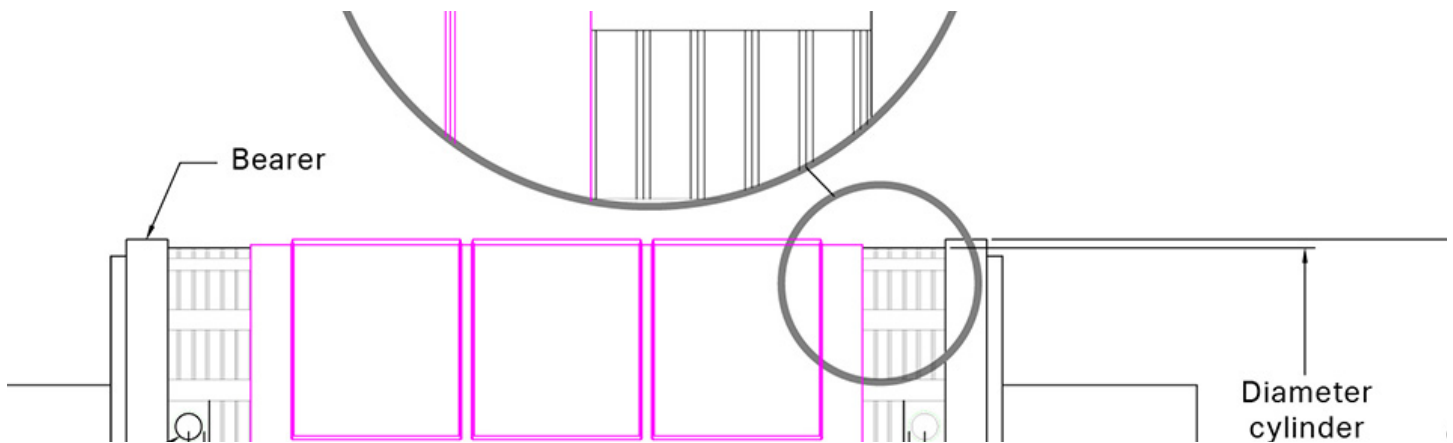


MAGNETIC CYLINDER UNDERCUT



At Wilson, we're always focused on the technical aspects of flexography. TechTalk is your quick snapshot of key topics in our industry. Let us know what you think.

Magnetic Cylinder Undercut: A Few Key Considerations

Before ordering your next magnetic cylinder, make sure you pay attention to the undercut. Here are a few technical points you may want to consider.

Sizing the Undercut The undercut of your magnetic cylinder is the difference between the body and the bearers of the cylinder, usually described as either the radii or the diameter. Typically, the undercut is .019" (480 microns) radii or .038" (960 microns) diameter. However, the undercut can actually be made anywhere between .019" and .030", so it is important to determine its measurements based on what materials you'll be cutting with your flexible (magnetic) tools. To determine the undercut that best serves your purpose, you must first define the material you are going to cut and the cylinder diameter you are going to purchase.

Thickness is Important The overall thickness of the material (face and liner) should be .009" less than the undercut of the cylinder. For example, if you have a cylinder that is undercut .019", the thickest material you can cut would be .010" thick. This allows for a .006" floor with .003" clearance between the material and floor. It is important to leave this clearance to ensure you're not rubbing the material or ink on the floor of the tool. Therefore, the thicker the material you're cutting; the greater the undercut must be.

Limiting Factors There is, however, a limiting factor on greater undercuts. Your flexible (magnetic) tool must wrap around the cylinder, so more undercut means a thicker tool. This makes it more difficult to wrap around the cylinder. Smaller tooth sizes might not wrap properly, either before or during operation. Also, you should consider how many blades are running with the web on your new tool. More blades makes it more difficult to wrap around the cylinder. In fact, these blades can act like I-beams on a bridge, and not allow the tool to wrap.