

CENTER ROCK FORCE®

HIGH PERFORMANCE RF HAMMER SERIES



Center Rock Inc's High Performance Down Hole Hammers and Bits

The Center Rock Force® line of high performance down-the-hole hammers and bits are available to suit a broad range of hole sizes and applications. All RF hammers feature a high efficiency valved air cycle to optimize performance. For deep hole applications, accessories such as bit retrieval systems and jetted backheads are available. The combination of high performance and longevity make this the perfect hammer for any job.

CENTER ROCK
We make rock disappear!

Phone: 814.267.7100

CENTERROCK.COM



**Drill faster.
Run harder.
Work smarter.**

breakthrough innovation and technology • superior products and services • outstanding technical support • genuine drilling expertise

MODEL	RF35-STD	RF40-STD	RF50-STD	RF55-STD	RF55-HD	RF60-STD	RF65-STD	RF65-HD	RF80-STD	RF100-STD	RF120-STD	RF200-STD	RF200S-STD	
DESCRIPTION	RF35 with 2-3/8 API reg pin connection	RF40 with 2-3/8 API reg pin connection	RF50 with 3-1/2 API reg pin connection	RF55 w/ 3-1/2 API reg pin connection & cutting backhead	Thick wall casing	RF60 with 3-1/2 API reg pin connection	RF65 with 3-1/2 API reg pin connection & cutting backhead	500 FSI high frequency hammer	RF80 with 4-1/2 API reg pin connection	RF100 with 6-5/8 API reg pin connection	RF120 with 6-5/8 API reg pin connection	RF200 with 8-5/8 API reg pin connection and jetted backhead	RF200S with 8-5/8 API reg pin connection and jetted backhead	
APPLICATION SUITABILITY	✓	✓	✓			✓	✓	✓	✓	✓	✓	✓	✓	
Geotechnical/Foundation	✓					✓								
Waterwell/Geothermal	✓	✓	✓	✓		✓			✓	✓	✓	✓	✓	
Quarry/Mining	✓	✓	✓	✓		✓		✓	✓					
Mineral Exploration		✓							✓	✓	✓	✓	✓	
Oil/Gas									✓					
AVAILABLE OPTIONS														
Bit retainer system						✓			✓	✓	✓	✓	✓	
Jetted backhead						✓			✓	✓	✓	✓	✓	
Deep-hole design			✓			✓			✓					
Directional	✓	✓							✓					
GENERAL SPECIFICATIONS														
Connection	Imperial	Metric	Imperial	Metric	Imperial	Metric	Imperial	Metric	Imperial	Metric	Imperial	Metric	Imperial	Metric
	2-3/8 reg pin 21 cubic pin	2-3/8 reg pin 21 cubic pin	3-1/2 reg pin	3-1/2 reg pin	3-1/2 API reg pin	3-1/2 API reg pin 350 BECO pin	3-1/2 API reg pin 350 BECO pin	3-1/2 API reg pin 350 BECO pin	4-1/2 API reg pin	6-5/8 API reg pin	6-5/8 API Reg Pin	8-5/8 reg pin 8" CRI Hex	8-5/8 API reg pin 8" CRI hex	
Bit Shank	DHD 35	CR40/CR40HD & TD40	QL50 / QL50 HD	QL50	QL50	QL60 / QL60 HD	QL60	QL60	QL80	N100	QL120	QL200	QL200	
Outside diameter (in/mm)	3.19 81.0	4.00 101.6	4.88 124.0	5.00 127.0	5.13 130.3	5.44 138.2	5.75 146.1	5.75 146.1	7.12 180.8	9.00 228.6	11.20 284.5	15.60 396.2	21.25 539.8	
Length w/o bit, shoulder to shoulder (in/mm)	30.03 762.8	36.04 915.4	40.03 1016.7	40.03 1016.7	40.03 1016.7	42.40 1077.0	42.40 1077.0	42.40 1077.0	57.23 1453.6	59.85 1520.2	72.91 1851.9	67.59 1717.0	73.74 1873.0	
Length with bit extended (in/mm)	33.93 861.8	40.39 1025.9	44.57 1132.0	44.57 1132.0	44.57 1132.0	47.75 1212.9	47.75 1212.9	47.75 1212.9	63.53 1613.6	66.79 1696.5	81.64 2073.7	79.01 2006.8	89.97 2285.2	
Length with bit retracted (in/mm)	32.62 828.5	39.17 994.9	43.30 1099.8	43.30 1099.8	43.30 1099.8	46.43 1179.3	46.43 1179.3	46.43 1179.3	61.73 1567.9	64.86 1647.4	79.41 2017.0	76.89 1953.0	87.74 2228.6	
Weight w/o bit (pds/kgs)	47.70 21.7	90.30 40.9	147.00 66.7	157.40 71.4	165.87 75.3	193.00 87.5	222.00 100.7	224.30 101.7	454.30 206.1	749.60 340.0	1387.8 629.5	2715 1231.5	3918.0 1780.9	
