

Robertshaw®

Heating Kits

UNI-LINE® PRODUCT KNOWLEDGE



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invensys™
Controls

Subjects We Will Cover In This Session

- Terminology and Acronyms
- Millivolt Heating Kit
- Actuator Types
- Uni-Kit 360 Heating Repair Kit
- Applications
- Gas Valve Manufacturers
- Sales Support Tools
- Website
- When You Have Questions



Acronyms

BTU	=	British Thermal Units
LC	=	Low Capacity
LP	=	Liquid Propane
MV	=	Main Valve
NAT	=	Natural Gas
PD	=	Pressure Drop
PV	=	Pilot Valve
SLC	=	Snap-action Low Capacity
mV	=	MilliVolt
WC	=	Water Column
V AC	=	Voltage Alternating Current
V DC	=	Voltage Direct Current

Tale of Two Heating Kits

Millivolt Kit is updated

- New pricing
- New packaging
- New mercury-free thermostat



Introducing Universal Kit 360

- All universal parts
- Replaces 1600 parts in field
- Reduces inventory with easy-to-order SKU
- Reduces installation time with right parts



Millivolt Kit Contents

- Gas Valve 710-502
- Thermostat 986-1R
- Pilot 1820-009
- Plus Free
— Pocket Guide



Robertshaw
Simple to Install. Easy to Operate.
GAS VALVE CROSS REFERENCE

**One Millivolt Kit.
Over 580 Solutions.**

**Millivolt Heating Kit
710-296**

**Plus Free
Robertshaw Gas Valve Cross
Reference Pocket Guide**

**710-502
Low Profile Millivolt Gas Valve**

**986-1R
Mercury-Free Economy
Mechanical Thermostat**

**1820-009
Replacement Pilot Uni-Kit***

1-710-296

Millivolt Kit – Gas Valve

- Low capacity gas valve 710-502 used in space heaters
- Designed for natural gas applications
- Natural gas max 70,000 BTU, ½" inlet and outlet
- Nat to LP conversion kit 1751-013 included



Millivolt Kit - Thermostat

- Economy mechanical Robertshaw® thermostat 986-1R
- Simply reliable with easy installation
- 24V AC with UL Listing

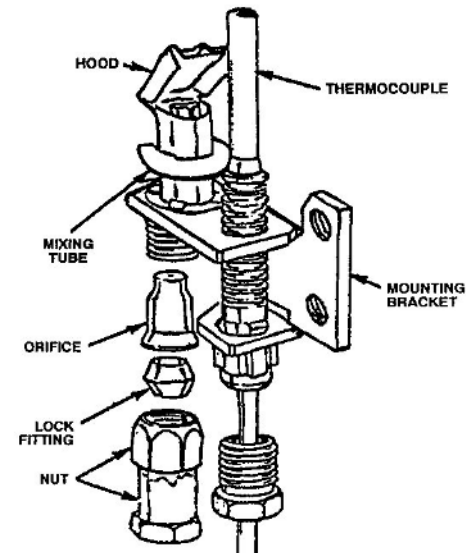


Millivolt Kit - Pilot Parts

- Robertshaw® 1820-009 with 90° right flame pattern
- Pilot Uni-Kits® with thermopile 1950-532 pre-mounted
- Replaces ITT-General part number PG9A42JTL02



