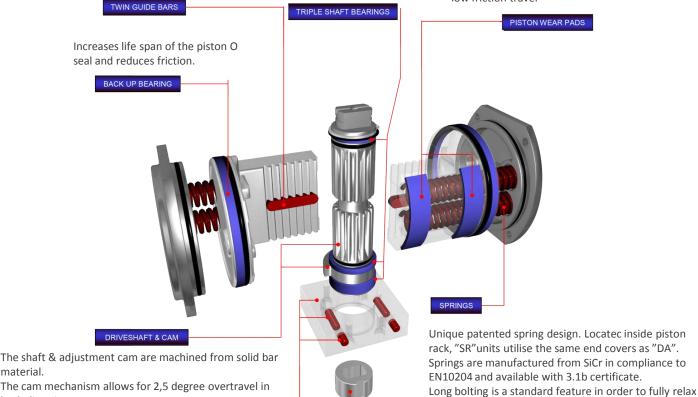


Unique twin guide bar absorbs adverse side loading from rack at the start of each stroke and maintains even engagement between rack & pinion for smooth operation.

Eliminates metal to metal contact & absorbs the impact load on the stop cam drive mechanism.

TECHNICAL SUMMARY E-TYPE

The dual encapsulated "POM" wear pads absorbs the adverse side 'loading at start of each stroke. The 4 off encapsulated "POM" wear pads also ensure no metal to metal contact thus providing low friction travel



Material standard

Anodized Aluminium, Black.

The inner depht of the driveshaft allows for total engagement of any valve shaft for direct mount.

CNI, Chemically Nickel Impregnated.

BODY ADAPTOR KIT & STOP ADJUSTMENTS

Other treatments upon request.

Movement

material.

both directions.

0-90 Degrees

End Stop Adjustment

Over travel, +2,5 degree Open & Closed

Dual end stop adjustment.

Sizes

E-Type: 8,12,20,35,55,70,100 & 150.

Torque Output at 80 PSI

Double Acting: 730 to 6689 in.lbs Spring Return: 350 to 4758 in. Ibs

Drive Medium

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

Changeble insert system makes the

E-type fit most valves

Temperature Range

- -40 to +212° F(Standard execution)
- -13 to +482° F(High temp)

springs.

INSERT SLEEVE

-58 to +140° F(Arctic temperature)

Standard Connections

Solenoid Valves - Namur

Fitting Accessories – ISO 5211, DIN 3337, VDI/VDE 3845, Namur.

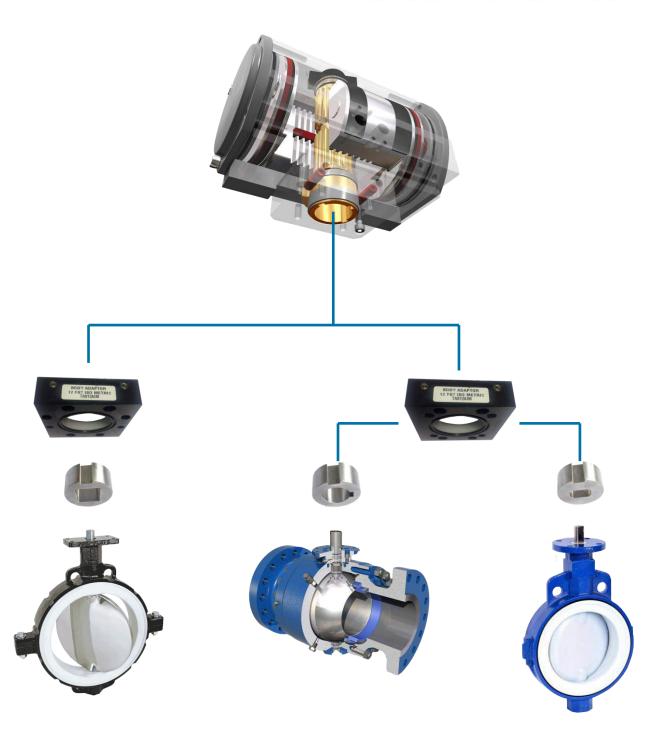
Stardrive Shaft - ISO 5211 (90), DIN 79 (45), Namur.

