

CRG, CRG-AW, CRG-A

CNC RUNDSCHELEIFMASCHINE

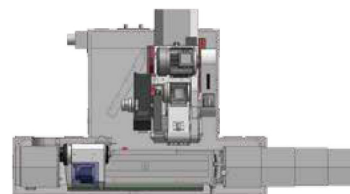


CRG, CRG-AW & CRG-A Series High Precision CNC cylindrical Grinder

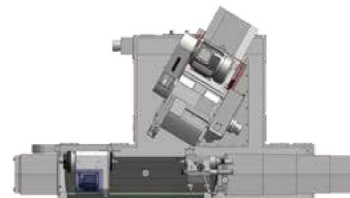
CRG, CRG-AW & CRG-A Series grinders are designed for high precision, high efficiency, and ease of operation. They are suitable for various applications including but not limited automotive, aero-space, medical instrument, tooling, job shop, and mold industries.

Features

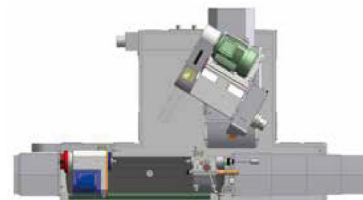
Kaast Werkzeugmaschinen GmbH introduces CRG, CRG-AW & CRG-A series CNC cylindrical grinders with superb grinding capabilities and choice of control options. The customers' requirements can be met with a choice of many machine options such as a touch probe, automatic sizing device, or swing down ID grinding attachment. The complete product line offers a wide range of between center distances and center heights in both plunge and angular wheelhead designs. Automation and turnkey solutions can be offered optional equipment.



CRG - Plunge Wheelhead
Max. Grinding OD: 230-480 mm
Distance between Centers: 500-3000 mm



CRG-AW - Angular Wheelhead
Max. Grinding OD: 230-480 mm
Distance between Centers: 500-2000 mm



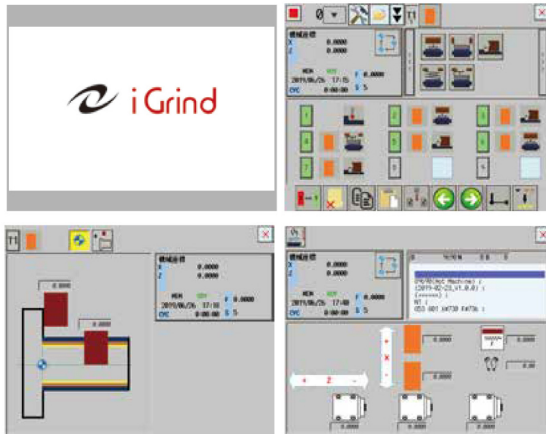
CRG-A - Angular Wheelhead Plunge type
Max. Grinding OD: 330-480 mm
Distance between Centers: 600-2000 mm

*Die oben genannten Spezifikationen können ohne vorherige Ankündigung geändert werden, keine Haftung für Druckfehler. Die Maschine kann mit optionaler Ausstattung gezeigt werden. KAAST Werkzeugmaschinen GmbH · Gadelander Straße 172 · D-24539 Neumünster / Germany · Phone: +49 (0) 4321-25 20 03-0 · Fax: +49 (0) 4321-25 20 03-90 · E-Mail: info@kaast.de

CNC Controller

A selection of CNC control systems including Fanuc, Mitsubishi-shi, Siemens, PC-BASE are available. For small and medium size workpiece grinding operations, e-tech incorporates the iGrind graphic conversational pro-graming software.

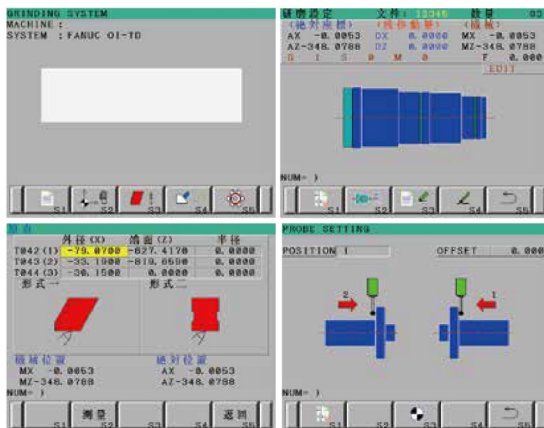
iGrind



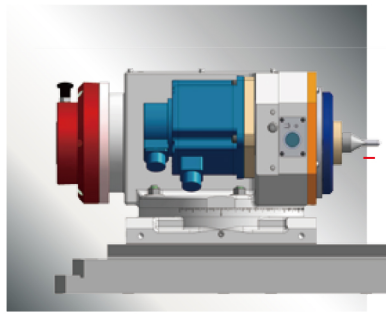
• FANUC Controller



• Mitsubishi Controller

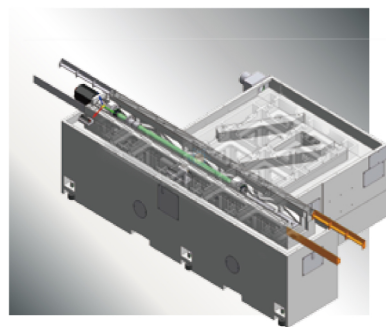


- OD Grinding / End Face Grinding / Form Grinding
- Form Dressing w/ Auto Compensation
- Multiple Section Grinding Sequences
- Setup Parameter Storage
- Graphic Parameter Instruction



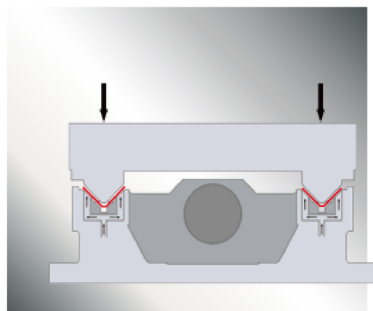
Work Head

NN bearing designed work spindle offers heavy duty load capacity, optimal rotation accuracy, and high rigidity. The servo motor drive offers steady speed and torque during the grinding operation. A positive air purge system keeps grinding swarf and coolant out of the work head, thus it prolongs its life.



