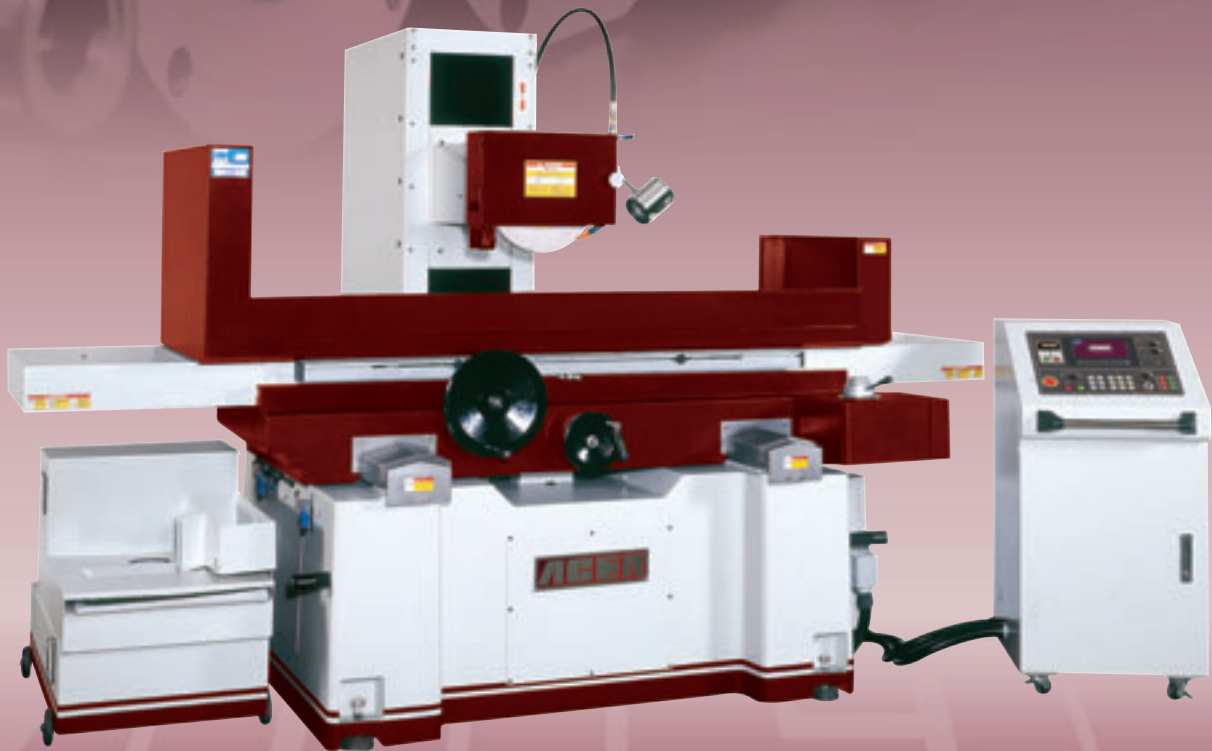




# SUPRA-PD Grinder Series

[www.acerlinks.com](http://www.acerlinks.com) • [www.aceronline.net](http://www.aceronline.net) (U.S. only)

