

# KENT PRECISION SURFACE GRINDERS

WIZARD SERIES

KGS-510WM



KGS-63WM



KENT INTERNATIONAL USA, INC.





# WIZARD SERIES

WM1 • WM2 • WMA1 • WMA2

## STRUCTURE

- Castings are made of high quality ribbed cast iron, which have been tempered to achieve extreme rigidity.
- X & Z slide ways are laminated with Turcite-B. This is done to guarantee smooth movement regardless of the load on the working table.
- The elevation guideways (Y axis) are hardened and ground, then firmly secured to the column structure. The result is a smooth highly precise, operation of the wheel head.
- The spindle is supported by P4 preloaded super precision angular contact ball bearings. This will guarantee a maximum run-out of 0.00005" for heavy duty, stable and accurate grinding.
- Hydraulic system with a specially designed valve enables smooth table reversing with a 28m/min table speed. Separate hydraulic unit and standard oil cooling unit, prevent temperature rise of hydraulic oil and permits easy maintenance.
- Automatic lubricating system to ensure smooth and long lasting operation in all 3-axes.



**KGS-250WM**



**KGS-1020WM**



**KGS-84WM**



**KGS-63WM**



**KGS-510WM**



**KGS-615,620WM**



**KGS-820,825,920,925WM**



**KGS-830,930WM**

CAPACITY		SPECIFICATION	UNIT	250	1020	63	84	510	615	820	825	830	920	925	930
OVERALL WORKING AREA		INCH	18 X 8	20 X 10	24 X 12	32 X 16	40 X 20	60 X 24	80 X 32	100 X 32	120 X 32	80 X 36	100 X 36	120 X 36	
LONGITUDINAL TABLE SPEED		INCH	21.25	23	28	36.6	45	63	88.5	108.2	128	88.5	108.2	128	
CROSS FEED SADDLE TRAVEL		INCH	10.5	11	13.5	17.7	21.3	26	34.5	34.8	34.8	37.8	37.8	37.8	
DISTANCE SPINDLE CENTER TO TABLE		INCH	18.6	19.3	24	24	22.6	23.6	34.5	34.5	34.5	34.5	34.5	34.5	34.5
TABLE LOAD INCLUDING MAGNETIC CHUCK		LBS	220	550	930	1540	2200	2860	5060	6160	6600	5060	6160	6600	
T-SLOT		INCH X N	1/2 X 1	1/2 X 1	1/2 X 3	1/2 X 3	5/8 X 3	5/8 X 3	11/16 X 3	11/16 X 3	11/16 X 3	11/16 X 3	11/16 X 3	11/16 X 3	11/16 X 3
LONGITUDINAL TABLE SPEED WM1		FT/MIN	4-82	4-82	4-82	4-82	24-82	24-82	30-98	30-98	30-98	30-98	30-98	30-98	30-98
LONGITUDINAL TABLE SPEED WM2		FT/MIN	4-98	4-98	4-98	4-98	4-98	4-98	4-98	4-98	4-98	4-98	4-98	4-98	4-98
CROSS FEED ON HANDWHEEL (WM1) 1 GRA		INCH	0.001	0.001	0.001	0.001	0.001	0.001	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004	0.0004
