

ISO 5211-Compliant Pneumatic Actuators



These Swagelok rack and pinion pneumatic actuators are ISO 5211 compliant and are suitable for general applications. They are available in spring-return and double-acting modes. Straight, angle-pattern, and 3-way valves with **H** and **L** flow paths require 90° actuation; all other 3-way valves require 180° actuation.

For technical data, including actuator materials of construction and weight, see the *Swagelok Ball Valve Actuation Options* catalog, MS-02-343.

For additional information on selecting and sizing ISO 5211-compliant actuators, see the *Actuated Ball Valve Selection Guide—ISO 5211-Compliant Actuator Mounting Bracket Kits*, MS-02-136.

Certifications

Factory-assembled valve assemblies with ISO 5211-compliant actuators are available with ATEX conformity on request at the time of order quotation. ATEX certification is not available for field assemblies.

⚠ 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.

Pressure-Temperature Ratings

Maximum actuator pressure is 116 psig (8.0 bar). See **Minimum Actuator Pressure** table below for minimum actuator pressures.

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

Minimum Actuator Pressure

40G Series and 40 Series

Valve Series ^①	Actuator Model	Actuator Model Designators			Actuation Modes	
		Spring Return		Double Acting	Spring Return	Double Acting
		Normally Open	Normally Closed			
41G, 42G, 41, 42	A10 (90°)	-A10O4	-A10C4	-A10D	50 (3.5)	36 (2.5)
	A15 (90°)	-A15O3	-A15C3	-A15D	36 (2.5)	36 (2.5)
41GX, 42GX, 41X, 42X	A15 (180°)	—	—	-A15XD	—	36 (2.5)
43G, 43	A10 (90°)	—	—	-A10D	—	43 (3.0)
	A15 (90°)	-A15O3	-A15C3	-A15D	43 (3.0)	36 (2.5)
43GX, 43X	A15 (180°)	②	②	-A15XD	—	36 (2.5)
44	A10 (90°)	—	—	-A10D	—	50 (3.5)
	A15 (90°)	-A15O4	-A15C4	-A15D	50 (3.5)	36 (2.5)
44X	A15 (180°)	②	②	-A15XD	—	36 (2.5)
45	A30 (90°)	-A30O4	-A30C4	-A30D	65 (4.5)	36 (2.5)
45X	A30 (180°)	③	③	-A30XD	—	36 (2.5)

40T and 40E Series for Low-Temperature Service

Valve Series ^①	Packing Material	Actuator Model	Actuator Model Designators			Actuation Modes	
			Spring Return		Double Acting	Spring Return	Double Acting
			Normally Open	Normally Closed			
41, 42	PFA, UHMWPE	A10 (90°)	-A10O4	-A10C4	-A10D	50 (3.5)	36 (2.5)
		A15 (90°)	-A15O3	-A15C3	-A15D	36 (2.5)	36 (2.5)
41X, 42X	PFA, UHMWPE	A15 (180°)	②	②	-A15XD	—	36 (2.5)
43	PFA	A10 (90°)	—	—	-A10D	—	43 (3.0)
		A15 (90°)	-A15O3	-A15C3	-A15D	43 (3.0)	36 (2.5)
	UHMWPE	A10 (90°)	—	—	-A10D	—	43 (3.0)
		A15 (90°)	-A15O3	-A15C3	-A15D	36 (2.5)	36 (2.5)
43X	PFA, UHMWPE	A15 (180°)	②	②	-A15XD	—	36 (2.5)
44	PFA	A30 (90°)	-A30O3	-A30C3	-A30D	50 (3.5)	36 (2.5)
44X	PFA	A15 (180°)	②	②	-A15XD	—	43 (3.0)
45	PFA	A60 (90°)	-A60O4	-A60C4	-A30D	50 (3.5)	36 (2.5)
45X	PFA	A30 (180°)	③	③	-A30XD	—	36 (2.5)

① X designates switching (3-way) valve.

② 3-way valves with **H** and **L** flow paths: **-A15S3**

③ 3-way valves with **H** and **L** flow paths: **-A30S4**

See next page for **Dimensions and Ordering Information**.

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Ordering Information

Factory-Assembled Valves with Actuators

Typical Ordering Number

A B C
SS-43GS4 -A15D HT

A Valve Ordering Number

B Actuator Model

Based on valve series, actuation mode, and packing material, select actuator designator. See **Minimum Actuator Pressure** table, page 19.

C Actuator Service

HT = High temperature
None = Standard

Kits for Field Assembly

Order one actuator kit and one mounting bracket kit for each valve.

Actuator Kit Typical Ordering Number

A B C D
MS - A15 - DA - DIN -HT

A Actuator Model

Based on valve series and packing material, select actuator designator. See **Minimum Actuator Pressure** table, page 19.

A10 = A10
A15 = A15
A30 = A30
A60 = A60

B Actuation Mode

DA = Double acting (2-way valves)
XDA = Double acting (3-way valves)
3 = Spring return (41G, 42G, 43G, 41, 42, 43 series 2-way valves with A15 and A30 actuators)
4 = Spring return (41G, 41 series 2-way valves with A10 actuator; 44, 45 series 2-way valves)

C Coupling Drive Type

DIN

D Actuator Service

-HT = High temperature
None = Standard

For field assembly to ISO 5211-compliant actuators, 40G series and 40 series valves must contain a two-flat, K-style stem. K-style stems are standard for all 40G series valves and for many 44 and 45 series valves, but are optional for 41, 42, and 43 series valves. For more information, contact your Swagelok sales and service representative.

To order a valve with a two-flat, K-style stem and without a handle, if they are not standard, add -K-NH to the valve ordering number.

Example: B-43S4-K-NH

Mounting Bracket Kits

Swagelok ISO 5211 mounting bracket kits contain:

- 316 stainless steel mounting bracket
- Four A4 stainless steel socket head cap screws (A4 is approximately equivalent to 316 SS)
- Coupling
 - 40G series—powdered metal
 - 300 series stainless steel
 - 40 series—316 stainless steel
- A4 stainless steel set screw
- Instructions.

Valve Series ^①	Mounting Bracket Kit Ordering Number
41G, 41GX, 42G, 42GX	SS-MB-41G-F04-11DIN-M ^②
43G, 43GX	SS-MB-43G-F04-11DIN-M
41, 41X, 42, 42X	SS-MB-41-F04-11DIN-M ^②
43, 43X	SS-MB-43-F04-11DIN-M
44, 44X	SS-MB-44-F04-11DIN-M
45, 45X	SS-MB-45-F05-14DIN-M

^① X designates switching (3-way) valve.

^② 42G series and 42 series valves with VCO or VCR end connections mounted to a Swagelok ISO 5211-compliant pneumatic actuator are only available factory assembled.

Couplings and Set Screws

Replacement of 41, 42, or 43 series valves mounted to ISO 5211-compliant pneumatic actuators with equivalent 41G, 42G, or 43G series valves requires new couplings and set screws. To order, contact your authorized Swagelok representative.