

Catalogue

# Actuators and Valves

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European Products Catalogue



The power behind **your mission**



# Comprehensive linecard Actuators

## Terminal Unit Valve Actuators



VA-7080



VA-7480



Smart flow control series



VA9905

## Non-Spring Return Plant Valve Actuators



VA-7700



VA7810



VA1125



FA-3000



RA-3000



VA9300



VA9104



VAP



VA-9070

## Spring Return Plant Valve Actuators



VA7820 - VA7830



VA1220 - VA1420



VA9203



VA9208

## Non-Spring Return Damper Actuators



M9102-M9104



M9304



M9300



M9100

## Spring Return Damper Actuators



M9203



M9208



M9220

## Safety Damper Actuators



S9208



S9220

## Pneumatic Valve Actuators



PA-2000

# Comprehensive linecard Valves

## Terminal Unit Valves



VG3000



V6W0000



VG1600

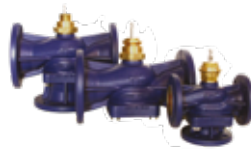
## Plant Valves



VG5800



VG7000



VG9000



VG8000N



VG8000H



VG8300N



VG1000 Threaded



VG1000 Flanged



VFB Butterfly Valves

## Pressure Independent Valves



VP1000



VPMA







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# Actuators



# VA-7080

## Thermal Linear Actuators

The VA-7080 Terminal Unit Valve Actuators series provide ON/OFF and DAT control in HVAC application.

The compact design of these actuators make them suitable for installations in confined spaces, such as fan-coil applications.

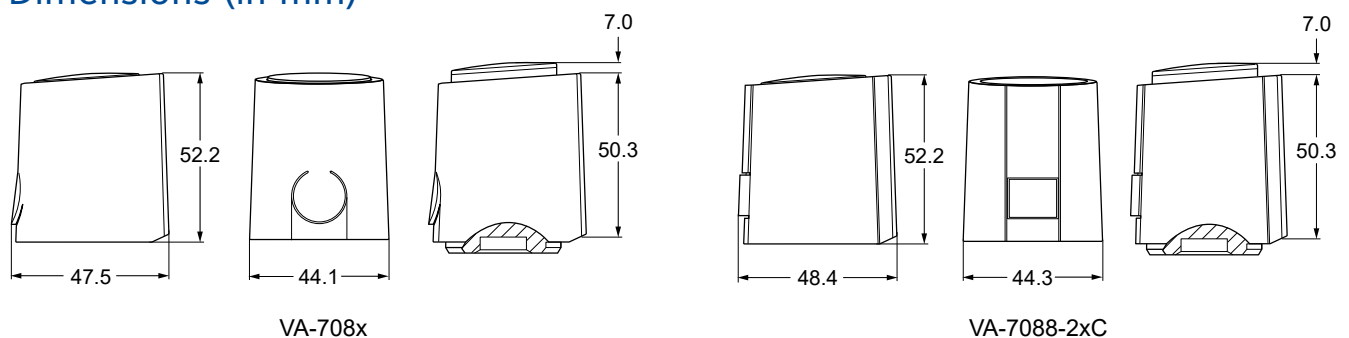
The VA-7080 series actuator is designed for field mounting onto VG3000 and VP1000 terminal unit valves.



### Features

- 24 VAC/DC and 230 VAC power supply
- Power consumption: 1W
- Force: 100 N
- Stroke: 5.0 mm
- ON/OFF or DAT controls
- Threaded ring nuts M28x1,5 and M30x1,5
- NC version (stem retracts when energized)
- NO version (stem extends when energized)
- Factory mounted cable 1.5 m
- Models with auxiliary switch
- IP54 Enclosure protection

### Dimensions (in mm)





# VA-7080

## Thermal Linear Actuators

### Ordering information

Codes	Supply voltage	Factory setting	Mounting thread	Auxiliary switches	Power Start-up		
VA-7081-21	24 VAC/DC	Normally closed (stem retracts when energized) 1.5 m cable length	M28x1.5	---	<300 mA during max 2 min.		
VA-7088-21			M30x1.5				
VA-7081-23	230 VAC		M28x1.5		■	<550 mA during 100 ms. max	
VA-7088-23			M30x1.5				
VA-7088-21C	24 VAC/DC		M30x1.5	---		<300 mA during max 2 min.	
VA-7088-23C	230 VAC						<550 mA during 100 ms. max
VA-7080-21	24 VAC/DC		Normally open (stem extends when energized) 1.5 m cable length		M28x1.5	---	<300 mA during max 2 min.
VA-7087-21					M30x1.5		
VA-7080-23	230 VAC	M28x1.5		---	<550 mA during 100 ms. max		
VA-7087-23		M30x1.5					



# VA-7080

Thermal Linear Actuators

## Ordering information

### Accessories (order separately)

Codes	Description
VA50	Adapter for VG6000
VA64	Adapter for VP1000

### Spare parts

Codes	Description
VA80	Standard adapter M30 x 1.5 for VG3000 and V5000, included in the product package
VA17	Standard adapter M28 x 1.5 for VG5000 and VG4000, included in the product package

## Adapter selection guide for Johnson Controls Valves

### Included in the actuator packaging

Valve	Actuator	Adapter
VG3000	VA-7087-2x	VA80
	VA-7088-2x	
V5000	VA-7087-2x	
	VA-7088-2x	
VG5000	VA-7080-2x	VA17
	VA-7081-2x	
VG4000	VA-7080-2x	
	VA-7081-2x	

### To be ordered separately

Valve	Actuator	Adapter
VG6000	VA-7087-2x	VA50
	VA-7088-2x	VA50
VP1000 (DN15...DN20)	VA-7080-2x	VA64
	VA-7081-2x	VA64





# VA-7480

## Electric Linear Actuators

The VA-748x series provides Floating and Proportional controls, with position feedback and fail safe position. The compact design of this actuator makes it suitable for installation in confined spaces, such as fan coil, chilled ceiling, manifolds, etc.

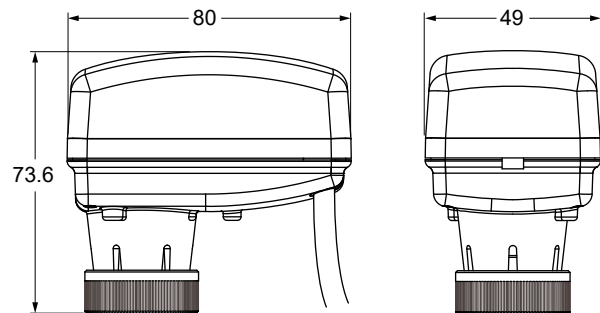
The VA-748x actuators can be mounted onto VG3000 and VP1000 terminal unit valves, but, due to its adaptive stroke design, it can be installed over most of the terminal unit valves on the market.

### Features

- 24 VAC/DC and 230 VAC power supply
- Floating and Proportional control
- Threaded nut M28x1.5 and M30x1.5
- Auto stroke detection
- Configurable stroke
- Configurable to direct and reverse action
- Configurable analog inputs
- Feedback Control
- Fail-Safe
- IP54 Enclosure protection for 24 V models and IP43 for 230 V models



### Dimensions (in mm)



# VA-7480

Electric Linear Actuators

## Ordering information

### Floating Control Type

Codes	Power supply	Running time (s/mm)	Nominal force (N)	Cable length (m)	Mounting thread nut	Special Configuration
VA-7480-0011	24 VAC	13	120	1.5	M28x1.5	---
VA-7480-0311				3		UL Listed
VA-7481-0011		8		1.5	M30x1,5	---
VA-7480-0001		13				
VA-7481-0001		8				
VA-7480-4001						
VA-7480-4003	230 VAC	13	120	1.5	M28x1.5	
VA-7480-0013						
VA-7481-0013		13		M30x1,5		
VA-7480-0003		8				
VA-7481-0003						
VA-7481-4003						

**Note**

Models available with special cable length and reverse action factory set. (Please refer to the Product Bulletin)





# VA-7480

Electric Linear Actuators

## Ordering information

### Proportional Control Type

Power supply: 24 VAC/DC - Running time 8 s/mm

Codes	Nominal force (N)	Factory stroke configuration	Cable length (m)	Mounting thread nut	Special Configuration	Feedback	Fail Safe	
VA-7482-1001	120	3.2 mm	1.5	M30x1,5	---	---		
VA-7482-2001		4.3 mm						
VA-7482-3001		6.0 mm						
VA-7482-1001-RA		3.2 mm	3		Reverse action			
VA-7482-1301-RA		3.2 mm						
VA-7482-2001-RA		4.3 mm	1.5		M28x1.5			---
VA-7482-0011		---	3	UL Listed				
VA-7482-0311		---						
VA-7482-0312		2.5 mm	1.5	M30x1,5	---			---
VA-7482-5001		5.0 mm						
VA-7482-6001		5.5 mm						
VA-7482-7001		---	2 (Halogen Free)		M30x1,5			
VA-7482-8201	---							
VA-7482-9201	---							
VA-7482-8201-RA	1.5 CMP	Auto stroke detection	Reverse action and UL Listed					
VA-7482-9201-RA	---							
VA-7482-8002-RA	---							
VA-7482-9002-RA	2 (Halogen Free)	1.5 (Halogen Free)	M30x1,5	Reverse action	■			
VA-7483-8201	---							
VA-7483-9201	---							
VA-7483-8201-RA	1.5 (Halogen Free)	1.5 (Halogen Free)		Reverse action	■			
VA-7483-9201-RA	---							
VA-7484-8001	---							
VA-7484-9001	---	1.5 (Halogen Free)	Reverse action	■				
VA-7484-8001-RA	---							
VA-7484-9001-RA	---	---	---	---				

Note

Models available with special cable length and reverse action factory set. (Please refer to the Product Bulletin)





# Smart Flow Control Series

## Smart Terminal Units and Room Controls

The Smart Flow Control Series combining a V6W0000 Six-Way Ball Valve with a smart programmable digital actuator (VMA) is the most efficient way to control technology advanced applications.

The Smart Flow Control Series delivers flow control performance and greater flexibility through sensor connection and extensive capabilities. Room control can be easily integrated into the VMA by connecting a NS8000 Network Sensor.



### Features

- Nominal voltage 24 VAC
- BACnet® MS/TP protocol communication
- Electronic pressure independent solution - Vortex Trail Flow Sensor fully integrated
- VMA is used in combination with a NS8000 Series Room Sensor to provide an all in one full-control user experience
- Capability for measuring and displaying zone temperature, occupancy detection, duct temperature, zone humidity and dewpoint, determination, carbon dioxide (CO<sub>2</sub>) level, setpoint adjustments, fan speed control or discharge air temperatures.

### Ordering information

Codes	DN	Connection	Description
SFC1656-V6W0-0	15	1/2" female BSPP	Smart Flow Control Kit (VMA BACnet MS/TP, six-way valve, flow sensor, cable)
SFC1656-V6W1-0		3/4" male flat ends	





# VA9905

## Electric 6 Way Ball Valve Actuator

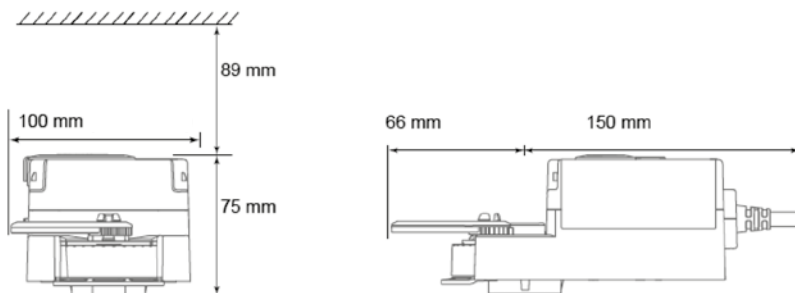
The VA9905 Series Electric Non-Spring Return Actuator is a direct-mount actuator for VG1600 Series 270° Six-Way Ball Valves. It provides proportional control.

### Features

- 24 VAC/DC power supply
- 5Nm running torque
- 60 seconds of rotation time for 90° travel
- Dual 0...10V Analog Input (one for cooling / one for heating)
- Fool-proof mounting system ensures no mistake in installation
- Pointer/handle system to manually shut off the valve for commissioning or maintenance
- Compatible and direct mount with VG1600 Series 270° Six-Way Ball Valves
- IP54 Enclosure protection



### Dimensions (in mm)



### Ordering information

Codes	Control type	Power supply	Running rate	Input signal	Enclosure
VA9905-KGA-1	Proportional	24 VAC/DC	1,5°/sec	2x 0(2) to 10 V DC or 0(4) to 20 mA with field furnished 500 ohm 1/4 W resistor	IP54





# VA-7700

## 500N Electric Valve Actuators

The VA-7700 series provides floating and proportional control. It develops a nominal force of 500N and can be mounted onto VG7000 and VGS800 threaded valves as well as VG9000 flanged valves.

### Features

- 24 VAC and 230 VAC power supply
- Floating and proportional control
- Nominal force: 500 N
- Stroke: 20 mm
- Full stroke time: 190 s
- Manual override
- LED operating status display
- Self calibrating
- IP54 Enclosure protection

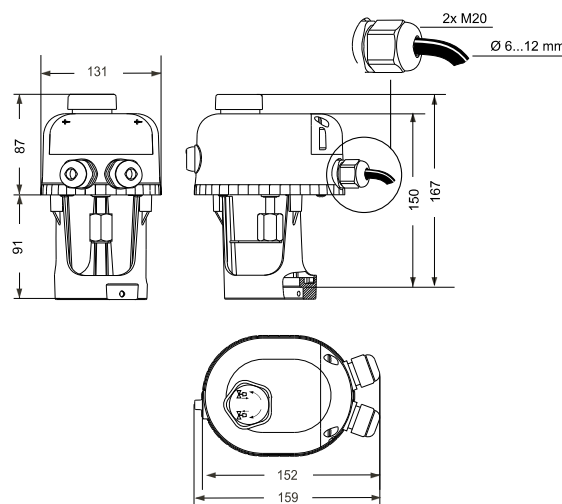


## Ordering information

### Mounting onto VG7000 Series Valves

Codes	Supply voltage (50/60Hz)	Action control	Manual override	Power consumption
VA-7700-1001	24 VAC	Floating	---	2.4 VA
VA-7700-1003	230 VAC			
VA-7740-1001	24 VAC		■	
VA-7740-1003	230 VAC			
VA-7706-1001	24 VAC	Proportional	---	4.4 VA
VA-7746-1001			■	

### Dimensions (in mm)



### Mounting onto VGS8000 and VG9000 Series Valves

Codes	Supply voltage (50/60 Hz)	Action control	Manual override	Power consumption
VA-7700-8201	24 VAC	Floating	---	2.4 VA
VA-7700-8203	230 VAC			
VA-7740-8201	24 VAC		■	
VA-7740-8203	230 VAC			
VA-7706-8201	24 VAC	Proportional	---	4.4 VA
VA-7746-8201			■	







# VA7810

## 1000N Electric Valve Actuators

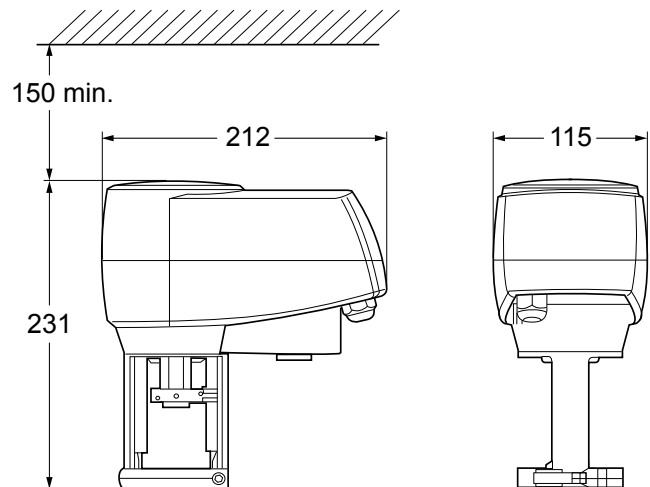
The VA7810 series provides on/off, floating and proportional control. It develops a nominal force of 1000N and can be mounted onto VG7000 and VGS800 threaded valves as well as VG8000 and VG9000 flanged valves.

### Features

- 24 VAC and 230 VAC power supply
- Proportional Actuators are self calibrating
- On-Off, floating and proportional control
- Nominal force: 1000 N
- Stroke: 25 mm
- Force controlled motor shut-off
- Manual override as standard
- Delivered with fitted 1.5 m cable and wire terminals
- Status LED
- Models with optional aux. switches or 2 kΩ feedback potentiometer
- Control-Signal failure - stem to pre-determined position
- Stroke position indicator
- IP54 Enclosure protection



### Dimensions (in mm)



# VA7810

1000N Electric Valve Actuators

## Ordering information

### Mounting onto VG7000 Threaded Valves

Codes	Supply voltage (50/60 Hz)	Action Control	Full stroke time (s)	Power consumption	Accessories factory mounted
VA7810-ADA-11	230 VAC	ON/OFF or Floating	150	8 VA	---
VA7810-ADC-11					2 aux switches
VA7810-AGA-11	24 VAC	ON/OFF or Floating	150	3 VA	---
VA7810-AGC-11					2 aux switches
VA7810-GGA-11		ON/OFF, Floating or Proportional	150 (selectable 75)	6 VA	---
VA7810-GGC-11					2 aux switches

### Mounting onto VGS800 Threaded Valves, VG8000 and VG9000 Flanged Valves

Codes	Supply voltage (50/60 Hz)	Action Control	Full stroke time (s)	Power consumption	Accessories factory mounted
VA7810-ADA-12	230 VAC	ON/OFF or Floating	150	8 VA	---
VA7810-ADC-12					2 aux switches
VA7810-AGA-12	24 VAC	ON/OFF or Floating	150	3 VA	---
VA7810-AGC-12					2 aux switches
VA7810-GGA-12		ON/OFF, Floating or Proportional	150 (selectable 75)	6 VA	---
VA7810-GGC-12					2 aux switches





# VA1125

## 2500N Electric Valve Actuators

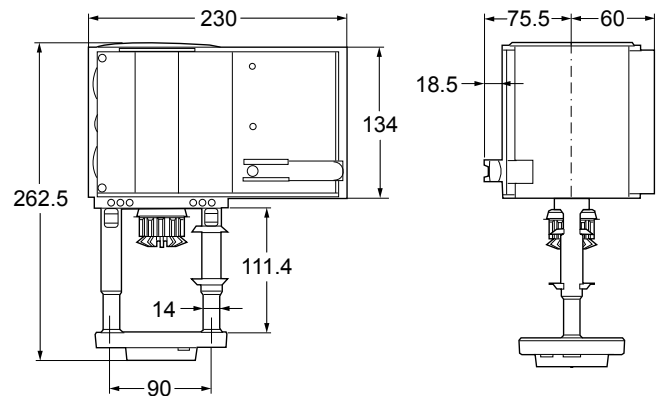
The VA1125 series provides floating and proportional control. It develops a nominal force of 2500N and can be mounted onto VG8000, VG8300 and VG9000 flanged valves.

### Features

- 24 VAC power supply  
230 VAC with additional module
- Floating and Proportional control
- Nominal stroke: 49 mm
- Manual override
- Automatic stem coupling
- Actuator fixed to valve with one ring nut
- Self adjusting, automatic stroke adjustment, calibrated pressure control at the end positions
- 2 auxiliary switches, feedback potentiometer and split range unit available
- Selectable characteristic curve
- Selectable running time
- IP66 Enclosure protection



Dimensions (in mm)



### Ordering information

Codes	Description
VA1125-GGA-1	24 VAC, 2500 N, Non-spring Return, Power Consumption 20,5 W

### Accessories Modules for On Site Installation

Codes	Description
VA1000-M230N	230 VAC module
VA1000-P2	2 KΩ feedback potentiometer
VA1000-S2	2 SPDT auxiliary switches
VA1000-EP	Extension kit for applications with temperatures greater than 140 °C up to 200 °C





# FA-3000

## 6000N Electric Valve Actuators

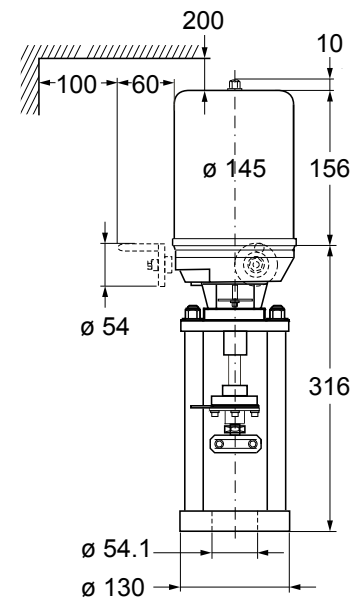
The FA-3000 series provides floating and proportional control. It develops a nominal force of 6000N and can be mounted onto VG8000 flanged valves.

### Features

- 24 VAC and 230 VAC power supply
- Floating and Proportional control
- Nominal force: 6000 N
- Stroke: 42 mm (max 45)
- Full stroke time: 150 s
- Manual override
- Special clamp coupler
- Uses synchronous motor with calibrated pressure limit switches
- IP65 Enclosure protection



### Dimensions (in mm)



### Ordering information

Codes	Supply voltage (50/60 Hz)	Action control	Power consumption	Accessories factory mounted
FA-3300-7416	24 VAC	Floating	37 VA	---
FA-3303-7416				2 aux switches and 2 KW pot
FA-3341-7416		Proportional	42 VA	2 aux switches
FA-3300-7411	230 VAC	Floating	37 VA	---





# RA-3000

## 1800/3000N Electric Valve Actuators

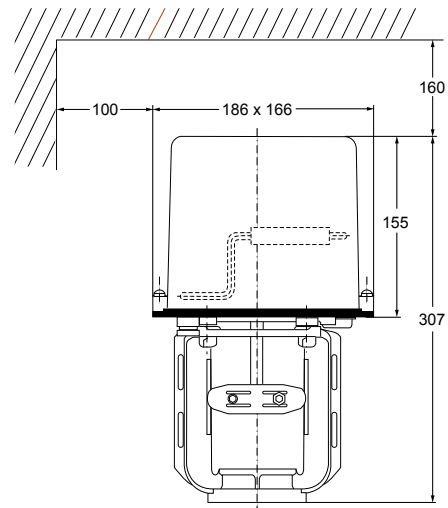
The RA-3000 series provides floating and proportional control with built-in positioner. It develops nominal forces of 1800N and 3000N. It can be mounted onto VG8000 and VG9000 flanged valves.

