

We bring out  
the genius  
in you.

# STEINER

INGENIOUS CUTTING TOOLS



The most ingenious  
Automatic Back Spot Facing Tools  
on the planet.



# Leonardo would love the Autofacer.

We took our lead from Mr. DaVinci when we invented the Autofacer®.

That's because Leonardo was a genius at devising inventions that solved seemingly impossible engineering problems.

So imagine if he could see today Steiner's ingenious tool that allows a machinist to reach through a hole and machine a circular feature on the back side of the part automatically.

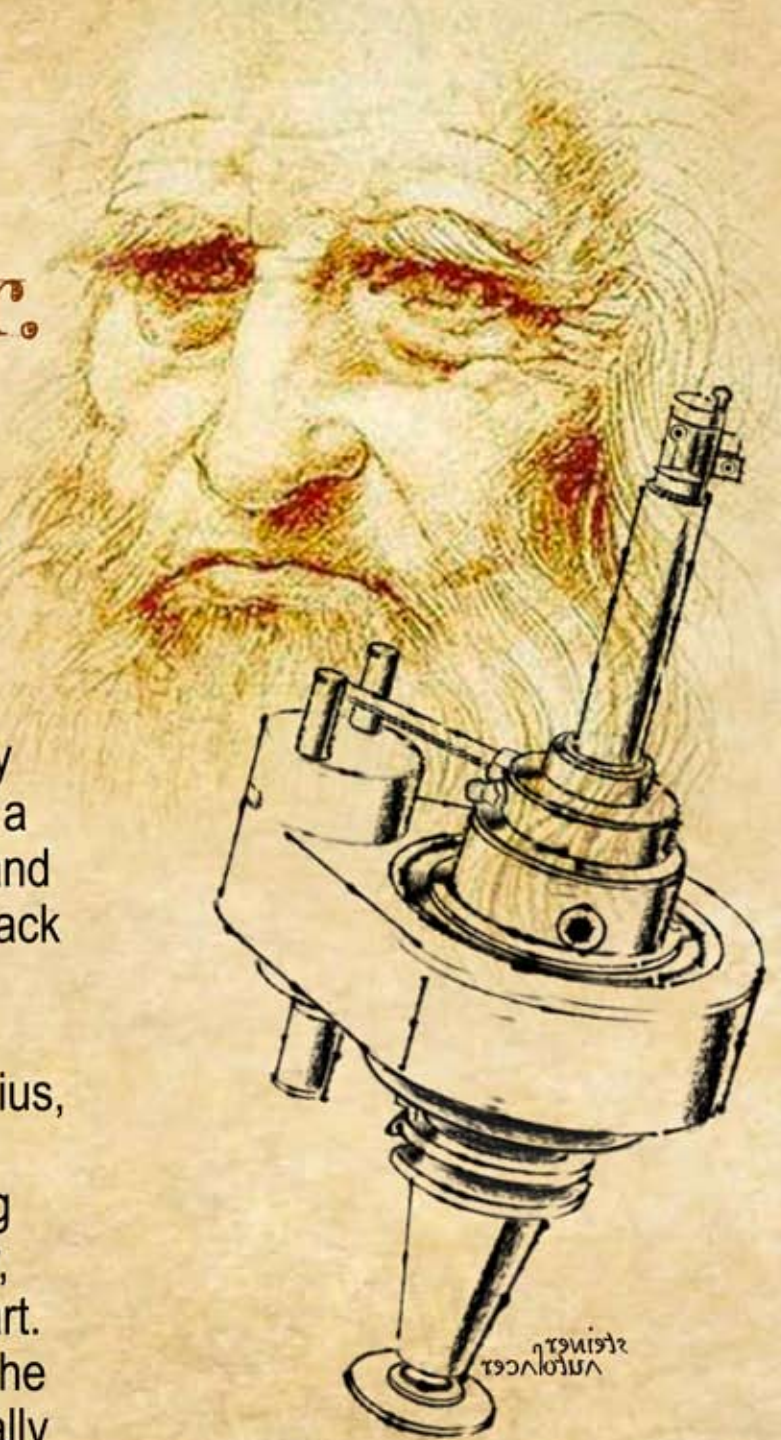
Be it a spot face, counter bore, countersink, chamfer, spherical radius, or some combination thereof.

