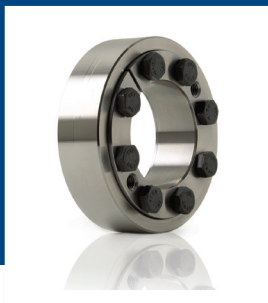


B-LOC®



 **Fenner Drives®**

Power and Precision

Fenner Drives, a worldwide leader in mechanical power transmission and motion control solutions, is pleased to present our comprehensive line of B-LOC Keyless Locking Devices. Only Fenner Drives delivers a product offering that combines versatile installation, design flexibility and extra heavy duty capacity – all in the B-LOC Series.

Backed by an extensive inventory of product ready for same-day shipment, the best customer service support in the industry, and the engineering expertise and manufacturing agility to provide custom solutions, Fenner Drives Keyless Locking Devices always deliver on this promise: The key to better machine design is no key at all!



Series B112, B115 & B113

- Wide, double taper design for enhanced bending moment capacity
- Exceptional concentricity with thru-bored hubs
- No axial movement during installation
- Available in Standard, Heavy and Extra-Heavy Duty models



Series B800

- Shallow, single taper design
- Exceptional concentricity
- Thin, extra wide sleeves provide low contact pressures allowing for smaller diameter hubs
- Integrated spacer sleeve eliminates axial movement during installation
- Minimal OD/ID ratio



Series B117

- Shorter length than other locking assemblies with two tapers
- Exceptional concentricity and ability to transmit bending loads
- High bending moment capacity ($M_b = 0.65 \times M_t$)
- Continuous inner promotes ease of removal
- No axial movement during installation



Series B400

- Self-releasing, double taper design permits simple adjustment and removal
- Not self-centering. Available pilot bushings provide pre-centering when required
- No axial movement during installation



Series B109

- Designed for shafts as small as 1/4" or 6mm
- Shallow, single taper design with integrated push-off threads
- Exceptional concentricity and ability to transmit bending loads
- No axial movement during installation



Series 10, 20 & 30 Shrink Discs

- External locking device
- Provides extremely concentric and well-balanced mechanical interference fit
- Offered in Standard, Light, and Heavy Duty series
- Also available in Split and Half Shrink Disc designs



Series B106

- Shallow, single taper design with integrated push-off threads
- Exceptional concentricity and ability to transmit bending loads
- Use optional integrated spacer sleeve to mount narrow hub components
- No axial movement during installation



Series 40 Shrink Discs

- External locking device
- Easy and quick installation with no torque wrench required
- High torque performance and dynamic balance



Series B103

- Shallow, single taper design with integrated push-off threads
- Exceptional concentricity and ability to transmit bending loads
- Limited axial movement during installation



WK Shaft Couplings

- Rigid shaft coupling
- External locking device
- Transmits high torque and bending moments using the same principles as the Shrink Disc

WHY GO KEYLESS

Today's global marketplace demands precise, efficient machines that optimize productivity while minimizing material and fabrication costs. When compared to traditional connection methods, Fenner Drives Keyless Locking Devices offer the following advantages:

- A mechanical interference fit with a uniform pressure distribution similar to that achieved through a shrink or press fit.
- A true zero backlash shaft-to-hub connection with none of the operational drawbacks of keyways or splines.
- The ability to mount on plain shafting, which need not be over-sized to compensate for notch factors. This allows the use of smaller shafts and bearings for more cost effective designs.
- The flexibility to mount over existing keyways if desired.
- Straight bore machining of the mounted component, generous machining tolerances and as-turned surface finishes.
- Complete axial and radial adjustability.
- Simple installation, adjustment and removal, even in the field.

