<table>
<thead>
<tr>
<th>Tools</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tools for engine block screws</td>
<td>208 - 209</td>
</tr>
<tr>
<td>Tools for cylinder block screws</td>
<td>209 - 212</td>
</tr>
<tr>
<td>Vibration damper tools</td>
<td>213</td>
</tr>
<tr>
<td>Service stands and parts stations</td>
<td>213</td>
</tr>
<tr>
<td>Slide rail bolts extraction tools</td>
<td>213</td>
</tr>
<tr>
<td>Guide sleeves internal extractor</td>
<td>213</td>
</tr>
<tr>
<td>Extraction tool and spiral profile sockets</td>
<td>213 - 216</td>
</tr>
<tr>
<td>Nut splitter</td>
<td>216 - 217</td>
</tr>
<tr>
<td>Thread boring tool and bore jigs</td>
<td>217</td>
</tr>
<tr>
<td>Crank shaft facing tools</td>
<td>218</td>
</tr>
<tr>
<td>Valve gauges</td>
<td>218</td>
</tr>
<tr>
<td>Valve pneumatic adapter</td>
<td>218</td>
</tr>
<tr>
<td>Valve retainer and valve spring tensioner</td>
<td>218 - 220</td>
</tr>
<tr>
<td>Valve shunt sealing tools</td>
<td>220 - 221</td>
</tr>
<tr>
<td>Gasket scraper</td>
<td>221 - 222</td>
</tr>
<tr>
<td>Sealing ring tools</td>
<td>222 - 223</td>
</tr>
<tr>
<td>Valve seat cutter</td>
<td>224</td>
</tr>
<tr>
<td>Valve cutter</td>
<td>224</td>
</tr>
<tr>
<td>Valve wedge assembly</td>
<td>224</td>
</tr>
<tr>
<td>Valve adjustment tools</td>
<td>224 - 225</td>
</tr>
<tr>
<td>Piston ring tools</td>
<td>225</td>
</tr>
<tr>
<td>Cylinder liner tools</td>
<td>225</td>
</tr>
<tr>
<td>Cylinder hon devices</td>
<td>226</td>
</tr>
<tr>
<td>Test and measuring tools</td>
<td>226 - 228</td>
</tr>
</tbody>
</table>
TOOLS FOR ENGINE BLOCK SCREWS

VAG Engine support socket set, extra short

- 12-point
- For the assembly and removal of the aluminium engine support (hard to reach sites)
- Ideal for timing belt change
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra-short design
- For manual operation
- Matt finish
- Chrome vanadium

Application range: For timing belt change on Volkswagen Golf IV, Audi, Škoda, Seat etc.

Bit socket for five star tamperproof screws

- Five star bit, tamperproof
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Control devices, alternator, air quantity meter, exterior mirror, insertion pumps for pump-line-nozzle system, door lock fastening screw for Volkswagen, Audi, Ford, Mercedes, Rover, Seat, Škoda, Volvo etc.

Bit socket for five star profile tamperproof key wrench set

- Long design
- Bore hole at the short and long end
- Continuous hardened
- Matt chrome
- Special steel

Application range: Control devices, alternator, air quantity meter, exterior mirror, insertion pumps for pump-line-nozzle system, door lock fastening screw for Volkswagen, Audi, Ford, Mercedes, Rover, Seat, Škoda, Volvo etc.

VAG Bit socket for hexagon screws, extra long

- Hexagon socket with ball head
- For releasing and tightening the TDC sensor
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra-long design
- For manual operation
- Matt finish
- Chrome vanadium

Application range: VAG models from 2005, 4-cylinder 2.0l diesel engines

CLASSIC Bit for tamperproof five star bits

- Five star bit, tamperproof
- With external hexagon drive to DIN 3126 / ISO 1173 - C 6.3
- Can be used by hand or with an electric screwdriver
- Ideal suited for fittings in trade and industry
- Nickel plated
- Special steel

Application range: Control devices, alternator, air quantity meter, exterior mirror, insertion pumps for pump-line-nozzle system, door lock fastening screw for Volkswagen, Audi, Ford, Mercedes, Rover, Seat, Škoda, Volvo etc.

CLASSIC Bit set for tamperproof five star screws

- Five star bit, tamperproof
- With external hexagon drive to DIN 3126 / ISO 1173 - C 6.3
- Can be used by hand or with an electric screwdriver
- Ideal suited for fittings in trade and industry
- Nickel plated
- Special steel

Application range: Control devices, alternator, air quantity meter, exterior mirror, insertion pumps for pump-line-nozzle system, door lock fastening screw for Volkswagen, Audi, Ford, Mercedes, Rover, Seat, Škoda, Volvo etc.

TX-E socket for Mercedes, extra-short

- TX-E
- Ideally suited for various engine screws
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra-short design
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Engine screws (e.g. various supports, housing cover, etc.) on Mercedes diesel engines 642, 651 and petrol engines 276, 278, 271

Bit socket for tamperproof five star screws

- Five star bit, tamperproof
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Control devices, alternator, air quantity meter, exterior mirror, insertion pumps for pump-line-nozzle system, door lock fastening screw for Volkswagen, Audi, Ford, Mercedes, Rover, Seat, Škoda, Volvo etc.

Bit socket for tamperproof five star screws

- Five star bit, tamperproof
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Control devices, alternator, air quantity meter, exterior mirror, insertion pumps for pump-line-nozzle system, door lock fastening screw for Volkswagen, Audi, Ford, Mercedes, Rover, Seat, Škoda, Volvo etc.
### Tools for Cylinder Block Screws

**ERGOTORQUE® Precision Torque Wrench with Rotary Mushroom Ratchet Head**
- Actuation accuracy: ±3% tolerance of the set scale value
- Precise reading accuracy for a minimum 5,000 tightening cycles
- For controlled fastening in clockwise and counter clockwise directions
- Torque setting by pulling out and pushing in the slide in knob at the end of the handle
- The direction of rotation (clockwise and counter clockwise) can be changed by simply rotating the square drive piece
- Double scale in Nm and lb•ft divisions for precise adjustment
- Includes micrometer scale in Nm divisions for precise and fine adjustment
- Large vision panel, precise adjustment using a magnifying glass
- An audible and palpable signal when the desired torque value is achieved
- Exact gearing 72 teeth ratchet mechanism
- Torque setting is quick and easy using the locking knob in the handle end
- Secure locking function within the handle
- Two component handle with a soft zone, is ergonomic in design and comfortable in the hand
- Square drive adapter to DIN 3120 - ISO 1174 with ball lock
- Individually marked with serial number unique product identification
- Includes test certificate in accordance with DIN EN ISO 6789:2003 national standard

### Cylinder Head Bit Socket for TX Screws, Extra Long
- **TX**
  - Internal square drive to DIN 3120 / ISO 1174 with ball reception
  - Long execution
  - Press fitted nickel plated insert bit
  - For manual operation
  - Matt finish
  - Chrome vanadium

### Cylinder Head Bit Socket for TX Screws, Long
- **TX**
  - Internal square drive to DIN 3120 / ISO 1174 with ball reception
  - Long design
  - With press fitted nickel plated insert bit
  - For manual operation
  - Matt finish
  - Chrome vanadium

**Application range:** e.g. Ford 1.8l Diesel (Turbo), Fiesta, Escort, Sienna and Mazda 121 >1996

---

**ERGOTORQUE®plus® T-Handle TX Wrench, Long**
- Extra long execution
- With two component handle
- Continuous hardened
- Tip burrished
- Chrome plated and mirror polished
- Special steel

**Application range:** e.g. Corolla 1.4l, Yaris 1.0l and VM diesel engines (e.g. Chrysler), Corolla 1.4l, Yaris 1.0l and VM diesel engines (e.g. Chrysler), Volkswagen, Audi, Opel etc.

---

### Cylinder Head Bit Socket for Spline (XZN®) Screws, Long
- **Spline (XZN®)**
  - For loosening and tightening cylinder head screws
  - Internal square drive to DIN 3120 / ISO 1174 with ball reception
  - Long design
  - With press fitted nickel plated insert bit
  - For manual operation
  - Matt finish
  - Chrome vanadium

**Application range:** e.g. cylinder head screws on Toyota Corolla 1.4l, Yaris 1.0l and VM diesel engines (e.g. Chrysler), Volkswagen, Audi, Opel etc.

---

**Chromeplus® T-Handle RIBE Profile Extra Long**
- Extra long design
- With 2 component handle
- Continuous hardened
- Tip burrished
- Chrome plated and mirror polished
- Special steel

**Application range:** e.g. valve cover and spark plug cover for Alfa Romeo, Fiat, Lantra etc.

### Specifications

<table>
<thead>
<tr>
<th>Diameter (mm)</th>
<th>Length (mm)</th>
<th>Bit Width (mm)</th>
<th>Shank Diameter (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M6</td>
<td>250</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>M5</td>
<td>250</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>M4</td>
<td>250</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>M3</td>
<td>250</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>M2</td>
<td>250</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>M1</td>
<td>250</td>
<td>0.5</td>
<td>0.8</td>
</tr>
</tbody>
</table>

---

**Rotary Angle Disc**
- For fastening screws at an angle
- Device for angle regulated fastening with a torque wrench
- Flexible arm
- Range 0° - 360°
- Square drive adapter to DIN 3120 - ISO 1174 with ball lock
- Optionally with a magnetic arm or claw arm

**Specifications**

<table>
<thead>
<tr>
<th>Diameter (mm)</th>
<th>Length (mm)</th>
<th>Bit Width (mm)</th>
<th>Shank Diameter (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>M6</td>
<td>250</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>M5</td>
<td>250</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>M4</td>
<td>250</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>M3</td>
<td>250</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>M2</td>
<td>250</td>
<td>0.5</td>
<td>0.8</td>
</tr>
<tr>
<td>M1</td>
<td>250</td>
<td>0.5</td>
<td>0.8</td>
</tr>
</tbody>
</table>
Cylinder head bit socket for spline (XZN®) screws, extra-long
- For RIBE® screws
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium

Cylinder head impact bit socket for RIBE® screws, extra-long
- For RIBE® screws
- Internal square drive to DIN 3121 / ISO 1174
- Chrome molybdenum

Cylinder head bit socket set for RIBE® screws, long
- For RIBE® screws
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Chrome vanadium

Cylinder head impact bit socket for RIBE® screws, extra-long
- For RIBE® screws
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Extra-long design
- With press fitted nickel plated insert bit
- Long execution
- For manual operation
- Matt finish
- Chrome molybdenum

Application range: Japanese cars with petrol engines, e.g. Daihatsu, Toyota etc.

Cylinder head surface drive socket, long
- Special profile (Surface Drive)
- For loosening and tightening cylinder head screws
- Internal square in accordance with DIN 3121 / ISO 1174
- Chrome vanadium

Application range: Polydrive cylinder head screws for VAG

Cylinder head TX-E socket set, long
- TX-E
- For loosening and tightening TX-E cylinder head screws
- With incorporated retaining ball for accurate removing of the bolt
- Long design
- For machinery usage
- Matt finish
- Chrome vanadium

Application range: M 42 1.8i, 4 cylinder engine with four-valve technology 318is from 1989, M50 2.0l, 2.5i, 6 cylinder with four-valve technology 5 series from 1991, Audi V6 engine, Opel, Mercedes CDI engines etc.

Cylinder head TX-E socket, long
- TX-E
- For loosening and tightening TX-E cylinder head screws
- With incorporated retaining ball for accurate removing of the bolt
- Internal square drive to DIN 3120 / ISO 1174
- Long design
- For machinery usage
- Matt finish
- Chrome vanadium

Application range: M 42 1.8i, 4 cylinder engine with four-valve technology 318is from 1989, M50 2.0l, 2.5i, 6 cylinder with four-valve technology 5 series from 1991, Audi V6 engine, Opel, Mercedes CDI engines etc.

Cylinder head 12-point socket, long
- 12-point
- For loosening and tightening cylinder head screws
- Internal square in accordance with DIN 3121 / ISO 1174
- Long design
- For machinery usage
- Phosphate
- Chrome molybdenum

Application range: Honda, Mitsubishi, Toyota, Suzuki
Cylinder head 12-point impact socket set, short
- 12 point
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum
- In durable plastic case

Applications for TX PLUS:
Opel (Corsa) / Volkswagen Passat / Fiat 1.3 / 1.4 / Toyota / Nissan / Renault / Subaru / GM / Ford etc.
e.g.: flywheel / timing belt housing cover / general engine / transmission

Cylinder head bit socket set for TX PLUS screws
- Ideal set completion for TX and TX PLUS screws
- With external hexagon drive to DIN 3126 / ISO 1173 Form C 6.3 and C 8
- Can be used by hand or with an electric screwdriver
- Ideally suited for fittings in trade and industry
- Reinforced execution
- Nickel plated
- Special steel
- In durable plastic storage box

Applications for TX PLUS:
Volkswagen, Mercedes Benz (passenger car+HGV Actros/ Atego), Audi, Bosch, MAN, Ford, Opel, John Deere, etc.
e.g.: plug-in pumps of pump-line-nozzle systems, air mass meters, EWS3 immobiliser controller / injection pumps / alternators, etc.

