

# KENT PRECISION SURFACE GRINDERS

SADDLE & COLUMN TRAVELING SERIES

KENT



KGS-510AHD



KGS-84AHD

**KENT**

KENT INTERNATIONAL USA, INC.





# AHD 3-AXES AUTOMATIC MODEL S MANUAL MODEL



**KGS-616S**



**KGS-618S**



**KGS-250AHD**



**KGS-1020AHD**



**KGS-63AHD**



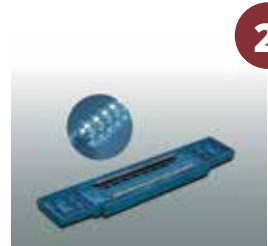
**KGS-84AHD**

## FEATURES

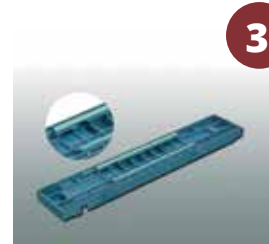
1. Well designed cast iron structure provides excellent dampening.
2. The ball bearing slide ways ensure smooth and easy operation.\*
3. Hand-scraped Turcite ways guarantee long lasting performance.\*\*
4. Automatic lubrication pump for guide ways and leadscrews.(1020AHD, 63AHD, 84AHD).
5. Automatic down-feed gearbox for accurate down-feed increments (AHD models).
6. Low voltage safety control panel with a separate electric cabinet.
7. Cartridge type spindle with high precision, preloaded angular contact ball bearings.
8. Separate hydraulic tank prevents heat and vibration from being transferred to the machine (AHD models).



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\* For KGS-616 / 250AHD only

\*\* For KGS- 1020 / 63 / 84AHD only

## DESCRIPTIONS

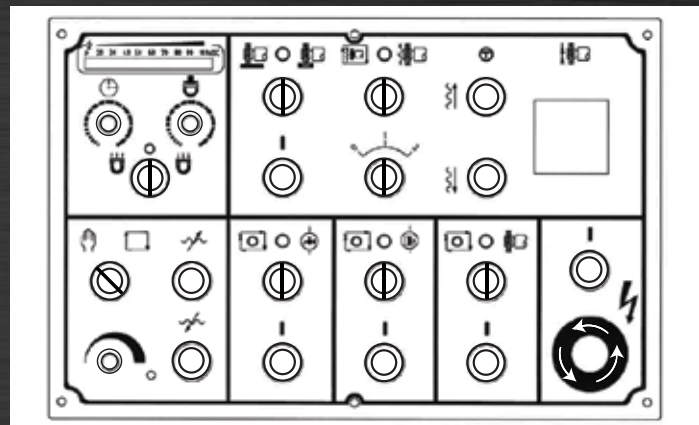
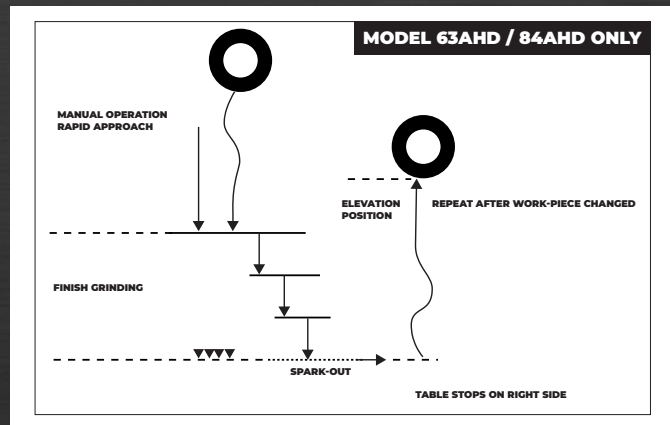
1. Compound table design with column fixed to the bed provides versatile operation. All cast iron components are well designed and heavily ribbed for the best rigidity and dampening capacity.
2. 616 and 250AHD feature ball bearing table and D-2 slide ways that are hardened and precision ground to ensure smooth and easy operation.
3. All models other than the 616/250 have Turcite-B lining for both the cross-feed double "V" guide-ways and the table V and Flat ways. They are also hand-scraped, with sufficient lubrication to guarantee easy maintenance and long lasting performance.
4. High precision Class 7 angular contact ball bearings are used on the cartridge spindle, integrated with a dynamically balanced shaft, sealed and lubricated for life. All the spindles are assembled at Kent by skilled and experienced technicians in temperature-controlled clean room. The result is a spindle that will provide years of trouble-free service with minimum temperature change, noise or vibrations.
5. The automatic down-feed gearbox is designed to achieve fine and accurate down-feed increments and avoid worn out parts.