Backhead across flats (in)	1.5 x 3 AF		2 x 3-1/2 AF		2 x 3-1/2 AF		2 x 4 AF		2-1/2 x 5-7/8 AF		2-1/2 x 7-1/2 AF		1" Holes	
Minimum bit size (in/mm)	3.50 88.9	4.50 114.3	5.75 146.1	5.75 146.1	5.75 146.1	6.13 155.7	6.13 155.7	6.13 155.7	7.88 200.2	9.63 244.6	12.25 311.2	17.50 444.5	26.00 660.4	
Maximum bit size (in/mm)	4.25 108.0	5.00 127.0	6.00 152.4	6.00 152.4	6.00 152.4	6.75 171.5	6.75 171.5	6.75 171.5	10.00 254.0	12.25 311.2	22.00 558.8	26.00 660.4	36.00 914.4	
Bore (in/mm)	2.63 66.7	3.19 81.0	4.13 104.8	4.13 104.8	4.13 104.8	4.63 117.5	4.63 117.5	4.63 117.5	5.88 149.2	7.54 191.5	9.25 235.0	12.25 311.2	12.25 311.2	
Piston weight (pds/kgs)	10.50 4.8	20.00 9.1	31.5 14.3	31.5 14.3	31.5 14.3	35.00 15.9	35.00 15.9	35.00 15.9	107.20 48.7	178.00 80.9	304.00 138.2	610.00 277.3	610.00 277.3	
Stroke (in/mm)	4.00 101.6	4.00 101.6	4.00 101.6	4.00 101.6	4.00 101.6	3.50 88.9	3.50 88.9	3.50 88.9	4.00 101.6	4.00 101.6	4.00 101.6	4.00 101.6	4.00 101.6	
Maximum pressure (psig/bar)	350.00 24.1	350.00 24.1	350.00 24.1	350.00 24.1	350.00 24.1	350.00 24.1	350.00 24.1	350.00 24.1	350.00 24.1	350.00 24.1	350.00 24.1	250.00 17.2	250.00 17.2	
Maximum choke diameter (in/mm)	0.25 6.4	0.25 6.4	0.50 12.70	0.50 12.70	0.50 12.70	0.38 9.5	38 9.5	38 9.5	0.00 0.0	0.00 0.00	0.88 22.2	1.40 35.6	1.40 35.6	
Make-up torque (ft-lb & N-m)	3000 4062	4000 5416	5000 6770	5000 6770	5000 6770	6000 8124	6000 8124	6000 8124	8000 10832	10000 13540.0	12000 16248	18000 24372	18000 24372	
AIR CONSUMPTION														
100 PSI/6.9 bar (scfm/m³/min)	142 4.0	230 6.5	94 2.7	94 2.7	94 2.7	305 8.6	305 8.6	305 8.6	358 10.1	581 16.4	804 22.7	1584 44.7	1584 44.7	
100 psi (bpm)	1289 1288.2	1111 1110.6	1039 1039	1039 1039	1039 1039	1461 1460.5	1461 1460.5	1461 1460.5	830 829.7	950 950.0	585 585.0	701 701	701 701	
150 psi/10.3 bar (scfm/m³/min)	219 6.2	330 9.3	288 8.1	288 8.1	288 8.1	431 12.2	431 12.2	431 12.2	571 16.1	1000 28.2	1248 35.3	2470 69.8	2470 69.8	
150 psi (bpm)	1509 1509	1289 1289.4	1235 1234.5	1235 1234.5	1235 1234.5	1576 1575.5	1576 1575.5	1576 1575.5	947 946.6	1050 1050.0	695 695	807 807	807 807	
200 psi/13.8 bar (scfm/m³/min)	288 8.1	422 11.9	459 13.0	459 13.0	459 13.0	561 15.8	561 15.8	561 15.8	808 22.8	1400 39.5	1680 47.5	3389 95.7	3389 95.7	
200 psi (bpm)	1699 1698.6	1448 1448.4	1409 1409	1409 1409	1409 1409	1691 1690.5	1691 1690.5	1691 1690.5	1063 1063.4	1150 1150.0	805 805	923 923	923 923	
250 psi/17.2 bar (scfm/m³/min)	348 9.8	505 14.3	608 17.2	608 17.2	608 17.2	695 19.6	695 19.6	675 19.1	1067 30.2	1781 50.3	2100 59.3	4341 122.6	4341 122.6	
250 psi (bpm)	1858 1858	1588 1587.8	1563 1562.5	1563 1562.5	1563 1562.5	1806 1805.5	1806 1805.5	1806 1805.5	1180 1180.3	1250 1250.0	915 915	1049 1049	1049 1049	
300 psi/20.7 bar (scfm/m³/min)	400 11.3	579 16.4	734 20.7	734 20.7	734 20.7	832 23.5	832 23.5	850 24.1	1350 38.1	2143 60.5	2508 70.8			
300 psi (bpm)	1.987 1.987.3	1707 1707.4	1695 1695	1695 1695	1695 1695	1921 1920.5	1921 1920.5	1800 1800.0	1297 1297.1	1350 1350.0	1025 1025			
350 psi/24.1 bar (scfm/m³/min)	444 12.5	644 18.2	838 23.7	838 23.7	838 23.7	973 27.5	973 27.5	1000 28.3	1656 46.8	2486 70.2	2904 82			
350 psi (bpm)	2086 2086.5	1807 1807.4	1807 1806.5	1807 1806.5	1807 1806.5	2036 2035.5	2036 2035.5	1920 1920	1414 1414	1450 1450	1135 1135			
400 PSI/27.6 bar (scfm/m³/min)								1150 32.6						
400 psi (bpm)								2070 2070						
450 psi/31 bar (scfm/m³/min)								1250 35.4						
450 psi (bpm)								2160 2160						
500 psi/34.5 bar (scfm/m³/min)								1325 37.5						
500 psi (bpm)								2292 2292						