



OPERATION & MAINTENANCE
XT® BUSHING

INSTALLATION

Follow all instructions carefully. This is necessary to insure satisfactory performance of both pulley and bushings. For units that have had the shaft installed at the factory, retighten the capscrews with a torque wrench set at the proper value, as stated in Table 1.

1. Before installing the bushing, polish the following components:
 - a. Surface of shaft.
 - b. Bore of the bushing.
 - c. Tapered inside diameter of the XT hub.
 - d. Tapered outside diameter of the XT bushing.

Remove all burrs and foreign material; any particles left on the mating surfaces may cause improper installation. Do not lubricate mating surfaces.

2. If pulley is to be keyed to shaft, make sure both shaft and bushing keyways are clean, smooth, and free from burrs. Check key size with both shaft and bushing keyways. Keys should be placed into the shaft keyways at this time. Pulley bushing keyways require alignment of both shaft keyways for proper bushing to hub installation.

3. Place shaft into pulley, being careful not to damage the bore of the hubs.

4. Carefully insert a wedge in the bushing split and tap lightly to expand the bushing (use caution as excessive expansion will cause the bushing to split.) Slip bushings onto shaft and into hubs with the drilled holes of the bushings lined up with the threaded holes of the hub. Place capscrews into the drilled holes of each bushing and hand tighten capscrews into the threaded holes of the hub.

5. Locate the shaft position desired and tighten capscrews in each bushing slightly so that bushings are snug in hubs.

6. Using a torque wrench and the recommended torque from Table 1, tighten capscrews alternately and evenly in one bushing only. Use the numbered sequence on the bushing flange capscrew heads in Diagrams B, C, and D, starting with 1 first, 2 second, etc., with all capscrews being used until the specified torque no longer turns the capscrews. Do not tighten more than recommended values. Check to make sure that the surfaces on both sides of the split are even.

Do not exceed recommended torque from Table 1 in attempt to pull bushing flange flush with hub face - there should be clearance when tightened. If bushing flange is pulled flush with hub face while tightening capscrews to recommended torque, check for undersized shaft.

It is recommended to use a hammer and a heavy steel or bronze bar; drift on the face of the bushing, starting opposite the split. Avoid drifting outside of the bolt circle.

7. Tighten the second bushing per Step 6.

Diagram A



Table 1

Recommended XT Capscrew Torque

HUB	# Bolts	Bolt Diameter (UNC)	Bolt Length	Torque (in lbs)
XT15	4	1/4	1 1/4	95
XT20	4	5/16	1 1/2	200
XT25	4	3/8	2	350
XT30	4	7/16	2	550
XT35	4	1/2	2 1/2	840
XT40	4	9/16	2 1/2	1200
XT45	4	5/8	2 1/2	1680
XT50	4	3/4	3	3000
XT60	4	7/8	3 1/2	4800
XT70	4	1	3 1/2	7200
XT80	4	1 1/8	4	9000
XT100	6	1 1/8	4	9000
XT120	8	1 1/8	4	9000

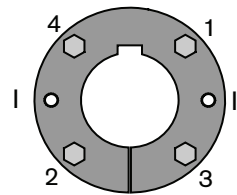
MAINTENANCE

During the first month of operation, inspect bushings and capscrews for proper seating at least once a week and re-torque as necessary. Thereafter inspect the bushings during periodic shutdowns.

REMOVAL

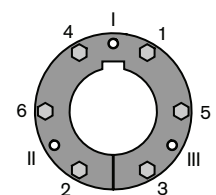
1. Remove all capscrews.
2. Insert the capscrews into all threaded removal holes on bushings.
3. Tighten capscrews alternately and evenly in one bushing only. Use the Roman numeral sequence near the threaded removal holes in Diagrams B, C, and D, starting with I first, II second, etc., with all threaded holes being used until bushing is loosened in hub. If bushing does not loosen immediately, tap on hub with a soft hammer.
4. Remove bushing from the shaft.
5. Remove the second bushing per Steps 1-4.

