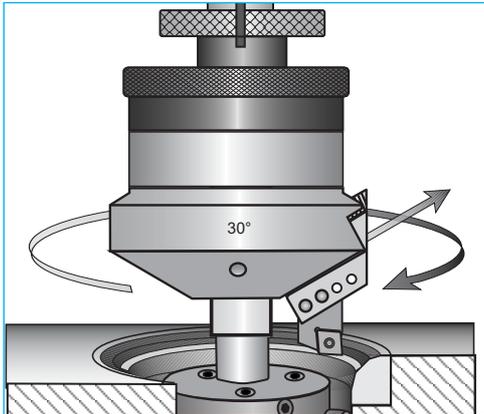
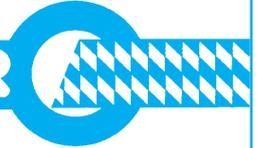


## Valve Seat Refacing Machine for Valve Seat Diameter Range 35 - 140 mm



- Compact and handy design.
- Powered by protective extra low voltage to avoid risk of electric hazard.
- Easy to use.
- Fast setup.
- No abrasive dust.
- A fast clean cut.
- A precise seat angle time and again.
- Successfully tested and specified by leading engine manufacturers.



**Working Principle**



**Exchangeable Refacing Head**

## WORKING PRINCIPLE

The valve seat is refaced to the preset depth by the simultaneous application of both a rotary and a transverse feed motion to the cutting tool fitted with an indexable cutting insert.

While the cutting insert rotates in a circle around the valve seat, a feed gear mechanism ensures a continuous outward transverse feed motion under the proper seat angle.

This angle is defined by an inclined slideway provided for the tool slide in the seat refacing head.

The seat refacing head with the built-in slideway for cutting tool travel is exchangeable mounted to the feed gear unit to ensure a precise seat angle eliminating faulty setting operations.

The VDS2.5HD is aligned and guided by a pilot which is locked in the valve guide bore and stabilized by a supporting spider just below the valve seat.

The lathe-type refacing action provides a flawless concentric seating surface texture for a perfect valve seal.

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

## SPECIAL FEATURES

The machine is fitted with two drive motors resulting in a smooth cutting action.

Powered by SELV (Safety Extra Low Voltage) to avoid risk of electric hazard.

The SELV is supplied by an universal power supply unit featuring a wide input range of 100 to 300 VAC.

The rotary speed of the refacing head is adjustable so that the speed can be selected according to the diameter and hardness of the valve seat.

## SPECIFICATION

### Capacity

Seat diameter range	35 - 140 mm
Seat angle range	0° - 45°

### Cutting motions

Rotary speed range	190 - 360 rpm
Transverse feed rate	0,05 mm/rev.

### Electrics

Operating voltage of machine	max. 27 VDC
Universal Power Supply Unit	
Supply voltage range (1ph. 50/60Hz)	100 - 300 VAC
Power Requirement	0,3 kW

### Dimensions

Length	410 mm
Width	125 mm
Height	310 mm

### Weight

Net weight	approx. 10 kg
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## HANDLING

### Setup is fast and easy.

First, lock the pilot with mounted supporting spider in the valve guide.

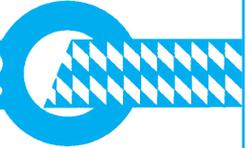
Then, lower the machine over the pilot and position the cutting tool in front of the inner edge of the valve seat.

Turn micrometer downfeed to set the desired depth of cut.

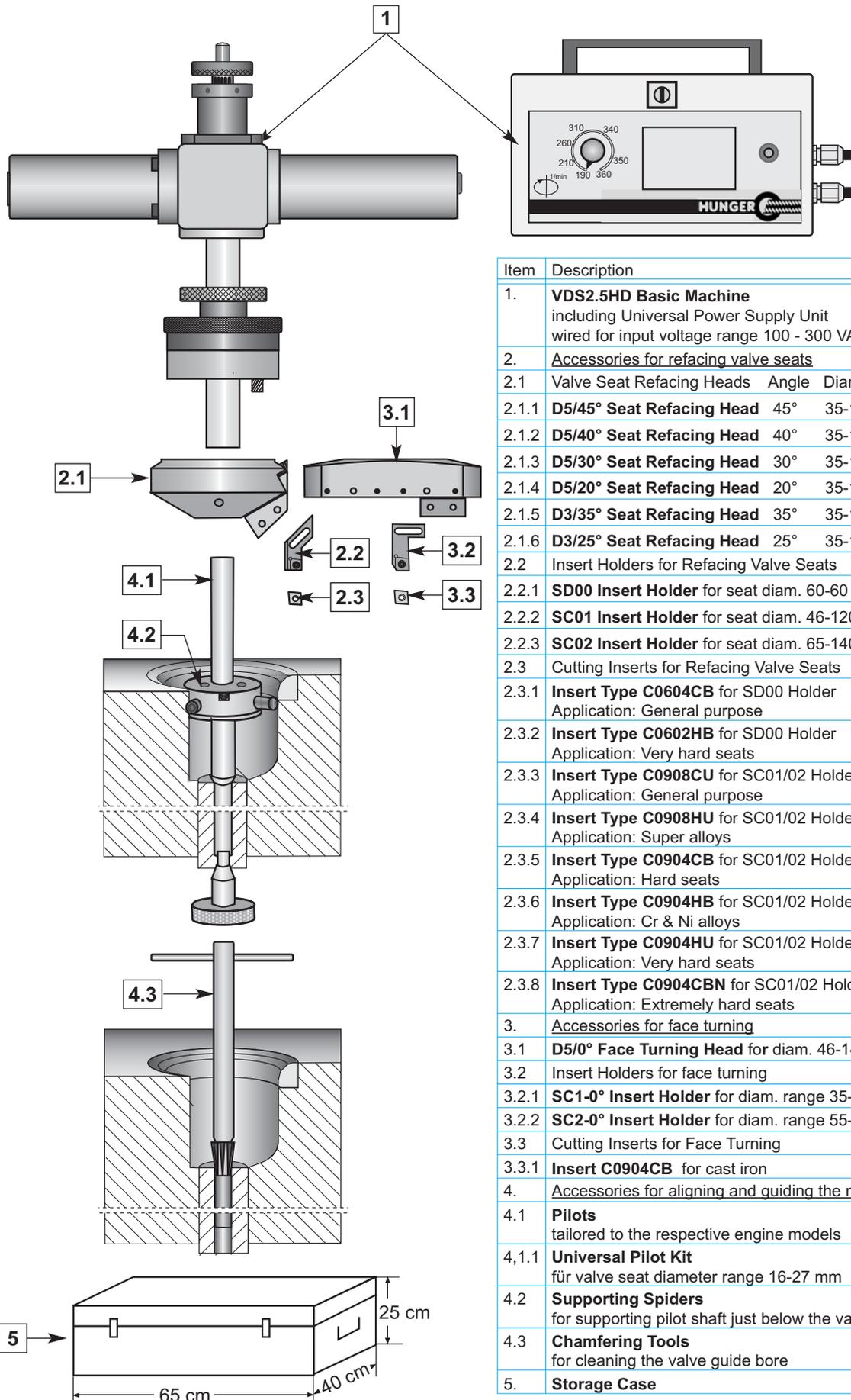
### Refacing is automatic.

