

Okamoto



ACC Series Saddle Type Surface Grinders

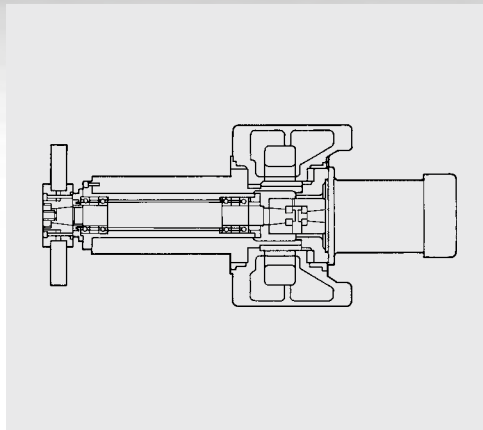
Okamoto

ACC Series SADDLE TYPE SURFACE GRINDERS

For over eighty years, machinists worldwide - in virtually every industry have relied on Okamoto surface grinders to get the job done. And with good reason, Okamoto is the recognized leader in grinding technology. From concept to design, manufacturing, distribution, support and service - Okamoto is dedicated to one thing - total customer satisfaction. This brochure outlines Okamoto's diverse line of high-precision Saddle Type Surface Grinders.

Check the features. Note the variety in capacity and control options. You'll see that Okamoto is the true value in grinding machines.

Rock Solid Construction is the key to precise grinding, reliability and long-term machine life. The heavily ribbed, high grade Meehanite cast iron on Okamoto's grinders provides the rigidity and stability that assures you unrivaled performance. Column construction is also extra rigid with tapered gibs on the vertical guideways, providing strength for rigorous-duty grinding and the high-precision necessary for those extra fine grinding applications.



CARTRIDGE TYPE SPINDLES

Grinding wheel spindles are direct drive and incorporate super-precision, pre-loaded ball bearings that are lubed for life. This design provides for maximum spindle stiffness to handle light to heavy duty grinding applications. This simple, yet effective design is maintenance free and simplifies service.



GUIDEWAYS

Okamoto saddle series surface grinders employ Double-Vee construction. This ensures true tracking and maximizes the effective life of the grinder's built-in accuracy.



WHEELHEAD ASSEMBLY

The wheelhead assembly features rigid design and construction for long-term precision. It is easily accessed for wheel change and maintenance (pictured with optional over-the-wheel dresser).



AUTOMATIC LUBRICATION

The reliable lubrication system assures proper oil distribution to necessary components to ensure smooth, trouble-free machine performance. All components are easily accessible for routine maintenance (pictured with cover removed).



PREMIUM GRADE COMPONENTS

The best components make the best machine. Castings, electrical, electronic and mechanical components - whatever the part, you'll find only the best on an Okamoto.

ACC SA1 Series AUTOMATIC GRINDERS

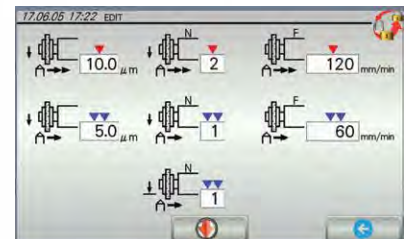
Rock-Solid construction and standard high-performance features make the ACC-SA1 Series the “Production Man’s” grinder.

Its efficient Shift-Plunge Cycle assures fast stock removal. Programmable Dressing with Dress Compensation is standard and dramatically boosts productivity by freeing operators from constant manual dressing - great for hard-to-grind materials. Less idle time means more production and profits!

- AC servo driven vertical feed system boasts an astounding 0.00001" minimum downfeed increment.
- Crossfeed minimum increment is 0.0001". Crossfeed Position is easily set through the “Teach” function.
- Programmable dressing and dress compensation is standard.
- High productivity Shift-Plunge cycle.



