

GAUMER PROCESS

HEATERS
SYSTEMS
CONTROLS

APPLICATIONS

90, 60, and 45 Watts Per Square Inch

- Industrial water heating - many aqueous solutions which are compatible with steel and Incoloy.

23 and 20 Watts Per Square Inch

- For heat transfer oil, cleaners, high temperature air and gas heating.

15 and 12 Watts Per Square Inch

- For lubricating oils, medium viscosity oils, high temperature air and gas heating.

8 and 6 Watts Per Square Inch

- For #5 and #6 fuel oil heating, viscous materials, raw crude oil, residual oils, high temperature air and gas heating.

4 and 2 Watts Per Square Inch

- For asphalt and other hard-to-heat materials, extra high temperature air and gas.

SPECIAL FEATURES

- Explosion Resistant Terminal Enclosure
- Moisture Resistant Terminal Enclosure
- Sheath Sensing Type K (J) Thermocouple attached to one element for overheat protection.
- Offset (Spaced Away) Terminal Housing
- Space Heater Mounted in Term. Encl.
- 2" Calcium Silicate Insulation with Alum. Jacke
- 2" Calcium Silicate Insulation with SS Jacket
- Insulation Jacket - Weatherproof Const.
- Custom Insulation Jacket
- 300#, 600#, 900#, etc. Construction
- Stainless Steel Construction - Type 304, 316
- ASME Coded and Stamped Chamber
- Thermowell/TC (Type J/K) mtd. in Outlet

OTHER CAPABILITIES

- Double Ended PBodies to 38 ft. Available
- Multiple Chamber Units Available
- Designs Available to 3000 psig and 1200°F.
- Special Material Assemblies are Available
- Special Coatings and Finishes are Available

7/3/2002

Circulation Heaters - Type IC



STANDARD FEATURES

Pipebody Chamber

- All Welded Construction
- 100% Hydrostatic Tested
- Sizes to 24 in. Diam. Available as Standard
- Over 200 Nozzle Arrangements are Standard
- Both Vertical and Horizontal Models Standard
- Either Mtg Brackets or Saddles are Standard
- Drain Plugs Where Applicable are Standard
- Large Selection of Standard Inlet and Outlet Sizes
- Chamber Connection Type and Size other than that detailed on Catalog Page

Heating Elements

- Incoloy 800 Sheath Material, Sealed Terminal
- Heavy Wall (.035 in.), Large diameter (.475 in.)

Spacers

- Rugged Design, High Temp Alloy Material
- "Evenflow" Configuration Standard

Construction

- Welded Heating Elements
- Welded Terminal Housings and Spacers

Installation

- Flying Leadwires Provided
- Only Standard Materials Needed in Field

Service

- Wiring Modifiable in Field
- Assembly Repairable at Factory

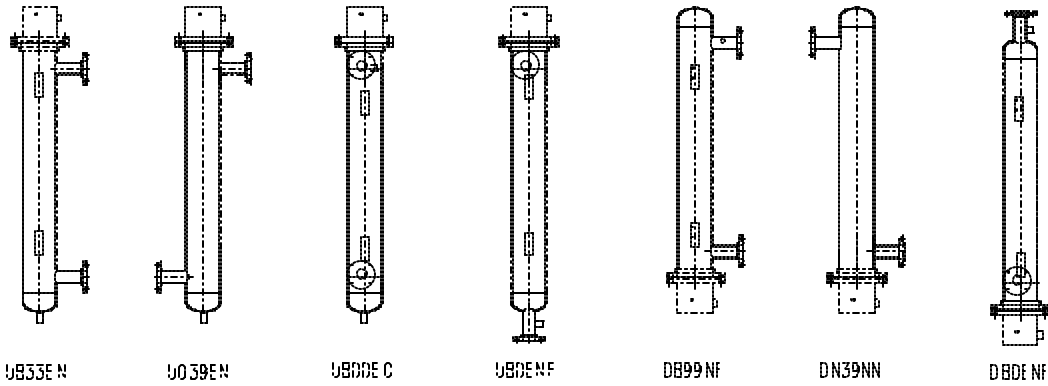
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Circulation Heaters

Type IC

Gaumer Drawing No. IC-100
(Arrangement Option Detail)

