INSTALLATION AND
OPERATING INSTRUCTIONS
FOR THE NORTHRIDGE 2000
AUTOMATIC GAS SHUT-OFF VALVE

SPECIFICATION OF THE VALVE:

MODEL M125

Nominal Pipe Size..... 1 ¼ inch IPS pipe
Inlet and Outlets..... 1 ¼ inch NPT female threads
Temperature Range..... -10 F to +150 F
Pressure Rating..... 10 PSI

Flow Rate in BTU/hr.	**@ 0.5" W.C.**	**Cv Value**	**@ 1.0" W.C.**	**Cv Value**
Flow Capacity at 2 PSI	730,000 .	17.10	1,040,000	17.33
Flow Capacity at 5 PSI.....	795,000 .	17.16	1,139,000	17.37
Flow Capacity at 10 PSI.....	895,000	17.23	1,280,000	17.44

READ THE FOLLOWING INSTALLATION AND OPERATING INSTRUCTIONS THOROUGHLY BEFORE INSTALLING OR RESETTING THE NORTHRIDGE 2000 VALVE.

WARNING! A qualified installer in accordance with the manufacturing installation instructions must install this device. If improperly installed, failure to function as intended or unwarranted interruption of gas service cold result. A qualified person should check for gas leaks before and immediately after turning gas ON by resetting valve.

Codes – The Northridge 2000 valve must be installed in compliance with local codes, or, in the absence of local codes, with the National Fuel Gas Code, ANSI Z223.7-1974, and Addenda, Z223.1a-1978.

Low Pressure Systems – The Northridge 2000 valve has been tested and approved under ASCE 25-97 for low pressure natural gas systems (10 PSI maximum), as well as propane systems. In addition, every valve is tested at 25 PSI for internal leakage prior to shipment.

Temperature Limits – The valve should not be installed where the ambient temperature is expected to be below -10 F or above -150 F.

VALVE DESIGN AND OPERATION:

Valve Design – The Northridge 2000 gas valve is designed to be used with 1 ¼" gas pipes. Simply reduce the valve as needed by using a 1" or 3/4" reducer with the sealant recommended by your local codes. The Northridge 2000 valve is a simple patented design with only one moving internal part. A stainless steel ball rests on a pedestal inside the valve when it is in the ON position allowing gas to flow. During a seismic disturbance of approximately 5.2 or greater on the Richter scale, the stainless steel ball falls from the pedestal and plugs the outlet passage stopping the flow of gas. The gas can only be turned back ON by manually resetting the valve. The faceplate has a magnet concealed behind it that lifts the stainless steel ball back onto the pedestal when it is slowly rotated one full turn counterclockwise. (NOTE: Before the valve will reset on systems with inlet pressure greater than 2 PSI, you must first bleed off the gas pressure on the inlet side of the valve – see instructions for **Bleed off Gas Pressure**). Slowly rotate the faceplate one full turn clock-wise (the opposite direction); the magnet behind the faceplate moves the stainless steel ball from the pedestal down onto the outlet passage which turns OFF the gas flow.

Sight Glass ON/OFF Indicator – The valve is equipped with a clear sight glass to determine whether the valve is on the ON or OFF position. When valve is ON, the internal stainless steel ball can be seen when looking straight down through the clear sight glass. Your eye should be approximately ten inches (10") above the sight glass. When the valve has shut OFF, the internal stainless steel ball cannot be seen.

Resetting to the ON Position – (NOTE: Before the valve will reset on systems with inlet pressure greater than 2 PSI, you must first bleed off the gas pressure on the inlet side of the valve – see instructions for **Bleed off Gas Pressure**).

The Northridge 2000 valve has an internal detent on the backside of the faceplate into which the handle snaps when in the static position with the magnet at the furthest position from the ball. Slowly rotate the faceplate one full turn counterclockwise. This moves the internal stainless steel ball back onto the pedestal, which resets the valve to the ON position. When properly reset, the faceplate will be locked back into place with the internal detent and the stainless steel ball will appear in the sight glass.

Emergency Shut-Off – The gas flow can be manually shut OFF during an emergency by slowly rotating the faceplate one full turn clockwise. By doing so, the magnet moves the internal stainless steel ball from the pedestal onto the outlet passage, which shuts OFF the gas flow. The sight glass will appear dark indicating that the valve is in the OFF position.

