








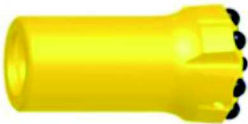





ESPARTANA[®]

DRILL TOOLS

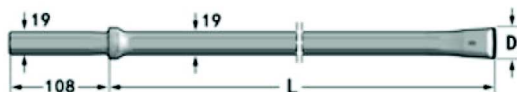




| Button type | Applications |
|---|--|
| <p data-bbox="357 365 509 387">Spherical button</p>  | <p data-bbox="683 389 834 412">Universal button</p> <p data-bbox="683 427 898 450">Wearing resistance good</p> <p data-bbox="683 465 930 488">Best suited to hard ground</p> <p data-bbox="683 504 1002 526">27,000–48,000 PSI (180 to 320 MPa)</p> <p data-bbox="683 542 919 564">Abrasive to very abrasive</p> |
| <p data-bbox="339 656 526 678">Hemispherical button</p>  | <p data-bbox="683 680 834 703">Universal button</p> <p data-bbox="683 719 898 741">Wearing resistance good</p> <p data-bbox="683 757 930 779">Best suited to hard ground</p> <p data-bbox="683 795 1002 817">25,000–45,000 PSI (170 to 300 MPa)</p> <p data-bbox="683 833 919 855">Abrasive to very abrasive</p> |
| <p data-bbox="352 969 505 992">Parabolic button</p>  | <p data-bbox="683 994 834 1016">Universal button</p> <p data-bbox="683 1032 834 1055">Fast penetration</p> <p data-bbox="683 1070 1007 1093">Best suited to medium to hard rock</p> <p data-bbox="683 1108 1002 1131">15,000–25,000 PSI (100 to 170 MPa)</p> <p data-bbox="683 1146 895 1169">Mildly abrasive ground</p> |
| <p data-bbox="357 1261 501 1283">Conical button</p>  | <p data-bbox="683 1330 834 1352">Fast penetration</p> <p data-bbox="683 1368 1034 1391">Best suited for smaller diameter bits</p> <p data-bbox="683 1406 1062 1429">Suited for all non-abrasive ground types</p> |
| <p data-bbox="357 1585 509 1608">Ballistic button</p>  | <p data-bbox="683 1632 834 1655">Fast penetration</p> <p data-bbox="683 1671 914 1693">Best suited to soft rock</p> <p data-bbox="683 1709 994 1731">10,000–20,000 PSI (70 to 140 MPa)</p> <p data-bbox="683 1747 866 1769">Non abrasive ground</p> |

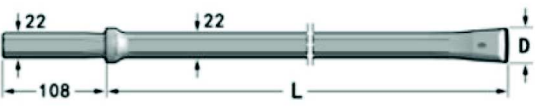
Bit face designs

| Face | Applications |
|---|--|
| <p>Button bit, short skirt</p>  | <p>For H22 drill rod</p> |
| <p>Button bit, long skirt</p>  | <p>For H22 drill rod</p> |
| <p>Button bit</p>  | <p>General purpose bit</p> |
| <p>Retrac button bit, long skirt</p>  | <p>Design to provide easy removal and completion of bit in adverse hole conditions</p> |
| <p>Retrac button bit, short skirt</p>  | <p>Design to provide easy removal and completion of bit in adverse hole conditions</p> |
| <p>Flat face</p>  | <p>General purpose bit Suited for medium to hard rock</p> |
| <p>Drop center</p>  | <p>Straight hole application Suited for medium to hard rock</p> |
| <p>New drop center</p>  | <p>Straight hole application Suited for medium to hard rock</p> |

Integral drill steels

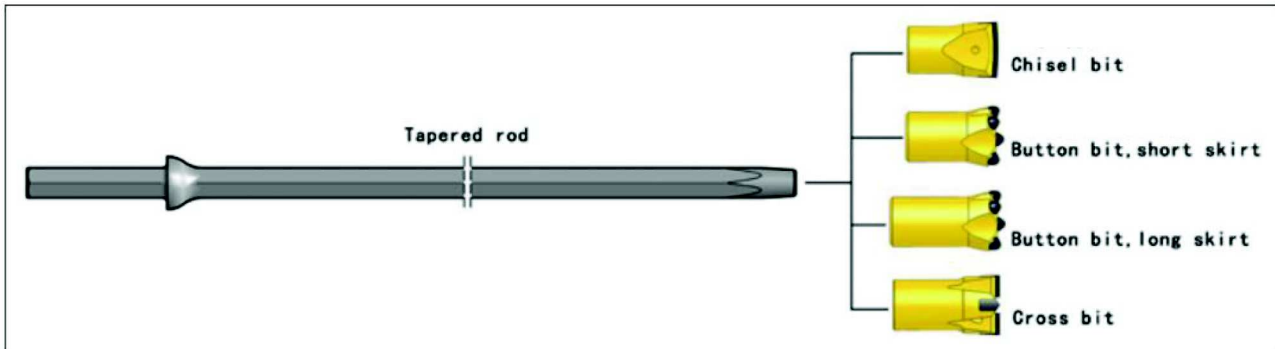
| 19mm | Length | | Bit dia. | Weight approx kg | SANSHAN P/N | |
|--|--|----------|---------------|------------------|-----------------------|-----------------------|
| | mm | foot | | | | |
| <p>Chisel bit integral</p> <p>Shank 19mm×108mm</p>  | 400 | 1' 4" | 29 | 1.3 | 5H19-291508-0400-40-2 | |
| | 500 | 1' 8" | 29 | 1.5 | 5H19-291508-0500-40-2 | |
| | 800 | 2' 7" | 28 | 2.2 | 5H19-281508-0800-40-2 | |
| | 1000 | 3' 33/8" | 28 | 2.6 | 5H19-281508-1000-40-2 | |
| | 1200 | 3' 11" | 27 | 3.0 | 5H19-271508-1200-40-2 | |
| | 1600 | 5' 3" | 27 | 3.9 | 5H19-271508-1600-40-2 | |
| | 2400 | 7' 10" | 26 | 5.7 | 5H19-261508-2400-40-2 | |
| | 3200 | 10' 6" | 25 | 7.5 | 5H19-251508-3200-40-2 | |
| | 4000 | 13' 1" | 24 | 9.2 | 5H19-251508-4000-40-2 | |
| | 400 | 1' 4" | 24 | 1.3 | 5H19-241508-0400-40-2 | |
| | 800 | 2' 7" | 23 | 2.2 | 5H19-231508-0800-40-2 | |
| | 600 | 2' | 27 | 1.7 | 5H19-271508-0600-40-2 | |
| | 1200 | 3' 11" | 26 | 3.0 | 5H19-261508-1200-40-2 | |
| | 2000 | 6' 7" | 24 | 4.8 | 5H19-241508-2000-40-2 | |
| | 2400 | 7' 10" | 24 | 5.7 | 5H19-241508-2400-40-2 | |
| | 2700 | 8' 10" | 24 | 6.3 | 5H19-241508-2700-40-2 | |
| | 400 | 1' 4" | 35 | 1.3 | 5H19-351810-0400-40-2 | |
| | 800 | 2' 7" | 34 | 2.2 | 5H19-341810-0800-40-2 | |
| | <p>Chisel bit integral</p> <p>Shank 22mm×108mm</p>  | 400 | 1' 4" | 24 | 1.5 | 5H19-241508-0400-40-2 |
| | | 400 | 1' 4" | 29 | 1.5 | 5H19-291508-0400-40-2 |
| 600 | | 2' | 27 | 1.7 | 5H19-271508-0600-40-2 | |
| 800 | | 2' 7" | 23 | 2.3 | 5H19-231508-0800-40-2 | |
| 800 | | 2' 7" | 28 | 2.3 | 5H19-281508-0800-40-2 | |
| 1200 | | 3' 11" | 23 | 3.2 | 5H19-231508-1200-40-2 | |
| 1600 | | 5' 3" | 27 | 4.0 | 5H19-271508-1600-40-2 | |
| 2000 | | 6' 7" | 28 | 5.0 | 5H19-281508-2000-40-2 | |
| 2400 | | 7' 10" | 26 | 5.8 | 5H19-261508-2400-40-2 | |
| 3200 | | 10' 6" | 25 | 7.5 | 5H19-251508-3200-40-2 | |
| <p>Plus hole integral steels</p> <p>Shank 19mm×108mm</p>  | Length (mm) | Bit dia. | Turned length | Weight approx kg | SANSHAN P/N | |
| | 210 | 17 | 150 | 0.7 | 5H19-171308-0210-40-2 | |
| | 210 | 20 | 150 | 0.7 | 5H19-201308-0210-40-2 | |
| | 210 | 22 | 150 | 0.7 | 5H19-221308-0210-40-2 | |
| | 260 | 20 | 200 | 0.8 | 5H19-201308-0260-40-2 | |
| | 260 | 22 | 200 | 0.8 | 5H19-221308-0260-40-2 | |
| | 310 | 22 | 250 | 0.9 | 5H19-221308-0310-40-2 | |
| | 340 | 20 | 280 | 1.0 | 5H19-201308-0340-40-2 | |
| | <p>Shank 19mm×82mm</p> | 210 | 20 | 150 | 0.7 | 5H19-201308-0210-40-2 |
| | | 210 | 22 | 150 | 0.7 | 5H19-221308-0210-40-2 |

Integral drill steels

| 22mm | Length | | Bit dia. | Weight approx kg | SANSHAN P/N | |
|--|--------|--------|----------|------------------|-----------------------|-----------------------|
| | mm | Foot | | | | |
| <p>Chisel bit integral</p> <p>Shank 22mm×108mm</p>  | 800 | 2' 7" | 34 | 3.0 | 5H22-341810-0800-40-2 | |
| | 1600 | 5' 3" | 33 | 5.2 | 5H22-331810-1600-40-2 | |
| | 2400 | 7' 10" | 32 | 8.0 | 5H22-321808-2400-40-2 | |
| | 3200 | 10' 6" | 31 | 10.2 | 5H22-311808-3200-40-2 | |
| | 4000 | 13' 1" | 30 | 12.9 | 5H22-301808-4000-40-2 | |
| | 4800 | 15' 9" | 29 | 15.1 | 5H22-291508-4800-40-2 | |
| | 5600 | 18' 4" | 28 | 17.6 | 5H22-281508-5600-40-2 | |
| | 6400 | 21' | 27 | 20.1 | 5H22-271508-6400-40-2 | |
| | 7200 | 23' 6" | 26 | 22.5 | 5H22-261508-7200-40-2 | |
| | 800 | 2' 7" | 40 | 3.0 | 5H22-401810-0800-40-2 | |
| | 1600 | 5' 3" | 39 | 5.2 | 5H22-391810-1600-40-2 | |
| | 2400 | 7' 10" | 38 | 8.0 | 5H22-381810-2400-40-2 | |
| | 3200 | 10' 6" | 37 | 10.2 | 5H22-371810-3200-40-2 | |
| | 4000 | 13' 1" | 36 | 12.9 | 5H22-361810-4000-40-2 | |
| | 4800 | 15' 9" | 35 | 15.1 | 5H22-351810-4800-40-2 | |
| | 5600 | 18' 4" | 34 | 17.6 | 5H22-341810-5600-40-2 | |
| | 6400 | 21' | 33 | 20.1 | 5H22-331810-6400-40-2 | |
| | 7200 | 23' 6" | 32 | 22.5 | 5H22-321808-7200-40-2 | |
| | 8000 | 26' 2" | 31 | 25.0 | 5H22-311808-8000-40-2 | |
| | | 400 | 1' 4" | 34 | 1.7 | 5H22-341810-0400-40-2 |
| | | 800 | 2' 7" | 33 | 3.0 | 5H22-331810-0800-40-2 |
| | | 1200 | 3' 11" | 32 | 4.1 | 5H22-321808-1200-40-2 |
| | | 1600 | 5' 3" | 31 | 5.2 | 5H22-311808-1600-40-2 |
| | | 2000 | 6' 7" | 30 | 6.7 | 5H22-301808-2000-40-2 |
| | 600 | 2' | 41 | 2.4 | 5H22-411810-0600-40-2 | |
| | 1200 | 3' 11" | 40 | 4.3 | 5H22-401810-1200-40-2 | |
| | 1800 | 5' 11" | 39 | 6.2 | 5H22-391810-1800-40-2 | |
| | 2400 | 7' 10" | 38 | 8.0 | 5H22-381810-2400-40-2 | |
| | 400 | 1' 4" | 41 | 1.7 | 5H22-411810-0400-40-2 | |
| | 800 | 2' 7" | 29 | 3.0 | 5H22-291508-0800-40-2 | |
| | 800 | 2' 7" | 38 | 3.1 | 5H22-381810-0800-40-2 | |
| | 1200 | 3' 11" | 39 | 4.3 | 5H22-391810-1200-40-2 | |
| | 1600 | 5' 3" | 36 | 5.2 | 5H22-361810-1600-40-2 | |
| | 1800 | 5' 11" | 36 | 6.0 | 5H22-361810-1800-40-2 | |
| | 2000 | 6' 7" | 32 | 6.7 | 5H22-321808-2000-40-2 | |
| | 2400 | 7' 10" | 27 | 8.0 | 5H22-271508-2400-40-2 | |
| | 3200 | 10' 6" | 27 | 10.2 | 5H22-271508-3200-40-2 | |
| | 3200 | 10' 6" | 32 | 10.3 | 5H22-321808-3200-40-2 | |
| | 6400 | 21' | 30 | 20.1 | 5H22-301808-6400-40-2 | |
| | 8000 | 26' 2" | 26 | 25.0 | 5H22-261508-8000-40-2 | |

Tapered rock drilling tools

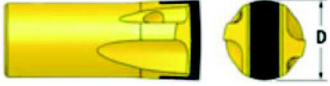
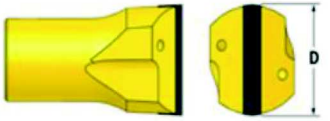
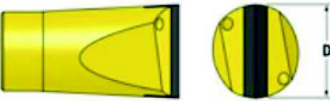
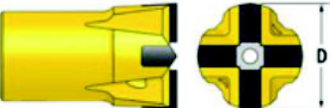
7°



| Drill bit | Diameter | | For class of rock | Tip size(mm) | Taper | Weight (kg) | SANSHAN P/N |
|--------------------------|----------|---------|-------------------|----------------|-------|-----------------------|-----------------------|
| | mm | inch | | Height X Width | | | |
| Horseshoe chisel bit | 26 | 1 1/32 | 10-14 | 10×7 | 7° | 0.17 | 1111-26721-10/7-40-21 |
| | 28 | 1 7/64 | 10-14 | 10×7 | 7° | 0.18 | 1111-28721-10/7-40-21 |
| | 30 | 1 3/16 | 8-12 | 13.5×8 | 7° | 0.22 | 1111-30722-13/8-40-14 |
| | 30 | 1 3/16 | 10-14 | 13.5×8 | 7° | 0.22 | 1111-30722-13/8-40-13 |
| | 32 | 1 1/4 | 8-12 | 13.5×8 | 7° | 0.24 | 1111-32722-13/8-40-14 |
| | 32 | 1 1/4 | 10-14 | 13.5×8 | 7° | 0.24 | 1111-32722-13/8-40-13 |
| | 34 | 1 11/32 | 8-12 | 13.5×8 | 7° | 0.27 | 1111-34722-13/8-40-14 |
| | 34 | 1 11/32 | 10-14 | 13.5×8 | 7° | 0.27 | 1111-34722-13/8-40-13 |
| | 36 | 1 27/64 | 8-12 | 13.5×8 | 7° | 0.30 | 1111-36722-13/8-40-14 |
| | 36 | 1 27/64 | 10-14 | 13.5×8 | 7° | 0.30 | 1111-36722-13/8-40-13 |
| | 38 | 1 1/2 | 8-12 | 13.5×8 | 7° | 0.33 | 1111-38723-13/8-40-14 |
| | 38 | 1 1/2 | 10-14 | 13.5×8 | 7° | 0.33 | 1111-38723-13/8-40-13 |
| | 38 | 1 1/2 | 8-12 | 15×9 | 7° | 0.33 | 1111-38723-15/9-40-14 |
| | 38 | 1 1/2 | 10-14 | 15×9 | 7° | 0.33 | 1111-38723-15/9-40-13 |
| | 40 | 1 37/64 | 8-12 | 13.5×9.2 | 7° | 0.38 | 1111-40723-13/9-40-14 |
| | 40 | 1 37/64 | 10-14 | 13.5×9.2 | 7° | 0.38 | 1111-40723-13/9-40-13 |
| | 40 | 1 37/64 | 14-16 | 13.5×9.2 | 7° | 0.38 | 1111-40723-13/9-40-12 |
| | 40 | 1 37/64 | 16-18 | 13.5×9.2 | 7° | 0.38 | 1111-40723-13/9-40-11 |
| | 40 | 1 37/64 | 8-12 | 15×9.8 | 7° | 0.38 | 1111-40723-15/9-40-14 |
| | 40 | 1 37/64 | 10-14 | 15×9.8 | 7° | 0.38 | 1111-40723-15/9-40-13 |
| 40 | 1 37/64 | 14-16 | 15×9.8 | 7° | 0.38 | 1111-40723-15/9-40-12 | |
| 40 | 1 37/64 | 16-18 | 15×9.8 | 7° | 0.38 | 1111-40723-15/9-40-11 | |
| 42 | 1 2/3 | 8-12 | 13.5×9.2 | 7° | 0.41 | 1111-42723-13/9-40-14 | |
| 42 | 1 21/32 | 10-14 | 13.5×9.2 | 7° | 0.41 | 1111-42723-13/9-40-13 | |
| 42 | 1 21/32 | 14-16 | 13.5×9.2 | 7° | 0.41 | 1111-42723-13/9-40-12 | |
| 42 | 1 21/32 | 16-18 | 13.5×9.2 | 7° | 0.41 | 1111-42723-13/9-40-11 | |
| 42 | 1 21/32 | 8-12 | 15×9.8 | 7° | 0.41 | 1111-42723-15/9-40-14 | |
| 42 | 1 21/32 | 10-14 | 15×9.8 | 7° | 0.41 | 1111-42723-15/9-40-13 | |
| 42 | 1 21/32 | 10-14 | 15×9.8 | 7° | 0.41 | 1111-42723-15/9-40-12 | |
| 42 | 1 21/32 | 16-18 | 15×9.8 | 7° | 0.41 | 1111-42723-15/9-40-11 | |
| 43 | 1 11/16 | 8-12 | 13.5×9.2 | 7° | 0.42 | 1111-43723-13/9-40-14 | |
| 43 | 1 11/16 | 10-14 | 13.5×9.2 | 7° | 0.42 | 1111-43723-13/9-40-13 | |
| 43 | 1 11/16 | 8-12 | 15×9.8 | 7° | 0.42 | 1111-43723-15/9-40-14 | |
| 43 | 1 11/16 | 10-14 | 15×9.8 | 7° | 0.42 | 1111-43723-15/9-40-13 | |

