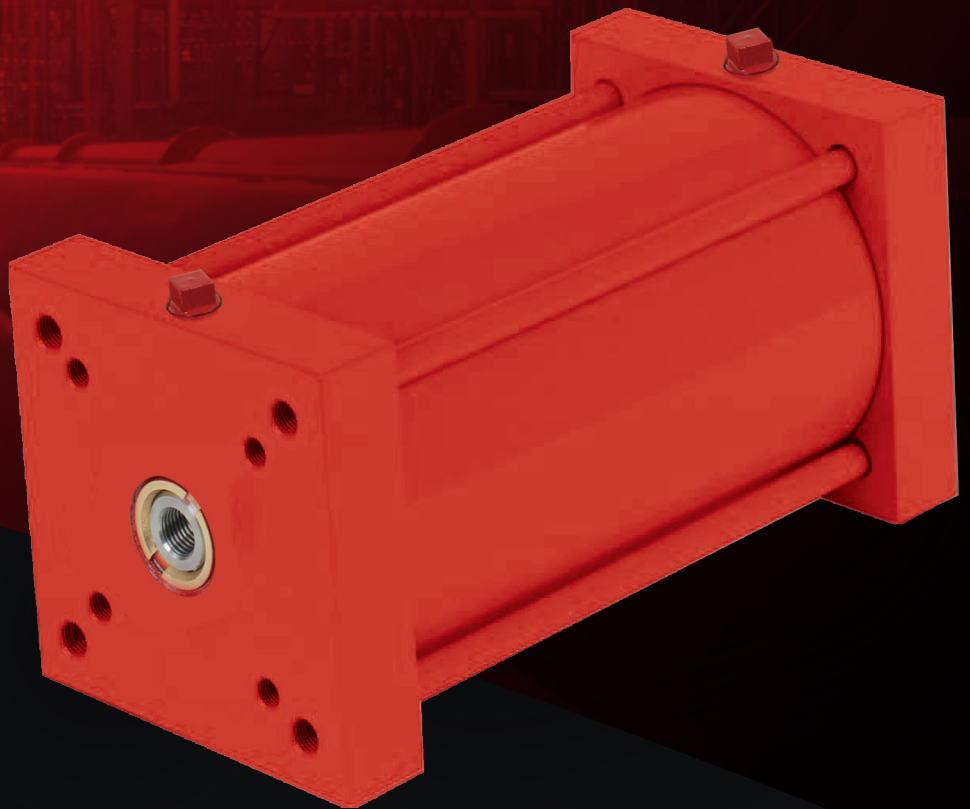


Elite Valve

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Customized
valve solutions
for the toughest
applications



HP Pneumatic Cylinders For Valve Actuation

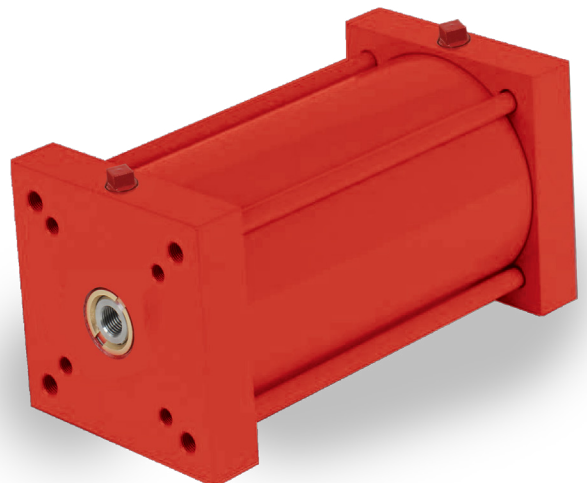
Bore size: $\frac{3}{4}$ " to 42" | Rating: 150 psig (1000 kPa)

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



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- 4 Features
- 6 Base Mounting
- 8 Optional Mountings
- 10 Model Numbering
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- 13 Notes



Features

The HP series of valve actuators are designed to automate valve operation. These actuators can be adapted for many applications, including special needs. Their compact design allows for easy installation.

