

Elite Valve

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Customized
valve solutions
for the toughest
applications



HP Series Pneumatic Modulating Valve Actuator

Durable | Accurate | Compact | Modular

Offering both standard and custom-engineered solutions, Elite Valve can meet all your process requirements.



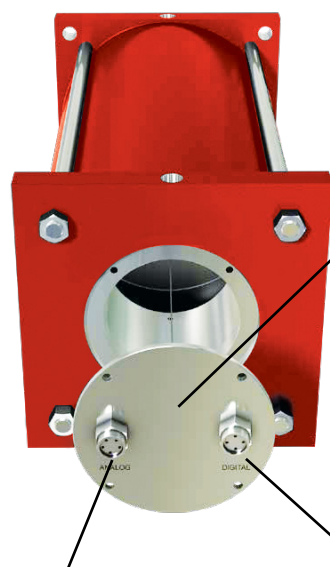


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Design & Materials

Material Breakdown	Standard	Corrosion Resistant	AWWA
Head & Cap	Steel	SS 316	Cad Plated
Barrel	Composite	Composite	Composite
Piston	Aluminum (4" - 8") & Steel (10" & above)	Steel	Cad Plated
Piston Rod	AISI 1045	SS 316	SS 316
Gland	SAE 660	Delrin	Delrin
Tie Rod 4" - 10"	AISI 1045	SS 316	SS 316
Tie Rod 12" & Above	AISI 1045	SS 17 - 4 PH	SS 17 - 4 PH



Standard

Analog output compatible with most digital positioners (see page 7).

Optional

Digital output for open and close indication.

Transducer module

- Easy-access for field maintenance and replacement.
- Completely self-contained.
- No need to disassemble cylinder or remove the valve assembly.



Barrel

High-strength composite standard; aluminum, steel or stainless steel optional.

Piston Packing

Nitrile U-cup standard; low-temp optional.

Gland Packing

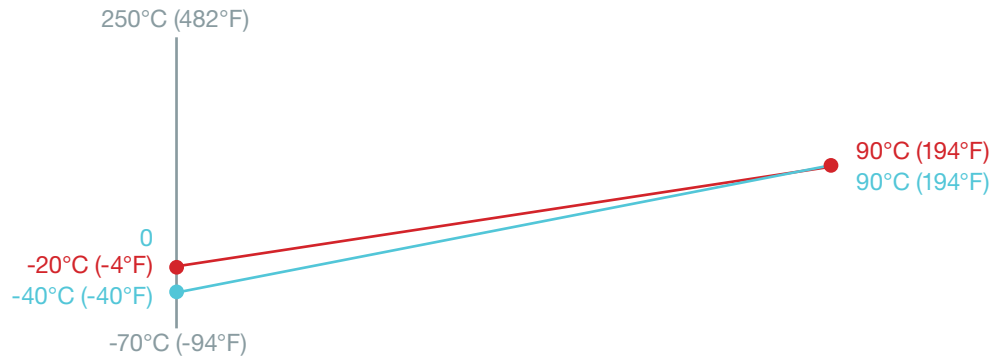
Polyurethane U-cup standard; low-temp optional.

Rod Wiper

Prevents contamination inside the cylinder.

Specifications

Elite Valve HP Series Pneumatic Modulating Valve Actuators are designed to suit a wide range of applications; from commodity to severe-service extremes.



**Tested to over
6.5 millions cycles!**

From the Arctic to the desert, proven seal compounds for a wide variety of applications.



Vibration Resistance

up to 10Gs at 2000Hz

Stroke Range

up to 144"

Resolution

Essentially Infinite

Pressure Rating

150 psi

Thrust

up to 425,000 lbs

Configuration

Spring-Return or
Double-Acting

Bore size

4" to 42"

Compatibility

Compatible with the most popular brands of Digital Positioners and communication protocols

Rod Size

1" to 5½"



14" Bore HP Series with pneumatic control panel, operating a dart valve in a mining flotation cell application.