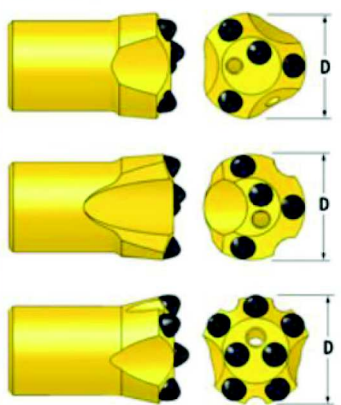
Tapered rock drilling tools


7°

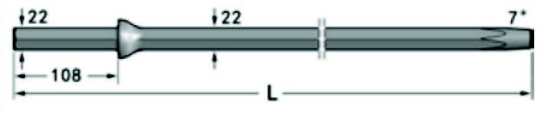
| Drill bit | Diameter | | For class of rock | Tip size (mm) | Taper | Weight (kg) | SANSHAN P/N |
|--|----------|---------|-------------------|----------------|-------|------------------------|------------------------|
| | mm | inch | | Height x Width | | | |
| Oblique chipways chisel bit  | 20 | 25/32 | 10-14 | 12×6 | 4° | 0.10 | 1112-20415-12/6-40-22 |
| | 22 | 55/64 | 10-14 | 12×6 | 4° | 0.12 | 1112-22415-12/6-40-22 |
| | 24 | 15/16 | 10-14 | 12×6 | 4° | 0.14 | 1112-24415-12/6-40-22 |
| | 26 | 1 1/32 | 10-14 | 12×6 | 4° | 0.16 | 1112-26415-12/6-40-22 |
| | 28 | 1 7/64 | 10-14 | 13×8 | 7° | 0.19 | 1112-28722-13/8-40-22 |
| | 30 | 1 3/16 | 10-14 | 13.5×8 | 7° | 0.22 | 1112-30722-13/8-40-22 |
| | 32 | 1 1/4 | 10-14 | 13.5×8 | 7° | 0.24 | 1112-32722-13/8-40-22 |
| | 33 | 1 19/64 | 10-14 | 13.5×8 | 7° | 0.25 | 1112-33722-13/8-40-22 |
| | 34 | 1 11/32 | 10-14 | 13.5×8 | 7° | 0.27 | 1112-34722-13/8-40-22 |
| | 36 | 1 27/64 | 10-14 | 13.5×8 | 7° | 0.29 | 1112-36722-13/8-40-22 |
| | 38 | 1 1/2 | 10-14 | 13.5×8 | 7° | 0.34 | 1112-38723-13/8-40-22 |
| | 40 | 1 37/64 | 10-14 | 13.5×9.2 | 7° | 0.40 | 1112-40723-13/9-40-22 |
| | 41 | 1 5/8 | 10-14 | 13.5×9.2 | 7° | 0.41 | 1112-41723-13/9-40-22 |
| | 42 | 1 21/32 | 10-14 | 13.5×9.2 | 7° | 0.43 | 1112-42723-13/9-40-22 |
| Flat chipways chisel bit  | 38 | 1 1/2 | 10-14 | 16×10 | 7° | 0.36 | 1113-38723-16/10-40-22 |
| | 40 | 1 37/64 | 10-14 | 16×10 | 7° | 0.38 | 1113-40723-16/10-40-22 |
| | 41 | 1 5/8 | 10-14 | 16×10 | 7° | 0.41 | 1113-41723-16/10-40-22 |
| | 42 | 1 21/32 | 10-14 | 16×10 | 7° | 0.43 | 1113-42723-16/10-40-22 |
| | 45 | 1 3/4 | 10-14 | 22×16×10 | 7° | 0.60 | 1113-45723-16/10-40-22 |
| | 46 | 1 3/4 | 10-14 | 22×16×10 | 7° | 0.61 | 1113-46723-16/10-40-22 |
| | 48 | 1 7/8 | 10-14 | 22×16×10 | 7° | 0.63 | 1113-48723-16/10-40-22 |
| | 50 | 1 31/32 | 10-14 | 22×16×10 | 7° | 0.65 | 1113-50723-16/10-40-22 |
| | 56 | 2 1/4 | 10-14 | 24×16×10 | 7° | 0.82 | 1113-56723-16/10-40-22 |
| | 60 | 2 23/64 | 10-14 | 26×16×10 | 7° | 0.91 | 1113-60723-16/10-40-22 |
| | 65 | 2 1/2 | 10-14 | 26×16×10 | 7° | 1.12 | 1113-65723-16/10-40-22 |
| 80 | 3 1/8 | 10-14 | 36×16×10 | 7° | 1.40 | 1113-80723-16/10-40-22 | |
| Oblique-flat chipways chisel bit  | 36 | 1 27/64 | 10-14 | 15×10 | 7° | 0.40 | 1114-36725-15/10-40-22 |
| | 38 | 1 1/2 | 10-14 | 15×10 | 7° | 0.42 | 1114-38725-15/10-40-22 |
| | 40 | 1 37/64 | 10-14 | 15×10 | 7° | 0.45 | 1114-40725-15/10-40-22 |
| | 41 | 1 5/8 | 10-14 | 15×10 | 7° | 0.47 | 1114-41725-15/10-40-22 |
| | 42 | 1 21/32 | 10-14 | 15×10 | 7° | 0.49 | 1114-42725-15/10-40-22 |
| 43 | 1 11/16 | 10-14 | 15×10 | 7° | 0.51 | 1114-43725-15/10-40-22 | |
| Cross-type bit  | 30 | 1 3/16 | 11-15 | 12×12×8 | 7° | 0.29 | 1221-30722-12/8-40-22 |
| | 32 | 1 1/4 | 11-15 | 12×12×8 | 7° | 0.31 | 1221-32722-12/8-40-22 |
| | 33 | 1 19/64 | 11-15 | 12×12×8 | 7° | 0.33 | 1221-33722-12/8-40-22 |
| | 34 | 1 11/32 | 11-15 | 12×12×8 | 7° | 0.34 | 1221-34722-12/8-40-22 |
| | 35 | 1 3/8 | 11-15 | 12×12×8 | 7° | 0.36 | 1221-35722-12/8-40-22 |
| | 36 | 1 27/64 | 11-15 | 13×12×8 | 7° | 0.37 | 1221-36722-12/8-40-22 |
| | 38 | 1 1/2 | 11-15 | 14×12×8 | 7° | 0.43 | 1221-38723-12/8-40-22 |
| | 40 | 1 37/64 | 11-15 | 15×12×8 | 7° | 0.47 | 1221-40723-12/8-40-22 |
| | 41 | 1 5/8 | 11-15 | 15×12×8 | 7° | 0.49 | 1221-41723-12/8-40-22 |
| | 42 | 1 21/32 | 11-15 | 15×12×8 | 7° | 0.51 | 1221-42723-12/8-40-22 |
| | 43 | 1 11/16 | 11-15 | 15×12×8 | 7° | 0.53 | 1221-43723-12/8-40-22 |
| | 45 | 1 3/4 | 11-15 | 17×14×8 | 7° | 0.58 | 1221-45723-14/8-40-22 |
| | 48 | 1 7/8 | 11-15 | 17×14×8 | 7° | 0.67 | 1221-48723-14/8-40-22 |
| | 50 | 1 31/32 | 11-15 | 19×14×8 | 7° | 0.72 | 1221-50723-14/8-40-22 |
| 55 | 2 1/4 | 11-15 | 20×16×10 | 7° | 0.92 | 1221-55725-16/10-40-22 | |
| 60 | 2 3/8 | 11-15 | 22×16×10 | 7° | 1.19 | 1221-60725-16/10-40-22 | |

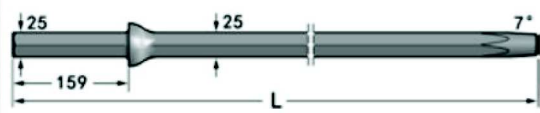
Tapered rock drilling tools

7°

| Drill bit | Diameter | | No X button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N |
|--|----------|---------|----------------------|-------|-------|---------------|------|-------------------------|-------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Size | | |
| Button bit, Short skirt  | 32 | 1 1/4 | 1×8 | 3×8 | 35° | 1 | 1 | 0.24 | 1431-32722-18/38-40-53 |
| | 33 | 1 19/64 | 2×7 | 5×7 | 35° | 2 | 1 | 0.26 | 1431-33722-27/57-42-53 |
| | 34 | 1 11/32 | 2×7 | 4×7 | 40° | 1 | 1 | 0.29 | 1431-34722-27/47-42-53 |
| | 35 | 1 3/8 | 2×7 | 5×8 | 35° | 1 | 1 | 0.33 | 1431-35722-27/58-42-53 |
| | 36 | 1 27/64 | 1×8 | 3×9 | 40° | 1 | 1 | 0.37 | 1431-36722-18/39-42-53 |
| | 36 | 1 27/64 | 2×7 | 5×8 | 35° | 1 | 1 | 0.37 | 1431-36722-27/58-42-53 |
| | 38 | 1 1/2 | 1×8 | 3×9 | 35° | 1 | 1 | 0.38 | 1431-38723-18/39-42-53 |
| | 38 | 1 1/2 | 2×7 | 5×8 | 35° | 1 | 1 | 0.38 | 1431-38723-27/58-42-53 |
| | 38 | 1 1/2 | 2×7 | 5×9 | 40° | 2 | 1 | 0.38 | 1431-38723-27/59-42-53 |
| | 40 | 1 37/64 | 1×8 | 3×9 | 30° | 1 | 1 | 0.40 | 1431-40723-18/39-40-53 |
| | 40 | 1 37/64 | 1×9 | 3×10 | 30° | 1 | 1 | 0.40 | 1431-40723-19/310-40-53 |
| | 40 | 1 37/64 | 1×9 | 3×9 | 35° | 1 | 1 | 0.40 | 1431-40723-19/39-42-53 |
| 40 | 1 37/64 | 2×7 | 5×9 | 35° | 1 | 1 | 0.40 | 1431-40723-27/59-42-53 | |
| 42 | 1 21/32 | 1×8 | 3×9 | 30° | 1 | 1 | 0.43 | 1431-42723-18/39-40-53 | |
| 42 | 1 21/32 | 1×9 | 3×10 | 30° | 1 | 1 | 0.43 | 1431-42723-19/310-40-53 | |
| 42 | 1 21/32 | 1×9 | 3×9 | 35° | 1 | 1 | 0.43 | 1431-42723-19/39-42-53 | |
| 42 | 1 37/64 | 2×8 | 5×9 | 35° | 1 | 1 | 0.43 | 1431-42723-28/59-42-53 | |

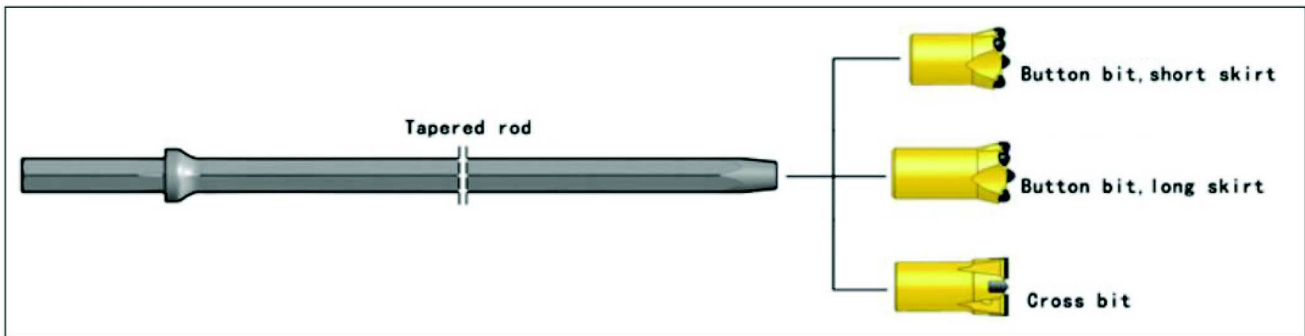
| | | | | | | | | | |
|--|----|---------|-----|-----|-----|---|---|------|------------------------|
| Long skirt  | 32 | 1 1/4 | 2×7 | 5×7 | 35° | 1 | 1 | 0.30 | 1435-32722-27/57-45-51 |
| | 33 | 1 19/64 | 2×7 | 5×7 | 35° | 1 | 1 | 0.31 | 1435-33722-27/57-45-51 |
| | 35 | 1 3/8 | 2×7 | 5×8 | 35° | 1 | 1 | 0.36 | 1435-35722-27/58-45-51 |
| | 38 | 1 1/2 | 2×7 | 5×9 | 35° | 1 | 1 | 0.41 | 1435-38723-27/59-45-51 |
| | 41 | 1 5/8 | 2×7 | 5×9 | 35° | 1 | 1 | 0.42 | 1435-41723-27/59-45-51 |

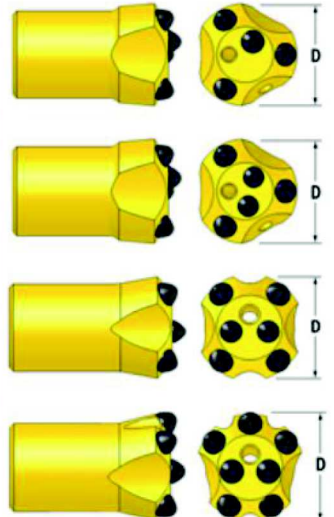
| Drill rod | Length | | Weight approx kg | SANSHAN P/N |
|--|--------|--------|---------------------|---------------------|
| | mm | Foot | | |
| Hex. Taperd rod  | 600 | 2' | 1.93 | 21H22-7/108-0600-40 |
| | 800 | 2' 6" | 2.54 | 21H22-7/108-0800-40 |
| | 1000 | 3' 3" | 3.15 | 21H22-7/108-1000-40 |
| | 1200 | 3' 9" | 3.76 | 21H22-7/108-1200-40 |
| | 1500 | 4' 11" | 4.68 | 21H22-7/108-1500-40 |
| | 1600 | 5' 3" | 4.98 | 21H22-7/108-1600-40 |
| | 1800 | 5' 9" | 5.59 | 21H22-7/108-1800-40 |
| | 2000 | 6' 7" | 6.20 | 21H22-7/108-2000-40 |
| | 2200 | 7' 2" | 6.81 | 21H22-7/108-2200-40 |
| | 2300 | 7' 6" | 7.12 | 21H22-7/108-2300-40 |
| | 2400 | 7' 9" | 7.42 | 21H22-7/108-2400-40 |
| | 2500 | 8' 2" | 7.73 | 21H22-7/108-2500-40 |
| | 2600 | 8' 8" | 8.03 | 21H22-7/108-2600-40 |
| | 3000 | 9' 10" | 9.25 | 21H22-7/108-3000-40 |
| | 3500 | 11' 5" | 10.78 | 21H22-7/108-3500-40 |
| | 4000 | 13' 1" | 12.30 | 21H22-7/108-4000-40 |
| | 4500 | 14' 8" | 13.83 | 21H22-7/108-4500-40 |
| 5000 | 16' 4" | 15.35 | 21H22-7/108-5000-40 | |
| 5500 | 18' 1" | 16.88 | 21H22-7/108-5500-40 | |
| 6000 | 19' 7" | 18.30 | 21H22-7/108-6000-40 | |

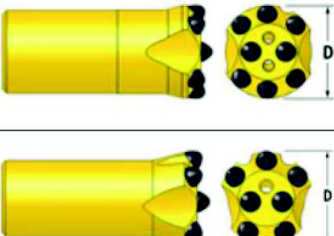

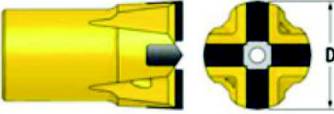
| | | | | |
|---|------|--------|-------|---------------------|
|  | 4000 | 13' 1" | 16.10 | 21H25-7/159-4000-40 |
| | 4700 | 15' 4" | 18.90 | 21H25-7/159-4700-40 |
| | 5000 | 16' 4" | 22.10 | 21H25-7/159-5000-40 |
| | 5500 | 18' 1" | 22.10 | 21H25-7/159-5500-40 |
| | 6000 | 19' 7" | 24.10 | 21H25-7/159-6000-40 |

Tapered rock drilling tools

11°

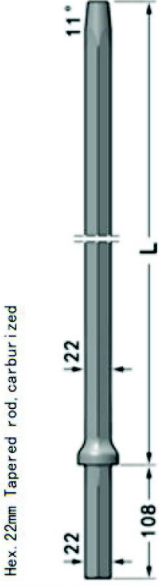


| Drill bit | Diameter | | No x button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N |
|---|----------|---------|----------------------|-------|-------|---------------|------|-------------------------|-------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | |
| Button bit, Short skirt  | 32 | 1 1/4 | 1x8 | 3x8 | 35° | 1 | 2 | 0.24 | 1431-321122-18/38-45-51 |
| | 32 | 1 1/4 | 2x7 | 5x7 | 40° | 1 | 1 | 0.24 | 1431-321122-27/57-45-51 |
| | 33 | 1 19/64 | 2x7 | 4x7 | 40° | 1 | 1 | 0.25 | 1431-331122-27/47-45-51 |
| | 34 | 1 11/32 | 2x7 | 4x7 | 40° | 1 | 1 | 0.29 | 1431-341122-27/47-45-51 |
| | 35 | 1 3/8 | 2x7 | 5x7 | 35° | 1 | 1 | 0.33 | 1431-351122-27/57-45-51 |
| | 35 | 1 3/8 | 2x7 | 5x8 | 35° | 1 | 1 | 0.33 | 1431-351122-27/58-45-51 |
| | 36 | 1 27/64 | 1x8 | 3x9 | 40° | 1 | 1 | 0.36 | 1431-361122-18/39-45-51 |
| | 36 | 1 27/64 | 2x7 | 4x7 | 40° | 1 | 1 | 0.36 | 1431-361122-27/47-45-51 |
| | 36 | 1 27/64 | 2x7 | 5x8 | 35° | 1 | 1 | 0.36 | 1431-361122-27/58-45-51 |
| | 38 | 1 1/2 | 1x9 | 3x9 | 40° | 1 | 1 | 0.39 | 1431-381122-19/39-45-51 |
| | 38 | 1 1/2 | 2x8 | 3x9 | 40° | 1 | 1 | 0.39 | 1431-381122-28/39-45-51 |
| | 38 | 1 1/2 | 2x7 | 5x8 | 35° | 1 | 1 | 0.39 | 1431-381122-27/58-45-51 |
| | 38 | 1 1/2 | 2x7 | 5x9 | 35° | 1 | 1 | 0.39 | 1431-381122-27/59-45-51 |
| | 40 | 1 37/64 | 1x9 | 3x9 | 40° | 1 | 1 | 0.40 | 1431-401122-19/39-45-51 |
| | 40 | 1 37/64 | 2x8 | 3x9 | 40° | 1 | 1 | 0.40 | 1431-401122-28/39-45-51 |
| | 40 | 1 37/64 | 2x9 | 3x9 | 40° | 1 | 2 | 0.40 | 1431-401122-29/39-45-51 |
| 40 | 1 37/64 | 2x7 | 5x9 | 35° | 1 | 1 | 0.40 | 1431-401122-27/59-45-51 | |
| 40 | 1 37/64 | 2x8 | 5x9 | 35° | 1 | 1 | 0.40 | 1431-401122-28/59-45-51 | |
| 41 | 1 5/8 | 2x7 | 5x9 | 35° | 1 | 1 | 0.41 | 1431-411122-27/59-45-51 | |

| | | | | | | | | | |
|---|-------|---------|------|-----|-----|---|------|------------------------|-------------------------|
| Long skirt  | 32 | 1 1/4 | 2x7 | 5x7 | 35° | 1 | 1 | 0.30 | 1435-321122-27/57-45-51 |
| | 33 | 1 19/64 | 2x7 | 5x7 | 35° | 1 | 1 | 0.31 | 1435-331122-27/57-45-51 |
| | 33 | 1 19/64 | 2x7 | 6x7 | 40° | 2 | 1 | 0.31 | 1435-331122-27/67-45-51 |
| | 35 | 1 3/8 | 2x7 | 6x7 | 40° | 2 | 1 | 0.35 | 1435-351122-27/67-45-51 |
| | 38 | 1 1/2 | 2x7 | 5x9 | 35° | 1 | 1 | 0.41 | 1435-381122-27/59-45-51 |
|  | 41 | 1 5/8 | 2x7 | 5x9 | 35° | 1 | 1 | 0.42 | 1435-411122-27/59-45-51 |
| | 35 | 1 3/8 | 2x7 | 5x9 | 35° | 1 | 1 | 0.38 | 1435-351125-27/59-45-51 |
| | 36 | 1 27/64 | 2x7 | 5x9 | 35° | 1 | 1 | 0.39 | 1435-361125-27/59-45-51 |
| | 38 | 1 1/2 | 2x7 | 5x9 | 35° | 1 | 1 | 0.41 | 1435-381125-27/59-45-51 |
| Cross-type bit  | 29 | 1 9/64 | 12x8 | | - | 1 | 2 | 0.25 | 1221-291122-12/8-42-22 |
| | 30 | 1 3/16 | 12x8 | | - | 1 | 2 | 0.26 | 1221-301122-12/8-42-22 |
| | 32 | 1 1/4 | 12x8 | | - | 1 | 2 | 0.30 | 1221-321122-12/8-42-22 |
| | 33 | 1 19/64 | 12x8 | | - | 1 | 2 | 0.32 | 1221-331122-12/8-42-22 |
| | 35 | 1 3/8 | 12x8 | | - | 1 | 2 | 0.36 | 1221-351122-12/8-42-22 |
| | 36 | 1 27/64 | 12x8 | | - | 1 | 2 | 0.39 | 1221-361122-12/8-42-22 |
| | 38 | 1 1/2 | 12x8 | | - | 1 | 2 | 0.43 | 1221-381122-12/8-42-22 |
| 41 | 1 5/8 | 14x8 | | - | 1 | 2 | 0.49 | 1221-411122-14/8-42-22 | |

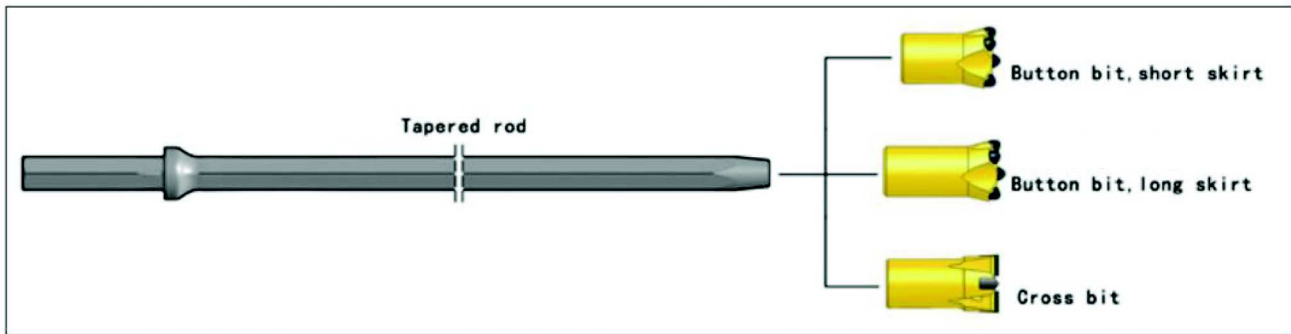
Tapered rock drilling tools

11°

| Drill rod | Length | | Weight approx. kg | SANSHAN P/N |
|--|--------|--------|-------------------|----------------------|
| | mm | Foot | | |
|  <p>Hex. 22mm Tapered rod, carburized</p> | 610 | 2' | 2.2 | 21H22-11/108-0610-40 |
| | 1220 | 4' | 4.1 | 21H22-11/108-1220-40 |
| | 1830 | 6' | 5.9 | 21H22-11/108-1830-40 |
| | 2000 | 6' 7" | 6.4 | 21H22-11/108-2000-40 |
| | 2435 | 8' | 7.8 | 21H22-11/108-2435-40 |
| | 2600 | 8' 8" | 8.3 | 21H22-11/108-2600-40 |
| | 3200 | 10' 6" | 10.1 | 21H22-11/108-3200-40 |
| | 3655 | 12' | 11.5 | 21H22-11/108-3655-40 |
| | 4000 | 13' 1" | 12.6 | 21H22-11/108-4000-40 |
| | 4800 | 15' 9" | 14.9 | 21H22-11/108-4800-40 |
| | 5600 | 18' 4" | 17.4 | 21H22-11/108-5600-40 |
| | 6400 | 21' | 19.8 | 21H22-11/108-6400-40 |
| | 7200 | 23' 6" | 22.2 | 21H22-11/108-7200-40 |
| | 8000 | 26' 2" | 24.6 | 21H22-11/108-8000-40 |