### Features

- 24 VAC and 230 VAC power supply
- Floating and Proportional control
- Nominal force: 1800N and 3000N
- Special clamp coupler quick-fit systems
- Positioner with adjustable starting point, span, and direct/reverse action
- Active 0...10 VDC position feedback on proportional models
- Optional auxiliary switches and feedback potentiometer available
- Optional hand crank
- IP54 Enclosure protection



### Dimensions (in mm)



# RA-3000

1800/3000N Electric Valve Actuators

## Ordering information

### For Floating Control

Codes	Hand Crank	Force (N)	Supply Voltage	Nominal Stroke (mm)
RA-3000-7226	---	1800	24 VAC (50/60 Hz)	25
RA-3100-7226	■			
RA-3000-7227	---		230 VAC (50/60 Hz)	
RA-3100-7227	■			
RA-3000-7326	---	3000	24 VAC (50 Hz)	42
RA-3100-7326	■			
RA-3000-7327	---		230 VAC (50 Hz)	
RA-3100-7327	■			

### For Floating Control, with 2 Auxiliary Switches and 2 kOhm Feedback Potentiometer

Codes	Hand Crank	Force (N)	Supply Voltage	Nominal Stroke (mm)
RA-3003-7226	---	1800	24 VAC (50/60 Hz)	25
RA-3103-7226	■			
RA-3003-7227	---		230 VAC (50/60 Hz)	
RA-3103-7227	■			
RA-3003-7325	---	3000	24 VAC (60 Hz)	42
RA-3103-7325	■			
RA-3003-7326	---		24 VAC (50 Hz)	
RA-3103-7326	■			
RA-3003-7327	---		230 VAC (50 Hz)	
RA-3103-7327	■			

### For Proportional Control with Built-in Positioner 0...10 VDC and 2 Auxiliary Switches

Codes	Hand Crank	Force (N)	Supply Voltage	Nominal Stroke (mm)
RA-3041-7226	---	1800 N	24 VAC (50/60 Hz)	25
RA-3141-7226	■			
RA-3041-7325	---	3000 N	24 VAC (60 Hz)	42
RA-3141-7325	■			
RA-3041-7326	---		24 VAC (50 Hz)	
RA-3141-7326	■			





# VA9300

## Electric Ball Valve Actuators

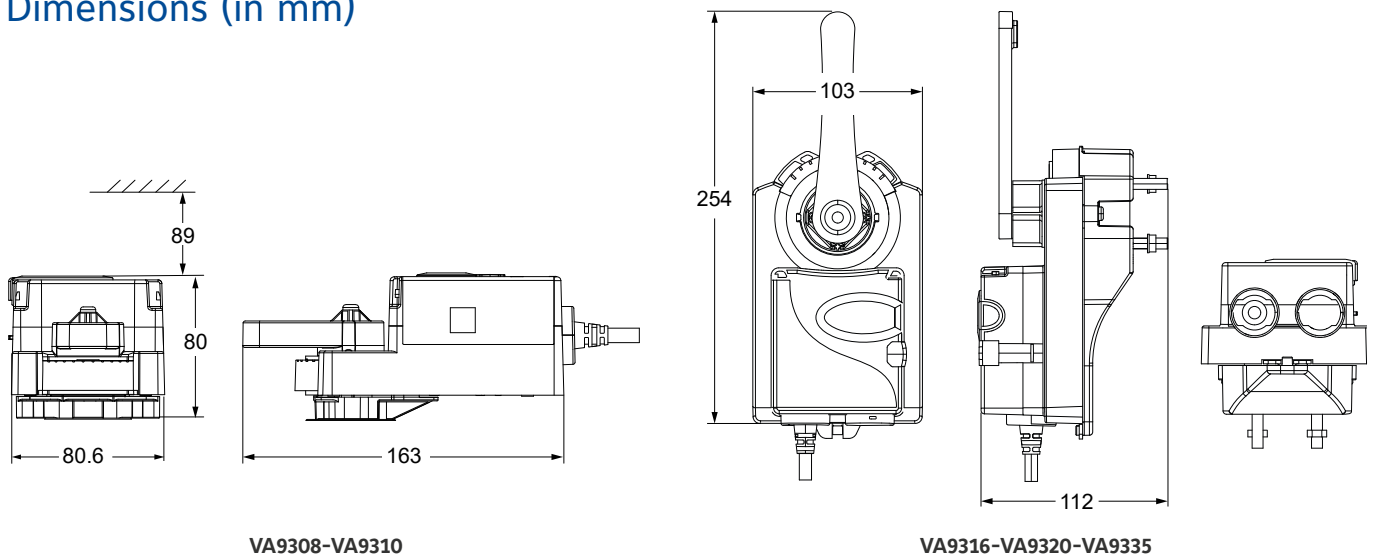
The VA9300 non spring return actuator series provides on/off, floating and proportional control. It has been developed to be mounted onto ball valves from the VG1000 series (DN15 to DN150).

### Features

- 24 VAC/DC and 230 VAC power supply
- Automatic models with signal input detection model: On/Off, Floating and Proportional
- High speed actuator models
- Optional auxiliary switch & potentiometer feedback
- Direct-Coupled Design
- Electronic stall detection
- Microprocessor-controlled Brushless DC Motor
- IP54 Enclosure protection



### Dimensions (in mm)



# VA9300

## Electric Ball Valve Actuators

### Ordering information

Codes	Torque (Nm)	Running Time (s)	Control Signals	Supply Voltage (50/60 Hz)
VA9308-AGA-1Z	8	8	ON/OFF and Floating	24 VAC/DC
VA9308-AUA-1Z				100 to 240 VAC
VA9310-AUA-1	10	35	ON/OFF and Floating	100 to 240 VAC
VA9310-GUA-1			Proportional	
VA9310-HGA-1			ON/OFF, Floating and Proportional	
VA9316-AUA-1Z*	16	16	ON/OFF and Floating	100 to 240 VAC
VA9316-AGA-1Z*				24 VAC/DC
VA9320-AUA-1	20	90	ON/OFF and Floating	100 to 240 VAC
VA9320-GUA-1			Proportional	
VA9320-HGA-1			ON/OFF, Floating and Proportional	
VA9335-AUA-1	35	150	ON/OFF and Floating	100 to 240 VAC
VA9335-GUA-1			Proportional	
VA9335-HGA-1			ON/OFF, Floating and Proportional	

Note

\* Excluded from use along with VG1000 Ball Valve Series

### Accessories (order separately)

Codes	Description
M9000-342	IP66/67 weather shield Kit for VG1000 Series Ball application of VA9104, VA9310, VA9203 and VA9208 Series Electric Actuators (quantity 1)
M9000-343	IP66 weather shield kit for M9320 and M9335 Series actuators for applications on VG1000 Series Flanged Ball Valves (DN65 to DN150)
M9000-400	Jackshaft Linkage Adapter Kit (quantity 1)
M9000-561	Thermal Barrier Kit. Extends the VA9104, VA9310, VA9203 and VA9208 Series Electric Non-Spring Return Actuators applications to include low pressure steam (quantity 1).
M9000-606	Position indicator for M9300 Kits (quantity 5)
M9300-1	Auxiliary Switch Kit (one single-pole, double-throw)
M9300-2	Auxiliary Switch Kit (two single-pole, double-throw)
M9300-100	Threaded Conduit Adapters for 12.7 mm (1/2 in.) electrician's fittings (quantity 5)
M9300-140	External Auxiliary Feedback Potentiometer 140k Ohm
M9300-1K	External Auxiliary Feedback Potentiometer 1k Ohm
M9300-2K	External Auxiliary Feedback Potentiometer 2k Ohm
M9300-10K	External Auxiliary Feedback Potentiometer 10k Ohm
M9310-500	Ball Valve Linkage Kit for applying M9310 Series Electric Actuators to VG1000 Series Valves (quantity 1)
M9000-700	Universal ball valve linkage kit for mounting VA9308 and VA9310 actuators to other manufacturers ball valves







# VA9104

## Electric Ball Valve Actuators

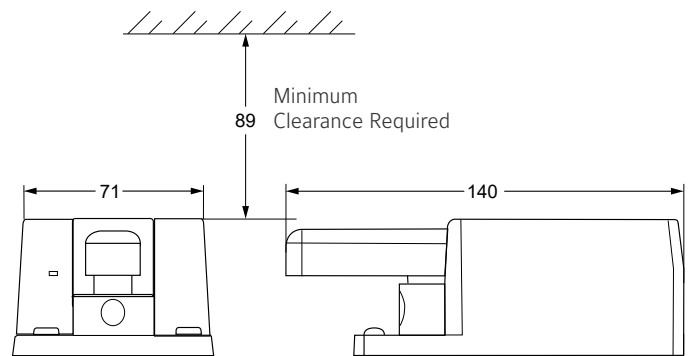
The VA-9104 non spring return actuator series provides on/off, floating and proportional control. It has been developed to be mounted onto ball valves from the VG1000 series (DN15 to DN25).



### Features

- 24 VAC and 230 VAC power supply
- ON/OFF, Floating with timeout and Proportional control
- Running time: 72 s/mm
- Load-independent running time
- Up to 5 Actuators in parallel operation possible
- Manual release button
- 1.2 m PVC cable
- Selectable direction of rotation
- Automatic shut-off at end position
- IP42 Enclosure protection

### Dimensions (in mm)



## Ordering information

Codes	Control signals	Supply voltage (50/60 Hz)
VA9104-AGA-1S	Floating without timeout	24 VAC
VA9104-IGA-1S	ON/OFF and Floating with timeout	
VA9104-IUA-1S		100 to 240 VAC
VA9104-GGA-1S	Proportional 0(2)...10 VDC 0(4)...20 mA	24 VAC



# VAP

## Electric Pressure Independent Valve Actuators

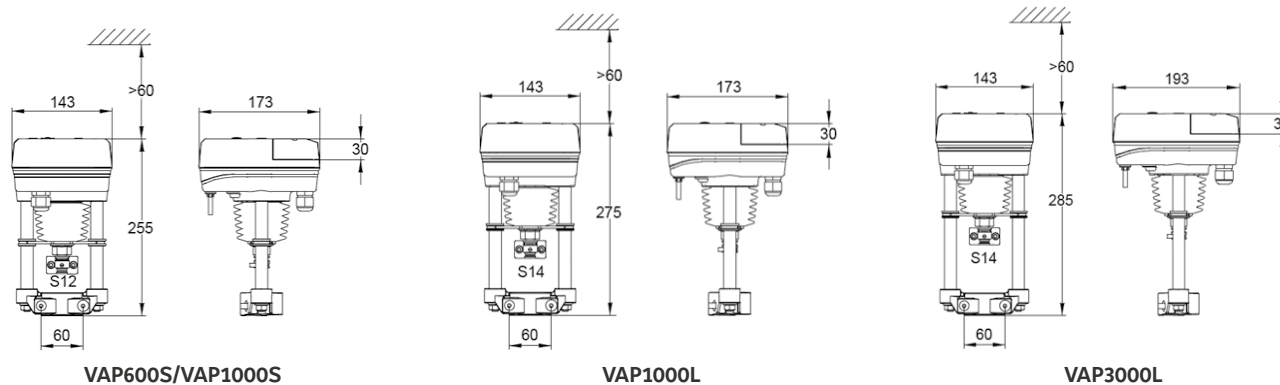
The VAP series provides floating and proportional control. It can be mounted onto VPMA pressure independent valves.

### Features

- 24 VAC/DC power supply
- Proportional and Floating Control
- 0(2)-10 V or 0(4)-20 mA input and feedback selectable
- Manual override and LED status indication
- Running speed adjustable (from 1s/mm to 2s/mm)
- Direct mounting on valves, no linkage required
- Stroke calibration ensure stroke consistency with valve
- IP65 Enclosure protection



### Dimensions (in mm)



### Ordering information

Codes	Force (N)	Supply voltage (50/60 Hz)
VAP600S-24-C	600	24 VAC/DC
VAP1000S-24-C	1000	
VAP1000L-24-C		
VAP3000-24-C	3000	





# VA-9070

## Electric Butterfly Valve Actuators

The VA-9070 series provides on-off, floating and proportional control. It develops nominal torques from 68Nm to 2300Nm. It can be mounted onto VFB butterfly valves.

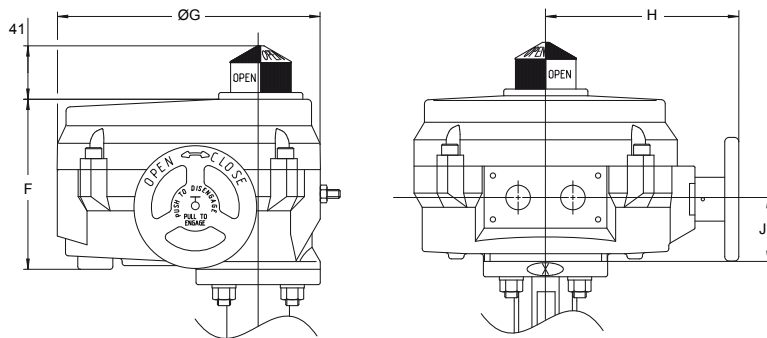
### Features

- 24 VAC and 230 VAC power supply
- On-Off, floating and proportional control
- Bi-directional actuator
- Direct mounting on butterfly valve (no linkage)
- Complete opening and closing from 100% to 0
- Range from 68 Nm to 2030 Nm
- Self-regulating heater as standard
- Two isolated auxiliary switches as standard
- Hand operation with yellow ring feedback display
- IP65 Enclosure protection



### Dimensions (in mm)

#### VA-9072 / VA-9075 / VA-9077 / VA-9078 Actuators

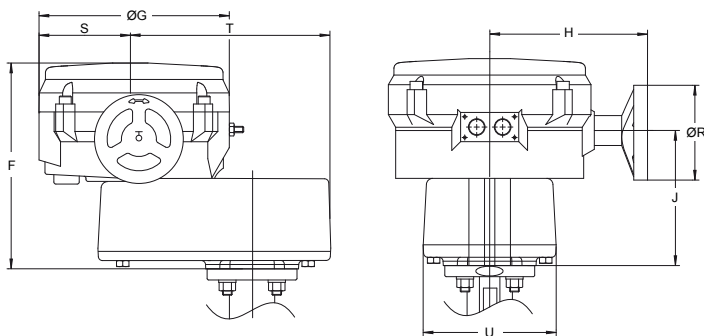


Codes	F	G	H	J	Top Flange
VA-9072	130	191	142	48	F07
VA-9075	165	257	198	64	F07/F12

# VA-9070

## Electric Butterfly Valve Actuators

### VA-907A / VA-907B Actuators



Codes	F	G	H	J	S	T	R	U	Top Flange
VA-9077 / VA-9078	183	307	241	74	---	---	---	---	F12/F16
VA-907A / VA-907B	317	307	241	206	155	323	305	203	F12/F16

## Ordering information

Codes	Torque (Nm)	Power supply	Controls
VA-9072-13	68	24 VAC	Proportional control
VA-9072-14			ON/OFF and Floating control
VA-9072-23		230 VAC	Proportional control
VA-9072-24			ON/OFF and Floating control
VA-9075-13	226	24 VAC	Proportional control
VA-9075-14			ON/OFF and Floating control
VA-9075-23		230 VAC	Proportional control
VA-9075-24			ON/OFF and Floating control
VA-9077-13	565	24 VAC	Proportional control
VA-9077-14			ON/OFF and Floating control
VA-9078-23	735	230 VAC	Proportional control
VA-9078-24			ON/OFF and Floating control
VA-907A-23*	1470		Proportional control
VA-907A-24*			ON/OFF and Floating control
VA-907B-23*	2034		Proportional control
VA-907B-24*			ON/OFF and Floating control

Note

\* Minimum Ordering conditions





# VA7820 – VA7830

## 1000N Electric Valve Actuators

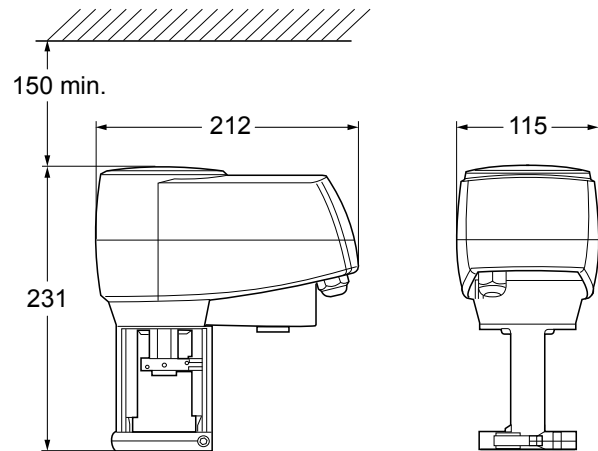
The VA7820 – VA7830 Spring Return Actuator series provide on/off, floating and proportional control. They develop a nominal force of 1000N and can be mounted onto VG7000 and VGS800 threaded valves as well as VG8000 and VG9000 flanged valves.

### Features

- 24 VAC power supply
- Proportional Actuators are self calibrating
- All models can also be used as floating and ON/OFF actuators
- Force: 1000 N
- Stroke: 7 to 25 mm
- Force controlled motor shut-off
- Manual override as standard
- Delivered with fitted 1.5 m cable and wire terminals
- Status LED
- Control-Signal failure – stem to pre-determined position
- Stroke position indicator
- IP54 Enclosure protection



### Dimensions (in mm)



# VA7820 – VA7830

1000N Electric Valve Actuators

## Ordering information

ON/OFF, Floating or Proportional, IP54, 24 VAC

Codes	Full stroke Time (s)	Power consumption	Spring Return Action	Accessories factory mounted
<b>Actuator with threaded coupler for VG7000 valves</b>				
VA7820-GGA-11	150 (selectable 75)	11 VA	Actuator stem retracts	---
VA7820-GGC-11				2 aux switches
VA7830-GGA-11			Actuator stem extend	---
VA7830-GGC-11				2 aux switches
<b>Actuator with clamp coupler for VGS800, VG8000 and VG9000</b>				
VA7820-GGA-12	150 (selectable 75)	11 VA	Actuator stem retracts	---
VA7820-GGC-12				2 aux switches
VA7830-GGA-12			Actuator stem extend	---
VA7830-GGC-12				2 aux switches





# VA1220 – VA1420

## 2000N Electric Valve Actuators

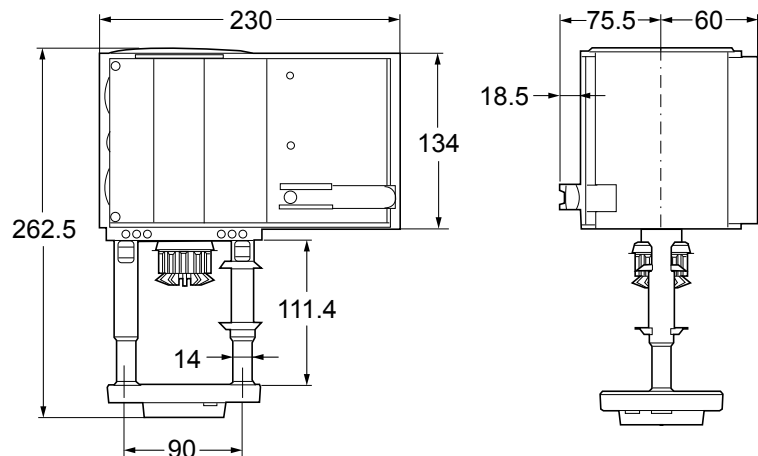
The VA1220 - VA1420 Spring Return Actuator series provide floating and proportional control. They develop a nominal force of 2000N and can be mounted onto VG8000, VG8300 and VG9000 flanged valves.

### Features

- 24 VAC power supply  
230 VAC with additional module
- Floating and Proportional control
- Manual override
- Automatic stem coupling
- Actuator fixed to valve with one ring nut
- Self adjusting, automatic stroke adjustment, calibrated pressure control at the end positions
- 2 auxiliary switches, feedback potentiometer and split range unit available
- Selectable characteristic curve
- Selectable running time
- IP66 Enclosure protection



### Dimensions (in mm)





# VA1220 – VA1420

2000N Electric Valve Actuators

## Ordering information

Codes	Description	Power Consumption	Protection Class	Nominal Stroke (mm)
VA1220-GGA-1	24 VAC, 2000 N, Spring Return retracts	17 VA	IP66	49 mm
VA1420-GGA-1	24 VAC, 2000 N, Spring Return extends			

## Accessories modules for in-situ installation

Codes	Description
VA1000-M230N	230 VAC module
VA1000-P2	2 KΩ feedback potentiometer
VA1000-S2	2 SPDT auxiliary switches
VA1000-EP	Extension kit for applications with temperatures greater than 140 °C up to 200 °C





# VA9203

## 3Nm Rotary Actuators for Ball Valves

The VA9203 Series Electric Spring Return Actuators are direct-mount actuators.

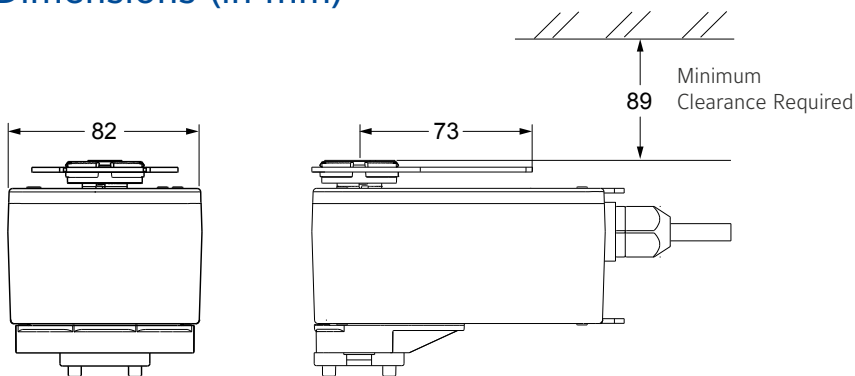
These bidirectional actuators are used to provide accurate positioning on VG1000 Ball Valve Series, DN15 up to DN25.

### Features

- 24 VAC and 230 VAC power supply
- ON/OFF, Floating and Proportional control
- 3 Nm rated torque
- Direct-coupled design
- Reversible mounting
- Electronic stall detection
- Integral cables with colored and numbered conductors
- Override control (proportional models only)
- UL, CE, and C-Tick Compliance
- IP54 Enclosure protection



### Dimensions (in mm)



# VA9203

3Nm Rotary Actuators for Ball Valves

## Ordering information

Codes	Running time (s/mm)		Control signals	Supply voltage (50/60 Hz)	1 Auxiliary Switch	
	Motor	Spring				
VA9203-GGA-1Z	90	12...17	Proportional	24 VAC/DC	---	
VA9203-GGB-1Z					■	
VA9203-AGA-1Z			ON/OFF and Floating		---	
VA9203-AGB-1Z					■	
VA9203-BGA-1	53...71	19...23	ON/OFF		100 to 230 VAC	---
VA9203-BGB-1						■
VA9203-BUA-1			ON/OFF		100 to 230 VAC	---
VA9203-BUB-1						■

## Accessories (order separately)

Codes	Description
M9000-560	Ball valve linkage kit for applying M9203 and M9208 series actuators to VG1000 series valves (quantity 1)
M9000-561	Thermal barrier extends M(VA)9104, M(VA)9203 and M(VA)9208 series electric spring return actuator applications to include low pressure steam (quantity 1)
M9000-342	Weathershield kit for VG1000 series ball valve application of M(VA)9104, M(VA)9203 and M(VA)9208 series electric spring return actuators (quantity 1)
M9000-607	Position indicator for VG1000 series ball valve applications (quantity 5)





# VA9208

## 8Nm Rotary Actuators for Ball Valves

The VA9208 Series Electric Spring Return Actuators are direct-mount actuators.

