

HI-LIFE

AMERICA



GRINDING
EXCELLENCE
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PRODUCT RANGE



Hi-Life America is a subsidiary
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CNC CYLINDRICAL **SWIFT**

GRINDING MACHINE (Straight)



CNC CYLINDRICAL **SWIFT TW**

GRINDING MACHINE (Twin Wheel)



CNC CYLINDRICAL **SWIFT AWH**

GRINDING MACHINE (Angular)



SPECIFICATIONS

GENERAL

Swing over table	mm	300 / 400 / 500
Max. Grinding Length	mm	300 / 500 / 800 / 1000 / 1250 / 1500

CNC SYSTEM

FANUC / SIEMENS

Rapid Feed Rate (X & Z axis)	mm/min	7000
Min. Incremental Feed (X & Z axis)	mm	0.001
Feed Servo Motor Torque	Nm	6 / 11
Max. Swivel of Table (Z axis)	deg	- 2 to +7

WORK HEAD

Speed Range (stepless)	rpm	20 - 500 (with CSS feature)
Spindle Nose taper	MT	4 / 5

GRINDING WHEEL HEAD (Straight Wheel)

Grinding Wheel Diameter	mm	400 / 450 / 500 / 600
Grinding Wheel Width	mm	50 / 63 / 80 / 120
Wheel Surface Speed	m/sec	33 / 45
Motor Power	hp	5 / 7.5 / 10 / 15

GRINDING WHEEL HEAD (Twin Wheel)

Grinding Wheel Diameter	mm	400 / 450 / 500 / 600
Grinding Wheel Width	mm	80 / 120 / 160
Wheel Surface Speed	m/sec	33 / 45
Motor Power	hp	10 / 15 / 20

GRINDING WHEEL HEAD (Angular Wheel)

Grinding Wheel Configuration	Angular	30 deg.
Grinding Wheel Diameter	mm	500 / 600
Grinding Wheel Width	mm	63 / 80 / 100 / 150
Wheel Surface Speed	m/sec	45
Motor Power	hp	7.5 / 10 / 15 / 20

TAILSTOCK	MT	4 / 5
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SALIENT FEATURES

GENERAL

- Simultaneous control of 2 Axis and 1 spindle (work head) through CNC.
- Multi-diameter grinding in Plunge, Traverse, Taper & Profile with Face grinding.
- SAS - Smart Attention assist System monitors the status of consumable items & generates alarm to avoid sudden down time of machine.
- Completely enclosed, TPM friendly, machine guarding provided.

MACHINE BASE, TABLE (Z AXIS) & INFEEED SLIDE (X AXIS)

- One piece, high quality graded cast iron machine bed having excellent damping characteristics, ensures outstanding surface quality of ground work piece.
- TURCITE-B coated Work head table and Infeed slide ways move on precise V & Flat guideways with stick slip free movement.

WORK HEAD

- Rigid, dead centre mode Work Head with CNC controlled Constant Surface Speed (CSS) of work piece.

WHEEL HEAD

- Cartridge type Grinding wheel spindle operating at 45 m/s cutting speed and with precision Anti friction bearings.
- Constant cutting speed of Grinding wheel thru variable speed drive.

WHEEL DRESSING

- Tailstock or Work head mounted Diamond dresser with CNC dressing for generating various profiles.
- Automatic Dressing with auto compensation through CNC.

AUTOMATION & OPTIONAL ACCESSORIES

- Robotic pick & place loading system, Auto loader Gantry.
- Inprocess gauge, Flagging device, Width control Inprocess gauge, Automatic Wheel Balancing System, Gap eliminator & Crash control system, Auto Door opening/closing, Work head Orientation, Linear Glass scale for axis, Fume extractor, Wheel loading device, Diamond disc/Roll dressing device, IOT Solutions for Industry 4.0, TPM & Productivity trackers.

SPECIAL FEATURES

- Multi-diameter grinding in Plunge, Traverse, Taper, Radius & Profile with Face grinding.
- Cartridge type Grinding wheel spindle operating at 45 m/s cutting speed and with precision Anti friction bearings.
- User friendly grinding cycles provided for Plunge, Traverse & Dressing.
- Partially enclosed machine guarding provided.

SPECIFICATIONS

No. of CNC Controlled Axis & Spindle		2 axis & 1 spindle
Swing over table	mm	300 / 400 / 500
Max. Grinding Length	mm	300 / 500 / 800 / 1000 / 1250 / 1500
CNC SYSTEM		FANUC / SIEMENS
Min. Incremental Feed (X & Z axis)	mm	0.001
Work Head Speed Range (stepless)	rpm	20 - 500 (with CSS feature)
Work Head Spindle Nose taper	MT	4 / 5
Grinding Wheel Diameter	mm	400 / 450 / 500
Grinding Wheel Width	mm	50 / 63 / 80 / 100
Wheel Surface Speed	m/sec	33 / 45
Grinding Wheel Motor Power	hp	5 / 7.5 / 10
Tailstock centre	MT	4 / 5

SPECIAL FEATURES

- Plunge grinding of 2 different diameters or Traverse grinding of single diameter is possible in a single setup.
- User friendly Automatic grinding cycles provided for Plunge, Traverse & Dressing.
- Automatic dressing with auto compensation thru CNC.