Grinding Wheel Speed Set-Up



Automatic Dress with Compensation Function



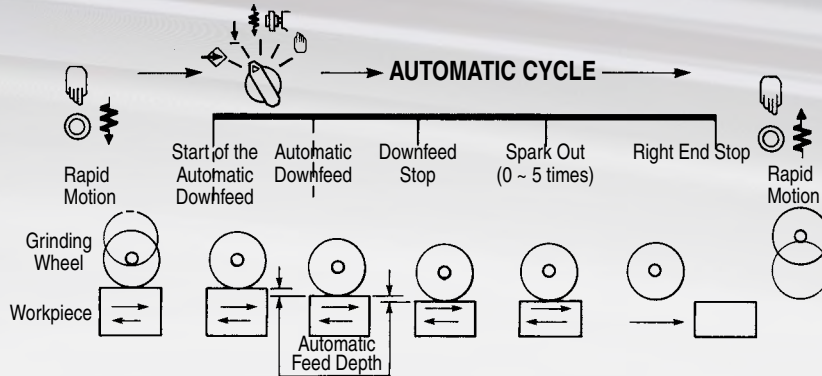


Crossfeed Position is easily set through the "Teach" function. A Crossfeed Pulse Generator with a minimum increment of 0.0001" is standard.



All functions are now integrated into the compact easy-to-use electronic control panel. This user-friendly control with self diagnostic functions is easy to learn and operate, even for first time users. Grind start position, and cross reverse are easily set. Dressing points are also easily set with the optional wheel dressers. Effortless Cross and Vertical Rapid Feeds are executed through simple touch pad control. A Manual Pulse Generator for vertical feed with minimum increments of 0.00001" is built into the control.

ACC GX Series AUTOMATIC GRINDERS



Built on the legendary Okamoto ACC-DX platform, the new ACC-GX Series provides a new dimension in surface grinding performance, reliability and value.

- Rock solid heavily ribbed, high grade Meehanite cast iron construction throughout provides rigidity and stability.
- Extra rigid column with tapered gibs on the vertical guideways provides strength for rigorous-duty grinding and high-precision for extra-fine grinding.
- Extra rigid wheelhead assembly for long-term precision.
- Automatic lubrication for trouble-free performance.
- Premium grade components throughout.
- Cartridge type wheel spindles utilize super-precision pre-loaded ball bearings for optimum stiffness.
- Full width tables eliminate overhang. Double-Vee Table Ways on both the longitudinal and crossfeed axes.
- Rapid vertical feed, extensive way protection, independent hydraulic and grinding wheel control, built-in chuck control & demagnetizer and much more.





The **ACC-6.18DX3** is the perfect smaller capacity hydraulic MDI control surface grinder. Rugged base and column construction supplies the rigidity and stability needed for both coarse and extra-fine grinding requirements. Extended saddle longitudinal ways reduce overhang to provide long machine life and peak accuracy. Hand scraped, Double-Vee Table Ways allow for heavier table loads and ensure true tracking for improved accuracy. Vertical feed is switchable - coarse and fine. Lubrication is provided by Okamoto's efficient gravity feed lubrication system.

Other standard features include Rapid Vertical Feed, efficient Automatic Lubrication, extensive Way Protection, conveniently positioned Controls, Independent Hydraulic and Grinding Wheel Control, built-in Chuck Control with variable holding power & demagnetizer and much more.

ACC-GX Control

The GX control has the control and convenience features that today's demanding machinist wants. Grinding Versatility, Quick Set-Up, Precise Control, Convenience and dependable long-term Reliability.

Okamoto truly has simplified surface grinding, even for first time operators. All control functions are conveniently located and are easily actuated by push buttons or switches. And since the GX Control uses solid state electronics, precise command execution is assured for consistent, repeatable accuracy and performance.

Automatic downfeed is selectable in increments from 0.00005" to 0.0015" (0.00001" manual increment) for the ultimate in Automatic Surface Grinding performance.

