

4.0

User Friendly and
High Efficiency
Machines



PROVALVE
Valve Guide And Seat Machine

New advanced technology
with three dimensional
friction free air cushion
positioning system



CE

industry 4.0

4.0

Valve Seat and Guide Machine

New advanced technology with three dimensional friction free air cushion positioning system

Automatic start of the precise centering process and automatic stop at the end of process

Servo motor of spindle has constant torque spindle rotation on lowest r.p.m as in all r.p.m

Depth control and memory with digital counter and stop with the buzzer

The vertical column body made of monoblock cast-iron

The main base body made of monoblock cast - iron

12 inches H.M.I (color touch screen operator panel)

Pre - centering system

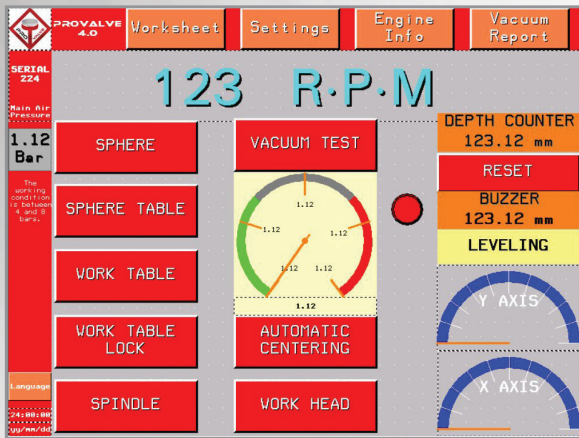
Tilt sensor (x - y axes)

Air pressure sensors

Vaccum pressure sensor



1 CONTROL PANEL 12 inches H.M.I. (Color Touch Operator Panel)



2 HANDLE WITH MICROSWITCH

- Handle with microswitch is on the work-head for horizontal movement of the work-head

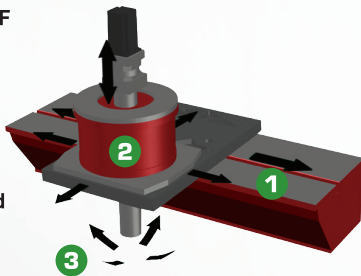
3 MOVEMENTS of FRICTION FREE AIR CUSHIONS

HORIZONTAL MOVEMENT OF WORK-HEAD

- 1) Longitudinal horizontal movement of work-head by friction free air cushion 1000 mm

MOVEMENT OF SPHERE and SPHERE CYLINDER DURING SENSITIVE CENTERING

- 2) Front – back – right – left as radius movement of sphere cylinder by friction free air cushion 15 mm.
- 3) Spindle inclination in all directions by spherical bearing by friction free air cushion 7 degree



4 VERTICAL COLUMN BODY & PROTECTION CLOTH BELLOWS



- The vertical column body made of monoblock cast-iron
- There are protection cloth bellows on the vertical column slides to the right and to the left for protect from dust.

5 LED LIGHTING

- LED lighting for an increased light ratio and a better energy saving.

6 CUTTING INSERT SHARPENER

- Diamond wheel cutting bit sharpener for fast easy sharpening of single angle and three angle tool bits mounted on machine.

7 SPINDLE

- a) Spindle rotation by A.C Servo motor with constant torque coupled planetary helical gear reducer.
- b) Infinitely variable speed from 0 to 600 r.p.m
- c) It is long life and maintenance free.
- d) The spindle motor provides constant a torque at variable speeds when machining valve seats
- e) Spindle cover with diameter 80 mm. hardened and plated hard chrome
- f) The cone standard of spindle ISO 30.
- g) Spindle movement up-down 250 mm
- h) Spindle stroke steering wheel for rapid and fine feed mechanism

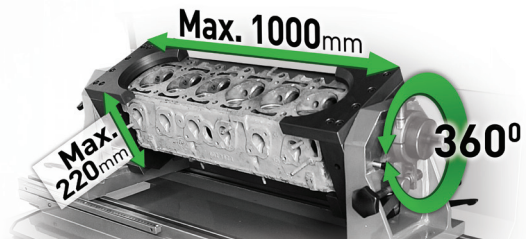
8 TOOLING STORAGE CABINET



- a) Three drawers and a top tray allows convenient storage of a wide selection of tooling
- b) The mounted arm of tooling storage cabinet swivels 130 degrees.

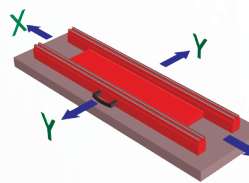
DIMENSIONS of TOOLING STORAGE CABINET
L350x D280 x H310 mm.

9 SINGLE AXIS ROLL-OVER FIXTURE



- Cylinder head clamping system that combined a side clamps for cylinder head, used for different angles with a universal mechanical fixture and rotatable adjustable 360° also for simple and combined angles.

