



T⁺SCHUDIN

T⁺SCHUDIN

ecoLine
proLine

T³SCHUDIN

The latest generation of centerless grinding machine with an automated digital setup of the machine and the grinding process.

Reduced number of components on the machines resulting in lower maintenance costs and maximum machines availability.

The machine base and the spindle blocks are made from natural granite; thus mastering thermal expansion due to variances of heat.





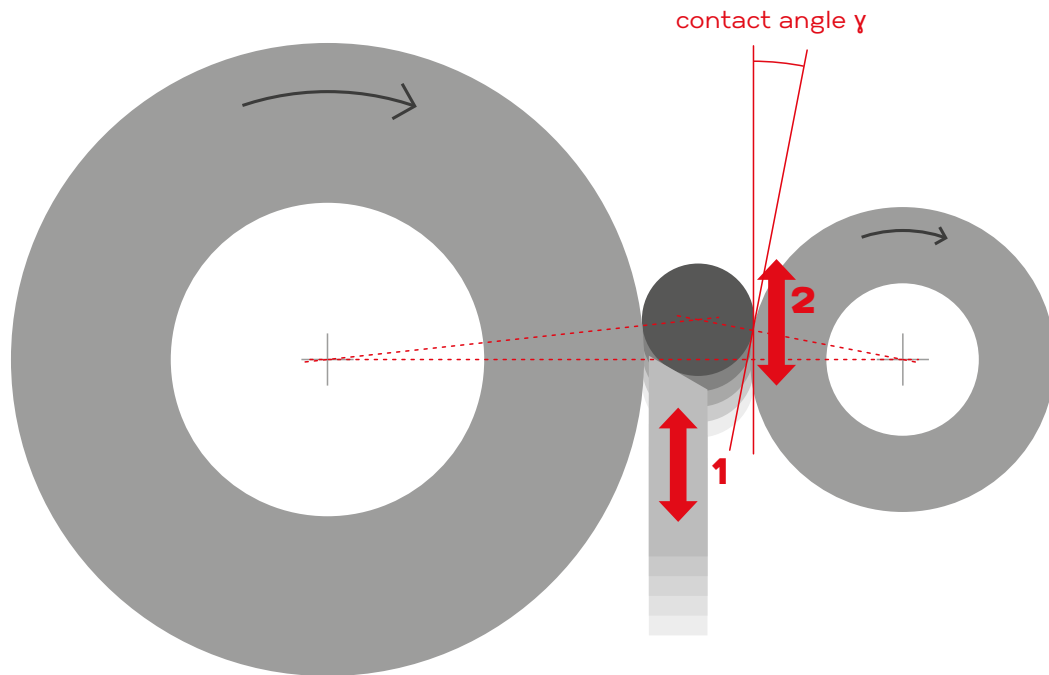
Loading and unloading of the workpieces outside of the grinding zone, allowing simplified automation or safe manual loading according to CE regulations.

Everybody is able to operate the machines.

The grinding and the regulating wheels are both dressed from the front.

