3-Way Temperature Control Valve

Model G, Version G and Accessories

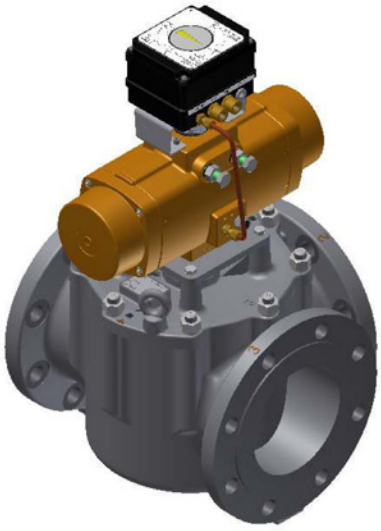
Typical applications

For engines, turbines, gearboxes and heat exchangers:

- Charge air cooling
- Secondary cooling systems
- Fuel and lube oil preheating
- Co-generation
- Engine jacket water

For refineries, chemical plants and oil reproduction:

- Waste heat boilers
- Product coolers
- Product heaters
- Product condensers

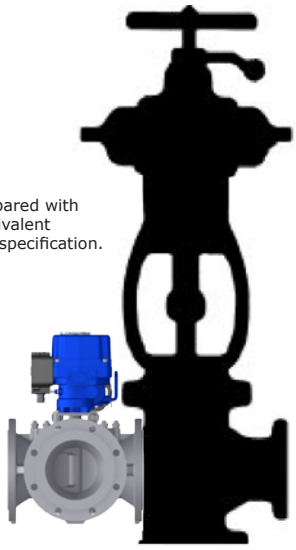


Pneumatic GG valve

Electric GG valve

Key benefits

- Ease of integration - valve size matches pipe size, resulting in reduced installation time and installation costs
- Flexible design - ports can be configured to suit installation
- Low pressure drop - compared to other valve types
- Small physical size
- Hand wheel allows manual adjustment of valve (optional on pneumatic valve) - simplified set up and maintenance



G valve compared with a typical equivalent competitor's specification.

Now even more compact

amot

Contents

3-Way Temperature Control Valve - Model G, Version G

Overview

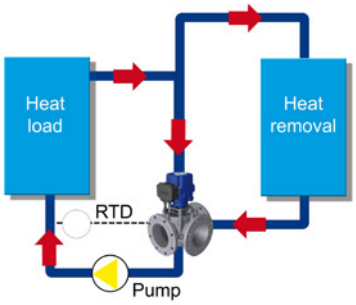
AMOT G valves are 3-way control valves consisting of a heavy duty rotary valve and either a quarter turn electric or pneumatic actuator. The valves provide a high degree of accuracy and repeatability for accurate temperature control and are equally accurate in mixing or diverting service over a wide flow range.

The heavy duty rotor design provides tight temperature control without high maintenance requirements. The system is available in three standard control configurations: electric; pneumatic; and electro-pneumatic, offering flexibility for most requirements. Designed for high vibration service, the AMOT G valves are qualified to Lloyd's Marine Requirements for shipboard service. Valves can be directly mounted to reciprocating machinery, such as diesel engines, without vibration isolation. The heavy duty actuators are specially reinforced to provide vibration resistance.

The standard valves are suitable for a variety of fluids such as water, water/glycol, sea water, lubricating and hydraulic oils. Optional body materials are available for services involving synthetic or fire resistant oils, deionized water and ammonia or freon in oil.

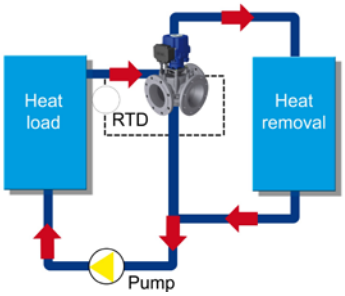
Applications

Mixing Applications



Lubricating oil temperature control is normally configured in a mixing application controlling the return temperature to the heat load. The temperature is normally measured as close as possible to the sump return.

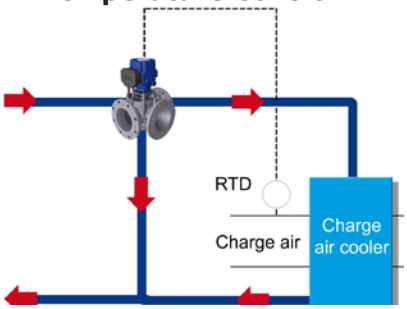
Diverting Applications



Jacket water cooling in diverting applications regulates the outlet coolant water temperature from a diesel or gas engine. The valve either sends water to a cooler or bypass loop, accurately maintaining the temperature.

The temperature is normally measured at the outlet from the heat source.

Charge Air Temperature Control



The intercooler is used to cool high temperature turbo charger air.

In this application the G Valve regulates the flow of cooling water through an intercooler, increasing efficiency, enhancing performance and helping to meet today's environmental requirements.

System Types

Electric Valve

Electric GG Valve

For the electric valve, the actuator of the G valve assembly uses an electric motor which rotates in either direction in response to the ON-OFF signals received. The motor drives a gearbox connected to the rotor shaft and turns the valve rotor clockwise or counter-clockwise, a maximum of 90 degrees. At the end of travel, limit switches are incorporated to isolate the electrical supply to the motor when the valve rotor has reached either end of the rotation. A feedback hall sensor is standard and provides position indication to the control system.

The electric actuator is a rugged, compact and lightweight quarter turn actuator having enclosure protection to IP65.

The actuator is powered by an electric motor driving a worm-type gearbox. The worm gearbox prevents reverse drive due to fluid forces. It is fitted with manual override as standard, enabling valve operation without power.

A thermal cutout is fitted preventing overheating. Limit switches at each end of stroke disconnect motor power when end stroke is reached. These can also be used for remote indication.

See page 15 for more information on the electric actuator.

