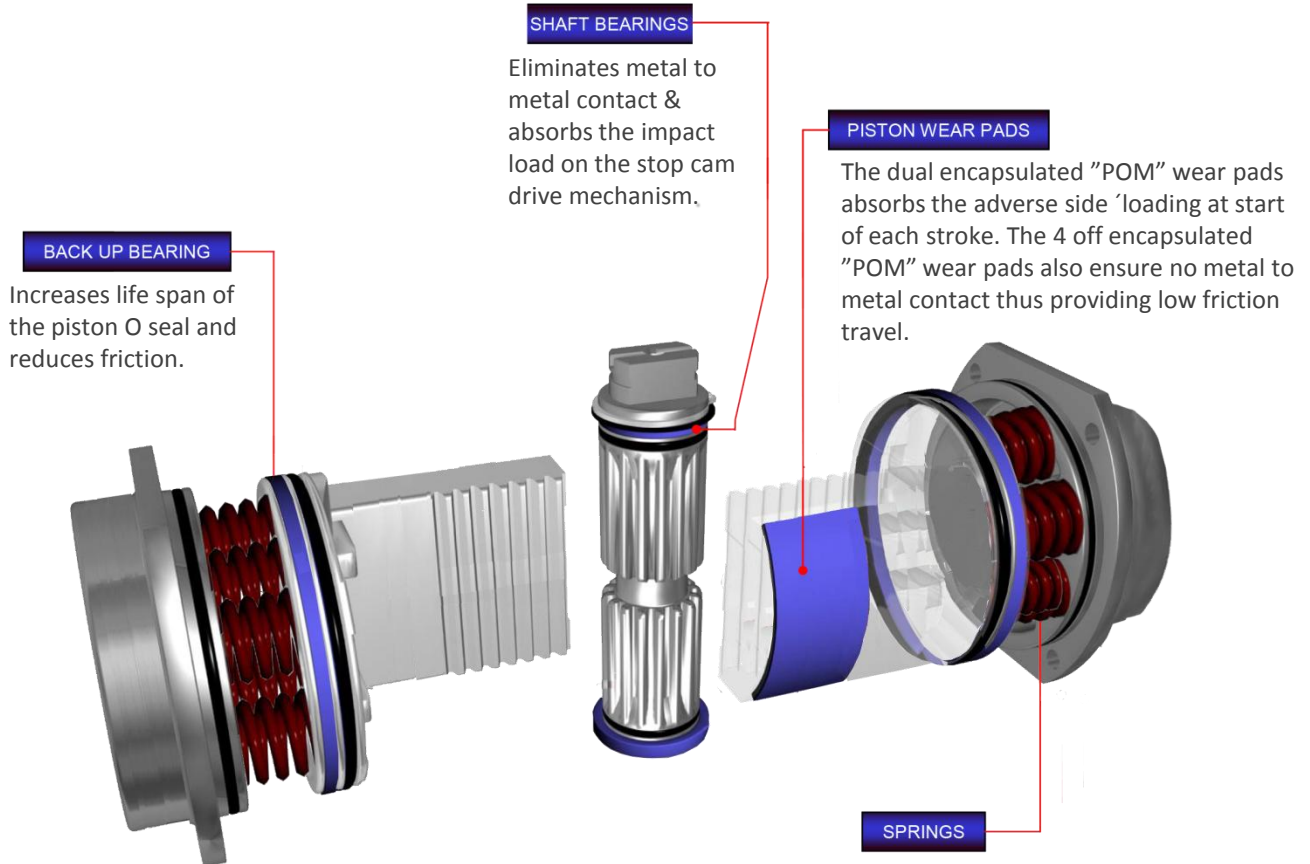




VALVE AUTOMATION
SINCE 1976

TECHNICAL SUMMARY S-TYPE



In opposite to C&E-type, springs are located outside piston rack. Springs are manufactured from SiCr in compliance to EN10204 and available with 3.1b certificate. Long bolting is a standard feature in order to fully relax springs.

Material standard

Anodized Aluminium, Black
CNI, Chemically Nickel Impregnated.
Other treatments upon request.

Movement

0-90 Degrees

End Stop Adjustment

Over travel, +2,5 degree Open or Closed
Singel end stop adjustment.

