AMC-SCHOU Cylindrical Grinding Machines For Rubber Roller Grinding



Model R-6000CNC HD with grooving system



Model R-1800Conv. PLC controlled



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The Benefits of Precision

AMC-SCHOU CYLINDRICAL GRINDING MACHINES
FOR RUBBER ROLLER GRINDING

The AMC-SCHOU cylindrical grinding machines are used in industries demanding the highest degree of accuracy and productivity.

AMC-SCHOU has for many years been the leading force in providing the rubber roller manufacturer with grinding machines specially designed for this industry. Today the majority of the high-end rubber roller manufacturers in Europe and more and more in the USA are using the AMC-SCHOU machines.

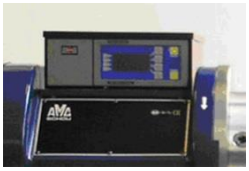
We take great pride in being at the forefront of developments within this industry, and in meeting the needs of our customers in an ever-changing market.

We supply state-of-art grinding equipment that meets every need – from simple straight grinding to parabolic and grooved rollers in any possible shape.

High speed grinding with either rubberhog- or vitrified grinding wheels is quite common in this industry and also widely used with the AMC-SCHOU machines.

Within this industry, rollers covered with various material such as rubber, silicone, polyester, urethane, nylon, photopolymer sleeves, fiberglass sleeves and polyurethane sleeves are grounded.

Our machines are the only cast iron CNC controlled grinder/groover in the world capable of grinding all thinkable grooves plus convex, concave, tapers and various other surface contours. **The ultimate machine that covers all needs within the rubber roller industry.**



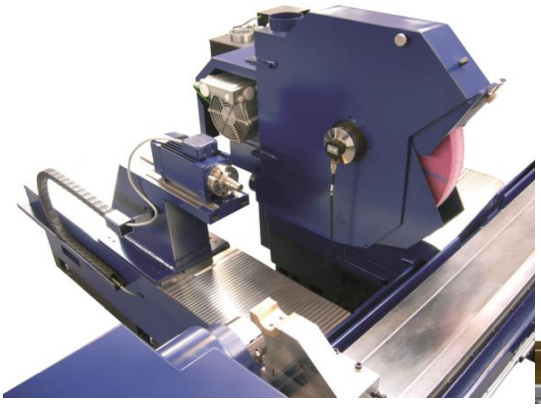
Display for automatic balancing system

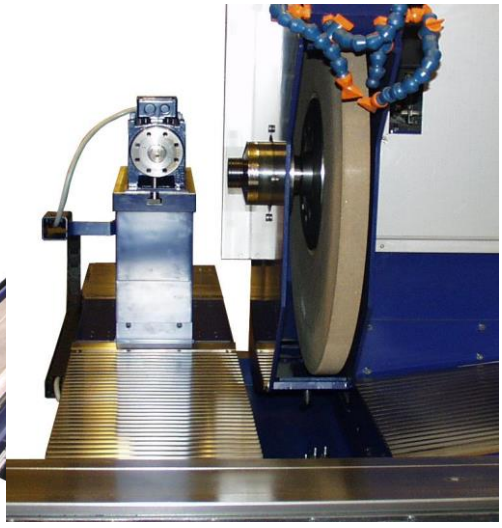


Model R-4000CNC

X-2 axis
The X-2 axis is an additional axis that can be installed next to the main grinding wheel on the rear side of the bed.

It is used for an extra grinding wheel for rough grinding or for installation of a polishing unit and is integrated with the CNC controls of the machine.