Cylinder head 12-point impact socket set, long
- 12 point
- Internal square drive to DIN 3121 / ISO 1174
- Short execution
- For machinery usage
- Phosphate finish
- Chrome molybdenum
- In durable plastic case

Cylinder head bit socket set for RXE® screws
- Ideal set completion for RXE® screws
- External hexagon drive to DIN 3126 / ISO 1173 form C 8
- Can be used by hand, electric screwdriver and impact drivers
- Reinforced execution
- Precise arrangement of the popular 5/16” RXE® bits
- Phosphate finish
- Special steel
- In durable plastic storage case

Cylinder head bit socket set
- Range of all current inserts for cylinder head screws
- Correct and quick engine repair
- Chrome vanadium
- In durable plastic storage case

Application range: Audi, Seat, Škoda, Volkswagen from 1994, Mercedes 6/8/12 cylinder engines, Opel, Ford, Japanese models, Renault, Opel (V6) and BMW from 1990
## Cylinder head screws socket wrench set

- Matt finish
- Chrome vanadium
- In durable plastic storage case

**Application range:** Cylinder head screws, air quantity meter, oil drain plugs, gearbox oil, airbag, brake saddle, etc.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>911.1970</td>
<td>1/2” Bit socket XZN, L=140mm, M10</td>
<td>125</td>
</tr>
<tr>
<td>911.1972</td>
<td>1/2” Bit socket XZN, L=140mm, M12</td>
<td>125</td>
</tr>
<tr>
<td>911.1974</td>
<td>1/2” Bit socket long, 1/2”, M14</td>
<td>125</td>
</tr>
<tr>
<td>911.1688</td>
<td>Hex bit socket, 1/2”, 5x40mm</td>
<td>125</td>
</tr>
<tr>
<td>911.1993</td>
<td>RIBE bit socket, 1/2”, M6x40mm</td>
<td>125</td>
</tr>
<tr>
<td>911.1994</td>
<td>RIBE bit socket, 1/2”, M6x40mm</td>
<td>125</td>
</tr>
<tr>
<td>911.1995</td>
<td>RIBE bit socket, 1/2”, M6x40mm</td>
<td>125</td>
</tr>
<tr>
<td>911.1624</td>
<td>TX bit socket, 1/2”, T30, 300mm</td>
<td>125</td>
</tr>
</tbody>
</table>

**Cylinder head bit socket set for RIBE® screws**

- Ideal configuration for the most common RIBE® cylinder head screws
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Short and long design
- With press fitted insert bit
- For manual operation
- Matt finish
- Chrome vanadium
- In durable plastic storage case

**Application range:** Fiat, Alfa Romeo, Lancia, Opel, Audi, Seat, Skoda, Volkswagen etc.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>911.4511</td>
<td>Bit socket for RIBE® screws, M5, length 55mm</td>
<td>32</td>
</tr>
<tr>
<td>911.4512</td>
<td>Bit socket for RIBE® screws, M6, length 55mm</td>
<td>34</td>
</tr>
<tr>
<td>911.4513</td>
<td>Bit socket for RIBE® screws, M7, length 55mm</td>
<td>35</td>
</tr>
<tr>
<td>911.4514</td>
<td>Bit socket for RIBE® screws, M8, length 55mm</td>
<td>35</td>
</tr>
<tr>
<td>911.4515</td>
<td>Bit socket for RIBE® screws, M9, length 55mm</td>
<td>35</td>
</tr>
<tr>
<td>911.4516</td>
<td>Bit socket for RIBE® screws, M10, length 55mm</td>
<td>37</td>
</tr>
<tr>
<td>911.4517</td>
<td>Bit socket for RIBE® screws, M12, length 55mm</td>
<td>39</td>
</tr>
<tr>
<td>911.4518</td>
<td>Bit socket for RIBE® screws, M14, length 55mm</td>
<td>39</td>
</tr>
<tr>
<td>911.4519</td>
<td>Bit socket for RIBE® screws, M12, length 55mm</td>
<td>40</td>
</tr>
<tr>
<td>911.4520</td>
<td>1/2” bit socket for RIBE® screws, M5, length 110mm</td>
<td>125</td>
</tr>
<tr>
<td>911.4521</td>
<td>1/2” bit socket for RIBE® screws, M6, length 110mm</td>
<td>125</td>
</tr>
<tr>
<td>911.4522</td>
<td>1/2” bit socket for RIBE® screws, M7, length 110mm</td>
<td>125</td>
</tr>
<tr>
<td>911.4523</td>
<td>1/2” bit socket for RIBE® screws, M8, length 110mm</td>
<td>125</td>
</tr>
<tr>
<td>911.4524</td>
<td>1/2” bit socket for RIBE® screws, M9, length 110mm</td>
<td>125</td>
</tr>
<tr>
<td>911.4525</td>
<td>1/2” bit socket for RIBE® screws, M10, length 110mm</td>
<td>125</td>
</tr>
<tr>
<td>911.4526</td>
<td>1/2” bit socket for RIBE® screws, M12, length 110mm</td>
<td>125</td>
</tr>
<tr>
<td>911.4527</td>
<td>1/2” bit socket for RIBE® screws, M14, length 110mm</td>
<td>125</td>
</tr>
<tr>
<td>911.4528</td>
<td>1/2” bit socket for RIBE® screws, M12, length 200mm</td>
<td>125</td>
</tr>
<tr>
<td>911.4529</td>
<td>1/2” bit socket for RIBE® screws, M14, length 200mm</td>
<td>125</td>
</tr>
</tbody>
</table>

## Cylinder head bit socket set for XZN® screws

- Vierzahn (XZN®)
- Ideal for the most common cylinder head screws
- Matt finish
- Chrome vanadium
- In durable plastic storage case

**Application range:** Škoda, Volkswagen etc.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>911.1701</td>
<td>5 Star bit socket, 1/4”, T5x10</td>
<td>10</td>
</tr>
<tr>
<td>911.1702</td>
<td>5 Star bit socket, 1/4”, T5x15</td>
<td>10</td>
</tr>
<tr>
<td>911.1703</td>
<td>5 Star bit socket, 1/4”, T5x20</td>
<td>10</td>
</tr>
<tr>
<td>911.1704</td>
<td>5 Star bit socket, 1/4”, T5x25</td>
<td>10</td>
</tr>
<tr>
<td>911.1705</td>
<td>5 Star bit socket, 1/4”, T5x30</td>
<td>10</td>
</tr>
<tr>
<td>911.1706</td>
<td>5 Star bit socket, 1/4”, T5x40</td>
<td>10</td>
</tr>
<tr>
<td>911.1707</td>
<td>5 Star bit socket, 1/4”, T5x50</td>
<td>10</td>
</tr>
<tr>
<td>911.1314</td>
<td>Hex bit socket, 1/2”, 14x4mm</td>
<td>120</td>
</tr>
<tr>
<td>911.1317</td>
<td>Hex bit socket, 1/2”, 17x7mm</td>
<td>150</td>
</tr>
<tr>
<td>911.1319</td>
<td>Hex bit socket, 1/2”, 19x9mm</td>
<td>200</td>
</tr>
<tr>
<td>911.1320</td>
<td>Hex bit socket, 1/2”, 22x10mm</td>
<td>200</td>
</tr>
<tr>
<td>911.1322</td>
<td>Hex bit socket, 1/2”, 24x12mm</td>
<td>200</td>
</tr>
<tr>
<td>911.1346</td>
<td>XZN® bit socket tamperproof, 1/2”, M16</td>
<td>140</td>
</tr>
<tr>
<td>911.0504</td>
<td>Impact bit socket XZN, 1/2”, M18, L=75mm</td>
<td>146</td>
</tr>
<tr>
<td>911.1982</td>
<td>RIBE® bit socket long, M5</td>
<td>112</td>
</tr>
<tr>
<td>911.1329</td>
<td>1/2” Bit socket XZN, L=140mm, M3</td>
<td>112</td>
</tr>
<tr>
<td>911.1325</td>
<td>XZN® bit socket, 1/2”, deep, M10</td>
<td>250</td>
</tr>
<tr>
<td>911.1623</td>
<td>1/2” TAPER-POINT BIT SOCKET T 160 x 110mm</td>
<td>125</td>
</tr>
<tr>
<td>911.1660</td>
<td>Hex bit socket long, 1/2”, T 10, 110mm</td>
<td>90</td>
</tr>
<tr>
<td>911.1661</td>
<td>Hex bit socket long, 1/2”, T 11, 100mm</td>
<td>100</td>
</tr>
<tr>
<td>911.1662</td>
<td>Hex bit socket long, 1/2”, T 13, 100mm</td>
<td>100</td>
</tr>
<tr>
<td>911.1663</td>
<td>Hex bit socket long, 1/2”, T 15, 100mm</td>
<td>100</td>
</tr>
<tr>
<td>911.1932</td>
<td>TX bit socket long, 1/2”, T 70, 125mm</td>
<td>125</td>
</tr>
<tr>
<td>911.1943</td>
<td>TX bit socket long, 1/2”, T 70, 125mm</td>
<td>125</td>
</tr>
<tr>
<td>911.1944</td>
<td>1/2” Bit socket TX L=140mm, T 70</td>
<td>125</td>
</tr>
</tbody>
</table>

**Consists of:**

- 38 pcs Automotive bit socket set 6.50
- 32 pcs RIBE® bit socket set 5.46
- 65 pcs XZN® socket set 4.46

## Cylinder head bit socket set for RIBE® screws

- Chrome vanadium
- In durable plastic storage case

**Consists of:**

- 25 pcs RIBE® bit socket set 4.46
- 25 pcs XZN® socket set 4.46
VIBRATION DAMPER TOOLS

BMW Vibration damper holding screw set

- For clamping the crankshaft when loosening and tightening the crankshaft central screw
- Prevents slipping whilst holding
- With replaceable and tight-fit guide sleeves (Ø 57.0 / 59.5 / 60.5 mm)
- Minimal force required thanks to extra-long lever
- Matt finish
- Chrome vanadium

Application range: When working on the timing drive of BMW M47 TU / T2U engines with old and new vibration damper design

![Guide sleeve, Ø 60.5 mm](image)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>911.1720</td>
<td>BMW Vibration damper holding screw set</td>
<td>5 pcs</td>
</tr>
</tbody>
</table>

VAG pulley wheel counter hold wrench

- For the professional engine repair
- Simple assembly and disassembly of the crank shaft pulley wheel or vibration dampers
- Special profiles allows for counter holding when releasing or securing the crank shaft central screw
- The handle can be lengthened via the 3/4” internal square
- Very high degree of accuracy

Application range: VAG group vehicles with 2.4 engines, in particular Volkswagen T2, T3, T4 Transporter LT, Golf, Passat and Audi (engine code: AAB, AJA, ADQ, ABL, 1X, 1Y, 1W, 1Y 5S, CW, KX, JP, JÖ, JU, JZ, LA, AEL, AAZ, AHU, APN, AEY, AVG, ALÉ, AFF, AHH, ACV, AHY, AJT, AUF, AXG, AXL, AY)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de

![Guide sleeves internal puller set](image)

**SERVICE STANDS AND PARTS STATIONS**

Cylinder head service pillar

- Suitable for all current cylinder heads
- Especially for engines with horizontal camshafts
- Damage free working on the cylinder head
- Special steel

![Cylinder head service pillar](image)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.1170</td>
<td>5 pcs</td>
<td></td>
</tr>
<tr>
<td>150.1171</td>
<td>5 pcs</td>
<td></td>
</tr>
<tr>
<td>150.1172</td>
<td>5 pcs</td>
<td></td>
</tr>
</tbody>
</table>

Parts storage for cylinder head components

- Ideal organisational aid for the systematic storage of small parts from the cylinder head
- Suitable for all cylinder heads
- No loss work on cylinder heads
- Made from rugged plastic

![Parts storage for cylinder head components](image)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>700.1135</td>
<td>Puller set for slide rail bolts</td>
<td>5 pcs</td>
</tr>
<tr>
<td>700.1136</td>
<td>Epoxy metal Quicksteel</td>
<td>80</td>
</tr>
</tbody>
</table>

VAG pulley wheel counter hold wrench

- For the professional engine repair
- Simple assembly and disassembly of the crank shaft pulley wheel or vibration dampers
- Special profiles allows for counter holding when releasing or securing the crank shaft central screw
- The handle can be lengthened via the 3/4” internal square
- Very high degree of accuracy

Application range: VAG group vehicles with 2.4 engines, in particular Volkswagen T2, T3, T4 Transporter LT, Golf, Passat and Audi (engine code: AAB, AJA, ADQ, ABL, 1X, 1Y, 1W, 1Y 5S, CW, KX, JP, JÖ, JU, JZ, LA, AEL, AAZ, AHU, APN, AEY, AVG, ALÉ, AFF, AHH, ACV, AHY, AJT, AUF, AXG, AXL, AY)

Please carry out an up-to-date cross reference test for the specific vehicle on www.timingtools.de

**GUIDE SLEEVES INTERNAL EXTRACTOR**

Guide sleeves internal puller set for engines and gearboxes

- Damage free removal and insertion of guide sleeves on engines and gearboxes
- Prevents damage to the guide sleeves from possible use of pliers or a hammer
- Centring shaft
- Enormous time and cost saving
- Universal usage
- Special steel
- In durable plastic storage case

![Guide sleeves internal puller set](image)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>700.1136</td>
<td>Worm pullers</td>
<td>5 pcs</td>
</tr>
<tr>
<td>700.1137</td>
<td>Tension bolts M 8 x 30 mm</td>
<td>5 pcs</td>
</tr>
<tr>
<td>700.1138</td>
<td>Tension bolts M 8 x 40 mm</td>
<td>20 pcs</td>
</tr>
<tr>
<td>700.1139</td>
<td>Tension bolts M 8 x 60 mm</td>
<td>20 pcs</td>
</tr>
<tr>
<td>700.1141</td>
<td>Adapter disk</td>
<td>15 pcs</td>
</tr>
</tbody>
</table>

SLIDE RAIL BOLTS EXTRACTION TOOLS

Puller set for slide rail bolts

- Allows simple removal for chain slide rail bolts
- For repair without cooler removal
- Includes tension bolts and adapter screw
- Special steel

Application range: for chain slide rail bolts for Mercedes, BMW etc.