Tapered rock drilling tools


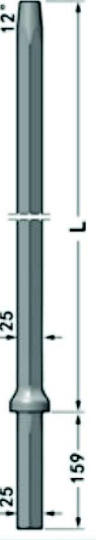
12°



| Drill bit | Diameter | | No x button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N |
|------------------------------------|----------|---------|----------------------|-------|-------|---------------|------|-------------------------|-------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | |
| Button bit, Short skirt | 28 | 1 7/64 | 1×7 | 3×7 | 20° | 1 | 1 | 0.20 | 1431-281222-17/37-45-51 |
| | 28 | 1 7/64 | 1×7 | 4×7 | 35° | 1 | 1 | 0.20 | 1431-281222-17/47-45-51 |
| | 29 | 1 9/64 | 1×7 | 3×7 | 40° | 1 | 1 | 0.21 | 1431-291222-17/37-45-51 |
| | 30 | 1 3/16 | 1×7 | 3×7 | 40° | 1 | 1 | 0.22 | 1431-301222-17/37-45-51 |
| | 30 | 1 3/16 | 1×7 | 4×7 | 35° | 1 | 1 | 0.22 | 1431-301222-17/47-45-51 |
| | 30 | 1 3/16 | 2×7 | 4×7 | 30° | 1 | 1 | 0.22 | 1431-301222-27/47-45-51 |
| | 32 | 1 1/4 | 2×7 | 5×7 | 40° | 2 | 1 | 0.24 | 1431-321222-27/57-45-51 |
| | 33 | 1 19/64 | 2×7 | 5×7 | 35° | 1 | 1 | 0.25 | 1431-331222-27/57-45-51 |
| | 34 | 1 11/32 | 2×7 | 5×8 | 35° | 1 | 1 | 0.29 | 1431-341222-27/58-45-51 |
| | 35 | 1 3/8 | 2×7 | 4×7 | 35° | 1 | 1 | 0.33 | 1431-351222-27/47-45-51 |
| | 35 | 1 3/8 | 2×7 | 5×8 | 35° | 2 | 1 | 0.33 | 1431-351222-27/58-45-51 |
| | 35 | 1 3/8 | 2×7 | 5×9 | 35° | 1 | 1 | 0.33 | 1431-351222-27/59-45-51 |
| | 36 | 1 27/64 | 2×7 | 5×9 | 35° | 1 | 1 | 0.37 | 1431-361222-27/59-45-51 |
| | 37 | 1 29/64 | 2×7 | 5×9 | 40° | 1 | 1 | 0.38 | 1431-371222-27/59-45-51 |
| 38 | 1 1/2 | 1×9 | 3×9 | 40° | 1 | 1 | 0.40 | 1431-381222-19/39-45-51 | |
| 38 | 1 1/2 | 2×7 | 5×9 | 35° | 1 | 1 | 0.40 | 1431-381222-27/59-45-51 | |
| 41 | 1 5/8 | 2×7 | 5×9 | 35° | 1 | 1 | 0.41 | 1431-411222-27/59-45-51 | |
| Long skirt | 32 | 1 1/4 | 2×7 | 5×7 | 35° | 1 | 1 | 0.30 | 1435-321222-27/57-45-51 |
| | 33 | 1 19/64 | 2×7 | 5×7 | 35° | 1 | 1 | 0.31 | 1435-331222-27/57-45-51 |
| | 33 | 1 19/64 | 2×7 | 6×7 | 40° | 2 | 1 | 0.31 | 1435-331222-27/67-45-51 |
| | 35 | 1 3/8 | 2×7 | 6×7 | 40° | 2 | 1 | 0.35 | 1435-351222-27/67-45-51 |
| | 38 | 1 1/2 | 2×7 | 5×9 | 35° | 1 | 1 | 0.41 | 1435-381222-27/59-45-51 |
| | 41 | 1 5/8 | 2×7 | 5×9 | 35° | 1 | 1 | 0.42 | 1435-411222-27/59-45-51 |
| Cross-type bit | 35 | 1 3/8 | 2×7 | 5×9 | 35° | 1 | 1 | 0.38 | 1435-351222-27/59-45-51 |
| | 36 | 1 27/64 | 2×7 | 5×9 | 35° | 1 | 1 | 0.39 | 1435-361222-27/59-45-51 |
| | 38 | 1 1/2 | 2×7 | 5×9 | 35° | 1 | 1 | 0.41 | 1435-381222-27/59-45-51 |
| | 41 | 1 5/8 | 2×7 | 5×9 | 35° | 1 | 1 | 0.42 | 1435-411222-27/59-45-51 |
| | 29 | 1 9/64 | | 12×8 | - | 1 | 2 | 0.25 | 1221-291222-12/8-42-22 |
| 30 | 1 3/16 | | 12×8 | - | 1 | 2 | 0.26 | 1221-301222-12/8-42-22 | |
| 32 | 1 1/4 | | 12×8 | - | 1 | 2 | 0.30 | 1221-321222-12/8-42-22 | |
| 33 | 1 19/64 | | 12×8 | - | 1 | 2 | 0.32 | 1221-331222-12/8-42-22 | |
| 35 | 1 3/8 | | 12×8 | - | 1 | 2 | 0.36 | 1221-351222-12/8-42-22 | |
| 36 | 1 27/64 | | 12×8 | - | 1 | 2 | 0.39 | 1221-361222-12/8-42-22 | |
| 38 | 1 1/2 | | 12×8 | - | 1 | 2 | 0.43 | 1221-381222-12/8-42-22 | |
| 40 | 1 37/64 | | 12×8 | - | 1 | 2 | 0.46 | 1221-401222-12/8-42-22 | |
| 41 | 1 5/8 | | 14×8 | - | 1 | 2 | 0.49 | 1221-411222-14/8-42-22 | |

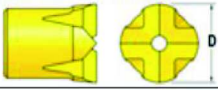
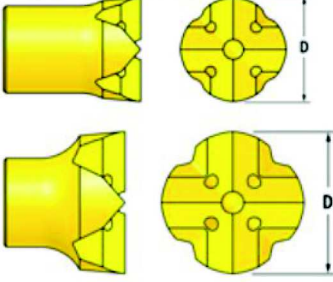
Tapered rock drilling tools

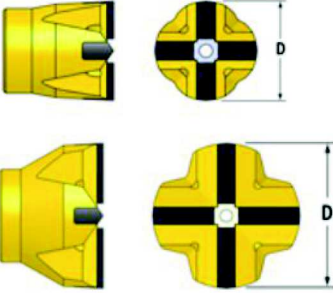
12°

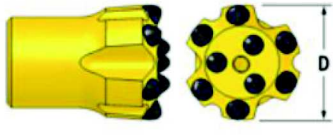
| Drill rod | Length | | Weight approx. kg | SANSHAN P / N | |
|--|--|--------|-------------------|----------------------|----------------------|
| | mm | Foot | | | |
| Hex. 22mm Tapered rod, carburized  | 610 | 2' | 2.20 | 21H22-12/108-0610-40 | |
| | 1220 | 4' | 4.10 | 21H22-12/108-1220-40 | |
| | 1830 | 6' | 5.90 | 21H22-12/108-1830-40 | |
| | 2000 | 6' 7" | 6.40 | 21H22-12/108-2000-40 | |
| | 2435 | 8' | 7.80 | 21H22-12/108-2435-40 | |
| | 2600 | 8' 8" | 8.30 | 21H22-12/108-2600-40 | |
| | 3200 | 10' 6" | 10.10 | 21H22-12/108-3200-40 | |
| | 3655 | 12' | 11.50 | 21H22-12/108-3655-40 | |
| | 4000 | 13' 1" | 12.60 | 21H22-12/108-4000-40 | |
| | 4800 | 15' 9" | 14.90 | 21H22-12/108-4800-40 | |
| | 5600 | 18' 4" | 17.40 | 21H22-12/108-5600-40 | |
| | 6400 | 21' | 19.80 | 21H22-12/108-6400-40 | |
| | 7200 | 23' 6" | 22.20 | 21H22-12/108-7200-40 | |
| | 8000 | 26' 2" | 24.60 | 21H22-12/108-8000-40 | |
| | Hex. 25mm Tapered rod, carburized  | 1830 | 6' | 7.96 | 21H25-12/159-1830-40 |
| | | 2435 | 8' | 10.38 | 21H25-12/159-2435-40 |
| 3050 | | 10' | 12.84 | 21H25-12/159-3050-40 | |
| 3655 | | 12' | 15.26 | 21H25-12/159-3655-40 | |
| 3965 | | 13' | 16.50 | 21H25-12/159-3965-40 | |
| 4270 | | 14' | 17.72 | 21H25-12/159-4270-40 | |
| 4880 | | 16' | 20.16 | 21H25-12/159-4880-40 | |
| 5530 | | 18' | 22.76 | 21H25-12/159-5530-40 | |
| 6095 | | 20' | 25.02 | 21H25-12/159-6095-40 | |

Shoulder drive drilling

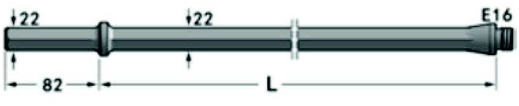

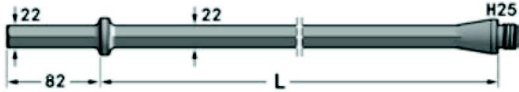
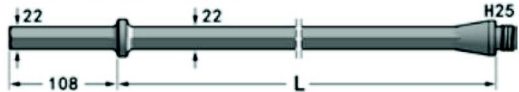
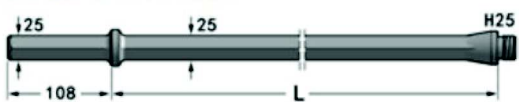


| Drill bit | Diameter | | Tip size (mm) | | Flushing hole | | Weight approx kg | SANSHAN P/N |
|---|----------|-------|----------------|--|---------------|------|------------------|----------------|
| | mm | inch | Height X Width | | Front | Side | | |
| E-Thread steel cross bit  | 24 | 15/16 | - | | 1 | - | 0.07 | 1223-24E16-42 |
| | 25 | 1 | - | | 1 | - | 0.08 | 1223-25E16-42 |
| | 28 | 1 1/8 | - | | 1 | - | 0.09 | 1223-28E16-42 |
| | 32 | 1 1/4 | - | | 1 | - | 0.10 | 1223-32E16-42 |
| D-Thread steel cross bit  | 45 | 1 3/4 | - | | 1 | 4 | 0.30 | 1223-45D30-42 |
| | 48 | 1 7/8 | - | | 1 | 4 | 0.40 | 1223-48D30-42 |
| | 51 | 2 | - | | 1 | 4 | 0.42 | 1223-51D30-42 |
| | 57 | 2 1/4 | - | | 1 | 4 | 0.51 | 1223-57D30-42 |
| | 64 | 2 1/2 | - | | 1 | 4 | 0.58 | 1223-64D30-42 |
| | 70 | 2 3/4 | - | | 1 | 4 | 0.63 | 1223-70D30-42 |
| | 76 | 3 | - | | 1 | 4 | 0.69 | 1223-76D30-42 |
| | 83 | 3 1/4 | - | | 1 | 4 | 1.08 | 1223-83D30-42 |
| | 89 | 3 1/2 | - | | 1 | 4 | 1.18 | 1223-89D30-42 |
| | 102 | 4 | - | | 1 | 4 | 1.39 | 1223-102D30-42 |

| | | | | | | | | |
|--|----|-------|-------|---|---|------|------------------------|------------------------|
| H-Thread cross bit  | 35 | 1 3/8 | 12x8 | | 1 | 4 | 0.22 | 1221-35H25-12/8-42-23 |
| | 38 | 1 1/2 | 12x8 | | 1 | 4 | 0.26 | 1221-38H25-12/8-42-23 |
| | 41 | 1 5/8 | 12x8 | | 1 | 4 | 0.30 | 1221-41H25-12/8-42-23 |
| | 45 | 1 3/4 | 14x8 | | 1 | 4 | 0.38 | 1221-45H25-14/8-42-23 |
| | 48 | 1 7/8 | 14x8 | | 1 | 4 | 0.42 | 1221-48H25-14/8-42-23 |
| | 51 | 2 | 14x8 | | 1 | 4 | 0.50 | 1221-51H25-14/8-42-23 |
| | 54 | 2 1/8 | 14x8 | | 1 | 4 | 0.50 | 1221-54H25-14/8-42-23 |
| | 57 | 2 1/4 | 16x10 | | 1 | 4 | 0.61 | 1221-57H25-16/10-42-23 |
| | 64 | 2 1/2 | 16x10 | | 1 | 4 | 0.71 | 1221-64H25-16/10-42-23 |
| | 70 | 2 3/4 | 16x10 | | 1 | 4 | 0.88 | 1221-70H25-16/10-42-23 |
| 76 | 3 | 20x12 | | 1 | 4 | 1.25 | 1221-76H25-20/12-42-23 | |

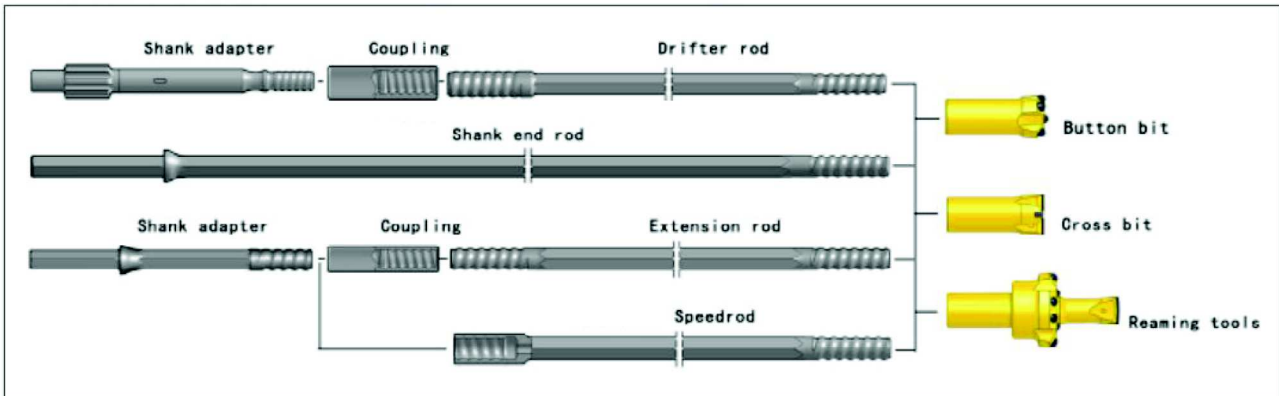
| | | | | | | | | | |
|---|----|-------|-----|------|-----|---|---|------|-------------------------|
| H-Thread button bit  | 35 | 1 3/8 | 2x7 | 5x8 | 35° | 1 | 1 | 0.26 | 1431-35H25-27/58-42-53 |
| | 38 | 1 1/2 | 2x7 | 5x9 | 30° | 1 | 1 | 0.30 | 1431-38H25-27/59-42-53 |
| | 41 | 1 5/8 | 2x8 | 5x9 | 35° | 1 | 1 | 0.34 | 1431-41H25-28/59-42-53 |
| | 45 | 1 3/4 | 3x8 | 6x9 | 40° | 1 | 1 | 0.42 | 1431-45H25-38/69-42-53 |
| | 48 | 1 7/8 | 3x8 | 6x10 | 40° | 1 | 1 | 0.46 | 1431-48H25-38/610-42-53 |
| | 51 | 2 | 3x9 | 6x10 | 40° | 1 | 1 | 0.54 | 1431-51H25-39/610-42-53 |
| | 57 | 2 1/4 | 3x9 | 6x11 | 35° | 1 | 1 | 0.66 | 1431-57H25-39/611-42-53 |

Shoulder drive drilling

| Drill rod | Length | | Weight approx kg | SANSHAN P / N |
|---|--------|-------|------------------|-----------------------|
| | mm | Foot | | |
| Hex. 22mm Hollow drill steel  | 305 | 1' | 1.20 | 21H22-E16/82-0305-40 |
| | 455 | 1' 6" | 1.67 | 21H22-E16/82-0455-40 |
| | 610 | 2' | 2.15 | 21H22-E16/82-0610-40 |
| | 762 | 2' 6" | 2.62 | 21H22-E16/82-0762-40 |
| | 915 | 3' | 3.10 | 21H22-E16/82-0915-40 |
| | 1220 | 4' | 4.04 | 21H22-E16/82-1220-40 |
| | 1525 | 5' | 4.99 | 21H22-E16/82-1525-40 |
| | 1830 | 6' | 5.93 | 21H22-E16/82-1830-40 |
| Hex. 25mm Hollow drill steel  | 305 | 1' | 1.66 | 21H25-D30/108-0305-40 |
| | 455 | 1' 6" | 2.26 | 21H25-D30/108-0455-40 |
| | 610 | 2' | 2.88 | 21H25-D30/108-0610-40 |
| | 762 | 2' 6" | 3.48 | 21H25-D30/108-0762-40 |
| | 915 | 3' | 4.10 | 21H25-D30/108-0915-40 |
| | 1220 | 4' | 5.32 | 21H25-D30/108-1220-40 |
| | 1525 | 5' | 6.54 | 21H25-D30/108-1525-40 |
| | 1830 | 6' | 7.76 | 21H25-D30/108-1830-40 |
| Hex. 22mm Hollow drill steel  | 305 | 1' | 1.20 | 21H22-H25/82-0305-40 |
| | 455 | 1' 6" | 1.67 | 21H22-H25/82-0455-40 |
| | 610 | 2' | 2.15 | 21H22-H25/82-0610-40 |
| | 762 | 2' 6" | 2.62 | 21H22-H25/82-0762-40 |
| | 915 | 3' | 3.10 | 21H22-H25/82-0915-40 |
| | 1220 | 4' | 4.04 | 21H22-H25/82-1220-40 |
| | 1525 | 5' | 4.99 | 21H22-H25/82-1525-40 |
| | 1830 | 6' | 5.93 | 21H22-H25/82-1830-40 |
| | 2440 | 8' | 7.82 | 21H22-H25/82-2440-40 |
| | 3050 | 10' | 9.71 | 21H22-H25/82-3050-40 |
| | 3660 | 12' | 11.60 | 21H22-H25/82-3660-40 |
| | 4270 | 14' | 13.49 | 21H22-H25/82-4270-40 |
| Hex. 22mm Hollow drill steel  | 305 | 1' | 1.30 | 21H22-H25/108-0305-40 |
| | 455 | 1' 6" | 1.72 | 21H22-H25/108-0455-40 |
| | 610 | 2' | 2.24 | 21H22-H25/108-0610-40 |
| | 762 | 2' 6" | 2.71 | 21H22-H25/108-0762-40 |
| | 915 | 3' | 3.18 | 21H22-H25/108-0915-40 |
| | 1220 | 4' | 4.12 | 21H22-H25/108-1220-40 |
| | 1525 | 5' | 5.07 | 21H22-H25/108-1525-40 |
| | 1830 | 6' | 6.01 | 21H22-H25/108-1830-40 |
| | 2440 | 8' | 7.90 | 21H22-H25/108-2440-40 |
| | 3050 | 10' | 9.79 | 21H22-H25/108-3050-40 |
| | 3660 | 12' | 11.68 | 21H22-H25/108-3660-40 |
| | 4270 | 14' | 13.57 | 21H22-H25/108-4270-40 |
| Hex. 25mm Hollow drill steel  | 305 | 1' | 1.66 | 21H25-H25/108-0305-40 |
| | 455 | 1' 6" | 2.26 | 21H25-H25/108-0455-40 |
| | 610 | 2' | 2.88 | 21H25-H25/108-0610-40 |
| | 762 | 2' 6" | 3.48 | 21H25-H25/108-0762-40 |
| | 915 | 3' | 4.10 | 21H25-H25/108-0915-40 |
| | 1220 | 4' | 5.32 | 21H25-H25/108-1220-40 |
| | 1525 | 5' | 6.54 | 21H25-H25/108-1525-40 |
| | 1830 | 6' | 7.76 | 21H25-H25/108-1830-40 |
| | 2440 | 8' | 10.20 | 21H25-H25/108-2440-40 |
| | 3050 | 10' | 12.64 | 21H25-H25/108-3050-40 |
| | 3660 | 12' | 15.08 | 21H25-H25/108-3660-40 |
| | 4270 | 14' | 17.52 | 21H25-H25/108-4270-40 |

Drifting and tunneling

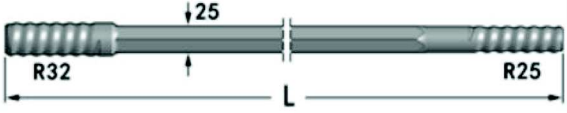


R25

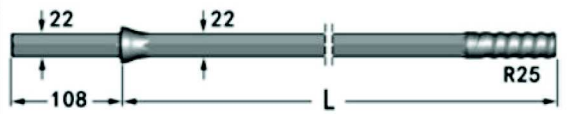
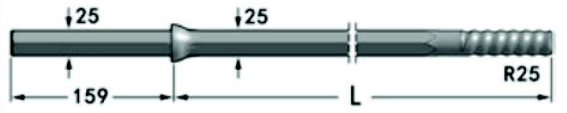




| Drill bit | Diameter | | No X button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P / N |
|-----------------------------|------------------------|---------|----------------------|-------|-------|---------------|------|-------------------------|-------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | |
| Button bit | 圆齿 Spherical buttons | | | | | | | | |
| | 33 | 1 19/64 | 2×7 | 5×7 | 35° | 1 | 1 | 0.4 | 1431-33R25-27/57-45-41 |
| | 35 | 1 3/8 | 2×7 | 5×8 | 35° | 1 | 1 | 0.4 | 1431-35R25-27/58-45-41 |
| | 38 | 1 1/2 | 2×7 | 5×8 | 30° | 1 | 1 | 0.5 | 1431-38R25-27/58-45-41 |
| | 38 | 1 1/2 | 2×7 | 5×9 | 30° | 1 | 1 | 0.5 | 1431-38R25-27/59-45-41 |
| | 41 | 1 5/8 | 2×9 | 4×9 | 35° | 1 | 2 | 0.6 | 1431-41R25-29/49-45-41 |
| | 41 | 1 5/8 | 2×8 | 5×9 | 35° | 1 | 1 | 0.6 | 1431-41R25-28/59-45-41 |
| | 45 | 1 3/4 | 2×9 | 4×11 | 35° | 1 | 2 | 0.6 | 1431-45R25-29/411-45-41 |
| | 45 | 1 3/4 | 2×8 | 5×10 | 30° | 1 | 2 | 0.6 | 1431-45R25-28/510-45-41 |
| | 45 | 1 3/4 | 2×8 | 5×11 | 30° | 1 | 2 | 0.6 | 1431-45R25-28/511-45-41 |
| | 抛物线齿 Parabolic buttons | | | | | | | | |
| | 33 | 1 19/64 | 2×7 | 5×7 | 35° | 1 | 1 | 0.4 | 1431-33R25-27/57-45-51 |
| | 35 | 1 3/8 | 2×7 | 5×9 | 25° | 1 | 1 | 0.4 | 1431-35R25-27/59-45-51 |
| | 38 | 1 1/2 | 2×7 | 5×9 | 40° | 1 | 1 | 0.5 | 1431-38R25-27/59-45-51 |
| | 41 | 1 5/8 | 2×8 | 5×9 | 40° | 1 | 1 | 0.6 | 1431-41R25-28/59-45-51 |
| 45 | 1 3/4 | 2×9 | 5×10 | 35° | 1 | 2 | 0.6 | 1431-45R25-29/510-45-51 | |
| Reaming bit 6° | 64 | 2 1/2 | 2×10 | 8×9 | 35° | - | - | 0.8 | 1441-646-210/89-45-41 |
| | 64 | 2 1/2 | 4×8 | 8×9 | 25° | - | - | 0.8 | 1441-646-48/89-45-41 |
| | 76 | 3 | 2×11 | 8×11 | 35° | - | - | 1.2 | 1441-766-211/811-45-41 |
| | 76 | 3 | 4×10 | 8×10 | 30° | - | - | 1.2 | 1441-766-410/810-45-41 |
| | 89 | 3 1/2 | 4×11 | 8×11 | 35° | - | - | 1.7 | 1441-896-411/811-45-41 |
| | 89 | 3 1/2 | 4×10 | 8×10 | 30° | - | - | 1.7 | 1441-896-410/810-45-41 |
| Pilot adapter 6° | 26 | 1 1/32 | 12×8 | | - | - | - | 1.3 | 1442-26R25-12/8-42-22 |
| Cross-type bit | 33 | 1 19/64 | 14×8 | | - | 1 | 2 | 0.4 | 1221-33R25-14/8-42-23 |
| | 35 | 1 3/8 | 14×8 | | - | 1 | 2 | 0.5 | 1221-35R25-14/8-42-23 |
| | 38 | 1 1/2 | 14×8 | | - | 1 | 4 | 0.6 | 1221-38R25-14/8-42-23 |
| | 41 | 1 5/8 | 14×8 | | - | 1 | 4 | 0.7 | 1221-41R25-14/8-42-23 |
| | 43 | 1 11/16 | 14×8 | | - | 1 | 4 | 0.7 | 1221-43R25-14/8-42-23 |
| | 45 | 1 3/4 | 14×8 | | - | 1 | 2 | 0.8 | 1221-45R25-14/8-42-23 |
| | 51 | 2 | 14×8 | | - | 1 | 4 | 1.1 | 1221-51R25-14/8-42-23 |

