COMMERCIAL DUCT HEATER
REPLACEMENT PARTS LISTING
EFFECTIVE: DECEMBER 29, 2017

Terms

AVAILABILITY

Stock parts marked with “ST” will normally be shipped in 24 hours of receipt of an order at factory. Non-stock marked “NS” contact factory for lead time. For parts not shown please contact our replacement parts group with compelte nameplate information and description of the part(s) required.

CREDIT TERMS

Net 30 days with approved credit. We accept major credit cards; Mastercard, VISA, Discover and American Express

MINIMUM ORDER CHARGE

$50.00 per order, excludes freight and taxes.

FREIGHT POLICY

UPS is our preferred method of shipment, FedEx is also available. Freight charges are prepaid and added to the invoice.

HOW TO ORDER

Form 10-1111-91 must be used to order these parts. Our goal to provide an expedited order and shipping program for many of the common duct heater parts. To meet this goal we have streamlined the ordering process with the use of preprinted ordering forms. An EXCEL formatted form can be requested at sales@Heatrex.com or by contacting your primary sales engineer or our customer service representatives. Order forms are to be emailed to customerservice@Heatrex.com.

Thermal Cutouts Auto

The automatic disc thermal cutout is usually located in the top flange of the heater frame. It is sometimes located in a sheet metal box inside the heater frame just above the heating elements. It is usually wired into the control circuit of the heater. The part is marked with a part and vendor number making it easy to identify. This cutout is used on open coil and finned tubular duct heaters.

Bimetal Cutout
Auto Reset

Bimetal Cutout
Auto Reset

PART NUMBERS			DESCRIPTION	AVAIL. CODE
NEW	OLD	VENDOR		
1006873	C241-003	20604L3-333-L152	Bimetal Cutout Auto Reset, Open 152°F	ST
1006877	C241-004	20604L3-316-L164	Bimetal Cutout Auto Reset, Open 164°F	ST
1006881	C241-005	20604L3-490-L145	Bimetal Cutout Auto Reset, Open 145°F	ST
1006885	C241-006	20604L3-494-L133	Bimetal Cutout Auto Reset, Open 133°F	ST

Linear Cutout- Auto

The automatic linear thermal cutout is located inside the heater terminal box (enclosure). The linear tube extends through the back of the terminal box into the heater's frame. It is usually strung across the top heater frame and then across the front of the heating elements to bottom frame. The cutout comes in various tube lengths. The cutout is usually wired in the control circuit. Optional with open coil but standard with finned tubular type heaters. The part is marked with a part and vendor number making it easy to identify.

PART NUMBERS			DESCRIPTION	AVAIL. CODE
NEW	OLD	VENDOR		
1006479	C231-053	10H11-221609	Linear Limit Cutout - Auto Reset, Open 210°F, 84" Capillary	ST
1006483	C231-055	10H11-210224	Linear Limit Cutout - Auto Reset, Open 210°F, 144" Capillary	ST
1006487	C231-057	10H11-210381	Linear Limit Cutout - Auto Reset, Open 260°F, 60" Capillary	ST
1006494	C231-070	10H11-210490	Linear Limit Cutout - Auto Reset, Open 260°F, 36" Capillary	ST
1006497	C231-071	10H11-210535	Linear Limit Cutout - Auto Reset, Open 260°F, 144" Capillary	ST
1006515	C231-082	351-254158	Bulb/Capillary Cutout - Auto Reset, Open 243°F	ST

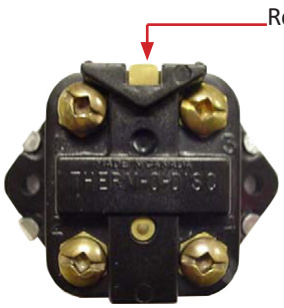
Thermal Cutouts Manual

Linear Cutout - Manual

The manual linear thermal cutout is located inside the heater terminal box (enclosure). The linear tube extends through the back of the terminal box into the heater's frame. It is usually strung across the top heater frame and then across the front of the heating elements to bottom frame. The cutout comes in various tube lengths. The cutout is usually wired in the control circuit. Used with finned tubular type heaters. There is a small round button on the back of the cutout that needs to be pushed to reset. The part is marked with a part and vendor number making it easy to identify.

