

BD545 RC Hammer

Compatibility: RE545, MR116, SR745, AD638



Black Diamond Drilling offers a complete range of reverse circulation hammers along with fully integrated R.C. Bits and Shrouds that have been designed to provide a world-class sampling system. Precision engineering enables our R.C. Hammers to excel in maintaining an efficient and smooth flow of drill cuttings to the surface, ensuring cleaner, more accurate samples. This leads to more reliable data for exploration and better overall hole quality.

SPECIFICATIONS

Item	Diameter Ø	
	mm	inch
Hammer	117.5	4 5/8
Bit	124 – 140	4 7/8 - 5 1/2
Suits medium to hard ground conditions		

BD545 RC Hammer

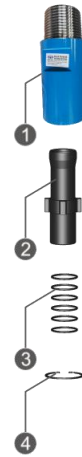


Black Diamond
Drilling Services Australia

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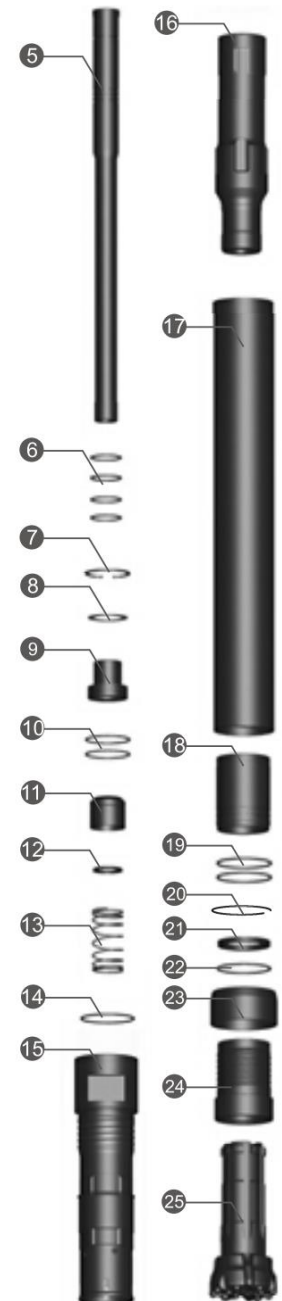
Top Sub Assembly

Product Code	Description	Amt	Compatibility
A	Crossover Sub Assy PIN Metzke 4.5"(57mm) to Remet 4.5" PIN to BOX Crossover Sub Assy OD117mm RC-SUBA-PM4BR4-116/54		
1	RC-SUBA-PM45BR45-117	Top Sub Remet 4.5"	1 33-545-R45
2	ADAPT-ATUBE-PM45BR45	Adaptor Tube Remet 4.5"	4 20-545-R45
3	SK-BR45	O Ring (Adaptor Tube Remet 4")	1 38-545-000
4	BD545-CIRCLIP-A	Top Sub-Remet 3.5"	1 41-D1300-0900



Hammer Assembly

Product Code	Description	Amt	Compatibility
5	BD545-STUBE-M4.5	Sample Tube	1 37-545-000
6	BD545-SK-STUBE	O Ring (Sample Tube)	4 41-D1300-0900
7	BD545-CIRCLIP-4	Circlip B	1 41-D1300-0850
8	BD545-AIRSCREEN	Air Screen	1 21-545-000
9	BD545-DIST	Distributor	1 29-545-000
10	BD545-SK-DIST	O Ring (Distributor)	1 41-D1300-0900
11	BD545-CVALVE	Check Valve/Plunger	1 25-545-000
12	BD545-SK-CVALVE	Y Ring (Check Valve)	1 41-D1300-0900
13	BD545-SPRING	Spring	1 22-545-000
14	BD545-SK-ICYL	O Ring (Inner Cylinder)	1 41-D1300-0900
15	BD545-ICYL-M4.5	Inner Cylinder/Top Barrel	1 31-545-000
16	BD545-PISTON	Piston	1 36-545-000
17	BD545-ECYL	External Cylinder	1 35-545-000
18	BD545-BUSH	Bearing Bush	1 26-545-000
19	BD545-SK-BUSH	O Ring (Bearing Bush)	4 41-D1300-0900
20	BD545-PRING	Bush Retaining Ring	1 23-545-000
21	BD545-SRING	Bit Ring	1 27-545-000
22	BD545-SK-SRING	O Ring (Bit Ring)	1 41-D1300-0900
23	BD545-SHROUD127/125	Shroud	1 40-545-415
24	BD545-DSUB	Drive Sub	1 16-545-000
25	BD545-133DC	Drill Bit	1 63-545-504DC
26	BD545-SK	Seal Kit (Item 2+4+7+11+13+15+20+23)	1 41-D1300-0900



Bit Selection Table

Bit Product Code	Diameter		Compatibility
	Metric	Imperial	
BD545-124DC-TP	124mm	4 7/8"	63-545-414DC
BD545-127DC-TPD	127mm	5"	63-545-500DC
BD545-133DC-TPD	133mm	5 1/8"	63-545-504DC
BD545-136DC-TPD	136mm	5 3/8"	63-545-506CF