Diagram B



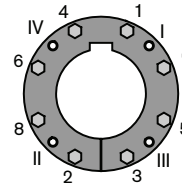
XT15 to XT80

Diagram C



XT-100

Diagram D



XT120



XT* Key Sizes

HUB	Bore Range	Keyway		Keystock	HUB	Bore Range	Keyway		Keystock	
		Shaft	Bushing				Shaft	Bushing		
XT15	1/2-9/16	1/8 x 1/16	1/8 x 1/16	1/8 x 1/8	XT45	2 7/16 - 2 3/4	5/8 x 5/16	5/8 x 5/16	5/8 x 5/8	
	5/8-7/8	3/16 x 3/32	3/16 x 3/32	3/16 x 3/16		2 13/16 - 3 1/4	3/4 x 3/8	3/4 x 3/8	3/4 x 3/4	
	15/16 - 1 1/4	1/4 x 1/8	1/4 x 1/8	1/4 x 1/4		3 5/16 - 3 3/4	7/8 x 7/16	7/8 x 7/16	7/8 x 7/8	
	1 5/16 - 1 3/8	5/16 x 5/32	5/16 x 5/32	5/16 x 5/16		3 13/16 - 4 5/16	1 x 1/2	1 x 1/2	1 x 1	
	1 7/16 - 1 1/2	3/8 x 3/16	3/8 x 1/8	3/8 x 5/16		4 3/8 - 4 1/2	1 x 1/2	1 x 3/8	1 x 7/8	
XT20	3/4-7/8	3/16 x 3/32	3/16 x 3/32	3/16 x 3/16	XT50	2 15/16 - 3 1/4	3/4 x 3/8	3/4 x 3/8	3/4 x 3/4	
	15/16 - 1 1/4	1/4 x 1/8	1/4 x 1/8	1/4 x 1/4		3 5/16 - 3 3/4	7/8 x 7/16	7/8 x 7/16	7/8 x 7/8	
	1 5/16 - 1 3/8	5/16 x 5/32	5/16 x 5/32	5/16 x 5/16		3 13/16 - 4 1/2	1 x 1/2	1 x 1/2	1 x 1	
	1 7/16 - 1 3/4	3/8 x 3/16	3/8 x 3/16	3/8 x 3/8		4 9/16 - 5	1 1/4 x 5/8	1 1/4 x 5/8	1 1/4 x 1 1/4	
	1 13/16 - 2	1/2 x 1/4	1/2 x 3/16	1/2 x 7/16		XT60	3 7/16 - 3 3/4	7/8 x 7/16	7/8 x 7/16	7/8 x 7/8
XT25	1 - 1 1/4	1/4 x 1/8	1/4 x 1/8	1/4 x 1/4	3 13/16 - 4 1/2		1 x 1/2	1 x 1/2	1 x 1	
	1 5/16 - 1 3/8	5/16 x 5/32	5/16 x 5/32	5/16 x 5/16	4 9/16 - 5 1/2		1 1/4 x 5/8	1 1/4 x 5/8	1 1/4 x 1 1/4	
	1 7/16 - 1 3/4	3/8 x 3/16	3/8 x 3/16	3/8 x 3/8	5 9/16 - 6		1 1/2 x 3/4	1 1/2 x 3/4	1 1/2 x 1 1/2	