HEATER COMPONENT LOCATION CODE



UB33EN

UO39EN

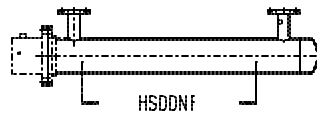
UBDDC

UBDDNF

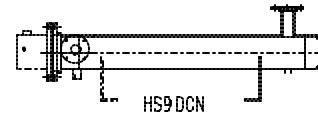
DB99NF

DN39NN

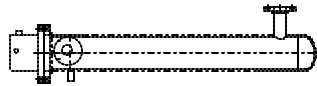
DBDENF



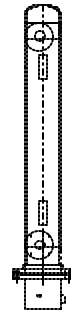
HSDDNF



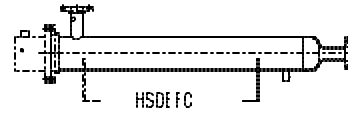
HS9DCN



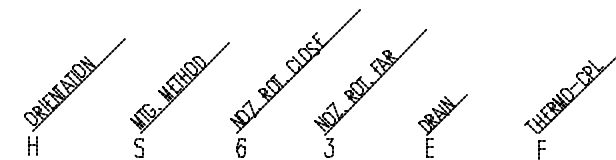
HN3DCN



DBDDNN



HSDFC



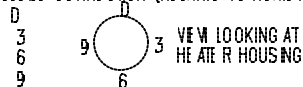
1) HEATER ORIENTATION

- H---HORIZONTAL
- U---UP (RELATIVE TO HEATER FLANGE)
- D---DOWN (RELATIVE TO HEATER FLANGE)

2) MOUNTING METHOD (ALWAYS AT THE 6 POSITION)

- S---SADDLES
- B---MOUNTING BLOCKS
- N---NONE

3) CLOSE CONNECTION (RELATIVE TO HEATER FLANGE)



4) FAR CONNECTION (SAME AS CLOSE CONNECTION)

- D
- 3
- 6
- 9
- E---END

5) DRAIN

- C---CLOSE
- F---FAR
- E---END
- N---NONE

6) THE THERMOCOUPLE

- C---CLOSE
- F---FAR
- N---NONE

7/3/2002

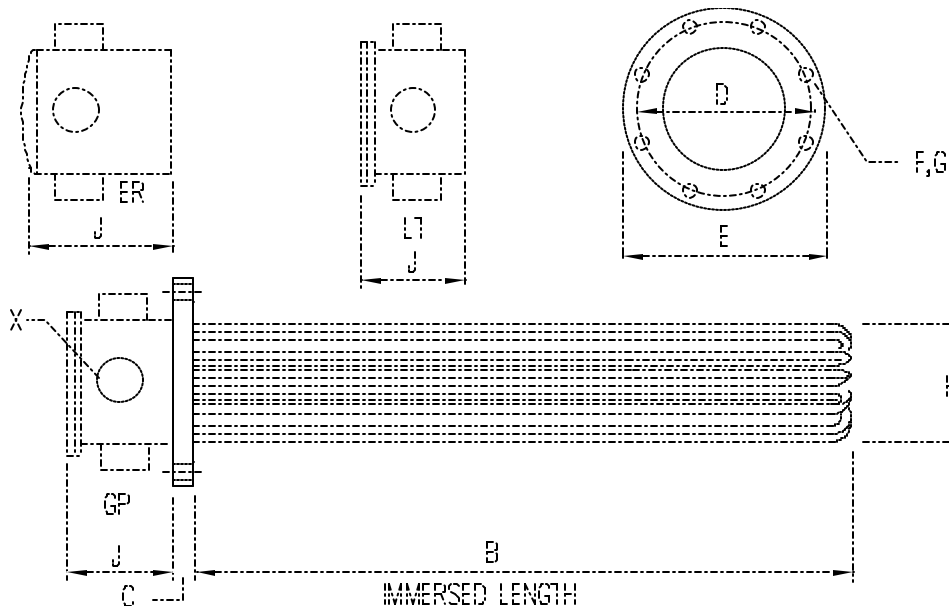
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Circulation Heaters

Type IC

Gaumer Drawing No. IF-200 (Dimension Flange Heater Detail)

