

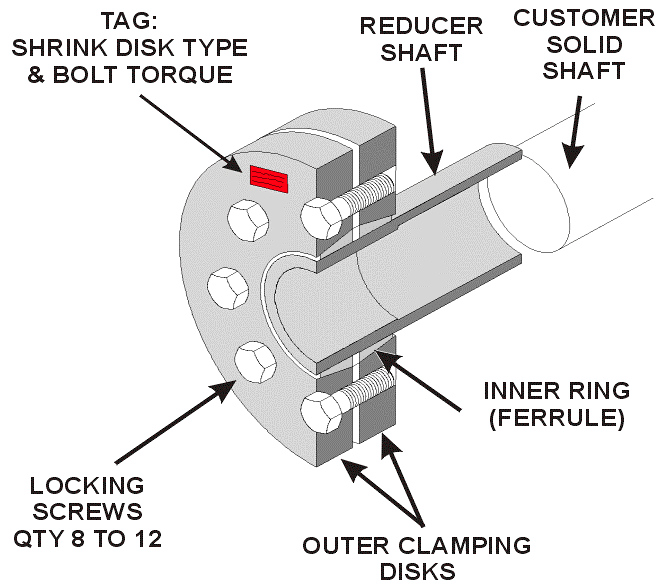
Hollow Shrink Disc Shaft Installation and Maintenance Instructions

BIM 1001

USA

CDN

Retain These Safety Instructions For Future Use



Installation Instructions:

1. Mating shaft tolerances are normally tighter for shrink discs due to the gripping forces needed. Customer shaft diameter has to be machined according to ISO h6 or f6 tolerances (f6 easier to machine but lower gripping forces as shown in catalog). Refer to Table 1 for h6 and f6 tolerances for customer shafts.
2. Remove transportation spacers (if provided) located between outer collars. Do not take the unit apart.
3. Lightly tighten locking screws until most play between outer collars and the conical inner ring (ferrule) is eliminated. You must be able to easily turn the ferrule with your fingers.
4. Lightly lubricate the bore of the ferrule, with grease, for easier mounting onto outside diameter of the reducer hollow shaft.
5. Slide the shrink-disc onto hollow shaft.
6. Wipe the reducer bore and the mating solid shaft clean of any lubricants and dirt. Only use solvent if the parts feel oily to the touch after wiping with a clean rag.
7. Slide the reducer onto the solid shaft until it is about half way through.
8. Lubricate the remaining portion of the solid shaft with a #2 grease, where it will be inserted into the hollow shaft.
9. Tighten the locking screws in a circular pattern. Refer to Table 2 for tightening torques. Initially, tighten locking screws finger tight to position outer collars. Then tighten 1/4

to 1/2 turn at a time until specified tightening torque (per table) is reached.

10. Continue tightening each bolt at rated torque until no further rotation is seen. This assures the shrink disc is fully seated.



Warning:

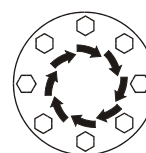
The surface area between the hollow shaft and the solid shaft must be free of lubricant or the connection may slip in service.



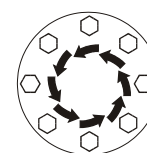
Warning:

Always tighten in a circular pattern. Never tighten bolts in a star pattern or connection may slip in service.

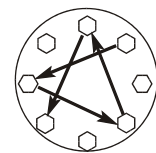
BOLT TIGHTENING PATTERN



CLOCKWISE
CIRCULAR
PATTERN
RIGHT



COUNTER
CLOCKWISE
CIRCULAR
PATTERN
RIGHT



STAR
PATTERN
WRONG

Customer shaft diameter tolerance with Shrink Disc fit h6

Metric (mm)

- $\leq \varnothing 18 = +0.000/-0.011$
- $> \varnothing 18 \leq \varnothing 30 = +0.000/-0.013$
- $> \varnothing 30 \leq \varnothing 50 = +0.000/-0.016$

- $> \varnothing 50 \leq \varnothing 80 = +0.000/-0.019$
- $> \varnothing 80 \leq \varnothing 120 = +0.000/-0.022$
- $> \varnothing 120 \leq \varnothing 180 = +0.000/-0.025$