TSCHUDIN PATENTS

EP 1330336
CH 699061
US 8100738
EP 1955808
EP 2394783
US 9085059
EP 3269500
US 10232484

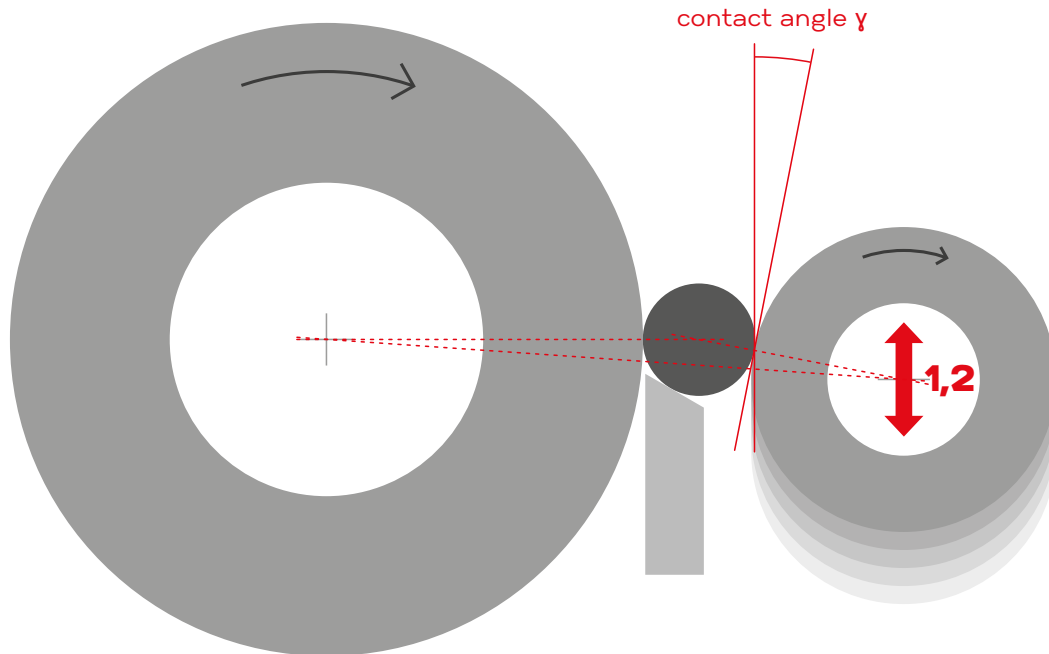


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MANUAL ADJUSTMENTS

- 1: workpiece height
- 2: dressing tool height for the regulating wheel

After each dressing cycle the diameter of the grinding and regulating wheels is reduced and therefore the contact angle γ changes. Compensation for this is done manually.