Rigid Machine Base

The machine base is designed to ensure the table is fully supported on both ends. The heavily ribbed box-type base is made of Meehanite casting, providing excellent rigidity and stability of the machine.

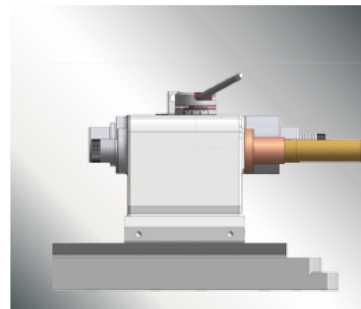
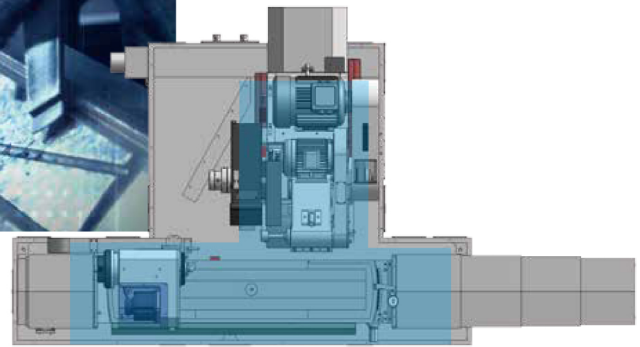


X-axis Guideway

The hand scraped Double V guideways provide maximum support to the wheel head for greater stability and grinding capacity. This design insures superior accuracy over the life of the machine.



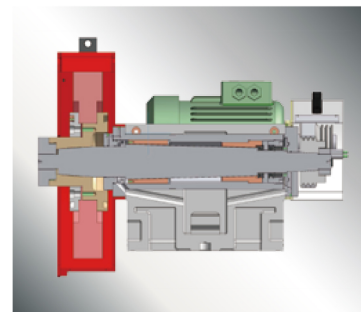
- KAAST
- Other



Tail Stock

A coolant nozzle is installed on the top of the tailstock for cooling the center tip. An air floating device allows for smoother movement and protection of the table.

- An optional tailstock quill travel of 75mm helps to load/unload the workpiece with ease. The quill is oil-bathed to ensure smooth movement.
- An optional tailstock taper adjustment feature allows the operator to easily adjust for taper error.



Wheel head Spindle Bearing Options:

- Standard — Contact Bearing Type Spindle is easy to maintain, environmentally friendly and minimizes thermal growth issues.
- Optional — Hydrodynamic Babbit Bearing Type Spindle applies SNCM220 super alloy steel with multiple heat treatments makes the surface hardness of spindle up to HRC 62. These features ensure maximum cutting capability and best part finish performance in the grinding operation.

Plunge Grinding Example :

Model CRG 320/600 CNC

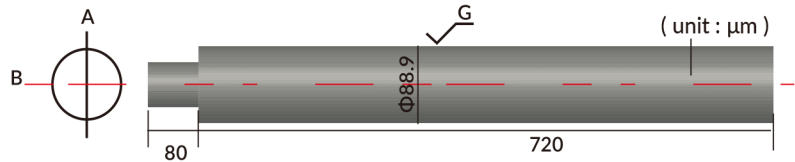
Grinding Conditions :

Wheel : WA60K(Φ405mm)

Workpiece

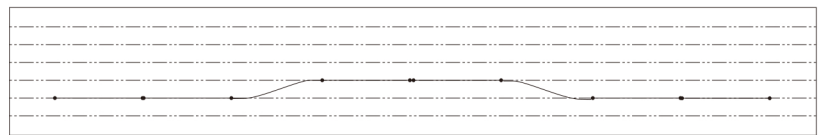
Name: Standard Grinding Test Workpiece

Material: SCM435



(unit : μm)	1	2	3	4	5	6	7	8	9
A	0.0	0.0	0.0	+1.0	+1.0	+1.0	0.0	0.0	0.0
B	0.0	0.0	0.0	+1.0	+1.0	+1.0	0.0	0.0	0.0

Cylindricity



Traverse Grinding Example :

Model CRG 320/600 CNC

Grinding Conditions :

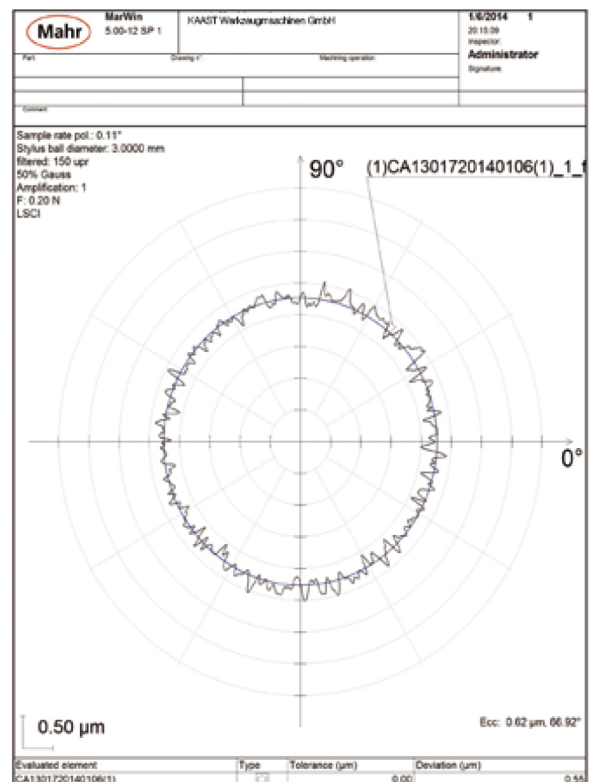
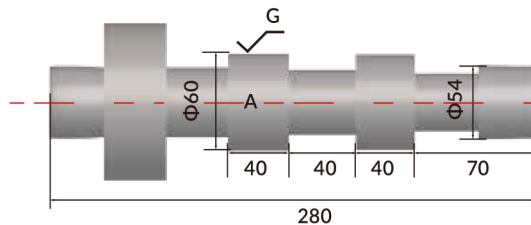
Wheel : WA60K(Φ405mm)