Operating Pressure

30-150 PSI



E-TYPE: FLEXIBILITY – DIRECT MOUNTING



The flexibility of the E-type actuator makes it the perfect actuator for stock keeping. One engine(Approx 90% of the actuator cost) in combination with different Body adaptors and Inserts (BAK) makes it possible to cover a range of valves, saving money and space.



E-type: Flexibility – direct mounting



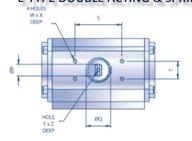
Because of the flexibility the interchangable adaptor plate and insert system provides, the E-type actuator can be customized for direct mounting on most valves.

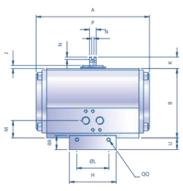


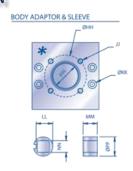
PNEUMATIC ACTUATORS

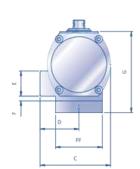
E-TYPE

TRUTORQ ACTUATOR SIZE 8/12/20/35 E-TYPE DOUBLE ACTING & SPRING RETURN

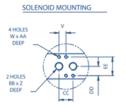












* Bak's may be dual drilled. Please refer to Bak Datasheet for more information.

•Dimensions

Imperial		A	В	C	D	E	F	G	H	J	K	ØL	□ M	N	P	ØQ	ØR	S	T	U	V
TT 8 F05	F07	6,38	4,29	4,13	2,24	1,65	0,30	5,00	3,15	0,20	0,79	1,38	1,06	0,16	0,45	0,79	0,79	3,15	1,18	0,71	0,47
TT 8F07		6,38	4,29	4,13	2,24	1,65	0,30	5,08	3,15	0,20	0,79	1,38	1,06	0,16	0,45	0,79	0,79	3,15	1,18	0,79	0,47
TT 12 F05	F07	7,64	4,67	4,67	2,64	1,69	0,31	5,45	3,15	0,22	0,79	1,38	1,16	0,16	0,45	0,79	0,79	3,15	1,18	0,79	0,47
TT 12 F07		7,64	4,67	4,67	2,64	1,69	0,31	5,37	3,15	0,22	0,79	1,38	1,16	0,16	0,45	0,79	0,79	3,15	1,18	0,71	0,47
TT 20 F07		8,58	5,53	5,37	2,83	1,69	0,31	6,48	3,54	0,26	0,79	2,17	1,16	0,16	0,75	1,26	1,26	3,15	1,18	0,94	0,47
TT 35 F07	F10	10,47	6,56	6,14	3,07	1,69	0,33	7,74	4,72	0,28	1,18	2,17	1,18	0,16	0,75	1,26	1,26	3,15	1,18	1,19	0,47
TT 35 F10	F12	10,47	6,56	6,14	3,07	1,69	0,33	7,74	4,72	0,28	1,18	2,17	1,18	0,16	0,75	1,26	1,26	3,15	1,18	1,19	0,47
*Additional dr	illing																				

