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**SHARP**  
PRECISION MACHINE TOOLS



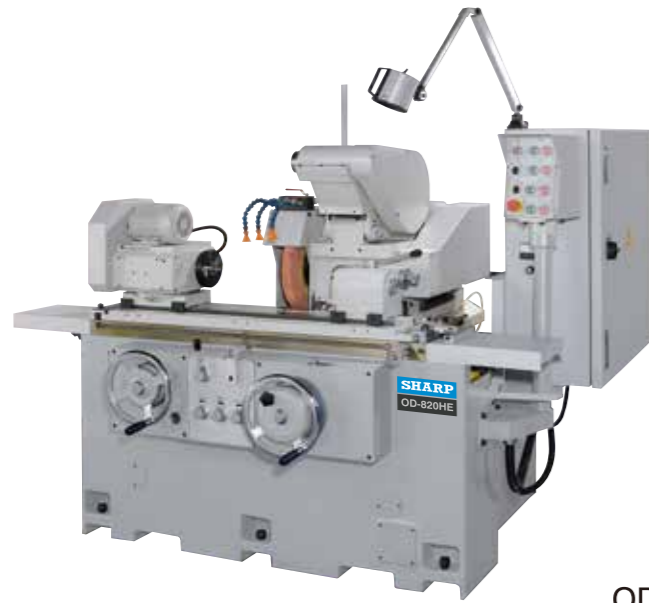
CYLINDRICAL GRINDERS  
CENTERLESS GRINDERS  
MANUAL, NC, CNC

# CYLINDRICAL GRINDER

Manual(HE), NC wheel head(SE)

- HE models - manual wheelhead infeed.
- SE models - auto (NC) wheelhead infeed via ballscrew/servo.
- SE model has PLC with LCD touch screen.
- Optional swing down ID attachment.
- Vari-speed table feed and work head spindle (except OD-820).
- Table swivel for taper grinding.
- Optional hydraulic tailstock.

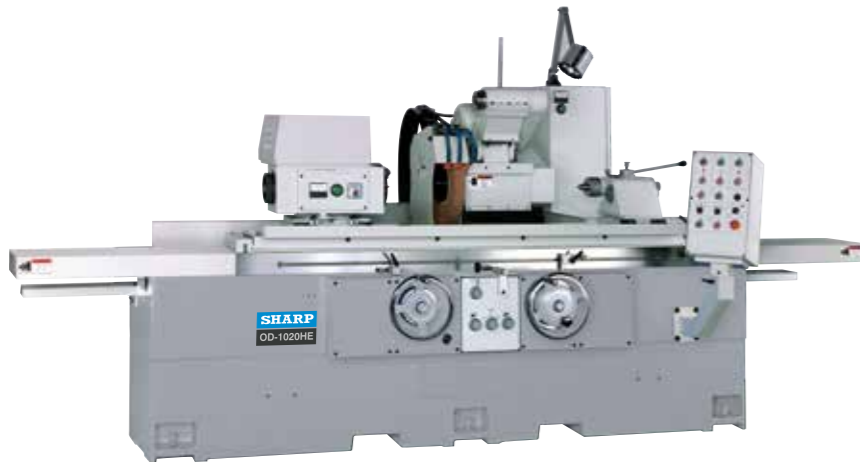
Unit: inch (mm)



