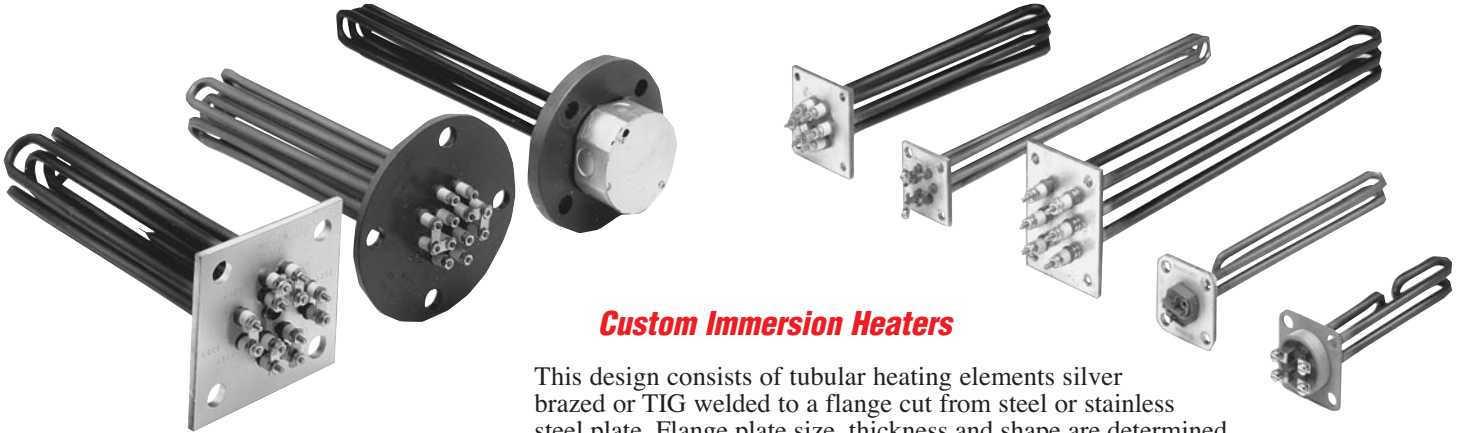


Flanged Immersion Heaters With Custom Size And Shape Flanges



Custom Immersion Heaters

This design consists of tubular heating elements silver brazed or TIG welded to a flange cut from steel or stainless steel plate. Flange plate size, thickness and shape are determined by the application. A fiber gasket is supplied with each heater.

The various style heaters in the Stock Lists on pages 11-22 through 11-25 are direct replacements for heaters in many OEM applications.

This type construction also lends itself to be easily and economically engineered into new equipment.

Typical Applications

- ↔ Hot Air Dryers
- ↔ Dehumidifying Dryers
- ↔ Heat Exchange Systems
- ↔ Water and Water Solutions
- ↔ Steam Tables
- ↔ Air Heating

For Type TPN Flanged Heaters used in UL Recognized Oil Immersion Heating Applications

- The heated oil temperature cannot exceed 257°F (125°C)
- TPN designs are not UL pressure rated
- Steel sheath elements are limited to 60 watts/in²

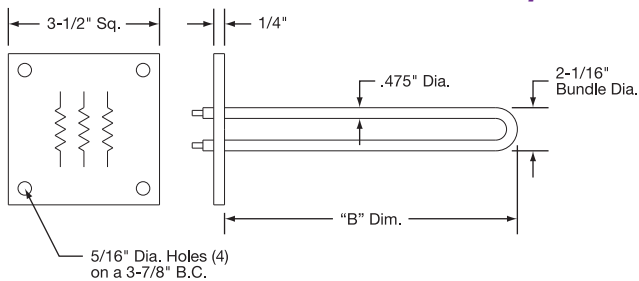
Contact Tempco for other application specific UL file information.



Tempco TPN Flanged Immersion Heaters are UL component recognized and CSA certified in most design variations for (non-pressure rated) general immersion heater use. The UL File Number is E90771 (CCN UBJY2/8) and the equivalent CSA File Number is 043099. They are also UL recognized under UL standard UL574 for oil heating, File Number MP4154 (CCN MDS2/8)

If you require UL, CSA, or other NRTL agency approvals, please specify when ordering.

