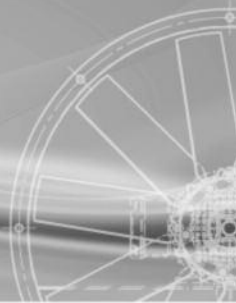
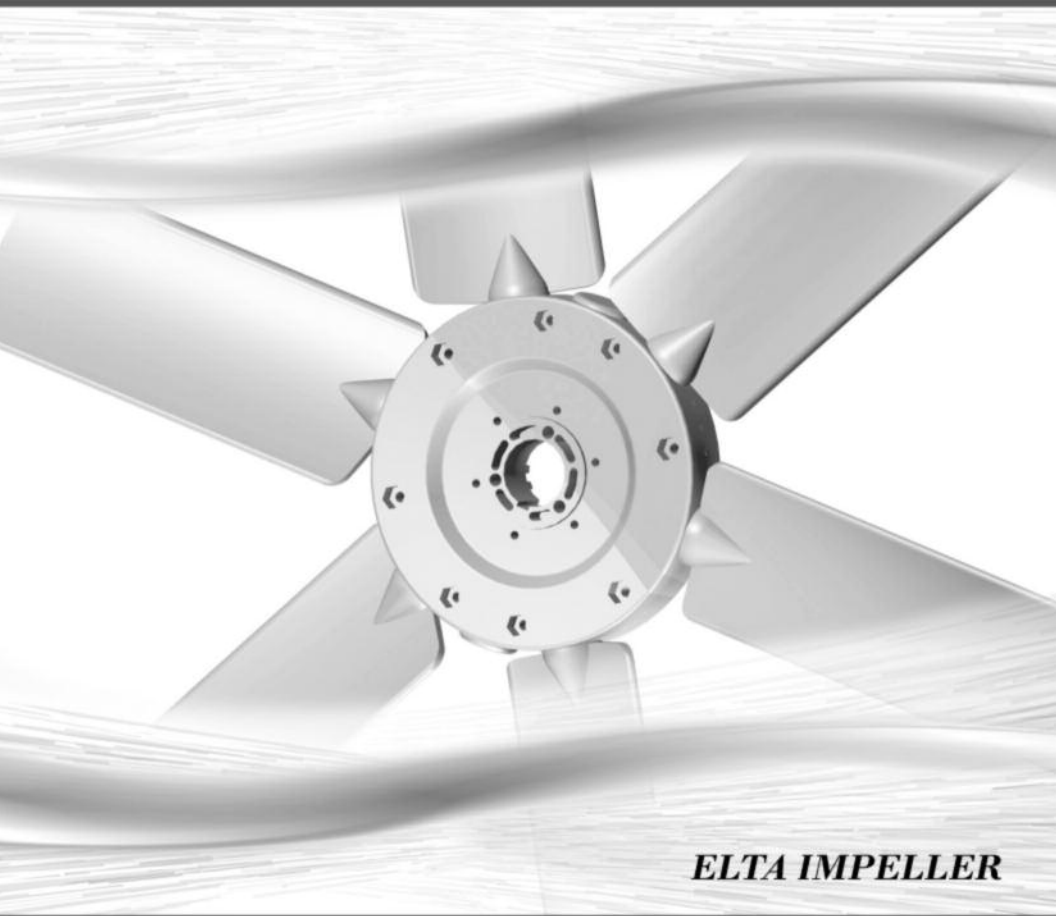




better AIRFLOW by DESIGN™



Installation Instructions



ELTA IMPELLER

READ AND SAVE THESE INSTRUCTIONS FOR FUTURE REFERENCE

ELTA IMPELLERS

ELTA impellers are furnished with split taper bushings for mounting the impeller to the drive shaft. The barrel of the bushing and the bore of impeller hub have matching tapers to ensure a concentric mount and a true running impeller. The impeller hub and bushing assembly is keyed to the drive shaft and held in place by compression.

The bushing is split so that when properly installed in the impeller hub, it will grip the drive shaft with a positive clamping action. Bushing bolts, when tightened to the correct torque and secured with lock nuts, will draw the bushing into the tapered bore, enabling it to grip the shaft securely.



SAFETY FIRST!