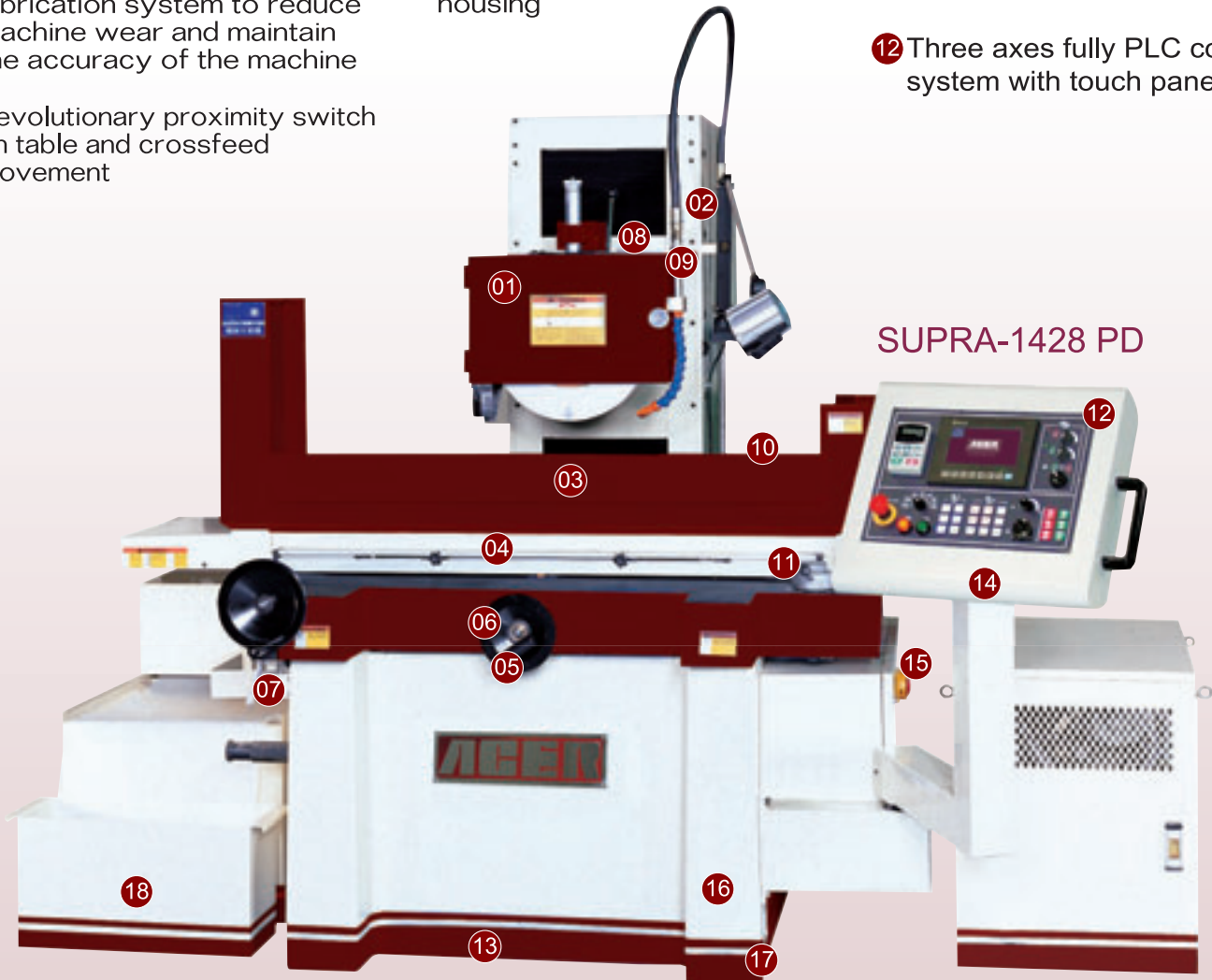


**Technology** | **Creativity** | **Reliability**

**An Unswerving Commitment to Excellence**

# MAIN FEATURE

- 01 Spindle run-out within 0.00015"
- 02 Enlarged honeycomb-ribbed column is designed for heavy duty grinding Standard high is at 28-5/16"
- 03 Continuous flood type lubrication system to reduce machine wear and maintain the accuracy of the machine
- 04 Revolutionary proximity switch on table and crossfeed movement
- 05 Zero-setting slip rings with venier scale on Y axis.
- 06 Crossfeed precision ball screw allows for zero backlash
- 07 Saddle lock/unlock device
- 08 Turcite-B coated spindle housing
- 09 Direct drive spindle motor Front mount flanged type spindle design for heavy duty grinding
- 10 Able to hold more than 1,000 lbs as work load
- 11 Preset table speed hydraulic control allows for fine increment of table speed
- 12 Three axes fully PLC controlled system with touch panel display.