Sizes

S-Type : 1,3,5 & 10

Torque Output at 80 PSI

Double Acting: 192 to 827 in. lbs
Spring Return: 64 to 328 in.lbs

Drive Medium

Standard: Air (Dry or lubricated) or inert gases.
Options: Oxygen, Hydraulic (requires rebuilding)

Temperature Range

-40 to +212° F (Standard execution)
-13 to +482° F (High temp)
-58 to +140° F (Arctic temperature)

Standard Connections

Solenoid Valves – Namur
Fitting Accessories – ISO 5211, DIN 3337, VDI/VDE 3845, Namur.
Stardrive Shaft – ISO 5211 (90), DIN 79 (45), Namur.

Operating Pressure

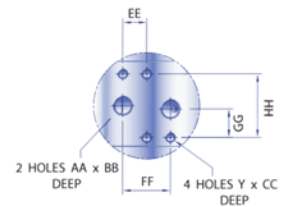
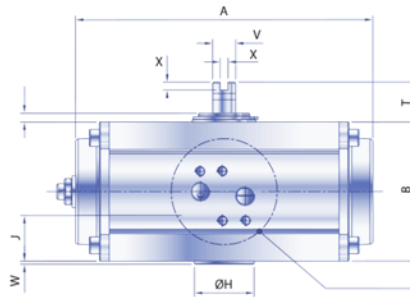
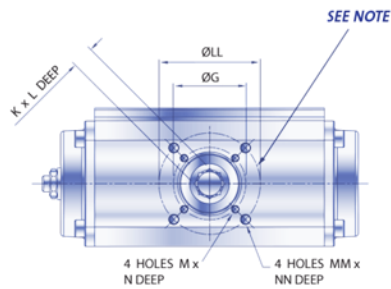
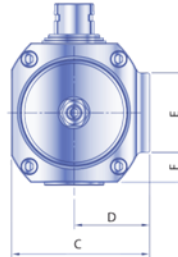
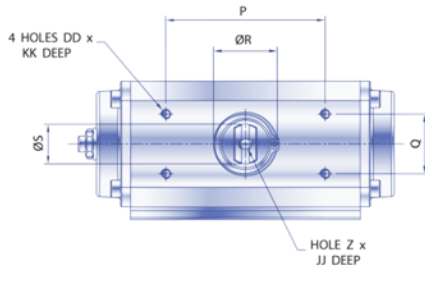
■30-150 PSI



VALVE AUTOMATION
SINCE 1976

PNEUMATIC ACTUATORS: S-TYPE

TRUTORQ ACTUATOR SIZE 3/5 S-TYPE DOUBLE ACTING & SPRING RETURN



SOLENOID MOUNTING

•Dimensions

Imperial	*	A	B	C	D	E	F	ØG	ØH	J	□K	L	M(unf)	N	P	Q	ØR	ØS	T
TT 3 F04	F07	5,89	2,76	2,74	1,5	1,93	0,41	1,42	1,18	0,91	0,35	0,43	10-32	0,31	3,15	1,18	1,26	0,79	0,79
TT 5 F05		7,34	3,43	3,56	1,93	1,93	0,87	1,97	1,38	1,36	0,55	0,59	1/4-20	0,39	3,15	1,18	1,26	0,79	0,79

*Additional drilling

Imperial	U	V	W	X	Y(unf)	Z	AA	BB	CC	DD(unf)	EE	FF	GG	HH	JJ	KK	LLØ	MM(unc)	NN
TT 3 F04	0,18	0,45	0,06	0,16	10-32	M6	NPT1/8	0,28	0,31	10-32	0,47	0,94	0,63	1,26	0,47	0,31	1,97	1/4-20	0,39
TT 5 F05	0,18	0,45	0,12	0,16	10-32	M6	NPT1/8	0,28	0,31	10-32	0,47	0,95	0,63	1,26	0,47	0,31	2,76	5/16-18	0,51

•Torque

Model	AIR SUPPLY PSI	DA TORQUE in.lbs	SR TORQUE - in.lbs				
			AIR-START	AIR-END	SPRING-START	SPRING-END	SPRING QTY
TT 3	80,0	192	127	64	128	65	11
TT 5	80,0	412	265	147	265	146	11

•Basic Operating Detail

Drive Medium = Air (Dry or lubricated); Non corrosive Gas; Light Hydraulic Oil

Temperature = -40 to +212°F. High & Low temp versions available

Model	Operating Time (5.5 barg/80 psig)				Air Consumption		Overall Weight		Sol. VV
	DA Open	DA Close	SR Open	SR Close	Open (ci)	Close (ci)	DA lbs	SR lbs	Min Cv
TT3	<1	<1	<1	<1	5,49	7,32	2,2	2,4	0,2
TT5	<1	<1	<1	<1	10,98	14,65	4,0	4,2	0,2

