



P Series Dual Scotch Yoke Pneumatic Valve Actuators



The Assured Automation P Series pneumatic actuators offer a simple and cost effective solution for your valve automation needs. For use on quarter turn (90°) ball valves, plug valves, dampers, and resilient seated butterfly valves.

FEATURES

- High duty cycle life, up to 1,000,000 cycles
- Double acting and spring return models
- Direct mounting to valve:
DIN/ISO 5211, DIN 3337 (F03 to F12)
- NAMUR solenoid and limit switch mounting
- Diamond & square output drive on all units
- Permanent lubrication
- Corrosion resistant coating
- Visual position indicator (Open/Closed)

SIZES & TORQUE OUTPUT

Output Torque: up to 35,400 in/lbs.

Spring Return

10 sizes

F03 to F12

**call for larger sizes*

Double Acting

11 sizes

F03 to F12

**call for larger sizes*

ACCESSORIES (see page 9 for details)

- NAMUR solenoid valves
- Limit Switches
- Positioners
- Automatic Thermal Shutoff Devices

TYPICAL APPLICATIONS

- Ball Valves
- Butterfly Valves
- Plug Valves

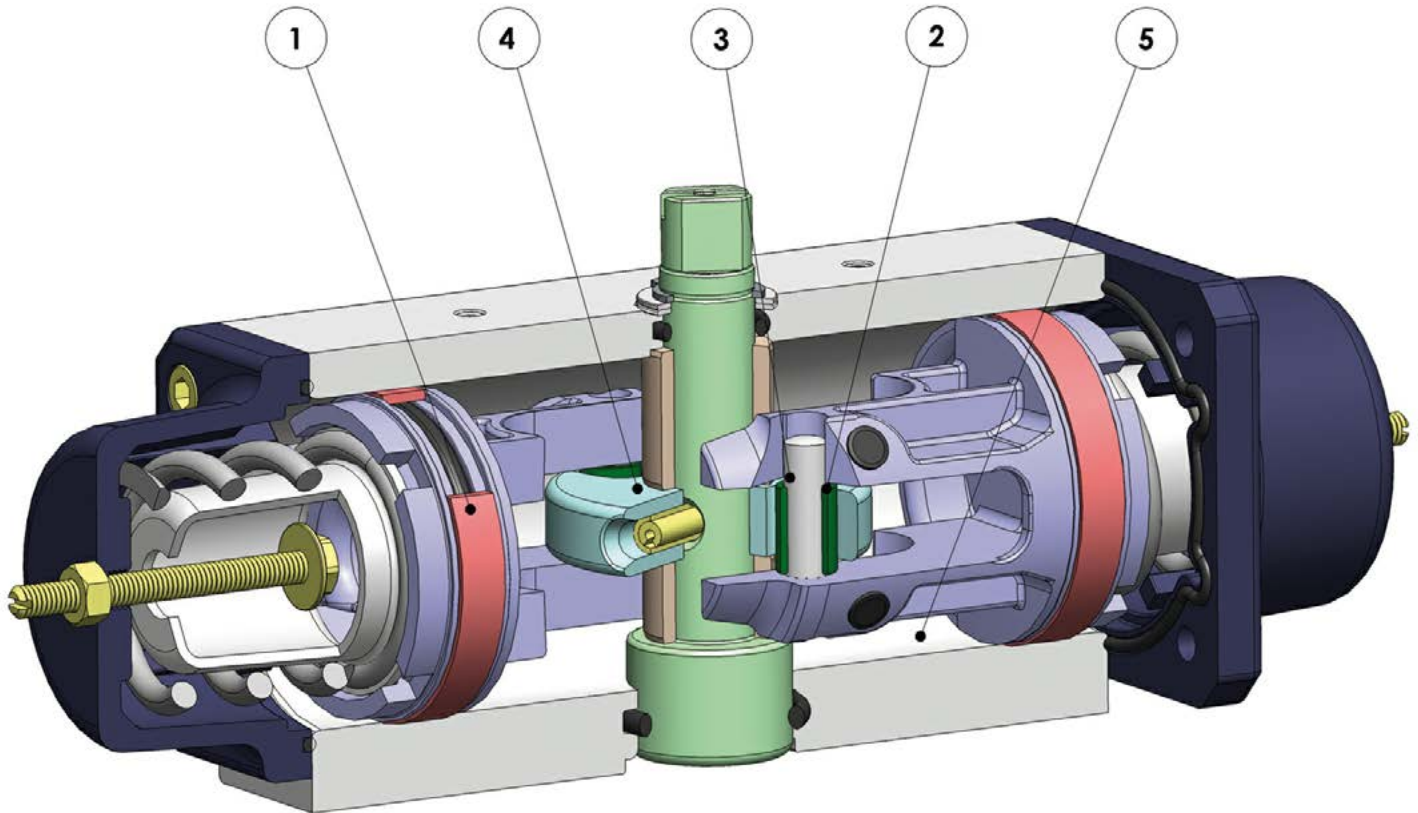


P Series



Dual Scotch Yoke Pneumatic Valve Actuators

CONSTRUCTION: Spring Return Actuators



Item	Name	Description & Benefits
1	Energized and self-lubricated strips	Less friction between piston and cylinder. It prevents the bonding of the seal to the cylinder even after long periods of inactivity
2	Slots, bushes, and pins	Made of steel with hardness higher than 50 HRC. Higher resistance to the forces inside the actuator
3	Rolling friction between piston and slot	Less friction
