

LCER

Technology . Creativity . Reliability
An Unswerving Commitment to Excellence

High Precision Manual/Automatic Surface Grinder

Supra Series



Supra-618



Supra-1428/1632/1640AHD
(Shown W/Option)



Supra-618AH



Supra-818AHD
(Shown W/Option)



Supra-1020AHD
(Shown W/Option)

ACER

Precision Automatic Surface Grinder

Spindle run-out within
0.00015"

Enlarged honey comb-ribbed
column is designed for heavy
duty grinding
Standard high is at 28-5/16"

Continuous flood type
lubrication system to reduce
machine wear and maintain
the accuracy of the machine

Revolutionary proximity switch
on table and crossfeed
movement

Zero-setting slip rings with
venier scale on both Z & Y
axes

Crossfeed precision ball screw
allows for zero backlash

Saddle lock/unlock device

Magnetic separator & paper
filter system

FC-25 casting iron allows for
maximum damping and stress
relief

Turcite-B coated spindle
housing

Direct drive spindle motor
Front mount flanged type
spindle design for heavy duty
grinding

Able to hold more than
1,000 lbs as work load

Preset table speed hydraulic
control allows for fine
increment of table speed

Double V of crossfeed system
is 36" wide for maintaining
table flatness accuracy

Three axes fully microprocessor
controlled system with LED
panel display

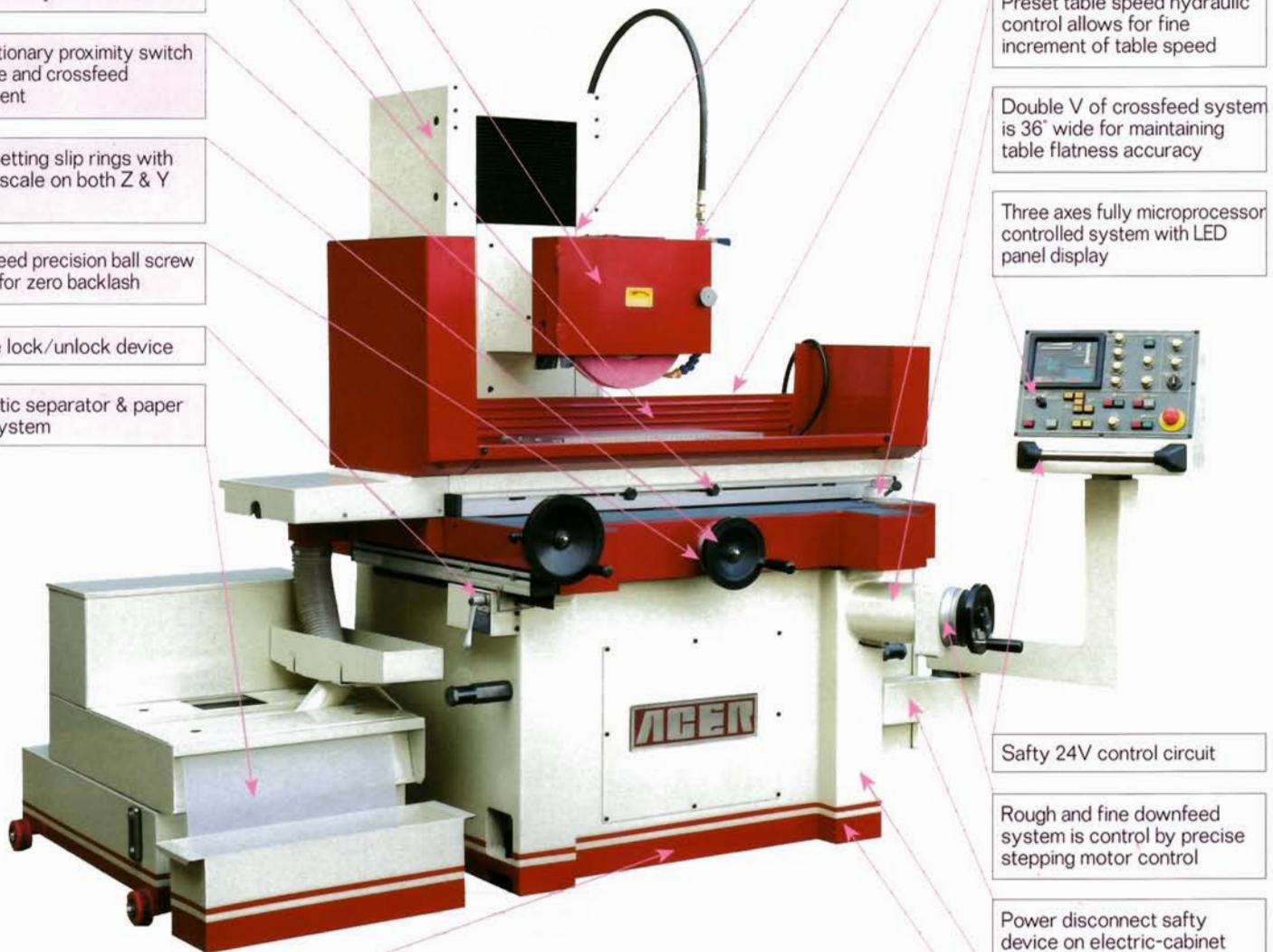
Safety 24V control circuit

Rough and fine downfeed
system is control by precise
stepping motor control

Power disconnect safety
device on electric-cabinet

Levelling bolts and pads

Machine weight more than
7,000 lbs



Supra - 1428/1632/1640AHD



Supra - 1020AHD

Supra - 1020AHD

- 5 HP 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
- Microprocessor controlled 24 volt control circuit
- Fully 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



Supra - 818AHD

- Dynamically balanced 3 HP spindle motor
- Front mount spindle with run-out within 0.00008"
- Over all flatness within 0.00012" at 8"x18" grinding capacity
- Revolutionary sensor triggering directional control valve
- Safety 24-volt, microprocessor controlled circuit
- Bello-type cover on crossfeed leadscrew
- Fully ribbed machine base and column