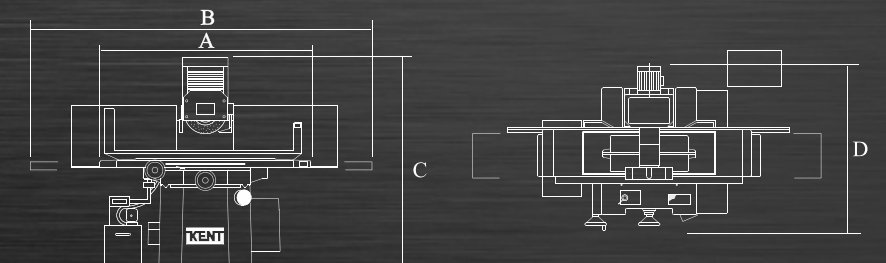
# AHD 3-AXES AUTOMATIC MODEL S MANUAL MODEL

## AUTOMATIC GRINDING CYCLE



## PRINCIPAL DIMENSIONS

MODEL	A	B	C	D
616S	46"	64"	68"	48"
618S	57"	76"	79"	48"
250AHD	60"	81"	70"	57"
1020AHD	69"	94"	70"	71"
63AHD	89"	102"	72"	98"
84AHD	116"	141"	74"	108"



## STANDARD EQUIPMENT



Micro 0.00005" down-feed and cross-feed devices, for 616 model.



Automatic plunge and surface grinding modes, AHD models.



Full-length rear splash guard (AHD models).



Over-head wheel dresser (250AHD, 1020AHD and 63AHD).



Hydraulic over-head wheel dresser (84AHD).



Standard tools.

Name-brand electro-magnetic chuck (AHD models).  
"Kent" chuck control (AHD models).  
Magnetic separator & coolant system (AHD models).

Halogen work light.  
Grinding wheel, flange and extractor.  
Operation manual with parts list.

