

BD Drill

REVERSE CIRCULATION HAMMERS AND BITS

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Black Diamond Drilling Services Australia Pty Ltd



Reverse Circulation Hammers & Bits

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Selecting the Right Hammer

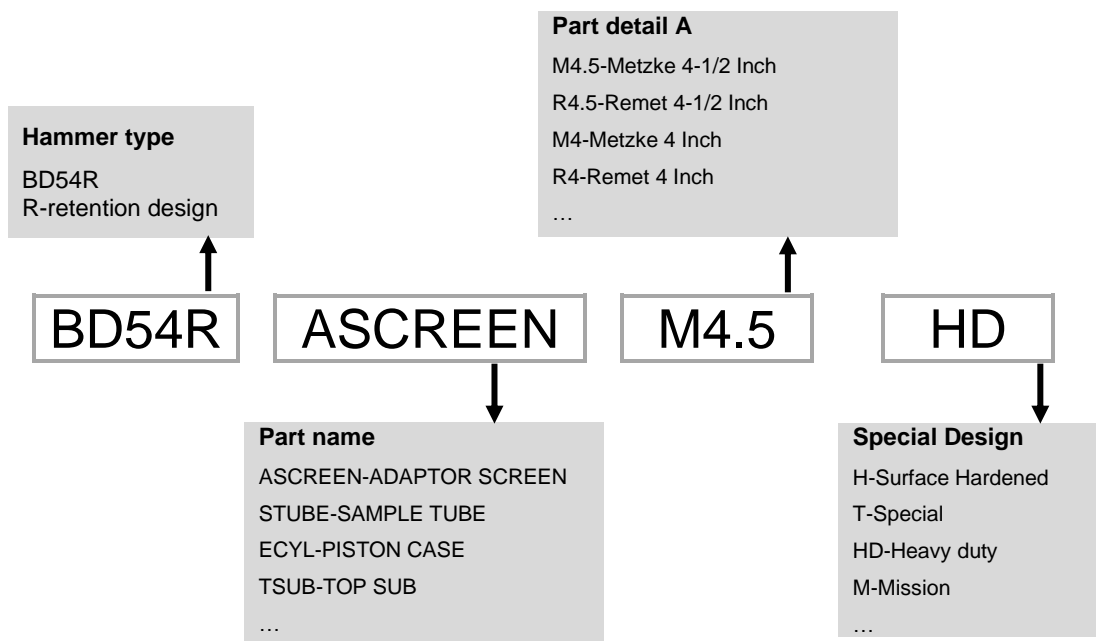
Black Diamond's reverse circulation hammers are specifically designed for all kind of exploration drilling (deep hole and pit grade control applications).

Whether you are exploring potential sites or working an existing mine, the BDDRILL RC hammer will assure high performance, exceptional reliability and dependable support.

Product codes

Product codes are a valuable tool to describe and identify the product. In the code structure we have tried to describe the product features with Alpha-numerical system that is not always 100% logical, but with the attached key you will be able to find the product you are looking for or a suitable alternative product.

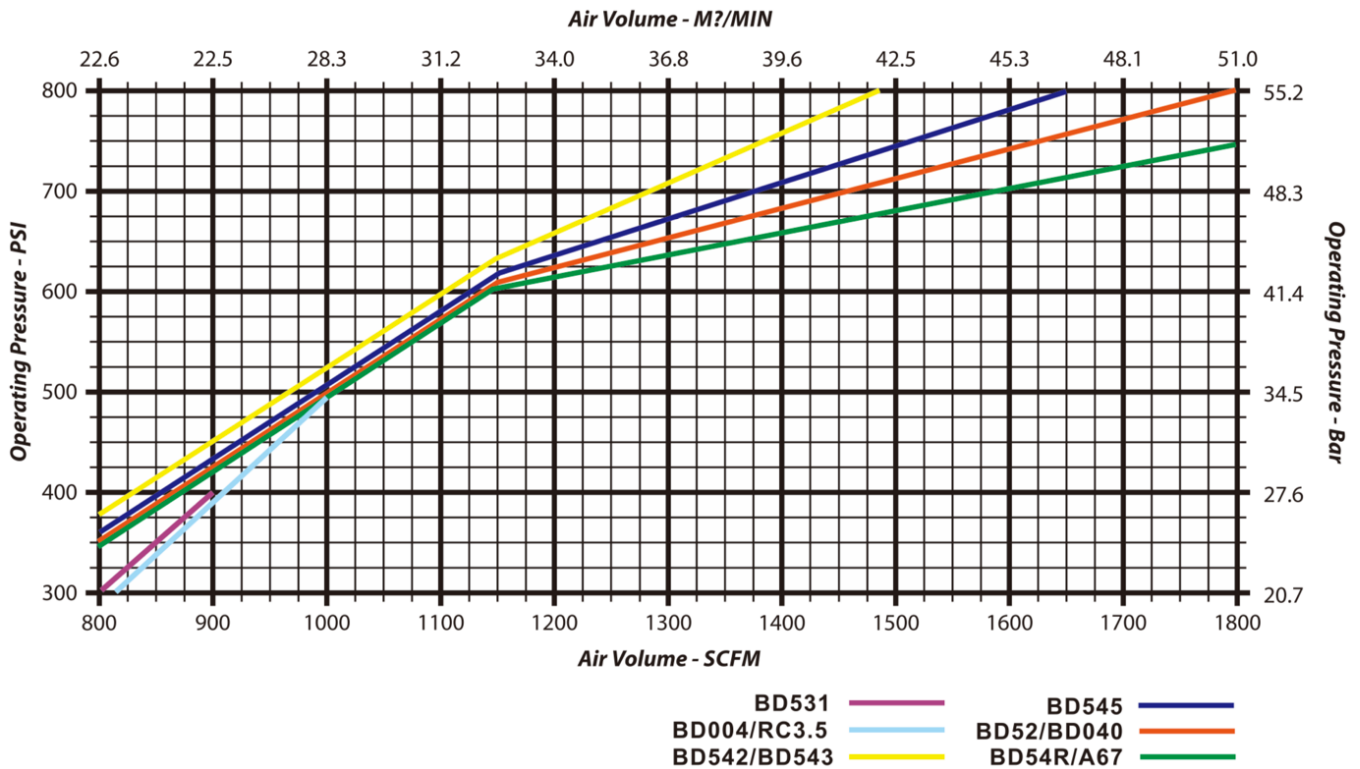
Example A: BDR54R-ASCREEEN-M4.5-HD



SPECIFICATIONS

| Hammer | BD351 | RC3.5 | BD004 | | | BD542 | | | BD543 | | BD545 | | BD040 | | | | BD52 | | BD54 | | A67 |
|--|------------------------------|-----------------------------|-----------------------------|----------------|----------------|-----------------------------|----------------|----------------|-----------------------------|----------------|-----------------------------|-----------------|----------------|----------------|-----------------------------|----------------|-----------------------------|----------------|-----------------------------|-----------------|----------------|
| Top sub thread | R3" | R3" | R3.5" | R4" | M4" | R3.5" | R4" | M4" | R4" | M4" | M4.5 | R4.5 | M4" | R4" | M4.5" | R4.5" | m4.5" | R4.5" | M4.5" | R4.5 | M4.5" |
| Package case size | (L)1100 (W)1110 (H)120 | (L)1230 (W)120 (H)150 | (L)1300 (W)150 (H)180 | | | (L)1230 (W)140 (H)170 | | | (L)1260 (W)150 (H)180 | | (L)1300 (W)150 (H)180 | | | | (L)1300 (W)160 (H)190 | | (L)1300 (W)160 (H)190 | | (L)1330 (W)160 (H)190 | | |
| Recommended bit size, mm | 86-100 | 100-110 | 111-125 | | | 113-133 | | | 123-140 | | 127-140 | | | | 133-143 | | 136-146 | | 136-146 | | |
| Bit shank | RE531 | RC3.5 | RE004 | | | RE542 | | | RE543 | | RE545 | | RE040 | | | | PR52 | | PR54 | | BD67 |
| External diameter, mm | 81 | 94 | 107 | | | 109.5 | | | 116 | | 117.5 | | 121 | | | | 120.5 | | 130 | | 132 |
| Length excl. thread, mm (Less bit) | 1069 | 1184 | 1252 | | | 1191 | | | 1261 | | 1210 | | | | 1227 | | 1294 | | 1200 | | |
| Hammer weight, Kg (Less bit) | 29 | 44 | 52 | | | 57 | | | 63 | | 65 | | 53.8 | 47.5 | 69.8 | 69.4 | 68.5 | | 84.5 | | 81.8 |
| Piston weight, Kg | 4.8 | 8.3 | 10.5 | | | 11.6 | | | 11.6 | | 13.5 | | 13.6 | | | | 14.3 | | 16.8 | | 17 |
| Wrench flat, mm | No wrench flat | (L)82 (W)40 | (L)90 (W)40 | (L)90 (W)50 | (L)90 (W)50 | (L)95 (W)45 | (L)95 (W)45 | (L)95 (W)50 | (L)95 (W)45 | (L)95 (W)50 | (L)102 (W)50 | (L)102 (W)50 | (L)94 (W)50 | (L)94 (W)50 | (L)94 (W)50 | (L)94 (W)50 | (L)94 (W)50 | (L)94 (W)50 | (L)100 (W)50 | (L)100 (W)50 | (L)95 (W)51 |
| Drilling conditions and project specifications may require a larger air package to be used | | | | | | | | | | | | | | | | | | | | | |

AIR CONSUMPTION/OPERATING PRESSURE



Reverse Circulation Service Guide

When breaking a hammer down, avoid placing breakout tools in the mid-section of the cylinder (barrel). Recommended breakout points are 130mm from each end of cylinder. Wrap around chain breakouts are recommended (see diagram). When holding bits for breakout, use a secure plate or opt to grab the bit head, but never on the gauge row buttons.