- Two speed rapid elevation control
- Precise stepping motor for downfeed increment control-- 0.00005-0.002"
- Recirculating auto lubrication system for all slideways and leadscrews
- Auto-lube indicator
- 9 position indexible table handwheel
- Special vacuum heat treated slideways at hardness up to HRC 62°
- Double-Vee lining crossfeed ways at 19.6" apart
- Ball-rolling table ways
- FC 25 high tensile iron weighing at 2,850 lbs
- Maximum work load at 520 lbs



Supra - 818AHD



Precision Manual/Automatic Surface Grinder



Supra - 618AH

Supra - 618AH

- 2 HP spindle motor
- Front mount spindle with run-out within 0.00008"
- 8" capacity wheel guard
- Per incremental downfeed is 0.0001"
- Table over-all flatness is within 0.00012"
- Revolutionary sensor triggering directional control valve
- Safety 24 volt control circuit
- Recirculating auto lubrication system for all slideways and leadscrews
- Auto-lube indicator
- 9 position indexible table handwheel
- Special vacuum heat treated slideways at hardness up to HRC 62°
- Double-Vee lining crossfeed ways at 19.6" apart
- Bello-type cover on crossfeed leadscrew
- Ball-rolling table ways
- FC 25 machine base weighs more than 1,804 lbs
- Maximum work load at 380 lbs

Supra - 618 / 818

- 2 HP spindle motor
- Front mount spindle with run-out within 0.00008"
- Table over-all flatness within 0.00012"
- Wheel guard with capacity for 8" wheel
- Longitudinal table stroke is 20"
- Continuous loop-cog timing belt system
- Crossfeed lock
- Adjustable longitudinal table stops
- Meehanite casted saddle with Double-Vee Turcite ways
- Safety 24 volt circuit control
- Push button manual starter with overload protection
- Distance between Double-Vee is 19.6" apart
- The width of machine base is 22"
- Incorporated tool base
- Ball-rolling table ways
- FC 25 machine base weighs more than 1,584 lbs
- Maximum work load at 320 lbs



Supra - 618/818

Standards

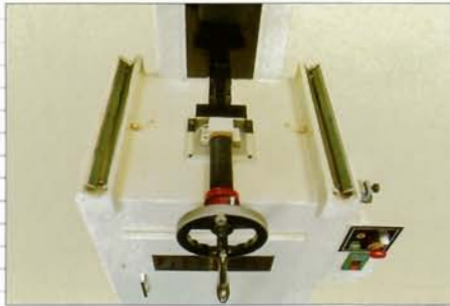
Manufactured to exact tolerances:

	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"/12"	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"

Features & Constructions



Dynamic balanced V-3 graded spindle motor.