10 WORK – TABLE



X : 200 mm. Y: 220 mm.

- a) The work-table is made of rigid cast-iron.
- b) The work-table move free all directions on the table bed rigid platform by friction free air cushion.
- c) Locking of work-table is done by providing aconstant vacuum pressure through 2 th vacuum pump motor.

11 MAIN BASE

- The main base body made of monoblock cast-iron

12 VACUUM TESTING

- a) Vacuum test is done by providing a constant vacuum pressure through 1 th vacuum pump motor.
- b) The machine contains vacuum pipe, vacuum filter and pads with foam

SIZE OF VACUUM PADS (8)
Ø40 mm / Ø50 mm / Ø60 mm / Ø75 mm
50x65 mm / 50x80 mm / 60x90 mm / 60x150 mm

4.0

Valve Seat and Guide Machine

TECHNICAL SPECIFICATIONS

4.0

-Machining capacity of valve seat (min.-max.)	Ø18 – Ø120 mm
-Longitudinal travel of the Work-Table	200 mm
-Transverse travel of the Work-Table	220 mm
-Longitudinal travel of the Work-Head	1000 mm
-Machining longitudinal total capacity of valve seat	1250 mm
-Spindle stroke	250 mm
-Spindle cover diameter	80 mm
-Spindle inclination (in all directions)	7°
-Sphere cylinder movement (radius)	15 mm
-Spindle speed	0 to 600 r.p.m
-Spindle motor - AC Servo motor with Servo driver	0.75 Kw
-Spindle nominal torque (Constant torque in all speeds)	17.5 Nm
-Carbide tip sharpener motor	0.25 kW
-1 th Vacuum pump motor for vacuum testing	0.12 kW
-2 th Vacuum pump motor for locking of work-table	0.25 kW
-Maximum cylinder head length (with single roll-over fixture)	1000 mm
-Maximum cylinder head width (with single roll-over fixture)	450 mm
-Maximum cylinder head height (with single roll-over fixture)	220 mm
-Maximum cylinder head length (on the parallel blocks)	Unlimited
-Maximum cylinder head width (on the parallel blocks)	500 mm
-Maximum cylinder head height	475 mm
-Vertical column – spindle axis between distance	315 mm
-Electrical requirements	2 kVA / 3 Ph-400 VAC-50/60 Hz
-Air requirements (Pressure & Usage)	7 Bar-400 l/min
-Machine dimensions (wide x deep x high)	2000 mm x 1050 mm x 2225 mm
-Machine weight	1700 Kg
-Control panel	12 " H.M.I. – Touch color screen operator panel with ETHERNET

BASIC EQUIPMENTS

- SINGLE AXIS ROLL – OVER FIXTURE (1 set)
- CARBIDE BIT SHARPENER with DIAMOND
- VACUUM TESTING PUMP
- PADS WITH FOAM FOR VACUUM TESTER (8)
- TOOL SETTING DEVICE
- BUBBLE LEVEL FOR PILOT DIA SHANK
- TORX T9 SCREW DRIVER
- ALLEN KEY T 2.5 mm.
- RATCHET SOCKET WRENCH 19 mm.
- PROTECTED GLASSES

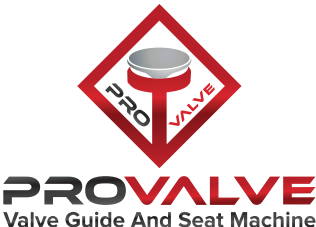
OPTIONS EQUIPMENTS & ACCESSORIES

- PARALLEL BLOCKS (h:140 mm L:340 mm.) (1 set)
- PARALLEL BLOCKS (h:110 mm L:340 mm.) (1 set)
- PARALLEL BLOCKS (h:90 mm L:340 mm.) (1 set)
- UNIVERSAL QUICK CLAMPING (1 set)
- ANGULAR PARALLEL BLOCKS for IVECO CURSORS
- TOOLING STORAGE CABINET with DRAWERS (on the machine)
- MICROMETER FOR COUNTERBORING TIPS
- PROTECTION CLOTH BELLOWS of VERTICAL COLUMN SLIDE
- HANDLE WITH MICROSWITCH AND LED MOVIE OF WORK-HEAD

OPTIONS FEATURES

- 4.0 INDUSTRY APPLICATION
- PRE-CENTERING SYSTEM
- USB & ETHERNET PORTS
- MINI PRINTER
- TILT SENSOR / X –Y AXES (on the spindle)

• Dimensions, weights and construction are not binding and may be modified.



User Friendly and High Efficiency Machines

İvedik Organize Sanayi Bölgesi 1548. Sk. No: 21-23
06378 Yenimahalle / ANKARA – TURKEY
Tel : +90 312 395 39 65 / +90 312 395 39 66
Mobil : +90 507 923 89 03
Fax: +90 312 395 41 69

DEALER