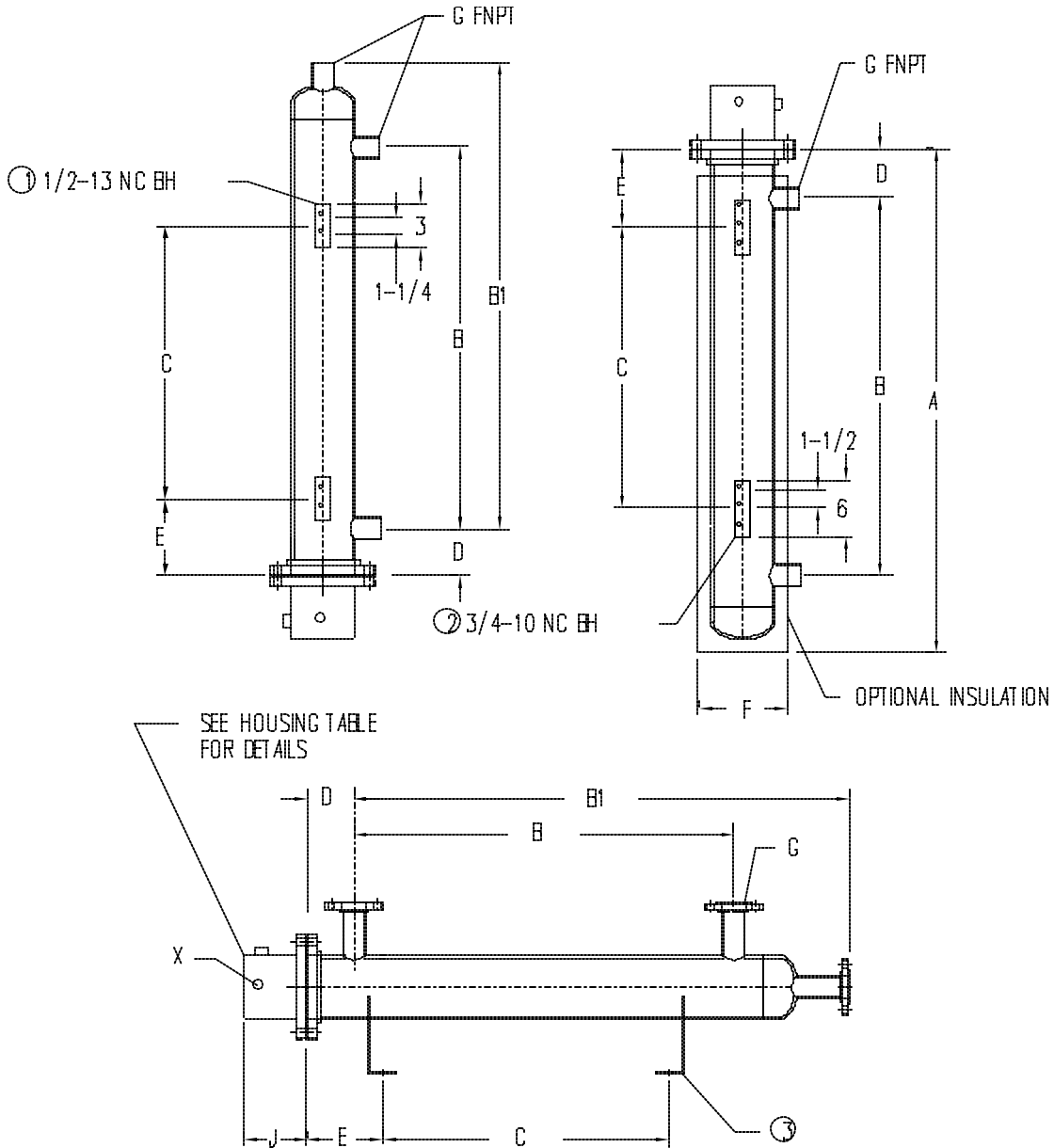
Flange Size (in)	Pressur Class (lb.)	Flange Dimensions (inches)			Hole Size F	No. of Holes G	Min.Hole Diam. H	Housing Height (inches)			X - No and Size Conduit Connection		
		C Thick	D Diam:	E Diam:				J GP:	J ER:	J LT:	GP:	ER:	LT:
2-1/2	150	7/8	5-1/2	7	3/4	4	2-1/4	2-5/8	5-1/2	2-5/8	1@1	2@1-1/4	1@1
2-1/2	300	1	5-7/8	7-1/2	7/8	8	2-1/4	2-5/8	5-1/2	2-5/8	1@1	2@1-1/4	1@1
3	150	0-15/16	6	7-1/2	3/4	4	2-3/4	2-5/8	5-1/2	2-5/8	1@1	2@1-1/4	1@1
3	300	1-1/8	6-5/8	8-1/4	7/8	8	2-3/4	2-5/8	5-1/2	2-5/8	1@1	2@1-1/4	1@1
4	150	0-15/16	7-1/2	9	3/4	8	3-13/16	5-1/2	6-1/2	5-1/2	4@1-1/2	2@1-1/2	4@1-1/2
4	300	1-1/4	7-7/8	10	7/8	8	3-13/16	5-1/2	6-1/2	5-1/2	4@1-1/2	2@1-1/2	4@1-1/2
5	150	0-15/16	8-1/2	10	7/8	8	4-13/16	5-1/2	6-1/2	5-1/2	4@1-1/2	2@1-1/2	4@1-1/2
5	300	1-3/8	9-1/4	11	7/8	8	4-13/16	5-1/2	6-1/2	5-1/2	4@1-1/2	2@1-1/2	4@1-1/2
6	150	1	9-1/2	11	7/8	8	5-3/4	5-1/2	8	5-1/2	4@1-1/2	4@1-1/2	4@1-1/2
6	300	1-7/16	10-5/8	12-1/2	7/8	12	5-3/4	5-1/2	8	5-1/2	4@1-1/2	4@1-1/2	4@1-1/2