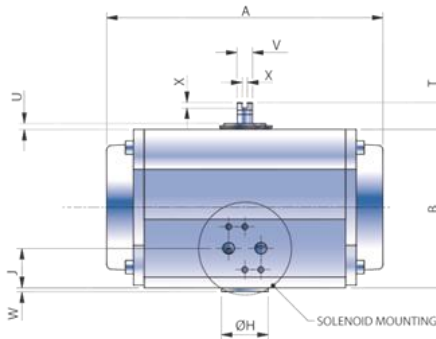
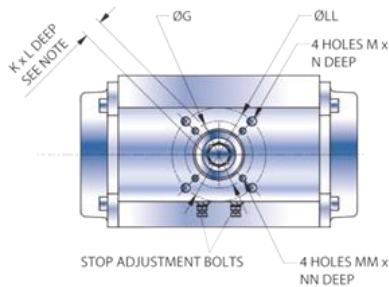
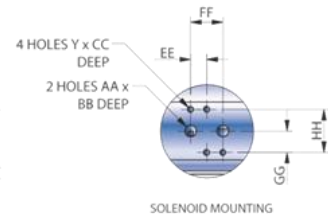
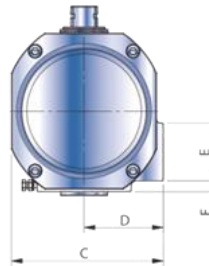
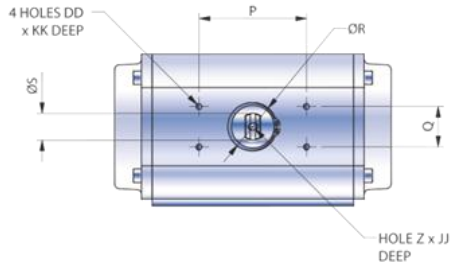


VALVE AUTOMATION
SINCE 1976

PNEUMATIC ACTUATORS: S-TYPE



TRUTORQ ACTUATOR SIZE 10 S-TYPE DOUBLE ACTING & SPRING RETURN



•Dimensions

Imperial	*	A	B	C	D	E	F	ØG	ØH	J	□K	L	M(unf)	N	P	Q	ØR	ØS	T
TT 10 F05	F07	8,11	4,65	4,45	2,32	1,69	0,32	1,97	1,38	1,16	0,55	0,75	1/4-20	0,39	3,15	1,18	1,26	0,79	0,79

*Additional drilling

Imperial	U	V	W	X	Y(unf)	Z	AA	BB	CC	DD(unf)	EE	FF	GG	HH	JJ	KK	LLØ	MM(unc)	NN
TT 3 F04	0,18	0,45	0,11	0,16	10-32	M6	NPT1/8	0,28	0,31	10-32	0,47	0,94	0,63	1,26	0,47	0,31	2,76	5/16-18	0,51

•Torque Model	AIR SUPPLY PSI	DA TORQUE in.lbs	SR TORQUE - in.lbs				
			AIR-START	AIR-END	SPRING-START	SPRING-END	SPRING QTY
TT 3	80,0	827	502	328	499	325	11

