Karl Dungs, Inc. is a subsidiary of Karl Dungs GmbH & Co. KG, Germany, a privately owned company with over 800 employees manufacturing DUNGS products in two factories:

**Karl Dungs GmbH & Co. KG**

*in Urbach, Germany*

**Karl Dungs A/S**

*in Hedensted, Denmark.*

The Karl Dungs, Inc. product offerings represent a wide range of gas flow controls, air and gas pressure switches, sensors, actuators and other burner equipment.

DUNGS has been developing and manufacturing high-quality components for gas safety and control systems for over 50 years. The American versions are tested and approved to UL, FM and CSA standards. European designs are tested to EN and DIN standards.

All products are manufactured using ISO standards.

Millions of gas fired systems all over the world rely on DUNGS valves and controls for the safe, environmentally friendly use of natural gas, propane and manufactured gas.
The DUNGS Dual Modular Valve (DMV) combines two automatic shutoff valves (which can be wired independently or in parallel) in one compact housing. Valve 1 (V1) of the DMV-D and DMV-DLE series is fast opening and fast closing. Valve 2 (V2) of the DMV-D is fast opening, while V2 of the DMV-DLE is slow-opening for smoother light-off. Max. flow adjustment on V2 provides variable main flow on both models.

Application
This DMV is recommended for industrial and commercial heating applications that require two automatic shutoff valves in series. The DMV is suitable for natural gas, propane, butane, air and other inert gases.

Specifications

Pipe size / thread
1/2” - 2” NPT or Rp Threaded
DN 25 - 125 Flanged

Max. operating pressure
7 PSI UL, FM; 5 PSI CSA

Max. close-off pressure
7 PSI UL, FM; 5 PSI CSA

Electrical ratings (+10% / -15%)
24; 120; 220 Vac 50 - 60 Hz
24 Vdc

Enclosure rating
NEMA Type 12 (/602) or NEMA Type 4x (/604)

Operating time
100 % duty cycle

Closing time
< 1 s

Opening time (to max. flow)
DMV-D: V1 & V2 < 1 s
DMV-DLE: V1 < 1 s; V2 Adjustable 10 - 20 s @ 70 °F

Ambient temperature rating
-40 °F to +150 °F (-40 °C to +65 °C) NEMA 12
-30 °F to +140 °F (-35 °C to +60 °C) NEMA 4x

Max. flow adjustment
Adjustable on V2: approx. <10 to 100 % of stroke

Installation position
Safety valve upright vertical to horizontal

Test ports & System accessory mounting ports
G 1/8 ISO 228 ports available on both sides. See sales literature for valve specifics.

Capacities @ 2 in. W.C. pressure Drop
450 - 15,000 CFH Natural Gas
Dual Modular Valves - with Proof of Closure

The DUNGS Dual Modular Valve (DMV) combines two automatic shutoff valves (which can be wired independently or in parallel) in one compact housing. Valve 1 (V1) of the DMV-D and DMV-DLE series is fast opening and fast closing. Valve 2 (V2) of the DMV-D is fast opening, while V2 of the DMV-DLE is slow-opening for smoother light-off. Max. flow adjustment on V2 provides variable main flow on both models. Valve 2 (V2) incorporates proof of closure (POC) on models designated /622 & /624. Valves 1 & 2 (V1 & V2) incorporate proof of closure on models /634

**Application**
This DMV is recommended for industrial and commercial heating applications that require two automatic shutoff valves in series with POC. The DMV is suitable for natural gas, propane, butane, air and other inert gases.