8	150	1-1/8	11-3/4	13-1/2	7/8	8	7-13/16	5-1/2	9	5-1/2	4@1-1/2	4@1-1/2	4@1-1/2
8	300	1-5/8	13	15	1	12	7-13/16	5-1/2	9	5-1/2	4@1-1/2	4@1-1/2	4@1-1/2
10	150	1-3/16	14-1/4	16	1	12	9-5/8	7	11	7	4@2	4@2	4@2
10	300	1-7/8	15-1/4	17-1/2	1-1/8	16	9-5/8	7	11	7	4@2	4@2	4@2
12	150	1-1/4	17	19	1	12	11-5/8	7	11	7	4@2	4@2	4@2
12	300	2	17-3/4	20-1/2	1-1/4	16	11-5/8	7	11	7	4@2	4@2	4@2
14	150	1-3/8	18-3/4	21	1-1/8	12	12-1/2	7	11	7	4@2	4@2	4@2
14	300	2-1/8	20-1/4	23	1-1/4	20	12-1/2	7	11	7	4@2	4@2	4@2
16	150	1-7/16	21-1/4	23-1/2	1-1/8	16	14-1/2	9	13	9	4@2	4@2	4@2
16	300	2-1/4	22-1/2	25-1/2	1-3/8	20	14-1/2	9	13	9	4@2	4@2	4@2
18	150	1-9/16	22-3/4	25	1-1/4	16	16-3/8	9	13	9	4@2	4@2	4@2
18	300	2-3/8	24-3/4	28	1-3/8	24	16-3/8	9	13	9	4@2	4@2	4@2
20	150	1-11/16	25	27-1/2	1-1/4	20	18-5/16	9	13	9	4@2	4@2	4@2
20	300	2-1/2	27	30-1/2	1-3/8	24	18-5/16	9	13	9	4@2	4@2	4@2
24	150	1-7/8	29-1/2	32	1-3/8	20	22-1/8	11	15	11	6@2	6@2	6@2
24	300	2-3/4	32	36	1-5/8	24	22-1/8	11	15	11	6@2	6@2	6@2



