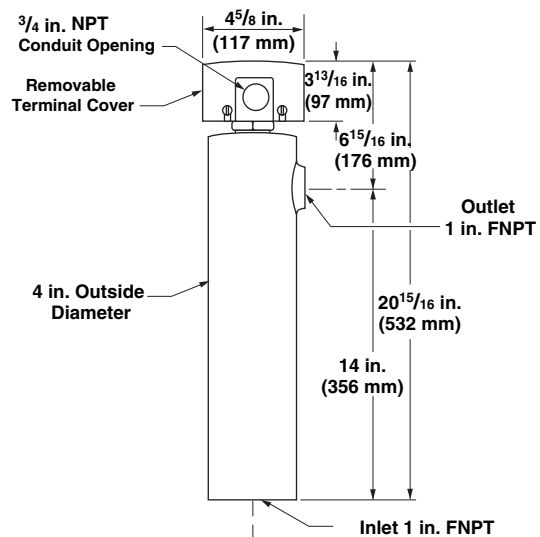
60 W/in ²	1.5	1	CBEC8G6	18	(8.2)
Brass Plug	2.0	1	CBEC10F6	18	(8.2)
2-Copper	2.5	1	CBEC12F6	18	(8.2)
(9.3 W/cm ²)	3.0	1	CBEC15A6X	18	(8.2)

Application: Lightweight Oils

23 W/in ²	0.5	1	CBES7G6	18	(8.2)
Steel Plug	0.75	1	CBES10B6	18	(8.2)
2- Steel	1.0	1	CBES12P6	18	(8.2)
(3.6 W/cm ²)					

Notes:

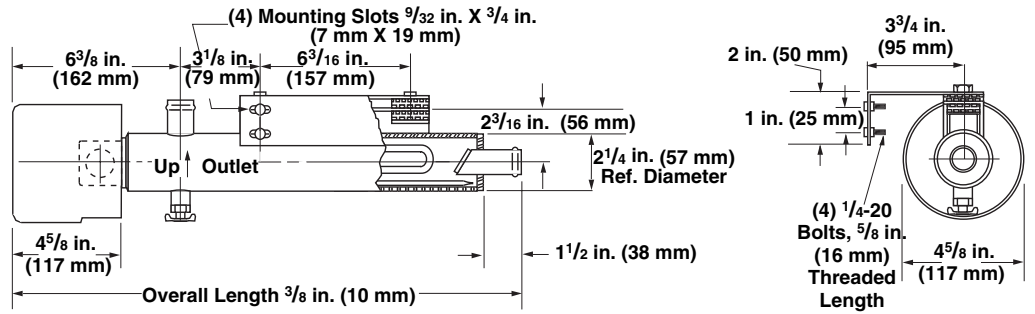
- **Same Day Shipment** up to **five pieces**. Over **five pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.



Tubular and Process Assemblies

Circulation Heaters

Engine Preheaters



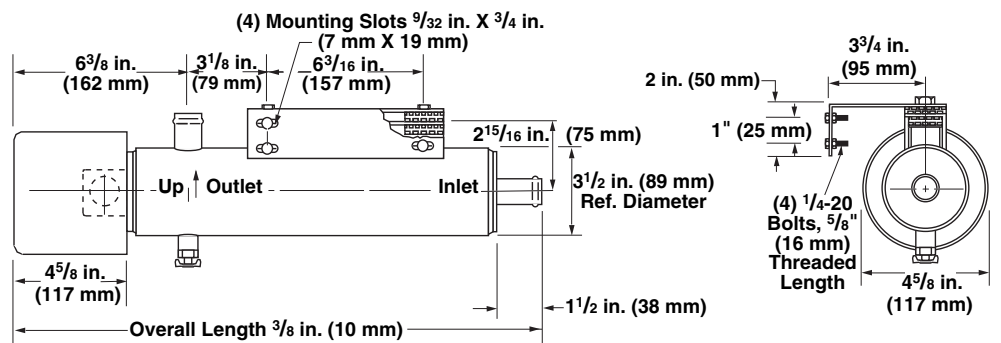
kW	Overall Length in. (mm)	Code No.		Est. Ship. Weight	
		120/240V~(ac) 1-Phase	240/480V~(ac) 1-Phase	lbs	(kg)

Application: Ethylene Glycol/Engine Coolant

1.13	20 7/8 (530)	CPBPB6S12		12	(6)
1.50	20 7/8 (530)			12	(6)
1.69	20 7/8 (530)			12	(6)
1.88	20 7/8 (530)			12	(6)
2.00	20 7/8 (530)	CPBPC6S12		12	(6)
2.25	20 7/8 (530)	CPBPD6S12		12	(6)
2.25	26 1/16 (678)	CPBPE6S12		15	(7)
2.50	20 7/8 (530)			12	(6)
3.00	26 1/16 (678)		CPBPF7S12	15	(7)
3.75	26 1/16 (678)			15	(7)
4.00	26 1/16 (678)		CPBPH7S12	15	(7)