Electric System

Temperature Probe 8060

PID Controller 8071/2D, IP67 enclosure

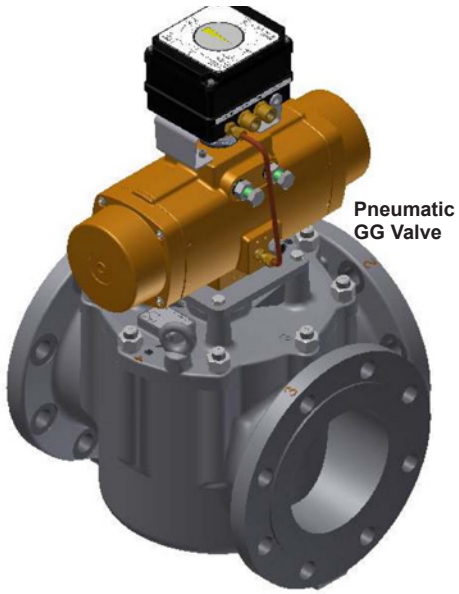
GG Valve

The electric valve system incorporates the use of an electrically actuated three-way control valve with an electronic controller. The 8071D PID Controller can be either panel or wall mounted (see page 18 for more information). The system is completed with a temperature sensor type 8060 (see page 18 for details).

The electric G Valve system is simple to install with standard four core cable, and provides more accurate measurement and control than typical pneumatically operated systems.

System Types continued

Pneumatic Valve



The pneumatic valve uses a spring return pneumatic actuator and positioner to control the rotation of the valve in response to an input signal from a pneumatic or electro-pneumatic control system. The pneumatic control system sends a pneumatic signal ranging from 0.21 to 1.03 bar (3 to 15 psi) to the actuator to correctly position the valve at the desired temperature setting. The pneumatic control system usually consists of a P+I pneumatic controller, sensor and the necessary air supply conditioning equipment (regulators, filters and water traps).

The pneumatic actuator is a rugged, quarter turn, double piston actuator operating on a scotch yoke principle.

The actuator is fitted with spring return as standard allowing fail-safe configuration if necessary. It is also fitted with a valve positioner enabling accurate and repeatable movement. See page 16 for more information on the pneumatic actuator.

Pneumatic System

SG80 Temperature Controller and Sensor

GG Valve

The pneumatic valve system incorporates a pneumatically actuated three-way control valve with controller and integral temperature sensor, the SG80, which can be panel or wall mounted. For more information on the SG80, see page 20. The pneumatic G valve system is ideal when there is a lack of electricity or when a fail-safe system is needed.

Electro-Pneumatic System

Temperature Probe 8060

Temperature Controller 8071D

Electro-Pneumatic Converter 8064A

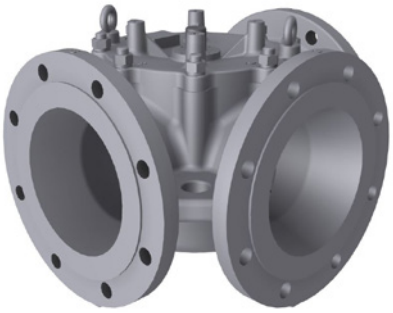
GG Valve

The electro-pneumatic valve system combines both electric and pneumatic technology, consisting of a pneumatically actuated three-way control valve with an electro-pneumatic converter, type 8064A. See page 19 for more details.

The probe sends a resistance signal to the electronic controller, which in turn sends a 4 to 20mA signal to an I/P converter that converts this to a pneumatic signal.

The electro-pneumatic system combines the features and functionality of the AMOT electronic control system with the fail-safe action benefits of a pneumatically actuated valve.

Overview of Valve Body



Valve Body

Key features and benefits

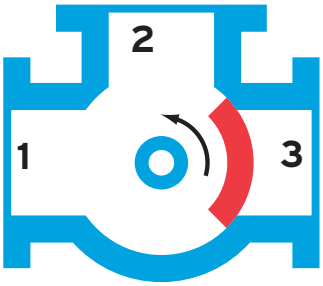
- Lightweight and compact
- Configurable ports - allowing flexibility on installation
- Low pressure drop - enables savings on either valve or pump size
- High accuracy providing better temperature control

Specification

Flow to:	720m³/hr	3,170 US gpm
	For valves with higher flow rates see datasheet GEF_GPD_Temp_Control_Valve	
Sizes:	**Standard flow**	**High flow**
	80mm - 250mm (3” - 10”)	80mm - 200mm (2” - 8”)
	For 250 mm (10”) high flow and above see Datasheet GEF_GPD_Temp_Control_Valve	
Body material:	Ductile iron	High performance iron, for fresh water, lubricating oils
Seal material:	Flourocarbon (Viton, FKM)	
Flanges:	EN 1092, ASME and JIS standards.	
Maximum internal valve pressure:	10 bar	(145 psi)
Maximum temperature of fluid:	100°C	(212°F)
Vibration:	Exceeds the requirements of Lloyd’s Register Type Approval System, Test Specification Number 1, 2002, Vibration Test 2. For both electric and pneumatic:	

Frequency range	Displacement	Acceleration	Lloyd’s
5 - 25 Hz	+/- 1.6mm		+/- 1.6mm
25 - 100 Hz		+/- 5.0g (49 m/s²)	+/- 4.0g (39 m/s²)
100 - 300 Hz		+/- 1.0g (9.81 m/s²) 90 minute	No requirement

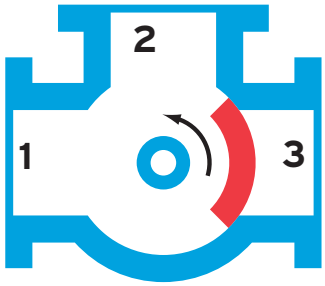
Modes of Operation - Electrically Actuated