PART NUMBERS			DESCRIPTION	AVAIL. CODE
NEW	OLD	VENDOR		
1006381	C232-032	10H14-212023	Linear Limit Cutout - Manual Reset, Open 260°F, 84" Capillary	ST
1006389	C232-039	10H14-212116	Linear Limit Cutout - Manual Reset, Open 324°F, 144" Capillary	ST
1006397	C232-042	10H14-212156	Linear Limit Cutout - Manual Reset, Open 324°F, 60" Capillary	ST
1006401	C232-043	10H14-212169	Linear Limit Cutout - Manual Reset, Open 324°F, 36" Capillary	ST
1006430	C232-056	10H14-212521	Linear Limit Cutout - Manual Reset, Open 275°F, 84" Capillary	ST
1006413	C232-045	351-253957	Bulb/Capillary Cutout - Manual Reset, Open 195°F	ST
1006783	C231-131	—	Bulb/Capillary Cutout - Manual Reset, Open 356°F	NS

The manual reset thermal cutout is located inside the heater terminal box (enclosure). These cutouts are usually load carrying (line voltage) and located in the element terminal area. There is one or more manual resets used. When the manual opens due to over temperature a lever will extend out of the body. The part is marked with a part and vendor number making it easy to identify.



Bimetal Cutout Manual


Bimetal Cutout Manual


Bimetal Cutout Manual

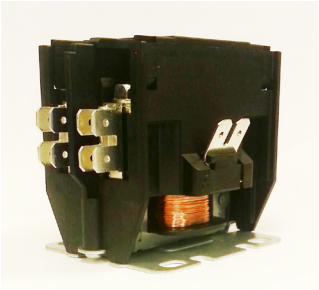
PART NUMBERS			DESCRIPTION	AVAIL. CODE
NEW	OLD	VENDOR		
1006945	C242-015	HLX-46607	Bimetal Cutout Manual Reset, Open 210°F	ST
1006953	C242-017	HLX-46606	Bimetal Cutout Manual Reset, Open 200°F	ST
1006973	C242-022	HLX-46624	Bimetal Cutout Manual Reset, Open 170°F (double-pole)	ST
1006981	C242-024	60TX15-330694	Bimetal Cutout Manual Reset, Open 170°F (single-pole)	ST
1006985	C242-025	60TX15-330695	Bimetal Cutout Manual Reset, Open 200°F	ST
1006989	C243-003	20604F3-31-L120	Bimetal Cutout Manual Reset, Open 120°F	ST

Contactors

Magnetic contactors are used as control, safety and backup type. Located in the power circuit are used to turn the power off and on to the heating elements. They are available with 1, 2 and 3 poles. When selecting the contactor match the ratings of the resistive amperage, number of poles and the holding coil voltage. The part is marked with a vendor number making it easy to identify.

Description e.g. MAG 40A 24V 3P – Magnetic 40 amps, 24V holding coils (heater control circuit) 3-poles.

2-Pole Contactor



PART NUMBERS			DESCRIPTION	AVAIL. CODE
NEW	OLD	VENDOR		
1002878	C112-001	XMC0-257-EBBCN	Magnetic Contactor - 24V, 30A, 1-pole	ST
1003087	C123-016	XMC0-322-EBBCN	Magnetic Contactor - 24V, 40A, 2-pole	ST
1003104	C123-017	3100-20T6281	Magnetic Contactor - 120V, 40A, 2-Pole	ST
1003156	C123-020	XMC0-252-EBBCN	Magnetic Contactor - 24V, 30A, 2-Pole	ST
1003173	C123-021	XMC0-252-FBBCN	Magnetic Contactor - 120V, 30A, 2-Pole	ST
1003314	C125-009	XMC0-402-EBBD	Magnetic Contactor - 24V, 50A, 2-Pole	ST
1003332	C125-010	XMC0-402-FBBD	Magnetic Contactor - 120V, 50A, 2-Pole	ST
1003656	C133-010	XMC0-323-EBBCF	Magnetic Contactor - 24V, 40A, 3-Pole	ST
1003672	C133-011	XMC0-323-FBBCF	Magnetic Contactor - 120V, 40A, 3-Pole	ST
1003853	C135-010	XMC0-403-EBBDFH	Magnetic Contactor - 24V, 50A, 3-Pole	ST
1003871	C135-011	XMC0-403-FBBDFH	Magnetic Contactor - 120V, 50A, 3-Pole	ST
1003996	C136-014	XMC0-633-FBBDFH	Magnetic Contactor - 120V, 75A, 3-Pole	ST

Disconnect Switch and Handles

Rotary Handle

Pistal Grip Handle

Disconnect switches provide the necessary disconnecting means required by NEC. The factory installed disconnect switch has a door interlocking feature which prevents the door from being opened while the electrical power inside the heater enclosure is on. The electrical field supplied power wire is connected to the disconnect switch. There is a shaft which extends out of the switch and connects to the disconnect switch handle mounted to the door of the enclosure. The handle has a lock out feature which prevents the handle from being turned to the on position. This feature is used when servicing the heater.

