

Shafer L-Series

Linear Valve Actuators Thrust Ratings and Dimensional Data

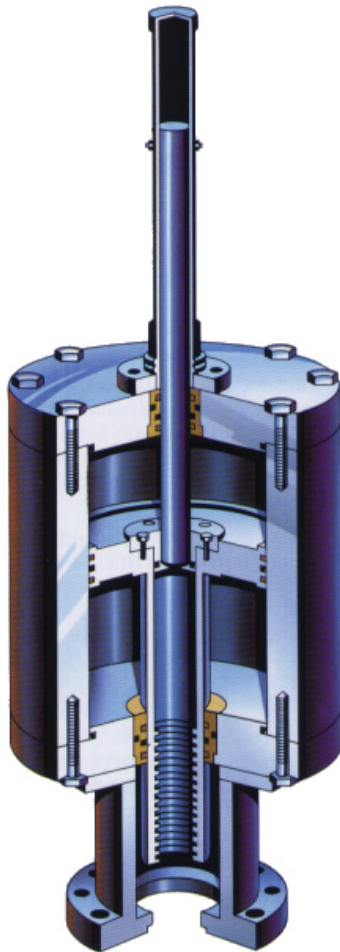


Table of Contents

Section 1: Dimensional Data

Actuator with gas/hydraulic tanks for gas over oil applications	1
Hydraulic Actuator	2

Section 2: Thrust Ratings

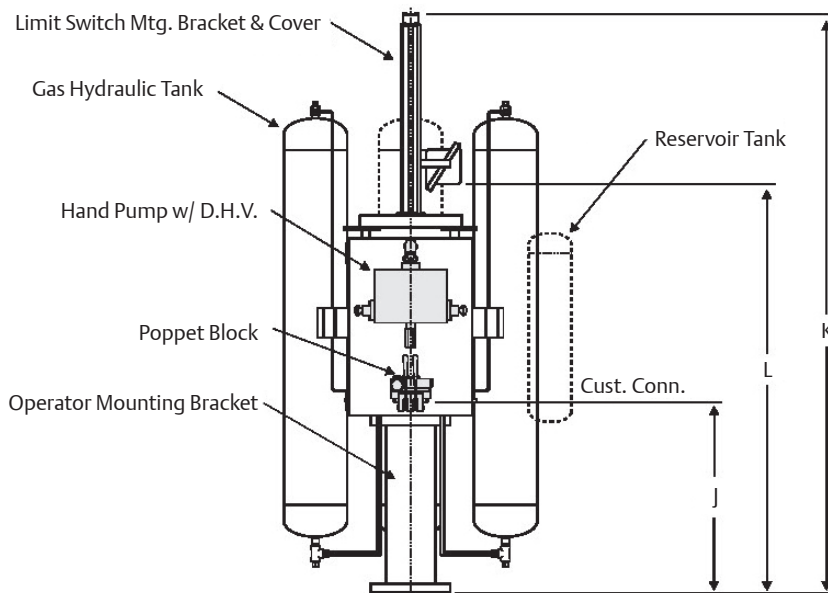
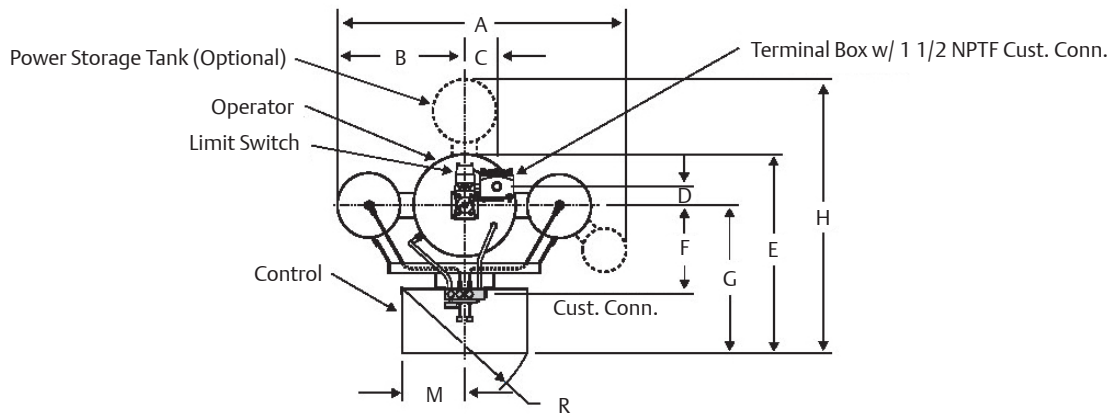
Thrust Table	3
--------------------	---

Dimensional Data

Actuator with gas/hydraulic tanks for gas over oil applications

All dimensions shown in inches.