Drifting and tunneling

R25

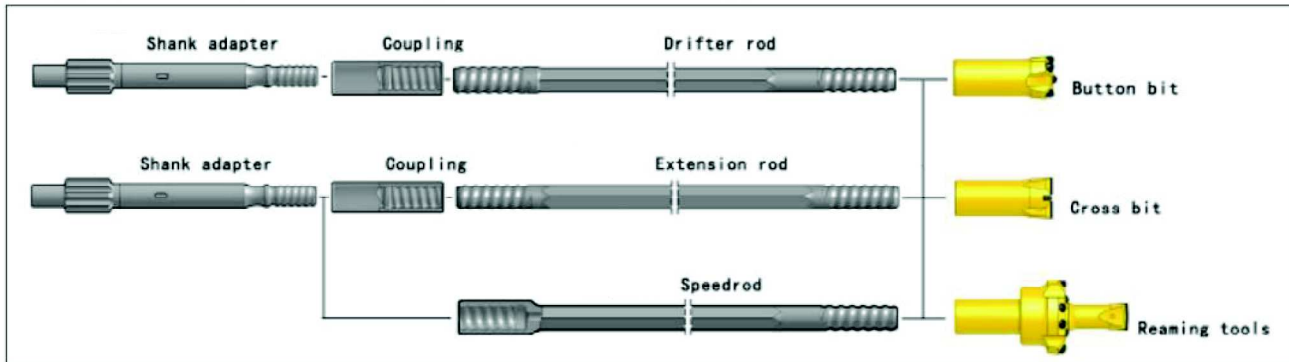
| Drill rod | Length | | Diameter | | Weight approx kg | SANSHAN P/N |
|---|--------|----------|----------|------|------------------|-----------------------|
| | mm | Foot | mm | inch | | |
| Drifter rod, R32-Hex25-R25 Flushing hole 8.6mm.  | 2100 | 7' | 25 | 1" | 8.6 | 22H25-R25/R32-2100-23 |
| | 2400 | 8' | 25 | 1" | 9.6 | 22H25-R25/R32-2400-23 |
| | 2600 | 8' 8" | 25 | 1" | 10.4 | 22H25-R25/R32-2600-23 |
| | 2800 | 9' | 25 | 1" | 11.1 | 22H25-R25/R32-2800-23 |
| | 3090 | 10' | 25 | 1" | 12.2 | 22H25-R25/R32-3090-23 |
| | 3700 | 12' | 25 | 1" | 14.6 | 22H25-R25/R32-3700-23 |
| Extension rod, R25-Hex25-R25 Flushing hole 8.6mm.  | 915 | 3' | 25 | 1" | 3.4 | 23H25-R25-0915-23 |
| | 1000 | 3' 33/8" | 25 | 1" | 4.0 | 23H25-R25-1000-23 |
| | 1220 | 4' | 25 | 1" | 4.6 | 23H25-R25-1220-23 |
| | 1525 | 5' | 25 | 1" | 5.8 | 23H25-R25-1525-23 |
| | 1830 | 6' | 25 | 1" | 7.0 | 23H25-R25-1830-23 |
| | 2435 | 8' | 25 | 1" | 9.3 | 23H25-R25-2435-23 |
| Speedrod, R25-Hex25-R25 Flushing hole 8.6mm.  | 610 | 2' | 25 | 1" | 2.7 | 24H25-R25/35-0610-23 |
| | 1220 | 4' | 25 | 1" | 5.1 | 24H25-R25/35-1220-23 |

| Shank end rod | Length | | Diameter | | Weight approx kg | SANSHAN P/N |
|--|---|--------------|--------------------|--------------------|------------------|-----------------------|
| | mm | Foot | mm | inch | | |
| Shank adapter/rod  | 22mm × 108mm | | Shank 22mm × 108mm | | | |
| | 610 | 2' | 22 | 7/8 | 2.6 | 21H22-R25/108-0610-40 |
| | 760 | 2' 6" | 22 | 7/8 | 2.9 | 21H22-R25/108-0760-40 |
| | 1000 | 3' 3" | 22 | 7/8 | 3.7 | 21H22-R25/108-1000-40 |
| | 1200 | 4' | 22 | 7/8 | 4.4 | 21H22-R25/108-1200-40 |
| | 1830 | 6' | 22 | 7/8 | 6.3 | 21H22-R25/108-1830-40 |
| | 2435 | 8' | 22 | 7/8 | 8.1 | 21H22-R25/108-2435-40 |
| | 3200 | 10' 6" | 22 | 7/8 | 10.6 | 21H22-R25/108-3200-40 |
| | 3600 | 12' | 22 | 7/8 | 12.0 | 21H22-R25/108-3600-40 |
| |  | 25mm × 159mm | | Shank 25mm × 159mm | | |
| 2700 | | 8' 10" | 25 | 1" | 11.3 | 21H25-R25/159-2700-40 |
| | 3200 | 10' 6" | 25 | 1" | 13.7 | 21H25-R25/159-3200-40 |

| Coupling | Length | | Diameter | | Thread | Weight approx kg | SANSHAN P/N |
|---|--------|--------|----------|---------|---------|------------------|----------------------|
| | mm | inch | mm | inch | | | |
| Coupling sleeves  | 155 | 6 1/8 | 44 | 1 3/4 | R32 | 1.0 | 31-R32-44-155-23 |
| | 150 | 5 7/8 | 35 | 1 3/8 | R25 | 0.7 | 31-R25-35-150-23 |
| | 160 | 6 5/16 | 38 | 1 1/2 | R25 | 1.3 | 31-R25-38-160-23 |
| Coupling sleeves of different diameter  | 150 | 5 7/8 | 45 | 1 3/4 | R25-R32 | 1.1 | 33-R25/R32-45-150-23 |
| | 160 | 6 5/16 | 45 | 1 3/4 | R25-R32 | 1.2 | 33-R25/R32-45-160-23 |
| | 160 | 6 5/16 | 56 | 1 13/64 | R25-R38 | 2.5 | 33-R25/R38-56-160-23 |
| | 170 | 6 3/4 | 56 | 1 13/64 | R25-T38 | 3.2 | 33-R25/T38-56-170-23 |

Drifting and tunneling

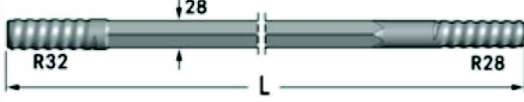


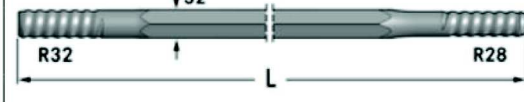
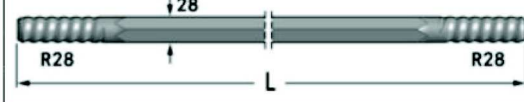
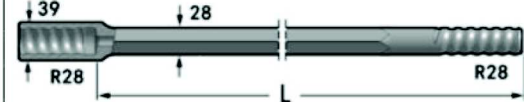
R28


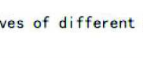


| Drill bit | Diameter | | No X button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N |
|-----------------------------|-------------------|---------|----------------------|-------|-------|---------------|------|-------------------------|-------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | |
| Button bit | Spherical buttons | | | | | | | | |
| | 37 | 1 29/64 | 2×7 | 5×9 | 30° | 1 | 1 | 0.5 | 1431-37R28-27/59-45-41 |
| | 38 | 1 1/2 | 2×8 | 4×9 | 30° | 1 | 2 | 0.6 | 1431-38R28-28/49-45-41 |
| | 38 | 1 1/2 | 2×7 | 5×9 | 30° | 1 | 1 | 0.6 | 1431-38R28-27/59-45-41 |
| | 41 | 1 5/8 | 2×8 | 5×9 | 35° | 1 | 1 | 0.7 | 1431-41R28-28/59-45-41 |
| | 43 | 1 11/16 | 2×9 | 5×9 | 35° | 1 | 2 | 0.8 | 1431-43R28-29/59-45-41 |
| | 45 | 1 3/4 | 2×9 | 5×10 | 30° | 1 | 2 | 0.9 | 1431-45R28-29/510-45-41 |
| | 45 | 1 3/4 | 3×8 | 6×9 | 35° | 1 | 3 | 0.9 | 1431-45R28-38/69-45-41 |
| | Parabolic buttons | | | | | | | | |
| | 37 | 1 29/64 | 2×7 | 5×9 | 30° | 1 | 1 | 0.5 | 1431-37R28-27/59-45-51 |
| | 38 | 1 1/2 | 2×8 | 4×9 | 30° | 1 | 2 | 0.6 | 1431-38R28-28/49-45-51 |
| | 38 | 1 1/2 | 2×7 | 5×9 | 30° | 1 | 1 | 0.6 | 1431-38R28-27/59-45-51 |
| | 41 | 1 5/8 | 2×8 | 5×9 | 35° | 1 | 1 | 0.7 | 1431-41R28-28/59-45-51 |
| | 43 | 1 11/16 | 2×9 | 5×9 | 35° | 1 | 2 | 0.8 | 1431-43R28-29/59-45-51 |
| 45 | 1 3/4 | 2×9 | 5×10 | 30° | 1 | 2 | 0.9 | 1431-45R28-29/510-45-51 | |
| 45 | 1 3/4 | 3×8 | 6×9 | 35° | 1 | 3 | 0.9 | 1431-45R28-38/69-45-51 | |
| 48 | 1 7/8 | 2×9 | 5×11 | 30° | 1 | 2 | 1.0 | 1431-48R28-29/511-45-51 | |
| 48 | 1 7/8 | 3×8 | 6×9 | 35° | 1 | 3 | 1.0 | 1431-48R28-38/69-45-51 | |
| Reaming bit 6° | 64 | 2 1/2 | 2×10 | 8×9 | 35° | - | - | 0.8 | 1441-646-210/89-45-41 |
| | 64 | 2 1/2 | 4×8 | 8×9 | 25° | - | - | 0.8 | 1441-646-48/89-45-41 |
| | 76 | 3 | 2×11 | 8×11 | 35° | - | - | 1.2 | 1441-766-211/811-45-41 |
| | 76 | 3 | 4×10 | 8×10 | 30° | - | - | 1.2 | 1441-766-410/810-45-41 |
| | 89 | 3 1/2 | 4×11 | 8×11 | 35° | - | - | 1.7 | 1441-896-411/811-45-41 |
| | 89 | 3 1/2 | 4×10 | 8×10 | 30° | - | - | 1.7 | 1441-896-410/810-45-41 |
| Pilot adapter 6° | 26 | 1 1/32 | 12×8 | | - | - | - | 1.5 | 1442-26R28-12/8-42-22 |
| Cross-type bit | 38 | 1 1/2 | 14×8 | | - | 1 | 2 | 0.6 | 1221-38R28-14/8-42-23 |
| | 41 | 1 5/8 | 14×8 | | - | 1 | 4 | 0.7 | 1221-41R28-14/8-42-23 |
| | 43 | 1 11/16 | 14×8 | | - | 1 | 4 | 0.7 | 1221-43R28-14/8-42-23 |
| | 45 | 1 3/4 | 14×8 | | - | 1 | 4 | 0.9 | 1221-45R28-14/8-42-23 |
| | 51 | 2 | 14×8 | | - | 1 | 4 | 1.1 | 1221-51R28-14/8-42-23 |

Drifting and tunneling

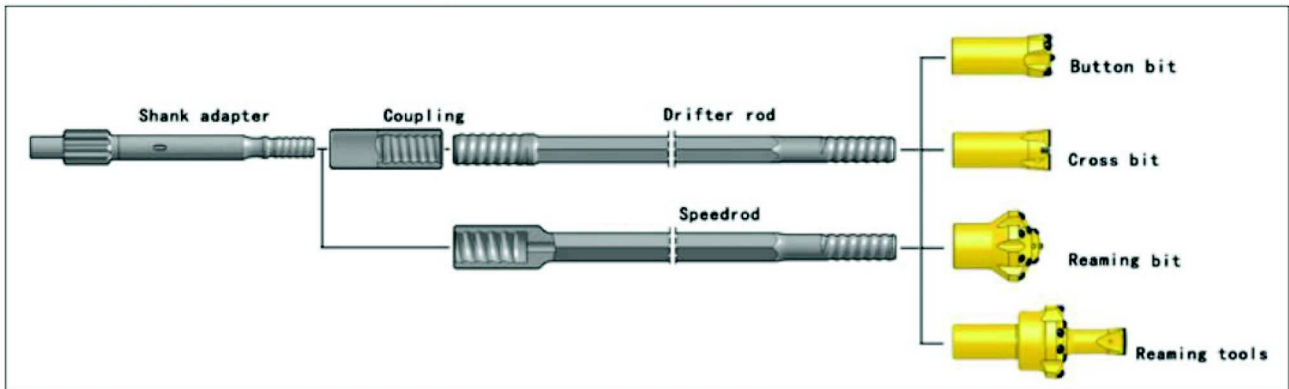
R28

| Drill rod | Length | | Diameter | | Weight approx kg | SANSHAN P/N |
|--|--------|-----------|----------|-------|------------------|------------------------|
| | mm | Foot | mm | inch | | |
| Drifter rod, R32-Hex28-R28 Flushing hole 8.8mm.  | 2400 | 7' 10" | 28 | 1 1/8 | 12.2 | 22H28-R28/R32-2400-23 |
| | 2750 | 9' | 28 | 1 1/8 | 14.4 | 22H28-R28/R32-2750-23 |
| | 3700 | 12' 11/2" | 28 | 1 1/8 | 18.9 | 22H28-R28/R32-3700-23 |
| | 4000 | 13' 13/8" | 28 | 1 1/8 | 20.4 | 22H28-R28/R32-4000-23 |
| | 4310 | 14' 11/2" | 28 | 1 1/8 | 22.0 | 22H28-R28/R32-4310-23 |
| | 4920 | 16' 11/2" | 28 | 1 1/8 | 25.3 | 22H28-R28/R32-4920-23 |
| Drifter rod, R38-Hex32-R28 Flushing hole 9.6mm.  | 2900 | 9' 61/8" | 32 | 1 1/4 | 18.8 | 22H32-R28/R38-2900-23 |
| | 3090 | 10' 11/2" | 32 | 1 1/4 | 20.0 | 22H32-R28/R38-3090-23 |
| | 3700 | 12' 11/2" | 32 | 1 1/4 | 24.0 | 22H32-R28/R38-3700-23 |
| | 4310 | 14' 11/2" | 32 | 1 1/4 | 27.9 | 22H32-R28/R38-4310-23 |
| Drifter rod, R32-Hex32-R28 Flushing hole 9.6mm.  | 3090 | 10' 11/2" | 32 | 1 1/4 | 20.0 | 22H32-R28/R32-3090-23 |
| | 3700 | 12' 11/2" | 32 | 1 1/4 | 23.5 | 22H32-R28/R32-3700-23 |
| Drifter rod, R32-Hex32-R28 Flushing hole 9.6mm. With slimmed shank end for female shank  | 3090 | 10' 11/2" | 32 | 1 1/4 | 20.0 | 22H32-R28/R32N-3090-23 |
| | 3700 | 12' 11/2" | 32 | 1 1/4 | 24.0 | 22H32-R28/R32N-3700-23 |
| | 4000 | 13' 13/8" | 32 | 1 1/4 | 25.9 | 22H32-R28/R32N-4000-23 |
| | 4310 | 14' 11/2" | 32 | 1 1/4 | 27.9 | 22H32-R28/R32N-4310-23 |
| Extension rod, R28-Hex28-R28 Flushing hole 8.8mm.  | 3050 | 10' | 28 | 1 1/8 | 15.0 | 23H28-R28-3050-23 |
| Speedrod, R28-Hex28-R28 Flushing hole 8.8mm.  | 3050 | 10' | 28 | 1 1/8 | 15.0 | 24H28-R28/39-3050-23 |

| Coupling | Length | | Diameter | | Thread | Weight approx kg | SANSHAN P/N |
|---|--------|--------|----------|---------|---------|------------------|----------------------|
| | mm | inch | mm | inch | | | |
| Coupling sleeves  | 150 | 5 7/8 | 44 | 1 3/4 | R32 | 1.0 | 31-R32-44-150-23 |
| | 150 | 5 7/8 | 40 | 1 37/64 | R28 | 0.9 | 31-R28-40-150-23 |
| | 170 | 6 3/4 | 55 | 2 5/32 | R38 | 2.0 | 31-R38-55-170-23 |
| Coupling sleeves of different diameter  | 160 | 6 5/16 | 45 | 1 3/4 | R28-R32 | 1.2 | 33-R28/R32-45-160-23 |
| | 160 | 6 5/16 | 56 | 1 13/64 | R28-R38 | 2.5 | 33-R28/R38-56-160-23 |

Drifting and tunneling

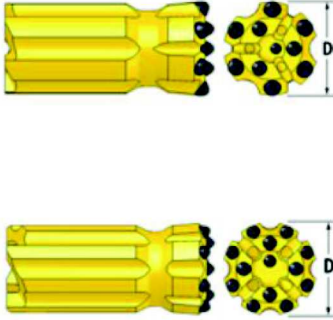
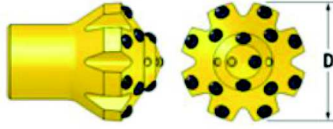
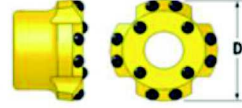

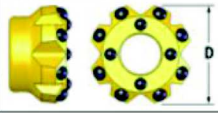


R32



| Drill bit | Diameter | | No X button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N |
|-------------------|----------|---------|----------------------|-------|-------|---------------|------|--------------------------|--------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | |
| Spherical buttons | | | | | | | | | |
| | 41 | 1 5/8 | 2×9 | 4×9 | 35° | 1 | 1 | 0.6 | 1431-41R32-29/49-45-41 |
| | 41 | 1 5/8 | 2×8 | 5×9 | 35° | 1 | 1 | 0.7 | 1431-41R32-28/59-45-41 |
| | 43 | 1 11/16 | 2×9 | 5×9 | 35° | 1 | 2 | 0.7 | 1431-43R32-29/59-45-41 |
| | 43 | 1 11/16 | 2×9 | 5×10 | 35° | 1 | 1 | 0.7 | 1431-43R32-29/510-45-41 |
| | 43 | 1 11/16 | 2×9 | 6×9 | 40° | 2 | - | 0.7 | 1431-43R32-29/69-45-41 |
| | 45 | 1 3/4 | 2×9 | 5×11 | 30° | 1 | 1 | 0.8 | 1431-45R32-29/511-45-41 |
| | 45 | 1 3/4 | 2×9 | 6×10 | 35° | 2 | - | 0.8 | 1431-45R32-29/610-45-41 |
| | 45 | 1 3/4 | 3×8 | 6×10 | 30° | 3 | - | 0.8 | 1431-45R32-38/610-45-41 |
| | 48 | 1 7/8 | 2×9 | 5×11 | 35° | 1 | 1 | 0.9 | 1431-48R32-29/511-45-41 |
| | 48 | 1 7/8 | 2×9 | 6×10 | 40° | 2 | - | 0.9 | 1431-48R32-29/610-45-41 |
| | 48 | 1 7/8 | 3×8 | 6×10 | 40° | 3 | - | 0.9 | 1431-48R32-38/610-45-41 |
| | 48 | 1 7/8 | 3×9 | 6×10 | 30° | 3 | - | 0.9 | 1431-48R32-39/610-45-41 |
| | 51 | 2 | 2×10 | 5×11 | 35° | 1 | 1 | 1.0 | 1431-51R32-210/511-45-41 |
| | 51 | 2 | 2×10 | 6×10 | 40° | 2 | - | 1.0 | 1431-51R32-210/610-45-41 |
| | 51 | 2 | 3×9 | 6×10 | 35° | 3 | - | 1.0 | 1431-51R32-39/610-45-41 |
| | 57 | 2 1/4 | 3×9 | 6×11 | 35° | 3 | - | 1.3 | 1431-57R32-39/611-45-41 |
| | 64 | 2 1/2 | 3×10, 1×10 | 6×11 | 35° | 3 | - | 1.6 | 1433-64R32-410/611-45-41 |
| | 64 | 2 1/2 | 4×10 | 8×10 | 40° | 2 | - | 1.6 | 1431-64R32-410/810-45-41 |
| 76 | 3 | 4×11 | 8×11 | 40° | 2 | - | 2.6 | 1431-76R32-411/811-45-41 | |
| Parabolic buttons | | | | | | | | | |
| | 41 | 1 5/8 | 2×8 | 5×9 | 40° | 1 | 1 | 0.7 | 1431-41R32-28/59-45-51 |
| | 43 | 1 11/16 | 2×9 | 5×9 | 40° | 1 | 2 | 0.7 | 1431-43R32-29/59-45-51 |
| | 43 | 1 11/16 | 2×9 | 6×9 | 40° | 2 | - | 0.7 | 1431-43R32-29/69-45-51 |
| | 43 | 1 11/16 | 3×8 | 6×8 | 40° | 3 | 1 | 0.7 | 1431-43R32-38/68-45-51 |
| | 45 | 1 3/4 | 2×9 | 5×11 | 30° | 1 | 2 | 0.8 | 1431-45R32-29/511-45-51 |
| | 45 | 1 3/4 | 2×9 | 6×9 | 40° | 2 | 2 | 0.8 | 1431-45R32-29/69-45-51 |
| | 45 | 1 3/4 | 3×8 | 6×9 | 40° | 3 | 1 | 0.8 | 1431-45R32-38/69-45-51 |
| | 48 | 1 7/8 | 2×9 | 5×11 | 35° | 1 | 1 | 0.9 | 1431-48R32-29/511-45-51 |
| | 48 | 1 7/8 | 2×9 | 6×10 | 40° | 2 | - | 0.9 | 1431-48R32-29/610-45-51 |
| | 48 | 1 7/8 | 3×8 | 6×10 | 40° | 3 | - | 0.9 | 1431-48R32-38/610-45-51 |
| | 51 | 2 | 2×10 | 6×10 | 40° | 2 | - | 1.0 | 1431-51R32-210/610-45-51 |
| | 51 | 2 | 3×9 | 6×10 | 40° | 3 | 1 | 1.0 | 1431-51R32-39/610-45-51 |
| | 54 | 2 1/8 | 3×9 | 6×10 | 40° | 3 | 1 | 1.0 | 1431-54R32-39/610-45-51 |
| | 57 | 2 1/4 | 3×9 | 6×11 | 35° | 3 | - | 1.3 | 1431-57R32-39/611-45-51 |
| | 64 | 2 1/2 | 4×10 | 8×10 | 40° | 2 | - | 1.6 | 1431-64R32-410/810-45-51 |

