

H-BLOCK

The lightweight, durable, low-profile H-Block design is the most versatile of our rod cylinder slides. It also has one of the highest ratings of load weight vs extension for its kind in the industry. The H-Block features flexible mounting with your choice of sintered bronze, composite or precision ball bearings.

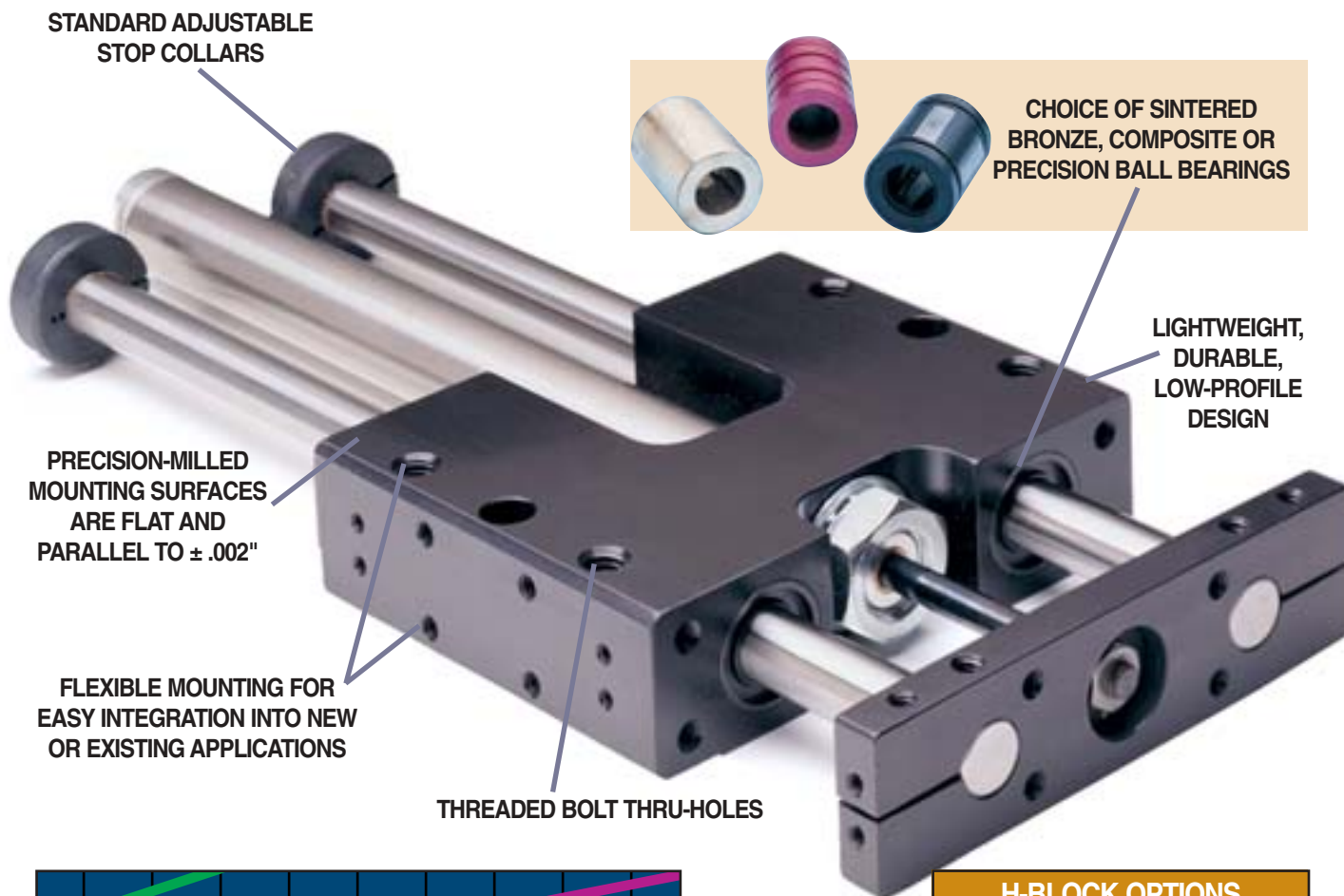
Tol-O-Matic's H-Block Rod Cylinder Slide was developed in direct response to customer requests. Thanks to its flexible mounting options and light-

weight yet strong and durable low-profile design, the H-Block is gaining popularity in a variety of linear motion applications.

H-Block actuators can be ordered with stroke lengths up to 12" [305mm] (longer stroke lengths are also available) in your choice of six cylinder bore sizes: $\frac{9}{16}$ ", $\frac{3}{4}$ ", $1\frac{1}{16}$ ", $1\frac{1}{2}$ ", 2" and 3". Three bearing types: sintered bronze bearings, composite bearings or precision ball bearings are available for smooth operation and longer bear-

ing life. Best of all, the H-Block series is completely adaptable to other Tol-O-Matic actuators, making it the perfect building block for a complete motion system.

The unique "H" design allows for easy mounting of sensing systems: dc reed, Hall-effect or ac Traic switches. Shock absorbers are available for high inertia applications. See page 211 & 222 for detailed descriptions, dimensional drawings and performance data. In addition, stop collars and fasteners are available.



