Circular Saw Guiding 2017 FEEDS & SPEEDS

Guided Circular Saws

For others it’s easy, they just try to be better than the rest. Everyday at PGMR, we must be better than PGMR.

Guided Circular Saws

Saw Guide Quality

Three dimensions are critical for successful guide operation:

1. Thickness of Clamping Area: The tolerance should be, at most, 0.0005 inch to avoid stacking errors in gangs with many guides. Each guide should be visually checked between the saw and the guide block for a good tight fit, and then checked with a lift at each guide block.

2. A bend in the body of the arm is not critical since guide dressing hides the problem. However, if the guide arm is bent too far the cutter may hit machine screws or the pocket when the guide is tested on a granite plate, or with a short surface plate.

3. Pocket restrictions in Chipping Guide blocks under heavy conditions when the pocket is undersized. The volume, and variation in the guide pad thickness (at the clamping and pad areas). Trying to reduce the clearance gap is not a good option. Bolting the spacer to guide blocks is not a good practice because it will be difficult to maintain good tolerances. Therefore, it is critical to ensure no errors in the setup of the guides and the alignment before releasing the guides.

Quality Control

There are some alignment checks to ensure the dresser produces accurate guides. The setup is shown in the picture below.

Dressing the guides: The final dressing is very precise in that it results in a guide that is very close to the ideal shape and form. The guide block must be perfectly flat to ensure:

1. Clamping surface is parallel to the cutter arc (or the cutter shaft axis is square to the arbor)

2. Stiffness

Must be perfectly flat to ensure:

a. No machining marks. If an area is untouched, the error is significant.

b. Maximum force needed to drive the saw through the guides.

c. Increased when the saw is in the cut.

3. Accuracy of Guide Safety

Lubrication

Circular saw guide oil that cuts downtime.

The saw guide oil that is most critical is the guide block surface oil that reduces friction and increases the life of the saw guide. This oil is a lubricant in that it re-moisturizes the saw guides when the saw is not in the cut for a short time after the cut is completed. Some systems also have a guide block oil that provides additional lubrication to the guide blocks.

Guide Dressers

For more information about Dressers, call 224-3221 or E-mail Bruce at Bruce.Lehmann@fpinnovations.ca

New CPG Guide Dresser

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Cylindrical Saw Guiding

See our support for any dressing machine or problem you may have with your guides.

Saw Guide Safety

Guides can fail from the saw and cause serious injuries, not to mention downtime and lost production. It is important to properly dress your guides, and regularly check for any dressing problems that may lead to guide failure.