Valve Size	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	30"	36"	42"	48"
A	31 1/8	32 7/8	34 1/8	39 1/2	39 1/2	39 1/2	58 3/8	58 3/8	58 3/8	58 3/8	58 3/8	58 3/8	66 1/2	83 3/4	83 3/4
B	12 5/8	13 5/8	13 5/8	17 5/8	17 5/8	17 5/8	26	26	26	26 1/8	26 1/8	25 5/8	29 1/4	36 7/8	36 7/8
C	3 1/4	3 1/4	3 1/4	3 1/4	3 1/4	3 1/4	6 5/8	6 5/8	6 5/8	6 5/8	6 5/8	6 5/8	6 5/8	6 5/8	6 5/8
D	6 7/8	6 7/8	6 7/8	6 7/8	6 7/8	6 7/8	3 3/4	3 3/4	3 3/4	3 3/4	3 3/4	3 3/4	3 3/4	3 3/4	3 3/4
E	36 1/4	36 1/2	36 1/2	36 5/8	36 5/8	36 5/8	40 7/8	40 7/8	40 7/8	40 7/8	41	40	43	43 1/4	43 1/4
F	13 7/8	14	14	15 3/4	15 3/4	15 3/4	17 7/8	17 7/8	17 7/8	17 7/8	18	17 3/4	19 3/4	17	21 3/4
G	24 1/4	24 3/8	24 1/2	25 1/4	25 1/4	25 1/4	29 7/8	29 7/8	29 7/8	29 7/8	29 7/8	29 7/8	29 7/8	31 3/4	30 1/8
H	48 1/4	48 1/2	48 1/2	40	40	40	55 5/8	55 5/8	55 5/8	55 5/8	55 3/4	55 3/4	61	65 1/4	69 5/8
J	7 5/8	5 3/4	11 1/2	12	16	12	18	18	18	24	24	24	30	38	44 1/2
K	36 1/8	36 3/4	38 1/4	59	62 5/8	64	77	88 3/4	97	101 1/4	116 3/4	121	139	147 3/8	178
L	28 3/8	28 3/4	25 5/8	42 1/4	45	44 1/4	58 7/8	63 1/4	70 1/2	72 3/4	88 1/4	92 1/2	96 3/4	101	105 1/4
M	12 5/8	12 5/8	12 5/8	12 5/8	12 5/8	12 5/8	12 5/8	12 5/8	12 5/8	12 5/8	12 5/8	12 5/8	12 5/8	12 5/8	12 5/8
R	27	27	27	27	27	27	28 1/4	28 1/4	28 1/4	28 1/4	28 1/4	28 1/4	28 1/4	28 1/4	28 1/4