Cable Specification	
Protection Class	Meets NEMA 1, 3, 4, 6P and IEC IP67
Cable Ratings	UL: ITC/PLTC/AWM, 105°C, 300 V CSA: CMX-OUTDOOR-CMG/AWM, 105°C, 300 V

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Add-Ons

Mounting Kits: ISO, MSS, & Customized Patterns Available

Elite Valve mounting kits can be designed for any linear valve.



Anti-Rotation Torque Arm:

Maintains constant alignment between valve stem and cylinder piston-rod. Compatible with rotary type switch boxes and beacons.

Field-Adjustable Travel Stops:

To limit stroke for position-seated or limited-travel applications. Ensures valve reaches positive sealing every time without damage to valve internals.



Digital Positioner Options

Remote Mount:

Digital positioners mounted remotely in a cabinet are ideal for harsh environments and any application with difficult or limited access to the actuator.

Cabinets available: NEMA 4/4X or for hazardous areas. Manual override push buttons customized to suit your application.



Direct Mount:

Direct mount digital positioner

- NEMA 4X/IP66
- Fail/close or Open Upon Loss of Power
- Optional Fail Last Module
- Intrinsically safe version available

Communication options:

- 4-20 mA
- HART
- Profibus PA
- Foundation Fieldbus
- and more!



Gland Seals

GT3 Gland for Harsh Environments:

Triple-seal gland with dual wipers. Rugged metallic scraper and urethane double-acting wiper deflect contamination away from the rod seal for long service life.

Options:

- Low Temp
- Cast iron construction for applications where yellow metals are not allowed.



Boosters

Volume Booster:

Volume boosters are recommended with larger modulating actuators for smooth operations.

Typically required for 10" bore and above. Booster can be installed either directly on the HP or in a remote panel.

Compatible Positioner Brands

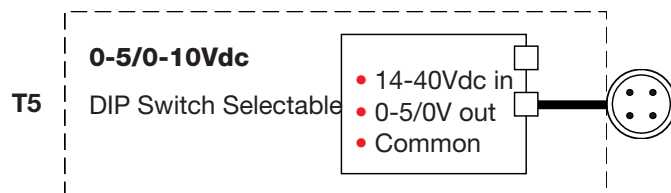
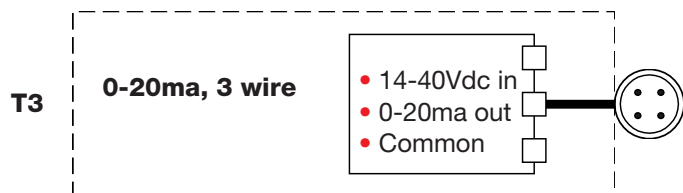
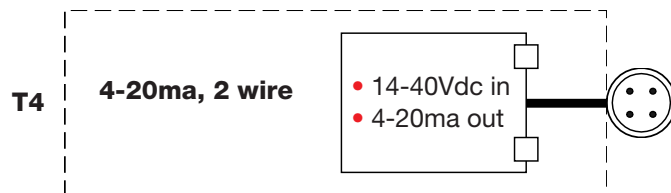
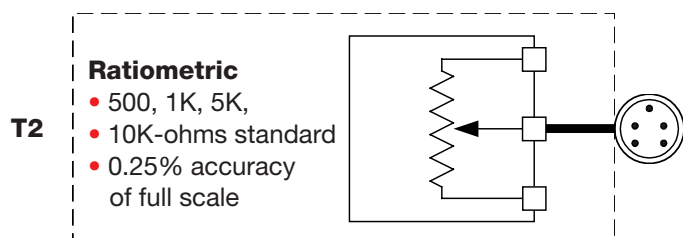
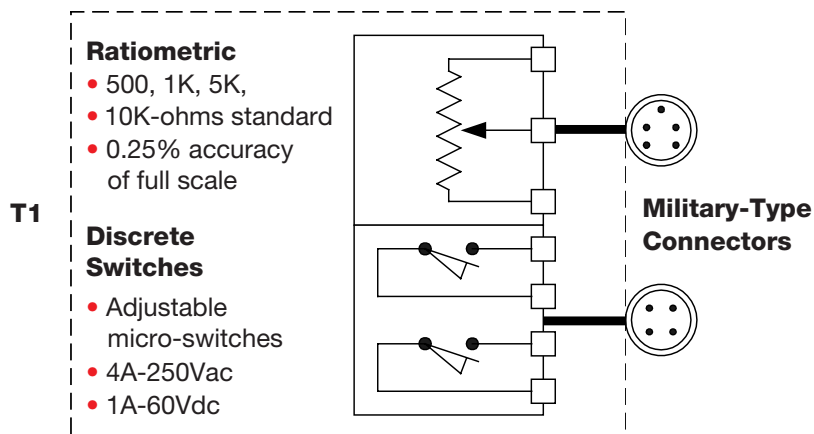
The HP's cable type transducer is compatible with the most popular brands of positioners. Our engineers can help you select the appropriate positioner to ensure compatibility.