Circulation Heaters

Type IC

Gaumer Drawing No. IC-300
(Dimension Option Detail)



- ① FOR SIZES 3" THRU 6"
- ② FOR SIZES 8" THRU 14"
- ③ SADDLES OPTIONAL

Circulation Heaters

Type IC

Watt Density: 90

Diameter (in.): 2.5

Watt Density (w/sq.in.): 90

GCI Circulation Heater Drawing No. IC-3 Dimensions (Inches) A, B, B1, C, D, E,							D = 3 E = N/A		Nozzles Option 1		Nozzles Option 2		Nozzles Option 3		Nozzles Option 4	
Catalog Number	kW	Volt	A	B	C	F	B1	G1(in.)	B1	G2(in.)	B1	G3(in)	B1	G4(in)		
C2F3N13M2U	9	480	19	N/A	N/A	5-1/2	15	1 FNPT	17	2 FNPT	19	1 150#	20	2 150#		
C2F3N18M2U	12	480	23	N/A	N/A	5-1/2	19	1 FNPT	21	2 FNPT	23	1 150#	24	2 150#		
C2F3N20M2U	15	480	26	N/A	N/A	5-1/2	22	1 FNPT	24	2 FNPT	26	1 150#	27	2 150#		
C2F3N25M2U	18	480	31	N/A	N/A	5-1/2	27	1 FNPT	29	2 FNPT	31	1 150#	32	2 150#		
C2F3N33M2U	24	480	38	N/A	N/A	5-1/2	35	1 FNPT	37	2 FNPT	38	1 150#	40	2 150#		
C2F3N40M2U	30	480	46	N/A	N/A	5-1/2	42	1 FNPT	44	2 FNPT	46	1 150#	47	2 150#		
C2F3N48M2U	36	480	53	N/A	N/A	5-1/2	50	1 FNPT	52	2 FNPT	54	1 150#	55	2 150#		
C2F3N52M2U	40	480	58	N/A	N/A	5-1/2	54	1 FNPT	55	2 FNPT	57	1 150#	58	2 150#		
C2F3N64M2U	50	480	70	N/A	N/A	5-1/2	66	1 FNPT	68	2 FNPT	70	1 150#	71	2 150#		
C2F3N77M2U	60	480	82	N/A	N/A	5-1/2	79	1 FNPT	81	2 FNPT	83	1 150#	84	2 150#		

Diameter (in.): 3

Watt Density (w/sq.in.): 90

GCI Circulation Heater Drawing No. IC-3 Dimensions (Inches) A, B, B1, C, D, E,							D = 4 E = 6		Nozzles Option 1		Nozzles Option 2		Nozzles Option 3		Nozzles Option 4	
Catalog Number	kW	Volt	A	B	C	F	B1	G1(in.)	B1	G2(in.)	B1	G3(in)	B1	G4(in)		
C3F3N18M2U	12	480	24-1/2	14	9	6-1/2	21	1 FNPT	23	2 FNPT	25	1 150#	26	3 150#		
C3F3N20M2U	15	480	26-1/2	16	11	6-1/2	23	1 FNPT	25	2 FNPT	27	1 150#	28	3 150#		
C3F3N25M2U	18	480	31-1/2	21	16	6-1/2	28	1 FNPT	30	2 FNPT	32	1 150#	33	3 150#		
C3F3N33M2U	24	480	39-1/2	29	24	6-1/2	36	1 FNPT	38	2 FNPT	40	1 150#	41	3 150#		
C3F3N40M2U	30	480	46-1/2	36	31	6-1/2	43	1 FNPT	45	2 FNPT	47	1 150#	48	3 150#		
C3F3N48M2U	36	480	54-1/2	44	39	6-1/2	51	1 FNPT	53	2 FNPT	55	1 150#	56	3 150#		
C3F3N52M2U	40	480	58-1/2	48	43	6-1/2	55	1 FNPT	57	2 FNPT	59	1 150#	60	3 150#		
C3F3N64M2U	50	480	70-1/2	60	55	6-1/2	67	1 FNPT	69	2 FNPT	71	1 150#	72	3 150#		
C3F3N77M2U	60	480	84-1/2	73	68	6-1/2	80	1 FNPT	82	2 FNPT	84	1 150#	85	3 150#		