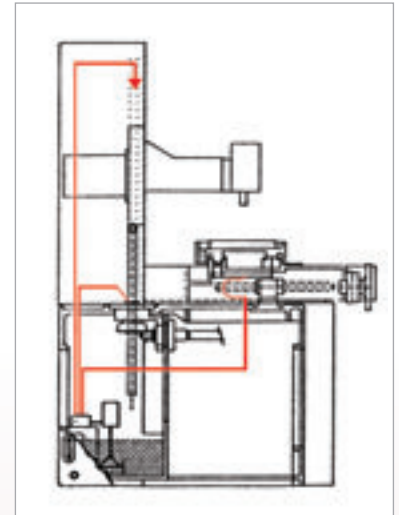


- 13 FC-25 casting iron allows for maximum damping and stress relief
- 14 Safety 24V control circuit.
- 15 Power disconnect safety device on electric-cabinet
- 16 Machine weight more than 7,000 lbs
- 17 Leveling bolts and pads
- 18 Magnetic separator & paper filter system

# MAIN FEATURE

## ■ Supra-1020 PD

- 3HP spindle motor
- Front mount spindle with run-out within 0.0001"
- Over all flatness within 0.00015" at 10"X20" grinding capacity
- Revolutionary sensor triggering directional control valve
- PLC controlled 24 volt control circuit
- Full ribbed machine base and column
- Two speed rapid elevation travel
- Recirculating auto lubrication system for all slideways and leadscrews
- Turcite-B coated table and crossfeed ways
- Precise stepping motor for downfeed increment control -- 0.00005-0.002"
- Electronic saddle lock device
- Table speed is adjusted with flow-control turning knob
- FC 25 casting weighing at 3,916 lbs
- Hold maximum work load at 840 lbs



Recirculating auto lubrication system

## SUPRA-1020 PD



## SUPRA-1632 PD

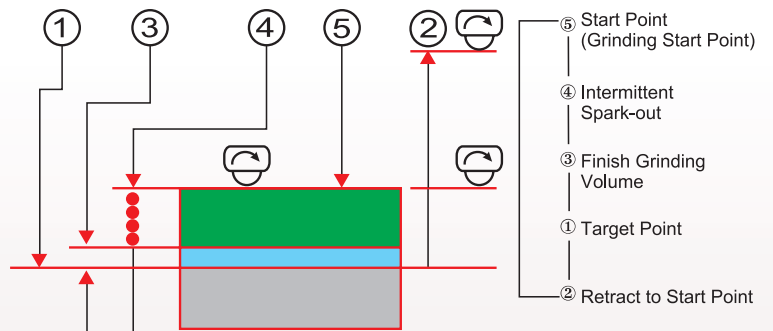


## ■ Standards

manufactured to exact to tolerances:	D.I.N.	J.I.S.	ACER STD
Parallelism of longitudinal movement	0.0004"/8"	0.0004"/18"	0.0001"/18"
Parallelism of cross movement	0.0004"/6"	0.0004"/6"	0.00012"/6"
Parallelism between spindle centerline to table surface	0.0004"/4"	0.0008"/12"	0.0004"/12"
Squareness between spindle centerline to table movement	0.0002"/4"	0.0008"/12"	0.0006"/12"
Squareness of longitudinal movement to cross movement	0.0004"/4"	0.0008"/4"	0.0006"/10"
Squareness between vertical, cross & longitudinal movement	0.0004"/4"	0.0004"/4"	0.0008"/12"
Run-out of spindle nose	0.0002"	0.0004"	0.00008"

# HUMANWARE FOR HIGH PRECISION

- On PD models, user can set the vertical zero point, start point, finish grinding volume, target point and the grinding wheel start point. The machines features a simple & clear digital display & touch control panel for easy learning and efficient operation.
- Vertical feed powered by an efficient AC motor for rapid up / down, stepping motor for slow up / down movement and downfeed increment.
- Vertical positioning is displayed on the screen showing spindle position and setting the start point, rough grinding volume, finish grinding volume, downfeed volume for finish grinding, target point, and intermittent spark-out position.
- Cross transverse travel is powered by a brushless DC servo motor. This allows step feeding & continuous infeed grinding. The speed of wheel dressing can be adjusted on the panel.



Patented elevating transmission mechanism



Table travel adjustment, provide built-in-type(hidden) proximity switches to feature safe & easy operation.



Enlarged double-V base. The guide ways are equipped with recirculating lubrication to resist wear on the guide-ways, increase machine accuracy, & reduce vibrations during grinding.



1228-2040 models table speed control



Honeycomb-ribbed column



# NEW GENERATION HUMANWARE

## ■ COLUMN

Enlarged honeycomb ribbed column especially suitable for heavy duty grinding.