PERFORMANCE DATA

SEE PAGES 138 TO 143
FOR PERFORMANCE DATA FOR
H-BLOCK ROD CYLINDER SLIDES

H-BLOCK OPTIONS

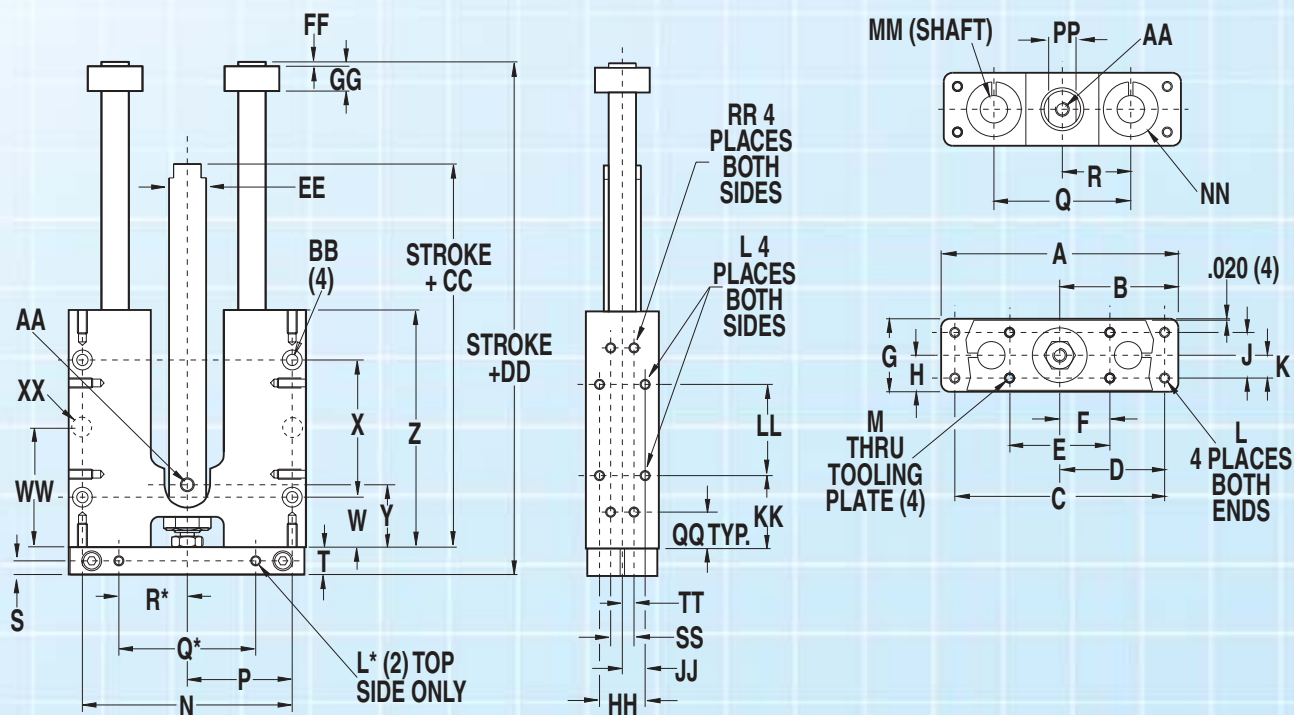
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H-BLOCK

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HB09.DXF
HB12.DWG
HB12.DXF
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HB17.DXF

DIMENSIONAL DATA

HB.EXE
HB24.DWG
HB24.DXF
HB32.DWG
HB32.DXF
HB48.DWG
HB48.DXF



OVERALL UNIT SPECIFICATIONS

	HB09	HB12	HB17	HB24	HB32	HB48
Bore size (in.)	0.562	0.75	1.062	1.50	2.00	3.00
Base weight (lbs.)	1.61	2.07	3.96	4.83	12.82	31.38
Weight per in. of stk. (lbs.)	0.08	0.15	0.22	0.34	0.59	0.97

OVERALL UNIT SPECIFICATIONS

	HB09	HB12	HB17	HB24	HB32	HB48
Bore size (in.)	0.562	0.75	1.062	1.50	2.00	3.00
Base weight (kgs.)	0.7	0.9	1.8	2.2	5.8	14.2
Weight per in.(25mm) of stk. (kgs.)	0.04	0.07	0.10	0.15	0.27	0.44

For Assistance Call
1-800-328-2174
(Toll Free U.S. and Canada)
or
763-478-8000
Fax 763-478-8080

MODEL NO.	BORE SIZE	A	B	C	D	E	F	G	H	J	K	L		M	N	P	Q*	R*	S	T	W	X	Y	Z
HB09	9/16"	3.250	1.625	2.875	1.438	1.375	0.688	0.950	0.475	0.625	0.313	#6-32 x .31 DP		#6-32 thru	2.875	1.438	1.875	0.938	0.18	0.38	0.685	1.880	0.86	3.250
HB12	3/4"	4.531	2.266	3.937	1.969	1.750	0.875	1.200	0.600	0.700	0.350	#10-24 x .38 DP		#10-24 thru	3.937	1.969	2.500	1.250	0.18	0.38	0.825	2.000	1.30	3.650
HB17	1 1/16"	5.125	2.562	4.500	2.250	2.000	1.000	1.560	0.780	0.945	0.473	1.4-20 x .50 DP		1/4-20 thru	4.500	2.250	2.750	1.375	0.25	0.50	1.000	2.500	1.36	4.500
HB24	1 1/2"	6.250	3.125	5.438	2.719	2.500	1.250	1.935	0.968	1.250	0.625	1/4-20 x .50 DP		1/4-20 thru	5.438	2.719	3.500	1.750	0.31	0.63	1.063	2.625	1.88	4.750
HB32	2"	7.750	3.875	7.000	3.500	3.500	1.750	2.800	1.400	2.050	1.025	5/16-18 x .50 DP		5/16-18 thru	7.000	3.500	4.688	2.344	0.38	0.75	1.188	3.875	2.19	6.250
HB48	3"	10.000	5.000	9.000	4.500	4.500	2.250	3.560	1.780	2.500	1.250	3/8-16 x .63 DP		3/8-16 thru	9.000	4.500	6.000	3.000	0.50	1.00	1.437	4.125	2.66	7.000
MODEL	BORE	AA		BB		CC	CC*	DD	EE	FF	GG	HH	JJ	KK	LL	MM	NN	PP	QQ	RR	SS	TT	WW	XX ^s
HB09	9/16"	#10-32		Clearance for #6 SHCS tapped #8-32 x .55DP from opposite side		2.41	2.66	4.07	Ø.62	0.03	0.31	0.625	0.313	1.000	1.250	.375 nom.	0.88	0.38	0.500	#6-32 x .18 DP	0.320	0.160	1.625	Ø.250/.251 x .375DP
HB12	3/4"	1/8-27 NPTF		Clearance for 1/4 SHCS tapped 5/16 x .95DP from opposite side		3.30	3.55	4.44	Ø.81	0.03	0.38	0.700	0.350	1.275	1.100	.500 nom.	1.13	0.62	0.500	#6-32 x .18 DP	0.320	0.160	1.825	Ø.375/.376 x .500DP
HB17	1 1/16"	1/8-27 NPTF		Clearance for 1/4 SHCS tapped 5/16 x .95DP from opposite side		3.42	3.58	5.44	Ø1.12	0.03	0.41	0.945	0.473	1.500	1.500	.625 nom.	1.50	0.88	0.625	#8-32 x .25 DP	0.450	0.225	2.250	Ø.375/.376 x .500DP
HB24	1 1/2"	1/8-27 NPTF		Clearance for 1/4 SHCS tapped 5/16 x .95DP from opposite side		4.07	4.32	5.91	Ø1.56	0.03	0.50	1.250	0.625	1.500	1.750	.750 nom.	1.75	0.88	0.625	#8-32 x .25 DP	0.450	0.225	2.375	Ø.375/.376 x .500DP
HB32	2"	1/4-18 NPT		Clearance for 5/16-18 SHCS tapped 3/8 x 1.00DP from opposite side		5.04	5.32	7.53	Ø2.08	0.03	0.50	2.050	1.025	1.750	2.750	1.000 nom.	2.00	1.25	0.625	#8-32 x .25 DP	0.450	0.225	3.125	Ø.500/.502 x .500DP
HB48	3"	3/8-18 NPT		Clearance for 7/16 SHCS tapped 1/2-13UNC-2B x 1.50 DP from opposite side		5.82	6.07	8.53	Ø3.16	0.03	0.50	2.500	1.250	2.125	2.750	1.250 nom.	2.25	2.00	0.625	#8-32 x .25 DP	0.450	0.225	3.500	Ø.500/.502 x .500DP