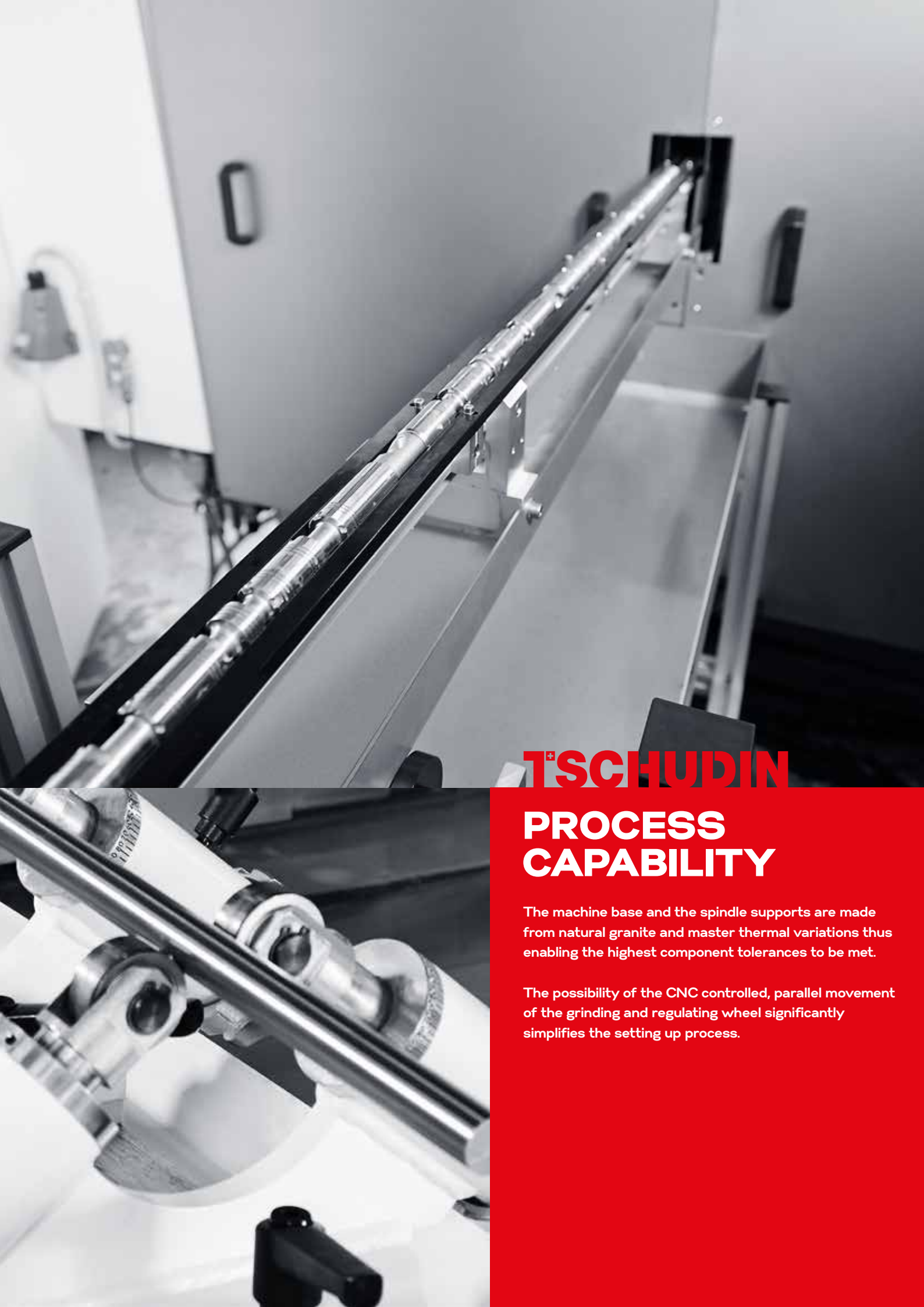
T⁺SCHUDIN CNC CONTROLLED

- 1: height adjustment of the regulating wheel for grinding
- 2: height adjustment of the regulating wheel for dressing

- The height of the adjustable regulating wheel (Y-Axis) allows for faster set up.
- The contact angle γ remains constant.
- The grinding and the dressing process is digital. This reduces the set up time and eliminates operator failures. All digital data necessary for the grinding process can be reproduced at any production location around the globe.

THROUGH-FEED GRINDING





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PROCESS CAPABILITY

The machine base and the spindle supports are made from natural granite and master thermal variations thus enabling the highest component tolerances to be met.

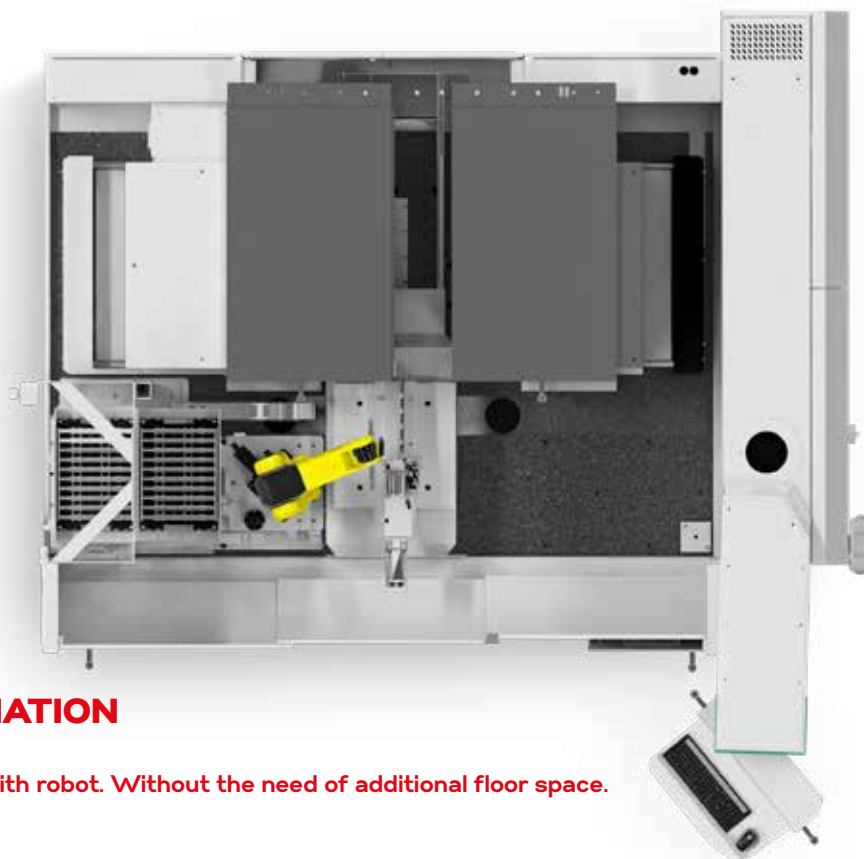
The possibility of the CNC controlled, parallel movement of the grinding and regulating wheel significantly simplifies the setting up process.