The vendor part number is printed onto the disconnect switch and handle and is to be used when ordering replacements.

Disconnect Switches:

PART NUMBERS			DESCRIPTION	AVAIL. CODE
NEW	OLD	VENDOR		
1001498	C325-061	OETL-NF600A	Disconnect Switch - 600A, 600V, 3P	ST
1016494	-	OT16F3	Disconnect Switch - 20A, 600V, 3P	ST
1016495	-	OT25F3	Disconnect Switch - 30A, 600V, 3P	ST
1016496	-	OT40F3	Disconnect Switch - 40A, 600V, 3P	ST
1016497	-	OT63F3	Disconnect Switch - 60A, 600V, 3P	ST
1016498	-	OT80F3	Disconnect Switch - 80A, 600V, 3P	ST
1016499	-	OT100F3	Disconnect Switch - 100A, 600V, 3P	ST
1023411	-	OT200U03	Disconnect Switch - 200A, 600V, 3P	ST
1023412	-	OT400U03	Disconnect Switch - 400A, 600V, 3P	ST

Disconnect Handles:

PART NUMBERS			DESCRIPTION	AVAIL. CODE
NEW	OLD	VENDOR		
1016502	-	OHBS2AJ1	Rotary Disconnect Handle - NEMA 1, 3R, 12	ST
1016780	-	OXP6X400	Pistol Grip Disconnect Handle	ST
1018595	-	OHB65L6	Pistol Grip Disconnect Handle - NEMA 4, 4X	ST
1023577	-	OHB80J6	Pistol Grip Disconnect Handle - NEMA 1, 3R, 12	ST

Power Block

Power blocks are provided when disconnect switches are not. The electrical field supplied power wiring is connected to the power terminal block.

The vendor part number is printed onto the power block and is to be used when ordering replacements.

Terminal Block

PART NUMBERS			DESCRIPTION	AVAIL. CODE
NEW	OLD	VENDOR		
1000327	E123-027	NC3	3P Terminal Block - 2/0-14	ST
1000419	E123-046	NFT-3	3P Terminal Block - 8-22	ST
1000433	E123-053	NDN111-WH	3P Terminal Block - 4-18	ST
1000447	E123-054	NFT-2	2P Terminal Block - 8-22	ST
1000461	E123-055	TB300-2 S5006	2P Terminal Block - 10-18	ST

Control Transformers

Transformers are used to power the control circuit which is usually either 24 or 120 VAC. However other control circuits are sometimes used. The transformer steps down the line voltage to the control voltage. Control circuit transformers consists of two coils of insulated wire wound around an iron core. A resultant electromagnetic induction field takes the primary line voltage and converts or steps down to the lower secondary voltage.

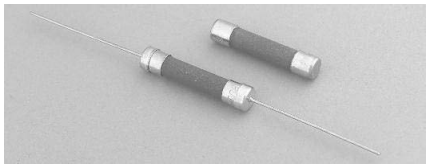
The transformers used in our duct heaters are either Class 1 or Class 2. Class 2 is limited to 24VAC secondary and to 75VA (unit of power). Class 2 transformers have built-in short circuit protection and do not require external secondary fuses. Whereas Class 1 which has control voltages of 120VAC require external secondary fusing.

Transformers are located inside the heater's terminal enclosure. Transformers can be selected based on their Primary and Secondary voltages and VA ratings. The vendor's part number is often marked on the transformer.