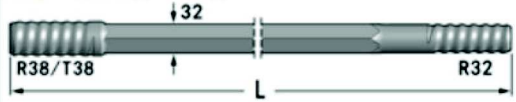


Drifting and tunneling

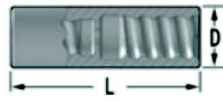
R32

| Drill bit | Diameter | | No x button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N |
|---|-------------------|---------|----------------------|-------|-------|---------------|------|------------------------|----------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | |
| Retrac button bit  | Spherical buttons | | | | | | | | |
| | 45 | 1 3/4 | 3x8 | 6x9 | 40° | 3 | - | 1.1 | 1531-45R32-38/69-45-41 |
| | 48 | 1 7/8 | 3x9 | 6x10 | 30° | 3 | - | 1.2 | 1531-48R32-39/610-45-41 |
| | 51 | 2 | 3x9 | 6x10 | 30° | 3 | - | 1.4 | 1531-51R32-39/610-45-41 |
| | 64 | 2 1/2 | 3x10, 1x10 | 6x11 | 35° | 3 | - | 2.2 | 1533-64R32-410/611-45-41 |
| | 64 | 2 1/2 | 4x10 | 8x10 | 40° | 2 | - | 2.2 | 1531-64R32-410/810-45-41 |
| | 76 | 3 | 4x11, 1x11 | 8x11 | 35° | 4 | 1 | 3.5 | 1533-76R32-511/811-45-41 |
| | Parabolic buttons | | | | | | | | |
| | 45 | 1 3/4 | 3x8 | 6x9 | 40° | 3 | - | 1.1 | 1531-45R32-38/69-45-51 |
| | 48 | 1 7/8 | 3x9 | 6x10 | 30° | 3 | - | 1.2 | 1531-48R32-39/610-45-51 |
| | 51 | 2 | 3x9 | 6x10 | 30° | 3 | - | 1.4 | 1531-51R32-39/610-45-51 |
| | 64 | 2 1/2 | 3x10, 1x10 | 6x11 | 35° | 3 | - | 2.2 | 1533-64R32-410/611-45-51 |
| | 64 | 2 1/2 | 4x10 | 8x10 | 40° | 2 | - | 2.2 | 1531-64R32-410/810-45-51 |
| | 76 | 3 | 4x11, 1x11 | 8x11 | 35° | 4 | 1 | 3.5 | 1533-76R32-511/811-45-51 |
| Dome bit for reaming  | Spherical buttons | | | | | | | | |
| | 76 | 3 | 1x13 | 9x13 | 35° | 3 | 1 | 2.0 | 1441-76R32-113/913-45-41 |
| | 89 | 3 1/2 | 1x13 | 14x13 | 35° | 2 | 2 | 2.6 | 1441-89R32-113/1413-45-41 |
| | 102 | 4 | 1x13 | 16x13 | 35° | 2 | 2 | 3.2 | 1441-102R32-113/1613-45-41 |
| | 127 | 5 | 1x13 | 18x13 | 35° | 3 | 1 | 4.8 | 1441-127R32-113/1813-45-41 |
| | Parabolic buttons | | | | | | | | |
| | 76 | 3 | 1x13 | 9x13 | 35° | 3 | 1 | 2.0 | 1441-76R32-113/913-45-51 |
| | 89 | 3 1/2 | 1x13 | 14x13 | 35° | 2 | 2 | 2.6 | 1441-89R32-113/1413-45-51 |
| | 102 | 4 | 1x13 | 16x13 | 35° | 2 | 2 | 3.2 | 1441-102R32-113/1613-45-51 |
| | 127 | 5 | 1x13 | 18x13 | 35° | 3 | 1 | 4.8 | 1441-127R32-113/1813-45-51 |
| Reaming bit 6°  | 64 | 2 1/2 | 2x10 | 8x9 | 35° | - | - | 0.8 | 1441-646-210/89-45-41 |
| | 64 | 2 1/2 | 4x8 | 8x9 | 25° | - | - | 0.8 | 1441-646-48/89-45-41 |
| | 76 | 3 | 2x11 | 8x11 | 35° | - | - | 1.2 | 1441-766-211/811-45-41 |
| | 76 | 3 | 4x10 | 8x10 | 30° | - | - | 1.2 | 1441-766-410/810-45-41 |
| | 89 | 3 1/2 | 4x11 | 8x11 | 35° | - | - | 1.7 | 1441-896-411/811-45-41 |
| | 89 | 3 1/2 | 4x10 | 8x10 | 30° | - | - | 1.7 | 1441-896-410/810-45-41 |
| Pilot adapter 6°  | 26 | 1 1/32 | 12x8 | | - | - | - | 1.5 | 1442-26R32-12/8-42-22 |
| Reaming bit 12°  | 89 | 3 1/2 | 4x10 | 8x12 | 35° | - | - | 1.8 | 1441-8912-410/812-45-41 |
| | 102 | 4 | 4x12 | 8x12 | 35° | - | - | 2.1 | 1441-10212-412/812-45-41 |
| | 127 | 5 | 4x12 | 8x12 | 35° | - | - | 4.0 | 1441-12712-412/812-45-41 |
| | 127 | 5 | 4x13 | 8x13 | 35° | - | - | 4.0 | 1441-12712-413/813-45-41 |
| Pilot adapter 12°  | 40 | 1 37/64 | 15x10 | | - | - | - | 2.2 | 1442-40R32-15/10-42-22 |
| Cross-type bit  | 41 | 1 5/8 | 16x10 | | - | 1 | 4 | 0.7 | 1221-41R32-16/10-42-23 |
| | 43 | 1 11/16 | 16x10 | | - | 1 | 2 | 0.8 | 1221-43R32-16/10-42-23 |
| | 45 | 1 3/4 | 16x10 | | - | 1 | 4 | 0.9 | 1221-45R32-16/10-42-23 |
| | 48 | 1 7/8 | 16x10 | | - | 1 | 4 | 0.9 | 1221-48R32-16/10-42-23 |
| | 51 | 2 | 16x10 | | - | 1 | 4 | 1.2 | 1221-51R32-16/10-42-23 |
| | 57 | 2 1/4 | 16x10 | | - | 1 | 4 | 1.3 | 1221-57R32-16/10-42-23 |
| 64 | 2 1/2 | 18x13 | | - | 1 | 4 | 1.5 | 1221-64R32-18/13-42-23 | |

Drifting and tunneling

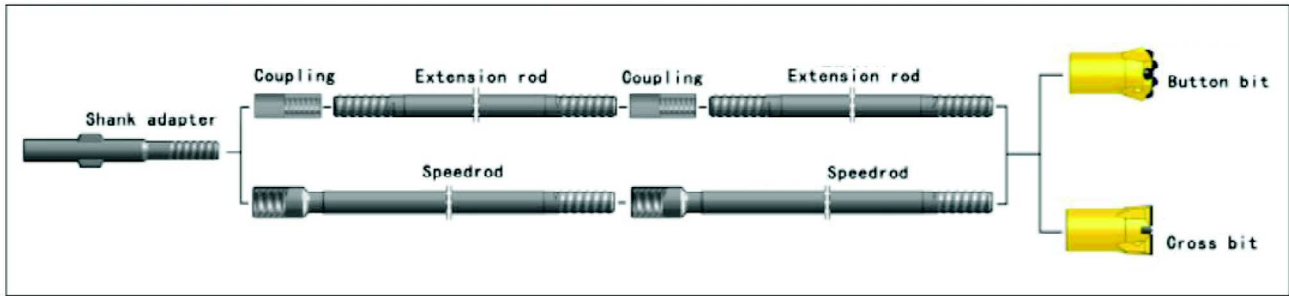
R32

| Drill rod | Length | | Diameter | | Weight approx kg | SANSHAN P/N |
|--|--------|-------------|----------|-------|------------------|-----------------------|
| | mm | Foot | mm | inch | | |
| Drifter rod, R/T38-Hex32-R32 Flushing hole 9.6mm.  | 2400 | 7' 10" | 32 | 1 1/4 | 15.3 | 22H32-R32/T38-2400-23 |
| | 3090 | 10' 11 1/2" | 32 | 1 1/4 | 19.8 | 22H32-R32/T38-3090-23 |
| | 3400 | 11' 13/4" | 32 | 1 1/4 | 21.7 | 22H32-R32/T38-3400-23 |
| | 4000 | 13' 13/8" | 32 | 1 1/4 | 25.5 | 22H32-R32/T38-4000-23 |
| | 4310 | 14' 11/2" | 32 | 1 1/4 | 27.5 | 22H32-R32/T38-4310-23 |
| | 4920 | 16' 11/2" | 32 | 1 1/4 | 31.3 | 22H32-R32/T38-4920-23 |
| | 5530 | 18' 11/2" | 32 | 1 1/4 | 35.2 | 22H32-R32/T38-5530-23 |
| Drifter rod, R/T38-Hex35-R32 Flushing hole 9.5mm.  | 3090 | 10' 11/2" | 35 | 1 3/8 | 24.0 | 22H35-R32/T38-3090-23 |
| | 3700 | 12' 11/2" | 35 | 1 3/8 | 28.7 | 22H35-R32/T38-3700-23 |
| | 4000 | 13' 13/8" | 35 | 1 3/8 | 31.1 | 22H35-R32/T38-4000-23 |
| | 4310 | 14' 11/2" | 35 | 1 3/8 | 33.4 | 22H35-R32/T38-4310-23 |
| | 4920 | 16' 11/2" | 35 | 1 3/8 | 37.8 | 22H35-R32/T38-4920-23 |
| | 5530 | 18' 11/2" | 35 | 1 3/8 | 42.9 | 22H35-R32/T38-5530-23 |
| | 6100 | 20' | 35 | 1 3/8 | 47.3 | 22H35-R32/T38-6100-23 |
| Speedrod, T38-Hex35-R32 Flushing hole 9.5mm.  | 3700 | 12' 11/2" | 35 | 1 3/8 | 29.0 | 24H35-R32/T38-3700-23 |
| | 4310 | 14' 11/2" | 35 | 1 3/8 | 34.1 | 24H35-R32/T38-4310-23 |
| | 4920 | 16' 11/2" | 35 | 1 3/8 | 38.8 | 24H35-R32/T38-4920-23 |
| | 5530 | 18' 11/2" | 35 | 1 3/8 | 43.6 | 24H35-R32/T38-5530-23 |
| | 6400 | 21' | 35 | 1 3/8 | 50.3 | 24H35-R32/T38-6400-23 |

| Coupling | Length | | Diameter | | Thread | Weight approx kg | SANSHAN P/N |
|--|--------|--------|----------|---------|---------|------------------|----------------------|
| | mm | inch | mm | inch | | | |
| Coupling sleeves | 170 | 6 3/4 | 55 | 2 5/32 | R38 | 1.8 | 31-R38-55-170-23 |
| | 190 | 7 1/2 | 55 | 2 5/32 | T38 | 2.0 | 31-T38-55-190-23 |
| Coupling sleeves of different diameter  | 150 | 6 1/8 | 45 | 1 3/4 | R25-R32 | 1.1 | 33-R25/R32-45-150-23 |
| | 160 | 6 1/4 | 45 | 1 3/4 | R25-R32 | 1.2 | 33-R25/R32-45-160-23 |
| | 160 | 6 1/4 | 45 | 1 3/4 | R28-R32 | 1.2 | 33-R28/R32-45-160-23 |
| | 160 | 6 1/4 | 55 | 2 5/32 | R32-R38 | 1.8 | 33-R32/R38-55-160-23 |
| | 170 | 6 3/4 | 55 | 2 5/32 | R32-R38 | 2.0 | 33-R32/R38-55-170-23 |
| | 180 | 7 1/16 | 55 | 2 5/32 | R32-R38 | 2.2 | 33-R32/R38-55-180-23 |
| | 210 | 8 1/4 | 55 | 2 5/32 | R32-R38 | 2.8 | 33-R32/R38-55-210-23 |
| | 170 | 6 3/4 | 56 | 2 1/8 | R32-T38 | 2.1 | 33-R32/T38-56-170-23 |
| | 180 | 7 1/16 | 56 | 2 1/8 | R32-T38 | 2.2 | 33-R32/T38-56-180-23 |
| | 210 | 8 1/4 | 56 | 2 1/8 | R32-T38 | 2.8 | 33-R32/T38-56-210-23 |
| | 190 | 7 1/2 | 63 | 2 33/64 | R32-T45 | 3.2 | 33-R32/T45-63-190-23 |

Bench drilling

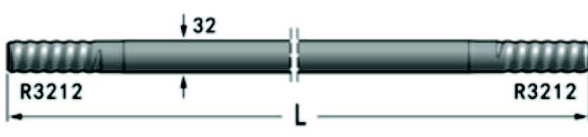

R3212





| D rill b it | D iam eter | | No X button d iam eter | | | F lish ing h o k | | W eigh t approx kg | S ANS HAN P A N | |
|---------------------|------------|-------|------------------------|------------|--------|------------------|-------|--------------------|----------------------------|----------------------------|
| | m m | in ch | F ront | G auge | Ang le | F ront | S ide | | | |
| Button bit | 48 | 1 7/8 | 2×9 | 3×11 | 35° | 1 | 1 | 0.7 | 1431-48R3212-29/311-45-62 | |
| | 48 | 1 7/8 | 2×9 | 5×11 | 35° | 1 | 1 | 0.7 | 1431-48R3212-29/511-45-62 | |
| | 55 | 2 1/8 | 1×12 | 3×14 | 35° | 1 | 1 | 0.9 | 1431-55R3212-112/314-45-62 | |
| | 55 | 2 1/8 | 2×10, 1×10 | 4×12 | 35° | 1 | 1 | 0.8 | 1434-55R3212-310/412-45-62 | |
| | 55 | 2 1/8 | 2×10, 1×10 | 4×10 | 35° | 1 | 1 | 0.8 | 1434-55R3212-310/410-45-62 | |
| | 55 | 2 1/8 | 3×9 | 6×10 | 35° | 3 | - | 0.9 | 1431-55R3212-39/610-45-62 | |
| | 60 | 2 3/8 | 2×12 | 3×14 | 40° | 1 | 1 | 1.0 | 1431-60R3212-212/314-45-62 | |
| | 60 | 2 3/8 | 2×11 | 5×12 | 40° | 1 | 1 | 1.0 | 1431-60R3212-211/512-45-62 | |
| | 60 | 2 3/8 | 2×10, 1×10 | 4×12 | 40° | 2 | 1 | 0.9 | 1434-60R3212-310/412-45-62 | |
| | 60 | 2 3/8 | 3×10 | 6×11 | 40° | 3 | - | 1.1 | 1431-60R3212-310/611-45-62 | |
| | 65 | 2 1/2 | 2×13 | 3×14 | 40° | 1 | 1 | 1.1 | 1431-65R3212-213/314-45-62 | |
| | 65 | 2 1/2 | 3×12 | 3×14 | 40° | 1 | 1 | 1.1 | 1431-65R3212-312/314-45-62 | |
| | 65 | 2 1/2 | 2×12, 1×12 | 4×12 | 40° | 1 | 1 | 1.2 | 1434-65R3212-312/412-45-62 | |
| | | 65 | 2 1/2 | 2×12, 1×10 | 4×14 | 35° | 1 | 1 | 1.5 | 1434-65R3212-312/414-45-62 |
| | | 65 | 2 1/2 | 3×12 | 6×12 | 35° | 1 | 1 | 1.2 | 1431-65R3212-312/612-45-62 |
| 65 | | 2 1/2 | 3×12 | 6×12 | 35° | 3 | - | 1.2 | 1431-65R3212-312/612-45-62 | |
| 70 | | 2 3/4 | 3×12 | 3×14 | 35° | 1 | 1 | 1.6 | 1431-70R3212-312/314-45-62 | |
| 70 | | 2 3/4 | 3×12 | 6×12 | 35° | 1 | 1 | 1.4 | 1431-70R3212-312/612-45-62 | |
| 70 | | 2 3/4 | 3×12 | 6×12 | 35° | 3 | - | 1.4 | 1431-70R3212-312/612-45-62 | |
| 75 | | 3 | 5×10 | 6×12 | 35° | 2 | 1 | 1.7 | 1431-75R3212-510/612-45-62 | |
| Cross-type bits | | 55 | 2 1/8 | 16×10 | - | - | 1 | 2 | 0.8 | 1221-55R3212-16/10-42-23 |
| | 60 | 2 3/8 | 16×10 | - | - | 1 | 2 | 0.9 | 1221-60R3212-16/10-42-23 | |
| | 65 | 2 1/2 | 16×10 | - | - | 1 | 2 | 1.0 | 1221-65R3212-16/10-42-23 | |
| | 70 | 2 3/4 | 16×10 | - | - | 1 | 2 | 1.1 | 1221-70R3212-16/10-42-23 | |
| | 75 | 3 | 18×13 | - | - | 1 | 2 | 1.3 | 1221-75R3212-18/13-42-23 | |
| | 80 | 3 1/8 | 18×13 | - | - | 1 | 2 | 1.6 | 1221-80R3212-18/13-42-23 | |

Bench drilling

R3212

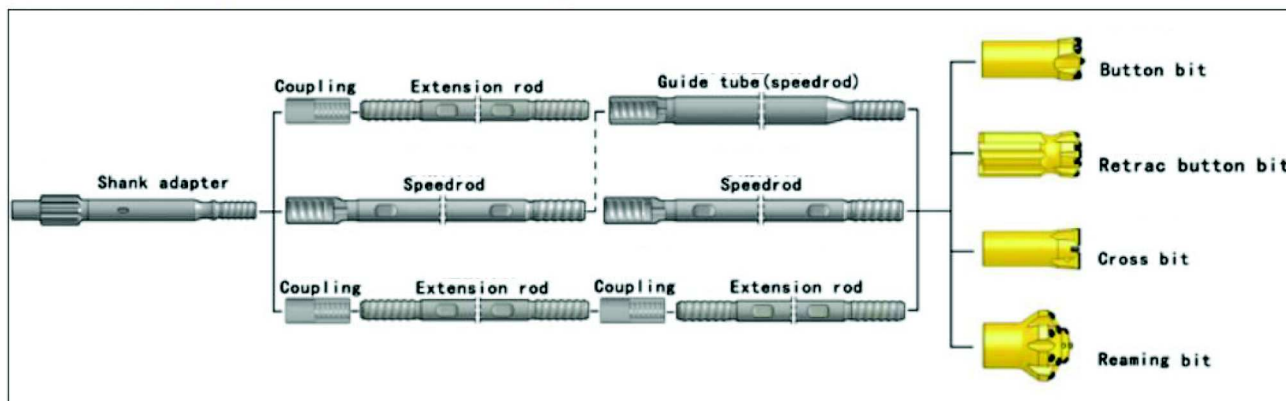
| Drill rod | Length | | Diameter | | Weight approx kg | SANSHAN P/N |
|---|--------|-------|----------|-------|------------------|------------------------|
| | mm | Foot | mm | inch | | |
| Extension rod R3212-Round32-R3212 Flushing hole 9.2mm.  | 600 | 2' | 32 | 1 1/4 | 3.53 | 23R32-R3212-0600-40 |
| | 800 | 2' 7" | 32 | 1 1/4 | 4.70 | 23R32-R3212-0800-40 |
| | 900 | 2' | 32 | 1 1/4 | 5.30 | 23R32-R3212-0900-40 |
| | 1000 | 3' 3" | 32 | 1 1/4 | 5.90 | 23R32-R3212-1000-40 |
| | 1100 | 3' 6" | 32 | 1 1/4 | 6.52 | 23R32-R3212-1100-40 |
| | 1200 | 3' 9" | 32 | 1 1/4 | 7.10 | 23R32-R3212-1200-40 |
| MF-rod R3212-Round32-R3212 Flushing hole 9.2mm.  | 600 | 2' | 32 | 1 1/4 | 4.45 | 24R32-R3212/46-0600-40 |
| | 800 | 2' 7" | 32 | 1 1/4 | 5.60 | 24R32-R3212/46-0800-40 |
| | 900 | 2' | 32 | 1 1/4 | 6.17 | 24R32-R3212/46-0900-40 |
| | 1000 | 3' 3" | 32 | 1 1/4 | 6.80 | 24R32-R3212/46-1000-40 |
| | 1100 | 3' 6" | 32 | 1 1/4 | 7.40 | 24R32-R3212/46-1100-40 |
| | 1200 | 3' 9" | 32 | 1 1/4 | 7.90 | 24R32-R3212/46-1200-40 |

| Coupling | Length | | Diameter | | Thread | Weight approx kg | SANSHAN P/N |
|--|--------|-------|----------|-------|--------|------------------|--------------------|
| | mm | inch | mm | inch | | | |
| Coupling sleeves  | 150 | 6 1/8 | 44 | 1 3/4 | R3212 | 1.0 | 31-R3212-44-150-42 |
| | 160 | 6 1/4 | 44 | 1 3/4 | R3212 | 1.1 | 31-R3212-44-160-42 |
| | 160 | 6 1/4 | 48 | 1 7/8 | R3212 | 1.5 | 31-R3212-48-160-42 |

| Shank adaptors | Length | | Diameter | | Thread | Weight approx kg | SANSHAN P/N |
|---|--------|--------|----------|-------|--------|------------------|------------------------|
| | mm | inch | mm | inch | | | |
| For 90 drills  | 330 | 1 1/12 | 56 | 2 1/4 | R3212 | 2.3 | 4NJ90-38R3212-10330-42 |