The GX Control delivers these versatile features:

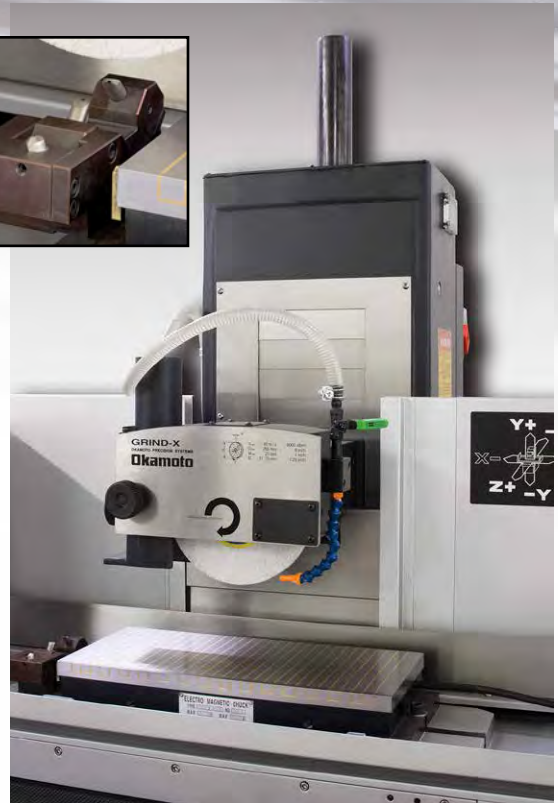
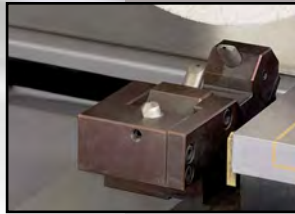
- Surface Grinding
- Traverse (Criss Cross) Grinding
- Plunge Grinding at one end or both ends of table stroke
- Rough & Finish Grind in Cycle
- Pre-Set Spark-Out Passes
- Table "Park" at Right End



Okamoto

ACC 8•18NC CNC FORM GRINDER

The ACC 8•18NC form grinder has the performance features of a full-function CNC surface grinder at a fraction of the price. Superb construction boasts heavily ribbed Meehanite cast iron throughout and full contact double-vee ways for unrivaled long-term peak precision. A 3-Point Diamond Dresser includes a 2-point angle dresser for form dressing and a 1-point dresser for straight dressing. A powerful 2-axis simultaneous-control CNC expands grinding flexibility. It's ideal for Surface, Slot, Step, Form and Contour grinding. User-friendly "Touch & Teach" conversational programming simplifies set-up and operation even for operators unfamiliar with CNC. A RS232C Port and PC Card Slot are standard. It all adds up to the optimum grinding flexibility, productivity and ease of operation.



Available with Full Enclosure (optional).



VERTICAL FEED MANUAL PULSE GENERATOR Precise vertical positioning of 0.0001"- 0.005" per manual pulse feed.



CROSSFEED MANUAL PULSE GENERATOR Precise crossfeed positioning of 0.00001" to 0.002".



ROTARY DRESSER delivers versatile, precise wheel form (optional).