Imperial	W(unf)	X	Υ	Z	AA	BB	CC	DD	EE	FF	ØGG	ØHH	JJ (unc)	ØKK	LL	MM	NN	ØPP	QQ	RR
TT 8	10-32	0,20	M6	0,50	0,31	NPT 1/8	0,94	0,63	1,26	3,14	1,18	1,97	1/4-20	0,22	0,80	0,67	0,55	0,90	M5	0,87
TT 8	10-32	0,20	M6	0,50	0,31	NPT 1/8	0,94	0,63	1,26	3,14	1,85	2,76	5/16-18	0,22	1,16	0,67	0,67	1,30	M6	0,94
TT 12	10-32	0,20	M6	0,50	0,31	NPT 1/4	0,94	0,63	1,26	3,14	1,18	1,97	1/4-20	0,22	0,80	0,67	0,55	0,90	M5	0,87
TT 12	10-32	0,20	M6	0,50	0,31	NPT 1/4	0,94	0,63	1,26	3,14	1,85	2,76	5/16-18	0,22	1,16	0,67	0,67	1,30	M6	0,94
TT 20	10-32	0,20	M6	0,50	0,31	NPT 1/4	0,94	0,63	1,26	3,54	1,81	2,76	5/16-18	0,26	1,16	0,79	0,67	1,30	M8	1,10
TT 35	10-32	0,20	M6	0,50	0,31	NPT 1/4	0,94	0,63	1,26	4,71	1,81	2,76	5/16-18	0,35	1,16	0,79	0,67	1,30	M10	1,34
TT 35	10-32	0,20	M6	0,50	0,31	NPT 1/4	0,94	0,63	1,26	4,71	2,40	4,02	3/8-16	0,35	1,54	0,98	0,87	1,73	M10	1,34

 Forque 	AIR SUPPLY	DATORQUE		SKIU	RQUE - In.IDS		
Model	PSI	in.lbs	AIR-START	AIR-END	SPRING-START	SPRING-END	SPRING QTY
TT 8	80,0	730	473	263	467	257	4x3
TT 12	80,0	994	768	481	638	350	4x3
TT 20	80,0	1638	1057	582	1056	581	4x3
TT 35	80,0	3035	1959	1078	1957	1076	4x3

-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

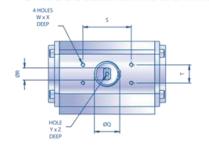
Operating Time (5.5 barg/80 p					psig)	Air Cons	Weight	Sol. VV		
	Model	DA Open	DA Close	SR Open	SR Close	Open (ci)	Close (ci)	DA Ibs	SR Ibs	Min Cv
	TT8	<1	<1	<1	<1	20,75	25,02	6,8	7,5	0,5
	TT12	1,5	1,5	1,5	1	29,9	39,06	9,9	11,4	0,5
	TT20	2	2	2	1,5	54,92	61,02	14	15	0,5
	TT35	2,5	2,5	2,5	2,0	103,12	115,94	23,0	26,0	0,5

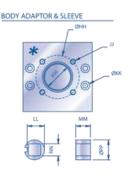


PNEUMATIC ACTUATORS

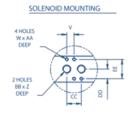
E-TYPE

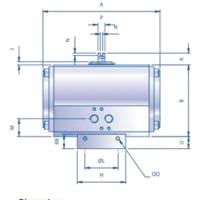
TRUTORQ ACTUATOR SIZE 55/70/100/150 E-TYPE DOUBLE ACTING & SPRING RETURN

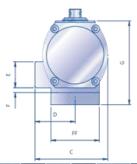












* Bak's may be dual drilled. Please refer to Bak Datasheet for more information.

