OPTIONS BOOTS FOR MACHINE SCREW JACKS

For Translating and Keyed Design Machine Screw Jacks

When boots are included on the Joyce jacks or actuators, Joyce sizes them as part of our service to you.

Adding boots to most jacks increases their retracted (closed) height, "A" or "B". The diagrams and chart below are provided as a reference to help illustrate how the addition of standard boots to jacks increases the closed height of those jacks.

The retracted (closed) height, "A" or "B", is based on the jack capacity and it changes based on the length of travel (rise), and end conditon of the lifting screw. For instance, an upright 2-ton jack with a T3 end conditon and 12 inches of rise will have a greater closed dimension than the same 2-ton jack with just 3 inches of rise.

Standard boot outside diameter, "C", and collar diameter at the base of the jack, "D" are listed in the chart below for reference.

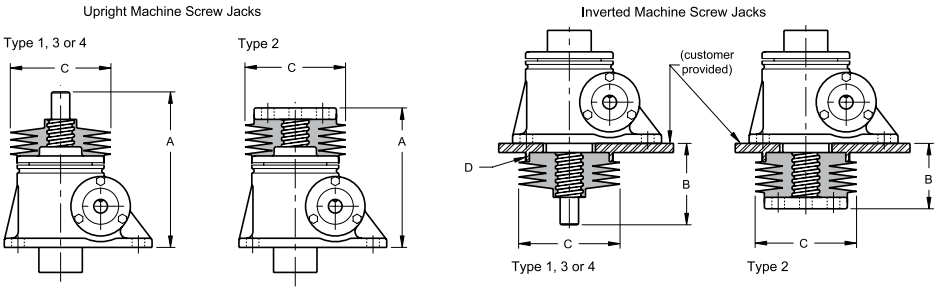
Although Joyce provides the stainless steel clamps needed to secure all boots in place, customers must provide a mounting ring of the standard diameter "D" to mount the boots on inverted jacks.

When you use Joyce 2D/3D online software to specify jacks with boots, the drawings will more accurately depict the added screw length needed to accomodate the boot. However, the actual boot will not be shown on the drawing.

Common Boot Options:

• Zippered boots • Boots for high temperatures

Contact Joyce for more information about these and other custom boot applications or boots for Bevel Gear Jacks.



Jack Capacity	A - Closed Height for Upright Jack				Max. Travel Without Increasing Closed Height - Upright Type 2**	B - Closed Height for Inverted Jack				C O.D. of Boot	D Collar Diameter
	Type 1*	Type 2	Type 3*	Type 4*		Type 1*	Type 2*	Type 3*	Type 4*		
250/500 Lb.	4 1/2	4	4 1/2	3 3/4	12	2 3/4	1 5/8	2 3/4	2	3.5	2 5/16
1,000 Lb.	4	4	4	4	12	3	2	3	2 1/4	3.5	2 5/16
1 Ton	5 3/8	4 1/2	5 3/8	5 3/8	9	2 1/2	1 15/16	2 1/2	2 1/2	5	2 3/4
2 Ton	6	5 5/16	6	6 1/4	3	2 7/8	2 1/16	2 7/8	3 3/16	5	3 3/4
3 Ton	5 15/16	5 1/4	5 15/16	6 3/4	0	2 5/8	1 15/16	2 5/8	3 1/2	5	3 3/4
5 Ton	7 3/4	7 1/16	7 3/4	8 1/4	6	3 7/8	2 11/16	3 7/8	4 3/8	5 1/2	4 3/4
10 Ton	8	7 1/4	8	8 11/16	9	4	2 1/2	4	4 11/16	6 1/2	5 3/4
15 Ton	8 3/4	8	8 3/4	9 7/16	9	4	2 1/2	4	4 11/16	6 1/2	5 3/4
20 Ton	9 15/16	9 1/4	9 15/16	10 3/4	9	3 15/16	2 1/2	3 15/16	4 3/4	6 1/2	6
25 Ton	11 3/8	11	12 1/4	12 3/4	9	4 1/16	2 7/8	4 15/16	5 7/16	8	7 1/2
30 Ton	11 15/16	11 1/2	11 3/16	17 1/16	21	4 15/16	4 1/8	4 3/16	9 11/16	8	8 1/4
35 Ton	13 5/8	12	13 5/8	13 5/8	0	6 11/16	5 1/16	6 11/16	6 11/16	10	8 1/2
50 Ton	18	14 3/8	18	18	0	10 5/8	7	8 3/8	9 1/8	13	11 5/8
75 Ton	20 1/2	16 1/2	20 1/2	20 1/2	0	9 7/8	5 13/16	7 3/4	7 7/8	13	13 1/2
100 Ton	20 1/4	19	20 1/4	21 1/4	0	9 7/8	6 7/16	8 3/8	8 7/8	14 1/2	15

