



INTERNAL FORMING MACHINE



ERNST GROB AG
COLD FORMING MACHINES
SPECIAL PURPOSE MACHINES
SLOTING MACHINES

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DIN 5480 Internal splines on thick-walled component

Controls

Fanuc or Siemens

Spline diameters

Lower range (mm)

Ø 100–250*

Upper range (mm)

Ø 200–350*

Clamping diameters (mm) Ø 450 max.*

No. of teeth

independently programmable

i9 Internal Forming Machine

Technology

The newly developed internal stroke-stamping process for generating splines or similar types of geometries offers engineers greater scope for breaking down current design limitations. In the design of workpieces that hitherto has been very difficult, or even impossible, as well as cost-intensive, this new machine model will establish new benchmarks.

Typical applications

The i9 internal cold forming machine covers a broad spectrum of potential applications. For example, the i9 can produce not only classic lightweight sheet-metal clutch plate carriers, hollow ring gears for planetary gear assemblies, but also thick-walled workpieces with internal splines.

This unique machine concept allows the processing of both ring shaped workpieces, and those with closed base contours.

Moreover, the i9 opens new potentials in joining technology, e.g. direct joining through forming or clinching.

Benefits

The use of forming technologies leads to significant savings primarily in the large-series production of automotive components.

Generating complex geometries can simplify functions and reduce numbers of components. Characteristic for workpieces produced by these processes are their superb precision and surface finish, combined with the typical benefits of cold forming: cold work hardening, enhanced material microstructure, material savings etc.

*These specifications are workpiece dependent and may vary.



i9 Internal Forming Machine

- ▶ GROB quality
- ▶ Extremely short cycle times
- ▶ High process stability
- ▶ Universal usage, minimal changeover times
- ▶ Ease of service and maintenance