Genuine

KIMRAY INC.®

Quality Since 1948

Catalytic Heaters

Catco Catalytic Heaters

Introduction

Catalytic heaters have been used in industrial applications since they were first introduced several decades ago. Using natural gas or propane, they produce flameless heat with most of the heat generated as radiant, infrared energy. Since the maximum operating temperature is relatively low (always below 900° F), catalytic heaters are ideally suited for use in many hazardous environments. Catalytic heaters are perfect for a wide variety of industrial applications.

Space Heating:

Catalytic heaters produce very efficient infrared heat for such locations as personnel work areas, hazardous classified areas and equipment storage areas.

Oven and Process Operations:

Catalytic heaters provide an excellent source of radiant heat for paint curing, powder coating, drying, and other process applications.

Natural Gas Regulation and Measurement:

Catalytic heaters are used to prevent freezing and hydrate formation, problems common in regulation and measurement equipment when gas pressures fluctuate. In these applications catalytic heaters are usually mounted to direct radiant heat directly at the problem area. There are CATCO enclosures available to mount heaters onto any valve or regulator.

Gas Pre-heating:

Heat exchanger units incorporating catalytic heaters may be used to preheat a gas stream, preventing freezing and hydrate formation downstream.

Principle of Operation

Catalytic heating is brought about by using a catalyst to promote the reaction of combustible gasses with oxygen or air, at a much slower rate, to produce heat without flame. When the temperature of the catalyst pad is elevated to 250 F° the combustible gas will burn at a temperature in the range of 600 - 800 F°. This is far below the 1200 - 1300 F° ignition point of natural gas. The result is a flameless heat that can be safely put to use in areas where hazards due to explosive vapors may exist. A catalytic heater can operate efficiently on low cost natural gas, propane or butane.

The intensity of heat energy varies with the distance of the heat source. In addition, the infrared energy emitted by catalytic heaters is in the lower end of the spectrum which means that nearly all of the energy produced is in the form of usable heat. Because of these characteristics, catalytic heaters are highly effective when heating specific objects such as valves and regulators. While other forms of heat often waste energy by heating the surrounding air and other objects in the vicinity, catalytic heaters heat only the objects they are directed at. This provides greater efficiency, allowing smaller heaters to be used, lowering initial cost and fuel consumption.