The operation and maintenance of machinery of any kind requires a person to be cautious and aware of the dangers that exist. The very nature of fans and their appurtenances presents a hazard to installation and maintenance personnel because they contain high-speed rotating parts.

Fans should only be installed, maintained, or replaced by trained, experienced personnel. Installations must meet all pertinent regulatory and local safety codes and OSHA requirements.

- **NEVER** allow an untrained person to work on a fan.
- **NEVER** remove WARNING labels from a fan.
- **NEVER** operate a fan without all safety guards in place.

Every fan is designed to operate safely to a stated maximum speed and temperature. Do not exceed these limits! Exceeding these limits could result in death or serious injury.

Disconnect and lock out power supply before performing any installation or maintenance. Working on or near energized equipment could result in death or serious injury.

IMPELLER INSTALLATION

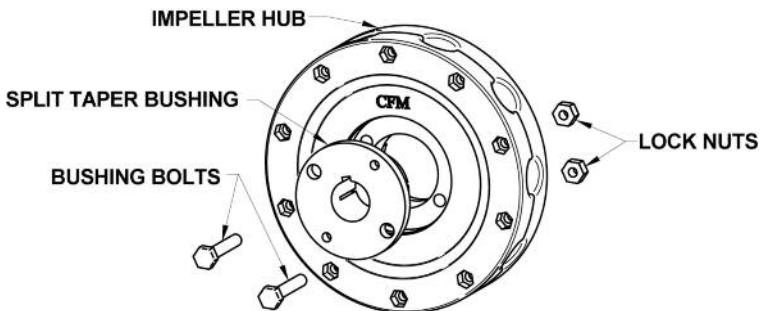
NOTE: Before starting, check the fit of the key in both the drive shaft and bushing keyways. Ensure that drive shaft, bushing barrel, hub bore, key and keyways are smooth and free of any grease and oil.

⚠ WARNING Do not use anti-seize compound on these tapered components, as friction is required to ensure a compressive fit.

1. Insert bushing bolts through the clearance (non-threaded) holes in the bushing flange, and place bushing loosely into impeller hub. Place the lock nuts into the pockets on the backside of the impeller hub.
2. Start bushing bolts by hand, turning them just enough to engage threads in the lock nuts. Do not use a wrench at this time. The bushing should move freely in the impeller hub.
3. Slide impeller and bushing assembly onto drive shaft and position impeller by aligning keyways. Fit key into keyway.
4. Using a torque wrench, take a part turn on each bolt sequentially, as in mounting an automobile wheel, until all are tight. Tighten bushing bolts evenly and progressively to the recommended torque value shown in the Recommended Torque Value Table. Do not attempt to tighten the bushing flange flush to the hub.
5. Check the installation gap. There must be a gap between the bushing flange and the impeller hub. If there is no gap between them, disassemble the parts (see 'Removal of Impeller from Drive Shaft') and determine the reason(s) for the faulty assembly.

NOTICE Tightening the bushing bolts to a torque higher than that shown in the table below may lead to bushing damage or impeller failure.

RECOMMENDED TORQUE VALUE			
BUSHING NO.	BOLT SIZE	TORQUE	
		LBS. FT.	N-m
QT/QH/L/H	1/4 - 20 UNC	8	11
P-1	5/16 - 18 UNC	16	22
Q1 / Q-2	3/8 - 16 UNC	29	40
R-2	3-8 - 16 UNC	29	40



REMOVAL OF IMPELLER FROM DRIVE SHAFT

⚠ WARNING Disconnect and lock out power supply before performing any maintenance. Working on or near energized equipment could result in death or serious injury.

NOTICE Once installed on drive shaft, never use a wheel puller on the impeller assembly.

NOTE: Removal holes on bushing are threaded, installation holes are not.

1. Remove all bushing bolts from the bushing and impeller hub assembly.
2. Insert bushing bolts into the threaded holes in the bushing flange.
3. Tighten bushing bolts evenly and progressively to push the impeller off the bushing. Take a part turn on each bolt sequentially until the impeller hub is forced loose from the bushing. The impeller and bushing may now be removed independently from the drive shaft.
4. If the assembly has been in place for some time, it may be necessary to use a wheel puller to remove the bushing.

WARRANTY

Go to www.continentalfan.com for complete warranty information.

ELTA BUSHING-1603

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