8" Bore Stainless Steel HP Series with remote positioner in a potash plant.

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Output Options

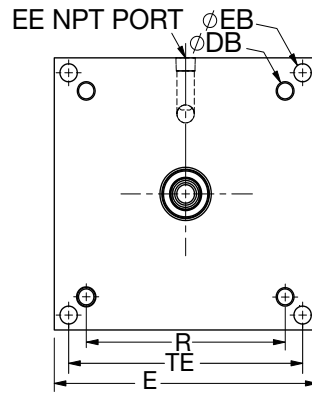
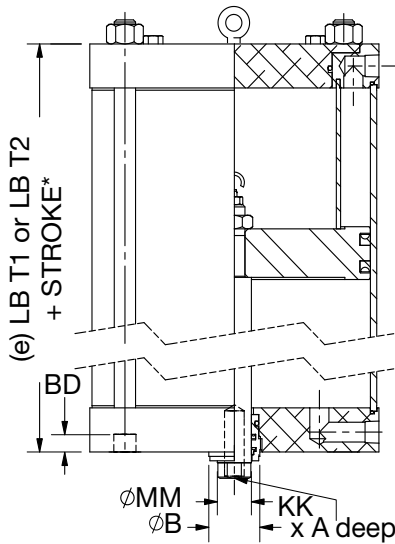


*AT available feedback combination

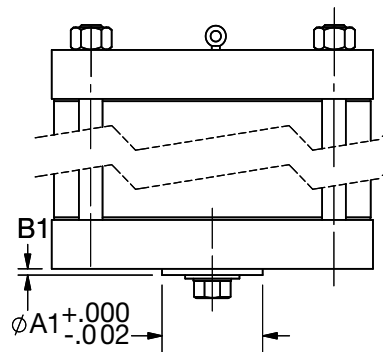
**T2 is default

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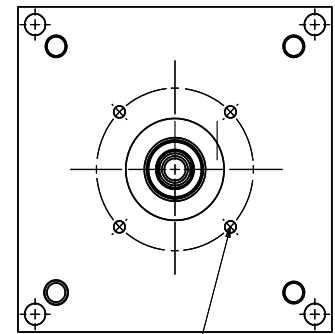
Actuator Dimensions: 5" - 26" Bore



*See page 5 for output options
LB T1 - Opt T1, LB T2 - Opt T2-T5



ISO AND MSS MOUNTING FLANGE



C1 OF BOLTS, D1 THREADS
E1 DEEP ON F1 P.C.D.

