

FAQ X1_035 – Resetting of the tooling



Basic settings of the tooling support

- Take the whole tooling incl. guidance channel and it's T-shaped basic plate out.
- Both vertical alu-plates must be lateral centered, measure it with the depth gauge!

Measurement: 2 ± 0.2 mm



Both vertical alu-plates shall be even to the basic T-shaped basic plate. If not, undo on each vertical plate 2 x M10 from underneath, and move plates in a correct position.



Tooling setting:

- Take the whole tooling incl. guidance channel and it's T-shaped basic plate out
- Undo 4 x M6 screws on the main tooling plate, turn the main excentric shaft (with black handle) underneath, til the black mark on the shaft is in line with the zero.
- Now the tooling has the correct height to for setting!



- Clean the whole calibration crown before loosen any screw!
- Make sure there is no dirt/welding spatters between any roller and its supports. Short circuits may be the consequence.
- Loosen all diabolo rollers on the crown (to make sure that setting mandrel moves in easily).
- Make sure that each ceramic precalibration roller is turning freely! If not, clean and lubricate them if needed.



ATTENTION:

If they are lateral to tight, check if the space-shims are damaged, or to thick. There must be always a slight play of the rollers. The space-shim close to the vertical shaft must be of same thickness on each side!



- Make sure that the setting mandrel is neither rusty nor damaged! If needed clean with sandpaper 400, and oil after using
- Put the mandrel (on it's basic plate) into the tooling and lock both M10 nuts

ATTENTION

Make sure that the mandrel touches the upper stopper, or has the indicated clearance between!



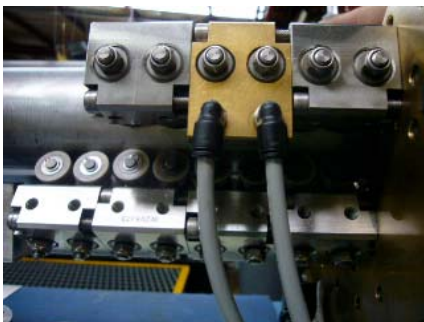
Make sure there is no clearance underneath the basic plate:
=> Check it with feeler gauge 0.05 mm



Set the precalibration roller pairs with a feeler gauge and a spanner 10 mm.
When the roller pair is touching the mandrel, there must be a clearance of 0.1 mm (recommendation) between nut and shaft.



ATTENTION:
This setting depends on the tooling version (shall be a basic recommendation).



ø 65 mm:
Top precalibration inside/outside (with water cooled brass holders):

- First 4 roller pairs (seen from main plate) clearance 0.1 mm
- Fifth roller pair 1.0 mm between rollers and mandrel!
- Sixth roller pair 2.0 mm between rollers and mandrel!

Bottom precalibration
inside/outside:

- First 6 roller pairs clearance 0.1 mm
- Seventh roller pair 1.0 mm between rollers and mandrel!
- Eighth roller pair 2.0 mm between rollers and mandrel!



NOTE:

Due to 2.0 and 1.0 mm the precalibration gets a tapered shape, and helps the can to run in smoother!



- Mount the very top precalibration rollers again, and position them til its rollers have a clearance of 0.5 mm to the mandrel.
=> This settings may vary, it can depend on the can format, and/or on operators experiences.
- Start now to position both top diablo rollers. Loose the supports and move both laterally on the plate in direction of the opposite diablo roller, til you have a space of about 6 ± 0.5 mm space between. Just enough for the upper welding disc, which sits after between both rollers.



Now do the same with the other diablo rollers, and make sure the space between each them is all around equal.
Just measure the spaces by eyes/guessing.



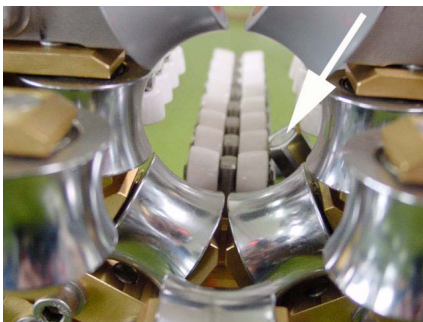
ATTENTION:

If two rollers may touch each other, they can get damaged, and cause marks on the tin plates!

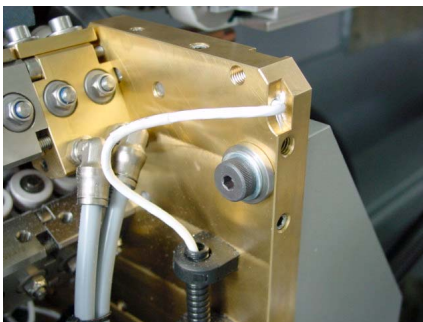


After all diabolo rollers are positioned, they need now to be fine adjusted:

- Their radius is slight bigger compared with the one of the setting mandrel!
- Mark each roller before setting with a pin-board marker (see pic), and move them till they touch the mandrel only in the very center.
- Turn the roller by hand til the marker is has past the mandrel and now move the roller back.
- The sign on the roller will show you, if the setting is properly done or not yet.

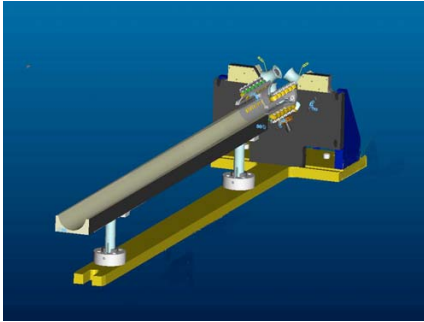


Check the welding sensor B6, there should be a clearance between 0.5 - 1.0 mm to the setting mandrel.



Control both temperature sensors:

- Any damage on the cables?
- Any dirt between sensor and bore?
- Better clean both sensors and lubricate them with heat compound before mounting again.



- Before mounting the T-shaped plate back clean it underneath on the whole length, clean its guide bar on the welder also, and lubricate the plate and guide bar again.
- Don't forget to mount the U-shaped steel clamp over the T-shaped basic plate again.