We do this by folding the cutting blade into the shaft of the tool body, allowing the tool to pass into the part.

And once the tool has entered the part, the cutting blade is mechanically opened and cutting may begin.

Result – it saves up to 80% on part operation cycle time, eliminating operator intervention and costly secondary operations.

Not to mention making your workplace safer.



What's more, we've been creating this ingenuity for more than 40 years, and no other manufacturer rivals our quality, reliability, and know-how.

So ultimately, we bring out the genius in you.



# Save up to 80 percent part operation cycle time.

## Ingenious results, reliability and performance.

**80% savings or more** – Custom guided tools allow aggressive speeds and feeds. Automatic operation eliminates operator intervention as well as costly secondary operations.

**Guaranteed tool performance** – All tools are designed for a specific application and the machine to be utilized to ensure the highest level of reliability and performance. We provide local technical support at your facility to set up and prove out the tools. The Autofacer will do the job it was designed to do; we guarantee it.

**Improved safety** – Eliminates manual tool changes and high-risk processes. No operators climbing into machines.

**Outstanding product and tech support** – Steiner has an international network of trained sales representatives, industrial distributors and an experienced team of in-house application engineers.

## What makes Steiner the world leader?

**Most comprehensive product offering** of back spot facing tools in the marketplace.

**Engineered activation methods** ensuring the most reliable performance for your application.

**Quick delivery** on custom tools due to our large inventory of stock components.

**More than 40 years experience** designing and building the patented Autofacer custom back spot facing tools.



## Industries capitalizing on the Autofacer Advantage:

### **Power Generation**

General Electric  
Siemens  
Solar Turbine  
Vestas  
Clipper  
Dong Fang Turbine  
Voith Hydro

### **Aerospace**

Boeing  
Raytheon  
Moog  
Bell Helicopters  
Rolls-Royce

### **Automotive**

Allison Trans  
Dana Corp.  
Cummins Engine  
Eaton  
Ford  
American Axle

### **Heavy Equipment**

Caterpillar  
John Deere  
Case New Holland  
Vermeer  
Bucyrus

### **Pump & Valve**

Goulds Pumps  
Milwaukee Valve  
Cooper Cameron  
Patterson Pumps  
Ariel Corp.



# Patented mechanical activation methods guaranteed to work.

**Torque Bar Style Autofacer** utilizes an anti-rotation device to activate the blade during spindle reversal.

**Air or Coolant Style Autofacer** is activated with coolant or air pressure to open and spring pressure to close the blade.

**Bump Style Autofacer** grips the face of the work piece to open and close the blade.

**Flywheel Style Autofacer** utilizes machine spindle inertia generated during rapid spindle acceleration and deceleration.