Note:

- **Same Day Shipment** up to **two pieces**. Over **two pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.



kW	Overall Length in. (mm)	Code No.	Est. Ship. Weight
		480V~(ac) 3-Phase	lbs (kg)

Application: Ethylene Glycol/Engine Coolant

4.0	20 7/8 (530)	CPCPH13S12	12 (6)
5.0	20 7/8 (530)	CPCPJ13S12	12 (6)

Note:

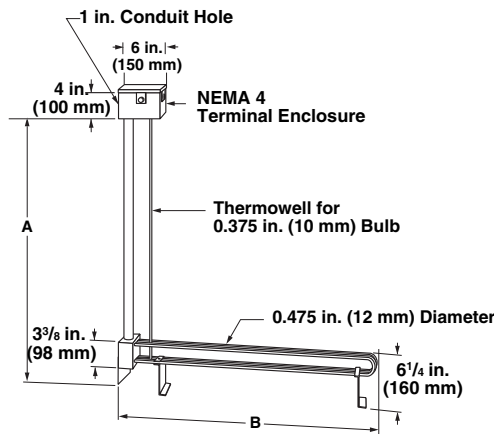
- **Same Day Shipment** up to **two pieces**. Over **two pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.

Tubular and Process Assemblies

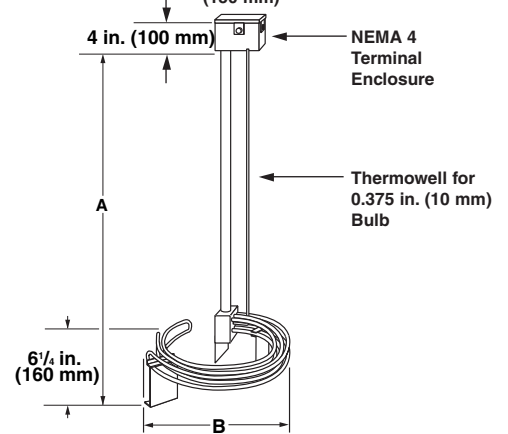
Over-the-Side Heaters

L and O Shaped

“L” Shaped



“O” Shaped



“L” Shaped

WATROD Description	kW	A Dimension in. (mm)	B Dimension in. (mm)	Code No.		Est. Ship. Weight lbs (kg)
				240V~(ac) 3-Phase	480V~(ac) 3-Phase	

Applications: Process Water, Mild Caustic Solutions (2 Percent Max), Clean Water

48 W/in ² Incoloy [®] (7.5 W/cm ²)	3	39 5/16 (1000)	14 3/8 (370)	OLN714L3W	OLN714L13W ^③	30 (14)
	6	39 5/16 (1000)	22 3/8 (575)	OLN722L3W	OLN722L5W	40 (19)
	9	39 5/16 (1000)	30 1/8 (765)	OLN730C3W	OLN730C5W	45 (21)
	12	51 1/16 (1300)	37 3/8 (955)	OLN737L3W	OLN737L5W	50 (23)
	15	51 1/16 (1300)	45 1/8 (1145)	OLN745C3W	OLN745C5W	65 (30)
	18	51 1/16 (1300)	52 3/8 (1335)	OLN752L3W	OLN752L5W	75 (34)

Applications: Citric and Phosphoric Acid Solutions, Caustic Solutions, Water Based Solutions

23 W/in ² Incoloy [®] (3.6 W/cm ²)	3	39 5/16 (1000)	22 3/8 (575)	OLNA22L3W	OLNA22L5W	40 (19)
	6	51 1/16 (1300)	37 3/8 (955)	OLNA37L3W	OLNA37L5W	50 (23)
	9	51 1/16 (1300)	52 3/8 (1335)	OLNA52L3W	OLNA52L5W	75 (34)

Applications: Lightweight Oils, Degreasing Solutions, Mineral Oil

23 W/in ² Steel (3.6 W/cm ²)	3	39 5/16 (1000)	22 3/8 (575)	OLS722L3W	OLS722L5W	40 (19)
	6	51 1/16 (1300)	37 3/8 (955)	OLS737L3W	OLS737L5W	50 (23)
	9	51 1/16 (1300)	52 3/8 (1335)	OLS752L3W	OLS752L5W	75 (34)

“O” Shaped

WATROD Description	kW	A Dimension in. (mm)	B Dimension in. (mm)	Code No.		Est. Ship. Weight lbs (kg)
				240V~(ac) 3-Phase	480V~(ac) 3-Phase	