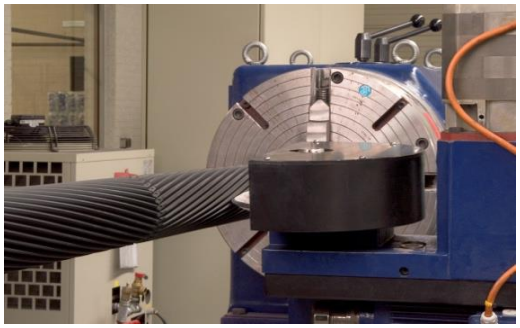


AMC-SCHOU CYLINDRICAL GRINDING MACHINES
FOR RUBBER ROLLER GRINDING

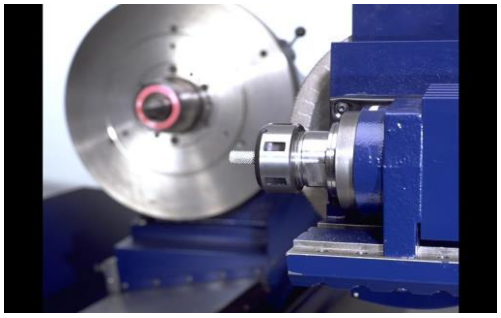
- Travelling table design ensuring stability and accuracy for decades.
- Capable of grinding all thinkable grooves plus convex, concave, tapers and various other surface contours.
- Programmed through the Siemens 840D controller, allowing you to grind various surface contours such as cylindrical, parabolic, sine curves, crowns, convex and concave, radius, tapers, angles and multiple diameters.
- Siemens servomotors offering variable speed, high accuracy, low vibration and large torque also at low speeds.
- SKF and Bosch Rexroth high precision ball screws for X- and Z-axis ensuring smooth, accurate and trouble free movements of the antifriction covered table and wheel slide.

GENERAL SPECIFICATIONS

- SKF bearings in heavy-duty design in head- and tailstock ensuring smooth and trouble free rotation of extra heavy workpieces.
- Hydrodynamic grinding wheel spindle ensuring no vibrations and no wear as the spindle is rotating on an oiled film. Runout less than 0.001 mm.
- All main components are made of high quality castings from well-established foundries. These are specially processed to avoid any internal stresses in the material ending up in machines that are entirely free of vibrations.
- Simple, stable design with very few movable components resulting in next to no downtime at all to do mechanical problems. Great savings on maintenance costs, as maintenance is limited to cleaning and lubrication alone.







Grooving system

The system consists of 4 programmable motors, operated through the Siemens 840SL controller.

Programs for almost every imaginable kind of groove are provided as standard with the machine.

The number of rollers used in all kinds of industry is almost innumerable. Many everyday products we come across are either fully or partially made using rollers.

The grooving attachment is placed in front of the machine and the system offers the possibility of grinding and milling.

Milling is performed with variable speed up to 17,500 rpm and using a mounted 12 mm / 1/2” clamping system for various tools.

Grinding is performed using a Siemens digital 5.75 hp servomotor with variable speeds of up to 9,000 rpm, max. grinding wheel 300 mm / 11,8” and max. width 30 mm / 1.2”.

The angle is positioned using a Siemens digital servomotor with a brake and enhanced with an Alpha gear ratio 1:10.

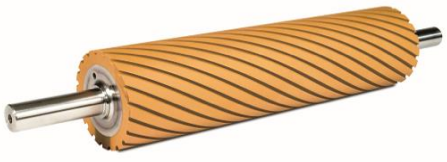
The grooving unit slide moves along linear guides.







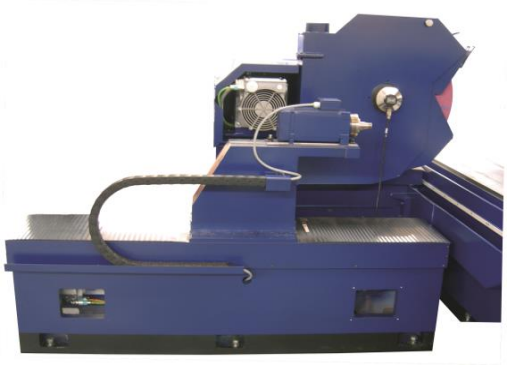






AMC-SCHOU CYLINDRICAL GRINDING MACHINES
FOR RUBBER ROLLER GRINDING

EXTRA EQUIPMENT



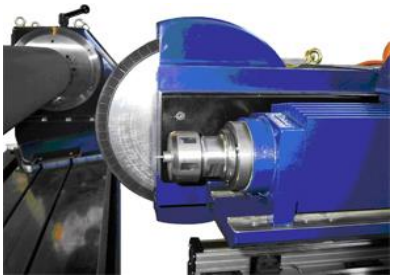
X-2 axis



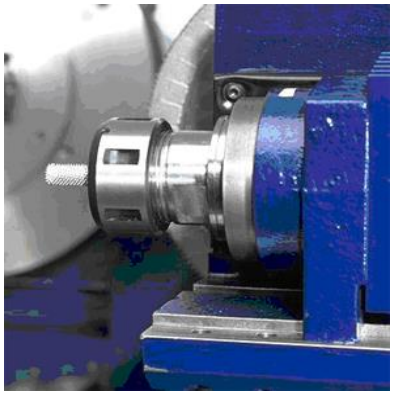
Self-centering chucks with adjustable jaws



