

LUDWIG <b>HUNGER</b> MÜNCHEN	<b>VDS2</b>	- 19 -
<b>Valve Seat Refacing Tool</b>		

The universal tool system for refacing valve seats from 30 to 90mm diam.

<b>Capacity:</b> Valve seat diameter range 30 - 90mm Valve seat angles 45°, 35°, 30°, 25°, 20°, 15° & 0°	<b>Application:</b> Commercial vehicles Locomotives Marine and stationary diesels
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- 20 -	<b>VDS2</b>	LUDWIG <b>HUNGER</b> MÜNCHEN
<b>Parts - Accessories - Kits</b>		

Item Description	Part No.
<b>1. VDS2 Basic Tool</b> The gear head of the basic unit is designed to receive an adapter head for the respective seat angle.	237 10 002
<b>2. Adapter Heads</b> The adapter head includes a tool slide which is guided under an angle corresponding to the valve seat angle.	
D2/45 Adapter Head for 45° seat angle	237 11 145
D2/35 Adapter Head for 35° seat angle	237 14 135
D2/30 Adapter Head for 30° seat angle	237 12 130
D2/25 Adapter Head for 25° seat angle	237 15 125
D2/20 Adapter Head for 20° seat angle	237 17 120
D2/15 Adapter Head for 15° seat angle	237 13 115
D2/0 Adapter Head for 0° angle	234 19 100
<b>Complete Refacing Units:</b> consisting of basic unit and mounted adapter head	
VDS 2/45 Refacing Unit for 45° seat angle	237 21 000
VDS 2/35 Refacing Unit for 35° seat angle	237 24 000
VDS 2/30 Refacing Unit for 30° seat angle	237 22 000
VDS 2/20 Refacing Unit for 25° seat angle	237 25 000
VDS 2/20 Refacing Unit for 20° seat angle	237 27 000
VDS 2/15 Refacing Unit for 15° seat angle	237 23 000
VDS 2/0 Refacing Unit for 0° angle	237 29 000
<b>3. Pilots</b> A pilot series VD2 is required for aligning the refacing unit	page 22
<b>4. Cutters</b>	
4.1 Cutters for 45°, 35°, 30°, 25° & 20° adapter heads	pages 23 - 24
4.2 Cutters for 15° adapter head	page 17
4.3 Cutters for 0° adapter head	page 32
<b>5. Steady</b> (page 26)	216 55 500
<b>6. Service Tools</b>	
Wrench SW 10 for setting up the refacing unit	863 01 010
Screwdriver hex 4mm for mounting cutter	863 20 045
Screwdriver hex 6mm for setting up steady	863 20 068
Brush for cleaning valve guide	865 01 001
Tommy bars for mounting pilots	page 10
<b>7. Storage case type 2A</b>	217 90 041
<b>8. Kits</b> Each kit comprises all items for the particular engine make to be serviced.	
VDS2 Kit Iveco	Seat angle 25°, 30° & 45° 237 03 156
VDS2 Kit Mercedes Trucks	Seat angle 20°, 30° & 45° 217 03 127
VDS2 Kit Scania	Seat angle 20°, 30° & 45° 237 03 150
VDS2 Kit Steyr	Seat angle 35° & 45° 237 03 001
VDS2 Standards Kit	Seat angle 20°, 30° & 45° 237 03 800

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<b>Parts and Accessories</b>		

1. Basic Tool

5. Steady

2. Adapter Heads

4.1 Cutter

3. Pilot

4.2 Cutter

6. Service Tools

7. Storage Case

- 22 -	<b>VDS2</b>	LUDWIG <b>HUNGER</b> MÜNCHEN
<b>Expanding Pilots Series VD2</b>		







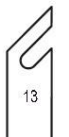
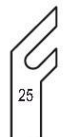

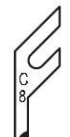
Expanding pilots are available to fit valve guides from 7,9 to 18,9 mm in diameter.  
 Two or more collets are available for each pilot size.  
 Collets of different length L are available for pilot sizes 8/2 - 12/2 to achieve perfect centering in case of vary short valve guides.







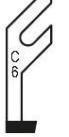
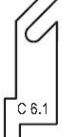
**important:**  
 When selecting a pilot make sure that the length L is shorter than the length of the valve guide.