Applications: Process Water, Mild Caustic Solutions (2 Percent Max), Clean Water

48 W/in ² Incoloy [®] (7.5 W/cm ²)	3	39 5/16 (1000)	10 3/8 (270)	ORN710N3W	ORN710N13W ^③	30 (14)
	6	39 5/16 (1000)	13 1/2 (345)	ORN713J3W	ORN713J5W	40 (19)
	9	39 5/16 (1000)	16 (405)	ORN716A3W	ORN716A5W	45 (21)
	12	51 1/16 (1300)	18 1/2 (470)	ORN718J3W	ORN718J5W	50 (23)
	15	51 1/16 (1300)	21 1/2 (540)	ORN721E3W	ORN721E5W	65 (30)
	18	51 1/16 (1300)	23 1/2 (595)	ORN723J3W	ORN723J5W	75 (34)

Applications: Citric and Phosphoric Acid Solutions, Caustic Solutions, Water Based Solutions

23 W/in ² Incoloy [®] (3.6 W/cm ²)	3	39 5/16 (1000)	13 1/2 (345)	ORNA13J3W	ORNA13J5W	40 (19)
	6	51 1/16 (1300)	18 1/2 (470)	ORNA18J3W	ORNA18J5W	50 (23)
	9	51 1/16 (1300)	23 1/2 (595)	ORNA23J3W	ORNA23J5W	75 (34)

Applications: Lightweight Oils, Degreasing Solutions, Mineral Oil

23 W/in ² Steel (3.6 W/cm ²)	3	39 5/16 (1000)	13 1/2 (345)	ORS713J3W	ORS713J5W	40 (19)
	6	51 1/16 (1300)	18 1/2 (470)	ORS718J3W	ORS718J5W	50 (23)
	9	51 1/16 (1300)	23 1/2 (595)	ORS723J3W	ORS723J5W	75 (34)

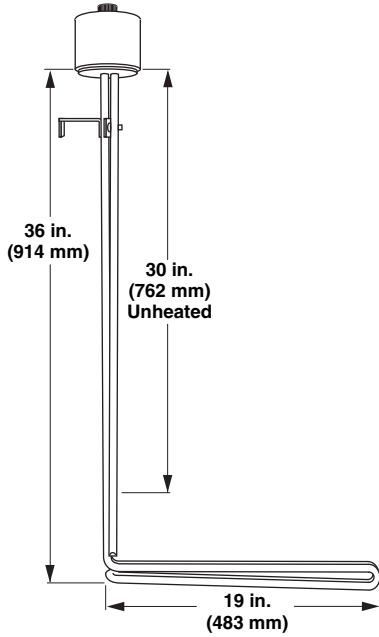
Notes:

- Same Day Shipment up to **three pieces**. Over **three pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- Truck Shipment only—To expedite shipment, evaluate whether Drop Ship is required.

Tubular and Process Assemblies

Over-the-Side Heaters

Drum Heaters



Drum Heater

WATROD Description	kW	Code No.			Est. Ship. Weight lbs(kg)
		120V~(ac) 1-Phase	240V~(ac) 1-Phase	480V~(ac) 1-Phase	

Applications: Solvents, Water and Water Based Solutions

32 W/in ² Incoloy® (5 W/cm ²)	4		OLDN10S4	OLDN10S11	35 (16)
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Applications: Melting Oils, Lard, Fats, Tar

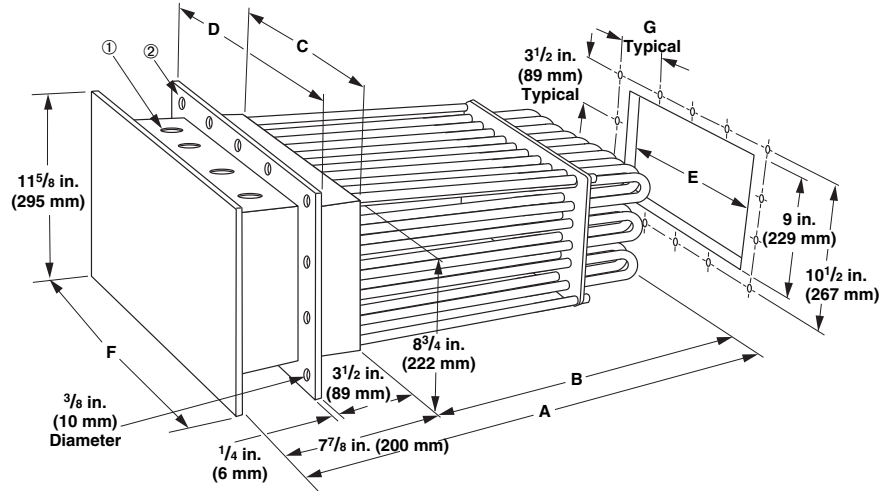
8 W/in ² Incoloy® (1.3 W/cm ²)	1	OLDN1S1	OLDN10S1		35 (16)
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Note:

- **Same Day Shipment** up to **three pieces**. Over **three pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.

