Our locations

Okamoto
GRIND - X

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Surface & Profile Grinding Machine

ACC SAiQ

GRIND - X
OKAMOTO PRECISION SYSTEMS
Okamoto

GRINDING SOLUTIONS

NEW MODEL SERIES
OF MEDIUM SIZE SURFACE
GRINDING MACHINES

ACC 42 SAiQ

- Better operability and repeatable accuracy are considered as the most important factor.

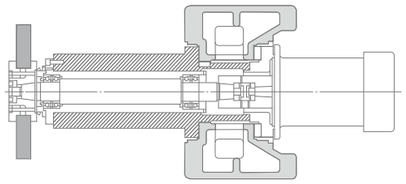
INCREASED FUNCTIONS

- Electro permanent magnet 400 x 200 mm
- Coolant system with paper filter
- ISO software, profile creation software
- Okamoto-I-CAM, CAD/CAM software

	Description		Unit	ACC 42 SAiQ
Capacity	Table working cap. (length x width)		mm	530 x 200
	Maximum travel (manual : longitudinal x cross)		mm	530 x 200
	Distance new wheel – table		mm	22,5 - 357,5
	Standard magnetic chuck size		mm	400 x 200 x 70
	Table load capacity (incl. chuck weight)		kg	120
Table	T-slots (width x No)		mm	17 x 1
	Hydaulic feed rate (Li : linear motor)		m/min	0,1 - 20
Crossfeed	Manual cross feed	Hand feed per revolution	mm	0,01 / 0,1 / 1,0
		Graduation of handwheel	mm	0,0001 / 0,001 / 0,01
	Automatic cross feed	Intermittent feed	mm	0,5 - 12
		Continuous feed	mm/min	0,1 - 1000
Wheel head	Manual pulse feed	Hand feed per revolution	µm	0,01 / 0,1 / 5,0
		Graduation of handwheel	mm	0,0001 / 0,001 / 0,05
	Automatic downfeed (traverse & plunge)	Rough grinding	mm	0,001 - 0,03 (15 steps)
		Fine grinding	mm	0,0001 - 0,01 (11 steps)
	Feedrate (F-Command)		mm	0 - 2000
	No. of sparkout		Anzahl	0 - 99
	Rapid feed rate		mm/min	0 - 1000
Grinding wheel	Size OD x W x ID		mm	ø 205 x 6 - 25 x ø 31,75
	Speed (Invertor)		min^{-1}	1000 - 3600
Motors	Grinding wheel spindle (reverse-ventilation)		kW/P	2,2 / 2
	Hydraulic pump		kW/P	0,75 / 4
	Vertical feed (AC servo)		kW	0,75
	Cross feed (AC servo)		kW	0,75
Destred power supply	including electro mag & coolant system		kVA	14
Floor space	L x W x H		mm	2470 x 2900 x 2093
Net weight			kg	2100

Extended accuracy, reliability and operability

ACC SAiQ

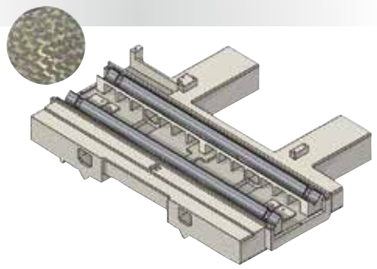


Increased rigidity

The extended vertical slides ensures most precise in feed and is capable to receive strong grinding forces.

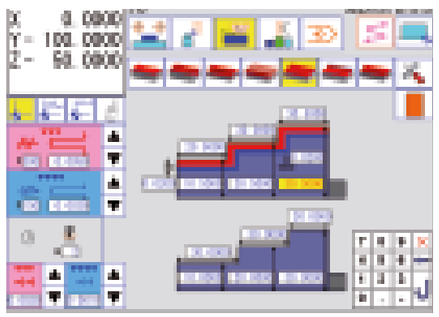
Improved handling

- The design was completely renewed to allow improved operability as a general purpose machine.
- The front panel levers have been completely removed an integrated into the control panel to guaranty easy set up and control.
- The height of the control panel has been increased for more ergonomic working.



V structural table sliding surfaces considering the straight table run

- Table imbalance due to uneven oil distribution is controlled.
- Each V-V sliding rail surface has 20 scraping points (50% of entire surface) to maintain optimum sliding performance.



Increased functions

- SA · CA series are conventional machines, with the ability of automatic dress cycles (fixed or overhead mounted dresser) as option.
- iQ software is the most advanced software meeting most work piece and grinding wheel shapes.
- Automatic set up of the optimal in-feed and dress amount to condition by just entering wheel specification (iQ function).

Automatic grinding cycles

- Cross reversing position can be set by teaching as standard.
- Automatic dress cycle (table dresser) is available a option.