This information is included with every Hammer purchase.



DO NOT APPLY HEAT OR DIRECT IMPACT TO HAMMER WHEN CRACKING JOINTS AS THIS TYPICALLY DAMAGES THE HAMMER.

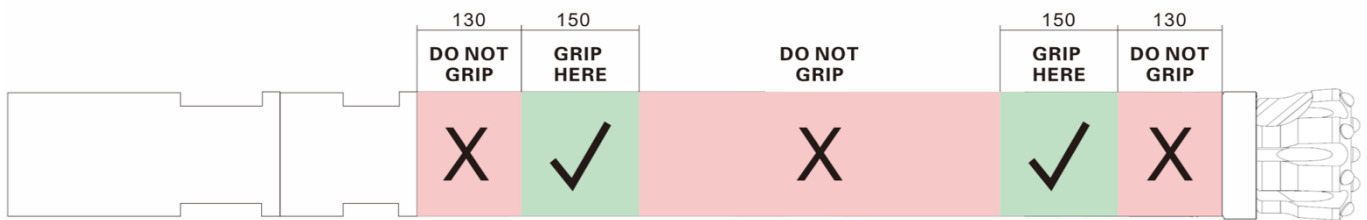


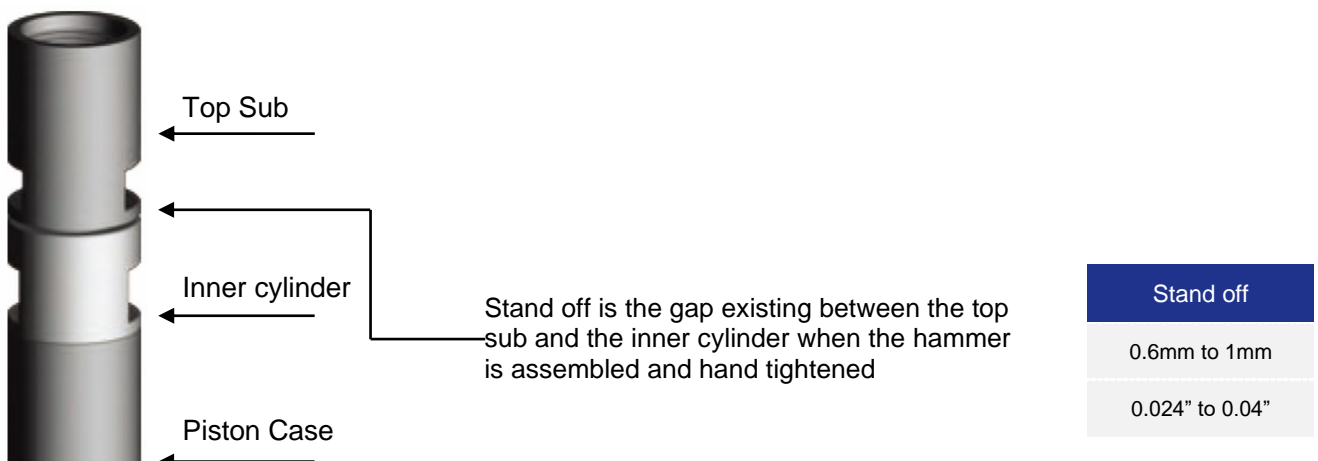
Figure 1: Gripping Locations for BD DRILL Reverse Circulation Hammer

Lubrication

Correct lubrication is critical to the performance and longevity of the hammer.

Recommended:

- Oil Grade: SAE 320 Hammer Oil for most operating conditions
- Rate: 2 litre/hour minimum via automatic feeder
- Double the rate when injecting fluids such as water, foam & polymers
- Clean and relubricate the hammer each day after use to prevent corrosion and premature failure



BD531 R.C. HAMMER

| 3" R.C. Hammers | Item Description | Weight Kg | Part Number |
|-----------------|------------------|-----------|-------------|
|-----------------|------------------|-----------|-------------|



| | | | |
|----|---------------------------------------|------|--------------------|
| 1 | Top Sub-Remet 3" | 3.76 | BD531-TSUB-R3 |
| 2 | O Ring (Adaptor Tube Remet 3") x 2 | 0.01 | BD531-SK-TSUB-R3 |
| 3 | Adaptor Tube Remet 3" | 1.85 | BD531-ASCREENR3 |
| 4 | O Ring (Sample Tube) x 4 | 0.01 | BD531-SK-STUBE |
| 5 | Sample Tube | 1.97 | BD531-STUBE |
| 6 | Circlip | 0.04 | BD531-CIRCLIP |
| 7 | O Ring (Distributor 1) x 2 | 0.01 | BD531-SK-DIST-1 |
| 8 | O Ring (Distributor 2) x 1 | 0.01 | BD531-SK-DIST-2 |
| 9 | Distributor | 0.37 | BD531-DIST |
| 10 | Check Valve/Plunger | 0.08 | BD531-CVALVE |
| 11 | O Ring (Check Valve) x 1 | 0.01 | BD531-SK-CVALVE |
| 12 | Spring | 0.1 | BD531-SPRING |
| 13 | Mount Sample Tube | 0.49 | BD531-STUBE-MOUNT |
| 14 | Inner Cylinder/Top Barrel | 3.4 | BD531-ICYL |
| 15 | O Ring (Inner Cylinder) x 1 | 0.01 | BD531-SK-ICYL |
| 16 | Piston | 4.69 | BD531-PISTON |
| 17 | External Cylinder/Barrel/Piston Case | 9.2 | BD531-ECYL |
| 18 | Seal Cover/ O Ring (Bearing Bush) x 2 | 0.02 | BD531-SCOVER |
| 19 | Bearing Bush | 1.03 | BD531-BUSH |
| 20 | Bit Stop Ring | 0.08 | BD531-SRING |
| 21 | O Ring (Bit Stop Ring) x 1 | 0.01 | BD531-SK-SRING |
| 22 | Shroud | 0.45 | BD531-SHROUD-85/83 |
| 23 | Drive Sub | 1.6 | BD531-DSUB |
| 24 | Drill Bit | 4.2 | BD531-85DC-TV |
| 25 | Seal Kit (Item 2+4+7+8+11+18+21) | 0.2 | BD531-SK |

Technical Data

| Length(Less bit) | Weight(Less bit) | External Diameter | Bit Shank | Hole Range | Connection Thread |
|------------------|--------------------------|----------------------------|-----------------|------------|-------------------|
| 1069mm | 29.0kg | Φ81mm | BD531 | Φ84- Φ100 | 3 " Remet |
| Box Size | Impact rate At 2.4Mpa | Recommended rotation speed | Air Consumption | | |
| | | | 200-500(PSI) | | |
| 1100x110x120mm | 30Hz | 25-40r/min | 300-1200(CFM) | | |

RC3.5 R.C. HAMMER

| 3.5" R.C. Hammers | Item Description | Weight Kg | Part Number |
|-------------------|--|-----------|----------------------|
| | 1 Top Sub-Remet 3" | 6.13 | RC3.5-TSUB-R3 |
| | 2 Adaptor Tube Remet 3" | 1.49 | RC3.5-ASCREEN-R3 |
| | 3 O Ring (Adaptor Tube Remet 3") x 2 | 0.01 | RC3.5-SK-ASCREEN-R3 |
| | 4 Sample Tube | 3.31 | RC3.5-STUBE |
| | 5 O Ring (Sample Tube) x 6 | 0.01 | RC3.5-SK-STUBE |
| | 6 Circlip | 0.01 | RC3.5-CIRCLIP |
| | 7 Distributor | 0.3 | RC3.5-DIST |
| | 8 Top Barrel (Sub) | 5.38 | RC3.5-TBARREL |
| | 9 Check Valve/Plunger | 0.28 | RC3.5-CVALVE |
| | 10 Y Ring (Check Valve) | 0.01 | RC3.5-SK-CVALVE |
| | 11 Spring | 0.05 | RC3.5-SPRING |
| | 12 Compression Buffer/Make up Ring Steel | 0.28 | RC3.5-MUR-STEEL |
| | 13 Mount Sample Tube | 0.87 | RC3.5-STUBE-MOUNT |
| | 14 Inner Cylinder | 1.26 | RC3.5-ICYL |
| | 15 Piston | 8.33 | RC3.5-PISTON |
| | 16 External Cylinder/Barrel/Piston Case | 10.8 | RC3.5-ECYL |
| | 17 Bearing Bush (Cold Pressed) | 1.47 | RC3.5-BUSH |
| | 18 O Ring (Bit Stop Ring) x 1 | 0.01 | RC3.5-SK-SRING |
| | 19 Bit Stop Ring | 0.17 | RC3.5-SRING |
| | 20 Shroud | 1.1 | RC3.5-SHROUD-104/102 |
| | 21 Drive Sub | 2.9 | RC3.5-DSUB |
| | 22 Drill Bit | 8.0 | RC3.5-104DC-TV |
| | 23 Seal Kit (3+5+10+18) | 0.2 | RC3.5-SK |