Hole diameter: 6 mm

Pilot shaft diameter: 14,5 mm

Expanding diameter Ø mm	Collet length L mm	Pilot size	Pilot incl. Collet Part No.	Spare & add. collets Part No.
7,9 - 8,4	38	8/2	217 75 122	216 75 522
↓	52	↓	217 71 122	216 71 522
8,4 - 8,9	38	↓		216 75 523
↓	52	↓		216 71 523
8,9 - 9,4	44	9/2	217 75 132	216 75 532
↓	59	↓	217 71 132	216 71 532
9,4 - 9,9	44	↓		216 75 533
↓	59	↓		216 71 533
9,9 - 10,4	48	10/2	217 75 142	216 75 542
↓	68	↓	217 71 142	216 71 542
10,4 - 10,9	48	↓		216 75 543
↓	68	↓		216 71 543
10,9 - 11,4	48	11/2	217 75 147	216 75 547
↓	76	↓	217 71 147	216 71 547
11,4 - 11,9	48	↓		216 75 548
↓	76	↓		216 71 548
11,9 - 12,4	56	12/2	217 75 152	216 75 552
↓	84	↓	217 71 152	216 71 552
12,4 - 12,9	56	↓		216 75 553
↓	84	↓		216 71 553
12,9 - 13,4	92	13/2	217 71 157	217 71 557
13,4 - 13,9	92	↓		217 71 558
13,9 - 14,4	100	14/2	217 71 162	217 71 562
14,4 - 14,9	100	↓		217 71 563
14,9 - 15,4	108	15/2	217 71 167	217 71 567
15,4 - 15,9	108	↓		217 71 568
15,9 - 16,4	108	16/2	217 71 172	217 71 572
16,4 - 16,9	108	↓		217 71 573
16,9 - 17,9	116	17/2	217 71 076	217 71 576
17,9 - 18,9	116	18/2	217 71 078	217 71 578

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		Cutters				
<b>Cutters for 45°, 35°, 30°, 25° and 20° adapter heads for seat refacing and correction</b>						
<b>Type</b>	<b>1</b>	<b>1M</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Part No.	216 64 110	216 64 112	216 64 130	216 64 210	216 64 230	216 64 460
for seat dia. mm	35 - 60	30 - 60	45 - 90	35 - 60	45 - 90	45 - 90
Refacing seats	yes	yes	yes	yes	yes	yes
Top correction	15°	15°	15°	15°	15°	15°
Bottom correction	75°	75°	75°	75°	75°	75°
Seat location	surface	surface	surface	recessed	recessed	recessed
Application	universal	universal Mercedes	universal	universal	universal	universal
Drawn to scale						
<b>Type</b>	<b>13</b>	<b>25</b>	<b>32</b>	<b>C8</b>		
Part No.	216 64 623	216 64 132	216 64 215	216 64 212		
for seat dia. mm	45 - 90	28 - 60	35 - 80	28 - 70		
Refacing seats	yes	yes	yes	yes		
Top correction	15°	0°	15°	15°		
Bottom correction	58°	58°	-	-		
Seat location	recessed	recessed	recessed	recessed		
Application	Mercedes	MAN	universal Mercedes	universal Mercedes		
Drawn to scale						

- 24 -		VDS2 / VD2		LUDWIG <b>HUNGER</b> MÜNCHEN		
		Cutters				
<b>Cutters 45°, 35°, 30°, 25° and 20° adapter heads for seat refacing only</b>						
<b>Typ</b>	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>SC1</b>	<b>SC2</b>
Part No.	216 61 110	216 61 130	216 61 210	216 61 230	216 65 110	216 65 100
for seat dia. mm	35 - 60	45 - 90	35 - 60	45 - 90	35 - 75	40 - 85
Refacing seats	yes	yes	yes	yes	yes	yes
Top correction	-	-	-	-	-	-
Bottom correction	-	-	-	-	-	-
Seat location	surface	surface	recessed	recessed	universal	universal
Application	universal	universal	universal	universal	universal	universal
Drawn to scale						
<b>Cutters for 45°, 35°, 30°, 25° and 20° adapter heads for cutting a groove into the valve seat ring</b>						
<b>Type</b>	<b>C6</b>	<b>C6.1</b>				
Part No.	216 69 210	216 69 215				
for seat dia. mm	36 - 80	29 - 70 *				
Seat location	universal	Mercedes				
Drawn to scale						
* from 29 mm with 30° adapter head						