Workpiece

Name: Standard Grinding Test Workpiece

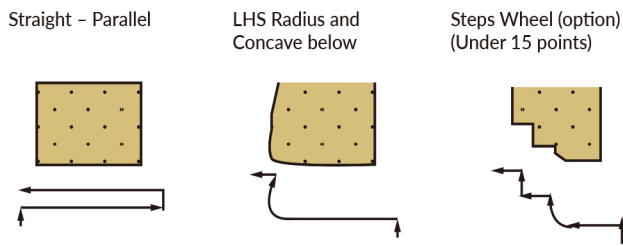
Material: SCM435

Roundness :
Part A 0.50 μm

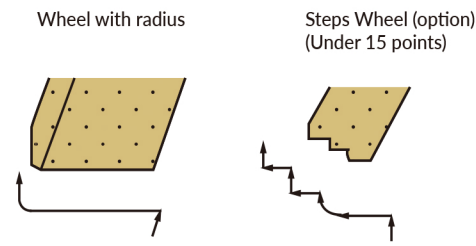


Wheel Dressing Cycle

Plunge Type



Angular Type

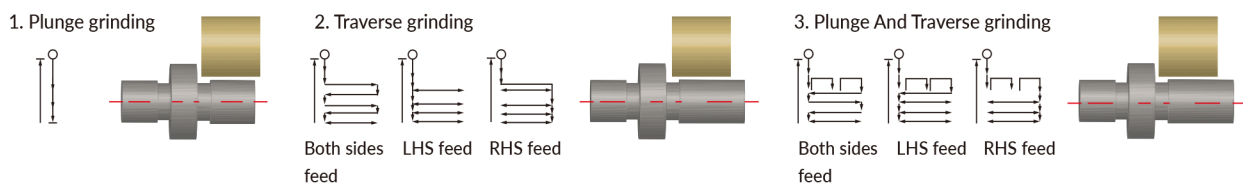


Remarks :

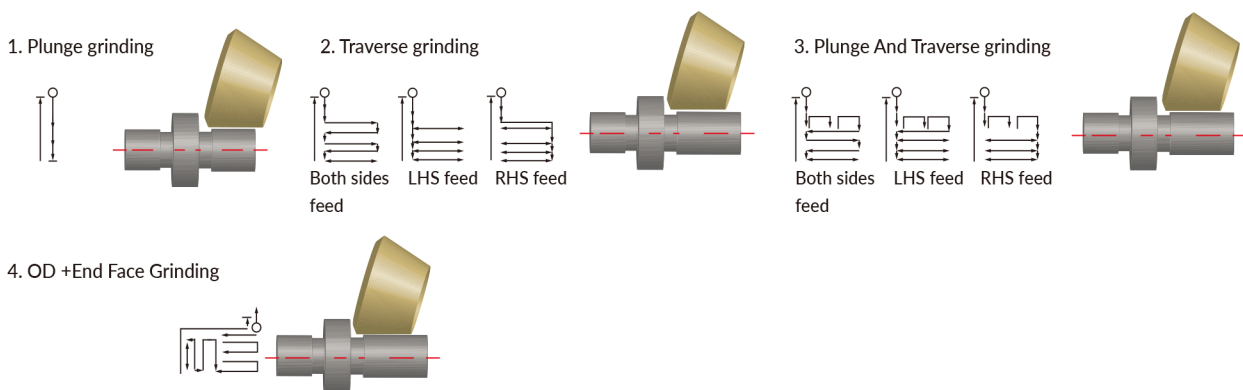
1. Max. 5 types of wheel profile can be saved.
2. Dressing condition can setup rough, intermediate and fine dressing
3. Machine with ID attachment, the dressing operation of ID wheel is manual operated.

Grinding Cycle

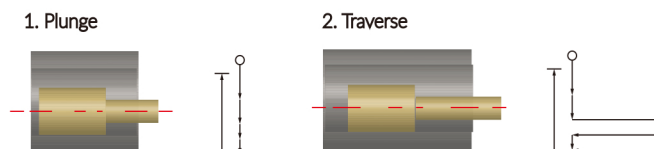
Plunge Type



Angular Type



ID Grinding Cycle (using OD Grinding Cycle)

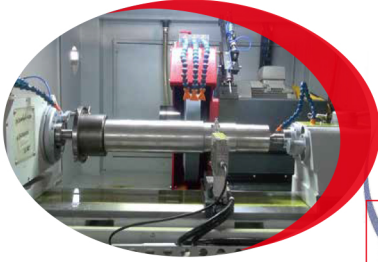


Remarks :

1. All cycles can be separated into rough grinding and fine grinding cycles.
2. Plunge type end face grinding can be implemented by manual operation and offsets.
3. ID grinding coordinate display is not the same to the dimension of the workpiece
4. Multiple steps ID grinding can be implemented by manual operation.