Technical Data

| Length(Less bit) | Weight(Less bit) | External Diameter | Bit Shank | Hole Range | Connection Thread |
|------------------|-----------------------|----------------------------|-----------------|------------|-------------------|
| 1184mm | 44.0kg | Φ94mm | RC3.5Y | Φ100- Φ110 | 3 " Remet |
| Box Size | Impact rate At 2.4Mpa | Recommended rotation speed | Air Consumption | | |
| 1230x120x150mm | 30Hz | 25-40r/min | 200-500(PSI) | | |
| | | | 300-1200(CFM) | | |

BD004 R.C. HAMMER

| 4" R.C. Hammers | Item Description | Weight Kg | Part Number |
|-----------------|------------------|-----------|-------------|
|-----------------|------------------|-----------|-------------|



| A Top sub Assy Remet 3.5" | | | |
|---------------------------|-------------------------------------|-------|--|
| 1 | Circlip | 0.02 | BD004-CIRCLIP |
| 2 | O Ring (Adaptor Tube Remet 3.5) x 4 | 0.02 | BD004-SK-ASCREEN3.5 |
| 3 | Adaptor Tube Remet 3.5" | 1.06 | BD004-ASCREEN-R3.5 |
| 4 | Top Sub-Remet 3.5" | 7.79 | BD004-TSUB-R3.5 |
| B Top sub Assy Remet 4" | | | |
| 1 | Circlip | 0.02 | BD004-CIRCLIP |
| 2 | O Ring (Adaptor Tube Remet 4") x 4 | 0.02 | BD004-SK-ASCREENR4 |
| 3 | Adaptor Tube Remet 4" | 1.06 | BD004-ASCREEN-R4 |
| 4 | Top Sub-Remet 4" | 7.79 | BD004-TSUB-R4 |
| C Top sub Assy Metzke 4" | | | |
| 1 | Circlip | 0.02 | BD004-CIRCLIP |
| 2 | O Ring (Adaptor Metzke 4") x 2 | 0.02 | BD004-SK-ASCREENM4 |
| 3 | Adaptor Tube Metzke 4" | 1.06 | BD004-ASCREEN-M4/54 BD004-ASCREEN-M4/57 |
| 4 | Top Sub-Metzke 4" | 7.79 | BD004-TSUB-M4 |
| Parts List | | | |
| 5 | Check Valve/Plunger | 0.51 | BD004-CVALVE |
| 6 | Y Ring (Check Valve) | 0.01 | BD004-SK-CVALVE |
| 7 | Spring | 0.06 | BD004-SPRING |
| 8 | Sample Tube Upper | 0.74 | BD004-STUBE-U |
| 9 | Make Up Ring, Steel | 0.17 | BD004-MUR-STEEL |
| 10 | O Ring (Sample Tube) x 2 | 0.02 | BD004-SK-STUBE1 |
| 11 | O Ring (Sample Tube) x 1 | 0.02 | BD004-SK-STUBE2 |
| 12 | Sample Tube Lower | 2.38 | BD004-STUBE |
| 13 | Distributor | 1.75 | BD004-DIST |
| 14 | O Ring (Distributor) | 0.02 | BD004-SK-DIST |
| 15 | Inner Cylinder | 2.45 | BD004-ICYL |
| 16 | Piston | 10.45 | BD004-PISTON |
| 17 | Piston Case with Bush (cold press) | 17.95 | BD004-ECYL |
| 18 | Bit Stop Ring | 0.29 | BD004-SRING |
| 19 | O Ring (Bit Stop Ring) | 0.02 | BD004-SK-SRING |
| 20 | Shroud | 1.05 | BD004-SHROUD-115/113 |
| 21 | Drive Sub | 3.13 | BD004-DSUB |
| 22 | Drill Bit | 11.7 | BD004-115DC-TV |

Technical Data

| Length(Less bit) | Weight(Less bit) | External Diameter | Bit Shank | Hole Range | Connection Thread |
|------------------|--------------------------|----------------------------|-----------------|------------|------------------------------|
| 1252mm | 52.0kg | Φ107mm | BD004 | Φ111- Φ127 | 3.5" – 4" Remet 4" Metzke |
| Box Size | Impact rate At 2.4Mpa | Recommended rotation speed | Air Consumption | | |
| | | | 200-500(PSI) | | |
| 1300x150x180mm | 30Hz | 25-40r/min | 300-1200(CFM) | | |

BD542 R.C. HAMMER

| 4.5" R.C. Hammers | Item Description | Weight Kg | Part Number | |
|---|--|--------------------------|-------------------------|--|
| | A Top sub Assy Remet 3.5" | | | |
| | 1 Circlip A | 0.04 | BD543/542-CIRCLIP-R3.5 | |
| | 2 O Ring (Adaptor Tube Remet 3.5") x 4 | 0.02 | BD543/542-SK-ASCREEN3.5 | |
| | 3 Adaptor Tube Remet 3.5" | 2.55 | BD543/542-ASCREEN-R3.5 | |
| | 4 Top Sub-Remet 3.5" | 8.52 | BD543/542-TSUB-R3.5 | |
| | B Top sub Assy Remet 4" | | | |
| | 1 Circlip A | 0.02 | BD543/542-CIRCLIP-4 | |
| | 2 O Ring (Adaptor Tube Remet 4") x 4 | 0.02 | BD543/542-SK-ASCREENR4 | |
| | 3 Adaptor Tube Remet 4" | 2.55 | BD543/542-ASCREEN-R4 | |
| | 4 Top Sub-Remet 4" | 8.52 | BD543/542-TSUB-R4 | |
| | C Top sub Assy Metzke 4" | | | |
| | 1 Circlip A | 0.02 | BD543/542-CIRCLIP-4 | |
| | 2 O Ring (Adaptor Metzke 4") x 2 | 0.02 | BD543/542-SK-ASCREENM4 | |
| | 3 Adaptor Tube Metzke 4" | 2.55 | BD543/542-ASCREEN-M4 | |
| | 4 Top Sub-Metzke 4" | 8.52 | BD543/542-TSUB-M4 | |
| | Parts List | | | |
| | 5 Sample Tube | 3.5 | BD543/542-STUBE | |
| | 6 O Ring (Sample Tube) x 5 | 0.02 | BD543/542-SK-STUBE | |
| | 7 Circlip B | 0.02 | BD543/542-CIRCLIP-4 | |
| | 8 Air Screen | 0.04 | BD543/542-AIRSCREEN | |
| | 9 Distributor | 0.56 | BD543/542-DIST | |
| | 10 O Ring (Distributor) | 0.02 | BD543/542-SK-DIST | |
| | 11 Check Valve/Plunger | 0.5 | BD543/542-CVALVE | |
| | 12 Y Ring (Check Valve) | 0.02 | BD543/542-SK-CVALVE | |
| | 13 Spring | 0.08 | BD543/542-SPRING | |
| | 14 Mount Sample Tube | 0.86 | BD543/542-STUBE-M | |
| | 15 Y Ring (Mount Sample Tube) | 0.02 | BD543/542-SK-STUBEM | |
| | 16 Inner Cylinder/Top Barrel | 7.26 | BD542-ICYL | |
| 17 O Ring (Inner Cylinder) | 0.02 | BD543/542-SK-ICYL | | |
| 18 Piston | 11.64 | BD543/542-PISTON | | |
| 19 External Cylinder/Barrel/Piston Case | 19.17 | BD542-ECYL | | |
| 20 Bearing Bush | 0.05 | BD543/542-PRING | | |
| 21 Bush Retaining Ring | 2.35 | BD543/542-BUSH | | |
| 22 O Ring (Bearing Bush) x 2 | 0.02 | BD543/542-SK-BUSH | | |
| 23 Bit Ring | 0.26 | BD543/542-SRING | | |
| 24 O Ring (Bit Ring) | 0.02 | BD543/542-SK-SRING | | |
| 25 Shroud | 2.21 | BD543/542-SHROUD-127/125 | | |
| 26 Drive Sub | 2.94 | BD543/542-DSUB | | |
| 27 Drill Bit | 10.96 | BD543/542-127DC | | |
| 28 Seal Kit (Item2+6+10+12+15+17+22+24) | 0.3 | BD543/542-SK | | |