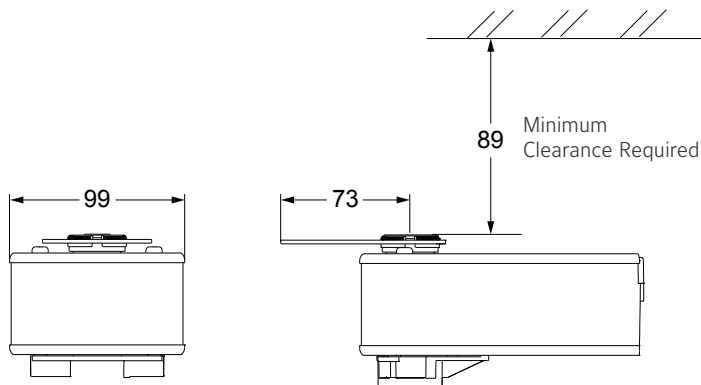
These bidirectional actuators are used to provide accurate positioning on VG1000 Ball Valve Series, DN32 up to DN50.

### Features

- 24 VAC and 230 VAC power supply
- ON/OFF, Floating and Proportional control 8 Nm rated torque
- Mechanical Spring Return System
- Direct-coupled design
- Reversible mounting
- Electronic stall detection
- External mode selection switch (-AGx and -GGx models)
- Integral cables with colored and numbered conductors
- UL, CE, and C-Tick Compliance
- IP54 Enclosure protection



### Dimensions (in mm)



# VA9208

8Nm Rotary Actuators for Ball Valves

## Ordering information

Codes	Running time (s/mm)		Control signals	Supply voltage (50/60 Hz)	2 Auxiliary Switch
	Motor	Spring			
VA9208-GGA-1	150	17...25	Proportional	24 VAC/DC	---
VA9208-GGC-1			■		
VA9208-AGA-1			---		
VA9208-AGC-1			■		
VA9208-BGA-1	53...71	13...26	ON/OFF	230 VAC	---
VA9208-BGC-1					■
VA9208-BDA-1					---
VA9208-BDC-1					■

## Accessories (order separately)

Codes	Description
M9000-560	Ball valve linkage kit for applying M9203 and M9208 series actuators to VG1000 series valves (quantity 1)
M9000-561	Thermal barrier extends M(VA)9104, M(VA)9203 and M(VA)9208 series electric spring return actuator applications to include low pressure steam (quantity 1)
M9000-342	Weathershield kit for VG1000 series ball valve application, IP54
M9000-607	Position Indicator for VG1000 Series ball valve applications (quantity 5)





# M9102-M9104

## 2 & 4 Nm Rotary Actuators for Dampers

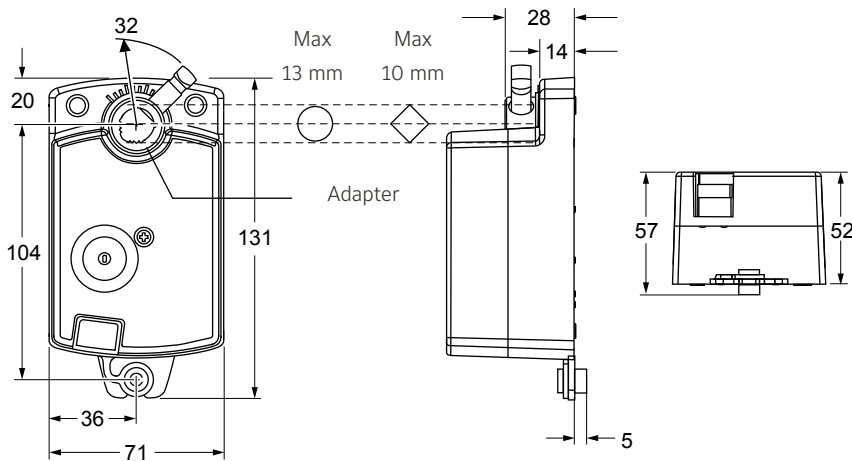
The M9102-M9104 family Electric Damper Actuator Series have been developed to operate small air dampers in Ventilation and Air Conditioning Systems.

### Features

- 24 VAC and 230 VAC power supply
- ON/OFF, Floating and Proportional control
- Load-independent running time
- Up to 5 Actuators in parallel
- Direct mounting on  $\varnothing$  8 to 13 mm round shaft or 8 to 10 mm square shaft
- Selectable direction of rotation
- Manual release button



### Dimensions (in mm)



# M9102-M9104

2 & 4 Nm Rotary Actuators for Dampers

## Ordering information

Codes	Torque (Nm)	Running Time (s/mm)	Control Signals	Supply Voltage (50/60 Hz)	Connection	
M9102-AGA-1S	2	36	Floating without timeout	24 VAC	PVC-cable	
M9102-AGA-5S					Terminal block	
M9102-IGA-1S			ON/OFF and Floating with timeout		PVC-cable	
M9102-IGA-5S					Terminal block	
M9104-AGA-1S	4	72	Floating without timeout		100 to 240 VAC	PVC-cable
M9104-AGA-5S						Terminal block
M9104-IGA-1S			ON/OFF and Floating with timeout			PVC-cable
M9104-IGA-5S						Terminal block
M9104-IUA-5S			Proportional 0...10 VDC	24 VAC	PVC-cable	
M9104-GGA-1S					PVC-cable	
M9104-GGA-5S					Terminal block	







# M9304

## 4Nm Rotary Actuators for Dampers

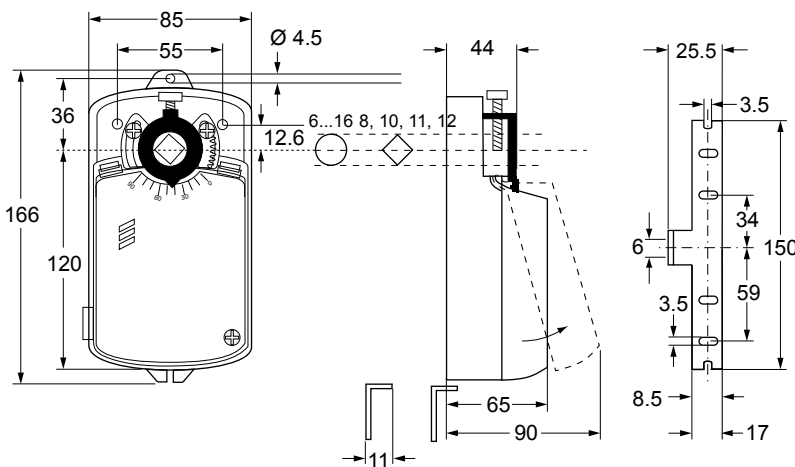
The Silence M9304 Electric Damper Actuator Series have been developed to operate small and medium air dampers in Ventilation and Air Conditioning Systems. The compact design and universal adapter fitted with limitation of rotation angle make this actuator highly versatile.

### Features

- 24 VAC/DC, 48 VDC and 230 VAC power supply
- ON/OFF, Floating and Proportional control
- Torque: 4 Nm
- Running time: 35 s (load independent)
- Up to 5 actuators in parallel operation possible
- Plug-in terminal block connection
- Direct mounting on  $\varnothing$  6 to 16 mm round shaft. Z10DNxx adapter kits for 8, 10 and 12 mm square shaft
- Selectable direction of rotation
- Limitation of rotation angle
- Manual release button
- Automatic shut-off at end position (overload switch)



### Dimensions (in mm)



# M9304

4Nm Rotary Actuators for Dampers

## Ordering information

Codes	Control Signal	2 Adjustable Auxiliary Contacts	Supply Voltage (50/60 Hz)
M9304-AGA-1N	Floating & ON/OFF	---	24 VAC/DC
M9304-AGC-1N		■	
M9304-ADA-1N		---	230 VAC
M9304-ADC-1N		■	
M9304-AKA-1N		---	48 VDC
M9304-AKC-1N		■	
M9304-BDA-1N	ON/OFF	---	230 VAC
M9304-BDC-1N		■	
M9304-GGA-1N	Proportional	---	24 VAC/DC
M9304-GKA-1N		---	48 VAC/DC





# M9300

## 8 to 35 Nm Rotary Actuators for Dampers

The M9300 Series Electric Non-Spring Return Actuators provide control of dampers in HVAC Systems with 8, 10, 16, 20 and 35 Nm rated torque.

These bidirectional actuators do not require a damper linkage and are easily installed on round shafts or square shafts.

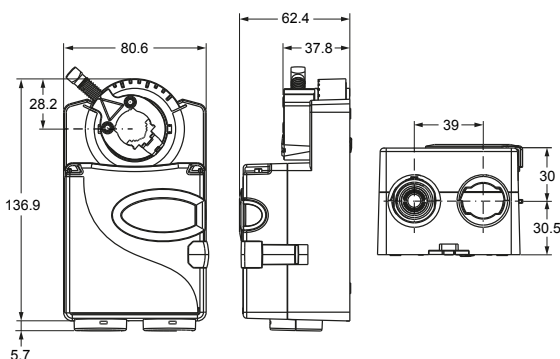
An optional line voltage auxiliary switch kits can be field installed to indicate an end-stop position or perform switching functions within the selected rotation range.

### Features

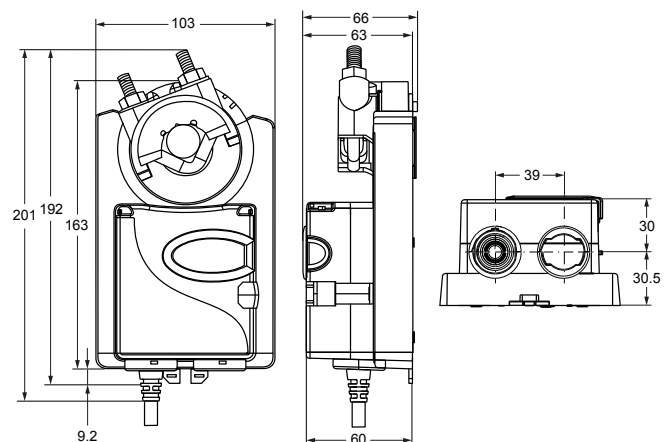
- 24 VAC and 240 VAC power supply
- Automatic signal input detection model: ON/OFF, Floating and Proportional
- High speed actuator models
- Optional auxiliary switch and potentiometer feedback
- Torques: 10, 20 and 35 Nm. 8 and 16 Nm (high speed versions)
- Self-calibrating to adjust stroke
- Electronic stall detection
- Integral cables
- IP54 Enclosure protection



### Dimensions (in mm)



M9308-M9310



M9316-M9320-M9335

# M9300

8 to 35 Nm Rotary Actuators for Dampers

## Ordering information

Codes	Torque (Nm)	Running time (s)	Control signals	Supply voltage (50/60 Hz)
M9308-AGA-1Z	8	8	ON/OFF and Floating	24 VAC/DC
M9308-AUA-1Z				100 to 240 VAC
M9310-AUA-1	10	35	ON/OFF and Floating	100 to 240 VAC
M9310-GUA-1			Proportional	
M9310-HGA-1			ON/OFF, Floating and Proportional	24 VAC/DC
M9316-AGA-1Z	16	16	ON/OFF and Floating	24 VAC/DC
M9316-AUA-1Z				100 to 240 VAC
M9320-AUA-1	20	90	ON/OFF and Floating	100 to 240 VAC
M9320-GUA-1			Proportional	
M9320-HGA-1			ON/OFF, Floating and Proportional	24 VAC/DC
M9335-AUA-1	35	150	ON/OFF and Floating	100 to 240 VAC
M9335-GUA-1			Proportional	
M9335-HGA-1			ON/OFF, Floating and Proportional	24 VAC/DC

## Accessories (order separately)

Codes	Description
M9000-322	IP66 Weathershield Kit for damper application of M9104, M9310, M9203 and M9208 Series Electric Actuators (quantity 1)
M9000-400	Jackshaft Linkage Adapter Kit (quantity 1)
M9000-604	Anti-Rotation Bracket Kit
M9000-606	Position indicator for M9300 Kits (quantity 5)
M9300-1	Auxiliary Switch Kit (one single-pole, double-throw)
M9300-2	Auxiliary Switch Kit (two single-pole, double-throw)
M9300-100	Threaded Conduit Adapters for 12.7 mm (1/2 in.) electrician's fittings (quantity 5)
M9300-140	External Auxiliary Feedback Potentiometer 140k Ohm
M9000-151	Remote Mounting Kit, with crank arm and damper linkage for M9100 and M9300 Series Actuators
M9300-1K	External Auxiliary Feedback Potentiometer 1k Ohm
M9300-2K	External Auxiliary Feedback Potentiometer 2k Ohm
M9300-10K	External Auxiliary Feedback Potentiometer 10k Ohm
M9310-600	Standard coupler kit for M9310 series: round 9.5 to 19 mm and square 9.5 to 16 mm
M9000-323	IP66 weather shield kit for M9320 and M9335 Series Electric Damper Actuators
M9000-342	IP66/67 Weathershield Kit for VG1000 Series Ball application of VA9104, VA9310, VA9203 and VA9208 Series Electric Actuators (quantity 1)
M9000-343	IP66 weather shield kit for M9320 and M9335 Series actuators for applications on VG1000 Series Flanged Ball Valves (DN65 to DN150)
M9320-500	Ball valve linkage kit for converting M9320 and M9335 Series Electric Damper Actuators into VA9320 and VA9335 Series Electric Valve Actuators
M9320-600	Standard coupler kit for M9316, M9320 and M9335 series: round 19 to 27 mm and square 16 to 19 mm





# M9100

## 8 to 32 Nm Rotary Actuators for Dampers

The M9100 Series Electric Actuators are direct-mount Actuators.

These bidirectional actuators do not require a damper linkage, and are easily installed on round shafts or square shafts using the standard shaft clamp included with the actuator.

A single M9100 series electric non spring return actuator provides 8, 16, 24 or 32 Nm torque depending on the model.

Two integral line voltage auxiliary switches, available only on the M91xx-xxC models, indicate end stop position or performs switching functions within the selected rotation range.

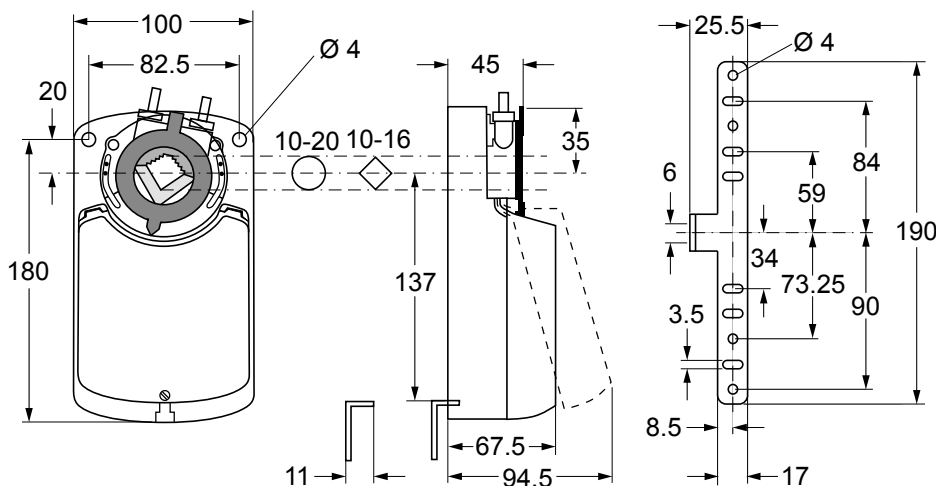
M9100 series actuators provide 90° of rotation. A graduated scale from 0° to 90° and a position indicator provide visual indication of stroke.



### Features

- 24 VAC/DC and 230 VAC power supply
- ON/OFF, Floating and Proportional Control
- Direct mounting on round shaft  $\varnothing$  10 to 20 mm or square shafts 10 to 16 mm (shaft coupler included)
- Torques: 8, 16, 24 and 32 Nm
- Selectable direction of rotation
- Limitation of rotation angle
- Optional integrated auxiliary switches
- IP54 Enclosure protection

### Dimensions (in mm)



# M9100

8 to 32 Nm Rotary Actuators for Dampers

## Ordering information

Codes	Running time (s)	Control signals	2 Auxiliary contacts	Supply voltage (50/60 Hz)	
<b>8 Nm</b>					
M9108-AGA-1N	30	ON/OFF and Floating	---	24 VAC/DC	
M9108-AGC-1N			■		
M9108-ADA-1N			---	100 ... 230 VAC	
M9108-ADC-1N			■		
M9108-GGA-1N		Proportional 0(2)...10 VDC / 0(4)...20 mA	---	24 VAC/DC	
M9108-GGC-1N			■		
M9108-GDA-1N			Proportional 0(2)...10 VDC	---	230 VAC
M9108-GDC-1N				■	
<b>16 Nm</b>					
M9116-AGA-1N	80	ON/OFF and Floating	---	24 VAC/DC	
M9116-AGC-1N			■		
M9116-ADA-1N			---	100 ... 230 VAC	
M9116-ADC-1N			■		
M9116-GGA-1N		Proportional 0(2)...10 VDC / 0(4)...20 mA	---	24 VAC/DC	
M9116-GGC-1N			■		
M9116-GDA-1N			Proportional 0(2)...10 VDC	---	230 VAC
M9116-GDC-1N				■	



# M9100

8 to 32 Nm Rotary Actuators for Dampers

## Ordering information

Codes	Running time(s)	Control signals	2 auxiliary contacts	Supply voltage (50/60 Hz)
24 Nm				
M9124-AGA-1N	125	ON/OFF and Floating	---	24 VAC/DC
M9124-AGC-1N			■	
M9124-ADA-1N			---	100 ... 230 VAC
M9124-ADC-1N			■	
M9124-GGA-1N		Proportional 0(2)...10 VDC 0(4)...20 mA	---	24 VAC/DC
M9124-GGC-1N			■	
M9124-GDA-1N		Proportional 0(2)...10 VDC	---	230 VAC
M9124-GDC-1N			■	
32 Nm				
M9132-AGA-1N	140	ON/OFF and Floating	---	24 VAC/DC
M9132-AGC-1N			■	
M9132-ADA-1N			---	100 ... 230 VAC
M9132-ADC-1N			■	
M9132-GDA-1N		Proportional 0(2)...10 VDC	---	230 VAC
M9132-GDC-1N			■	
M9132-GGA-1N	200	Proportional 0(2)...10 VDC 0(4)...20 mA	---	24 VAC/DC
M9132-GGC-1N			■	







# M9203

## 3Nm Rotary Actuators for Dampers

The M9203 Spring Return Electric Damper Actuator series has been specially developed for the motorized operation of air dampers in Air Conditioning Systems. It provides a 3Nm torque.

When the control signal is applied the actuator drives the damper to the operational position.

After a power failure the stored energy in the spring immediately brings the damper to the safety position.

The compact design and universal adapter fitted with limitation of rotation angle make this actuator highly versatile.

### Features

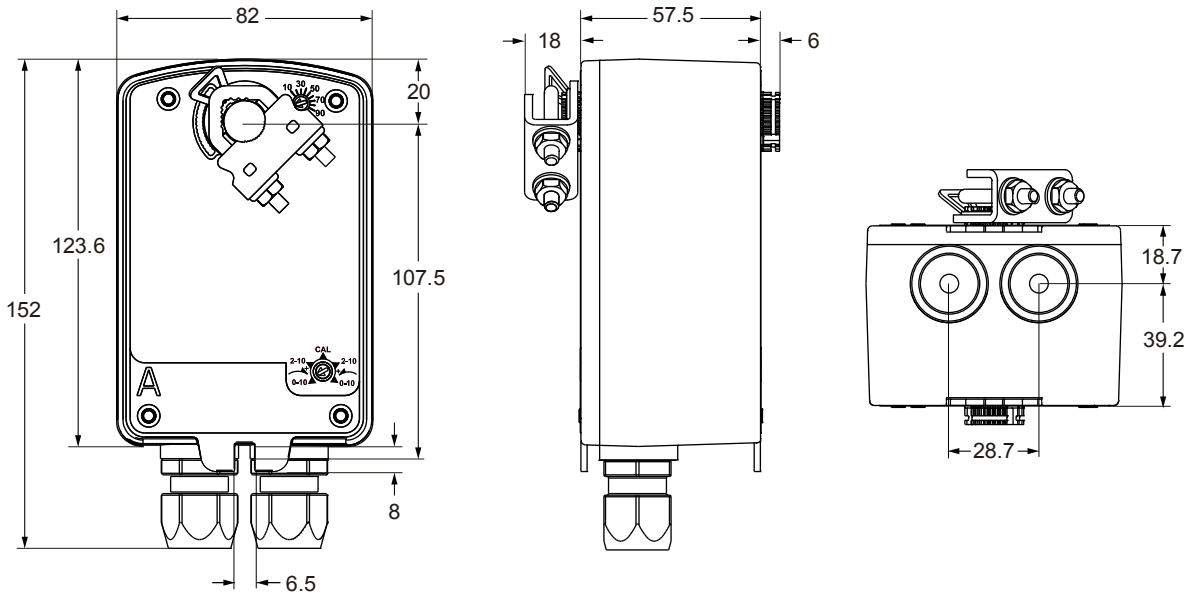
- 24 VAC/DC and 240 VAC power supply
- ON/OFF, Floating and Proportional Control
- Direct mounting on round shaft  $\varnothing$  6 to 12 mm or square shafts 6 to 8 mm.
- Integral cables with coloured and numbered conductors
- Reversible mounting
- Limitation of rotation angle
- Override control (proportional models only)
- Optional auxiliary switch
- IP54 Enclosure protection



# M9203

## 3Nm Rotary Actuators for Dampers

### Dimensions



### Ordering information

Codes	Running time (s/mm)	Control signals	Supply voltage (50/60 Hz)	1 Auxiliary Switch		
M9203-AGA-1	150	ON/OFF and Floating	24 VAC/DC	---		
M9203-AGB-1				■		
M9203-AGA-1Z	90			---		
M9203-AGB-1Z				■		
M9203-BGA-1	60	ON/OFF	100 - 240 VAC	---		
M9203-BGB-1				■		
M9203-BUA-1				---		
M9203-BUB-1				■		
M9203-BUA-1Z	27			---		
M9203-BUB-1Z				■		
M9203-GGA-1	150			Proportional	24 VAC/DC	---
M9203-GGB-1						■
M9203-GGA-1Z	90	---				
M9203-GGB-1Z		■				



# M9203

## 3Nm Rotary Actuators for Dampers

### Accessories (order separately)

Codes	Description
M9000-322	Weathershield kit for damper application of M9203 and M9208 series electric spring return Actuators (quantity 1)
M9000-342	Weathershield kit for VG1000 series ball valve application of M(VA)9104, M(VA)9203 and M(VA)9208 series electric spring return Actuators (quantity 1)
M9000-400	Jackshaft linkage adapter kit (quantity 1)
M9000-560	Ball valve linkage kit for applying M9203 and M9208 series electric Actuators to VG1000 series valves (quantity 1)
M9000-561	Thermal barrier kit for M9000-560 ball valve linkage. Extends M(VA)9104, M(VA)9203 and M(VA)9208 series electric spring return Actuators applications to include low pressure steam (quantity 1)
M9000-604	Replacement anti-rotation bracket Kit for M9203, M9208, M9210 and M9220 series electric spring return Actuators (quantity 1)
M9000-606	Position indicator for damper applications (quantity 5)
M9000-607	Position indicator for VG1000 series ball valve applications (quantity 5)
M9203-100	Remote mounting kit with crankarm kit (quantity 1)
M9203-110	Universal mounting kit without Crankarm kit (quantity 1)
M9203-115	Universal mounting kit with crankarm kit (quantity 1)
M9203-150	Crankarm kit (quantity 1)
M9203-250	Remote mounting kit with crankarm kit and damper linkage for D1300 dampers (quantity 1)
M9203-601	Replacement standard coupler kit (with retainer) for mounting M9203 series electric spring return Actuators (quantity 1)
M9203-602	Replacement retainer for M9203 series electric spring return Actuators (quantity 5)
M9203-603	Adjustable stop kit for M9203 series electric spring return Actuators (quantity 1)





# M9208

## 8Nm Rotary Actuators for Dampers

The M9208 Spring Return Electric Damper Actuator series has been specially developed for the motorized operation of air dampers in Air Conditioning Systems. It provides a 8Nm torque.