Diameter (in.): 4

Watt Density (w/sq.in.): 90

GCI Circulation Heater Drawing No. IC-3 Dimensions (Inches) A, B, B1, C, D, E,							D = 4 E = 6		Nozzles Option 1		Nozzles Option 2		Nozzles Option 3		Nozzles Option 4	
Catalog Number	kW	Volt	A	B	C	F	B1	G1(in.)	B1	G2(in.)	B1	G3(in)	B1	G4(in)		
C4F6N18M2U	24	480	25	14	9	7-1/2	21	1 FNPT	23	2 FNPT	25	1 150#	26	3 150#		
C4F6N20M2U	30	480	27	16	11	7-1/2	23	1 FNPT	25	2 FNPT	27	1 150#	28	3 150#		
C4F6N25M2U	36	480	32	21	16	7-1/2	28	1 FNPT	30	2 FNPT	32	1 150#	33	3 150#		
C4F6N33M2U	48	480	32	29	24	7-1/2	36	1 FNPT	38	2 FNPT	40	1 150#	41	3 150#		
C4F6N40M2U	60	480	47	36	31	7-1/2	43	1 FNPT	45	2 FNPT	47	1 150#	48	3 150#		
C4F6N48M2U	72	480	55	44	39	7-1/2	51	1 FNPT	53	2 FNPT	55	1 150#	56	3 150#		
C4F6N52M2U	80	480	55	48	43	7-1/2	55	1 FNPT	57	2 FNPT	59	1 150#	60	3 150#		
C4F6N64M2U	100	480	71	60	55	7-1/2	67	1 FNPT	69	2 FNPT	71	1 150#	72	3 150#		
C4F6N77M2U	120	480	85	74	68	7-1/2	80	1 FNPT	82	2 FNPT	84	1 150#	85	3 150#		

Circulation Heaters

Type IC

Diameter (in.): 5

Watt Density (w/sq.in.): 90

GCI Circulation Heater Drawing No. IC-3 Dimensions (Inches) A, B, B1, C, D, E,							D = 4-1/2 E = 8		Nozzles Option 1		Nozzles Option 2		Nozzles Option 3		Nozzles Option 4	
Catalog Number	kW	Volt	A	B	C	F	B1	G1(in.)	B1	G2(in.)	B1	G3(in)	B1	G4(in)		
C5F6N18M2U	24	480	25-3/4	13-1/2	9	8-1/2	21	2 FNPT	23	2-1/2 FNPT	25	2 150#	26	3 150#		
C5F6N20M2U	30	480	27-3/4	15-1/2	11	8-1/2	23	2 FNPT	25	2-1/2 FNPT	27	2 150#	28	3 150#		
C5F6N25M2U	36	480	32-3/4	20-1/2	16	8-1/2	28	2 FNPT	30	2-1/2 FNPT	32	2 150#	33	3 150#		
C5F6N33M2U	48	480	40-3/4	28-1/2	24	8-1/2	36	2 FNPT	38	2-1/2 FNPT	40	2 150#	41	3 150#		
C5F6N40M2U	60	480	47-3/4	35-1/2	31	8-1/2	43	2 FNPT	45	2-1/2 FNPT	47	2 150#	48	3 150#		
C5F6N48M2U	72	480	55-3/4	43-1/2	39	8-1/2	51	2 FNPT	53	2-1/2 FNPT	55	2 150#	56	3 150#		
C5F6N52M2U	80	480	59-3/4	47-1/2	43	8-1/2	55	2 FNPT	57	2-1/2 FNPT	59	2 150#	60	3 150#		
C5F6N64M2U	100	480	71-3/4	59-1/2	55	8-1/2	67	2 FNPT	69	2-1/2 FNPT	71	2 150#	72	3 150#		
C5F6N77M2U	120	480	85-3/4	73-1/2	68	8-1/2	80	2 FNPT	82	2-1/2 FNPT	84	2 150#	85	3 150#		
C5F9N18M2U	36	480	25-3/4	13-1/2	9	8-1/2	21	2 FNPT	23	2-1/2 FNPT	25	2 150#	26	3 150#		
C5F9N20M2U	45	480	27-3/4	15-1/2	11	8-1/2	23	2 FNPT	25	2-1/2 FNPT	27	2 150#	28	3 150#		
C5F9N25M2U	54	480	32-3/4	20-1/2	16	8-1/2	28	2 FNPT	30	2-1/2 FNPT	32	2 150#	33	3 150#		
C5F9N33M2U	72	480	40-3/4	28-1/2	24	8-1/2	36	2 FNPT	38	2-1/2 FNPT	40	2 150#	41	3 150#		
C5F9N40M2U	90	480	47-3/4	35-1/2	31	8-1/2	43	2 FNPT	45	2-1/2 FNPT	47	2 150#	48	3 150#		
C5F9N48M2U	108	480	55-3/4	43-1/2	39	8-1/2	51	2 FNPT	53	2-1/2 FNPT	55	2 150#	56	3 150#		
C5F9N52M2U	120	480	59-3/4	47-1/2	43	8-1/2	55	2 FNPT	57	2-1/2 FNPT	59	2 150#	60	3 150#		
C5F9N64M2U	150	480	71-3/4	59-1/2	55	8-1/2	67	2 FNPT	69	2-1/2 FNPT	71	2 150#	72	3 150#		
C5F9N77M2U	180	480	85-3/4	73-1/2	68	8-1/2	80	2 FNPT	82	2-1/2 FNPT	84	2 150#	85	3 150#		