Electronic safety light grid



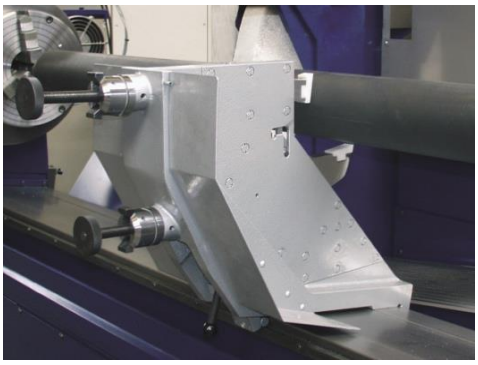
Grinding wheel for groover diam.300 / diam.60



Grooving bit 0.125”



Journal supports



Steady rest capacity diam. 30-180 mm



Heavy duty steady rest capacity diam. 50-300 mm



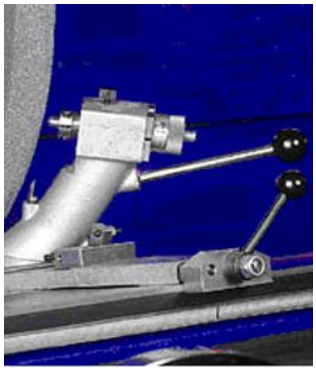
Dressing fixture for face and side of wheel



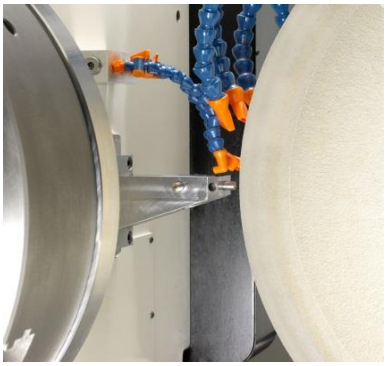
Air-condition in power supply box



Centering device with dial gauge



Dressing fixture for radius dressing



Dressing diamond, 10mm (0,4”) shank (on the headstock)



Automatic balancing system for grinding wheel, incl. display



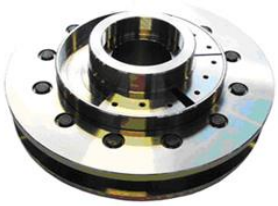
Driving dogs with copper shoes



Dressing fixture for face and side



Dressing tools



Grinding wheel hub HD diam.305mm (12”)