PLUNGE GRINDING



MANUAL

Manual loading/unloading. Safe in accordance with CE regulations.



LEAN AUTOMATION

"Lean Automation" with robot. Without the need of additional floor space.



CUSTOMER SPECIFIC

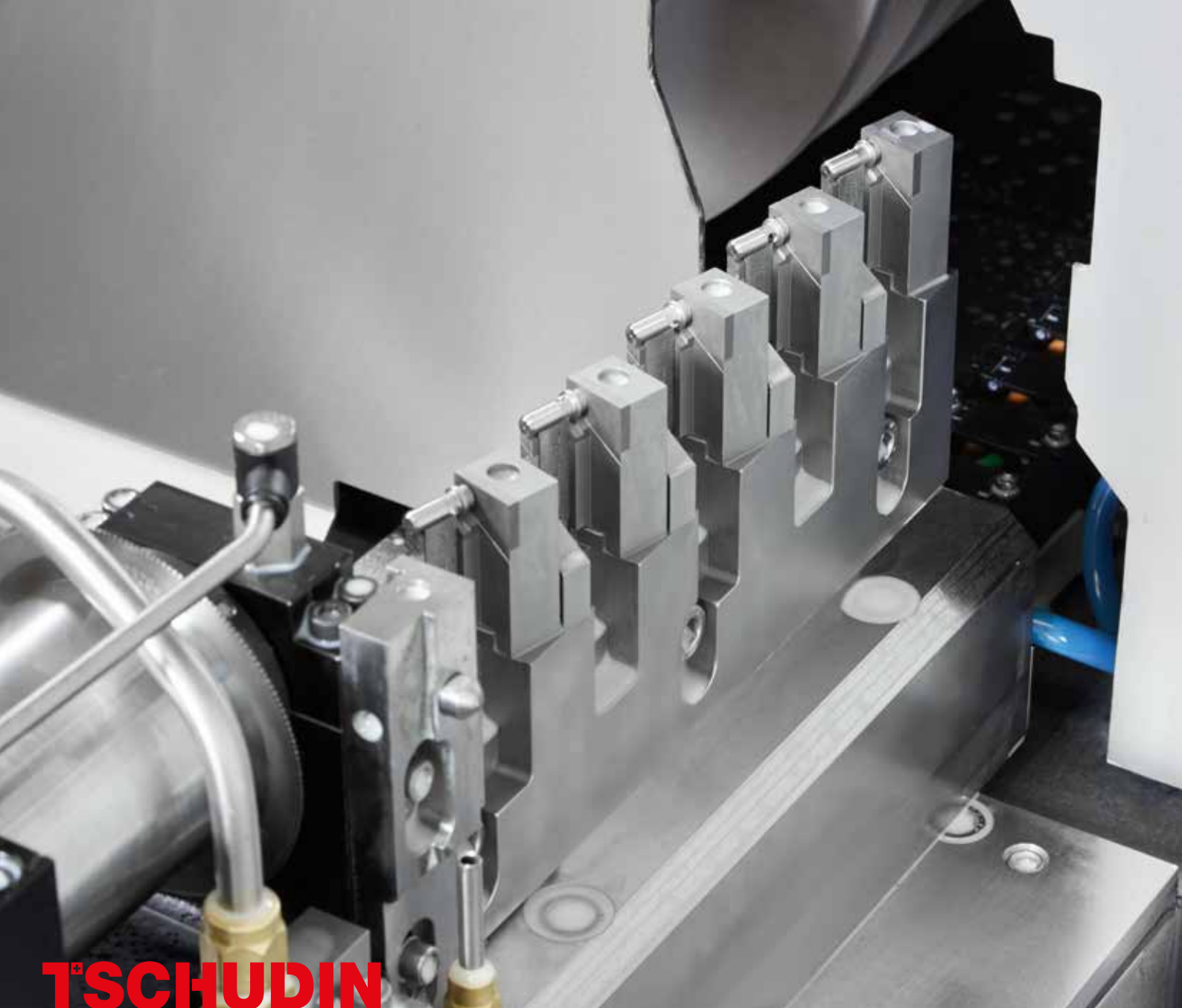
Handling cell for high autonomy and with the possibilities to integrate additional functionalities.



