Van Gorp®
THE PULLEY PLACE!

ISO 9001 CERTIFIED

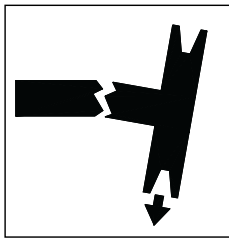
INSTALLATION AND OPERATION INSTRUCTIONS FOR CONVEYOR PULLEYS EQUIPPED WITH Q-D® HUBS

BEFORE INSTALLATION:

1. Make sure that the shaft, barrel & bore of the Bushing(s), Q-D® bushed conveyor pulley hub bore(s), key(s) and keyway(s) are clean and free of burrs, paint, etc.
   Make sure the key, as applicable, will slide in both shaft keyseat and Bushing bore keyway.

⚠WARNING

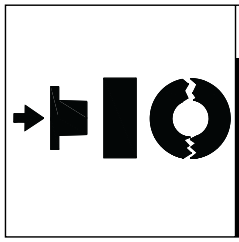
Disconnect power before installation and maintenance. Failure to do so can result in severe injury or death.



⚠CAUTION

To avoid damage, supporting structure including shafts and bearings must be designed to handle transmitted loads and belt tension(s).

2. For proper operation, make sure that the shaft size is within the size limits shown in Table 1. Some applications may benefit from tighter shaft tolerances.



⚠WARNING

Lubricant on bushing barrel, hub or screws could lead to breakage.

⚠CAUTION Mounting a Q-D® Bushing on a shaft smaller than the size limits shown in Table 1 may result in a faulty assembly. The assembly may come come off the shaft or undesirable assembly runout may result.

MOUNTING:

3. Using a hoist or other appropriate means, place the shaft through the pulley and locate in the desired position. When mounting on an inclined surface, if required, make sure the conveyor pulley and shaft do not drop during installation.

4. It may be necessary to slightly wedge open the saw slot on some Bushings in order to start the bore and position the Bushing onto the shaft. A narrow edged regular screw driver may be used.

⚠CAUTION Excessive wedging forces in Bushing saw slot may damage or break Bushing. AVOID.

5. Align the shaft keyseat with the Bushing bore keyway and install the key. Make sure the key runs the entire length of the Bushing bore. Some Bushings with shallow keyways are supplied with shaft keys. For proper operation use the key supplied with the Bushing.

INSTALLATION AND OPERATION INSTRUCTIONS FOR CONVEYOR PULLEYS EQUIPPED WITH Q-D® HUBS (CONT'D.)

6. Align the non-threaded holes (A) in the bushing flange(s) with the threaded holes in the hub(s) (B). Insert the cap screws with lockwashers and thread them by hand three or four turns. See Illustration 1 below.

7. Position the assembly axially on the shaft such that it is aligned with its running mate(s). Be sure to check for adequate clearance between the assembly and other nearby components if applicable.

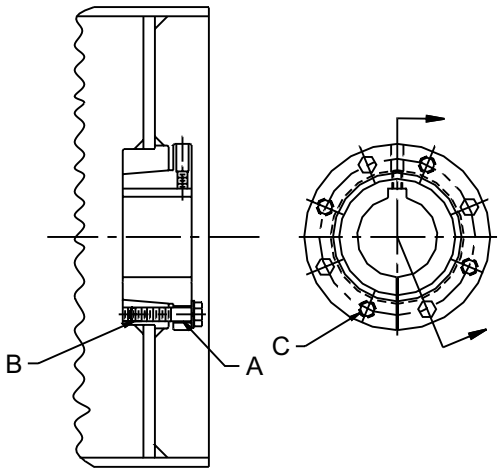
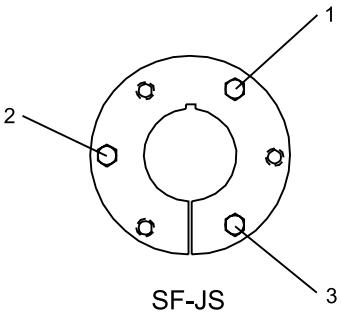


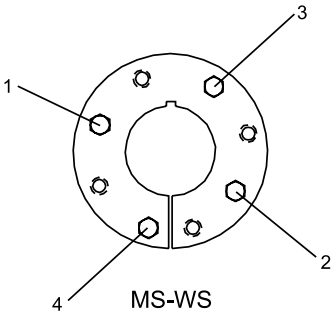
ILLUSTRATION 1

8. Using a torque wrench and appropriate socket, tighten the cap screws with lockwashers sequentially in order as shown on the diagrams below. Tighten to the torque shown in Table 2. When the cap screw torque is at or near recommended torque, make at least two more sequential rounds to assure all cap screws are at Table 2 cap screw torque value..

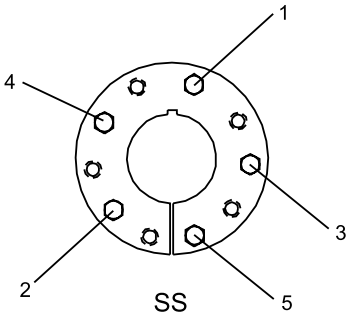
⚠CAUTION Tightening the cap screws to a torque higher than shown in Table 2 may lead to product failure. AVOID.



SF-JS



MS-WS



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INSTALLATION AND OPERATION INSTRUCTIONS FOR CONVEYOR PULLEYS EQUIPPED WITH Q-D® HUBS (CONT'D.)

