

## ISO 5211-Compliant Actuators for Swagelok® Ball Valves



### 40G, 40, 60, and 83 Series; and AFS Ball Valves

- Pneumatic rack and pinion actuators
- Actuators meet industry standards for interface: ISO 5211, NAMUR, and VDI/VDE 3845
- Available factory assembled or in kits for field assembly

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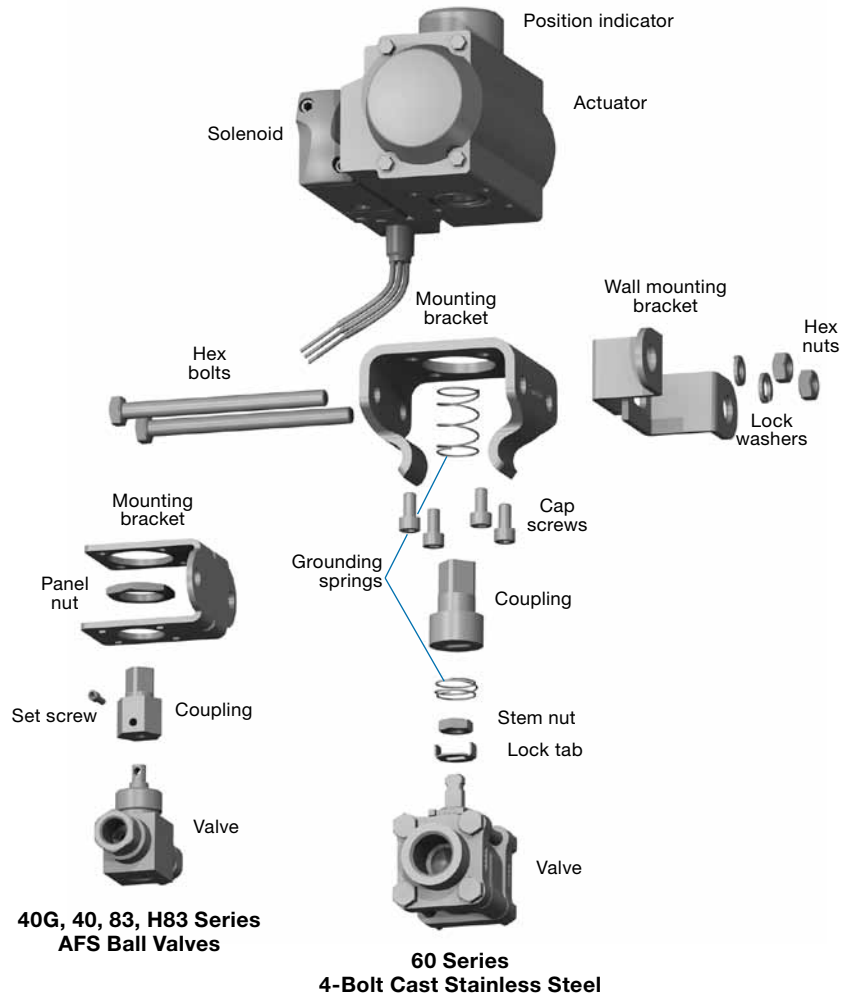
## ISO 5211-Compliant Pneumatic Actuators

Swagelok ISO 5211-compliant rack and pinion pneumatic actuators are suitable for general applications. They are available in spring-return and double-acting modes on straight and angle-pattern valves.

Swagelok can provide complete actuated ball valve assemblies—including valves, actuators, sensors, bracket kits, and solenoids—with interfaces that meet ISO 5211, NAMUR, and VDI/VDE 3845.

Valve-actuator assemblies listed in this catalog are based on:

- maximum valve pressure
- ambient temperature (50 to 100°F [10 to 37°C])
- a design margin of 20 % for calculated operating torque. For information on valve operating torque calculation, see the Swagelok *Actuated Ball Valve Selection Guide, ISO 5211-Compliant Actuator Mounting Bracket Kits, MS-02-136*.



## Actuator Service Ratings

Maximum actuator pressure is 116 psig (8.0 bar).

Actuator Service	Temperature Range °F (°C)	Ordering Designator
Standard	-4 to 176 (-20 to 80)	—
High temperature	5 to 302 (-15 to 150)	-HT
Low temperature	-40 to 176 (-40 to 80)	-LT

## Certifications

Factory-assembled Swagelok ISO 5211-compliant actuators can be ATEX certified on request at the time of order quotation. ATEX certification is not available for field assemblies.