**Specifications**

Pipe size / thread
1/2” - 2” NPT or Rp

Max. operating pressure
7 PSI UL, FM; 5 PSI CSA

Max. close-off pressure
7 PSI UL, FM; 5 PSI CSA

Electrical ratings (+10% / -15%)
120 Vac 50 - 60 Hz (others available depending on body size)

Enclosure rating
NEMA Type 12 (/622) or NEMA Type 4x (/624; /634)

Operating time
100 % duty cycle

Closing time
< 1 s

Opening time (to max. flow)
DMV-D: V1 & V2 < 1 s
DMV-DLE: V1 < 1 s; V2 Adjustable 10 - 20 s @ 70 °F

Ambient temperature rating
-40 °F to +150 °F (-40 °C to +65 °C) NEMA 12
-30 °F to +140 °F (-35 °C to +60 °C) NEMA 4x

Max. flow adjustment
Adjustable on V2: approx. <10 to 100 % of stroke

Installation position
Safety valve upright vertical to horizontal.

Test ports & System accessory mounting ports
G 1/8 ISO 228 ports available on both sides. See sales literature for valve specifics.

Proof of Closure Switch
Factory mounted & calibrated; SPDT switch with indication lamps;
AC max. 10A resistive @ 120 Vac
AC max. 8A inductive @ 120 Vac

Capacities @ 2 in. W.C. pressure Drop
450 - 4,000 CFH Natural Gas
Dual Modular Valves - Two Stage, available with Proof of Closure

The DUNGS Two-Stage Dual Modular Valve (DMV-ZR) combines two automatic shutoff valves (which can be wired independently or in parallel) in one compact housing. Valve 2 incorporates two stages, which can be set at two different firing rates. Both firing rates are field adjustable and can modulate from high to low during burner operation. Valve 1 (V1) of the DMV-D and DMV-DLE series is fast opening and fast closing. Valve 2 (V2) of the DMV-D is fast opening, while V2 of the DMV-DLE is slow-opening for smoother light-off. Max. flow adjustment on V2 provides variable main flow on both models. Valve 1 (V1) incorporates proof of closure (POC) on models designated /612 only.

Application
This DMV-ZR is recommended for industrial and commercial heating applications, where two automatic shutoff valves and modulating between two firing rates is required. The DMV-ZR Dual Modular Valve two stage is suitable for natural gas, propane, butane, air and inert gases.

Specifications

<table>
<thead>
<tr>
<th>Pipe size / thread</th>
<th>1/2&quot; - 2&quot; NPT or Rp</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. operating pressure</td>
<td>7 PSI UL, FM; 5 PSI CSA</td>
</tr>
<tr>
<td>Max. close-off pressure</td>
<td>7 PSI UL, FM; 5 PSI CSA</td>
</tr>
<tr>
<td>Electrical ratings (+10% / -15%)</td>
<td>110 - 120 Vac 50 - 60 Hz (others available depending on body size)</td>
</tr>
<tr>
<td>Enclosure rating</td>
<td>NEMA Type 12 (/602)</td>
</tr>
<tr>
<td>Operating time</td>
<td>100 % duty cycle</td>
</tr>
<tr>
<td>Closing time</td>
<td>&lt; 1 s</td>
</tr>
<tr>
<td>Opening time (to max. flow)</td>
<td>DMV-ZRD: V1 &amp; V2 &lt; 1 s</td>
</tr>
<tr>
<td></td>
<td>DMV-ZRDLE: V1 &lt; 1 s; V2 Adjustable 10 - 20 s @ 70 °F</td>
</tr>
<tr>
<td>Ambient temperature rating</td>
<td>-20 °F to +150 °F (-35 °C to +65 °C)</td>
</tr>
<tr>
<td>Max. flow adjustment</td>
<td>Adjustable on V2, stage one: approx. 5 to 30 % of stroke</td>
</tr>
<tr>
<td></td>
<td>Adjustable on V2, stage two: approx. 20 to 100 % of stroke</td>
</tr>
<tr>
<td>Installation position</td>
<td>Safety valve upright vertical to horizontal</td>
</tr>
<tr>
<td>Test ports &amp; System accessory mounting ports</td>
<td>G 1/8 ISO 228 ports available on both sides. See sales literature for valve specifics.</td>
</tr>
<tr>
<td>Proof of Closure Switch (/612 models only)</td>
<td>Factory mounted &amp; calibrated; SPDT switch with indication lamps; AC max. 10A resistive @ 120 Vac</td>
</tr>
<tr>
<td></td>
<td>AC max. 8A inductive @ 120 Vac</td>
</tr>
<tr>
<td>Capacities @ 2 in. W.C. pressure Drop</td>
<td>450 - 3,000 CFH Natural Gas</td>
</tr>
</tbody>
</table>
Dual Modular Valves - with gas/air ratio control or servo pressure controller