CROSS FEED ON HANDWHEEL (WM1) 1 REV		INCH	0.2	0.2	0.2	0.2	0.2	0.2	0.08	0.08	0.08	0.08	0.08	0.08	0.08
CROSS FEED ON MPG (WM2) 1 GRA		INCH	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
CROSS FEED ON MPG (WM2) 1 REV		INCH	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
AUTO CROSS FEED PER STROKE WM1		INCH	0.004 - 0.5	0.004 - 0.5	0.004 - 0.5	0.004 - 0.5	0.02 - 0.47	0.02 - 0.47	0.02 - 0.8	0.02 - 0.8	0.02 - 0.8	0.02 - 0.8	0.02 - 0.8	0.02 - 0.8	0.02 - 0.8
AUTO CROSS FEED PER STROKE WM2		INCH	0.0002 - 4	0.0002 - 4	0.0002 - 4	0.0002 - 4	0.0002 - 4	0.0002 - 4	0.0002 - 4	0.0002 - 4	0.0002 - 4	0.0002 - 4	0.0002 - 4	0.0002 - 4	0.0002 - 4
RAPID CROSS FEED WM1		INCH/MIN	40	40	48	48	60	60	60	60	60	60	60	60	60
RAPID CROSS FEED WM2		INCH/MIN	60	60	60	60	60	60	60	60	60	60	60	60	60
GRINDING WHEEL		WHEEL DIEMNSION (OD X T X ID)	INCH	8 X 0.5 X 1.25	8 X 1 X 1.25	14 X 1.5 X 5	14 X 1.5 X 5	14 X 1.5 X 5	14 X 2 X 5	20 X 2 X 5	20 X 2 X 5	20 X 2 X 5	20 X 2 X 5	20 X 2 X 5	20 X 2 X 5
SPINDLE SPEED		R.P.M.	3480	3480	1740	1740	1740	1740	1150	1150	1150	1150	1150	1150	1150
VERTICAL MOVEMENT		VERTICAL ON HAND WHEEL 1 GRA	INCH	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
VERTICAL ON HAND WHEEL 1 REV		INCH	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005
AUTO DOWN FEED INCREMENT (MIN.)		INCH	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005	0.00005
RAPID ELEVATING		INCH/MIN	12	12	12	12	12	12	12	12	12	12	12	12	12
MOTOR		SPINDLE MOTOR	HP X P	2 X 2	3 X 2	7.5 X 4	7.5 X 4	7.5 X 4	7.5 X 4	15 X 2	15 X 2	15 X 2	15 X 2	15 X 2	15 X 2
ELEVATION MOTOR (AC SERVO)		HP	0.5	0.5	0.5	0.5	0.8	0.8	1.3	1.3	1.3	1.3	1.3	1.3	1.3
HYDRAULIC MOTOR		HP X P	1 X 4	1 X 4	2 X 6	3 X 6	3 X 5	5 X 6	10 X 6	10 X 6	10 X 6	10 X 6	10 X 6	10 X 6	10 X 6
CROSS FEED MOTOR WM1		WATT X P	40 X 6	40 X 6	40 X 6	80 X 6	190 X 6	190 X 6	HYDRAULIC	HYDRAULIC	HYDRAULIC	HYDRAULIC	HYDRAULIC	HYDRAULIC	HYDRAULIC
CROSS FEED MOTOR WM2		AC SERVO HP	0.5	0.5	0.5	0.5	1	1	1.3	1.3	1.3	1.3	1.3	1.3	1.3
DIMENSION & WEIGHT		MACHINE HEIGHT	INCH	70	70	72	74	94.5	96	112	112	112	112	112	112
FLOOR SPACE		INCH	71 X 56	83 X 71	103 X 99	142 X 103	175 X 83	229 X 101	237 X 133	296 X 133	343 X 133	237 X 146	288 X 146	343 X 146	
NET WEIGHT		LBS	3400	3700	4600	6160	11000	13750	34100	36350	38550	34760	37050	39200	
GROSS WEIGHT		LBS	3600	3900	4800	6600	13200	15950	38500	43200	43600	39160	41450	43600	