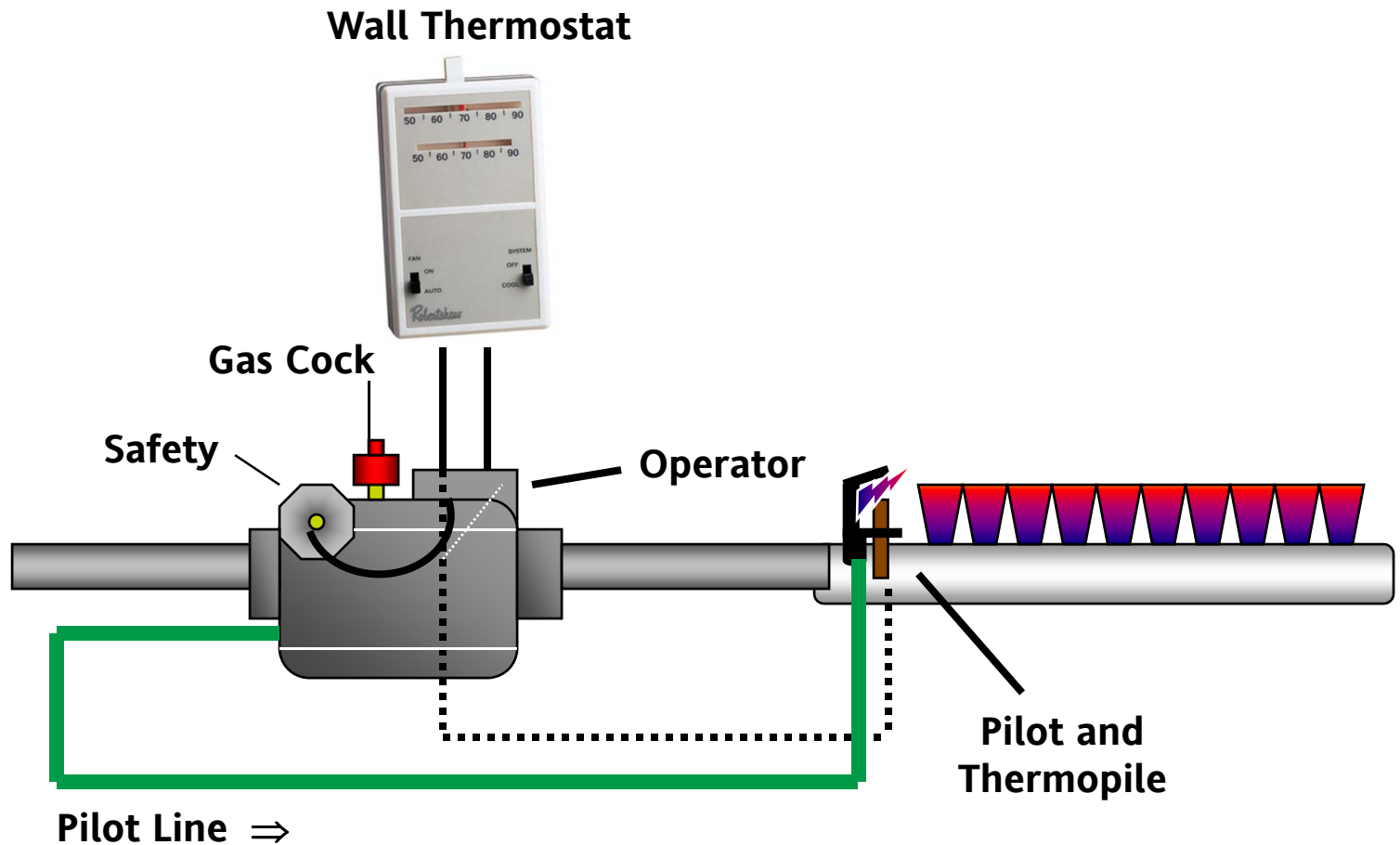
TYPICAL PILOT ASSEMBLY



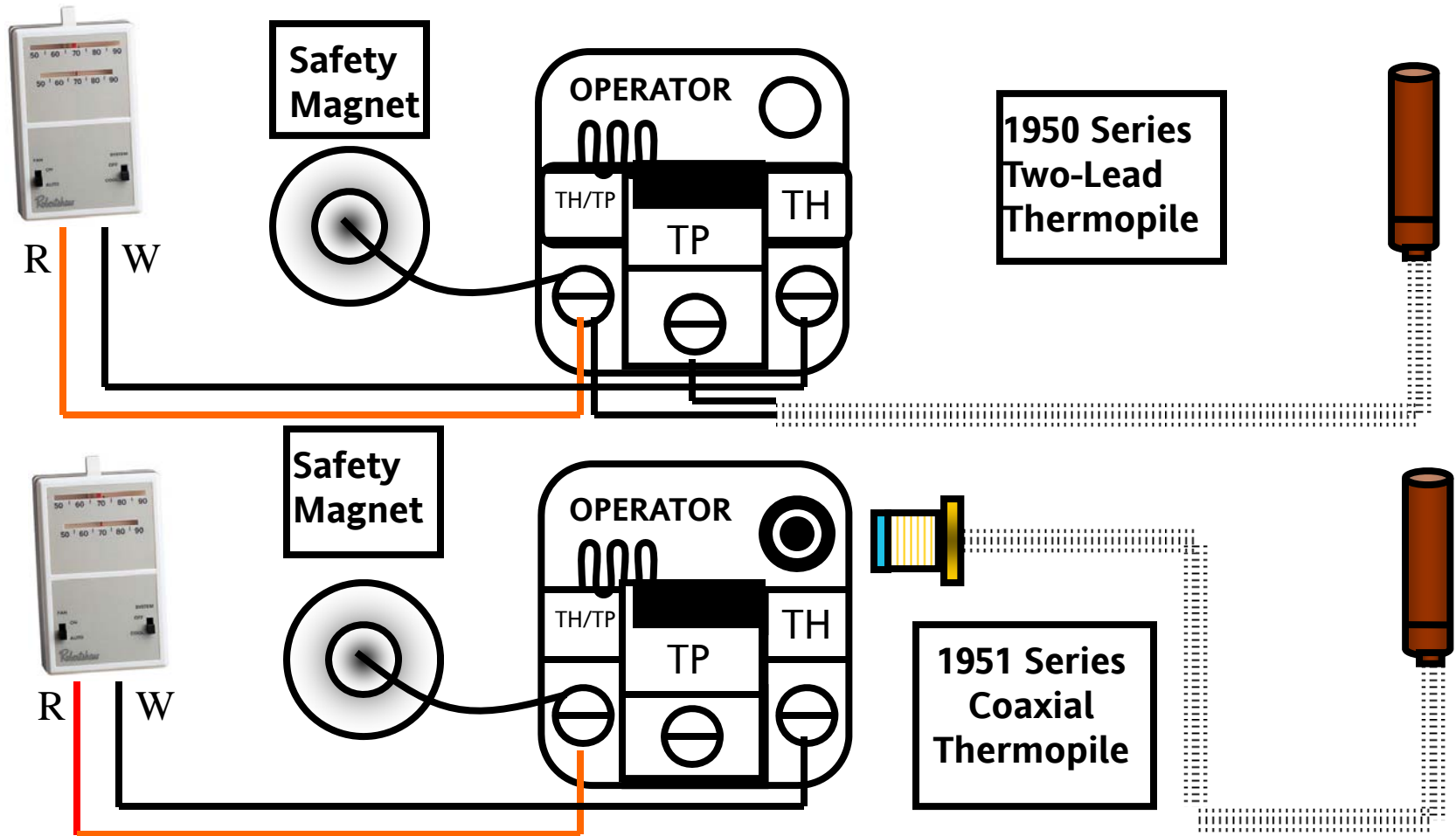
Gas Valve Actuator Types

- **Manual** – Standing pilot valve manually turned ON and OFF for each heating cycle.
- **Millivolt** – Wall thermostat actuated with manual gas cock, automatic pilot safety valve and a Millivolt operator. The automatic pilot safety is separate from gas cock and provides shutoff in case of pilot outage. Millivolt gas valves do not require external power source.
- **24 Volt, 120 Volt, and 240 Volt** – Combines a manual main and pilot gas valve, a separate automatic safety pilot valve, pilot filtration, and automatic electric valve.
- **Hydraulic** – Temperature is sensed by a capillary bulb. The bulb in the return air stream is actuated open and close by the hydraulic system.