Bench drilling

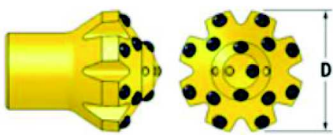
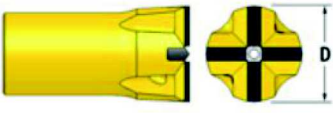
R32

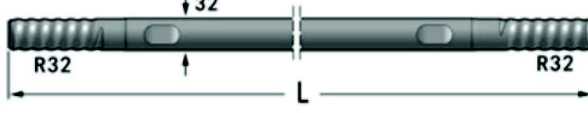




| Drill bit | Diameter | | No x button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N |
|------------------------------|-------------------|-------|----------------------|-------|-------|---------------|------|--------------------------|--------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | |
| Button bit | Spherical buttons | | | | | | | | |
| | 48 | 1 7/8 | 2x9 | 5x11 | 35° | 1 | 2 | 1.0 | 1431-48R32-29/511-45-31 |
| | 48 | 1 7/8 | 3x8 | 6x10 | 40° | 3 | - | 0.9 | 1431-48R32-38/610-45-31 |
| | 51 | 2 | 2x10 | 5x11 | 35° | 1 | 2 | 1.0 | 1431-51R32-210/511-45-31 |
| | 51 | 2 | 3x9 | 6x10 | 35° | 3 | - | 1.0 | 1431-51R32-39/610-45-31 |
| | 57 | 2 1/4 | 3x9 | 6x11 | 35° | 3 | - | 1.3 | 1431-57R32-39/611-45-31 |
| | 57 | 2 1/4 | 3x10 | 6x11 | 35° | 3 | - | 1.3 | 1431-57R32-310/611-45-31 |
| | 64 | 2 1/2 | 3x11 | 6x12 | 30° | 3 | - | 1.6 | 1431-64R32-311/612-45-31 |
| | 64 | 2 1/2 | 3x10, 1x10 | 6x11 | 35° | 3 | - | 1.6 | 1433-64R32-410/611-45-31 |
| | 64 | 2 1/2 | 4x10 | 8x10 | 40° | 2 | - | 1.6 | 1431-64R32-410/810-45-31 |
| | 70 | 3 | 4x11 | 8x11 | 40° | 2 | - | 2.6 | 1431-70R32-411/811-45-31 |
| | 76 | 3 | 4x11, 1x11 | 8x11 | 35° | 2 | - | 2.6 | 1433-76R32-511/811-45-31 |
| | Parabolic buttons | | | | | | | | |
| | 48 | 1 7/8 | 3x8 | 6x10 | 40° | 3 | - | 0.9 | 1431-48R32-38/610-45-51 |
| | 51 | 2 | 3x9 | 6x10 | 40° | 3 | 1 | 1.0 | 1431-51R32-39/610-45-51 |
| | 54 | 2 1/8 | 3x9 | 6x10 | 40° | 3 | 1 | 1.0 | 1431-54R32-39/610-45-51 |
| | 57 | 2 1/4 | 3x9 | 6x11 | 35° | 3 | - | 1.3 | 1431-57R32-39/611-45-51 |
| | 57 | 2 1/4 | 3x10 | 6x11 | 35° | 3 | - | 1.3 | 1431-57R32-310/611-45-51 |
| 64 | 2 1/2 | 4x10 | 8x10 | 40° | 2 | - | 1.6 | 1431-64R32-410/810-45-51 | |
| Retrac button bit | Spherical buttons | | | | | | | | |
| | 48 | 1 7/8 | 3x8 | 6x10 | 40° | 3 | - | 1.2 | 1531-48R32-38/610-45-31 |
| | 51 | 2 | 3x9 | 6x10 | 35° | 3 | - | 1.4 | 1531-51R32-39/610-45-31 |
| | 64 | 2 1/2 | 3x10, 1x10 | 6x11 | 35° | 3 | - | 2.2 | 1533-64R32-410/611-45-31 |
| | 64 | 2 1/2 | 4x10 | 8x10 | 40° | 2 | - | 2.2 | 1531-64R32-410/810-45-31 |
| | 76 | 3 | 4x11, 1x11 | 8x11 | 35° | 4 | 1 | 3.5 | 1533-76R32-511/811-45-31 |
| | Parabolic buttons | | | | | | | | |
| | 48 | 1 7/8 | 3x9 | 6x10 | 30° | 3 | - | 1.2 | 1531-48R32-39/610-45-51 |
| | 51 | 2 | 3x9 | 6x10 | 30° | 3 | - | 1.4 | 1531-51R32-39/610-45-51 |
| | 64 | 2 1/2 | 3x10, 1x10 | 6x11 | 35° | 3 | - | 2.2 | 1533-64R32-410/611-45-51 |
| | 64 | 2 1/2 | 4x10 | 8x10 | 40° | 2 | - | 2.2 | 1531-64R32-410/810-45-51 |
| | 76 | 3 | 4x11, 1x11 | 8x11 | 35° | 4 | 1 | 3.5 | 1533-76R32-511/811-45-51 |

Bench drilling

R32


| Drill bit | Diameter | | No X button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N |
|---|-------------------|-------|----------------------|-------|-------|---------------|------|------------------|----------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | |
| Dome bit for reaming  | Spherical buttons | | | | | | | | |
| | 76 | 3 | 1×13 | 9×13 | 35° | 3 | 1 | 2.0 | 1441-76R32-113/913-45-31 |
| | 89 | 3 1/2 | 1×13 | 14×13 | 35° | 2 | 2 | 2.6 | 1441-89R32-113/1413-45-31 |
| | 102 | 4 | 1×13 | 16×13 | 35° | 2 | 2 | 3.2 | 1441-102R32-113/1613-45-31 |
| | 127 | 5 | 1×13 | 18×13 | 35° | 3 | 1 | 4.8 | 1441-127R32-113/1813-45-31 |
| | Parabolic buttons | | | | | | | | |
| | 76 | 3 | 1×13 | 9×13 | 35° | 3 | 1 | 2.0 | 1441-76R32-113/913-45-51 |
| | 89 | 3 1/2 | 1×13 | 14×13 | 35° | 2 | 2 | 2.6 | 1441-89R32-113/1413-45-51 |
| | 102 | 4 | 1×13 | 16×13 | 35° | 2 | 2 | 3.2 | 1441-102R32-113/1613-45-51 |
| | 127 | 5 | 1×13 | 18×13 | 35° | 3 | 1 | 4.8 | 1441-127R32-113/1813-45-51 |
| Cross-type bits  | 45 | 1 3/4 | 16×10 | | - | 1 | 4 | 0.9 | 1221-45R32-16/10-42-23 |
| | 48 | 1 7/8 | 16×10 | | - | 1 | 4 | 0.9 | 1221-48R32-16/10-42-23 |
| | 51 | 2 | 16×10 | | - | 1 | 4 | 1.2 | 1221-51R32-16/10-42-23 |
| | 57 | 2 1/4 | 16×10 | | - | 1 | 4 | 1.3 | 1221-57R32-16/10-42-23 |
| | 64 | 2 1/2 | 18×13 | | - | 1 | 4 | 1.5 | 1221-64R32-18/13-42-23 |

| Drill rod | Length | | Diameter | | Weight approx kg | SANSHAN P/N |
|---|--------|----------|----------|-------|------------------|----------------------|
| | mm | Foot | mm | inch | | |
| Extension rod R32-Round32-R32 Flushing hole 9.2mm. Wrench flat 25.4mm.  | 915 | 3' | 32 | 1 1/4 | 5.4 | 23R32-R32-0915-23 |
| | 1000 | 3' 33/8" | 32 | 1 1/4 | 5.9 | 23R32-R32-1000-23 |
| | 1220 | 4' | 32 | 1 1/4 | 7.2 | 23R32-R32-1220-23 |
| | 1830 | 6' | 32 | 1 1/4 | 10.8 | 23R32-R32-1830-23 |
| | 2435 | 8' | 32 | 1 1/4 | 14.3 | 23R32-R32-2435-23 |
| | 3050 | 10' | 32 | 1 1/4 | 17.9 | 23R32-R32-3050-23 |
| | 3660 | 12' | 32 | 1 1/4 | 21.5 | 23R32-R32-3660-23 |
| MF-rod R32-Round32-R32 Flushing hole 9.2mm. Wrench flat 25.4mm.  | 915 | 3' | 32 | 1 1/4 | 6.2 | 24R32-R32/46-0915-23 |
| | 1220 | 4' | 32 | 1 1/4 | 8.0 | 24R32-R32/46-1220-23 |
| | 1525 | 5' | 32 | 1 1/4 | 9.8 | 24R32-R32/46-1525-23 |
| | 1830 | 6' | 32 | 1 1/4 | 11.6 | 24R32-R32/46-1830-23 |
| | 2435 | 8' | 32 | 1 1/4 | 15.1 | 24R32-R32/46-2435-23 |
| | 3050 | 10' | 32 | 1 1/4 | 18.7 | 24R32-R32/46-3050-23 |
| | 3660 | 12' | 32 | 1 1/4 | 22.3 | 24R32-R32/46-3660-23 |


| | | | | | | |
|--|------|-----|----|-------|------|----------------------|
| Guide speedrod R32-Round39-R32 Flushing hole 14.5mm.  | 3050 | 10' | 39 | 1 1/2 | 27.0 | 24R39-R32/46-3050-23 |
| | 3660 | 12' | 39 | 1 1/2 | 32.0 | 24R39-R32/46-3660-23 |

Bench drilling

R32

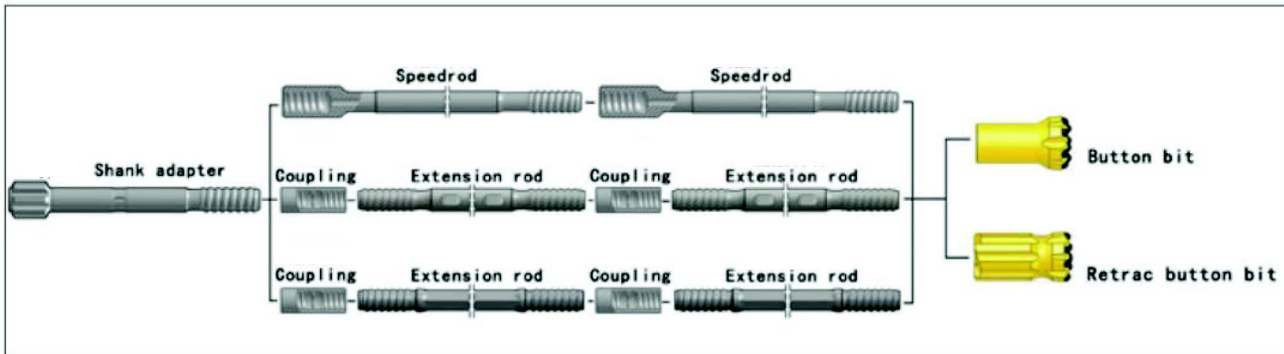
| Guide tube | Length | | Diameter | | Weight approx kg | SANSHAN P / N |
|---|--------|------|----------|-------|------------------|----------------------|
| | mm | inch | mm | inch | | |
| <p>Guide tube 51-64mm D46 for bits from 51-64mm</p>  | 1220 | 4' | 46 | 1 3/4 | 10.0 | 24R46-R32/46-1220-23 |
| | 1525 | 5' | 46 | 1 3/4 | 12.5 | 24R46-R32/46-1525-23 |
| | 1830 | 6' | 46 | 1 3/4 | 14.2 | 24R46-R32/46-1830-23 |
| | 3050 | 10' | 46 | 1 3/4 | 25.0 | 24R46-R32/46-3050-23 |

| Coupling | Length | | Diameter | | Thread | Weight approx kg | SANSHAN P / N |
|------------------|--------|-------|----------|-------|--------|------------------|------------------|
| | mm | inch | mm | inch | | | |
| Coupling sleeves | 150 | 6 1/8 | 44 | 1 3/4 | R32 | 1.0 | 31-R32-44-150-23 |
| | 160 | 6 1/4 | 44 | 1 3/4 | R32 | 1.1 | 31-R32-44-160-23 |



Bench drilling

HL38



| Drill bit | Diameter | | No X button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P / N |
|------------------------------|-------------------|-------|----------------------|-------|-------|---------------|------|------------------|---------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | |
| Button bit | Spherical buttons | | | | | | | | |
| | 64 | 2 1/2 | 3×11 | 6×12 | 35° | 3 | - | 1.8 | 1431-64HL38-311/612-45-31 |
| | 70 | 2 3/4 | 4×11 | 8×11 | 40° | 2 | - | 1.9 | 1431-70HL38-411/811-45-31 |
| | 70 | 2 3/4 | 4×10, 1×10 | 8×11 | 30° | 4 | - | 1.9 | 1432-70HL38-510/811-45-31 |
| | 70 | 2 3/4 | 3×10, 1×10 | 6×12 | 35° | 3 | - | 1.8 | 1433-70HL38-410/612-45-31 |
| | 76 | 3 | 4×11 | 8×11 | 40° | 2 | - | 2.4 | 1431-76HL38-411/811-45-31 |
| | 76 | 3 | 3×11, 1×11 | 6×12 | 35° | 3 | 1 | 2.6 | 1433-76HL38-411/612-45-31 |
| | 76 | 3 | 4×11, 1×11 | 8×12 | 35° | 4 | - | 2.6 | 1432-76HL38-511/812-45-31 |
| | 89 | 3 1/2 | 5×12 | 8×12 | 35° | 2 | - | 3.3 | 1431-89HL38-512/812-45-31 |
| | 89 | 3 1/2 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 3.3 | 1432-89HL38-513/813-45-31 |
| Retrac button bit | Parabolic buttons | | | | | | | | |
| | 64 | 2 1/2 | 3×11 | 6×12 | 35° | 3 | - | 1.8 | 1431-64HL38-311/612-45-51 |
| | 70 | 2 3/4 | 4×11 | 8×11 | 40° | 2 | - | 1.9 | 1431-70HL38-411/811-45-51 |
| | 70 | 2 3/4 | 4×10, 1×10 | 8×11 | 30° | 4 | - | 1.9 | 1432-70HL38-510/811-45-51 |
| | 76 | 3 | 4×11 | 8×11 | 40° | 2 | - | 2.4 | 1431-76HL38-411/811-45-51 |
| | 76 | 3 | 3×11, 1×11 | 6×13 | 35° | 3 | 1 | 2.6 | 1433-76HL38-411/613-45-51 |
| | 76 | 3 | 4×11, 1×11 | 8×12 | 35° | 4 | - | 2.6 | 1432-76HL38-511/812-45-51 |
| | 89 | 3 1/2 | 5×12 | 8×12 | 35° | 2 | - | 3.3 | 1433-89HL38-512/812-45-51 |
| | 89 | 3 1/2 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 3.3 | 1432-89HL38-513/813-45-51 |

| | | | | | | | | | | |
|------------------------------|------------------------------|-------------------|------------|------------|------|-----|-----|---------------------------|---------------------------|---------------------------|
| Retrac button bit | Spherical buttons | | | | | | | | | |
| | 64 | 2 1/2 | 3×10, 1×10 | 6×11 | 35° | 3 | - | 2.2 | 1533-64HL38-410/611-45-31 | |
| | 70 | 2 3/4 | 4×10, 1×10 | 8×11 | 35° | 4 | - | 2.4 | 1532-70HL38-510/811-45-31 | |
| | 76 | 3 | 4×11, 1×11 | 8×11 | 40° | 4 | - | 3.3 | 1532-76HL38-511/811-45-31 | |
| | 76 | 3 | 4×11, 1×11 | 8×12 | 35° | 4 | - | 3.3 | 1532-76HL38-511/812-45-31 | |
| | 89 | 3 1/2 | 5×12 | 8×12 | 35° | 2 | - | 4.8 | 1531-89HL38-512/812-45-31 | |
| | 89 | 3 1/2 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 4.8 | 1532-89HL38-513/813-45-31 | |
| | Retrac button bit | Parabolic buttons | | | | | | | | |
| | | 64 | 2 1/2 | 3×10, 1×10 | 6×11 | 35° | 3 | - | 2.2 | 1533-64HL38-410/611-45-51 |
| | | 70 | 2 3/4 | 4×10, 1×10 | 8×11 | 35° | 4 | - | 2.4 | 1532-70HL38-510/811-45-51 |
| 76 | | 3 | 4×11, 1×11 | 8×11 | 40° | 4 | - | 3.3 | 1532-76HL38-511/811-45-51 | |
| 76 | | 3 | 4×11, 1×11 | 8×12 | 35° | 4 | - | 3.3 | 1532-76HL38-511/812-45-51 | |
| 89 | | 3 1/2 | 5×12 | 8×12 | 35° | 2 | - | 4.8 | 1531-89HL38-512/812-45-51 | |
| 89 | 3 1/2 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 4.8 | 1532-89HL38-513/813-45-51 | | |

Bench drilling

HL38

| Drill rod | Length | | Diameter | | Weight approx kg | SANSHAN P/N |
|---|--------|-----------|----------|-------|--------------------|--------------------|
| | mm | Foot | mm | inch | | |
| Extension rod HL38-Round39-HL38 Flushing hole 14.5mm. Wrench flat 32mm. | 1220 | 4' | 39 | 1 1/2 | 10.2 | 23R39-HL38-1220-23 |
| | 1525 | 5' | 39 | 1 1/2 | 12.8 | 23R39-HL38-1525-23 |
| | 1830 | 6' | 39 | 1 1/2 | 15.3 | 23R39-HL38-1830-23 |
| | 2435 | 8' | 39 | 1 1/2 | 20.4 | 23R39-HL38-2435-23 |
| | 3050 | 10' | 39 | 1 1/2 | 25.5 | 23R39-HL38-3050-23 |
| | 3660 | 12' | 39 | 1 1/2 | 30.9 | 23R39-HL38-3660-23 |
| | 3965 | 13' | 39 | 1 1/2 | 33.2 | 23R39-HL38-3965-23 |
| | 4270 | 14' | 39 | 1 1/2 | 35.7 | 23R39-HL38-4270-23 |
| | 4880 | 16' | 39 | 1 1/2 | 41.0 | 23R39-HL38-4880-23 |
| | 5530 | 18' 11/2" | 39 | 1 1/2 | 46.3 | 23R39-HL38-5530-23 |
| 6095 | 20' | 39 | 1 1/2 | 50.9 | 23R39-HL38-6095-23 | |

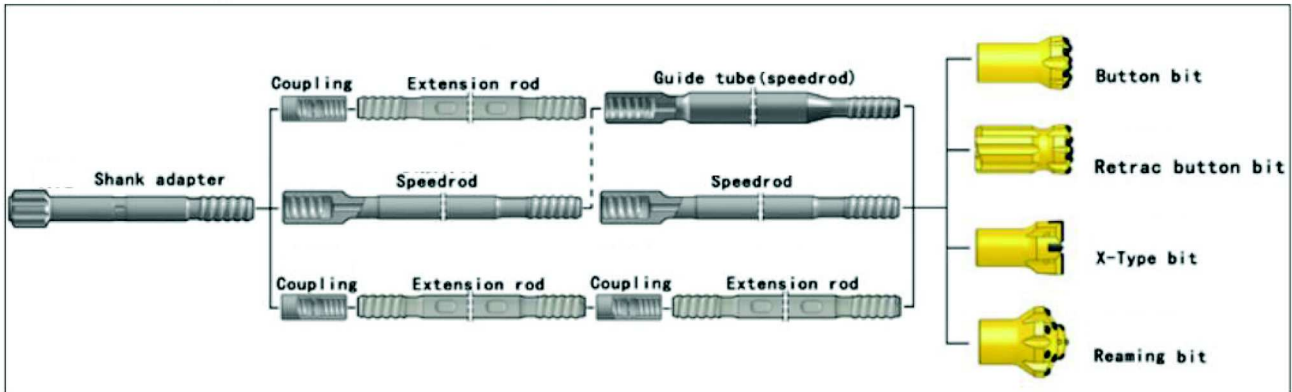
| | | | | | | |
|---|------|-----------|----|-------|------|-----------------------|
| MF-rod HL38-Round39-HL38 Flushing hole 14.5mm. | 915 | 3' | 39 | 1 1/2 | 10.7 | 24R39-HL38/57-0915-23 |
| | 1220 | 4' | 39 | 1 1/2 | 13.3 | 24R39-HL38/57-1220-23 |
| | 1525 | 5' | 39 | 1 1/2 | 15.8 | 24R39-HL38/57-1525-23 |
| | 1830 | 6' | 39 | 1 1/2 | 18.3 | 24R39-HL38/57-1830-23 |
| | 3050 | 10' | 39 | 1 1/2 | 28.5 | 24R39-HL38/57-3050-23 |
| | 3660 | 12' | 39 | 1 1/2 | 33.6 | 24R39-HL38/57-3660-23 |
| | 4270 | 14' | 39 | 1 1/2 | 38.7 | 24R39-HL38/57-4270-23 |
| | 4880 | 16' | 39 | 1 1/2 | 43.7 | 24R39-HL38/57-4880-23 |
| | 5530 | 18' 11/2" | 39 | 1 1/2 | 49.2 | 24R39-HL38/57-5530-23 |
| | 6095 | 20' | 39 | 1 1/2 | 53.9 | 24R39-HL38/57-6095-23 |

| | | | | | | |
|--|------|-----|----|-------|------|--------------------|
| Hex. extension rod HL38-Hex32-HL38 Flushing hole 9.6mm. | 1220 | 4' | 32 | 1 1/4 | 8.6 | 23H32-HL38-1220-23 |
| | 1830 | 6' | 32 | 1 1/4 | 12.6 | 23H32-HL38-1830-23 |
| | 2435 | 8' | 32 | 1 1/4 | 16.6 | 23H32-HL38-2435-23 |
| | 3050 | 10' | 32 | 1 1/4 | 20.8 | 23H32-HL38-3050-23 |
| | 3660 | 12' | 32 | 1 1/4 | 24.9 | 23H32-HL38-3660-23 |

| Coupling | Length | | Diameter | | Thread | Weight approx kg | SANSHAN P/N |
|------------------|--------|-------|----------|--------|--------|------------------|-------------------|
| | mm | inch | mm | inch | | | |
| Coupling sleeves | 170 | 6 3/4 | 55 | 2 5/32 | HL38 | 1.9 | 31-HL38-55-170-23 |
| | 190 | 7 1/2 | 55 | 2 5/32 | HL38 | 2.1 | 31-HL38-55-190-23 |

