



The Art of Grinding

Product range

The Art of Grinding.





The Company The Art of Grinding



**We have been cultivating the art of grinding since 1912.
Our success has proved us right.**

More than 80 engineers and developers continuously question existing standards, so that the limits of what was previously possible are constantly exceeded. We set new standards with groundbreaking developments.

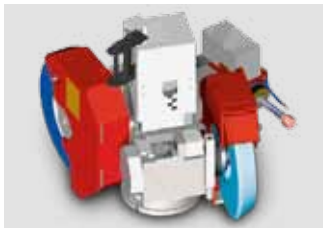
Our substantial investments in research and new technologies reflect our clear profession to market leadership and uncompromising quality. The continuous further training of our staff is part of our policy of regarding quality as a principle, which is why we also actively support our younger generation. Over 10 % of our workforce are apprentices undergoing training in the most varied specialist fields – helping us to set the course now for the competence needed in the future.

More than 20 000 Studer machines have been sold worldwide. Our customers appreciate the reliability and safety ensured by working with

the latest technology, as well as the guarantee of being able to retrofit older machines with more advanced technology.

We have been shaping and cultivating the art of grinding since our foundation – because, as a system provider, we equip each of our machines with the most modern technology, know-how and extensive services. For decades now, the Studer logo has been seen as a quality seal for first-class results worldwide. And we will continue to ensure that the state of the art in grinding remains associated with our name in the future.

The advantages



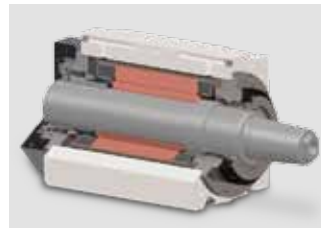
More than 100 wheelhead options

The optimum solution for every grinding job thanks to the modular machine concept.



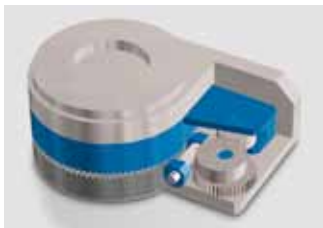
Thread grinding

Axis-parallel or with suitable grinding wheel (A axis).



Motor spindle

The motor spindles make a large contribution to the legendary Studer precision. They are manufactured entirely in-house.



Nanospin®

Infinitely variable B2 fine axis. Repeating accuracy in the nano range, no backlash play. Grind cylinders and tapers without interim dressing.



Granitan® machine bed

Vibration damping and unaffected by temperature fluctuations.



Leading edge with Piezo technology

Optimum process thanks to ingenious sensor technology.



HSM (High Speed Machining)

Self-learning function (with contouring error correction), C axis with 0.0001° resolution, highest precision in form grinding.



StuderGRIND The Grinding Software

Efficient creation of grinding programs online and offline.



StuderWIN The User Interface

Standardised operation of all Studer machines thanks to the Windows user interface.



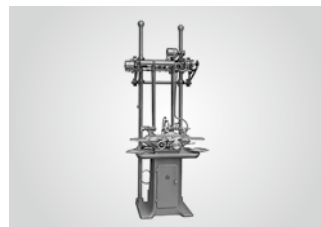
Own research and development

Innovative partner for the future.



Customer service

Global, fast and competent.



Over 95 years' experience

Extensive knowledge of technology and processes which has grown continuously over the decades.



Our product concept fulfils every need.



In brief: we provide everything to facilitate the highest possible grinding precision for every type of application. From A to Z.

In somewhat more detail: every machine needed for every conceivable task. As a modular stand-

ard product or special customised design – with our advice, know-how and extensive services available to you before, during and after purchase. And if your needs grow, your machine can grow with them because our modular production concept ensures that older machines can also

be retrofitted and upgraded. A concept which sets standard and makes history, as well as protecting your investment.

Conventional cylindrical grinding machines

The electrically and hydraulically controlled universal cylindrical grinding machines remain very popular for many grinding tasks.



S20

S30

Distance between centres mm	400/650 (15.7"/25.6")	650/1 000 (25.6"/39.4")
Grinding length mm	400/650 (15.7"/25.6")	650/1 000 (25.6"/39.4")
Centre height mm	100 (3.9")	125/175/225 (4.9"/6.9"/8.9")
Workpiece weight kg	20 (44 lbs)	130 (286 lbs)
X-axis travel mm	25 (1")	260 (10.2")
Z-axis travel mm	420/650 (16.5"/25.6")	700/1 050 (27.6"/41.3")
Grinding wheel mm	350 x 32 (50) (14" x 1.3"/2")	500 x 63 (80) (19.7" x 2.5"/3.1")
Driving power kW	3 (4 hp)	5.5/7.5 (7.5/10 hp)
Machine weight kg	1 600/1 900 (3 520 / 4 180 lbs)	3 400/3 800 (7 480 / 8 360 lbs)



Production cylindrical grinding machines

Universal cylindrical grinding machines for medium-sized workpieces. The modular system offers everything the customer requires, from simple machine though to complex grinding system.