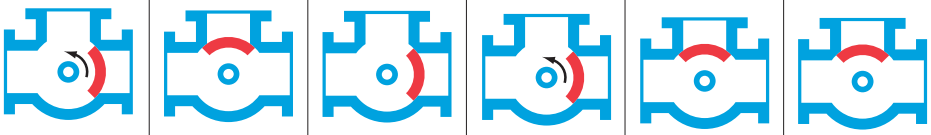
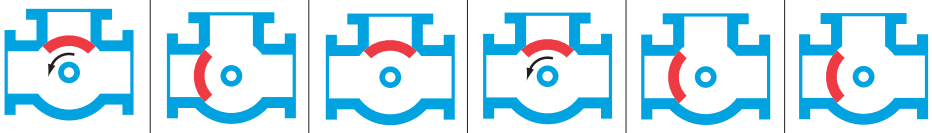
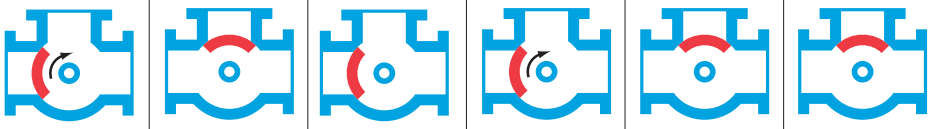
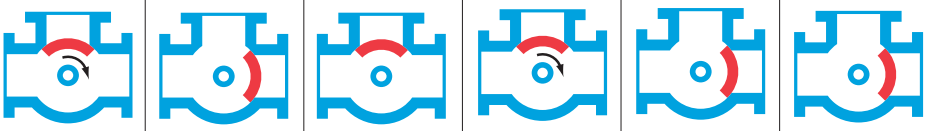
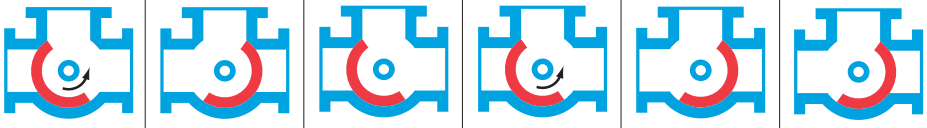
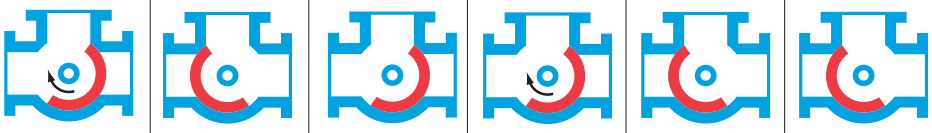
The unique construction of the AMOT G valve provides total flexibility by allowing you to select the valve port positions most ideally suited to meet your application requirements. There are two main types of mode of operation: 90° rotor that allows either ports 1 or 3 to be selected as the common port; and 180° rotor that requires port 2 to be the common port. Arrow indicates valve movement with increasing temperature or mA, as viewed from above (see diagram). For electrically actuated valves, on loss of signal the actuator is set up by default to stop in its current position.

	Electric actuator (switched live input)		**Electric actuator direct acting (4-20mA input)**		**Electric actuator reverse acting (20-4mA input)**	
	Cold position	Hot position	4mA (cold)	20mA (hot)	20mA (cold)	4mA (hot)
Mode 32						
Mode 21						
Mode 12						
Mode 23						
Mode 13						
Mode 31						

Modes of Operation - Pneumatically Actuated

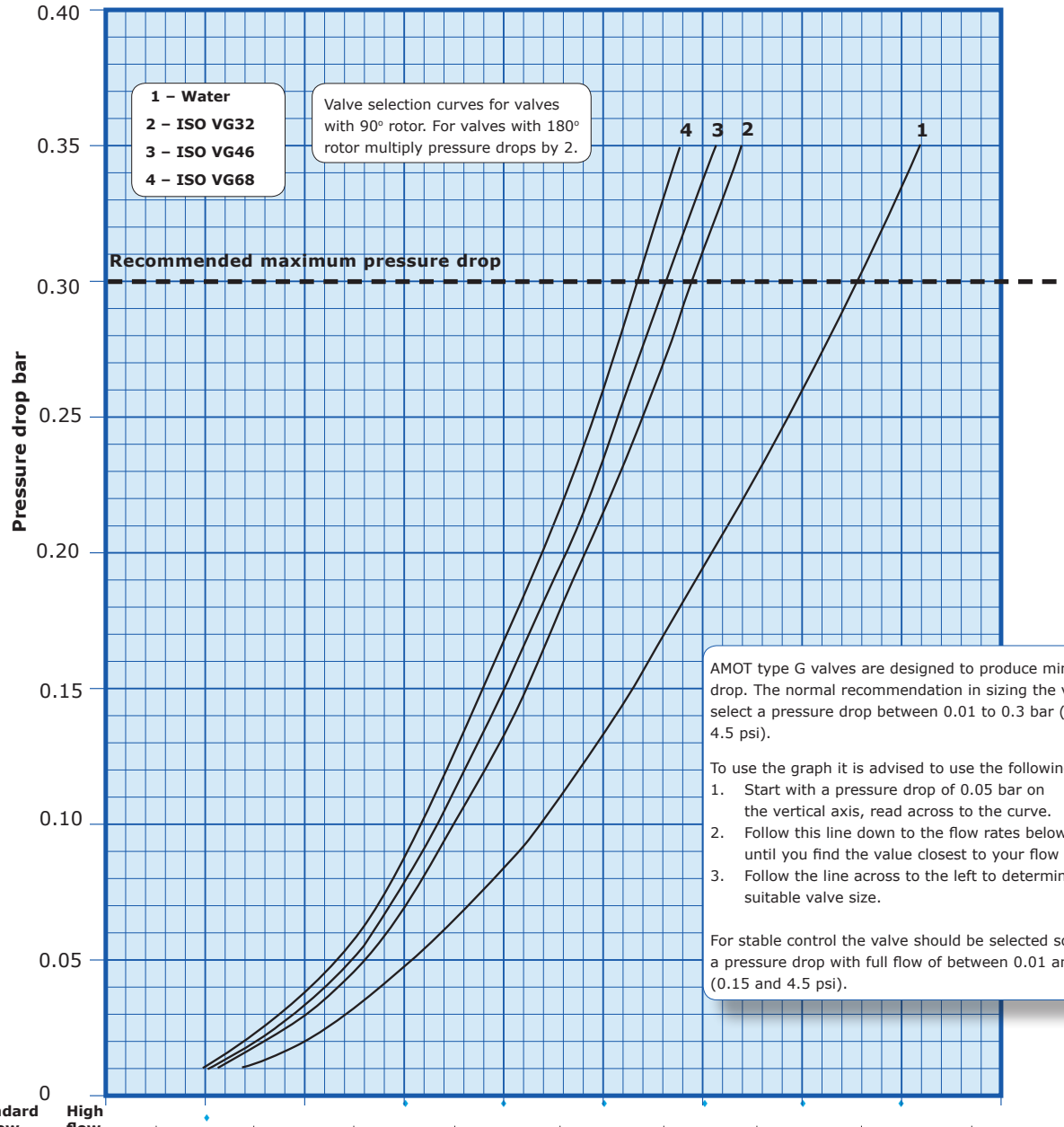


The unique construction of the AMOT G valve provides total flexibility by allowing you to select the valve port positions most ideally suited to meet your application requirements. There are two main types of mode of operation: 90° rotor that allows either ports 1 or 3 to be selected as the common port; and 180° rotor that requires port 2 to be the common port. Arrow indicates valve movement with increasing temperature or mA, as viewed from above (see diagram).