The DUNGS Dual Modular Valve DMV-VEF integrates a gas/air ratio control with two automatic shutoff valves in one compact housing. The DUNGS Dual Modular Valve DMV-SE integrates a servo pressure regulator with two automatic shutoff valves in one compact housing.

Application
The DUNGS DMV-VEF is recommended for industrial and commercial heating applications that require two automatic shutoff valves and precise gas/air ratio control in forced air burners and pre-mix burners.

The DUNGS DMV-SE is recommended for industrial and commercial heating applications that require two automatic shutoff valves and a pressure regulator that provides precise pressure control in forced air burners and pre-mix burners.

The DMV-VEF & DMV-SE are suitable for natural gas, propane, butane, air and inert gases.

Specifications

<table>
<thead>
<tr>
<th>Pipe size/ thread</th>
<th>1/2” - 2” NPT or Rp Threaded</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. operating pressure</td>
<td>5 PSI CSA</td>
</tr>
<tr>
<td>Max. close-off pressure</td>
<td>5 PSI CSA</td>
</tr>
</tbody>
</table>
| Outlet pressure range (DMV-SE) | S 20, S 22: \( p_b \) : 1 to 8 in. W.C. (2 - 20 mbar)  
S 80, S 82: \( p_b \) : 2 to 30 in. W.C. (5 - 80 mbar)  
S 300, S 302: \( p_b \) : 12 to 120 in. W.C. (30 - 300 mbar) |
| Air impulse pressure range (DMV-VEF) | \( p_L \) : 16” to 40” (0.4 mbar to 100 mbar) |
| Gas pressure range (DMV-VEF) | \( p_b \) : 20” to 40” (0.5 mbar to 100 mbar) |
| Electrical ratings (+10% / -15%) | 24; 120; 220 Vac 50 - 60 Hz  
24 Vdc |
| Enclosure rating | NEMA Type 12 |
| Operating time | 100 % duty cycle |
| Closing time | < 1 s |
| Ambient temperature rating | + 5 °F to + 140 °F (-15 °C to +60 °C) |
| Installation position | Safety valve upright only |
| Test ports & System accessory mounting ports | G 1/8 ISO 228 ports available on both sides. See sales literature for valve specifics. |
| Capacities @ 2 in. W.C. pressure Drop | 150 - 5,000 CFH Natural Gas |
| Contact DUNGS for sizing information | |
**Specifications**

Pipe size / thread
- 1/2" - 2" NPT or Rp

Max. operating pressure
- 10 PSI UL, CSA

Max. body pressure
- 15 PSI

Max. close-off pressure
- 15– PSI UL, CSA

Electrical ratings (+10% / -15%)
- 110 - 120 Vac 50 - 60 Hz (others available depending on body size)

Enclosure rating
- NEMA Type 4

Operating time
- 100 % duty cycle

Closing time
- < 1 s

Opening time (to max. flow)
- SV < 1 s
- SV-DLE: Adjustable 10 - 20 s  @ 70 °F

Ambient temperature rating
- -40 °F to +140 °F (-40 °C to +60 °C)

Installation position
- Safety valve upright vertical to horizontal

Test ports & System accessory mounting ports
- G 1/8 ISO 228 ports available on both sides. See sales literature for valve specifics

Proof of Closure Switch
- Factory mounted & calibrated; PDT switch with indication lamps;
- AC max. 10A resistive  @ 120 Vac
- AC max.  8A inductive @ 120 Vac

**Capacities @ 1in. W.C. pressure Drop**
- 300 - 2,250 CFH Natural Gas

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**Application**

The DUNGS SV is recommended for industrial and commercial heating applications that require an automatic shutoff valve incorporating proof of closure. The SV is suitable for natural gas, propane, butane, air and inert gases.
Single Valves

The DUNGS MV-D/6 and the MV-DLE/6 are electrically operated normally closed, automatic safety shutoff valves for gas burners and gas appliances.

