



CATCO

CATALYTIC HEATER COMPANY

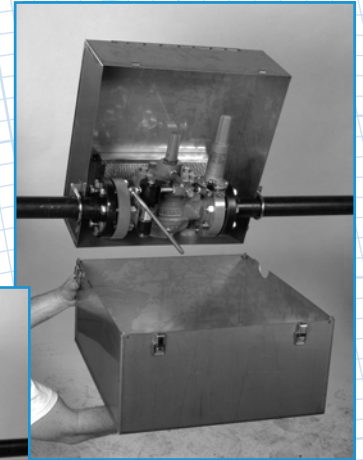
www.catcoUSA.com • P. O. Box 188 • Terrell, Texas 75160

Heater Enclosure Packages for Pilot Operated Regulators

As with all regulators, pilot operated regulators have the potential for freezing and hydrate formation due to the combined factors of pressure drop, gas quality, and ambient temperatures. These regulators are often used in critical applications where the loss of pressure downstream due to freezing can have serious implications. CATCO

heater enclosure packages alleviate freezing and hydrate formation.

Typically, a CATCO enclosure “clamshells” around the regulator body. The enclosure serves to protect the heaters from rain and snow while placing the heaters so that they focus the radiant energy onto the valve body.



Model 70-032

ADVANTAGES OF CATALYTIC HEATERS

Efficiency

Radiant energy can be directed onto a specific target and is not wasted on heating the surrounding air. CATCO heaters convert easily accessible fuel directly into heat energy.

Safety

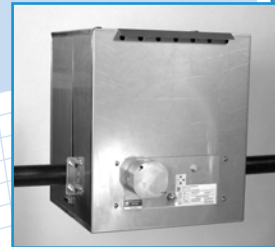
CATCO heaters are ideally suited for use in areas where a flame or conventional high temperature electrical heater is not safe. The face temperature of the heater is always well below the temperature needed to ignite natural gas or LPG in the open atmosphere (about 1300°F). CATCO heaters are available with certification for hazardous locations.

Simplicity

CATCO heaters are fundamentally simple with basically no moving parts and nothing requiring routine maintenance. As long as the fuel supply is clean and dry and the heater face is protected from contamination and damage, the heater will continue to function.

Economy

CATCO heaters are economical to install and operate. Installation is usually a matter of placing the enclosure over the regulator and running a fuel supply. There are no wear parts to replace, chemicals to supply, or extensive electrical installation required.

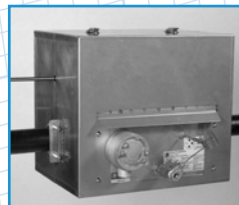


HOW THEY WORK:

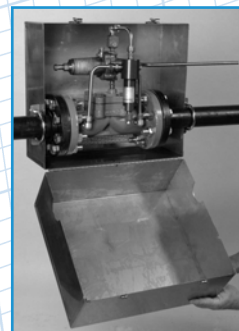
Using a catalytic chemical reaction, CATCO heaters oxidize natural gas or propane. This flameless reaction takes place at a relatively low temperature, resulting in a surface temperature always below 900°F. The reaction produces heat, emitted in the form of radiant infrared energy. The byproducts are carbon dioxide and water vapor.

The catalytic reaction is typically started using electricity to energize a heating element that pre-heats the catalyst bed to at least 250°F. Electrical power can come from a battery or line source and is needed for starting only.

Once the catalyst bed is pre-heated, fuel gas flows into the heater, catalytic reaction begins and stabilizes at a temperature below 900°F. Electrical power is removed and the catalytic reaction continues as long as the heater has a source of clean, dry, fuel gas and adequate combustion air.

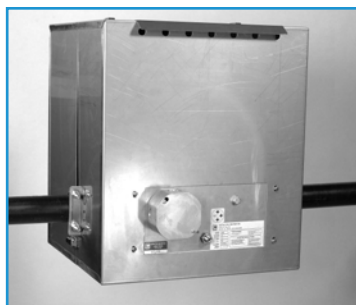


Model 70-076

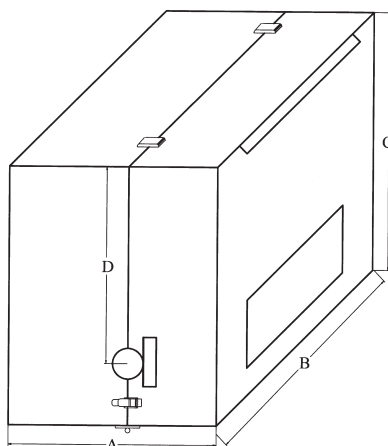


Model 70-076

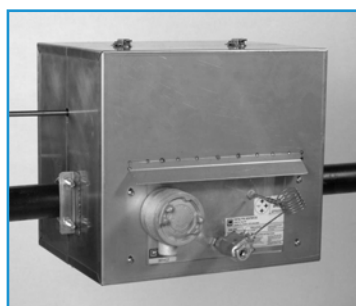
Available Models



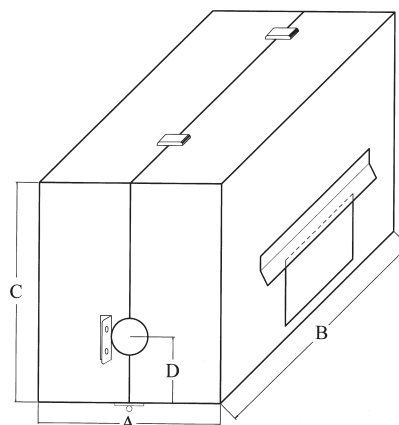
Model 70-032



Model 70-032



Model 70-076



Model 70-076

MODEL NO.	VALVE	HEATER SIZE	BTU	DIMENSIONS (INCHES)			
				A	B	C	D
70-032	Fisher 399, others	612	3000	17.00	18.00	21.00	16.00
70-076	Mooney, others	612	3000	12.50	16.75	15.00	4.50

DESIGN CONSIDERATIONS AND FEATURES

The enclosure must be large enough to enclose the regulator, pilot and related tubing.

When conditions require, the enclosure can be made to provide for the mounting a heater on one side or both sides of the enclosure, allowing the amount of heat provided to be matched to the severity of the conditions. A catalytic heater can be added or removed in the field with a Phillips screwdriver.

When practical, enclosures are hinged and secured with draw latches, making installation a snap.

Many pilot operated regulators can be protected by using a CATCO FREEZE BUSTER instrument gas heater. In many cases this is a superior approach compared to using a heater enclosure package. See *CATCO Instrument Gas Heaters Literature*.

Don't See What You Need Here?

Catalytic Heater Company has available hundreds of different enclosure designs to fit many equipment applications. Custom made packages are available for special conditions. Contact your representative or the factory for assistance.

For more detailed information about the catalytic heaters used in these heater enclosure packages please see the data sheet *Catalytic Heaters*. For information regarding accessories please see the data sheet *Parts and Accessories*.