4	Scotch yoke with rolling friction (transforming rotary motion into linear motion using piston and shaft without teeth/gears)	<ul style="list-style-type: none"> • Reduced friction between piston and shaft with consequently less wear on these parts • Enhanced Breakaway Torque (BTO & BTC) • Smaller size than rack and pinion actuators (with the same torque) therefore less space required for installation. • Less weight than the rack and pinion (-30%) • Lower air consumption compared to the rack and pinion actuators (-40% for Double Acting and -20% for Spring Return) therefore less load on the compressor or the possibility of using a smaller compressor's size.
5	Rolled cylinder	Less wear of the energized ties thanks to the fine finish of the surface (0.15 micron Ra)

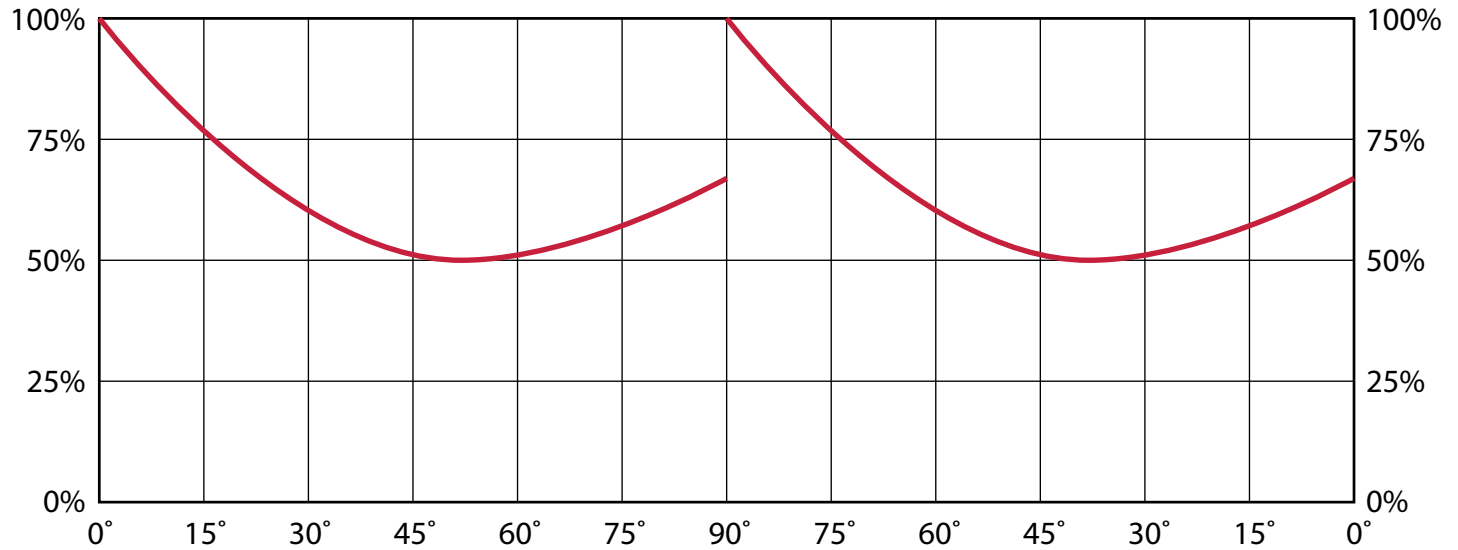


P Series



Dual Scotch Yoke Pneumatic Valve Actuators

TORQUE CURVE: Spring Return Actuators



TORQUE VALUES: Spring Return Actuators (in/lbs)

Size	60 PSI						80 PSI					
	Air Stroke			Spring Stroke			Air Stroke			Spring Stroke		
	0°	50°	90°	0°	50°	90°	0°	50°	90°	0°	50°	90°
SRN15	100	49.6	66.4	66.4	49.6	100	132.8	66.4	88.5	88.5	66.4	132.8
SRN30	199.1	100	132.8	132.8	100	199.1	265.5	132.8	177	177	132.8	265.5
SRN53	354	175	230	230	175	354	469	230	309	309	230	469
SRN60	398.3	199.1	265.5	265.5	199.1	398.3	531.1	265.5	354	354	265.5	531.1
SRN90	597.4	300	398.3	398.3	300	597.4	769.6	398.3	531.1	531.1	398.3	769.6
SRN120	796.6	398.3	531.1	531.1	398.3	796.6	1062.1	531.1	708.1	708.1	531.1	1062.1
SRN180	1194.9	597.4	796.6	796.6	597.4	1194.9	1593.2	796.6	1062.1	1062.1	796.6	1593.2
SRN240	1593.2	796.6	1062.1	1062.1	796.6	1593.2	2124.2	1062.1	1416.2	1416.2	1062.1	2124.2
SRN360	2389.7	1195.0	1593.1	1593.1	1195.0	2389.7	3186.3	2124.2	1593.1	1593.1	2124.2	3186.3
SRN480	3186.3	1593.1	2124.2	2124.2	1593.1	3186.3	4248.4	2124.2	2832.2	2832.2	2124.2	4248.4