OD-820HE



OD-820SE



OD-1020HE

DESCRIPTION / MODEL		OD-820 HE / SE	OD-1020 HE / SE	OD-13 / 15 - 24 / 40 / 60 / 80 HE / SE					
General Capacity	Distance Between Centers	20" (500)	20" (500)	24" (600)	40" (1000)	60" (1500)	80" (2000)		
	Swing Over Table	Ø8.8" (Ø220)	Ø10.2" (Ø260)	Ø12.6" / Ø15" (Ø320 / Ø380)					
	Max. Grinding Diameter	Ø8" (Ø200)	Ø10" (Ø250)	Ø12" / Ø14" (Ø300 / Ø360)					
	Max. Load Held Between Centers	80 kgs (176 lbs)			150 kgs (330 lbs)				
Grinding Wheel	Diameter x Width x Bore	Ø14" x 1.5" x Ø5" (Ø355 x 38 x Ø127)	Ø16" x 2" x Ø5" (Ø405 x 50 x Ø127)	Ø16" x 2" x Ø5" (Ø405 x 50 x Ø127)					
	Wheel Peripheral Speed	45 M / sec							
Wheelhead	Swivelling Angle (R&L)	Fixed	±30°	±30°					
	Infeed Travel	6.3" (160)	5.3" (135)	9.6" (245)					
	Hand Feed Travel	6.3" (160)	3.5" (90)	7.9" (200)					
	Top Slide Travel				7" (180)				
	Automatic Rapid Travel (NC Model)				1-3/4" (45)				
	Auto Increment Infeed (NC Model)				0.0001"~0.0999"				
	Handwheel Per Graduation (M/H)	0.0002" (0.005)				0.0002" (0.005)			
	Handwheel Per Revolution (M/H)				Ø0.1" (Ø2.5)				
Workhead	Swivelling Angle	- 45°		- 90°					
	Center Taper	MT 3 (opt. 5C)		MT 4 (opt. MT5, 5C)					
	Spindle Speed	60HZ:200/330/425/570 50HZ:165/273/352/472	30~350 rpm						
Tailstock	Center Taper	MT 3		MT 4 (opt. MT5)					
	Quill Travel	1" (25)							
Table	Swivelling Angle	- 8°		- 9°	- 7°	- 5°	- 3°		
	Traverse Speed	0~15.75in/min(0~400mm/min)		1-1/5 ~ 275 in / min (30~7000 mm / min)					
	Handwheel Per Revolution	0.35" (9)		0.39" (9.8)					
Internal Grinding (Opt.)	Spindle Speed	14000 (or 25000) rpm		18000 (or 25000) rpm					
	Max. Grinding Bore	Ø0.95"~2.76" (Ø24~70)"		Ø1.18"~3.94" (Ø30~100) or Ø0.79"~1.97" (Ø20~50)					
	Max. Grinding Length	2.8" (70)		4.3" (110) or 2.2" (55)					
	Max. Chucking Length	10.8" (275)		12.4" (315)					
	Max. Chucking Diameter	4" (110)		6" (150)					
Motor	Wheel Spindle Motor	3 HP (2.2 KW) / 4P	5 HP (3.7 KW) / 4P	7.5 HP (5.5 KW) / 4P					
	Workhead Motor	1/2 HP (0.4 KW) / 4P		2 HP (1.5 KW) / 4P					
	Coolant Pump	1/8 HP (0.1 KW) / 4P		1/4 HP (0.2 KW) / 4P					
	Hydraulic Pump	2 HP (1.5 KW) / 4P							
Machine Size	Internal Grinding Motor	1/2 HP (0.4 KW) / 2P		2 HP (1.5 KW) / 4P					
	Net Weight	4070 lbs (1850 kgs)	6160 lbs (2800 kgs)	7700 lbs (3500 kgs)	9691 lbs (4400 kgs)	10340 lbs (4700 kgs)	13200 lbs (6000 kgs)		
	Gross Weight	4950 lbs (2250kgs)	7040 lbs (3200 kgs)	8800 lbs (4000 kgs)	10340 lbs (4700 kgs)	12320 lbs (5600 kgs)	14916 lbs (6780 kgs)		
	Packing Dimension (L x W x H)	89" x 74" x 77" (2280 x 1900 x 1960)	90" x 90" x 76" (2280 x 2280 x 1940)	126" x 89" x 80" (3200 x 2250 x 2030)	126" x 89" x 80" (3200 x 2250 x 2030)	159" x 89" x 80" (4030 x 2250 x 2030)	206" x 89" x 80" (5220 x 2250 x 2030)		

• Specifications are subject to change without prior notice.

# CNC CYLINDRICAL GRINDER

(2 axes X-wheel head feed Z-table feed)

- Highly rigid machine structure provides excellent stability during operation.
- The wheel head spindle for OD-820 and OD-1020-2X rotates on bearing.
- The table moves on hydrodynamic slideways, that makes moving motions smoother and moves stable.
- X, Z-axis are driven by servo motors for smooth motions with high positioning accuracy.
- X-axis is equipped with a high precision linear scale with 0.0001" resolution, providing a closed loop control that ensures high positioning accuracy and repeatability accuracy.
- Automatic wheel linear speed compensation function.
- Optional swing down type ID attachment.



OD-820-2X

# CNC CYLINDRICAL GRINDER

(2 axes X-wheel head plunge Z-table feed)

- The massive base is manufactured from high quality Meehanite cast iron and stress relieved.
- The wheel spindle rotates in the hydrostatic and hydrodynamic combination bearings, featuring higher rigidity and outstanding dampening performance.
- The table moves on hydrodynamic slideways, that makes moving motions smoother and stable.
- X, Z-axis are driven by servo motors for smooth motions with high positioning accuracy.
- Automatic wheel linear speed compensation function.
- Available to equip with an internal grinding attachment.
- Optional swing down type ID attachment.



OD-1340-2X

Unit: inch (mm)