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Spindle Shaft
Model: CRG-3802000CNC



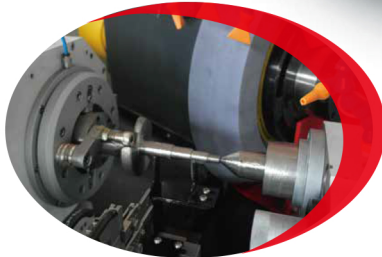
Rotor
Model: CRG-320600CNC



Printer Roller
Model: CRG-3802000CNC



Crank Shaft
Model: CRG-320600AW CNC



Gear Box Helical Gear Model:
CRG-320600CNC



Accumulated inspection time of over 100 hours for each machine produced.

We know how it runs and we know how it is inspected

In-Process Inspections



(Wenzel CMM LH65)



Workpiece Inspections



Mahr cylinder formtester: MMQ400

Mahr Surface Roughness Tester: PERTHOETER M2

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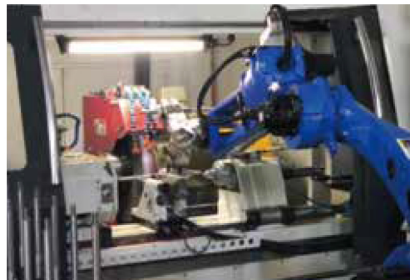
Automation Solutions

Due to our extensive engineering knowledge and vast supplier network, we can provide the best grinding solutions.

1. In Process Gauging/Automation 2. Standard Automation Systems 3. Flexible Automation



> General purpose production

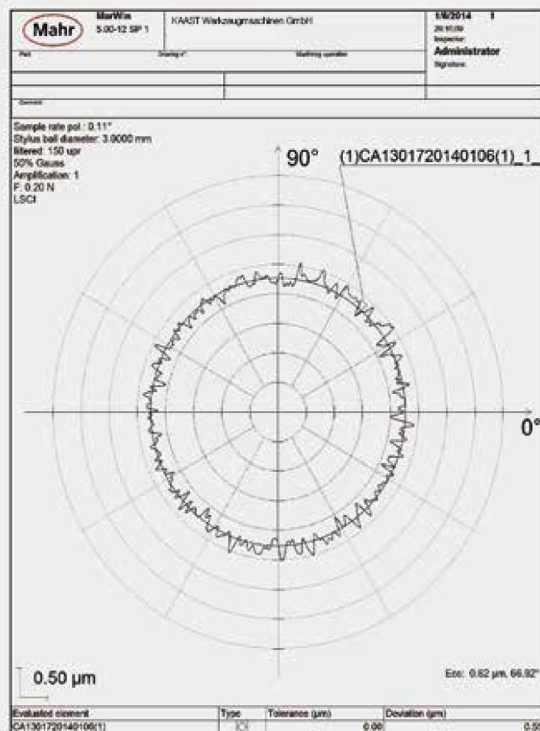


> Load / Unloading solutions
> Gantry Type and
6-axis Robot solution



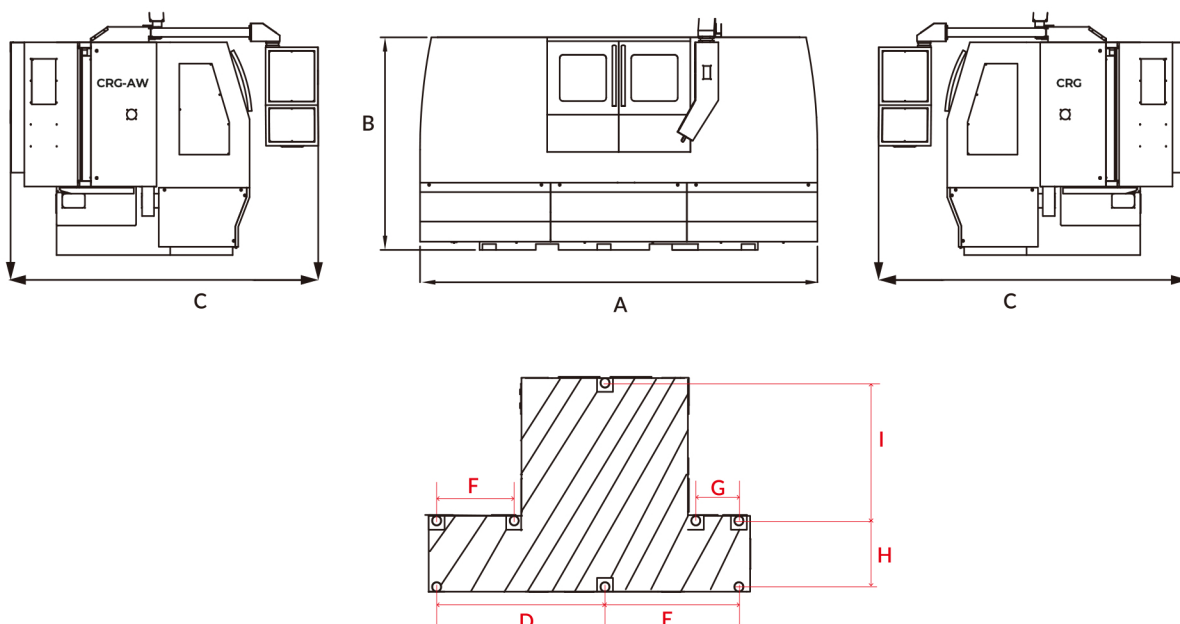
> High Production Units
> Offers total solution for customized
production process, grinders with the
automation system, and turnkey operations.