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>700.1130</td>
<td>Puller set for slide rail bolts</td>
<td>5 pcs</td>
</tr>
</tbody>
</table>

Epoxy metal Quicksteel

- Optimal adhesive power
- Enables durable repair
- Mechanical preparation after the curing possible
- Firmly set after 15 minutes
- Cures after 60 minutes completely
- Also suitable for use under water
- Temperature resistant up to 260
- Approx three years use duration
- Resistant to oil, diesel, petrol and battery acid

Application range: Metal, glass, plastic, ceramics, wood, concrete optical fiber reinforced plastic, etc.

![Epoxy metal Quicksteel](image)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>700.1130</td>
<td>Epoxy metal Quicksteel</td>
<td>80</td>
</tr>
</tbody>
</table>
Screw grab screw assistance

- Increases the static friction by up to 400%
- Residue free washes off and non-toxic
- Immediate effect without waiting
- Applicable for all screw heads
- Unlimited storage

Application range: In rounded turned screw heads

Stud bolt puller

- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- External drive hexagon socket 21 mm
- Right and left hand clamping function
- Stud screws can be screwed in or without using counter nuts on the bolt
- Also for extra long studs that will go through the through socket
- Chrome plated and mirror polished
- Chrome vanadium

Stud bolt puller set

- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- External drive hexagon socket 21 mm
- Right and left hand clamping function
- Stud screws can be screwed in or without using counter nuts on the bolt
- Also for extra long studs that will go through the through socket
- Chrome plated and mirror polished
- Chrome vanadium
- In durable plastic case

Screw bolt puller

- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- External drive hexagon socket 21 mm
- Right and left hand clamping function
- Safely clamping due to 3 rollers
- Stud screws can be screwed in or out without using counter nuts on the bolt
- Also for extra long studs that will go through the through socket
- Chrome plated and mirror polished
- Chrome vanadium

Screw bolt puller set

- Square drive adaptor to DIN 3120 / ISO 1174 with ball lock
- External drive hexagon socket 21 mm
- Right and left hand clamping function
- Stud screws can be screwed in or out without using counter nuts on the bolt
- Also for extra long studs that will go through the through socket
- Chrome plated and mirror polished
- Chrome vanadium
- In durable plastic case

Stud bolt puller

- For screwing in or extracting out stud bolts
- Clockwise and anticlockwise clamping function
- Also suitable for extra long stud bolts
- Special steel

Screw bolt puller set

- For screwing in or extracting out stud bolts
- Clockwise and anticlockwise clamping function
- Also suitable for extra long stud bolts
- Special steel

Stud bolt puller

- For screwing in or extracting out stud bolts
- Clockwise and anticlockwise clamping function
- Also suitable for extra long stud bolts
- Special steel

Screw bolt puller set

- For screwing in or extracting out stud bolts
- Clockwise and anticlockwise clamping function
- Also suitable for extra long stud bolts
- Special steel

Spiral extractor

- Extra short design
- With external drive hexagonal socket 13.0 mm
- Slightly conical tapered spiral
- Can also be used for broken screws and stud bolts
- Counter effect motion guarantees easy extraction
- Special steel

Application range: Hexagon head, brakes + Water pumps, Spline drives etc.

Stud bolt puller

- For screwing in or extracting out stud bolts
- Clockwise and anticlockwise clamping function
- Also suitable for extra long stud bolts
- Special steel

Screw bolt puller set

- For screwing in or extracting out stud bolts
- Clockwise and anticlockwise clamping function
- Also suitable for extra long stud bolts
- Special steel

Spiral extractor

- Extra short design
- With external drive hexagonal socket 13.0 mm
- Slightly conical tapered spiral
- Can also be used for broken screws and stud bolts
- Counter effect motion guarantees easy extraction
- Special steel

Application range: Hexagon head, brakes + Water pumps, Spline drives etc.
Captive bolt extractor set

• Extra short execution
• With hexagon drive SW 13
• Slightly conical tapered spiral
• Applicable also for dismantled screws and stand bolt
• Counter effect motion guarantees easy extraction
• Special steel
• In durable plastic storage case

Application range: Hexagon head, brakes + water pumps, spline drives etc.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Qty.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>670.0235</td>
<td>Expansion sleeves, 2 pcs. M10 x 1.5</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>670.0237</td>
<td>Expansion sleeves, 2 pcs. M10 x 1.25</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>670.0238</td>
<td>Expansion sleeves, 2 pcs. M8 x 1.00</td>
<td>100</td>
<td></td>
</tr>
<tr>
<td>670.0239</td>
<td>Mounting sleeves, M10 x 1.5</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>670.0240</td>
<td>Mounting sleeves, M10 x 1.25</td>
<td>40</td>
<td></td>
</tr>
<tr>
<td>670.0241</td>
<td>Mounting sleeves, M8 x 1.00</td>
<td>40</td>
<td></td>
</tr>
</tbody>
</table>

Screw extractor set

• For screws from M3 - M16
• Enable the loosening of screws and bolts with turned off heads
• Conical tapered spiral
• In durable plastic storage case

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Qty.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>100.1286</td>
<td>Extractor 1/4&quot;</td>
<td>15</td>
<td>pcs</td>
</tr>
<tr>
<td>100.1287</td>
<td>Extractor 3/8&quot;</td>
<td>15</td>
<td>pcs</td>
</tr>
<tr>
<td>100.1288</td>
<td>Extractor 1/2&quot;</td>
<td>15</td>
<td>pcs</td>
</tr>
<tr>
<td>100.1289</td>
<td>Extractor 3 mm</td>
<td>15</td>
<td>pcs</td>
</tr>
<tr>
<td>100.1290</td>
<td>Extractor 4 mm</td>
<td>15</td>
<td>pcs</td>
</tr>
<tr>
<td>100.1291</td>
<td>Extractor 5 mm</td>
<td>15</td>
<td>pcs</td>
</tr>
<tr>
<td>100.1292</td>
<td>Extractor 6 mm</td>
<td>15</td>
<td>pcs</td>
</tr>
<tr>
<td>100.1293</td>
<td>Extractor 8 mm</td>
<td>15</td>
<td>pcs</td>
</tr>
<tr>
<td>100.1294</td>
<td>Extractor 10 mm</td>
<td>15</td>
<td>pcs</td>
</tr>
<tr>
<td>100.1295</td>
<td>Extractor 11 mm</td>
<td>15</td>
<td>pcs</td>
</tr>
<tr>
<td>100.1296</td>
<td>Extractor 12 mm</td>
<td>15</td>
<td>pcs</td>
</tr>
<tr>
<td>100.1297</td>
<td>Extractor 14 mm</td>
<td>15</td>
<td>pcs</td>
</tr>
</tbody>
</table>

Stud bolt extraction and insertion tool set

• For screwing in or extracting out stud bolts
• With internal hexagonal socket drive 17.0 mm and 19.0 mm
• Very flat compact and compact design
• Clockwise and anticlockwise clamping function
• Also suitable for extra-long stud bolts
• Special steel
• In durable plastic storage case

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Qty.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>813.3080</td>
<td>M6 - M10 - M11 - M12 - M13 - M14</td>
<td>6</td>
<td>pcs</td>
</tr>
<tr>
<td>813.3081</td>
<td>M8</td>
<td>10</td>
<td>pcs</td>
</tr>
<tr>
<td>813.3082</td>
<td>M10</td>
<td>10</td>
<td>pcs</td>
</tr>
<tr>
<td>813.3083</td>
<td>M11</td>
<td>10</td>
<td>pcs</td>
</tr>
<tr>
<td>813.3084</td>
<td>M12</td>
<td>10</td>
<td>pcs</td>
</tr>
<tr>
<td>813.3085</td>
<td>M13</td>
<td>10</td>
<td>pcs</td>
</tr>
<tr>
<td>813.3086</td>
<td>M14</td>
<td>10</td>
<td>pcs</td>
</tr>
<tr>
<td>813.3087</td>
<td>M15</td>
<td>10</td>
<td>pcs</td>
</tr>
<tr>
<td>813.3088</td>
<td>M16</td>
<td>10</td>
<td>pcs</td>
</tr>
<tr>
<td>813.3089</td>
<td>M17</td>
<td>10</td>
<td>pcs</td>
</tr>
<tr>
<td>813.3090</td>
<td>M18</td>
<td>10</td>
<td>pcs</td>
</tr>
<tr>
<td>813.3091</td>
<td>M19</td>
<td>10</td>
<td>pcs</td>
</tr>
</tbody>
</table>

Spiral profile nut set

• For loosening and unscrewing of fixed bolt and nuts with damaged "round turned" threads or heads
• Special, left handed cutting edge thread with 6 conical reducing cutting edges
• Very flat compact and robust execution
• The drive can be used alternatively with a socket ring or combination spanner
• In durable plastic case

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Description</th>
<th>Qty.</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>813.3092</td>
<td>M6 - M10 - M11 - M12 - M13 - M14</td>
<td>10</td>
<td>pcs</td>
</tr>
</tbody>
</table>

Spiral profile impact socket

• Internal square drive to DIN 3120 / ISO 1174 with ball reception
• Rejuvenating special profile with aggressive spiral nut
• For turning off of screws with rounded or turned heads
• Fits firmly to give a firm connection between stuck nut and head
• Phosphate finish
• Chromolybdenum
Spiral profile impact socket
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Rejuvenating special profile with aggressive spiral nut
- For turning off of screws with rounded or turned heads
- Bits firmly to give a firm connection between stub nut and head
- Phosphate finish
- Chrome molybdenum

Spiral profile impact socket set
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Rejuvenating special profile with aggressive spiral nut
- For turning off of screws with rounded or turned heads
- Bits firmly to give a firm connection between stub nut and head
- Drive out pin
- Phosphate finish
- Chrome molybdenum
- In durable plastic case

NUT SPLITTER
Mechanical nut splitter
- For the splitting of seized or over tightened bolts without damage to the bolt thread
- Suitable for nuts to a tensile strength class 6
- Special steel

Mechanical nut splitter set
- For the splitting of seized or over tightened bolts without damage to the bolt thread
- Suitable for nuts to a tensile strength class 6
- Special steel

Spiral profile socket set
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Rejuvenating special profile with aggressive spiral nut
- For turning off of screws with rounded or turned heads
- Bits firmly to give a firm connection between stub nut and head
- Phosphate finish
- Chrome molybdenum

Spiral profile impact socket set
- Internal square drive to DIN 3120 / ISO 1174 with ball reception
- Rejuvenating special profile with aggressive spiral nut
- For turning off of screws with rounded or turned heads
- Bits firmly to give a firm connection between stub nut and head
- Drive out pin
- Phosphate finish
- Chrome molybdenum
- In durable plastic case

Mechanical nut splitter
- Suitable for nuts to a tensile strength class 6

Hydraulic nut splitter
- Small execution
- Suitable for nuts to a tensile strength class 10
- Work pressure max. 5 t
- Especially suitable for narrow hard to access areas
Hydraulic nut splitter set

- Large execution
- Suitable for nuts to a tensile strength class 10
- Work pressure max. 13 t
- In durable plastic storage case

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>700.1180</td>
<td>Replacement chisel large</td>
<td>700</td>
</tr>
<tr>
<td>700.1181</td>
<td>Replacement plate large</td>
<td>700</td>
</tr>
<tr>
<td>700.1182</td>
<td>Nut splitter</td>
<td>3000</td>
</tr>
<tr>
<td>700.2052</td>
<td>Hexagon key 3/8&quot; for replacement plate large</td>
<td>110</td>
</tr>
</tbody>
</table>

700.1180 4 pcs 22 - 36 mm; M14 - M24 5.80

Hydraulic nut splitter set

- For the splitting of seized or over tightened bolts without damage to the bolt thread
- Working range from 7.0 - 36.0 mm
- Inductively hardened cutting edge
- Suitable for nuts to a tensile strength class 10
- Requires low expenditure of energy
- Special steel