Millivolt Actuated Gas Valve



Robertshaw® 700 & 710 Millivolt Wiring



Universal Kit Contents for Uni-Kit 360

- Gas Valve
- Ignition Control Module
- Nitride Ignitor
- Flame Sensor
- Air Pressure Sensing Switch
- Plus free tools
 - Robertshaw® Toolbag
 - Robertshaw® Screwdriver
 - Pocket Guide
 - Cross Reference Guide
 - Reorder form



Universal Kit - Gas Valve

- Gas Valve 720-079
- Universal model
 - Intermittent Pilot
 - Direct Spark
 - Hot Surface
- 150,000 BTU, ½" inlet and ¾" outlet
- Factory set at 3.5" W.C. for natural gas
- Can be converted to LP with conversion kit included



Universal Kit – Ignition Module

- Universal hot surface ignition module kit 780-910
- Designed for gas fired systems
- Diagnostic green LED for quick troubleshooting
- Kit includes all necessary hardware
- Replaces most hot surface modules manufactured by Robertshaw[®], Honeywell[®] and White-Rodgers[®]
- Local or remote sensing
- 120V AC units



Universal Kit - Hot Surface Igniter

- Hot Surface Igniter Types
 - Silicon Nitride
 - Silicon Carbide (fragile)
- Robertshaw® 41-802N
 - Silicon Nitride
 - Brackets included



Universal Kit – Flame Sensor

- Flame Sensor 10-760
- Rod can withstand 1800 °F
- Rod is 4" and can be cut and bent
- Replaces White-Rodgers 760-401

