



# MICRON

NEWSLETTER FROM SOLITAIRE MACHINE TOOLS LIMITED

APRIL - JUNE 2002



Dear friends,

Solitaire has established itself as a market leader for its No.2 Precision Centerless Grinding Machine in India and USA. The esteemed customers who use No.2 Centerless Grinding Machines have encouraged us to produce a smaller Centerless Grinding Machine and give us desired features and parameters.

We undertook the task of designing and developing a smaller Centerless Grinder in the year 1999 and the first prototype was made and exhibited at National Manufacturing Technology Show at Mumbai in the year 2000.

We were fortunate enough to have Bharat Ratna Dr. A. P. J. Abdul Kalam visit our booth. We explained to him the indigenous development of the machine and he encouraged us by his kind words and asked us to make sure that the product which we offer is equal to the best in the world.

The smaller No.1 Precision Centerless Grinding Machine is now being produced at our plant and is being offered as a sturdy machine with capacity to deliver quality components with stringent accuracy at an economical price. This is the latest addition in our Centerless Grinders range and we are planning to offer a still wider range of machines in the near future. No. 1 Centerless Grinder is being offered in conventional as well as CNC versions.

We have been able to achieve this with the goodwill, feedback and encouragement received from our valued customers.

  
P.J. SHETH



Precision to the last micron

# Solitaire No.1 Precision Centerless Grinders

## Capacities

## 4" (100 mm) Machine

### Work Diameter Range

Thrufeed Workrest	0 to 40 mm (0 to 1-1/2")
Infeed Workrest	0 to 40 mm (0 to 1-1/2")

### Grinding Wheel

Diameter x Width - Max x Bore	400 x 100 mm x 250 mm (16" x 4" x 10")
Minimum Diameter	300 mm (12")
Max. Wheel Surface Speed, New Wheel	33 m/sec. (6500 sfpm)

### Regulating Wheel

Diameter x Width - Max	225 x 100 x 100 mm (9" x 4" x 4")
Minimum Diameter	175 mm (7")

### Drive Motor

Grinding Wheel	7.5 hp
Regulating Wheel	1.0 hp
Hydraulic Unit	0.5 hp
Coolant Unit	0.25 hp

### General Data

Floor Space	1600 X 1550 MM (63" X 61")
Approximate Weight	2000 KG (4500 LB)



### Design Highlights:

- ✦ Hydrodynamic grinding wheel spindle supported with sets of bearings consisting of three shoes each for constant center of rotation
- ✦ Sturdy swivel plate supports that double slide infeed system to facilitate fast, precise taper correction without the need to retrue the wheels to achieve parallelism
- ✦ Infinitely variable AC drive for regulating wheel alongwith digital read out for speed
- ✦ Simplified hydraulics with easy access for cleaning and maintenance
- ✦ Automatic lubrication to grinding wheel and regulating wheel spindles with automatic shut off in case of lube system failure for grinding wheel
- ✦ Profile truing for grinding wheel and regulating wheel
- ✦ Easily accessible electricals with door mounted switch for safety

**Think Centerless Grinders. Think Solitaire.**



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