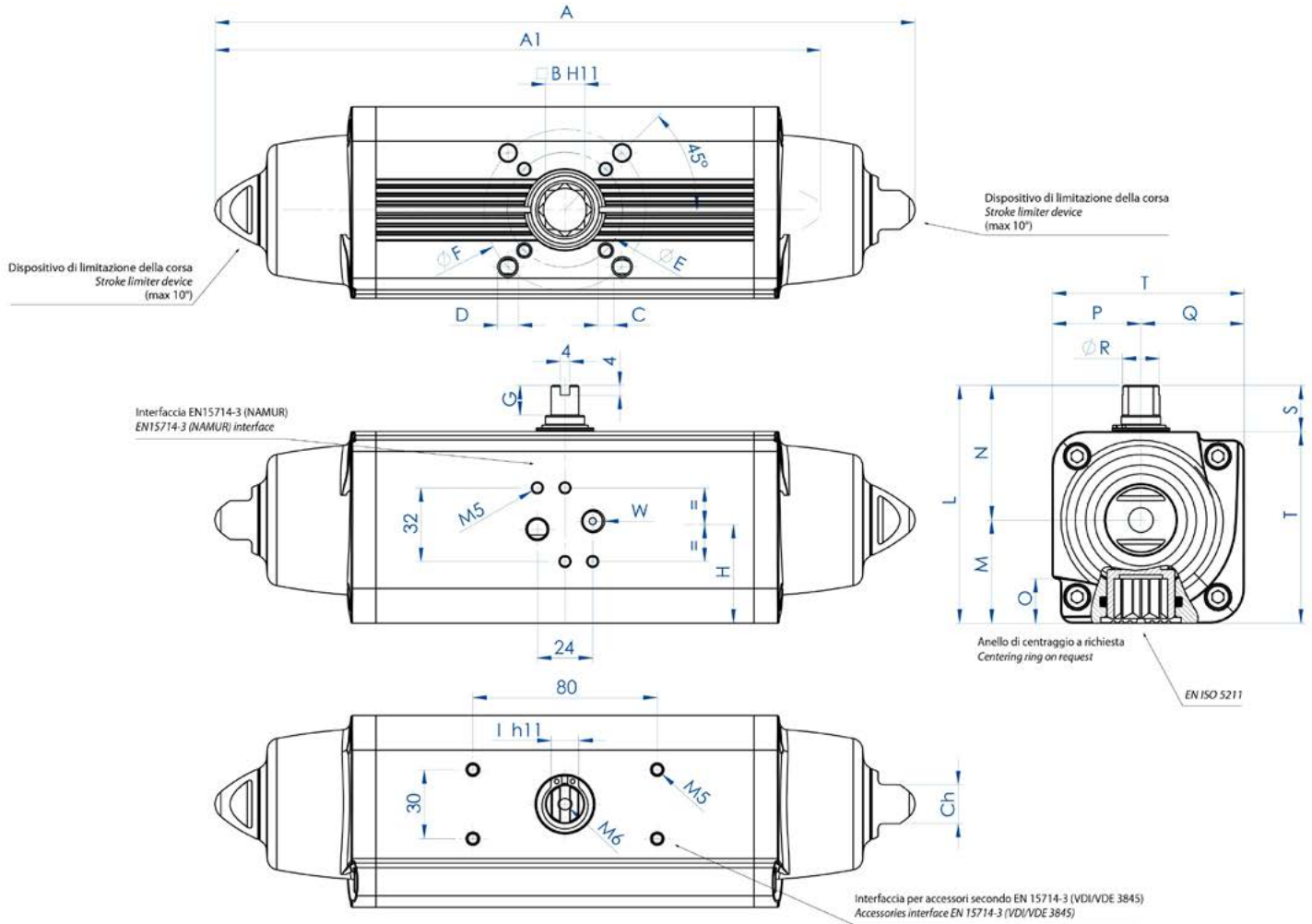


P Series



Dual Scotch Yoke Pneumatic Valve Actuators

DIMENSIONS: Spring Return Actuators





P Series



Dual Scotch Yoke Pneumatic Valve Actuators

DIMENSIONS: Spring Return Actuators

Dim.	SRN15	SRN30	SRN53	SRN60	SRN90	SRN120	SRN180	SRN240	SRN360	SRN480
ISO	F03/F05*	F05/F07*	F05/F07	F05/F07	F07/F10	F07/F10	F07/F10	F10/F12	F10/F12	F10/F12
A	233.3	259	304.3	360.8	393.7	409.6	474	520.5	613	648.2
A1	203.8	228.5	270.7	309.1	341.8	361.6	406.6	454.1	523	563.8
B	11	14	17	17	22	22	22	27	27	36
C	M5 x 8	M6 x 9	M6 x 9	M6 x 9	M8 x 12	M8 x 12	M8 x 12	M10 x 15	M10 x 15	M10 x 15
D	M6 x 9	M8 x 12	M8 x 12	M8 x 12	M10 x 15	M10 x 15	M10 x 15	M12 x 18	M12 x 18	M12 x 18
E	36	50	50	50	70	70	70	102	102	102
F	50	70	70	70	102	102	102	125	125	125
G	10	13	13	13	16	17	19	19	19.5	19.5
H	30.3	35.7	42.8	44.8	54.5	58.1	60	57.4	61.5	78
I	9	10	12	12	15	15	19	19	22	24
L	79.2	90.4	103.3	107	137.5	141.1	148	57.4	178	198
M	31.5	37.7	44.8	46.8	56.5	60.1	62	19	78.5	93.5
N	47.7	52.7	58.5	60.2	81	81	86	164.9	99.5	104.5
O	13.2	16.5	19.3	19.3	24.8	24.8	24.3	72.9	29.5	38.5
P	27.7	32.7	38.5	40.2	51	51	56	92	69.5	74.5
Q	31.5	37.7	44.8	46.8	56.5	60.1	62	29.5	78.5	93.5
R	10.9	14.5	16.2	18	20.2	22.5	25.5	62	31.8	36.5
S	20	20	20	20	30	30	30	30	30	30
T	59.2	70.4	83.3	87	107.5	111.1	118	134.9	148	168
W	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/4"	1/4"	1/4"
Ch	13	13	17	22	22	22	22	27	27	27
Weight	2.65 lbs.	4.3 lbs.	6.6 lbs.	7.4 lbs.	13 lbs.	15 lbs.	19.6 lbs.	26 lbs.	36.38 lbs.	50 lbs.
Air (per cycle)	0.09 dm ³	0.17 dm ³	0.30 dm ³	0.33 dm ³	0.55 dm ³	0.80 dm ³	1 dm ³	1.5 dm ³	2 dm ³	2.8 dm ³

Dimensions are in mm except where noted.