- Max. operating pressure up to
  7 PSI (500 mbar) on MV-D/6 (5 PSI @ CSA)
  3 PSI (200 mbar) on MV-DLE/6 (2 PSI @ CSA)
- Optional field installable visual indicator (VI) or CPI 400 with indication lamps and SPDT interlock switch for valve position.

Application

The DUNGS MV-D/6 and MV-DLE/6 are recommended for industrial and commercial heating applications that require one safety shutoff valve or two safety shutoff valves in series. The MV-D/6 and MV-DLE/6 safety shutoff valves are suitable for natural gas, propane, butane, air and inert gases.

Specifications

<table>
<thead>
<tr>
<th>Pipe size / thread</th>
<th>1/2” - 3” NPT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. operating pressure</td>
<td>7 PSI UL, FM; 5 PSI CSA</td>
</tr>
<tr>
<td>Max. body pressure</td>
<td>15 PSI</td>
</tr>
<tr>
<td>Max. close-off pressure</td>
<td>7 PSI UL, FM; 5 PSI CSA</td>
</tr>
<tr>
<td>Electrical ratings (+10% / -15%)</td>
<td>110 - 120 Vac 50 - 60 Hz (others available depending on body size)</td>
</tr>
<tr>
<td>Enclosure rating</td>
<td>NEMA Type 12 (/6)</td>
</tr>
<tr>
<td>Operating time</td>
<td>100 % duty cycle</td>
</tr>
<tr>
<td>Closing time</td>
<td>&lt; 1 s</td>
</tr>
<tr>
<td>Opening time (to max. flow)</td>
<td>MV-D: &lt; 1 s</td>
</tr>
<tr>
<td></td>
<td>MV-DLE: Adjustable 10 - 20 s @ 70 °F</td>
</tr>
<tr>
<td>Ambient temperature rating</td>
<td>-30 °F to +140 °F (-35 °C to +60 °C)</td>
</tr>
<tr>
<td>Installation position</td>
<td>Safety valve upright vertical to horizontal</td>
</tr>
<tr>
<td>Test ports &amp; System accessory mounting ports</td>
<td>1/4 NPT ports available on both sides. See sales literature for valve specifics</td>
</tr>
<tr>
<td>Capacities @ 1 in. W.C. pressure Drop</td>
<td>250 - 5,000 CFH Natural Gas</td>
</tr>
</tbody>
</table>
Valve Proving Systems

The DUNGS valve proving systems - Model VPS 504 S06 available for the DMV / SV series modular automatic valves and model VDK 200A S02 available for stand alone valves test and verify that two automatic shutoff valves in series are fully closed before either a system start-up and/or after system shutdown when wired and interlocked to a suitable flame safeguard control. The valve proving system will halt the start-up sequence to a burner if it detects an open automatic shutoff valve, thus preventing ignition under dangerous conditions.

Application

The DUNGS valve proving systems are recommended for industrial and commercial heating applications. Some authorities having jurisdiction accept the VPS in lieu of “proof of closure” when integrated with the preignition system and/or in lieu of a vent valve when it checks the valves at start up and shut down. It can also be used as a valve seat tightness check when used within its capabilities. The VPS is suitable for natural gas, propane, air and inert gases. Not suitable for butane gas.