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>700.1150</td>
<td>Replacement chisel small</td>
<td>50</td>
</tr>
<tr>
<td>700.1151</td>
<td>Replacement plate small</td>
<td>50</td>
</tr>
<tr>
<td>700.1152</td>
<td>Nut splitter</td>
<td>3000</td>
</tr>
<tr>
<td>700.2050</td>
<td>Hexagon key 3/8&quot; for replacement plate large</td>
<td>110</td>
</tr>
</tbody>
</table>

700.1150 4 pcs 22 - 36 mm; M14 - M24 5.80

Cylinder head bore-jig set

- permits the quick and accurate boring out of broken or torn out stud screws, on cylinder heads or exhaust flanges directly on the vehicle
- Universal usage
- High time savings of up to 4 hours
- Cylinder head does not need to be removed
- Straight boring out of old screw
- In durable plastic storage case

Application range: Can be used universally on cylinder heads or exhaust flanges with bolt threads M8 and M10

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.7040</td>
<td>28 pcs Cylinder head bore-jig set</td>
<td>136</td>
</tr>
</tbody>
</table>

150.7040 28 pcs 136

Thread Boring Tool and Bore Jigs

Stud extractor set

- Set contents for extensive applications
- For removing of threaded bolts, studfling and screws
- No damage of the thread
- Only negligible enlarging of the threaded bolt through special profile extractor pin
- For screws and bolts M5 - M16
- Special steel
- In durable plastic storage case

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.0521</td>
<td>Hexagon key 3/8&quot; for extractor</td>
<td>67</td>
</tr>
<tr>
<td>150.0522</td>
<td>4,0 25.0 67</td>
<td></td>
</tr>
<tr>
<td>150.0523</td>
<td>4,5 30.0 77</td>
<td></td>
</tr>
<tr>
<td>150.0524</td>
<td>5,0 35.0 87</td>
<td></td>
</tr>
<tr>
<td>150.0525</td>
<td>5,5 40.0 97</td>
<td></td>
</tr>
</tbody>
</table>

150.0521 5 pcs Stud extractor set 5.50

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.0501</td>
<td>3,2 16.0 57</td>
<td></td>
</tr>
<tr>
<td>150.0502</td>
<td>4,0 25.0 67</td>
<td></td>
</tr>
<tr>
<td>150.0503</td>
<td>4,5 30.0 77</td>
<td></td>
</tr>
<tr>
<td>150.0504</td>
<td>5,0 35.0 87</td>
<td></td>
</tr>
<tr>
<td>150.0505</td>
<td>5,5 40.0 97</td>
<td></td>
</tr>
</tbody>
</table>

150.0501 25 pcs Stud extractor set 5.50

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.0501</td>
<td>Hexagon key 3/8&quot; for extractor</td>
<td>67</td>
</tr>
<tr>
<td>150.0502</td>
<td>4,0 25.0 67</td>
<td></td>
</tr>
<tr>
<td>150.0503</td>
<td>4,5 30.0 77</td>
<td></td>
</tr>
<tr>
<td>150.0504</td>
<td>5,0 35.0 87</td>
<td></td>
</tr>
<tr>
<td>150.0505</td>
<td>5,5 40.0 97</td>
<td></td>
</tr>
</tbody>
</table>

150.0501 25 pcs Stud extractor set 5.50

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>160.0510</td>
<td>Drilling template 120</td>
<td></td>
</tr>
<tr>
<td>160.0520</td>
<td>3 Guide sleeve, Ø 9.0 mm 20</td>
<td></td>
</tr>
<tr>
<td>160.0530</td>
<td>3 Guide sleeve, Ø 12.0 mm 20</td>
<td></td>
</tr>
<tr>
<td>160.0540</td>
<td>2 Hexagon collar nut, M12 12</td>
<td></td>
</tr>
<tr>
<td>160.0550</td>
<td>2 Hexagon collar nut, M10 18</td>
<td></td>
</tr>
<tr>
<td>160.0560</td>
<td>1 Drill bush with cylinder pin, Ø 4.0 mm 35</td>
<td></td>
</tr>
<tr>
<td>160.0570</td>
<td>1 Drill bush with cylinder pin, Ø 5.0 mm 30</td>
<td></td>
</tr>
<tr>
<td>160.0580</td>
<td>1 Drill bush with cylinder pin, Ø 6.5 mm 25</td>
<td></td>
</tr>
<tr>
<td>160.0590</td>
<td>1 Guide sleeve, M10 60</td>
<td></td>
</tr>
<tr>
<td>160.0600</td>
<td>1 Guide sleeve, M8 50</td>
<td></td>
</tr>
<tr>
<td>160.0610</td>
<td>1 Drilling stop with cylinder screws, Ø 4.0 mm 10</td>
<td></td>
</tr>
<tr>
<td>160.0620</td>
<td>1 Drilling stop with cylinder screws, Ø 5.0 mm 10</td>
<td></td>
</tr>
<tr>
<td>160.0630</td>
<td>1 Drilling stop with cylinder screws, Ø 6.0 mm 10</td>
<td></td>
</tr>
<tr>
<td>160.0640</td>
<td>1 Hexagonal key socket wrench, 2 mm 8</td>
<td></td>
</tr>
<tr>
<td>160.0650</td>
<td>1 Hexagonal key socket wrench, 3 mm 13</td>
<td></td>
</tr>
<tr>
<td>160.0660</td>
<td>1 Hexagonal key socket wrench, 5 mm 32</td>
<td></td>
</tr>
<tr>
<td>160.0670</td>
<td>1 Special spiral drill, Ø 4.0 mm 34</td>
<td></td>
</tr>
<tr>
<td>160.0680</td>
<td>1 Special spiral drill, Ø 5.0 mm 23</td>
<td></td>
</tr>
<tr>
<td>160.0690</td>
<td>1 Special spiral drill, Ø 6.5 mm 28</td>
<td></td>
</tr>
</tbody>
</table>

160.0510 1 Drilling template 120

160.0520 3 Guide sleeve, Ø 9.0 mm 20

160.0530 3 Guide sleeve, Ø 12.0 mm 20

160.0540 2 Hexagon collar nut, M12 12

160.0550 2 Hexagon collar nut, M10 18

160.0560 1 Drill bush with cylinder pin, Ø 4.0 mm 35

160.0570 1 Drill bush with cylinder pin, Ø 5.0 mm 30

160.0580 1 Drill bush with cylinder pin, Ø 6.5 mm 25

160.0590 1 Guide sleeve, M10 60

160.0600 1 Guide sleeve, M8 50

160.0610 1 Drilling stop with cylinder screws, Ø 4.0 mm 10

160.0620 1 Drilling stop with cylinder screws, Ø 5.0 mm 10

160.0630 1 Drilling stop with cylinder screws, Ø 6.0 mm 10

160.0640 1 Hexagonal key socket wrench, 2 mm 8

160.0650 1 Hexagonal key socket wrench, 3 mm 13

160.0660 1 Hexagonal key socket wrench, 5 mm 32

160.0670 1 Special spiral drill, Ø 4.0 mm 34

160.0680 1 Special spiral drill, Ø 5.0 mm 23

160.0690 1 Special spiral drill, Ø 6.5 mm 28
**Crank Shaft Facing Tools**

Face milling attachment for crank shaft mating surfaces

- Precise repair of damaged mating surfaces on the front of the crank shaft
- Prevents repeated loosening of the toothed belt wheel by reworking the mating surfaces
- Accurately guided milling using the centring pin
- Front is reworked precisely on angles and planes
- Correct seat of the new toothed belt wheel

Application range: Audi, Volkswagen, Ford, Saab, Škoda 1.9 diesel engines, 5-cylinder engines (engine code: e.g. ACV, AHA), 4-cylinder engines with crank shaft thread M16 x 1.5 engine code AGR, Volkswagen 5-cylinder engine code 4ZV from engine number 048 995 and AAB from engine number 424 606

**Feeler Gauge**

- For the testing of intervals, contact distances, etc.
- Feeler gauge cylindrical
- Blades individually marked with size
- Blades made out of hardened spring steel

**Piston Clearance Gauge**

- For the testing of intervals, contact distances, etc.
- Feeler gauge conical tapered
- Blades individually marked with size
- Blades made out of hardened spring steel

**Valve Pneumatic Adapter**

- For holding up the installed valves when removing and fitting the valve facing wedges on the cylinder head
- Can be used universally in place of the spark plugs or glow plugs
- Ideal when replacing the valve shaft seals without removing the cylinder head
- For hard to reach spark plugs and glow plugs too
- Can also be used as an adapter for pressure loss testing
- Flexible reinforced hose

**Valve Retainer and Valve Spring Tensioner**

- Required for valve adjustment
- For retaining the tappet
- Functional area additionally surface hardened
- Phosphate
- Chrome vanadium

Application range: all 4 / 5 / 6-cylinder engines with tappet

---

**Antimagnetic Brass Feeler Gauge**

- For the testing of intervals, contact distances, etc.
- Feeler gauge conical tapered
- Blades made of brass

**Valve Pneumatic Adapter, Flexible**

- For holding up the installed valves when removing and fitting the valve facing wedges on the cylinder head
- Can be used universally in place of the spark plugs or glow plugs
- Ideal when replacing the valve shaft seals without removing the cylinder head
- For hard to reach spark plugs and glow plugs too
- Can also be used as an adapter for pressure loss testing
- Flexible reinforced hose

---

**Valve Retainer**

- For the suppression of the cup valve stem for the removal of the valve platelets
- Special steel

Application range: Opel-Diesel 1.5 D + 1.7 DT-Izuzu Renault 1.7 Diesel, Engines F2N + P3N + F8Q z.B. Clio, R19, R21, R9, Super S 5 Volvo Diesel U40, 440, 460 + 480 Engines B 172K + B 18KD, Mazda 323 S - 1.7 TD

---

**Valve Pneumatic Adapter**

- Suitable for spark plug thread M14 x 1.25 and M18 x 1.5
- Ideal when replacing the valve shaft seals without removing the cylinder head
- With 13 mm hexagon pneumatic connection and rubber rings for sealing
- Special steel

Application range: For all petrol engines with sufficient clearance in the spark plug bore, e.g. Volkswagen, Audi, Ford (excluding CVH and multi-valve engines) etc.

---

**Piston Clearance Gauge**

- Suitable for sealing the valve platelets
- Suitable for valve facing wedges on the cylinder head
- Suitable for valve platelets
- Suitable for valve facing wedges on the cylinder head

---

**Feeler Gauge**

- For the testing of intervals, contact distances, etc.
- Feeler gauge conical tapered
- Blades individually marked with size
- Blades made of brass

---

**Valve Pneumatic Adapter**

- Suitable for spark plug thread M14 x 1.25 and M18 x 1.5
- Ideal when replacing the valve shaft seals without removing the cylinder head
- With 13 mm hexagon pneumatic connection and rubber rings for sealing
- Special steel

Application range: For all petrol engines with sufficient clearance in the spark plug bore, e.g. Volkswagen, Audi, Ford (excluding CVH and multi-valve engines) etc.

---

**Valve Retainer**

- For the suppression of the cup valve stem for the removal of the valve platelets
- Special steel

Application range: Opel-Diesel 1.5 D + 1.7 DT-Izuzu Renault 1.7 Diesel, Engines F2N + P3N + F8Q z.B. Clio, R19, R21, R9, Super S 5 Volvo Diesel U40, 440, 460 + 480 Engines B 172K + B 18KD, Mazda 323 S - 1.7 TD

---

**Piston Clearance Gauge**

- Suitable for sealing the valve platelets
- Suitable for valve facing wedges on the cylinder head
- Suitable for valve platelets
- Suitable for valve facing wedges on the cylinder head

---

**Feeler Gauge**

- For the testing of intervals, contact distances, etc.
- Feeler gauge conical tapered
- Blades individually marked with size
- Blades made of brass

---

**Valve Pneumatic Adapter**

- Suitable for spark plug thread M14 x 1.25 and M18 x 1.5
- Ideal when replacing the valve shaft seals without removing the cylinder head
- With 13 mm hexagon pneumatic connection and rubber rings for sealing
- Special steel

Application range: For all petrol engines with sufficient clearance in the spark plug bore, e.g. Volkswagen, Audi, Ford (excluding CVH and multi-valve engines) etc.