Technical Data

| Length(Less bit) | Weight(Less bit) | External Diameter | Bit Shank | Hole Range | Connection Thread |
|------------------|--------------------------|----------------------------|-----------|-------------------------------|------------------------------|
| 1191mm | 57.0kg | Φ109.5mm | BD542 | Φ113- Φ130 | 3.5" – 4" Remet 4" Metzke |
| Box Size | Impact rate At 2.4Mpa | Recommended rotation speed | | Air Consumption | |
| 1230x140x170mm | 35Hz | 25-40r/min | | 200-500(PSI) 300-1200(CFM) | |

BD543 R.C. HAMMER

| 4.5" R.C. Hammers | Item Description | Weight Kg | Part Number | |
|---|---|-----------------|--------------------------|--|
| | A Crossover sub Assy PIN Metzke 4"(54mm) to Remet 4"(blank, Matrix, Drill Star...) PIN to BOX CROSSOVER SUB ASSEMBLY OD116MM ADAPT-PM4BR4-116/54 | | | |
| | 1 Top Sub-Remet 4" Adaptor Tube | 7.79 | ADPAT-SUB-PM4BR4-116/54 | |
| | 2 Remet 4" | 1.06 | ADAPT-ATUBE-PM4BR4 | |
| | 3 O Ring (Adaptor Tube Remet 4") x4 | 0.02 | SK-BR4 | |
| | 4 Circlip A | 0.02 | BD543/542-CIRCLIP-4 | |
| | Parts List | | | |
| | 5 Sample Tube-Metzke 4" | 3.5 | BD543/542-STUBE-M4/54 | |
| | 6 O Ring (Sample Tube) x 5 | 0.02 | BD543/542-SK-STUBE | |
| | 7 Circlip B | 0.02 | BD543/542-CIRCLIP-4 | |
| | 8 Air Screen | 0.04 | BD543/542-AIRSCREEN | |
| | 9 Distributor | 0.56 | BD543/542-DIST | |
| | 10 O Ring (Distributor) | 0.02 | BD543/542-SK-DIST | |
| | 11 Check Valve/Plunger | 0.5 | BD543/542-CVALVE | |
| | 12 Y Ring (Check Valve) | 0.02 | BD543/542-SK-CVALVE | |
| | 13 Spring | 0.08 | BD543/542-SPRING | |
| | 14 Mount Sample Tube | 0.86 | BD543/542-STUBE-M | |
| | 15 O Ring (Mount Sample Tube) | 0.02 | BD543/542-SK-STUBEM | |
| | 16 Inner Cylinder/Top Barrel-Metzke 4" (to build 543 Hammer with thread of metzke 4") | 7.26 | BD542-ICYL-M4/54 | |
| | 17 O Ring (Inner Cylinder) | 0.02 | BD543/542-SK-ICYL | |
| | 18 Piston | 11.64 | BD543/542-PISTON | |
| | 19 External Cylinder/Barrel/Piston Case | 19.17 | BD542-ECYL | |
| | 20 Bearing Bush | 0.05 | BD543/542-PRING | |
| | 21 Bush Retaining Ring | 2.35 | BD543/542-BUSH | |
| | 22 O Ring (Bearing Bush) x 2 | 0.02 | BD543/542-SK-BUSH | |
| | 23 Bit Ring | 0.26 | BD543/542-SRING | |
| | 24 O Ring (Bit Ring) | 0.02 | BD543/542-SK-SRING | |
| | 25 Shroud | 2.21 | BD543/542-SHROUD-127/125 | |
| | 26 Drive Sub | 2.94 | BD543/542-DSUB | |
| 27 Drill Bit | 10.96 | BD543/542-127DC | | |
| 28 Seal Kit (Item2+6+10+12+15+17+22+24) | 0.3 | BD543/542-SK | | |

Technical Data

| Length(Less bit) | Weight(Less bit) | External Diameter | Bit Shank | Hole Range | Connection Thread |
|------------------|--------------------------|----------------------------|-----------|-------------------------------|----------------------------|
| 1191mm | 62.0kg | Φ116mm | BD543 | Φ113- Φ133 | 3" – 4" Remet 4" Metzke |
| Box Size | Impact rate At 2.4Mpa | Recommended rotation speed | | Air Consumption | |
| 1230x140x170mm | 35Hz | 25-40r/min | | 200-500(PSI) 300-1200(CFM) | |

BD545 R.C. HAMMER

| 5" R.C. Hammers | Item Description | Weight Kg | Part Number | |
|--|---|-------------|----------------------|--|
| | A Crossover sub Assy PIN Metzke 4.5"(57mm) to Remet 4.5"(blank, Matrix, Drill Star...) PIN to BOX CROSSOVER SUB ASSEMBLY OD117MM ADAPT-PM4BR4-117/57 | | | |
| | 1 Top Sub-Remet 4.5" | 7.79 | SUB-RC-PM45BR45-117 | |
| | 2 Adaptor Tube Remet 4.5" | 1.06 | ADAPT-ATUBE-PM45BR45 | |
| | 3 O Ring (Adaptor Tube Remet 4.5") x6 | 0.02 | SK-BR45 | |
| | 4 Circlip A | 0.02 | BD545-CIRCLIP-A | |
| | Parts List | | | |
| | 5 Sample Tube | 4.61 | BD545-STUBE-M4.5 | |
| | 6 O Ring (Sample Tube) x 4 | 0.02 | BD545-SK-STUBE | |
| | 7 Circlip B | 0.02 | BD545-CIRCLIP-4 | |
| | 8 Air Screen | 0.04 | BD545-AIRSCREEN | |
| | 9 Distributor | 0.48 | BD545-DIST | |
| | 10 O Ring (Distributor) x2 | 0.02 | BD545-SK-DIST | |
| | 11 Check Valve/Plunger | 0.53 | BD545-CVALVE | |
| | 12 Y Ring (Check Valve) | 0.02 | BD545-SK-CVALVE | |
| | 13 Spring | 0.12 | BD545-SPRING | |
| | 14 O Ring (Inner Cylinder) | 0.02 | BD545-SK-ICYL | |
| | 15 Inner Cylinder/Top Barrel | 10.2 | BD545-ICYL-M4.5 | |
| | 16 Piston | 15.1 | BD545-PISTON | |
| | 17 External Cylinder/Barrel/Piston Case | 17.2 | BD545-ECYL | |
| | 18 Bearing Bush | 2.95 | BD545-BUSH | |
| | 19 O Ring (Bearing Bush) x 4 | 0.05 | BD545-SK-BUSH | |
| | 20 Bush Retaining Ring | 0.02 | BD545-PRING | |
| | 21 Bit Ring | 0.26 | BD545-SRING | |
| | 22 O Ring (Bit Ring) | 0.02 | BD545-SK-SRING | |
| | 23 Shroud | 1.6 | BD545-SHROUD127/125 | |
| | 24 Drive Sub | 3.41 | BD545-DSUB | |
| 25 Drill Bit | 12.6 | BD545-133DC | | |
| 26 Seal Kit (Item 2+4(3)+7+11+13+15+20+23) | 0.3 | BD545-SK | | |

Technical Data

| Length(Less bit) | Weight(Less bit) | External Diameter | Bit Shank | Hole Range | Connection Thread |
|------------------|-----------------------|----------------------------|-----------|-------------------------------|-------------------------------------|
| 1261mm | 65.0kg | Φ117.5mm | BD545 | Φ123- Φ140 | 4" – 4.5" Remet 4" – 4.5" Metzke |
| Box Size | Impact rate At 2.4Mpa | Recommended rotation speed | | Air Consumption | |
| 1260x150x180mm | 35Hz | 25-40r/min | | 200-500(PSI) 300-1200(CFM) | |

BD547 R.C. HAMMER

| 5" R.C. Hammers | Item Description | Weight Kg | Part Number |
|-----------------|------------------|-----------|-------------|
|-----------------|------------------|-----------|-------------|