3-1/2" Square Steel Flange • 3 Elements



Supplied with gasket (GSK-110-102)

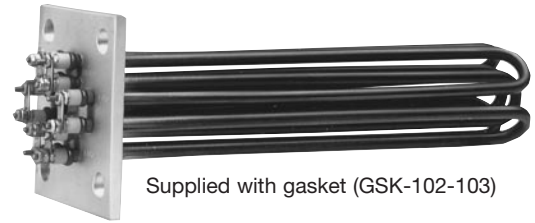
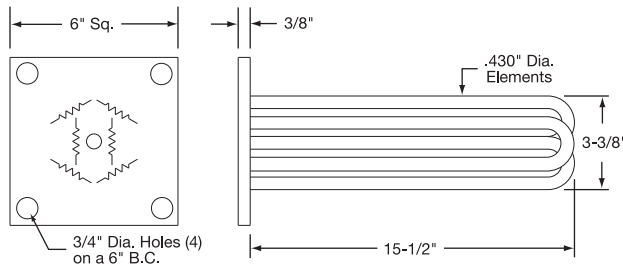
Standard (Non-Stock) and Stock Flanged Heaters

Stock Items Are Shown In RED

Element Sheath Material	KW	Watt Density		"B"		Part Number			Approximate Net Weight	
		W/in ²	W/cm ²	in	mm	240V-3Ph Y	480V-3Ph Y	575V-3Ph Y	lbs	kgs
Incoloy® 800	1.5	15	2.3	12 ⁷ / ₁₆	316	TPN01400	TPN01401	—	3	1.4
	2.5	24	3.7	12 ⁷ / ₁₆	316	TPN01173	TPN01174	TPN01402	3	1.4
	3	31	4.8	12 ⁷ / ₁₆	316	TPN01403	TPN01404	TPN01405	3	1.4
	3.5	24	3.7	17 ⁷ / ₈	454	TPN01175	TPN01201	TPN01406	4	1.8
	4	27	4.2	17 ⁷ / ₈	454	TPN01407	TPN01176	TPN01408	4	1.8
	5	34	5.3	17 ⁷ / ₈	454	TPN01409	TPN01410	TPN01411	4	1.8
Steel	2.5	24	3.7	12 ⁷ / ₁₆	316	TPN01351	TPN01373	—	3	1.4
	3.5	24	3.7	17 ⁷ / ₈	454	TPN01311	TPN01412	—	4	1.8

Standard lead time on non-stock items is 3 to 4 weeks.

6" Square Steel Flanged • 6 Incoloy® 800 Elements • 2 Circuits



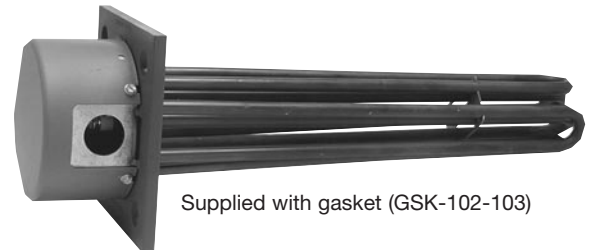
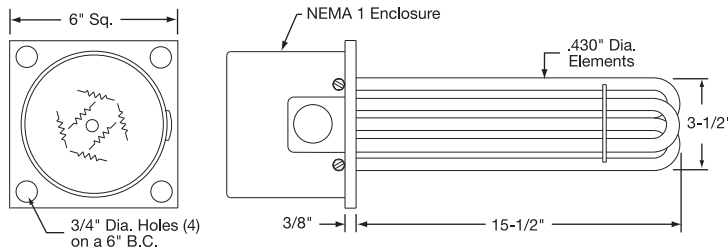
Supplied with gasket (GSK-102-103)