Head & Cap

Numerically controlled machined from hot rolled steel plates ASTM A36 or better.

Piston Packing

2 pressure sensitive “U” cups for better sealing and durability.

Piston

Bore size from 3 1/4 to 8”: Numerically controlled machined from high strength aluminum barstock (6061-T6).

Bore size from 10” to 20”: Made from mild steel. A wear strip is added on the outside diameter to protect the tube and assure a perfect fit.

Piston Wear Strip

Bore size from 10” to 20”: It consists of a teflon tape filled with particles of bronze and glass, for smoother piston operation.

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Features

Cylinder Barrel

Thermoset fiber reinforced composite, specially designed for cylinder tubing for weight reduction and corrosion resistance.

Tie Rods and Nuts

High strength steel barstock along with zinc plated steel nuts (Grade 5).

Gland Bushing

Cartridge type, made from Bronze SAE 660. Seals can be replaced without dismantling the cylinder.

Piston Rod

High carbon content steel SAE 1045, ground, polished and chrome plated. (Chrome plated #316 stainless steel available on request).

Rod Wiper

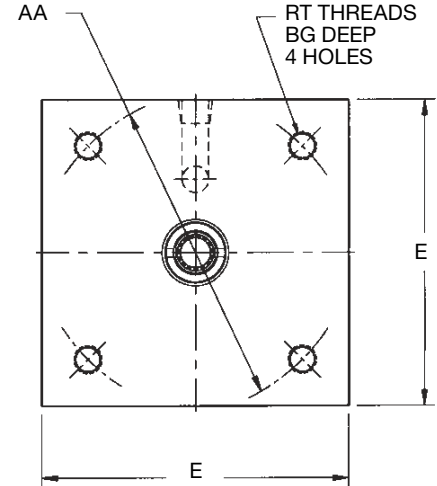
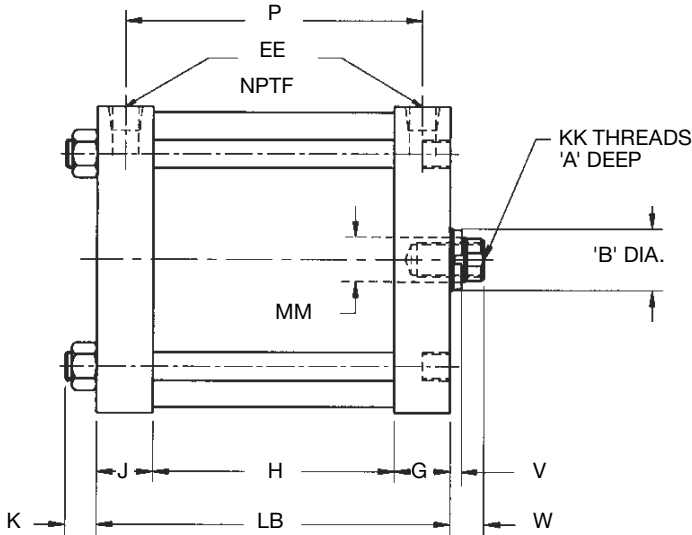
Stops dust and other particles from entering into the cylinder. Standard material is polyurethane. It can be replaced by fluorocarbon (viton) for higher temperature applications.

Seals and Packing

"U" CUP AND "O" RING used for added security. A high durometer nitrile material is offered as a standard for a temperature rating from -34°C to 120°C (-30°F to 250°F). For temperature range up to 250°C (450°F), fluoro-carbon (viton) seals and packings are available.