<table>
<thead>
<tr>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pipe size / thread</strong></td>
</tr>
<tr>
<td>1/4” NPT (VDK Only)</td>
</tr>
<tr>
<td><strong>Max. operating pressure</strong></td>
</tr>
<tr>
<td>7 PSI - VPS; 5 PSI - VDK</td>
</tr>
<tr>
<td><strong>Max. body pressure</strong></td>
</tr>
<tr>
<td>10 PSI</td>
</tr>
<tr>
<td><strong>Max. close-off pressure</strong></td>
</tr>
<tr>
<td>7 PSI - VPS; 5 PSI - VDK</td>
</tr>
<tr>
<td><strong>Electrical ratings (+10% / -15%)</strong></td>
</tr>
<tr>
<td>120 Vac 60 Hz (others available)</td>
</tr>
<tr>
<td><strong>Power ratings</strong></td>
</tr>
<tr>
<td>Test period: 60 VA; In operation: 17 VA - VPS</td>
</tr>
<tr>
<td>Test period: 80 VA; In operation: 20 VA - VDK</td>
</tr>
<tr>
<td><strong>Enclosure rating</strong></td>
</tr>
<tr>
<td>NEMA Type 12</td>
</tr>
<tr>
<td><strong>Operating time</strong></td>
</tr>
<tr>
<td>100 % duty cycle, max. 20 test cycles/hr - VPS</td>
</tr>
<tr>
<td>100 % duty cycle, max. 15 test cycles/hr - VDK</td>
</tr>
<tr>
<td><strong>Ambient temperature rating</strong></td>
</tr>
<tr>
<td>+5 °F to +140 °F (-15 °C to +60 °C) VPS</td>
</tr>
<tr>
<td>+15 °F to +140 °F (-10 °C to +60 °C) VDK</td>
</tr>
<tr>
<td><strong>Installation position</strong></td>
</tr>
<tr>
<td>Mounts directly to DMV via mounting screws (included)</td>
</tr>
<tr>
<td>Upright vertical to horizontal - VPS</td>
</tr>
<tr>
<td>Upright to horizontal, not inverted - VDK</td>
</tr>
</tbody>
</table>

Accessory: CM 100, CM 101

The DUNGS CM 100 and CM 101 incorporate the relays and logic necessary to operate a Valve Proving System on a system start up and after shutdown when wired and interlocked with a suitable flame safeguard control. When a Valve Proving System is integrated with the CM 100 or CM 101, the Valve Proving System can be used in lieu of a vent line when accepted by the authority having jurisdiction.
Gas Pressure Switches

The GAO-, GMH-, and GML-A2… pressure switches are compact pressure switches for direct mounting to DUNGS modular valve train components and the SV valve. The GAO-, GMH-, and GML-A4… pressure switches are compact pressure switches with 1/4” NPT threaded connections. The A2 & A4 series pressure switches are suitable for making and/or breaking a circuit when the medium pressure changes relative to the set point. The set point can be set in the field by an adjustable dial with an integrated scale. The GAO is a automatic reset pressure switch while the GMH and GML are manual reset pressure switches.

Application
The DUNGS series of pressure switches are recommended for industrial and commercial heating applications with the DUNGS DMV dual modular valves or with 1/4” NPT connections. The GAO-, GMH-, and GML-A2 & A4… pressure switches are suitable for natural gas, propane, butane, air and other inert gases.