Shroud Selection Table

Shroud Product Code	Diameter		Compatibility
	Metric	Imperial	
BD545-SHROUD-124/122	124mm	4 7/8"	40-545-413
BD545-SHROUD-127/125-DB	127mm	5"	40-545-415
BD545-SHROUD-133/131-DB	133mm	5 1/4"	40-545-503
BD545-SHROUD-136/134-DB	136mm	5 11/32"	40-545-505
BD545-SHROUD-138/136-DB	138mm	5 7/16"	40-545-507
BD545-SHROUD-140/138-DB	140mm	5 1/2"	40-545-508



General Specifications

Description	Metric	Imperial
Piston Case OD	117.5mm	4 5/8"
Hammer length	1261mm	4' 1 5/8"
Hammer Weight	65.0kg	143lb 5oz
Bit Size Range	124 -140mm	4 7/8 - 5 1/2"
Drill Rod Diameter	114mm	4 1/2"
Spanner Flat Width – Inner Cylinder	45mm	1 3/4"
Spanner Flat Width – Top Sub	50mm	2"

Air Consumption

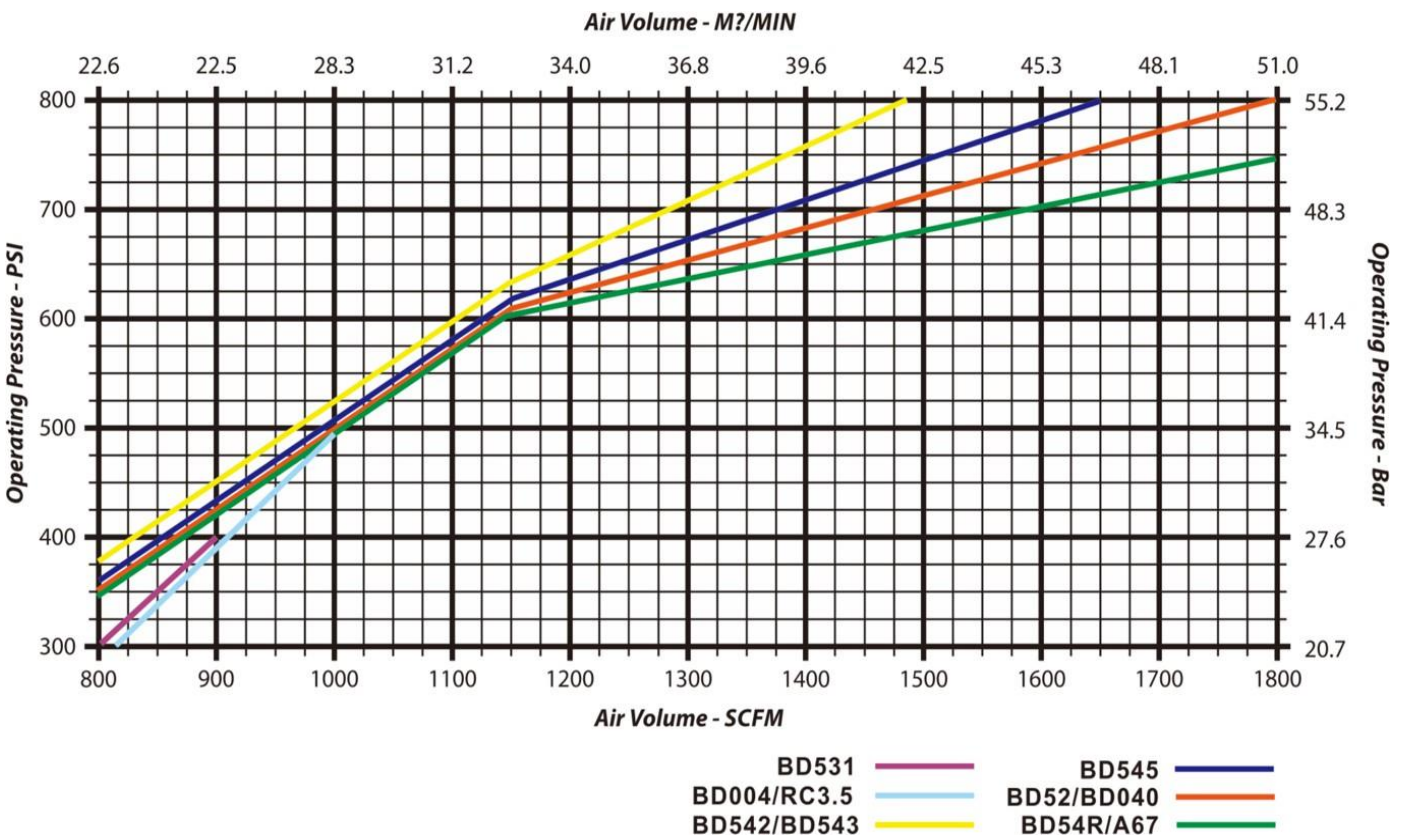
Pressure		Consumption	
psi	bar	cfm	m ³ /min
400	27.6	850	24.0
450	31.1	925	25.1
500	34.5	1000	28.3
550	38.0	1050	29.8
600	41.4	1125	32.0

REVERSE CIRCULATION GENERAL 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)110 (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)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 performance and longevity.

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