Tubular and Process Assemblies

Duct Heaters



20 W/in² (3.1 W/cm²)

kW	Dimension Reference No.	Number of Elements	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	# of Circ.	240V~(ac) 3-Phase	# of Circ.	480V~(ac) 1-Phase	# of Circ.	480V~(ac) 3-Phase	# of Circ.	Weight lbs	(kg)
6*	1	6	D6S10	1	D6S3	1	D6S11	1	D6S5	1	50	(23)
12*	2	12	D12S10	1	D12S3	1	D12S11	1	D12S5	1	55	(25)
18*	3	18	D18S10	2	D18S3	1	D18S11	1	D18S5	1	65	(30)
24*	4	24	D24S10	2	D24S3	2	D24S11	1	D24S5	1	95	(43)
30*	5	30			D30S3	2	D30S11	2	D30S5	1	120	(55)
36*	6	36			D36S3	2	D36S11	2	D36S5	1	135	(62)
42**	7	42			D42S3	2	D42S11	2	D42S5	2	155	(71)
48**	8	48			D48S3	4	D48S11	2	D48S5	2	195	(89)
54**	9	54			D54S3	3	D54S11	3	D54S5	2	205	(93)
60**	10	60			D60S3	4	D60S11	4	D60S5	2	235	(107)
75**	11	60				4	D75S11	4	D75S5	2	260	(118)

Notes:

- *Same Day Shipment up to **two pieces = 36 elements; four pieces = 18 elements; six pieces = six to nine elements.** Consult factory for other RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- **Next Day Shipment up to **two pieces = 36 elements; four pieces = 18 elements; six pieces = six to nine elements.** Consult factory for other RAPID SHIP details. Items for Next Day Shipment must be ordered by 12 p.m. CST.

30 W/in² (4.7 W/cm²)

kW	Dimension Reference No.	Number of Elements	Code No.								Est. Ship.	
			240V~(ac) 1-Phase	# of Circ.	240V~(ac) 3-Phase	# of Circ.	480V~(ac) 1-Phase	# of Circ.	480V~(ac) 3-Phase	# of Circ.	Weight lbs	(kg)
9*	1	6	D6SX10	1	D6SX3	1	D6SX11	1	D6SX5	1	50	(23)
18*	2	12	D12SX10	2	D12SX3	1	D12SX11	1	D12SX5	1	55	(25)
27*	3	18	D18SX10	3	D18SX3	2	D18SX11	2	D18SX5	1	65	(30)
36*	4	24	D24SX10	4	D24SX3	2	D24SX11	2	D24SX5	1	95	(43)
45*	5	30			D30SX3	5	D30SX11	2	D30SX5	2	120	(55)
54*	6	36			D36SX3	3	D36SX11	3	D36SX5	2	135	(62)
63**	7	42			D42SX3	7	D42SX11	3	D42SX5	2	155	(71)
72**	8	48			D48SX3	4	D48SX11	4	D48SX5	2	195	(89)
81**	9	54			D54SX3	6	D54SX11	6	D54SX5	3	205	(93)
90**	10	60			D60SX3	5	D60SX11	4	D60SX5	4	235	(107)
115**	11	60				10	D75SX11	5	D75SX5	4	260	(118)

Notes:

- *Same Day Shipment up to **two pieces = 36 elements; four pieces = 18 elements; six pieces = six to nine elements.** Consult factory for other RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.
- **Next Day Shipment up to **two pieces = 36 elements; four pieces = 18 elements; six pieces = six to nine elements.** Consult factory for other RAPID SHIP details. Items for Next Day Shipment must be ordered by 12 p.m. CST.

Tubular and Process Assemblies

Duct Heaters

Replacement Elements

Replaceable heating elements provide easy field service and reduce downtime. Element change-out is made simple by a single screw clamp.

To order replacement elements, specify the **replacement element code number** (from the table) that corresponds to the original Watlow duct heater code number. Then specify **quantity**.

Replacement Elements

Original Duct Heater Code Numbers	Replacement Element		A Dimension in. (mm)	Replacement Element Code No.	Availability	Est. Net Weight	
	Volts	Watts				lbs	(kg)

20 W/in² (3.1 W/cm²)

D6S3 to D60S3	240	1000	27% (708)	D6240	Stock	1.0	(0.5)
D6S5 to D60S5	480	1000	27% (708)	D6480	Stock	1.0	(0.5)
D75S5	480	1250	32% (835)	D75480	Stock	1.0	(0.5)
D100S5	480	1667	40% (1026)	D100480	Stock	1.4	(0.7)
D125S5	480	2083	49% (1254)	D125480	Stock	1.7	(0.8)