---

**Valve Retainer**

- For the suppression of the cup valve stem for the removal of the valve platelets
- Special steel

Application range: Opel-Diesel 1.5 D + 1.7 DT-Izuzu Renault 1.7 Diesel, Engines F2N + P3N + F8Q z.B. Clio, R19, R21, R9, Super S 5 Volvo Diesel U40, 440, 460 + 480 Engines B 172K + B 18KD, Mazda 323 S - 1.7 TD
Valve spring assembly tool
- Required for the assembly and removal of the valves
- Universal usage
- Enormous time and cost saving
- Expansion of the cylinder head is generally not necessary
- Special steel

Application range: BMW, Ford, Mercedes, Opel, Porsche, VAG etc. with SV OHV and OHCh engines

Valve spring clamp for Ford CVH-engines
- For clamping the valve springs in the course of restoration works in the area of the cylinder head

Application range: 1.3 / 1.4 and 1.6 litre of CVH engines in the Escort (incl. XR31 and RS Turbo), Fiesta (incl. RS Turbo) and Orion

Valve spring clamp for OHC engines
- For clamping the valve springs in the course of restoration works in the area of the cylinder head

Application range: BMW, Ford, Mercedes, Opel, Porsche, VAG etc. with SV OHV and OHC engines

Valve spring compressor for VAG
- For retaining the valve springs
- Replaceable plastic pressure piece
- Chrome vanadium
- Surface finished in chrome

Application range: e.g. VAG with tappet engines 1.3 – 1.4 l with stud bolts M8

Valve spring compressor for Peugeot
- For assembly and removal of valve springs
- For fitted or removed cylinder head
- Suitable for Peugeot with 1.380 mm and 1.380 mm valve springs
- Universal usage
- Chrome vanadium

Application range: Peugeot

PSA - Valve spring compressor
- For the professional engine repair
- For retaining the valve springs
- Universal usage
- Includes 8 screws with pressure cone and 2 locking screws
- Chrome vanadium
- Very high degree of accuracy

Application range: Citroen Berlingo, Xsara petrol engines

Valve spring tension
- Easy and quick change of the valve
- Expansion of the cylinder head is not necessary
- Use in conjunction with pneumatic adapter 150.1105 / 150.1107
- Special steel

Application range: Passenger cars and vans

Valve spring clamping yoke
- Robust, adjustable and cam assembly tool with parallel stroke
- The tool is to be sure special for motors with horizontal camshaft (OHC motors) conceives, can however also be used in small and medium-sized OHV engines where needed
- The activity handles locks automatically after the clamping of the valve spring so that the hands remain free for removing and/or placing of the valve wedges

Application range: PSA - Valve spring compressor

Valve spring clamp yoke for Ford CVH-engines
- The tool is to be sure special for motors with horizontal camshaft (OHC motors) conceives, can however also be used in small and medium-sized OHV engines where needed
- The activity handles locks automatically after the clamping of the valve spring so that the hands remain free for removing and/or placing of the valve wedges

Application range: Ford CVH-engines

Valve spring tension
- Easy and quick change of the valve
- Expansion of the cylinder head is not necessary
- Use in conjunction with pneumatic adapter 150.1105 / 150.1107
- Special steel

Application range: Passenger cars and vans

Valve spring mounting bridge set
- For assembly and removal of valve springs
- For fitted or removed cylinder head
- Can be used universally with various assembly and adjustment options
- Enormous cost and time saving
- Removal of cylinder head not necessary for repair of valve shaft seals or valve springs
- Flange fastenings can be attached crossways or parallel to the cam shaft axis from the cylinder head
- Optionally upgradable with specific pressure pieces
- Special steel

Application range: Range from 1 to 12-cylinder engines, 2 to 4 valve technology for which the valves are arranged in a row or in a V.

Valve spring assembly tool
- For the assembly and removal of the valves
- Universal usage
- Enormous time and cost saving
- Expansion of the cylinder head is generally not necessary
- Special steel

Application range: BMW, Ford, Mercedes, Opel, Porsche, VAG etc. with SV OHV and OHCh engines

Valve spring clamp for Ford CVH-engines
- For clamping the valve springs in the course of restoration works in the area of the cylinder head

Application range: 1.3 / 1.4 and 1.6 litre of CVH engines in the Escort (incl. XR31 and RS Turbo), Fiesta (incl. RS Turbo) and Orion

Valve spring clamp for OHC engines
- For clamping the valve springs in the course of restoration works in the area of the cylinder head

Application range: BMW, Ford, Mercedes, Opel, Porsche, VAG etc. with SV OHV and OHC engines

Valve spring compressor for VAG
- For retaining the valve springs
- Replaceable plastic pressure piece
- Chrome vanadium
- Surface finished in chrome

Application range: e.g. VAG with tappet engines 1.3 – 1.4 l with stud bolts M8

Valve spring compressor for Peugeot
- For assembly and removal of valve springs
- For fitted or removed cylinder head
- Suitable for Peugeot with 1.380 mm and 1.380 mm valve springs
- Universal usage
- Chrome vanadium

Application range: Peugeot

PSA - Valve spring compressor
- For the professional engine repair
- For retaining the valve springs
- Universal usage
- Includes 8 screws with pressure cone and 2 locking screws
- Chrome vanadium
- Very high degree of accuracy

Application range: Citroen Berlingo, Xsara petrol engines

Valve spring tension
- Easy and quick change of the valve
- Expansion of the cylinder head is not necessary
- Use in conjunction with pneumatic adapter 150.1105 / 150.1107
- Special steel

Application range: Passenger cars and vans

Valve spring clamping yoke
- Robust, adjustable and cam assembly tool with parallel stroke
- The tool is to be sure special for motors with horizontal camshaft (OHC motors) conceives, can however also be used in small and medium-sized OHV engines where needed
- The activity handles locks automatically after the clamping of the valve spring so that the hands remain free for removing and/or placing of the valve wedges

Application range: PSA - Valve spring compressor

Valve spring clamp yoke for Ford CVH-engines
- The tool is to be sure special for motors with horizontal camshaft (OHC motors) conceives, can however also be used in small and medium-sized OHV engines where needed
- The activity handles locks automatically after the clamping of the valve spring so that the hands remain free for removing and/or placing of the valve wedges

Application range: Ford CVH-engines

Valve spring tension
- Easy and quick change of the valve
- Expansion of the cylinder head is not necessary
- Use in conjunction with pneumatic adapter 150.1105 / 150.1107
- Special steel

Application range: Passenger cars and vans

Valve spring mounting bridge set
- For assembly and removal of valve springs
- For fitted or removed cylinder head
- Can be used universally with various assembly and adjustment options
- Enormous cost and time saving
- Removal of cylinder head not necessary for repair of valve shaft seals or valve springs
- Flange fastenings can be attached crossways or parallel to the cam shaft axis from the cylinder head
- Optionally upgradable with specific pressure pieces
- Special steel

Application range: Range from 1 to 12-cylinder engines, 2 to 4 valve technology for which the valves are arranged in a row or in a V.

Valve spring assembly tool
- Required for the assembly and removal of the valves
- Universal usage
- Enormous time and cost saving
- Expansion of the cylinder head is generally not necessary
- Special steel

Application range: BMW, Ford, Mercedes, Opel, Porsche, VAG etc. with SV OHV and OHCh engines

Valve spring clamp for Ford CVH-engines
- For clamping the valve springs in the course of restoration works in the area of the cylinder head

Application range: 1.3 / 1.4 and 1.6 litre of CVH engines in the Escort (incl. XR31 and RS Turbo), Fiesta (incl. RS Turbo) and Orion

Valve spring clamp for OHC engines
- For clamping the valve springs in the course of restoration works in the area of the cylinder head

Application range: BMW, Ford, Mercedes, Opel, Porsche, VAG etc. with SV OHV and OHC engines

Valve spring compressor for VAG
- For retaining the valve springs
- Replaceable plastic pressure piece
- Chrome vanadium
- Surface finished in chrome

Application range: e.g. VAG with tappet engines 1.3 – 1.4 l with stud bolts M8

Valve spring compressor for Peugeot
- For assembly and removal of valve springs
- For fitted or removed cylinder head
- Suitable for Peugeot with 1.380 mm and 1.380 mm valve springs
- Universal usage
- Chrome vanadium

Application range: Peugeot

PSA - Valve spring compressor
- For the professional engine repair
- For retaining the valve springs
- Universal usage
- Includes 8 screws with pressure cone and 2 locking screws
- Chrome vanadium
- Very high degree of accuracy

Application range: Citroen Berlingo, Xsara petrol engines

Valve spring tension
- Easy and quick change of the valve
- Expansion of the cylinder head is not necessary
- Use in conjunction with pneumatic adapter 150.1105 / 150.1107
- Special steel

Application range: Passenger cars and vans

Valve spring clamping yoke
- Robust, adjustable and cam assembly tool with parallel stroke
- The tool is to be sure special for motors with horizontal camshaft (OHC motors) conceives, can however also be used in small and medium-sized OHV engines where needed
- The activity handles locks automatically after the clamping of the valve spring so that the hands remain free for removing and/or placing of the valve wedges

Application range: PSA - Valve spring compressor

Valve spring clamp yoke for Ford CVH-engines
- The tool is to be sure special for motors with horizontal camshaft (OHC motors) conceives, can however also be used in small and medium-sized OHV engines where needed
- The activity handles locks automatically after the clamping of the valve spring so that the hands remain free for removing and/or placing of the valve wedges

Application range: Ford CVH-engines

Valve spring tension
- Easy and quick change of the valve
- Expansion of the cylinder head is not necessary
- Use in conjunction with pneumatic adapter 150.1105 / 150.1107
- Special steel

Application range: Passenger cars and vans

Valve spring mounting bridge set
- For assembly and removal of valve springs
- For fitted or removed cylinder head
- Can be used universally with various assembly and adjustment options
- Enormous cost and time saving
- Removal of cylinder head not necessary for repair of valve shaft seals or valve springs
- Flange fastenings can be attached crossways or parallel to the cam shaft axis from the cylinder head
- Optionally upgradable with specific pressure pieces
- Special steel

Application range: Range from 1 to 12-cylinder engines, 2 to 4 valve technology for which the valves are arranged in a row or in a V.
**Valve pressure adaptors for mounting bridges**

- For assembly and removal of valve springs
- For use in conjunction with valve mounting bridge
- Special steel

![Valve pressure adaptors](image)

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>160.0280</td>
<td>Pressure adaptor internal Ø 21 mm</td>
<td>46</td>
</tr>
<tr>
<td>160.0281</td>
<td>Pressure adaptor internal Ø 24 mm</td>
<td>50</td>
</tr>
<tr>
<td>160.0282</td>
<td>Pressure adaptor internal Ø 25 mm</td>
<td>60</td>
</tr>
<tr>
<td>160.0283</td>
<td>Pressure adaptor internal Ø 28 mm</td>
<td>70</td>
</tr>
<tr>
<td>160.0284</td>
<td>Pressure adaptor internal Ø 30 mm</td>
<td>80</td>
</tr>
<tr>
<td>160.0285</td>
<td>Pressure adaptor internal Ø 31 mm</td>
<td>90</td>
</tr>
<tr>
<td>160.0286</td>
<td>Pressure adaptor internal Ø 32 mm</td>
<td>100</td>
</tr>
<tr>
<td>160.0287</td>
<td>Pressure adaptor internal Ø 33 mm</td>
<td>120</td>
</tr>
<tr>
<td>160.0288</td>
<td>Pressure adaptor internal Ø 34 mm</td>
<td>120</td>
</tr>
<tr>
<td>160.0289</td>
<td>Pressure adaptor internal Ø 35 mm</td>
<td>130</td>
</tr>
<tr>
<td>160.0290</td>
<td>Pressure adaptor internal Ø 37 mm</td>
<td>140</td>
</tr>
<tr>
<td>160.0291</td>
<td>Pressure adaptor internal Ø 38 mm</td>
<td>150</td>
</tr>
<tr>
<td>160.0292</td>
<td>Pressure adaptor internal Ø 40 mm</td>
<td>160</td>
</tr>
<tr>
<td>160.0293</td>
<td>Pressure adaptor internal Ø 42 mm</td>
<td>170</td>
</tr>
<tr>
<td>160.0294</td>
<td>Pressure adaptor internal Ø 44 mm</td>
<td>180</td>
</tr>
<tr>
<td>160.0295</td>
<td>Pressure adaptor internal Ø 44 mm</td>
<td>120</td>
</tr>
</tbody>
</table>

**Valve dismantling and assembly tool set**

- Assortment for changing of defective sealings on the cylinder head
- Enormous time savings as the cylinder head does not need to be dismantled
- For a cost and damage free use
- In durable plastic storage case

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>146.1100</td>
<td>Valve dismantling and assembly tool set</td>
<td>30</td>
</tr>
</tbody>
</table>

---

**Valve shaft removal pliers**

- Slim execution
- Plastic coated jaws
- Knurled handle
- With self opening mechanism
- Quick and easy removal of valves from the valve shaft
- For the extension of the valve spring lever
- Ideally suitable for engines with 4 valve technology
- For the replacement of valve plates

**Valve shaft sealing tools**

- Valve sealing ring pliers
- For removing valve shaft seals on multi-valve engines
- For easy removal of deep seated valve shaft seals using extra long jaws
- Hardened jaws
- Longitudinal teeth
- Functional area dip-insulated to avoid damage to the valve control
- Straight design
- Special steel

**Application range:** Volkswagen, Audi, Ford, Opal, Nissan etc.

**Application range:** Volkswagen, Audi, Ford, Opal, Nissan etc.

**Valve plate pliers for Volkswagen**

- For replacing the valve plates
- Tempered tips
- Special steel

**Application range:** Volkswagen tappet engines from 1.3 l

---

**Valve plate pliers for Opel**

- For removing valve shaft seals on multi-valve engines
- For easy removal of deep seated valve shaft seals using extra long jaws
- Hardened jaws
- Longitudinal teeth
- Functional area dip-insulated to avoid damage to the valve control
- Straight design
- Special steel