DESCRIPTION / MODEL		OD-820/1020-2X		OD-1020-2XD	OD-13 / 15 - 20 / 24 / 30 / 40 / 60 / 80-2X					
General Capacity	Swing Over Table	Ø8" (Ø200)	Ø10" (Ø250)	Ø10" (Ø250)	Ø12.6" (Ø320) / Ø15" (Ø380) / Ø18" (Ø450)					
	Distance Between Centers	20" (500)		20" (500)	20" (500)	24" (600)	30" (750)	40" (1000)	60" (1500)	80" (2000)
	Max. Grinding Diameter	Ø8" (Ø200)	Ø10" (Ø250)	Ø10" (Ø250)	Ø12" (Ø300) / Ø14" (Ø360) / Ø17" (Ø430)					
	Max. Load Held Between Centers	176lbs (80kgs)			330 lbs (150 kgs)					
Grinding Wheel	Diameter x Width x Bore	Ø14" x 1"~2" x Ø5" (Ø355 x 25~50 x Ø127)	Ø16" x 2" x Ø5" (Ø405 x 50 x Ø127)	Ø18" x 2" x Ø5" (Ø455 x 50 x Ø127)	Ø20" x 2"~4" x Ø6" (Ø510 x 50~100 x Ø152.4), opt: Ø24.02" (Ø610)					
	Wheel Speed	1940 rpm	1650 rpm	1650 rpm	1390 rpm					
	Wheel Peripheral Speed	1771 in / sec (45 M / sec)			1771 in / sec (45 M / sec)					
Wheelhead	Sliding Angle Deg	90			90					
	Max. Increment Speed	Ø157 in / min (Ø4 M / min)			Ø157 in / min (Ø4 M / min)					
	Infeed Travel	Ø6" (Ø150)	Ø6.3" (Ø160)		Ø9" (Ø225)					
	Min. Increment Speed	Ø0.0001"			Ø0.0001"					
Workhead	Spindle Speed (Variable)	50~500 rpm			30~350 rpm					
	Center Taper		MT 3		MT 4 (opt. MT5)					
	Spindle Type	Fixed & Rotary			Fixed & Rotary					
	Diameter Of Bore	Ø0.79" (Ø20)			Ø0.9" (Ø23)					
Tailstock	Quill Travel	1" (25)			1" (25)					
	Center Taper	MT 3			MT 4 (opt. MT5)					
Table	Rapid Feedrate	315 in / min (8 M / min)			393 in / min (10 M / min)					
	Min. Increment Feed	Ø0.0001"			Ø0.0001"					
	Swivelling Angle C.C.W.	7°			9°	7°		5°	3°	
Motor	Wheel Spindle Motor	5 HP (bearing)		7.5 HP (hydrostatic bearing)	7.5 HP, opt: 10 HP, (5.6 KW, opt: 7.5 KW)					
	Workhead Motor	1/2 HP (0.4 KW)			2 HP (1.5 KW)					
	Hydraulic Pump	1 HP (0.7 KW)			2 HP (1.5 KW)					
	Lubrication Pump	1/4 HP (0.2 KW)			1/4 HP (0.2 KW)					
	Coolant Pump	1/8 HP (0.6 KW)			1/4 HP (0.2 KW)					
	Wheel (X Axis) Motor (Fanuc)	1.6 HP (1.2 KW)			1.6 HP (1.2 KW)					
	Wheel (Z Axis) Motor (Fanuc)	1.6 HP (1.2 KW)			1.6 HP (1.2 KW)		2.4 HP (1.8 KW)			
Machine Size	Net Weight (Semi Enclosed)	5500 lbs (2500 kgs)	6820 lbs (3100 kgs)	6820 lbs (3100 kgs)	11440 lbs (5200 kgs)	12320 lbs (5600 kgs)	12760 lbs (5800 kgs)	12760 lbs (6000 kgs)	13860 lbs (6300 kgs)	14740 lbs (6700 kgs)
	Gross Weight	6160lbs (2800 kgs)	7700 lbs (3500 kgs)	7700 lbs (3500 kgs)	12320 lbs (5600 kgs)	14124 lbs (6420 kgs)	15400 lbs (7000 kgs)	16500 lbs (7500 kgs)	17160 lbs (7800 kgs)	18040 lbs (8200 kgs)
	Packing Dimension (L x W x H)	117" x 89" x 87" (2970 x 2250 x 2220)	131" x 89" x 89" (3330 x 2250 x 2250)	131" x 89" x 89" (3330 x 2250 x 2250)	167" x 90" x 89" (4250 x 2280 x 2260)	185" x 90" x 89" (4760 x 2280 x 2260)	152" x 92" x 80" (3780 x 2300 x 2040)	208" x 90" x 90" (5280 x 2280 x 2280)	250" x 90" x 91" (6360 x 2280 x 2310)	250" x 90" x 91" (6360 x 2280 x 2310)

# CNC CYLINDRIAL GRINDER Turret Head Design

(3 axes X-wheelhead plunge, B-wheelhead rotates, Z-table feed)  
(OD plunge / OD angular / ID )

- Models : OD-1424-3XTR, OD-1440-3XTR  
(4 axes X-wheelhead plunge, B-wheelhead rotates, Z-table feed, C-workhead spindle orientation)  
(OD plunge / OD angular / ID / workhead orientation)  
Models : OD-1424-4XTN, OD-1440-4XTN
- 3 axes design, turret wheelhead can mount two OD attachment and one ID attachment
  - OD attachments can do plunge and angular feed
  - Turret wheelhead allows different operations in one set up
  - 3 axes design is ideal for round parts grinding
  - 4 axes design offers additional C axis controlling spindle orientation of workhead.
  - 4 axes design is ideal for non round parts grinding, such as cam, crankshaft, elliptical parts



OD-1440-3XTR

Unit: inch (mm)