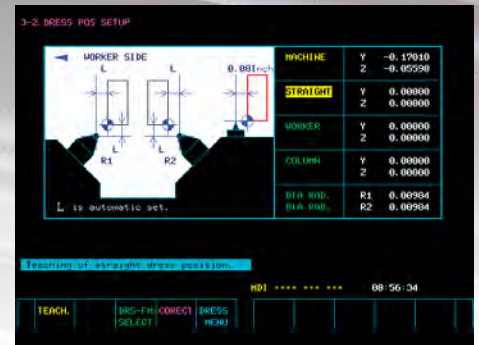


ACC818NC

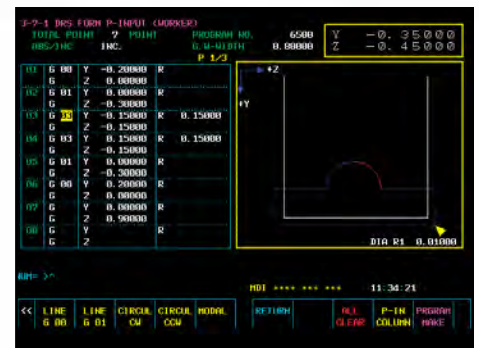
5. USER ORIGINAL
4. WORKING UP DATA
3. DRESSING DATA
2. FULL-AUTO GRIND
1. SEMI-AUTO GRIND

CYCLE TIME ON 3M55 2009/02/10
 *** Select data from soft keys.***
 MDI ***** 10:45:38
 S-AUTO F-AUTO DRESS MARK USER MAX CONTAL N-FUNC
 GRIND GRIND SET UP ORIGIN COND SET LIST

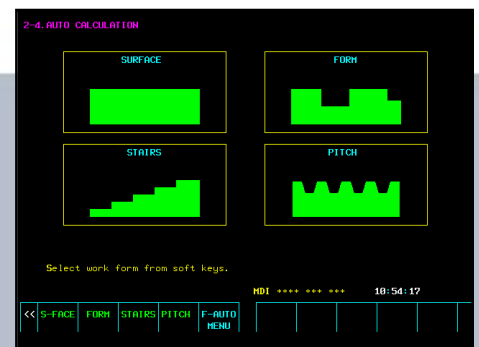
Main Data Screen



Wheel Dress Set-Up Screen



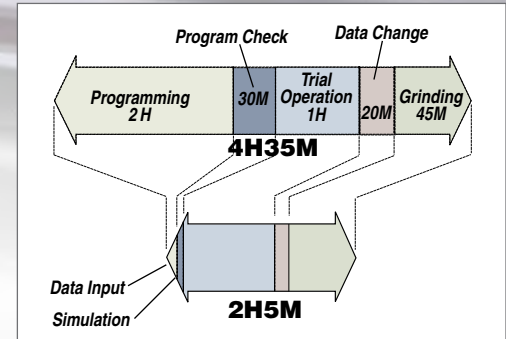
Dress Form Input Screen



Grinding Pattern Screen

ACC DXNC Series CNC FORM GRINDERS

Okamoto ACC-DXNC Series CNC Form Grinders are fast becoming the preferred choice of performance conscious machinists. And with good reason. They deliver all of the benefits of 2-axis simultaneous CNC controlled grinding without the time-consuming, complicated programming. Okamoto's user-friendly conversational CNC software slashes programming time. The operator simply chooses the set-up grinding mode, grinding pattern and cycle that's right for the job and the unique DXNC control does the rest! Now even unskilled operators can realize optimum grinding accuracy and productivity.



ACC-DXNC CNC Grinders dramatically reduce cycle times.

ACC-DXNC CNC Grinders boost throughput while delivering the highest degree of repeatable accuracy. A RS232C Interface simplifies program changeover, program saving and retrieval. This assures consistent, accurately ground parts even with multiple machine operators. Easy data input & fast set-up, consistent repeatable peak accuracy and precise CNC control make the DXNC ideal for both small-lot grinding as well as high volume production runs.





