



Sharp Industries, Inc.

3501 Challenger Street
Torrance, CA 90503

Tel 310-370-5990 Fax 310-542-6162

Email: info@sharp-industries.com

Parts: parts@sharp-industries.com

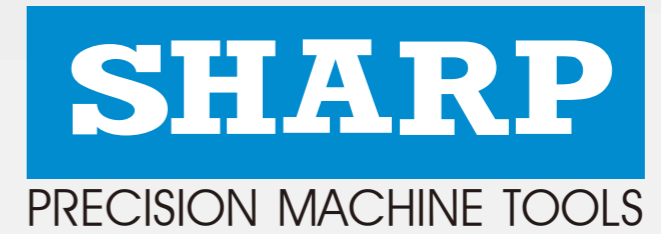
Sales: sales@sharp-industries.com

Support: support@sharp-industries.com

www.sharp-industries.com



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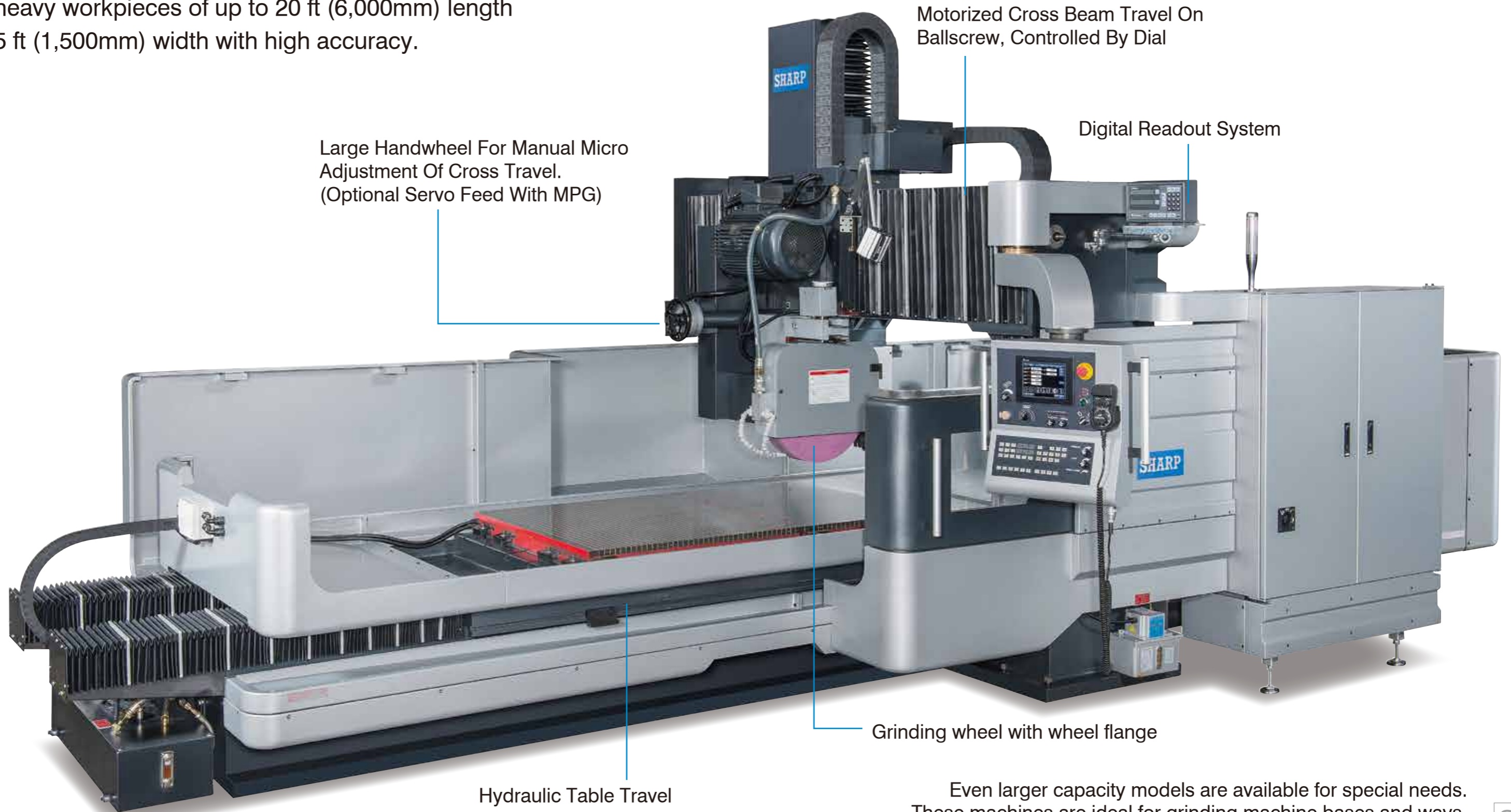