	Pneumatic actuator direct acting			**Pneumatic actuator reverse acting**		
	3 PSI (cold)	15 PSI (hot)	No signal	15 PSI (cold)	3 PSI (hot)	No signal
Mode 32						
Mode 21						
Mode 12						
Mode 23						
Mode 13						
Mode 31						

Valve Sizing (Metric units)

Valve Flowrate Selection (Flowrate m^3/hr)



AMOT type G valves are designed to produce minimal pressure drop. The normal recommendation in sizing the valves is to select a pressure drop between 0.01 to 0.3 bar (0.15 and 4.5 psi).

To use the graph it is advised to use the following method:

1. Start with a pressure drop of 0.05 bar on the vertical axis, read across to the curve.
2. Follow this line down to the flow rates below until you find the value closest to your flow rate.
3. Follow the line across to the left to determine suitable valve size.

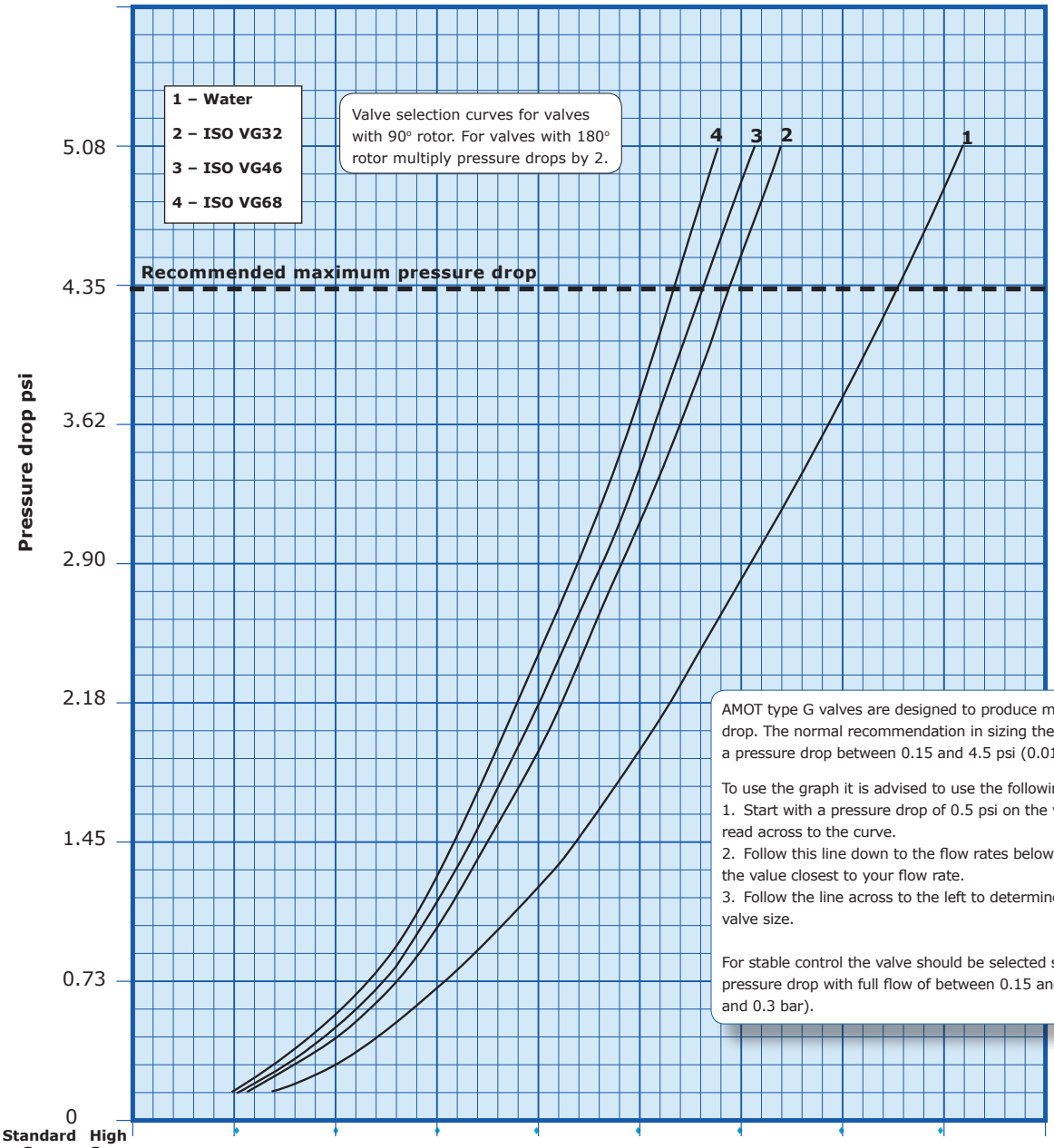
For stable control the valve should be selected so as to provide a pressure drop with full flow of between 0.01 and 0.3 bar (0.15 and 4.5 psi).

Size DN (inches) Standard flow	High flow								
80 (3)	50 (2)	7	14	20	26	33	39	46	52
100 (4)	80 (3)	19	35	51	67	83	99	115	131
150 (6)	100 (4)	29	54	79	104	129	154	179	204
200 (8)	150 (6)	66	122	178	235	291	347	403	459
	200 (8)	118	218	318	418	517	617	717	817
250 (10)									
300 (12)	250 (10)								
350 (14)	300 (12)								
400 (16)	350 (14)								
450 (18)	400 (16)								

Currently only available in GEF/GPD versions.
See Datasheet GEF_GPD_Temp_Control_Valve for data

Valve Sizing (English units)

Valve Flowrate Selection (Flowrate USg/m)



AMOT type G valves are designed to produce minimal pressure drop. The normal recommendation in sizing the valves is to select a pressure drop between 0.15 and 4.5 psi (0.01 to 0.3 bar).