When the control signal is applied the actuator drives the damper to the operational position.

After a power failure the stored energy in the spring immediately brings the damper to the safety position.

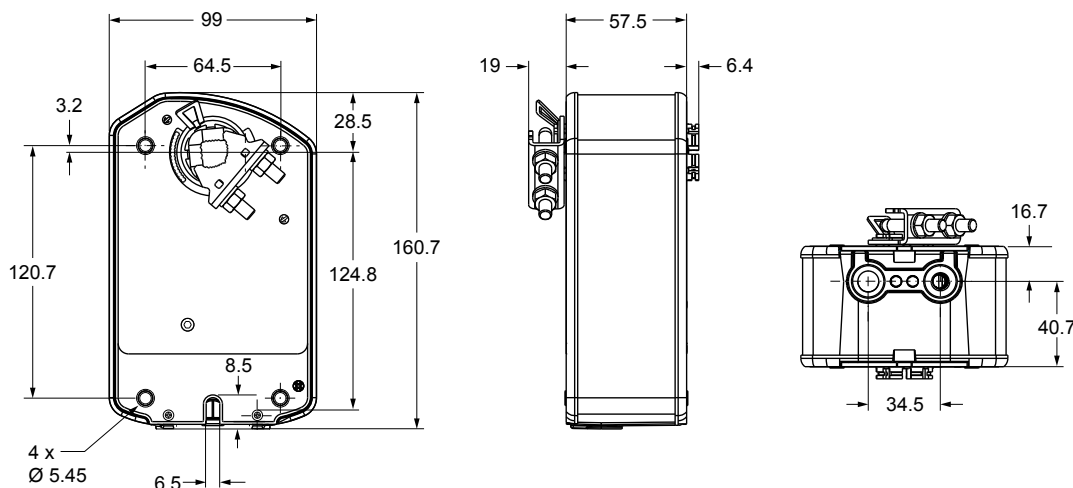
The compact design and universal adapter fitted with limitation of rotation angle make this actuator highly versatile.



### Features

- 24 VAC/DC and 240 VAC power supply
- ON/OFF, Floating and Proportional Control
- Direct mounting on round shaft  $\varnothing$  8 to 16 mm or square shafts 6 to 12 mm. Optional Jackshaft coupler (M9208-600) available for  $\varnothing$  12 to 19 mm round shaft or 10 to 14 mm square shaft
- Integral cables with coloured and numbered conductors
- Limitation of rotation angle
- Manual positioning with crank handle
- Optional integrated auxiliary switches
- IP54 Enclosure protection

### Dimensions (in mm)



# M9208

8Nm Rotary Actuators for Dampers

## Ordering information

Codes	Running time (s/mm)		Control signals	Supply voltage (50/60 Hz)	2 auxiliary contacts
	Motor	Spring			
M9208-AGA-1	150	17...25	ON/OFF or Floating	24 VAC/DC	---
M9208-AGC-1					■
M9208-BGA-1	55...71	13...26	ON/OFF	24 VAC	---
M9208-BGC-1					■
M9208-BDA-1	55...71			230 VAC	---
M9208-BDC-1					■
M9208-GGA-1	150	17...25	Proportional 0...10 VDC / 2...10 VDC	24 VAC/DC	---
M9208-GGC-1					■





# M9220

## 20Nm Rotary Actuators for Dampers

The M9220 Spring Return Electric Damper Actuator series has been specially developed for the motorized operation of air dampers in Air Conditioning Systems. It provides a 20Nm torque.

When the control signal is applied the actuator drives the damper to the operational position.

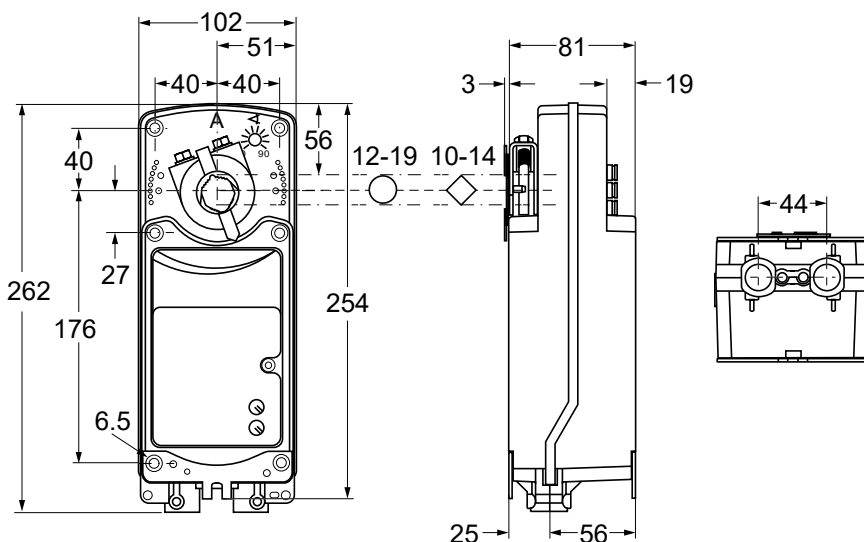
After a power failure the stored energy in the spring immediately brings the damper to the safety position.

### Features

- 24 VAC/DC and 240 VAC power supply
- ON/OFF, Floating and Proportional Control
- Direct mounting on round shaft  $\varnothing$  12 to 19 mm or square shafts 10-12-14 mm. Optional Jackshaft coupler (M9220-600) available for  $\varnothing$  19 to 27 mm round shaft or 16-18-19 mm square shaft
- Integral cables with coloured and numbered conductors
- Limitation of rotation angle
- Manual positioning with crank handle
- Optional integrated auxiliary switches
- IP54 Enclosure protection



### Dimensions (in mm)



# M9220

20Nm Rotary Actuators for Dampers

## Ordering information

Codes	Running time (s/mm)		Control signals	Supply voltage (50/60 Hz)	2 auxiliary contacts
	Motor	Spring			
M9220-AGA-1	150	20	ON/OFF and Floating	24 VAC/DC	---
M9220-AGC-1					■
M9220-BDA-1	25...57	11...15	ON/OFF	230 VAC	---
M9220-BDC-1					■
M9220-BGA-1				24 VAC/DC	---
M9220-BGC-1					■
M9220-GGA-1	150	26	Proportional (2)...10 VDC	24 VAC/DC	---
M9220-GGC-1			■		
M9220-HGA-1			---		
M9220-HGC-1			■		
			Proportional 0(2)...10 VDC with span offset		







# S9208

## 8Nm Spring Return Actuators for Safety Dampers

The S9208 Spring Return Electric Damper Actuator series has been specially developed for the motorized operation of fire protection dampers. It provides a 8Nm torque.

When the control signal is applied the actuator drives the damper to the operational position.

After a power failure the stored energy in the spring immediately brings the damper to the safety position.

S9208 actuators can be supplied with the Advanced Sensor. The Advanced Sensor is a thermoelectric tripping device which contains two thermal fuses: one for duct temperature monitoring, available in 72 °C or 95 °C models; and one for ambient temperature, available in a 72 °C model. It includes a test feature for safety functionality and diagnostics.

When the ambient temperature or duct temperature exceeds the maximum value, the power cuts off irreversibly, allowing the actuator to drive the damper to its safety position with the energy stored in the spring.



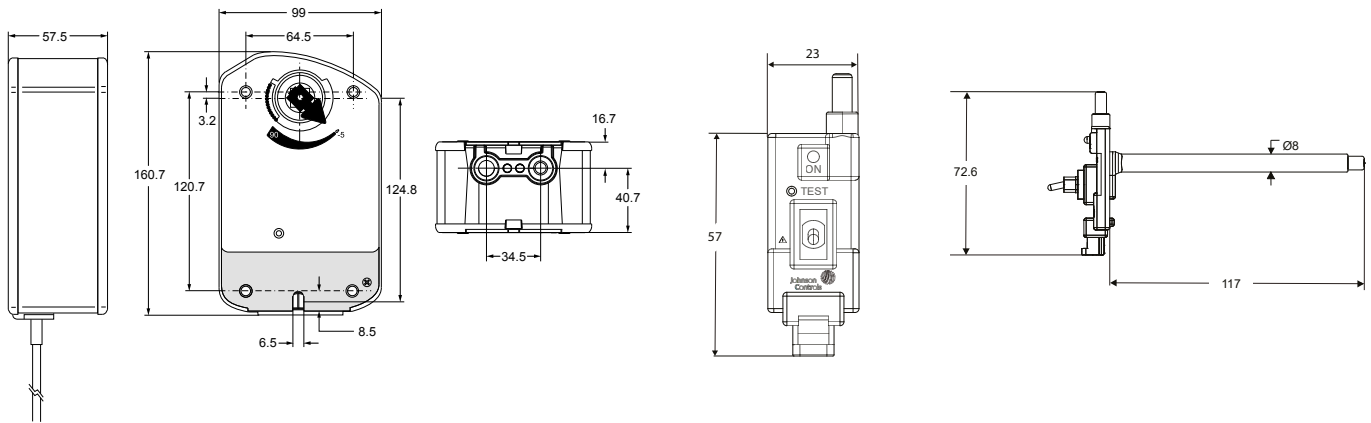
## Features

- 24 VAC/DC and 230 VAC power supply
- ON/OFF Control
- Direct mounting on square shafts 8-10-12 mm
- Integral cables with coloured and numbered conductors
- Advanced sensor with status LED and on-off switch for test of safety functionality
- Basic sensor
- Manual positioning with crank handle
- 2 fixed auxiliary switches (8° and 83°)
- IP54 Enclosure protection

# S9208

8Nm Spring Return Actuators for Safety Dampers

## Dimensions (in mm)



## Ordering information

Codes	Supply voltage (50-60 Hz)	Description
S9208-BGC-33	24 VAC/DC	Without sensor
S9208-BGC-33A		With ambient thermosensor
S9208-BGC-33B		With duct sensor
S9208-BGC-33C		With duct and ambient sensors
S9208-BGC-33E		With advanced sensor, 72 °C duct fuse and 72 °C ambient fuse
S9208-BGC-33F		With advanced sensor, 95 °C duct fuse and 72 °C ambient fuse
S9208-BDC-33	230 VAC	Without sensor
S9208-BDC-33A		With ambient thermosensor
S9208-BDC-33B		With duct sensor
S9208-BDC-33C		With duct and ambient sensors
S9208-BDC-33E		With advanced sensor, 72 °C duct fuse and 72 °C ambient fuse
S9208-BDC-33F		With advanced sensor, 95 °C duct fuse and 72 °C ambient fuse





# S9220

## 20Nm Rotary Actuators for Safety Dampers

The S9220 Fire Electric, Spring Return damper actuator series has been specially developed for the motorized operation of fire protection dampers.

When the control signal is applied the actuator drives the damper to the operational position, while evenly tensioning the integrated spring.

After a power failure the stored energy in the spring immediately brings the damper to the safety position. Manual operation is automatically cancelled when the actuator is in electrical operation.

### Features

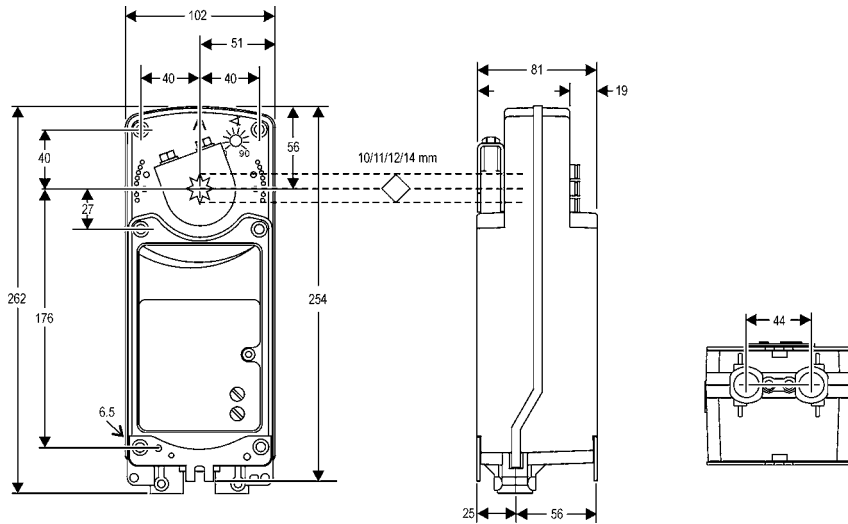
- 24 VAC/DC and 230 VAC power supply
- ON/OFF Control
- 10/11/12/14 mm steel adapter for a square shaft
- Connection with halogen-free cable
- Optional Duct Temperature Sensor available
- Ambient Temperature Sensor
- Low noise level
- Manual positioning with crank handle
- 2 fixed auxiliary switches (5° and 85°)
- IP54 Enclosure protection



# S9220

20Nm Rotary Actuators for Safety Dampers

## Dimensions (in mm)



## Ordering information

Codes	Supply voltage (50-60 Hz)	Coupler	Description
S9220-BDC-33	230 VAC	12 mm	Without sensor
S9220-BDC-33B			With duct sensor
S9220-BDC-33C			With duct and ambient sensors
S9220-BDC-34		14 mm	Without sensor
S9220-BDC-34A			With ambient sensor
S9220-BGC-33		24 VAC/DC	12 mm
S9220-BGC-33C	With duct and ambient sensors		
S9220-BGC-34	14 mm		Without sensor





# PA-2000

## Pneumatic Linear Valve Actuators

The PA-2000 Pneumatic Valve Actuators series is available for ON/OFF control.

The actuator can be combined with VG8000 series valves in accordance with the maximum close-off pressure ratings specified.

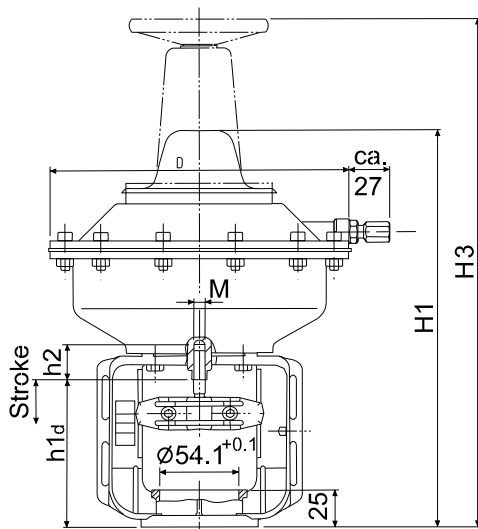
The fail safe position of the PA-2000 can be changed in-situ with a conversion kit.

### Features

- 150 to 600 cm<sup>2</sup> diaphragm
- 1/8" fitting to connect a 6mm copper pipe or a 4x6mm plastic tube
- Direct or Reverse action mode
- Options for manual operation and pilot positioner



### Dimensions (in mm)



# PA-2000

## Pneumatic Linear Valve Actuators

### Ordering information

Codes	Spring range	Spring return action	Diaphragm area	Stroke
PA-2000-3212	20 - 50 kPa	Direct Acting Actuator stem extends	150 cm <sup>2</sup>	13 mm
PA-2000-3217	70 - 100 kPa			
PA-2000-3312	20 - 50 kPa		300 cm <sup>2</sup>	25 mm
PA-2000-3317	70 - 100 kPa			
PA-2000-3617	70 - 100 kPa		600 cm <sup>2</sup>	42 mm
PA-2000-3717	70 - 100 kPa			25 mm
PA-2000-3222	20 - 50 kPa	Reverse Acting Actuator stem extends	150 cm <sup>2</sup>	13 mm
PA-2000-3227	70 - 100 kPa			
PA-2000-3322	20 - 50 kPa		300 cm <sup>2</sup>	25 mm
PA-2000-3327	70 - 100 kPa			
PA-2000-3627	70 - 100 kPa		600 cm <sup>2</sup>	42 mm
PA-2000-3727	70 - 100 kPa			25 mm

**Note:**

Some models are available under request with Handwheel, Positioner (PR10), or valve factory mounted.









Valves



# Valves and Actuators Combinations

## Control Valve Selection

# Valves and Actuators Combinations

	VFB	VG1000	VP1000	VPMA	VG3000	VG7000
2-way	■	■	■	■	■	■
3-way mixing valve		■			■	■
3-way diverting valve		■			■	
3-way + by-pass valve					■	
6-way valves						
Thermal actuator			■		■	
Electric actuator	■	■	■	■	■	■
Pneumatic actuator						■
$K_{VS}$ 0,25						
$K_{VS}$ 0,4						
$K_{VS}$ 0,63						
$K_{VS}$ 1						
$K_{VS}$ 1,6						
$K_{VS}$ 2,5						
$K_{VS}$ 3,3						
$K_{VS}$ 4						
$K_{VS}$ 6,3						
$K_{VS}$ 10						
$K_{VS}$ 16						
$K_{VS}$ 25						
$K_{VS}$ 40						
$K_{VS}$ 52						
$K_{VS}$ 63						
$K_{VS}$ 72						
$K_{VS}$ 100						
$K_{VS}$ 124						
$K_{VS}$ 126						
$K_{VS}$ 150						
$K_{VS}$ 160						
$K_{VS}$ 180						
$K_{VS}$ 243						
$K_{VS}$ 250						
$K_{VS}$ 350						
$K_{VS}$ 397						
$K_{VS}$ 721						
$K_{VS}$ 1083						
$K_{VS}$ 1591						
$K_{VS}$ 2852						
$K_{VS}$ 4670						
$K_{VS}$ 6946						
$K_{VS}$ 9063						
$K_{VS}$ 12044						
$K_{VS}$ 14804						
$K_{VS}$ 19212						



# Valves and Actuators Combinations

## Control Valve Selection

# Valves and Actuators Combinations

	VGS800	VG9000	VG8000	VG8300	V6W0000	VG1600
2-way	■	■	■	■		
3-way mixing valve	■	■	■			
3-way diverting valve			■			
3-way + by-pass valve						
6-way valves					■	■
Thermal actuator						
Electric actuator	■	■	■	■	■	■
Pneumatic actuator			■	■		
$K_{VS}$ 0,25						
$K_{VS}$ 0,4						
$K_{VS}$ 0,63						
$K_{VS}$ 1						
$K_{VS}$ 1,6						
$K_{VS}$ 2,5						
$K_{VS}$ 3,3						
$K_{VS}$ 4						
$K_{VS}$ 6,3						
$K_{VS}$ 10						
$K_{VS}$ 16						
$K_{VS}$ 25						
$K_{VS}$ 40						
$K_{VS}$ 52						
$K_{VS}$ 63						
$K_{VS}$ 72						
$K_{VS}$ 100						
$K_{VS}$ 124						
$K_{VS}$ 126						
$K_{VS}$ 150						
$K_{VS}$ 160						
$K_{VS}$ 180						
$K_{VS}$ 243						
$K_{VS}$ 250						
$K_{VS}$ 350						
$K_{VS}$ 397						
$K_{VS}$ 721						
$K_{VS}$ 1083						
$K_{VS}$ 1591						
$K_{VS}$ 2852						
$K_{VS}$ 4670						
$K_{VS}$ 6946						
$K_{VS}$ 9063						
$K_{VS}$ 12044						
$K_{VS}$ 14804						
$K_{VS}$ 19212						





# VG3000

## DN10...25 Threaded Globe Valves

VG3000 forged brass valve series is primarily designed to regulate the flow of water in response to the demand of a controller in zone and terminal unit applications.

Valves are available in 2 way, 3 way mixing and 3 way with built-in bypass configurations. They are compatible with VA-708x thermal actuator and VA-748x motorized actuator.