SHDC DOUBLE COLUMN SURFACE GRINDER

WITH NC SERVO SPINDLE DOWN FEED SYSTEM

Highlights of the Sharp Model SHDC Double Column Surface Grinder With NC Servo Down Feed System

The SHDC line of Double Column Grinder can process large and heavy workpieces of up to 20 ft (6,000mm) length and 5 ft (1,500mm) width with high accuracy.



Even larger capacity models are available for special needs. These machines are ideal for grinding machine bases and ways. They are also well suited for various die-mold applications.

Table and Cross Beam Design of the Sharp Model SHDC Double Column Surface Grinder

Reliable and Precise Movement



Machine Base

- The work table travels on hardened and ground double V ways that are hand scraped and TURCITE coated to maintain high precision at all times.
- The extra long base ensures no table over-hang at full travel.
- Two single action hydraulic cylinders and piston rods ensure smooth and steady travel of large work table.
- Free standing hydraulic system prevents heat and vibration from affecting the grinding operation.
- Specially designed directional valve eliminates table reversal shock during fast movement of the large work table.
- Cartridge type oil filters are used for maintenance-free operations.

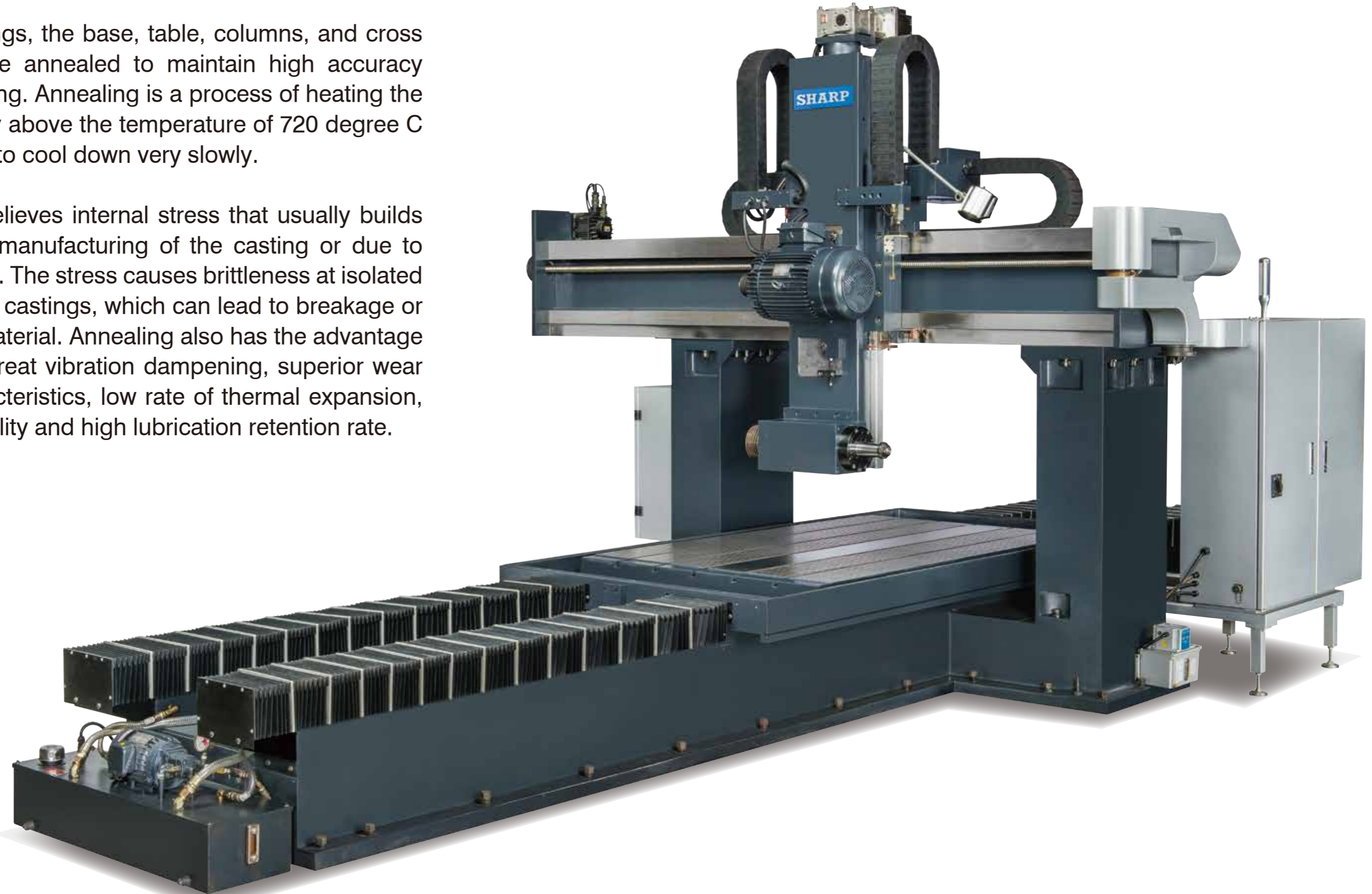


Cross Beam Travel

- An AC motor driven grinding head travels on ball screw along the cross beam.
- Grinding head is supported at two levels by flat and dovetail ways. The ways are fully gibbed to ensure long-lasting accuracy..
- Cross travel is controlled by turning a dial on the operating panel.
- A large hand wheel performs manual micro adjustment of the cross movement for grinding operations using the side of the grinding wheel.
- Servo driven cross movement with MPG operation is available as an option.
- Linear guide ways for Cross travel are available as an option.
- The vertical down feed spindle travels on two box ways. It is driven by servo motor and operated by MPG (electronic handwheel). It also has an AC motor for rapid traverse of the spindle for positioning.

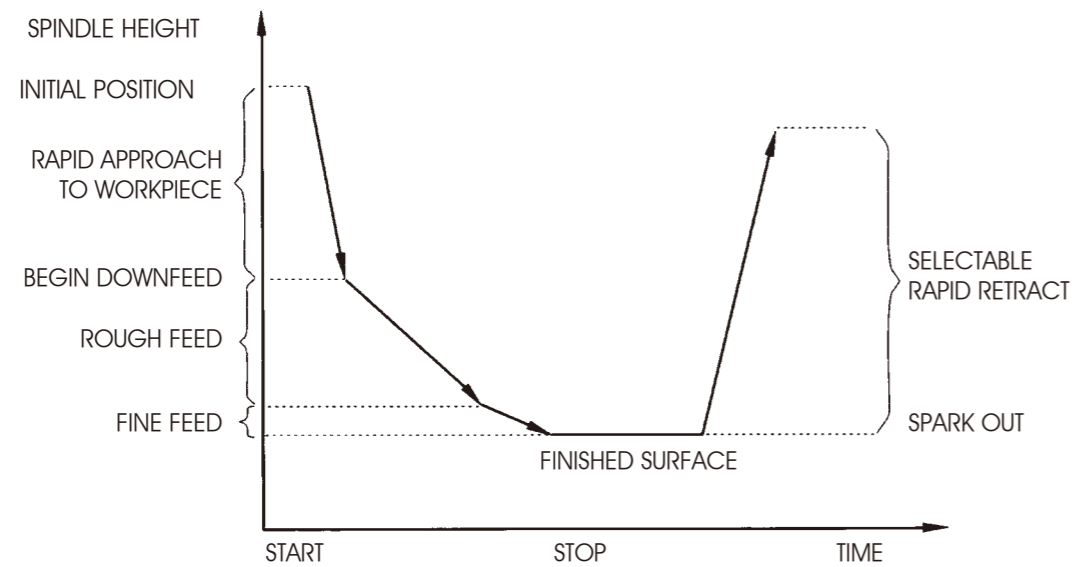
All major castings, the base, table, columns, and cross beam are twice annealed to maintain high accuracy during machining. Annealing is a process of heating the material slightly above the temperature of 720 degree C and allowing it to cool down very slowly.