*Holes on top side only, set screws fill holes on bottom side ¥Cylinders equipped with magnets

\$Dowel Pins Φ 0.002 M

Above Dimensions in inches

MODEL NO.	BORE SIZE	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q*	R*	S	T	W	X	Y	Z		
HB09	9/16"	82.55	41.28	73.03	36.53	34.93	17.48	24.13	12.07	15.88	7.95	#6-32 x .31 DP	#6-32 thru	73.03	36.53	47.63	23.83	4.6	9.7	17.40	47.75	21.8	82.55		
HB12	3/4"	115.09	57.56	100.00	50.01	44.45	22.23	30.48	15.24	17.78	8.89	#10-24 x .38 DP	#10-24 thru	100.00	50.01	63.50	31.75	4.6	9.7	20.96	50.80	33.0	92.71		
HB17	1 1/16"	130.18	65.07	114.30	57.15	50.80	25.40	39.62	19.81	24.00	12.01	1.4-20 x .50 DP	1/4-20 thru	114.30	57.15	69.85	34.93	6.4	12.7	25.40	63.50	34.5	114.30		
HB24	1 1/2"	158.75	79.38	138.13	69.06	63.50	31.75	49.15	24.59	31.75	15.88	1/4-20 x .50 DP	1/4-20 thru	138.13	69.06	88.90	44.45	7.9	16.0	27.00	66.68	47.8	120.65		
HB32	2"	196.85	98.43	177.80	88.90	88.90	44.45	71.12	35.56	52.07	26.04	5/16-18 x .50 DP	5/16-18 thru	177.80	88.90	119.08	59.54	9.7	19.1	30.18	98.43	55.6	158.75		
HB48	3"	254.00	127.00	228.60	114.30	114.30	57.15	90.42	45.21	63.50	31.75	3/8-16 x .63 DP	3/8-16 thru	228.60	114.30	152.40	76.20	12.7	25.4	36.50	104.78	67.6	177.80		
MODEL	BORE	AA	BB				CC	CC*	DD	EE	FF	GG	HH	JJ	KK	LL	MM	NN	PP	QQ	RR	SS	TT	WW	XX [§]
HB09	9/16"	#10-32	Clearance for #6 SHCS tapped #8-32 x .55DP from opposite side				61.21	67.6	103.4	Ø15.7	0.8	7.9	15.88	7.95	25.40	31.75	9.53 nom.	22.4	9.7	12.70	#6-32 x .18 DP	8.13	4.06	41.28	Ø.250/.251 x .375DP
HB12	3/4"	1/8-27 NPTF	Clearance for 1/4 SHCS tapped 5/16 x .95DP from opposite side				83.82	90.2	112.8	Ø20.6	0.8	9.7	17.78	8.89	32.39	27.94	12.70 nom.	28.7	15.7	12.70	#6-32 x .18 DP	8.13	4.06	46.36	Ø.375/.376 x .500DP
HB17	1 1/16"	1/8-27 NPTF	Clearance for 1/4 SHCS tapped 5/16 x .95DP from opposite side				86.87	90.9	138.2	Ø28.4	0.8	10.4	24.00	12.01	38.10	38.10	15.88 nom.	38.1	22.4	15.88	#8-32 x .25 DP	11.43	5.72	57.15	Ø.375/.376 x .500DP
HB24	1 1/2"	1/8-27 NPTF	Clearance for 1/4 SHCS tapped 5/16 x .95DP from opposite side				103.4	109.7	150.1	Ø39.6	0.8	12.7	31.75	15.88	38.10	44.45	19.05 nom.	44.5	22.4	15.88	#8-32 x .25 DP	11.43	5.72	60.33	Ø.375/.376 x .500DP
HB32	2"	1/4-18 NPT	Clearance for 5/16-18 SHCS tapped 3/8 x 1.00DP from opposite side				128.0	135.1	191.3	Ø52.8	0.8	12.7	52.07	26.04	44.45	69.85	25.40 nom.	50.8	31.8	15.88	#8-32 x .25 DP	11.43	5.72	79.38	Ø.500/.502 x .500DP
HB48	3"	3/8-18 NPT	Clearance for 7/16 SHCS tapped 1/2-13UNC-2B x 1.50 DP from opposite side				147.8	154.2	216.7	Ø80.3	0.8	12.7	63.50	31.75	53.98	69.85	31.75 nom.	57.2	50.8	15.88	#8-32 x .25 DP	11.43	5.72	88.90	Ø.500/.502 x .500DP