Location of Installation – This valve is designed to be rigidly installed in the gas line piping in an accessible location on the low pressure side of the utility gas meter, between the gas meter and the foundation of the structure. Installation of the valve should be as close to the foundation of the structure as possible. There should be no more than twelve inches (12") of pipe between the valve and the structure to ensure rigidity. The valve is not designed for subterranean installation or installations below ground level.

WARNING! A qualified installer in accordance with the manufacturer's installation instructions must install this device; if improperly installed, failure to function as intended or unwarranted interruption of gas service could result.

INSTALLATION INSTRUCTIONS:

Caution – The incoming and outgoing piper being attached to the valve must be clean and free of dirt, metal particles, and any other contamination.

Codes – Some city and/or state installation codes may require that the valve be firmly secured to the structure. If such requirements exist, the valve must be secured to the structure following instructions specified by city or state codes, or as required. Both the inlet and outlet pipes of the valve must be rigidly attached to the structure within twelve inches (12") of the valve with a channel-strut supporting system, pipe clamping system, or other similar clamping means to rigidly secure the piping to the structure.

Planning – Plan out the installation prior to starting. Allow for at least eighteen inches (18") of clearance above and in front of the valve so that the sight glass can be easily seen and the faceplate can be seen and rotated. The valve should be mounted as close to the structure as possible for maximum rigidity. Make sure all fittings, pipe sealant, and tools are on hand and the area is free from contamination before beginning the installation.

Un-box and Inspect Valve – Remove the valve from the box and inspect it for potential damage from shipment. If any functional damage is apparent, return the valve to the distributor for a replacement valve.

Turn OFF Gas Users – Turn OFF all gas appliances and gas users connected to the gas supply line, including any appliances with pilot lights instead of relying on automatic safety shut-off devices.

Check for Leaks – Before proceeding with installation, check for any gas leaks in the existing system by monitoring the gas meter's flow reading. With all gas users OFF, there should not be any change in the meter's flow reading. If any leakage is detected, the leakage source must be located and the leak corrected before proceeding with the installation.

Turn OFF Main Gas Supply to Meter – Turn OFF the main inlet gas cock valve on the high-pressure side of the meter.

Bleed off Gas Pressure – Bleed off the gas pressure in the pipes on the low-pressure side of the gas meter by loosening one of the pipe fittings, or open bleed off valve on meter (if existing), on the low-pressure side of the meter where the valve is to be installed.

Safety Requirement: When gas piping is to be opened for an addition, a modification, or service, the section to be worked on shall be turned off from the gas supply at the nearest convenient point and the line pressure vented to the outdoors or to ventilated areas of sufficient size to prevent accumulation of flammable mixtures.

INSTALLING THE GAS VALVE

1. Disconnect the gas pipes at the location where the new gas valve is to be installed.

2. Prepare the pipe that comes through the wall of the structure so that the outlet of the valve can be connected as close to the structure as possible with no more than twelve inches (12") of pipe between the valve and the structure. The piping must be rigidly attached to the structure.

3. Make sure all burrs and contamination are removed from all pipes and the installation area prior to connecting the pipes to the valve.

4. Connect the valve to the piping that enters the structure and level the valve.

5. The valve must be installed in a level position as indicated by the circular level on the valve's lid.

6. Install reducers as necessary, for ¾" and 1" pipe only. Check local codes for pipe sealant requirements. Make the necessary plumbing connections to rigidly join the valve to the piping from the meter. Re-level the valve. Use the minimum number of fittings to minimize flow restrictions.

Test ON/OFF Operation (turn valve ON, OFF and back ON again) – After installing and leveling the valve, verify that the valve is OFF by looking straight down the sight glass on the top of the valve. The sight glass will appear dark, and the internal stainless steel ball will not be visible. Reset the valve to the ON position by slowly rotating the faceplate one full turn clockwise. The faceplate will lock into place and the sight glass will appear dark. Finally, reset the valve on the ON position again by slowly rotating the faceplate one full turn counterclockwise; the faceplate will lock into place and the stainless steel ball will appear in the sight glass indication the valve is ON.

