



Air-Cooled

Standard Cast-In Finned Heater Designs for Air-Cooled Extruder Systems

Aluminum Finned Cast-In Band Heaters are used as an alternative to Liquid Cooled Cast-In Band Heaters for heating and cooling the barrels of plastic extruders.

As a standard, Finned Cast-In Band Heaters are manufactured in aluminum alloys because this material provides very good thermal conductive properties. For applications requiring higher operating temperatures and/or higher watt densities, bronze or brass alloys can be used.

Precision machining of the inside diameter yields superior heat transfer between the heater and the machine barrel, thereby

ensuring uniform heating and cooling of the extrusion process. The heaters are secured to the barrel either by Stainless Steel Clamp Bands or by means of Bolt Clamping the heater halves together.

Finned Cast-In Band Heaters can be designed to meet the mechanical and physical constraints of existing extruder shroud systems. They are manufactured for Original Equipment Manufacturers (OEM) and maintenance (MRO) applications to customer specifications.



Type FF – Finned Aluminum Cast-In

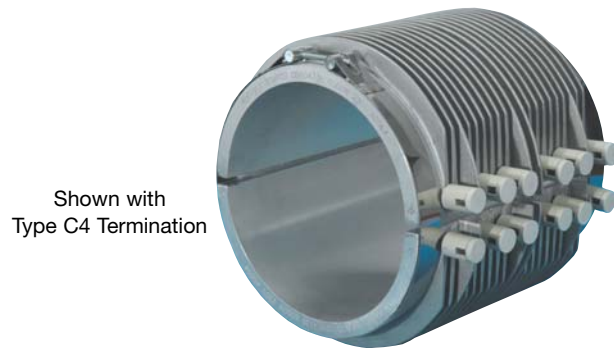
This aluminum cast-in band heater style is normally made to be used in conjunction with Arctic Cast Shroud Systems. It can also be used as a stand-alone replacement for other heating and air cooling extrusion systems.

The clamping mechanism consists of separate stainless steel straps and is normally supplied with Type “E” screw terminals. For other termination styles see pages 3-52 and 3-53.

Cast-In Aluminum Band Heater Bolt and Strap Clamping Designs



Shown with
Type T Termination



Shown with
Type C4 Termination

Type P – Bolt Clamp

This finned aluminum cast-in band heater features standard bolt clamping design. The fins cover approximately 95% of the heater width. This style can be used on Tempco’s exclusive shroud systems and/or as a stand-alone replacement for other heating and air cooling extrusion systems.

It is supplied with Type “S” terminals if not otherwise specified. For other termination styles see pages 3-52 and 3-53.

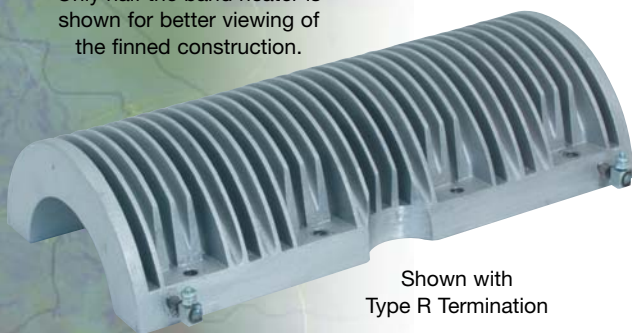
Type F – Strap Clamp

This finned aluminum cast-in band heater features standard strap clamping design. The fins cover approximately 90% of the heater width. This style is utilized as a replacement heater for existing extrusion systems requiring heating and forced air cooling by finned aluminum cast-in heaters.

It is supplied with Type “S” terminals if not otherwise specified. For other termination styles see pages 3-52 and 3-53.

Low-Profile Finned Aluminum Cast-In Band Heater – New Unique Design for Smaller Extruders

Only half the band heater is shown for better viewing of the finned construction.