•Basic Operating Detail

Drive Medium = Air (Dry or lubricated); Non corrosive Gas; Light Hydraulic Oil

Temperature = -40 to +212°F. High & Low temp versions available

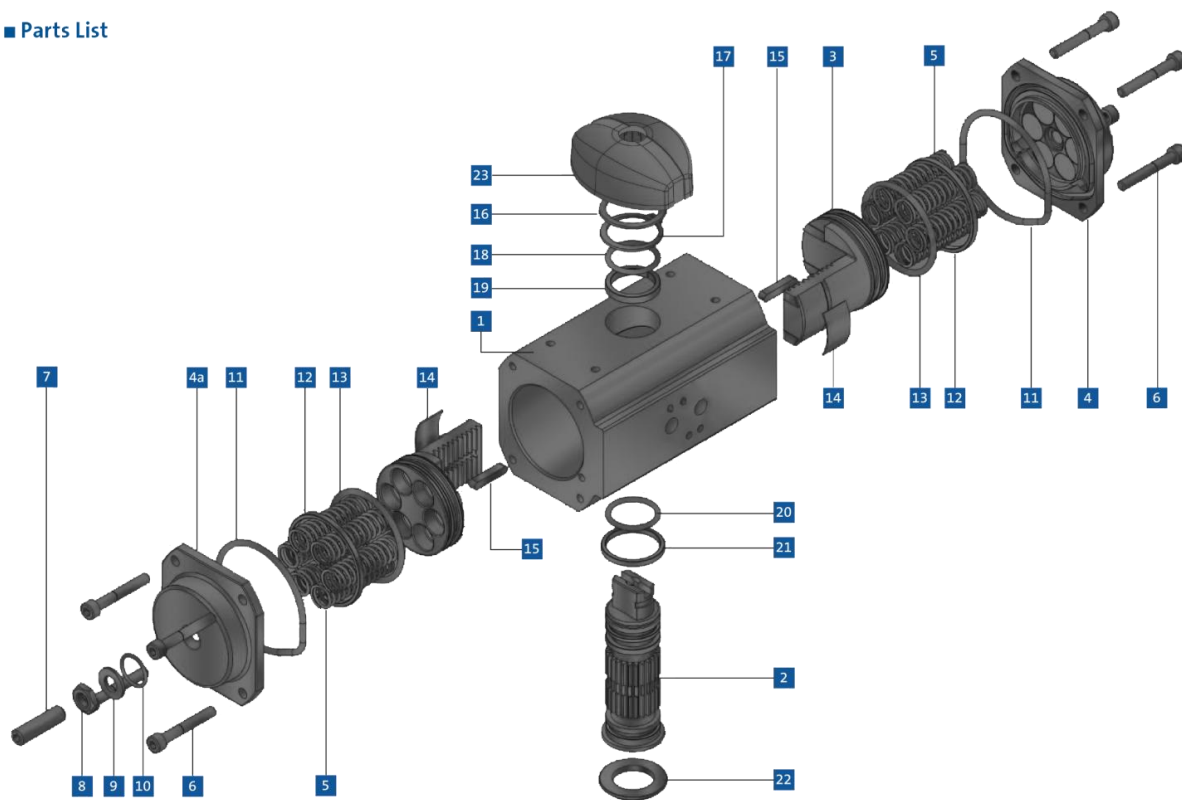
Model	Operating Time (5.5 barg/80 psig)				Air Consumption		Overall Weight		Sol. VV
	DA Open	DA Close	SR Open	SR Close	Open (ci)	Close (ci)	DA lbs	SR lbs	Min Cv
TT3	<1	<1	<1	<1	23,18	30,52	6,2	6,4	0,5



VALVE AUTOMATION
SINCE 1976

PNEUMATIC ACTUATORS: S-TYPE

■ Parts List



Ref No	Description	Qty	Material Std Unit	Comments
1	Body	1	Aluminium Anod.	
2	Driveshaft	1	Steel	Zinc Plated
3	Piston	2	Aluminium	
4	Endcover	1	Aluminium	Polyester Coating
4a	Endcover with Stop Adj.	1	Aluminium	Polyester Coating
5	Spring	12max	SiCr	
6	Endcover Bolt	8	Stainless Steel	
7	Stop Adj. Bolt	1	Stainless Steel	
8	Stop Adj. Nut	1	Stainless Steel	
9*	Stop Adj. Washer	1	Stainless Steel	
10*	Stop Adj. 'O' Ring	1	Buna Nitrile	Alt. Viton/Silicone/EPDM
11*	Endcover 'O' Ring	2	Buna Nitrile	Alt. Viton/Silicone/EPDM
12*	Piston Back-up Bearing	2	POM Delrin	
13*	Piston 'O' Ring	2	Buna Nitrile	Alt. Viton/Silicone/EPDM
14*	Piston Wearpad	2	POM Delrin	
15*	Piston Guidebar	2	Steel	
16*	Driveshaft Washer	1	Polyethylene	
17*	Driveshaft Circlip	1	Steel	
18*	Driveshaft Upper 'O' Ring	1	Buna Nitrile	Alt. Viton/Silicone/EPDM
19*	Driveshaft Upper Bearing	1	POM Delrin	
20*	Driveshaft Lower 'O' ring	1	Buna Nitrile	Alt. Viton/Silicone/EPDM
21*	Driveshaft Lower Bearing	1	POM Delrin	
22	Centralization Ring	1	POM Delrin	
23	Position Indicator	1	Nylon	Optional Truvison Puck

REPAIR KIT INCLUDES ITEMS MARKED WITH AN ASTERISKS