Flameless heat ideally suited for use in many hazardous environments

Wide range of valve compatibility

Efficient infrared heat provides low cost freezing prevention

ENCLOSURES - ALL ITEMS LISTED ABOVE ARE AVAILABLE WITH AN OPTIONAL EXPLOSION PROOF JUNCTION BOX				
Item number	**Description**	**BTU/hr**	**Gas Consumption Cu. Ft./hr**	**Features**
KSC70-010P1	ENCLOSURE GENERIC 2"MV	6000	6	STANDARD
KSC70011P2SFTEP	ENCLOSURE BLANK W/1212 HTRS.	6000	6	Thrml. Cplr/ Shut-off valve/EP
KSC70-015P1	ENCLOSURE FISHER 630/612	3000	3	STANDARD
KSC70-015P1SFT	ENCLOSURE FISHER 630/612	3000	3	Thrml. Cplr/ Shut-off valve/EP
KSC70-015P2	ENCLOSURE FISHER 630/612	6000	6	STANDARD
KSC70-015P2SFTEP	ENCLOSURE FISHER 630/612	6000	3	Thrml. Cplr/ Shut-off valve/EP
KSC70016P2SFTEP	ENCLOSURE FISHER 630/612-FLANGED	6000	6	Thrml. Cplr/ Shut-off valve/EP
KSC70019P2SFTEP	ENCLOSURE FISHER 630/612	1200	12	Thrml. Cplr/ Shut-off valve/EP
KSC70-019P1	ENCLOSURE FISHER 630/612	2667	2.7	STANDARD
KSC70-019P2	ENCLOSURE FISHER 630/612	5334	5.4	STANDARD
KSC70-035P1	ENCLOSURE KIMRAY 2IN HPMV	5000	5	STANDARD
KSC70035P2	ENCLOSURE KIMRAY 2IN HPMV	10000	10	STANDARD
KSC70035P2SFTEP	ENCLOSURE KIMRAY 2IN HPMV	10000	10	Thrml. Cplr/ Shut-off valve/EP
KSC70-050P1	ENCLOSURE KIMRAY 1IN HPMV	2667	2.7	STANDARD
KSC70-050P2	ENCLOSURE KIMRAY 1IN HPMV	5334	5.4	STANDARD
KSC70050P2SFTEP	ENCLOSURE KIMRAY 1IN HPMV	5334	5.4	Thrml. Cplr/ Shut-off valve/EP
KSC70-067P1	ENCLOSURE 1-4IN FISHER D/E	6000	6	STANDARD
KSC70067P2SFTEP	ENCLOSURE 1-4IN FISHER D/E	12000	12	Thrml. Cplr/ Shut-off valve/EP
KSC70093P2SFTEP	ENCLOSURE 1IN FISHER 612	6000	6	Thrml. Cplr/ Shut-off valve/EP
KSC70-096P1	ENCLOSURE FISHER 1301	1500	1.5	STANDARD
KSC70096P1SFTEP	ENCLOSURE FISHER 1301	1500	1.5	Thrml. Cplr/ Shut-off valve/EP
KSC70096P2SFTEP	ENCLOSURE FISHER 1301	3000	3	Thrml. Cplr/ Shut-off valve/EP
KSC70109P2SFTEP	ENCLOSURE NORRISEAL 2220 600RF	?	?	Thrml. Cplr/ Shut-off valve/EP
KSC70429P1SFTEP	ENCLOSURE TESCOM REGULATOR	1500	1.5	Thrml. Cplr/ Shut-off valve/EP
KSC70429P2SFTEP	ENCLOSURE TESCOM REGULATOR	3000	3	Thrml. Cplr/ Shut-off valve/EP
KSC70045P2SFTEP	ENCLOSURE PIPELINE	12000	12	Thrml. Cplr/ Shut-off valve/EP
KSC70040P1SFTEP	ENCLOSURE DRIP POT	1500	1.5	Thrml. Cplr/ Shut-off valve/EP
KSCSTD2600SS1	INSTRUMENT GAS HEATER	2667	2.7	STANDARD/12V

Flow Meter Accessories

HEATER PADS

Item number	Description	BTU/hr	Gas Consumption Cu. Ft./hr	Features
KSCSFT12RDS1G	HEATER PAD ROUND	5000	5	Thrml. Cplr/ Shut-off valve
KSCSFT1212S1G	HEATER PAD	6000	6	Thrml. Cplr/ Shut-off valve
KSCSFT1224S1G	HEATER PAD	12000	12	Thrml. Cplr/ Shut-off valve
KSCSFT612S1G	HEATER PAD	3000	3	Thrml. Cplr/ Shut-off valve
KSCSFT66S1G	HEATER PAD	1500	1.5	Thrml. Cplr/ Shut-off valve
KSCSFT8RDS1G	HEATER PAD ROUND	2500	2.5	Thrml. Cplr/ Shut-off valve
KSCSFT88S1G	HEATER PAD	2667	2.7	Thrml. Cplr/ Shut-off valve
KSCSTD1012S1G	HEATER PAD	5000	5	STANDARD
KSCSTD612S1G	HEATER PAD	3000	3	STANDARD
KSCSTD66S1G	HEATER PAD	1500	1.5	STANDARD
KSCSTD88S1G	HEATER PAD	2667	2.7	STANDARD

ACCESSORIES		
KSC10-010	WALL MOUNT BRACKET	PAIR
KSC20-005	1/2” EP JUNCTION BOX	SINGLE OUTLET
KSC20-006	1/2” EP JUNCTION BOX	DUAL OUTLET
KSC20-020	16’ PIGTAIL	12V/ STANDARD
KSC20-021	16’ PIGTAIL	12V/ EXPLOSION PROOF
KSC20-023	16’ PIGTAIL	120V/EXPLOSION PROOF
KSC20-025	JUMPER	12V
KSC20-026	JUMPER	120V
KSC30-006	SAFETY VALVE-BASO H17	1/4”X1/4” CONNECTION
KSC30-010	THERMOCOUPLE W/NUT	TYPE K/ 14.36” lg.
KSC30-035SS	BALL VALVE	1/4”/ STAINLESS STEEL
KSC40-030	THERMOSTAT CONTROL	1/4”NPT/ 60-250 F
KSC50-005	REGULATOR/FISHER	1/4”NPT/ 250 PSI INLET
KSC55010SS	REGULATOR MANIFOLD	STAINLESS STEEL