Swing Indexer

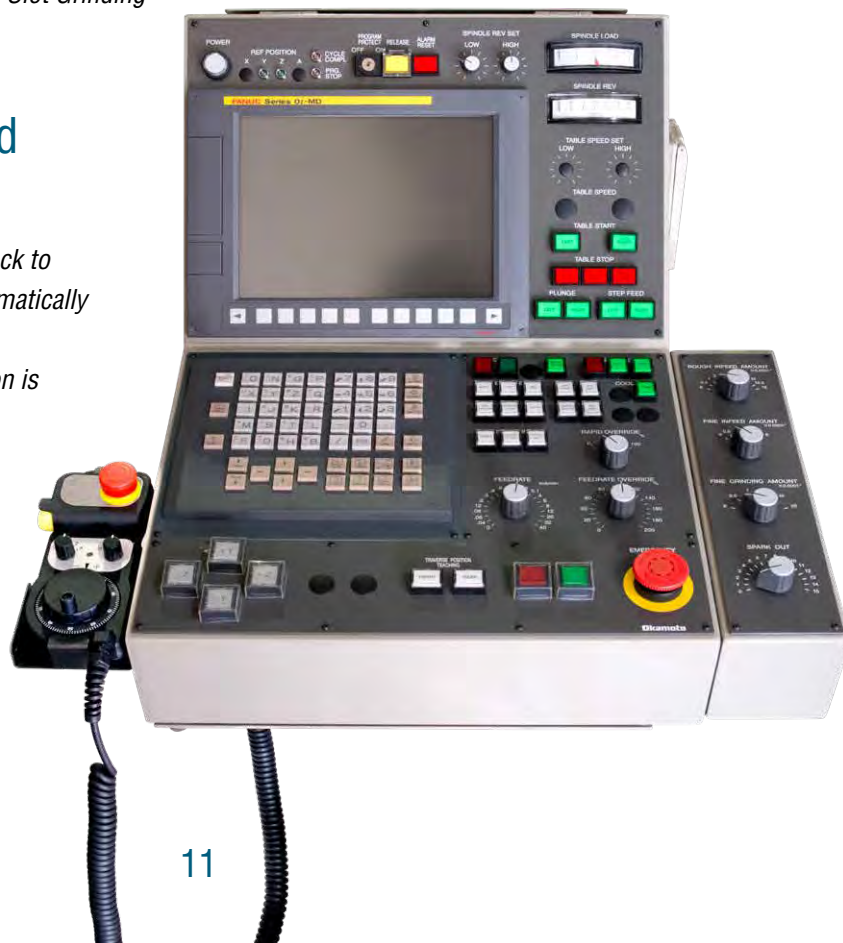


Dual Shoulder Dresser & Indexer for Slot Grinding

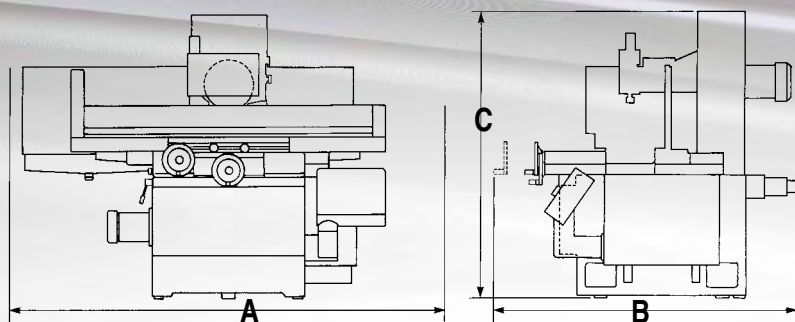


CNC Transverse Mount Indexer

A ladder display function simplifies program check to ensure accuracy and productivity. The CNC automatically controls grinding functions including dressing. Programmable dressing with dress compensation is standard on all DXNC grinders.



FLOOR PLANS



	8-20	12-24	16-24	16-32	20-24	20-40
ACC GX Series						
A	96"	108"	108"	108"	132"	171"
B	79"	89"	97"	103"	97"	103"
C	73"	73"	73"	84"	84"	84"
Weight Lbs.	5,160	6,920	7,980	8,350	10,120	11,290

ACC SA1 Series						
A	96"	108"	108"	108"	131"	171"
B	76"	89"	92"	100"	92"	101"
C	73"	73"	73"	84"	86"	84"
Weight Lbs.	5,250	7,010	8,070	8,440	10,210	11,380

