



AWM-Precision GmbH
Parkallee 5 · 16727 Velten · Deutschland
Amtsgericht Potsdam · HRB 30034 P · USt-IdNr.: DE312793309

FACTORY DOCUMENTATION · TRANSCRIPT

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STUDER S30-1

Universal cylindrical grinding machine · machine no. 019.3784 · year 2005

This document reproduces, in legible form, the original Fritz Studer AG factory documents supplied with the machine: the title page of the operating manual, the EC declaration of conformity, chapter 1 "Introduction, machine data" and the factory noise measurement protocol. All figures are taken over unchanged – nothing added, nothing rounded. Where the documents list several sizes, the row of this machine is highlighted in orange; that is how it is marked in bold in the original tables.

YEAR OF MANUFACTURE	MACHINE NO. / SERIES	MACHINE TYPE	CENTRE DISTANCE	OPERATING HOURS
2005	019.3784 / 090	0091 211 C	1,000 mm	38,388.5 h

MACHINE IDENTITY

Product	S30-1 · universal cylindrical grinding machine	Machine type	0091 211 C
Machine no. / series	019.3784 / 90	Year of manufacture	2005
Supply voltage per title page	400 V · 50 Hz	Electrical nameplate	3 × 400 V · 50 Hz · I 10 A
Control voltages	24 V · 230 V	Back-up fuse	25 A
Manufacturer	Fritz Studer AG, CH-3602 Thun	Operating manual	0091 211 C / 00 · volume 1/1 · DE/EN/FR
Machine bed	Granitan® S103 mineral casting	First owner	manufacturer of carbide and diamond tools, southern Germany

Source: title page of the operating manual, issued for this machine number; machine and electrical nameplates.

EC DECLARATION OF CONFORMITY

Fritz Studer AG, CH-3602 Thun, declares for the cylindrical grinding machine S30-1, machine no. 019.3784, year 2005, without automatic handling:

Machinery directive	conforms to 98/37/EC	Electrical equipment	EN 60204-1 (1997)
Further directives	low voltage 72/23/EEC · EMC 89/336/EEC	Standards applied	EN 292-1 · EN 292-2 · EN 294 · EN 349 · EN 13218
Hazard analysis	SUVA protection objectives, order no. 66017	Place, date	Thun, 27 Sept 2005
Signed	F. Gaegauf, Director	Document no.	BA 0091 675 A 05-DEU

Source: original declaration of conformity in the manual binder (chapter 0), included in the scope of supply.



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TECHNICAL DATA FROM THE OPERATING MANUAL

Main dimensions

Centre distance	400 / 650 / 1,000 / 1,600 mm	Version of this machine	1,000 mm
Centre height	125 / 175 / 225 mm	Max. workpiece weight between centres	130 kg

Longitudinal slide

Max. travel	centre distance + 50 mm → 1,050 mm	Min. automatic travel	1.5 mm
Speed vt	50 - 5,500 mm/min	Reversal dwell	0 - 6 s
Max. swivel of table	12° / 10° / 8.5° / 6° · here 8.5°	Air cushion	table and workhead

Wheelhead slide

Max. travel	300 mm	Rapid approach	60 mm
Plunge depth in diameter	3.4 mm	Infeed 1	0.012 - 6 mm/min
Infeed 2	0.012 - 1.2 mm/min	Incremental infeed	0.001 - 0.05 mm/min

Wheelhead

External grinding wheel, left	Ø 400 × 80 × Ø 127 mm	Power requirement	5.5 kW
Peripheral speed vs	35 m/s	Speeds	1,670 / 2,110 rpm
Internal grinding attachment	hinged, for belt spindles, incl. 1.5 kW drive		

Workhead

Swivel range	0 - 90°	Speed nw	30 - 1,000 rpm, stepless
Fitting taper	Morse 5	Collets	W-25
Power requirement	0.55 kW	Live grinding load	100 Nm

Tailstock

Fitting taper	Morse 3	Travel of barrel	35 mm
Fine adjustment for cylindricity	± 40 µm		

Guaranteed working accuracy

Surface straightness, 400 mm	0.0025 mm	Surface straightness, 650 mm	0.004 mm
Roundness on live spindle	0.0003 mm		

Our Terms and Conditions apply · Technical data as per the manufacturer's documentation and the operating manual supplied with the machine — individual values are confirmed bindingly upon inspection or on specific request · Offer non-binding, errors and prior sale reserved.



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Connection loads

Total power requirement max.	13 kVA	Max. permissible voltage fluctuation	-15 % / +10 %
Max. permissible frequency fluctuation	± 1 Hz	Required air pressure	5 bar
Voltage per operating manual	380 V · 50/60 Hz	Voltage per nameplate of this machine	3 × 400 V · 50 Hz

Accessories per factory list

- | | |
|-----------------------------------|---|
| + Internal grinding spindles | + Collets · hydraulic collet clamping |
| + Cooling / lubricating equipment | + Sine bar rule |
| + Balancing equipment | + Open steady rest Ø 4–88 mm / Ø 10–100 mm |
| + Dial indicators | + Adjustable, hinged and radius dressing attachments |
| + Full and half centres | + External and internal grinding wheels · adaptors · arbors |
| + Three-jaw chuck Ø 160 mm | + Grain fliese diamonds · single point diamonds |
| + Four-jaw chuck Ø 150 mm | + In-process gauging |
| + Face plate Ø 195 mm | + Range of spare parts |
| + Magnetic chuck Ø 165 mm | |

Source: operating manual chapter 1, document BA 0091 504 A, index 01, pages 3/9 to 6/9.