30 W/in² (4.7 W/cm²)

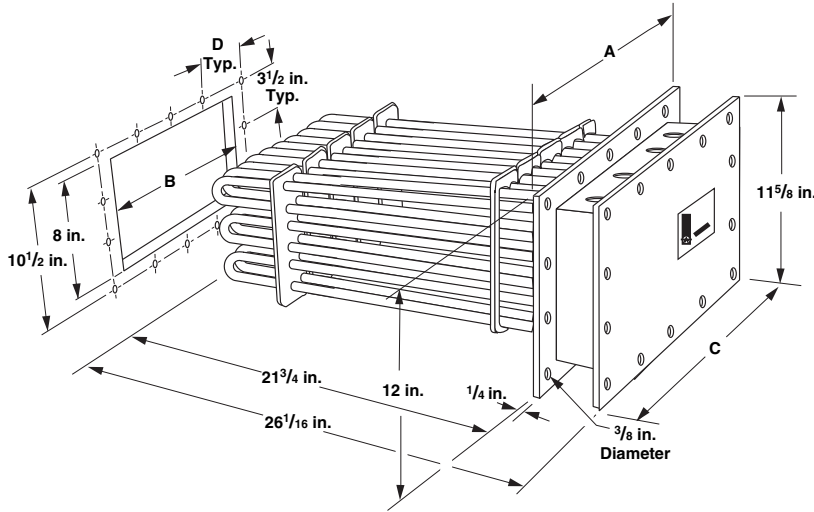
D6SX3 to D60SX3	240	1500	27% (708)	D6X240	Stock	1.0	(0.5)
D6SX5 to D60SX5	480	1500	27% (708)	D6X480	Stock	1.0	(0.5)
D75SX5	480	1917	32% (835)	D75X480	Stock	1.0	(0.5)
D100SX5	480	2500	40% (1026)	D100X480	Stock	1.4	(0.7)
D125SX5	480	3167	49% (1254)	D125X480	Stock	1.7	(0.8)

Note:

- **Same Day Shipment** up to **two pieces = 36 elements; four pieces = 18 elements; six pieces = six to nine elements**. Consult factory for other RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.

Tubular and Process Assemblies

Modular Duct Heaters



Watlow Code Number	Description
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Replacement Modules

M63	6kW, 240 volts, 3-phase
M610	6kW, 240 volts, 1-phase
M65	6kW, 480 volts, 3-phase
M611	6kW, 480 volts, 1-phase

Note:

- Same Day Shipment up to **10 pieces**. Over **10 pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.

Watt Density W/in ²	kW	Volts	Phase	No. of Circuits	No. of Modules	Est. Shipping Wt. lbs	Availability	Code No.	Dimensions in.			
									A	B	C	D
26	6	240	1	1	1	35	Assy. Stk.	MDH6S10	6.50	2.50	5.75	2.50
26	6	240	3	1	1	35	Assy. Stk.	MDH6S3	6.50	2.50	5.75	2.50
26	6	480	1	1	1	35	Assy. Stk.	MDH6S11	6.50	2.50	5.75	2.50
26	6	480	3	1	1	35	Assy. Stk.	MDH6S5	6.50	2.50	5.75	2.50
26	12	240	1	2	2	39	Assy. Stk.	MDH12S10	8.50	4.75	7.75	3.50
26	12	240	3	1	2	39	Assy. Stk.	MDH12S3	8.50	4.75	7.75	3.50
26	12	480	1	1	2	39	Assy. Stk.	MDH12S11	8.50	4.75	7.75	3.50
26	12	480	3	1	2	39	Assy. Stk.	MDH12S5	8.50	4.75	7.75	3.50
26	18	240	1	3	3	46	Assy. Stk.	MDH18S10	10.50	7.00	9.75	3.00
26	18	240	3	1	3	46	Assy. Stk.	MDH18S3	10.50	7.00	9.75	3.00
26	18	480	1	1	3	46	Assy. Stk.	MDH18S11	10.50	7.00	9.75	3.00
26	18	480	3	1	3	46	Assy. Stk.	MDH18S5	10.50	7.00	9.75	3.00
26	24	240	1	4	4	67	Assy. Stk.	MDH24S10	12.50	9.25	11.75	2.75
26	24	240	3	2	4	67	Assy. Stk.	MDH24S3	12.50	9.25	11.75	2.75
26	24	480	1	2	4	67	Assy. Stk.	MDH24S11	12.50	9.25	11.75	2.75
26	24	480	3	1	4	67	Assy. Stk.	MDH24S5	12.50	9.25	11.75	2.75
26	30	240	3	2	5	84	Assy. Stk.	MDH30S3	15.75	11.50	15.00	3.56
26	30	480	1	2	5	84	Assy. Stk.	MDH30S11	15.75	11.50	15.00	3.56
26	30	480	3	1	5	84	Assy. Stk.	MDH30S5	15.75	11.50	15.00	3.56
26	36	240	3	2	6	95	Assy. Stk.	MDH36S3	18.00	13.75	17.25	4.13
26	36	480	1	2	6	95	Assy. Stk.	MDH36S11	18.00	13.75	17.25	4.13
26	36	480	3	1	6	95	Assy. Stk.	MDH36S5	18.00	13.75	17.25	4.13
26	42	240	3	3	7	109	Assy. Stk.	MDH42S3	20.25	16.00	19.50	4.69
26	42	480	1	3	7	109	Assy. Stk.	MDH42S11	20.25	16.00	19.50	4.69
26	42	480	3	2	7	109	Assy. Stk.	MDH42S5	20.25	16.00	19.50	4.69
26	48	240	3	4	8	137	Assy. Stk.	MDH48S3	22.50	18.25	21.75	5.25
26	48	480	1	3	8	137	Assy. Stk.	MDH48S11	22.50	18.25	21.75	5.25
26	48	480	3	2	8	137	Assy. Stk.	MDH48S5	22.50	18.25	21.75	5.25
26	54	240	3	3	9	144	Assy. Stk.	MDH54S3	24.75	20.50	24.00	5.81
26	54	480	1	3	9	144	Assy. Stk.	MDH54S11	24.75	20.50	24.00	5.81
26	54	480	3	2	9	144	Assy. Stk.	MDH54S5	24.75	20.50	24.00	5.81
26	60	240	3	4	10	165	Assy. Stk.	MDH60S3	27.00	22.75	26.25	6.38
26	60	480	1	4	10	165	Assy. Stk.	MDH60S11	27.00	22.75	26.25	6.38
26	60	480	3	2	10	165	Assy. Stk.	MDH60S5	27.00	22.75	26.25	6.38

