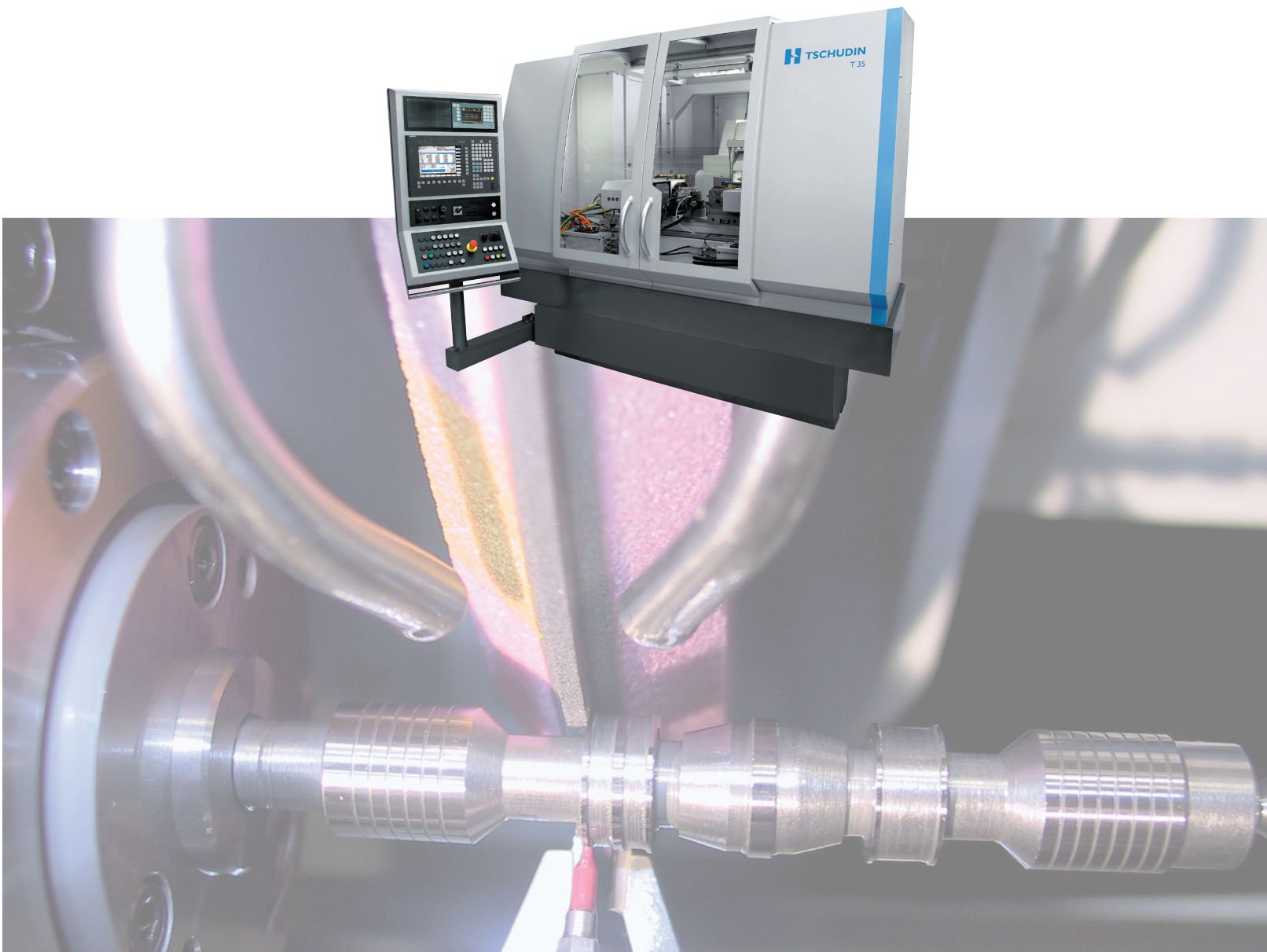




## Tschudin T35

The modular production  
cylindrical grinding machine

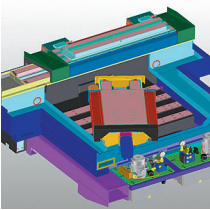


[kellenberger.com](http://kellenberger.com)

 **KELLENBERGER**

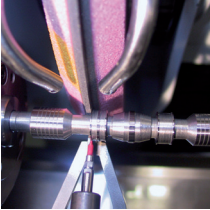
# The modular production cylindrical grinding machine