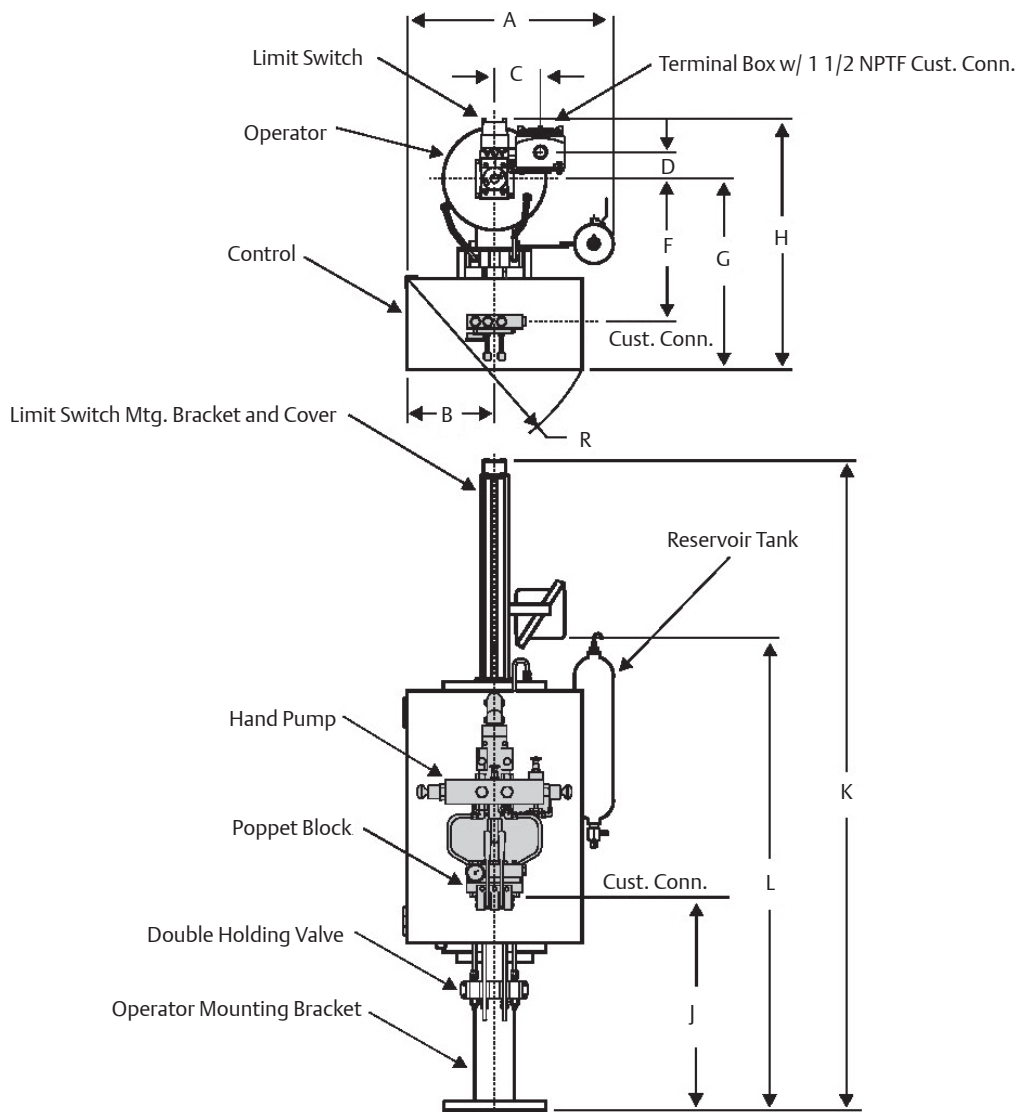


Dimensional Data

Hydraulic Actuator

All dimensions shown in inches.

Valve Size	6"	8"	10"	12"	14"	16"	18"	20"	22"	24"	26"	30"	36"	42"	48"
A	27	27	27	27	27	27	27	27	27	28	28	28	28	28	30
B	95/8	95/8	95/8	95/8	95/8	95/8	141/8	141/8	141/8	141/8	141/8	141/8	141/8	141/8	141/8
C	31/4	31/4	31/4	31/4	31/4	31/4	65/8	65/8	65/8	65/8	65/8	65/8	65/8	65/8	65/8
D	67/8	67/8	67/8	67/8	67/8	67/8	33/4	33/4	33/4	33/4	33/4	33/4	33/4	33/4	33/4
F	173/4	185/8	191/4	191/4	201/8	201/8	211/8	211/8	211/8	191/2	21	23	301/8	315/8	323/4
G	221/2	24	24	24	247/8	247/8	257/8	257/8	257/8	261/2	28	30	375/8	385/8	403/4
H	361/4	361/2	361/2	361/2	371/2	371/2	381/2	381/2	381/2	37	39	401/2	493/4	513/4	56
J	12	14	16	18	20	22	24	26	28	30	34	36	44	50	56
K	347/8	407/8	471/8	531/8	591/8	651/8	711/8	771/8	831/8	885/8	945/8	1005/8	1247/8	1407/8	1567/8
L	283/8	283/4	405/8	363/8	411/2	453/8	53	59	65	701/2	761/2	821/2	1063/4	1223/4	1383/4
R	237/8	237/8	237/8	237/8	237/8	237/8	331/2	331/2	331/2	331/2	331/2	331/2	331/2	331/2	331/2



Thrust Table

All thrusts shown in pounds. All diameters shown in inches.