MAHR MMQ400 Roundness Measurement



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Model		CRG 250/500	CRG 320/600	CRG 320/1000	CRG 320/1500	CRG 320/2000	CRG 320/2500	CRG 320/3000	CRG 380/600	CRG 380/1000			
Grinding	Swing over table	mm		Ø250	Ø320	Ø320	Ø320	Ø320	Ø320	Ø380	Ø380		
	Capacity	Distance between centers	mm		500	600	1000	1500	2000	2500	3000	600	1000
		Max. grinding diameter	mm		Ø230	Ø300	Ø300	Ø300	Ø300	Ø300	Ø300	Ø360	Ø360
		Max. load held between center	kg		80	150	150	150	250	250	250	150	150
		Center distance between spindle & slide table	mm		130	162	162	162	162	162	162	192	192
Grinding Wheel	Diameter x Width x Bore	mm		Ø455x50xØ127 (5")		Ø510x50-100xØ152.4(6")				Ø510x50-100xØ152.4(6")			
		mm		Opt.Ø455x50xØ152.4 (6")		Opt.Ø510x50 ~ 100xØ203.2(8")				Opt.Ø610x50 ~ 100xØ203.2(8")			
Workhead	Motor rated power / max. torque	Kw/Nm		3.75kw / 13Nm		7.5kw/49Nm(Opt.11Kw/ 71Nm)				7.5kw/49Nm(Opt.11Kw/ 71Nm)			
	Wheel speed	rpm		1400		1250 (Opt.1650)				1250 (Opt.1650)			
	Swiveling angle	deg		90		90				90			
Spindle	Spindle speed (infinite variable)	rpm		10 ~ 600		10 ~ 600				10 ~ 600			
	Motor rated power / max. torque	kw		0.75		1.5				1.5			
	Center taper	-		MT3(Opt.MT4)		MT4 (Opt. MT5)				MT4 (Opt. MT5)			
	Spindle type	-		Fixed or Rotary		Fixed or Rotary				Fixed or Rotary			
	Diameter of bore	mm		Ø20		Ø23				Ø23			
	Tailstock	Quill travel	mm		25		25 (Opt.50/75)				25 (Opt.50/75)		
Center taper		-		MT3(Opt.MT4)		MT4 (Opt. MT5)				MT4 (Opt. MT5)			
X Axis	Travel	mm		200		270				270			
	Max. rapid feedrate	m/min		6		6				6			
	Heidenhain linear scale resolution	um		0.05		0.05				0.05			
	Min. increment	mm		0.0001		0.0001				0.0001			
	Servo motor rated power	kw		1.2(F)/1.5(M)		1.8(F)/2.2(M)				1.8(F)/2.2(M)			
Z Axis	Travel	mm		750	850	1250	1850	2450	3050	3650	850	1250	
	Swiveling angle	deg		±7	±9	±7	±5	±5	±3	±2	±9	±7	
	Max. rapid feedrate	m/min		8		10				10			
	Min. increment	mm		0.0001		0.0001				0.0001			
	Servo motor rated power	kw		1.2(F)/1.5(M)		1.8(F)/2.2(M)		2.5(F)/3.5(M)			1.8(F)/2.2(M)		
Motor	Hydraulic pump	kw		0.38		0.38				0.38			
	Hydrodynamic GW spindle lubrication pump	kw		0.2		0.2				0.2			
	Guide way lubrication pump	kw		0.2		0.2				0.2			
	Coolant pump	kw		0.2		0.2				0.2			
Machine	Net Weight (semi-enclosed splash guard)	kg		3100	5600	5900	6300	6700	7100	7500	5700	6000	
	Gross Weight	kg		3800	6400	6700	7100	7500	7900	8300	6500	6800	
Artikel-Nr.			3100054	3100053	3100055	3100050	3100051	3100056	3100057	3100058	3100059		



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			CRG	CRG	CRG	CRG	CRG	CRG	CRG	CRG	CRG	CRG
			380/1500	380/2000	380/2500	380/3000	500/600	500/1000	500/1500	500/2000	500/2500	500/3000
Grinding	Swing over table	mm	Ø380	Ø380	Ø380	Ø380	Ø500	Ø500	Ø500	Ø500	Ø500	Ø500
Capacity	Distance between centers	mm	1500	2000	2500	3000	600	1000	1500	2000	2500	3000
	Max. grinding diameter	mm	Ø360	Ø360	Ø360	Ø360	Ø480	Ø480	Ø480	Ø480	Ø480	Ø480
	Max. load held between center	kg	150	250	250	250	150	150	150	250	250	250
	Center distance between spindle & slide table	mm	192	192	192	192	255	255	255	255	255	255
Grinding Wheel	Diameter x Width x Bore	mm	Ø510x50-100xØ152.4(6") Opt.Ø610x50 - 100xØ203.2(8")				Ø510x50-100xØ152.4(6") Opt.Ø610x50 - 100xØ203.2(8")					
	Motor rated power / max. torque	Kw/Nm	7.5kw/49Nm(Opt.11Kw/ 71Nm)				7.5kw/49Nm(Opt.11Kw/ 71Nm)					
	Wheel speed	rpm	1250 (Opt.1650)				1250 (Opt.1650)					
Workhead	Swiveling angle	deg	90				90					
	Spindle speed (infinite variable)	rpm	10 ~ 600				10 ~ 600					
	Motor rated power / max. torque	kw	1.5				1.5					
	Center taper	-	MT4 (Opt. MT5)				MT4 (Opt. MT5)					
	Spindle type	-	Fixed or Rotary				Fixed or Rotary					
	Diameter of bore	mm	Ø23				Ø23					
	Tailstock	Quill travel	mm	25 (Opt.50/75)				25 (Opt.50/75)				
Center taper		-	MT4 (Opt. MT5)				MT4 (Opt. MT5)					
X Axis	Travel	mm	270				270					
	Max. rapid feedrate	m/min	6				6					
	Heidenhain linear scale resolution	um	0.05				0.05					
	Min. increment	mm	0.0001				0.0001					
	Servo motor rated power	kw	1.8(F)/2.2(M)				1.8(F)/2.2(M)					
Z Axis	Travel	mm	1850	2450	3050	3650	850	1250	1850	2450	3050	3650
	Swiveling angle	deg	±5	±5	±3	±2	±9	±7	±5	±5	±3	±2
	Max. rapid feedrate	m/min	10				10					
	Servo motor rated power	kw	2.5(F)/3.5(M)				1.8(F)/2.2(M)		2.5(F)/3.5(M)			
Motor	Hydraulic pump	kw	0.38				0.38					
	Hydrodynamic GW spindle lubrication pump	kw	0.2				0.2					
	Guide way lubrication pump	kw	0.2				0.2					
	Coolant pump	kw	0.2				0.2					
Machine	Net Weight (semi-enclosed splash guard)	kg	6400	6800	7200	7600	5800	6100	6500	6900	7300	7700
	Gross Weight	kg	7200	7600	8000	8400	6600	6900	7300	7700	8100	8500
Artikel-Nr.		3100066	3100067	3100068	3100069	3100075	3100076	3100077	3100078	3100079	3100086	