2



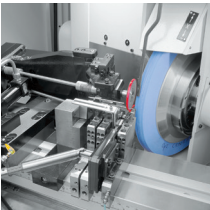
## Axes configuration

- Straight or angular
- Range +6° to -30° configurable



## Burr-free grinding

- Several patented processes
- Production of sharper, burr-free edges



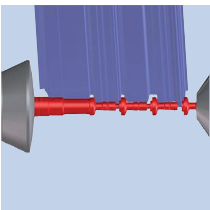
## Prismatic grinding system

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



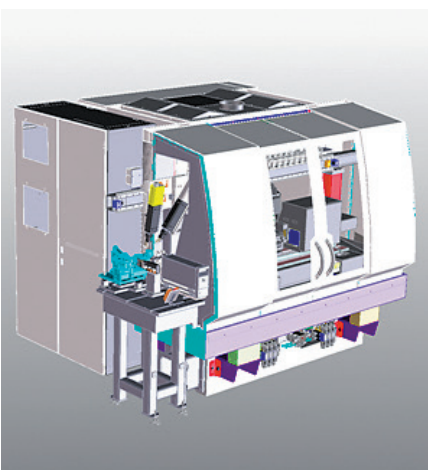
## Match grinding

- 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



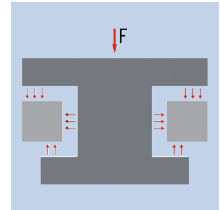
## Automation

- 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



### Hydrostatics with holding device

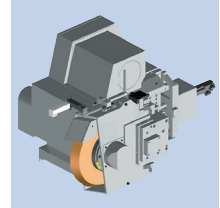
- X and Z guideways
  - No stick slip
- Good damping
- High dynamics



3

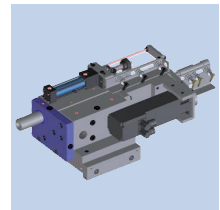
### Wheelhead

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



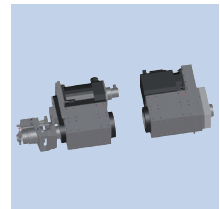
### Tailstock

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



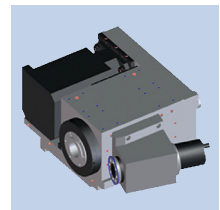
### Workhead

- 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



### 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.

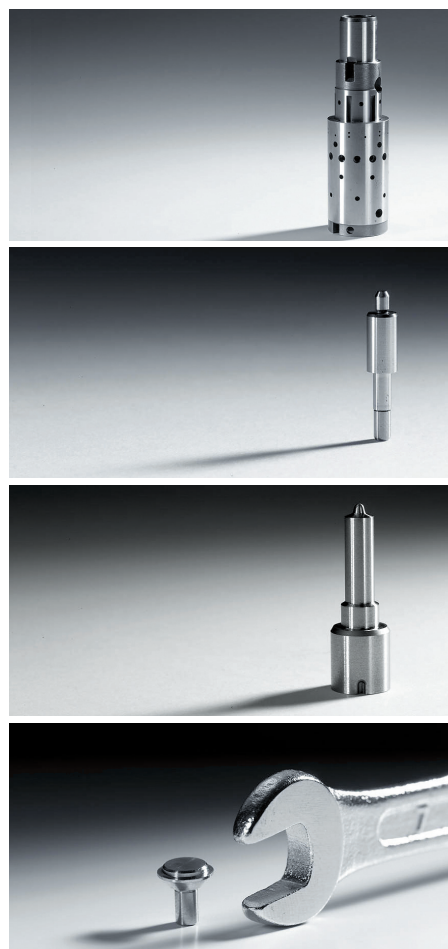


# Technical Data TSCHUDIN T 35

12.2014

Dimensions		
Distance between centers	mm	400
Grinding length	mm	400
Centre height	mm	125 / 175
Max. workpiece diameter	mm	249
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	+/- 6 °
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-l	V const ( opt )
Motor output	kW	10 (opt. up to 20)
Workhead		
Spindle speed	min-l	5 - 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.

## L. Kellenberger & Co. AG

Heiligkreuzstrasse 28  
9008 St. Gallen / Switzerland  
Phone +41 (0) 71 242 91 11  
Fax +41 (0) 71 242 92 22  
www.kellenberger.com  
info@kellenberger.net

## L. Kellenberger & Co. AG

Längfeldweg 107  
2500 Biel-Bienne 8 / Switzerland  
Phone +41 (0) 32 344 11 52  
Fax +41 (0) 32 344 13 93  
www.kellenberger.com

## Sales and Service in China:

### Hardinge Machine (Shanghai) Co., Ltd

No. 1388 Kangqiao RD (East),  
Shanghai, China 201319  
Phone +86 21 3810 8686  
Fax +86 21 3810 8681  
Service:  
Phone +86 21 3810 8689  
Sales:  
Phone +86 21 3810 8686  
EXT 8403  
www.hardinge.com.cn

## Sales and Service in Great Britain and The Republic of Ireland:

### Jones & Shipman Hardinge Ltd

Murrayfield Road  
Braunstone Frith Industrial Estate  
Leicester LE3 1UW/England  
Phone +44 (0) 11 62 013 000  
www.jonesshipman.com  
info@jonesshipman.com

## Sales and Service in USA and Canada:

### Hardinge Inc.

One Hardinge Drive  
Elmira, New York 14902-1507 USA  
Phone +1 (607) 734 2281  
Fax +1 (607) 735 0570  
www.hardinge.com  
info@hardinge.com

### Usach Technologies Inc.

1524 Davis Road  
Elgin, IL 60123 USA  
Phone +1 (847) 888 0148  
Fax +1 (847) 888 0144  
www.usach.com  
info@usach.com