Shown with
Type R Termination

Type LP Low-Profile for 1" to 1-1/2" Extruders

This low-profile aluminum cast-in band heater has a compact design that is intended to be used on small tabletop extruders – 1" to 1-1/2" in screw size. Clamping is achieved by a unique, low profile bolting method that allows the maximum use of surface area for fins. If not otherwise specified, supplied with Type “S” screw terminals. For other termination styles see pages 3-52 and 3-53.



Stock and Standard (Non-Stock) Finned Aluminum Cast-In Band Heaters for Extrusion Processing

Standard Sizes and Ratings Listed by Extruder Size

These Sizes and Ratings are among the most commonly used. They will provide the shortest delivery times.

Many of these Cast-In Heaters are available Off-the-Shelf for Immediate Delivery.

Extruder Size	I.D. in	O.D. in	Width in	Watts	Volts	Phase	Cooling Tube O.D.	Features	Part Number
1" to 1-1/2"	2.875	5.000	4.125	750	240	1	N/A	Bolt clamp	CBH04188
	2.875	5.000	4.125	500	240	1	N/A	Bolt clamp, 1/2" dia. hole at top of gap	CBH03853
	2.875	5.000	7.500	1100	240	1	N/A	Bolt clamp, 3/4" dia. hole at top of gap	CBH03796
	3.625	6.750	5.500	375	110	1	N/A	Type F leads, 1" dia. T/C hole top/bot. at gap	*CBH02483
2" to 2-1/2"	4.000	8.000	10.750	2000	230	1	N/A	(1) 3/4" dia. hole in center at gap, 2 1/2" dia. x 3 hole	CBH03254
	4.000	8.000	10.750	3000	230	1	N/A	Bronze	*CBH04719
	4.000	9.000	5.375	1000	240	1	3/8"	(1) 3/4" dia. hole in center at gap	CBH03256
	4.250	7.500	13.000	2910	230	3	N/A	(1) 1" dia. hole	CBH08563
	4.375	8.250	12.250	2000	230	1	N/A	(2) 1/8" NPT TC holes	*CBH01139
	4.375	8.375	4.500	710	230	1	N/A	(2) 1/8" NPT holes	CBH01671
	4.375	9.875	12.250	2000	230	1	1/2"	2" Lg. slot at gap top/bot.	CBH02189
	4.500	8.000	11.000	2000	240	1	N/A	(1) 1 1/4" dia. hole E/H	CBH01558
	4.500	8.500	12.000	2750	240	1	N/A	Bolt clamp	CBH06640
	4.500	9.000	11.500	2000	230	1	N/A	3/4" x 3" slot	CBH05533
	4.750	7.688	7.313	1250	460	1	N/A	(2) 1 1/16" dia. holes on 1 half only	CBH01625
	5.000	8.000	16.250	3500	190	1	N/A	Bolt clamp, (1) 3/4" dia. hole at top and bottom gap	*CBH03671
	5.000	8.000	16.250	3500	240	1	N/A	Bolt clamp	CBH04477
	5.000	10.000	11.187	2500	230	1	N/A	Bolt clamp	CBH01787
	5.000	10.000	11.187	2500	230	1	N/A	Bolt clamp	CBH03215
	5.000	10.250	14.000	3300	230	1	N/A	Bolt clamp	*CBH03564
5.500	8.750	3.500	900	240	1	N/A		CBH04418	
5.500	9.000	9.000	1725	230	1	N/A		CBH04193	
5.500	9.500	5.250	1250	230	1	N/A	3/8" Radius cutout at each end, both halves	CBH01772	
5.500	9.500	12.500	2800	240	1	N/A	Bolt clamp	CBH04982	
5.500	10.000	11.000	2100	230	1	N/A		*CBH02803	
5.500	10.000	14.000	3250	240	1	N/A	5/8" dia. Hole E/H	CBH04964	
3-1/2"	6.000	10.500	11.500	2700	230	1	N/A	Slot at gap	CBH02588
	6.000	10.500	14.500	3500	230	1	N/A	Slot at gap	CBH02432
	6.250	9.250	18.000	5000	240	1	N/A	Bolt clamp, 5 3/4" dia. vent at gap	CBH04383
	6.250	10.250	6.250	1400	240	1	N/A	Bolt clamp	*CBH04382
	6.250	10.250	6.250	1700	240	1	N/A	Bolt clamp	CBH06373
	6.250	10.250	10.438	2500	230	1	N/A	2" Lg. slot at top gap, (2) 1/8" NPT holes at top gap	*CBH01708
	6.250	10.250	13.688	3000	230	1	N/A	2" Lg. slot at top gap, (2) 1/8" NPT holes E/H	*CBH01406
	6.253	10.250	14.000	4400	240	1	N/A	Bolt clamp	CBH06089
	6.300	9.550	15.750	5000	240	1	N/A	M12-6 tap on 1 half only, 3/8" dia. hole top gap	CBH03793
	6.500	9.625	5.500	1500	240	1	N/A		CBH03016
	6.500	10.500	7.500	2000	230	1	N/A	3/8" Radius cutout each end E/H	CBH03321
	6.500	10.500	13.000	3750	230	1	N/A	Bolt clamp	CBH04953
	6.500	11.000	17.500	3600	230	1	N/A	1" dia. T/C hole top/bot. at gap	CBH07372
6.500	11.000	17.500	3600	230	1	N/A		*CBH02802	
6.750	11.250	16.000	4800	230	1	N/A		CBH05405	