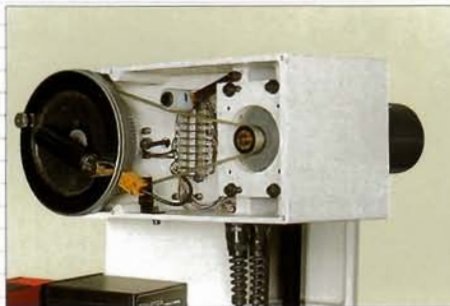
Extra wide saddle & Turcite-B lining double-V crossfeed ways ensure the table movement always within the machine base.



Machine is equipped with splash guard, halogen light & balancing stand.



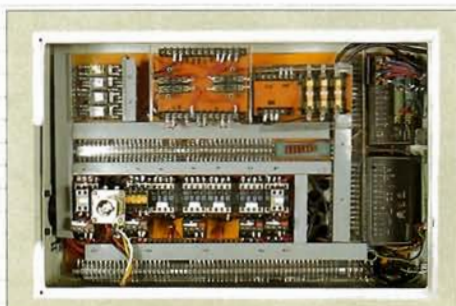
Modular downfeed gear panel allows for easy maintenance and repair. (Model 1428 & above)



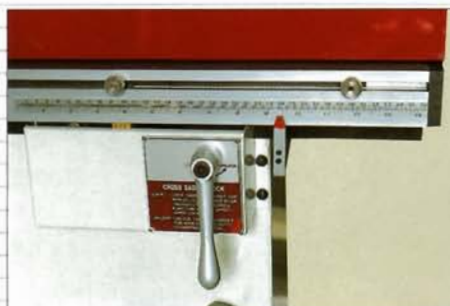
Stepping motor on downfeed system ensures a accurate downfeed amount. (Model 818)



Separated motor controls and downfeed gear panel is a special for 1020 only.



Simple and oriented electrical cabinet.



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



Preset table speed hydraulic control allows for fine control of the table speed (Model 1428 & above). Revolutionary proximity switch makes sure the table movement smooth and easy.



Features & Constuctions



The guideways of the column is hardened & ground to Rockwell C 62 degree. The column is also heavily ribbed.



Precision hardened & ground crossfeed leadscrew with double nut. Also shown is the bello type cover. (Model 618 to 1020)



Circular auto-lubrication system. (Model 618 & 1020)



Model 1428 and above have honey comb ribbed column.



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



Recirculating auto-lube with outside gauge indicator. The oil pan can be clean with simple take-out action.



Indexible longitudinal hand wheel. (Model 618 & 818)



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



Table longitudinal ball roller slideways are vacuum heat-treated up to RC 62, and hardness of them is through out the whole bar. Therefore, the slideways have no chance to deform, and the accuracy of the machine is guaranteed



Front mount six screws spindle with 4 super precision angular ball bearings. (Model 618 to 1020)