Standard (Non-Stock) and Stock Flanged Heaters
Stock Items Are Shown In RED

Element Sheath Material	KW	Watt Density		Part Number				Approximate Net Weight	
		W/in ²	W/cm ²	208V-3Ph	230V-3Ph	460V-3Ph	575V-3Ph	lbs	kgs
Incoloy® 800	9	44	6.8	TPN01168	TPN01169	TPN01170	TPN01424	8	3.6
	10.5	52	8.1	TPN01425	TPN01426	TPN01427	TPN01428	8	3.6
	12	60	9.3	TPN01171	TPN01429	TPN01172	TPN01430	8	3.6
	15	70	10.9	TPN01431	TPN01432	TPN01433	TPN01434	8	3.6

Standard lead time on non-stock items is 3 to 4 weeks.

6" Square Steel Flanged • 6 Incoloy® 800 Elements



Supplied with gasket (GSK-102-103)

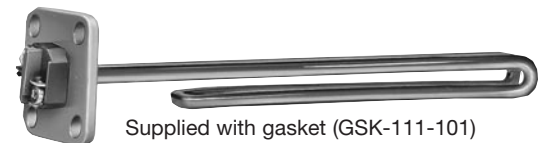
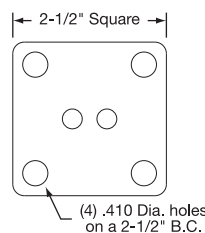
Standard (Non-Stock) and Stock Flanged Heaters
Stock Items Are Shown In RED

Standard lead time on non-stock items is 3 to 4 weeks.

Element Sheath Material	KW	Watt Density		Part Number			Approximate Net Weight	
		W/in ²	W/cm ²	208V-3Ph	240/480V-3Ph	575V-3Ph	lbs	kgs
Incoloy® 800	4.5	20	3.1	TPN01413	TPN01414	—	9	4.1
	9.0	40	6.2	TPN01415	TPN01416	TPN01417	9	4.1
	10.5	47	7.3	TPN01418	TPN01419	TPN01420	9	4.1
	12.0	54	8.4	TPN01421	TPN01422	TPN01423	9	4.1

Standard (Non-Stock) Hot Water Tank Heater • 2-1/2" Square Steel Flanged • 1 Incoloy® 800 Element

Immersed Length		KW	Part Number	
in	mm		120V	240V
9¼	235	1.0	—	TPN01484
11	279	1.25	TPN01485	TPN01486
7¾	187	1.5	TPN01487	TPN01488
9	279	2.0	TPN01489	TPN01490
10¾	273	2.5	—	TPN01491
12¾	313	3.0	—	TPN01167
13¾	349	3.5	—	TPN01492
15¾	400	4.0	—	TPN01493
16¾	413	4.5	—	TPN01494
19	483	5.0	—	TPN01287



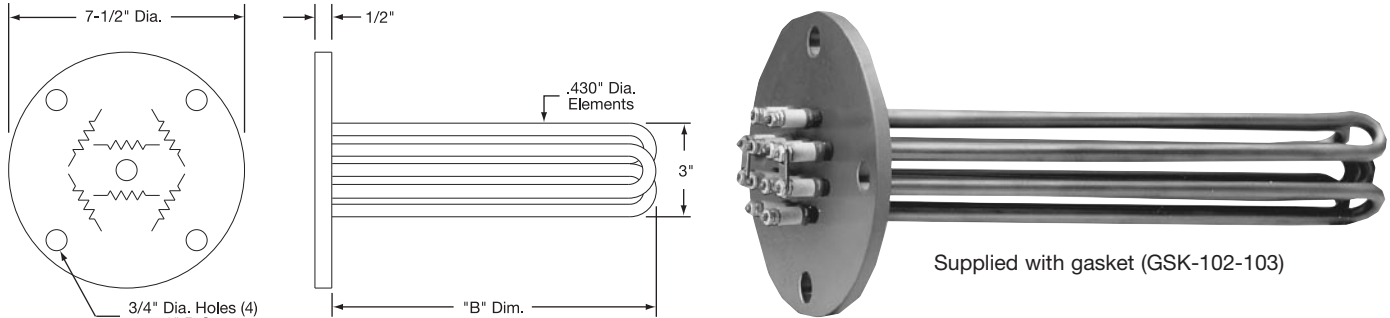
Supplied with gasket (GSK-111-101)

Design Features

- * 2-1/2" Square × 1/4" thick flange with gasket
- * 70 w/in² Incoloy® 800 tubular heating element
- * 10-32 plated screw terminals
- * Optional ceramic terminal block for high temperature applications

Standard lead time on non-stock items is 3 to 4 weeks.