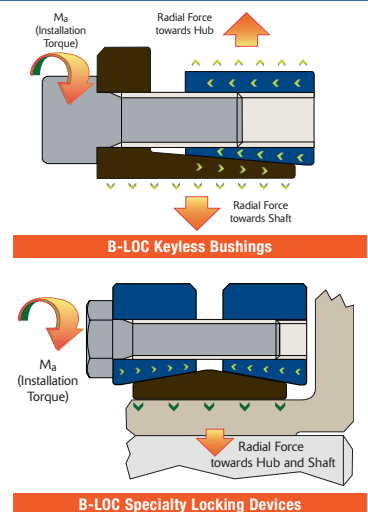
Comparison Chart	B-LOC	Interference Fit	Keyed Connection	Splined Connection	QD or TL Bushings
Keyless frictional connection	✗	✗			
Infinite radial and axial adjustment	✗				
Easy installation	✗		✗	✗	✗
Easy removal	✗				✗
Backlash free connection	✗	✗			
Transmits shock and torque reversals	✗	✗			
Transmits reversing bending moments	✗	✗			

Principles of Operation

Though offered in many shapes and sizes, Fenner Drives Keyless Locking Devices all operate using the simple wedge principle. An axial force is applied — by a series of annular screws — to engage circular steel rings with mating tapers. In the case of keyless bushings, the resulting wedge action creates a radial force on the tapered rings, one of which contracts to squeeze the shaft while the other expands and presses into the component bore.

In the case of specialty locking devices, similar tapered geometry generates a radial force that is concentrated (as in our Shrink Discs) around a solid steel hub, squeezing so tightly that the hub “shrinks” onto the underlying shaft, or (as in our WK Series Couplings) simultaneously onto two solid shaft ends to form a high-capacity rigid coupling.

In all cases, the product of the radial force applied to the shaft, the radius of that shaft and the coefficient of friction between the surfaces being joined equals the rated torque capacity of the connection.



SELECTION ASSISTANCE	Shaft Size Range	Overall Length Range	Torque Transmission	Axial Movement*	Self Centering	Concentricity	Balance	Recessed Installation Without Counterbore
B-LOC B112	1 — 8 in; 24 — 600mm	1.575 — 5.866 in; 40 — 203mm	600 — 110,469 ft lb; 755 — 1,756,139 Nm	No	Yes	Excellent	Excellent	Yes
B-LOC B115	2 3/4 — 8 in; 70 — 600mm	2.441 — 4.134 in; 62 — 160mm	5,261 — 70,109 ft lb; 7,118 — 1,228,856 Nm	No	Yes	Excellent	Excellent	Yes
B-LOC B113	180 — 560mm	231 — 280mm	223,566 — 2,342,897 Nm	No	Yes	Excellent	Excellent	Yes
B-LOC B117	180 — 600mm	122 — 178mm	87,000 — 1,080,000 Nm	No	Yes	Excellent	Excellent	No
B-LOC B109	1/4 — 1 3/8 in; 6 — 35mm	0.650 — 1.102 in; 16.5 — 28.5mm	167 — 5,929 in lb; 19 — 683 Nm	No	Yes	Excellent	Excellent	No
B-LOC B106	5/8 — 8 in; 14 — 400mm	0.846 — 2.559 in; 20.5 — 116mm	55 — 37,959 ft lb; 68 — 372,590 Nm	No	Yes	Excellent	Excellent	No
B-LOC B103	3/4 — 8 in; 15 — 400mm	1.122 — 2.559 in; 21.5 — 116mm	247 — 48,913 ft lb; 115 — 489,701 Nm	~0.032 in (0.8mm)	Yes	Excellent	Excellent	Yes
B-LOC B800	1/4 — 4 15/16 in; 6 — 130mm	0.866 — 5.039 in; 22 — 128mm	16 — 18,362 ft lb; 22 — 25,742 Nm	No	Yes	Excellent	Excellent	No
B-LOC B400	3/4 — 8 in; 18 — 500mm	0.787 — 2.047 in; 20 — 102mm	234 — 53,827 ft lb; 302 — 814,734 Nm	No	No	Fair	Very Good	Yes
Shrink Discs	5/8 — 21.26 in; 15 — 540mm	0.71 — 11.26 in; 22 — 286 mm	139 — 3,267,568 ft lb	No	Yes	Excellent	Excellent	N/A

All units except B400 and Shrink Discs are RoHS compliant and have self-locking tapers. All units are corrosion treated with machine oil, except Shrink Discs, which are zinc or chrome plated.

* Axial Movement values are approximate.



Information subject to change without prior notification.
Visit www.fennerdrives.com/catalogs for the most current information.