Transformers:

PART NUMBERS			DESCRIPTION				AVAIL. CODE
NEW	OLD	VENDOR	CLASS	VA	PRIMARY COIL	SECONDARY COIL	
1007176	C311-021	BE33734-001	1	20	208/240V	24V	NS
1007182	C311-023	BE33736-001	1	20	480V	24V	ST
1007164	C311-012	155433	1	25	208V	120V	ST
1007167	C311-013	155146	1	25	240/480V	120V	ST
1007250	C312-028	2-1611461-1	2	50	120V	24V	ST
1007244	C312-026	8-1611461-1	2	50	208/240V	24V	ST
1007223	C312-015	155436	1	50	240/480V	120V	ST
1007241	C312-025	4000-03AW18K999	2	50	277V	24V	ST
1007247	C312-027	4000-77H15K281	2	50	380V	24V	ST
1007253	C312-029	4000-04AW18K999	2	50	480V	24V	ST
1007256	C312-030	4-1611511-4	2	50	600V	24V	ST
1007280	C313-022	4000-09J15K999	2	75	208/240V	24V	ST
1007265	C313-010	155439	1	75	240/480V	120V	ST
1007268	C313-011	154327	1	75	277/600V	120V	ST
1007289	C313-025	4000-77J15K281	2	75	380V	24V	ST
1007286	C313-024	4000-04J15K281	2	75	480V	24V	ST
1000002	C314-012	155440	1	100	208/240/480V	24V	ST
1007298	C314-010	154330	1	100	277/600V	24/120V	ST
1000017	C314-013	155444	1	100	400V	24/120V	ST
1000102	C315-011	155447	1	150	208/240/480V	24V	ST
1000059	C315-008	155445	1	150	240/480V	120V	ST
1000130	C316-014	155449	1	200	240/480V	120V	ST
1000177	C316-018	155452	1	250	240/480V	120V	ST
1000193	C316-020	2824320T00	1	250	240/480V	24V	ST
1000209	C316-021	155453	1	350	240/480V	120V	ST
1000225	C316-022	155454	1	500	240/480V	120V	ST

Control Transformers Fuses



Primary and secondary transformer fusing is used to provide short circuit protection for the transformer.

Primary fusing is optional and when provided in connection to the primary wiring feeding to the transformer. The selection of the fusing and fuse block depends on the voltage to the heater. Heaters with power of 250-volts and less will use the fuse and fuse block listed in the table. Heater with power rating over 250-volts will use the fuse and block rated 600-volts.

Secondary fusing will be provided on all Class I transformers. A fuse and fuse block with ratings of up to 250-volts is to be selected. Class II transformers have built-in overcurrent/short circuit protect and are not normally provided with external fusing.

Fuses for CL1:

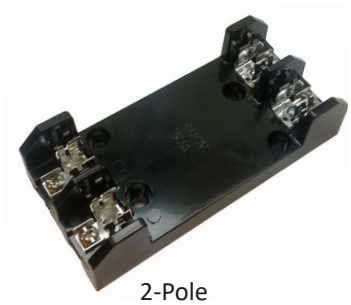
PART NUMBERS			CLASS	DESCRIPTION	AVAIL. CODE
NEW	OLD	VENDOR			
1005200	E111-095	ABC-15	1	Class 1 Transformer Secondary Fuse	ST
1005270	E111-121	GAB-15	1	Class 1 Transformer Secondary Fuse	ST
1005641	E112-031	S-8202-01	1	Class 1 Transformer Secondary Fuse Block	ST
1004893	E111-019	OT-20		Primary Fuse 250V 20A 50KAIC	ST
1004976	E112-036	OTS-20		Primary Fuse 600V 20A 50KAIC	ST
1005606	E112-002	H25030-2SR		Primary Fuse Block 250V 30A 2P	ST
1005677	E112-040	H60030-2SR		Primary Fuse Block 600V 30A 2P	ST

Power Fuses

Fuses are the most common form of overcurrent protection used in duct heaters. They are located in the terminal box and installed into fuse blocks. Fuses are marked with type, voltage and amperage and it is important that the exact fuse ratings be used to maintain safe and reliable operation.