This process relieves internal stress that usually builds up during the manufacturing of the casting or due to uneven cooling. The stress causes brittleness at isolated locations in the castings, which can lead to breakage or failure of the material. Annealing also has the advantage of producing great vibration dampening, superior wear resistant characteristics, low rate of thermal expansion, high machinability and high lubrication retention rate.



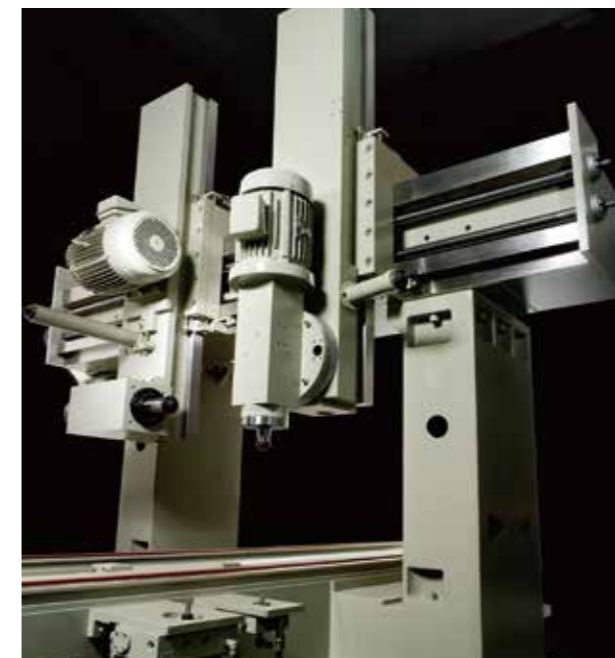
Features and Accessories of the Sharp Model SHDC Double Column Surface Grinder

With NC Servo Down Feed System



NC Down Feed Process

- Automatic rapid approach to top of work piece
- Minimum increment setting is 0.0001"
- Maximum setting for wheelhead retract is 9.9" for loading and unloading of work-piece at the end of job
- Maximum setting of "Spark-out" is 99 passes
- 2 grinding modes: SURFACE, PLUNGE, speeds SLOW, FAST and FIXED.
- Synchronized movement of longitudinal table and wheel head cross travel.
- Cross travel speed of wheel head is variable. It offers a wide range of cross spacing options.
- Ideal for removing large surface with minimal depth.



Standard Features and Accessories

- Hydraulic table travel
- Motorized cross beam travel on ballscrew. Controlled by dial.
- Servo driven NC downfeed controlled by MPG
- 2 axes Digital Readout System (down feed, cross beam feed)
- Automatic central lubrication
- Grinding wheel with wheel flange
- Table mount diamond dresser
- Criss-cross grinding system
- Oil temperature controller

Optional Accessories

- Spare wheel flange
- Electromagnetic chuck (2 pieces) with transformer, rectifier, and auto demagnetizer
- Auto paper filler, magnetic separator (300 liter tank)
- Auto paper filler, magnetic separator (500 liter tank)
- Auto wheel dresser and wheel compensator
- Spindle motor with inverter
- Servo control swiveling grinding head
- Additional head with vertical grinding attachment
- Servo cross beam feed with MPG
- Linear Guideway on cross feed and down feed

Additional Vertical Grinding Head

- This option allows multiple operations to be done on the same workpiece without having to re-position a part for different operations.