	SPECIFICATION	UNIT	616S	618S	250AHD	1020AHD	63AHD	84AHD
<b>CAPACITY</b>	OVERALL WORKING AREA	INCH	16X6	18X6	18X8	20X10	24X12	32X16
	LONGITUDINAL TABLE TRAVEL	INCH	16 15/16	18 5/8	21 1/4	23 1/4	28	36 1/4
	CROSSFEED SADDLE TRAVEL	INCH	7 7/8	7 1/4	10 1/2	10 7/8	13 3/8	17 3/4
	DISTANCE SPINDLE CENTER TO TABLE	INCH	17 5/16	14 15/16	18 11/16	19 1/4	24	23 5/8
	TABLE LOAD INCLUDING MAGNETIC CHUCK	LBS	220	265	220	660	1000	1540
<b>TABLE</b>	T-SLOT	INCH X N	1/2X1	1/2X1	1/2X1	1/2X1	1/2X1	1/2X1
	LONGITUDINAL TABLE SPEED	FT/MIN	N/A	N/A	15-85	15-85	15-85	15-85
	CROSSFEED ON HANDWHEEL 1 GRA.	INCH	0.001	0.0005	0.001	0.001	0.001	0.001
	CROSSFEED ON HANDWHEEL 1 REV.	INCH	0.2	0.2	0.2	0.2	0.2	0.2
	AUTO CROSSFEED PER STROKE	INCH	N/A	N/A	0.004-0.475	0.004-0.475	0.004-0.5	0.004-0.5
	POWER CROSSFEED	INCH/MIN	N/A	N/A	38 1/2	38 1/2	47 1/4	47 1/4
<b>VERTICAL MOVEMENT</b>	MANUAL MICRO FEED (PER GRA.)	INCH	0.00005	N/A	N/A	N/A	N/A	N/A
	WHEEL DIMENSION	INCH	7X1/2X1 1/4	7X1/2X1 1/4	7X1/2X1 1/4	7X1X1 1/4	14X1 1/2X5	14X1 1/2X5
	SPINDLE SPEED	RPM	3480	3360	3480	3480	1740	1740
	VERTICAL ON HANDWHEEL 1 GRA.	INCH	0.001	0.0002	0.0005	0.0005	0.00005	0.00005
	VERTICAL ON HANDWHEEL 1 REV.	INCH	0.1	0.05	0.1	0.1	0.025	0.025
	AUTO DOWNFEED INCREMENT	INCH	N/A	N/A	0.0001-0.001	0.0001-0.001	0.00025-0.00125	0.00025-0.00125
	RAPID ELEVATING	INCH/MIN	N/A	N/A	N/A	N/A	6 1/4	6 1/4
	MANUAL MICRO FEED (PER GRA.)	INCH	0.00005	N/A	N/A	N/A	N/A	N/A
<b>MOTOR</b>	SPINDLE MOTOR	HP X P	2X2	2X2	2X2	3X2	7.5X4	7.5X4
	ELEVATION MOTOR	WATT	N/A	N/A	N/A	N/A	80	80
	HYDRAULIC MOTOR	HP X P	N/A	N/A	1X4	2X4	2X6	3X6
	COOLANT MOTOR	HP	1/8	1/8	1/8	1/8	0.4	0.4
<b>DIMENSION &amp; WEIGHT</b>	CROSSFEED MOTOR	WATT	N/A	N/A	40	40	40	80
	MACHINE HEIGHT	INCH	68	79	70	70	72	74
	FLOOR SPACE	INCH	64X48	71X48	81X57	94X71	102X98	141X108
	NET WEIGHT	LBS	1380	1550	2860	3150	4100	6160
	PACKING DIMENSION	INCH	60X46X77	72X53X79	88X66X83	88X66X83	90X82X87	108X89X91
GROSS WEIGHT	LBS	1650	1880	3300	3590	4600	6760	



# COLUMN TRAVELING SERIES AHD 3-AXES AUTOMATIC



**KGS-510AHD**



**KGS-615AHD**



**KGS-620AHD**



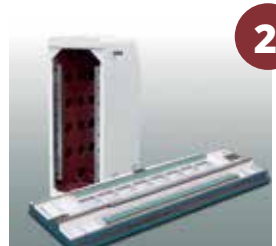
**KGS-820 / 830 / 920 / 930AHD**

## FEATURES

1. Box type and double walled structure for excellent dampening.
2. Designed for a highly precise, smooth elevation of the wheel head.
3. The flanged cartridge type spindle is sealed and greased for life.
4. Hydraulic dresser, friendly and easily operated as a standard attachment.
5. Automatic lubrication pump for all guide ways and lead screws.
6. Separate hydraulic tank prevents heat and vibrations from being transferred to the machine.
7. It's excellent designed and packed, thus permits easy maintenance.
8. Automatic down feed cycle: plunge-cut and surface grinding modes.