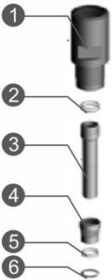
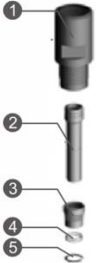
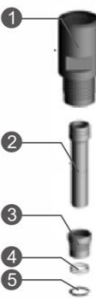
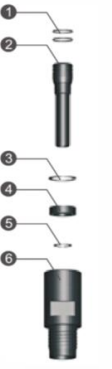


| A Top sub Assy Remet 3.5" | | | |
|-----------------------------------|---|------|----------------------|
| 1 | Circlip A | 0.04 | BD547-CIRCLIP-R4.5 |
| 2 | O Ring (Adaptor Tube Remet 4.5") x 4 | 0.02 | BD547-SK-ASCREEN4.5 |
| 3 | Adaptor Tube Remet 4.5" | 2.95 | BD547-ASCREEN-R4.5 |
| 4 | O Ring (Adaptor Tube) x 2 | 0.02 | BD547-SK-ASCREENMR |
| 5 | Top Sub-Remet 3.5" | 6.98 | BD547-TSUB-R4.5 |
| B Top sub Assy Metzke 4.5" | | | |
| 1 | Circlip A | 0.04 | BD547-CIRCLIP-M4.5 |
| 2 | Adaptor Tube Metzke 4.5 | 2.95 | BD547-ASCREEN-M4.5 |
| 3 | O Ring Adaptor Tube x 2 | 0.02 | BD547-SK-ASCREENMR |
| 4 | Top Sub-Metzke 4.5" | 6.98 | BD547-TSUB-M4.5 |
| Parts List | | | |
| 6 | Sample Tube | 4.61 | BD547-STUBE |
| 7 | O Ring (Sample Tube) x 4 | 0.02 | BD547-SK-STUBE |
| 8 | Circlip B | 0.02 | BD547-CIRCLIP-4 |
| 9 | Air Screen | 0.04 | BD547-AIRSCREEN |
| 10 | Distributor | 0.48 | BD547-DIST |
| 11 | O Ring (Distributor) x 2 | 0.02 | BD547-SK-DIST |
| 12 | Check Valve/Plunger | 0.53 | BD547-CVALVE |
| 13 | Y Ring (Check Valve) | 0.02 | BD547-SK-CVALVE |
| 14 | Spring | 0.12 | BD547-SPRING |
| 15 | O Ring (Inner Cylinder) | 0.02 | BD547-SK-ICYL |
| 16 | Inner Cylinder/Top Barrel | 10.2 | BD547-ICYL |
| 17 | Piston | 15.1 | BD547-PISTON |
| 18 | External Cylinder/Barrel/Piston Case | 17.2 | BD547-ECYL |
| 19 | Bearing Bush | 0.05 | BD547-PRING |
| 20 | O Ring (Bearing Bush) x 2 | 2.95 | BD547-BUSH |
| 21 | Bush Retaining Ring | 0.02 | BD547-SK-BUSH |
| 22 | Bit Ring | 0.26 | BD547-SRING |
| 23 | O Ring (Bit Ring) | 0.02 | BD547-SK-SRING |
| 24 | Shroud | 1.6 | BD547-SHROUD-127/125 |
| 25 | Drive Sub | 3.41 | BD547-DSUB |
| 26 | Drill Bit | 12.6 | BD547-133DC |
| 27 | Seal Kit (Item 2+4(3)+7+11+13+15+21+233) | 0.3 | BD547-SK |

Technical Data

| Length(Less bit) | Weight(Less bit) | External Diameter | Bit Shank | Hole Range | Connection Thread |
|------------------|--------------------------|----------------------------|-----------|-------------------------------|-----------------------------------|
| 1292mm | 80.0kg | Φ124.4mm | BD547 | Φ133- Φ146 | 4" – 4.5" Remet 4"-4.5" Metzke |
| Box Size | Impact rate At 2.4Mpa | Recommended rotation speed | | Air Consumption | |
| 1300x160x190mm | 35Hz | 25-40r/min | | 200-500(PSI) 300-1200(CFM) | |

BD040 R.C. HAMMER

| 5" R.C. Hammers | Item Description | Weight Kg | Part Number |
|--|---|--|--|
|  <p>Top Sub Assembly-A</p> | <p>A Top sub Assy Remet 4"</p> <p>① Top Sub-Remet 4"</p> <p>② O Ring (Adaptor Tube Remet 4") x2</p> <p>③ Adaptor Tube Remet 4"</p> <p>④ Air Screen</p> <p>⑤ O Ring (Air Screen) x 2</p> <p>⑥ Circlip</p> | <p>7.79</p> <p>0.02</p> <p>1.51</p> <p>0.5</p> <p>0.02</p> <p>0.02</p> | <p>BD040-TSUB-R4</p> <p>BD040-SK-ASCREEEN-R4</p> <p>BD040-ASCREEEN-R4</p> <p>BD040-AIRSCREEN</p> <p>BD040-SK-AIRSCREEN</p> <p>BD040-CIRCLIP</p> |
|  <p>Top Sub Assembly-B</p> | <p>B Top sub Assy Metzke 4"</p> <p>① Top Sub-Metzke 4"</p> <p>② Adaptor Tube Metzke 4"</p> <p>③ Air Screen</p> <p>④ O Ring (Air Screen) x 2</p> <p>⑤ Circlip</p> | <p>7.79</p> <p>1.51</p> <p>0.5</p> <p>0.02</p> <p>0.02</p> | <p>BD040-TSUB-M4</p> <p>BD040-ASCREEEN-M4</p> <p>BD040-AIRSCREEN</p> <p>BD040-SK-AIRSCREEN</p> <p>BD040-CIRCLIP</p> |
|  <p>Top Sub Assembly-C</p> | <p>C Top sub Assy Metzke 4.5"</p> <p>① Top Sub-Metzke 4.5"</p> <p>② Adaptor Tube Metzke 4.5"</p> <p>③ Air Screen</p> <p>④ O Ring (Air Screen) x 2</p> <p>⑤ Circlip</p> | <p>7.79</p> <p>1.51</p> <p>0.5</p> <p>0.02</p> <p>0.02</p> | <p>BD040-TSUB-M4.5</p> <p>BD040-ASCREEEN-M4.5</p> <p>BD040-AIRSCREEN</p> <p>BD040-SK-AIRSCREEN</p> <p>BD040-CIRCLIP</p> |
|  <p>Top Sub Assembly-D</p> | <p>D Top sub Assy Remet 4.5"</p> <p>① O Ring (Adaptor Tube Remet 4.5") x2</p> <p>② Adaptor Tube Remet 4.5"</p> <p>③ Circlip A</p> <p>④ Air Screen</p> <p>⑤ Circlip B</p> <p>⑥ Top Sub-Remet 4.5"</p> | <p>0.02</p> <p>1.51</p> <p>0.02</p> <p>0.5</p> <p>0.02</p> <p>7.79</p> | <p>BD040/52-SK-ASCREEEN-R4.5</p> <p>BD040/52-ASCREEEN-R4.5</p> <p>BD040/52-CIRCLIP-1</p> <p>BD040/52-AIRSCREEN-R4.5</p> <p>BD040/52-CIRCLIP-2</p> <p>BD040-TSUB-R4.5</p> |

BD040 R.C. HAMMER

| 5" R.C. Hammers | Item Description | Weight Kg | Part Number |
|-----------------|---|-----------|----------------------|
| | 7 Check Valve/Plunger | 0.63 | BD040/52-CVALVE |
| | 8 Y Ring (Check Valve) | 0.01 | BD040/52-SK-CVALVE |
| | 9 Spring | 0.12 | BD040/52-SPRING |
| | 10 Spring Seat | 0.12 | BD040/52-SSEAT |
| | 11 Make Up Ring, Steel | 0.09 | BD040/52-MUR-STEEL |
| | 12 Make Up Ring, Viton | 0.06 | BD040/52-MUR-VITON |
| | 13 Distributor | 1.75 | BD040/52-DIST |
| | 14 O Ring (Distributor) x 1 | 0.02 | BD040/52-SK-DIST |
| | 15 O Ring (Sample Tube) x 2 | 0.02 | BD040-SK-STUBE1 |
| | 16 O Ring (Sample Tube) x 1 | 0.02 | BD040-SK-STUBE2 |
| | 17 Sample Tube Lower | 4.32 | BD040-STUBE |
| | 18 Mount Sample Tube | 1 | BD040-STUBE-MOUNT |
| | 19 O Ring (Mount Sample Tube) x 1 | 0.02 | BD040-SK-STUBE-M |
| | 20 Inner Cylinder | 7.69 | BD040-ICYL |
| | 21 Piston | 13.63 | BD040-PISTON |
| | 22 External Cylinder/Barrel/Piston Case | 24.14 | BD040-ECYL |
| | 23 Piston Retaining Ring | 0.1 | BD040-PRING |
| | 24 Bearing Bush | 1.89 | BD040-BUSH |
| | 25 O Ring (Bearing Bush) x 1 | 0.02 | BD040-SK-BUSH1 |
| | 26 O Ring (Bearing Bush) x 1 | 0.02 | BD040-SK-BUSH2 |
| | 27 Bit Stop Ring | 0.31 | BD040-SRING |
| | 28 O Ring (Bit Stop Ring) x 1 | 0.02 | BD040-SK-SRING |
| | 29 Shroud | 2.2 | BD040-SHROUD-136/134 |
| | 30 Drive Sub | 3.67 | BD040-DSUB |
| | 31 Drill Bit | 15.09 | BD040-136DC=TV |
| | 32 Seal Kit (Item2(1)+5(4)+8+14+15+16+19+25+26+28) | 0.2 | BD040-SK |