### Features

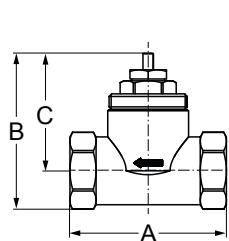
- PN16
- Brass body, stainless steel stem and spring
- Kvs 0.4...6.3
- 2 way Push-Down-To-Open (PDTO, normally closed), 3 way mixing and 3 way with built-in bypass configurations
- Commissioning cap available as accessory (VG3000-CAP)



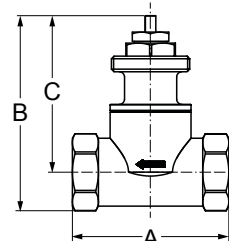
### Dimensions (in mm)

Threaded Female Connections - BSPP and NPT

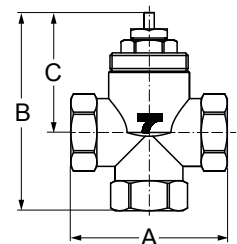
Codes	Dimensions		
	A	B	C
VG3200FS VG3240FS	60	58	45
VG3200KS VG3240KS	65	60	45
VG3200LS VG3240LS	80	64	45.5
VG3201FS VG3241FS	60	73	60
VG3201KS VG3241KS	65	75	60
VG3201LS VG3241LS	80	77	58
VG3300FS VG3340FS	60	76	46
VG3300KS VG3340KS	65	80	46
VG3300LS VG3340LS	80	85.5	46



**VG3200xx  
VG3240xx**



**VG3201xx  
VG3241xx**



**VG3300xx  
VG3340xx**



# VG3000

DN10...25 Threaded Globe Valves

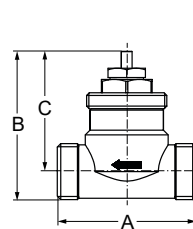
## Dimensions (in mm)

### Threaded male connection - BSPP

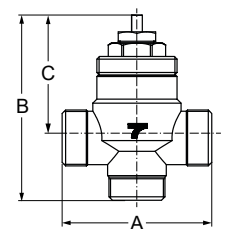
Codes	Dimensions			
	A	B	C	D
VG3210BS	52	55	45	---
VG3210CS				
VG3210DS				
VG3210ES				
VG3210FS	56	58	45.5	---
VG3210JS				
VG3210KS	66	61.5	45.5	---
VG3210LS	80			
VG3211BS	52	70	60	---
VG3211CS				
VG3211DS				
VG3211ES				
VG3211FS	56	73	46	---
VG3211JS				
VG3211KS	66	74	46	---
VG3211LS	80			
VG3310BS	52	66	45	---
VG3310CS				
VG3310DS				
VG3310ES				
VG3310FS	56	67	46	---
VG3310JS		73		
VG3310KS	66	80	46	---
VG3310LS	80	85		
VG3410BS	52	95.5	45	40
VG3410CS				
VG3410DS				
VG3410ES				
VG3410FS	56	96.5	46	40
VG3410JS		98.2		
VG3410KS	66	99.2	46	72
VG3410LS	80	125		

### Compression fitting

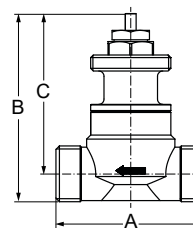
Codes	Dimensions			
	A	B	C	D
VG3290BS	52	55	45	---
VG3290CS				
VG3290DS				
VG3290ES				
VG3290FS	56	95.5	45	40
VG3490BS	52			
VG3490CS				
VG3490DS				
VG3490ES	56	96.5	45	40
VG3490FS				



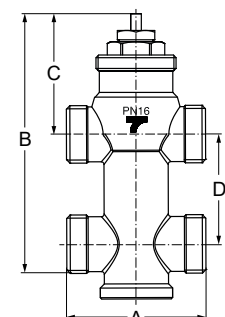
VG3210xx  
VG3290xx



VG3310xx



VG3211xx



VG3410xx  
VG3490xx



# VG3000

DN10...25 Threaded Globe Valves

## Ordering information

### Threaded female connection - BSPP

Codes	Body Type	Body Size	Connections	K <sub>VS</sub> (Cv) Control Port	K <sub>VS</sub> By-pass Port	Max Close Off Pressure kPa
VG3200FS	2-way PDTC (NO)	DN15	G 1/2"	2.5 (2.9)	---	250
VG3200KS		DN20	G 3/4"	4.0 (4.7)	---	200
VG3200LS		DN25	G 1"	6.3 (7.4)	---	100
VG3201FS	2-way PDTC (NO)	DN15	G 1/2"	2.5 (2.9)	---	600
VG3201KS		DN20	G 3/4"	4.0 (4.7)	---	
VG3201LS		DN25	G 1"	6.3 (7.4)	---	
VG3300FS	3-way Mixing	DN15	G 1/2"	2.5 (2.9)	1.6	250
VG3300KS		DN20	G 3/4"	4.0 (4.7)	2.5	200
VG3300LS		DN25	G 1"	6.3 (7.4)	4.0	150

### Threaded female Connection - NPT

Codes	Body Type	Body Size	Connections	K <sub>VS</sub> (Cv) Control Port	K <sub>VS</sub> By-pass Port	Max Close Off Pressure kPa
VG3240FS	2-way PDTC (NO)	DN15	NPT 1/2"	2.5 (2.9)	---	250
VG3240KS		DN20	NPT 3/4"	4.0 (4.7)	---	200
VG3240LS		DN25	NPT 1"	6.3 (7.4)	---	100
VG3241FS	2-way PDTC (NO)	DN15	NPT 1/2"	2.5 (2.9)	---	600
VG3241KS		DN20	NPT 3/4"	4.0 (4.7)	---	
VG3241LS		DN25	NPT 1"	6.3 (7.4)	---	
VG3340FS	3-way Mixing	DN15	NPT 1/2"	2.5 (2.9)	1.6	250
VG3340KS		DN20	NPT 3/4"	4.0 (4.7)	2.5	200
VG3340LS		DN25	NPT 1"	6.3 (7.4)	4.0	150

### Compression fitting

Codes	Body Type	Body Size	Connections	K <sub>VS</sub> (Cv) Control Port	K <sub>VS</sub> By-pass Port	Max Close Off Pressure kPa
VG3290BS	2-way PDTC (NO)	DN10	Compression fitting 1/2"	0.4 (0.43)	---	250
VG3290CS				0.63 (0.70)		
VG3290DS				1.0 (1.12)		
VG3290ES				1.6 (1.9)		
VG3290FS				2.5 (2.9)		
VG3490BS	3-way with Built-in By-pass Mixing	DN10	Compression fitting 1/2"	0.4 (0.43)	0.25 (0.29)	250
VG3490CS				0.63 (0.70)	0.4 (0.43)	
VG3490DS				1.0 (1.12)	0.63 (0.70)	
VG3490ES				1.6 (1.9)	1.0 (1.12)	
VG3490FS				2.5 (2.9)	1.6 (1.9)	



# VG3000

DN10...25 Threaded Globe Valves

## Ordering information

Threaded male connection - BSPP

Codes	Body Type	Body Size	Connections	K <sub>VS</sub> (Cv) Control Port	K <sub>VS</sub> By-pass Port	Max Close Off Pressure kPa	
VG3210BS	2-way PDTC (NO)	DN10	G 1/2"	0.4 (0.43)	---	250	
VG3210CS				0.63 (0.70)			
VG3210DS				1.0 (1.12)			
VG3210ES				1.6 (1.9)			
VG3210FS				2.5 (2.9)			
VG3210JS		DN15	G 3/4"	2.5 (2.9)		200	
VG3210KS				4.0 (4.7)			
VG3210LS				DN20			G 1"
VG3211BS		2-way PDTC (NO)	DN10			G 1/2"	
VG3211CS	0.63 (0.70)						
VG3211DS	1.0 (1.12)						
VG3211ES	1.6 (1.9)						
VG3211FS	2.5 (2.9)						
VG3211JS	DN15		G 3/4"	2.5 (2.9)	200		
VG3211KS				4.0 (4.7)			
VG3211LS				DN20		G 1"	6.3 (7.4)
VG3310BS	3-way Mixing		DN10		G 1/2"		0.4 (0.43)
VG3310CS		0.63 (0.70)		0.25			
VG3310DS		1.0 (1.12)		0.4			
VG3310ES		1.6 (1.9)		0.63			
VG3310FS		2.5 (2.9)		1.0			
VG3310JS		DN15	G 3/4"	2.5 (2.9)	---	200	
VG3310KS				4.0 (4.7)	1.6		
VG3310LS				DN20	G 1"		6.3 (7.4)
VG3410BS		3-way with Built-in By-pass Mixing	DN10			G 1/2"	0.4 (0.43)
VG3410CS	0.63 (0.70)			0.25			
VG3410DS	1.0 (1.12)			0.4			
VG3410ES	1.6 (1.9)			0.63			
VG3410FS	2.5 (2.9)			1.0			
VG3410JS	DN15		G 3/4"	2.5 (2.9)	---	200	
VG3410KS				4.0 (4.7)	1.6		
VG3410LS				DN20	G 1"		6.3 (7.4)
VG3410LS	4.0						

## Accessory (order separately)

Code	Description
VG3000-CAP	Plastic commissioning cap





# V6W0000

## 90° 6-Way Ball Valves

V6W000 brass valve series is primarily designed to regulate the flow of water in response to the demand of a controller in 4 pipes terminal unit applications.

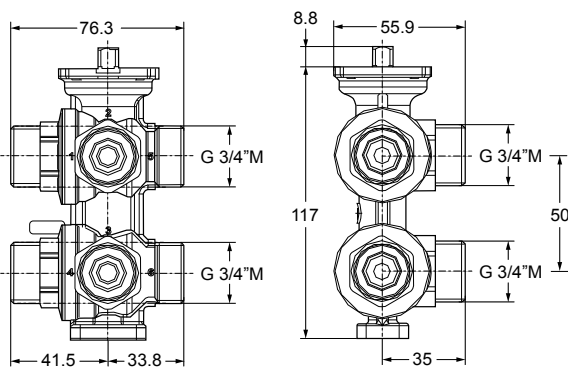
Valves are available in 6 way configuration, carry out heating and cooling in an unique body. They are compatible with VA9104 and VA9310 rotary actuators.

### Features

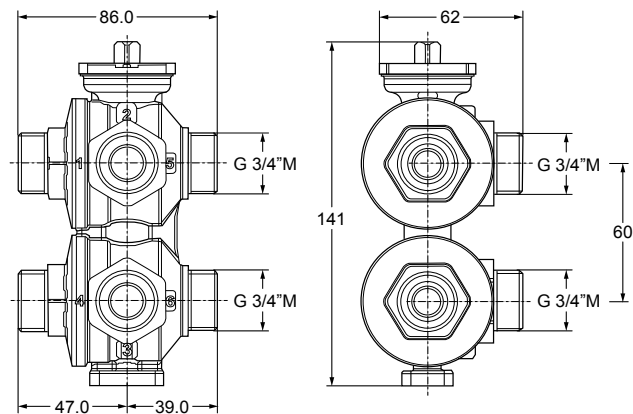
- PN16
- Brass body
- Kvs 0.25...2.1
- No cross-flow between heating and cooling circuits
- Different Kvs combination for an accurate and valuable control
- Compact and cost effective solution
- Changeable disk to select Kvs on site, avoiding any possible ordering mistakes



### Dimensions (in mm)



V6W1AAE



V6W1BCF

### Ordering information

Codes	Body size	Kvs max	Kvs with disk	Connection
V6W1AAE	DN15	1.25	1 - 0.63 - 0.4 - 0.25	3/4" Male Flat ends
V6W1BCF	DN20	2.7	2.1 - 1.6 - 1.0 - 0.7	
V6W0AAE	DN15	1.25	1 - 0.63 - 0.4 - 0.25	1/2" Female BSP





# VG1600

## 270° 6-Way Ball Valves

VG1600 Johnson Controls patented brass valve series is primarily designed to regulate the flow of water in response to the demand of a controller in 4 pipes terminal unit applications.

Valves are available in 270° 6 way configuration, carry out heating and cooling in a unique body. They are compatible with VA9905 rotary actuators.

### Features

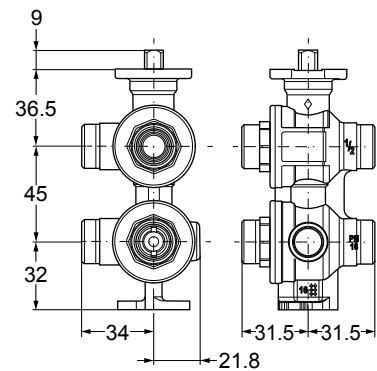
- PN16
- Brass body
- Kvs 0.63...5.0
- Interchangeable flow disks
- Dual stainless steel AISI 304 ball and stem
- Leakage rate A, air-bubble-tight
- Tested for 100,000 full stroke cycles at harsh water conditions with 900 ppm of iron oxide
- Overpressure system to prevent any damage in the terminal unit circuit.



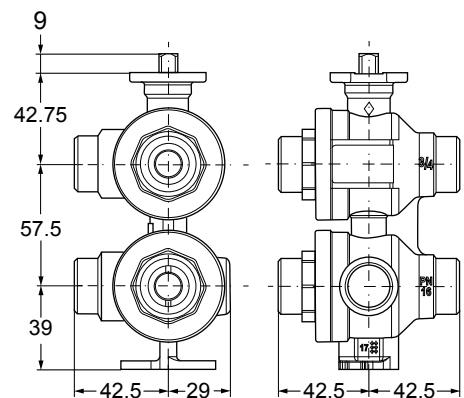
### Ordering information

Codes	Kvs max	Kvs with disk	Connection
VG1611AF	3.3	0.63 / 1 / 1.6 / 2.5	1/2" Male Flat Ends
VG1611BL	6.3	4.0 / 5.0	3/4" Male Flat Ends

### Dimensions (in mm)



VG1611AF



VG1611BL

### Accessory (order separately)

Codes	Description
VG1600-01	Mounting bracket
VG1600-02	Flow disk kit 1/2"
VG1600-03	Insulating shell 1/2"
VG1600-05	Flow disk kit 3/4"
VG1600-06	Insulating shell 3/4"







# VGS800

## DN15...50 Threaded Globe Valves

VGS800 cast bronze valve series is primarily designed to regulate the flow of water in response to the demand of a controller in heating, ventilating, and air conditioning applications.

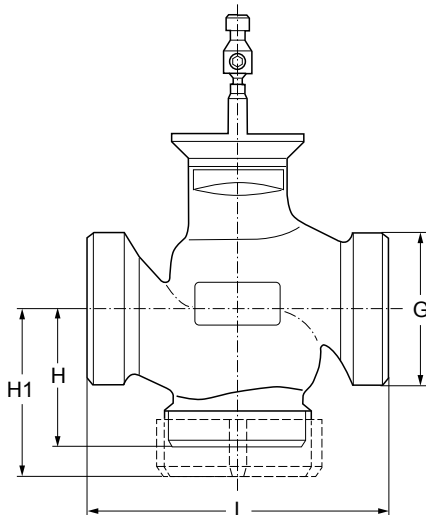
Valves are available in 3 way mixing configuration, convertible in 2 way configuration. They are compatible with VA-7700 and VA78x0 linear actuator.

### Features

- PN16
- Cast bronze body
- Kvs 0.63...40
- 3 ways mixing, convertible in 2 way Push-Down-To-Open (PDTO, normally closed)
- Fluid temperature 2 to 130 °C
- BSPP male threaded body connections



### Dimensions (in mm)



Body Size	G	L	H	H1
DN15	1-1/8	80	55	65
DN20	1-1/4	90	55	65
DN25	1-1/2	110	55	66
DN32	2	120	55	67
DN40	2-1/4	130	60	72
DN50	2-3/4	150	65	77

# VGS800

DN15...50 Threaded Globe Valves

## Ordering information

### 3-way mixing configuration

Codes	Body size	K <sub>vs</sub>	Nominal stroke (mm)	Close-off pressure kPa	
				VA-77xx-820x / 500 N	VA78xx-xxx-12 / 1000 N
VGS8A5W1N	DN15	0.63	13	958	1600
VGS8A4W1N		1.0			
VGS8A3W1N		1.6			
VGS8A2W1N		2.5			
VGS8A1W1N		4.0			
VGS8B1W1N	DN20	6.3		605	1600
VGS8C1W1N	DN25	10		280	1046
VGS8D1W1N	DN32	16		176	744
VGS8E1W1N	DN40	25		54	369
VGS8F1W1N	DN50	40		---	208

#### Note

Ordering of factory mounted valves and electric actuators. The valves and actuators can be ordered separately or factory mounted. When factory mounted, please add "+M" to the order code for the actuator.

## Accessory (order separately)

### Pipe muffles

Codes	Muffles
121 4935 151	DN15 / Rp 1/2
121 4935 201	DN20 / Rp 3/4
121 4935 251	DN25 / Rp 1
121 4935 321	DN32 / Rp 1-1/4
121 4935 401	DN40 / Rp 1-1/2
121 4935 501	DN50 / Rp 2

#### Note

3-pipe muffles are needed for the mixing valves

### Modkit for transformation of 3-way into 2-way valves

Codes	Mod kit for:
121 4930 151	DN15 / Rp 1/2
121 4930 201	DN20 / Rp 3/4
121 4930 251	DN25 / Rp 1
121 4930 321	DN32 / Rp 1-1/4
121 4930 401	DN40 / Rp 1-1/2
121 4930 501	DN50 / Rp 2

#### Note

2-pipe muffles and 1 modkit are required to alter a 3-way valve into a 2-way valve





# VG7000

## DN15...50 Threaded Globe Valves

VG7000 bronze valve series is primarily designed to regulate the flow of water and steam in response to the demand of a controller in heating, ventilating, and air conditioning applications.

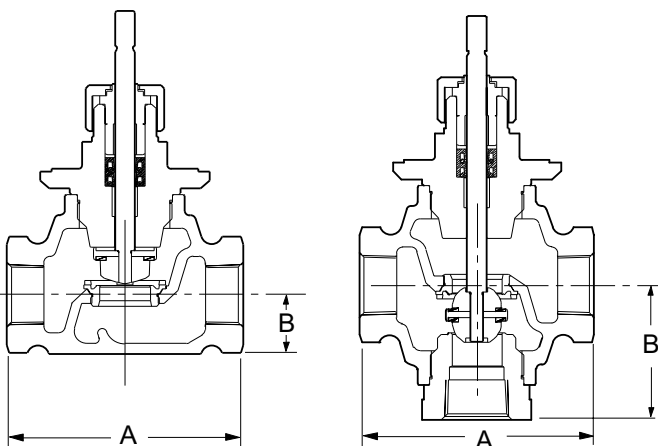
Valves are available in 2 way and 3 way mixing configurations. They are compatible with VA-7310, VA-7700 and VA78x0 electric linear actuators and pneumatic actuators.

### Features

- PN16
- Bronze body
- Kvs 0.25...40
- 2 way Push-Down-To-Close (PDTC, normally open), 2 way Push-Down-To-Open (PDTO, normally closed) and 3 way mixing configurations
- Fluid temperature (max. depending on actuator and trim material): water 2 °C to 120/140/170 °C, saturated steam up to 100/260/690 kPa
- Equal percentage (2 ways valves) and linear (3 way valves) flow characteristic
- Leakage: 0.01% (Brass trim) and 0.05% (stainless steel trim) of maximum flow
- Operating pressure drop: 240kPa max (DN15...DN32), 200 kPa max (DN40...DN50)
- Rangeability: 25:1 at 0.25...1 Kvs and 100:1 at 1.6...40 Kvs



### Dimensions (in mm)



Body size	A	B		
		2-way PDTC	2-way PDTO	3-way
DN15	76	21	39	46
DN20	81	24	41	54
DN25	104	29	44	65
DN32	119	34	51	70
DN40	130	55	70	85
DN50	150	53	72	95

# VG7000

DN15...50 Threaded Linear Valves

## Ordering information

### For Valve Bodies

VG7

#### Stem type

T	Standard threaded stem
S	Slotted stem and small bonnet (for VA-7310 electric and V-3801 pneumatic actuators only, only available for DN15 and DN20 valves with brass trim)

	Size	Flow coefficient Kvs
A	DN15	0.25
B	DN15	0.4
C	DN15	0.63
D	DN15	1.0
E	DN15	1.6
F	DN15	2.5
G	DN15	4.0
L	DN20	6.3
N	DN25	10
P	DN32	16
R	DN40	25
S	DN50	40

	Body configuration	Trim type	Inherent flow characteristics
1	2-way	Brass trim	Equal percentage
2	3-way mixing	Brass trim	Linear in both ports
3	2-way	Stainless steel trim	Equal percentage
4	3-way mixing	Stainless steel trim	Linear in both ports
5	3-way mixing	Brass trim	Equal percentage in control port, linear in bypass port (only available for VG7x1... valves with BSPP male connection)

#### End connection

0	BSP Parallel Female Threaded
1	BSP Parallel Male Threaded (only DN15 and DN20, with Brass Trim)

#### Body configuration

2	2-way PDTC (Normally Open)
4	2-way PDTO (Normally Closed)
8	3-way Mixing



# VG7000

DN15...50 Threaded Globe Valves

## Ordering information

### Maximum close-off pressures (in kPa), for valves:

#### With brass trim and electric actuators

Size	VA-731x	VA-77xx	VA78xx
DN15	1600	1600	---
DN15	700	1600	---
DN15	400	1490	---
DN20	250	950	---
DN25	---	595	1235
DN32	---	360	750
DN40	---	235	480
DN50	---	145	310

#### With stainless steel trim and electric actuators

Size	VA-731x	VA-77xx	VA78xx
DN15	---	1600	1600
DN15	---	1600	1600
DN15	---	930	1600
DN20	---	595	1220
DN25	---	370	770
DN32	---	230	470
DN40	---	145	300
DN50	---	90	190

### Maximum close-off pressures (in kPa), for valves with brass trim and pneumatic actuators

Actuator	Valves size	2-way PDTC or 3-way valves with 138 kPa air supply		2-way PDTO or 3-way valves with 0 kPa air supply	
		Spring range kPa <sup>1</sup>			
		21 to 42	63 to 91	21 to 42	63 to 91
V-3801	DN15	1600	1600	580	1600
	DN15	1180	530	165	715
	DN15	670	300	90	405
	DN20	430	190	55	255
V-3000	DN15	1600	1600	1430	1600
	DN15	1600	1100	405	1450
	DN15	1310	620	230	820
	DN20	835	390	145	525
	DN25	520	240	85	315
	DN32	320	145	50	195
	DN40	200	95	35	125
DN50	130	60	20	85	

### Maximum close-off pressures (in kPa), for valves with stainless steel trim and pneumatic actuators

Actuator	Valves size	2-way PDTC or 3-way valves with 138 kPa air supply		2-way PDTO or 3-way valves with 0 kPa air supply	
		Spring range kPa <sup>1</sup>			
		21 to 42	63 to 91	21 to 42	63 to 91
V-3000	DN15	1600	1600	1090	1600
	DN15	1600	825	300	1085
	DN15	980	470	170	615
	DN20	630	295	110	395
	DN25	385	180	60	240
	DN32	240	110	35	145

#### Note

<sup>1</sup> The recommended spring ranges for use with a V-9502 Positioner are: 21 to 42 kPa for PDTC valves, 63 to 91 kPa for PDTO valves and 63 to 91 kPa for three way valves.





# VG9000

## DN15...100 Flanged Globe Valves

VG9000 cast iron flanged valve series is primarily designed to regulate the flow of water and steam in response to the demand of a controller in heating, ventilating, and air conditioning applications.

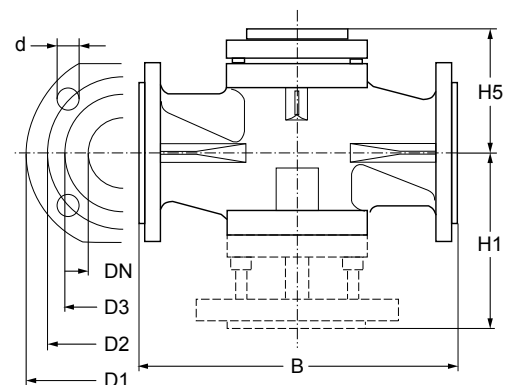
Valves are available in 2 way and 3 way mixing configurations. They are compatible with a variety of electric linear actuators.