7-1/2" Diameter Steel Flanged • 6 Elements

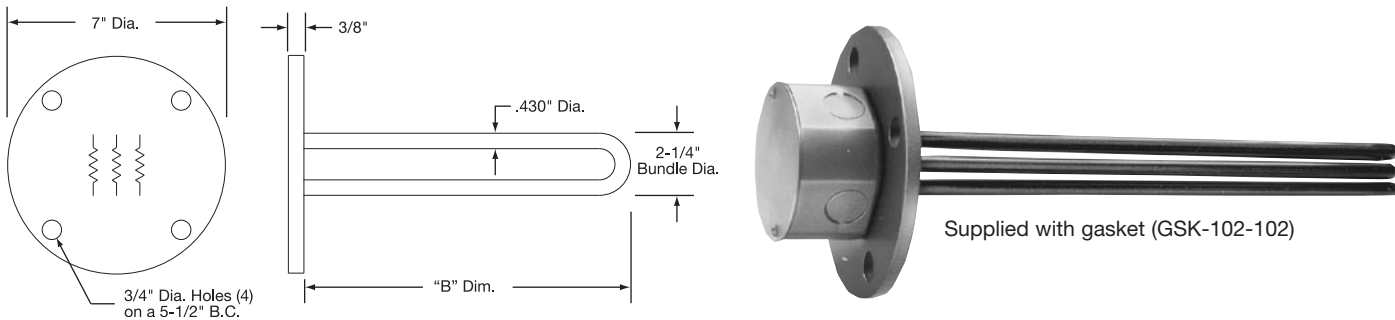


Standard (Non-Stock) and Stock Flanged Heaters Stock Items Are Shown In **RED**

Element Sheath Material	KW	Watt Density		"B"		Part Number			Approximate Net Weight	
		W/in ²	W/cm ²	in	mm	208V-3Ph	240V-3Ph Y	480V-3Ph Y	lbs	kgs
Incoloy [®] 800	7.5	50	7.8	12	305	TPN01468	TPN01165	TPN01469	12	5.5
	9	42	8.1	15 $\frac{1}{8}$	403	TPN01470	TPN01350	TPN01211	14	6.4
	10	50	7.8	15 $\frac{1}{8}$	403	TPN01471	TPN01472	TPN01473	14	6.4
	12	53	8.2	15 $\frac{1}{8}$	403	TPN01474	TPN01475	TPN01476	14	6.4
Copper	9	42	8.1	15 $\frac{1}{8}$	403	TPN01477	TPN01478	TPN01479	14	6.4
	10	50	7.8	15 $\frac{1}{8}$	403	TPN01480	TPN01481	TPN01260	14	6.4
	12	53	8.2	15 $\frac{1}{8}$	403	TPN01482	TPN01483	TPN01299	14	6.4

Standard lead time on non-stock items is 3 to 4 weeks.

7" Diameter Steel Flange • 3 Incoloy[®] 800 Elements

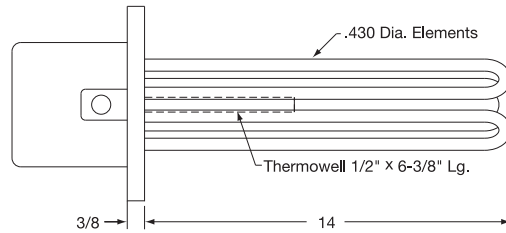
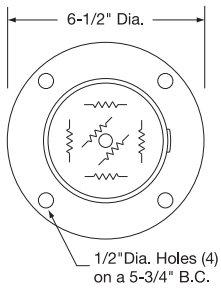