## Actuator Materials of Construction

Component	Material
Housing	Aluminum
End cap	Cast aluminum
Plug	Buna N
O-rings	Buna N—standard
	Fluorocarbon FKM (FPM)—high temperature
	Silicone—low temperature
Drive shaft	Alloy C-22
Spring cartridge	SiCr spring alloy steel
Cap screws	304 SS
Position indicator	Glass-reinforced polypropylene

Additional materials may be available. Contact your authorized Swagelok representative.

### 40G and 40 Series Valves

For valve features, materials of construction, and technical data, see the Swagelok *One-Piece Instrumentation Ball Valves—40G Series* catalog, MS-02-331, and the *Swagelok Instrument Ball Valves—40 Series* catalog, MS-01-60.

Valve-actuator assemblies on this page are based on:

- maximum valve pressure
- ambient temperature (50 to 100°F [10 to 37°C])

### Ordering Information

To order a 40G series or 40 series ball valve factory assembled with actuator and mounting bracket, add an actuator designator to a valve ordering number from the catalogs listed above.

Example: **SS-43GS4-A15C3**

To order an actuator and mounting bracket kit for field assembly, select both an actuator ordering number and a corresponding mounting bracket kit for each valve.

Example: **MS-A15-3-DIN** and **SS-MB-43G-F04-11DIN-M**



*For field assembly to ISO 5211-compliant actuators, 40 series ball valves must contain a two-flat, K-style stem. To order a 40 series valve with a K-style stem and no handle, add **-K-NH** to the valve ordering number.*

*Example: SS-43S4-K-NH*

### 40G Series

Valve Series	Actuator Model	Minimum Actuator Pressure, psig (bar)		Actuator Designators			Actuator Ordering Numbers		Mounting Bracket Kit Ordering Number
		Spring Return	Double Acting	Spring Return		Double Acting	Spring Return	Double Acting	
				Normally Closed	Normally Open				
<b>2-Way Valves</b>									
41G, 42G	A15	36 (2.5)	36 (2.5)	-A15C3	-A15O3	-A15D	MS-A15-3-DIN	MS-A15-DA-DIN	SS-MB-41G-F04-11DIN-M <sup>①</sup>
43G	A15	43 (3.0)	36 (2.5)	-A15C3	-A15O3	-A15D	MS-A15-3-DIN	MS-A15-DA-DIN	SS-MB-43G-F04-11DIN-M
<b>3-Way Valves</b>									
41G, 42G	A15	—	36 (2.5)	—	—	-A15XD	—	MS-A15-XDA-DIN	SS-MB-41G-F04-11DIN-M <sup>①</sup>
43G	A15	—	36 (2.5)	—	—	-A15XD	—	MS-A15-XDA-DIN	SS-MB-43G-F04-11DIN-M

① 42G series valves with VCO<sup>®</sup> or VCR<sup>®</sup> end connections mounted to an actuator are only available factory assembled.