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## DESCRIPTIONS

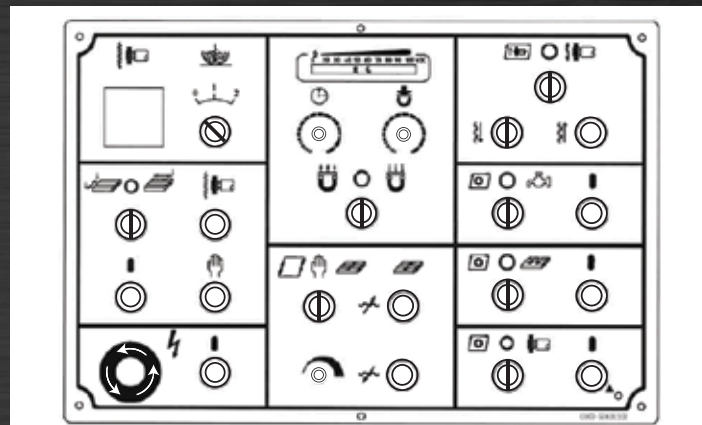
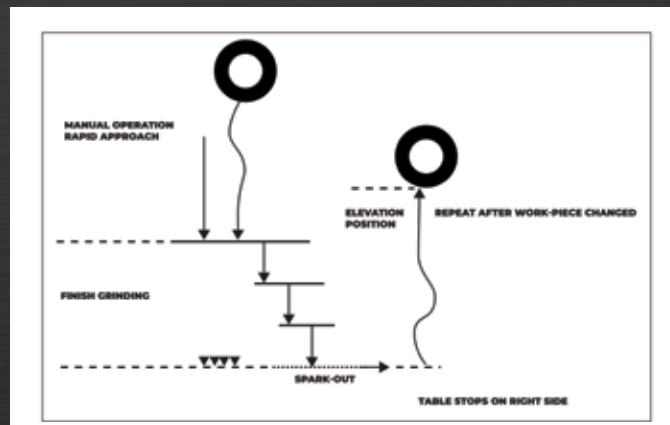
1. The working table executes only longitudinal movements. This ensures full contact and support from the machine bed, even in the table limit position. V and flat guide-ways are laminated with Turcite B, to guarantee smooth table movement regardless of the load on the table.
2. The column carries out only cross feed movements. This guarantees uniform contact between the column slide and machine bed in any column position. The column slide is guided by V and flat Turcite B laminated ways, hand scraped to obtain smooth and stick-free movement.
3. The spindle housing carries out only vertical movements. This provides a constant distance between the vertical slide ways and the grinding wheel, creating a perfectly perpendicular movement of the spindle in relation to the working table. The housing construction is also designed for better rigidity..
4. The flanged cartridge type spindle is supported by class 7 (CP4) precision angular contact ball bearings, preloaded and select-fitted into spindle cartridge. This will guarantee a maximum run out of 0.000075" for stable and accurate grinding.
5. Hydraulic dresser is employed for column-traveling models and is mounted on the spindle head to allow the wheel to be dressed on the grinding height of column position. The dresser device provides a minimum 0.0005" graduation for productivity and ease of operation.
6. The control operates with preset increment and spark-out times. Grinding cycle for Plunge-cut and Surface grinding both with sequences of fine grinding – spark-out – retraction. Spindle motor stop, coolant stop, and table parking can be chosen by the operator in any combination.





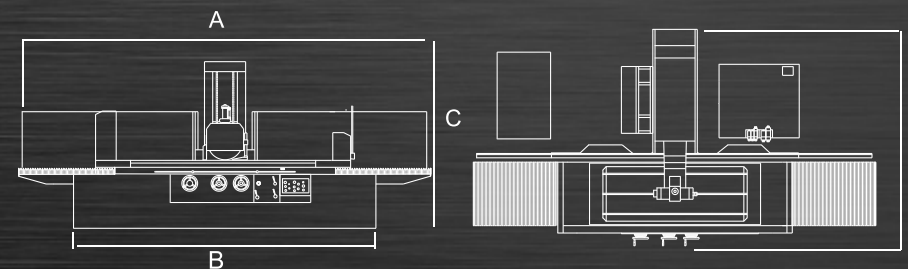
# COLUMN TRAVELING SERIES AHD 3-AXES AUTOMATIC

## AUTOMATIC GRINDING CYCLE



## PRINCIPAL DIMENSIONS

MODEL	A	B	C	D
510AHD	95"	175"	95"	86"
615AHD	119"	228"	95"	96"
620AHD	173"	244"	95"	106"
820AHD	173"	236"	113"	134"
825AHD	228"	288"	113"	134"
830AHD	228"	342"	113"	134"
920AHD	173"	236"	113"	134"
925AHD	228"	288"	113"	134"
930AHD	228"	342"	113"	134"



## STANDARD EQUIPMENT



Full length rear splash guard.