MSS Flange Mounting Dimensions (in)							
Mss Flange	Max. Thrust (Lbs)	A1	B1	C1	D1	E1	F1
FA07	4,500	2.166	0.120	4	5/16 - 18	1 1/16	2.750
FA10	9,000	2.312	0.120	4	3/8 - 16	1 1/16	4.000
FA14	25,000	3.750	0.160	4	5/8 - 11	1 3/16	5.500
FA16	35,000	5.000	0.190	4	3/4 - 10	1 1/8	6.500
FA25	50,000	6.000	0.190	8	5/8 - 11	1 1/8	10.000
FA30	75,000	7.000	0.190	8	3/4 - 10	1 1/8	11.750
FA35	140,000	8.500	0.190	8	1 - 8	1 1/4	14.000
FA40	230,000	9.000	0.320	8	1 1/4 - 7	1 1/2	16.000

ISO Flange Mounting Dimensions (in)							
ISO Flange	Max. Thrust (Lbs)	A1	B1	C1	D1	E1	F1
FA07	4,495	2.165	0.118	4	M8	7/16	2.755
FA10	8,990	2.756	0.118	4	M10	5/8	4.016
FA14	22,480	3.937	0.157	4	M16	3/4	5.512
FA16	33,723	5.118	0.197	4	M20	7/8	6.496
FA25	44,964	7.874	0.197	8	M16	7/8	10.000
FA30	73,066	9.055	0.197	8	M20	7/8	11.732
FA35	157,374	10.236	0.197	8	M30	7/8	14.016
FA40	247,302	11.811	0.314	8	M36	7/8	15.984

*Thrust of up to 425,000 lbs available. Consult factory for dimensions

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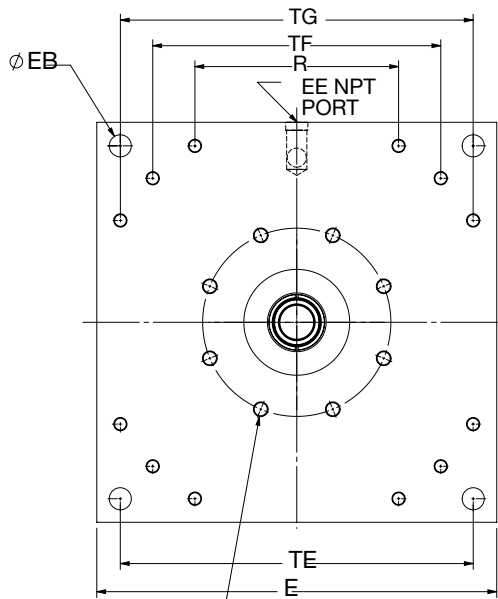
Actuator Dimensions: 5" - 26" Bore

Actuator Dimensions (in)														Thrust Values (lbs)			ISO or MSS Mounting Pattern*	
Bore	A	B	BD	DB	E	EE	KK	R	LB T1	LB T2	MM	TE	W	60 PSI	80 PSI	100 PSI	STD	OPT
5	1.75	1.50	3/4	1/2 - 20	5.50	1/4	5/8 - 18	3.32	N/A	8.88	1.00	N/A	0.75	1,131	1,508	1,885	F/FA07	
6	1.75	1.50	7/8	1/2 - 20	6.50	1/4	5/8 - 18	4.10	N/A	9.38	1.00	N/A	0.75	1,649	2,199	2,749	F/FA07	
7	1.75	1.50	1/2	5/8 - 18	7.50	3/8	5/8 - 18	4.88	N/A	8.88	1.00	N/A	0.75	2,262	3,016	3,770	F/FA07	
8	1.75	1.50	N/A	5/8 - 18	8.50	3/8	5/8 - 18	N/A	9.50	8.88	1.00	7.60	0.75	2,969	3,958	4,948	F/FA10	F/FA07
10	2.25	2.00	N/A	3/4 - 16	10.75	1/2	1 - 14	N/A	9.63	9.00	1.38	9.40	0.88	4,623	6,164	7,705	F/FA10	F/FA07
12	2.25	2.00	N/A	3/4 - 16	12.75	1/2	1 - 14	N/A	10.00	9.38	1.38	11.10	0.88	6,697	8,929	11,161	F/FA14	F/FA10
14	2.25	2.00	N/A	7/8 - 14	14.88	1/2	1 - 14	N/A	10.75	10.13	1.38	12.87	0.88	9,147	12,196	15,245	F/FA14	F/FA10
16	2.25	2.63	N/A	1 - 14	17.00	3/4	1 1/4 - 12	N/A	11.25	10.63	2.00	14.85	1.13	11,875	15,834	19,792	F/FA14	F/FA10
18	2.25	2.63	N/A	1 1/8 - 12	19.00	3/4	1 1/4 - 12	N/A	11.25	10.63	2.00	16.70	1.13	15,080	20,106	25,133	F/FA16	F/FA14
20	2.25	3.13	N/A	1 1/4 - 12	21.00	3/4	1 1/4 - 12	N/A	12.00	11.38	2.50	18.40	1.13	18,555	24,740	30,925	F/FA16	F/FA14
24	3.50	3.75	N/A	1 1/4 - 12	25.25	3/4	2 1/4 - 12	N/A	14.00	13.38	3.00	21.75	1.25	26,719	35,626	44,532	F/FA25	F/FA16
26	3.50	4.25	N/A	1 1/2 - 12	27.50	3/4	2 1/4 - 12	N/A	15.00	3.50	3.50	23.34	1.25	31,278	41,705	52,131	F/FA30	F/FA25