Fuses:

PART NUMBERS			DESCRIPTION	AVAIL. CODE
NEW	OLD	VENDOR		
1004900	E111-020	OT-25	Fuse K5 250V 25A 50KAIC	ST
1004939	E111-026	OT-60	Fuse K5 250V 60A 50KAIC	ST
1004976	E111-036	OTS-20	Fuse K5 600V 20A 50KAIC	ST
1004983	E111-037	OTS-25	Fuse K5 600V 25A 50KAIC	ST
1004990	E111-038	OTS-30	Fuse K5 600V 30A 50KAIC	ST
1004997	E111-039	OTS-35	Fuse K5 600V 35A 50KAIC	ST
1005004	E111-040	NOS-40	Fuse K5 600V 40A 50KAIC	ST
1005011	E111-041	OTS-45	Fuse K5 600V 45A 50KAIC	ST
1005018	E111-042	OTS-50	Fuse K5 600V 50A 50KAIC	ST
1005025	E111-043	OTS-60	Fuse K5 600V 60A 50KAIC	ST
1005172	E111-067	TRSR60	Fuse RK5 600V 60A 200KAIC	ST
1005361	E111-136	JJS-40	Fuse K5 600V 40A 200KAIC	NS

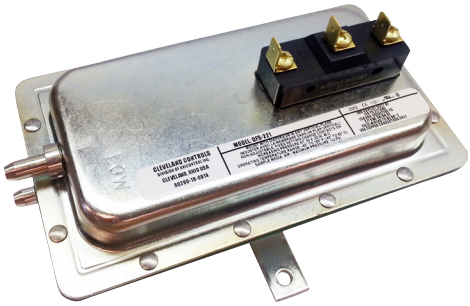


2-Pole
Fuse Block

Fuse Blocks:

PART NUMBERS			DESCRIPTION	AVAIL. CODE
NEW	OLD	VENDOR		
1005613	E112-003	H25030-3SR	Fuse Block K5 250V 30A 3P	ST
1005641	E112-031	S-8202-01	Fuse Block K5 250V 15A 1P	ST
1005648	E112-036	H60030-3SR	Fuse Block K5 600V 30A 3P	ST
1005655	E112-037	H25060-3CR	Fuse Block K5 250V 60A 3P	ST
1005670	E112-039	H60030-1SR	Fuse Block K5 600V 30A 1P	ST
1005677	E112-040	H60030-2SR	Fuse Block K5 600V 30A 2P	ST
1005698	E112-043	H60060-3CR	Fuse Block K5 600V 60A 3P	ST
1005768	E112-054	R6T60A3B	Fuse Block K5 600V 60A 3P BOX	NS

Pilot Lights, Toggle Switch
PE Switches



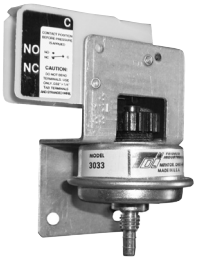
Airflow Switch
1000606

Terminal Block
1024860

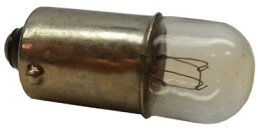
Toggle Switch
1004288

Duct Sensing Probe
for C1025 Adjuster
1031407

Proportional Remote
Thermostat
1031404



Pneumatic Control
Switch - 1001994

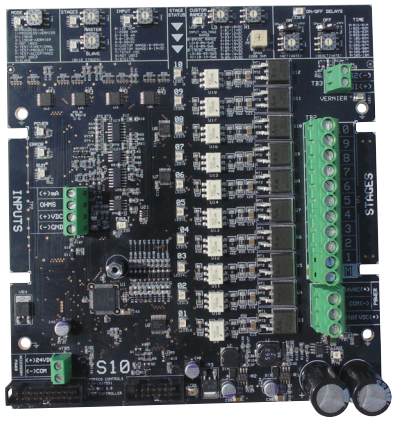


Bulb - see below

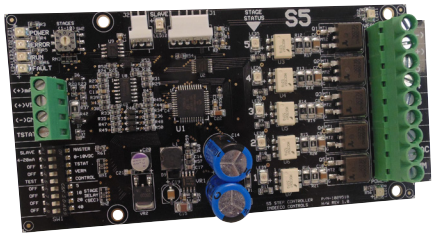
PART NUMBERS			DESCRIPTION	AVAIL. CODE
NEW	OLD	VENDOR		
1000606	C321-007, 009, 012	DFS-221-112	Airflow Switch - 0.05"$H_2$0 Calibrated	ST
1004288	E103-007	0121-0009	Toggle Switch - NEMA 1, 15A, 277V	ST
1001994	C326-023	3033	Pneumatic Control Switch - 25A, 2-22PSI, 277V	ST
1002162	E131-042	P9XURRD0	Pilot Light Base	ST
1001774	E131-004	8010N	Pilot Light - Red, 120V, NEMA 1	ST
1001798	E131-006	XL-8035-5JL	Pilot Light - Red, 24V, NEMA 1	ST
1002318	E132-008	BA9S24	Pilot Light - Incandescent, 24V	ST
1002331	E132-009	BA9S130	Pilot Light - Incandescent, 130V	ST
1024860	-	323-FU-18.5-HDS/03	3P Terminal Block - 10-22	ST
1031404	1016941	C1025-14	Proportional Remote Thermostat	ST
1031407*	1016942	022-0068	Duct Sensing Probe for C1025 Adjuster	ST

*If 1016942 is replaced, you must purchase both 1031404 and 1031407.