* F04 available as special request

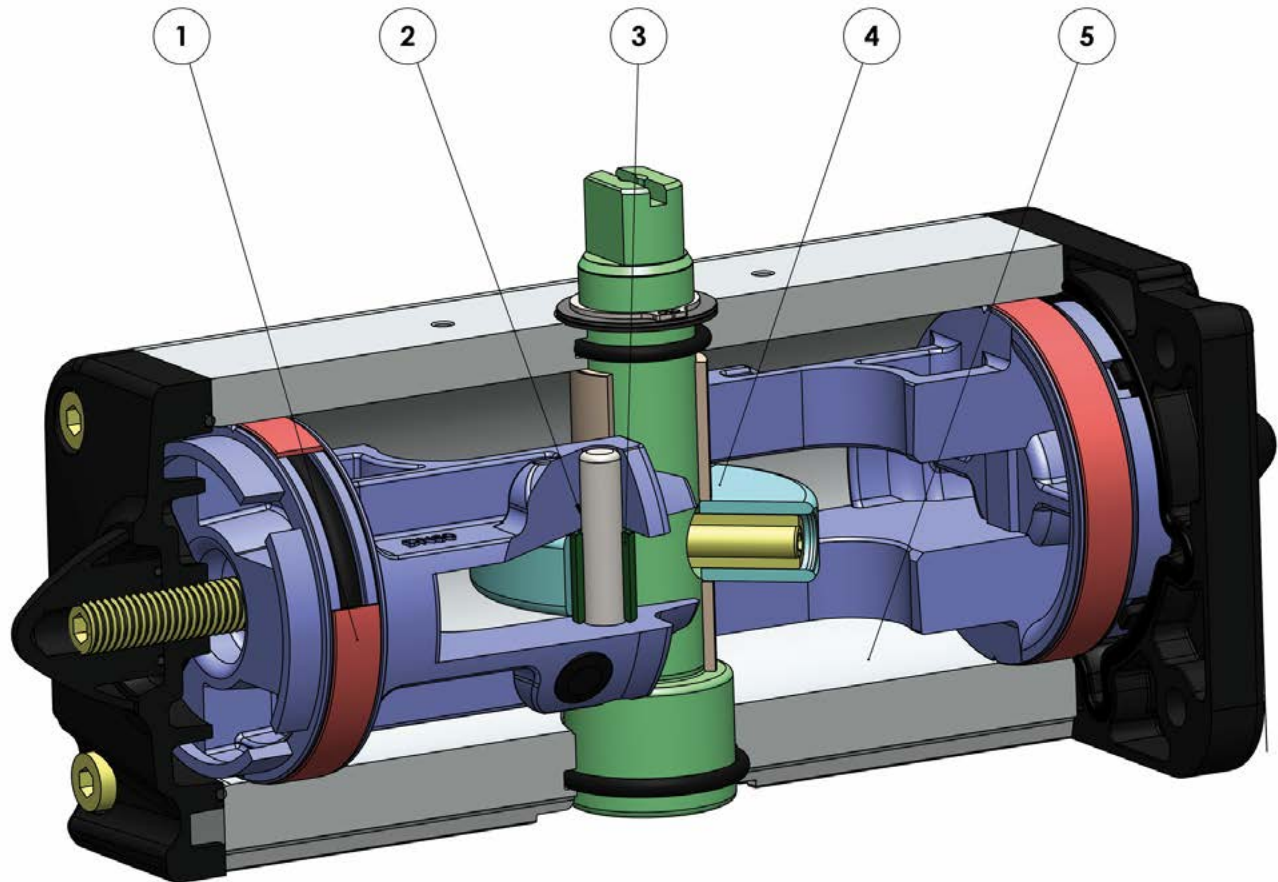


P Series



Dual Scotch Yoke Pneumatic Valve Actuators

CONSTRUCTION: Double Acting Actuators



Item	Name	Description & Benefits
1	Energized and self-lubricated strips	Less friction between piston and cylinder. It prevents the bonding of the seal to the cylinder even after long periods of inactivity
2	Slots, bushes, and pins	Made of steel with hardness higher than 50 HRC. Higher resistance to the forces inside the actuator
3	Rolling friction between piston and slot	Less friction
4	Scotch yoke with rolling friction (transforming rotary motion into linear motion using piston and shaft without teeth/gears)	<ul style="list-style-type: none"> • Reduced friction between piston and