

Hall[®] Surgairtome Two[®] Drill (5058-001) Guide to Optimum Performance

What are my responsibilities as the user of this product?

As the user of this product, it is important that you understand usage guidelines, product cleaning, sterilization parameters and recommended service intervals. Proper maintenance of this product is vital to its performance.

Usage Guidelines

- Never operate this drill above 100 PSI unless using a hose longer than the standard 10 feet. Add an additional 1 PSI for every extra foot of hose. Excessive pressure can cause internal damage to the instrument and exert excessive stress on the hose.
- Always ensure that attachments, accessories and hoses are correctly and completely attached to the drill.
- Always inspect hoses for signs of wear or damage. Do not use worn or damaged hoses. Under pressure, a severed or broken hose can whip out of control and cause serious injury.
- The use of 99.7% water-pumped dry nitrogen is the ideal source for this air-powered drill as pure, dry nitrogen will not support combustion or corrosion.
- Always check all equipment for any air or nitrogen leakage. If leakage is noted, return for service.
- Always place this drill in the safe position before changing attachments, accessories, or hoses.
- Never operate this drill if not completely cool. Do not force cool this drill. Force cooling can give a false impression that the internal components of the drill are cool which can result in overheating of the drill.

Bur Usage Precautions

- Overheating of the bur can occur if the bearings in the bur guard are worn and can cause burning of the patient's tissue. To reduce the risk of injury, perform the following bur guard procedure prior to each use:
 - Remove the bur guard from the drill.
 - Insert a bur into the nose of the bur guard.
 - While holding the bur, spin the bur guard. The bur guard should spin freely around the bur shaft without resistance. If not, do not use the bur guard and return for service.
- Always use a bur of proper length to provide proper stabilization. Without proper stabilization, the bur can break and be propelled with great force. To determine proper length, the tip of the bur guard should cover the safe line on the bur.
- Always inspect for bent burs. Do not use a bent bur as the bur can break and be propelled with great force.
- Never operate the drill without the bur completely seated and locked in place, otherwise, overheating of the bur can occur causing burns to the patient's tissue or the bur can be thrown with great force causing injury to the patient or medical staff.
- Never lock collet without a bur in place. Damage to the collet will occur.
- The use of non-Hall Surgical burs that do not conform to Hall Surgical specifications for hardness, configuration, and shank diameter may result in overheating, bur slippage or breakage, damage to the instruments and premature wear and tear.
- It is recommended that single-use burs be used. Dull burs can cause heat buildup in the drill and bone necrosis.
- Do not use burs for plunge cutting.

Care and Cleaning Guidelines

- Never oil this drill. Oiling can result in damage to the motor and other internal components causing the drill to function improperly.
- Remove attachments from the drill prior to cleaning.
- Never immerse this drill or attachments in soap solution or water.
- Clean the drill with the hose attached to prevent water from entering the internal components of the drill.
- Never clean this drill or attachments with liquid or chemical disinfectant. Improper solutions can cause corrosion to internal components.
- Never clean the drill or attachments in an ultrasonic cleaner or combination washer/sterilizer.
- With the hose attached, thoroughly scrub the drill and attachments with a soft brush and mild detergent. Remove all traces of blood, debris and stains. Manipulate all moving parts of the drill to ensure all debris is removed. Repeat process until all debris is removed.
- With the nose of the drill in the downward position and the hose attached, rinse all soap off the drill. Rinse all attachments likewise.
- The bur guard is the only piece of equipment which will not be damaged by running water through the inside.
- Flush all surfaces free of tap water with distilled water to prevent metal discoloration.
- Gently shake all equipment free of water and wipe the surfaces with a clean, lint-free towel.
- Only the angle attachments are to be lubricated (1375-032, 033, 034, 035, and 036). These attachments must be cleaned prior to lubrication. Refer to the Hall Surgairtome Two Drill instruction manual for proper lubrication.

Sterilization Guidelines

- Never sterilize the nitrogen regulator used in the operation of this drill.
- Disconnect the drill from the hose prior to sterilization.
- Assure that the collet is in the fully open or unlocked position prior to sterilization.
- Use steam sterilization for sterilizing this surgical equipment. Do not sterilize with Ethylene Oxide (EtO).
- Never sterilize equipment in a washer/sterilizer, STERIS System, STERRAD System, CIDEX, Abtox Plazlyte or comparable sterilization methods.
- Do not "Peel Pack" this drill or attachments for sterilization. Sterilization in a sealed pouch traps moisture, which can cause damage.
- Flash sterilization is not recommended for powered surgical instruments, as it will not result in internal sterilization or proper drying.
- An 8-minute minimum dry cycle is essential for proper functioning of this surgical equipment. A proper dry cycle is required for heat and moisture dissipation.

Sterilization	Temperature	Exposure Time	Dry Time
Steam Pre-Vacuum	270-272° F (132-133° C)	4 minutes	8 minutes minimum
Steam Gravity	270-272° F (132-133° C)	20 minutes*	8 minutes minimum
Steam Gravity	250-254° F (121-123° C)	40 minutes*	8 minutes minimum

*Note for sterilization containers with filters, add 5 minutes to the gravity cycle.

Caution: An eight (8) minute minimum dry cycle must be run on all drills and attachments every time the product is sterilized. Failure to use a dry cycle may lead to reduced performance or premature product failure. Operation of a drill that is not completely cool or dry may decrease performance and/or reliability.

Service Intervals

- The service interval for the Surgairtome Two drill is one year. The service interval for the bur guards is six months. The service interval for the angle attachments is twelve months. Failure to follow the service schedule could result in reduced instrument performance or overheating of the drill or guard.