150-ton and 250-ton dimensions supplied upon request.

* Closed height given must be increased by about 0.071" for each 1" of travel.

** Upright Type 2 closed height must be increased by about 0.071" for each 1" over the maximum given.

A and B dimensions generally increase when boots are added to jacks.

Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

OPTIONS BOOTS FOR BALL SCREW JACKS

For Translating Design Ball Screw Jacks

When boots are included on Joyce jacks or actuators, Joyce sizes them as part of our service to you.

Adding boots to most jacks will increase their retracted (closed) height, "A" or "B". The diagrams and chart below are provided as a reference to help you understand how the addition of standard boots increases the closed height of those jacks.

The retracted (closed) height, "A", or "B", is based on the jack capacity and it changes based on the length of travel (rise), and end condition of the lifting screw. For instance, an upright 2-ton jack with a T3 end condition and 12 inches of rise will have a greater closed dimension than the same 2-ton jack with just 3 inches of rise. Standard boot outside diameter, "C", and collar diameter at the base of the jack, "D" are listed in the chart below for reference.

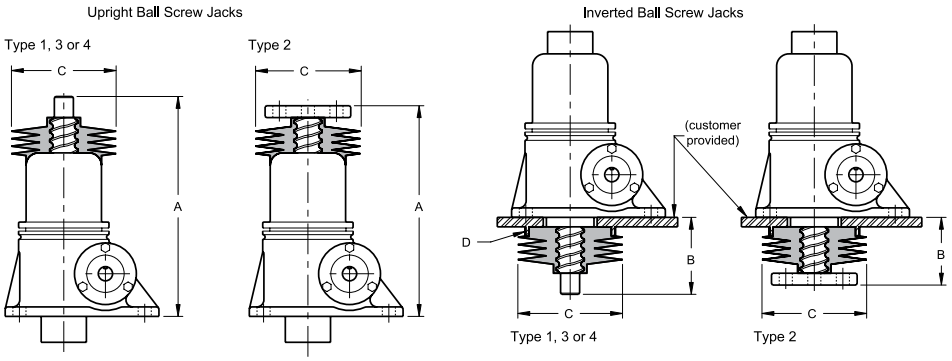
Although Joyce provides the stainless steel clamps needed to secure all boots in place, customers must provide a mounting ring of the standard diameter "D" to mount the boots on inverted jacks.

When you use Joyce 2D/3D online software to specify jacks with boots the drawings will accurately depict the added screw length needed to accomodate the boot, however the actual boot will not be shown on the drawing.

Common Boot Options:

• Zippered boots • Boots for high temperatures • Boots for corrosive atmospheres

Contact Joyce for more information about these and other custom boot applications or boots for Bevel Gear Jacks.



△ The closed height of Type 4 jacks remains the same up to the maximum travel given in the chart below.