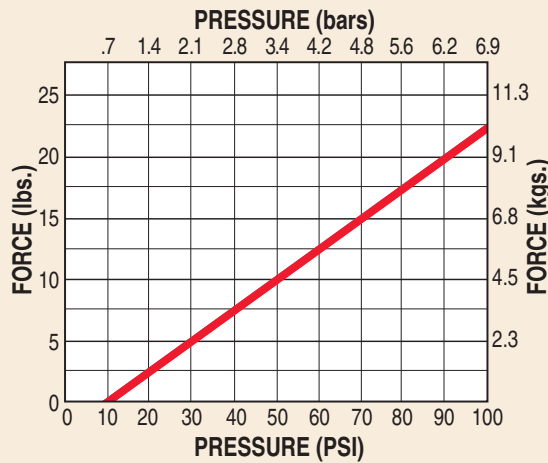
*Holes on top side only, set screws fill holes on bottom side ¥Cylinders equipped with magnets

\$Dowel Pins Φ 0.051 M

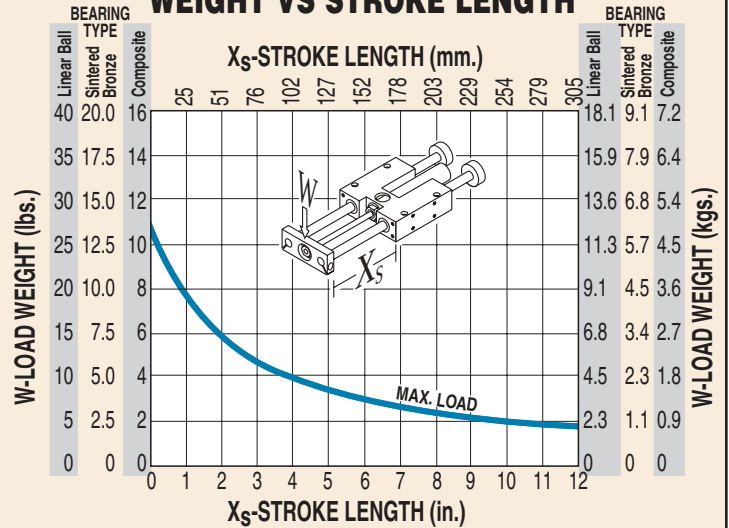
Above Dimensions in millimeters

PERFORMANCE DATA 9/16" Bore HB09

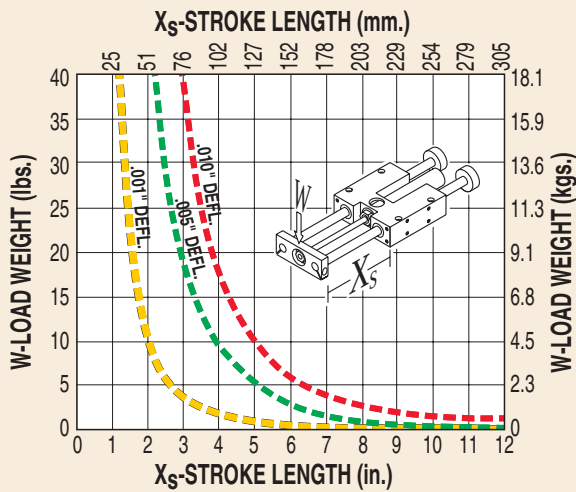
FORCE VS PRESSURE



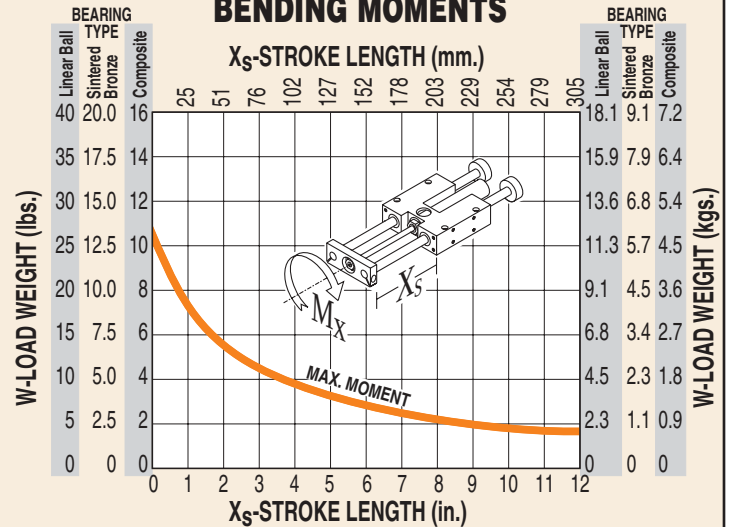
WEIGHT VS STROKE LENGTH



DEFLECTION



BENDING MOMENTS



FORCE VS. PRESSURE

NOTE: Force vs Pressure performance data applies to models with either linear ball, sintered bronze or composite bearings.

MAX. LOAD WEIGHT VS. STROKE LENGTH

Do not exceed Max. Load curve. (Deflection curves are provided for reference.)

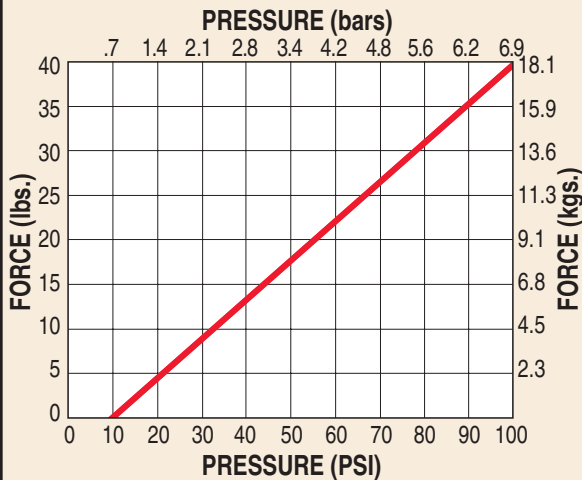
Max. Load for linear ball and composite bearings is based on 200 million linear inches of travel; 20 million for sintered bronze bearings.