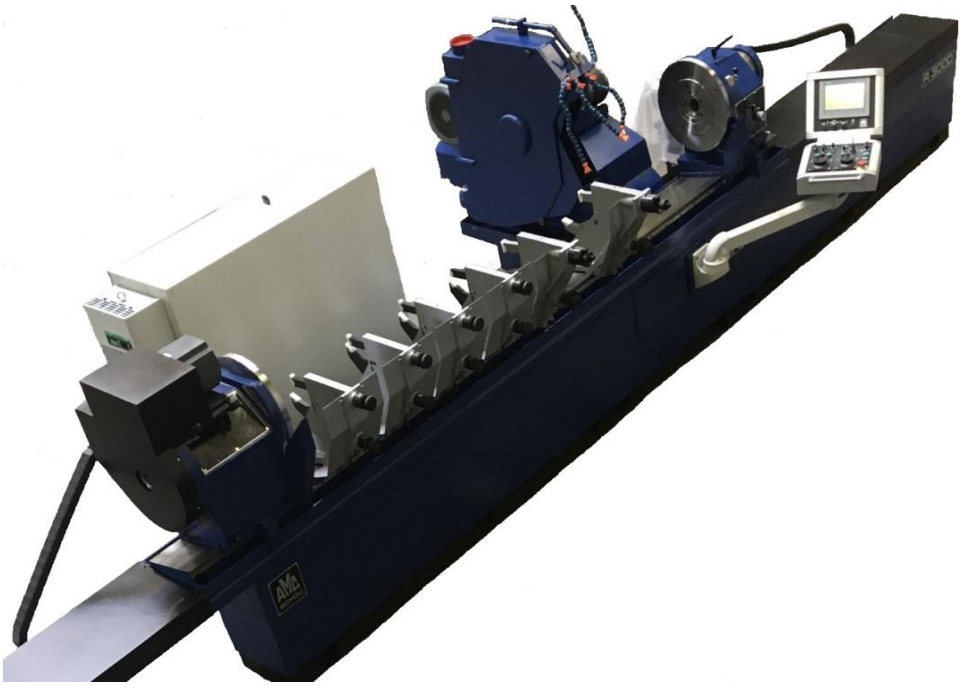
Grinding wheel balancing stand



Dead center MT 6



Grinding wheel hub diam.305mm (12”)



R-3000Conv. PLC controlles



Control panel for PLC control

AMC-SCHOU CYLINDRICAL GRINDING MACHINES - TECHNICAL SPECIFICATIONS

LINE OF CNC-CONTROLLED GRINDING MACHINES		R 1400-CNC	R 1800-CNC	R 2400-CNC	R 3000-CNC	R 4000-CNC
Max. length between centres	mm	1400	1800	2400	3000	4050
	inch	55	71	94	118	160
Max. swing over table	mm	460	680	680	680	680
	inch	18	27	27	27	27
Max. weight of workpiece between centers/chucks	kg	200/300	800/2000	800/2000	800/2000	800/2000
	lbs	441/661	1763/4408	1763/4408	1763/4408	1763/4408
Max. grinding length	mm	1400	1800	2400	3000	4000
	inch	55	71	94	118	157
Max. grinding diameter with new grinding wheel	mm	420	610	610	610	610
	inch	16	24	24	24	24
Table speeds	mm/min	1-3000	1-4000	1-4000	1-4000	1-4000
	inch/min	0.04-118	0.04-157	0.04-157	0.04-157	0.04-157
Headstock spindle speeds, variable	rpm	2-500	2-500	2-500	2-500	2-500
Headstock motor	kW	2.5	7	7	7	7
	hp	3.4	9.5	9.5	9.5	9.5
Grinding wheel motor	kW	7.5	17	17	17	17
	hp	10	23	23	23	23
Max. grinding wheel diameter	mm	660	813	813	813	813
	inch	26	32	32	32	32
Max. grinding wheel width	mm	50	80	80	80	80
	inch	2	3.2	3.2	3.2	3.2
Diameter of grinding wheel bore for hub	mm	203	305	305	305	305
	inch	8	12	12	12	12
Max. tailstock quill	mm	50	70	70	70	70
	inch	2	2.8	2.8	2.8	2.8
Working space (working machine)	mm	4300x2200	6100x2900	7800x2900	9800x2900	12800x2900
	inch	169x86	240x114	307x114	386x114	504x114
Net weight of basic machine	kg	3200	4500	5300	6300	7700
	lbs	7056	9923	11687	13891	16979

LINE OF PLC-CONTROLLED GRINDING MACHINES		R 1400	R 1800	R 2400	R 3000	R 4000
Max. length between centres	mm	1400	1800	2400	3000	4050
	inch	55	71	94	118	160
Max. swing over table	mm	460	680	680	680	680
	inch	18	27	27	27	27
Max. weight of workpiece between centers/chucks	kg	200/300	800/2000	800/2000	800/2000	800/2000
	lbs	441/661	1763/4408	1763/4408	1763/4408	1763/4408
Max. grinding length	mm	1400	1800	2400	3000	4000
	inch	55	71	94	118	157
Max. grinding diameter with new grinding wheel	mm	420	610	610	610	610
	inch	16	24	24	24	24
Table speeds	mm/min	1-3000	1-4000	1-4000	1-4000	1-4000
	inch/min	0.04-118	0.04-157	0.04-157	0.04-157	0.04-157
Headstock spindle speeds, variable	rpm	2-500	2-500	2-500	2-500	2-500
Headstock motor	kW	2.5	7	7	7	7
	hp	3.4	9.5	9.5	9.5	9.5
Grinding wheel motor	kW	7.5	17	17	17	17
	hp	10	23	23	23	23
Max. grinding wheel diameter	mm	660	813	813	813	813
	inch	26	32	32	32	32
Max. grinding wheel width	mm	50	80	80	80	80
	inch	2	3.2	3.2	3.2	3.2
Diameter of grinding wheel bore for hub	mm	203	305	305	305	305
	inch	8	12	12	12	12
Max. tailstock quill	mm	50	70	70	70	70
	inch	2	2.8	2.8	2.8	2.8
Working space (working machine)	mm	4300x2200	6100x2900	7800x2900	9800x2900	12800x2900
	inch	169x86	240x114	307x114	386x114	504x114
Net weight of basic machine	kg	3200	4500	5300	6300	7700
	lbs	7056	9923	11687	13891	16979