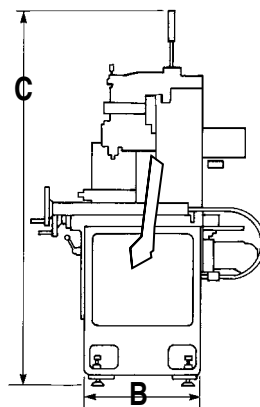
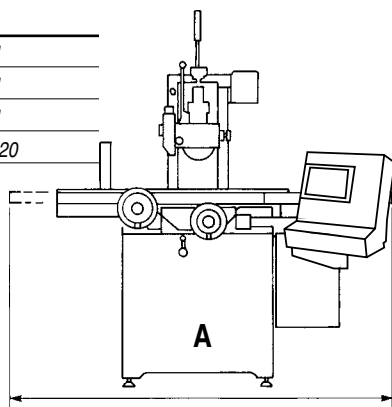
ACC DXNC Series						
A	95"	107"	107"	130"	107"	178"
B	72"	79"	87"	87"	97"	100"
C	97"	95"	95"	107"	105"	102"
Weight Lbs.	5,160	6,175	7,055	8,820	7,720	10,580

ACC 8-18NC

A	79"
B	66"
C	68"
Weight Lbs.	3,600

ACC 6-18 DX3

A	77"
B	51"
C	79"
Weight Lbs.	2,420



	ACC 6•18 DX3	ACC 8•18NC	ACC GX, SA1, DXNC Series					
			8•20	12•24	16•24	16•32	20•24	20•40
Table Capacity								
Working Surface (W x L)	6" x 20"	7.87" x 20.86"	8" x 21.6"	12" x 24"	16" x 25.6"	16" x 33.5"	20" x 25.6"	20" x 41.3"
Max. Movement (Manual)	20.8"	20.86"	25.6"	29.5"	29.5"	37.4"	29.5"	45.3"
Max. Dist. Wheel to Table	11.7"	14.07"	15.7"	13.6"	13.6"	21.5"	21.5"	21.5"
Magnetic Chuck (W x L)	6" x 18"	8" x 18"	8" x 20"	12" x 24"	16" x 24"	16" x 32"	20" x 24"	20" x 40"
Capacity Incl. Chuck	264 lbs	265 lbs	440 lbs	925 lbs	925 lbs	1,540 lbs	1,540 lbs	1,540 lbs
T Slots (No. x W)**	1 x 0.67"	1 x 0.67"	1 x 0.67"	3 x 0.67"	3 x 0.67"	3 x 0.67"	3 x 0.67"	3 x 0.67"
Grinding Wheel								
Wheel Size (D x W x B)	8" x 1" x 1.25"	8" x 0.23"-1 x 1.25"	8" x 1" x 1.25"	12" x 1.5" x 5"	12" x 1.5" x 5"	12" x 1.5" x 5"	12" x 1.5" x 5"	12" x 1.5" x 5"
Wheel Speed (60 Hz)	3,480 rpm	3,600 rpm	3,600 rpm	1,800 rpm	1,800 rpm	1,800 rpm	1,800 rpm	1,800 rpm
Motors								
Grinding Wheel Spindle	2 hp	2 hp	2 hp (3 hp*)	5 hp (7.5 hp*)	5 hp (7.5 hp*)	5 hp (7.5 hp*)	5 hp (7.5 hp*)	5 hp (7.5hp*)
Vertical Feed	0.5 hp AC Servo	0.6 hp AC Servo	0.5 AC Servo Motor					
Hydraulic Oil Pump	1 hp	1 hp	1 hp	2 hp	2 hp	3 hp	3 hp	3 hp

*Opt. - DXNC Models Only.