## WM1 PROGRAMMABLE DOWNFEED SURFACE GRINDER WM2 PROGRAMMABLE DOWNFEED AND CROSSFEED SURFACE GRINDER

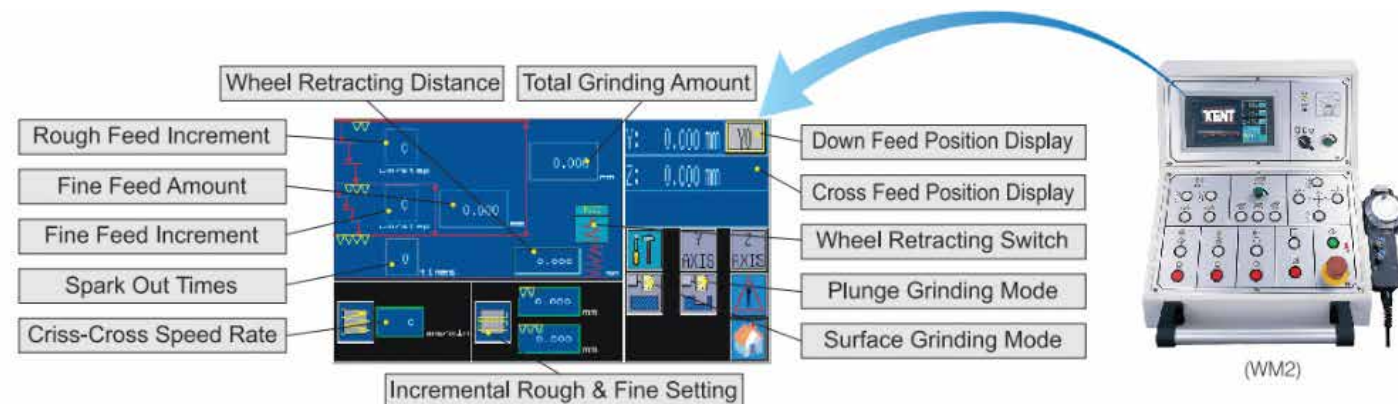
### CONTROL:

- Separate Ergonomically designed electrical control box offers a comfortable and convenient operation environment.
- At the heart of the control system is a Mitsubishi PLC, which will provide years of reliable and trouble-free operation. Service centers are strategically located all over the world offering prompt after-sale service.
- LCD touch screen panel, simply touch the screen to set the grinding variables. Even a beginner can become an expert without complicated training. Easy to learn and easy to use!
- Downfeed mechanism is driven by an AC servomotor with grade C5 precision ball-screw, with minimum 0.001" increment capacity.
- (WM2) Crossfeed mechanism is driven by an AC servomotor with grade C5 precision ball-screw, with minimum 0.001" increment capacity.
- Manual Pulse Generator (MPG) is also provided for user's convenience for both downfeed and crossfeed.
- The crossfeed travel is set by the push-button on the console; different crossfeed increments can be set for both rough and finish grinding.
- (WM2) With servo controlled crossfeed movement, the surface grinding mode can be selected to grind a slot wider than the grinding wheel width.
- The control system will store the last grinding cycle in memory. Simply press the cycle start button to repeat the previous operation. Production efficiency is dramatically improved.

### OPERATION:

Simple key-in the total grinding amount, rough grinding increment, fine grinding amount and increment, spark-out passes, wheel spindle retracting distance. After cycle is complete; table parks, spindle and coolant either remains running or shuts off. This can be set according to operator's preference.