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SAFE LOADING/ UNLOADING

Loading and unloading of the workpiece outside of the grind zone results in higher reliability. The automation is not within the dirty grinding zone.



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NEW PROCESSES

The patented movable workrest axis (W-Axis) allows additional process possibilities.

- Roughing and finishing in a double cycle
- Grinding of sharp edges
- Controlled dressing of taper and radius



APPLICATIONS

Automotive



Electric Motor



Hydraulic



Bearings



Medical



Various



T⁺SCHUDIN APPLICATIONS

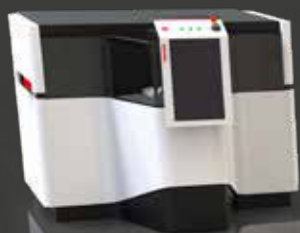
The TSCHUDIN machines are used for various applications for example:

- Sub-contract work / small batch sizes
- In automotive for mass production

Various materials can be ground from steel to aluminium, glass, titanium, carbon, ceramic, germanium, silicon, etc

www.tschudin.swiss

TSCHUDIN CUBE 350



TSCHUDIN 400 ecoLine / proLine



TSCHUDIN 600 ecoLine / proLine



TECHNICAL SPECIFICATIONS

PROCESS

Through feed grinding
Grinding area \emptyset

TSCHUDIN 400 ecoLine / proLine

100 mm

TSCHUDIN 600 ecoLine / proLine

150 mm

Plunge grinding
Grinding area \emptyset

150 mm

250 mm

Grinding wheel width /
Grinding length
Plunge grinding

max. 280 mm

max. 500 mm

Grinding wheels \emptyset
Bore diameter

400 mm
203.2 mm

610 mm
304.8 mm

Regulating wheels \emptyset
Bore diameter

250 mm
127 mm

410 mm
254 mm

Drive power
grinding spindle

15 / 29 / 37 kW

30 / 60 kW

Peripheral speed
grinding wheel (V-constant)

max. 63 m/s

max. 63 m/s

Speed regulating wheel
(infinitely variable)

5-1000/min

5-1000/min

CNC control

Fanuc Oi

Fanuc Oi

Resolution

0.1 μ

0.1 μ

Dimensions L x W x H

2860 x 2660 x 2080 mm

3700 x 3000 x 2220 mm

Weight

10 t

24 t

TSCHUDIN

CH-2540 Grenchen, Switzerland
Ph. +41 32 654 64 74, Fax +41 32 654 64 73, info@tschudin.swiss

www.tschudin.swiss

Technical data are subject to changes and amendments in the context of ongoing improvements and/or errors.