Pressing one button is enough to start the refacing pass.

Two to three passes will restore the valve seat to the original condition.



The Modular Components



Item	Description	P/N
1.	<b>VDS2.5HD Basic Machine</b> including Universal Power Supply Unit wired for input voltage range 100 - 300 VAC	247 05 500
2.	<u>Accessories for refacing valve seats</u>	
2.1	Valve Seat Refacing Heads Angle Diam.Range	
2.1.1	<b>D5/45° Seat Refacing Head</b> 45° 35-140 mm	247 11 545
2.1.2	<b>D5/40° Seat Refacing Head</b> 40° 35-140 mm	247 16 540
2.1.3	<b>D5/30° Seat Refacing Head</b> 30° 35-140 mm	247 12 530
2.1.4	<b>D5/20° Seat Refacing Head</b> 20° 35-140 mm	247 17 520
2.1.5	<b>D3/35° Seat Refacing Head</b> 35° 35-120 mm	247 14 335
2.1.6	<b>D3/25° Seat Refacing Head</b> 25° 35-120 mm	247 15 325
2.2	Insert Holders for Refacing Valve Seats	
2.2.1	<b>SD00 Insert Holder</b> for seat diam. 60-60 mm	247 65 108
2.2.2	<b>SC01 Insert Holder</b> for seat diam. 46-120 mm	247 65 103
2.2.3	<b>SC02 Insert Holder</b> for seat diam. 65-140 mm	247 65 104
2.3	Cutting Inserts for Refacing Valve Seats	
2.3.1	<b>Insert Type C0604CB</b> for SD00 Holder Application: General purpose	862 20 021
2.3.2	<b>Insert Type C0602HB</b> for SD00 Holder Application: Very hard seats	862 20 016
2.3.3	<b>Insert Type C0908CU</b> for SC01/02 Holder Application: General purpose	862 20 007
2.3.4	<b>Insert Type C0908HU</b> for SC01/02 Holder Application: Super alloys	862 20 009
2.3.5	<b>Insert Type C0904CB</b> for SC01/02 Holder Application: Hard seats	862 20 010
2.3.6	<b>Insert Type C0904HB</b> for SC01/02 Holder Application: Cr & Ni alloys	862 20 013
2.3.7	<b>Insert Type C0904HU</b> for SC01/02 Holder Application: Very hard seats	862 20 015
2.3.8	<b>Insert Type C0904CBN</b> for SC01/02 Holder Application: Extremely hard seats	862 20 022
3.	<u>Accessories for face turning</u>	
3.1	<b>D5/0° Face Turning Head</b> for diam. 46-140mm	247 19 500
3.2	Insert Holders for face turning	
3.2.1	<b>SC1-0° Insert Holder</b> for diam. range 35-60 mm	247 65 111
3.2.2	<b>SC2-0° Insert Holder</b> for diam. range 55-140 mm	247 65 119
3.3	Cutting Inserts for Face Turning	
3.3.1	<b>Insert C0904CB</b> for cast iron	862 20 010
4.	<u>Accessories for aligning and guiding the machine</u>	
4.1	<b>Pilots</b> tailored to the respective engine models	on request
4.1.1	<b>Universal Pilot Kit</b> für valve seat diameter range 16-27 mm	247 70 100
4.2	<b>Supporting Spiders</b> for supporting pilot shaft just below the valve seat	on request
4.3	<b>Chamfering Tools</b> for cleaning the valve guide bore	on request
5.	<b>Storage Case</b>	247 90 038