### 40 Series

Valve Series	Seat Material	Actuator Model	Minimum Actuator Pressure, psig (bar)		Actuator Designators			Actuator Ordering Numbers		Mounting Bracket Kit Ordering Number						
			Spring Return	Double Acting	Spring Return		Double Acting	Spring Return	Double Acting							
					Normally Closed	Normally Open										
<b>2-Way Valves</b>																
41 42	PTFE, UHMWPE, PTFE (-1466)	A15	36 (2.5)	36 (2.5)	-A15C3	-A15O3	-A15D	MS-A15-3-DIN	MS-A15-DA-DIN	SS-MB-41-F04-11DIN-M <sup>①</sup>						
43	PTFE	A15	43 (3.0)	36 (2.5)	-A15C3	-A15O3	-A15D	MS-A15-3-DIN	MS-A15-DA-DIN	SS-MB-43-F04-11DIN-M						
	UHMWPE	A15	36 (2.5)													
44	PTFE (-1466)	A15	36 (2.5)	36 (2.5)	-A15C3	-A15O3	-A15D	MS-A15-3-DIN	MS-A15-DA-DIN	SS-MB-43-F04-11DIN-M						
	PTFE	A15	50 (3.5)								-A15C4	-A15O4	-A15D	MS-A15-4-DIN	MS-A15-DA-DIN	SS-MB-44-F04-11DIN-M
	UHMWPE	A30	50 (3.5)								-A30C4	-A30O4	-A15D	MS-A30-4-DIN		SS-MB-44-F05-14DIN-M
45	PTFE (-1466)	A30	43 (3.0)	36 (2.5)	-A30C3	-A30O3	-A15D	MS-A30-3-DIN	MS-A15-DA-DIN	SS-MB-44-F05-14DIN-M						
	PTFE	A30	65 (4.5)								-A30C4	-A30O4	-A30D	MS-A30-4-DIN	MS-A30-DA-DIN	SS-MB-45-F05-14DIN-M
	UHMWPE	A60	50 (3.5)								-A60C4	-A60O4	-A30D	MS-A60-4-DIN		
45	PTFE (-1466)	A60	43 (3.0)	50 (3.5)	-A60C3	-A60O3	-A30D	MS-A60-3-DIN	MS-A30-DA-DIN	SS-MB-45-F05-14DIN-M						
	PTFE	A30	36 (2.5)								-A30C4	-A30O4	-A30D	MS-A30-4-DIN		
	UHMWPE	A30	50 (3.5)								-A60C4	-A60O4	-A30D	MS-A60-4-DIN		
<b>3-Way Valves</b>																
41 42 43	PTFE UHMWPE PTFE (-1466)	A15	—	36 (2.5)	—	—	-A15XD	—	MS-A15-XDA-DIN	SS-MB-41-F04-11DIN-M <sup>①</sup>						
44	PTFE	A15	—	36 (2.5)	—	—	-A15XD	—	MS-A15-XDA-DIN	SS-MB-44-F04-11DIN-M						
	UHMWPE	A15	—	50 (3.5)	—	—	-A15XD	—	MS-A15-XDA-DIN							
	PTFE (-1466)	A15	—	43 (3.0)	—	—	-A15XD	—								
45	PTFE	A30	—	36 (2.5)	—	—	-A30XD	—	MS-A30-XDA-DIN	SS-MB-45-F05-14DIN-M						
	UHMWPE	A30	—	50 (3.5)	—	—	-A30XD	—								
	PTFE (-1466)	A30	—	50 (3.5)	—	—	-A30XD	—								

① 42 series valves with VCO or VCR end connections mounted to an actuator are only available factory assembled.

## 60 Series Valves

For valve features, materials of construction, and technical data, see the *Swagelok Ball Valves, General Purpose and Special Application—60 Series* catalog, MS-01-146.

Valve-actuator assemblies on this page are:

- for standard 4-bolt cast stainless steel valve bodies with reinforced PTFE seats and packing
- based on a –20 to 100°F (–28 to 37°C) system temperature and the valve cycling at least once per day but not more than once per hour.

For other valve body and seat materials or if your application falls outside of this scope, contact your Swagelok sales and service representative. For more information on actuated ball valves and torque, see the *Swagelok Actuated Ball Valve Selection Guide, ISO 5211-Compliant Actuator Mounting Bracket Kits*, MS-02-136.

### Ordering Information

To order a 60 series ball valve factory-assembled with an actuator and mounting bracket, add an actuator designator to a valve ordering number from the *Swagelok Ball Valves, General Purpose and Special Application—60 Series* catalog, MS-01-146.

Example: SS-62TS4-**A15C4**

To order an actuator and mounting bracket kit for field assembly, select both an actuator ordering number and a corresponding mounting bracket kit for each valve.

Example: **MS-A15-4-DIN** and **SS-MB-62-F04-11DIN-M**



Swagelok 63 series valve with actuator, solenoid, and proximity sensor.