Standard (Non-Stock) and Stock Flanged Heaters Stock Items Are Shown In **RED**

Element Sheath Material	KW	Watt Density		"B"		Part Number				Approximate Net Weight	
		W/in ²	W/cm ²	in	mm	240V-1Ph	240V-3Ph	480V-1Ph	480V-3Ph	lbs	kgs
Incoloy [®] 800	3	24	3.7	17 $\frac{1}{8}$	448	TPN01460	TPN01461	TPN01462	TPN01463	6	2.7
	4.5	50	7.8	12 $\frac{3}{8}$	314	TPN01347	TPN01339	TPN01464	TPN01465	5	2.3
	9	70	10.8	17 $\frac{1}{8}$	454	TPN01348	TPN01198	TPN01349	TPN01223	6	2.7
	12	70	10.8	22 $\frac{1}{8}$	581	—	TPN01304	TPN01466	TPN01467	6	2.7

Standard lead time on non-stock items is 3 to 4 weeks.

6-1/2" Diameter Steel Flange • 6 Incoloy® 800 Elements • 1 Circuit



Supplied with gasket (GSK-102-103)

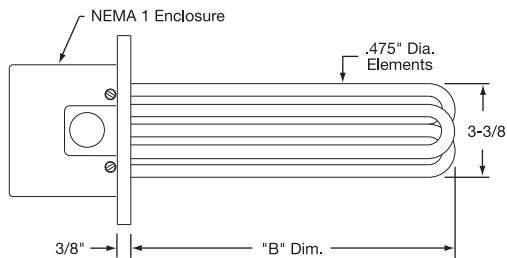
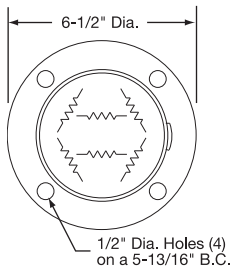
Standard (Non-Stock) and Stock Flanged Heaters

Stock Items Are Shown In **RED**

Element Sheath Material	KW	Watt Density		Part Number 460V-3Ph	Approximate Net Weight	
		W/in ²	W/cm ²		lbs	kgs
Incoloy® 800	9	46	7.1	TPN01706	10	4.5
	12	62	9.6	TPN01707	10	4.5

Heaters can be factory rewired for 230V-3PH.

6-1/2" Diameter Steel Flange • 6 Elements • 2 Circuits



Supplied with gasket (GSK-102-103)

Standard (Non-Stock) and Stock Flanged Heaters

Stock Items Are Shown In **RED**

Element Sheath Material	KW	Watt Density		B		Part Number				Approximate Net Weight	
		W/in ²	W/cm ²	in	mm	208V-3Ph	230V-3Ph	460V-3Ph	575V-3Ph	lbs	kgs
Incoloy® 800	9	50	7.8	17	432	TPN01448	TPN01177	TPN01178	TPN01449	10	4.5
	10.5	42	8.1	17	432	TPN01450	TPN01451	TPN01452	TPN01453	10	4.5
	12	50	7.8	17	432	TPN01454	TPN01204	TPN01179	TPN01455	10	4.5
Copper	12	48	7.4	17	432	TPN01319	TPN01456	TPN01321	—	10	4.5
	15	70	10.9	28	711	TPN01457	TPN01458	TPN01459	—	12	5.4

Ordering Information

Catalog Heaters

Flanged Immersion Heaters whose Part Numbers are in **RED** are available from Stock for immediate delivery.

Standard Non-Stock Part Numbers have a 2-3 week lead time.

Custom Engineered/Manufactured Heaters

An electric heater can be very application specific; for sizes and ratings not listed, **TEMPCO** will design and manufacture a Flanged Immersion Heater to meet your requirements. **Standard lead time is 3 to 4 weeks.**

Please Specify the following:

- Wattage, Voltage and Phase
- Element Immersion Length
- Flange Size and Material
- Electrical Enclosure, if required
- Element Sheath Material
- Optional Features
- Element Watt Density

⚠ WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.