### Specifications

<table>
<thead>
<tr>
<th>Pressure connection</th>
<th>A2- O ring flange connection on underside of pressure switch</th>
<th>A4- Standard: 1/4” NPT female thread centered, underside</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Max. operating pressure; Setting range</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GAO-A2/4-2,3,4,5,6:</td>
<td>7 PSI; 0.16 to 60 in. W.C.</td>
<td></td>
</tr>
<tr>
<td>GMH-, GML-A2/4-2,3,4,5,6:</td>
<td>7 PSI; 0.16 to 60 in. W.C.</td>
<td></td>
</tr>
<tr>
<td>GAO-, GMH- and GML-A2/4-4-8:</td>
<td>14 PSI; 40 to 200 in. W.C.</td>
<td></td>
</tr>
<tr>
<td><strong>Max. body pressure</strong></td>
<td>15 PSI</td>
<td></td>
</tr>
<tr>
<td><strong>Electrical ratings (+10% / -15%) A2 &amp; A4</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>AC eff. min.</td>
<td>24 V max. 240 V</td>
<td>DC min. 24 V max. 48 V</td>
</tr>
<tr>
<td><strong>Current ratings A2 &amp; A4</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Silver (Ag) contact ratings</td>
<td>Gold (Au) contact ratings</td>
<td></td>
</tr>
<tr>
<td>AC 10A resistive</td>
<td>@ 120 VAC</td>
<td>AC 8A inductive</td>
</tr>
<tr>
<td>DC min. 20 mA @ 24 VDC</td>
<td>5 mA @ 5 VDC</td>
<td>DC max. 1 A @ 48 VDC</td>
</tr>
<tr>
<td><strong>Electrical connection A2 &amp; A4</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Screw terminals via 1/2” NPT conduit connection</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Enclosure rating A2 &amp; A4</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NEMA Type 4</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ambient temperature rating</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>GAO-, GMH- and GML-(A2 &amp; A4)-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>-40 °F to +140 °F (-40 °C to +60 °C)</td>
<td></td>
</tr>
<tr>
<td>Medium temperature</td>
<td>-40 °F to +140 °F (-40 °C to +60 °C)</td>
<td></td>
</tr>
<tr>
<td>GAO-, GMH- and GML-(A2 &amp; A4)-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ambient temperature</td>
<td>-22 °F to +140 °F (-30 °C to +60 °C)</td>
<td></td>
</tr>
<tr>
<td>Medium temperature</td>
<td>-22 °F to +140 °F (-30 °C to +60 °C)</td>
<td></td>
</tr>
<tr>
<td><strong>Installation position A2 &amp; A4</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>± 15% switching point deviation referred to set point, adjusted as pressure rises, vertical diaphragm position.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Air Pressure Switches

AA-... Differential compact pressure switches for automatic burner controls.
AA-A1... Differential pressure switches that are factory set with hose connections.
AA-A2-4... Differential pressure switches that are field adjustable and feature hose connections.
AA-A2-6... Differential pressure switches that are field adjustable with NPT threaded connections also include a test button in the lower housing.
AA-C2... Low pressure differential pressure switches that are field adjustable with hose connections.

Application
Differential pressure monitoring in combustion air proving, ventilation and air-conditioning systems. The AA-... can be used as a pressure, vacuum or differential pressure switch for air and non-aggressive gases. Not suitable for natural gas, propane, butane and other combustible gases.

Specifications
Pressure connection
AA-A1; AA-A2-4; AA C2
0.16” (4 mm) dia. positive; 0.24” (6 mm) diameter negative
AA-A2-6
1/4” NPT positive; 1/8” NPT negative
5/32” (4.6 mm) test connection

Max. operating pressure; Setpoint range
AA-A1: 1.5 PSI; 0.16 to 20 in. W.C.
AA-A2-4 / 6: 7 PSI; 0.16 to 60 in. W.C.
AA-C2: 20 in. W.C.; 0.08 to 4.0 in. W.C.

Electrical ratings (+10% / -15%) All
AC eff. min. 24 V max. 240 V
DC min. 24 V max. 48 V

Current ratings, All
AC 5 A resistive @ 120 VAC
AC 2.5 A inductive @ 120 VAC
DC min. 20 mA @ 24 VDC
DC max. 1 A @ 48 VDC

Electrical connection
AA-A1
1/4 x 1/32” (6.3 x 0.8 mm) flat male terminals
AA-A2, AA-C2
Screw terminals via 1/2” NPT conduit connection

Enclosure rating
AA-A1
NEMA Type1 or 12 depending on optional cover.
AA-A2-4; AA C2
NEMA Type 4

Ambient temperature rating
AA-A1; AA-A2-4/6; AA C2
Ambient temperature -40 °F to +140 °F (-40 °C to +60 °C)
Medium temperature -40 °F to +140 °F (-40 °C to +60 °C)
Pressure Regulators

The DUNGS FR_ series pressure regulators, are spring-loaded pressure regulators with adjustable setpoint that feature an internal sensor for regulating output pressure.
- FRI 7../6: Modular design, directly mounts to DMV valves - Constant output pressure with integrated 50 micron filter.
- FRS 7../6: Threaded connections - Constant output pressure
- FRS 5...: Flanged connections - Constant output pressure
- FRG 7../6: Threaded connections - Proportionator / Zero Governor
- Lock-up type regulators & vent limiter - approved as a ventless regulator by some authorities having jurisdiction.

