

# MAXON SERIES 8000 PNEUMATIC SAFETY SHUT-OFF VALVES

Fast-Acting Linear Valves Ensure Safety with Maximum Uptime



# Importance of Safety in Fuel-Fired Processes

Every second counts when it comes to safe operation of fuel-fired combustion systems such as those used in the oil & gas and petrochemical industries. Refineries and other plants strive to reduce liability and risk associated with process equipment, and at the same time ensure energy efficiency, regulatory compliance, and operational reliability.





# Critical Service for Safety Shut-off Valves

Safety shut-off valves are one of the most important devices in a safety-instrumented system (SIS). These devices must be able to instantaneously cut the supply of fuel to a burner when the safety system requires an “off” condition. Their use is governed by a host of ever-tightening industry standards, and as such, it is imperative to choose a proven and reliable valve design.



## MAXON Series 8000 Pneumatically Actuated Safety Shut-off Valves

- Fast acting linear valve designed to close in less than one second
- Reduces the amount inadvertent gas flow to a furnace in emergency shut down (ESD) situations
- Better long-term performance than inexpensive ball valves
- Rugged and compact design
- Powerful closing spring for reliable operation
- Carbon steel and stainless steel body assembly options
- No intervention or adjustments required for metal-to-metal sealing surfaces
- FM, CSA and CE-rated for hazardous locations.

## Rely on Honeywell Thermal Solutions

The Honeywell Thermal Solutions family of products includes Honeywell Combustion Safety, Honeywell Combustion Service, Eclipse, EXOTHERMICS, HAUCK, Kromschroder, and MAXON. We offer a comprehensive range of burners, heat exchangers, shut-off and control valves, air and fuel supply components, and other equipment for industrial heating processes that deliver safe, reliable, efficient, and clean heat.

Honeywell Thermal Solutions' best-in-class MAXON line includes Series 8000 Safety Shut-off Valves designed to ensure the safety of processes, plants and people—while eliminating costly downtime with the use of available diagnostics. Paired with advanced MAXON PSCHECK™ Partial Stroke technology, these rugged devices can provide enhanced SIL3-rated safety capability. Series 8000 Valves and MAXON PSCHECK, integrated with smart flow controls and ultra-efficient, low-NOx burners, offer a comprehensive solution.



# Hazardous Environments, Innovative Solutions



The MAXON Series 8000 line of pneumatically-actuated, linear acting safety shut-off valves stands up to demanding hazardous duty environments. Featuring renowned metal-to-metal seating, which wears in and not out with repeated cycling, the valves provide quick exhaust and fast-acting linear shut-off—enabling an extra measure of safety as compared to traditional ball-type shut-off valves.

The faster a valve closes on demand, the less inadvertent amount of gas will flow to the furnace, which reduces explosion risk. In some cases, PLC-based burner management systems introduce delays into the response time. It may take the system 4-5 seconds or more to close the gas valve after the flame goes out. MAXON Series 8000 valves are designed to close in less than one second.



## Extreme Conditions, Reliable Performance

In refineries and petrochemical plants, process conditions can range from extreme heat to bitter cold, increasing the probability of equipment failure over time. As such, it's important to partner with a supplier that truly understands your application requirements, and has proven products to meet your individual needs.

Honeywell Thermal Solutions has decades of experience in the combustion market. We provide safety shut-off valve models employing industry-leading technology.

- Pneumatically actuated valves with powerful closing spring for reliable operation
- Compact design with integral solenoid, quick exhaust and position switches that protects components, simplifies piping and minimizes space requirements
- Factory Mutual, CSA, CE, IECEx, INMETRO and KTL (KC mark) approved safety shut-off and vent valves
- Hazardous Location approved: Intrinsically Safe and Non-Incendive constructions available
- Full assessment to IEC 61508 as SIL3 capable
- Large, top-mounted, 360-degree open-shut visual position indication, configurable in red/green or yellow/black color schemes
- Cast iron, carbon steel, low temperature carbon steel and stainless steel body assemblies with internal trim options to handle general purpose or corrosive gases; oxygen compatibility, NACE compliance, and Fire Safe conformance to API 6FA
- Ambient temperature ranges of -58°F (-50°C) to 140°F (60°C); gas temperature range of -58°F (-50°C) to 212°F (100°C)
- Actuator assemblies are field-replaceable and available in 120VAC 50/60 Hz, 240VAC 50/60 Hz, and 24VDC (with low power option), rated for NEMA 4, NEMA 4X and IP65
- Unique bonnet design eliminates packing adjustments, reducing maintenance and minimizing drag on closing
- Series 8000 Valves meet Fluid Control Institute (FCI) 70-2 control valve standard for Class VI seat leakage
- Option available to utilize customer-supplied, externally mounted solenoids. When used in hazardous locations, the component must be rated for the Class and Division of the hazardous area.



Honeywell Thermal Solutions customers achieve significant operational savings through reduced system downtime due to advanced valve health diagnostics, single digit NOx burners, single source supply and component compatibility, as well as annual system compliance certification. We provide extensive application knowledge and sizing expertise to build a combustion system for optimal safety, emission and efficiency.







# Support When, and Where, You Need It

Honeywell Thermal Solutions' commitment to backing combustion system customers extends into your facilities through our Global Service Team of over 100 factory trained technicians, engineers, and support staff. Our technicians adhere to a strict SAFE working policy in the many industries we serve.

Available support solutions range from emergency assistance and ongoing combustion system service, to startup and commissioning, preventative maintenance, audits and testing, and training workshops.



## How Honeywell Can Help You

At Honeywell, we're dedicated to improving your industrial operation by optimizing the design and performance of your combustion systems. We know that the best performance requires detailed engineering calculations, design and project execution and proper hardware selection, all backed by our available commissioning and tuning expertise.

Honeywell Thermal Solutions delivers the most comprehensive line of industrial and commercial thermal solutions on the market. Our extensive product portfolio spans from burners and controls, to valves and complete combustion solutions.

The Honeywell Thermal Solutions family of products includes Honeywell Combustion Safety, Honeywell Combustion Service, Eclipse, EXOTHERMICS, HAUCK, Kromschroder and MAXON.



**MAXON Series 8000 Safety Shut-off Valve paired with MAXON PSCHECK Partial Stroke technology**

MAXON's PSCHECK Partial Stroke Technology will identify a potential early failure or signal a hard failure on the Series 8000 Pneumatic Shut-off Valve by checking the amount of time required for the valve to "trip," signaling its capability to open or close. The longer it takes to trip the valve, the greater

the potential performance issues. After the MAXON PSCHECK Partial Stroke Technology test has run, the unit will signal a PASS/FAIL result that can be seen either from an alarm LED or touchscreen display indicator, or communicated to the DCS directly.

When used in conjunction with a MAXON Series 8000 Shut-off Valve, MAXON PSCHECK captures key diagnostic information and tracks the overall health of the valve, plotting the results on an optional touchscreen display to show partial stroke testing results over the life of the valve. This trending

information shows a linear relationship between the degradation of the valve's performance, indicating when the device may potentially fail.

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