shaft with consequently less wear on these parts • Enhanced Breakaway Torque (BTO & BTC) • Smaller size than rack and pinion actuators (with the same torque) therefore less space required for installation. • Less weight than the rack and pinion (-30%) • Lower air consumption compared to the rack and pinion actuators (-40% for Double Acting and -20% for Spring Return) therefore less load on the compressor or the possibility of using a smaller compressor's size.
5	Rolled cylinder	Less wear of the energized ties thanks to the fine finish of the surface (0.15 micron Ra)

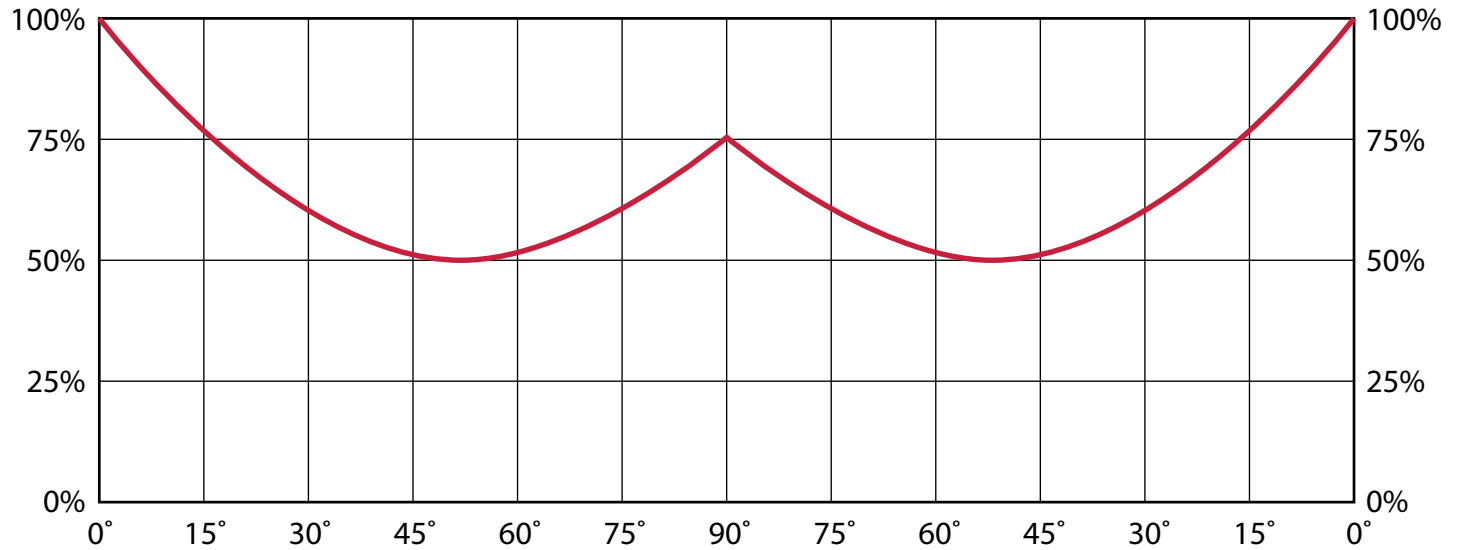


P Series



Dual Scotch Yoke Pneumatic Valve Actuators

TORQUE CURVE: Double Acting Actuators



TORQUE VALUES: Double Acting Actuators (in/lbs)