CRG	A	B	C	D	E	F	G	H	I
250/500	3125	1810	2300	850	566	309	260	320	860
320/600	3500	1800	2760	1270	1010	585	325	480	1000
320/1000	4300	1800	2760	1670	1410	985	725	480	1000
320/1500	5600	1800	2760	2270	2010	1585	1325	480	1000
320/2000	7055	1800	2850	2890	2630	2205	1945	560	1000
320/2500	8560	1800	2850	3390	3150	2700	2445	560	1000
320/3000	10060	1800	2850	3890	3630	3205	2945	560	1000
380/600	3500	1800	2760	1270	1010	585	385	480	1000
380/1000	4300	1800	2760	1670	1410	985	725	480	1000
380/1500	5600	1800	2760	2270	2010	1325	1585	480	1000
380/2000	7055	1800	2850	2890	2630	1945	2205	560	1000
380/2500	8560	1800	2850	3390	3150	2700	2445	560	1000
380/3000	10060	1800	2850	3890	3630	3205	2945	560	1000
500/600	3500	1800	2760	1270	1010	585	385	480	1000
500/1000	4300	1800	2760	1670	1410	985	725	480	1000
500/1500	5600	1800	2760	2270	2010	1325	1585	480	1000
500/2000	7055	1800	2850	2890	2630	1945	2205	560	1000
500/2500	8560	1800	2850	3390	3150	2700	2445	560	1000
500/3000	10060	1800	2850	3890	3630	3205	2945	560	1000

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Model		CRG-AW 250/500	CRG-AW 320/600	CRG-AW 320/1000	CRG-AW 320/1500	CRG-AW 320/2000	CRG-AW 380/600	CRG-AW 380/1000
Grinding	Swing over table	mm	Ø250	Ø320	Ø320	Ø320	Ø380	Ø380
Capacity	Distance between centers	mm	500	600	1000	1500	2000	600
	Max. grinding diameter	mm	Ø230	Ø300	Ø300	Ø300	Ø300	Ø360
	Max. grinding length - dresser on workhead side	mm	350	450	850	1350	1850	450
		- dresser on tailstock side (Opt.)	mm	500	600	1000	1500	2000
	Max. load held between center	kg	80	150	150	150	250	150
	Center distance between spindle and slide table	mm	130	162	162	162	162	192
Grinding	Infeed angle	deg	60*	60	60	60	60	60
Wheel	Diameter x Width x Bore	mm	Ø510x50xØ127 (5")	Ø510x50-100xØ152.4 (6")			Ø510x50-100xØ152.4 (6")	
				Opt. Ø510x50~100xØ203.2 (8")			Opt. Ø610x50~100xØ203.2 (8")	
	Motor rated power / max. torque	Kw/Nm	3.75kw / 13Nm	7.5kw/49Nm(Opt.11Kw/ 71Nm)			7.5kw/49Nm(Opt.11Kw/ 71Nm)	
	Wheel speed	rpm	1400	1250 (Opt.1650)			1250 (Opt.1650)	
Workhead	Swiveling angle	deg	90	90			90	
	Spindle speed (infinite variable)	rpm	10~600	10~600			10~600	
	Motor rated power / max. torque	kw	0.75	1.5			1.5	
	Center taper	-	MT3	MT4 (Opt. MT5)			MT4 (Opt. MT5)	
	Spindle type	-	Fixed or Rotary	Fixed or Rotary			Fixed or Rotary	
	Diameter of bore	mm	Ø20	Ø23			Ø23	
Tailstock	Quill travel	mm	25	25 (Opt.50/75)			25 (Opt.50/75)	
	Center taper	-	MT3	MT4 (Opt. MT5)			MT4 (Opt. MT5)	
X Axis	Travel	mm	200	270			270	
	Max. rapid feedrate	m/min	6	6			6	
	Heidenhain linear scale resolution	um	0.05	0.05			0.05	
	Min. increment	mm	0.0001	0.0001			0.0001	
	Servo motor rated power	kw	1.2(F)/1.5(M)	1.8(F)/2.2(M)			1.8(F)/2.2(M)	
Z Axis	Travel	mm	750	850	1250	1850	2450	850
	Swiveling angle	deg	±7	±9	±7	±5	±5	±9
	Max. rapid feedrate	m/min	8	10			10	
	Min. increment	mm	0.0001	0.0001			0.0001	
Motor	Servo motor rated power	kw	1.2(F)/1.5(M)	1.8(F)/2.2(M) 2.5(F)/3.5(M)			1.8(F)/2.2(M)	
	Hydraulic pump	kw	0.38	0.38			0.38	
	Hydrodynamic GW spindle lubrication pump	kw	0.2	0.2			0.2	
	Guide way lubrication pump	kw	0.2	0.2			0.2	
Machine	Coolant pump	kw	0.2	0.2			0.2	
	Net Weight (semi-enclosed splash guard)	kg	3100	5600	5800	6300	6700	5600
	Gross Weight	kg	3500	6420	7500	7800	8200	6420
Artikel-Nr.			3100089	3100090	3100091	3100092	3100093	3100094

