Tschudin T35
The modular production cylindrical grinding machine
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**Axes configuration**
- Straight or angular
- Range +6° to -30° configurable

**Burr-free grinding**
- Several patented processes
- Production of sharper, burr-free edges

**Prismatic grinding system**
- Very efficient production grinding process
- Shortest part changing time, rapid retooling
- Fully integrated handling with modular peripherals and great autonomy

**Match grinding**
- Highly accurate automatic process with several extension possibilities
- Automatic cylindrical correction within 0.1 µm range

**Grinding from hardened bar stock**
- High precision parts can be finish-ground directly from hardened bar stock
- Optimal process to produce non-machined parts with high precision centers and minimum overmeasure for subsequent operations

**Automation**
- Modular concept for peripherals and handling systems
- Wide application range from small integrated handling to complex systems with autonomous cells
- Unrestricted use, water or oil
- Customer-specific solutions possible
Control systems
- Siemens 840 D
- Bosch Rexroth MTX

The software for the control system was developed by grinding specialists and thus permits optimum programming of grinding and dressing processes. A particular highlight is the integration of part-specific features such as measurement technology, handling and additional processing units.

Hydrostatics with holding device
- X and Z guideways
  - No stick slip
  - Good damping
  - High dynamics

Wheelhead
- Hydrodynamic spindle bearings
  - Roller bearing variant for applications up to 120 m/sec.
  - Grinding wheels 400 – 600 mm

Tailstock
- In manual or automatic versions
  - Version for automatic taper correction

Workhead
- MT5 and MT6 versions in modular construction
  - Synchronously running workheads left and right for special grinding applications

Dressing device
- Formed dressing roll unit installed behind workhead, tailstock or on the table
  - CNC controlled profiling roll unit fitted behind the wheelhead
## Technical Data TSCHUDIN T 35

### Dimensions

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Distance between centers mm</td>
<td>400</td>
</tr>
<tr>
<td>Grinding length mm</td>
<td>400</td>
</tr>
<tr>
<td>Centre height mm</td>
<td>125 / 175</td>
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<tr>
<td>Max. workpiece diameter mm</td>
<td>249</td>
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</tbody>
</table>

### Workpiece weight

| Between centres kg                     | 150       |

### Base / Table slide

| Travel z axis mm                       | 600       |
| Rapid traverse m/min                   | 15        |
| Resolution µm                          | 0.1       |

### Upper table

| Swivelling range degr                  | +/- 6º    |

### Wheel slide

| Travel x axis mm                       | 350       |
| Rapid traverse m/min                   | 7.5       |
| Resolution µm                          | 0.1       |

### Wheelhead OD

| Wheel (appl. spez.) mm                 | 400 - 500 x 80 x 203.2 |
| Diameter mm                            | up to 600 |
| Width mm                               | up to 120  |
| opt. mm                                | 500 x 120 x 203.2      |
| Peripheral roller bearing m/s          | 0 - 120   |
| Peripheral hydrodynamic m/s            | 45 / 60   |
| Spindle speed min-1                    | V const (opt.) |
| Motor output kW                        | 10 (opt. up to 20)     |

### Workhead

| Spindle speed min-1                    | 3 - 1,500 (opt. 3,000) |
| Motor output kW                        | 2.1                   |
| Spindelnose taper MT5 / Ø 70 mm // MT6 / Ø 90 mm |
| Spindelnose bore mm                    | 34                    |
| Spindle torque Nm                      | 20                    |

### Tailstock

| Sleeve retraction mm                   | 80        |
| internal taper MT3                     |           |

### Control

| Bosch / Siemens                        |           |

All specifications and designs are subject to alterations without notice.

The Hardinge Group is a major global provider of customer-specific solutions for grinding applications. The Hardinge Grinding Group encompasses all activities in the areas of cylindrical, surface and jig grinding and includes the well known brands of Kellenberger, Hauser, Tschudin, Jones & Shipman, Usach and Voumard.

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