An asterisk (*) next to the Part Number guarantees in-stock availability for same-day shipping when

ORDERED BY 2 PM CST



Note: Part numbers are for aluminum heaters unless otherwise specified. For Sizes and Ratings not listed,

Tempco will manufacture a Cast-In Heater to your specifications. See page 3-45 for how to order.

Key for Abbreviations found under the Features Column

- E/H** = Each Half
- EP** = Explosion Resistant Terminal Housing
- MR** = Moisture Resistant Terminal Housing
- MPR** = Moisture Proof Die Cast Aluminum Box
- C/T** = Cooling Tubes
- CW** = Single Set of Cooling Tubes
- CWW** = Dual Set of Cooling Tubes
- RC** = Non-Exposed Cooling Tubes/Recessed NPT Fittings

CONTINUED

Cast-In Heaters



Air-Cooled

Stock and Standard (Non-Stock) Finned Aluminum Cast-In Band Heaters for Extrusion Processing

Continued from previous page...

Extruder Size	I.D. in	O.D. in	Width in	Watts	Volts Each Half	Phase	Cooling Tube O.D.	Features	Part Number
4-1/2"	7.000	10.250	18.000	6000	230	3	N/A	(1) 1" dia. hole	CBH08425
	7.000	11.000	13.500	2400	230	1	N/A	6" Lg. slot at gap	CBH05871
	7.500	10.375	18.000	4500	240	3	N/A	Bolt clamp	*CBH07211
	7.500	11.500	10.875	3500	240	1	N/A		CBH04269
	7.500	11.500	21.000	7500	230	1	N/A	Used with shroud ASF1025	CBH05122
	7.500	12.000	10.250	2085	230	1	N/A	1" dia. hole top/bot. gap	*CBH01314
	7.500	12.000	17.000	3500	230	1	N/A		CBH05395
	7.500	12.000	18.000	4500	240	3	N/A	3/4" dia. hole at gap	CBH06595
	7.500	12.000	18.000	3500	230	1	N/A		CBH05574
	7.500	12.000	22.000	6000	230	1	N/A		CBH05396
	7.500	12.500	20.875	7500	230	3	1/2	Bolt clamp, CWW C/T, 5/4" dia. vent	*CBH01958
	7.500	12.750	20.875	7500	230	3	N/A	Bolt clamp	*CBH01665
	7.500	12.875	12.500	2500	230	1	3/8	Bolt clamp	CBH05559
	7.500	13.000	17.375	4000	230	1	1/2	Bolt clamp	CBH03383
	7.625	11.500	18.000	3500	230	1	N/A	1 1/8" Lg. slot at top gap, (2) 1/8" NPT holes E/H	CBH02252
	7.625	11.625	14.438	3500	230	1	N/A	2" Lg. slot at top gap, (2) 1/8" NPT holes E/H	CBH01401