### Features

- PN6 and PN10
- Nodular cast iron body
- Kvs 0.63...160
- 2 way Push-Down-To-Open (PDTO, normally closed) and 3 way mixing configurations
- Fluid temperature: 2 °C to 140 °C
- Equal percentage flow characteristic on the in-line control port
- Leakage: 0.01% of Kvs
- Operating pressure drop: 150 kPa max (DN15...DN25), 100 kPa max (DN32...DN100)
- Rangeability: >25:1
- DIN Flanged

### Dimensions (in mm)



Body size	PN6							PN10						
	B	D1	D2	D3	d	H1	Holes	B	D1	D2	D3	d	H1	Holes
DN15	130	80	55	38	11	65	4	130	95	65	46	14	65	4
DN20	140	90	65	48	11	70	4	150	105	75	56	14	75	4
DN25	150	100	75	58	11	75	4	160	115	85	65	14	80	4
DN32	180	120	90	69	14	90	4	180	140	100	76	19	90	4
DN40	180	130	100	78	14	90	4	200	150	110	84	19	100	4
DN50	200	140	110	88	14	100	4	230	165	125	99	19	115	4
DN65	240	160	130	108	14	120	4	290	185	145	118	19	145	4
DN80	260	190	150	124	19	130	4	310	200	160	132	19	155	8
DN100	300	210	170	144	19	150	4	350	220	180	156	19	175	8



# VG9000

DN15...100 Flanged Globe Valves

## Ordering information

PN6 Series (VG9xxxS1K)

Codes <sup>1</sup>	Body size	Kvs	Maximum Close Off Pressure (kPa)				
			Non-Spring Return Actuators				Spring Return Actuator
			VA-77xx-820x 500 N	VA78xx-xxx-12 1000 N	VA-1125-GGA-1 2500 N	RA-3000-732x 3000 N	VA-1x20-GGA-1 2000 N
2-way PDT0 (Normally Closed) configuration							
VG94A5S1K	DN15	0.63	600	600	---	---	---
VG94A4S1K		1.0					
VG94A3S1K		1.6					
VG94A2S1K		2.5					
VG94A1S1K		4.0					
VG94B1S1K	DN20	6.3	---	---	---	---	---
VG94C1S1K	DN25	10					
VG94D1S1K	DN32	16					
VG94E1S1K	DN40	25					
VG94F1S1K	DN50	40					
VG94G1S1K	DN65	63	---	150	620	---	470
VG94H1S1K	DN80	100	---	---	400	510	300
VG94J1S1K	DN100	160	---	---	240	320	180
3-way mixing configuration							
VG98A5S1K	DN15	0.63	600	600	---	---	---
VG98A4S1K		1.0					
VG98A3S1K		1.6					
VG98A2S1K		2.5					
VG98A1S1K		4.0					
VG98B1S1K	DN20	6.3	---	---	---	---	---
VG98C1S1K	DN25	10					
VG98D1S1K	DN32	16					
VG98E1S1K	DN40	25					
VG98F1S1K	DN50	40					
VG98G1S1K	DN65	63	---	130	620	---	470
VG98H1S1K	DN80	100	---	---	400	510	300
VG98J1S1K	DN100	160	---	---	240	320	180

### Note

**1** For factory mounted valve actuators just add "+M" to the actuator ordering code.



# VG9000

DN15...100 Flanged Globe Valves

## Ordering information

PN10 series (VG9xxxS1L)

Codes <sup>1</sup>	Body size	K <sub>VS</sub>	Maximum Close Off Pressure (kPa)					
			Non-Spring Return Actuators				Spring Return Actuator	
			VA-77xx-820x 500 N	VA78xx-xxx-12 1000 N	VA-1125-GGA-1 2500 N	RA-3000-732x 3000 N	VA-1x20-GGA-1 2000 N	
2-way PDT0 (Normally Closed) configuration								
VG94A5S1L	DN15	0.63	1000	1000	---	---	---	
VG94A4S1L		1.0						
VG94A3S1L		1.6						
VG94A2S1L		2.5						
VG94A1S1L		4.0						
VG94B1S1L	DN20	6.3	980	---	---	---		
VG94C1S1L	DN25	10	640					
VG94E2S1L	DN32	16	400				900	
VG94E1S1L	DN40	25	210				510	
VG94F1S1L	DN50	40	110				310	
VG94G1S1L	DN65	63	---	160	620	---	470	
VG94H1S1L	DN80	100		---	400		510	300
VG94J1S1L	DN100	160			240		320	180
3-way Mixing configuration								
VG98A5S1L	DN15	0.63	1000	1000	---	---	---	
VG98A4S1L		1.0						
VG98A3S1L		1.6						
VG98A2S1L		2.5						
VG98A1S1L		4.0						
VG98B1S1L	DN20	6.3	880	---	---	---		
VG98C1S1L	DN25	10	430					
VG98E2S1L	DN32	16	240				790	
VG98E1S1L	DN40	25	110				420	
VG98F1S1L	DN50	40	40				240	
VG98G1S1L	DN65	63	---	120	620	---	470	
VG98H1S1L	DN80	100		---	400		510	300
VG98J1S1L	DN100	160			240		320	180

### Note

**1** For factory mounted valve actuators just add "+M" to the actuator ordering code.







# VG8000N

## DN15...150 Flanged Globe Valves (PN16)

VG8000N nodular cast iron flanged valve series is primarily designed to regulate the flow of water and steam in response to the demand of a controller in heating, ventilating, and air conditioning applications.

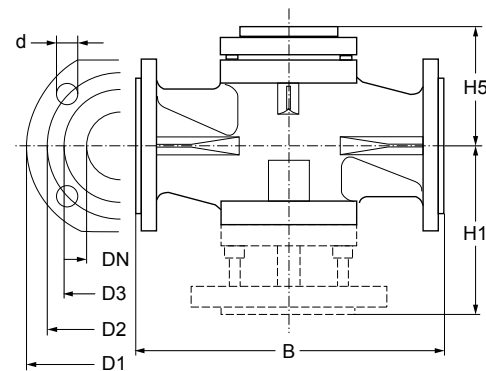
Valves are available in 2 way, 3 way mixing and 3 way diverting configurations. They are compatible with a variety of electric linear actuators.

### Features

- PN16
- Nodular cast iron body
- Kvs 0.1...350
- 2 way Push-Down-To-Close (PDTC, normally open), 3 way mixing and 3 way diverting configurations
- Fluid temperature: 0 °C to 180 °C, -10 °C to 180 °C with glycerin cup. Glycol 50% max.
- Equal percentage flow characteristic on the in-line control port
- Leakage: 0.05% of Kvs
- Operating pressure drop: 500 kPa max with water, 850 kPa with saturated steam
- Rangeability: 100:1
- DIN Flanged



### Dimensions (in mm)



Body size	B	D1	D2	D3	d	H1	H5	Bolts	Holes
DN15	130	95	65	45	13.5	100	76	M12 x 45	4
DN20	150	105	75	58	13.5	106	76	M12 x 50	4
DN25	160	115	85	68	13.5	106	76	M12 x 50	4
DN32	180	140	100	78	17.5	123	81	M16 x 55	4
DN40	200	150	110	88	17.5	140	78	M16 x 55	4
DN50	230	165	125	102	17.5	145	101	M16 x 60	4
DN65	290	185	145	122	17.5	156	102	M16 x 60	4
DN80	310	200	160	138	17.5	180	108	M16 x 65	8
DN100	350	220	180	158	17.5	225	136	M16 x 70	8
DN125	400	250	210	188	17.5	255	155	M16 x 75	8
DN150	480	285	240	212	22	290	175	M20 x 75	8

# VG8000N

DN15...150 Flanged Globe Valves (PN16)

## Ordering information

2-way PDTC (Normally Open) configuration

Codes <sup>1</sup>	Body size	Kvs	Maximum Close Off Pressure (kPa)					
			Non-Spring Return Actuators			Spring Return Actuators		
			VA78xx 1000 N	VA1125 <sup>2</sup> 2500 N	FA-3300 6000 N	VA1x20 <sup>2</sup> 2000 N	FA-2000- 751x 2200 N	FA-2000- 741x 2400 N
VG82A4S1N	DN15	1.0	1600	1600	---	1600	---	---
VG82A3S1N		1.6						
VG82A2S1N		2.5						
VG82A1S1N		4.0						
VG82B1S1N	DN20	6.3	---	---	---	---	---	---
VG82C1S1N	DN25	10						
VG82D1S1N	DN32	16						
VG82E1S1N	DN40	25						
VG82F1S1N	DN50	40	---	---	---	---	---	---
VG82G1S1N	DN65	63						
VG82H1S1N	DN80	100						
VG82J1S1N	DN100	160						
VG82K1S1N	DN125	250	---	---	---	---	---	---
VG82L1S1N	DN150	350						

### Notes

- 1 For factory mounted valve actuators just add "+M" to the actuator ordering code
- 2 For fluid temperature >140 °C the extension kit VA1000-EP must be mounted.



# VG8000N

DN15...150 Flanged Globe Valves (PN16)

## Ordering information

### 3-way mixing configuration

Codes <sup>1</sup>	Body size	Kvs	Maximum Close Off Pressure (kPa)					
			Non-Spring Return Actuators			Spring Return Actuators		
			VA78xx 1000 N	VA1125 <sup>2</sup> 2500 N	FA-3300 6000 N	VA1x20 <sup>2</sup> 2000 N	FA-2000- 751x 2200 N	FA-2000- 741x 2400 N
VG88A4S1N	DN15	1.0	1600	1600	---	1600	---	---
VG88A3S1N		1.6						
VG88A2S1N		2.5						
VG88A1S1N		4.0						
VG88B1S1N	DN20	6.3	1570	---	---	---	---	---
VG88C1S1N	DN25	10						
VG88D1S1N	DN32	16						
VG88E1S1N	DN40	25						
VG88F1S1N	DN50	40	---	1080	740	800	1030	190
VG88G1S1N	DN65	63		830		630	790	
VG88H1S1N	DN80	100		390		380	370	
VG88J1S1N	DN100	160		230		160	---	
VG88K1S1N	DN125	250	140	460	90	---	110	
VG88L1S1N	DN150	350	75	280	40	---	50	

#### Notes

- 1 For factory mounted valve actuators just add "+M" to the actuator ordering code
- 2 For fluid temperature >140 °C the extension kit VA1000-EP must be mounted.



# VG8000N

DN15...150 Flanged Globe Valves (PN16)

## Ordering information

### 3-way mixing configuration

Codes <sup>1</sup>	Body size	Kvs	Maximum Close Off Pressure (kPa)					
			Non-Spring Return Actuators			Spring Return Actuators		
			VA78xx 1000 N	VA1125 <sup>2</sup> 2500 N	FA-3300 6000 N	VA1x20 <sup>2</sup> 2000 N	FA-2000- 751x 2200 N	FA-2000- 741x 2400 N
VG89A4S1N	DN15	1.0	1600	1600	---	1600	---	---
VG89A3S1N		1.6						
VG89A2S1N		2.5						
VG89A1S1N		4.0						
VG89B1S1N	DN20	6.3	1570	---	---	---	---	---
VG89C1S1N	DN25	10						
VG89D1S1N	DN32	16						
VG89E1S1N	DN40	25						
VG89F1S1N	DN50	40	---	1080	740	800	1030	190
VG89G1S1N	DN65	63		830		630	790	
VG89H1S1N	DN80	100		390		380	370	
VG89J1S1N	DN100	160		230		160	---	
VG89K1S1N	DN125	250	140	460	90	---	110	
VG89L1S1N	DN150	350	75	280	40	---	50	

#### Notes

- 1 For factory mounted valve actuators just add "+M" to the actuator ordering code
- 2 For fluid temperature >140 °C the extension kit VA1000-EP must be mounted.





# VG8000H

## DN15...125 Flanged Globe Valves (PN25)

VG8000H nodular cast iron flanged valve series is primarily designed to regulate the flow of water and steam in response to the demand of a controller in heating, ventilating, and air conditioning applications.

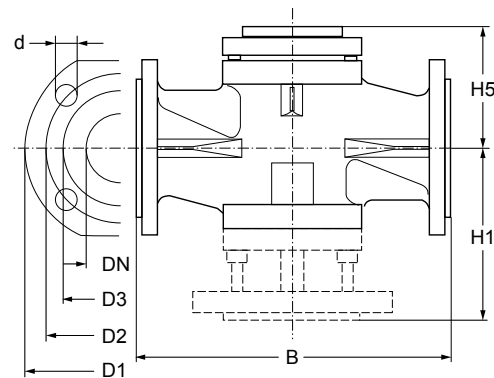
Valves are available in 2 way, 3 way mixing and 3 way diverting configurations. They are compatible with a variety of electric linear actuators.



### Features

- PN25
- Nodular cast iron body
- Kvs 0.4...350
- 2 way Push-Down-To-Close (PDTC, normally open), 3 way mixing and 3 way diverting configurations
- Fluid temperature: 2 °C to 200 °C, -20 °C to 200 °C with glycerin cup, up to 280 °C with cooling fins. Glycol 50% max.
- Equal percentage flow characteristic on the in-line control port
- Leakage: 0.05% of Kvs
- Operating pressure drop: 1000 kPa max with water, 1600 kPa with saturated steam
- Rangeability: 100:1
- DIN Flanged

### Dimensions (in mm)



Body size	B	D1	D2	D3	d	H1	H5	Bolts	Holes
DN15	130	95	65	45	13.5	100	76	M12 x 45	4
DN20	150	105	75	58	13.5	106	76	M12 x 50	4
DN25	160	115	85	68	13.5	106	76	M12 x 50	4
DN32	180	140	100	78	17.5	123	81	M16 x 55	4
DN40	200	150	110	88	17.5	140	78	M16 x 55	4
DN50	230	165	125	102	17.5	145	101	M16 x 60	4
DN65	290	185	145	122	17.5	156	102	M16 x 60	8
DN80	310	200	160	138	17.5	180	108	M16 x 65	8
DN100	350	235	190	162	22	225	136	M20 x 70	8
DN125	400	270	220	188	26	255	155	M24 x 75	8



# VG8000H

DN15...125 Flanged Globe Valves (PN25)

## Ordering information

2-way PDTC (Normally Open) configuration

Codes <sup>1</sup>	Body size	K <sub>vs</sub>	Maximum Close Off Pressure (kPa)						
			Non-Spring Return Actuators				Spring Return Actuators		
			VA78xx 1000 N	VA1125 <sup>2</sup> 2500 N	RA-3000- 732x 3000 N	FA-3300- 741x 6000 N	VA1x20 <sup>2</sup> 2000 N	FA-2000- 751x 2400 N	FA-2000- 741x 2200 N
VG82A4S1H	DN15	1.0	2500	2500	---	---	2500	---	---
VG82A3S1H		1.6							
VG82A2S1H		2.5							
VG82A1S1H		4.0							
VG82B1S1H	DN20	6.3	2030	---	---	---	---	---	---
VG82C1S1H	DN25	10	1360						
VG82D1S1H	DN32	16	660						
VG82E1S1H	DN40	25	370						
VG82F1S1H	DN50	40	---	1020	1300	---	750	920	---
VG82G1S1H	DN65	63		750	1010		580	710	
VG82H1S1H	DN80	100		370	480		260	330	
VG82J1S1H	DN100	160		210	290		720	140	
VG82K1S1H	DN125	250	120	170	450	80	---	100	

### Notes

- 1 For factory mounted valve actuators just add "+M" to the type model number.
- 2 For fluid temperature >140 °C the extension kit VA1000-EP must be mounted. Max-Fluid temperature must not exceed 200 °C.



# VG8000H

DN15...125 Flanged Globe Valves (PN25)

## Ordering information

### 3-way mixing configuration

Codes <sup>1</sup>	Body size	K <sub>vs</sub>	Maximum Close Off Pressure (kPa)						
			Non-Spring Return Actuators				Spring Return Actuators		
			VA78xx 1000 N	VA1125 <sup>2</sup> 2500 N	RA-3000- 732x 3000 N	FA-3300- 741x 6000 N	VA1x20 <sup>2</sup> 2000 N	FA-2000- 751x 2400 N	FA-2000- 741x 2200 N
VG88A4S1H	DN15	1.0	2500	2500	---	---	2500	---	---
VG88A3S1H		1.6							
VG88A2S1H		2.5							
VG88A1S1H		4.0							
VG88B1S1H	DN20	6.3	2030	---	---	---	---	---	---
VG88C1S1H	DN25	10	1360						
VG88D1S1H	DN32	16	660						
VG88E1S1H	DN40	25	370						
VG88F1S1H	DN50	40	---	1020	1300	---	750	920	---
VG88G1S1H	DN65	63		750	1010		580	710	
VG88H1S1H	DN80	100		370	480		260	330	
VG88J1S1H	DN100	160		210	290		720	140	
VG88K1S1H	DN125	250	120	170	450	80	---	100	

#### Notes

- 1 For factory mounted valve actuators just add "+M" to the type model number
- 2 For fluid temperature >140 °C the extension kit VA1000-EP must be mounted. Max-Fluid temperature must not exceed 200 °C.



# VG8000H

DN15...125 Flanged Globe Valves (PN25)

## Ordering information

### 3-way diverting configuration

Codes <sup>1</sup>	Body size	K <sub>vs</sub>	Maximum Close Off Pressure (kPa)						
			Non-Spring Return Actuators				Spring Return Actuators		
			VA78xx 1000 N	VA1125 <sup>2</sup> 2500 N	RA-3000- 732x 3000 N	FA-3300- 741x 6000 N	VA1x20 <sup>2</sup> 2000 N	FA-2000- 751x 2400 N	FA-2000- 741x 2200 N
VG89A4S1H	DN15	1.0	2500	2500	---	---	2500	---	---
VG89A3S1H		1.6							
VG89A2S1H		2.5							
VG89A1S1H		4.0							
VG89B1S1H	DN20	6.3	2030	2000	1300	---	1550	---	---
VG89C1S1H	DN25	10	1360						
VG89D1S1H	DN32	16	660						
VG89E1S1H	DN40	25	370						
VG89F1S1H	DN50	40	1020	1300	720	140	---	---	---
VG89G1S1H	DN65	63	750	1010					
VG89H1S1H	DN80	100	370	480					
VG89J1S1H	DN100	160	210	290					
VG89K1S1H	DN125	250	120	170	450	80	---	---	180
									100

#### Notes

- 1 For factory mounted valve actuators just add "+M" to the type model number
- 2 For fluid temperature >140 °C the extension kit VA1000-EP must be mounted. Max-Fluid temperature must not exceed 200 °C.







# VG8300N

## DN40...150 Flanged Pressure Balanced Valves

VG8300N nodular cast iron flanged valve series is primarily designed to regulate the flow of water and steam in response to the demand of a controller in heating, ventilating, and air conditioning applications.

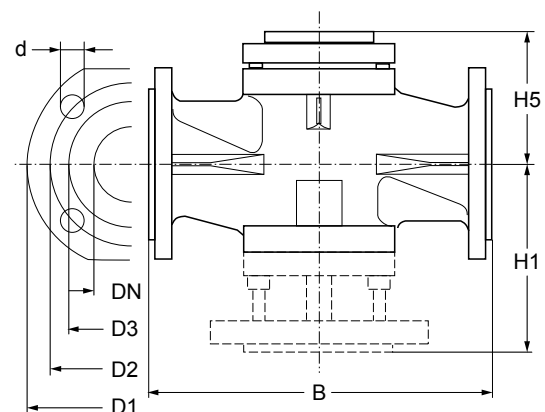
Valves are available in 2 way configuration and have a special designed plug, which through balancing of pressure, allows higher close-off pressures with standard actuator combinations. They are compatible with a variety of electric linear actuators.



### Features

- PN16
- Nodular cast iron body
- Kvs 25...350
- 2 way Push-Down-To-Close (PDTC, normally open) configuration
- Fluid temperature: 2 °C to 180 °C (130 °C with DN125 & DN150), -10 °C to 180 °C with glycerin cup. Glycol 50% max.
- Equal percentage flow characteristic on the in-line control port
- Leakage: 0.05% of Kvs
- Operating pressure drop: 500 kPa max with water, 800 kPa with saturated steam
- Rangeability: 100:1
- DIN Flanged

### Dimensions (in mm)



Body size	B	D1	D2	D3	d	H1	H5	Bolts	Holes
DN40	200	150	110	88	17.5	140	78	M16 x 55	4
DN50	230	165	125	102	17.5	145	101	M16 x 60	4
DN65	290	185	145	122	17.5	156	102	M16 x 60	4
DN80	310	200	160	138	17.5	180	108	M16 x 65	8
DN100	350	220	180	158	17.5	225	136	M16 x 70	8
DN125	400	250	210	188	17.5	255	155	M16 x 75	8
DN150	480	285	240	212	22	290	175	M20 x 75	8



# VG8300N

DN40...150 Flanged Pressure Balanced Valves

## Ordering information

Codes <sup>1</sup>	Body size	K <sub>vs</sub>	Maximum Close Off Pressure (kPa)			
			Non-Spring Return Actuators		Spring Return Actuators	
			VA78xx 1000 N	VA1125 <sup>2</sup> 2500 N	VA1x20 <sup>2</sup> 2000 N	FA-2000-741x 2200 N
VG83E1S1N	DN40	25	1600	1600	1600	---
VG83F1S1N	DN50	40	---			
VG83G1S1N	DN65	63				
VG83H1S1N	DN80	100		1500	1400	1600
VG83J1S1N	DN100	160				
VG83K1S1N	DN125	250				
VG83L1S1N	DN150	350	1400	1000		

### Notes

- 1 For factory mounted valve actuators just add "+M" to the actuator ordering code.
- 2 For fluid temperature >140 °C the extension kit VA1000-EP must be mounted.





# VG1000 Threaded

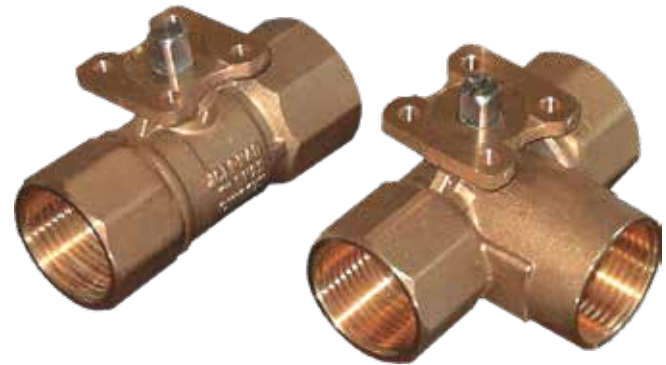
## DN15...50 Threaded Ball Valves

VG1000 forged brass threaded valve series is primarily designed to regulate the flow of water and steam in response to the demand of a controller in heating, ventilating, and air conditioning applications.

Valves are available in 2 way and 3 way mixing configurations. They are compatible with spring return and non spring return rotary actuators.

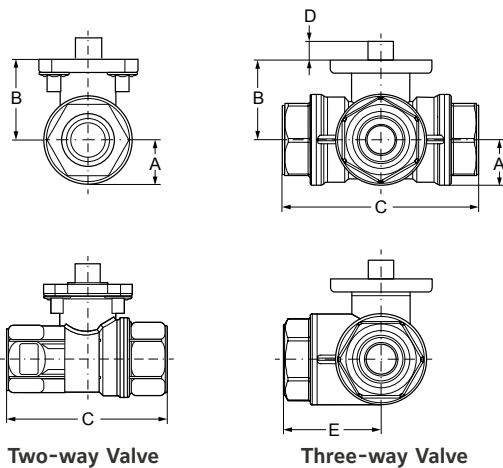
### Features

- PN40
- Forged brass body
- Kvs 1...63
- 2 way and 3 way mixing configurations
- Fluid temperature: -30 °C to 95 °C (with VA9104 series), -30 °C to 100 °C (with VA9203, VA9208 and VA9310 series). Up to 140 °C with M9000-561 thermal barrier. Glycol 50% max. Steam max 103 kPa at 121 °C with thermal barrier



- Equal percentage flow characteristic on the in-line control port
- Leakage: <0.01%
- Operating pressure drop: 340 kPa max
- Rangeability: >500:1

### Dimensions (in mm)



Body size	A	B	C	D	E
DN15	17	31	67	9	33
DN20			75		38
DN25	19	33	92		46
DN32	26	44	109		54
DN40	29	48	119		59
DN50	37	53	139	74	

### Ordering information

Body size	Codes		K <sub>vs</sub> (Control port)	K <sub>vs</sub> (Bypass port) 3-way only
	2-way	3-way		
DN15	VG1205AD	VG1805AD	1.0	0.63
	VG1205AE	VG1805AE	1.6	1.0
	VG1205AF	VG1805AF	2.5	1.6
	VG1205AG	VG1805AG	4.0	2.5
	VG1205AL	VG1805AL	6.3	4.0
	VG1205AN	VG1805AN	10	5.0
DN20	VG1205BL	VG1805BL	6.3	4.0
	VG1205BN	VG1805BN	10	5.0
DN25	VG1205CN	VG1805CN	10	6.3
	VG1205CP	VG1805CP	16	8.0
DN32	VG1205DP	VG1805DP	16	10.0
	VG1205DR	VG1805DR	25	12.5
DN40	VG1205ER	VG1805ER	25	16
	VG1205ES	VG1805ES	40	20
DN50	VG1205FS	VG1805FS	40	25.0
	VG1205FT	VG1805FT	63	31.5









# VG1000 Flanged

## DN65...150 Flanged Ball Valves

VG1000 flanged valve series is primarily designed to regulate the flow of water and steam in response to the demand of a controller in heating, ventilating, and air conditioning applications.