•D	m	ens	ioi	าร

Imperial		Α	В	C	D	E	F	G	Н	J	K	ØL	□M	N	Р	ØQ	ØR	S	T	U	V
TT 55 F10	F12	12,28	8,17	7,52	3,76	1,69	0,81	9,55	5,51	0,30	1,18	3,35	1,65	0,16	1,00	1,57	1,57	5,12	1,18	1,38	0,47
TT 55 F12	F10	12,28	8,17	7,52	3,76	1,69	0,81	9,55	5,51	0,30	1,18	3,35	1,65	0,16	1,00	1,57	1,57	5,12	1,18	1,38	0,47
TT 70 F10	F12	13,39	8,30	7,52	3,76	1,69	0,81	9,72	5,51	0,28	1,18	3,35	1,65	0,16	1,00	2,83	1,57	5,12	1,18	1,42	0,47
TT 70 F12	F10	13,39	8,30	7,52	3,76	1,69	0,81	9,72	5,51	0,28	1,18	3,35	1,65	0,16	1,00	2,83	1,57	5,12	1,18	1,42	0,47
TT 100 F14		14,21	9,97	8,94	4,47	1,69	1,56	11,93	6,30	0,28	1,18	3,94	2,40	0,16	1,00	3,07	1,57	5,12	1,18	1,96	0,47
TT 150 F14		15,35	11,89	11,02	5,51	1,69	2,22	13,82	6,30	0,28	1,18	3,94	3,07	0,16	1,00	3,07	1,57	5,12	1,18	1,93	0,47
*Additional dr	illing																				

Imperial	W(unf)	Х	Y	Z	AA	BB	CC	DD	EE	FF	ØGG	ØHH	JJ (unc)	ØKK	LL	MM	NN	ØPP	QQ	RR
TT 55	10-32	0,20	M6	0,50	0,31	NPT 1/4	0,94	0,63	1,26	5,51	2,40	4,02	3/8-16	0,43	1,54	0,98	0,87	1,73	M10	1,57
TT 55	10-32	0,20	M6	0,50	0,31	NPT 1/4	0,94	0,63	1,26	5,51	2,95	4,92	1/2-13	0,43	1,97	0,98	1,06	2,16	M10	1,57
TT 70	10-32	0,20	M6	0,50	0,31	NPT 1/4	0,94	0,63	1,26	5,51	2,40	4,02	3/8-16	0,43	1,54	0,98	0,87	1,73	M10	1,57
TT 70	10-32	0,20	M6	0,50	0,31	NPT 1/4	0,94	0,63	1,26	5,51	2,95	4,92	1/2-13	0,43	1,97	0,98	1,06	2,16	M10	1,57
TT 100	10-32	0,20	M6	0,50	0,31	NPT 1/4	0,94	0,63	1,26	6,30	3,46	5,51	5/8-11	0,55	2,46	1,38	1,42	2,68	M14	2,24
TT 150	10-32	0,20	M6	0,50	0,31	NPT 1/4	0,94	0,63	1,26	6,30	3,46	5,51	5/8-11	0,55	2,46	1,38	1,42	2,68	M14	2,24

 Torque 	AIR SUPPLY	DA TORQUE		SR TO	DRQUE - in.lbs		
Model	PSI	in.lbs	AIR-START	AIR-END	SPRING-START	SPRING-END	SPRING QTY
TT 55	80,0	4742	3026	1622	3120	1716	4x3
TT 70	80,0	6689	4320	2381	4308	2369	4x3
TT 100	80,0	9105	8667	4774	8651	4758	4x3

-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

	Oper	rating Time (5.5 barg/80	psig)	Air Cons	sumption	Overall	Weight	Sol. VV
Model	DA Open	DA Close	SR Open	SR Close	Open (ci)	Close (ci)	DA Ibs	SR lbs	Min Cv
TT55	3,5	3,5	3,5	3	170,86	207,47	40	45	0,8
TT70	4	4	4	3	186,12	225,79	49,3	58,3	0,8
TT100	4,5	4,5	5,5	3	336,85	360,04	68,6	78,8	1,1
TT150	5,0	5,0	7,0	4,0	463,78	585,83	97,7	116,2	1,1