Standard Accessories

Infinite variable workhead w/servo motor
 Diamond Dresser and Stand
 Automatic wheel speed change (15 steps)
 Carbide tip center
 X Axis Heidenhain/Mitsubishi linear scale (resolution 0.05 um)
 Levelling bolts and blocks
 Operation manual and part lists
 Fanuc CNC Controller (Oi TF)
 Grinding Wheel + Wheel Flange
 Standard oil cooler (cooling fan)

Standard coolant tank 140L
 MPG handwheel 2 Axes control
 Touch probe (for EGA series only)
 LED working light
 Tools and Tool Box
 Electricity cabinet w/ heat exchanger
 Semi-enclosed splash guard
 Wheel Extractor
 4-color indication signal light
 Electrical wiring diagram

Model			CRG-AW 380/1500	CRG-AW 380/2000	CRG-AW 500/600	CRG-AW 500/1000	CRG-AW 500/1500	CRG-AW 500/2000
Grinding	Swing over table	mm	Ø380	Ø380	Ø500	Ø500	Ø500	Ø500
Capacity	Distance between centers	mm	1500	2000	600	1000	1500	2000
	Max. grinding diameter	mm	Ø360	Ø360	Ø480	Ø480	Ø480	Ø480
	Max. grinding length - dresser on workhead side	mm	1350	1850	450	850	1350	1850
		- dresser on tailstock side (Opt.)	mm	1500	2000	600	1000	1500
	Max. load held between center	kg	150	250	150	150	150	250
	Center distance between spindle and slide table	mm	192	192	255	255	255	255
Grinding	Infeed angle	deg	60	60	60	60	60	60
Wheel	Diameter x Width x Bore	mm	Ø510x50-100xØ152.4 (6")		Ø510x50-100xØ152.4 (6")			
			Opt. Ø610x50~100xØ203.2 (8")		Opt. Ø610x50~100xØ203.2 (8")			
	Motor rated power / max. torque	Kw/Nm	7.5kw/49Nm(Opt.11Kw/ 71Nm)		7.5kw/49Nm(Opt.11Kw/ 71Nm)			
	Wheel speed	rpm	1250 (Opt.1650)		1250 (Opt.1650)			
Workhead	Swiveling angle	deg	90		90			
	Spindle speed (infinite variable)	rpm	10~600		10~600			
	Motor rated power / max. torque	kw	1.5		1.5			
	Center taper	-	MT4 (Opt. MT5)		MT4 (Opt. MT5)			
	Spindle type	-	Fixed or Rotary		Fixed or Rotary			
	Diameter of bore	mm	Ø23		Ø23			
Tailstock	Quill travel	mm	25 (Opt.50/75)		25 (Opt.50/75)			
	Center taper	-	MT4 (Opt. MT5)		MT4 (Opt. MT5)			
X Axis	Travel	mm	270		270			
	Max. rapid feedrate	m/min	6		6			
	Heidenhain linear scale resolution	um	0.05		0.05			
	Min. increment	mm	0.0001		0.0001			
	Servo motor rated power	kw	1.8(F)/2.2(M)		1.8(F)/2.2(M)			
Z Axis	Travel	mm	1850	2450	850	1250	1850	2450
	Swiveling angle	deg	±5	±5	±9	±7	±5	±5
	Max. rapid feedrate	m/min	10		10			
	Min. increment	mm	0.0001		0.0001			
	Servo motor rated power	kw	2.5(F)/3.5(M)		1.8(F)/2.2(M) 2.5(F)/3.5(M)			
Motor	Hydraulic pump	kw	0.38		0.38			
	Hydrodynamic GW spindle lubrication pump	kw	0.2		0.2			
	Guide way lubrication pump	kw	0.2		0.2			
	Coolant pump	kw	0.2		0.2			
Machine	Net Weight (semi-enclosed splash guard)	kg	6300	6700	5600	5800	6300	6700
	Gross Weight	kg	7800	8200	6420	7500	7800	8200
Artikel-Nr.			3100094	3100095	3100096	3100097	3100098	3100099