Valve Series	Actuator Model	Minimum Actuator Pressure, psig (bar)		Actuator Designators			Actuator Ordering Numbers		Mounting Bracket Kit Ordering Number
				Spring Return		Double Acting	Spring Return	Double Acting	
		Spring Return	Double Acting	Normally Closed	Normally Open				
<b>2-Way Valves</b>									
62	A15	50 (3.5)	36 (2.5)	-A15C4	-A15O4	-A15D	MS-A15-4-DIN	MS-A15-DA-DIN	SS-MB-62-F04-11DIN-M
63	A30	50 (3.5)	36 (2.5)	-A30C4	-A30O4	-A30D	MS-A30-4-DIN	MS-A30-DA-DIN	SS-MB-63-F05-14DIN-M
65	A60	72 (5.0)	36 (2.5)	-A60C5	-A60O5	-A60D	MS-A60-5-DIN	MS-A60-DA-DIN	SS-MB-65-F05-14DIN-M
67	A100	65 (4.5)	43 (3.0)	-A100C5	-A100O5	-A100D	MS-A100-5-DIN	MS-A100-DA-DIN	SS-MB-67-F07-17DIN-M
	A150	61 (4.2)	43 (3.0)	-A150C4	-A150O4	-A100D	MS-A150-4-DIN	MS-A100-DA-DIN	SS-MB-67-F07-17DIN-M
68	A150	65 (4.5)	58 (4.0)	-A150C5	-A150O5	-A100D	MS-A150-5-DIN	MS-A100-DA-DIN	SS-MB-68-F07-17DIN-M
	A220	50 (3.5)	58 (4.0)	-A220C4	-A220O4	-A100D	MS-A220-4-DIN	MS-A100-DA-DIN	SS-MB-68-F07-17DIN-M
<b>3-Way Valves</b>									
62	A15		36 (2.5)			-A15XD		MS-A15-XDA-DIN	SS-MB-62-F04-11DIN-M
63	A30		36 (2.5)			-A30XD		MS-A30-XDA-DIN	SS-MB-63-F05-14DIN-M
65	A60	–	36 (2.5)	–	–	-A60XD	–	MS-A60-XDA-DIN	SS-MB-65-F05-14DIN-M
67	A100		43 (3.0)			-A100XD		MS-A100-XDA-DIN	SS-MB-67-F07-17DIN-M
68	A100		58 (4.0)			-A100XD		MS-A100-XDA-DIN	SS-MB-68-F07-17DIN-M
<b>3-Way Valves with L Flow Pattern</b>									
62	A15	50 (3.5)	36 (2.5)	-A15S4		-A15D	MS-A15-4-DIN	MS-A15-DA-DIN	SS-MB-62-F04-11DIN-M
63	A30	50 (3.5)	36 (2.5)	-A30S4		-A30D	MS-A30-4-DIN	MS-A30-DA-DIN	SS-MB-63-F05-14DIN-M
65	A60	72 (5.0)	36 (2.5)	-A60S5		-A60D	MS-A60-5-DIN	MS-A60-DA-DIN	SS-MB-65-F05-14DIN-M
67	A100	65 (4.5)	43 (3.0)	-A100S5	–	-A100D	MS-A100-5-DIN	MS-A100-DA-DIN	SS-MB-67-F07-17DIN-M
	A150	61 (4.2)	43 (3.0)	-A150S4		-A100D	MS-A150-4-DIN	MS-A100-DA-DIN	SS-MB-67-F07-17DIN-M
68	A150	65 (4.5)	58 (4.0)	-A150S5		-A100D	MS-A150-5-DIN	MS-A100-DA-DIN	SS-MB-68-F07-17DIN-M
	A220	50 (3.5)	58 (4.0)	-A220S4		-A100D	MS-A220-4-DIN	MS-A100-DA-DIN	SS-MB-68-F07-17DIN-M

### 83 Series Valves

For valve features, materials of construction, and technical data, see the Swagelok *Trunnion Ball Valves—83 Series* catalog, MS-01-166.

Valve-actuator assemblies on this page are based on:

- maximum valve pressure
- ambient temperature (50 to 100°F [10 to 37°C])

#### Ordering Information

To order an 83 series ball valve factory-assembled with an actuator and mounting bracket, add an actuator designator to a valve ordering number from the catalog listed above.

Example: **SS-83KF4-A15C3**

To order an actuator and mounting bracket kit for field assembly, select both an actuator ordering number and a corresponding mounting bracket kit for each valve.

Example: **MS-A15-DA-DIN** and **SS-MB-83-F04-11DIN-M**



Swagelok 83 series valve with actuator.