Note:

- Same Day Shipment up to **two pieces**. Over **two pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.

Tubular and Process Assemblies

Thermostats and Accessories

Thermostats for Remote Mounting

Desc.	Temp Range °F	Bulb		Capillary Length in.	Est. Shipping Weight lbs	Code No.
		Length in.	Diameter in.			
SPST	30-110	4 ¹ / ₁₆	0.250	18	1	1
SPST	30-110	4 ¹ / ₁₆	0.250	18	6	1D
SPST	30-110	4 ¹ / ₁₆	0.250	18	3	1E
SPST	30-110	4 ¹ / ₁₆	0.250	18	2	1S
SPST	30-110	4 ¹ / ₁₆	0.250	18	6	1W
SPST	30-250	3 ¹ / ₄	0.250	18	1	2
SPST	30-250	3 ¹ / ₄	0.250	84	1	2A
SPST	30-250	3 ¹ / ₄	0.250	84	6	2AD
SPST	30-250	3 ¹ / ₄	0.250	84	3	2AE
SPST	30-250	3 ¹ / ₄	0.250	84	2	2AS
SPST	30-250	3 ¹ / ₄	0.250	84	6	2AW
SPST	30-250	3 ¹ / ₄	0.250	18	6	2D
SPST	30-250	3 ¹ / ₄	0.250	18	3	2E
SPST	30-250	3 ¹ / ₄	0.250	18	2	2S
SPST	30-250	3 ¹ / ₄	0.250	18	6	2W
SPST	175-550	3 ¹ / ₈	0.250	18	1	3
SPST	175-550	2 ¹ / ₄	0.250	84	1	3A
SPST	175-550	2 ¹ / ₄	0.250	84	6	3AD
SPST	175-550	2 ¹ / ₄	0.250	84	3	3AE
SPST	175-550	2 ¹ / ₄	0.250	84	2	3AS
SPST	175-550	2 ¹ / ₄	0.250	84	6	3AW
SPST	175-550	3 ¹ / ₈	0.250	18	6	3D
SPST	175-550	3 ¹ / ₈	0.250	18	3	3E
SPST	175-550	3 ¹ / ₈	0.250	18	2	3S
SPST	175-550	3 ¹ / ₈	0.250	18	6	3W
DPST	30-110	6 ¹ / ₄	0.375	36	2	4
DPST	30-110	6 ¹ / ₄	0.375	36	7	4D
DPST	30-110	6 ¹ / ₄	0.375	36	4	4E
DPST	30-110	6 ¹ / ₄	0.375	36	3	4S
DPST	30-110	6 ¹ / ₄	0.375	36	7	4W
DPST	60-250	4 ¹ / ₂	0.375	48	2	5
DPST	60-250	6 ¹ / ₂	0.250	48	2	5A
DPST	60-250	6 ¹ / ₂	0.250	48	7	5AD
DPST	60-250	6 ¹ / ₂	0.250	48	4	5AE
DPST	60-250	6 ¹ / ₂	0.250	48	3	5AS
DPST	60-250	6 ¹ / ₂	0.250	48	7	5AW
DPST	60-250	4 ¹ / ₂	0.375	48	7	5D
DPST	60-250	4 ¹ / ₂	0.375	48	4	5E
DPST	60-250	4 ¹ / ₂	0.375	48	3	5S
DPST	60-250	4 ¹ / ₂	0.375	48	7	5W
DPST	100-550	3 ¹ / ₈	0.375	48	2	7
DPST	100-550	7 ¹ / ₁₆	0.250	48	2	7A
DPST	100-550	7 ¹ / ₁₆	0.250	48	7	7AD
DPST	100-550	7 ¹ / ₁₆	0.250	48	22	7AE
DPST	100-550	7 ¹ / ₁₆	0.250	48	3	7AS
DPST	100-550	7 ¹ / ₁₆	0.250	48	7	7AW
DPST	100-550	3 ⁷ / ₈	0.375	48	7	7D
DPST	100-550	3 ⁷ / ₈	0.375	48	22	7E
DPST	100-550	3 ⁷ / ₈	0.375	48	3	7S
DPST	100-550	3 ⁷ / ₈	0.375	48	7	7W

CONTINUED

Note:

- **Same Day Shipment** up to **15 pieces**. Over **15 pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.