SPECIFICATIONS

No. of CNC Controlled Axis & Spindle		1 axis & 1 spindle
Swing over table	mm	300 / 400 / 500
Max. Grinding Length	mm	300 / 500 / 800 / 1000 / 1250 / 1500
CNC SYSTEM		FANUC / SIEMENS
Infeed Slide Movement Motor (X axis)	mm	AC Servo thru CNC
Min. Incremental Feed (X axis)	mm	0.001
Work Head Table Movement (Z axis)		Hydraulically thru CNC
Work Head Speed Range (stepless)	rpm	20 - 500 (with CSS feature)
Work Head Spindle Nose taper	MT	4 / 5
Grinding Wheel Diameter	mm	400 / 450 / 500
Grinding Wheel Width	mm	50 / 63 / 80
Wheel Surface Speed	m/sec	33 / 45

SPECIAL FEATURES

- Suitable for In-feed grinding of multi-diameter, Form grinding & Thru-feed grinding.
- TURCITE B coated Infeed slideways with automatic lubrication.
- Precision ballscrew directly coupled to AC Servo motor moves each CNC axis.
- Anti Friction / Hydrodynamic bearings for grinding wheel spindle.
- Menu driven Grinding & Dressing cycles with automatic dressing
- CNC Controlled grinding wheel Dressing Slide with Anti-Friction Guideways

SPECIFICATIONS

No. of CNC Controlled Axis		1 / 2 / 3
Grinding Range (Dia.)	mm	2-125
Max. Infeed Grinding Length	mm	95 / 145 / 195
CNC SYSTEM		FANUC / SIEMENS
Min. Incremental Feed (X axis)	mm	0.001 thru AC Servo motor
Grinding Wheel Diameter	mm	350 / 400 / 500
Grinding Wheel Width	mm	100 / 150 / 200
Reg. Wheel Speed (stepless)	rpm	20-200 (with digital RPM display)
Gr. Wheel Motor Power	hp	7.5 / 10 / 15 / 25

CNC CYLINDRICAL *SWIFT(ECO)*

GRINDING MACHINE (Straight / Angular)



CNC CYLINDRICAL *SWIFT(S)*

GRINDING MACHINE (Single Axis)



CNC CENTRELESS

GRINDING MACHINE



HYDRAULIC CYLINDRICAL

GRINDING MACHINE



SPECIAL FEATURES

- TURCITE-B coated Work head table & Infeed Slideways.
- Hydrodynamic bearings for wheel spindle.
- Infeed screw with special nut having facility for backlash adjustment.

OPTIONAL

- Internal Grinding Attachment.
- Automatic Plunge & Traverse Grinding Cycle.
- Workhead & Wheelhead with Anti Friction bearings.
- In-Process Gauging System.

SPECIFICATIONS

Swing over table	mm	300 / 400	400 / 500
Max. Grinding Length	mm	300 / 500 / 800	1000 / 1250 / 1500 / 1700
Grinding Wheel Dia.	mm	350 / 400	400 / 500
Grinding Wheel Width	mm	40 / 50	40 / 50 / 80
Rapid Approach	mm	50	50
Work Head Centre	MT	4 / 5	4 / 5

CENTRELESS

GRINDING MACHINE



SPECIAL FEATURES

- Hydrodynamic bearings for grinding wheel spindle.
- Variable speed of Regulating wheel with digital RPM display.
- Swivel of Reg. wheel in horizontal plane for fast taper correction.

OPTIONAL

- Automatic In-Feed Grinding Cycle.
- Auto loading & un-loading system.
- Hi-speed Cartridge type Gr. wheel spindle with Anti Friction bearings.

SPECIFICATIONS

Grinding Range (Dia.)	mm	2-125
Max. Infeed Grinding Length	mm	95 / 145 / 195
Grinding Wheel Diameter	mm	350 / 400 / 500
Grinding Wheel Width	mm	100 / 150 / 200
Regulating Wheel (d x w)	mm	230x100 / 230x150 / 300x200
Reg. Wheel Speed (stepless)	rpm	20-200
Swivel of Reg. Wheel Head	deg	0-5 Vertical & ± 1.5 Horizontal
Gr. & Reg. Wheel Dresser		Hydraulic
Gr. Wheel Motor Power	hp	7.5 / 10 / 15 / 25
Reg. Wheel Motor Power	hp	1 / 2

INTERNAL GRINDING MACHINE

CNC / HYDRAULIC



SPECIAL FEATURES

- Shoe Centreless & Magnetic Chucking or Hydraulic Chuck
- Slide ways coated with 'TURCITE - B'.
- Workhead with precision Anti Friction bearings.
- Automatic Grinding Cycle

SPECIFICATIONS

Centre Height	mm	180 / 240
Max. Grinding Diameter (bore)	mm	100 / 200
CNC SYSTEM		FANUC / SIEMENS
Table Speed - stepless	m/min	0.1 - 4
Max. Table Stroke	mm	350 / 500
Internal Grinding Spindle Dia.	mm	60 / 80 / 100
Spindle Speed	rpm	18000 / 28000 / 14000
Grinding Wheel Motor Power	hp	3 / 5
Work Head Speed - stepless	rpm	20 - 650
Work Head Swivel	deg	0 to 30
Auto Spark Off Time	sec	0 - 60