Valve Series	Actuator Model	Minimum Actuator Pressure, psig (bar)		Actuator Designators			Actuator Ordering Numbers		Mounting Bracket Kit Ordering Number
				Spring Return			Spring Return	Double Acting	
		Spring Return	Double Acting	Normally Closed	Normally Open	Double Acting			
<b>2-Way Valves</b>									
83, H83	A15	43 (3.0)	36 (2.5)	-A15C3	-A15O3	-A15D	MS-A15-3-DIN	MS-A15-DA-DIN	SS-MB-83-F04-11DIN-M
<b>3-Way Valves</b>									
83, H83	A15	—	36 (2.5)	—	—	-A15XD	—	MS-A15-XDA-DIN	SS-MB-83-F04-11DIN-M

### Alternative Fuel Service (AFS) Ball Valves

For valve features, materials of construction, and technical data, see the Swagelok *Alternative Fuel Service (AFS) Ball Valves for High-Pressure, High-Flow Applications* catalog, MS-02-303.

Valve-actuator assemblies on this page are based on:

- maximum valve pressure
- ambient temperature (50 to 100°F [10 to 37°C])

#### Ordering Information

To order an AFS ball valve factory-assembled with an actuator and mounting bracket, add an actuator designator to a valve ordering number from the catalog listed above.

Example: **SS-AFSS6-A30C4**

To order an actuator and mounting bracket kit for field assembly, select both an actuator ordering number and a corresponding mounting bracket kit for each valve.

Example: **MS-A30-4-DIN** and **SS-MB-45-F05-14DIN-M**



Swagelok AFS ball valve with actuator.

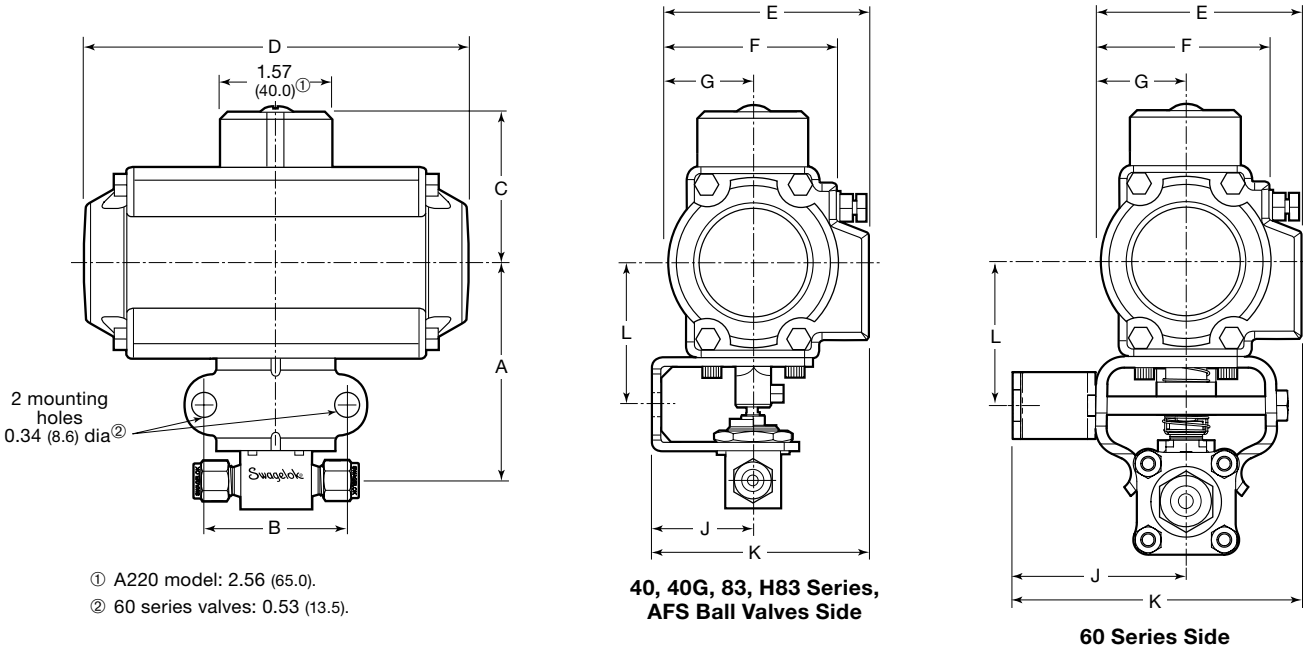
Valve Series	Actuator Model	Minimum Actuator Pressure, psig (bar)		Actuator Designators			Actuator Ordering Numbers		Mounting Bracket Kit Ordering Number
				Spring Return			Spring Return	Double Acting	
		Spring Return	Double Acting	Normally Closed	Normally Open	Double Acting			
AFS	A30	55 (3.8)	40 (2.8)	-A30C4	-A30O4	-A30D	MS-A30-4-DIN	MS-A30-DA-DIN	SS-MB-45-F05-14DIN-M



## Dimensions

Dimensions are for reference only and are subject to change. See appropriate product catalog for valve dimensions.