**T-Slots not available on ACC GX and SA1 models.

ACC 6•18 DX3		ACC GX Series 8•20, 12•24, 16•24, 16•32, 20•24, 20•40	ACC SA1 Series 8•20, 12•24, 16•24 16•32, 20•24, 20•40	ACC 8•18NC	ACC DXNC Series 8•20 12•24, 16•32
Table Longitudinal					
Longitudinal Feed Rate	0.33 ~ 66 ft/min	1 ~ 82 ft/min		0.33 ~ 66.67 ft/min	3 ~ 82 ft/min
Crossfeed Manual					
Feed Per Handwheel Graduation	N/A	N/A	0.0001" / 0.0005"	0.00001" / 0.0001" / 0.005" / 0.002"	0.00001" / 0.0001" / 0.005" / 0.002"
Jog Feed	N/A	N/A	0 ~ 40 in/min	0 ~ 40 in/min	0 ~ 40 in/min
Automatic					
Intermittent Feed	0.0001 ~ 0.16 in/min	0.02" ~ 0.4" (8•20), 0.02" ~ 0.8" (all others)		0.02" ~ 0.4"	0.02" ~ 0.4" 0. 02" ~0.8"
Continuous Feed	0.1 ~ 40 in/min	4 ~ 40 in/min	0.004 ~ 40 in/min	0.3 ~ 3.2 in/min	0.3 ~ 3.2 in/min
Wheel Vertical Feed Automatic					
Feed Rate	0.00005" - 0.0015"	0.00001" - 0.0015"		0.00005" - 0.0015" Semi-Automatic 0.00001" - 0.004" Full Automatic	0.00005" - 0.0015" Semi-Automatic 0.00001" - 0.004" Full Automatic
Spark-Out Passes	0 - 5	0 - 5	0 - 10	0 - 15	0 - 15
Feed Per Handwheel Graduation	0.00001" (x .1) 0.0001" (x 1) 0.001" (x 10)	N/A N/A N/A	0.00001" (x .1) 0.0001" (x 1) 0.0005" (x 5)	0.00001" (x .1) 0.0001" (x 1) 0.0005" (x 5)	0.00001" (x .1) 0.0001" (x 1) 0.0005" (x 5)
Rapid Vertical Feed					
	23.6 in/min	23.6 in/min		40 in/min	40 in/min

Specifications subject to change without notice.
Machines in this brochure are pictured with options.

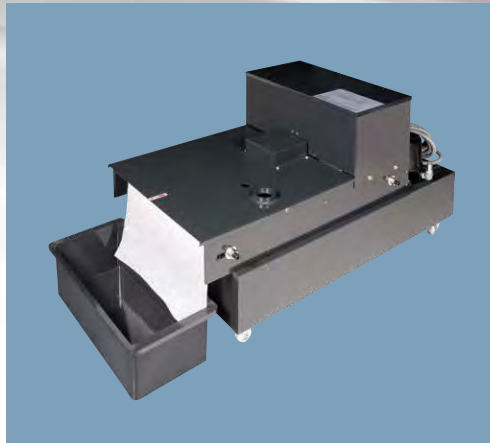
OPTIONS

Pages 14 & 15 feature just a few of the many optional accessories available for your high-performance ACC Saddle Type Surface Grinders. Consult your Okamoto Sales Professional for a complete list of available options.



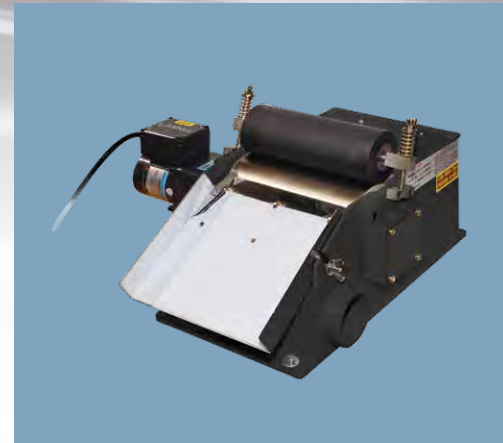
Coolant System with Dust Suction

Efficiently removes grinding dust from work envelope.