	S21	S31 favorit CNC	S33	S40	
Distance between centres mm	400 (15.75")	650/1 000 (25.6" / 39.4")	650 (25.6")	650/1 000 (25.6" / 39.4")	1 000/1 600 (39.4" / 63")
Grinding length mm	400 (15.75")	650/1 000 (25.6" / 39.4")	650 (25.6")	650/1 000 (25.6" / 39.4")	1 000/1 600 (39.37" / 63")
Centre height mm	125 (4.9")	175 (6.9")	175 (6.9")	175/175 (6.9")	175/225 (6.9" / 8.9")
Workpiece weight kg	30 (66 lbs)	80/120 (176 / 264 lbs)	80 (176 lbs)	80/120 (176 / 264.5 lbs)	130/150 (286.5 / 330.5 lbs)
X-axis travel mm	254 (10")	280 (9.8")	285 (11.2")	285 (11.2")	275 (10.8")
Z-axis travel mm	483 (19.02")	850/1150 (33.5" / 45.3")	800 (31.5")	800 / 1 150 (31.5" / 45.3")	1 050 / 1 650 (41.3" / 64.9")
Grinding wheel mm	400 x 40 (50) 15.7" x 1.5" / 1.9"	500 x 63 (80) (20" x 2.5" / 3.2")	500 x 63 (80) (19.6 x 2.5 / 3.1")	500 x 63 (80) (19.6 x 2.5 / 3.1")	500 x 63 (80) (19.6" x 2.5" / 3.1")
Driving power kW	5.5 (5.42 hp)	7.5 (7.4 hp)	9 (8.9hp)	11 (10.8 hp)	9 (8.9 hp)
Machine weight kg	4 300 (9 460 lbs)	5 500/6 000 (12 100/13 200 lbs)	4 000 (8 800 lbs)	4 000/5 000 (8 800/11 000 lbs)	6 500/7 200 (14 300/15 840 lbs)

Our product concept fulfils every need.



Production external cylindrical grinding machines

For large scale production, Studer offers single-purpose machines with optimized grinding cycles and maximum availability.



S12

S22

Distance between centres mm	150 (5.9")	650 (max. 1 100) (25.6" max. 43.3")
Grinding length mm	150 (5.9")	max. 800 (31.5")
Centre height mm	175 (6.9")	175 / 225 (6.9" / 8.9")
Workpiece weight kg	30 (66 lbs)	150 (330 lbs)
X-axis travel mm	300 (11.8")	310 (13.4")
Z-axis travel mm	350 (13.8")	850 (33.5")
Grinding wheel mm	500 x 80 (20" x 3.1")	up to 610 x 160 mm (24" x 6.3")
Driving power kW	7.5 / 12.5 (10 / 17 hp)	15 (20.5 hp)
Machine weight kg	6 300 (13 860 lbs)	8 500 (18 700 lbs)



Fine machining system

For efficient hard fine machining, Studer offers a combined machine tool for process optimization.



S242

Distance between centres mm	400 / 1 000 mm (15.7" / 39.4")
Grinding length mm	max. 1 000 (39.4")
Centre height mm	180 (7.1")
Workpiece weight kg	60 kg (132 lbs)
X-axis travel mm	220 (8.7")
Z-axis travel mm	850 / 1 600 (33" / 63")
Grinding wheel mm	400 x 50 (63) (15.7" x 2" / 2.5")
Driving power kW	8 / 12 (7.9 / 11.8 hp)
Machine weight kg	7 600 / 12 000 (16 720 / 26 400 lbs)

Our product concept fulfils every need.



Internal cylindrical grinding machines with manual B-axis

In the area of internal-, surface-, and external grinding of chucking components we set standards. The modular, flexible arrangement of spindles enables optimal dimensioning of the machine ranging from the machining of individual parts to large-scale production. Integrated and autonomous loading systems are supported.

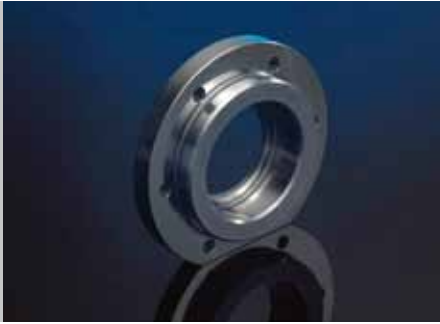


CT450

CT450L

CT550

Length of parts mm	max. 230 (9")	max. 150 (5.9")	max. 650 (25.6")
Grinding length mm	max. 120 (4.7")	max. 120 (4.7")	max. 150 (5.9")
Height of centers above table mm	102 (4")	102 (4")	150 (5.9")
Max. number of spindles (in-line)	3	2	3
Max. number of spindles on turret	–	–	–
HF spindle Ø mm	45/60/80/100/120 (1.7"/2.4"/3.1"/3.9"/4.7")	–	80/100/120 (3.15"/3.94"/4.7")
Belt-driven spindle Ø mm	80 (3.1")	80 (3.1")	80 (3.1")
External grinding wheel mm	max. 305 (12.0")	–	max. 305 (12")
X-axis travel mm	450 (17.7")	450 (17.7")	520 (20.5")
Z-axis travel mm	200 (7.9")	200 (7.9")	250 (9.8")
B-axis setting angle (manual)	±2° (Opt. +21°)	-1°/+8°	+1°/-1°
Load on spindle nose Nm	150 (111 ft lbs)	150 (111 ft lbs)	300 (223 ft lbs)
Machine weight kg	2600 (5720 lbs)	2600 (5700 lbs)	3200 (7040 lbs)