Step Controllers



S10



S5

Proportional Controllers:

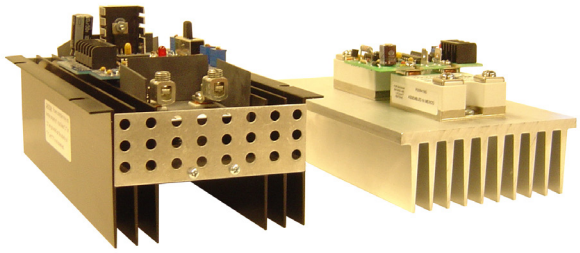
Step controllers take temperature control signal, usually 0-10VDC or 4-20mA and stages the heater on and off to increase the amount of heat produced. There are two types of step controllers use in our duct heaters. The S208 for up to 4-stages and S95 which is capable of up to 10-stages with a master and 20 when a slave is added. The controller can be identified by markings on the board. Match the model number exactly. If the model number is not exact contact the factory.

Step Control Units:

PART NUMBERS		DESCRIPTION	AVAIL. CODE
NEW	OLD		
201-S10-M10-B	202-S95-M10-2S-I	S95 Series Master Step Controller	NS
	202-S95-S10-2	S95 Series Slave Step Controller	NS
201-S5-M5	208-1942	S208 Series 4-Stage Step Controller	ST

SCR Power Controllers

SCR power controllers units take the temperature control signal, usually 0-10VDC or 4-20mA and modulates the power to the elements to provide proportional output. There can be multiple power controllers using a master and slave SCR's. SCR's are usually mounted to the side of the heater's enclosure with cooling fins on the outside. The 101 and 103 Series SCR have the control board and power relays integrated and will be shipped as a complete assembly. The 108 Series control board is mounted separately and is ordered as two parts.



Series A&B Series 103

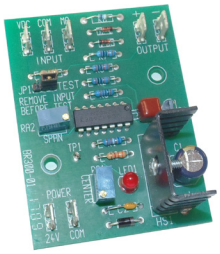
PART NUMBER	MODEL NUMBER	DESCRIPTION	AVAIL. CODE
1003400	101-A1-240020I	Master SCR Rated 240V,1 PH, 20 Amp	NS
1003472	101-A1-480-40I	Master SCR Rated 480V,1 PH, 40 Amp	NS
1003526	101-A1-480-50I	Master SCR Rated 480V,1 PH, 50 Amp	NS
1003561	101-A3-240-20I	Master SCR Rated 240V, 3PH, 20 Amp	NS
1003633	101-A3-480-30I	Master SCR Rated 480V, 3PH, 30 Amp	NS
1003698	101-A3-600-40I	Master SCR Rated 600V, 3PH, 40 Amp	NS
1003745	101-A3-600-50I	Master SCR Rated 600V, 3PH, 50 Amp	NS
	101-B1-600-50	Slave SCR Rated 600V, 1PH, 50 Amp	NS
1004109	101-B3-600-50	Slave SCR Rated 600V, 3PH, 50 Amp	NS
1007376	103-A1-240-20I(1)	Outdoor Master SCR Rated 240V, 1PH, 20 Amp	NS
1007384	103-A1-480-40I(1)	Outdoor Master SCR Rated 480V, 1PH, 40 Amp	NS
1007386	103-A1-480-50I(1)	Outdoor Master SCR Rated 480V, 1PH, 50 Amp	NS
1007402	103-A3-240-20I(1)	Outdoor Master SCR Rated 480V, 3PH, 20 Amp	NS
1007404	103-A3-480-30I(1)	Outdoor Master SCR Rated 480V, 1PH, 50 Amp	NS
1007414	103-A3-600-40I(1)	Outdoor Master SCR Rated 600V, 3PH, 40 Amp	NS
1007416	103-A3-600-50I(1)	Outdoor Master SCR Rated 600V, 3PH, 50 Amp	NS
1006264	103-B3-600-50(1)	Outdoor Slave SCR Rated 600V, 3PH, 50 Amp	NS
1009206	103-1901	Field Replacement Kit for 103 Series SCR	NS
	IC-ZC110-00	A-Series Circuit Board Single Phase	NS
	IC-ZC110-01	A-Series Circuit Board Three Phase	NS