Bench drilling

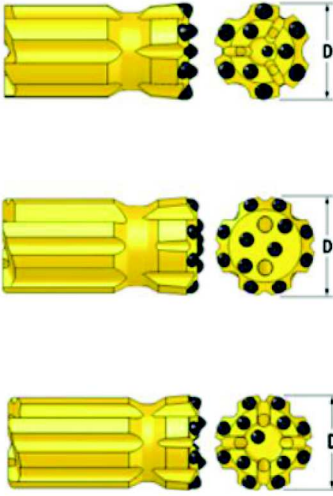
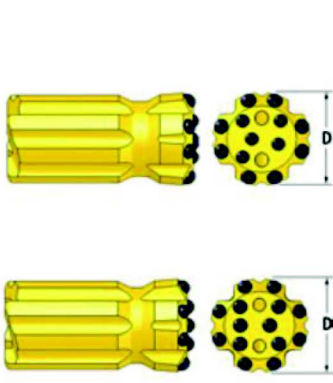
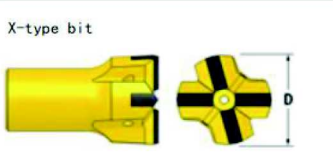
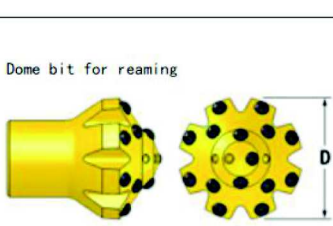
T38



| Drill bit | Diameter | | No Xbutton diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N |
|--------------------------|----------|------------|---------------------|-------|-------|---------------|------|--------------------------|--------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | |
| Spherical buttons | | | | | | | | | |
| | 64 | 2 1/2 | 3×11 | 6×12 | 35° | 3 | - | 1.8 | 1431-64T38-311/612-45-31 |
| | 64 | 2 1/2 | 4×10 | 8×10 | 40° | 2 | - | 1.6 | 1431-64T38-410/810-45-31 |
| | 64 | 2 1/2 | 3×10, 1×10 | 6×11 | 35° | 3 | - | 1.7 | 1433-64T38-410/611-45-31 |
| | 70 | 2 3/4 | 4×11 | 8×11 | 40° | 2 | - | 1.9 | 1431-70T38-411/811-45-31 |
| | 70 | 2 3/4 | 4×10, 1×10 | 8×11 | 30° | 4 | - | 1.9 | 1432-70T38-510/811-45-31 |
| | 70 | 2 3/4 | 3×10, 1×10 | 6×12 | 35° | 3 | - | 1.8 | 1433-70T38-410/612-45-31 |
| | 76 | 3 | 4×11 | 8×11 | 40° | 2 | - | 2.4 | 1431-76T38-411/811-45-31 |
| | 76 | 3 | 5×11 | 8×13 | 35° | 2 | 1 | 2.4 | 1431-76T38-511/813-45-31 |
| | 76 | 3 | 3×11, 1×11 | 6×12 | 35° | 3 | 1 | 2.6 | 1433-76T38-411/612-45-31 |
| | 76 | 3 | 4×11, 1×11 | 8×12 | 35° | 4 | - | 2.6 | 1432-76T38-511/812-45-31 |
| | 76 | 3 | 4×11, 1×11 | 8×11 | 40° | 4 | - | 2.6 | 1432-76T38-511/811-45-31 |
| | 89 | 3 1/2 | 4×13 | 8×13 | 40° | 2 | - | 3.3 | 1431-89T38-413/813-45-31 |
| 89 | 3 1/2 | 5×13 | 8×13 | 35° | 2 | - | 3.3 | 1431-89T38-513/813-45-31 | |
| 89 | 3 1/2 | 6×11 | 8×12 | 35° | 2 | - | 3.3 | 1431-89T38-611/812-45-31 | |
| 89 | 3 1/2 | 3×11, 2×11 | 6×13 | 35° | 3 | 1 | 3.3 | 1433-89T38-511/613-45-31 | |
| 89 | 3 1/2 | 4×11, 1×11 | 8×13 | 35° | 4 | - | 3.3 | 1433-89T38-511/813-45-31 | |
| 89 | 3 1/2 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 3.3 | 1432-89T38-513/813-45-31 | |
| Parabolic buttons | | | | | | | | | |
| | 64 | 2 1/2 | 3×11 | 6×12 | 35° | 3 | - | 1.8 | 1431-64T38-311/612-45-51 |
| | 64 | 2 1/2 | 4×10 | 8×10 | 40° | 2 | - | 1.6 | 1431-64T38-410/810-45-51 |
| | 64 | 2 1/2 | 3×10, 1×10 | 6×11 | 35° | 3 | - | 1.7 | 1433-64T38-410/611-45-51 |
| | 70 | 2 3/4 | 4×11 | 8×11 | 40° | 2 | - | 1.9 | 1431-70T38-411/811-45-51 |
| | 70 | 2 3/4 | 3×10, 1×10 | 6×12 | 35° | 3 | - | 1.8 | 1433-70T38-410/612-45-51 |
| | 76 | 3 | 4×11 | 8×11 | 40° | 2 | - | 2.4 | 1431-76T38-411/811-45-51 |
| | 76 | 3 | 5×11 | 8×13 | 35° | 2 | 1 | 2.4 | 1431-76T38-511/813-45-51 |
| | 76 | 3 | 3×11, 1×11 | 6×13 | 35° | 3 | 1 | 2.6 | 1433-76T38-411/613-45-51 |
| | 76 | 3 | 4×11, 1×11 | 8×12 | 35° | 4 | - | 2.6 | 1432-76T38-511/812-45-51 |
| | 76 | 3 | 4×11, 1×11 | 8×11 | 40° | 4 | - | 2.6 | 1432-76T38-511/811-45-51 |
| | 89 | 3 1/2 | 5×13 | 8×13 | 35° | 2 | - | 3.3 | 1431-89T38-513/813-45-51 |
| | 89 | 3 1/2 | 6×11 | 8×12 | 35° | 2 | - | 3.3 | 1431-89T38-611/812-45-51 |
| 89 | 3 1/2 | 3×11, 2×11 | 6×13 | 35° | 3 | 1 | 3.3 | 1433-89T38-511/613-45-51 | |
| 89 | 3 1/2 | 4×11, 1×11 | 8×13 | 35° | 4 | - | 3.3 | 1433-89T38-511/813-45-51 | |
| 89 | 3 1/2 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 3.3 | 1432-89T38-513/813-45-51 | |

Bench drilling

T38

| Drill bit | Diameter | | No x button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N |
|--|-------------------|----------------|----------------------|---------|-------|---------------|------|--------------------------|----------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | |
| | Spherical buttons | | | | | | | | |
| Retrac button bit  | 64 | 2 1/2 | 4 x 10 | 8 x 10 | 30° | 2 | - | 2.2 | 1531-64T38-410/810-45-31 |
| | 64 | 2 1/2 | 3 x 10, 1 x 10 | 6 x 11 | 35° | 3 | - | 2.2 | 1533-64T38-410/611-45-31 |
| | 70 | 2 3/4 | 4 x 11 | 8 x 11 | 40° | 2 | - | 2.4 | 1531-70T38-411/811-45-31 |
| | 70 | 2 3/4 | 3 x 10, 1 x 10 | 6 x 13 | 35° | 3 | - | 2.4 | 1533-70T38-410/613-45-31 |
| | 70 | 2 3/4 | 4 x 10, 1 x 10 | 8 x 11 | 35° | 4 | - | 2.4 | 1632-70T38-510/811-45-31 |
| | 76 | 3 | 4 x 11 | 8 x 11 | 40° | 2 | - | 3.3 | 1531-76T38-411/811-45-31 |
| | 76 | 3 | 4 x 11, 1 x 11 | 8 x 11 | 35° | 4 | - | 3.3 | 1632-76T38-511/811-45-31 |
| | 76 | 3 | 4 x 11, 1 x 11 | 8 x 12 | 35° | 4 | - | 3.3 | 1632-76T38-511/812-45-31 |
| | 89 | 3 1/2 | 4 x 13 | 8 x 13 | 40° | 2 | - | 4.8 | 1531-89T38-413/813-45-31 |
| | 89 | 3 1/2 | 5 x 13 | 8 x 13 | 35° | 2 | - | 4.8 | 1531-89T38-513/813-45-31 |
| | 89 | 3 1/2 | 6 x 11 | 8 x 12 | 35° | 2 | - | 4.8 | 1531-89T38-611/812-45-31 |
| | 89 | 3 1/2 | 4 x 11, 1 x 11 | 8 x 13 | 35° | 4 | - | 4.8 | 1533-89T38-511/813-45-31 |
| 89 | 3 1/2 | 4 x 13, 1 x 13 | 8 x 13 | 35° | 4 | - | 4.8 | 1632-89T38-513/813-45-31 | |
| Parabolic buttons | | | | | | | | | |
| 64 | 2 1/2 | 4 x 10 | 8 x 10 | 30° | 2 | - | 2.2 | 1531-64T38-410/810-45-51 | |
|  | 64 | 2 1/2 | 3 x 10, 1 x 10 | 6 x 11 | 35° | 3 | - | 2.2 | 1533-64T38-410/611-45-51 |
| | 70 | 2 3/4 | 4 x 11 | 8 x 11 | 40° | 2 | - | 2.4 | 1531-70T38-411/811-45-51 |
| | 70 | 2 3/4 | 3 x 10, 1 x 10 | 6 x 13 | 35° | 3 | - | 2.4 | 1533-70T38-410/613-45-51 |
| | 70 | 2 3/4 | 4 x 10, 1 x 10 | 8 x 11 | 35° | 4 | - | 2.4 | 1632-70T38-510/811-45-51 |
| | 76 | 3 | 4 x 11 | 8 x 11 | 40° | 2 | - | 3.3 | 1531-76T38-411/811-45-51 |
| | 76 | 3 | 4 x 11, 1 x 11 | 8 x 11 | 35° | 4 | - | 3.3 | 1632-76T38-511/811-45-51 |
| | 76 | 3 | 4 x 11, 1 x 11 | 8 x 12 | 35° | 4 | - | 3.3 | 1632-76T38-511/812-45-51 |
| | 89 | 3 1/2 | 4 x 13 | 8 x 13 | 40° | 2 | - | 4.8 | 1531-89T38-413/813-45-51 |
| | 89 | 3 1/2 | 5 x 13 | 8 x 13 | 35° | 2 | - | 4.8 | 1531-89T38-513/813-45-51 |
| | 89 | 3 1/2 | 6 x 11 | 8 x 12 | 35° | 2 | - | 4.8 | 1531-89T38-611/812-45-51 |
| | 89 | 3 1/2 | 4 x 11, 1 x 11 | 8 x 13 | 35° | 4 | - | 4.8 | 1533-89T38-611/813-45-51 |
| | 89 | 3 1/2 | 4 x 13, 1 x 13 | 8 x 13 | 35° | 4 | - | 4.8 | 1632-89T38-513/813-45-51 |
| X-type bit  | 64 | 2 1/2 | 25 x 13 | | - | 1 | 2 | 1.9 | 1321-64T38-25/13-42-23 |
| | 76 | 3 | 25 x 13 | | - | 1 | 2 | 2.5 | 1321-76T38-25/13-42-23 |
| | 89 | 3 1/2 | 25 x 13 | | - | 1 | 2 | 2.8 | 1321-89T38-25/13-42-23 |
| Dome bit for reaming  | Spherical buttons | | | | | | | | |
| | 102 | 4 | 1 x 13 | 16 x 13 | 35° | 2 | 2 | 3.8 | 1441-102T38-113/1613-45-31 |
| | 127 | 5 | 1 x 13 | 18 x 13 | 35° | 1 | 3 | 5.2 | 1441-127T38-113/1813-45-31 |
| | Parabolic buttons | | | | | | | | |
| | 102 | 4 | 1 x 13 | 16 x 13 | 35° | 2 | 2 | 3.8 | 1441-102T38-113/1613-45-51 |
| | 127 | 5 | 1 x 13 | 18 x 13 | 35° | 1 | 3 | 5.2 | 1441-127T38-113/1813-45-51 |

Bench drilling

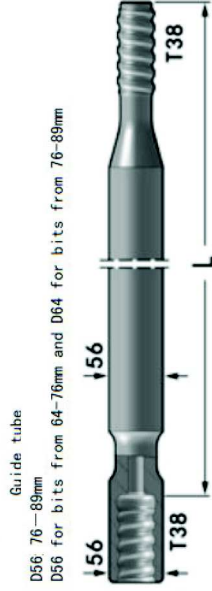
T38

| Drill rod | Length | | Diameter | | Weight approx kg | SANSHAN P/N |
|---|--------|-----------|----------|-------|------------------|------------------------|
| | mm | Foot | mm | inch | | |
| Extension rod T38-Round39-T38 Flushing hole 14.5mm. Wrench flat 32mm. | 1220 | 4' | 39 | 1 1/2 | 10.2 | 23R39-T38-1220-23 |
| | 1525 | 5' | 39 | 1 1/2 | 12.8 | 23R39-T38-1525-23 |
| | 1830 | 6' | 39 | 1 1/2 | 15.3 | 23R39-T38-1830-23 |
| | 2435 | 8' | 39 | 1 1/2 | 20.4 | 23R39-T38-2435-23 |
| | 3050 | 10' | 39 | 1 1/2 | 25.5 | 23R39-T38-3050-23 |
| | 3660 | 12' | 39 | 1 1/2 | 30.9 | 23R39-T38-3660-23 |
| | 3965 | 13' | 39 | 1 1/2 | 33.2 | 23R39-T38-3965-23 |
| | 4270 | 14' | 39 | 1 1/2 | 35.7 | 23R39-T38-4270-23 |
| | 4880 | 16' | 39 | 1 1/2 | 41.0 | 23R39-T38-4880-23 |
| | 5530 | 18' 11/2" | 39 | 1 1/2 | 46.3 | 23R39-T38-5530-23 |
| | 6095 | 20' | 39 | 1 1/2 | 50.9 | 23R39-T38-6095-23 |
| MF-rod T38-Round39-T38 Flushing hole 14.5mm. | 915 | 3' | 39 | 1 1/2 | 10.7 | 24R39-T38/57-0915-23 |
| | 1220 | 4' | 39 | 1 1/2 | 13.3 | 24R39-T38/57-1220-23 |
| | 1525 | 5' | 39 | 1 1/2 | 15.8 | 24R39-T38/57-1525-23 |
| | 1830 | 6' | 39 | 1 1/2 | 18.3 | 24R39-T38/57-1830-23 |
| | 3050 | 10' | 39 | 1 1/2 | 28.5 | 24R39-T38/57-3050-23 |
| | 3660 | 12' | 39 | 1 1/2 | 33.6 | 24R39-T38/57-3660-23 |
| | 4270 | 14' | 39 | 1 1/2 | 38.7 | 24R39-T38/57-4270-23 |
| | 4880 | 16' | 39 | 1 1/2 | 43.7 | 24R39-T38/57-4880-23 |
| Hex. extension rod T38-Hex32-T38 Flushing hole 9.6mm. | 1220 | 4' | 32 | 1 1/4 | 8.6 | 23H32-T38-1220-23 |
| | 1830 | 6' | 32 | 1 1/4 | 12.6 | 23H32-T38-1830-23 |
| | 2435 | 8' | 32 | 1 1/4 | 16.6 | 23H32-T38-2435-23 |
| | 3050 | 10' | 32 | 1 1/4 | 20.8 | 23H32-T38-3050-23 |
| | 3660 | 12' | 32 | 1 1/4 | 24.9 | 23H32-T38-3660-23 |
| Double thread rod T38-Round39-T38 Flushing hole 14.5mm. Wrench flat 32mm. | 3050 | 10' | 46 | 1 3/4 | 25.7 | 23R39-T38/2T38-3050-23 |
| | 3660 | 12' | 46 | 1 3/4 | 30.9 | 23R39-T38/2T38-3660-23 |
| Guide speedrod T38-Round46-T38 Flushing hole 17mm. | 1830 | 6' | 46 | 1 3/4 | 23.5 | 24R46-T38/57-1830-23 |
| | 3050 | 10' | 46 | 1 3/4 | 37.2 | 24R46-T38/57-3050-23 |
| | 3660 | 12' | 46 | 1 3/4 | 44.0 | 24R46-T38/57-3660-23 |
| | 4270 | 14' | 46 | 1 3/4 | 50.9 | 24R46-T38/57-4270-23 |
| | 4880 | 16' | 46 | 1 3/4 | 57.7 | 24R46-T38/57-4880-23 |
| | 5530 | 18' 11/2" | 46 | 1 3/4 | 65.0 | 24R46-T38/57-5530-23 |
| | 6095 | 20' | 46 | 1 3/4 | 71.3 | 24R46-T38/57-6095-23 |

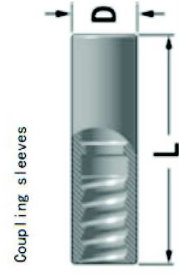
Bench drilling

T38

| Guide tube | Length | | Diameter | | Weight approx kg | SANSHAN P / N |
|------------|--------|------|----------|-------|----------------------|---------------|
| | mm | inch | mm | inch | | |
| | 1220 | 4' | 56 | 2 1/8 | | |
| 1525 | 5' | 56 | 2 1/8 | 14 | 24G56-T38/56-1525-23 | |
| 1830 | 6' | 56 | 2 1/8 | 17.4 | 24G56-T38/56-1830-23 | |
| 3050 | 10' | 56 | 2 1/8 | 28.3 | 24G56-T38/56-3050-23 | |
| 3660 | 12' | 56 | 2 1/8 | 32.8 | 24G56-T38/56-3660-23 | |
| 4920 | 16' 2" | 56 | 2 1/8 | 47.9 | 24G56-T38/56-4920-23 | |
| 3660 | 12' | 64 | 2 1/2 | 51 | 24G64-T38/64-3660-23 | |

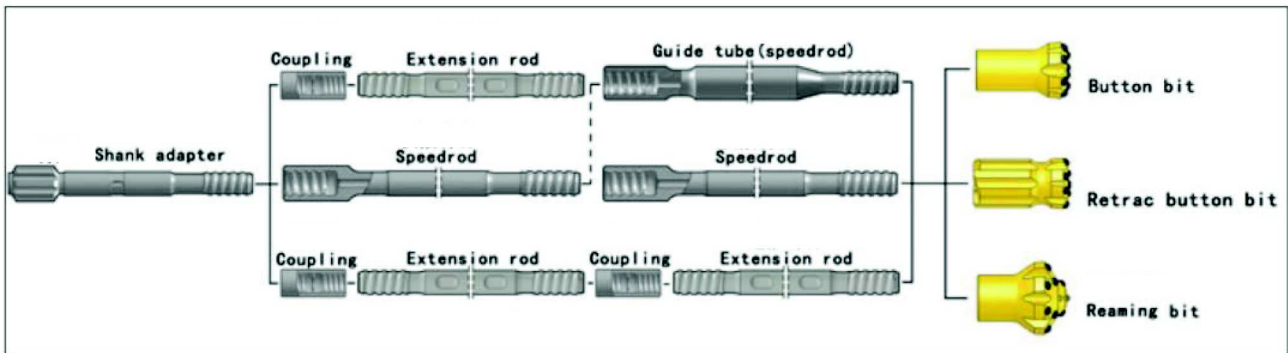


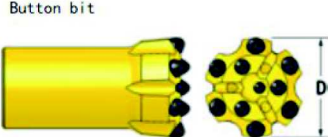
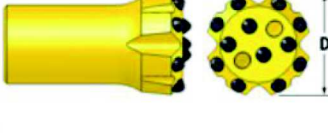
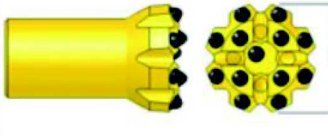
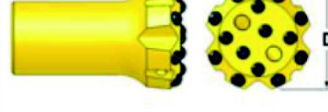
| Coupling | Length | | Diameter | | Weight approx kg | SANSHAN P / N |
|----------|--------|-------|----------|--------|------------------|---------------|
| | mm | inch | mm | inch | | |
| | 190 | 7 1/2 | 55 | 2 5/32 | | |



