Solid Carbide

- Milling Cutters
- Step Drills
Leistritz is supplying solid carbide end mills and solid carbide drills with the usual excellent grinding properties.

**Application Areas**

- Automotive industry
- Fittings industry
- Lathe parts industry
- CNC milling companies
- Mould die industry
- Turbine blade manufacturing
- General mechanics
- CNC Turning companies

**Product Range**

- Form end mills
- Countersink
- Multicut Drills
- Ball Cutters
- Die-sinking Cutters
- Step Drills
- Thread Cutting Tap
- Toroid Cutters
- Flat Drills

**Grinding Center**

The application technology at Leistritz can supply the appropriate tool for all customer projects; in accordance with customer samples and technical drawings.

- **New production**
  The implementation to the latest CNC controlled multiple shaft grinding machines enables Leistritz to supply highest precision to technical specifications.

- **Regrinding**
  The LEISTRITZ REGRIND-SERVICE can resharpen customer tools in a very short delivery time to uphold the production.

- **Coating**
  For a better tool lifetime solid carbide tools can also be coated with all available Coating-types.

- **Quality**
  Leistritz can guarantee high degree precision, item for item, with EDP supported measuring techniques. Leistritz can provide ongoing quality by means of its quality control management functions.
Manufacturing

The heart of the process is a modern machinery park with the latest CNC controlled multiple shaft grinding machines. The quality and precision of the machinery at Leistritz is the basis for customer’s productivity.

Measurement

The optimum working area

<table>
<thead>
<tr>
<th></th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shaft Ø</td>
<td>6 mm - 32 mm</td>
</tr>
<tr>
<td>Tool Ø</td>
<td>Up to 200 mm</td>
</tr>
<tr>
<td>Tool length</td>
<td>Up to 400 mm</td>
</tr>
</tbody>
</table>

Pallet for series production

Modern control systems and software enables us to grind and regrind in the highest precision.

- Repeatability
  The up-to-date grinding- and measuring techniques renders the best service four you new or re-grinding projects.
Measuring Techniques

To meet the current demands on productivity and capability requires many years of experience in the production of precision tools.

**Measuring machine**

**Measuring a countersinking miller**

**Incident light measuring**

**Touchless measuring**

The drilling and milling tools get measured in a separate room which is temperature controlled. The best guarantee for piece by piece quality!

Bloomed lenses, fixed focus and firm enlargements relay the image of the tool cutter edge to high definition digital cameras. The image of the cutting edge is displayed on a screen particularly sharp and without flickering.
We also design your tools with the assistance of modern software according to your specifications, technical drawings or on the basis of a provided work piece.

**Laser labelling**

All necessary details can be lasered onto the tool (for e.g. tool and processing no.)

Based on the Leistritz strategy we find the right solution for your work task. LEISTRITZ stands for EFFICIENCY, PROFITABILITY and ECONOMY!
Data Sheet For Step Drills

Fax Inquiry: +49 911/4306 300

To: LEISTRITZ PRODUKTIONSTECHNIK GMBH  Phone: +49 911/4306-350  Attn.

Customer details

Company: Contact person:
Street:: E-Mail:
ZIP-Code: Place:
Phone:: Fax:

Inquiry  [ ]  Due-date requirement ______________________
Order  [ ]  Quantity ______________________

Single-stage  [ ]  Multi-stage  [ ]

Dimensions with tolerances
D\text{S} = ______________________
SpW = ______________________
D1 = ______________________
L1 = ______________________
W1 = ______________________
D2 = ______________________

Dimensions with tolerances
L2 = ______________________
W2 = ______________________
D3 = ______________________
L2 = ______________________
W3 = ______________________

[ ] Sundries ______________________________________
_________________________________________________

Shaft design:
DIN 6535 Form HA (zyl)  [ ]  Form DIN 6535 HB (w. surface)  [ ]
DIN 6535 HB (inclined surface)  [ ]  Other standard  [ ]

Processing material ___________________________  Machine _______________________

Internal cooling  [ ] Yes  [ ] No  Coating  [ ] Yes  [ ] No
Pre-drilling existent  [ ] Yes  [ ] No  Cutting direction  [ ] Right  [ ] Left
Spiral  [ ] straight  [ ] Spiraled  Work piece drawing*  [ ] Yes  [ ] No
Single-stage drill  [ ] Yes  [ ] No  Multi-stage drill  [ ] Yes  [ ] No

* with marked processing job
**Milling Type**

- **Shaft - Ø**
  - **D1** [mm]
- **DIN 6535 Form HA (cyl.)**
  - **Yes**
  - **No**
- **DIN 6535 HB (incl. clamping surface)**
  - **Yes**
  - **No**
- **DIN 6535 HB (surface inclined)**
  - **Yes**
  - **No**
- **Others**
  - **Cutting - Ø**
    - **D2** [mm]
  - **Aproved - Ø**
    - **D3** [mm]
  - **Total length**
    - **L1** [mm]
  - **Cutting length**
    - **L2** [mm]
  - **Shaft end**
    - **L3** [mm]
  - **Shaft length**
    - **L4** [mm]
  - **Corner radius**
    - **ER** ['']
  - **Corner chamfer angle**
    - **EW** [mm]
  - **Shaft opening radius**
    - **EF** [mm]
  - **Shaft opening angle**
    - **ÜR** ['']
  - **Transition radius**
    - **ÜF** [mm]
  - **Plunging**
    - **Yes**
    - **No**
  - **Coating**
    - **Yes**
    - **No**
  - **Cutting direction**
    - **Right**
    - **Left**
  - **Helix angle**
    - ['']
  - **Rough working**
    - **Yes**
    - **No**
  - **Finishing**
    - **Yes**
    - **No**
  - **Number of cogs**
  - **Work piece material**
  - **Customer drawing existent**
    - **Yes**
    - **No**

*with marked processing job*
## Product Range

### End Finishing Tools
- Up to 5 Working Operations In Only one Working Cycle
- Modular Construction System
- Large Variety of Stock Articles
- Facing, Chamfering, Longitudinal Turning, Boring, Centering, Convex Turning of Face

### Flat Form Tools
- Structural Dimensions Various Types from Stock
- Flat form Change Insert
  - non Profiled
  - Profiled According to Customer’s Specification
- For all Single- and Multi-Spindle Automatios
- Grinded Insert Seat
- Turning Tools
- Cutoff Tools

### Supporting Bars
- For all Centerless Circular Grinding Machines
- Grooving Rails
- Dressing Templates
- Thread Roll Supports
- Support Rails for Throughfeed Grinding
- Prism Rails
- Guide Plates
- Special Cutters
- Paper Cutter

### Turning Tools
- Turning Chisel/ Boring Bars
- Thread Turning Tools
- Copy-Turning Tools
- Special Turning Tools acc. to Customer’s Specification

### Cutoff Tools
- Grooving
- Parting

### Carbide Drills and Milling Cutters
- Drills
- Profile Cutter
- Flat Drill
- Finishing Cutter
- Ball End Mill
- Roughing Cutter
- Stepped Tools / Countersink
  - Coated / Uncoated
  - Carbide or HSS

### Leistritz-Profil-Center
- We Design Flatform Tools with Profiled Indexable Cutting Inserts
- Highest Precision and Quality
- Fast and Economic
- E-Mail: profil-center@leistritz.com

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