(1) Field Installation Kit P/N 1019206 is required for proper installation of these SCR's.
Product Warranty will be voided if this kit is not used. 103-series SCR is not suitable for outdoor use unless it is used as a replacment to an original factory approved installation.

SCR Power Controllers

Series 108

Series 108
Circuit Board

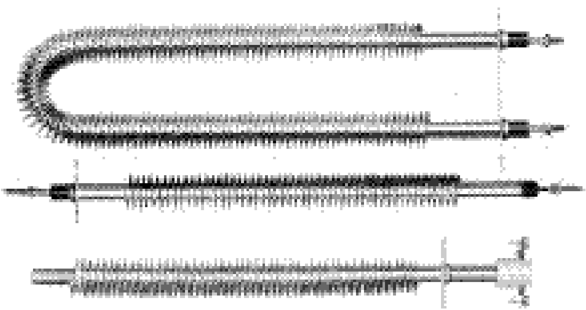


108 Series SCR Control Units:

PART NUMBER	MODEL NUMBER	DESCRIPTION	AVAIL. CODE
1024793	-	Series 108 Circuit Board, 0-10VDC, 4-20mA Inputs	ST
1024983	108-B1-600-50	SCR Controller Rated up to 600/1, 50 Amp	NS
1024984	108-B3-600-30	SCR Controller Rated up to 600/3, 30 Amp	ST
1024985	108-B3-600-40	SCR Controller Rated up to 600/3, 40 Amp	NS
1024986	108-B3-600-50	SCR Controller Rated up to 600/3, 50 Amp	ST

Replacement Elements

Replacement Finned Tubular Elements

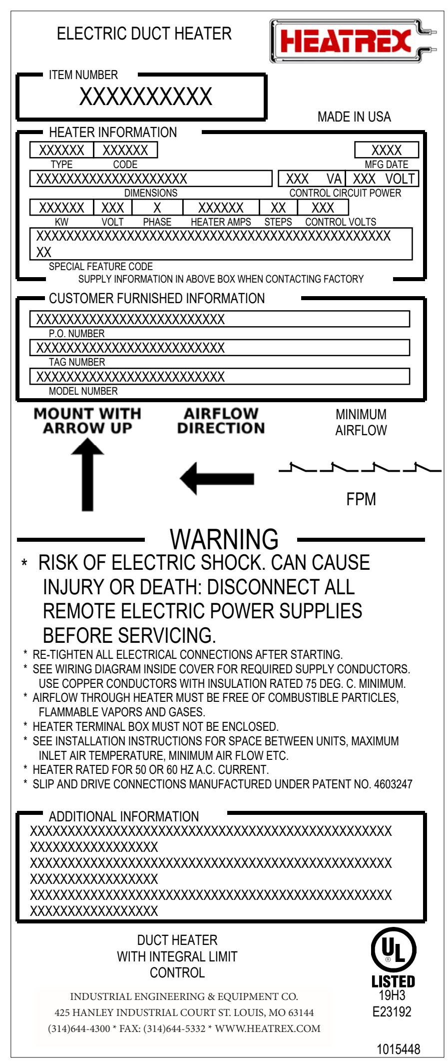


There are three different types of finned tubular elements; U-Bent, Straight and Two-Pass. Each element is built for a particiular heater and is marked with a part number on the mounting plate.

Locate the part number and provide it for a quick quotation and lead time for replacements. Pricing of the elements will depend on the length and type of the elements. Elements will be provided with necessary terminal hardware of nuts and washers.

Replacement Open Coil Elements

Part numbers are not attached to open coil elements. It will be necessary to provide the nameplate information off the heater to obtain replacement elements. The heater nameplate is located on the outside of the door of the heater. Replacement elements will be provided with two part terminal insulators and the necessary terminal hardward nuts and washers. See the order form for the information required. Send this information to the factory to get a quote and lead time.



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