Application
The DUNGS FR_ series gas pressure regulators are recommended for industrial and commercial heating applications and are suitable for natural gas, propane, butane, air and inert gases.

Specifications
Pipe size / thread
- FRI 7../6: Modular mount or 1/2” to 2” stand alone - flanges required.
- FRS 7../6: NPT 1/2” to NPT 3”
- FRS 5...: DN 40 to DN 150 - ISO Flanged
- FRG 7../6: NPT 1/2” to NPT 3”

Input pressure range; Output pressure range
- FRI 7../6: 7 PSI; +1 to + 60 in. W.C.
- FRS 7../6: 10 PSI; +1 to + 80 in. W.C.
- FRS 5...: 7 PSI; +1 to + 80 in. W.C.
- FRG 7../6: 7 PSI; -1.2 to 110 in. W.C.

Max. body pressure
- FRI 7../6; FRS 5...; FRG 7../6: 10 PSI
- FRS 7../6: 15 PSI

Ambient temperature rating
- FRI 7../6; FRS 7../6; FRG 7../6
  -40 to +160 °F (-40 to +70 °C)
- FRS 5...
  +5 to +160 °F (-15 to +70 °C)

Installation position
Regulator dome from vertically upright to lying horizontally

Vent Line
Optional vent line connection is standard.
Safety diaphragm and limiting orifice installed as standard. Check applicable codes for requirements.

Capacities @ 1 in. W.C. pressure Drop
200 - 15,000 CFH Natural Gas
Modulating Control Valves & Motors

The DUNGS DMA actuator drives from 0° to 90° via a 4 - 20 mA input signal and features integrated 4-20 mA output terminals. The DMA can move in any direction and stop anywhere over the entire 90° stroke. The DMA is available in three different set speeds: 6s, 12s, and 30s. The DMA has one independent, field adjustable auxiliary SPDT switch and two field adjustable limit switches. The DUNGS DMK butterfly control valve operates from 0° to 90° degrees in either direction. Inlet-side male thread and outlet-side female thread enable a space-saving assembly directly to most DUNGS valves. The DUNGS DML linear control valve operates from 0° to 90° degrees in the clockwise direction. Inlet and outlet-side female thread enable in line assembly.

Application
The DMA is used to automatically modulate the amount of gas supplied to the burner. The DMK & DML are recommended for industrial and commercial heating applications for modulating gas or air supply to burners. The DMK & DML control valves are suitable for natural gas, propane, butane, air and other inert gases.

Specifications
DMA - Actuator
Electrical ratings (+10% / -15%)
110 - 120 Vac 50 - 60 Hz
Power rating
Holding: max. 2.0 VA - Operation: max. 5.4 VA
Enclosure rating
NEMA Type 1 (Optional NEMA type 4 cover available)
Electrical connection
Screw terminals with 1/2" NPT conduit connection
Operating time
100 % duty cycle
Ambient temperature rating
-15 °F to +120 °F (-25 °C to +50 °C)
Installation position
Multiplied

Specifications
DMK & DML - Modulating valves
Pipe thread, Male input female output
DMK: NPT: 3/4"; 1"; 1 1/4"; 1 1/2"; 2"
DML: NPT: 1"; 2"
Max. inlet pressure
7 PSI
Max. differential pressure
1.5 PSI
Max. body pressure
14 PSI
Ambient temperature rating
0 °F to +160 °F (-15 °C to +70 °C)
Installation position
Multiplied
Capacities @ 4 in. W.C. pressure Drop
500 - 15,000 CFH Natural Gas
The modular gas safety system reduces piping costs and space requirements.
When using the VPS 504 with a CM 100/101, the need of a vent line is eliminated in an IRI gas train.
Pre-Piped Valve Trains

DUNGS designs, builds and tests high quality fuel trains for just about any application. 40 years in the gas control industry allows DUNGS to be your design partner with experience in Europe, The Americas, Australia and Asia.