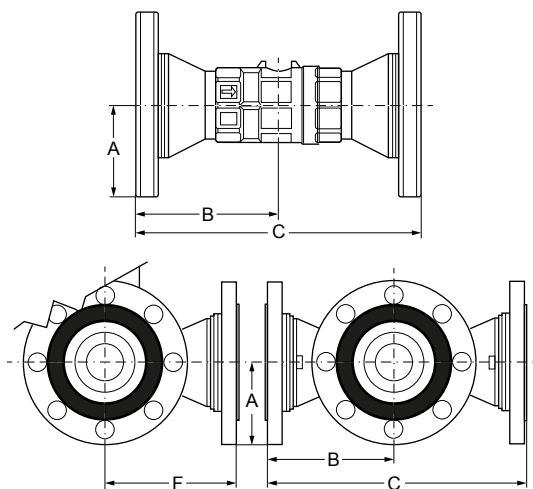
Valves are available in 2 way and 3 way mixing configurations. They are compatible with spring return and non spring return rotary actuators.

### Features

- PN16
- Forged brass body
- Kvs 63...350
- 2 way and 3 way mixing configurations
- Fluid temperature: -20 to 140 °C. Glycol 50% max. Steam 172 kPa max.
- Equal percentage flow characteristic on the in-line control port
- Leakage: 0.01% of maximum flow (control port)
- Operating pressure drop: 200 kPa max
- Rangeability: >500:1
- DIN Flanged



### Dimensions (in mm)



Codes	Valve size	A	B	C	F	Holes for flange	Holes diameters	Bolt
VG1xE5Gx	DN65	92.5	145	290	149	4	19	M16x60
VG1xE5Hx	DN80	100	155	310	159	8	19	M16x65
VG1xE5Jx	DN100	110	175	350	179	8	19	M16x70
VG1xE5NY	DN125	125	200	400	255	8	19	M16x75
VG1xE5PZ	DN150	142.5	240	480	290	8	23	M20x80

# VG1000 Flanged

DN65...150 Flanged Ball Valves

## Ordering information

### Valve Selection Table

Valve Codes	Body Size	$K_{vs}$ (Control port)	$K_{vs}$ (Bypass port)	Maximum Close Off Pressure (kPa)
2-way models				
VG12E5GT	DN65	63	---	690 kPa
VG12E5GU		100		
VG12E5HU	DN80	100		
VG12E5HW		180		
VG12E5JV	DN100	150		
VG12E5NY	DN125	250		
VG12E5PZ	DN150	350		
3-way models				
VG18E5GT	DN65	63	40	345 kPa
VG18E5GU		100	63	
VG18E5HU	DN80	100	63	
VG18E5HW		180	75	
VG18E5JV	DN100	150	75	
VG18E5NY	DN125	250	160	
VG18E5PZ	DN150	350	160	



# VG1000 Flanged

DN65...150 Flanged Ball Valves

## Ordering information

### Assemblies of valves with proportional actuators

Control signal 0(2)/10V or 0(4)/20 mA, Feedback signal 0(2)/10V

Ordering Code Suffix for Assemblies	Spring Return	Supply Voltage	Running Time (Spring Return Time)	Switches	Actuator Code	Linkage Code
VG1xE5xx+524GGA	---	24 VAC/DC	125	---	M9124-GGA-1N	M9000-518
VG1xE5xx+524GGC				■	M9124-GGC-1N	
VG1xE5xx+530HGA	■ (Spring opens)		150 s (26 s)	---	M9220-HGA-1	M9000-519
VG1xE5xx+530HGC				■	M9220-HGC-1	
VG1xE5xx+550HGA	■ (Spring closes)			---	M9220-HGA-1	
VG1xE5xx+550HGC				■	M9220-HGC-1	

#### Note

Assembly available upon request with Non-Spring Return Actuators:

VA9320-GUA-1 (230 VAC) and VA9320-HGA-1 (24 VAC/DC), Running Time (s) 90

### Assemblies of valves with floating and ON/OFF actuators

Ordering Code Suffix for Assemblies	Spring Return	Control Signal	Supply Voltage	Running Time (Spring Return Time)	Switches	Actuator Code	Linkage Code
VG1xE5xx+524AGA	---	Floating and ON/OFF	24 VAC/DC	125 s	---	M9124-AGA-1N	M9000-518
VG1xE5xx+524AGC			230 VAC		■	M9124-AGC-1N	
VG1xE5xx+524ADA					---	M9124-ADA-1N	
VG1xE5xx+524ADC			■		M9124-ADC-1N		
VG1xE5xx+530AGA	■ (Spring opens)	ON/OFF	24 VAC/DC	150 s (20 s)	---	M9220-AGA-1	M9000-519
VG1xE5xx+530AGC			230 VAC	■	M9220-AGC-1		
VG1xE5xx+530BGA				---	M9220-BGA-1		
VG1xE5xx+530BGC		24 - 57 s (11...50 s)	ON/OFF	■	M9220-BGC-1		
VG1xE5xx+530BDA				---	M9220-BDA-1		
VG1xE5xx+530BDC			■	M9220-BDC-1			
VG1xE5xx+550AGA	■ (Spring closes)	Floating and ON/OFF	24 VAC/DC	150 s (20 s)	---	M9220-AGA-1	M9000-519
VG1xE5xx+550AGC			230 VAC	■	M9220-AGC-1		
VG1xE5xx+550BGA				---	M9220-BGA-1		
VG1xE5xx+550BGC		24 - 57 s (11...50 s)	ON/OFF	■	M9220-BGC-1		
VG1xE5xx+550BDA				---	M9220-BDA-1		
VG1xE5xx+550BDC			■	M9220-BDC-1			

#### Note

Assembly available upon request with Non-Spring Return Actuators:

VA9316-AUA-1 (230 VAC) and VA9316-AGA-1 (24 VAC/DC), Running Time (s) 16

VA9320-AUA-1 (230 VAC) and VA9320-HGA-1 (24 VAC/DC), Running Time (s) 90







# VFB Butterfly Valves

## DN25...500 Butterfly Valves

VBF butterfly valve series is primarily designed to regulate the flow of water in response to the demand of a controller in heating, ventilating, air conditioning and refrigeration applications.

Valves are bidirectional, allowing positive shutoff with the flow in either direction. They are compatible with spring return and non spring return rotary actuators.

### Features

- PN6, PN10, PN16
- Cast iron body
- Nylon coated ductile iron disc provides bubble-tight shutoff, low torque and longer seat life
- Kvs 52...19212
- Normally open or normally closed configurations
- Fluid temperature: water -29 to 141 °C. Glycol 50% max.
- Modified equal percentage flow characteristic

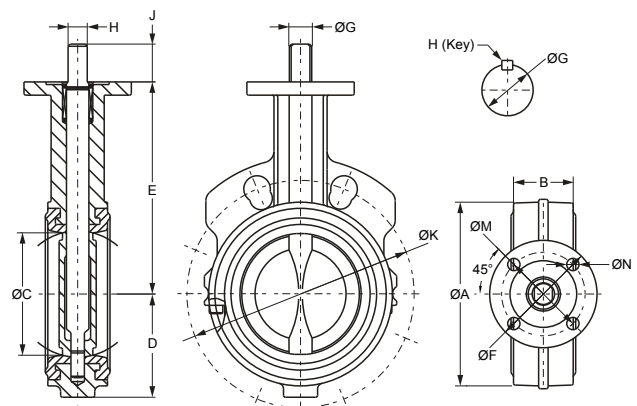


- Leakage: gas tight leak rate A
- Operating pressure drop: 200 kPa max
- Rangeability: >500:1
- Maximum fluid velocity: 4 m/s

### Ordering information

Codes	Body size	Valve size (inch)	K <sub>vs</sub> value	Max Δp (kPa) Close-off pressure
High pressure close-off (12 Bar from DN50 to DN300, 10 Bar all other sizes)				
VFB025H	DN25	1	52	1000
VFB032H	DN32	1 ¼	72	
VFB040H	DN40	1 ½	126	
VFB050H	DN50	2	124	
VFB065H	DN65	2 ½	243	
VFB080H	DN80	3	397	
VFB100H	DN100	4	723	
VFB125H	DN125	5	1083	
VFB150H	DN150	6	1591	
VFB200H	DN200	8	2852	
VFB250H	DN250	10	4670	1200
VFB300H	DN300	12	6946	
VFB350H	DN350	14	9063	
Low pressure close-off (3,5 Bar from DN100 to DN500)				
VFB100L	DN100	4	723	350
VFB125L	DN125	5	1083	
VFB150L	DN150	6	1591	
VFB200L	DN200	8	2852	
VFB250L	DN250	10	4670	
VFB300L	DN300	12	6946	

### Dimensions (in mm)



# VFB Butterfly Valves

## DN25...500 Butterfly Valves

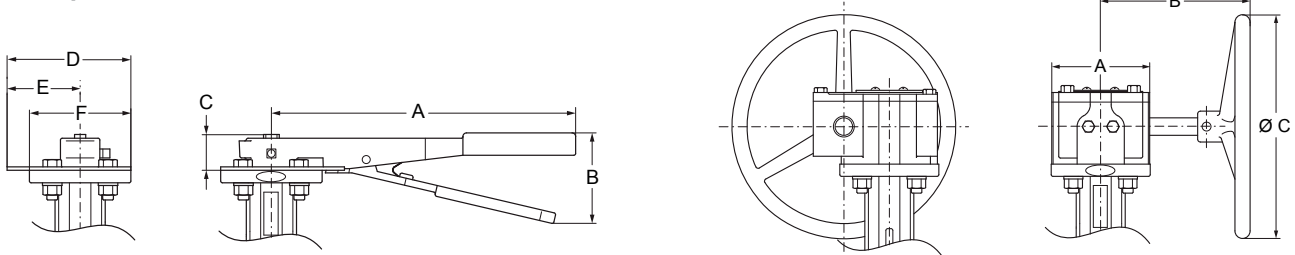
### Two-way valve

Valve size (mm)	Valve size (inch)	A	B	C	D	E	F	M	N	G	H	J	Valve net weight <sup>2</sup> (kg)	Top flange ISO 5211	K <sup>1</sup>	Number of holes on flange		K <sup>1</sup>	Number of holes on flange		K <sup>1</sup>	Number of holes on flange	
																PN6			PN10			PN16	
25	1	60	30	32	43	25	65	50	7	10	8	25	1	F05	75	4 x M10		85	4 x M12		85	4 x M12	
32	1-¼	70	32	41	53	25	65	50	7	10	8	25	1,2	F05	90	4 x M12		100	4 x M16		100	4 x M16	
40	1-½	80	32	47	55	25	65	50	7	10	8	25	2.8	F05	100	4 x M12		110	4 x M16		110	4 x M16	
50	2	94	42	51	56	140	90	70	10	14	10	32	3.1	F07	110	4 x M12		125	4 x M16		125	4 x M16	
65	2-½	106	45	64	63	152	90	70	10	14	10	32	4.1	F07	130	4 x M12		145	4 x M16		145	4 x M16	
80	3	124	45	76	71	159	90	70	10	14	10	32	4.3	F07	150	4 x M16		160	8 x M16		160	8 x M16	
100	4	154	51	102	87	178	90	70	10	16	11	32	4.9	F07	170	4 x M16		180	8 x M16		180	8 x M16	
125	5	179	55	127	102	190	90	70	10	19	13	32	7.2	F07	200	8 x M16		210	8 x M16		210	8 x M16	
150	6	206	55	146	115	203	90	70	10	19	13	32	9.5	F07	225	8 x M16		240	8 x M20		240	8 x M20	
200	8	267	59	197	146	241	150	125	14	22	16	32	12	F07	280	8 x M16		295	8 x M20		295	12 x M20	
250	10	324	67	248	181	273	150	125	14	30	22	51	17	F12	335	12 x M16		350	12 x M20		355	12 x M24	
300	12	378	77	298	206	311	150	125	14	30	22	51	20	F12	395	12 x M20		400	12 x M20		410	12 x M24	
350	14	433	78	337	238	346	150	125	14	35	10x10 <sup>3</sup>	51	23	F12	445	12 x M20		460	16 x M20		470	16 x M24	
400	16	488	102	387	273	375	150	125	14	35	10x10 <sup>3</sup>	51	27	F12	495	16 x M20		515	16 x M24		525	16 x M27	
450	18	536	114	438	305	406	210	165	21	50	10x12 <sup>3</sup>	64	30	F16	---	---		565	20 x M24		585	20 x M27	
500	20	591	127	489	356	436	210	165	21	50	10x12 <sup>3</sup>	64	33	F16	---	---		650	20 x M24		650	20 x M30	

Notes

- 1 Disc chordal dimension at valve face.
- 2 Net weight is for valve only (no actuator).
- 3 Key: the key is needed to link the actuator. It is inside the package of the valve. Dimensions in mm (high x width).

### Ten-position manual handle



Valve size (mm)	Valve size (inch)	Codes <sup>1</sup>	A	B	C
25 to 40	1/2" to 1-1/2"	VF-998-100	196	60	25
50 to 80	2" to 3"	VF-998-101	270	80	32
100	4"	VF-998-102	270	80	32
125 to 150	5" to 6"	VF-998-103	270	80	32
200	8"	VF-998-104	298	80	32
250 to 300	10" to 12"	VF-998-105*	298	80	51

Valve size (mm)	Valve size (inch)	Codes <sup>1</sup>	A	B	C
50 to 150	2" to 6"	VF-998-303	90	136	203
200	8"	VF-998-304*	150	190	203
250 to 300	10" to 12"	VF-998-305*	150	190	203
350 to 400	14" to 16"	VF-998-307*	150	303	305
450 to 500	18" to 20"	VF-998-308*	210	379	305

Note

- 1 Kit includes a manual gear operator, adaptor (if required), and mounting hardware.
- \* Availability on request. Consult MoQ

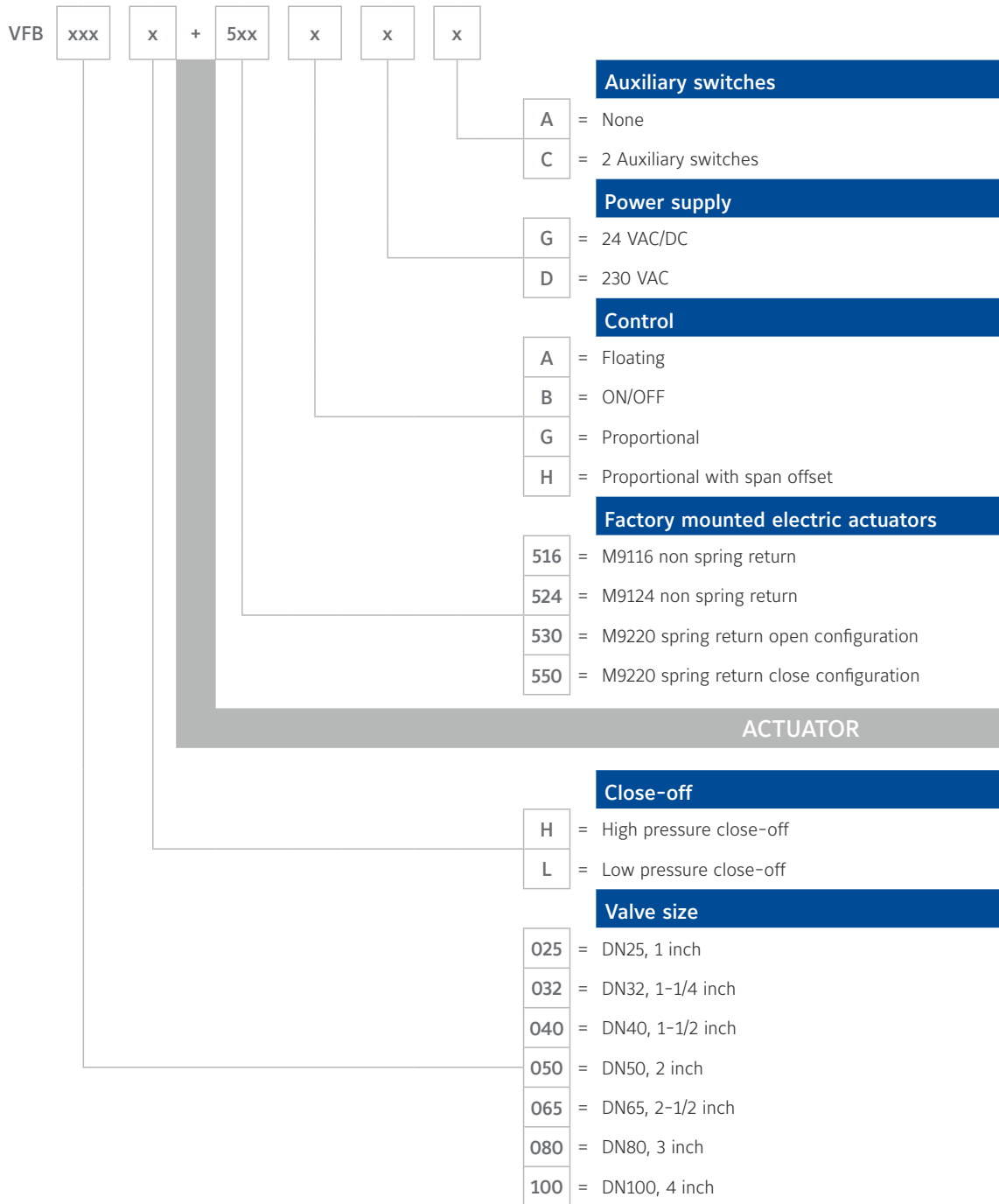


# VFB Butterfly Valves

DN25...500 Butterfly Valves

## Ordering information

### VFB butterfly valves with M9000 actuators assembly



# VFB Butterfly Valves

DN25...500 Butterfly Valves

## Ordering information

VBF valves with M9000 actuators and necessary linkage code - Available combination

Valves				Actuator		
				Non Spring Return		Spring Return
				Torque (Nm)		
				16	24	20
Codes	DN	Inches	MAX Close-off pressure (bar)	M9116	M9124	M9220
VFB025H	25	1"	12	M9100-100A	---	M9200-100A
VFB032H	32	1-1/4"	12	M9100-100A		M9200-100A
VFB040H	40	1-1/2"	12	M9100-100A		M9200-100A
VFB050H	50	2"	12	M9100-100B		M9200-100B
VFB065H	65	2-1/2"	12	M9100-100B		M9200-100B
VFB080H	80	3"	12	---	M9100-100B	M9200-100B
VFB100L	100	4"	3.5		M9100-100C	M9200-100C

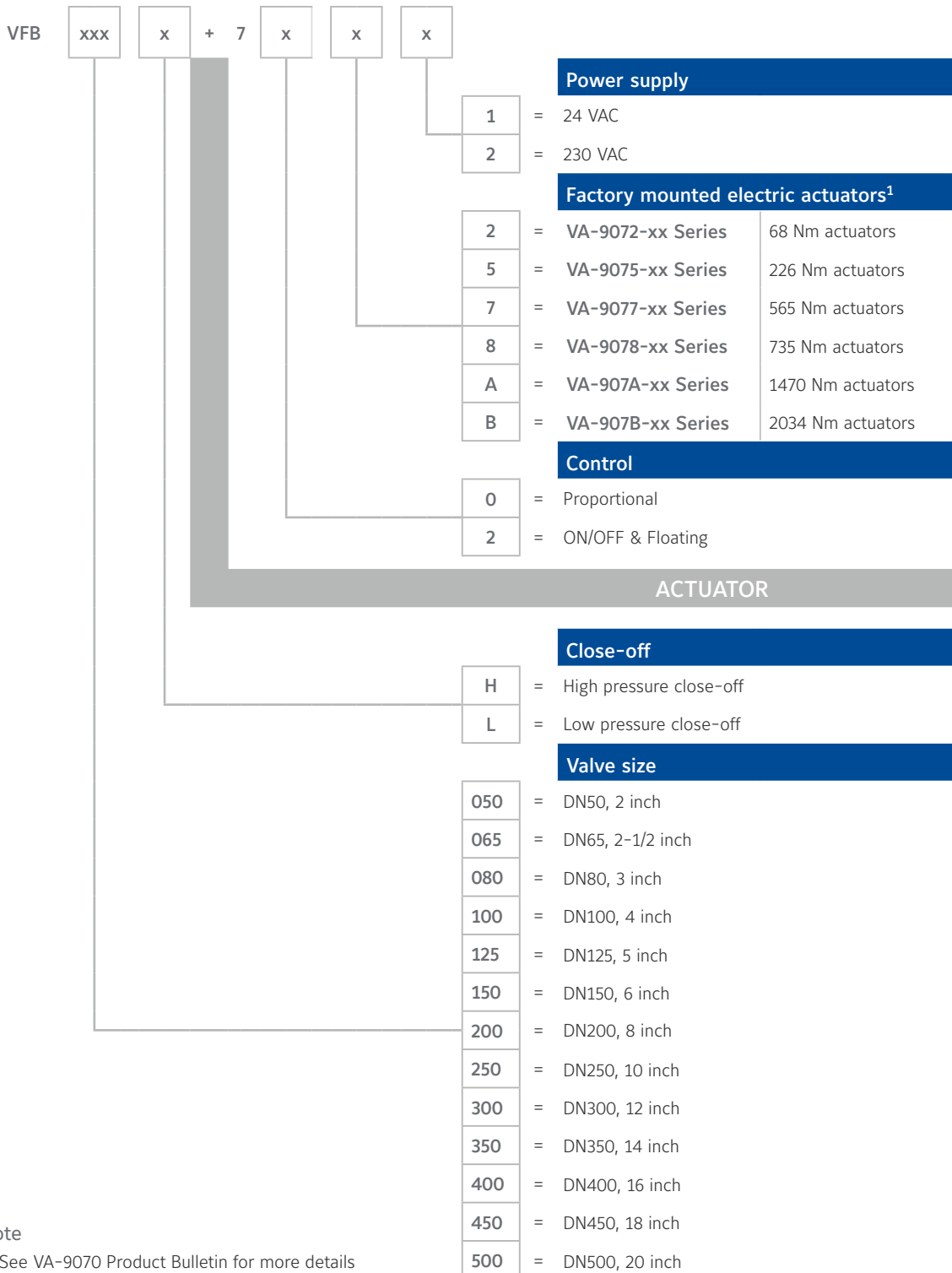


# VFB Butterfly Valves

DN25...500 Butterfly Valves

## Ordering information

### VFB butterfly valves with VA-9070 actuators assembly



Note

<sup>1</sup> See VA-9070 Product Bulletin for more details



# VFB Butterfly Valves

DN25...500 Butterfly Valves

## Ordering information

VBF valves with VA-9070 series actuators - Available combination

JCI VFB valves				ACTUATORS							
				Power supply 230 VAC				Power supply 24 VAC			
				Torque (Nm)							
				68	226	735	1470	2034	68	226	565
Valves codes	DN	Inches	MAX close-off pressure (bar)	VA-9072	VA-9075	VA-9078	VA-907A	VA-907B	VA-9072	VA-9075	VA-9077
VFB050H	50	2	12	■	---	---	---	---	■	---	---
VFB065H	65	2-½	12	■	---	---	---	---	■	---	---
VFB080H	80	3	12	■	---	---	---	---	■	---	---
VFB100H	100	4	12	■	---	---	---	---	■	---	---
VFB125H	125	5	12	■	---	---	---	---	■	---	---
VFB150H	150	6	12	■	---	---	---	---	■	---	---
VFB200H	200	8	12	---	■	---	---	---	---	■	---
VFB250H	250	10	12	---	---	■	---	---	---	---	■
VFB300H	300	12	10	---	---	■	---	---	---	---	■
VFB350H	350	14	10	---	---	■	---	---	---	---	---
VFB100L	100	4	3.5	■	---	---	---	---	■	---	---
VFB125L	125	5	3.5	■	---	---	---	---	■	---	---
VFB150L	150	6	3.5	■	---	---	---	---	■	---	---
VFB200L	200	8	3.5	---	■	---	---	---	---	■	---
VFB250L	250	10	3.5	---	■	---	---	---	---	■	---
VFB300L	300	12	3.5	---	---	■	---	---	---	---	■





# VP1000

## DN15...50 Threaded Pressure Independent Control Valves

VP1000 Pressure Independent Control Valve (PICV) performs the function of two valves (balancing and adjustments) in a unique body that allows the adjustment of the flow rate in case of partial load of the system and also ensures a stable adjustment of the supply connected to it. VP1000 proposes three modes: axial, compact axial and ball. VP1000 range covers valves from DN15 to DN50 and a flow capacity from 150 l/h to 18.000 l/h. Axial and compact series are compatible with linear actuators from VA-7480 and VA-7080 series. Ball valve series is compatible with rotary actuators from VA9310 and VA9208 series.