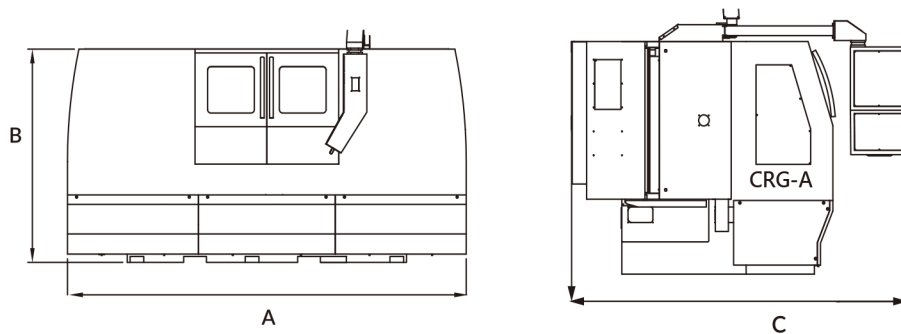
Optional Accessories

- | | |
|--|---|
| BS VM25 Integration system
(OD gauging+ crash & gap control + dynamic balance system) | FANUC Oi-TF iGrind program |
| BS VM15 Integration system
(OD gauging+ crash & gap control) | Mitsubishi controller (M80) iGrind program |
| Hydraulic tailstock (w/ foot pedal) | Electrical cabinet air conditioner |
| Z Axis Heidenhain/Mitsubishi linear scale (resolution 0.05 um) | Interanal grinding attachment (for EGP series only) |
| Manual grinding wheel balance system (vibrator) | Workhead upgrade to MT5 (not suitable for 25 ser |
| Grinding wheel dynamic balance system | Tailstock upgrade to MT5 (not suitable for 25 serie |
| Wheel spindle lubrication oil cooler for hydrodynamic spindle | Roller type balancing stand/ arbor |
| Gap & crash control device | Automatic 3-jaw hydraulic chuck |
| Safety door lock | CE standard electrical cabinet |
| Workhead spindle adjustment arbor | Touch probe |
| Auto gauging device | Transformer |
| Coolant system with magnetic separator & paper filter | Workpiece carrier |
| Coolant system with magnetic separator | Full-enclosed splash guard |
| Coolant system with paper filter | Workpiece supporting seat, 2pc / set |
| Oil & mist collecting system | 2 Point Steady Rest |
| Spare grinding wheel flange | 3-point steady rest |
| Full-Carbide center tip | 3-jaw scroll chuck |
| | 4-jaw scroll chuck |

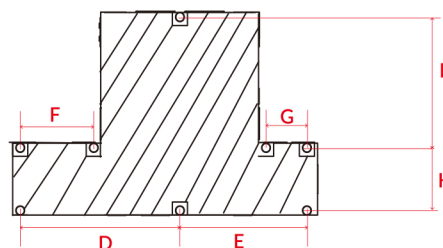
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Model			CRG 380/600A	CRG 380/1000A	CRG 380/1500A	CRG 380/2000A	CRG 500/600A	CRG 500/1000A	CRG 500/1500A	CRG 500/2000A
Grinding	Swing over table	mm	Ø380	Ø380	Ø380	Ø380	Ø500	Ø500	Ø500	Ø500
Capacity	Distance between centers	mm	600	1000	1500	2000	600	1000	1500	2000
	Max. grinding diameter	mm	Ø360	Ø360	Ø360	Ø360	Ø480	Ø480	Ø480	Ø480
	Max. load held between center	kg	150	150	150	250	150	150	150	250
	Center distance between spindle & slide table	mm	192	192	192	192	255	255	255	255
Grinding Wheel	Diameter x Width x Bore	mm	Ø510x50-100xØ152.4(6")				Ø510x50-100xØ152.4(6") Opt.Ø610x50 - 80xØ152.4(6")			
	Motor rated power / max. torque	Kw/Nm	7.5kw/49Nm(Opt.11Kw/ 71Nm)				7.5kw/49Nm(Opt.11Kw/ 71Nm)			
Workhead	Wheel speed	rpm	1250 (Opt.1650)				1250 (Opt.1650)			
	Swiveling angle	deg	90				90			
	Spindle speed (infinite variable)	rpm	10 - 600				10 - 600			
	Motor rated power / max. torque	kw	1.5				1.5			
	Center taper	-	MT4 (Opt. MT5)				MT4 (Opt. MT5)			
	Spindle type	-	Fixed or Rotary				Fixed or Rotary			
	Diameter of bore	mm	Ø23				Ø23			
	Tailstock	Quill travel	mm	25 (Opt.50/75)				25 (Opt.50/75)		
Center taper		-	MT4 (Opt. MT5)				MT4 (Opt. MT5)			
X Axis	Travel	mm	270				270			
	Max. rapid feedrate	m/min	6				6			
	Heidenhain linear scale resolution	um	0.05				0.05			
	Min. increment	mm	0.0001				0.0001			
	Servo motor rated power	kw	1.8(F)/2.2(M)				1.8(F)/2.2(M)			
Z Axis	Travel	mm	850	1250	1850	2450	850	1250	1850	2450
	Swiveling angle	deg	±9	±7	±5	±5	±9	±7	±5	±5
	Max. rapid feedrate	m/min	10				10			
	Min. increment	mm	0.0001				0.0001			
	Servo motor rated power	kw	1.8(F)/2.2(M) 2.5(F)/3.5(M)				1.8(F)/2.2(M) 2.5(F)/3.5(M)			
Motor	Hydraulic pump	kw	0.38				0.38			
	Hydrodynamic GW spindle lubrication pump	kw	0.2				0.2			
	Guide way lubrication pump	kw	0.2				0.2			
	Coolant pump	kw	0.2				0.2			
Machine	Net Weight (semi-enclosed splash guard)	kg	5700	6000	6400	6800	5800	6100	6500	6900
	Gross Weight	kg	6500	6800	7200	7600	6600	6900	7300	7700
Artikel-Nr.			3100109	3100110	3100111	3100112	3100113	3100114	3100115	3100116

Measurement



CRG-A	A	B	C	D	E	F	G	H	I
380/600	3500	1800	2760	1270	1010	585	385	480	1000
380/1000	4300	1800	2760	1670	1410	985	725	480	1000
380/1500	5600	1800	2760	2270	2010	1325	1585	480	1000
380/2000	7055	1800	2850	2890	2630	1945	2205	560	1000
500/600	3500	1800	2760	1270	1010	585	385	480	1000
500/1000	4300	1800	2760	1670	1410	985	725	480	1000
500/1500	5600	1800	2760	2270	2010	1325	1585	480	1000
500/2000	7055	1800	2850	2890	2630	1945	2205	560	1000



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