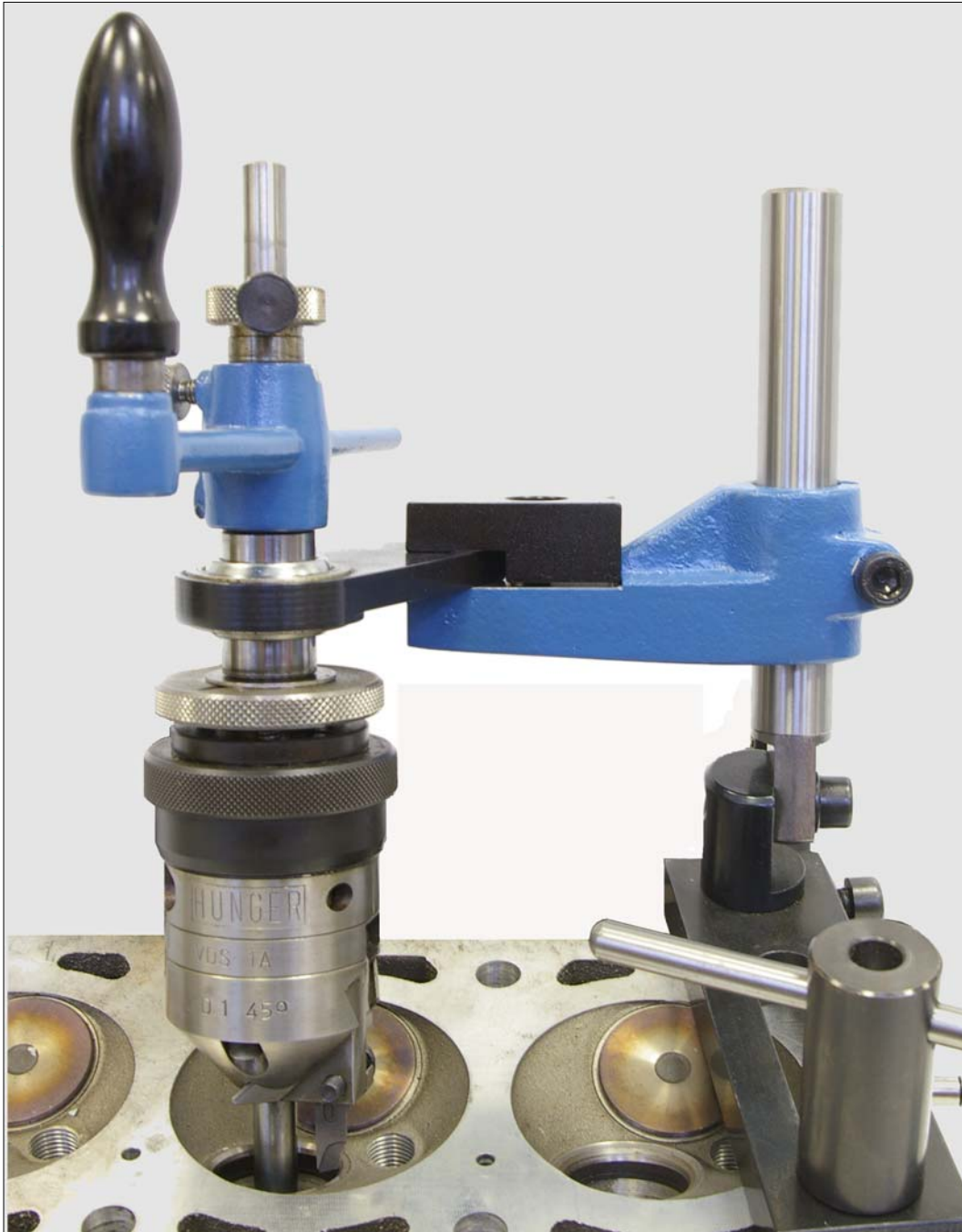




# Hunger VDS1A

## Valve Seat Refacing Tool

for valve seats from 14 to 60mm diameter



**Capacity:**

Valve seat diameter range 14 - 60mm

Seat angle range 0° - 50°

**Feed motions:**

Rotary motion manual

Transverse feed 0,05 mm/rev

**Dimensions:**

Length 150 mm

Width 55 mm

Height 210 mm

**Weight:**

Net weight 1,4 kg

## Hunger valve seat refacing, the superior alternative to grinding and form cutting.

### Working principle:

The valve seat is refaced in a lathe-type facing action.

While the single point cutting tool is rotated in a circle around the valve seat, a feed gear ensures a continuous outward transverse feed motion under the proper seat angle.

This angle is defined by an inclined slide-way in the exchangeable adapter head.

A pilot inserted in the valve guide aligns the VDS1A in centerline with the valve guide.

A swiveling guide arm is provided below the crank handle for additional support.

To eliminate run out when the VDS 1A is rotated around the pilot, the swiveling guide arm is locked in place either by a steady rest which is mounted on the cylinder head or by means of the Hunger K2000 cylinder head stand.