### Valve-Actuator Assembly

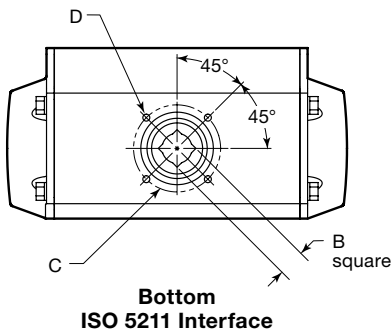
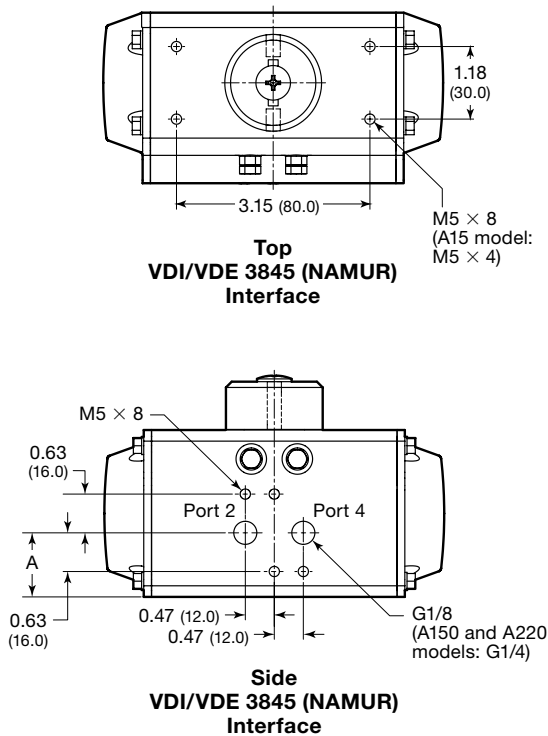