Hydraulic over-head wheel dresser.



Automatic lubrication pump with re-circulating system.



Operation manual with parts list.

- Convenient console box with wheels.
- Automatic cycle controlled down-feed with Plunge-cut and Surface Grinding modes.
- Hydraulic criss-cross mode for model 820AHD and up.
- Name-brand electro-magnetic chuck.
- "Kent" variable holding power chuck control.
- Magnetic separator coolant system (510AHD). Magnetic separator & paper filter coolant system (615AHD and up).
- Halogen work lamp.
- Grinding Wheel, flange and extractor.

	SPECIFICATION	UNIT	510AHD	615AHD	620AHD	820AHD	825AHD	830AHD	920AHD	925AHD	930AHD
<b>CAPACITY</b>	OVERALL WORKING AREA	INCH	40X20	60X24	80X24	80X32	100X32	120X32	80X36	100X36	120X36
	LONGITUDINAL TABLE TRAVEL	INCH	44 7/8	63	87 3/4	88 1/2	108 1/4	128	88 1/2	108 1/4	128
	CROSSFEED COLUMN TRAVEL	INCH	21 1/4	26	26	34 3/4	34 3/4	34 3/4	37 3/4	37 3/4	37 3/4
	DISTANCE SPINDLE CENTER TO TABLE	INCH	23 1/4	23 5/8	23 5/8	34 5/8	34 5/8	34 5/8	34 5/8	34 5/8	34 5/8
	TABLE LOAD INCLUDING MAGNETIC CHUCK	LBS	2200	2860	3300	5060	6160	6600	5500	6160	6600
<b>TABLE</b>	T-SLOT	INCH X N	5/8X3	5/8X3	5/8X3	11/16X3	11/16X3	11/16X3	11/16X3	11/16X3	11/16X3
	LONGITUDINAL TABLE SPEED	FT/MIN	15-85	15-85	15-85	30-92	30-92	30-92	30-92	30-92	30-92
	CROSSFEED ON HANDWHEEL 1 GRA.	INCH	0.001	0.001	0.001	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
	CROSSFEED ON HANDWHEEL 1 REV.	INCH	0.2	0.2	0.2	0.08	0.08	0.08	0.08	0.08	0.08
	T-SLOT	INCH	0.02-0.47	0.02-0.47	0.02-0.47	0.2-0.8	0.2-0.8	0.2-0.8	0.2-0.8	0.2-0.8	0.2-0.8
LONGITUDINAL TABLE SPEED	INCH/MIN	59	59	59	59	59	59	59	59	59	
<b>VERTICAL MOVEMENT</b>	WHEEL DIMENSION	INCH	14X1 1/2X5	14X2X5	14X2X5	20X2X5	20X2X5	20X2X5	20X2X5	20X2X5	20X2X5
	SPINDLE SPEED	RPM	1740	1740	1740	1150	1150	1150	1150	1150	1150
	VERTICAL ON HANDWHEEL 1 GRA.	INCH	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001
	VERTICAL ON HANDWHEEL 1 REV.	INCH	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02
	AUTO DOWNFEED INCREMENT	INCH	0.0002-0.0016	0.0002-0.0016	0.0002-0.0016	0.0002-0.0016	0.0002-0.0016	0.0002-0.0016	0.0002-0.0016	0.0002-0.0016	0.0002-0.0016
RAPID ELEVATING	INCH/MIN	11	11	11	11	11	11	11	11	11	
<b>MOTOR</b>	SPINDLE MOTOR	HP X P	7.5X4	10X4	10X4	15X6	15X6	15X6	15X6	15X6	15X6
	ELEVATION MOTOR	HP X P	1/4X4	1/2X4	1/2X4	1/2X4	1/2X4	1/2X4	1/2X4	1/2X4	1/2X4
	HYDRAULIC MOTOR	HP X P	3X6	5X6	5X6	10X6	15X6	15X6	10X6	15X6	15X6
	COOLANT MOTOR	HP	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
CROSSFEED MOTOR	HP X P	1/4X6	1/4X6	1/4X6	HYDRAULIC	HYDRAULIC	HYDRAULIC	HYDRAULIC	HYDRAULIC	HYDRAULIC	
<b>DIMENSION &amp; WEIGHT</b>	MACHINE HEIGHT	INCH	94	94	94	112	112	112	112	112	112
	FLOOR SPACE	INCH	175X86	228X96	244X106	236X134	288X134	342X134	236X145	288X134	342X145
	NET WEIGHT	LBS	11000	13750	18700	34100	36350	38550	34750	37050	39200
	PACKING DIMENSION	INCH	139X85X89	186X90X98	213X90X99	213X135X113	276X135X113	284X144X113	213X135X113	283X135X113	284X144X113
	GROSS WEIGHT	LBS	13500	15950	21350	38500	43200	43600	39200	41450	43600