## ■ HIGH ANTI-WEAR GUIDE-WAYS

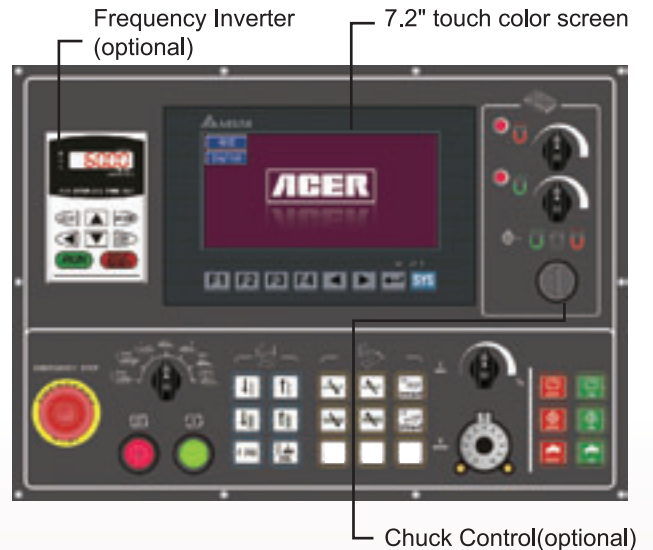
The saddle rests on precision hand scraped double V ways, and the table rests on precision hand scraped V and flat ways which coated with "TURCITE-B" These guide ways are equipped with recirculating lubrication system to resist wear of guide ways, and provide stable movement and repetitive accuracy.

## ■ CROSS FEED

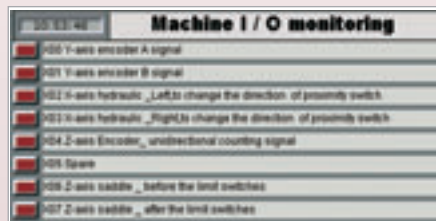
Cross feed ball screw is driven by Brushless DC motor, and there are have two speed rates - rough and finish grinding speed to increase grinding efficiency and grinding accuracy.

## ■ OPERATION PANEL

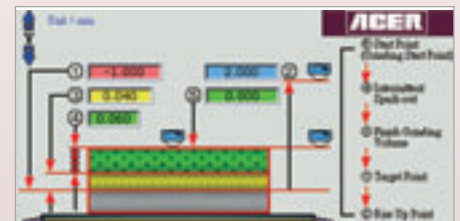
Delta's 7.2" touch color screen is equipped with Delta's PLC digital control and ACER'S unique touch-mode operation system. They are easy to learn and operate.



