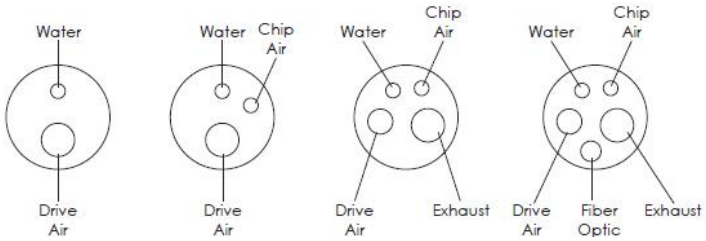
Handpieces and Burs

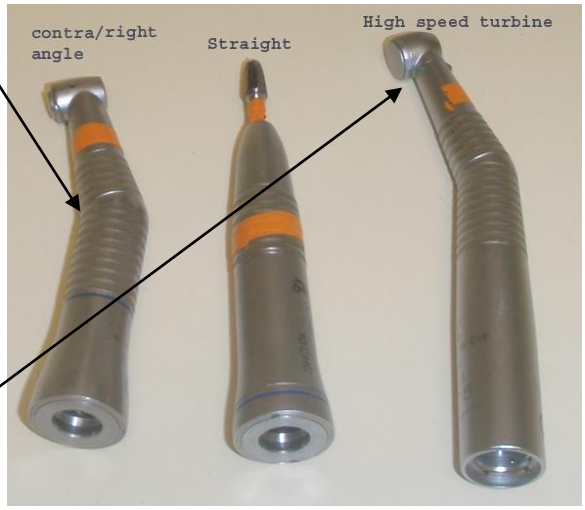
Most dental units come equipped with a 3 in 1 syringe and 2 or more airlines to supply high pressure air to drive handpieces. The 3 hole coupling is known as Borden and the 4 hole as Mid West. (it is important to know the type of coupling to be able to order the correct handpiece or motor)



The compressor will have a pressure gauge on it and the pressure should not be above the pressure for the dental unit. The dental unit will often have a pressure gauge to ensure you run the handpiece at the correct air pressure. The handpieces will be damaged easily with too high or low air pressure (usually 40psi).

The slow handpieces are fitted with a quick coupling to an air motor (some units use an electric motor).The burs can rotate at 25-50,000 turns per minute and they have a high torque (power). The motor speed can be adjusted as well as going forward or in reverse –always check that it is going forward or burs will not cut.

The high speed has a small turbine in the head that rotates very fast at up to 500,000 turns per minute.



- **Remove bur from handpiece.**
- **Clean the outside of the handpiece under running water.**
  (Do not clean the handpiece in disinfectant.
  Do not immerse your handpieces in any chemical solution, which includes water.)
- **Separate head and shank as appropriate.**
- **Lubricate the head and handpiece separately with KaVo Spray and appropriate nozzle. Repeat until clean lubricant appears from the chuck.**
  (Always shake the can prior to use and keep upright when lubricating)
- **Use tissue to clean handpiece of any excess lubricant.**
- **Sterilise in autoclave, if a bag is used you must follow BDA guidelines.**
  (Remember to change distilled water in autoclave on a regular basis.
  Note: Recommended temperatures must not be exceeded)
- **Upon completion of cycle remove handpiece from chamber as soon as possible and store with head upright, until coll and internally dry.**
  (Do not leave handpieces in autoclave)
- **Once dry and cool, handpieces can be stored in a bag, cupboard, drawer or upright on a handpiece stand.**
- **Run handpiece briefly before use to clear excess lubricant. (Do not lubricate prior to use)**

The advice on what to do with a handpiece and bur after use varies. The 2 important factors are to ensure safe decontamination and keep the hanpiece working correctly. Run the handpiece with water spray for 30 seconds (this should be done into the high speed aspirator to avoid the aerosol spray). This stops any contaminated water being sucked back into the tubing. Wipe the hanpiece using a detergent wipe with the bur in place to prevent debris being pushed into the bearings, then remove the bur. Follow the manufacturer's instructions on how to clean and oil the handpiece. Many manufacturers make automated cleaning and oiling units.

The unit uses compressed air to clean the air and water lines and then oils the bearings. Cleaning agent and oil have indicators to show their levels.

The handpieces are now ready for sterilisation.

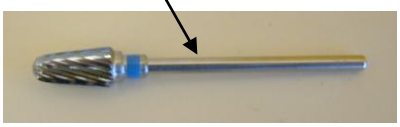
Some handpieces may require oiling after sterilisation. Remember to run handpieces for a few seconds before use on a patient.

The manufacturers put a label on the handpiece to indicate if it can be put in a washer disinfector or an autoclave.

Burs

Burs are described by shape – material – for which handpiece – for particular use.

Burs			
• Round	• Steel	• Friction grip/FG	Acrylic
• Flat fissure	• Diamond	• Latch grip/LG	• Pear
• Tapered fissure	• Tungsten Carbide/TC	• Straight hand piece/HP	• Bud
• Flame			
• Pear			
• Bud			
• Inverted cone			



Round **Fisssure** **Tapered fissure** **Flame** **Pear** **Bud**



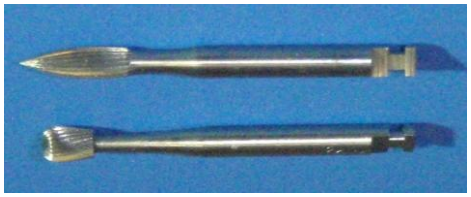


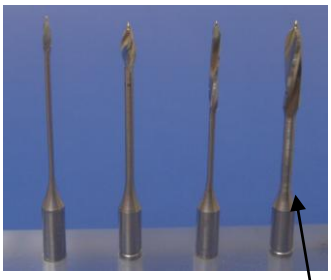

Diamond **Steel** **Tungsten carbide**

Diamond burs come in various grits (the size of the diamond particles) Green is course, blue indicates medium, red is fine, yellow is super fine.

Tungsten carbide burs look like steel burs except the end is a darker colour from the rest of the bur

Finishing burs for amalgam are different from steel cutting burs as they have many more fine cutting edges. They come as round, flame, pear shape. Polishing kits are also available.



Commercial kits for finishing and polishing are available or bur blocks with favourite instruments can be used. There are also specialist burs for surgical or endodontics use such as these Gates Glidden and Peezo burs. Remember that all burs put on the bracket table must be sterilised even if they are not used.