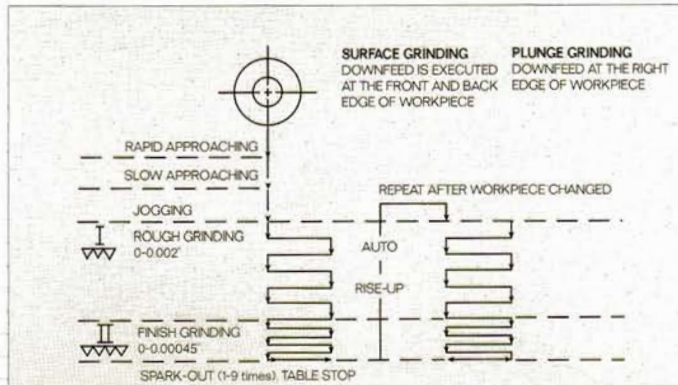


Control Panel & Functional Descriptions

AHD Control Panel Model 1428 & Above

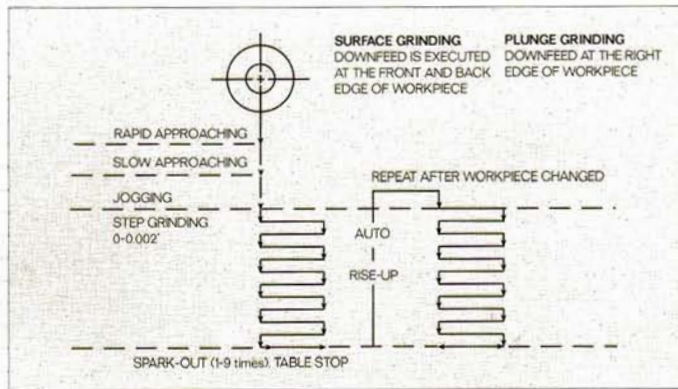


Grinding Procedures



- Provide plunge & surface grinding modes.
- Vertical feed powered by double motors: Stepping motor for Auto-downfeed (Min. increment: 0.00005"); AC motor for Rapid & slow up/down
- Maximum cycle downfeed: (0.45"), can extend to whole vertical travel (optional accessory: digital readout set with feedback function) to meet special requirements.
- 2-setup grinding procedure control: Rough grinding (0-0.002"); finish grinding (0-0.00045").
- Spark out: 1-9 times.
- Automatically table movement stops and wheel head rises up from surface of workpiece, after cycle grinding completed.
- LED screen display allows users to detect oil inadequacy, downfeed amount, and procedure errors.
- Two steps jog feed design.
- Power will shot off after automatic cycle is complete.

Model 818AHD



Model 1020AHD



- Provide plunge & surface grinding modes.
- Vertical feed powered by double motors: Stepping motor for Auto-downfeed (Min. increment: 0.00005"); AC motor for Rapid & slow up/down
- Maximum cycle downfeed: (0.45"), can extend to whole vertical travel (optional accessory: digital readout set with feedback function) to meet special requirements.
- Spark out: 1-9 times.
- Automatically table movement stops and wheel head rises up from surface of workpiece, after cycle grinding completed.

Note: 1020 control panel differs from 818's on coolant push button and chuck control switch. One is built-in, others is not.