BENDING MOMENTS

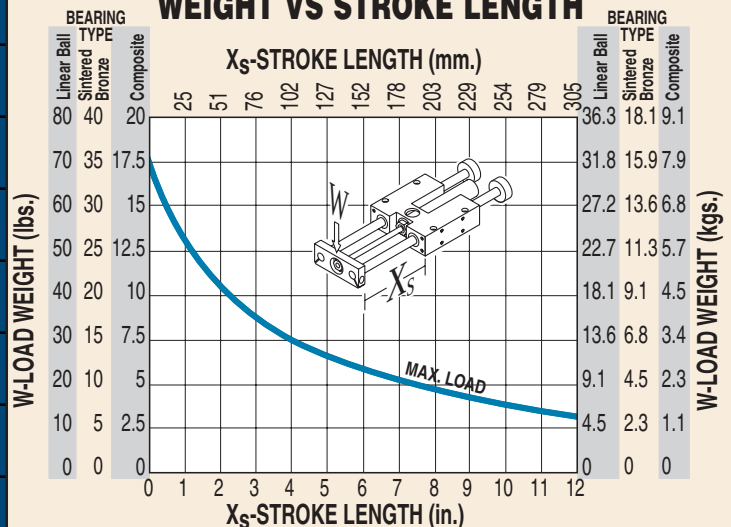
Max. Moment for linear ball and composite bearings is based on 200 million linear inches of travel; 20 million for sintered bronze.

PERFORMANCE DATA 3/4" Bore HB12

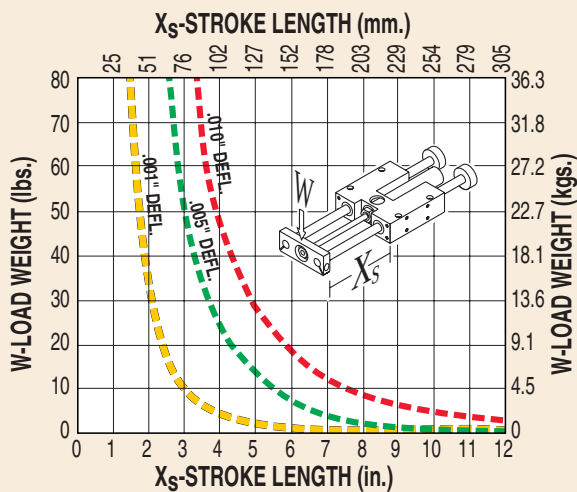
FORCE VS PRESSURE



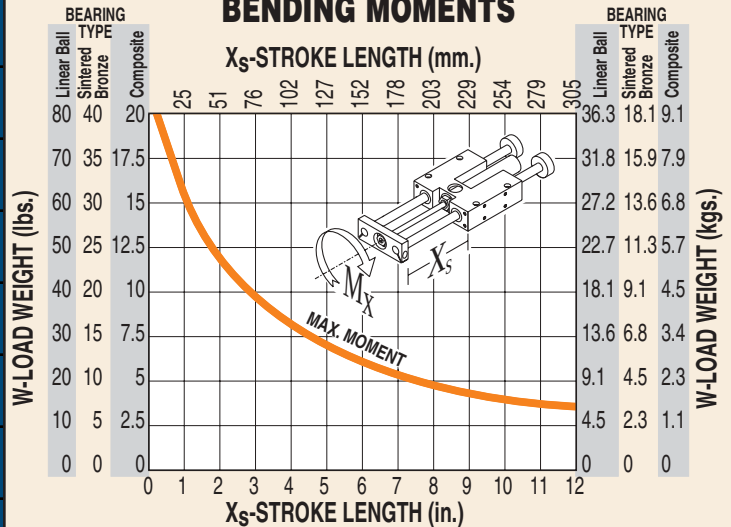
WEIGHT VS STROKE LENGTH



DEFLECTION



BENDING MOMENTS



FORCE VS. PRESSURE

NOTE: Force vs Pressure performance data applies to models with either linear ball, sintered bronze or composite bearings.

MAX. LOAD WEIGHT VS. STROKE LENGTH

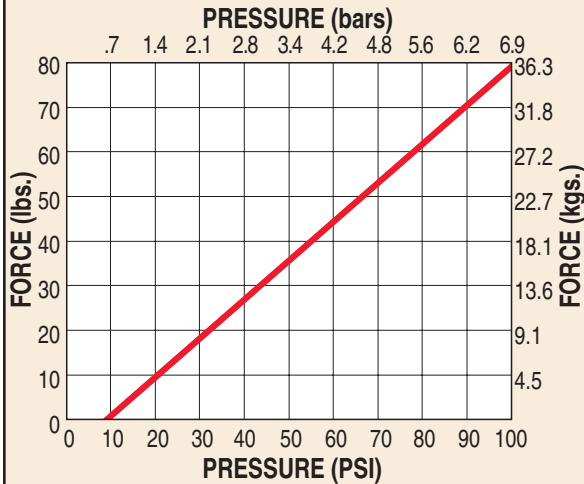
Do not exceed Max. Load curve. (Deflection curves are provided for reference.)
Max. Load for linear ball and composite bearings is based on 200 million linear inches of travel; 20 million for sintered bronze bearings.

