

# 800S

User Friendly and  
High Efficiency  
Machines



**PROVALVE**  
Valve Guide And Seat Machine



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

**TURK  
PATENT**  
TÜRK PATENT VE MARKA KURUMU

INDUSTRIAL DESIGN PROTECTION N° 2019/01394  
PATENT N° 2019/07860 - PATENT N° 2019/07865  
TRADE MARK **PROVALVE**

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**CE**  
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industry



# 800S

## 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

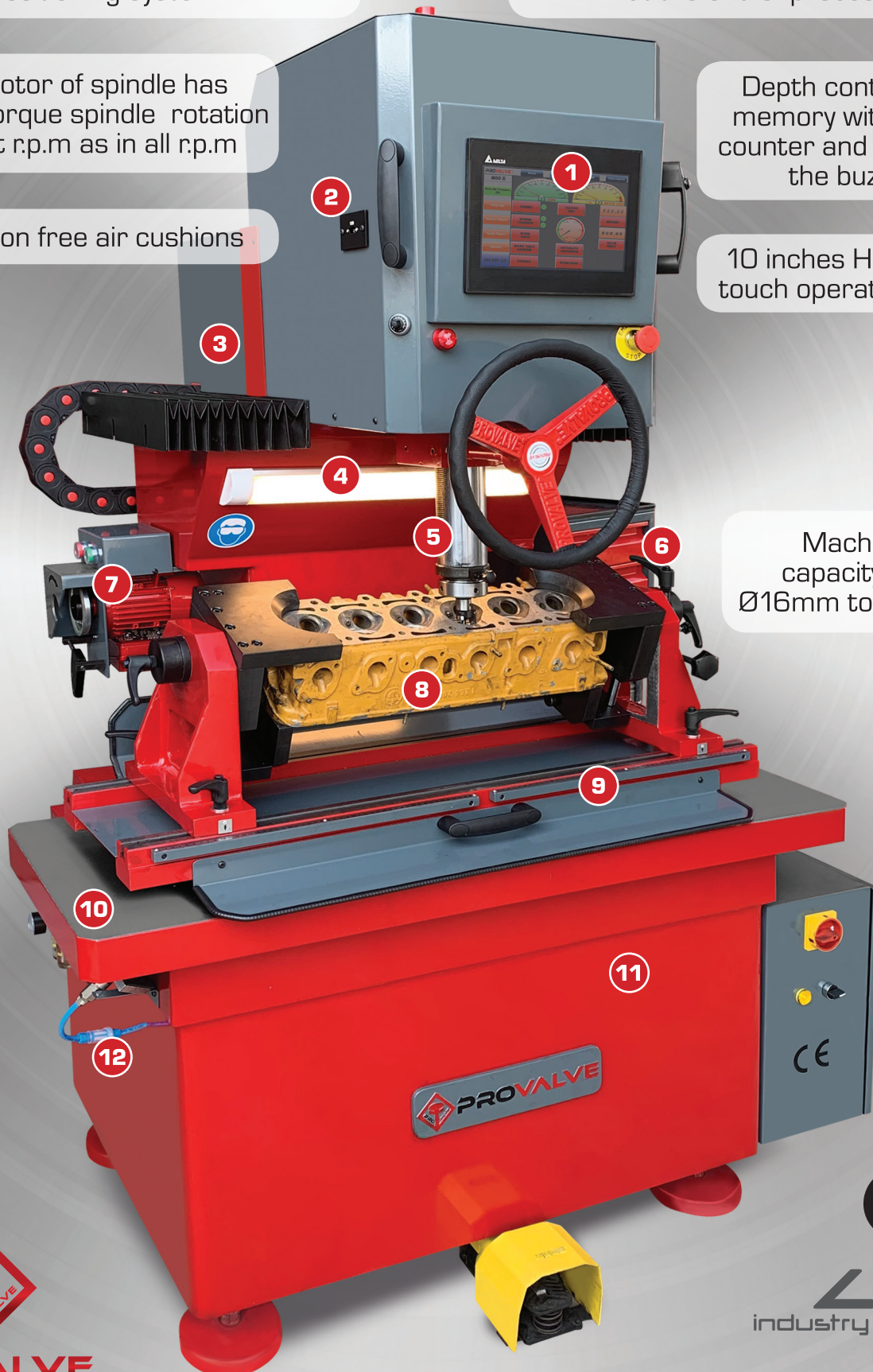
Servo motor of spindle has constant torque spindle rotation on lowest r.p.m as in all r.p.m