DUNGS Fuel Trains:
- Comply with applicable US Standards and European Directives
- Capacities to 4500 Kw (150 Mbtu)
- Natural gas, propane, butane, air, and inert gases

Specifications

Electrical ratings
- 120 Vac 50 - 60 Hz, 220 Vac 50 - 60 Hz, 24 Vdc

Enclosure rating
- IP 54 (NEMA Type 12), IP65 (NEMA Type 4)
- or hazardous location

Input pressure range
- Up to 6 Bar (87 PSI)

Delivered fully assembled and pressure tested with certificate.
Gas flow controls & Burner accessories

Multi Purpose Ball Valves
Full port manual shut-off ball valves with low turning torque. Valve seat and packing are made of Teflon; O-ring is made of Viton.

Gas Orifice & Venturi Meters
Permit accurate setting of burner air & gas flow for optimum efficiency.

Electric Actuators
Designed to operate dampers, butterfly valves and similar devices. Torques from 16 in. lb. to 1300 in. lb.

Ignition Transformers
For reliable ignition of gas burners.

Specifications

Multi purpose Ball Valves
CSA certified, UL Listed,
Pipe sizes (NPT): 1/4' to 4'
Ambient temperatures: -40 to +300°F
max. operating pressures (ratings):
UL 1/4" to 2" 175 PSIG
CSA 1/4" to 2" 5 PSIG

Gas Orifice Meters
Max. operating pressure: 250 PSI
Brass construction: 1/2" to 2"
Carbon steel: 2 1/2" to 24"

Gas Venturi Meters
Max. operating pressure: 250 PSI
Brass construction: 1/2" to 11/4"
Carbon steel: 2 1/2" to 8"

Electric Actuators
All models are UL listed and CSA approved.
EMA..... Two Position
EMP..... Position Proportioning 100 Ohm Slidewire Feedback
• Potentiometer Slaved Proportioning, 100-1000 Ohm, Slidewire Feedback
• Proportioning, 4-20 mA Input
• High Torque

Ignition Transformers
Primary 120 or 240 V
50 or 60 Hz Models
Secondary 6000 V
UL listed, CSA approved (120 V-Version)
DUNGS has over 800 employees manufacturing DUNGS products in two factories. These products, which comply with high safety requirements, are used in gas firing systems throughout the world.

DUNGS products are suitable for all industrial combustion gases, non-corrosive gases and air. Free of non-ferrous metal versions are suitable for gases with max. 0.1 Vol.% H₂S, dry (sewer or bio gases).

Karl Dungs GmbH & Co. KG Head Office
Urbach, Germany

Karl Dungs Inc. Scope of supply
Safety Valves (MV)
Manual Shut-Off Valves
Vent Valves (EU)
Dual Safety Valves (DMV)
Combination Regulator and Safety Valves (EU)
Pressure Regulators
Proportionators
Gas Pressure Switches
Air Pressure Switches
Klima-Sets
Closed Position Indicator Switches
Closed Position Visual Indicators
Valve Proving Systems
Control Modules
Test Burners, Pilot Burners (EU)
Gas Filters (EU)
Ball Valves, Side Tap Ball Valves
Butterfly Valves
Linear Butterfly Valves
Gas Orifice Meters
Automatic gas burner controls (EU)
UV sensors (EU)
Control units (EU)
Analog Pressure sensors (EU)
Electric Actuators
Ignition Transformers
Temperature Controllers
Temperature Sensors
Accessories
Control cabinets (EU)
Gas trains

(EU) European specifications only

Specifications subject to alteration in the interest of technical progress.

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