BENDING MOMENTS

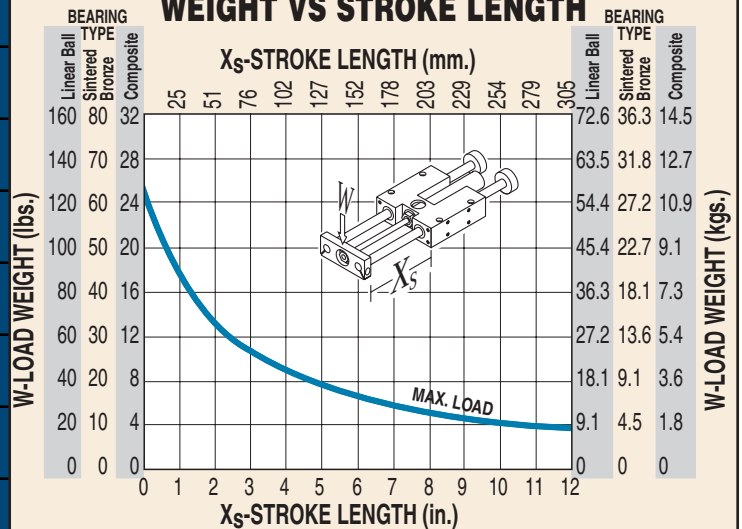
Max. Moment for linear ball and composite bearings is based on 200 million linear inches of travel; 20 million for sintered bronze.

PERFORMANCE DATA 1 1/16" Bore HB17

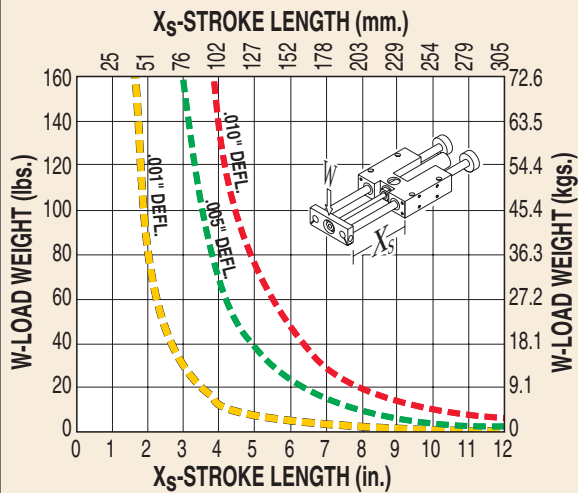
FORCE VS PRESSURE



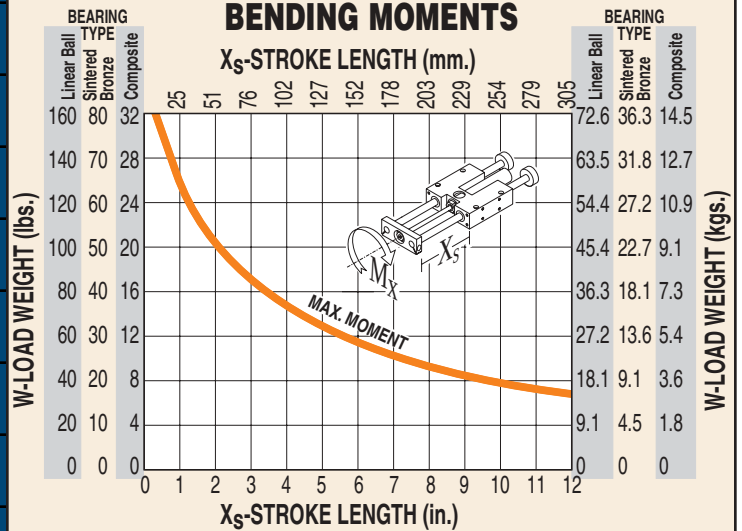
WEIGHT VS STROKE LENGTH



DEFLECTION



BENDING MOMENTS



FORCE VS. PRESSURE

NOTE: Force vs Pressure performance data applies to models with either linear ball, sintered bronze or composite bearings.

MAX. LOAD WEIGHT VS. STROKE LENGTH

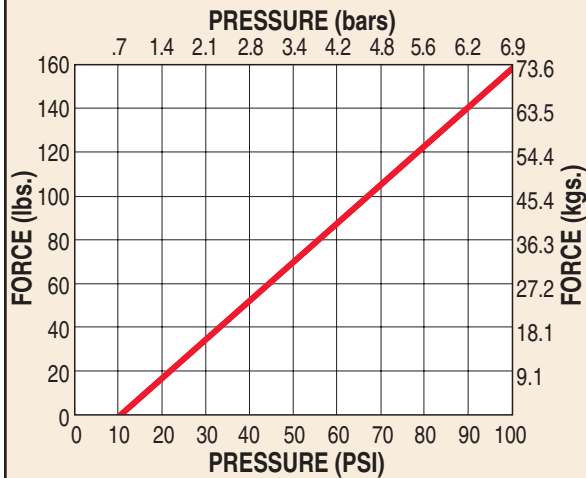
Do not exceed Max. Load curve. (Deflection curves are provided for reference.)
Max. Load for linear ball and composite bearings is based on 200 million linear inches of travel; 20 million for sintered bronze bearings.

BENDING MOMENTS

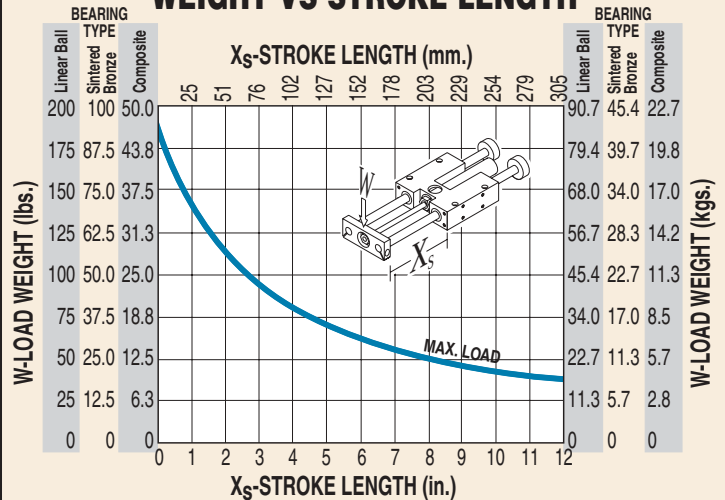
Max. Moment for linear ball and composite bearings is based on 200 million linear inches of travel; 20 million for sintered bronze.