Valve Series	Actuator Model	Dimensions, in. (mm)									
		A	B	C	D	E	F	G	J	K	L
<b>2-Way Valves</b>											
41G, 41 42G, 42	A15	3.05 (77.5)	2.00 (50.8)	2.15 (54.5)	5.51 (140)	2.78 (70.5)	2.32 (59.0)	1.14 (29.0)	1.44 (36.6)	3.07 (78.0)	2.03 (51.6)
43G, 43	A15	3.12 (79.2)	2.00 (50.8)	2.15 (54.5)	5.51 (140)	2.78 (70.5)	2.32 (59.0)	1.14 (29.0)	1.44 (36.6)	3.07 (78.0)	2.02 (51.3)
44	A15	3.56 (90.4)	2.00 (50.8)	2.15 (54.5)	5.51 (140)	2.78 (70.5)	2.32 (59.0)	1.14 (29.0)	1.44 (36.6)	3.07 (78.0)	2.18 (55.4)
	A30	3.88 (98.6)		2.46 (62.5)	6.22 (158)	3.27 (83.0)	2.83 (72.0)	1.42 (36.0)	1.72 (43.7)	3.57 (90.7)	2.49 (63.2)
45	A30	4.20 (107)	2.19 (55.6)	2.46 (62.5)	6.22 (158)	3.27 (83.0)	2.83 (72.0)	1.42 (36.0)	1.72 (43.7)	3.57 (90.7)	2.59 (65.8)
	A60	4.54 (115)		2.80 (71.1)	8.27 (210)	3.72 (94.5)	3.33 (84.5)	1.67 (42.5)		3.77 (95.8)	2.93 (74.4)
62	A15	3.73 (94.7)	4.50 (114)	2.15 (54.5)	5.51 (140)	2.78 (70.5)	2.32 (59.0)	1.14 (29.0)	2.90 (73.7)	4.61 (117)	2.18 (55.4)
63	A30	4.12 (105)	4.50 (114)	2.46 (62.5)	6.22 (158)	3.27 (83.0)	2.83 (72.0)	1.42 (36.0)	2.92 (74.2)	4.77 (121)	2.50 (63.5)
65	A60	5.80 (147)	4.50 (114)	2.80 (71.1)	8.27 (210)	3.72 (94.5)	3.33 (84.5)	1.67 (42.5)	3.30 (83.8)	5.41 (137)	3.62 (91.9)
	A100	6.06 (154)		3.05 (77.5)	9.76 (248)	4.17 (106)	3.84 (97.5)	1.95 (49.5)			3.88 (98.6)
67	A100	6.55 (166)	4.50 (114)	3.05 (77.5)	9.76 (248)	4.17 (106)	3.84 (97.5)	1.95 (49.5)	3.58 (90.9)	5.98 (152)	4.12 (105)
	A150	6.79 (172)		3.29 (83.5)	10.6 (268)	4.84 (123)	4.37 (111)	2.20 (56.0)		6.21 (158)	4.36 (111)
68	A100	6.70 (170)	4.50 (114)	3.05 (77.5)	9.76 (248)	4.17 (106)	3.84 (97.5)	1.95 (49.5)	3.58 (90.9)	5.81 (148)	4.12 (105)
	A150	6.93 (176)		3.29 (83.5)	10.6 (268)	4.84 (123)	4.37 (111)	2.20 (56.0)		6.21 (158)	4.36 (111)
	A220	7.14 (181)		4.02 (102)	12.4 (315)	5.55 (141)	5.00 (127)	2.52 (64.0)		3.58 (90.9)	6.61 (168)
83, H83	A15	3.43 (87.1)	2.00 (50.8)	2.15 (54.5)	5.51 (140)	2.78 (70.5)	2.32 (59.0)	1.14 (29.0)	1.44 (36.6)	3.07 (78.0)	2.14 (54.4)
AFS	A30	4.27 (108)	2.19 (55.6)	2.46 (62.5)	6.22 (158)	3.27 (83.0)	2.83 (72.0)	1.42 (36.0)	1.72 (43.7)	3.57 (90.7)	2.59 (65.8)
<b>3-Way Valves</b>											
41G, 41 42G, 42	A15XD	3.05 (77.5)	2.00 (50.8)	2.15 (54.5)	7.76 (197)	2.78 (70.5)	2.32 (59.0)	1.14 (29.0)	1.44 (36.6)	3.07 (78.0)	2.03 (51.6)
43G, 43	A15XD	3.12 (79.2)	2.00 (50.8)	2.15 (54.5)	7.76 (197)	2.78 (70.5)	2.32 (59.0)	1.14 (29.0)	1.44 (36.6)	3.07 (78.0)	2.02 (51.3)
44	A15XD	3.56 (90.4)	2.00 (50.8)	2.15 (54.5)	7.76 (197)	2.78 (70.5)	2.32 (59.0)	1.14 (29.0)	1.44 (36.6)	3.07 (78.0)	2.18 (55.4)
45	A30XD	4.20 (107)	2.19 (55.6)	2.46 (62.5)	8.70 (221)	3.27 (83.0)	2.83 (72.0)	1.42 (36.0)	1.72 (43.7)	3.57 (90.7)	2.59 (65.8)
62	A15XD	3.73 (94.7)	4.50 (114)	2.15 (54.5)	7.76 (197)	2.78 (70.5)	2.32 (59.0)	1.14 (29.0)	2.90 (73.7)	4.61 (117)	2.18 (55.4)
63	A30XD	4.12 (105)	4.50 (114)	2.46 (62.5)	8.70 (221)	3.27 (83.0)	2.83 (72.0)	1.42 (36.0)	2.92 (74.2)	4.77 (121)	2.50 (63.5)
65	A60XD	5.80 (147)	4.50 (114)	2.80 (71.1)	11.7 (298)	3.72 (94.5)	3.33 (84.5)	1.67 (42.5)	3.30 (83.8)	5.41 (137)	3.62 (91.9)
67	A100XD	6.55 (166)	4.50 (114)	3.05 (77.5)	13.7 (348)	4.17 (106)	3.84 (97.5)	1.95 (49.5)	3.58 (90.9)	5.98 (152)	4.12 (105)
68	A100XD	6.93 (176)	4.50 (114)	3.05 (77.5)	13.7 (348)	4.17 (106)	3.84 (97.5)	1.95 (49.5)	3.58 (90.9)	5.98 (152)	4.12 (105)
83, H83	A15XD	3.43 (87.1)	2.00 (50.8)	2.15 (54.5)	7.76 (197)	2.78 (70.5)	2.32 (59.0)	1.14 (29.0)	1.44 (36.6)	3.07 (78.0)	2.14 (54.4)

## Dimensions

Dimensions, in inches (millimeters) and pounds (kilograms), are for reference only and are subject to change.