Jack Capacity	A - Closed Height for Upright Jack				▲ - Type 4**	B - Closed Height for Inverted Jack				▲ - Type 4**	C O.D. of Boot	D O.D. of Boot
	Type 1*	Type 2*	Type 3*	Type 4*		Type 1*	Type 2*	Type 3*	Type 4*			
1 Ton WBL	6 7/16	6 1/4	6 7/16	7 1/4	6	2 5/8	2 1/4	2 5/8	2 7/8	0	5	2 3/4
1 Ton WB	7 7/16	7 1/4	7 7/16	8 1/4	9	2 5/8	2 1/4	2 5/8	2 7/8	0	5	2 3/4
2 Ton	8 3/8	7 3/4	8 3/8	9 5/8	12	3 1/4	2 9/16	3 1/4	3 5/8	0	5	2 3/4
5 Ton	10 1/2	11	10 1/2	13 3/8	18	3 13/16	3 5/16	3 13/16	5 3/16	0	5 1/2	4 3/4
10 Ton WBL/ HWBL	11 1/4	10 5/16	11 1/4	13 1/16	15	4 7/16	3 7/16	4 7/16	5 3/16	0	6 1/2	5 3/4
10 Ton WB/HWB	15	14 1/2	15	16 3/4	18	4 15/16	3 3/4	4 15/16	5 1/2	0	6 1/2	5 3/4
20 Ton	17 3/16	16 5/8	17 3/16	20 5/16	27	4 3/4	3 7/16	4 3/4	6 1/2	9	6 1/2	6
30 Ton	23 1/4	22 9/16	23 1/4	28 5/16	42	6 1/4	4	6 1/4	10	24	8	8 1/4
50 Ton	27 3/16	26 7/16	27 3/16	32 1/2	45	6 11/16	4 15/16	6 11/16	10 1/4	21	13	11 5/8

* Closed height given must be increased by about 0.071" for each 1" of travel.

** Type 4 closed height must be increased by about 0.071" for each 1" over the maximum given.

A and B dimensions generally increase when boots are added to jacks.

Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

OPTIONS BOOTS FOR KFTN JACKS

For Traveling Nut Design Machine and Ball Screw Jacks

Adding single or dual boots to cover the fixed-length rotating screw on KFTN jacks usually increases the base-to-end of screw dimension due to boot stack up*. Other factors that affect boot specification include:

- Jack orientation – Upright or inverted
- Travel distance and maximum height of jack with boots (Base-to-end of screw)
- Traveling Nut (TN) orientation – TN mounted toward the jack or away from the jack
- Position and thickness of the load – Mounted above or below the flange
- Choice of dual boots, single upper boot, or single lower boot

The chart below lists standard boot diameter dimensions based on jack capacity. Working from this reference and input provided by customers about their applications, Joyce customizes boots to meet specific requirements. Please complete the worksheet on page 173 to help us understand your requirements more fully.

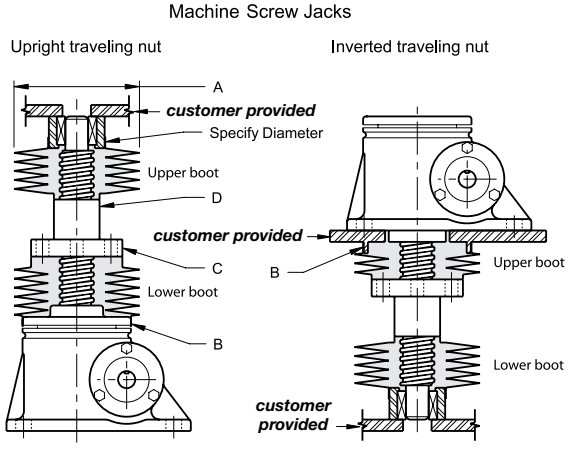
Although Joyce provides the stainless steel clamps needed to secure all boots in place, customers must provide mounting rings to mount boots to their structures. These customer provided mounting diameters must also be communicated to Joyce to ensure that boot collars are compatibly sized.

Common bellows boot options:

• Zippered boots • Boots for high temperatures • Boots for harsh environments

Contact Joyce for more information about these and other custom boot applications or boots for Bevel Gear® jacks.

*Boot stack up is the space required to accommodate retracted bellows boots. It can be estimated by multiplying the maximum amount of travel by 0.071". If the KFTN jack has dual boots the stack up of both boots must be considered. Contact Joyce for additional information.