	1 13/16 - 2 1/4	1/2 x 1/4	1/2 x 1/4	1/2 x 1/2	XT70		4 15/16 - 5 1/2	1 1/4 x 5/8	1 1/4 x 5/8	1 1/4 x 1 1/4
	2 5/16 - 2 1/2	5/8 x 5/16	5/8 x 1/8	5/8 x 7/16		5 9/16 - 6 1/2	1 1/2 x 3/4	1 1/2 x 3/4	1 1/2 x 1 1/2	
XT30	1 7/16 - 1 3/4	3/8 x 3/16	3/8 x 3/16	3/8 x 3/8		6 9/16 - 7 1/2	1 3/4 x 3/4	1 3/4 x 3/4	1 3/4 x 1 1/2	
	1 13/16 - 2 1/4	1/2 x 1/4	1/2 x 1/4	1/2 x 1/2		XT80	4 15/16 - 5 1/2	1 1/4 x 5/8	1 1/4 x 5/8	1 1/4 x 1 1/4
	2 5/16 - 2 3/4	5/8 x 5/16	5/8 x 5/16	5/8 x 5/8			5 9/16 - 6 1/2	1 1/2 x 3/4	1 1/2 x 3/4	1 1/2 x 1 1/2
	2 13/16 - 3	3/4 x 3/8	3/4 x 3/16	3/4 x 9/16	6 9/16 - 7 1/2		1 3/4 x 3/4	1 3/4 x 3/4	1 3/4 x 1 1/2	
	XT35	1 15/16 - 2 1/4	1/2 x 1/4	1/2 x 1/4	1/2 x 1/2		7 9/16 - 8	2 x 3/4	2 x 3/4	2 x 1 1/2
2 5/16 - 2 3/4		5/8 x 5/16	5/8 x 5/16	5/8 x 5/8	XT100		6 9/16 - 7 1/2	1 3/4 x 3/4	1 3/4 x 3/4	1 3/4 x 1 1/2
2 13/16 - 3 1/4		3/4 x 3/8	3/4 x 3/8	3/4 x 3/4		7 9/16 - 9	2 x 3/4	2 x 3/4	2 x 1 1/2	
3 5/16 - 3 3/8		7/8 x 7/16	7/8 x 7/16	7/8 x 7/8		9 1/16 - 10	2 1/2 x 7/8	2 1/2 x 7/8	2 1/2 x 1 3/4	
3 7/16 - 3 1/2		7/8 x 7/16	7/8 x 5/16	7/8 x 3/4		XT120	8 7/16 - 9	2 x 3/4	2 x 3/4	2 x 1 1/2
XT40	2 7/16 - 2 3/4	5/8 x 5/16	5/8 x 5/16	5/8 x 5/8			9 1/16 - 11	2 1/2 x 7/8	2 1/2 x 7/8	2 1/2 x 1 3/4
	2 13/16 - 3 1/4	3/4 x 3/8	3/4 x 3/8	3/4 x 3/4	11 1/16 - 12		3 x 1	3 x 1	3 x 2	
	3 5/16 - 3 3/4	7/8 x 7/16	7/8 x 7/16	7/8 x 7/8						
	3 13/16	1 x 1/2	1 x 1/2	1 x 1						
	3 7/8 - 4	1 x 1/2	1 x 3/8	1 x 7/8						