**Application range:** Volkswagen, Audi, Ford, Opal, Nissan etc.

---

**Valve shaft sealing pliers**

- Slim design
- Knurled handle
- Quick and clean removal of valve shaft sealing rings
- For removal of the valve spring support
- Ideal for engines with 4 valve technology
- Nickel plated finish
- Special tool steel

**Application range:** Volkswagen, Audi, Ford, Opal, Nissan etc.

---

**Valve shaft sealing tools**

- Valve sealing ring pliers
- For removing valve shaft seals on multi-valve engines
- For easy removal of deep seated valve shaft seals using extra long jaws
- Hardened jaws
- Longitudinal teeth
- Functional area dip-insulated to avoid damage to the valve control
- Straight design
- Special steel

**Application range:** Volkswagen, Audi, Ford, Opal, Nissan etc.
**Valve shaft pusher**

- For pushing on valve shaft seals Ø 7.0 mm on multi-valve engines
- Plastic

Application range: Multi-valve engines M104, M119, M120

---

**Slide hammer puller for valve shaft sealing ring**

- Special construction allows quick and easy removal of seized valve shaft sealing rings
- Universal usage
- Secure working without damage to the tappet guide on the cylinder head
- With collect and plastic sleeve
- Special steel

---

**Valve shaft sealing ring tool set**

- Permits the assembly and removal of valve shaft sealing rings
- Universal usage
- Damage-free operation due to wear-resistant plastic pusher
- Includes extra long pliers and slide hammer puller with collets
- In durable plastic storage case

---

**Valve shaft seal pusher**

- For pushing on valve shaft seals Ø 7.0 mm and 8.0 mm
- Phosphate finish
- Special steel

Application range: BMW and Opel Omega B 2.5l turbo diesel

---

**STAINLESS STEEL Chisel scraper set**

- Continuous stainless steel blade that can be re-sharpened
- With reinforcement eylet
- With ergonomic moulded two component handle
- Suitable for use at extremely low temperatures
- Extreme resistance to intergranular corrosion and oxidation
- Extremely long service life
- Autoclavable (heating of the tools to over 100°C to kill germs)
- Rust-proof and acid resistant
- Stainless steel

---

**Stainless steel chisel scraper**

- Ideal for removing stickers, seal and glue residues
- Blades can be re-sharpened
- Blade 10° angled
- Extra long design for hard to reach areas
- Also for removing extremely stubborn impurities and seal residue
- With ergonomic moulded one component handle

---

**Gasket scraper**

- Includes especially long pliers and slide hammer puller with collets
- For pushing extremely stubborn impurities and seal residue
- Also for removing extremely stubborn impurities and seal residue
- With ergonomic moulded one component handle

---

**STAINLESS STEEL Chisel scraper**

- Ideal for removing stickers, seal and glue residues
- Also suitable for the removal and chiselling of plates or welding spots
- Heavy, continuous stainless steel blade that can be re-sharpened
- With reinforcement eylet
- With hammer cap on the handle
- With ergonomic moulded two component handle
- Suitable for use at extremely low temperatures
- Extreme resistance to intergranular corrosion and oxidation
- Extremely long service life
- Autoclavable (heating of the tools to over 100°C to kill germs)
- Rust-proof and acid resistant
- Stainless steel

---

**Gasket scraper**

- Includes especially long pliers and slide hammer puller with collets
- For pushing extremely stubborn impurities and seal residue
- Also for removing extremely stubborn impurities and seal residue
- With ergonomic moulded one component handle

---

**Gasket scraper set**

- Includes especially long pliers and slide hammer puller with collets
- For pushing extremely stubborn impurities and seal residue
- Also for removing extremely stubborn impurities and seal residue
- With ergonomic moulded one component handle
Gasket scraper set

- For removing seal residue, e.g. cylinder head seals
- With replacement blade
- Angled blade head
- With ergonomic moulded two component handle
- Special steel

Slide hammer puller with thread tip

- For the removal of radial shaft seals and small bearings
- For hard to reach places too
- Quick and easy to remove
- Using the blow weight the thread tip is hit into the radial shaft seal and turned by hand and then removed with the blow weight
- Universal usage
- With two component handle
- Special steel

Magnet and hook tool set

- Ideal for removing and inserting O-rings and seals
- With telescopic magnet attachment and replaceable hook
- Storage compartment in the handle for the various attachments
- Special steel

Radial shaft seal remover set

- For the removal of radial shaft seals and small bearings
- For hard to reach places too
- Quick and easy to remove
- Using the blow weight the thread tip is hit into the radial shaft seal and turned by hand and then removed with the blow weight
- Long durability through hardened leverage
- Universal usage
- Special steel

Hook tool set

- Ideal for removing and use of O-rings and seals
- With one component handle
- With hanging hole
- Special steel

Hook tool set

- Ideal for removing and use of O-rings and seals
- With one component handle
- With hanging hole
- Special steel

SEALING RING TOOLS

Double hook tool

- Sickle-shaped
- For the removal of sealing rings
- Quick and easy to remove
- Long durability through hardened leverage
- Universal usage
- With one component handle

Hook tool set

- Ideal for removing and use of O-rings and seals
- Special steel

Radial shaft seal remover set

- For the removal of radial shaft seals and small bearings
- For hard to reach places too
- Quick and easy to remove
- Using the blow weight the thread tip is hit into the radial shaft seal and turned by hand and then removed with the blow weight
- Long durability through hardened leverage
- Universal usage
- Special steel

Rule 5 pieces Gasket scraper set 180

Rule 2 pcs Gasket scraper set 180

Rule consists of:

- 907.2280 Scraper, 270 mm 155
- 907.2282 Scraper blade 5

Scaper blades

- 5 replacement blades for seal scraper 907.2280
- For removing seal residue, e.g. cylinder head seals
- For angled blade head
- Special steel

Rule 5 pieces Magnet and hook tool set 70

Rule 6 pcs Magnet and hook tool set 70

Rule consists of:

- 550.1081 Basic unit 28
- 550.1082 Telescopic magnet attachment, 90 - 390 mm 13
- 550.1083 Hook attachment, straight, 75 mm 5
- 550.1084 Hook attachment, 90° - 75 mm 5
- 550.1085 Hook attachment, 120° - 75 mm 5
- 550.1086 Hook attachment, lateral bend, 75 mm 5

Rule 4 pcs Hook tool set 120

Rule 2 pcs Hook tool set 120

Rule consists of:

- 550.1046 Hook tool 120mm blade, straight version 27
- 550.1047 Hook tool 120mm blade, 45° angled version 27
- 550.1048 Hook tool 120mm blade, 90° angled version 27
- 550.1049 Hook tool 120mm blade, 135° angled version 27

Rule 4 pcs Hook tool set 120

Rule consists of:

- 550.1046 Hook tool 120mm blade, straight version 27
- 550.1047 Hook tool 120mm blade, 45° angled version 27
- 550.1048 Hook tool 120mm blade, 90° angled version 27
- 550.1049 Hook tool 120mm blade, 135° angled version 27

Rule 2 pcs Hook tool set 30

Rule consists of:

- 550.1046 Hook tool 120mm blade, straight version 27
- 550.1047 Hook tool 120mm blade, 45° angled version 27
- 550.1048 Hook tool 120mm blade, 90° angled version 27
- 550.1049 Hook tool 120mm blade, 135° angled version 27
Sealing ring assembly set for BMW

- For assembly and removal of sealing rings
- Especially for the front crankshaft radial sealing ring
- Includes puller and mounting tool
- Special steel
- In durable plastic storage case

Application range: BMW engines N40, N42, N43, N45, N45T, N46, N51, N52, N52K, N53, N54

Sealing ring removal tool for VAG

- For the quick and correct removal of the sealing rings on engine shafts such as the crank shaft, cam shaft or intermediate shaft
- Enormous cost and time saving
- No need to strip the engine
- Universal usage
- With external drive hexagonal socket 22.0 mm
- With internal square drive to DIN 3120 / ISO 1174
- Special steel

Application range: e.g. Volkswagen, Audi, Seat, Škoda engines etc.

Universal crank seal remover and installer set

- Suitable for the damage-free and correct assembly and removal of radial shaft seals and drive shaft orifices
- For tight-fit application on engine shafts such as crank shaft, cam shaft or intermediate shaft
- Can be used universally for radial sealing rings in diameters from 21.5 mm to 64.0 mm
- Enormous cost and time saving
- No need to strip the engine
- Prevents damage to the aluminum fits
- Set contents for extensive applications
- Includes puller and pressing tool
- Prevents the ring from becoming loose
- In durable plastic storage case

Application range: Extensive universal tool including pressing tools for radial sealing rings in diameters from 21.5 mm to 64.0 mm on almost all vehicles

Master hook tool set

- Ideal for removing and use of O rings and seals
- With hanging hole
- Special steel

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>700.1070</td>
<td>7 pcs Master hook tool set</td>
<td>580</td>
</tr>
</tbody>
</table>

consists of:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>700.1040</td>
<td>Hook tool 120mm blade, straight version 27°</td>
<td>27</td>
</tr>
<tr>
<td>700.1041</td>
<td>Hook tool 120mm blade, 45° angled version 27°</td>
<td>27</td>
</tr>
<tr>
<td>700.1042</td>
<td>Hook tool 120mm blade, 60° angled version 27°</td>
<td>27</td>
</tr>
<tr>
<td>700.1043</td>
<td>Hook tool large, straight</td>
<td>90</td>
</tr>
<tr>
<td>700.1044</td>
<td>Hook tool 90mm blade, sickle form 88</td>
<td></td>
</tr>
<tr>
<td>700.1045</td>
<td>Hook tool large, sickle 91</td>
<td></td>
</tr>
<tr>
<td>700.1046</td>
<td>Hook tool 120mm blade, 90° angled version 27°</td>
<td>27</td>
</tr>
<tr>
<td>700.1047</td>
<td>Hook tool small, 42</td>
<td></td>
</tr>
<tr>
<td>700.1048</td>
<td>Hook tool large, 135° angled version 27°</td>
<td>27</td>
</tr>
<tr>
<td>700.1049</td>
<td>Hook tool 120mm blade, 45° angled version 27°</td>
<td>27</td>
</tr>
<tr>
<td>700.1050</td>
<td>Hook tool large, straight</td>
<td>90</td>
</tr>
<tr>
<td>700.1051</td>
<td>T-handle hook tool, S-form small 42</td>
<td></td>
</tr>
<tr>
<td>700.1052</td>
<td>T-handle hook tool, S-form large 96</td>
<td></td>
</tr>
</tbody>
</table>

Sealing ring assembly set for BMW

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.3628</td>
<td>4 pcs Sealing ring assembly set for BMW</td>
<td>160</td>
</tr>
</tbody>
</table>

consists of:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.3636</td>
<td>Extraction tool</td>
<td>550</td>
</tr>
<tr>
<td>150.3637</td>
<td>Mounting tool Ø 90 mm</td>
<td>550</td>
</tr>
<tr>
<td>150.3638</td>
<td>Mounting tool Ø 60 mm</td>
<td>550</td>
</tr>
<tr>
<td>150.3639</td>
<td>Mounting tool nut</td>
<td>550</td>
</tr>
</tbody>
</table>

Assembly tool set for sealing flange with sensor wheel

- For the correct and damage-free assembly of the sealing flange
- With integrated pulse sensor wheel
- Exact sensor wheel adjustment - Precise sensor signal
- No need for reworking with repeated removal of the gearbox
- Enormous time and cost saving

Application range: Volkswagen, Audi, Seat, Škoda, Mitsubishi petrol and diesel engines e.g. 1.0, 1.4, 16V, 1.4 FSI, 1.6 16V, 1.6 FSI, 1.9 TDI, 2.0 TDI, 2.0 TDI 16V, 2.0 SDI, 2.0 DI-D with Audi (A2, A3), Volkswagen (Polo, Golf IV/V/Plus, Passat), Seat (Arosa, Ibiza, Leon), Škoda (Fabia, Octavia) and Mitsubishi (Grands, Outlander)