Double Column Surface Grinder (NC servo down feed) Specifications:

Model		SHDC-4060 / SHDC-40100 / SHDC-40160 SHDC-40200 / SHDC-40240	SHDC-4760 / SHDC-47100 / SHDC-47160 SHDC-47200 / SHDC-47240	SHDC-6087 / SHDC-60120 / SHDC-60160 SHDC-60200 / SHDC-60240
Capacity				
Table travel	inch (mm)	47.2" x 64.9" / 47.2" x 104.3" (1200 x 1650 / 1200 x 2650)	55.1" x 64.9" / 55.1" x 104.3" (1400 x 1650 x / 1400 x 2650)	74.8" x 92.5" / 74.8" x 124" (1900 x 2350 / 1900 x 3150)
	inch (mm)	47.2" x 163.4" / 47.2" x 202.7" (1200 x 4150 / 1200 x 5150)	55.1" x 163.4" / 55.1" x 202.7" (1400 x 4150 / 1400 x 5150)	74.8" x 163.4" / 74.8" x 202.7" (1900 x 4150 / 1900 x 5150)
	inch (mm)	47.2" x 242" (1200 x 6150)	55.1" x 242" (1400 x 6150)	74.8" x 242" (1900 x 6150)
Working surface (W x L)	inch (mm)	39.3" x 59" / 39.3" x 98.4" (1000 x 1500 / 1000 x 2500)	47.2" x 59" / 47.2" x 98.4" (1200 x 1500 / 1200 x 2500)	59" x 86.6" / 59" x 118.1" (1500 x 2200 / 1500 x 3000)
	inch (mm)	39.3" x 157.5" / 39.3" x 196.8" (1000 x 4000 / 1000 x 5000)	47.2" x 157.5" / 47.2" x 196.8" (1200 x 4000 / 1200 x 5000)	59" x 157.5" / 59" x 196.8" (1500 x 4000 / 1500 x 5000)
	inch (mm)	39.3" x 236.2" (1000 x 6000)	47.2" x 236.2" (1200 x 6000)	59" x 236.2" (1500 x 6000)
Spindle center to table top	inch (mm)	43.3" (1100)	43.3" (1100)	43.3" (1100)
Wheel bottom to table	inch (mm)	29.5" (750)	29.5" (750)	33.4" (850)
Clearance between columns	inch (mm)	47.2" (1200)	55.1" (1400)	78.7" (2000)
Max. table load (including chuck)	lbs (kg)	7,700 lbs / 10,000 lbs (3493 / 4536)	8,200 lbs / 11,500 lbs (3719 / 5216)	12,300 lbs / 16,500 lbs (5579 / 7484)
	lbs (kg)	15,800 lbs / 18,200 lbs (7167 / 8255)	18,500 lbs / 21,000 lbs (8391 / 9525)	21,000 lbs / 24,100 lbs (9525 / 10932)
	lbs (kg)	18,700 lbs (8482)	21,000 lbs (9525)	24,100 lbs (10932)
Chuck wt.	lbs (kg)	1,970 lbs / 3,280 lbs (894 / 488)	2,300 lbs / 4,000 lbs (1043 / 1814)	4,300 lbs / 5,600 lbs (1950 / 2540)
	lbs (kg)	4,620 lbs / 5,700 lbs (2096 / 2585)	5,500 lbs / 8,000 lbs (2495 / 3629)	7,500 lbs / 9,500 lbs (3402 / 4309)
	lbs (kg)	6,900 lbs (3130)	9,500 lbs (4309)	9,500 lbs (4309)
Longitudinal feed (Hyd) (X axis)				
Table feed (hydraulic)	imp (mm/min)	78-984 inch per minute (1981.2-24993.6)	78-984 inch per minute (1981.2-24993.6)	78-984 inch per minute (1981.2-24993.6)
Cross feed (electro-mechanical)				