Specifications

ITEMS		MODEL		Supra-618 / 618AH	Supra-818AHD	Supra-1020AHD	Supra-1428AHD	Supra-1632AHD	Supra-1640AHD
Table size		6' x 18'		8' x 18'	10' x 20'	12' x 26'	16' x 32'	16' x 40'	
Max. grinding length	Longitudinal	19'		18'	20'	28'	32'	40'	
Max. grinding width	Crosswise	7'	6-5/8'	9'	11'	14'	16'	16'	
Max. Distance From Table Surface to Spindle Centerline		18"		18"	22-3/4"	28-5/16"	28-5/16"	28-5/16"	
Standard magnetic chuck size		6' x 18'		8' x 18'	10' x 20'	11-3/4' x 23-9/16'	15-11/16' x 31-1/2'	15-11/16' x 39-1/4'	
Longitudinal movement to table	Max. travel, hydraulic	-	19'	19'	23-1/5"	28"	35"	41-11/16"	
	Max. travel, manual	20"		20"	24-4/5"	29-1/2"	36-1/2"	43-1/4"	
	Table speed infinitely variable	-	60HZ, 16-80ft/min	60HZ, 16-80 ft/min	60HZ, 16-80 ft/min	60HZ, 16-80 ft/min	60HZ, 16-80 ft/min	60HZ, 16-80 ft/min	
Cross transverse travel	Auto transverse increment	-	0.07' - 0.4'	0.07' - 0.4'	0.02' - 0.5"	0.02' - 0.5"	0.02' - 0.5"	0.02' - 0.5"	
	Max. auto transverse travel	-	7'	9-3/8"	10-3/5"	13-3/4"	17"	17"	
	Max. manual transverse travel	7-1/2"		9-3/4"	11-3/4"	15"	18"	18"	
	Handwheel per revolution	0.2"		0.2"	0.2"	0.2"	0.2"	0.2"	
	Handwheel per graduation	0.0005"		0.0005"	0.001"	0.001"	0.001"	0.001"	
Wheelhead vertical downfeed	Automatic infeed	-	0.00005 - 0.002"	0.00005 - 0.002"	0.00005" - 0.002"	0.00005" - 0.002"	0.00005" - 0.002"	0.00005" - 0.002"	
	Step feed	-	0.00005"	0.00005"	0.00005"	0.00005"	0.00005"	0.00005"	
	Rapid travel, approx	-	60HZ, 280 mm/min	60HZ, 150 mm/min	60HZ, 180 mm/min	60HZ, 180 mm/min	60HZ, 180 mm/min	60HZ, 180 mm/min	
	Slow travel, approx	-	6 mm/min	6 mm/min	6 mm/min	6 mm/min	6 mm/min	6 mm/min	
	Handwheel per revolution	0.05"		0.05"	0.05"	0.05"	0.05"	0.05"	
Handwheel per graduation	0.0001"		0.0001"	0.0005"	0.0005"	0.0005"	0.0005"		
Grinding spindle drive	Speed	60HZ/3,450 R.P.M.		60HZ/3,450 R.P.M.	60HZ/3,450 R.P.M.	60HZ/1,750 R.P.M.	60HZ/1,750 R.P.M.	60HZ/1,750 R.P.M.	
	Power rating	2.0 HP		3.0 HP	3 HP(5HP option)	5, 7-1/2, 10 HP	7-1/2HP(10HP option)	7-1/2HP(10HP option)	
Standard grinding wheel	Diameter	8"		8"	8", 12"	14"	14"	14"	
	Width	1/2" MAX 3/4"		1/2" MAX 3/4"	3/4", 1-1/4"	2"	2"	2"	
	Bore	1-1/4"		1-1/4"	1-1/4", 3"	5"	5"	5"	
Hydraulic motor	Power rating	-	1HP x 6 P	1HP x 6 P	1HP x 6 P	2 HP x 6 P	2 HP x 6 P	2 HP x 6 P	
Crossfeed motor	Power rating	-	1/6 HP x 6 P	1/6 HP x 6 P	80 W	80W	80 W	80 W	
Elevating motor	Power rating	-	40 W x 4 P	40 W x 4 P	1/8 HP x 6 P	1/4 HP x 6 P	1/4 HP x 6 P	1/4 HP x 6 P	
Floor space	Total space required	71' x 45' x 65'	71' x 45' x 86"	71' x 50-1/2' x 66"	95' x 57' x 69"	110' x 78' x 81"	130' x 87' x 81"	158' x 87' x 81"	
Weights	Net weight, approx	1584 LBS	1,804 LBS	2,850 LBS	3,916 LBS	6,525 LBS	7,933 LBS	8,558 LBS	
	Gross weight, approx	1,870 LBS	2,134 LBS	3,225 LBS	4,466 LBS	7,625 LBS	9,363 LBS	10,054 LBS	
Rated power, approx		2.0 HP	3.0 HP	4.0 HP	4-1/4 (6-1/4) HP	7-1/2HP(Spindle motor:5HP)	10HP(Spindle motor:7.5HP)	12.5HP(Spindle motor:10HP)	
Packing dimensions	L x W x H	42' x 36" x 73"	59' x 38" x 73"	59' x 41" x 73-1/2"	85' x 73" x 80"	87' x 77" x 88"	97' x 89" x 88"	119' x 89" x 88"	

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

Optional Accessories

Magnetic Separator & Paper Filter System
Coolant System
Dust Suction & Coolant System
Wheel Flange

Grinding Wheel
Overhead Parallel Dresser
Electromagnetic Chuck
Permanent Magnetic Chuck

Chuck Control with Demagnetizer
Punch Former
Radius & Angle Forming Attachment

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