Universal crank seal remover and installer set

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>700.1280</td>
<td>24 pcs Universal crank seal remover and installer set</td>
<td>1,96</td>
</tr>
</tbody>
</table>

consists of:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>700.1277</td>
<td>Steel sleeve 22 mm, long for 700.1280</td>
<td>160</td>
</tr>
<tr>
<td>700.1278</td>
<td>Steel sleeve 27 mm, long for 700.1280</td>
<td>220</td>
</tr>
<tr>
<td>700.1279</td>
<td>Axle body for 700.1280</td>
<td>140</td>
</tr>
<tr>
<td>700.1281</td>
<td>Hook 76 mm for 700.1280 5 pcs</td>
<td>160</td>
</tr>
<tr>
<td>700.1282</td>
<td>Hook 114 mm for 700.1280 5 pcs</td>
<td>22</td>
</tr>
<tr>
<td>700.1283</td>
<td>Adapter sleeve for 700.1280</td>
<td>75</td>
</tr>
<tr>
<td>700.1284</td>
<td>Nut 20.0 mm for 700.1280</td>
<td>25</td>
</tr>
<tr>
<td>700.1285</td>
<td>Nut 18.0 mm for 700.1280</td>
<td>25</td>
</tr>
<tr>
<td>700.1286</td>
<td>Nut 16.0 mm for 700.1280</td>
<td>25</td>
</tr>
<tr>
<td>700.1287</td>
<td>Nut 14.0 mm for 700.1280</td>
<td>19</td>
</tr>
<tr>
<td>700.1288</td>
<td>Nut 12.0 mm for 700.1280</td>
<td>17</td>
</tr>
<tr>
<td>700.1289</td>
<td>Nut 10.0 mm for 700.1280</td>
<td>15</td>
</tr>
<tr>
<td>700.1290</td>
<td>Nut 8.1 mm for 700.1280</td>
<td>15</td>
</tr>
<tr>
<td>700.1291</td>
<td>Adapter 31.5 mm for 700.1280</td>
<td>25</td>
</tr>
<tr>
<td>700.1292</td>
<td>Adapter 45.0 mm for 700.1280</td>
<td>27</td>
</tr>
<tr>
<td>700.1293</td>
<td>Adapter 48.0 mm for 700.1280</td>
<td>27</td>
</tr>
<tr>
<td>700.1294</td>
<td>Adapter 56 mm for 700.1280</td>
<td>25</td>
</tr>
<tr>
<td>700.1295</td>
<td>Adapter 54 mm for 700.1280</td>
<td>25</td>
</tr>
<tr>
<td>700.1296</td>
<td>Adapter 30.0 mm for 700.1280</td>
<td>30</td>
</tr>
<tr>
<td>700.1297</td>
<td>Adapter 41.0 mm for 700.1280</td>
<td>30</td>
</tr>
<tr>
<td>700.1298</td>
<td>Steel sleeve 10 mm for 700.1280</td>
<td>80</td>
</tr>
<tr>
<td>700.1299</td>
<td>Steel sleeve 27 mm, long for 700.1280</td>
<td>220</td>
</tr>
</tbody>
</table>

Assembly tool set for sealing flange with sensor wheel

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.3659</td>
<td>7 pcs Assembly tool set for sealing flange with sensor wheel</td>
<td>1.74</td>
</tr>
</tbody>
</table>

consists of:

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.3651</td>
<td>Housing with centering pin</td>
<td>480</td>
</tr>
<tr>
<td>150.3652</td>
<td>Flange with spindle and nut</td>
<td>4820</td>
</tr>
<tr>
<td>150.3653</td>
<td>Guide bolts, Ø 10 mm</td>
<td>20</td>
</tr>
<tr>
<td>150.3654</td>
<td>Guide bolts, Ø 6 mm</td>
<td>21</td>
</tr>
</tbody>
</table>
**VALVE SEAT CUTTER**

Universal valve milling set for valve seat machining

- Suitable for reworking/milling valve seats
- Milling heads prevent chatter marks and ensure uniform force distribution
- Can be used universally for unhardened valve seats
- Special steel
- In durable plastic storage case

**Application range:** for engines with lead-free fuel

---

**Valve seat grinding set**

- With two sided sucker
- For the bow on the valve seat in the cylinder head
- Body made out of sealed hard wood
- Suckers made out of rubber

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Price</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.1130</td>
<td>Valve seat grinding set</td>
<td>£22.00</td>
<td>2 pc</td>
</tr>
</tbody>
</table>

**Valve tool grinding with 2 suction discs**

- 8 mm bore reception
- For the grinding of the valve seats for repair work
- The deteletion of the device body is automatically generated via a transmission, the typical right-left wing movement used in grinding
- Gives you convenient and rapid seat grinding with the drill between approx. 500-1,000 rpm

**Consists of:**

- 150.1131: Valve set grinder 19/22 mm, 245 mm long: 30
- 150.1132: Valve set grinder 22/32 mm, 255 mm long: 36

---

**VALVE WEDGE ASSEMBLY**

Valve wedge assembly tool Ø 5mm, Opel, Volkswagen, Audi

- For the assembly of valve wedges
- Easy to flit even in cramped spaces
- Also suitable for valve springs that are arranged deep in the cylinder head or are seated in a cup guide
- Allows easy and secure assembly of one- and three-grooved valve wedges on fitted and removed cylinder head
- Special steel

**Application range:** Opel, Volkswagen, Audi

---

**Valve cutter**

- With two sided sucker
- For grinding the valve seat in the cylinder head
- Body made out of sealed hard wood
- Suckers made out of rubber

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Price</th>
<th>Qty</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.3580</td>
<td>Valve milling guide 5.5 mm</td>
<td>£45.00</td>
<td>1 pc</td>
</tr>
</tbody>
</table>

---

**Valve adjustment push-through square**

- Push-through square
- Valve adjustment tool for spinning the engine when adjusting the valve control times
- Serviceable from both sides
- For use with a 1/2” push-through ratchet
- Special steel

**Application range:** Mercedes engine type 102, 103, 104, 110, 115, 116, 117, 119, 120, 123

---

**Ratchet**

- Ratchet with 1/2” square drive
- E.g. for tuning the engine crank alignment tool
Valve adjustment spanner

- For adjusting the valves
- Prevents the valve plate
- Can be used in conjunction with 150.3587 or 150.3590
- Can be used in pairs
- Special steel

<table>
<thead>
<tr>
<th>150.3580</th>
<th>14.0</th>
<th>225.0</th>
<th>140</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.3590</td>
<td>14.0</td>
<td>160.0</td>
<td>100</td>
</tr>
</tbody>
</table>

PISTON RING TOOLS

Piston ring pliers

- PVC dipped handle
- For the safe disassembly and assembly of piston rings
- Nickel plated surface
- Special tool steel

<table>
<thead>
<tr>
<th>115.1391</th>
<th>60.0-140.0</th>
<th>3.9/16&quot; - 5.1/2&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.1141</td>
<td>piston ring tension band plier</td>
<td></td>
</tr>
<tr>
<td>150.1142</td>
<td>Tension band, Ø 73 - 79 (2.7/8&quot; - 3.1/8&quot;)</td>
<td></td>
</tr>
<tr>
<td>150.1143</td>
<td>Tension band, Ø 79 - 86 (3.1/8&quot; - 3.3/8&quot;)</td>
<td></td>
</tr>
<tr>
<td>150.1144</td>
<td>Tension band, Ø 86 - 92 (3.5/8&quot; - 3.5/8&quot;)</td>
<td></td>
</tr>
<tr>
<td>150.1145</td>
<td>Tension band, Ø 92 - 98 (3.5/8&quot; - 3.7/8&quot;)</td>
<td></td>
</tr>
<tr>
<td>150.1146</td>
<td>Tension band, Ø 98 - 105 (3.7/8&quot; - 4.1/8&quot;)</td>
<td></td>
</tr>
</tbody>
</table>

Piston ring pliers

- Special wheel clamps with suspension hole for fixing the piston ring when splaying
- With restriction of the splaying dimension
- Special steel

<table>
<thead>
<tr>
<th>115.1391</th>
<th>60-140</th>
<th>3.9/16&quot; - 5.1/2&quot;</th>
</tr>
</thead>
</table>

Piston ring tensioning tool

- Flexible tool for assembly and removal of piston rings
- Profiled tension band Ø 38.0 mm
- Low friction between tension band and piston ring
- The profile band cannot slip between the piston and cylinder
- Universal usage

<table>
<thead>
<tr>
<th>115.3016</th>
<th>75.0-100.0</th>
</tr>
</thead>
</table>

Piston ring tension band set

- For the pretensioning of the piston rings when inserting the piston in the cylinder
- Selflocking ratchet function
- In durable plastic storage case

| 150.1150 | 7 pcs Piston ring tension band set |

CYLINDER LINER TOOLS

Lever for cylinder head for PSA

- For removing cylinder heads on engines with wet cylinder liners
- Prevents the lift-off of the cylinder liners from their seat
- Supplied in pairs
- Special steel

| 150.3594 | 2 pcs 12.0 mm 280.0 |

Securing straps for PSA

- Prevents the lift-off of the cylinder liners from their seat
- Continuous adjustment of operating tool
- Spring steel strip

| 150.1141 | 45 - 90 |
| 150.1142 | 57 - 125 |
| 150.1143 | 90 - 175 |
| 150.1144 | 90 - 175 |

Application range:

- Citroën, Peugeot and Renault engines
- Can be used with wet cylinder liners
- Supplied in pairs
- Special steel
CYLINDER HON DEVICES

Cylinder honing machine

- For honing / deburring of cylinders, bearings, bores, pipes, etc.
- Interchangeable honing
- Flexible drive shaft for air or electric drills
- Special steel

Application range: Automotive brake and clutch cylinders, engine cylinders of motor cycles, lawn mowers, outboard motors, hydraulic cylinders, marine and industrial engines, etc.

TEST AND MEASURING TOOLS

Precision straightedge

- In accordance with DIN 874/00
- Hand warmth protection
- Test area precise and finely engineered
- Flatness tolerance for highest accuracy
- For controlled and test working in the light gap procedure
- Hardened
- Stainless steel

Application range:
- Engine: Valves, bearings, piston pins
- Alternator: Bearing sounds
- Differential: Barrel sounds
- Bodywork: Creak and squeak sounds

Electronic professional stethoscope

- For the professional defect diagnosis
- Serves the acoustic test and judgment of a component under load
- Delivers fast, absolutely clear and unambiguous test results over sounds
- Contains 6 independent sensors that can mounted for example on the vehicle floor or in the engine compartment for ease
- Simple coordination of the defect source through colour coded cable and colour table on the box
- In durable plastic storage case

Application range:
- Engine: Valves, bearings, piston pins
- Alternator: Bearing sounds
- Differential: Barrel sounds
- Bodywork: Creak and squeak sounds

<table>
<thead>
<tr>
<th>Ø mm</th>
<th>H mm</th>
<th>B mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.1180</td>
<td>50.0</td>
<td>25.0</td>
</tr>
<tr>
<td>150.1181</td>
<td>75.0</td>
<td>25.0</td>
</tr>
<tr>
<td>150.1182</td>
<td>100.0</td>
<td>25.0</td>
</tr>
<tr>
<td>150.1183</td>
<td>125.0</td>
<td>25.0</td>
</tr>
<tr>
<td>150.1184</td>
<td>150.0</td>
<td>25.0</td>
</tr>
<tr>
<td>150.1185</td>
<td>200.0</td>
<td>25.0</td>
</tr>
<tr>
<td>150.1186</td>
<td>250.0</td>
<td>25.0</td>
</tr>
<tr>
<td>150.1187</td>
<td>300.0</td>
<td>25.0</td>
</tr>
<tr>
<td>150.1188</td>
<td>350.0</td>
<td>25.0</td>
</tr>
<tr>
<td>150.1189</td>
<td>400.0</td>
<td>25.0</td>
</tr>
<tr>
<td>150.1190</td>
<td>450.0</td>
<td>25.0</td>
</tr>
<tr>
<td>150.1191</td>
<td>500.0</td>
<td>25.0</td>
</tr>
<tr>
<td>150.1192</td>
<td>550.0</td>
<td>25.0</td>
</tr>
<tr>
<td>150.1193</td>
<td>600.0</td>
<td>25.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ø mm</th>
<th>L mm</th>
<th>H mm</th>
<th>B mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>152.1090</td>
<td>600.0</td>
<td>30.0</td>
<td>16.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ø mm</th>
<th>L mm</th>
<th>H mm</th>
<th>B mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>516.1195</td>
<td>1/2</td>
<td>1/2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ø mm</th>
<th>H mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.1695</td>
<td>300.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ø mm</th>
<th>H mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>516.1196</td>
<td>1/2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ø mm</th>
<th>L mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>300.1095</td>
<td>18</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ø mm</th>
<th>L mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>300.1096</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ø mm</th>
<th>L mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>300.1097</td>
<td>3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ø mm</th>
<th>L mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>300.1098</td>
<td>3</td>
</tr>
</tbody>
</table>

Replacement stones

- Replacement honing stones for 150.1195
- For honing / deburring of cylinders, bearings, bores, pipes, etc.
- Special steel

Application range: car brake and clutch cylinders, engine cylinders of motobikes, lawn mowers, outboard motors, hydraulic cylinders, ship engines and industrial motors, etc.
Synchronous carburator test device with 4 synchronous clocks

- For synchronous measurement on 2 - 4 carburettors with vacuum connection to the carburator
- After adjustment and inspection of the valve clearances the carburators should be synchronised
- Universal usage
- Unit for vacuum measurement: 0-70 cmHg / inHg 30 inHg
- Generally necessary after a major inspection
- Optimum results for mechanical function-free engines
- Must be used with running engine
- Pressure gauges are fitted on the plate
- In durable plastic storage case

Application range: Multi-cylinder engines require synchronous opening of the throttle valve. Through tolerances in the intake system, adjustment of the throttle valve stop is not sufficient. Dynamic adjustment is required here. Through synchronisation, the same vacuum is reached before the carburettors.

A dial is required for each carburator for synchronisation. Adjustment of the individual compressors is done via the adjustment mechanisms.