	8.000	12.000	8.000	2500	240	1	N/A	Bolt clamp	CBH06574
	8.000	12.000	8.000	2850	240	1	N/A	Bolt clamp	CBH06642
	8.000	12.000	10.000	3550	240	1	N/A	Bolt clamp	CBH06643
	8.250	12.250	13.000	5500	240	1	N/A	1" dia. Hole E/H	*CBH04892
	8.250	12.250	16.000	7000	230	3	N/A	Bolt clamp, 1" dia. hole E/H	CBH05247
	8.268	11.504	21.457	7500	240	3	N/A	M12 Hole E/H, 5/8" dia. hole top gap	*CBH04167
	8.500	11.500	20.500	6300	240	3	N/A	Bolt clamp	CBH08281
	8.500	12.000	8.500	2750	230	1	N/A		CBH05417
	8.500	12.500	6.000	1250	240	1	N/A		CBH04854
	8.500	12.500	18.000	5500	240	1	N/A		CBH05287
	8.500	13.000	19.000	6000	480	1	N/A		CBH05227
	8.502	13.500	12.750	4500	480	3	N/A	Bolt clamp, (2) 1 1/4" dia. holes E/H	CBH07212
6"	9.313	12.313	23.000	7500	230	3	N/A	Bolt clamp, 1 1/4" dia. hole at gap	CBH07492
	9.313	12.313	28.000	7500	230	3	N/A	Bolt clamp, 1 1/4" dia. hole at gap	CBH07491
	9.313	13.813	23.500	9900	230	1	N/A		CBH05327
	9.313	13.813	23.500	7500	460	3	N/A		CBH05515
	9.313	13.813	28.500	7500	460	3	N/A	1" dia. hole top gap	CBH05514
	9.313	13.813	28.500	9900	460	3	N/A	1" dia. hole top gap	CBH05513
	9.500	15.000	13.750	4000	230	1	1/2	Bolt clamp	CBH02797
	9.500	15.000	13.750	7250	230	1	1/2	Bolt clamp	CBH02185
	9.500	15.000	27.750	12000	230	3	N/A	Bolt clamp, 1/8" NPT hole E/H	*CBH01666
	9.750	14.000	19.438	6000	230	1	N/A	2" Lg. slot top gap	*CBH01262
	9.750	14.000	23.875	6000	230	1	N/A	2" Lg. slot top/bot. gap	CBH02945
	9.858	14.000	7.125	4000	230	1	N/A	Bolt clamp	CBH03984
	9.875	13.875	8.500	3500	240	1	N/A	Bolt clamp	CBH06644
	9.875	13.875	8.500	3750	240	1	N/A	Bolt clamp	CBH06645
	10.000	13.250	12.000	6480	230	3	N/A		CBH08424
	10.039	13.289	12.992	6000	230	3	N/A		CBH04738
8"	12.010	17.760	7.870	4000	230	1	N/A	Bolt clamp, 1" dia. hole at gap	CBH07905
	12.127	15.750	22.000	7050	210	1	N/A	2 Elements E/H @ 105V each	CBH03006
	12.250	18.500	11.562	5500	230	1	N/A	Bolt clamp, 3/8" dia. hole E/H	CBH05455

An asterisk (*) next to the Part Number guarantees in-stock availability for same-day shipping when



