Tech Talk #19

WHY USE PRESSURE GAUGES?



Pressure is one of the most important variables to control in your die cutting process. The best practice is using the lightest pressure that achieves the necessary cut. When using a die for the first time, the pressure should start low and be increased just until the desired cut is achieved. Large spikes in the pressure readings can indicate that the die is bouncing or lifting off the anvil when it encounters the most resistance, typically on a long horizontal cut. When this happens, the pressure should be increased in small increments until the fluctuations are eliminated or at least minimized.

Every die requires a different amount of pressure based on geometry and the material being converted, but using excessive pressure causes short and long-term issues including unnecessary wear and damage to the tool. Friction of the rolls running against each other generates heat, causing expansion of the steel and naturally increasing the pressure beyond the initial setting. With pressure monitoring, this is easily made noticeable to the press operator and immediate adjustments can be made to reset the pressure to the minimum needed to run and avoid the risk of premature wear to the bearers, anvil, hold down bearings, support roll, and gears.

Pressure gauges have other benefits as well. Tracking the starting and ending pressures on a job allows for quicker start up the next time it runs. Plus, as the ending pressure gets higher, it will indicate the approach of the end of the tool's life or the need for resharpening.



Which gauges are right for my operation?

At Wilson, we offer two types of gauges. The WH1 is a hydraulic design, is easy to install, and features a fully rotating gauge for ease in use. Our WM1 is more robust, featuring a mechanical design that makes it optimal for wider webs and steel-to-steel applications cutting thicker materials. Both systems are available in different screw lengths to accommodate your press size, and they are equipped with quick-snap locks for easy tooling changes.

It is a good practice to check the condition of your bearing blocks, gears, and hold down bearings daily. Making sure your bearer wipers are in good condition and oiled is a simple task that can greatly improve the life of your tooling. At Wilson, we also offer a tooling audit where one of our experts will visit your facility to evaluate your magnetic cylinders and anvils to confirm the specs are within tolerance and the roll's general condition to help you avoid potential downtime for repairs.