Oil pressure testing equipment

- Quick safe and problem free testing of the oil pressure on the engine
- Incl. 10 adaptors
- Colour coding: Black= metric / silver = imperial
- Adaption with oil pressure sensor thread
- Manometer Ø 80 mm with rubber safety cover
- Flexible tube (L=1.3 m) with anti-kink device, decompression valve and quick coupling
- Robust execution
- In durable plastic storage case

CO² Cylinder head leak testing set

- For the locating of leaks on combustion engines
- Rational and dependable finding of cracks and leakages
- Potential CO² content in the coolant solution is detected
- Ideally suited for the cylinder head, cylinder head seals and engine block
- Leakages are visible through discoloration of the test fluid
- For all current vehicles with water cooled engines (Gas, Diesel and Petrol)
- Automatic regenerating reaction fluid for multiple use
- In durable plastic storage case

Cylinder leak detector tester set

- For diagnosis of compression pressure loss
- Suitable for analysing inlet and outlet valves, piston rings or cylinder liner, cylinder head or head seal
- Better alternative for compression measurement
- Universal usage
- Integrated pressure reducer
- Necessary working pressure: 1.0 bar
- For use on engines at operating temperature
- In durable plastic storage case

Test results:
- Outlet valves not tight: Air noises in exhaust, manifold and cylinder head on the outlet side
- Inlet valves not tight: Air noises in intake, on cylinder head on the inlet side
- Piston rings, piston, cylinder bore damaged: Air noises on the crankcase breather or on the dipstick
- Cylinder head seal defective: Air noises in the adjacent cylinder, spark plug bore
- Cylinder head seal defective or tear in cylinder head
- Air noises or bubble formation in the cooling system or reservoir
## Compression pressure test instrument for diesel engines

- Complete test tool set with or without direct injection
- Compact adaptor pieces with quick couplings
- Includes extensive adaptor assortment
- Very flexible tube for hard to access places
- In durable plastic storage case

### Technical data:

- Manometer: 0.5-70.0 bar
- Tube length: 355.0
- Manometer gauge: bar, psi or KPA

### Master fuel injection system pressure test set for petrol engines

- Ideal for quick and reliable pressure testing on all common injection systems of petrol engines
- For simple testing of fuel pumps, system pressure sensors and tightness
- Suitable for mechanical and electrical petrol injection systems
- For almost all common, European, Asian and American vehicle types
- Includes shock-proof, large precision manometer Ø 100.00 mm, 0 - 10 bar with rubber cover
- Includes shock-proof, small precision manometer Ø 75.00 mm, 0 - 1 bar especially for the central injection with rubber cover
- Compact quick couplings to all adaptors and hoses
- Replacement washers (20 pieces) are available in the set
- In durable plastic storage case

### Application range / injection systems:

- Bosch K-Jetronic,
- GDP/EPI, ECI, MPi, PGM-Fi, DIGIFANT
- OPF, SPI, EFI, Simtec EFI, 1-Tec, Magnet Motorex G5/G6 Mono, Weber-Marelli 1AW, CFI, Volkswagen 1AW, FI, Electronic etc.

### Digital compression pressure test set for petrol engines

- For dry and wet compression tests
- Compact adaptor pieces with quick couplings
- Includes extensive adaptor assortment and analogue manometer (psi)
- Digital manometer with reading storage up to 12 cylinders
- By means of brass coupling the repair is possible on valve seals without dismantling of the cylinder head
- Very flexible tube for hard to access places
- In durable plastic storage case

### Technical data:

- Manometer with tube
- Oil seal plug adapter M10x1.25
- Oil seal plug adapter M12x1.25
- Oil seal plug adapter M14x1.25
- Compression pressure test adaptor 1/4", 1/2" or 3/8" internal and external connection
- Adapter piece M12x1.5
- Compression pressure test adaptor 145
- Replacement washers and washers
- Angle connecting piece
- Clamp arch

### Digital compression pressure test set for petrol engines

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.1650-1</td>
<td>Manometer digitale</td>
<td>480</td>
</tr>
<tr>
<td>150.1650-10</td>
<td>Replacement seals and valve assembly</td>
<td>18</td>
</tr>
<tr>
<td>150.1650-15</td>
<td>Manometer analogue</td>
<td>120</td>
</tr>
<tr>
<td>150.1650-16</td>
<td>Adapter tube M18 x 1.5</td>
<td>160</td>
</tr>
<tr>
<td>150.1650-17</td>
<td>Adapter tube M14 x 1.25 long</td>
<td>80</td>
</tr>
<tr>
<td>150.1650-18</td>
<td>Adapter tube M14 x 1.25 short</td>
<td>110</td>
</tr>
<tr>
<td>150.1650-19</td>
<td>Adapter bush L64 mm, M18 x 1.5</td>
<td>155</td>
</tr>
<tr>
<td>150.1650-20</td>
<td>Adapter bush L42 mm, M12 x 1.25</td>
<td>40</td>
</tr>
<tr>
<td>150.1650-21</td>
<td>Adapter bush L42 mm, M10 x 1.0</td>
<td>40</td>
</tr>
<tr>
<td>150.1650-22</td>
<td>Coupling 1/4&quot; ID</td>
<td>90</td>
</tr>
</tbody>
</table>

### Application range / injection systems:

- Bosch K-Jetronic,
- GDP/EPI, ECI, MPi, PGM-Fi, DIGIFANT
- OPF, SPI, EFI, Simtec EFI, 1-Tec, Magnet Motorex G5/G6 Mono, Weber-Marelli 1AW, CFI, Volkswagen 1AW, FI, Electronic etc.

### Digital compression pressure test set for petrol engines

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.1650-13</td>
<td>Compression pressure test instrument for petrol engines</td>
<td>228</td>
</tr>
</tbody>
</table>

### Digital compression pressure test set for petrol engines

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.1650</td>
<td>Digital compression pressure test set for petrol engines</td>
<td>0.26</td>
</tr>
</tbody>
</table>

### Application range / injection systems:

- Bosch K-Jetronic,
- GDP/EPI, ECI, MPi, PGM-Fi, DIGIFANT
- OPF, SPI, EFI, Simtec EFI, 1-Tec, Magnet Motorex G5/G6 Mono, Weber-Marelli 1AW, CFI, Volkswagen 1AW, FI, Electronic etc.

### Digital compression pressure test set for petrol engines

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.2341</td>
<td>Adapter piece M6x1.0 external thread and 16 mm hexagon with sealant ring</td>
<td>37</td>
</tr>
<tr>
<td>150.2345</td>
<td>Adapter piece M6x1.0 external thread and 1/4&quot; hose connection with sealant ring</td>
<td>70</td>
</tr>
<tr>
<td>150.2340</td>
<td>Dual adapter piece M16x1.5 internal and external thread and 3/8&quot; hose connection</td>
<td>60</td>
</tr>
<tr>
<td>150.2341</td>
<td>Dual adapter piece M14x1.5 internal and external thread and 3/8&quot; hose connection</td>
<td>65</td>
</tr>
<tr>
<td>150.2346</td>
<td>Adapter piece M12x1.5 external thread and 1/4&quot; hose connection with sealant ring</td>
<td>39</td>
</tr>
<tr>
<td>150.2349</td>
<td>Adapter piece M12x1.5 internal thread and 1/4&quot; hose connection</td>
<td>21</td>
</tr>
<tr>
<td>150.2351</td>
<td>Adapter piece M6x1.0 external thread and 1/4&quot; hose connection</td>
<td>22</td>
</tr>
<tr>
<td>150.2361</td>
<td>Manometer connection hose with 1/4&quot; hose connection</td>
<td>19</td>
</tr>
<tr>
<td>150.2362</td>
<td>Manometer connection hose with 1/4&quot; hose connection and valve for Bosch CSI and GM TBI systems</td>
<td>110</td>
</tr>
<tr>
<td>150.2363</td>
<td>Manometer connection hose with 1/4&quot; hose connection for Ford EFI systems</td>
<td>324</td>
</tr>
<tr>
<td>150.2364</td>
<td>Manometer connection hose with 1/4&quot; hose connection for universal use with 3/8&quot; and 5/16&quot; high-pressure hose connections</td>
<td>160</td>
</tr>
<tr>
<td>150.2365</td>
<td>Adapter piece for small Schrader valve 5/16&quot;x1/8&quot; UNF internal thread and 1/4&quot; hose connection with sealant ring</td>
<td>95</td>
</tr>
<tr>
<td>150.2366</td>
<td>Manometer connection hose with 1/4&quot; hose connection including pressure release valve, transparent dome</td>
<td>110</td>
</tr>
<tr>
<td>150.2367</td>
<td>Adapter piece for standard Schrader valve</td>
<td>116</td>
</tr>
<tr>
<td>150.2368</td>
<td>Manometer 5/8&quot; quick coupling connection hose with 1/4&quot; hose connection for Ford EFI systems</td>
<td>40</td>
</tr>
<tr>
<td>150.2369</td>
<td>Manometer 5/8&quot; quick coupling connection hose with 1/4&quot; hose connection for Ford EFI systems</td>
<td>55</td>
</tr>
<tr>
<td>150.2371</td>
<td>Adapter piece M12x1.5 internal thread and 1/4&quot; hose connection with sealant ring</td>
<td>13</td>
</tr>
<tr>
<td>150.2372</td>
<td>Adapter piece M12x1.5 internal thread and 1/4&quot; hose connection with sealant ring</td>
<td>24</td>
</tr>
<tr>
<td>150.2373</td>
<td>Adapter piece M12x1.5 external thread and 1/4&quot; hose connection with sealant ring</td>
<td>22</td>
</tr>
<tr>
<td>150.2374</td>
<td>Adapter piece M14x1.5 external thread and 1/4&quot; hose connection with sealant ring</td>
<td>63</td>
</tr>
<tr>
<td>150.2375</td>
<td>Adapter piece M14x1.5 external thread and 1/4&quot; hose connection with sealant ring</td>
<td>64</td>
</tr>
<tr>
<td>150.2376</td>
<td>Adapter piece M12x1.5 external thread and 1/4&quot; hose connection with sealant ring</td>
<td>51</td>
</tr>
<tr>
<td>150.2377</td>
<td>Adapter piece M12x1.5 external thread and 1/4&quot; hose connection with sealant ring</td>
<td>28</td>
</tr>
<tr>
<td>150.2378</td>
<td>Adapter piece M12x1.5 external thread and 1/4&quot; hose connection with sealant ring</td>
<td>38</td>
</tr>
<tr>
<td>150.2379</td>
<td>Adapter piece M12x1.5 external thread and 1/4&quot; hose connection with sealant ring</td>
<td>33</td>
</tr>
<tr>
<td>150.2380</td>
<td>Adapter piece M12x1.5 external thread and 1/4&quot; hose connection with sealant ring</td>
<td>29</td>
</tr>
<tr>
<td>150.2381</td>
<td>Replacement sealant ring pack 20 Pieces</td>
<td>10</td>
</tr>
</tbody>
</table>

### Digital compression pressure test set for petrol engines

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.2325</td>
<td>42 pc Master fuel injection system pressure test set for petrol engines</td>
<td>4.00</td>
</tr>
</tbody>
</table>

### Digital compression pressure test set for petrol engines

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.2325-10</td>
<td>Digital compression pressure test set for petrol engines</td>
<td>0.26</td>
</tr>
</tbody>
</table>

### Digital compression pressure test set for petrol engines

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>150.2383</td>
<td>1 A Manometer Ø 100.0 mm, 0 - 10 bar with 1/4&quot; quick coupling</td>
<td>380</td>
</tr>
<tr>
<td>150.2371</td>
<td>1 B Manometer Ø 50.0 mm, 0 - 1 bar with 1/4&quot; quick coupling</td>
<td>252</td>
</tr>
<tr>
<td>150.2338</td>
<td>2 GA Adapter piece M12x1.5 internal thread and 1/4&quot; hose connection</td>
<td>41</td>
</tr>
<tr>
<td>150.2339</td>
<td>2 GT Adapter piece M10x1.5 internal thread and 1/4&quot; hose connection</td>
<td>39</td>
</tr>
<tr>
<td>150.2340</td>
<td>1 GG Double-sided adapter piece M14x1.5 internal thread and 1/4&quot; hose connection</td>
<td>24</td>
</tr>
<tr>
<td>150.2341</td>
<td>2 GV Adapter piece M12x1.5 external thread and 1/4&quot; hose connection with sealant ring</td>
<td>26</td>
</tr>
<tr>
<td>150.2342</td>
<td>2 GL Adapter piece M12x1.5 external thread and 1/4&quot; hose connection</td>
<td>45</td>
</tr>
<tr>
<td>150.2343</td>
<td>2 GB Adapter piece M12x1.5 external thread and 1/4&quot; hose connection with sealant ring</td>
<td>39</td>
</tr>
</tbody>
</table>
THE BIGGEST SELECTION OF RATCHET-WRENCHES IN THE WORLD!

PERFECT TECHNOLOGY – THE AS YET UNEQUALLED “INVENTOR OF THE RATCHET WRENCH” WITH OVER 10,000,000 SATISFIED CUSTOMERS

Innovative ratchet technology from 5.5 mm to 41.00 mm!