Key for Abbreviations found under the Features Column

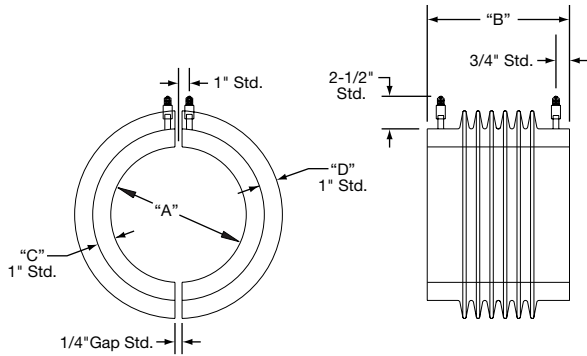
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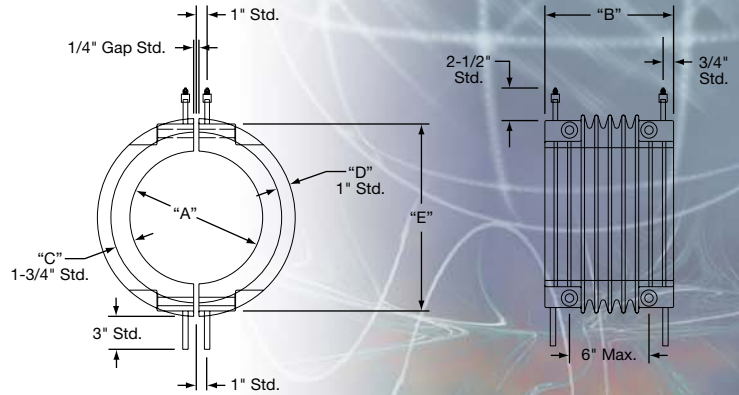
Note: Part numbers are for aluminum heaters unless otherwise specified. For Sizes and Ratings not listed, Tempco will manufacture a Cast-In Heater to your specifications. See page 3-45 for how to order.



Cast-In Finned Band Heaters Ordering Information



Finned Cast-In Band Heater Strap Clamping



Finned Cast-In Band Heater Bolt Clamping

Specify size and location of bolt holes.

Ordering Information

To process your order or quotation, please specify the following information.

- Variable Dimensions** Inside Dia. "A" _____ Length "B" _____ Thickness "C" _____ Fin Height "D" _____ "E" _____
- Material Specifications** Aluminum Bronze Brass
- Electrical Specifications** Watts each half _____ Volts each half _____ Phase _____
- Clamping Style** Straps Bolt Clamp
- Cooling Tube Sizes** 1/4" O.D. SS 3/8" O.D. SS 1/2" O.D. SS
 Optional Incoloy® (1/2" only) Dual Cooling Tubes
- Cooling Tube Fittings** Non-exposed 3/8" NPTF "HS" Hi-Seal Fitting "RA" 90° Copper Elbow
 Non-exposed 1/2" NPTF "BF" High Pressure "RT" 90° Threaded Elbow
 "FF" Flared Seal "R3" Straight Threaded
- Terminal Style** "S" Post Terminals "T7" Post Terminals "C4" Ceramic Cover
 "R" 90° Blockhead "F" Plain Leads "H" Hermetic Seal "T" Mica Washers
 "SF" Quick-Disconnect "R1" Armor Cable Leads "TS" Leads and Shrink Sleeve
 "SF9" Quick-Disconnect "E" Right-Angle Lugs "R2" Blockhead and Through Hole
 "L" Terminal Lug "L9" Terminal Lug
- Terminal Protection Box** "C7" 1 Box for both halves "EP" Explosion Resistant "MPR" Moisture Resistant Box
 "P2" High Temperature Quick Disconnect "CB1" 1 Box per half
 "C2" 1 Box for both half
- Surface Finish** Machined or As Cast. *Indicate surfaces to be machined.*
- Special Cast-In Features** Holes, Cutouts, Slots, Bevels, Mounting Studs, Stand-Offs and Taper Angles.
For special features a detailed drawing is required.