Starting Picture



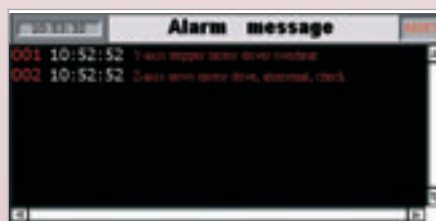
Machine I / O Monitoring



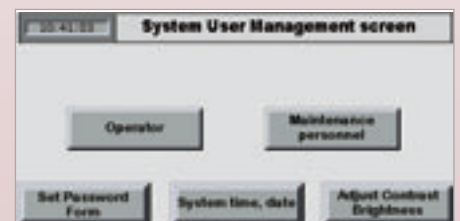
Grinding Dimension Input



Grinding Condition Input



Alarm Message



System Data

# OPTIONAL ACCESSORIES



Frequency Inverter



Electric Parallel Dresser



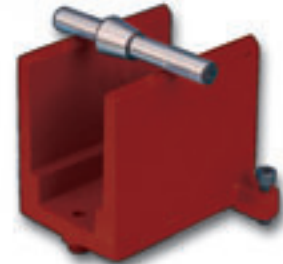
Digital Readout



Wheel Flange



Halogen light



Balancing Stand



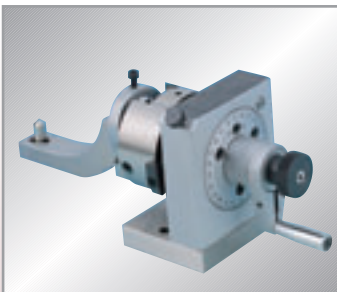
Roller Type Balancing Stand



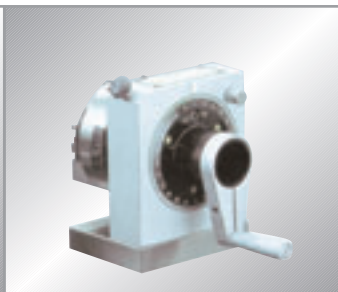
Precision Vise



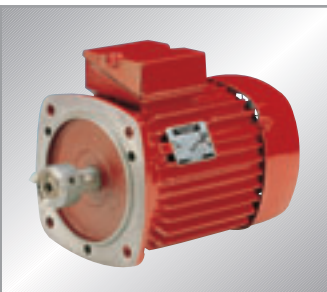
Concave / Convex Forming Dresser



Bi-directional Punch Former



Single-directional Punch Former



Dynamic balanced V-3 graded spindle motor.



Crossfeed lock and proximity switch design for crossfeed travel. (Model 1020 & above)

# OPTIONAL ACCESSORIES



Dust Suction & Coolant System



Permanent Magnetic Chuck



Electro Magnetic Chuck



Coolant System with Magnetic Separator



Coolant System



Coolant System with Paper Filter & Magnetic Separator



Dust Collector



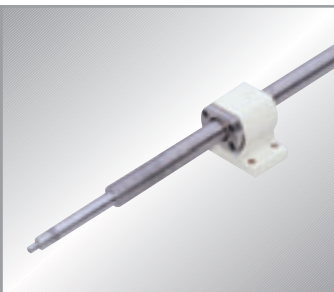
Overhead Parallel Dresser



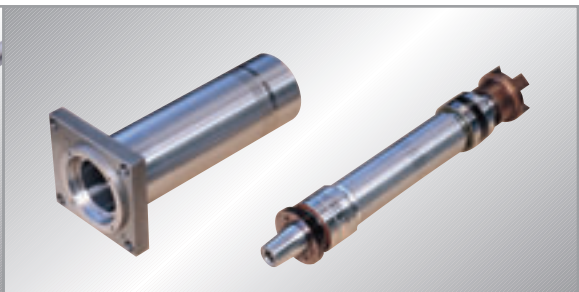
Chuck Control With Demagnetizer



Stepping motor on downfeed system ensures an accurate downfeed amount. (Model 818)



Crossfeed with ball screw design eliminates backlash. (Model 1428 & above)



Front mount four screws spindle with 4 super precision angular ball bearing. (Model 1428 & above)