Technical Data

| Length(Less bit) | Weight(Less bit) | External Diameter | Bit Shank | Hole Range | Connection Thread |
|------------------|-----------------------|----------------------------|-------------------------------|------------|--|
| 1362mm | 80.5kg | Φ120.5mm | BD040 | Φ124- Φ142 | 3.5" – 4.5" Remet 3.5"- 4.5" Metzke |
| Working Pressure | Impact rate At 2.4Mpa | Recommended rotation speed | Air Consumption | | |
| 1.5-3.5Mpa | 35Hz | 25-40r/min | 200-500(PSI) 300-1200(CFM) | | |

RC121-BD040 R.C. HAMMER

| 4.5" R.C. Hammers | Item No. | Crossover Sub Remet 4 1/2"(Thread available in Drill Star, Matrix and Blank | | |
|-------------------|------------------|---|----------------|-----------------------------|
| | ① | DAPT-PM45BR45-121 Pin to Box Crossover Sub Assembly Od121mm | | |
| | ② | ADAPT-SUB-PM45BR45-121 Pin to Box Crossover Sub Od121mm | | |
| | ③ | SK-BR45 O Ring (Box Remet 4.5") | | |
| | ④ | ATUBE-PM45BR45 Adaptor Tube Pin to Box | | |
| | ⑤ | SKOPM45 O Ring (Pin Metzke 4.5) | | |
| | Item Description | | Weight Kg | Part Number |
| | ⑥ | Inner Cylinder | 8.95 | RC121-ICYL-M4.5 |
| | ⑦ | O Ring x 1 | 0.02 | RC121-SK-ICYL |
| | ⑧ | Sample Tube | 5.2 | RC121-STUBE-H |
| | ⑨ | O Ring x 5 | 0.02 | BD67/RC121-SK-STUBE |
| | ⑩ | Circlip B | 0.02 | BD67/RC121-CIRCLIP-1 |
| | ⑪ | Air Screen | 0.02 | BD67/RC121-AIRSCREEN-1 |
| | ⑫ | Distribution Nozzle | 0.48 | BD67/RC121-DIST-1 |
| | ⑬ | "O" Ring x2 | 0.02 | BD67/RC121-SK-DIST |
| | ⑭ | Plunger/Check Valve | 0.53 | BD67/RC121-CVALVE-MHK |
| | ⑮ | "Y" Ring x 1 | 0.02 | BD67/545/547/RC121-SK-YRING |
| | ⑯ | Spring | 0.12 | BD67/545/547/RC121-SPRING |
| | ⑰ | Piston | 14.1 | BD52/RC121-PISTON |
| | ⑱ | External Cylinder/Barrel/Wear Sleeve/Piston Case | 19.4 | RC121-ECYL-DK |
| | ⑲ | Bush Retaining Ring | 0.02 | RC121-SRING-BUSH |
| | ⑳ | Bearing Bush/Bush Drive Sub | 1.85 | RC121-BUSH |
| | ㉑ | "O" Ring x 2 | 0.02 | BD040/RC121-SK-BUSH |
| | ㉒ | Bit Retaining Ring | 0.31 | BD040/RC121-SRING-HD |
| | ㉓ | "O" Ring x 1 | 0.02 | RC121/BD040-SK-SRING |
| | ㉔ | Piston Retaining Ring | 0.15 | RC121-RRING |
| | ㉕ | Shroud | 2.2 | BD040-136/133.5-DB |
| | ㉖ | Drive Sub/Chuck | 3.67 | RC121/BD040-DSUB |
| ㉗ | Drill Bit | 15.09 | BD040-136DC-TV | |

Technical Data

| Length(Less bit) | Weight(Less bit) | External Diameter | Bit Shank | Hole Range | Connection Thread |
|------------------|-----------------------|----------------------------|-----------|-------------------------------|---------------------------|
| 1039mm | 71.0kg | Φ121mm | RE040 | Φ126- Φ146 | Metzke 4.5" Remet 4.5" |
| Box Size | Impact rate At 2.4Mpa | Recommended rotation speed | | Air Consumption | |
| 1340x350x350mm | 35Hz | 25-40r/min | | 200-500(PSI) 300-1200(CFM) | |

BD52 R.C. HAMMER

| 5.5" R.C. Hammers | Item Description | Weight Kg | Part Number |
|-------------------|------------------|-----------|-------------|
|-------------------|------------------|-----------|-------------|



| A Top sub Assy Metzke 4.5" | | | |
|-----------------------------------|--|-------|---|
| 2 | Adaptor Tube Metzke 4.5" | 2.19 | BD52-ASCREEN-M4.5 |
| 3 | Circlip B | 0.03 | BD52-CIRCLIP |
| 4 | Air Screen | 0.42 | BD52-AIRSCREEN-M4.5 |
| 5 | Circlip A | 0.03 | BD52-CIRCLIP |
| 6 | Top Sub-Metzke 4.5" | 8.92 | BD-TSUB-M4.5 |
| B Top sub Assy Remet 4.5" | | | |
| 1 | O Ring Adaptor Tube Remet 4.5" x 2 | 0.02 | BD040/52-SK-ASCREEN-R4.5 |
| 2 | Adaptor Tube Remet 4.5" | 2.19 | BD040/52-ASCREEN-R4.5 |
| 3 | Circlip B | 0.03 | BD040/52-CIRCLIP |
| 4 | Air Screen | 0.42 | BD040/52-AIRSCREEN-R4.5 |
| 5 | Circlip A | 0.03 | BD040/52-CIRCLIP |
| 6 | Top Sub-Remet 4.5" | 8.92 | BD52-TSUB-R4.5 |
| Parts List | | | |
| 7 | Check Valve/Plunger | 0.63 | BD040/52-CVALVE |
| 8 | Y Ring (Check Valve) | 0.03 | BD040/52-SK-CVALVE |
| 9 | Spring | 0.12 | BD040/52-SPRING |
| 10 | Spring Seat | 0.12 | BD040/52-SSEAT |
| 11 | Make Up Ring, Steel | 0.1 | BD040/52-MUR-STEEL |
| 12 | Make Up Ring, Viton | 0.05 | BD040/52-MUR-VITON |
| 13 | Distributor | 1.31 | BD040/52-DIST |
| 14 | O Ring (Distributor) | 0.02 | BD040/52-SK-DIST |
| 15 | O Ring (Sample Tube) x 2 | 0.02 | BD52-SK-STUBE1 |
| 16 | O Ring (Sample Tube) x 1 | 0.02 | BD52-SK-STUBE2 |
| 17 | Sample Tube Lower | 4.52 | BD52-STUBE |
| 18 | Mount Sample Tube | 0.8 | BD52-STUBE-MOUNT |
| 19 | O Ring (Mount Sample Tube) | 0.02 | BD52-SK-STUBE-M |
| 20 | Inner Cylinder | 7.39 | BD52-ICYL |
| 21 | Piston | 14.63 | BD52-PISTON |
| 22 | External Cylinder/Barrel/Piston Case | 18.86 | BD52-ECYL |
| 23 | Piston Retaining Ring | 0.13 | BD52-PRING |
| 24 | Bearing Bush | 1.89 | BD52-BUSH |
| 25 | O Ring (Bearing Bush) x 1 | 0.02 | BD52-SK-BUSH1 |
| 26 | O Ring (Bearing Bush) x 1 | 0.02 | BD52-SK-BUSH2 |
| 27 | Bit Stop Ring | 0.31 | BD52-SRING |
| 28 | O Ring (Bit Stop Ring) | 0.02 | BD52-SK-SRING |
| 29 | Shroud (Retaining Option) | 1.86 | BD52-SHROUD-136/134 or BD52R-SHROUD-136/134 |
| 30 | Drive Sub (Retaining Option) | 4.17 | BD52-DSUB or BD52R-DSUB |
| 31 | Drill Bit (Retaining Option) | 11.01 | BD52-136DC or BD52R-136DC |
| 32 | Seal Kit (Item 1+8+14+15+16+19+25+26+28) | 0.30 | BD52-SK |

Technical Data

| Length(Less bit) | Weight(Less bit) | External Diameter | Bit Shank | Hole Range | Connection Thread |
|------------------|-----------------------|----------------------------|-------------------------------|------------|-----------------------------------|
| 1227mm | 68.5kg | Φ121mm | BD52 | Φ126- Φ142 | 4" – 4.5" Remet 4"-4.5" Metzke |
| Working Pressure | Impact rate At 2.4Mpa | Recommended rotation speed | Air Consumption | | |
| 1.5-3.5Mpa | 35Hz | 25-40r/min | 200-500(PSI) 300-1200(CFM) | | |