### Features

- Axial and Ball valve configurations
- PN16 (ball valves) and PN25 (axial valves)
- Brass body (axial series), Ductile Iron (Ball valves)
- Kvs calculation is not necessary. Flow rate is the only parameter to consider. Valve's maximum adjustment matches the maximum flow rate allowed by the pipe size
- Flow rate adjustment knob, external (axial serie) and internal (compact axial and ball series)
- Fluid temperature: water -10 to 120 °C
- Equal percentage flow characteristic (axial and ball), linear flow characteristic (compact axial)
- Leakage: 0.01% (Class IV)
- Operating pressure drop: 600kPa max
- Rangeability: 50:1 to 100:1 (axial valves), >100:1 (ball valves)

# VP1000

DN15...50 Threaded Pressure Independent Control Valves

## Selection Tables

### Compact Series

Item codes	Diameter	Maximum Flow Rate (l/h)	Minimum $\Delta P$ for start-up (kPa)	Stroke (mm)	Actuator Compatibility
VP10xHAA	DN15	150	25	3	VA-748x/VA-7080
VP10xHDA	DN15	450	35	3	VA-748x/VA-7080
VP10xHDC	DN15	850	25	3	VA-748x/VA-7080
VP10xJAJ	DN20	1000	30	3	VA-748x/VA-7080
VP10xJDB	DN20	1850	35	3	VA-748x/VA-7080
VP10xKDD	DN25	2500	30	6	VA-748x
VP10xKDE	DN25	3300	30	6	VA-748x
VP10xLDF	DN32	5200	35	6	VA-748x
VP100MBC	DN40	9000	40	7.5	VA-748x

Note: x=0 (Pressure ports included), x=1 (No pressure ports included)

### Axial Series

Item codes	Diameter	Maximum Flow Rate (l/h)	Minimum $\Delta P$ for start-up (kPa)	Stroke (mm)	Actuator Compatibility
VP10xAAA	DN15	150	20	3	VA-748x/VA-7080
VP10xAAE	DN15	600	25	3	VA-748x/VA-7080
VP10xAAG	DN15	780	35	3	VA-748x/VA-7080
VP10xBAJ	DN20	1000	30	3	VA-748x/VA-7080
VP10xBAN	DN20	1500	35	6	VA-748x
VP10xCAU	DN25	2200	25	6	VA-748x
VP10xCAW	DN25	2700	30	6	VA-748x
VP10xDAW	DN32	2700	30	6	VA-748x
VP10xDAY	DN32	3000	35	6	VA-748x

Note: x=0 (Pressure ports included), x=1 (No pressure ports included)

### Ball Series

Item codes	Diameter	Maximum Flow Rate (l/h)	Minimum $\Delta P$ for start-up (kPa)	Connection	Actuator Compatibility
VP101DBB	DN40	6000	30	1 1/4"	VA9310-HGA-1 (non spring return) VA9208-GGA-1 (spring return) VA9208GGC-1 (spring return + switches)
VP101EBB	DN40	6000	30	1 1/2"	
VP101EBC	DN40	9000	35	1 1/2"	
VP101EBD	DN50	11000	40	2"	
VP101FBD	DN50	12000	35	2"	
VP101FBF	DN50	18000	35	2"	

Note: same body (DN) is available with different threaded connections



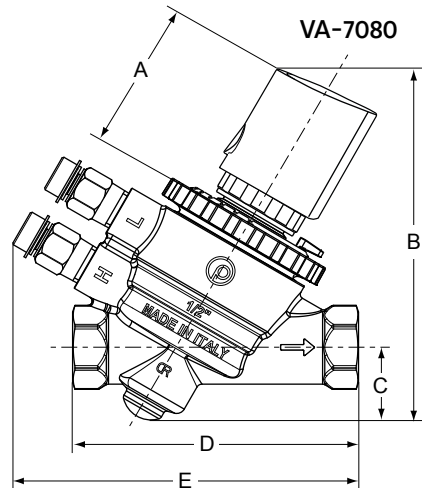
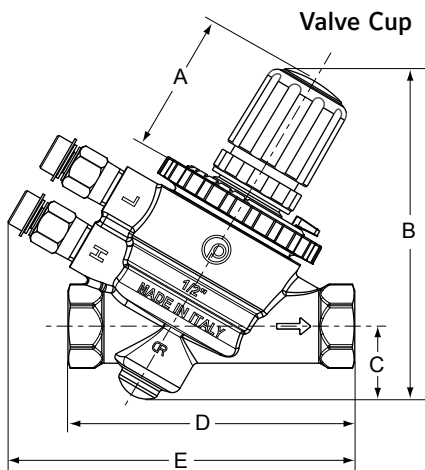


# VP1000

DN15...50 Threaded Pressure Independent Control Valves

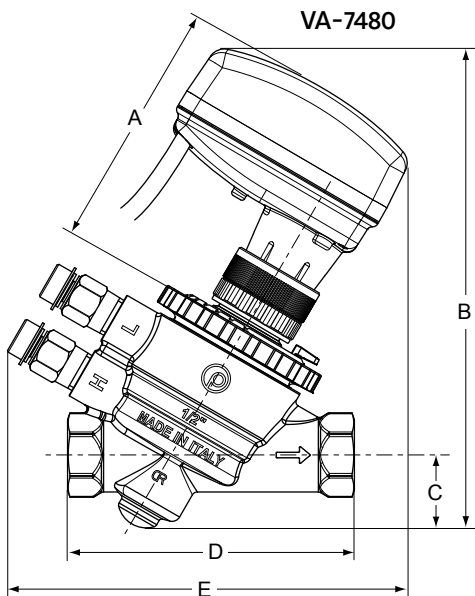
## Dimensions (in mm)

Axial DN15 - DN20



Size	A	B	C	D	E
DN15	47	115	25	99	120
DN20	47	115	25	108	127

Size	A	B	C	D	E
DN15	81.7	164	25	99	120
DN20	81.7	164	25	108	127



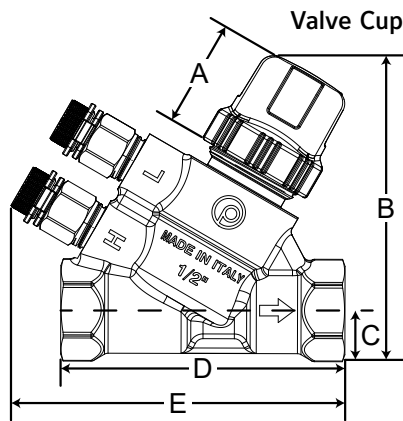
Size	A	B	C	D	E
DN15	80	144	14.5	99	120
DN20	80	149	17.5	108	127



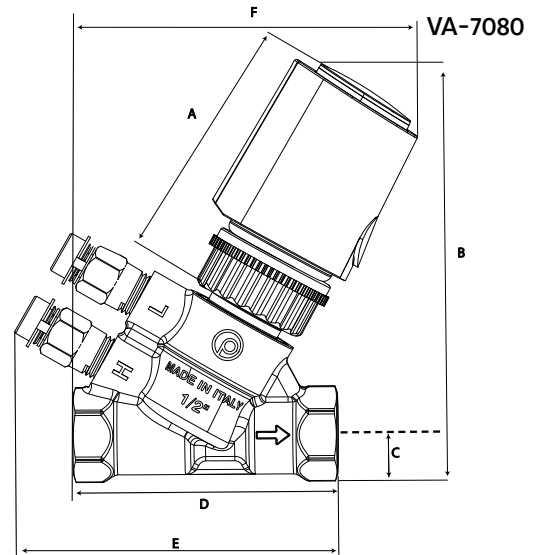
# VP1000

## DN15...50 Threaded Pressure Independent Control Valves

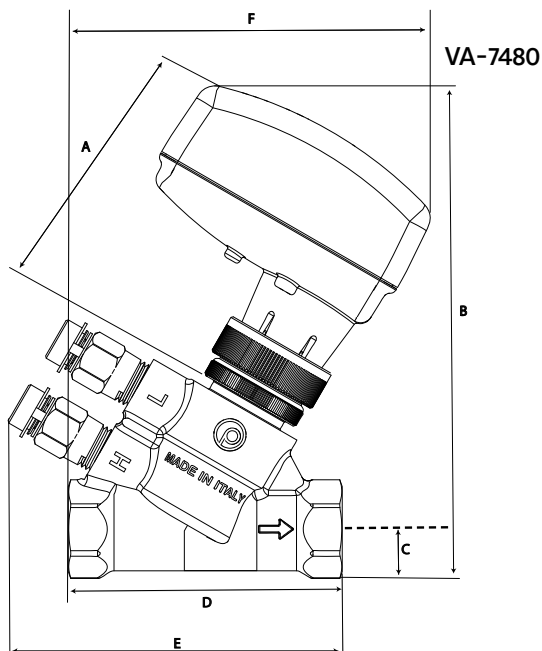
### Compact Axial DN15 - DN20



Size	A	B	C	D	E
DN15	33	83	14.5	80.5	98
DN15-VP10xHDC	33	84.5	14.5	93.5	110.5
DN20	33	88	17.5	98	116



Size	A	B	C	D	E	F
DN15	64.5	120	14.5	80.5	98	119
DN15-VP10xHDC	64.5	122	14.5	93.5	110.5	123
DN20	64.5	125	17.5	98	116	126

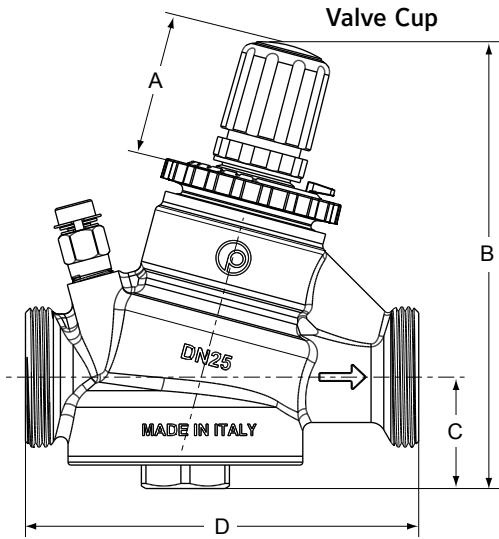


Size	A	B	C	D	E	F
DN15	80.5	145	14.5	80.5	98	124
DN15-VP10xHDC	80.5	147	14.5	93.5	110.5	127
DN20	80.5	150	17.5	98	116	131

# VP1000

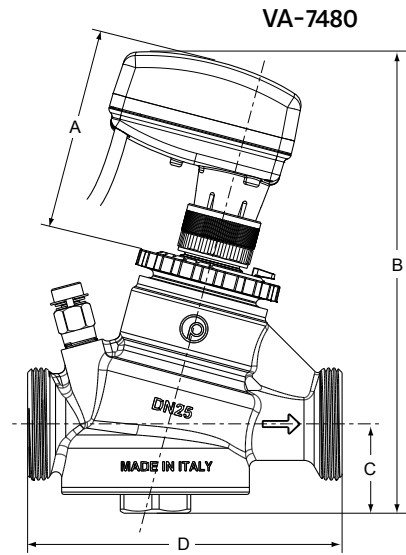
## DN15...50 Threaded Pressure Independent Control Valves

### Axial DN25 - DN32



Size	A	B	C	D*
DN25	47	152	38	184
DN32				209

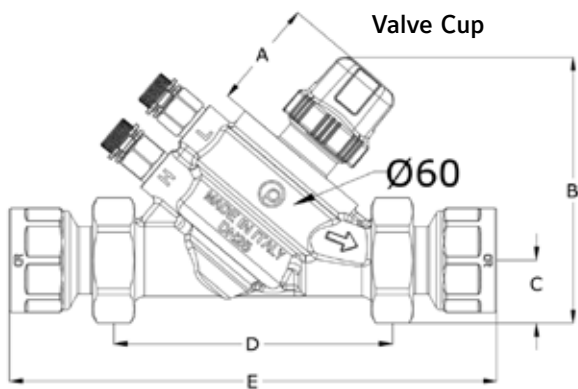
Note  
\*Dimensional data without fittings



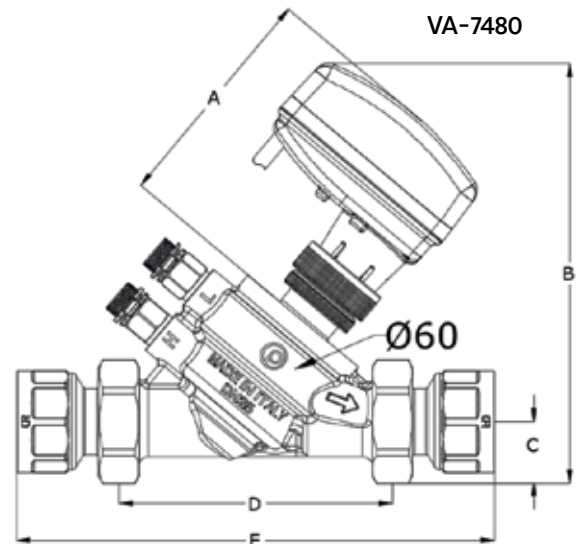
Size	A	B	C	D*
DN25	83	196	38	184
DN32				209

Note  
\*Dimensional data without fittings

### Compact Axial DN25 - DN32



Size	A	B	C	D	E
DN25	41	99	24	108	182
DN32	46	113	30	120	194



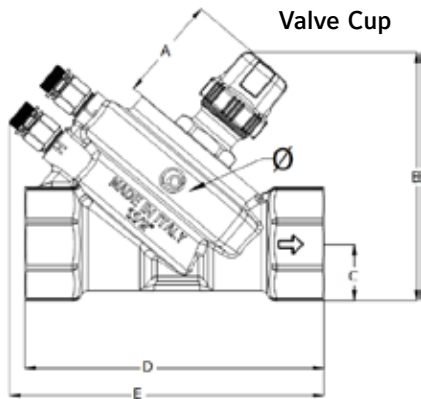
Size	A	B	C	D	E
DN25	83	155	23.5	108	182
DN32	88	169	30	120	194



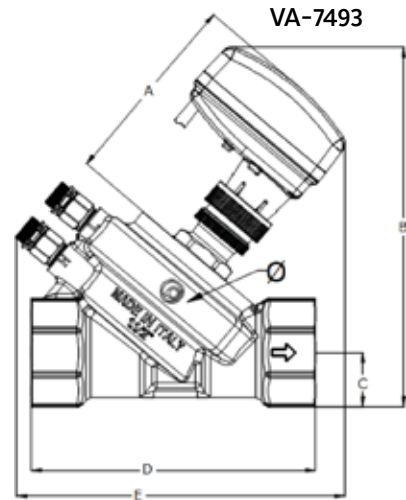
# VP1000

DN15...50 Threaded Pressure Independent Control Valves

## Compact Axial DN40

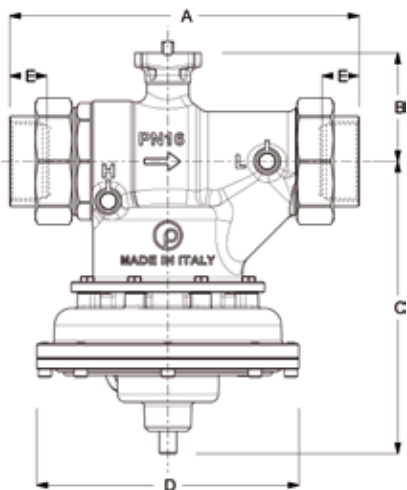


Size	A	B	C	D	E
DN40	49.5	119	27	143	150.5



Size	A	B	C	D	E
DN40	98.5	181	27	143	165

## Ball Valves DN40 - DN50



Size	A	B	C	D	E	Fittings
DN40	230	89	180	156	23.6	1 1/4", 1 1/2" or 2"
DN50	264	97	221	198	28	2"

# VP1000

## DN15...50 Threaded Pressure Independent Control Valves

### Assessories

Codes	Description
VA64	Adapter for VA-708x when used with DN15 / DN20
OA7010	Adapter for VA-748x when used with DN15 / DN20
OA748X	Adapter for VA-748x when used with DN25 / DN32
VA93	Adapter for VA-7493 when used with compact valve DN40
T90	Pressure Plug (quantity 2)
REPLCRT-HAA	Cartridge for Compact PICV DN15 150 l/h
REPLCRT-HDA	Cartridge for Compact PICV DN15 450 l/h
REPLCRT-JAJ	Cartridge for Compact PICV DN20 1000 l/h
REPLCRT-JDB	Cartridge for Compact PICV DN20 1850 l/h
INSL-01	Insulation case for Compact PICV DN15
INSL-03	Insulation case for Compact PICV DN20
INSL-05	Insulation case for Compact PICV DN25
VP1DM	Digital differential pressure manometer
B90T	2x union nuts with O-rings for VP1000 ball valve DN40
B91	2x union nuts with O-rings for VP1000 ball valve DN50

### Assembly Codes for Ball Valve Series

Valve and actuator could be assembled in factory. This option has to be evaluated with JC sales representative. Code of the assembly is obtained by adding an actuator suffix to the valve code. Actuator suffix identifies the type of actuator.

Example: Non spring return Actuator mounted on VP101EBC Ball Valve. Item code of the assembly is VP101EBC+510HGA

Codes	Description
+510HGA*	VA9310-HGA-1, 10 Nm Non Spring Return Actuator, 24 V AC/DC, Proportional Control
+538GGA	VA9208-GGA-1, 8 Nm Spring Return Actuator, 24 V AC/DC, Proportional Control, assembled in Spring Open Valve configuration
+538GGC	VA9208-GGC-1, 8 Nm Spring Return Actuator, 24 V AC/DC, Proportional Control, two auxiliary switches, assembled in Spring Open Valve configuration
+558GGA	VA9208-GGA-1, 8 Nm Spring Return Actuator, 24 V AC/DC, Proportional Control, assembled in Spring Close Valve configuration
+558GGC	VA9208-GGC-1, 8 Nm Spring Return Actuator, 24 V AC/DC, Proportional Control, two auxiliary switches, assembled in Spring Close Valve configuration

#### Note

\* Auxiliary switches available as kit. See Product Bulletin of VA9310 for more details.





# VPMA

## DN50...250 Flanged Pressure Independent Control Valves

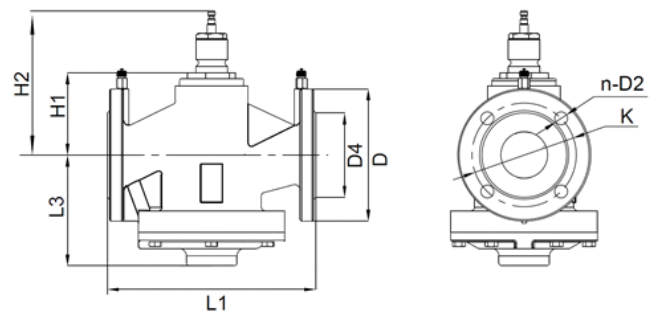
VPMA Pressure Independent Control Valve (PICV) performs the function of two valves (balancing and adjustments) in a unique body that allows the adjustment of the flow rate in case of partial load of the system and also ensures a stable adjustment of the supply connected to it. Valves are available in 2 way configuration. VPMA range covers valves from DN50 to DN250 and a flow capacity from 21.000 l/h to 240.000 l/h. VPMA valves are compatible with linear actuators from VAP series.

### Features

- PN16
- Ductile Iron
- Kvs calculation is not necessary. Flow rate is the only parameter to consider.
- 2 Way Push-Down-To-Close (PDTC, normally open) configuration
- Fluid temperature: water -10 to 120 °C
- Equal percentage flow characteristic
- Leakage: < 0.01% (Class IV)
- Operating pressure drop: 500 kPa max
- Pressure ports



### Dimensions (in mm)



DN	D	n-D2	D4	K	L1	L3	H1	H2	Weight (kg)
65	Ø 185	4 - Ø 19	Ø 118	Ø 145	290	155	115	191.5	24
80	Ø 200	8 - Ø 19	Ø 132	Ø 160	310	167	148	224.5	34
100	Ø 220	8 - Ø 19	Ø 156	Ø 180	350	181	150	226.5	49
125	Ø 250	8 - Ø 19	Ø 184	Ø 210	400	197	163	239.5	63
150	Ø 285	8 - Ø 19	Ø 211	Ø 240	480	222	198	274.5	82
200	Ø 340	12 - Ø 23	Ø 266	Ø 295	500	245	180	256.5	129
250	Ø 405	12 - Ø 23	Ø 319	Ø 355	600	277	210	286.5	195

# VPMA

DN50...250 Flanged Pressure Independent Control Valves

## Ordering information

Valves	DN	Flow rate Max. (m <sup>3</sup> /h)	Stroke (mm)	Start-up $\Delta P$ (kPa)	Pressure Ports	Actuators
VPMA6065P-C	DN65	21	20	35	Yes	VAP600S-24-C
VPMA6080P-C	DN80	28	40			VAP1000L-24-C
VPMA6100P-C	DN100	50	40			VAP1000L-24-C
VPMA6125P-C	DN125	90	40			VAP1000L-24-C
VPMA6150P-C	DN150	145	40			VAP1000L-24-C
VPMA6200P-C	DN200	208	40			VAP3000L-24-C
VPMA6250P-C	DN250	240	40			VAP3000L-24-C



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