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Base Mounting

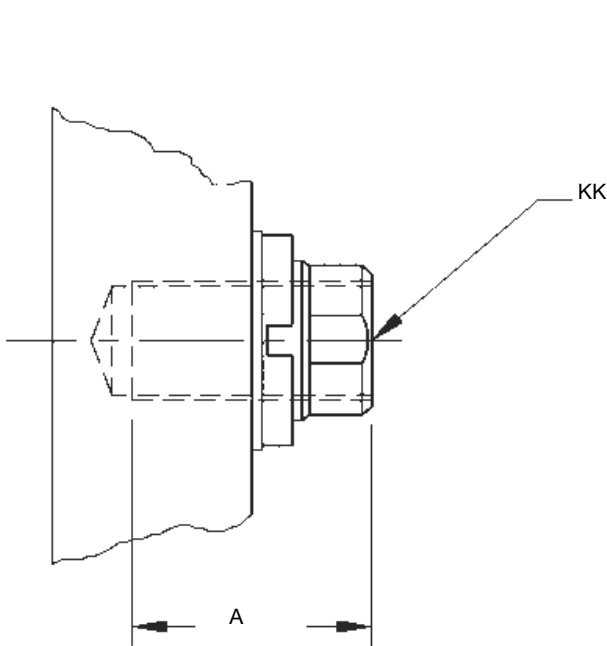


Dimensions

BORE	MM ROD SIZE	KK UNF	A	AA	B	BG	E	EE NPTF	G	J	K	RT UNF	V	W	ADD STROKE		
															LB	H	P
inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch	inch
3 1/4"	1	5/8 - 18	1 1/2	3.900	1.375	5/8	3 3/4	1/4	1	1	3/8	3/8 - 24	1/4	3/4	3	1	2
4"	1	5/8 - 18	1 1/2	4.700	1.375	5/8	4 1/2	1/4	1	1	3/8	3/8 - 24	1/4	3/4	3	1	2
5"	1	5/8 - 18	1 1/2	5.800	1.375	1/2	5 1/2	1/4	1	1	1/2	1/2 - 20	1/4	3/4	3 1/8	1 1/8	2 1/8
6"	1	5/8 - 18	1 1/2	6.900	1.375	1/2	6 1/2	1/4	1	1	1/2	1/2 - 20	1/4	3/4	3 1/8	1 1/8	2 1/8
7"	1	5/8 - 18	1 1/2	8.100	1.375	5/8	7 1/2	3/8	1 1/4	1 1/4	5/8	5/8 - 18	1/4	3/4	3 3/4	1 1/4	2 1/2
8"	1	5/8 - 18	1 1/2	9.100	1.375	5/8	8 1/2	3/8	1 1/4	1 1/4	5/8	5/8 - 18	1/4	3/4	3 3/4	1 1/4	2 1/2
10"	1 3/4	1 - 14	2	11.200	1.875	3/4	10 5/8	3/8	1 1/2	1 1/2	3/4	3/4 - 16	5/16	1	4 3/4	1 3/4	3 1/4
12"	1 3/4	1 - 14	2	13.300	1.875	3/4	12 3/4	1/2	1 1/2	1 1/2	3/4	3/4 - 16	5/16	1	4 3/4	1 3/4	3 1/4
14"	1 3/4	1 - 14	2	15.400	1.875	7/8	14 3/4	1/2	1 3/4	1 3/4	7/8	7/8 - 14	5/16	1	5 1/2	2	3 3/4
16"	2	1 1/2 - 12	2 1/2	17.800	2.500	-	17	1/2	1 3/4	1 3/4	1	-	3/8	1 1/2	5 5/8	2 1/8	3 7/8
18"	2	1 1/2 - 12	2 1/2	20.00	2.500	-	19	3/4	1 3/4	1 3/4	1 1/8	-	3/8	1 1/2	5 7/8	2 3/8	4 1/8
20"	2	1 1/2 - 12	2 1/2	22.300	2.500	-	21	3/4	1 3/4	1 3/4	1 1/4	-	3/8	1 1/2	6 1/8	2 5/8	4 3/8