AMC-SCHOU CYLINDRICAL GRINDING MACHINES - TECHNICAL SPECIFICATIONS

MIDDLE RANGE LINE OF CNC-CONTROLLED GRINDING MACHINES		R 4000-CNC MR	R 5000-CNC MR	R 6000-CNC MR
Max. length between centres	mm inch	4000 157	5000 196	6000 236
Max. swing over table	mm inch	900 35	900 35	900 35
Max. weight of workpiece between centers/chucks	kg lbs	2000/4000 4408/8816	2000/4000 4408/8816	2000/4000 4408/8816
Max. grinding length	mm inch	4000 157	5000 196	6000 236
Max. grinding diameter with new grinding wheel	mm inch	900 35	900 35	900 35
Table speeds	mm/min inch/min	1-3000 0.04-118	1-3000 0.04-118	1-3000 0.04-118
Headstock spindle speeds, variable	rpm	5-250	5-250	5-250
Headstock motor	kW hp	10 13	10 13	10 13
Grinding wheel motor	kW hp	22 29	22 29	22 29
Max. grinding wheel diameter	mm inch	1000 39	1000 39	1000 39
Max. grinding wheel width	mm inch	70 2.75	70 2.75	70 2.75
Diameter of grinding wheel bore for hub	mm inch	305 12	305 12	305 12
Max. tailstock quill	mm inch	90 3.5	90 3.5	90 3.5
Working space (working machine)	mm inch	12600x3500 496x137	14600x3500 574x137	16600x3500 653x137
Net weight of basic machine	kg lbs	14000 30856	15500 34162	17000 37468

MIDDLE RANGE LINE OF PLC-CONTROLLED GRINDING MACHINES		R 4000-MR	R 5000-MR	R 6000-MR
Max. length between centres	mm inch	4000 157	5000 196	6000 236
Max. swing over table	mm inch	900 35	900 35	900 35
Max. weight of workpiece between centers/chucks	kg lbs	2000/4000 4408/8816	2000/4000 4408/8816	2000/4000 4408/8816
Max. grinding length	mm inch	4000 157	5000 196	6000 236
Max. grinding diameter with new grinding wheel	mm inch	900 35	900 35	900 35
Table speeds	mm/min inch/min	1-3000 0.04-118	1-3000 0.04-118	1-3000 0.04-118
Headstock spindle speeds, variable	rpm	5-250	5-250	5-250
Headstock motor	kW hp	10 13	10 13	10 13
Grinding wheel motor	kW hp	30 40	30 40	30 40
Max. grinding wheel diameter	mm inch	1000 39	1000 39	1000 39
Max. grinding wheel width	mm inch	70 2.75	70 2.75	70 2.75
Diameter of grinding wheel bore for hub	mm inch	305 12	305 12	305 12
Max. tailstock quill	mm inch	90 3.5	90 3.5	90 3.5
Working space (working machine)	mm inch	12600x3500 496x137	14600x3500 574x137	16600x3500 653x137
Net weight of basic machine	kg lbs	14000 30856	15500 34162	17000 37468

