

# CENTER ROCK FORCE®

HIGH PERFORMANCE RF HAMMER SERIES



## Center Rock Inc's High Performance Down Hole Drills and Bits

The Center Rock Force® line of High Performance Down Hole drills and bits are available to suit a broad range of hole sizes and applications. All Center Rock Force® hammers feature a high efficiency and tuneable valved air cycle to optimize performance on your compressor. Many models also feature a heat resistant steel valve which keeps on working even in the most demanding quarry and mining applications. Additionally, most models feature reversible casings so you can get the most footage from your hammer. For high air flow deep hole applications accessories such as bit retrieval systems and jetted backheads are available.

Center Rock Inc.

**Our technology optimizes your impact.**

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**Drill Faster  
Run Harder  
Work Smarter**

| MODEL  | RF35-STD                               | RF40-STD                               | RF50-STD                               | RF55-STD  | RF60-STD                               | RF65-STD  | RF80-STD                               | RF88-STD                               | RF100-STD                               | RF120-STD                               | RF200-STD   | RF200S-STD   |
|--|--|--|--|---|--|---|--|--|---|---|---|--|
| CPU  | 91002395                               | 91001602                               | 91001174                               | 91000917  | 91001065                               | 91000912  | 91001192                               | 91001223                               | 91001593                                | 91001930                                | 91001256  | 91002141   |
| 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 with 3-1/2 API reg pin connection & cutting backhead | RF60 with 3-1/2 API reg pin connection | RF65 with 3-1/2 API reg pin connection & cutting backhead | RF80 with 4-1/2 API reg pin connection | RF88 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                             |  |  | ✓                                      |   |  |   |  |  |   |   |   |  |
| GENERAL SPECIFICATIONS                       | Imperial                               | Imperial                               | Imperial                               | Imperial  | Imperial                               | Imperial  | Imperial                               | Imperial                               | Imperial                                | Imperial                                | Imperial  | Imperial   |
| Connection                                   | 2-3/8 API reg pin                      | 2-3/8 API reg pin                      | 3-1/2 API reg pin                      | 3-1/2 API reg pin   | 3-1/2 API reg pin                      | 3-1/2 API reg pin   | 4-1/2 API reg pin                      | 4-1/2 API reg pin                      | 6-5/8 API Reg Pin                       | 6-5/8 API reg pin                       | 8-5/8 API reg pin   | 8-5/8 API reg pin  |
| Bit Shank                                    | DHD 35                                 | CR40                                   | QL50                                   | QL50  | QL60                                   | QL60  | QL80                                   | CR88                                   | N100                                    | QL120                                   | QL200   | QL200  |
| Reversible casing                            | NO                                     | NO                                     | YES                                    | YES   | YES                                    | YES   | YES                                    | YES                                    | No                                      | NO                                      | YES   | YES  |
| Outside diameter (in/mm)                     | 3.19                                   | 4.00                                   | 4.75                                   | 5.00  | 5.44                                   | 5.88  | 7.13                                   | 7.75                                   | 9.0                                     | 11.20                                   | 15.60   | 15.60  |
| Length w/o bit, shoulder to shoulder (in/mm) | 30.0                                   | 36.8                                   | 42.4                                   | 40.1  | 42.7                                   | 41.8  | 57.2                                   | 58.9                                   | 59.9                                    | 72.9                                    | 67.2  | 73.7   |
| Length with bit extended (in/mm)             | 33.9                                   | 40.8                                   | 46.6                                   | 44.6  | 47.8                                   | 46.0  | 63.7                                   | 66.8                                   | 69.0                                    | 83.6                                    | 78.5  | 85.3   |
| Length with bit retracted (in/mm)            | 32.6                                   | 39.7                                   | 45.4                                   | 43.3  | 46.4                                   | 44.9  | 61.9                                   | 64.9                                   | 67.1                                    | 81.4                                    | 76.2  | 83.1   |
| Weight w/o bit (pds/kgs)                     | 47.7                                   | 21.7                                   | 145                                    | 153   | 186                                    | 219   | 443                                    | 518                                    | 740.0                                   | 1358                                    | 2663  | 3055   |
| Backhead across flats (in)                   | 1.25 X 2.5 AF                          | 1.5 x 3 AF                             | 2 x 3-1/2 AF                           | 2 x 3-1/2 AF  | 2-1/2 x 4 AF                           | 2-1/4 x 3-1/2 AF  | 2-1/2 x 5-7/8 AF                       | 2 x 6-7/16 AF                          | 2-1/2 x 7-1/2 AF                        | 2-1/2 x 9-1/4 AF                        | 1" Holes  | 1" Holes   |
| Minimum bit size (in/mm)                     | 3.50                                   | 4.50                                   | 5.25                                   | 5.75  | 6.00                                   | 6.50  | 7.88                                   | 8.75                                   | 9.63                                    | 12.25                                   | 17.50   | 28.00  |
| Maximum bit size (in/mm)                     | 4.25                                   | 108.0                                  | 6.00                                   | 6.00  | 6.75                                   | 6.75  | 10.00                                  | 11.00                                  | 12.25                                   | 22.00                                   | 26.00   | 36.00  |