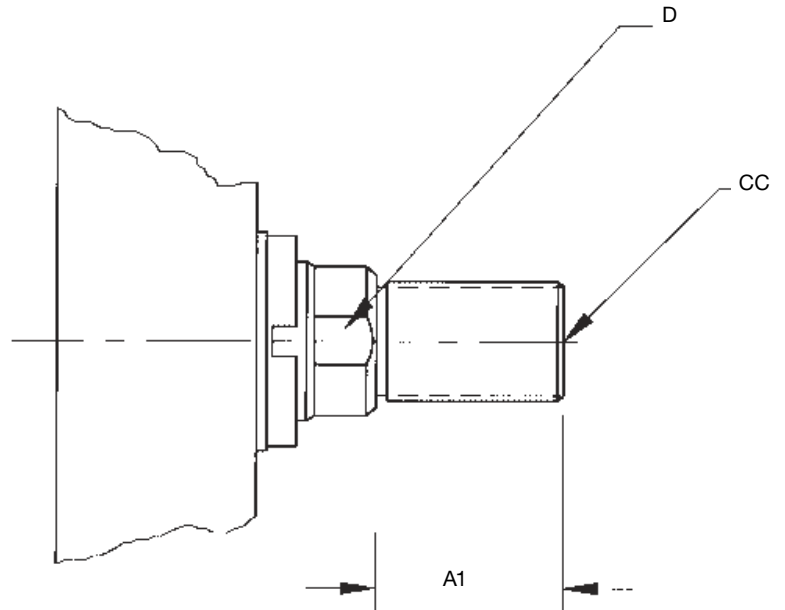
Base Mounting

Rod Threads



Type -4-

Female Threads (standard)



Type -1-

Male Threads (optional)

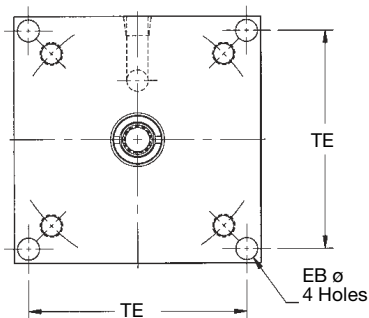
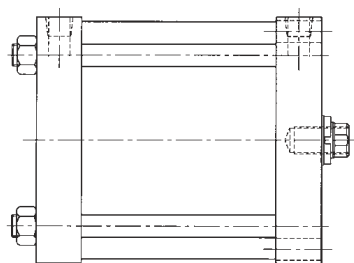
Dimensions					
ROD SIZE	A1	CC UNF 2A	D	A	KK UNF 2B
inch	inch	inch	inch	inch	inch
3 1/4"	1	5/8 - 18	1 1/2	3.900	1.375
4"	1	5/8 - 18	1 1/2	4.700	1.375
5"	1	5/8 - 18	1 1/2	5.800	1.375

RDC Contrôle can also manufacture special rod ends to answer your specific needs. Use thread type -9- in model number and specify required dimensions.

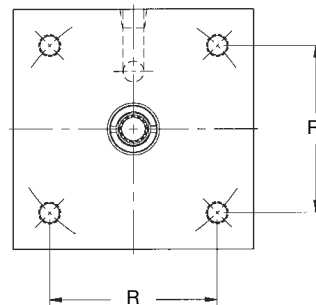
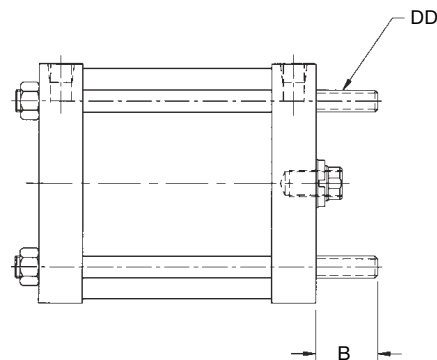
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Optional Mountings