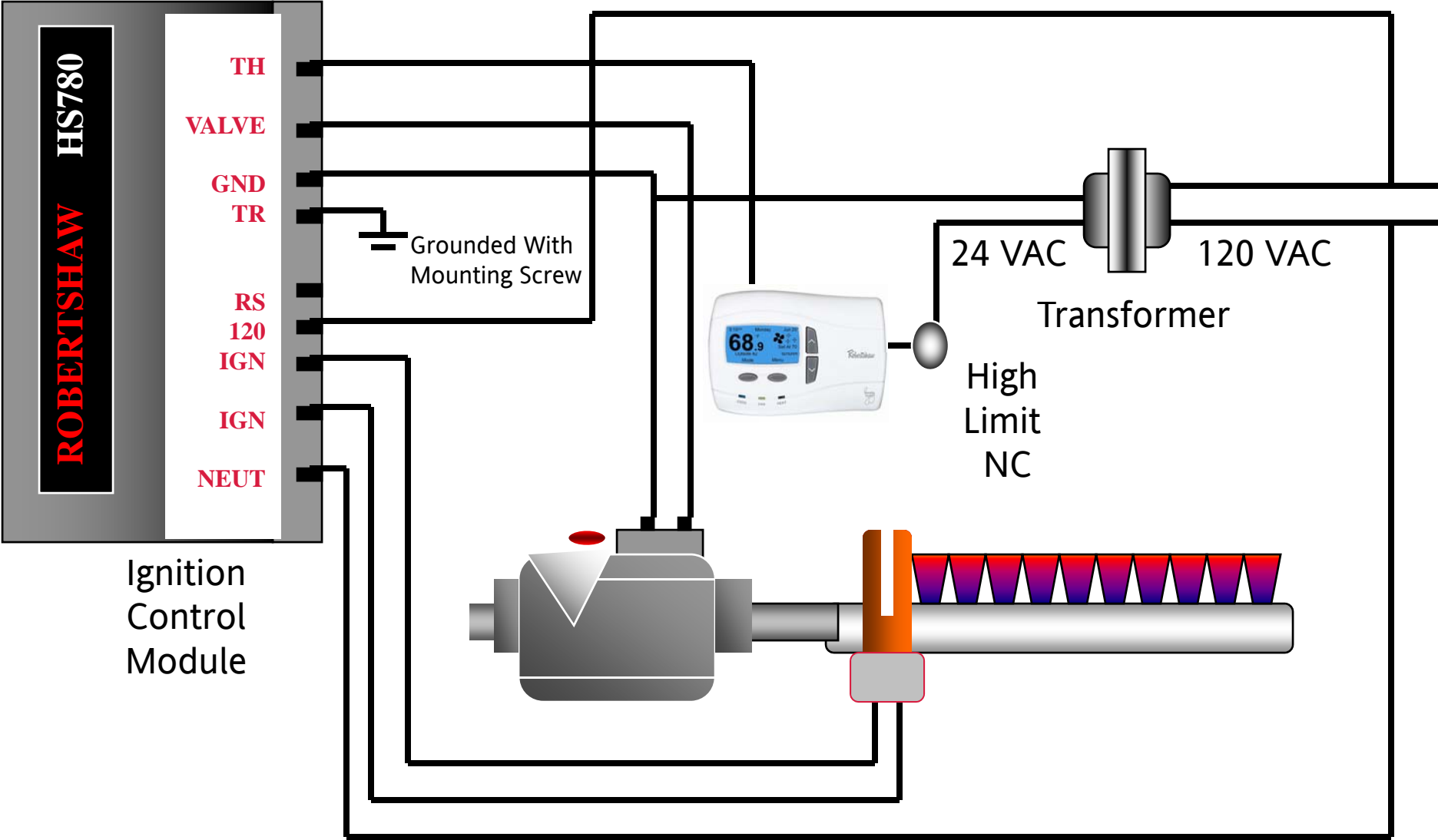


Universal Kit – Air Pressure Sensing Switch

- Universal Air Pressure Sensing Switch 2374-510
- Senses air flow from 0.10" to 10.0" W.C.
- Switch controls wide variety of HVAC applications
- Kit includes springs, orifices, mounting bracket
- Calibration hex tool included



Hot Surface Ignition (HSI) System



Heating Kit Manufacturers

- Robertshaw® replaces 1,600 solutions
- Not all kits have the same parts



- Uni-Kit 360 equivalents:
 - 50M56U-843 White-Rodgers®
 - Y8427U9045 Honeywell®



Gas Valve Manufacturers

Attributes	Robertshaw®	Honeywell	White-Rodgers	Dexen	SIT
US Based Engineering	✓	✓	✓	✗	✗
US Based Technical Services	✓	✓	✗	✗	✗
Space & Central	✓	✓	✓	✓	✓
Residential Water	✓	✓	✓	✗	✗
Hearth Products	✓	✓	✗	✓	✓
Pilot, Thermocouple and Ignition Controls	✓	✓	✓	✗	✓


Ignition Control Manufacturers

- Robertshaw®
- Johnson Controls®
- White-Rodgers®
- Honeywell®
- RAM
- Fenwal®



Support Tools


Sell Sheet 150-2343 – PDF version only




Uni-Kit
360


Universal
Heating
Repair Kit

One Universal Kit. Over 1,600 Solutions.







720-079
Universal Electronic
Ignition Gas Valve




780-910
Universal Hot
Surface Ignition Control



41-802N Universal Igniter



10-760
Universal
Flame Sensor




2374-610
Universal Air Pressure
Sensing Switch

Features and Benefits


We are excited to announce the new Robertshaw® Uni-Kit 360 - a Universal Heating Repair Kit with your favorite five controls. The Robertshaw Uni-Kit 360 is designed to replace over 1,600 controls used in the field today. Designed to service the most common replacement needs, this kit:

- Consolidates inventory into one easy-to-order SKU
- Reduces installation time by having all the right parts for typical repairs, and
- Comes with great FREE Robertshaw tools - a sturdy tool bag, screwdriver, helpful reorder form, universal cross reference visor card, and handy gas valve cross reference guide.

No contractor should be without this new all-in-one kit. So order yours today! The Robertshaw Uni-Kit 360 is only available for a limited time. Robertshaw – Simply the Right Choice™ for universal solutions.



UNI-KIT
360
UNIVERSAL HEATING REPAIR KIT



Uni-Kit
360

Universal
Heating
Repair Kit

Uni-Kit 360 Products Include:

720-079 Universal Electronic Ignition Gas Valve

- Provides dual automatic valves (redundant)
- Installs easier with wiring connections, manual selector and adjustments on top of valve
- Meets all codes requiring dual valve safety shutoff
- Reduces service truck stock - freeing up valuable space and saving money

Applications include:

- Intermittent pilot
- Direct spark
- Hot surface

41-802N Universal Igniter

The Robertshaw 41-802N Universal Igniter replaces over 200 igniters currently found in the field today.