| Bore (in/mm)                                 | 2.625                                  | 3.190                                  | 3.890                                  | 4.125   | 4.500                                  | 4.875   | 5.875                                  | 6.410                                  | 7.54                                    | 9.25                                    | 12.25   | 12.25  |
| Piston weight (pds/kgs)                      | 10.5                                   | 4.8                                    | 31.9                                   | 31.5  | 40.0                                   | 45  | 107.2                                  | 117                                    | 178.0                                   | 304                                     | 610   | 610  |
| Stroke (in/mm)                               | 4.00                                   | 101.6                                  | 4.00                                   | 4.00  | 4.00                                   | 4.00  | 4.00                                   | 4.00                                   | 4.0                                     | 4.00                                    | 4.00  | 4.00   |
| Maximum pressure (psig/bar)                  | 350.0                                  | 24.1                                   | 350.0                                  | 350.0   | 350.0                                  | 350.0   | 350.0                                  | 350.0                                  | 350.0                                   | 350.0                                   | 250.0   | 250.0  |
| Maximum choke diameter (in/mm)               | 0.25                                   | 6.35                                   | 0.50                                   | 0.50  | 0.38                                   | 0.00  | 0.00                                   | 0.00                                   | 0.00                                    | 0.88                                    | 1.40  | 1.40   |
| Make-up torque (ft-lb & N-m)                 | 3000                                   | 4062                                   | 5000                                   | 6770  | 6000                                   | 8124  | 8000                                   | 9000                                   | 10000                                   | 12000                                   | 18000   | 18000  |
| AIR CONSUMPTION                              |  |  |  |   |  |   |  |  |   |   |   |  |
| 100 PSV/6.9 bar (scfm/m <sup>3</sup> /min)   | 142                                    | 4.0                                    | 202                                    | 149   | 305                                    | 235   | 358                                    | 560                                    | 581                                     | 909                                     | 44.7  | 1584   |
| 100 psi (bpm)                                | 1289                                   | 1226                                   | 1116                                   | 1116  | 1122                                   | 1350  | 830                                    | 968                                    | 950                                     | 585                                     | 701   | 701  |
| 150 psi/10.3 bar (scfm/m <sup>3</sup> /min)  | 219                                    | 6.2                                    | 284                                    | 8.0   | 431                                    | 383   | 571                                    | 826                                    | 1000                                    | 1336                                    | 2470  | 2470   |
| 150 psi (bpm)                                | 1509                                   | 1353                                   | 1266                                   | 1266  | 1301                                   | 1456  | 947                                    | 1050                                   | 1050                                    | 695                                     | 807   | 807  |
| 200 psi/13.8 bar (scfm/m <sup>3</sup> /min)  | 288                                    | 8.1                                    | 386                                    | 10.9  | 561                                    | 543   | 808                                    | 1092                                   | 1400                                    | 1811                                    | 3389  | 3389   |
| 200 psi (bpm)                                | 1699                                   | 1479                                   | 1401                                   | 1401  | 1453                                   | 1561  | 1063                                   | 1132                                   | 1150                                    | 805                                     | 923   | 923  |
| 250 psi/17.2 bar (scfm/m <sup>3</sup> /min)  | 348                                    | 9.8                                    | 488                                    | 13.8  | 695                                    | 713   | 1067                                   | 1358                                   | 1781                                    | 2333                                    | 4341  | 4341   |
| 250 psi (bpm)                                | 1858                                   | 1606                                   | 1521                                   | 1521  | 1576                                   | 1667  | 1180                                   | 1215                                   | 1250                                    | 915                                     | 1049  | 1049   |
| 300 psi/20.7 bar (scfm/m <sup>3</sup> /min)  | 400                                    | 11.3                                   | 590                                    | 16.7  | 832                                    | 894   | 1350                                   | 1624                                   | 2143                                    | 2903                                    | 5324  | 5324   |
| 300 psi (bpm)                                | 1,987                                  | 1733                                   | 1626                                   | 1626  | 1671                                   | 1773  | 1297                                   | 1297                                   | 1350                                    | 1025                                    | 1185  | 1185   |
| 350 psi/24.1 bar (scfm/m <sup>3</sup> /min)  | 444                                    | 12.5                                   | 691                                    | 19.5  | 783                                    | 30.7  | 1656                                   | 1890                                   | 2486                                    | 3519                                    | 6340  | 6340   |
| 350 psi (bpm)                                | 2086                                   | 2086                                   | 1860                                   | 1716  | 1738                                   | 1878  | 1414                                   | 1379                                   | 1450                                    | 1135                                    | 1331  | 1331   |