AMC-SCHOU CYLINDRICAL GRINDING MACHINES - TECHNICAL SPECIFICATIONS

MIDDLE RANGE LINE OF CNC-CONTROLLED GRINDING MACHINES		R 4000-CNC MD	R 5000-CNC MD	R 6000-CNC MD
Max. length between centres	mm inch	4000 157	5000 196	6000 236
Max. swing over table	mm inch	1200 47	1200 47	1200 47
Max. weight of workpiece between centers/chucks	kg lbs	3000/6000 6612/13224	3000/6000 6612/13224	3000/6000 6612/13224
Max. grinding length	mm inch	4000 157	5000 196	6000 236
Max. grinding diameter with new grinding wheel	mm inch	1200 47	1200 47	1200 47
Table speeds	mm/min inch/min	1-3000 0.04-118	1-3000 0.04-118	1-3000 0.04-118
Headstock spindle speeds, variable	rpm	5-200	5-200	5-200
Headstock motor	kW hp	12 16	12 16	12 16
Grinding wheel motor	kW hp	30 40	30 40	30 40
Max. grinding wheel diameter	mm inch	1200 47	1200 47	1200 47
Max. grinding wheel width	mm inch	70 2.75	70 2.75	70 2.75
Diameter of grinding wheel bore for hub	mm inch	305 12	305 12	305 12
Max. tailstock quill	mm inch	90 3.5	90 3.5	90 3.5
Working space (working machine)	mm inch	12600x3500 496x137	14600x3500 574x137	16600x3500 653x137
Net weight of basic machine	kg lbs	16700 36817	18200 40123	19800 43651

MIDDLE RANGE LINE OF PLC-CONTROLLED GRINDING MACHINES		R 4000-MD	R 5000-MD	R 6000-MD
Max. length between centres	mm inch	4000 157	5000 196	6000 236
Max. swing over table	mm inch	1200 47	1200 47	1200 47
Max. weight of workpiece between centers/chucks	kg lbs	3000/6000 6612/13224	3000/6000 6612/13224	3000/6000 6612/13224
Max. grinding length	mm inch	4000 157	5000 196	6000 236
Max. grinding diameter with new grinding wheel	mm inch	1200 47	1200 47	1200 47
Table speeds	mm/min inch/min	1-3000 0.04-118	1-3000 0.04-118	1-3000 0.04-118
Headstock spindle speeds, variable	rpm	5-200	5-200	5-200
Headstock motor	kW hp	12 16	12 16	12 16
Grinding wheel motor	kW hp	30 40	30 40	30 40
Max. grinding wheel diameter	mm inch	1200 47	1200 47	1200 47
Max. grinding wheel width	mm inch	70 2.75	70 2.75	70 2.75
Diameter of grinding wheel bore for hub	mm inch	305 12	305 12	305 12
Max. tailstock quill	mm inch	90 3.5	90 3.5	90 3.5
Working space (working machine)	mm inch	12600x3500 496x137	14600x3500 574x137	16600x3500 653x137
Net weight of basic machine	kg lbs	16700 36817	18200 40123	19800 43651

AMC-SCHOU CYLINDRICAL GRINDING MACHINES - TECHNICAL SPECIFICATIONS

HEAVY-DUTY LINE OF CNC-CONTROLLED GRINDING		R 2000-CNC HD	R 4000-CNC HD	R 6000-CNC HD
Max. length between centres	mm inch	2000 79	4000 157	6000 236
Max. swing over table	mm inch	1100 43	1100 43	1100 43
Max. weight of workpiece between chucks	kg lbs	15000 33069	15000 33069	15000 33069
Max. grinding length	mm inch	2000 79	2000 79	2000 79
Max. grinding diameter with new grinding wheel	mm inch	1100 43	1100 43	1100 43
Table speeds	mm/min inch/min	1-3000 0.04-118	1-3000 0.04-118	1-3000 0.04-118
Headstock spindle speeds, variable	rpm	2-140	2-140	2-140
Headstock motor	kW hp	17 23	17 23	17 23
Grinding wheel motor	kW hp	37 50	37 50	37 50
Max. grinding wheel diameter	mm inch	1000 40	1000 40	1000 40
Max. grinding wheel width	mm inch	100 4	100 4	100 4
Diameter of grinding wheel bore for hub	mm inch	305 12	305 12	305 12
Max. tailstock quill	mm inch	90 3.5	90 3.5	90 3.5
Working space (working machine)	mm inch	8700x3500 343x138	12500x3500 492x138	16500x3500 650x138
Net weight of basic machine	kg lbs	15600 34391	20700 45636	24100 53131