LCD touch screen display Simplified and efficient control

Control to simplify the operation

The development of the new Okamoto iQ touch screen control and its easy to use software, coupled with an inherent mechanical accuracy, allows everyone to achieve impressive results. Setting of the machine is divided into 2 parts, wheel dressing and grinding. A logical graphicalrepresentation of each of these operations serves to guide the operator through the setting process. This setting process is made even easier by the use of easy to understand icons displayed on a generously sized colour screen.

Control Panel

- The position of the panel gives easy access to the controls, with the switches ergonomic positioned.

Mode selector switch

- Automatic cycle position setting, rapid and manual feed rate to be set.
- All function are interlocked.

Handwheel

- Both axes can be moved with electronic handwheels, whereby the pitch can be varied

Stock removal set

- The remaining stock removal is displayed (0,1).
- Rough and fine infeed amount are set by selector switches (0.5, 1, 2, 5, 10, 20, 30 µm).

Grinding Data (Surface)

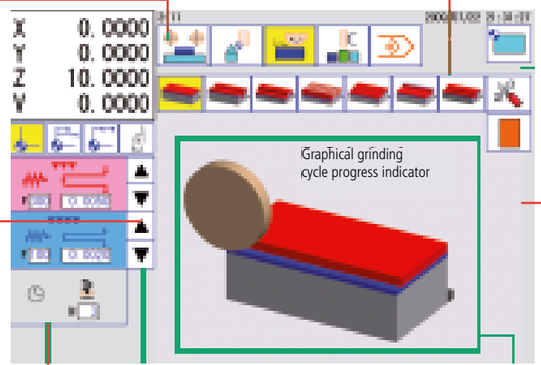
The grinding method and all other parameters including wheel shape are set-up using the touch screen panel.

Mode Select

- Table setting
- Dress data
- Grind data
- Combined grinding
- File operation

Feed Rates

- Can be changed in-cycle



Grinding Feed Rates

- **iQ Function**
  By entering the wheel mesh size, optimal grinding condition automatically set.
- Cross feed
- 1 Speed (F)
  2 Infeed amount
- Spark out passes / times
- Estimated remaining time to cycle finish

Dynamic Menu

- Surface shape
- U-shape
- T-shape
- Pitch
- Step
- Side face
- Conturing

Dynamic Menu

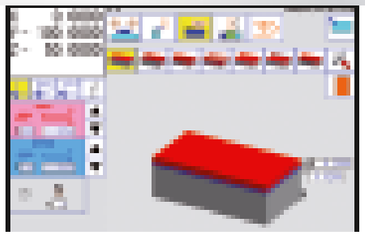
(Grind parameters)

- Datum method selected (picture show work datum)
- Setting parameters
  1 Select step or continuous feed
  2 Chuck/Word datum select
  3 Set up air-cut amount
- Selected wheel shape for current grind cycle (Press this icon to alter dress conditions)

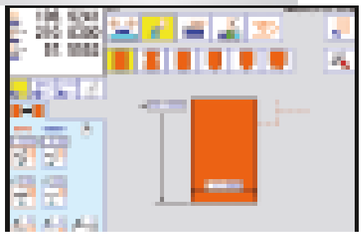
Software

Surface

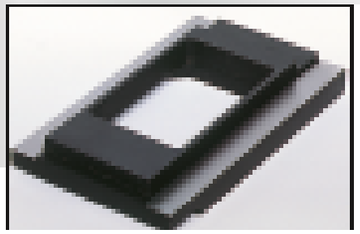
Grinding data (Surface)



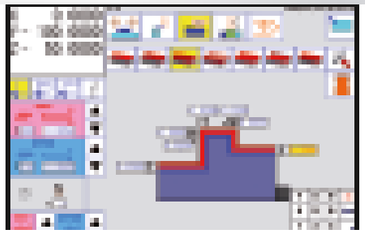
Dress data (Straight)



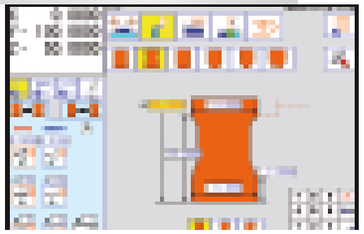
t shape



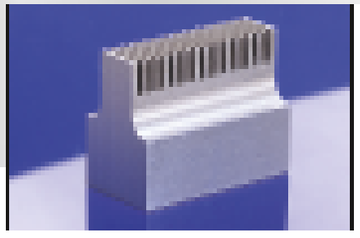
Grinding data (T shape)



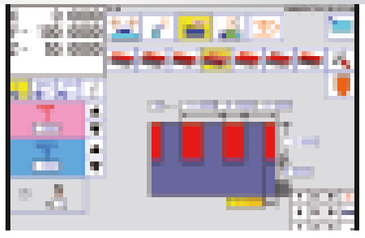
Dress data (Side)



