

RC121 – BD040 R.C. HAMMER

Compatibility: RE545, RE040, PR40, AD650, RC45, MR120



Black Diamond
BD Drill Drilling Services Australia



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	121	4 3/4
Bit	124 – 152	4 7/8 – 6"
Suits medium to hard ground conditions		

RC121 – BD040 R.C. HAMMER



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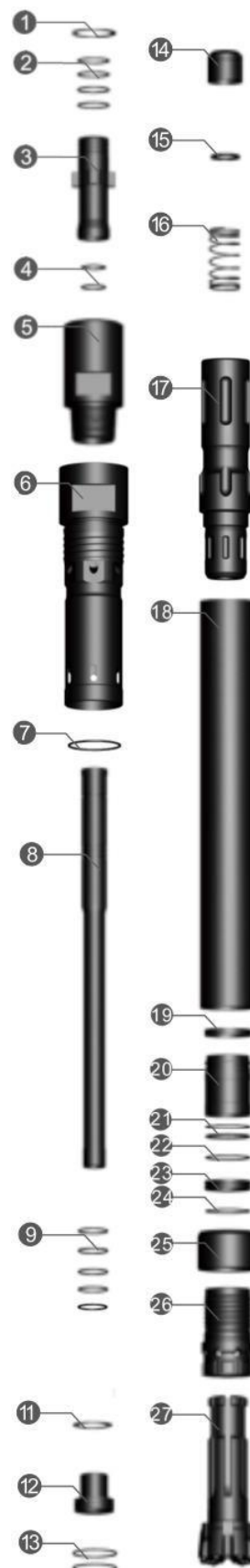
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Top Sub Assembly

Product Code	Description	Amt	Compatibility
A	Top Sub Assembly Remet 4"		
1	BD67/RC121-CIRCLIP	1	-
2	SKOPM45	4	-
3	ATUBE-PM45BR45	1	-
4	SK-BR45	2	-
5	ADAPT-SUB-PM45BR45-121	1	-

Hammer Assembly

Product Code	Description	Amt	Compatibility
6	RC121-ICYL-M4.5	1	-
7	RC121-SK-ICYL	1	-
8	RC121-STUBE-H	1	-
9	BD67/RC121-SK-STUBE	5	-
10	BD67/RC121-CIRCLIP-1	1	-
11	BD67/RC121-AIRSCREEN-1	1	-
12	BD67/RC121-DIST-1	1	-
13	BD67/RC121-SK-DIST	2	-
14	BD67/RC121-CVALVE-MHK	1	-
15	BD67/545/547/RC121-SK-YRING	1	-
16	BD67/545/547/RC121/S-PRING	1	-
17	BD52/RC121-PISTON	1	-
18	RC121-ECYL-DK	1	-
19	RC121-SRING-BUSH	1	-
20	RC121-BUSH	1	-
21	BD040/RC121-SK-BUSH	2	-
22	BD040/RC121-SRING-HD	1	-
23	RC121-BD040-SK-SRING	1	-
24	RC121-RRING	1	-
25	BD040-133/130.5-DB	1	-
26	RC121/BD040-DSUB	1	-
27	BD040-133DC-TPD	1	-



Bit Selection Table

Bit Product Code	Diameter		Compatibility
	Metric	Imperial	
BD040-124DC-TPD	124mm	4 7/8"	-
BD040-127DC-TPD	127mm	5"	63-040-502DC
BD040-133DC-TPD	133mm	5 1/4"	63-040-504DC
BD040-140DC-TPD	140mm	5 7/16"	63-040-508DC
BD040-152DC-TPD	152mm	6"	63-040-510DC



Shroud Selection Table

Shroud Product Code	Diameter		Compatibility
	Metric	Imperial	
BD040-SHROUD-124/121.5-DB	124mm	4 7/8"	40-040-413
BD040-SHROUD-127/124.5-DB	127mm	5"	40-040-415
BD040-SHROUD-133/130.5-DB	133mm	5 1/4"	40-040-503
BD040-SHROUD-140/137.5-DB	140mm	5 1/2"	40-040-507
BD040-SHROUD-152/149.5-DB	152mm	6"	-