Bore size: 7" to 20" only



X3 – Extended Tie Rods Mounting



Dimensions

BORE	EB	TE	BB	DD UNF	R
inch	inch	inch	inch	inch	inch
3 1/4"	-	-	1 3/8	3/8 - 24	2.76
4"	-	-	1 3/8	3/8 - 24	3.32
5"	-	-	1 3/4	1/2 - 20	4.10
6"	-	-	1 3/4	1/2 - 20	4.88
7"	9/16	6.75	2	5/8 - 18	5.73
8"	1 1/16	7.57	2	5/8 - 18	6.44
10"	1 3/16	9.40	2 1/4	3/4 - 16	7.92
12"	1 3/16	11.10	2 1/4	3/4 - 16	9.40
14"	1 5/16	12.87	2 1/2	7/8 - 14	10.90
16"	1 11/16	14.85	2 3/4	1 - 14	12.59
18"	1 3/8	16.69	3 1/4	1 1/8 - 12	14.14
20"	1 5/8	18.46	3 1/4	1 1/4 - 12	15.77

Elite Valve can also adapt any special mounting to your needs. Consult our engineering department.

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Valve Mountings, Options and Accessories

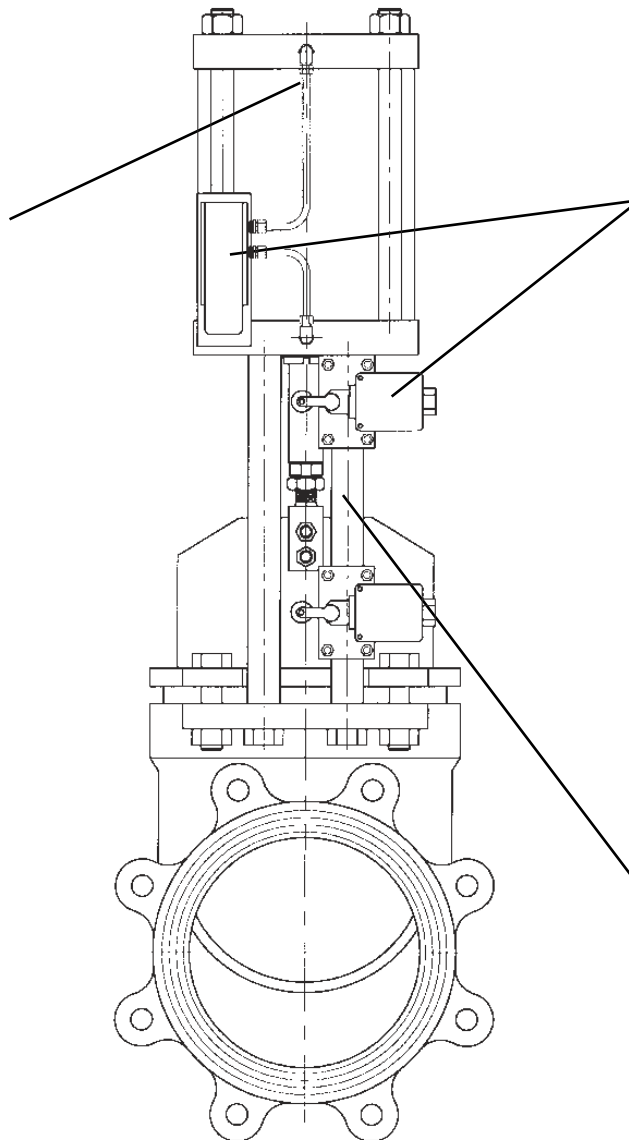
Elite Valve can also design and fabricate custom cylinders. In addition, we can also add a complete range of accessories to answer your automation requirements.

Cylinder Options

- Stainless steel piston rod
- Double ended cylinder
- Viton seals (450°F)
- Piston rod scrapper
- Special exterior finish
- Water operation (AWWA)
- Spring return (fail safe)
- Multiple stage cylinder

Other Options

- Stroke adjustment
- Manual override
- Stainless steel mounting
- Air fail safe system



Automation Accessories

- Control valve:
 - Manual
 - Solenoid
- Limit switches
- Positioners
- Position transmitters

Valve Types

- Knife gate
- Wedge gate
- Globe
- Pinch
- Sluice

Model Numbering

How to Order

1	2	3	4	5	6		
Bore	Rod Size	Rod Threads	Cushions	Mounting	Option Suffix	Stroke (in)	
L	E	4	N	A0	V	—	11.00