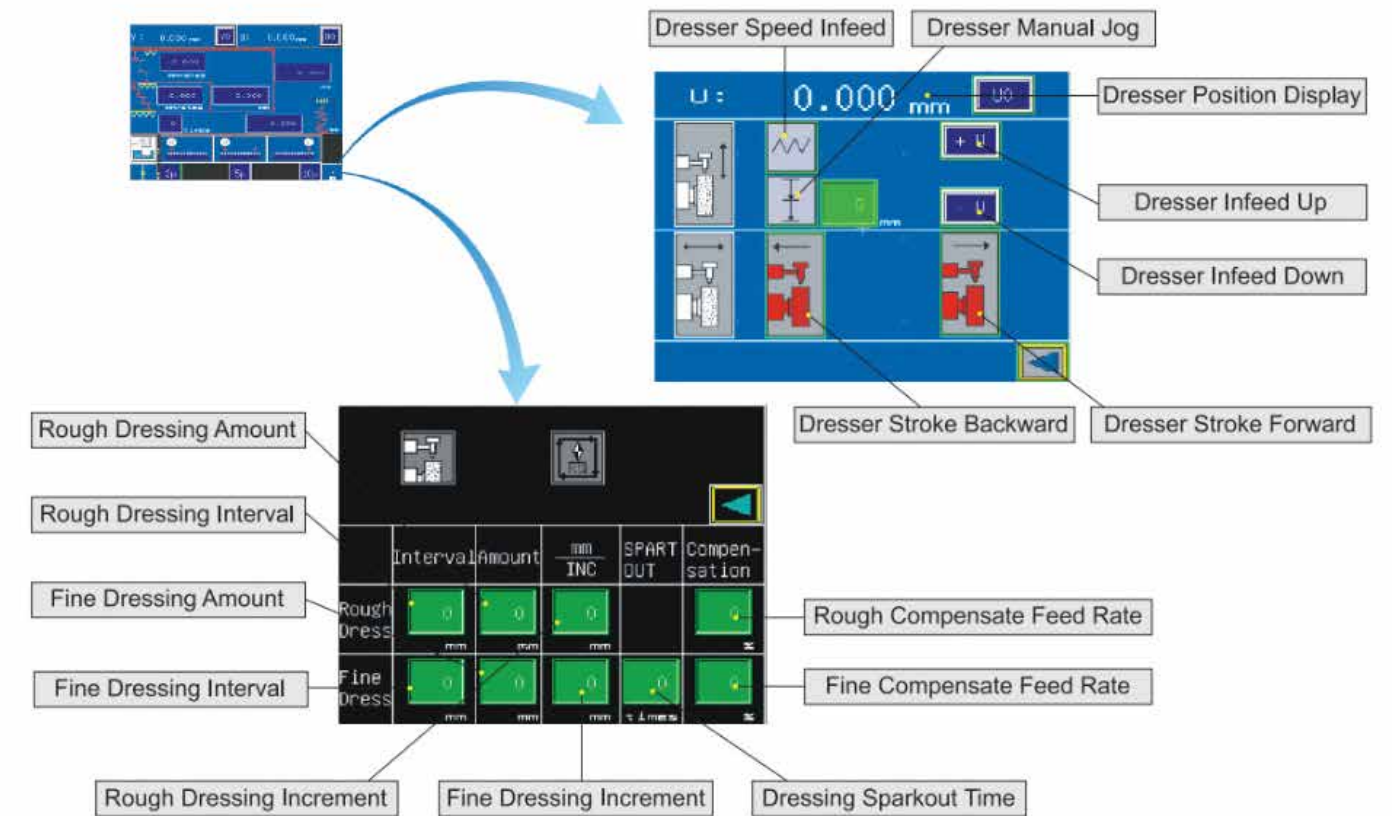
(WM2) With all the functions of WM1 model, Z-axis length of travel starting point and rough feeding increment & fine feeding increment can all be keyed in. Criss-cross grinding function is standard on column traveling models.



## WMA1 PROGRAMMABLE DOWNFEED SURFACE GRINDER WITH AUTO DRESSER WMA2 PROGRAMMABLE DOWNFEED & CROSSFEED SURFACE GRINDER WITH AUTO DRESSER

### CONTROL:

- With all the feature and functions of WM1/WM2 plus Programmable Automatic Wheel Dressing and Compensation cycle.
- Integrated in automatic grinding cycle, dressing diamond feeding is driven by AC servo motor with ball screw while dressing stroke is driven by hydraulic with adjustable passing speed.
- The dressing parameters such as: Interval, Dressing Amount, Dressing Increment, and Wheel Head Compensation Feed Rate can all be keyed in with minimum increment 0.001".
- Dressing parameters can be set in different setting for both the rough and fine grinding process.
- The control system will hold the last setting in memory. Simply press the cycle start button to execute the previous grinding procedure. Production efficiency is dramatically improved.





# **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**

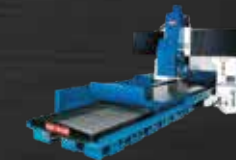
We are not a trader but a true manufacturer. "KENT" includes Kent Industrial Co. Ltd in Taiwan and Kent International USA, Inc.

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  
DOWNFEEED (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)

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