DESCRIPTION / MODEL		OD-1424 / 1440-3XTN		OD-1424 / 1440-4XTN	
General Capacity	Swing Over Table	Ø14" (Ø360), Grinding range Ø1.18"~11.81" (Ø30~300)			
	Distance Between Centers	24" (600)	40" (1000)	24" (600)	40" (1000)
	Max. Grinding Length	20" (500)	32" (800)	20" (500)	32" (800)
	Distance From Center Tip to Table	7.6" (192)			
	Max. Weight Between Centers	330 lbs (150 kgs)			
	Wheelhead	Wheel Size - LH (D x W x B)	Ø18" x 2" x Ø5" (Ø455 x 50 x Ø127)		
Wheel Size - RH (D x W x B)		Ø14" x 1 1/2" x Ø5" (Ø335 x 38 x Ø127)			
OD Spindle Speed (50/60hz)		1575 / 1795 rpm			
Wheel Peripheral Speed		1771 in / sec (45 M / sec)			
ID Spindle Diameter		Ø4.72" (Ø120)			
ID Spindle Speed		High Frequency 24000 rpm			
ID Shaft Diameter		Ø0.27"~1" (Ø7~25)			
Feed Angle		90°			
Max. Traverse Speed		Ø236 in / min (6 M / min)			
Min. Feed Unit Set		Ø0.0001"			
Workhead	Total Stroke	9.68" (246)			
	Spindle Speed (Variable)	30~350 rpm			
Tailstock	Center Taper	MT 4			
	Quill Stroke	Ø2" (Ø50)			
Table	Center Taper	MT 4			
	Swivelling Angle C.C.W.	5°	3°	5°	3°
	Max. Traverse Speed	393 in / min (10 M / min)			
Motor	Min. Feed Unit Set	Ø0.0001"			
	OD Spindle Motor	7.5 HP (5.5 KW)			
	B-axis Servo Motor	3.6 HP (2.7 KW)			
	Workhead Spindle Motor	2 HP (1.5 KW)	4 HP (3 KW)		
	Frequency Spindle Motor	8 HP (6 KW)			
Machine Size	Hydraulic Motor	1 HP (0.7 KW) / 4P			
	Coolant Pump	1/2 HP (0.4 KW) / 4P			
	X-axis Feed Servo Motor	2 HP (1.6 KW)	3.5 HP (2.7 KW)		
	Z-axis Feed Servo Motor	2 HP (1.6 KW)			
	Packing Dimension (L x W x H)	184" x 88" x 84" (4663 x 2225 x 2134), Width for 100 1440-3/4XTR 208" (5273)			
Net Weight	12320 lbs (5600 kgs)	13640 lbs (6200 kgs)	12540 lbs (5700 kgs)	13860 lbs (6300 kgs)	

# CNC CYLINDRICAL GRINDER TRAVELLING WHEELHEAD

2 AXES (X-wheelhead plunge, Z-wheelhead travels)

Models : OD-1520/40/80/120/160-2XM

Features same as other 2X CNC OD grinders



OD-15120-2XM

DESCRIPTION / MODEL		OD-1520-2XM	OD-1540-2XM	OD-1580-2XM	OD-15120-2XM	OD-15160-2XM	
Unit: inch (mm)							
General Capacity	Max. Grinding Diameter	Ø12" (Ø300)					
	Max. Grinding Length	20" (500)	40" (1000)	80" (2000)	120" (3000)	160" (4000)	
	Swing Over Table	15" (380)					
Grinding Wheel	Max. Load Held Between Centers	422 lbs (192 kgs)		1430 lbs (650 kgs)			
	Diameter x Width x Bore	Ø20" x 2" x Ø6" (Ø510 x 50 x Ø152.4)					
	wheel Speed	1250 rpm					
Wheelhead	wheel Peripheral Speed	1771 in / sec (45 M / sec)					
	X axis	Sliding Angle Deg	90°				
		Automatic Rapid Traverse	Ø236 in / min (6 M / min)				
	Z axis	Min. Increment Feed	Ø0.0001				
		Infeed Travel	8.9" (225)				
Rapid Feedrate		0-393 in / min (0-10 M / min)					
Workhead	Min. Increment Feed	Ø0.0001					
	Spindle Speed	30~350 rpm					
Tailstock	Center Taper	MT 4		MT 6			
	Quill Travel	1" (25)		2" (50)			
Motor	Center Taper	MT 4		MT 5			
	Wheel Spindle Motor	7.5 HP, opt: 10HP (5.5 KW, opt: 7.5 KW)					
	Workhead Spindlemotor	1.6 HP (1.2 KW)					
	Hydraulic Pump	1 HP (0.8 KW)					
	Coolant Pump	0.24 HP (0.2 KW)					
Machine Size	Wheel (X Axis) Motor	1.6 HP (1.2 KW)					
	Wheel (Z Axis) Motor	1.6 HP (1.2 KW)		2.5 HP (1.8 KW)			
Machine Size	Packing Dimension (L x W x H)	155" x 89" x 96" (3930 x 2250 x 2450)	208" x 90" x 89" (5280 x 2280 x 2250)	250" x 90" x 89" (6360 x 2280 x 2250)	261" x 90" x 89" (6640 x 2280 x 2250)	275" x 90" x 93" (6980 x 2280 x 2360)	