- The ultimate in Silicon Nitride with technology from Kyocera™ for the best durability
- Flat blade heating element for best heat dissipation
- 3 year warranty

780-910 Universal Hot Surface Ignition Control

The 780-910 Uni-Kit is designed to replace the widest variety of hot surface ignition modules available today, including systems using:


- Local (sense through the hot surface igniter) or remote flame sensors
- Single or three ignition attempts or 7 second ignition trial time
- 17 or 34 second igniter warm-up time
- 34 seconds or less pre-purge
- Natural or L.P. gas controls
- 120V AC hot surface igniters

10-760 Universal Flame Sensor

- High temperature sensor rod will withstand 1800°F
- Insulated lead wire with a 482°F rating and a 1/4" quick connect terminal
- 4" sensor rod can be cut and bent to match original unit
- Excellent replacement to White-Rodgers 760-401

2374-610 Universal Air Pressure Sensing Switch

- High impact polycarbonate housing for harsh conditions
- Snap-acting switch with three male 90° quick connect terminals
- Field adjustable set points ranging from 0.10" to 10" W.C.



Bonus tools include:
Sturdy Toolbag
Screwdriver
Sizing/Visor Heating Cross Reference Chart
Reorder Form
Gas Valve Cross Reference Product Guide

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Controls

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Choosing the Right Gas Valve

- **Trusted Brand** – Dependable and reliable with a history of innovative products.
- **Universal Products** – The right product for the job. Simplifies inventory. Assured compatibility.
- **Availability** – Where you need it, when you need it.
- **Quality** – Works right the first time.
- **Contractor Friendly** – Simple set-up and installation. Saves time & money. Eliminates second guessing.
- **Support** – Sales and technical support for all your needs.
- **Innovative** – Leading technology for maximum performance.

Robertshaw[®]

Simply the Right Choice[™]

Website Tools: www.Uni-Line.com

The screenshot shows the Uni-Line website interface. At the top, the Uni-Line logo is on the left, and navigation links for 'About Us', 'Careers', and 'Contact Us' are on the right. Below the logo is a navigation bar with 'Uni-Line Home', 'Products', 'Customer Support', and 'Online Services'. On the left side, there is a search box with 'Search Options' and 'By Part # or Keyword' fields, a 'GO' button, a 'Categories' dropdown menu set to 'Thermostats', another 'GO' button, and an 'Advance Search' button. A yellow arrow points to the search input field. The main content area features a 'Welcome to the Uni-Line Catalog' section with a paragraph about product data access and links to 'cross reference guides' and 'FAQ Knowledge Database'. To the right is a 'UNI-LINE Training' banner with a photo of a man on a truck and text: 'Accelerate your HVACR learning curve. Check out our NATE classes'. Below this is a table with three columns: 'Product Categories', 'Customer Support', and 'Online Services'. The 'Product Categories' column lists: Thermostats, Zoning, Indoor Air Quality, Alarms and Detectors, Heating, Refrigeration, Cooking, Laundry, Time and Energy Controls, and Service Products. The 'Customer Support' column lists: Customer Service, Technical Service, and Dealer Price Information. The 'Online Services' column lists: Customer Toolbox, Product Cross Reference, Distributor Locator, Publication Zone, and Contractor ID. A yellow arrow points to 'Product Cross Reference'. At the bottom, there are links for 'Invensys Controls', 'Legal Information', and 'Privacy Policy', followed by a copyright notice: 'Invensys Controls is a business division of Invensys®. ©2009 Invensys Controls. All rights reserved.'

Enter part numbers to search

Cross reference

Click here for more Heating information

When You Have Uni-Line® Questions

Telephone:

Technical Service 1-800-445-8299

Technical Service Fax 1-630-260-7294

Customer Service 1-800-304-6563

Customer Service Fax 1-800-426-0804

Website:

Uni-Line® Catalog Website: www.Uni-Line.com

Cross Reference Website: www.uni-line.com/templates/xrefsearch.aspx

General Information Websites for:

Robertshaw®, Paragon®, Eliwell™, Ranco®, and Publication Zone®

www.InvensysControls.com

www.RobertshawTstats.com

www.ToolBox.InvensysControls.com



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