Model	60 PSI			80 PSI		
	Air Stroke			Air Stroke		
	0°	50°	90°	0°	50°	90°
DA08	50.5	24.8	50.5	70.8	35.4	70.8
DAN15	94.7	47.8	71.7	132.8	66.4	100
DAN30	189.4	94.7	142.5	265.5	132.8	199.1
DAN45	284.1	143.4	215.1	398.3	199.1	300.9
DAN60	379.7	189.4	284.1	531.1	265.5	398.3
DAN106	670	335	505	938	469	708
DAN120	758.5	379.7	569.1	1062.1	531.1	796.6
DAN180	1136.5	573.5	860.3	1593.2	796.6	1194.9
DAN240	1517.1	758.5	1138.2	2124.2	1062.1	1593.2
DAN360	2275.5	1138.2	1707.3	3186.3	1593.1	2389.7
DAN480	3034.9	1517.0	2275.5	4248.4	2124.2	3186.3

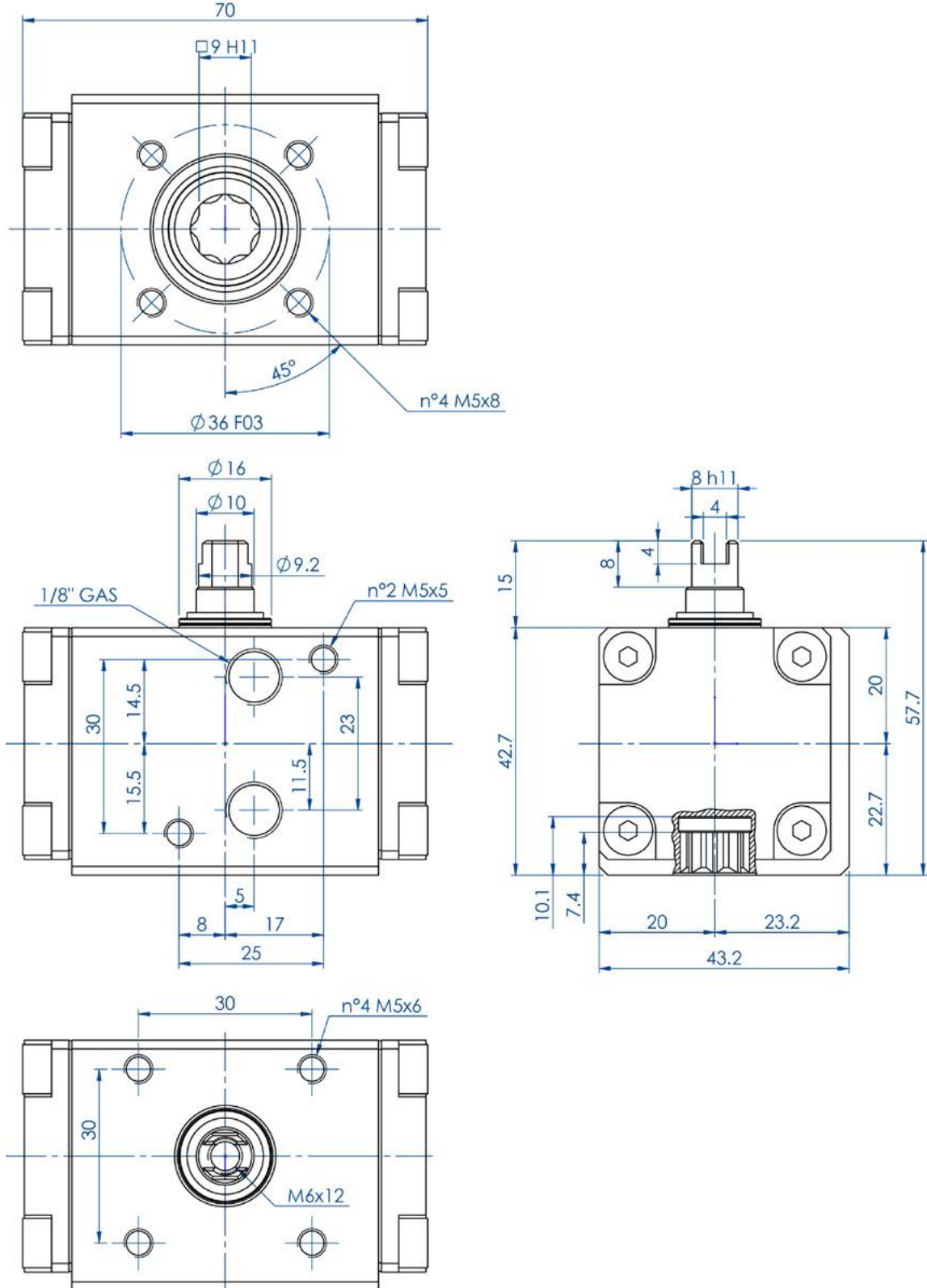


P Series



Dual Scotch Yoke Pneumatic Valve Actuators

DIMENSIONS: Double Acting Actuators (size 008)