# SUPRA PD SERIES SPECIFICATIONS

MODEL DESCRIPTIONS		Supra 818PD	Supra 1020PD	Supra 1224PD	Supra 1428PD	Supra 1436PD	Supra 1632PD	Supra 1640PD	Supra 2040PD
TABLE SIZE		203x460mm	254x508mm	300x600mm	305x712mm	305x915mm	406x813mm	406x1020mm	506x1020mm
		8" x 18"	10" x 20"	12" x 24"	12" x 28"	12" x 36"	16" x 32"	16" x 40"	20" x 40"
Max. Grinding Length	Longitudinal	18.9" (480mm)	20.47" (520mm)	23.62" (600mm)	28" (712mm)	36" (915mm)	32" (813mm)	40.16" (1020mm)	
Max. Grinding Width	Crosswise	8.98" (228mm)	11" (280mm)	11.81" (300mm)	13" (330mm)		16.14" (410mm)		19.69" (500mm)
Max. Distance from Table Top to Spindle Centerline		18.11" (460mm)	23.62" (600mm)	23" (585mm)	28.35" (720mm)				
Standard Magnetic Chuck Size		200x450mm (7.87"x17.72")	250x500mm (9.84"x19.69")	300x600mm (11.81"x23.62")	300x700mm (11.81"x27.56")	300x800mm (11.81"x31.5")	400x800mm (15.75"x31.5")	400x1000mm (15.75"x39.37")	500x1000mm (19.69"x39.37")
Longitudinal Movement of The Table	Max. Travel, Hydraulic	18.9" (480mm)	22.84" (580mm)	25.59" (650mm)	29.92" (760mm)	35" (890mm)		41.73" (1060mm)	
	Max. Travel, Manual	20" (510mm)	24.41" (620mm)	28.74" (730mm)	32.68" (830mm)	36.61" (930mm)		43.31" (1100mm)	
	Max. Travel, Infinitely Variable	60HZ, 5-25m/min ; 50HZ, 5-20m/min				60HZ, 5-25m/min ; 50HZ, 5-20m/min			
Cross Transverse Travel	Auto Transverse Increment	0.04"-0.4"(1~10mm)	0.04"-0.5"(1~13mm)	0.04"-0.75"(1~19mm)		0.04"-0.98"(1~25mm)			
	Auto Constant Feeding Speed	0.79"-12.6" (20~320mm/min)			0.79"-12.6" (20~320mm/min)				
	Max. Auto Transverse Travel	9.25"(235mm)	10.63"(270mm)	12.2"(310mm)	13.78"(350mm)		16.93"(430mm)		20.08"(510mm)
	Max. Manual Transverse Travel	9.84"(250mm)	11.81"(300mm)	13.39"(340mm)	14.96"(380mm)		18.11"(460mm)		20.47"(520mm)
	Handwheel per Revolution	0.2"(5mm)				0.2"(5mm)			
	Handwheel per Graduation	0.0008"(0.02mm)				0.0008"(0.02mm)			
Wheelhead Vertical Infeed	Automatic Downfeed	0.00004"-0.002"(0.001~0.05mm)			0.00004"-0.002"(0.001~0.05mm)				
	Step Feed(Jogging)	0.00004"(0.001mm)			0.00004"(0.001mm)				
	Rapid Travel, Approx	9.84"(250mm/min)	5.91"(150mm/min)		5.91"(150mm/min)				
	Slow Travel Approx.	0.236"(6mm/min)			0.236"(6mm/min)				
	Handwheel Revolution	0.4"(1mm)			0.4"(1mm)				
	Handwheel Graduation	0.0002"(0.005mm)			0.0002"(0.005mm)				
Grinding Spindle Drive	Speed	60HZ, 3450 R.P.M ; 50HZ, 2850 R.P.M			60HZ, 1750 R.P.M ; 50HZ, 1450 R.P.M				
	Power rating	2HP	3HP	5HP	7.5HP				
Standard Grinding Wheel	Diameter	8" (203mm)		12" (304mm)	14" (355mm)				
	Width	1/2" (12.7mm)	3/4" (19mm)	1 1/4" (31.75mm)	2" (50mm)				
	Bore	1 1/4"(31.75mm)		3"(76.2mm)	5"(127mm)				
Hydraulic Motor		1HPx6P	2HPx6P	2HPx6P	3HPx6P				
Crossfeed Motor		40Wx6P	80Wx6P			80Wx6P			
Elevating Motor		40Wx4P	80Wx4P	80Wx4P	1/4HPx6P				
Floor Space	cm	181x129x168	240x145x175	270x160x185	295x197x205	355x197x205	329x220x205	402x220x205	450x220x210
	inch	71.3x50.8x66.2	94.5x57.1x68.9	106.3x63x72.9	116.2x77.6x80.8	139.8x77.6x80.8	129.6x86.7x80.8	158.3x86.7x80.8	177.2x86.7x82.7
Weight	Net Approx.	2651 lbs(1205kgs)	3982 lbs(1810kgs)	4378 lbs(1990kgs)	6644 lbs(3020kgs)	7326 lbs(3330kgs)	7480 lbs(3400kgs)	8800 lbs(4000kgs)	10560 lbs(4800kgs)
	Gross Approx.	3205 lbs(1375kgs)	4725 lbs(2160kgs)	5038 lbs(2290kgs)	7744 lbs(3520kgs)	8140 lbs(3700kgs)	8800 lbs(4000kgs)	9900 lbs(4500kgs)	11440 lbs(5200kgs)
Rated Power Approx.		3.0HP	5.0HP	8.25HP	11.0HP				
Packing Dimensions	L x W x H	189x163x193	248x206x210	248x214x210	250x229x222	300x229x222	280x229x222	325x229x222	350x229x222
	Metric (inch)	(74.5"x64.2"x76")	(97.7"x81.2"x82.7")	(97.7"x84.3"x82.7")	(98.5"x90.2"x87.5")	(118.2"x90.2"x87.5")	(110.3"x90.2"x87.5")	(128"x90.2"x87.5")	(137.8"x90.2"x87.5")

Note: The manufacturer reserves the right to modify the design, specifications, mechanisms, etc. to improve the performance of machine without notice. All the specifications shown above are for reference only.



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