BD54 R.C. HAMMER

| 5.5" R.C. Hammers | Item Description | Weight Kg | Part Number |
|-------------------|------------------|-----------|-------------|
|-------------------|------------------|-----------|-------------|




| A Top sub Assy Remet 4.5" | | | |
|-----------------------------------|--|-------|---|
| 1 | Top Sub-Remet 4.5" | 11.61 | BD54-TSUB-R4.5 |
| 2 | O Ring (Adaptor Tube Remet 4.5") x 2 | 0.02 | BD54-SK-ASCREEEN-R4.5 |
| 3 | Adaptor Tube Remet 4.5" | 2.35 | BD54-ASCREEEN-R4.5 |
| 4 | Air Screen | 0.50 | BD54-AIRSCREEN |
| 5 | O Ring (Air Screen) x 2 | 0.02 | BD54-SK-AIRSCREEN |
| 6 | Circlip | 0.04 | BD54-CIRCLIP |
| B Top sub Assy Metzke 4.5" | | | |
| 1 | Top Sub-Metzke 4.5" | 11.61 | BD54-TSUB-M4.5 |
| 2 | Adaptor Tube Metzke 4.5" | 2.35 | BD54-ASCREEEN-M4.5 |
| 3 | Air Screen | 0.5 | BD54-AIRSCREEN |
| 4 | O Ring (Air Screen) x 2 | 0.02 | BD54-SK-AIRSCREEN |
| 5 | Circlip | 0.04 | BD54-CIRCLIP |
| Parts List | | | |
| 7 | Check Valve/Plunger | 0.58 | BD54-CVALVE |
| 8 | Y Ring (Check Valve) | 0.02 | BD54-SK-CVALVE |
| 9 | Spring | 0.12 | BD54-SPRING |
| 10 | Spring Seat | 0.12 | BD54-SSEAT |
| 11 | Make Up Ring, Steel | 0.14 | BD54-MUR-STEEL |
| 12 | Make Up Ring, Viton | 0.06 | BD54-MUR-VITON |
| 13 | Distributor | 1.54 | BD54-DIST |
| 14 | O Ring (Distributor) | 0.02 | BD54-SK-DIST |
| 15 | O Ring (Sample Tube) x 2 | 0.02 | BD54-SK-STUBE1 |
| 16 | O Ring (Sample Tube) x 1 | 0.02 | BD54-SK-STUBE2 |
| 17 | Sample Tube Lower | 6.47 | BD54-STUBE |
| 18 | Mount Sample Tube | 1.00 | BD54-STUBE-MOUNT |
| 19 | O Ring (Mount Sample Tube) | 0.02 | BD54-SK-STUBE-M |
| 20 | Inner Cylinder | 8.54 | BD54-ICYL |
| 21 | Piston | 16.8 | BD54-PISTON |
| 22 | External Cylinder/Barrel/Piston Case | 23.44 | BD54-ECYL |
| 23 | Piston Retaining Ring | 0.2 | BD54-PRING |
| 24 | Bearing Bush | 1.89 | BD54-BUSH |
| 25 | O Ring (Bearing Bush) x 1 | 0.02 | BD54-SK-BUSH1 |
| 26 | O Ring (Bearing Bush) x 1 | 0.02 | BD54-SK-BUSH2 |
| 27 | Bit Stop Ring | 0.43 | BD54-SRING |
| 28 | O Ring (Bit Stop Ring) | 0.02 | BD54-SK-SRING |
| 29 | Shroud (Retaining Option) | 2.35 | BD54 SHROUD-143/141 or BD54R-SHROUD-136/134 |
| 30 | Drive Sub (Retaining Option) | 4.9 | BD54-DSUB or BD54R-DSUB |
| 31 | Drill Bit (Retaining Option) | 18.33 | BD54-143DC or BD54R-143DC |
| 32 | Seal Kit (Item 2+4+8+14+15+16+19+25+26+28) | 0.3 | BD52-SK |


Technical Data

| Length(Less bit) | Weight(Less bit) | External Diameter | Bit Shank | Hole Range | Connection Thread |
|------------------|-----------------------|----------------------------|-----------------|------------|---------------------------|
| 1294mm | 84.5kg | Φ130mm | BD54 | Φ136- Φ150 | 4.5" Remet 4.5" Metzke |
| Working Pressure | Impact rate At 2.4Mpa | Recommended rotation speed | Air Consumption | | |
| 1.5-3.5Mpa | 35Hz | 25-40r/min | 200-500(PSI) | | |
| | | | 300-1200(CFM) | | |


BD 531 Reverse circulation drill bit and shroud

|  | Diameter | | No x Button diameter mm | | Button Angle° | Flushing Holes | Shroud Diameter | Weight (Kg) | Part No. |
|---|----------|-------|-------------------------|---------------|---------------|----------------|-----------------|-------------|----------|
| | mm | Inch | Gauge Buttons | Front Buttons | | | | | |
| | 86 | 2 1/4 | 6x12 | 4x12 | | | | | |
| 89 | 2 1/2 | 8x12 | 5x12 | 35 | 2 | 87 | 4.3 | BD351-89 | |
| 95 | 2 3/4 | 8x12 | 6x12 | 35 | 2 | 93 | 4.6 | BD351-95 | |
| 102 | 3 | 8x12 | 6x12 | 35 | 2 | 100 | 4.9 | BD531-102 | |


RC3.5Y Reverse circulation drill bit and shroud

|  | Diameter | | No x Button diameter mm | | Button Angle° | Flushing Holes | Shroud Diameter | Weight (Kg) | Part No. |
|--|----------|---------|-------------------------|---------------|---------------|----------------|-----------------|-------------|----------|
| | mm | Inch | Gauge Buttons | Front Buttons | | | | | |
| | 100 | 3 15/16 | 6x16 | 6x14+6x13 | | | | | |
| 104 | 4 1/10 | 6x16 | 6x14+6x13 | 35 | 2 | 102 | 6.6 | RC3.5Y-104 | |
| 108 | 4 1/4 | 8x16 | 6x14+6x13 | 35 | 2 | 106 | 6.9 | RC3.5Y-108 | |
| 114 | 4 1/2 | 8x16 | 6x14+6x13 | 35 | 2 | 112 | 7.5 | RC3.5Y-114 | |


BD 004 Reverse circulation drill bit and shroud

|  | Diameter | | No x Button diameter mm | | Button Angle° | Flushing Holes | Shroud Diameter | Weight (Kg) | Part No. |
|---|----------|-------|-------------------------|---------------|---------------|----------------|-----------------|-------------|----------|
| | mm | Inch | Gauge Buttons | Front Buttons | | | | | |
| | 114 | 4 1/2 | 8x14 | 6x14 | | | | | |
| 118 | 4 5/8 | 8x14 | 6x14 | 35 | 2 | 116 | 11.7 | BD004-118 | |
| 121 | 4 3/4 | 8x14 | 6x14 | 35 | 2 | 119 | 12.0 | BD004-121 | |
| 127 | 5 | 8x14 | 8x14 | 35 | 2 | 125 | 12.4 | BD004-127 | |


BD 542 Reverse circulation drill bit and shroud

|  | Diameter | | No x Button diameter mm | | Button Angle° | Flushing Holes | Shroud Diameter | Weight (Kg) | Part No. |
|---|----------|-------|-------------------------|---------------|---------------|----------------|-----------------|-------------|----------|
| | mm | Inch | Gauge Buttons | Front Buttons | | | | | |
| | 121 | 4 3/4 | 8x14 | 6x14 | | | | | |
| 124 | 4 7/8 | 8x14 | 8x13 | 35 | 2 | 122 | 10.8 | BD542-124 | |
| 127 | 5 | 8x14 | 8x14 | 35 | 2 | 125 | 11.0 | BD542-127 | |
| 130 | 5 1/8 | 8x14 | 10x14 | 35 | 2 | 128 | 11.3 | BD542-130 | |


BD 543 Reverse circulation drill bit and shroud

|  | Diameter | | No x Button diameter mm | | Button Angle° | Flushing Holes | Shroud Diameter | Weight (Kg) | Part No. |
|--|----------|-------|-------------------------|---------------|---------------|----------------|-----------------|-------------|----------|
| | mm | Inch | Gauge Buttons | Front Buttons | | | | | |
| | 124 | 4 7/8 | 8x14 | 8x13 | | | | | |
| 127 | 5 | 8x14 | 8x14 | 35 | 2 | 125 | 11.0 | BD543-127 | |
| 130 | 5 1/8 | 8x14 | 10x14 | 35 | 2 | 128 | 11.3 | BD543-130 | |
| 133 | 5 1/4 | 8x16 | 10x14 | 35 | 2 | 131 | 11.8 | BD543-133 | |


BD 545 Reverse circulation drill bit and shroud

|  | Diameter | | No x Button diameter mm | | Button Angle° | Flushing Holes | Shroud Diameter | Weight (Kg) | Part No. |
|---|----------|-------|-------------------------|---------------|---------------|----------------|-----------------|-------------|----------|
| | mm | Inch | Gauge Buttons | Front Buttons | | | | | |
| | 124 | 4 7/8 | 8x14 | 8x13 | | | | | |
| 127 | 5 | 8x14 | 8x14 | 35 | 2 | 125 | 13.5 | BD545-127 | |
| 133 | 5 1/4 | 8x16 | 10x14 | 35 | 2 | 131 | 13.8 | BD545-133 | |
| 136 | 5 3/8 | 8x16 | 6x16+3x14 | 35 | 2 | 134 | 14.2 | BD545-136 | |