General Specifications

Description	Metric	Imperial
Piston Case OD	121mm	4 3/4"
Hammer length	1039mm	4' 5 5/8"
Hammer Weight	71 kg	156lb 8 3/8oz
Bit Size Range	124 - 152mm	4 7/8 – 6"
Drill Rod Diameter	114mm	4 1/2"
Spanner Flat Width – Inner Cylinder	51mm	2"
Spanner Flat Width – Top Sub	51mm	2"

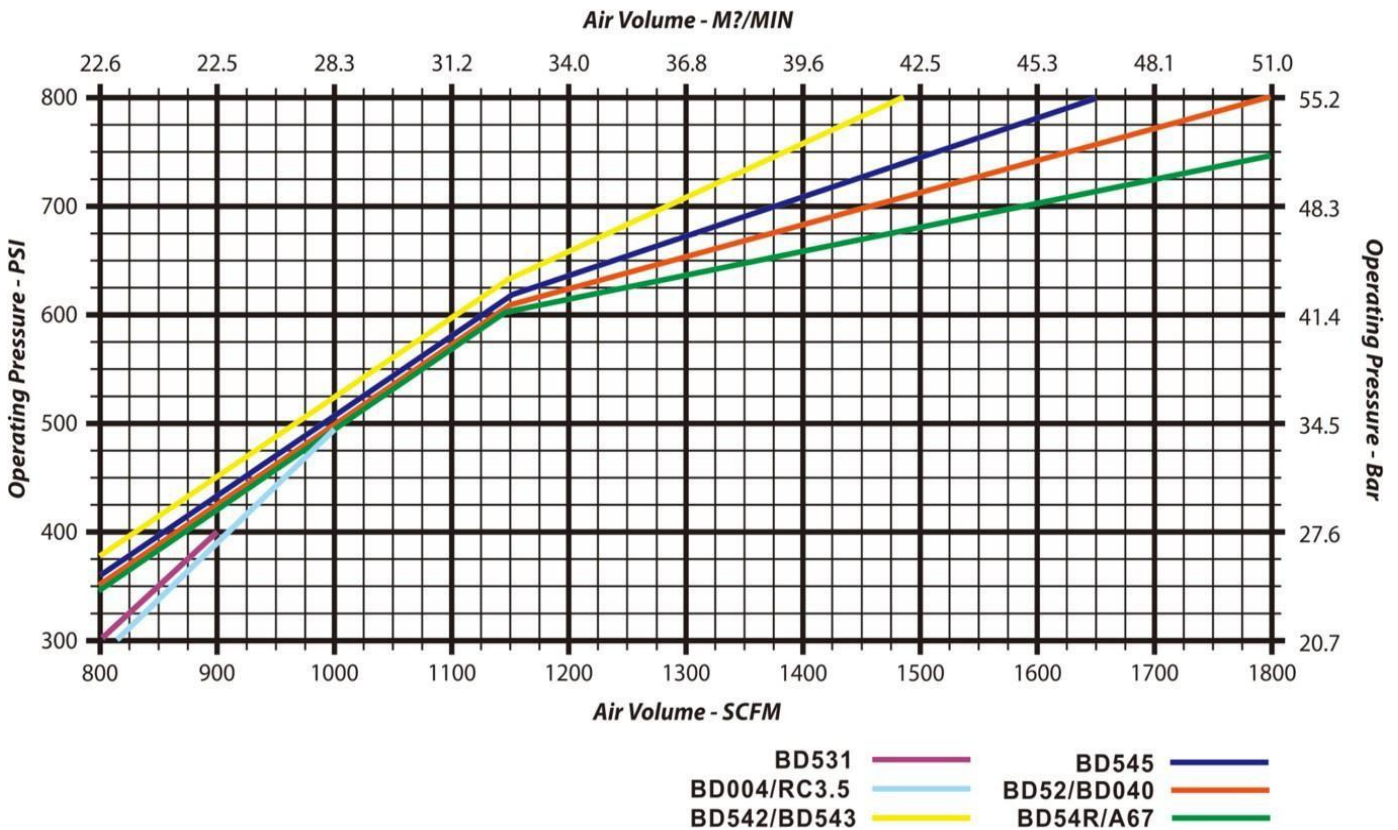
Air Consumption

Pressure		Consumption	
psi	bar	cfm	m³/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)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		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		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 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