1	Bore		
G	3 ¼	R	12
H	4	S	14
K	5	T	16
L	6	V	18
M	7	W	20
N	8	Z	Other
P	10		

4	Cushions		
N	None		

5	Mounting		
A0		State	
E3		• Make	
X3		• Type	
Z9		• Size	

2	Rod Size		
E	1	K	2 1/2
G	1 3/4	Z	Others
J	2		

3	Rod Threads		
1	Male (opt.)	5	Added Stud
4	Female (STD)	9	Special

6	Option Suffix		
	Blank if none	T	Stop tube
A	Stroke adjustment	V	Viton seals for temp. up to 250°C (450°F)
D	Double-rod	W	Water operation specs. AWWA C-504
E	Special exterior finish	X	Spring to extend
J	Rod extension	Y	Spring to retract
S	Stainless steel piston rod	Z	Others

Replacement Parts

Torque Chart (Minimum and Maximum)

Spare parts and seal kits can be ordered, using the part number prefix, followed by the cylinder model number:

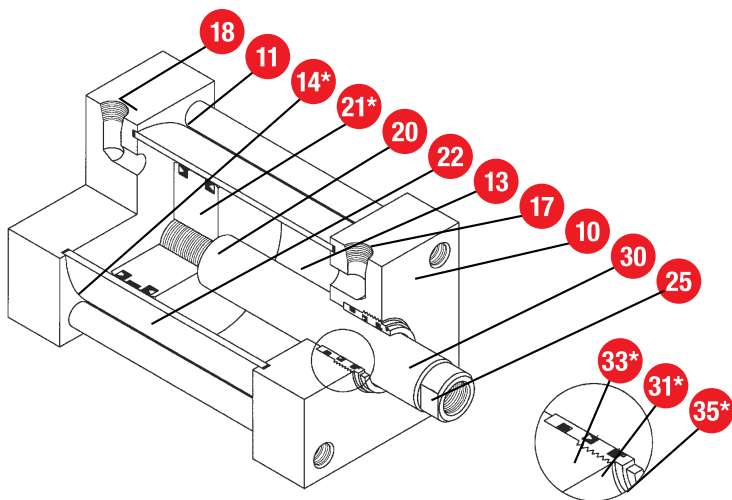
Example: 20-OPCYL Bore x Stroke HP-PDA.

It is recommended to provide the cylinder serial number to facilitate inquiries for part replacement.

A Maintenance & Operation Manual HP is available for more detailed maintenance instructions of Series PA actuators.

Seal kit	
29	For piston (parts #21 and #22)
39	For bushing (parts #31, #33, and #35)
99	Complete (parts indicated with an *)

Bore Size	Tie Rods		Gland Bushing	
	Dia.	Torque (Ft. - lbs)	Rod Dia.	Torque (Ft. - lbs)
3 1/4" - 4"	3/8	6 - 15	1"	30 - 50
5" - 6"	1/2	15 - 30	1"	30 - 50
7"	5/8	20 - 70	1"	30 - 50
8"	5/8	30 - 70	1"	30 - 50
10"	3/4	55 - 110	1 3/8"	40 - 60
12"	3/4	70 - 110	1 3/8"	40 - 60
14"	7/8	100 - 180	1 3/8"	40 - 60
16"	1	150 - 350	2"	55 - 75
18"	1 1/8	220 - 500	2"	55 - 75
20"	1 1/4	300 - 720	2"	55 - 75



Pieces	Description	Qty
10	Head	1
11	Cap	1
13	Barrel	1
14*	Barrel seals	2
17	Tie rods	4
18	Tie rod nuts	4
20	Piston	1
21*	Piston packings	2
22*	Wear strip (10" and up)	1
25	Piston rod	1
30	Gland bushing	1
31*	Gland packing	1
33*	Gland seal	1
35*	Piston rod wiper	1

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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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