BD 040 Reverse circulation drill bit and shroud

|  | Diameter | | No x Button diameter mm | | Button Angle° | Flushing Holes | Shroud Diameter | Weight (Kg) | Part No. |
|---|----------|-------|-------------------------|---------------|---------------|----------------|-----------------|-------------|----------|
| | mm | Inch | Gauge Buttons | Front Buttons | | | | | |
| | 124 | 4 7/8 | 8x14 | 8x13 | | | | | |
| 127 | 5 | 8x14 | 8x14 | 35 | 2 | 125 | 14.7 | BD040-127 | |
| 133 | 5 1/4 | 8x16 | 10x14 | 35 | 2 | 131 | 15.2 | BD040-133 | |
| 138 | 5 7/16 | 8x16 | 6x16+3x14 | 35 | 2 | 136 | 15.8 | BD040-138 | |

BD 52 Reverse circulation drill bit and shroud

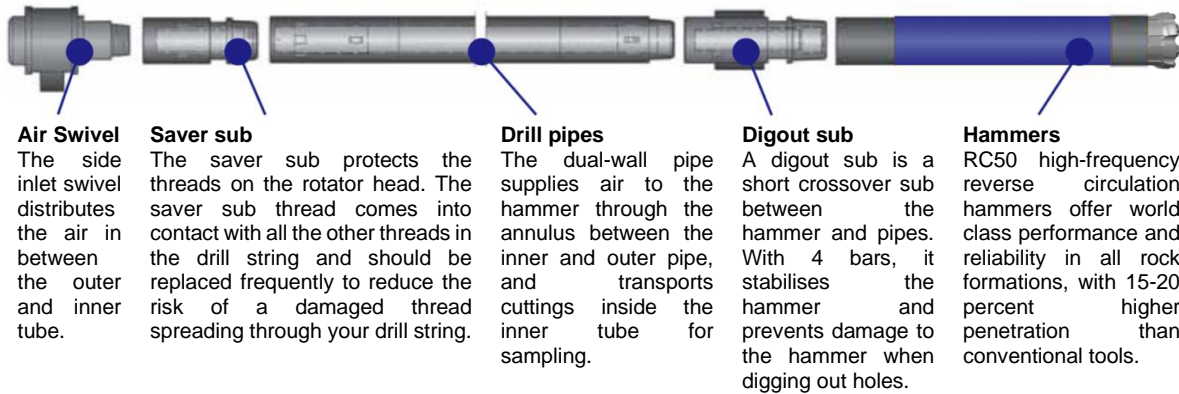
|  | Diameter | | No x Button diameter mm | | Button Angle° | Flushing Holes | Shroud Diameter | Weight (Kg) | Part No. |
|--|----------|-------|-------------------------|---------------|---------------|----------------|-----------------|-------------|----------|
| | mm | Inch | Gauge Buttons | Front Buttons | | | | | |
| | 133 | 5 1/4 | 8x16 | 10x14 | | | | | |
| 136 | 5 3/8 | 8x16 | 6x16+3x14 | 35 | 2 | 134 | 11.5 | BD52-136 | |
| 140 | 5 1/2 | 8x16 | 6x16+3x14 | 35 | 2 | 138 | 11.9 | BD52-140 | |
| 143 | 5 5/8 | 8x16 | 6x16+3x14 | 35 | 2 | 141 | 12.3 | BD52-143 | |

BD 54 Reverse circulation drill bit and shroud

|  | Diameter | | No x Button diameter mm | | Button Angle° | Flushing Holes | Shroud Diameter | Weight (Kg) | Part No. |
|---|----------|-------|-------------------------|---------------|---------------|----------------|-----------------|-------------|----------|
| | mm | Inch | Gauge Buttons | Front Buttons | | | | | |
| | 136 | 5 3/8 | 8x16 | 6x16+3x14 | | | | | |
| 140 | 5 1/2 | 8x16 | 6x16+3x14 | 35 | 2 | 138 | 18.5 | BD54-140 | |
| 143 | 5 5/8 | 8x16 | 6x16+3x14 | 35 | 2 | 141 | 18.8 | BD54-143 | |
| 146 | 5 3/4 | 8x16 | 6x16+3x14 | 35 | 2 | 144 | 19.2 | BD54-146 | |

Reverse circulation drill string

Black Diamond offers a complete range of reverse circulation rock drilling tools. The drill string equipment is designed specifically for greenfield exploration and in-pit grade control.



Air Swivel

The side inlet swivel distributes the air in between the outer and inner tube.

Saver sub

The saver sub protects the threads on the rotator head. The saver sub thread comes into contact with all the other threads in the drill string and should be replaced frequently to reduce the risk of a damaged thread spreading through your drill string.

Drill pipes

The dual-wall pipe supplies air to the hammer through the annulus between the inner and outer pipe, and transports cuttings inside the inner tube for sampling.

Digout sub

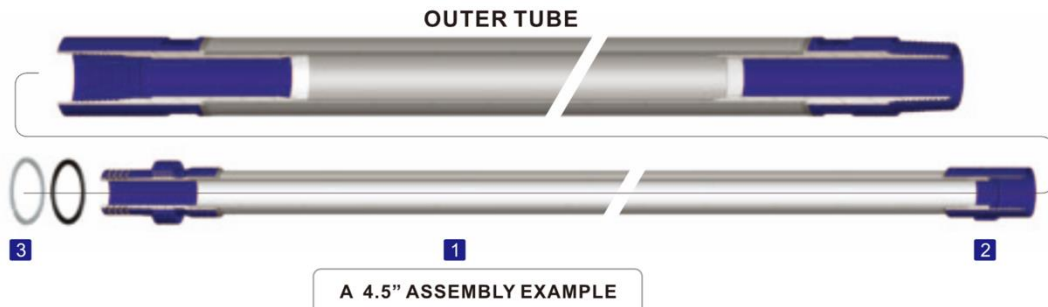
A digout sub is a short crossover sub between the hammer and pipes. With 4 bars, it stabilises the hammer and prevents damage to the hammer when digging out holes.

Hammers

RC50 high-frequency reverse circulation hammers offer world class performance and reliability in all rock formations, with 15-20 percent higher penetration than conventional tools.

Remet

| | A | 1 | 2 | 3 |
|---|-------------------------------|---------------------------------|-----------------------------|------------------------------|
| 1 | Rod RC 4-1/2" x 6m Long Remet | Inner Tube RC 4-1/2" x 6m Remet | O-Ring, 4-1/2" Remet/Metzke | Circlip, 4-1/2" Remet |
| 2 | Rod RC 4-1/2" x 3m Long Remet | Inner Tube RC 4-1/2" x 3m Remet | O-Ring, 4-1/2" Remet/Metzke | Circlip, 4-1/2" Remet |
| 3 | Rod RC 4" x 6m Long Remet | Inner Tube RC 4" x 6m Remet | O-Ring, 4" Remet | Circlip, 4" Remet/Metzke |
| 4 | Rod RC 4" x 6m Long Remet | Inner Tube RC 4" x 3m Remet | O-Ring, 4" Remet | Circlip, 4" Remet/Metzke |
| 5 | Rod RC 3-1/2" x 6m Long Remet | Inner Tube RC 3-1/2" x 6m Remet | O-Ring, 3-1/2" Remet/Metzke | Circlip, 3-1/2" Remet/Metzke |
| 6 | Rod RC 3-1/2" x 3m Long Remet | Inner Tube RC 3-1/2" x 3m Remet | O-Ring, 3-1/2" Remet/Metzke | Circlip, 3-1/2" Remet/Metzke |



Metzke

| | A | 1 | 2 | 3 |
|---|--------------------------------|----------------------------------|-----------------------------|------------------------------|
| 1 | Rod RC 4-1/2" x 6m Long Metzke | Inner Tube RC 4-1/2" x 6m Metzke | O-Ring, 4-1/2" Metzke/Remet | Circlip, 4-1/2" Metzke/Remet |
| 2 | Rod RC 4-1/2" x 3m Long Metzke | Inner Tube RC 4-1/2" x 3m Metzke | O-Ring, 4-1/2" Metzke/Remet | Circlip, 4-1/2" Metzke/Remet |
| 3 | Rod RC 4" x 6m Long Metzke | Inner Tube RC 4" x 6m Metzke | O-Ring, 4" Metzke | Circlip, 4" Metzke |
| 4 | Rod RC 4" x 6m Long Metzke | Inner Tube RC 4" x 3m Metzke | O-Ring, 4" Metzke | Circlip, 4" Metzke |
| 5 | Rod RC 3-1/2" x 6m Long Metzke | Inner Tube RC 3-1/2" x 6m Metzke | O-Ring, 3-1/2" Metzke/Remet | Circlip, 3-1/2" Metzke/Remet |
| 6 | Rod RC 3-1/2" x 3m Long Metzke | Inner Tube RC 3-1/2" x 3m Metzke | O-Ring, 3-1/2" Metzke/Remet | Circlip, 3-1/2" Metzke/Remet |