PERFORMANCE DATA 1½" Bore HB24

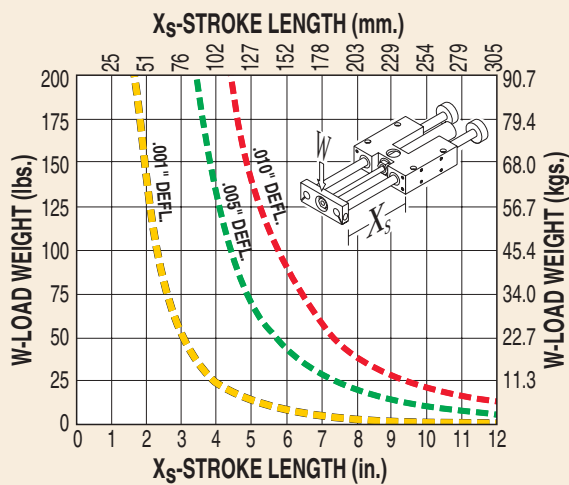
FORCE VS PRESSURE



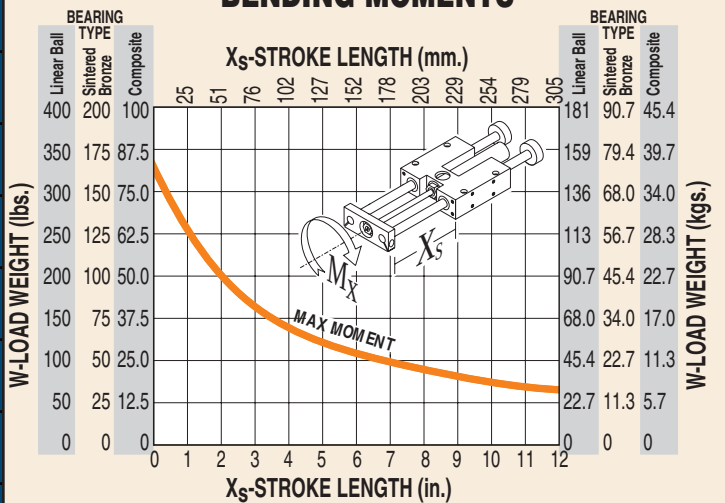
WEIGHT VS STROKE LENGTH



DEFLECTION



BENDING MOMENTS



FORCE VS. PRESSURE

NOTE: Force vs Pressure performance data applies to models with either linear ball, sintered bronze or composite bearings.

MAX. LOAD WEIGHT VS. STROKE LENGTH

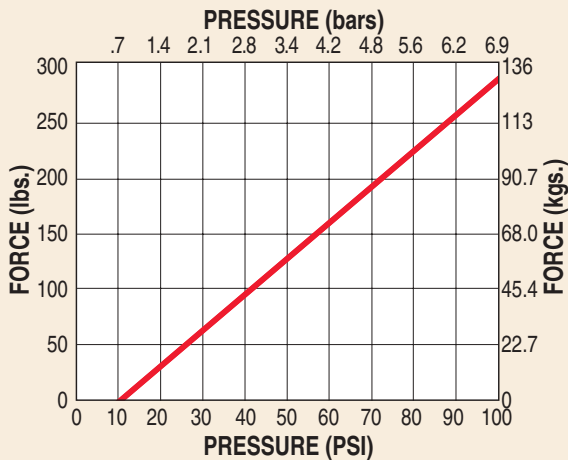
Do not exceed Max. Load curve. (Deflection curves are provided for reference.)
Max. Load for linear ball and composite bearings is based on 200 million linear inches of travel; 20 million for sintered bronze bearings.

BENDING MOMENTS

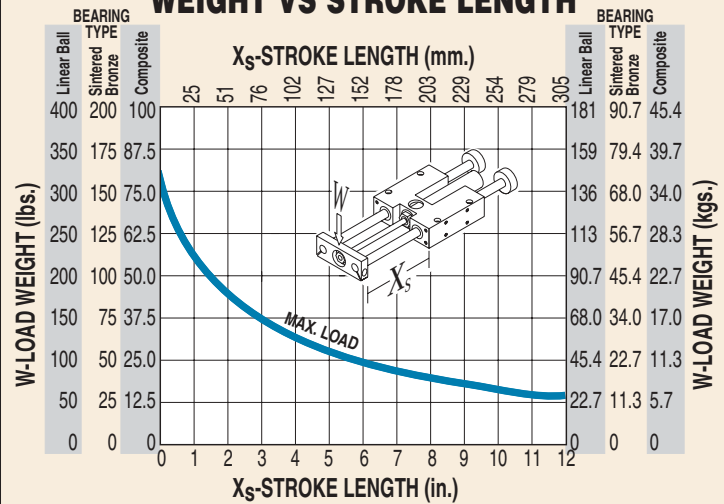
Max. Moment for linear ball and composite bearings is based on 200 million linear inches of travel; 20 million for sintered bronze.