Tubular and Process Assemblies

Thermostats and Accessories

Thermostats for Remote Mounting (con't)

Desc.	Temp Range °F	Bulb Length in.	Bulb Diameter in.	Capillary Length in.	Est. Shipping Weight lbs	Code No.
DPST	60-250	6½	0.375	48	2	8
DPST	60-250	6½	0.375	48	7	8D
DPST	60-250	6½	0.375	48	22	8E
DPST	60-250	6½	0.250	48	3	8S
DPST	60-250	6½	0.250	48	7	8W
DPST	100-550	12	0.188	48	2	9
DPST	100-550	12	0.188	48	7	9D
DPST	100-550	12	0.188	48	22	9E
DPST	100-550	12	0.188	48	3	9S
DPST	100-550	12	0.188	48	7	9W
SPST	300-700	¾	0.375	60	1	10
SPST	300-700	¾	0.375	60	2	10S
SPST	300-680	¾	0.375	60	6	10W
SPST	300-680	¾	0.375	60	21	10E
SPST	300-680	¾	0.375	60	6	10D
SPST	350	¾	0.250	36	1	11
SPST	350	¾	0.250	36	6	11D
SPST	350	¾	0.250	36	21	11E
SPST	350	¾	0.250	36	2	11S
SPST	350	¾	0.250	36	6	11W
SPST	60-160	⅞	0.250	20	1	12A
SPST	60-160	⅞	0.250	20	3	12AD
SPST	60-160	⅞	0.250	20	21	12AE
SPST	60-160	⅞	0.250	20	2	12AS
SPST	60-160	⅞	0.250	20	3	12AW

Note:

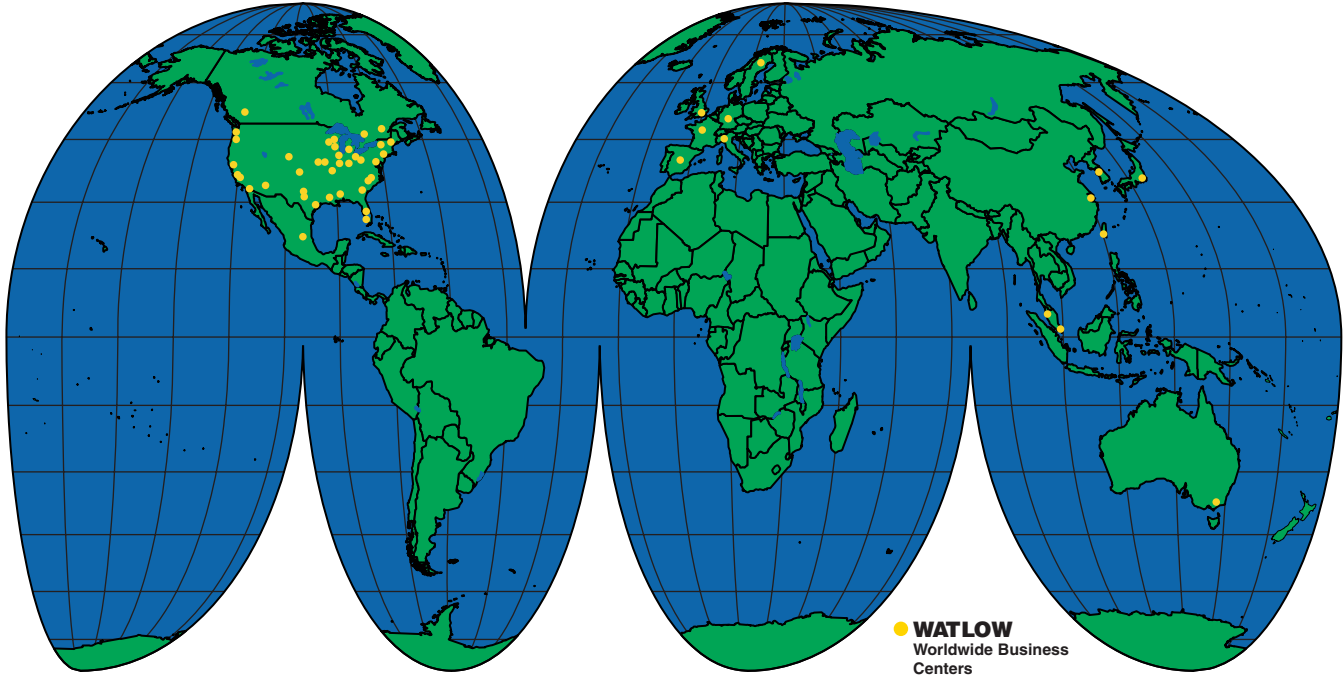
- **Same Day Shipment** up to **15 pieces**. Over **15 pieces**, please contact factory for RAPID SHIP details. Items for Same Day Shipment must be ordered by 12 p.m. CST.