Diameter (in.): 6

Watt Density (w/sq.in.): 90

GCI Circulation Heater Drawing No. IC-3 Dimensions (Inches) A, B, B1, C, D, E,							D = 4-1/2 E = 8		Nozzles Option 1		Nozzles Option 2		Nozzles Option 3		Nozzles Option 4	
Catalog Number	kW	Volt	A	B	C	F	B1	G1(in.)	B1	G2(in.)	B1	G3(in)	B1	G4(in)		
C6F12N18M2U	48	480	26-1/4	13-1/2	9	8-1/2	21	2 FNPT	23	2-1/2 FNPT	25	2 150#	26	3 150#		
C6F12N20M2U	60	480	28-1/4	20-1/2	11	8-1/2	23	2 FNPT	25	2-1/2 FNPT	27	2 150#	28	3 150#		
C6F12N25M2U	72	480	33-1/4	20-1/2	16	8-1/2	28	2 FNPT	30	2-1/2 FNPT	32	2 150#	33	3 150#		
C6F12N33M2U	96	480	41-1/4	28-1/2	24	8-1/2	36	2 FNPT	38	2-1/2 FNPT	40	2 150#	41	3 150#		
C6F12N40M2U	120	480	48-1/4	35-1/2	31	8-1/2	43	2 FNPT	45	2-1/2 FNPT	47	2 150#	48	3 150#		
C6F12N48M2U	144	480	55-1/4	43-1/2	39	9-5/8	51	2 FNPT	53	2-1/2 FNPT	55	2 150#	56	3 150#		
C6F12N52M2U	160	480	60-1/4	47-1/2	43	9-5/8	55	2 FNPT	57	2-1/2 FNPT	59	2 150#	60	3 150#		
C6F12N64M2U	200	480	72-1/4	59-1/2	55	9-5/8	67	2 FNPT	69	2-1/2 FNPT	71	2 150#	72	3 150#		
C6F12N77M2U	240	480	86-1/4	73-1/2	68	9-5/8	80	2 FNPT	82	2-1/2 FNPT	84	2 150#	85	3 150#		
C6F15N18M2U	60	480	26-1/4	13-1/2	9	8-1/2	21	2 FNPT	23	2-1/2 FNPT	25	2 150#	26	3 150#		
C6F15N20M2U	75	480	28-1/4	15-1/2	11	8-1/2	23	2 FNPT	25	2-1/2 FNPT	27	2 150#	28	3 150#		
C6F15N25M2U	90	480	33-1/4	20-1/2	16	8-1/2	28	2 FNPT	30	2-1/2 FNPT	32	2 150#	33	3 150#		
C6F15N33M2U	120	480	41-1/4	28-1/2	24	8-1/2	36	2 FNPT	38	2-1/2 FNPT	40	2 150#	41	3 150#		
C6F15N40M2U	150	480	48-1/4	35-1/2	31	8-1/2	43	2 FNPT	45	2-1/2 FNPT	47	2 150#	48	3 150#		
C6F15N48M2U	180	480	55-1/4	43-1/2	39	9-5/8	51	2 FNPT	53	2-1/2 FNPT	55	2 150#	56	3 150#		
C6F15N52M2U	200	480	60-1/4	47-1/2	43	9-5/8	55	2 FNPT	57	2-1/2 FNPT	59	2 150#	60	3 150#		
C6F15N64M2U	250	480	72-1/4	59-1/2	55	9-5/8	67	2 FNPT	69	2-1/2 FNPT	71	2 150#	72	3 150#		
C6F15N77M2U	300	480	86-1/4	73-1/2	68	9-5/8	80	2 FNPT	82	2-1/2 FNPT	84	2 150#	85	3 150#		