# **KENT** | **ADDITIONAL INFORMATION HISTORY & OTHER PRODUCTS**

## **OUR HISTORY**



KENT Industrial Co., Ltd. was built in 1966 in Taiwan. Today, our company covers over 2 million square feet (190,000 square meters) and includes 300 staff members. Our main products are: surface grinders, CNC surface grinders, cylindrical grinders, rotary grinders, double column surface grinders, and double column machining centers.

KENT America office was opened in California, United States in 1979. Now, KENT International USA, Inc. is serving our customers in North and South America with excellent products and service.

For additional information please visit our website [www.kentgrinder.com](http://www.kentgrinder.com)



**HEADQUARTERS**  
Located in Taiwan



**DOU LIU FACTORY**  
Located in Taiwan



**KENT INTERNATIONAL  
USA INC.**

## **WHY KENT?**



**"KENT" INCLUDES KENT  
INDUSTRIAL CO. LTD. IN TAIWAN  
& KENT INTERNATIONAL USA, INC.**



**KENT USA BASED IN  
TUSTIN, CALIFORNIA**

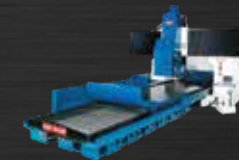
We are not an imitator but a true manufacturer. "KENT" includes Kent Industrial Co. Ltd in Taiwan and Kent International USA, Inc.

KENT USA or KENT Industrial USA, Inc based in Tustin is a trader and doesn't carry "KENT" products.

## **OTHER PRODUCTS**



**KGS SURFACE GRINDER /  
PROGRAMMABLE  
DOWNFEED (CROSSFEED)**



**KGP DOUBLE COLUMN  
SURFACE GRINDER**



**KMV DOUBLE COLUMN  
MACHINING CENTER**



**KGC UNIVERSAL  
CYLINDRICAL GRINDER**



**KGR ROTARY TABLE  
SURFACE GRINDER**





**KENT INTERNATIONAL USA, INC.**

[WWW.KENTGRINDER.COM](http://WWW.KENTGRINDER.COM)

**KENT INTERNATIONAL USA, INC.**

📍 14161 ALBERS WAY, CHINO, CA 91710

📞 909-393-9100 | 📠 909-393-5678

**KGK INTERNATIONAL CORP.**

📍 1550 LOUIS AVENUE ELK GROVE VILLAGE, IL 60007

📞 224-808-0508 | 📠 847-640-0211