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# CNC CYLINDRICAL GRINDER

TRAVELLING WORKHEAD, TRAVELLING WHEELHEAD

3 AXES

(X-workhead, Z-ID wheelhead, Y-ID or OD wheelhead)

Models : ID/ID set up (Y axis with ID wheelhead) OD-2408-3XII, 2416-3XII, 2424-3XII

Models : ID/OD set up (Y axis with OD wheelhead) OD-1208-3XOI, 1816-3XOI, 3224-3XOI

TRAVELLING WORKHEAD, TRAVELLING WHEELHEAD, TURRET WHEELHEAD

4 AXES

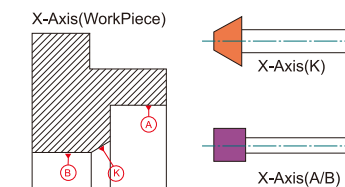
(X-workhead, Z-ID wheelhead, Y- turret with ID and OD wheelhead)

Models : OD-3224-4XOII

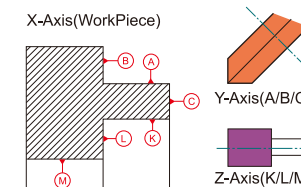


OD-1816-3XOI

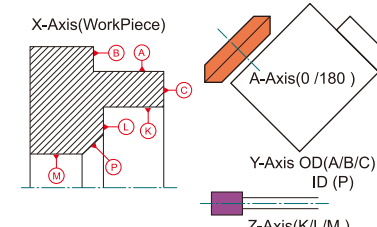
I/I Type



I/O Type



I/I/O Type  
for OD-3224-4XOII only



- 3axes are CNC controlled independently to meet flexible machining requirements.
- Designed to perform complex and precision grinding operations with a single setup.
- Versatile grinding capabilities include internal diameter, outside diameter, shoulder, taper and end face.
- The machine employs an advanced CNC controller that controls the workhead (X-axis), ID wheelhead (Z-axis), ID/OD wheelhead (Y-axis).
- X-axis is equipped with a high precision linear scale, providing a closed-loop control and ensuring high positioning accuracy and repeatability accuracy.
- Ideal for both small volume production and mass production with reduced production cost, thereby helping customers to stay competitive.

DESCRIPTION / MODEL		OD-2408-3XII OD-1208-3XOI	OD-2416-3XII OD-1816-3XOI	OD-2424-3XII, OD-3224-3XOI OD-3224-4XOII
General Capacity	Id Grinding Range	Ø0.59~5.91" (Ø15-Ø150)	Ø0.25~Ø15.7" (Ø6-Ø400)	Ø0.25~Ø23.6" (Ø6-Ø600)
	Max. OD Grinding Diameter	Ø11.81 (Ø300)	Ø17.72 (Ø450)	Ø31.50 (Ø800)
	Max. Length of Workpiece	7.87" (200)	11.81" (300)	
	Swing Over Workhead	Ø13.78 (Ø350)	Ø17.72 (Ø450)	Ø31.50 (Ø800)
	Max. Weight of Workpiece	110lbs (50kgs)		176lbs (80kgs)
Workhead Closed-loop System (X Axis)	Type of Chuck	6" Manual 3-Jaw chuck (Opt.: 8")	8" Manual 3-Jaw chuck (Opt.: 10")	
	Spindle	A2-5		A2-6
	Spindle Motor	4 HP (3 KW)		
	Spindle Speed (Variable)	30~1000 rpm		
	Travel	23.62" (600) / 393 in / min (10 M / min)		
	Min. Infeed Increment	Ø0.0001"		
	Servo Motor	1.6 HP, Fanuc (1.2 KW, Fanuc)		
ID / OD Wheelhead (Y Axis)	ID Spindle Motor (I/I)	3 HP (2.2 KW) / 2P		
	ID Spindle Speed (I/I)	8000 / 15000 / 20000 / 30000 rpm (Select one)		
	OD Spindle Motor (I/O)	7.5 HP (5.5 KW) / 4P		
	OD Spindle Speed (I/O)	1800 rpm		
	OD Wheel Size	Ø16" x 2" x Ø5" (Ø405 x 50 x Ø127)	Ø16" x 2" x Ø5" (Ø405 x 50 x Ø127)	
	B-axis Swiveling Mechanism (I/I/O)	N/A	Automatic Swivel	
	B-axis Swiveling Servo Motor (I/I/O)	N/A	1.6 HP, Fanuc (1.2 KW, Fanuc)	
	B-axis Swiveling Angle (I/I/O)	N/A	+120°/-30°	
	Feed Angle (I/O)	20°		
	W-axis Travel	15" (380)	20" (500)	20" (500)
Id Wheelhead (Z Axis)	Rapid Feedrate	393 in (10 M/min)		
	Min. Infeed Increment	Ø0.0001"		
	Servo Motor	1.6 HP, Fanuc (1.2 KW, Fanuc)		
	IS Wheel Size	3 HP (2.2 KW) / 2P		
	ID Spindle Speed	8000 / 15000 / 20000 / 30000 rpm (Select one)		
	Travel	16" (410)	20" (500)	
	Rapid Feedrate	393 in (10 M/min)		
Coolant System	Min. Infeed Increment	Ø0.0001"		
	Servo Motor	1.6 HP, Fanuc (1.2 KW, Fanuc)		
Hyd. System	Tank Volume / Gallon	58 (260 L)		
	Processing Volumnn	MS=120 · PF=80		
Machine	Tank Volume / Gallin	9 (40 L)		
	Motor	1HP (0.8 KW) / 4P		
	Net Weight	10340 lbs (4700 kgs)	15400 lbs (7000 kgs)	16940 lbs (7700 kgs)
	Gross Weight	11440 lbs (5200 kgs)	16500 lbs (7500 kgs)	18040 lbs (8200 kgs)
Packing Dimension (L x W x H)		189" x 91" x 89" (4880 x 2300 x 2250)		