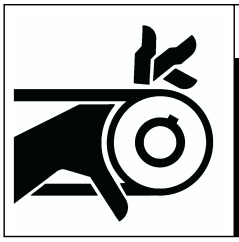
9. When two Bushings are used, completely tighten the screws with lockwashers on one Bushing before proceeding to tighten the other one. If the Bushing has a set screw over the keyway, tighten it to the torque value in Table 2.

⚠CAUTION Tightening the set screw to a torque higher than shown in Table 2 may lead to Bushing damage or breakage. AVOID.

10. Since tightening the cap screws may affect the axial position of the assembly, confirm that it is still properly aligned with its running mate(s). If not, determine how much the assembly must be moved to be in proper alignment.

11. If axial adjustment is required, (following REMOVAL procedure), reposition the assembly, and repeat steps 8 and 9.

12. Check installation gap - There must be a gap between the Bushing flange and the hub face. If there is no gap between them, disassemble the parts (following REMOVAL procedure) and determine the reason(s) for the faulty assembly.



⚠WARNING

Operating drives without guards in place can result in severe injury or death.

REMOVAL:

1. Heavier Product may require a hoist or other means of supporting the Product during the removal procedure. When removing from an inclined surface, make sure the Bushing and Product do not drop during removal.

2. Remove all cap screws sequentially. If the Bushing has a keyway set screw, loosen it.

3. Insert cap screws in all threaded Bushing flange holes (C). Tighten the cap screws against hub face of the Product until the screw force releases the Product from the Bushing.

4. When two Bushings are used, completely loosen the screws and set screws on one Bushing before proceeding to loosen the other one.

5. Remove the Bushing(s) and Product from the shaft using appropriate means.

TABLE 1
SHAFT SIZE LIMITS FOR Q-D® BUSHINGS

Shaft Size Range (IN)		Lower Shaft Size Limit (IN)	Shaft Size Range (MM)		Lower Shaft Size Limit (MM)
Above	Through		Above	Through	
-	1 1/2	-0.003	-	38.1	-0.076
1 1/2	2 1/2	-0.004	38.1	63.5	-0.102
2 1/2	4	-0.005	63.5	101.6	-0.127
4	6	-0.006	101.6	152.4	-0.152
6	8	-0.007	152.4	203.2	-0.178
8	9	-0.008	203.2	228.6	-0.203
9	-	-0.009	228.6	-	-0.229

Note: Upper limit is +0 whether units are INCHES or MILLIMETERS.

INSTALLATION AND OPERATION INSTRUCTIONS FOR CONVEYOR PULLEYS EQUIPPED WITH Q-D® HUBS (CONT'D.)

TABLE 1
TIGHTENING TORQUES

BUSHING	SAE Grade 5 Cap Screw		CAP SCREW TORQUE			SET SCREW SIZE	SET SCREW TORQUE		
	NO.	SIZE	(IN-LBS)	(FT-LBS)	(N - M)		(IN-LBS)	(FT-LBS)	(N - M)
SF	3	3/8 - 16NC	360	30	40.7	5/16 - 18NC	165	13.8	18.6
E	3	1/2 - 13NC	720	60	81.3	3/8 - 16NC	290	24.2	32.8
F	3	9/16 - 12NC	900	75	101.7	3/8 - 16NC	290	24.2	32.8
JS	3	5/8 - 11NC	1620	135	183.0	3/8 - 16NC	290	24.2	32.8
MS	4	3/4 - 10NC	2700	225	305.1	3/8 - 16NC	290	24.2	32.8
NS	4	7/8 - 9NC	3600	300	406.8	1/2 - 13NC	620	51.7	70.1
PS	4	1 - 8NC	5400	450	610.1	1/2 - 13NC	620	51.7	70.1
WS	4	1 1/8 - 7NC	7200	600	813.5	-	-	-	-
SS	5	1 1/4 - 7NC	9000	750	1016.9	-	-	-	-

(N - M) = Newton Meters

OPERATION INSTRUCTIONS:

1. All pulleys should be checked for tightness on their shafts.

   NOTE: For the first month of operation, inspect the Bushings for proper seating and cap screws for correct cap screw torque at least once a week and thereafter during periodic shutdowns.

2. The pulley lagging should be checked for wear, cracks, and tightness. Changes in coefficient of friction between the drive pulleys and belt could result in belt slippage.

3. The ends of pulleys should be inspected for cracks or other signs of stress or fatigue. The pulley should not be operated if a crack develops.

4. Take-up pulleys and belt tensioning devices should function normally. Excessive belt tension could fail pulleys, bearings and shafts.

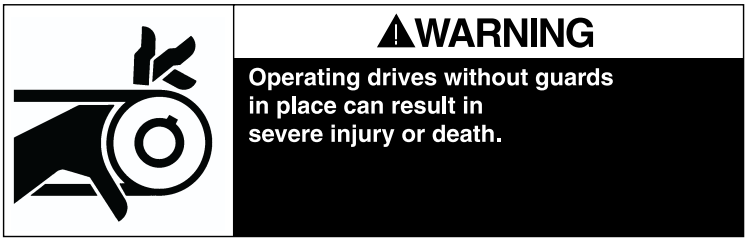
5. Pulleys should be checked for vertical and lateral alignment. Misalignment can result in belt tracking problems and pulley wear.

6. Bearings should be visually checked for excessive shaft movement in the bearing during operation.

7. All bearings should be checked for alignment, lubrication, and tightness of locking devices.

8. Conveyor pulleys should not be cleaned during operation. It is extremely dangerous to be near the nip point when the pulley is in operation.

9. The conveyor should not be operated without the necessary protective guards.



Have questions? Contact Engineering at 1-800-VAN-GORP.

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