Thermostat Stock Chart

Control Mode	Type	Temperature Range		Differential °F (°C)	Ampacity @ Line Voltage				Bulb Diameter in. (mm)	Bulb Length in. (mm)	Capillary Length in. (mm)	Terminal Type	Code No.	Est. Net Weight lbs (kg)
		°F	(°C)		120	240	277	480						
On-off Temp Control	Single Pole	30-110	(0-40)	8 (0)	25	25	22	—	0.250 (6)	¾ (121)	18 (455)	#12 AWG	1	1 (0.4)
		30-250	(0-120)	15 (8)	25	25	22	—	0.250 (6)	¾ (85)	18 (455)		2	1 (0.4)
	Single Throw (SPST)	30-250	(0-120)	15 (8)	25	25	22	—	0.250 (6)	¾ (85)	84 (2135)	Stranded Leads	2A	1 (0.4)
		175-550	(80-290)	26 (14)	25	25	22	—	0.250 (6)	¾ (85)	18 (455)		3	1 (0.4)
		175-550	(80-290)	26 (14)	25	25	22	—	0.250 (6)	¾ (70)	84 (2135)		3A	1 (0.4)
		300-700	(150-350)	12 (7)	25	25	—	—	0.375 (10)	¾ (95)	60 (1525)		10	1 (0.4)
	Double Pole Single Throw (DPST)	60-160	(15-70)	19 (10)	30	30	30	20	0.250 (6)	¾ (110)	14 (355)	#8-32 Screw Lug	12A	1 (0.4)
		30-110	(0-40)	12 (7)	30	30	30	21	0.375 (10)	¾ (160)	36 (915)		4	2 (0.9)
		60-250	(15-120)	12 (7)	30	30	30	21	0.375 (10)	¾ (115)	48 (1220)		5	2 (0.9)
		60-250	(15-120)	12 (7)	30	30	30	21	0.250 (6)	¾ (165)	48 (1220)		5A	2 (0.9)
On-off with	(DPST)	100-550	(40-290)	22 (12)	30	30	30	21	0.375 (10)	¾ (100)	48 (1220)	#10-32 Screw Lug	7	2 (0.9)
		100-550	(40-290)	22 (12)	30	30	30	21	0.250 (6)	⅞ (179)	48 (1220)		7A	2 (0.9)
Manual Reset	(SPST)	60-250	(15-120)	12 (7)	30	30	30	—	0.250 (6)	¾ (165)	48 (1220)	#10-32 Screw Lug	8	2 (0.9)
		100-550	(40-290)	22 (12)	30	30	30	—	0.188 (8)	12 (305)	48 (1220)		9	2 (0.9)
Manual Reset	(SPST)	350 ①	(180)	—	30	30	20	—	0.250 (6)	¾ (90)	36 (915)	#10-32 Screw Lug	11	1 (0.4)

① Fixed temperature setting

Watlow Products and Technical Support Delivered Worldwide



Asian Technical Support & Sales Offices

Australia	+61-3-9335-6449
China	+86-21-5950-5565
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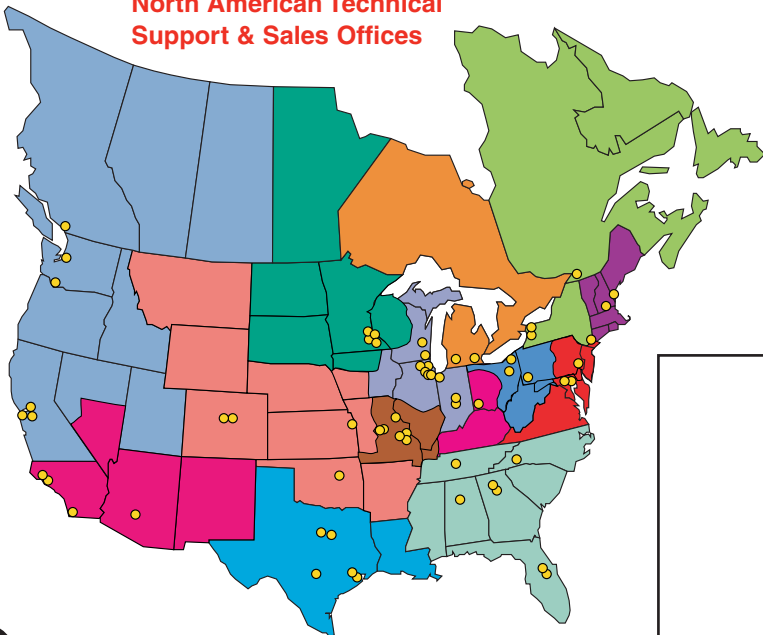
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