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

Four friction free air cushions

10 inches HMI (color touch operator panel)

Machining capacity from  $\varnothing 16\text{mm}$  to  $\varnothing 60\text{mm}$



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## 1 CONTROL PANEL

### 10 inches HMI (Color Touch Operator Panel)



a) The friction free air cushion of Sphere and Sphere Cylinder on/lock by touch button.

b) Movement of Work-Table and Work-head on/lock by touch button.

c) Locking of Work-Table on/lock by touch button

d) Rotation of Spindle on/off by touch button

e) Vacuum test on/off by touch button

f) The vacuum test result is obtained by digital pressure sensor which has attached on the machine and the results can be saved to the USB Flash drive.

g) Depth control of the stroke linear encoder is to keep track of the stroke. Memory function is to warn operator when the desired depth is reached by the help of buzzer. In the settings menu it can be adjusted that when the desired depth is reached spindle shall stop at the given time in seconds.

### Automatic Centering

Automatic centering is to start the high precise centering which is done by automatically instead of done by operator manually. When the adjustments are set on the setting page, the automatic centering function will complete whole operation according to given time intervals. When the centering is done, work table is locked by vacuum pump. This operation is called **Automatic Centering**.

The purpose of this operation is to use the air cushions at the optimum time for high precise centering and do this operation only by a single touch.

## 2 USB & ETHERNET PORTS

a) The machine has USB and ETHERNET ports.

b) Remote control via internet is available by Ethernet.

c) Vacuum test report can be saved to flash disk in Excel format so it can be viewed and printed by computers.

## 3 MOVEMENTS of FRICTION FREE AIR CUSHIONS

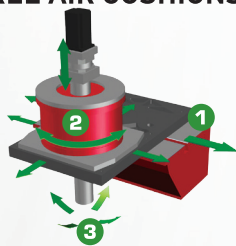
### HORIZONTAL MOVEMENT OF WORK-HEAD

1) Longitudinal horizontal movement of work-head by friction free air cushion 220 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 14 mm.

3) Spindle inclination in all directions by spherical bearing by friction free air cushion 10 degree



## 4 LED LIGHTNING

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

## 5 SPINDLE

a) Spindle rotation by A.C Servo motor with constant torque coupled planetary helical gear reducer.

b) Infinity variable speed from 0 to 1000 r.p.m.

c) It is long life and maintenance free.

d) The spindle motor provides constant 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 200 mm

h) Spindle stroke steering wheel for rapid and fine feed mechanism

## 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 TOOLING STORAGE CABINET



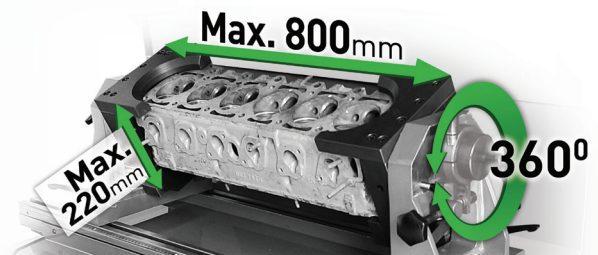
a) Three drawers and a top tray allows convenient storage of a wide selection of tooling

b) The mounted arm of tooling storage cabinet swivels 130 degrees.

### DIMENSIONS of TOOLING STORAGE CABINET

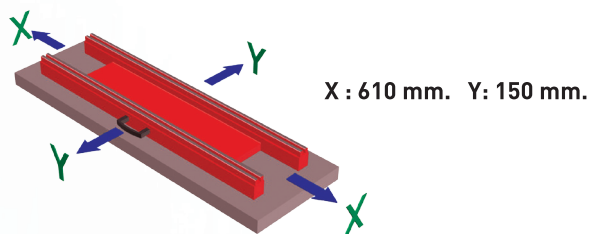
L350 x D280 x H310 mm.

## 8 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.

## 9 WORK - TABLE



a) The work-table is made of rigid cast-iron.

b) The work-table moves free all directions on the table bed rigid platform by friction free air cushion.

c) Locking of work-table is done by providing a constant vacuum pressure through 2nd vacuum pump motor.

## 10 TABLE BED

a) The table bed made of rigid cast-iron.

b) The surface of the table bed is precision grinded.