### Handling:

Operation is straightforward.

First, insert the pilot into the valve guide.

Then place the VDS1A over the pilot and lock swiveling guide arm in place.

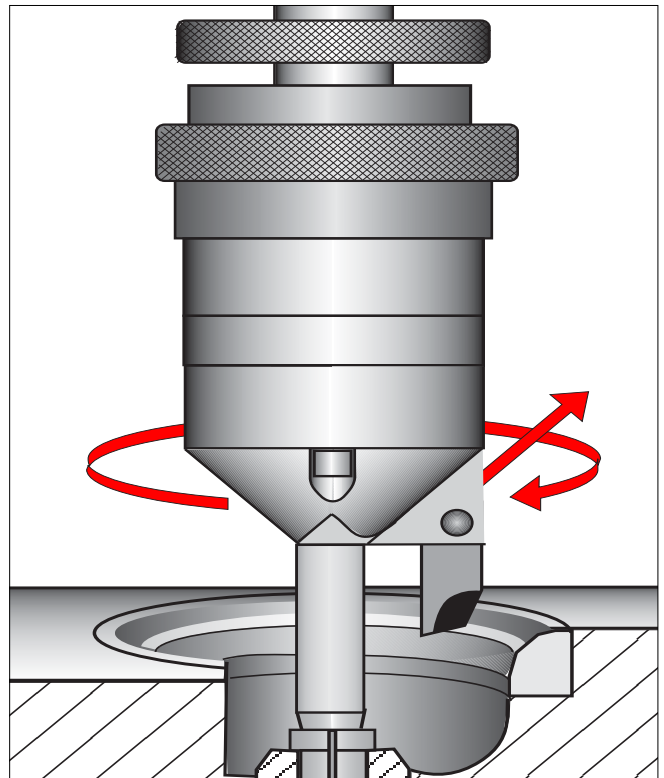
Lower the VDS1A until the cutting tool is just in contact with the valve seat.

Turn rapid tool traverse to position the cutting tool in front of the inner edge of the valve seat.

Turn micrometer downfeed to set the desired depth of cut.

Rotate VDS1A with crank handle to reface the valve seat in centerline with the valve guide under the correct seat angle.

If required, the refaced valve seat can be narrowed by using the side cutting edges of the cutting tool to machine the upper and lower edges of the valve seat.



### Benefits:

No setting gauges, no time consuming measurements or guesswork

Lathe-type refacing removes material from the hardened and burned spots of the seat gradually from the side and, therefore, no upward spring action resulting in chatter marks will occur.

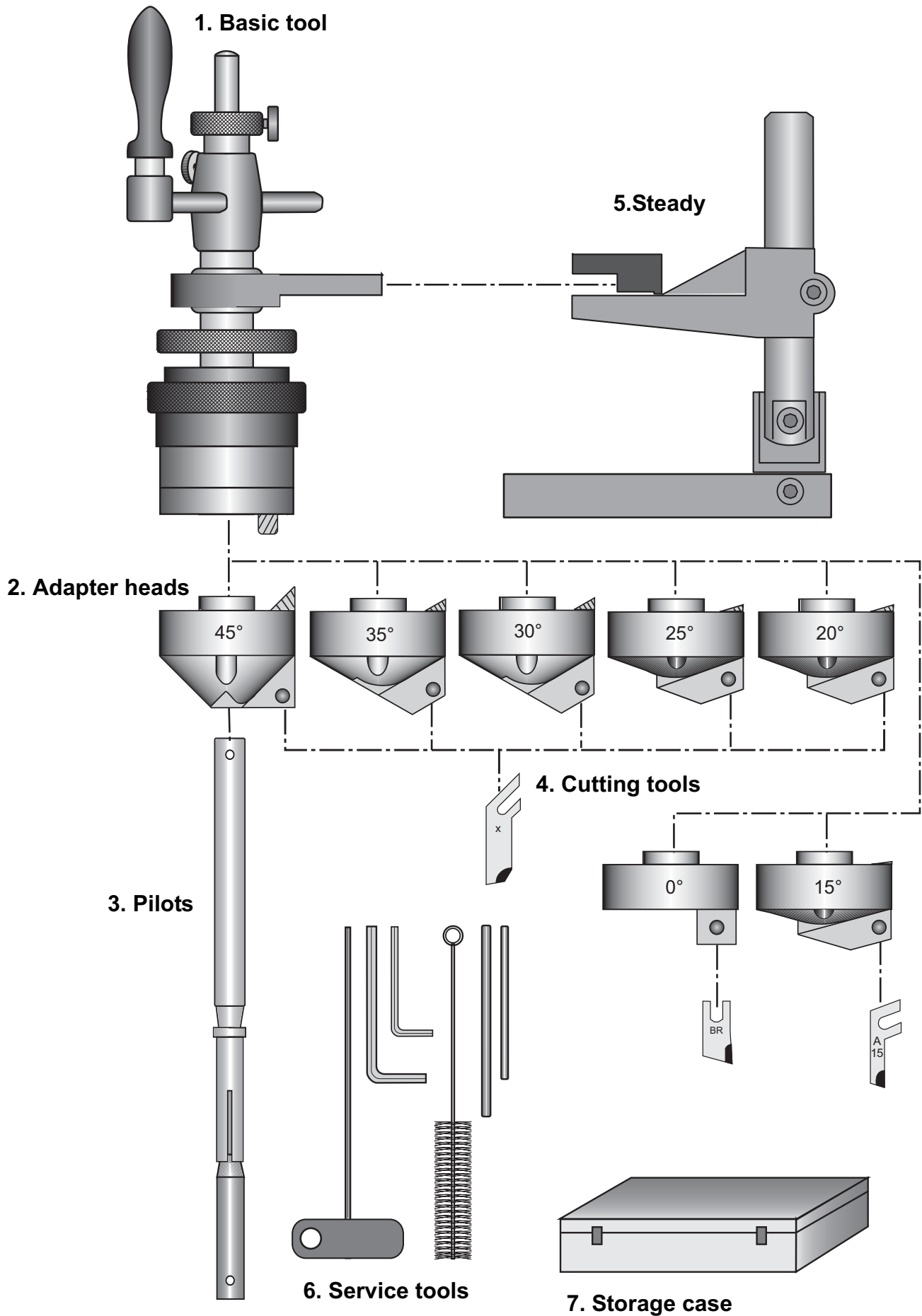
The refaced valve seat has a flawless concentric texture for a complete valve seal.