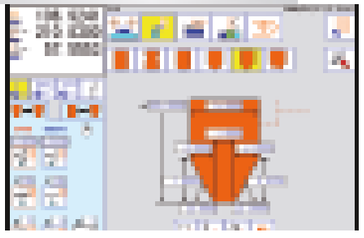
Pitch Shape



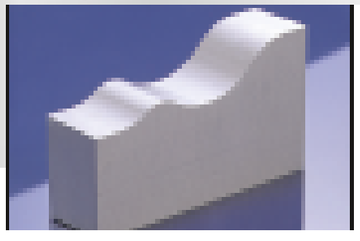
Grinding data (Pitch shape)



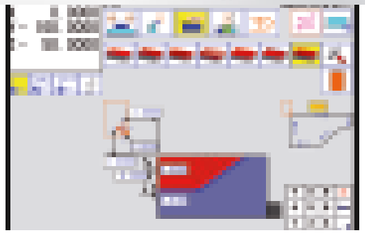
Dress data (V shape)



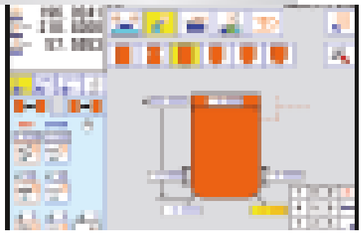
Conturing



Grinding data (Contouring)

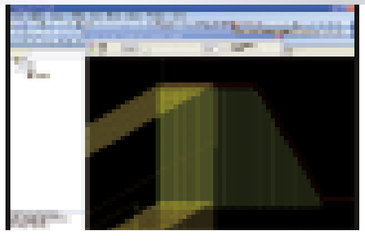


Dress data (Radius)

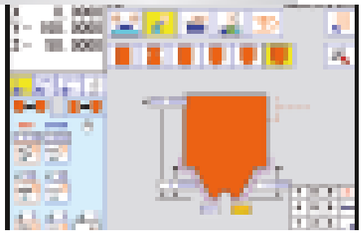


UPCAM

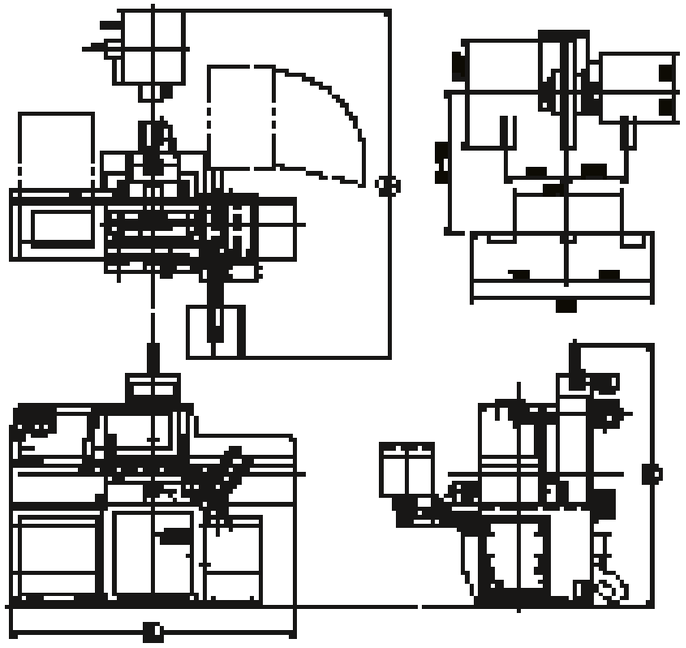
Rapid pre-profil dressing



Dress data (Free Form)



Outline Drawing



Accessories

Standard	Optional	
Grind X grinding wheel	**Coolant system**	Coolant tank with paper
Wheel balancing arbor		Coolant tank with ECO filter, magnetic dust separator and temperature controller
Spindle speed inverter	**Chuck**	Electro magnetic chuck
Whee flange		Electro permanent chuck and microcontroller
3 point dresser	**Grinding whel adaptor**	Spare grinding wheel adaptor
Flexible nozzle	**Balancing apparatus**	Balancing apparatus with arbor
Standard tools		Micro Balancer semi automatic
Leveling bolts and plates		Fully automatic wheel balancer
Splash cover	**Work light**	LED Working Light
chuck controller MA5	**Special paint**	
Earth leakage breaker	**Oil cooling system**	Air exchange
Grinding time estimate function		Oil cooling system
Grinding cycle (Surface, U shape, T shape, step, pitch, side)		Temperature controlled grinding head
Dressing cycle (straight,side)	**Measuring instrument**	Calender timer
High speed grinding	**Safety related options**	Postoperation power off
	Dressing options	Overhead wheel dresser with compensation
		Swing dresser
	Grinding cycles	Contouring cycle
		ISO code cycle
	Dressing cycle	Radius dressing
		Full radius dressing
		V form dressing
		ISO code dressing
	Programming software	UP CAM