Cross feed (continuous)	imp (mm/min)	118 inch per minute (3000)	118 inch per minute (3000)	118 inch per minute (3000)
Cross feed (intermittent)		0.0039 – 1.37 in/min	0.0039 – 1.37 in/min	0.0039 – 1.37 in/min
Cross feed (Manual) (Y axis)				
Feed per graduation		0.002'	0.002'	0.002'
No. of graduations on dial		200	200	200
Feed per revolution	inch (mm)	0.4" (10)	0.4" (10)	0.4" (10)
Vertical feed (NC servo) (Z axis)				
MPG per graduation		0.0001"	0.0001"	0.0001"
Rapid downfeed	inch (mm)	9.8 inch per min (250)	9.8 inch per min (250)	9.8 inch per min (250)
Grinding wheel				
Size (OD x W x ID)	inch (mm)	20" x 3.9" x 8" (510 x 100 x 203)	20" x 3.9" x 8" (510 x 100 x 203)	20" x 3.9" x 8" (510 x 100 x 203)
Spindle speed		1,150 rpm	1,150 rpm	1,150 rpm
Motors				
Spindle motor	HP (kw)	25 HP	25 HP	25 HP
Vertical downfeed motor	HP (kw)	10 HP / 10 HP	10 HP / 10 HP	10 HP / 10 HP
	HP (kw)	15 HP / 20 HP	15 HP / 20 HP	15 HP / 20 HP
	HP (kw)	27.5 HP	27.5 HP	27.5 HP
Cross travel motor	HP (kw)	1 HP	1 HP	1 HP
Longitudinal table motor (hyd)	HP (kw)	10 HP / 10 HP	10 HP / 10 HP	17.5 HP / 17.5 HP
	HP (kw)	15 HP / 20 HP	15 HP / 20 HP	20 HP / 27.5 HP
	HP (kw)	27.5 HP	27.5 HP	30 HP
Approx. weight	lbs (kg)	28,600 lbs / 47,300 lbs (12973 / 21455)	37,400 lbs / 49,500 lbs (16964 / 22453)	81,400 lbs / 94,600 lbs (36922 / 42910)
	lbs (kg)	90,200 lbs / 99,000 lbs (40914 / 44906)	92,400 lbs / 101,000 lbs (41912 / 45813)	108,900 lbs / 121,000 lbs (49396 / 54885)
	lbs (kg)	109,000 lbs (49442)	113,000 lbs (51256)	136,400 lbs (61870)
Dimensions	inch (mm)	16.6' x 9.5' x 11.2' / 23.9' x 9.5' x 11.2' (421.6 x 241.3 x 284.5 / 607.1 x 241.3 x 284.5)	17.7' x 9.5' x 11.2' / 23.9' x 9.5' x 11.2' (449.6 x 241.3 x 284.5 / 607.1 x 241.3 x 284.5)	21.6' x 11.4' x 12.5' / 27.5' x 11.4' x 12.5' (548.6 x 289.6 x 317.5 / 698.5 x 289.6 x 317.5)
	inch (mm)	24' x 9.5' x 11.2' / 36.6' x 9.5' x 11.4' (609.6 x 241.3 x 284.5 / 929.6 x 241.3 x 289.6)	24' x 9.5' x 11.2' / 36.6' x 9.5' x 11.4' (609.6 x 241.3 x 284.5 / 929.6 x 241.3 x 289.6)	36.6' x 11.4' x 12.5' / 44' x 11.4' x 12.5' (929.6 x 289.6 x 317.5 / 1117.6 x 289.6 x 317.5)
	inch (mm)	51.1' x 9.5' x 11.4' (1297.9 x 241.3 x 289.6)	51.1' x 9.5' x 11.4' (1297.9 x 241.3 x 289.6)	51.2' x 11.4' x 12.5' (1300.5 x 289.6 x 317.5)

Please contact your local distributor for more details. We reserve the right to modify specifications without notice.