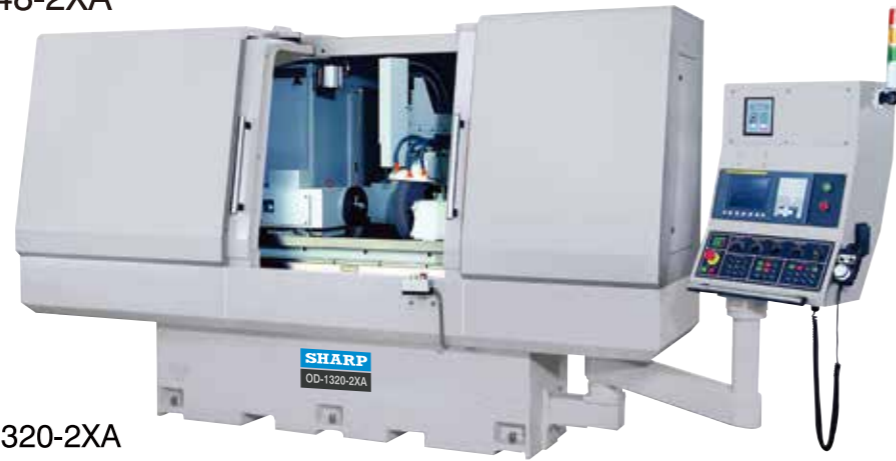
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# CNC CYLINDRICAL GRINDER ANGULAR INFEEED

2 AXES (X-wheelhead angular, Z-table feed)

Models : OD-10/13/15/18-14/20/32/48-2XA

- The massive base is manufactured from high quality Meehanite cast iron and stress relieved.
- Angular feed wheelhead (60°).
- The wheel spindle rotates in the hydrostatic and hydrodynamic combination bearings, featuring higher rigidity and outstanding dampening performance.
- The table moves on hydrodynamic slideways, that makes moving motions smoother and stable.
- X, Z-axis are driven by serve motors for smooth motions whit high positioning accuracy.
- Automatic wheel linear speed compensation function.



OD-1320-2XA

Unit: inch (mm)

DESCRIPTION / MODEL		OD-1014-2XA	OD-13 / 15 / 18 - 14 / 20 / 32 / 48-2XA			
General Capacity	Swing Over Table	Ø10" (Ø250)	Ø12.6" (Ø320) / Ø15" (Ø380) / Ø18" (Ø450)			
	Distance Between Centers	Ø14" (Ø350)	Ø14" (Ø350)	Ø20" (Ø500)	Ø32" (Ø800)	Ø48" (Ø1200)
	Max. Grinding Diameter	Ø10" (Ø250)	Ø11.8" (Ø300) / Ø14.2" (Ø360) / Ø17" (Ø430)			
	Max. Load Held Between Centers	176 lbs (80 kgs)	330lbs (150 kgs)			
Grinding Wheel	Diameter x Width x Bore	Ø18"x2"xØ5"(Ø455x50x127)	Ø20" x 2"~4" x Ø6 (Ø510 x 50~100 x 152.4), opt: 24" (Ø610)			
	Wheel Speed	1650 rpm	1390 rpm			
	Wheel Peripheral Speed	1300 in / sec (33 M / sec)	1300 in / sec (33 M / sec)			
Wheelhead	Sliding Angle Deg	60°	60°			
	Max. Increment Speed	236 in / min (6 M / min)	393 in / min (10 M / min)			
	Infeed Travel	Ø6" (Ø160)	Ø9" (Ø225)			
Workhead	Min. Increment Speed	Ø0.0001" (Ø0.001)	Ø0.0001"			
	Spindle Speed (Variable)	50~500 rpm	30~350 rpm			
	Center Taper	MT 3	MT 4 (opt. MT5)			
Tailstock	Spindle Type	Fixed & Rotary	Fixed & Rotary			
	Diameter of Bore	Ø0.8" (Ø20)	Ø0.9" (Ø23)			
	Quill Travel	Ø1" (Ø25)	Ø1" (Ø25)			
Table	Center Taper	MT 3	MT 4 (opt. MT5)			
	Rapid Feedrate	315 in / min (8 M / min)	393 in / min (10 M / min)			
	Min. Increment Feed	Ø0.0001" (Ø0.001)	Ø0.0001"			
Motor	Swivelling Angle C.C.W.	7°	9°	7°	5°	
	Wheel Spindle Motor	7.5 HP (5.6 KW)	7.5 HP, opt: 10 HP (5.6 KW, opt: 7.5 KW)			
	Workhead Motor	1/2 HP (0.4 KW)	2 HP (1.5 KW)			
	Hydraulic Pump	1 HP (0.7 KW)	2 HP (1.5 KW)			
	Lubrication Pump	1/4 HP (0.2 KW)	1/4 HP (0.2 KW)			
	Coolant Pump	1/8 HP (0.6 KW)	1/4 HP (0.2 KW)			
	Wheel (X Axis) Motor (Fanuc)	1.6 HP (1.2 KW)	1.6 HP (1.2 KW)			
Wheel (Z Axis) Motor (Fanuc)	1.6 HP (1.2 KW)	1.6 HP (1.2 KW)				
Machine Size	Net Weight (Semi Enclosed)	6820 lbs (3100 kgs)	11440 lbs (5200 kgs)	12320 lbs (5600 kgs)	12760 lbs (5800 kgs)	13860 lbs (6300 kgs)
	Gross Weight	7700 lbs (3500 kgs)	12320 lbs (5600 kgs)	14124 lbs (6420 kgs)	16500 lbs (7500kgs)	17160 lbs (7800 kgs)
	Packing Dimension (L x W x H)	117" x 89" x 89" (2970 x 2250 x 2250)	167" x 90" x 89" (4250 x 2280 x 2260)	185" x 90" x 89" (4760 x 2280 x 2260)	208" x 90" x 90" (5280 x 2280 x 2280)	221" x 90" x 91" (56100 x 2280 x 2310)