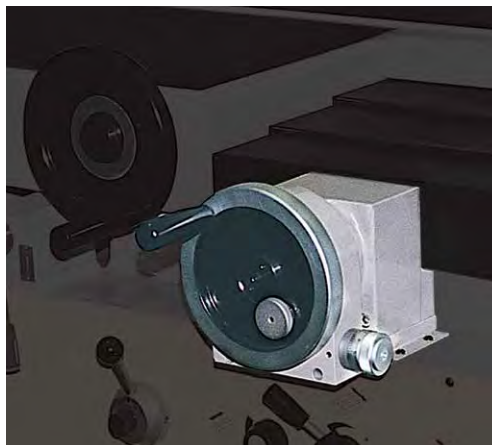
Coolant Systems

Available in a wide variety of configurations. (Paper filter type shown.)



Magnetic Separator

Efficiently separates swarf from coolant fluid.



Micro Crossfeed

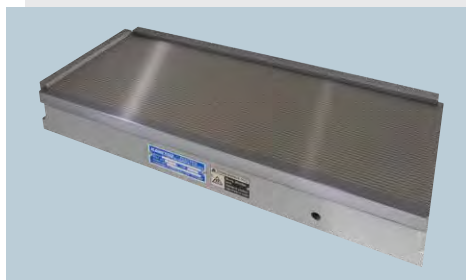
For precise manual crossfeed positioning.



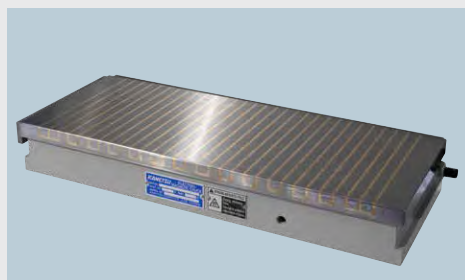
Crossfeed Digital Display with Glass Scale



Electromagnetic Chuck (Longitudinal Pole)



Electromagnetic Chuck (Transverse Pole)



Electromagnetic Chuck (Okamoto Brand)



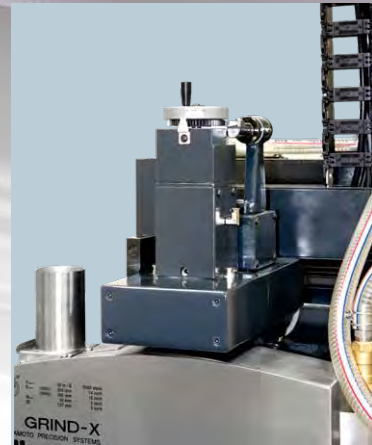


Grinding Wheel Balancer

Balances grinding wheels quickly, precisely and efficiently.



Manual Overhead Wheel Dresser



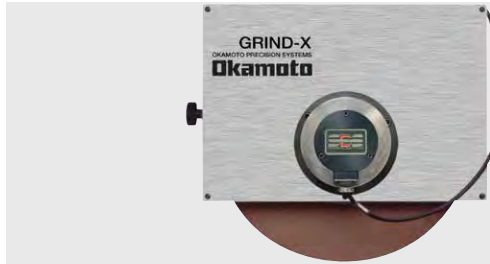
Hydraulic Overhead Wheel Dresser

Simplifies grinding wheel dressing and provides true wheel form.



Oil Temperature Regulator

Minimizes thermal growth.



Dynamic Wheel Balancing System



LED Worklight



The only manufacturer in the world
supplying overall solutions for a total
abrasive process.



Okamoto Corporation Chicago USA



Okamoto Machine Tool
Europe GmbH Germany



Okamoto
Thai Company LTD.



Okamoto Machine Tool
China



Okamoto Corporation
Semi Conductor Equipment Division
CA USA



Midwest Sales
KY

East Coast Sales
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West Coast Sales
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Annaka Factory Japan



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