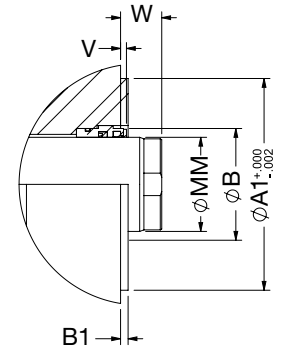
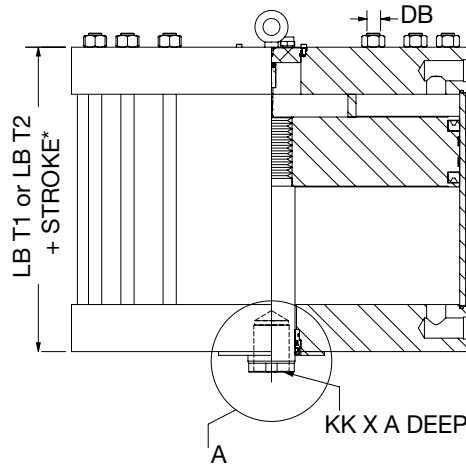
Consult factory for more detailed dimensions

*Other Mounting Patterns are available; consult factory

Actuator Dimensions: 28"– 42" Bore



C1 OF BOLTS, D1 THREADS
E1 DEEP ON F1 P.C.D.



*See page 5 for output options
LBT1 - Opt T1, LBT2 - Opt T2-T5

Actuator Dimensions (in)																		Thrust Values (lbs)			ISO or MSS Mounting Pattern*	
Bore	A	B	DB	E	EB	EE	KK	LB	LB T1	LB T2	MM	V	W	R	TE	TF	TG	60 PSI	80 PSI	100 PSI	STD	OPT
28	3.50	4.25	8 x 1 1/8 - 12	31.25	1.56	3/4	2 1/4 - 12UN	12.25	17.00	17.00	3.50	0.25	1.25	17.60	26.00	25.00	N/A	36,368	48,490	60,613	F/FA25	F/FA30
30	3.50	4.25	8 x 1 1/8 - 12	31.50	1.88	1 1/2 NP	2 1/4 - 12UN	12.25	17.00	17.00	3.50	0.25	1.50	18.70	26.70	26.70	N/A	41,834	55,779	69,724	F/FA25	F/FA30
32	3.50	4.75	8 x 1 1/8 - 12	34.00	1.88	1 1/2 NP	2 3/4 - 12UN	14.00	16.00	16.00	4.00	0.25	1.75	17.30	30.00	30.00	N/A	47,501	63,334	79,168	F/FA30	F/FA35
36	4.50	6.25	12 x 1 1/8 - 12	39.00	2.50	1 1/2 NP	4 - 12UN	20.00	20.00	20.00	5.50	0.25	1.75	13.30	33.00	27.60	N/A	59,647	79,529	99,412	F/FA30	F/FA35
42	4.50	6.25	12 x 1 1/8 - 12	45.00	2.50	1 1/2 NP	4 - 12UN	20.00	20.00	20.00	5.50	0.25	1.75	15.40	38.00	31.80	N/A	81,701	108,935	136,168	F/FA30	F/FA35