• Specifications are subject to change without prior notice.

# CNC INTERNAL DIAMETER GRINDER

2 axes (X-work head, Z-ID wheel head)

Models : ID-0605-2X

- X, Z-axis are CNC controlled, including right / left feed points and the grinding wheel federate.
- X-axis is equipped with a Germany made linear scale with0.05mm resolution, providing a closed loop control that ensures high positioning accuracy and repeatability accuracy.
- Linear motion guides are mounted on slideways in combination with 0.1um of feed setting unit, that drastically improves positioning accuracy and repeatability accuracy.
- The use of a belt tension retainer for the wheel spindle motor enables the belt to keep a proper tension at all times. It minimizes grinding resistance, eliminates belt slippage while ensuring high running accuracy of spindle.
- The height of the work spindle center is only 1000mm, making workpiece change or wheel replacement easier.



ID-0605-2X

Unit: inch (mm)

DESCRIPTION / MODEL		ID-0605-2X
General Capacity	ID Grinding Range	Ø0.25"~Ø6" (Ø6~Ø150)
	Max. Grinding Depth	5" (125)
	Max. Swing to Dresser	8.6" (220)
	Swing of Chuck Cover	10.2" (260)
	Spindle Center Height	41.3" (1050)
	Chuck Type	6" Hydraulic chuck
Workhead	Max. Loading	110 lbs (50 kgs)
	Spindle Speed (Variable)	0~1000 rpm
	Swiveling Angle	C.W.15°~C.C.W.5°
X Axis	Spindle Motor	4HP (3 KW)
	Feedback System	Closed-Loop system
	Stroke	7.9" (200)
Z Axis	Rapid Traverse Speed	393 in / min (10 M / min)
	Min. Infeed Increment	Ø0.0001"
	X-axis Servo Motor	2.4 HP (1.8 KW)
Coolant System	ID Spindle Motor	3 HP (2.2 KW) / 2P
	ID Spindle Speed	8000 / 15000 / 20000 / 30000 rpm (Special speed by request)
	Stroke	22" (560)
	Z-axis Driven By Z	Servo Motor 2.4 HP (1.8 KW)
Lubrication System	Rapid Traverse Speed	393 in / min (10 M / min)
	Min. Infeed Increment	Ø0.0001"
Hyd. System	Equipment	Electro Magnet Separator (Opt. paper filter)
	Tank Volume	27 (120 L)
Machine	Capacity	40 L/min
	Motor	0.13 HP (0.1 KW) / 4P
Machine Cover Type	Tank Volume / Gallon	0.45 (2 L)
	Motor	45w
Machine	Tank Volume	5.8 (26 L)
	Motor	1HP (0.7 KW) / 4P
	Machine Cover Type	Full Enclosure Splash Guard / Manual Door
	Net Weight	7700 lbs (3500 kgs)
Machine	Gross Weight	8800 lbs (4000 kgs)
	Packing Dimension (L x W x H)	117" x 90" x 89" (2980 x 2280 x 2250)

• Specifications are subject to change without prior notice.

