

# GGs-Valve Profiling Machine

The Machine that is everything you need for  
servicing your valves.



## Easy access and visibility during operation.



**With the gear ratchet  
an automatic feed  
rate of the cutting  
tool is maintained.**



From our research over the last few decades, we have developed new specialized equipment and are leaders in the field of Safety valve maintenance. For optimum performance, seat and disc faces require flatness to within wavelengths of light and a surface texture in the order of microns. With this machine, these critical tolerances can be achieved within a matter of minutes.

## 1. Machining a seat profile with conventional cutting tools.

Re-profiling of a valve seat is always necessary once the minimum critical dimension has been reached.



## 2. Grinding a seat face with diamond coated wheels.



### Grinding a seat face for rapid removal of material prior to lapping.

The various grit sizes of diamond coated grinding wheels revolving at 5,000 rpm can reduce lapping time by as much as 90%.

Lapping by hand can lead to the seat face being out of square to the body. This can cause leaking and a Safety Valve not performing to the required standard. The Machine corrects these errors and maintains the seat square to the body.

### 3. Lapping & polishing a seat face to the required flatness and surface finish.



Equal lapping forces across the seat face is achieved with the swivel Joint. This together with the random motion of the Lapping Disc ensures the required flatness is transferred to the valve seat.



The adjustable eccentric gearbox allows maximum lapping action reducing time and ensuring accuracy.

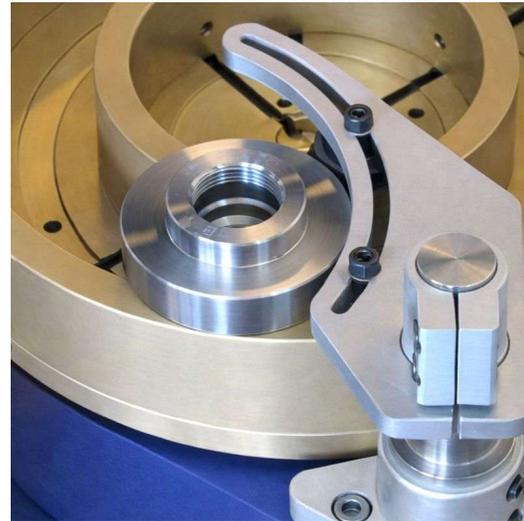


**The lapping process on any size valve can be completed within a matter of minutes.**

#### 4. Lapping & polishing a valve disc to the required flatness and surface finish.

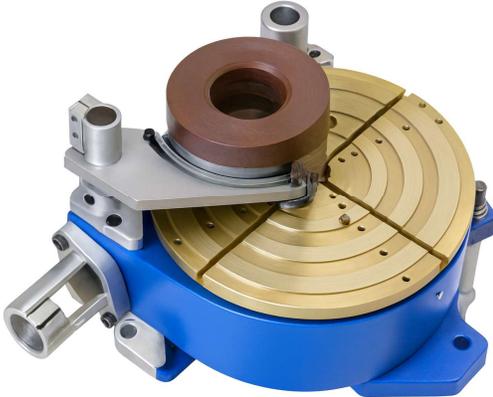


Lapping of a thermal disc on selected rings suitable for the relevant disc



The most accurate method of lapping a thermal disc is achieved with the Machine lapping ring table attachment.

## 5. Lapping a lapping block to the required flatness and surface finish.



Lapping Blocks can be maintained Flat and in good condition by Reconditioning on the Merlin's flat lapping table.

## 6. Grinding a new profile to the seat on a Control Valve.



In the picture below a new 45 degree angle is being ground on the seat face.



### Specifications: GGS-VPM-03A



**Dimensions of each case:**  
 28.1 x 52.0 x 29.5 cm  
**Average Weight of each case**  
 when full: 45 Kg.  
**Total weight of machine including**  
 the cases: 135 Kg.  
**Main Drive:**  
 110/240 3000 rpm 1/2" electric drill 700W.  
**Optional:**  
 Air motor or Hydraulic drive motor.

**Grinding motor: 2.9 kW Diamond**  
**grinding wheels: 80, 120, 240 grit size**  
**Min std tool inside cutting diameter**  
 approx: 5 cm **Max std tool outside**  
**cutting diameter approx: 20 cm**  
**Max std depth: approx: 30 cm Max**  
**eccentricity: 100mm**



**Std Lapping plate sizes:**  
 100, 150, 200MM o/d  
**Std Lapping ring sizes:**  
**Outside dia. Inside dia.**

1.	300	270
2.	230	200
3.	165	135
4.	108	78
5.	75	45

**Protected by Patents**

## 7. The Pedestal

The Merlin Pedestal is Suitable for:  
Safety Valves, Control Valves, Globe  
Valves & Gate Valves.

For workshop applications the Valve  
Pedestal can be used for machining,  
grinding and lapping of valve bodies  
saving the need for skilled lathe  
operators therefore reducing service  
time and costs.

