

# CENTRING AND FACING MACHIN

## FEATURE:-

SPM Centering and Facing Machines are most suitable for centering, plunge facing, chamfering and external turning of the two ends simultaneously of the bar stock, such as camshafts, crankshafts, motor-shafts, universal joint, spiders etc. ensuring perfect alignment of centers, accurate lengths and true end. These are available in four length capacities.

The combined centering and facing operation saves machining time, handling time and floor space. The machine has two Hydraulic operated self centering work holding vices with push button control. The cutting cycle is operated with push button on a fast approach, slow feed and rapid return basis.

Facing is a machining process in which material is removed from the end of a workpiece to create a flat surface perpendicular to its rotational axis. A facing tool moves perpendicular to the workpiece's rotational axis, cutting the material to achieve the desired surface finish.

## Operation:-

**Step 1:** Adjust the **V-steady fixture** according to the job's diameter and length. Move one spindle **forward or backward** as required.

**Step 2:** Load the job and ensure it touches the **side stopper plate** for proper positioning.

**Step 3:** Press the **push button** to start the cycle.

**Step 4:** The job gets clamped, and both spindles move **forward** to cut the **job face**. The spindles then stop at the **center** of the job to perform the **centering operation**.

**Step 5:** Both spindles move **backward**, and the job is **declamped** from the fixture.

**Step 6: Manually unload** the job and check its size for accuracy.

Technical Specification:-

|                                          |                             |
|------------------------------------------|-----------------------------|
| Min. OD of the Job                       | 30mm                        |
| Max. OD of the Job                       | 100mm                       |
| Min. Length of the Job                   | 250mm                       |
| Max. Length of the Job                   | 1600 mm                     |
| Clamping System                          | Hydraulic Cylinder          |
| Spindle Speed                            | 2000 RPM                    |
| Max. Stroke of the each Spindle (x-axis) | 50mm                        |
| Spindle Cutting Feed                     | Moves to Hydraulic Cylinder |
| Max. Facing dia.                         | 100mm                       |
| Center drill size                        | As per customer need        |
| Motoe power-1)Spindle                    | 3Hp                         |
| 2) Hydraulic power pack                  | 4Hp                         |
| 3)Cooling Motor                          | 0.5 Hp                      |
| 4)Servo motor                            |                             |
| Center Height of the base and spindle    | As per spindle height       |
| Machine overall size                     | 2.5x1 meter                 |

Main Component of the machine:-

- 1) Plc and control panel / tower lamp / Buzzer.
- 2) Strong machine Structure
- 3) Spindle with polycrystal diamond insert
- 4) Spindle slide
- 5) Clamping System (Hydraulic Base)
- 6) Y-axis slide use ball screw with servo motor maintain the center drill accuracy.
- 7) Use SS bellows.
- 8) Use powder coating on outer body.