LINE OF CNC CONTROLLED MACHINES WITH B-AXIS		R 2000-CNC B
Max. length between centres	mm inch	2000 79
Max. swing over table	mm inch	2000 79
Max. weight of workpiece between chucks	kg lbs	5000 11023
Max. grinding length	mm inch	2000 79
Max. grinding diameter with new grinding wheel	mm inch	1100 43
Table speeds	mm/min inch/min	1-3000 0.04-118
Headstock spindle speeds, variable	rpm	1-100
Headstock motor	kW hp	12 16
Grinding wheel motor	kW hp	15 20
Max. grinding wheel diameter	mm inch	800 31.5
Max. grinding wheel width	mm inch	100 4
Diameter of grinding wheel bore for hub	mm inch	305 12
Max. tailstock quill	mm inch	90 3.5
Working space (working machine)	mm inch	8100x4800 319x189
Net weight of basic machine	kg lbs	15600 34391

AMC-SCHOU – CYLINDRICAL GRINDING MACHINES - FOR STEEL ROLLER GRINDING

CURRENT STANDARD MODELS:

Model	Swing	Grinding length	Weight between chucks
R 1400	460 mm / 18.1"	1400 mm / 55"	300 kg / 661 lbs
R 1800	680 mm / 26.7"	1800 mm / 71"	2500 kg / 5510 lbs
R 2400	680 mm / 26.7"	2400 mm / 94"	2500 kg / 5510 lbs
R 3000	680 mm / 26.7"	3000 mm / 118"	2500 kg / 5510 lbs
R 4000	680 mm / 26.7"	4000 mm / 157"	2500 kg / 5510 lbs
R 4000-MR	900 mm / 35.4"	4000 mm / 157"	4000 kg / 8816 lbs
R 5000-MR	900 mm / 35.4"	5000 mm / 197"	4000 kg / 8816 lbs
R 6000-MR	900 mm / 35.4"	6000 mm / 236"	4000 kg / 8816 lbs
R 4000-MD	1200 mm / 47,2"	4000 mm / 157"	6000 kg / 13224 lbs
R 5000-MD	1200 mm / 47,2"	5000 mm / 197"	6000 kg / 13224 lbs
R 6000-MD	1200 mm / 47,2"	6000 mm / 236"	6000 kg / 13224 lbs
R 1400-CNC	460 mm / 18.1"	1400 mm / 55"	300 kg / 661 lbs
R 1800-CNC	680 mm / 26.7"	1800 mm / 71"	2500 kg / 5510 lbs
R 2400-CNC	680 mm / 26.7"	2400 mm / 94"	2500 kg / 5510 lbs
R 3000-CNC	680 mm / 26.7"	3000 mm / 118"	2500 kg / 5510 lbs
R 4000-CNC	680 mm / 26.7"	4000 mm / 157"	2500 kg / 5510 lbs
R 4000-CNC MR	900 mm / 35.4"	4000 mm / 157"	4000 kg / 8816 lbs
R 5000-CNC MR	900 mm / 35.4"	5000 mm / 197"	4000 kg / 8816 lbs
R 6000-CNC MR	900 mm / 35.4"	6000 mm / 236"	4000 kg / 8816 lbs
R 4000-CNC MD	1200 mm / 47,2"	4000 mm / 157"	6000 kg / 13224 lbs
R 5000-CNC MD	1200 mm / 47,2"	5000 mm / 197"	6000 kg / 13224 lbs
R 6000-CNC MD	1200 mm / 47,2"	6000 mm / 236"	6000 kg / 13224 lbs
R 2000-CNC HD	1100 mm / 43,3"	2000 mm / 79"	15000 kg / 33000 lbs
R 4000-CNC HD	1100 mm / 43,3"	4000 mm / 157"	15000 kg / 33000 lbs
R 6000-CNC HD	1100 mm / 43,3"	6000 mm / 236"	15000 kg / 33000 lbs
R 2000-CNC B-axis	2000 mm / 79.0"	2000 mm / 79"	5000 kg / 11023 lbs

As we are continuously improving our machines, descriptions, dimensions and illustrations are not binding in detail.

The Benefits of Precision