To use the graph it is advised to use the following method:
1. Start with a pressure drop of 0.5 psi on the vertical axis, read across to the curve.
2. Follow this line down to the flow rates below until you find the value closest to your flow rate.
3. Follow the line across to the left to determine suitable valve size.

For stable control the valve should be selected so as to provide a pressure drop with full flow of between 0.15 and 4.5 psi (0.01 and 0.3 bar).

Size inches (DN) Standard flow	High flow								
3 (80)	2 (50)	31	62	88	114	145	172	203	229
4 (100)	3 (80)	84	154	225	295	365	436	506	577
6 (150)	4 (100)	128	238	348	458	568	678	788	898
8 (200)	6 (150)	291	537	784	1035	1281	1528	1774	2021
	8 (200)	520	960	1400	1840	2276	2717	3157	3597
10 (250)									
12 (300)	10 (250)								
14 (350)	12 (300)								
16 (400)	14 (350)								
18 (450)	16 (400)								

Currently only available in GEF/GPD versions.
See Datasheet GEF_GPD_Temp_Control_Valve for data

Valve Sizing

Viscosity Correction

Example:

From the graph below:

100 cSt = correction factor of 0.68

0.68 x flow coefficient = corrected flow coefficient (Kv or Cv)

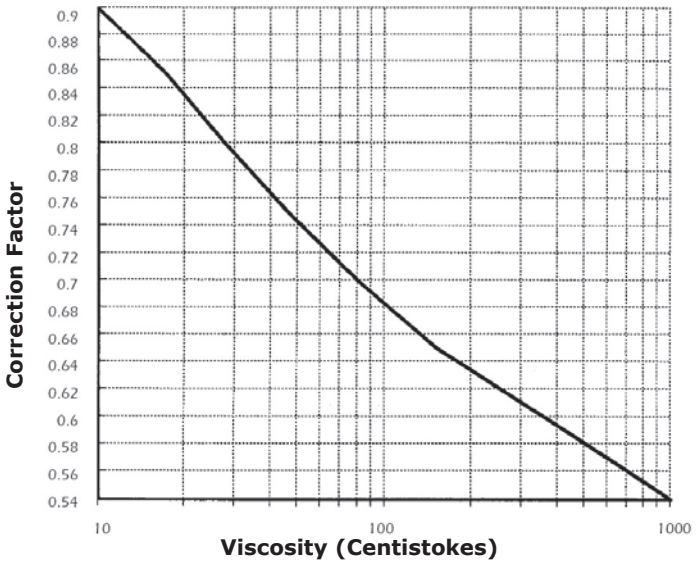
Some approximate viscosities (cSt) of SAE oils at 40°C (110°F) are shown below, based on leading oil manufacturers published data.

For the selection of valves for more viscous fluids than water, the following must be calculated:

Viscosity: Find the viscosity of the fluid in which the valve is to operate. The viscosity is normally expressed in centistokes. Where ISO oil is used, the grade number is also the viscosity eg ISO VG46 is 46 centistokes at 40°C (104°F).

Viscosity correction: By using the correction graph below, the flow coefficient correction factor can be established. The correction figure obtained from the graph should then be multiplied by the original flow coefficient which can then be used in the standard valve sizing formulae.

Viscosity Correction Curve (Fv)



Some approximate viscosities (cSt) of SAE oils at 40°C (104°F) are shown below, based on leading oil manufacturers' published data.

SAE Oil Viscosities

Engine oils	
Oil	**cSt**
SAE 5W	6.8
SAE 10W	32
SAE 20	46
SAE 20W	68
SAE 30	100
SAE 40	150
SAE 50	220

Gear oils	
Oil	**cSt**
SAE 75W	22
SAE 80W	46
SAE 85W	100
SAE 90	150
SAE 140	460

Valve Sizing

Valve Sizing Calculations

Valve Flowrate

See the table below for examples of Kv and Cv:

Size DN (in)	Standard flow		80 (3)	100 (4)	150 (6)	200 (8)		250 (10)	300 (12)	350 (14)	400 (16)	450 (18)
	High flow	50 (2)		80 (3)	100 (4)	150 (6)	200 (8)		250 (10)	300 (12)	350 (14)	400 (16)
Kv			82	207	323	729	1296					
Cv			96	242	378	851	1513					

Currently only available in GEF/GPD versions.
See Datasheet GEF_GPD_Temp_Control_Valve for data

Pressure Drop

The G valve is designed to produce minimal pressure drop. The normal recommendation when determining the size of an AMOT G valve is a pressure drop between 0.01 and 0.3 bar (1.5 and 4.5 psi). **Note:** Kv and Cv values are applicable to 90° rotor versions only.

Kv is the flow coefficient in metric units. It is defined as the flow rate in cubic meters per hour (m^3/h) of water at a temperature of 16º celsius with a pressure drop across the valve of 1 bar. Cv is the imperial coefficient. It is defined as the flow rate in US Gallons per minute [gpm] of water at a temperature of 60º fahrenheit with a pressure drop across the valve of 1 psi. (Kv = 0.865 Cv / Cv = 1.156 Kv)

The basic formula to determine the Kv of a valve is:

$$Kv = Q\sqrt{\frac{SG}{Dp}}$$

Q = Flow (m^3/h)
Dp = Pressure drop (bar)
SG = Specific gravity of fluid
Kv = Valve flow coefficient

There are two other ways that this formula can be used to find the flow in m^3/h or pressure drop of a valve in bar:

$$Q = Kv\sqrt{\frac{Dp}{SG}} \qquad Dp = \left[\frac{Q}{Kv}\right]^2 SG$$

The basic formula to determine the Cv of a valve is:

$$Cv = Q\sqrt{\frac{SG}{Dp}}$$

Q = Flow (US gallons/min)
Dp = Pressure drop (psi)
SG = Specific gravity of fluid
Cv = Valve flow coefficient

There are two other ways that this formula can be used to find the flow in US gallons/minute or pressure drop of a valve in PSI:

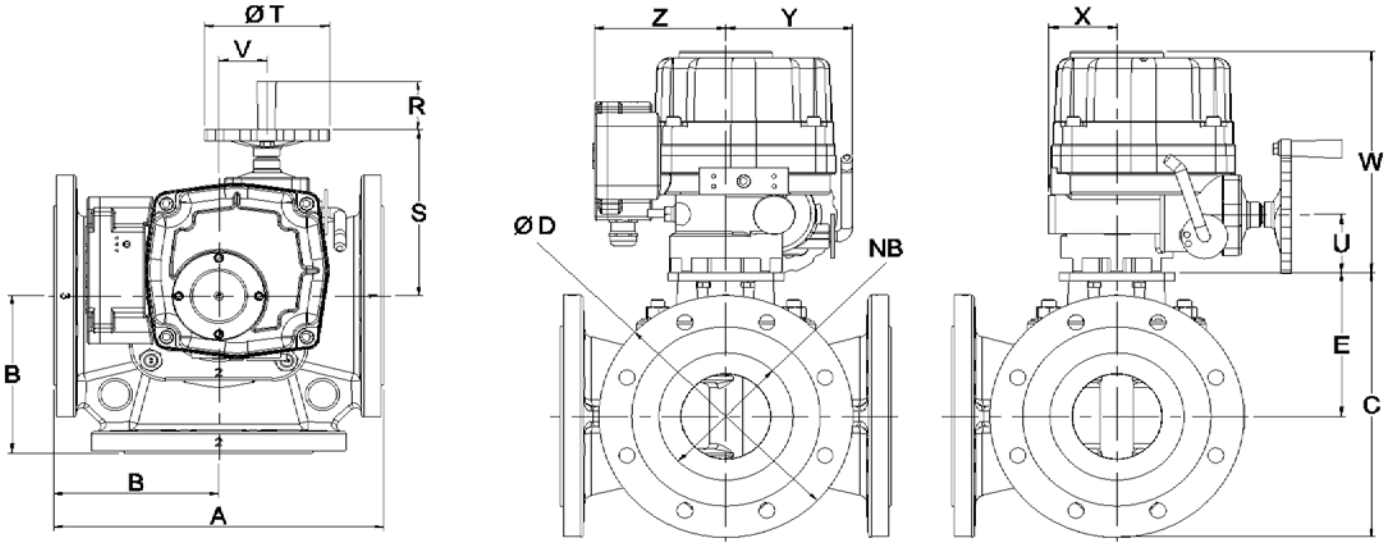
$$Q = Cv\sqrt{\frac{Dp}{SG}} \qquad Dp = \left[\frac{Q}{Cv}\right]^2 SG$$

Valve Bypass Flowrates

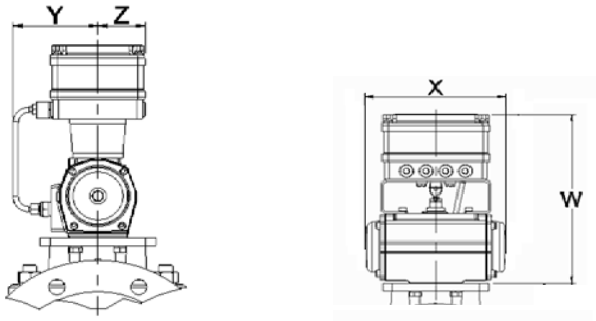
The AMOT G Valve is not a tight shutoff valve. When used in a reasonably balanced pressure system there will be some small amounts of leakage between ports. The actual amount of leakage will vary with the pressure difference between these ports. Consult AMOT for further information if the application is sensitive to leakage rates or if high pressure differences are likely to occur.

Dimensions

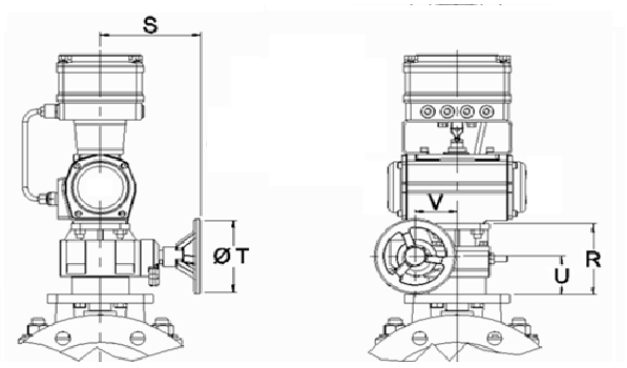
Electrically Actuated with Manual Override



Pneumatically Actuated



Pneumatically Actuated with Manual Override



See page 14 for dimensions

Dimensions continued

Dimensions in mm

Valve Type	Valve Body						Electrically Actuated									Pneumatically Actuated									Valve Type
	NB	A	B	C	D	E	R	S	T	U	V	W	X	Y	Z	R*	S*	T*	U*	V*	W	X	Y	Z	
03GGS	80	280	140	207	200	107	65	195	140	68	54	260	76	142	147	95	123	100	52	52	245	192	95	53	03GGS
03GGH				227	200	127																			03GGH
04GGS	100	300	150	242	229	128																			04GGS
04GGH				281	224	169																			04GGH
06GGS	150	370	185	312	285	169																			06GGS
06GGH				346	285	191										100	155	200	45	79	297	362	115	53	06GGH
08GGS	200	450	225	371	343	191										113									08GGS
08GGH				418	340	253																			08GGH
10GGS	250	520	260	455	406	253																			10GGS
10GGH				521	405	292		221			70	290	82	160	157	236	298	400	156	132	363	477	149	53	10GGH
12GGS	300	600	300	533	483	292																			12GGS
12GGH				631		346																			12GGH

Dimensions in inches

Valve Type	Valve Body						Electrically Actuated									Pneumatically Actuated									Valve Type
	NB	A	B	C	D	E	R	S	T	U	V	W	X	Y	Z	R*	S*	T*	U*	V*	W	X	Y	Z	
03GGS	3.0	11.0	5.5	8.2	7.9	4.2	2.56	7.68	5.51	2.68	2.13	10.24	2.99	5.59	5.79	3.74	4.84	3.94	2.05	2.05	9.65	7.56	3.74	2.09	03GGS
03GGH				8.9	7.9	5.0																			03GGH
04GGS	4.0	11.8	5.9	9.5	9.0	5.0																			04GGS
04GGH				11.1	8.8	6.7																			04GGH
06GGS	6.0	14.6	7.3	12.3	11.2	6.7																			06GGS
06GGH				13.6	11.2	7.5										3.94	6.10	7.87	1.77	3.11	11.69	14.25	4.53	2.09	06GGH
08GGS	8.0	17.7	8.9	14.6	13.5	7.5										4.45									08GGS
08GGH				16.5	13.4	10.0																			08GGH
10GGS	10.0	20.4	10.2	17.9	16.0	10.0																			10GGS
10GGH				20.5	15.9	11.5		8.70			2.76	11.42	3.23	6.30	6.18	9.29	11.73	15.75	6.14	5.20	14.29	18.78	5.87	2.09	10GGH
12GGS	12.0	23.6	11.8	21.0	19.0	11.5																			12GGS
12GGH				24.8	19.0	13.6																			12GGH

* Relevant only to pneumatic actuator with manual override version

Bolthole dimensions are as per the relevant specification chosen in the model coding. Full dimensional details can be provided on request.