PERFORMANCE DATA 2" Bore HB32

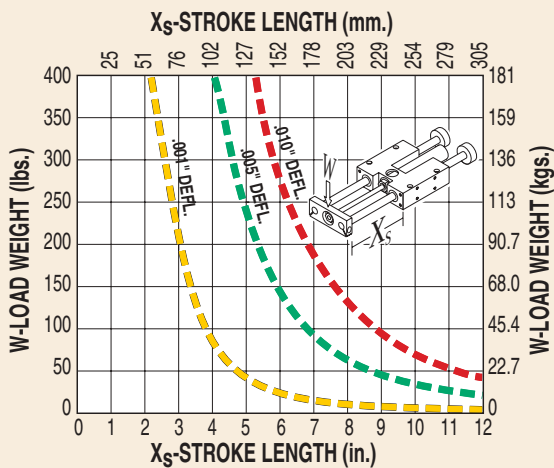
FORCE VS PRESSURE



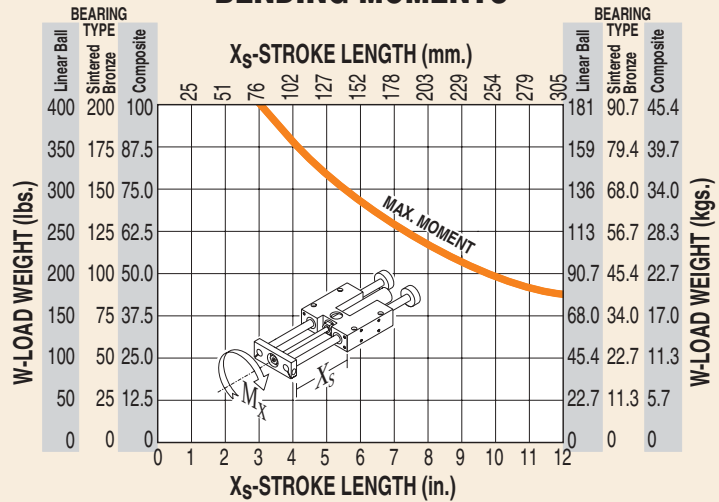
WEIGHT VS STROKE LENGTH



DEFLECTION



BENDING MOMENTS



FORCE VS. PRESSURE

NOTE: Force vs Pressure performance data applies to models with either linear ball, sintered bronze or composite bearings.

MAX. LOAD WEIGHT VS. STROKE LENGTH

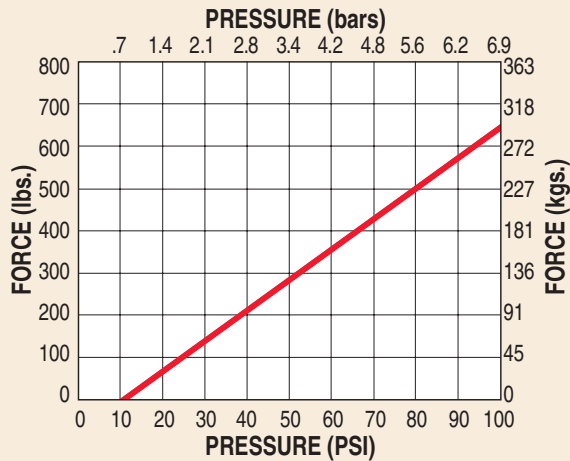
Do not exceed Max. Load curve. (Deflection curves are provided for reference.)
Max. Load for linear ball and composite bearings is based on 200 million linear inches of travel; 20 million for sintered bronze bearings.

BENDING MOMENTS

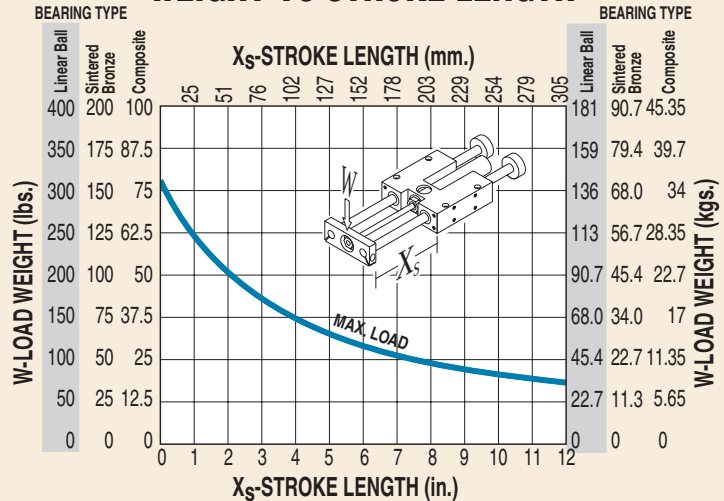
Max. Moment for linear ball and composite bearings is based on 200 million linear inches of travel; 20 million for sintered bronze.

PERFORMANCE DATA 3" Bore HB48

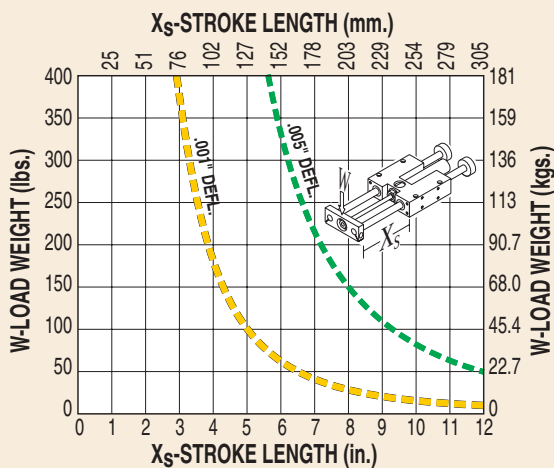
FORCE VS PRESSURE



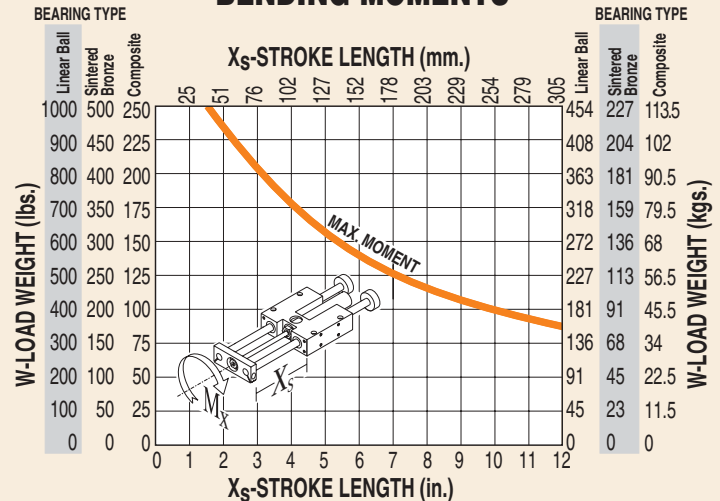
WEIGHT VS STROKE LENGTH



DEFLECTION



BENDING MOMENTS



FORCE VS. PRESSURE

NOTE: Force vs Pressure performance data applies to models with either linear ball or composite bearings.

MAX. LOAD WEIGHT VS. STROKE LENGTH

Do not exceed Max. Load curve. (Deflection curves are provided for reference.)
Max. Load for linear ball and composite bearings is based on 200 million linear inches of travel.

BENDING MOMENTS

Max. Moment for linear ball and composite bearings is based on 200 million linear inches of travel.