PNEUMATIC ACTUATORS: E-TYPE

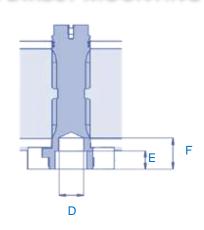
DIMENSIONS FOR DIRECT MOUNTING











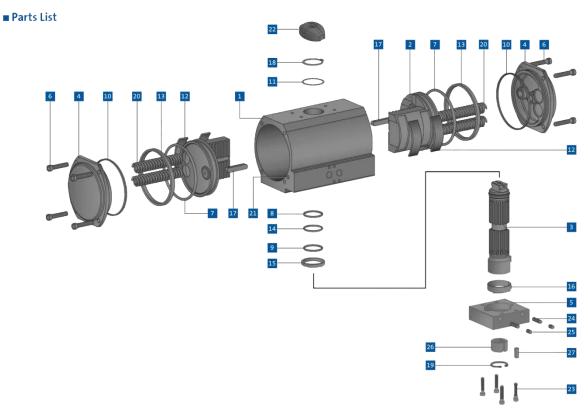
Dimensions

Imperial	Α	В*	С	D	E	F
TT8	F05	F07	0,551	0,788	0,788	1,576
TT8	F07	/(=	0,669	0,906	0,788	1,379
TT12	F05	F07	0,551	0,788	0,788	1,576
TT12	F07	-	0,669	0,985	0,788	1,379
TT20	F07	84	0,669	1,024	0,906	1,576
TT35	F07	F10	0,669	1,024	0,906	1,576
TT35	F10	F12	0,866	1,1182	1,142	2,16
TT55	F12	F10	1,06	1,497	1,142	1,97
TT70	F12	F10	1,06	1,576	1,142	2,36
TT100	F14	-	1,418	1,97	1,615	2,44
TT150	F14	-	1,418	1,97	1,615	2,56

^{*} Dual drilled, additional hole pattern



PNEUMATIC ACTUATORS: E-TYPE



Ref No	Description	Quantity	Material Std Unit	Material CNI® unit	Comments
1	Cylinder	1	Alum. Anodized	Alum/CNI 530T	
2	Piston	2	Aluminium	Alum/CNI 425	
3	Driveshaft	1	Steel Zinc Plated	Eniflon Coating	
4	Endcap	2	Alum. Painted	Alum/CNI 530T	
5	Body Adaptor	1	Alum. Anodized	Alum/CNI 530T	
6	Endcap Bolt	8	Stainless Steel	Stainless Steel	
7*	Piston 'O' ring	2	Buna Nitrile	Buna Nitrile	Option Viton or Silicone
8*	Driveshaft upper 'O' ring	1	Buna Nitrile	Buna Nitrile	Option Viton or Silicone
9*	Driveshaft lower 'O' ring	1	Buna Nitrile	Buna Nitrile	Option Viton or Silicone
10*	Endcap 'O' ring	2	Buna Nitrile	Buna Nitrile	Option Viton or Silicone
11*	Washer	1	Polyethylene	Polyethylene	
12*	Wear Pads	4	POM Delrin	POM Delrin	
13*	Backup Bearing	2	POM Delrin	POM Delrin	
14*	Driveshaft Upper Bearing	1	POM Delrin	POM Delrin	
15*	Driveshaft Lower Bearing	1	POM Delrin	POM Delrin	
16*	Body Adaptor Bearing	1	POM Delrin	POM Delrin	
17*	Guide Bar	2	Steel	Steel	
18*	Circlip Upper	1	Steel Zinc Plate	Stainless Steel	
19	Circlip Lower	1	Steel Zinc Plate	Stainless Steel	
20	Spring	4/4	SiCr	SiCr	made by eibach®
21*	Ball Bearing	2	Composite	Composite	
22	TruVision Indicator	1	POM Delrin	POM Delrin	
23	Body Adaptor Bolts	4	Stainless Steel	Stainless Steel	
24	Stop Adjustment Screws	2	Stainless Steel	Stainless Steel	
25	Lock Screws	2	Steel	Steel	
26	Insert Sleeve	1	Stainless Steel	Stainless Steel	
27	Insert Sleeve Key	1	Keysteel	Keysteel	

REPAIR KIT INCLUDES ITEMS MARKED WITH AN ASTERISK