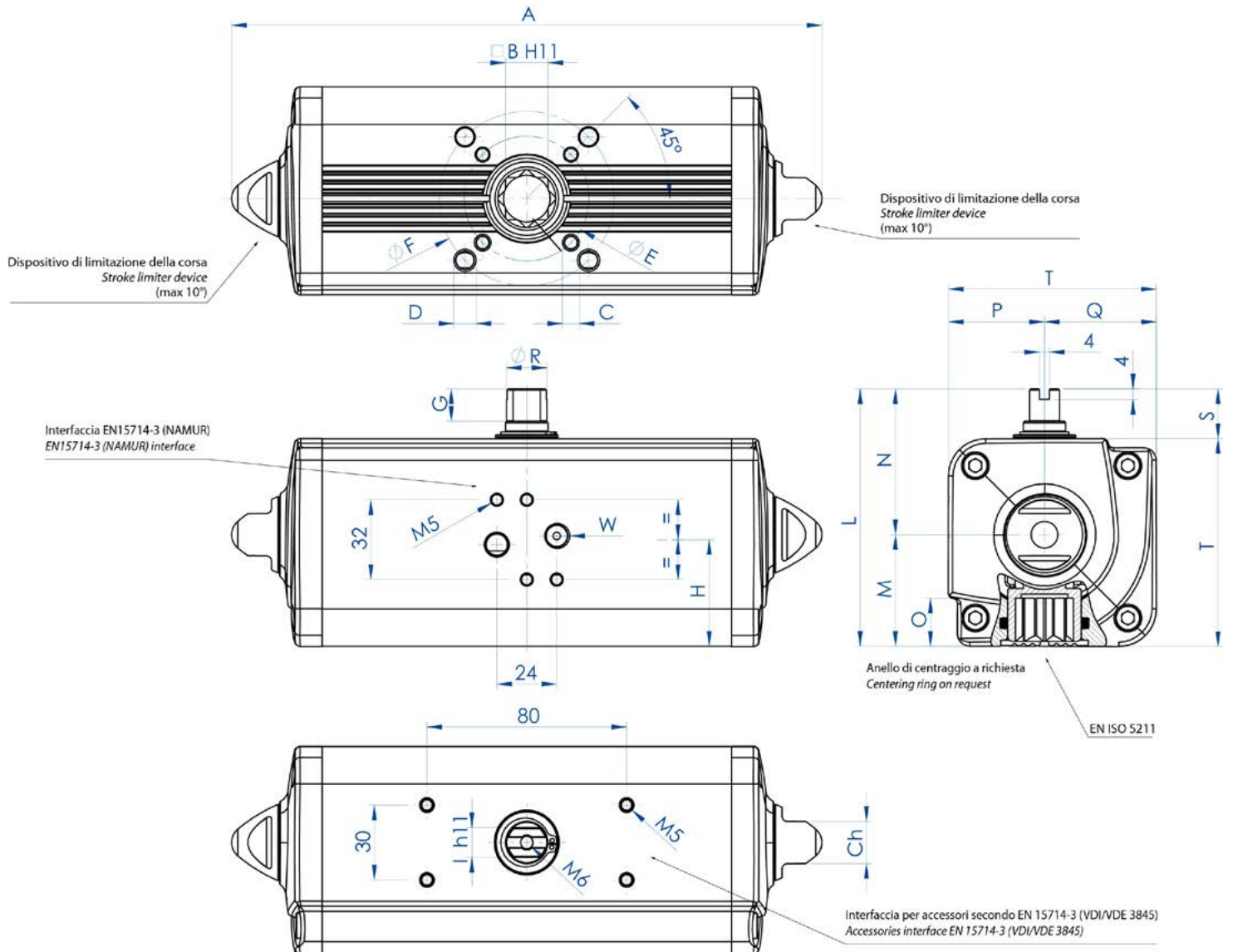


P Series



Dual Scotch Yoke Pneumatic Valve Actuators

DIMENSIONS: Double Acting Actuators (sizes 0015 to 0480)