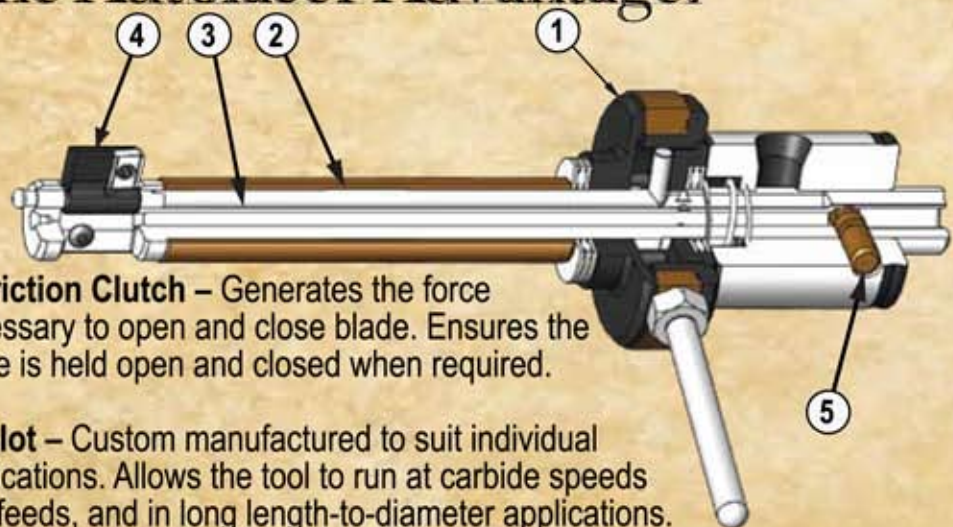
**Pad or Ring Style Autofacer** grips inside diameter of the part hole.

## Additional application tools:

**Bearing Guided Autofacer** is a unique solution for the most demanding applications where ultra-high precision tolerances are required.

**Extended Range Autofacer** offers the largest hole to spot face diameter ratio in the industry. This design features a cutting blade that folds out like a jackknife.

## The Autofacer Advantage:



**1. Friction Clutch** – Generates the force necessary to open and close blade. Ensures the blade is held open and closed when required.

**2. Pilot** – Custom manufactured to suit individual applications. Allows the tool to run at carbide speeds and feeds, and in long length-to-diameter applications.

**3. Activating Rod** – Transfers rotational forces from the friction clutch to the cutting blade.

**4. Cutting Blade** – Available in many configurations including indexable inserts. Custom forms are available to combine multiple features into single operations.

**5. Shear Pin** – Safety feature which provides additional protection against axial overload.



Counterbore



Countersink



Front and Back



ID Chamfer



OD Chamfer



Special Form



Spherical



Spot Face



# Success:

"This is the greatest tool introduced to our facility in the last ten years."

— stated by a Power Generation industry production manager, one of many Steiner Success stories.

## Differential Case



### Application Details:

- 300 SF/Min, .002 IPR (Spherical cut), .004 IPR (Thrust Face cut)
- Thrust gear faces must be parallel within  $\pm .002$ "
- R2.050" spherical radius must be held within  $\pm R.002$ "

**Machine Used:** CNC Horizontal Machining Center

### Autofacer Advantage:

- Eliminated costly special purposes machines required by alternative process
- Able to run on standard CNC machines

### Application Details:

- 275 SF/Min, .003 IPR
- $\Phi 2.477$  through hole,  $\Phi 3.638$  spot face
- Must hold  $\pm .002$ " perpendicularity between front and back faces and through hole
- Heavy interrupted cut

**Machine Used:** CNC Vertical Machining Center

### Autofacer Advantage:

- Eliminated costly secondary broaching operation
- Machined front and back faces in one operation without indexing part
- Successfully maintained spot face and perpendicularity tolerances through heavy interrupted cut

## Planetary Gear Carrier



## Steam Turbine Housing



### Application Details:

- 250 SF/Min, .006 IPR
- $\Phi 3.111$  through hole,  $\Phi 5.018$  spot face
- 17" thick part
- Heavy interrupted cut

**Machine Used:** CNC Vertical Gantry Mill

### Autofacer Advantage:

- Operation process time was reduced from 48 minutes per hole to under 5 minutes per hole
- Eliminated the need for second operator to change old cutter head from manual system



Now, from the makers of the Autofacer,  
comes an expanding line of cutting tools  
that will save you time and money,  
and make you even more competitive.

Steiner's amazing  
**Tungsten  
Carbide  
Ingenuity  
Collection**

Steiner presents

**RENAISSANCE**  
TOOL REFURBISHING



See it all at [www.steiner-genius.com](http://www.steiner-genius.com)

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