Maximum Acceptable Valve Stem Dia.	Piston Dia. (In)	* Downward Closing Thrust Factor (In ²)	* Upward Opening Thrust Factor (In ²)	Maximum Allowable Thrust (lbs)	Typical Valve Size
1 3/8	4	9.975	9.975	17,800	4" - 6"
2	4	9.975	8.480	24,480	4" - 6"
2	6	24.11	22.61	40,500	8" - 10"
2 3/4	6	24.11	20.10	47,860	8" - 10"
2 1/2	8	43.90	40.82	66,260	10" - 14"
3 1/4	8	43.90	37.77	77,300	10" - 14"
2 3/4	10	69.35	65.34	83,380	16" - 18"
3 3/4	10	69.35	60.74	112,680	16" - 18"
3	12	100.45	95.43	102,460	20" - 22"
4 1/4	12	100.45	89.02	153,900	20" - 22"
3 1/2	14 7/8	155.06	147.74	146,500	24" - 26"
5 3/4	14 7/8	155.06	133.03	252,060	24" - 26"
5	16 1/2	190.57	174.76	213,780	28" - 30"
5 3/4	16 1/2	190.57	169.07	283,480	28" - 30"
5	18 3/4	246.64	230.83	213,780	32" - 36"
6 1/4	18 3/4	246.64	220.89	312,940	32" - 36"
5	20 1/4	287.98	272.18	213,780	36" - 40"
6 1/4	20 1/4	287.98	262.24	312,940	36" - 40"
5 3/4	22	340.25	318.74	283,480	40" - 42"
6 1/4	22	340.25	314.50	312,940	40" - 42"

Shafer L-Series linear actuators are custom engineered to match the specific application requirements of stroke length, thrust, and power pressure. Due to the vast number of combinations offered by valve manufacturers, little standardization is allowed. Various diameter cylinders may be utilized as thrust requirements and power supply pressures vary. The Thrust Table gives only a representative sample of our total capabilities. Please contact our factory for specific actuator sizing requirements.

Normal design working pressure is 1,480 psi with a test pressure of 2,220 psi, however, higher pressures may be specified.

* To determine the actuator thrust output, multiply the thrust factor (In²) times the power supply pressure (psi).

Thrust Output = Thrust Factor (In²) x Power Pressure (psi)

World Area Configuration Centers (WACC) offer sales support, service, inventory and commissioning to our global customers. Choose the WACC or sales office nearest you:

NORTH & SOUTH AMERICA

19200 Northwest Freeway
Houston TX 77065
USA
T +1 281 477 4100
F +1 281 477 2809

2500 Park Avenue West
Mansfield Ohio 44906
USA
T +419 529 4311
F +419 529 3688

Av. Hollingsworth
325 Iporanga Sorocaba
SP 18087-105
Brazil
T +55 15 3238 3788
F +55 15 3228 3300

ASIA PACIFIC

No. 9 Gul Road
#01-02 Singapore 629361
T +65 6777 8211
F +65 6268 0028

No. 1 Lai Yuan Road
Wuqing Development Area
Tianjin 301700
P. R. China
T +86 22 8212 3300
F +86 22 8212 3308

For complete list of sales and manufacturing sites, please visit www.emerson.com/actuationtechnologieslocations or contact us at info.actuationtechnologies@emerson.com

MIDDLE EAST & AFRICA

P. O. Box 17033
Dubai
United Arab Emirates
T +971 4 811 8100
F +971 4 886 5465

P. O. Box 10305
Jubail 31961
Saudi Arabia
T +966 3 340 8650
F +966 3 340 8790

24 Angus Crescent
Longmeadow Business Estate East
P.O. Box 6908 Greenstone
1616 Modderfontein Extension 5
South Africa
T +27 11 451 3700
F +27 11 451 3800

EUROPE

Berenyi u. 72- 100
Videoton Industry Park
Building #230
Székesfehérvár 8000
Hungary
T +36 22 53 0950
F +36 22 54 3700

www.emerson.com/shafer

©2017 Emerson. All rights reserved.

The Emerson logo is a trademark and service mark of Emerson Electric Co. Shafer™ is a mark of one of the Emerson family of companies. All other marks are property of their respective owners.

The contents of this publication are presented for information purposes only, and while every effort has been made to ensure their accuracy, they are not to be construed as warranties or guarantees, express or implied, regarding the products or services described herein or their use or applicability. All sales are governed by our terms and conditions, which are available on request. We reserve the right to modify or improve the designs or specifications of our products at any time without notice.