Unshaded key sizes are FULL Depth Keys

Keys are provided for shaded cells only, (non-standard key sizes)

XT[®] Metric Key Sizes

METRIC DIMENSIONS (mm)						DIMENSIONS CONVERTED TO ENGLISH UNITS (in)				
HUB	Bore	Shaft	Bushing	Keystock	Length	HUB	Bore	Key Width	Key Height	Length
XT20	20	6 x 3.5	6 x 2.8	6 x 6	35	XT20	0.787	0.236	0.236	1 3/8
	25 - 30	8 x 4	8 x 3.3	8 x 7			0.984 - 1.181	0.315	0.276	
	35	10 x 5	10 x 3.3	10 x 8			1.378	0.394	0.315	
	40	12 x 5	12 x 3.3	12 x 8			1.575	0.472	0.315	
	45 - 50	14 x 5.5	14 x 3.8	14 x 9			1.772 - 1.969	0.551	0.354	
XT25	25 - 30	8 x 4	8 x 3.3	8 x 7	48	XT25	0.984 - 1.181	0.315	0.276	1 7/8
	35	10 x 5	10 x 3.3	10 x 8			1.378	0.394	0.315	
	40	12 x 5	12 x 3.3	12 x 8			1.575	0.472	0.315	
	45 - 50	14 x 5.5	14 x 3.8	14 x 9			1.772 - 1.969	0.551	0.354	
	55	16 x 6	16 x 4.3	16 x 10			2.165	0.630	0.394	
	60 - 65	18 x 7	18 x 4.4	18 x 11			2.362 - 2.559	0.709	0.433	
XT30	35	10 x 5	10 x 3.3	10 x 8	53	XT30	1.378	0.394	0.315	2 1/16
	40	12 x 5	12 x 3.3	12 x 8			1.575	0.472	0.315	
	45 - 50	14 x 5.5	14 x 3.8	14 x 9			1.772 - 1.969	0.551	0.354	
	55	16 x 6	16 x 4.3	16 x 10			2.165	0.630	0.394	
	60 - 65	18 x 7	18 x 4.4	18 x 11			2.362 - 2.559	0.709	0.433	
	70 - 75	20 x 7.5	20 x 4.9	20 x 12			2.756 - 2.953	0.787	0.472	
	50	14 x 5.5	14 x 3.8	14 x 9			64	XT35	1.969	
55	16 x 6	16 x 4.3	16 x 10	2.165	0.630	0.394				
60 - 65	18 x 7	18 x 4.4	18 x 11	2.362 - 2.559	0.709	0.433				
70 - 75	20 x 7.5	20 x 4.9	20 x 12	2.756 - 2.953	0.787	0.472				
80 - 85	22 x 9	22 x 5.4	22 x 14	3.150 - 3.346	0.866	0.551				
90	25 x 9	25 x 5.4	25 x 14	3.543	0.984	0.551				
XT40	60 - 65	18 x 7	18 x 4.4	18 x 11	72	XT40	2.362 - 2.559	0.709	0.433	2 13/16
	70 - 75	20 x 7.5	20 x 4.9	20 x 12			2.756 - 2.953	0.787	0.472	
	80 - 85	22 x 9	22 x 5.4	22 x 14			3.150 - 3.346	0.866	0.551	
	90 - 95	25 x 9	25 x 5.4	25 x 14			3.543 - 3.740	0.984	0.551	
	100	28 x 10	28 x 6.4	28 x 16			3.937	1.102	0.630	
XT45	80 - 85	22 x 9	22 x 5.4	22 x 14	84	XT45	3.150 - 3.346	0.866	0.551	3 5/16
	90 - 95	25 x 9	25 x 5.4	25 x 14			3.543 - 3.740	0.984	0.551	
	100 - 110	28 x 10	28 x 6.4	28 x 16			3.937 - 4.331	1.102	0.630	
XT50	100 - 110	28 x 10	28 x 6.4	28 x 16	95	XT50	3.937 - 4.331	1.102	0.630	3 3/4
	115 - 125	32 x 11	32 x 7.4	32 x 18			4.528 - 4.921	1.260	0.709	
XT60	125 - 130	32 x 11	32 x 7.4	32 x 18	105	XT60	4.921 - 5.118	1.260	0.709	4 1/8
	135 - 150	36 x 12	36 x 8.4	36 x 20			5.315 - 5.906	1.417	0.787	
XT70	160 - 170	40 x 13	40 x 9.4	40 x 22	120	XT70	6.299 - 6.693	1.575	0.866	4 11/16
XT80	180 - 200	45 x 15	45 x 10.4	45 x 25	130	XT80	7.087 - 7.874	1.772	0.984	5 1/8
XT100	220 - 230	50 x 17	50 x 11.4	50 x 28	158	XT100	8.661 - 9.055	1.969	1.102	6 3/16
	240	56 x 20	56 x 12.4	56 x 32			9.449	2.205	1.260	

Metric Keys Standards are for rectangular keys. All keys are standard full depth keys.

Keys for Metric Bores are not supplied with the bushing.



CORPORATE OFFICE • P.O. Box 287 • Pella, IA 50219
800.247.1228 • 641.628.3115 • 641.628.3658 FAX