Circulation Heaters

Type IC

Diameter (in.): 8

Watt Density (w/sq.in.): 90

GCI Circulation Heater Drawing No. IC-3 Dimensions (Inches) A, B, B1, C, D, E,						D = 4-1/2 E = 8-1/2	Nozzles Option 1		Nozzles Option 2		Nozzles Option 3		Nozzles Option 4	
Catalog Number	kW	Volt	A	B	C	F	B1	G1(in.)	B1	G2(in.)	B1	G3(in)	B1	G4(in)
C8F18N18M2U	72	480	26-3/4	13-1/2	9	11-5/8	21	2 FNPT	23	2-1/2 FNPT	25	2 150#	26	3 150#
C8F18N20M2U	90	480	28-3/4	15-1/2	11	11-5/8	23	2 FNPT	25	2-1/2 FNPT	27	2 150#	28	3 150#
C8F18N25M2U	108	480	33-3/4	20-1/2	16	11-5/8	28	2 FNPT	30	2-1/2 FNPT	32	2 150#	33	3 150#
C8F18N33M2U	144	480	41-3/4	28-1/2	24	11-5/8	36	2 FNPT	38	2-1/2 FNPT	40	2 150#	41	3 150#
C8F18N40M2U	180	480	48-3/4	35-1/2	31	11-5/8	43	2 FNPT	45	2-1/2 FNPT	47	2 150#	48	3 150#
C8F18N48M2U	216	480	56-3/4	43-1/2	39	11-5/8	51	2 FNPT	53	2-1/2 FNPT	55	2 150#	56	3 150#
C8F18N52M2U	240	480	61-1/4	47	43	11-5/8	55	2 FNPT	57	2-1/2 FNPT	59	2 150#	60	3 150#
C8F18N64M2U	306	480	73-1/4	59	55	11-5/8	67	2 FNPT	69	2-1/2 FNPT	71	2 150#	72	3 150#
C8F18N77M2U	360	480	87-1/4	73	68	11-5/8	80	2 FNPT	82	2-1/2 FNPT	84	2 150#	85	3 150#
C8F24N18M2U	96	480	26-3/4	13-1/2	9	11-5/8	21	2 FNPT	23	2-1/2 FNPT	25	2 150#	26	3 150#
C8F24N20M2U	120	480	28-3/4	15-1/2	11	11-5/8	23	2 FNPT	25	2-1/2 FNPT	27	2 150#	28	3 150#
C8F24N25M2U	144	480	33-3/4	20-1/2	16	11-5/8	28	2 FNPT	30	2-1/2 FNPT	32	2 150#	33	3 150#
C8F24N33M2U	192	480	41-3/4	28-1/2	24	11-5/8	36	2 FNPT	38	2-1/2 FNPT	40	2 150#	41	3 150#
C8F24N40M2U	240	480	48-3/4	35-1/2	31	11-5/8	43	2 FNPT	45	2-1/2 FNPT	47	2 150#	48	3 150#
C8F24N48M2U	288	480	56-3/4	43-1/2	39	11-5/8	51	2 FNPT	53	2-1/2 FNPT	55	2 150#	56	3 150#
C8F24N52M2U	320	480	61-1/4	47	43	11-5/8	55	2 FNPT	57	2-1/2 FNPT	59	2 150#	60	3 150#
C8F24N64M2U	408	480	73-1/4	59	55	11-5/8	67	2 FNPT	69	2-1/2 FNPT	71	2 150#	72	3 150#
C8F24N77M2U	480	480	87-1/4	73	68	11-5/8	80	2 FNPT	82	2-1/2 FNPT	84	2 150#	85	3 150#