SCOPE OF THE OPERATING MANUAL SUPPLIED

The original binder is trilingual (German / English / French) and complete. It is handed over to the buyer with the machine – including the spare parts catalogue, which makes sourcing parts through UNITED GRINDING straightforward.

- | | |
|--|------------------------------|
| ✓ 0 · EC declaration of conformity | ✓ 6 · Lubricating technology |
| ✓ 1 · Introduction, machine data, safety | ✓ 7 · General maintenance |
| ✓ 2 · Operating elements | ✓ 8 · Accessories |
| ✓ 3 · Set-up, grinding | ✓ 9 · Interfaces |
| ✓ 4 · Transport, installation | ✓ 10 · Spare parts catalogue |
| ✓ 5 · Grinding technology | ✓ 11 · Various components |



GRINDING GEOMETRY

External grinding

CENTRE DISTANCE SPW	CLAMPING LENGTH LE	TABLE STROKE
400 mm	430 mm	450 mm
650 mm	680 mm	700 mm
1000 mm	1030 mm	1050 mm
1600 mm	1630 mm	1650 mm

Internal grinding

CENTRE DISTANCE	LT	LA ₂ / LA ₁	Ø F IN CHUCK	Ø L WITH STEADY
400 mm	645 mm	43 / 115 mm	129 mm	140 mm
650 mm	895 mm	43 / 115 mm	129 mm	140 mm
1000 mm	1245 mm	43 / 115 mm	129 mm	140 mm
1600 mm	1845 mm	43 / 115 mm	129 mm	140 mm

Reach of the internal grinding spindle to the workpiece face: 210 mm · arbor length Lv 79.5 / 79.5 / 82 mm depending on arbor (no. 2026.609 / 2026.608 / 2026.607).

Source: operating manual pages 7/9 to 9/9. Le = clamping length, Hub = table stroke, Ls = max. grinding length = centre distance + wheel width – 80 mm.

FACTORY NOISE MEASUREMENT PROTOCOL

Measuring instrument	Brüel + Kjær, type 2203	Room	≥ 3,000 m ³
Background noise	50 dB(A)	Height over floor	1,600 mm
Microphone distance A	300 mm	Microphone distance B / C / D	1,000 mm
External grinding	wheel Ø 350 mm · 1,900 rpm · idle	Internal grinding (option)	wheel Ø 12 mm · 45,000 rpm · idle
Highest measured value	75 dB(A)		

POINT	EXTERNAL GRINDING DB(A)	INTERNAL GRINDING DB(A)
A	73	72
B	68	73
C	73	75
D	74	62

Source: factory protocol BA 0091 590 A, index 02, pages 1/3 and 2/3, issued for the S30-1 series.

S30 AND S30-1 — WHAT THE DOCUMENTS ACTUALLY SHOW

STUDER still lists the conventional, hydraulically controlled universal cylindrical grinding machine as the **S30** in its current product range. In its factory documents our machine carries the designation **S30-1**, machine type 0091 211 C. There is no published, clear-cut model distinction between “S30” and “S30-1” – the “-1” denotes the build status of the series. What can be documented cleanly is the comparison of the figures in this machine’s operating manual with the current brochure:

FEATURE	S30-1 · OPERATING MANUAL OF THIS MACHINE	S30 · BROCHURE 04/2024
Centre distances of the series	400 / 650 / 1,000 / 1,600 mm	650 / 1,000 mm
Wheelhead slide, max. travel	300 mm	255 mm
Longitudinal slide, speed	50 – 5,500 mm/min	50 – 5,000 mm/min
Workhead	hydrodynamic, 30 – 1,000 rpm	hydrodynamic 30 – 1,000 or roller bearing 10 – 600 rpm
Wheelhead drive	5.5 kW	5.5 kW (7.5 kW option)
Peripheral speed	35 m/s	35 or 50 m/s
Guaranteed straightness	0.0025 mm over 400 mm	0.0025 mm over 610 mm
Machine bed	Granitan® S103	Granitan® S103 – unchanged
Control	hydraulic	hydraulic – unchanged

What matters commercially: **same mechanical concept, same series, still in production today.** The S30-1 is not a discontinued model but an earlier build status of a machine STUDER still builds – service, spare parts and full overhaul run through UNITED GRINDING, and the matching spare parts catalogue is supplied with the machine. The earlier build status also offers the longer wheelhead slide travel (300 instead of 255 mm) and a slightly faster table traverse.

NOTE ON THE TECHNICAL DATA

The above data is taken from the manufacturer’s documents supplied with the machine (operating manual, declaration of conformity, factory protocol) and from the nameplates on the machine, and reproduces their content as a communication of knowledge; we have not carried out our own metrological verification of every individual value. Unless expressly agreed otherwise in the purchase contract or our order confirmation, the data therefore constitutes neither an agreement on quality nor a guarantee within the meaning of sections 434, 443 of the German Civil Code. Individual values that matter to you will be checked and confirmed by us on specific request or together at the inspection appointment; we expressly recommend inspecting and testing the machine before concluding a contract. Offer non-binding; errors, technical modifications and prior sale reserved. Our statutory liability for intent and gross negligence, for injury to life, body or health, for fraudulently concealed defects and under an expressly assumed guarantee remains unaffected.