USEFUL AREA of PLATFORM 480 x 1300 mm.

## 11 MAIN BASE

• The main base made of welded thick sheet steel construction.

## 12 VACUUM TESTING

a) Vacuum test is done by providing a constant vacuum pressure through 1st vacuum pump motor.

b) The machine contains vacuum pipe, vacuum filter and pads with foam

### SIZE OF VACUUM PADS (7)

Ø40 mm / Ø50 mm / Ø60 mm / Ø75 mm  
50x65 mm / 50x80 mm / 60x90 mm



TECHNICAL SPECIFICATIONS	800	800 S
- Machining capacity of valve seat ( min.-max. )	Ø16 mm – Ø60 mm	Ø16 mm – Ø60 mm
- Longitudinal movement of the work-table ( free all directions – with air cushion )	610 mm	610 mm
- Transverse movement of the work-table ( free all directions – with air cushion )	150 mm	150 mm
- Longitudinal movement of the work-head ( with air cushion )	220 mm	220 mm
- Longitudinal total machining capacity of valve seat	830 mm	830 mm
- Spindle stroke	200 mm	200 mm
- Spindle inclination (in all direction –with air cushion)	10°	10°
- Sphere cylinder movement ( radius –with air cushion )	14 mm	14 mm
- Spindle rotation speed	0-1000 r.p.m.	0-1000 r.p.m
- Spindle motor ( A.C. Servo motor )	0.75 Kw.	0.75 Kw.
- Carbide tip sharpener motor	0.25 Kw	0.25 Kw
- 1 th Vacuum pump motor ( vacuum testing )	0.08 Kw.	0.08 Kw.
- 2 th Vacuum pump motor ( locking of work-table )	0.25 Kw.	0.25 Kw.
- Max. cylinder head length ( with single roll-over fixture )	800 mm	800 mm
- Max. cylinder head width (with single roll-over fixture)	400 mm	400 mm
- Max. cylinder head height ( with single roll-over fixture )	220 mm	220 mm
- Max. cylinder head length ( on the parallel blocks / EXTRA )	1000 mm	1000 mm
- Max. cylinder head width ( on the parallel blocks / EXTRA )	500 mm	500 mm
- Max. spindle – on the work table between distance	425 mm	425 mm
- Max. spindle axis – vertical column between distance	270 mm	270 mm
- Overall dimensions (WxDxH)	1415 mm x 1000 mm x 2175 mm	
- Machine weight	1200 Kg	1200 Kg
- Electrical requirements	3 Ph- 400 VAC- 50/60 Hz	3 Ph- 400 VAC- 50/60 Hz
- Air requirements ( Pressure & Volume supply )	7 Bar – 400 l/min	7 Bar – 400 l/min
- Paint color code	RAL 3000 ( Flame red ) & RAL 7011 ( Iron grey )	
- Control panel	Electrical switch	10" HMI ( Color touch screen )
- USB PORT	-----	STANDARD
- ETHERNET PORT	-----	STANDARD
- 4.0 INDUSTRY	-----	EXTRA

### BASIC EQUIPMENTS

- SINGLE AXIS 360° ROLL – OVER FIXTURE / **CF800** (1 pair)
- CARBIDE BIT SHARPENER / **CBS100**
- VACUUM TESTING / VTS (including vacuum pump,vacuum filter,vacuum manometer)
- PADS WITH FOAM FOR VACUUM TESTER / **VP** (various sizes - 7)
- MICROMETER FOR COUNTERBORING / **25100**
- TOOL SETTING DEVICE / **TAD**
- BUBBLE LEVEL / **20952**
- TOOL RACK WITH DRAWERS / **TR352831** (mounted on the machine)
- TORX T9 SCREW DRIVER / **23801T9**
- ALLEN KEY T 2.5 mm / **23801T25**
- PROTECTED GLASSES / **1665**

### EXTRA

- PARALLEL BLOCKS (h:140 mm – l:340 mm) / **PB140340** (1 pair)
- UNIVERSAL QUICK CLAMPING / **CH** (1 pair)
- PROTECTION CLOTH BELLOWS OF VERTICAL COLUMN SLIDE / **PCB220**
- HANDLE WITH MICROSWITCH AND LED MOVIE OF WORK-HEAD / **EBR150SWBF2.5**

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



### User Friendly and High Efficiency Machines

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