Consult factory for more detailed dimensions

*Other Mounting Patterns are available; consult factory

How to Order

How to Order										
1	2	3	4	5	6	7	8	9	10	11
Series	Bore Size	Rod Diameter	Rod End	Cushions	Transducer Option	Positioner	Seal	Ports	Mountings	Mods
HP	N	E	A4	8	T2	R	N	N11	X0	A2.50

Example With Automation Options						
Special Cylinder	1	2	3	4	5	10
Z	Series	Bore Size	Rod Diameter	Rod End	Cushions	Mountings
	HP	N	E	A4	8	X0

1	Series
HP	HP Series

2	Bore Size						
K	5"	R	12"	A	22"	J	32"
L	6"	S	14"	Y	24"	Q	36"
M	7"	T	16"	B	26"	V	42"
N	8"	W	18"	F	28"		
P	10"	X	20"	I	30"		

3	Rod Diameter						
E	1"	J	2"	M	3 1/2"	R	5"
G	1 3/8"	K	2 1/2"	N	4"	S	5 1/2"
H	1 3/4"	L	3"	P	4 1/2"		

4	Rod End
A4	Series HP Female

5	Cushions
8	None

6	Transducer Option		
T1	Analog output (Ratiometric) Digital output (discrete contacts)		T4 Analog output (04-20 mA)
T2	Analog output (Ratiometric)		T5 Analog output (0-5/0-10 Vdc)
T3	Analog output (0-20 mA)		

7	Positioner		
S	Positioner with Stainless Steel Tubing and fittings	R	Remote Positioner

Omit if Positioner integrated with Stainless fittings and Stainless Steel braided tubing

8	Seal		
N	Standard Seals	L	Low Temp

9	Ports		
NXX	NPT	TXX	BSPT

** XX denotes position. Example: 12 = Pos 1 head, Pos 2 Cap

10	Mountings		
X1	Tie rods extended b.e. (MX1)	X0	Standard (MX0)
X3	Tie rods extended h.e. (MX3)	IS	ISO mounting flange
X2	Tie rods extended c.e. (MX2)	MSS	MSS mounting flange

11	Mods		
	Omit if none required	C6	Stainless Steel construction with Carbon Fibre barrel*
A#	Thread extensions ex: A2.50 = A = 2.50"	LE	Lifting Lugs (8" bore and above)
C1	Epoxy Paint (Non Stainless Steel parts only)	M2	Stainless Steel tie rods (Do not specify with C5 or C6)
C2	Nickel Plate (Do not specify with C1 or C5)	M3	Stainless Steel piston rod (Do not specify with C5 or C6)
C5	All Stainless Steel construction*	W#	Rod Extension ex: W2.50 = W = 2.50"

Modifications to be listed alpha numerically after the stroke #

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Elite Valve



Elite Valve is committed to being a global leader in valve technology. We recognize that not all process applications are the same, and as our clients' processes vary, so should the valve technology they use. Registered as an ISO 9001 company, Elite Valve is committed to maintaining valve manufacturing technology centers, and delivering a reliable product every time called upon. In support of this commitment, Elite Valve has strategically located manufacturing and service centers within North America.

Our engineers are rewarded for innovative thinking... turning problems into opportunities and advancing product performance. Working closely with our customers is encouraged. Our modus operandi is "Strive to be the very best". It can be seen in the work we do daily. With these few words, we employ years of experience, handcrafting some of the best products available. Our ability to provide both standardized and custom-engineered solutions allows us to meet all your needs, in the most critical of applications.



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