Because the depth of cut is preset by a micrometer downfeed mechanism, even an unexperienced operator is able to maintain positive control over the material being removed from the valve seat.

Roundness, concentricity and surface finish of the refaced seat are within manufacturers' specifications or even better.

The carbide-tipped cutting tools can be re-sharpened on standard tool sharpeners

# The modular components of the VDS1A



## Pilots and Cutting Tools

The available pilots and the available cutting tools are listed in our Catalog "Tools and Equipment for Automotive Workshops".

The Catalog can be downloaded as pdf file from our website "www.ludwig-hunger.de".

### VDS1A Kits

VDS1A Kits are available to match the various requirements.

Each kit contains all the items needed in a storage case.

The storage case has space for additional pilots and cutters so that the kit can be updated, if new or additional engines are to be serviced.

Hunger uses information supplied by various sources to keep the contents of the kits up to date. As specifications are liable to change without prior notice Hunger cannot be held responsible for inaccuracies which may occur from time to time.

In addition to the kits listed below Hunger supplies also kits as specified by the customer.

### Universal VDS1A Kits

Description	Part No.	Seat angle	Remarks
Basic Kit I	236 03 137	45°	The low cost starting kit for 45° seats
Basic Kit II	236 03 296	45°&30°	The low cost starting kit for 45° & 30° seats
Standard Kit	236 03 100	45°	The complete kit for 45° seats
Master Kit	236 03 300	45°&30°	The complete kit for 45° & 30° seats
Motorcycle Kit	236 03 193	45°	The complete kit for motorcycles
Tractor Kit	236 03 117	45°	The complete kit for tractors

### Special VDS1A Kits

Description	Part No.	Seat Angle	Description	Part No.	Seat Angle
Alfa Romeo	236 03 343	45°&30°	Mazda	236 03 161	45°
BMW cars	236 03 184	45°	Mercedes cars	236 03 308	45°&30°
BMW mot.cycl.	236 04 172	45°	Mitsubishi	236 03 187	45°
BMW universal	236 03 102	45°	Opel	236 03 112	45°
Citroen	236 03 303	45°&30°	Perkins	236 03 588	45°,35°&30°
Daihatsu	236 03 186	45°	Peugeot	236 03 314	45°&30°
Datsun	236 03 158	45°&30°	Porsche	236 03 713	45°&15°
Fiat / Lancia	236 03 104	45°&30°	Renault cars	236 03 315	45°&30°
Ford cars	236 03 105	45°	Saab	236 03 181	45°
Harley Davidson	236 03 130	45°	Skoda	236 03 144	45°
Hatz	236 03 131	45°	Subaru	236 03 199	45°
Honda m.cycles	236 03 162	45°	Suzuki cars	236 03 134	45°
Hyundai	236 03 314	45°	Suzuki mot.cycl.	236 03 129	45°
IHC	236 03 133	45°	Toyota	236 03 160	45°
Kawasaki	236 03 194	45°	VW-Audi	236 03 373	45°
Lada	236 03 179	45°	Volvo cars	236 03 318	45°&30°
Massey-Ferg.	236 03 136	45°	Yamaha	236 03 183	45°

### Ludwig Hunger GmbH

Graefelfinger Str. 146  
81375 Munich/Germany

Tel.: +49 89 7091-0  
Fax: +49 89 7091-26

info@ludwig-hunger.de  
www.ludwig-hunger.de