



Belvac Production Machinery Technical Bulletin

Information for Customers Operating & Maintaining Belvac Machines

ISSUE 3, VOLUME 17, MAY 2014

RECOMMENDED PROCEDURE FOR CLEANING AND POLISHING NECKER SYSTEM TOOLING

Whether tooling is ceramic, carbide or tool steel, build up and scratches can occur, causing inferior product and reduced tool life.

- Ceramic tooling should be caustically cleaned when build up appears. Polish to remove scratches if necessary.

Warning: DO NOT use Scotchbrite or any other abrasive material to clean or polish ceramic tooling

- Carbide and Tool Steel tooling should only be polished.

Warning: DO NOT caustic clean. Surface leaching will result

Oils, acids and/or sweat from hands can corrode carbide and tool steels. Nitrile rubber gloves can be worn during handling but should NEVER be used when operating rotating equipment during a polishing operation.

Ceramic Tooling

Supplies Required for Cleaning

- Ultra-sonic cleaner (if available)
- Sodium Hydroxide @ 10% concentration or Dow oven cleaner

- Clean water
- Clean soft rag, buff cloth or wipe (such as Kimtech Science Kimwipes®)
- Mineral oil

Cleaning Procedure

- Fill container with enough 10% Sodium Hydroxide solution to cover tooling.
- Leave submerged for 10 to 15 minutes or until all build up is removed. Inspect with 10x magnifier.
- Rinse thoroughly in water to remove cleaner.
- Wipe dry with clean soft rag, buff cloth or wipe.
- Apply a thin coat of mineral oil.

Supplies Required for Polishing

- Clean soft rag, buff pad or wipe (such as Kimtech Science Kimwipes®)
- Denatured or Isopropyl alcohol
- Mineral oil
- #3 micron Diamond Polishing Compound

Polishing Procedure

- Mount tool in lathe or polishing machine.
- Run at low speed, 500 to 1000 rpm.
- Clean tool with alcohol.
- Apply a small amount of mineral oil with rag, pad or wipe. The oil helps the



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compound to spread, thereby reducing the amount of abrasive required.

- Apply a small amount of diamond compound with light pressure. To protect the integrity of the tool profile, do not over polish.

Warning: Diamond compound can remove material very quickly.

- Buff for up to 15 seconds at the area of build up or scratched surface.
- Quick polish the entire die.
- Clean with rag, pad or wipe.
- Inspect for residual pickup with 10X magnifier, repeat polishing procedure if necessary.
- Thoroughly clean all diamond compound from surface with alcohol.
- When thoroughly cleaned, wiping with Kimwipes® will not discolor.
- Apply a thin coat of mineral oil.

Carbide Tooling

Supplies Required for Polishing

- Clean soft rag, buff pad or wipe (such as Kimtech Science Kimwipes®)
- Denatured or Isopropyl alcohol
- Mineral oil
- #3 micron Diamond Polishing Compound

Polishing Procedure

- Mount tool in lathe or polishing machine.
- Run at low speed, 500 to 1000 rpm.
- Clean tool with alcohol to remove oils.
- Apply a small amount of mineral oil with rag, pad or wipe. The oil helps the compound to spread, thereby reducing the amount of abrasive required.
- Apply a small amount of diamond compound with light pressure. To protect the integrity of the tool profile, do not over polish.

Warning: Diamond compound can remove material very quickly

- Buff for up to 15 seconds at the area of build up or scratched surface.
- Quick polish the entire die.
- Clean with rag, pad or wipe.
- Inspect for residual pickup with 10X magnifier, repeat polishing procedure if necessary.
- Thoroughly clean all diamond compound from surface with alcohol.
- When thoroughly cleaned, wiping with Kimwipes® will not discolor.
- Apply a thin coat of mineral oil.



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Tool Steel Tooling

The Carbide polishing procedure can be used or the following.

Supplies Required for Polishing

- Clean soft rag, buff pad or wipe (such as Kimtech Science Kimwipes®)
- Denatured or Isopropyl alcohol
- WD-40
- 1000 – 2000 grit emery cloth (to remove pickup), 4000 grit (for min. pickup & cleaning)
- Mineral oil

Polishing Procedure

- Mount tool in lathe or polishing machine.
- Run at low speed, 500 to 1000 rpm.
- Clean tool with alcohol to remove oils.
- Apply a small amount of WD-40 with rag, pad or wipe.
- Buff for up to 15 seconds at the area of build up or scratched surface. To protect the integrity of the tool profile, do not over polish.
- Quick polish the entire tool.
- Clean with rag, pad or wipe.
- Inspect for residual pickup with 10X magnifier, repeat polishing procedure if necessary.

- Thoroughly clean and dry the entire surface with alcohol.
- When thoroughly cleaned, wiping with Kimwipes® will not discolor.
- Apply a thin coat of mineral oil.

Tooling Storage

- Thoroughly clean tooling.
- Apply a thin coat of mineral oil.
- Enclose in bubble wrap.

Place in a suitable protective container.