Overview of Electric Actuation

Electric Actuator

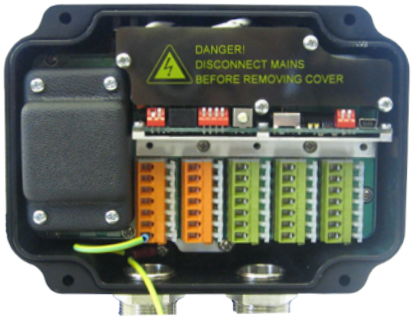
Key features and benefits

- Self-locking with minimum backlash in the transmission - prevents valve movement due to flow
- Auxiliary limit switches for user connection
- Manual override fitted as standard - valve can be operated in event of power failure
- Two torque switches - provide protection in event of actuator overloading

Specification

Power		115V ± 10% or 230V ± 10%		50/60Hz single phase		
Limit switches		Two open/close SPDT		250V AC, 10A		
Motor thermal protection		Fitted as standard				
Angular rotation		110° max		Quarter turn		
Position sensor		Contactless half effect				
Cable entry		2 x M25 x 1.5		IP68 glands provided		
Mechanical stop		Two adjustable screws				
Manual override		Fitted as standard				
Materials		Steel, aluminum alloy, aluminum bronze, polycarbonate				
External coating		Dry powder polyester				
Weatherproof enclosure		IP67, NEMA 4 and 6				
Ambient temperature		-20°C to +85°C		(-4°F to +185°F)		
Ambient humidity		90% RH max (non-condensing)				
Anti-condensation heater		7 - 10W				
Vibration resistance		5 - 100 Hz		5g		
		100 - 300 Hz		1g		
Performance		**Duty cycle 20°C**	**Stroke time (secs)**		**Max currrent (A)**	
Standard	**High flow**		**50 Hz**	**60 Hz**	**220V**	**110V**
	50	Currently only available in GEF/GPD versions. See Datasheet GEF_GPD_Temp_Control_Valve for data				
80 - 200	80 - 200	65%	25	21	0.88	1.7
250 - 450	250 - 400	Currently only available in GEF/GPD versions. See Datasheet GEF_GPD_Temp_Control_Valve for data				

Electronic Positioner



Electronic Positioner

The AMOT actuator/valve positioner is configured to accept an industry standard 4-20mA position demand input signal, and uses this to operate internal solid state switching to drive the motor.

The microprocessor based unit uses the signal from the contactless position sensor to accurately position the actuator, taking into account motor response time and actuator overshoot.

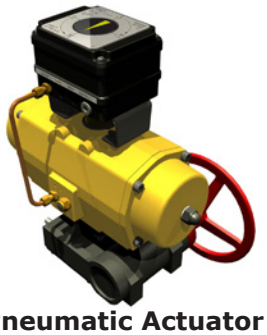
The positioner is split into two parts, housed in the terminal box. There is a power module, in which all high voltage circuits are fully encapsulated to withstand high vibration, and a control board. This design allows for easy maintenance.

There are three LEDs on the terminal box on the side of the actuator, providing clear visual indication of actuator status. Two alarm outputs allow for remote fault monitoring.

User configuration allows:

- The input can be selected from 4-20mA, 0-20mA, 0-5V, 0-10V and 2-10V by switches.
- 4-20mA output, which shows actual valve position, can be configured to retransmit the demand input signal.
- A switch allows for easy configuration of which end of stroke corresponds with a 4mA demand.
- The action on sensor fail can be selected from moving to either the 4mA or the 20mA positions, but is factory set to not moving.
- The deadband can be increased to aid performance with noisy input signals.
- When necessary, such as after maintenance, the actuator can be recalibrated at the touch of a button.

Overview of Pneumatic Actuation



Pneumatic Actuator

Key features and benefits

- A rugged quarter turn, double piston, rack and pinion pneumatic actuator with spring return and valve positioner as standard.
- Can be configured fail-safe

Specification

Housing	Cast aluminum base, steel cover and two part Polyurethane paint finish.	
Supply pressure	6 to 8 bar	(90 to 115 psi)
Signal pressure	0.21 to 1.03 bar	(3 to 15 psi)
Pressure connections	G 1/4	(1/4 NPT)
Manual override	Optional	

How to Order

Use the table below to select the unique specification of your G valve:

Example Code	06GG	S	D	B	S	32	EA	B	CA	-AA	Code Description		
Valve Body Selection											**Nominal Bore Size**		**Comments**
Valve Size & Model	02GG										2 Inch (DN50)		High Flow Only
	03GG										3 Inch (DN80)		
	04GG										4 Inch (DN100)		
	05GG										5 Inch (DN 125)		Standard Flow only
	06GG										6 Inch (DN150)		
	08GG										8 Inch (DN200)		
	10GG										10 Inch (DN250)		Standard Flow only
Valve Flow Type											**Valve Flow Type** (Refer to flow coefficient table for Cv/Kv data)		
		S									Standard Flow Valve		
		H									High Flow Valve		
Valve Body											**Body Material**		
			D								Ductile Iron		
Valve Flange Connection Standard and Class											**Flange Class**	**Flange Standard**	**Flat / Raised Face**
				A							PN6	EN 1092	Raised
				B							PN10	EN 1092	Raised
				C							PN16	EN 1092	Raised
				F							125 lb (Flat Face)	ASME	Flat
				J							150 lb	ASME	Raised
				L							10K	JIS	Flat
				M							5K	JIS	Flat
Rotor Type											**Rotor Type**		
					S						Standard Rotor		
Valve Mode of Operation											**Rotor Position**		**Rotation Starting From Cold Position**
											Cold Process	**Hot Process**	
						12					Port 1	Port 2	Clockwise
						23					Port 2	Port 3	
						31					Port 3	Port 1	
						21					Port 2	Port 1	Anticlockwise
						32					Port 3	Port 2	
						13					Port 1	Port 3	
Actuator Selection											**Power Supply**	**Air Connection**	**Manual override**
Valve Actuation Type Electric Actuator Power Supply Pneumatic Actuator Air Connections & Manual override						Elec	EA				100 -120 Vac 50/60Hz	-	Fitted as Standard
							EB				200 - 240 Vac 50/60Hz	-	
						Pneu	P1				-	G1/4 (1/4" BSPP)	Not Fitted
							P2				-	1/4" NPT	
							P3				-	G1/4 (1/4" BSPP)	Fitted
							P4				-	1/4" NPT	
Actuator Control Input Signal											**Input Signal**	**Comments**	
							Elec	A			Relays, Switched Live Supply		
								B			4-20mA	On Increasing Temperature	
								C			20-4mA		
							Pne	1			3-15psi		
								2			15-3psi		
Actuator Feedback Signal											**Feedback Signal**		
								Electric	AA		None	Not applicable for Actuator Control Input Signal codes B or C	
									CA		4-20mA Position Retransmit		
									EA		20-4mA Position Retransmit		
								Pne	00		None		
Customer Special Options													
										-AA	Standard Product		
										-***	Customer Special Code Assigned		

Accessories

PID Valve Controllers 8071/8072D and Solid State Relays 47581L001

PID Controller 8072D

Solid State Relay 47581L001

PID Controller 8071D

Key features and benefits

- Fully programmable PID-based control - allows easy system configuration
- Universal inputs; RTD's, thermocouple, or standard 4-20mA signal gives maximum system design flexibility
- Can be operated in manual mode - easy maintenance and set up

For further information and how to order these products see Datasheet_8071_2_D_47851.pdf

3-Wire PT100 Temperature Sensor - 8060

Temperature Sensor 8060

Key features and benefits

- 3 wire RTDs - accurate temperature measurement
- Excellent long term stability
- Good linearity
- Can use standard 3-core cable

For further information and how to order this product see Datasheet_8060_temp_sensor.pdf

Accessories

Solid State Relay Module - 8073C

Relay Module

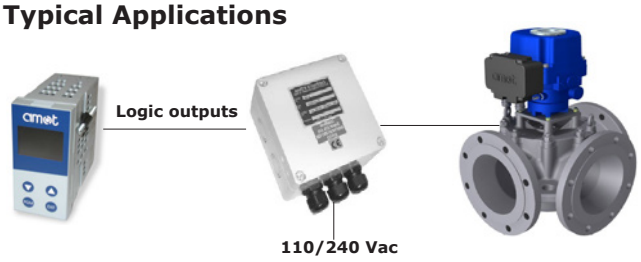
8073C

Key features and benefits

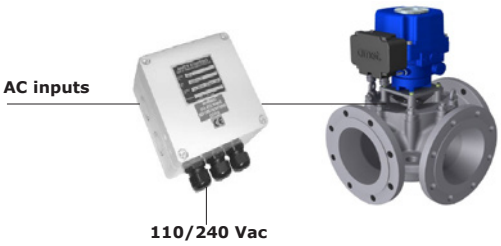
- IP67 enclosure
- Alternative to using two SSRs type 47581L001
- Good linearity
- Can use standard 3-core cable

The 8073C relay module incorporates two solid state relays with terminations in an IP67 enclosure. The 8073C is designed to be used with the 8071D controller logic outputs to drive voltages for the electrically actuated G valve. Features include: zero-crossing switching, relay and logic level inputs and IP67 enclosure.

Typical Applications



Interface with 8071D controller



Interface with AC input signals

For further information and how to order this product see Datasheet_8073C_SSR.pdf

Electro-Pneumatic Converter - 8064A

Electro-Pneumatic Converter - 8064A

Typical Application

Temperature Probe 8060 | Temperature Controller 8071D | Electro-Pneumatic Converter 8064A | G Valve

Key features and benefits

- High vibration resistance - Lloyds 4G
- Suitable for longer pipe runs
- Fully adjustable for optimised system operation
- ATEX hazardous area certification

For further information and how to order this product see Datasheet_8064A_C_elect_pneu_converter.pdf

Accessories

Electro-Pneumatic Converter - 8064C

Typical Application

Electro-Pneumatic Converter - 8064C

Electro-pneumatic system

Temperature probe 8060 | Temperature controller 8071D | Electro-pneumatic converter 8064C | G valve

Key features and benefits

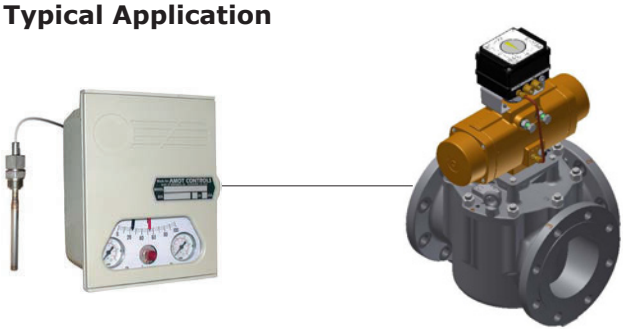
- Accepts high supply pressure - avoids use of additional regulator
- Factory set for ease of installation
- Low cost alternative to 8064A
- ATEX hazardous area certification

For further information and how to order this product see Datasheet_8064A_C_elect_pneu_converter.pdf

Pneumatic Indicator Controller - SG80

Pneumatic Indicator Controller SG80

Typical Application



SG80 Temperature Controller and Sensor | G Valve

Key features and benefits

- Complete stand alone controller, no other control components required - reduced system cost
- Easily removable components - low maintenance
- Good dynamic response - gives optimum engine performance
- Compatible with every type of pneumatic valve - flexible

For further information and how to order this product see Datasheet_SG80_Pneu_Ind_Controller.pdf

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