Turn ON the Main Gas supply to Meter – Close bleed off valve on meter (if existing). Turn ON the main cock valve that supplies gas to the meter.

Safety Requirement:

Placing in Operation: When piping full of air is placed in operation, the air in the piping shall be displaced with fuel gas. The air can be safely displaced with fuel gas, provided that a moderately rapid and continuous flow of fuel gas is introduced at one end of the line and air is vented out at the other end. The fuel gas flow shall be continued without interruption until the vented gas is free of air. The point of discharge shall not be left unattended during purging. After purging, the vent shall then be closed.

Discharge of Purged Gases. The open end of piping systems being purged shall not discharge into confined spaces or areas where there are sources of ignition unless precautions are taken to perform this operation in a safe manner by ventilation of the space, control of purging rate, and elimination of all hazardous conditions.

Check for Leaks – Soap test all pipe joints that were adjusted to make sure there are no leaks, and check the gas meter for a change in the flow reading for at least ten (10) minutes after the gas is turned back ON and the system has been fully pressurized. With the gas users OFF there should not be any gas flow recorded through the meter. Any continuous flow reading after pressurization has occurred indicates that the system has a leak, which must be located and corrected before proceeding.

Turn On All Gas Users and Check for Proper Operation – Bleed off the air from distribution lines at the most distant points from the valve. Turn ON all gas users and appliances and re-light any pilot lights. Double check that all gas users are turned back ON, and verify that they are all operating properly.

Placing Appliances and Equipment in Operation. After the piping system has been placed in operation, all appliances and equipment shall be purged and then placed in operation, as necessary.

NOTE:

See page 4 for: **Resetting Instructions for Turning Gas ON:**

Resetting Instructions for Turning Gas ON:

Determine if Valve is OFF and Check for Leaks – After a major earthquake, the gas valve will be in the OFF position. Verify that the valve is in fact in the OFF position by looking straight down into the sight glass on the top of the valve, keeping your eye approximately ten inches (10") away. If the valve is OFF, the sight glass will appear dark. If the valve has been turned OFF automatically during an earthquake, examine the gas system's piping for potential leaks. If any leaks are indicated, they must be located and corrected before proceeding.

Turn OFF Gas Users – Turn OFF all gas appliances and gas users connected to the gas supply line including any appliances that have pilot lights instead of automatic safety shut-off devices.

Turn OFF Main Gas Supply to Meter – Turn OFF the main inlet gas cock valve on the high-pressure side of the meter.

Level the Valve if Needed – The valve must be maintained in a level position as indicated by the circular level on top of the valve. The center circle must be inside the outer ring for the valve to be level.

Reset the Valve to the ON Position – Reset the valve from the OFF to the ON position by slowly rotating the faceplate one full turn counterclockwise. The faceplate will lock into place and the stainless steel ball will be seen in the sight glass indicating the valve is ON.

Turn ON Main Gas Supply to Meter – Turn ON the main gas cock valve that supplies gas to the meter.

Check for Gas Leaks – Check the gas meter for a change in the flow reading for at least ten (10) minutes after the gas is turned ON and the system has been fully pressurized. With the gas users OFF there should not be any gas flowing through the meter. Any continuous flow reading after pressurization indicates that the system has a leak, which must be located and corrected before proceeding.

Turn ON All Gas Users and Check for Proper Operation – Turn ON all gas users and gas appliances and re-light any pilot lights. Double check to verify that all gas users are operating properly.

MANUAL EMERGENCY GAS SHUT-OFF

Manual Emergency Gas Shut-off – The valve can be used to quickly turn OFF the gas during any emergency. To manually turn OFF the gas, slowly rotate the faceplate one full turn clockwise. The faceplate will lock into place and the sight glass will appear dark. If the gas is to remain OFF for any extended period of time, the main gas cock valve that supplies gas to the high-pressure side of the meter should also be turned OFF.

MAINTENANCE:

Visual Inspections – The valve should be inspected periodically to verify that no damage has occurred and that the valve is in the level position. These visual inspections should be done at least once a year as well as after any major earthquake.

Checking Valve's levelness – The levelness of the valve can be checked by examining the circular level located on top of the valve. The valve is level if the center circle is inside the outer ring.

Re-leveling the Valve – If the valve is found to be out of level, it can be re-leveled by adjusting the pipe connections.