P Series



Dual Scotch Yoke Pneumatic Valve Actuators

DIMENSIONS: Double Acting Actuators

Dim.	DAN15	DAN30	DAN45	DAN60	DAN106	DAN120	DAN180	DAN240	DAN360	DAN480
ISO	F03*	F03/F05*	F03/F05*	F05/F07*	F05/F07	F05/F07	F07/F10	F07/F10	F07/F10	F10/F12
A	159.1	174.3	188.5	198.1	237.1	257.4	289.9	313.6	339.3	387.7
B	11	11	11	14	17	17	22	22	22	27
C	M5 x 8	M5 x 8	M5 x 8	M6 x 9	M6 x 9	M6 x 9	M8 x 12	M8 x 12	M8 x 12	M10 x 15
D	-	M6 x 9	-	M8 x 12	M8 x 12	M8 x 12	M10 x 15	M10 x 15	M10 x 15	M12 x 18
E	36	36	36	50	50	50	70	70	70	102
F	-	50	50	70	70	70	102	102	102	25
G	10	10	13	13	13	13	16	17	19	19
H	26.8	30.3	32.5	35.7	42.8	44.8	54.5	58.1	60	57.4
I	8	9	10	10	12	12	15	15	19	19
L	72.2	79.2	84.5	90.4	103.3	107	137.5	141.1	148	164.9
M	28	31.5	34.5	37.7	44.8	46.8	56.5	60.1	62	72.9
N	44.2	47.4	50	52.7	58.5	60.2	81	81	86	92
O	13.2	13.2	13.2	16.5	19.3	19.3	24.8	24.8	24.3	29.5
P	24.2	27.7	30	32.7	38.5	40.2	51	51	56	62
Q	28	31.5	34.5	37.7	44.8	46.8	56.5	60.1	62	72.9
R	9.2	10.9	12.7	14.5	16.2	18	20.2	22.5	25.5	29
S	20	20	20	20	20	20	30	30	30	30
T	52.2	59.2	64.5	70.4	83.3	87	107.5	111.1	118	134.9
W	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/8"	1/4"
Ch	13	13	13	13	17	22	22	22	22	27
Weight	1.65 lbs.	2.20 lbs.	2.65 lbs.	3.53 lbs.	5.51 lbs.	5.73 lbs.	10.14 lbs.	11.9 lbs.	14.33 lbs.	21.16 lbs.
Air	0.08 dm ³	0.15 dm ³	0.22 dm ³	0.30 dm ³	0.55 dm ³	0.59 dm ³	0.95 dm ³	1.3 dm ³	1.8 dm ³	2.6 dm ³

Dimensions are in mm except where noted.

* F04 available as special request



P Series



Dual Scotch Yoke Pneumatic Valve Actuators

ORDERING INFORMATION

DAN 0120 411S

Series	Size	Version
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Type: _____

- DA** = Direct Acting (Double Acting "original style") for Size 008 only
- DAN** = Direct Acting (Double Acting "new style")
- SRN** = Spring Return (Single Acting "new style")

Size: (see torque and dimension tables to select the proper size) _____

- | | | |
|----------------------------------|----------------------------------|-------------|
| 008 - Direct Acting only | 0060 | 0240 |
| 0015 | 0090 - Spring Return only | 0360 |
| 0030 | 0106 - Direct Acting only | 0480 |
| 0045 | 0120 | |
| 0053 - Spring Return only | 0180 | |

Version: _____

- 401S** = spring return with 80 psi spring caps and smaller ISO5211 mounting pattern
- 402S** = spring return with 80 psi spring caps and larger ISO5211 mounting pattern
- 461S** = spring return with 60 psi spring caps and smaller ISO5211 mounting pattern
- 462S** = spring return with 60 psi spring caps and larger ISO5211 mounting pattern
- 411S** = double acting with smaller ISO5211 mounting pattern
- 412S** = double acting with larger ISO5211 mounting pattern

ACCESSORIES

NAMUR Solenoid Valves



Either 3-way for Spring return or 4-way for double acting. Each is available with various coils and connectors that are either NEMA 4/4X Weatherproof, NEMA 7 Explosion proof.

For complete details visit:

<https://assuredautomation.com/NAMUR-solenoid-valves>

Limit Switches



We offer a wide range of limit switches that includes proximity sensors and mechanical switches. Our offering includes NEMA 4/4X Weatherproof, NEMA 7 Explosion proof.

For complete details visit:

<https://assuredautomation.com/limit-switches>

Positioners



Pneumatic and Electro-pneumatic positioners are available. Electro-pneumatic models are available as standard, intrinsically safe, and explosion proof. All units are available with or without feedback units.

For complete details visit:

<https://assuredautomation.com/valve-positioners>

FireChek Thermal Shutoff Valve



This revolutionary product turns any spring return pneumatic actuator into a thermally activated shutoff valve. Not only does it vent the actuator allowing for the springs to return the valve to fail-safe, it also shuts off the supply air which would feed oxygen to the fire. Sizes are available for ANY size actuator.

For complete details visit:

<https://assuredautomation.com/firechek>