

# TF1 & TF2



## TF1 and TF2 Thrufeed Centerless Gages

Affordable process-control gaging for mid-size, long-run parts: piston pins, valve guides, lifters & rollers

The TF1 and TF2 are general purpose gage fixtures that adapt to almost any thrufeed centerless grinder. The gage fixture mounts to the exit workrest of the grinder and feeds part measurement data to a high-resolution gage controller for real-time process analysis and grinder control.

As parts exit the workblade, a carbide “V” channels them into the gaging portion of the fixture. An adjustable-height carbide gage shoe rides on top of the part as it moves through the gage area. A precision probe sends the displacement of the shoe to the D500 controller, which assembles the data into subgroups and develops real-time trend information. When the trend deviation from size increases to programmed limits, a wheel compensation signal is sent to the grinder.

The TF1 and TF2 fixtures are easy to understand and easy to set up, but access to the workrest for setup may be limited on some grinders. Feel free to review your application with a sales engineer at CGI.



### Tf1 & TF2 Specifications:

**Tf1 diameter range:** 13 - 50mm  
.5 - 2.0”

**Tf2 diameter range:** 44 - 75mm  
1.75 - 3.0”

**TF1, TF2 part length to:** 76mm/3.0”  
Extended anvils for longer parts are available

**Part tolerances down to .005mm/.0002”**



**D500  
Gage  
Controller**

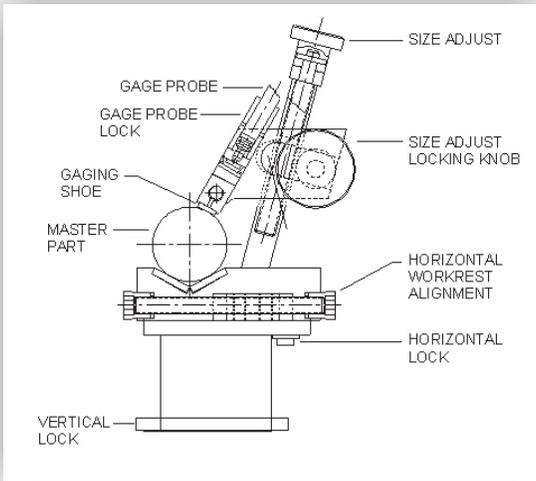
The D500 is a highly-configurable gage controller that is affordable for basic systems but has reserve power for demanding applications. Advanced DSP technology yields fast, precise data, and there are several proven trend-based software packages to choose from. One option, Intelligent Process Control (IPC), outperforms all other compensation techniques and can control a grinder to its best possible operating capability.

**TAKE CONTROL & SAVE MONEY**

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# TF1 TF2



**TF1 and TF2 share simple design, easy setup.**

## Simplicity of design keeps the TF1 and TF2 affordable and easy to set up

Both the vertical size adjustment posts and the carbide shoe assembly are mounted at specific angles to simplify setup. As the shoe assembly is adjusted up and down, it maintains its position on the centerline of the workpiece across the full range of sizes for the unit.

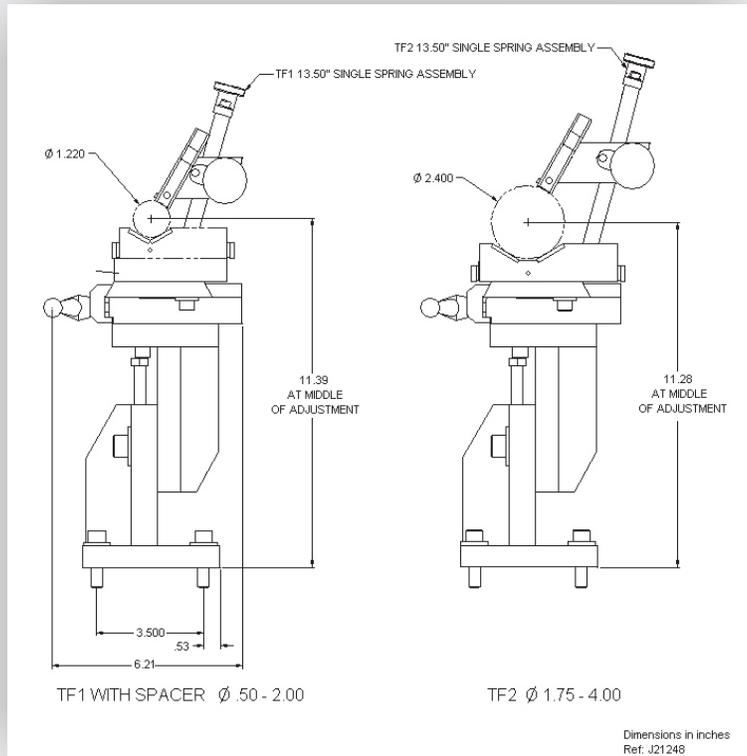
The mounting brackets for these fixtures have both a vertical and a horizontal adjustment mechanism, allowing alignment of the V-track with the exit guides of the machine.

It is recommended to provide abundant clean coolant flowing across the gage anvil and gaging shoe to reduce friction and backpressure, to keep the gage surfaces and parts clean, and to increase life of the wear surfaces.

## Use of TF1 and TF2 on interchangeable bracket doubles the system measuring range

In the application shown at right, the mounting bracket was designed to allow direct interchangeability of the TF1 and TF2 fixtures. An adapter-spacer raises the centerline of the smaller TF1 to allow it to be vertically adjusted across its full part size range. The full diameter range of this system was 12.7 to 100mm (.5 - 4.0")

This application includes extended lower anvils (340mm/13.5" long) to measure workpieces up to 125mm/5.0" long. Parts up to 150mm/6.0" long can be measured, but should only be considered if included in a mix of shorter parts. If all parts are longer than 3.0", the TFD conveyor-based gage fixture is likely to be a better solution.



**An adapter-spacer allows both a TF1 and TF2 to mount on the same machine, doubling the range of the gaging system.**

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