See selection guide worksheet on page 173

Jack Capacity	A O.D. of Boot	B Collar Diameter	C - Flange Collar Diameter		D - Nut Collar Diameter Machine Screw Jacks Only**
			ACME Nut	Ball Nut	
250/500 Lb.	3.5	2 5/16	2 1/4		1
1,000 Lb.	3.5	2 5/16	2 1/4		1
1 Ton	5	2 3/4	3 1/4	2 5/8	1 1/2
2 Ton	5	3 3/4	3 1/4	3 1/4	1 1/2
3 Ton	5 1/2	3 3/4	3 1/4		2
5 Ton	5 1/2	4 3/4	4	4 15/16	2
10 Ton	6 1/2	5 3/4	6	5 3/8	3
15 Ton	6 1/2	5 3/4	6 1/2		3 1/2
20 Ton	6 1/2	6	7 1/2	5 3/8	3 3/4
25 Ton	8	7 1/2	8 1/2		4 1/2
30 Ton	8	8 1/4	7 3/8	7 3/8	4 1/2
35 Ton	10	8 1/2	9		5
50 Ton	10	11 5/8	10	9 3/4	6
75 Ton	13	13 1/2	12		7
100 Ton	14 1/2	15	12 3/4		8

**Boot collars do not fit small end of ball nuts.

Note: Drawings are artist's conception — not for certification; dimensions are subject to change without notice.

SELECTION GUIDE WORKSHEET BOOTS FOR KFTN JACKS

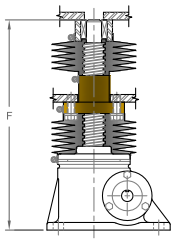
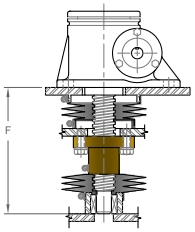
Name _____ Title _____

Company _____ Project _____

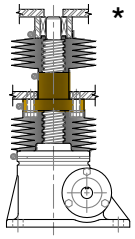
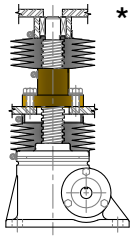
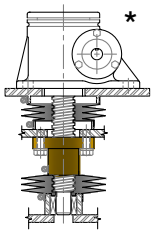
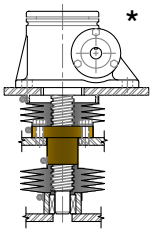
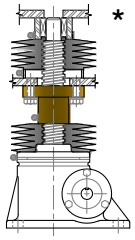
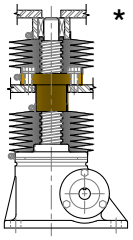
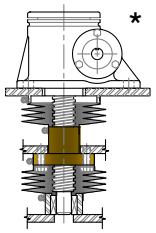
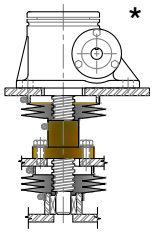
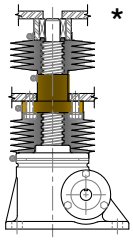
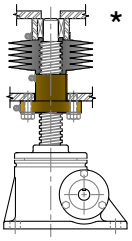
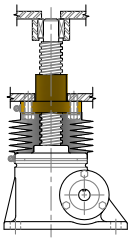
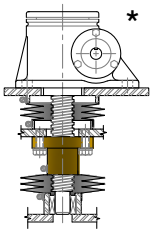
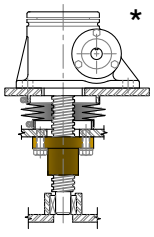
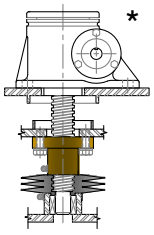
Address _____

Phone _____ Fax _____ Email _____

Sizing boots for KFTN jacks requires additional input because many mounting configurations are possible. This worksheet is designed to help define and communicate your boot requirements. Complete the form below and submit to sales@joycedayton.com along with a sketch of your application.

Upright Jack	Inverted Jack
 Travel Distance_____ (F) Base-to-end of screw dimension_____	 Travel Distance_____ (F) Base-to-end of screw dimension_____

Choose the image that best represents your application

 * ☐ Flange toward jack Load above	 * ☐ Flange toward jack Load below	 * ☐ Flange toward jack Load above	 * ☐ Flange toward jack Load below
 * ☐ Flange away from jack Load above	 * ☐ Flange away from jack Load below	 * ☐ Flange away from jack Load above	 * ☐ Flange away from jack Load below
 * ☐ Dual boot	 * ☐ Upper boot	 ☐ Lower boot	 * ☐ Dual boot	 * ☐ Upper boot	 * ☐ Lower boot

*Some customer provided dimensions are required from diagram on page 172.