Internal cylindrical grinding machines with programmable B-axis

The right machine for every application. Whether in individual production or series production. Whether for large or small workpieces. With up to 4 spindles on the turret or 2 spindles arranged in parallel, any task can be handled.



S120

S145

S151

Length of parts mm	max. 60 (2.4")	max. 450 (17.7")	max. 450 (17.7")
Grinding length mm	max. 50 (2")	max. 200 (7.9")	max. 200 (7.9")
Height of centers above table mm	125 (4.9")	224 (8.8")	265 (10.4")
Max. number of spindles (in-line)	2	–	–
Max. number of spindles on turret	–	4	4
HF spindle Ø mm	100/120 (3.9"/4.7")	100/120 (3.9"/4.7")	120/150/170 (4.7"/5.9"/6.7")
Belt-driven spindle Ø mm	–	–	–
External grinding wheel mm	max. 180 (7.1")	max. 250 (9.8")	max. 300 (11.8")
X-axis travel mm	300 (11.8")	120 (4.7")	360 (14.2")
Z-axis travel mm	180 (7.1")	500 (19.7")	530 (20.9")
B-axis track system	+30° / -5°	+30° / -30°	+30° / -5°
Load on spindle nose Nm	100 (74 ft lbs)	250 (186 ft lbs)	300 (223 ft lbs)
Machine weight kg	5 100 (11 220 lbs)	5 700 (12 540 lbs)	4 000 (8 800 lbs)

Our product concept fulfils every need.



Internal cylindrical grinding machines with interpolating B-axis

Machines with an automatic B-axis in the area of internal grinding, surface grinding, external-, cone-, and radius grinding for extremely flexible machining of chucking components. Thanks to offline simulation programming and the sophisticated set-up philosophy, set-up time is significantly reduced.



CT730 CT730L CT750 CT930 CT960

Length of parts mm	max. 150 (5.9")	max. 150 (5.9")	max. 150 (5.9")	max. 300 (11.8")	max. 300 (11.8")
Grinding length mm	max. 100 (3.9")	max. 100 (3.9")	max. 100 (3.9")	max. 150 (5.9")	max. 150 (5.9")
Height of centers above table mm	102 (4")	102 (4")	102 (4")	150 (5.9")	150 (5.9")
Max. number of spindles (in-line)	4	2	–	3	–
Max. number of spindles on turret	–	–	2	–	4
HF spindle Ø mm	45/60/80/100 (1.8"/2.4"/3.2"/3.9")	–	100 (3.9")	100/120 (3.9"/4.7")	100/120 (3.9"/4.7")
Belt-driven spindle Ø mm	–	80	–	–	–
External grinding wheel mm	max. 200 (7.9")	–	max. 150 (5.9")	max. 250 (9.8")	max. 250 (9.8")
X-axis travel mm	360 (14.2)	360 (14.2)	360 (14.2)	400 (15.8")	400 (15.8")
Z-axis travel mm	250 (9.8")	250 (9.8")	250 (9.8")	400 (15.8")	400 (15.8")
B-axis track system	+60°/-91°	+60°/-91°	+60°/-91°	+60°/-91°	+60°/-91°
Load on spindle nose Nm	150 (111 ft lbs)	150 (111 ft lbs)	150 (111 ft lbs)	300 (223 ft lbs)	300 (223 ft lbs)
Machine weight kg	2940 (6470 lbs)	2940 (6470 lbs)	3300 (7260 lbs)	3200 (7040 lbs)	3600 (7920 lbs)



High-performance, close to the customer

We in SERVICE will be there for you throughout the working life of your STUDER machines.

We provide everything from a single source. In addition to the Start-up package, our range of services comprise of all the services for your STUDER machine that are necessary for the production process. This extends to preventive maintenance and complete or assembly over-

hauls at the STUDER factory in Thun (CH). You can benefit from an experienced and competent HelpLine at any time. Local well-trained SERVICE technicians will be quickly on-site. They guarantee speedy and long-term problem solutions.

We will find a quick solution to your problems.

We will provide assistance promptly and without fuss.

We will help you to increase your productivity.

We work professionally, reliably and transparently.

Start up

- Commissioning
- Guarantee extension

Service

- HelpLine
- Field service
- Remote service

Material

- Original parts
- Original refurbished parts

Overhaul

- Entire overhaul
- Component overhaul
- Control retrofit

Know-how

- Training
- Production support

Prevention

- Maintenance
- Inspection
- Service subscription



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