### Actuator Housing



Actuator Model	ISO 5211 Flange Size	Dimensions, in. (mm)			
		A	B	C	D
A15	F04	1.04 (26.5)	0.43 (11)	1.65 (42)	M5 × 8
A30	F05	1.18 (30.0)	0.55 (14)	1.97 (50)	M6 × 9
A60	F05	1.20 (30.5)	0.55 (14)	1.97 (50)	M6 × 9
A100	F07	1.28 (32.5)	0.67 (17)	2.76 (70)	M8 × 12
A150	F07	1.48 (37.5)	0.67 (17)	2.76 (70)	M8 × 12
A220	F07	1.68 (42.5)	0.67 (17)	2.76 (70)	M8 × 12

### Actuator Weights

#### 2-Way Valves

Actuator Ordering Number	Weight lb (kg)
MS-A15-DA-DIN	2.2 (1.0)
MS-A15-3-DIN	
MS-A15-4-DIN	
MS-A30-DA-DIN	3.5 (1.6)
MS-A30-3-DIN	
MS-A30-4-DIN	
MS-A60-DA-DIN	6.0 (2.7)
MS-A60-3-DIN	6.4 (2.9)
MS-A60-4-DIN	6.6 (3.0)
MS-A60-5-DIN	6.8 (3.1)
MS-A100-DA-DIN	8.4 (3.8)
MS-A100-4-DIN	9.3 (4.2)
MS-A100-5-DIN	9.5 (4.3)
MS-A150-5-DIN	14.3 (6.5)
MS-A220-4-DIN	20.7 (9.4)

#### 3-Way Valves

Actuator Ordering Number	Weight lb (kg)
MS-A15-XDA-DIN	4.6 (2.1)
MS-A30-XDA-DIN	7.5 (3.4)
MS-A60-XDA-DIN	13.0 (5.9)
MS-A100-XDA-DIN	18.5 (8.4)

### Mounting Bracket Kits

#### 40G, 40, 83, H83 Series Valves; AFS Ball Valves

Kits contain:

- 316 stainless steel mounting bracket that meets ISO 5211 dimensional specifications
- four A4 stainless steel socket head cap screws (A4 is approximately equivalent to AISI 316.)
- Coupling
  - 40G series—powdered metal 300 series stainless steel
  - 40 and 83 series and AFS ball valves—316 stainless steel
- A4 stainless steel set screw
- instructions.

#### 60 Series Valves (4-Bolt Cast Stainless Steel)

Kits contain:

- 316 stainless steel mounting bracket that meets ISO 5211 dimensional specifications
- four A4 stainless steel socket head cap screws (A4 is approximately equivalent to AISI 316.)
- 316 stainless steel coupling
- 316 stainless steel wall mounting bracket
- two 316 stainless steel lock washers
- 302 stainless steel upper and lower grounding springs
- 316 stainless steel lock tab
- two 316 stainless steel hex nuts and bolts
- lubricant and MSDS
- instructions.

For 60 series valves with other body materials and for 8-bolt 60 series valves, contact your authorized Swagelok representative.

## Options

### For Field Assembly or Factory Assembly

#### ***Solenoid Valves***

Attach to the actuator to create an electropneumatically actuated ball valve assembly.

#### ***Position Indicators***

Provide visual status of a valve.

#### ***Limit Switches and Proximity Sensors***

Indicate actuator position by means of an electrical signal. They meet a variety of NEMA ratings such as NEMA 4 (weatherproof) and NEMA 7 (explosion proof).

All electrical components listed above meet North American NEMA and European CE/GENELEC requirements. Contact your authorized Swagelok representative for ordering information.

**⚠ Caution: Actuated assemblies must be properly aligned and supported. Improper alignment or inadequate support of the actuated assembly may result in leakage or premature valve failure.**

#### **Safe Product Selection**

**When selecting a product, the total system design must be considered to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.**

**Caution: Do not mix or interchange valve components with those of other manufacturers.**

## Warranty Information

Swagelok products are backed by The Swagelok Limited Lifetime Warranty. For a copy, visit [swagelok.com](http://swagelok.com) or contact your authorized Swagelok representative.