# CENTERLESS GRINDERS

Manual Centerless Grinder

Models : CG-1206H, CG-1808H

NC Centerless Grinder (NC regulating wheel infeed)

Models : CG-1206NC, CG-1808NC

CNC Centerless Grinder 3 axes (X-grinding wheel dressing, Y-grinding wheel interpolation, Z-regulating wheel infeed)

Models : CG-1808-3X, CG-2008-3X

- Hydrostatic type spindle bearing provides a heavy duty grinding capacity and outstanding vibration dampening performance.
- The NC model is equipped with a Mitsubishi PLC in combination with LCD touch screen for easy operation.
- The massive base is manufactured from high quality Meehanite cast iron for maximum rigidity and stability.



CG-1808NC



CG-1206NC

Unit: inch (mm)

DESCRIPTION / MODEL		CG-1206H / NC	CG-1808-3X CG-1808 / 1810 / 1812-H / NC	CG-2008 / 2010 / 2012-3X CG-2008 / 2010 / 2012-H / NC	CG-2410-3X CG-2410 / 2412-H / NC
General Capacity	Work Diameter (With Standard Workrest)	Ø0.08"~1.18 (Ø2 ~30)	Ø0.08"~2.36 (Ø2 ~60)	Ø0.04"~2.3 (Ø3~60)	Ø0.04"~3.15 (Ø10~80)
	Work Diameter (With Special Workrest)	Ø1.18"~2 (Ø30~50)	Ø2.36"~4 (Ø60 ~100)	Ø3.15"~4.8 (Ø60 ~120)	Ø3.15"~6 (Ø80~150)
	Auto Infeed Increment (NC Model)	0.001~9.99			
Grinding Wheel	Spindle Speed	1900 rpm	1520 rpm	1350 rpm	1050 rpm
	Dressing	Per Graduation	0.0005"	0.0005"	0.0005"
	Increment	Per Revolution	0.05" (2)	0.0625" (2)	0.0625" (2)
Regulating Wheel	Spindle Speed (Infinitely Variable)	15~310 rpm		13~308 rpm	10~250 rpm
	Handwheel	Per Graduation	0.002" (0.05)		0.002" (0.05)
		Per Revolution	0.2" (4)		0.2" (4)
	Swiveling Angle	±5°		±5°	
	Inclining Angle	+5° ~ -3°		+5° ~ -3°	
	Dressing	Per Graduation	0.0005"		0.0005"
		Increment	Per Revolution	0.05" (1.5)	0.00625" (2)
	Rapid Feeding of Saddle	Per Graduation	0.00125"		0.002"
		Per Revolution	0.25" (7)		0.25" (9)
	Micro Feeding (H only) of Saddle (Hand Wheel)	Per Graduation	0.00005"		0.00005"
Per Revolution		0.005" (0.2)		0.005" (0.2)	
Motor	Grinding Wheel Motor	7.5 HP, opt: 10 HP (6 KW, opt: 7.5 KW)	15 HP, opt: 20 HP (11 KW, opt: 15 KW)	20 HP, opt: 25 HP (15 KW, opt: 18 KW)	20 HP, opt: 30 HP (15 KW, opt: 22 KW)
	Hydraulic Motor	2 HP (1.49 KW)	2 HP (1.5 KW)		
	Infeed Servo Motor (NC Model)	1.5 HP (1 KW)	2 HP (1.5 KW)		4 HP (3 KW)
Machine Size	Net Weight	3960 lbs (1800 kgs)	6600 lbs (3000 kgs)	7480 lbs (3400 kgs)	12760 lbs (5800 kgs)
	Gross Weight	4840 lbs (2200 kgs)	7700 lbs (3500 kgs)	8140 lbs (3700 kgs)	15620 lbs (7100 kgs)
	Packing Dimension (L x W x H)	89" x 66" x 73" (2250 x 1670 x 1850)	107" x 88" x 81" (2730 x 2240 x 2060)	107" x 89" x 81" (2730 x 2250 x 2060)	121" x 89" x 85" (3070 x 2250 x 2160)

Model	CG-1206	CG-1808	CG-1810	CG-1812	CG-2008	CG-2010	CG-2012	CG-2410	CG-2412
Grinding Wheel (dia. X width X bore)	12" x 6" x 5" (305 x 150 x 120)	18" x 8" x 9" (405 x 205 x 228.6)	18" x 10" x 9" (455 x 255 x 228.6)	18" x 12" x 9" (455 x 305 x 228.6)	20" x 8" x 12" (508 x 205 x 304.8)	20" x 10" x 12" (508 x 255 x 304.8)	20" x 12" x 12" (508 x 305 x 304.8)	24" x 10" x 12" (610 x 255 x 305)	24" x 12" x 12" (610 x 305 x 305)
Regulating Wheel (dia. X width X bore)	8" x 6" x 3.5" (205 x 150 x 90)	10" x 8" x 4 3/8" (255 x 205 x 111.2)	10" x 8" x 4 3/8" (255 x 255 x 111.2)	10" x 8" x 4 3/8" (255 x 305 x 111.2)	12" x 8" x 5" (305 x 205 x 127)	12" x 10" x 5" (305 x 255 x 127)	12" x 12" x 5" (305 x 305 x 127)	12" x 10" x 5" (355 x 255 x 152.4)	12" x 12" x 5" (305 x 305 x 127)

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