Inch

- $\leq \varnothing 0.750 = +0.0000/-0.0004$
- $> \varnothing 0.750 \leq \varnothing 1.125 = +0.0000/-0.0005$
- $> \varnothing 1.125 \leq \varnothing 2.000 = +0.0000/-0.0006$
- $> \varnothing 2.000 \leq \varnothing 3.000 = +0.0000/-0.0007$
- $> \varnothing 3.000 \leq \varnothing 4.750 = +0.0000/-0.0008$
- $> \varnothing 4.750 \leq \varnothing 7.000 = +0.0000/-0.0010$

Shaft finish to be 125 micro inches or smoother.

Customer shaft diameter tolerance with Shrink Disc fit f6 (looser fit)

Metric (mm)

- $\leq \varnothing 18 = -0.016/-0.024$
- $> \varnothing 18 \leq \varnothing 30 = -0.020/-0.029$
- $> \varnothing 30 \leq \varnothing 50 = -0.025/-0.036$
- $> \varnothing 50 \leq \varnothing 80 = -0.030/-0.043$
- $> \varnothing 80 \leq \varnothing 120 = -0.036/-0.051$
- $> \varnothing 120 \leq \varnothing 180 = -0.043/-0.061$

Inch

- $\leq \varnothing 0.750 = -0.0006/-0.0011$
- $> \varnothing 0.750 \leq \varnothing 1.125 = -0.0008/-0.0013$
- $> \varnothing 1.125 \leq \varnothing 2.000 = -0.0010/-0.0016$
- $> \varnothing 2.000 \leq \varnothing 3.000 = -0.0012/-0.0019$
- $> \varnothing 3.000 \leq \varnothing 4.750 = -0.0014/-0.0023$
- $> \varnothing 4.750 \leq \varnothing 7.000 = -0.0017/-0.0027$

Shaft finish to be 125 micro inches or smoother

Tightening Torques for Locking Screws

Shrink Disk Type	Bore Size Inches (mm)	Locking Screws (Bolts)		
		Qty	Size	Torque in-lbs (Nm)
SNxx/35V	0.9375 – 1.000 (24 - 26)	8	M5X25	60 (7)
SNxx/40V	1.125 - 1.250 (28 - 32)	8	M6X35	110 (12)
SNxx/46V	1.3125 - 1.4375 (34 - 36)	10	M6X35	110 (12)
SNxx/55V	1.5625 - 1.75 (40 - 45)	8	M8X40	270 (30)
SNxx/62V	1.875 - 2.0625 (48 - 52)	10	M8X40	270 (30)
SNxx/76V	2.1875 - 2.5625 (55 - 65)	10	M10X50	520 (59)
SNxx/90V	2.5625 - 2.9375 (65 - 75)	10	M12X70	885 (100)
SNxx/108V	2.9375 - 3.375 (75 - 85)	12	M12X70	885 (100)
SNxx/128V	3.750 - 4.125 (95 - 105)	8	M16X70	2,210 (250)
SNxx/138V	4.125 - 4.500 (105 - 115)	8	M16X70	2,210 (250)
SNxx/158V	4.500 - 5.125 (115 - 130)	12	M16X80	2,210 (250)
SNxx/185V	5.3125 - 5.875 (135 - 150)	12	M16X80	2,210 (250)
SNxx/210V	6.250 (160)	12	M16X80	4,340 (490)
SNxx/230V	6.3125 - 7.500 (160 - 190)	12	M20X100	4,340 (490)

Maintenance

Shrink disks are maintenance free.

Removal

- Loosen locking screws in circular pattern as they were tightened, by approximately 1/4 to 1/2 turn at a time until finger tight. Do not remove locking screws completely.
- Loosen the outer collars from the tapered inner ring. This may require tapping the bolts with a soft faced hammer or prying lightly between the outer collars.
- Remove hollow-shaft reducer from solid shaft.

Preparation for Re-Use:

- Disassemble and thoroughly clean all parts. Wire brush to remove any excessive rust or dirt.
- Lubricate the taper of the outer collars and of the inner ring with Molycote G-Rapid plus (product of Dow Corning) or equivalent.
- Grease screw threads and head contact area with multipurpose grease.

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