Bench drilling

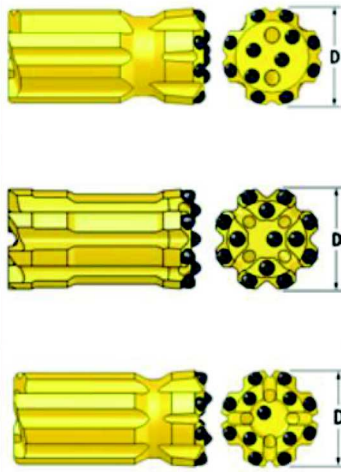


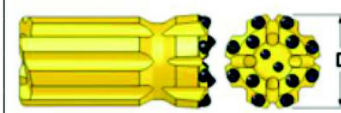
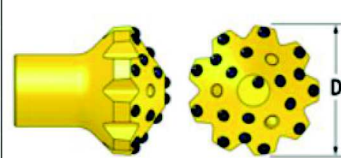
T45



| Drill bit | Diameter | | No x button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N | |
|---|---|-------|----------------------|----------------|--------|---------------|------|------------------|---------------------------|--------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | | |
| Spherical buttons | | | | | | | | | | |
|  | 70 | 2 3/4 | 4 x 11 | 8 x 11 | 40° | 2 | - | 2.3 | 1431-70T45-411/811-45-31 | |
| | 70 | 2 3/4 | 3 x 11, 1 x 9 | 6 x 11 | 35° | 3 | - | 2.2 | 1433-70T45-411/611-45-31 | |
| | 70 | 2 3/4 | 4 x 10, 1 x 10 | 8 x 11 | 35° | 4 | - | 2.2 | 1432-70T45-510/811-45-31 | |
| | 76 | 3 | 4 x 11 | 8 x 11 | 40° | 2 | - | 2.6 | 1431-76T45-411/811-45-31 | |
| | 76 | 3 | 5 x 11 | 8 x 12 | 35° | 2 | 1 | 2.6 | 1431-76T45-511/812-45-31 | |
| | 76 | 3 | 3 x 11, 1 x 11 | 6 x 13 | 35° | 3 | - | 2.4 | 1433-76T45-411/613-45-31 | |
| | 76 | 3 | 4 x 11, 1 x 11 | 8 x 12 | 35° | 4 | - | 2.6 | 1432-76T45-511/812-45-31 | |
| | 89 | 3 1/2 | 4 x 13 | 8 x 13 | 40° | 2 | - | 4.6 | 1431-89T45-413/813-45-31 | |
| | 89 | 3 1/2 | 6 x 11 | 8 x 12 | 35° | 2 | - | 4.6 | 1431-89T45-611/812-45-31 | |
| | 89 | 3 1/2 | 3 x 11, 2 x 11 | 6 x 13 | 35° | 3 | 1 | 4.1 | 1433-89T45-511/613-45-31 | |
| | 89 | 3 1/2 | 4 x 11, 1 x 11 | 8 x 12 | 35° | 4 | - | 4.6 | 1433-89T45-511/812-45-31 | |
| |  | 89 | 3 1/2 | 4 x 13, 1 x 13 | 8 x 13 | 35° | 4 | - | 4.6 | 1432-89T45-513/813-45-31 |
| 102 | | 4 | 5 x 14 | 8 x 14 | 40° | 2 | - | 5.0 | 1431-102T45-514/814-45-31 | |
| 102 | | 4 | 6 x 13 | 8 x 16 | 40° | 2 | 1 | 5.0 | 1431-102T45-613/816-45-31 | |
| 102 | | 4 | 3 x 13, 2 x 13 | 6 x 14 | 35° | 3 | 1 | 4.5 | 1433-102T45-513/614-45-31 | |
|  | 102 | 4 | 4 x 13, 2 x 13 | 8 x 13 | 35° | 4 | 1 | 4.5 | 1433-102T45-613/813-45-31 | |
| | Parabolic buttons | | | | | | | | | |
| | 70 | 2 3/4 | 3 x 11, 1 x 9 | 6 x 11 | 35° | 3 | - | 2.2 | 1433-70T45-411/611-45-51 | |
| | 70 | 2 3/4 | 4 x 10, 1 x 10 | 8 x 11 | 35° | 4 | - | 2.2 | 1432-70T45-510/811-45-51 | |
| | 76 | 3 | 4 x 11 | 8 x 11 | 40° | 2 | - | 2.6 | 1431-76T45-411/811-45-51 | |
| | 76 | 3 | 5 x 11 | 8 x 12 | 35° | 2 | 1 | 2.6 | 1431-76T45-511/812-45-51 | |
| | 76 | 3 | 3 x 11, 1 x 11 | 6 x 13 | 35° | 3 | 1 | 2.4 | 1433-76T45-411/613-45-51 | |
| | 76 | 3 | 4 x 11, 1 x 11 | 8 x 11 | 35° | 4 | - | 2.6 | 1432-76T45-511/811-45-51 | |
| | 76 | 3 | 4 x 11, 1 x 11 | 8 x 12 | 35° | 4 | - | 2.6 | 1432-76T45-511/812-45-51 | |
| | 89 | 3 1/2 | 4 x 13 | 8 x 13 | 40° | 2 | - | 4.6 | 1431-89T45-413/813-45-51 | |
| | 89 | 3 1/2 | 6 x 11 | 8 x 12 | 35° | 2 | - | 4.6 | 1431-89T45-611/812-45-51 | |
| | 89 | 3 1/2 | 3 x 11, 2 x 11 | 6 x 13 | 35° | 3 | 1 | 4.1 | 1433-89T45-511/613-45-51 | |
|  | 89 | 3 1/2 | 4 x 11, 1 x 11 | 8 x 12 | 35° | 4 | - | 4.6 | 1433-89T45-511/812-45-51 | |
| | 89 | 3 1/2 | 4 x 13, 1 x 13 | 8 x 13 | 35° | 4 | - | 4.6 | 1432-89T45-513/813-45-51 | |

Bench drilling

T45

| Drill bit | Diameter | | No X button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N | |
|---|---|-------------------|----------------------|------------|-------|---------------|------|----------------------------|----------------------------|---------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | | |
| Retrac button bit  | Spherical buttons | | | | | | | | | |
| | 70 | 2 3/4 | 4×11 | 8×11 | 40° | 2 | - | 2.5 | 1531-70T45-411/811-45-31 | |
| | 70 | 2 3/4 | 3×11, 1×9 | 6×11 | 35° | 3 | - | 2.5 | 1533-70T45-411/611-45-31 | |
| | 70 | 2 3/4 | 4×10, 1×10 | 8×11 | 35° | 4 | - | 2.5 | 1632-70T45-510/811-45-31 | |
| | 76 | 3 | 4×11 | 8×11 | 40° | 2 | - | 3.2 | 1531-76T45-411/811-45-31 | |
| | 76 | 3 | 5×11 | 8×12 | 35° | 2 | 1 | 3.2 | 1531-76T45-511/812-45-31 | |
| | 76 | 3 | 3×11, 1×11 | 6×13 | 35° | 3 | - | 3.2 | 1533-76T45-411/613-45-31 | |
| | 76 | 3 | 4×11, 1×11 | 8×11 | 35° | 4 | - | 3.2 | 1632-76T45-511/811-45-31 | |
| | 76 | 3 | 4×11, 1×11 | 8×12 | 35° | 4 | - | 3.2 | 1632-76T45-511/812-45-31 | |
| | 89 | 3 1/2 | 4×13 | 8×13 | 40° | 2 | - | 5.4 | 1531-89T45-413/813-45-31 | |
| | 89 | 3 1/2 | 6×11 | 8×12 | 35° | 2 | - | 5.4 | 1531-89T45-611/812-45-31 | |
| | 89 | 3 1/2 | 3×11, 2×11 | 6×13 | 35° | 3 | 1 | 5.4 | 1533-89T45-511/613-45-31 | |
| | 89 | 3 1/2 | 4×11, 1×11 | 8×12 | 35° | 4 | - | 5.4 | 1533-89T45-511/812-45-31 | |
| | 89 | 3 1/2 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 5.4 | 1632-89T45-513/813-45-31 | |
| | 102 | 4 | 5×14 | 8×14 | 40° | 2 | - | 6.8 | 1531-102T45-514/814-45-31 | |
| | 102 | 4 | 6×13 | 8×16 | 40° | 2 | 1 | 6.8 | 1531-102T45-613/816-45-31 | |
| |  | 102 | 4 | 3×13, 2×13 | 6×14 | 35° | 3 | 1 | 6.8 | 1533-102T45-513/614-45-31 |
| | | 102 | 4 | 4×13, 1×13 | 8×14 | 35° | 4 | - | 6.8 | 1533-102T45-513/814-45-31 |
| 102 | | 4 | 4×13, 2×13 | 8×13 | 35° | 4 | 1 | 6.8 | 1533-102T45-613/813-45-31 | |
| Parabolic buttons | | | | | | | | | | |
| 70 | | 2 3/4 | 3×11, 1×9 | 6×11 | 35° | 3 | - | 2.5 | 1533-70T45-411/611-45-51 | |
| 70 | | 2 3/4 | 4×10, 1×10 | 8×11 | 35° | 4 | - | 2.5 | 1632-70T45-510/811-45-51 | |
|  | 76 | 3 | 4×11 | 8×11 | 40° | 2 | - | 3.2 | 1531-76T45-411/811-45-51 | |
| | 76 | 3 | 5×11 | 8×12 | 35° | 2 | 1 | 3.2 | 1531-76T45-511/812-45-51 | |
| | 76 | 3 | 3×11, 1×11 | 6×13 | 35° | 3 | 1 | 3.2 | 1533-76T45-411/613-45-51 | |
| | 76 | 3 | 4×11, 1×11 | 8×11 | 35° | 4 | - | 3.2 | 1632-76T45-511/811-45-51 | |
| | 76 | 3 | 4×11, 1×11 | 8×12 | 35° | 4 | - | 3.2 | 1632-76T45-511/812-45-51 | |
| |  | 89 | 3 1/2 | 4×13 | 8×13 | 40° | 2 | - | 5.4 | 1531-89T45-413/813-45-51 |
| 89 | | 3 1/2 | 6×11 | 8×12 | 35° | 2 | - | 5.4 | 1531-89T45-611/812-45-51 | |
| 89 | | 3 1/2 | 3×11, 2×11 | 6×13 | 35° | 3 | 1 | 5.4 | 1533-89T45-511/613-45-51 | |
| 89 | | 3 1/2 | 4×11, 1×11 | 8×12 | 35° | 4 | - | 5.4 | 1533-89T45-511/812-45-51 | |
| 89 | | 3 1/2 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 5.4 | 1632-89T45-513/813-45-51 | |
| Dome bit forreaming  | | Spherical buttons | | | | | | | | |
| | 127 | 5 | 1×13 | 18×13 | 35° | 3 | 1 | 6.0 | 1441-127T45-113/1813-45-31 | |
| | 152 | 6 | 2×14 | 18×14 | 35° | 3 | 1 | 10.6 | 1441-152T45-214/1814-45-31 | |
| | Parabolic buttons | | | | | | | | | |
| 127 | 5 | 1×13 | 18×13 | 35° | 3 | 1 | 6.0 | 1441-127T45-113/1813-45-51 | | |
| 152 | 6 | 2×14 | 18×14 | 35° | 3 | 1 | 10.6 | 1441-152T45-214/1814-45-51 | | |

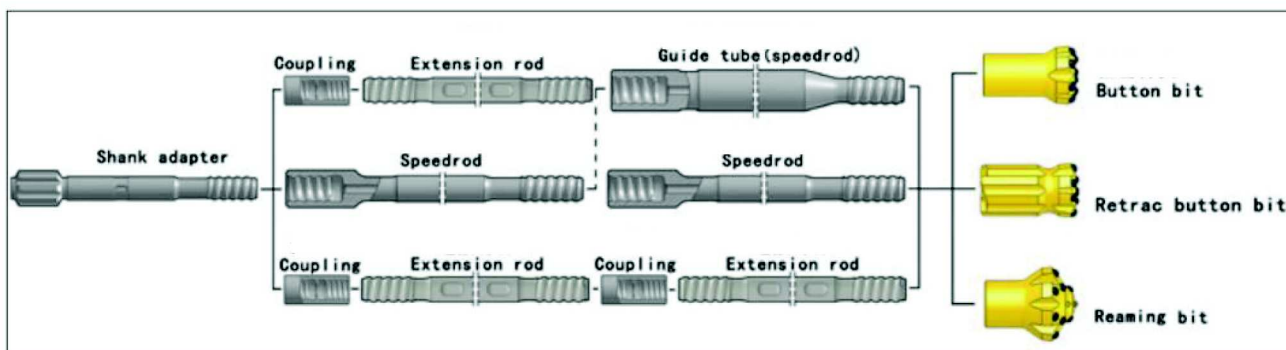
Bench drilling




T45

| Drill rod | Length | | Diameter | | Weight approx kg | SANSHAN P/N | |
|--|----------|--------|----------|----------|------------------|----------------------|------------------|
| | mm | Foot | mm | inch | | | |
| Extension rod T45-Round46-T45 Flushing hole 17mm. Wrench flat 38mm. | 1830 | 6' | 46 | 1 3/4 | 21.6 | 23R46-T45-1830-23 | |
| | 2435 | 8' | 46 | 1 3/4 | 28.3 | 23R46-T45-2435-23 | |
| | 3050 | 10' | 46 | 1 3/4 | 35.2 | 23R46-T45-3050-23 | |
| | 3660 | 12' | 46 | 1 3/4 | 42.1 | 23R46-T45-3660-23 | |
| | 4270 | 14' | 46 | 1 3/4 | 48.9 | 23R46-T45-4270-23 | |
| | 5530 | 18' | 46 | 1 3/4 | 63.0 | 23R46-T45-5530-23 | |
| | 6095 | 20' | 46 | 1 3/4 | 69.3 | 23R46-T45-6095-23 | |
| MF-rod T45-Round46-T45 Flushing hole 17mm. | 1525 | 5' | 46 | 1 3/4 | 21.2 | 24R46-T45/65-1525-23 | |
| | 1830 | 6' | 46 | 1 3/4 | 24.6 | 24R46-T45/65-1830-23 | |
| | 3050 | 10' | 46 | 1 3/4 | 38.2 | 24R46-T45/65-3050-23 | |
| | 3660 | 12' | 46 | 1 3/4 | 45.0 | 24R46-T45/65-3660-23 | |
| | 4270 | 14' | 46 | 1 3/4 | 51.9 | 24R46-T45/65-4270-23 | |
| | 5530 | 18' | 46 | 1 3/4 | 66.0 | 24R46-T45/65-5530-23 | |
| | 6095 | 20' | 46 | 1 3/4 | 72.3 | 24R46-T45/65-6095-23 | |
| Guide speedrod T45-Round52-T45 Flushing hole 21.5mm. | 3050 | 10' | 52 | 2 | 46.6 | 24R52-T45/65-3050-23 | |
| | 3660 | 12' | 52 | 2 | 55.8 | 24R52-T45/65-3660-23 | |
| | 4270 | 14' | 52 | 2 | 63.8 | 24R52-T45/65-4270-23 | |
| | 5530 | 18' | 52 | 2 | 81.5 | 24R52-T45/65-5530-23 | |
| | 6095 | 20' | 52 | 2 | 89.4 | 24R52-T45/65-6095-23 | |
| Guide tube | Length | | Diameter | | Weight approx kg | SANSHAN P/N | |
| | mm | inch | mm | inch | | | |
| Guide tube D64 76-89mm D76 89-102mm D64 for bits from 76-89mm and D76 for bits from 89-102mm | 1220 | 4' | 64 | 2 1/8 | 12.6 | 24G64-T45/64-1220-23 | |
| | 1525 | 5' | 64 | 2 1/8 | 14.0 | 24G64-T45/64-1525-23 | |
| | 1830 | 6' | 64 | 2 1/8 | 17.4 | 24G64-T45/64-1830-23 | |
| | 3050 | 10' | 64 | 2 1/8 | 28.3 | 24G64-T45/64-3050-23 | |
| | 3660 | 12' | 64 | 2 1/8 | 32.8 | 24G64-T45/64-3660-23 | |
| | 1830 | 6' | 76 | 3 | 40.0 | 24G76-T45/76-1830-23 | |
| | 3660 | 12' | 76 | 3 | 77.8 | 24G76-T45/76-3660-23 | |
| | Coupling | Length | | Diameter | | Thread | Weight approx kg |
| mm | | inch | mm | inch | | | |
| Coupling sleeves | 210 | 8 1/4 | 63 | 2 33/64 | T45 | 3.0 | 31-T45-63-210-23 |
| | 210 | 8 1/4 | 66 | 2 37/64 | T45 | 3.3 | 31-T45-66-210-23 |

Bench drilling

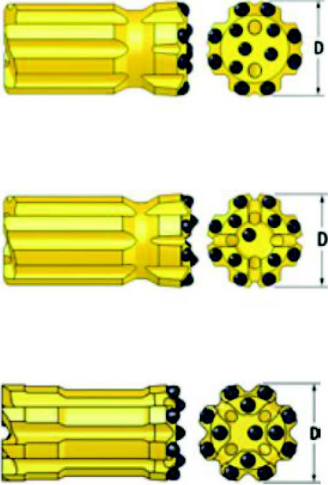
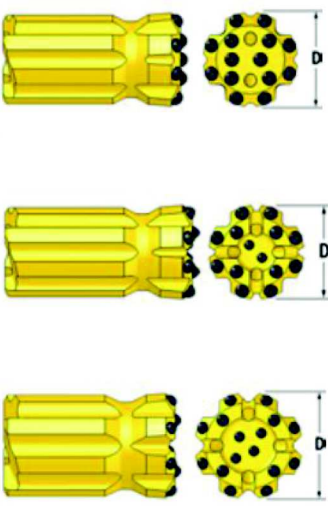
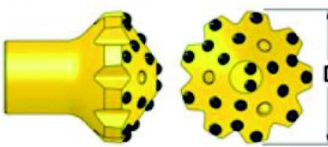
T51



| Drill bit | Diameter | | No X button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N | |
|---|---|-------|----------------------|------------|-------|---------------|------|------------------|---------------------------|---------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | | |
| Spherical buttons | | | | | | | | | | |
|  | 89 | 3 1/2 | 4×13 | 8×13 | 40° | 2 | - | 4.9 | 1431-89T51-413/813-45-31 | |
| | 89 | 3 1/2 | 5×13 | 8×13 | 35° | 2 | 1 | 4.9 | 1431-89T51-513/813-45-31 | |
| | 89 | 3 1/2 | 3×11, 2×11 | 6×13 | 35° | 4 | - | 4.9 | 1433-89T51-511/613-45-31 | |
| | 89 | 3 1/2 | 4×11, 1×11 | 8×13 | 35° | 4 | - | 4.9 | 1433-89T51-511/813-45-31 | |
| | 89 | 3 1/2 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 4.9 | 1432-89T51-513/813-45-31 | |
| | 102 | 4 | 4×14 | 8×14 | 40° | 2 | - | 5.8 | 1431-102T51-414/814-45-31 | |
| | 102 | 4 | 6×13 | 8×16 | 35° | 2 | 1 | 5.8 | 1431-102T51-613/816-45-31 | |
| | 102 | 4 | 3×13, 2×13 | 6×14 | 35° | 3 | 1 | 5.2 | 1433-102T51-513/614-45-31 | |
| | 102 | 4 | 4×13, 1×13 | 8×14 | 35° | 4 | - | 5.8 | 1433-102T51-513/814-45-31 | |
| | 102 | 4 | 4×13, 2×13 | 8×13 | 35° | 4 | 1 | 5.8 | 1433-102T51-613/813-45-31 | |
| | 115 | 4 1/2 | 6×14 | 8×14 | 35° | 2 | - | 6.8 | 1431-115T51-614/814-45-31 | |
| | 115 | 4 1/2 | 6×14 | 8×16 | 35° | 2 | - | 6.8 | 1431-115T51-614/816-45-31 | |
|  | 115 | 4 1/2 | 4×13, 2×13 | 8×14 | 35° | 4 | - | 6.8 | 1433-115T51-613/814-45-31 | |
| | 115 | 4 1/2 | 4×13, 3×13 | 8×14 | 35° | 4 | - | 6.8 | 1433-115T51-713/814-45-31 | |
| | 115 | 4 1/2 | 4×14, 2×14 | 8×16 | 35° | 4 | - | 6.8 | 1433-115T51-614/816-45-31 | |
| | 127 | 5 | 8×14 | 8×16 | 35° | 2 | 1 | 7.5 | 1431-127T51-814/816-45-31 | |
| | 127 | 5 | 4×16, 2×13 | 8×16 | 35° | 4 | - | 7.5 | 1433-127T51-616/816-45-31 | |
| |  | 127 | 5 | 4×14, 3×14 | 8×14 | 35° | 4 | - | 7.5 | 1433-127T51-714/814-45-31 |
| Parabolic buttons | | | | | | | | | | |
| 89 | | 3 1/2 | 5×13 | 8×13 | 35° | 2 | 1 | 4.9 | 1431-89T51-513/813-45-51 | |
| 89 | | 3 1/2 | 3×11, 2×11 | 6×13 | 35° | 4 | - | 4.9 | 1433-89T51-511/613-45-51 | |
| 89 | | 3 1/2 | 4×11, 1×11 | 8×13 | 35° | 4 | - | 4.9 | 1433-89T51-511/813-45-51 | |
| 89 | | 3 1/2 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 4.9 | 1432-89T51-513/813-45-51 | |
| 102 | | 4 | 4×14 | 8×14 | 40° | 2 | - | 5.8 | 1431-102T51-414/814-45-51 | |
| 102 | | 4 | 6×13 | 8×16 | 35° | 2 | 1 | 5.8 | 1431-102T51-613/816-45-51 | |
| 102 | | 4 | 3×13, 2×13 | 6×14 | 35° | 3 | 1 | 5.2 | 1433-102T51-513/614-45-51 | |
| 102 | | 4 | 4×13, 1×13 | 8×14 | 35° | 4 | - | 5.8 | 1433-102T51-513/814-45-51 | |
| 102 | | 4 | 4×13, 2×13 | 8×13 | 35° | 4 | 1 | 5.8 | 1433-102T51-613/813-45-51 | |
| 115 | | 4 1/2 | 6×14 | 8×16 | 35° | 2 | - | 6.8 | 1431-115T51-614/816-45-51 | |
| 115 | | 4 1/2 | 4×13, 2×13 | 8×14 | 35° | 4 | - | 6.8 | 1433-115T51-613/814-45-51 | |
| 115 | | 4 1/2 | 4×13, 3×13 | 8×14 | 35° | 4 | - | 6.8 | 1433-115T51-713/814-45-51 | |
| 115 | | 4 1/2 | 4×14, 2×14 | 8×16 | 35° | 4 | - | 6.8 | 1433-115T51-614/816-45-51 | |

Bench drilling

T51

| Drill bit | Diameter | | No×button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N |
|--|-------------------|------------|--------------------|-------|-------|---------------|------|----------------------------|----------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | |
| Retrac button bit  | Spherical buttons | | | | | | | | |
| | 89 | 3 1/2 | 4×13 | 8×13 | 40° | 2 | - | 5.3 | 1531-89T51-413/813-45-31 |
| | 89 | 3 1/2 | 5×13 | 8×13 | 35° | 2 | 1 | 5.3 | 1531-89T51-513/813-45-31 |
| | 89 | 3 1/2 | 3×11, 2×11 | 6×13 | 35° | 4 | - | 5.3 | 1533-89T51-511/613-45-31 |
| | 89 | 3 1/2 | 4×11, 1×11 | 8×13 | 35° | 4 | - | 5.3 | 1533-89T51-511/813-45-31 |
| | 89 | 3 1/2 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 5.3 | 1632-89T51-513/813-45-31 |
| | 102 | 4 | 4×14 | 8×14 | 40° | 2 | - | 7.3 | 1531-102T51-414/814-45-31 |
| | 102 | 4 | 6×13 | 8×16 | 35° | 2 | 1 | 7.3 | 1531-102T51-613/816-45-31 |
| | 102 | 4 | 4×13, 1×13 | 8×14 | 35° | 4 | - | 7.3 | 1533-102T51-513/814-45-31 |
| | 102 | 4 | 4×13, 2×13 | 8×13 | 35° | 4 | 1 | 7.3 | 1533-102T51-613/813-45-31 |
| | 102 | 4 | 4×13, 1×13 | 8×14 | 35° | 4 | 1 | 7.3 | 1533-102T51-513/814-45-31 |
| | 115 | 4 1/2 | 6×14 | 8×14 | 35° | 2 | - | 9.8 | 1531-115T51-614/814-45-31 |
| | 115 | 4 1/2 | 6×14 | 8×16 | 35° | 2 | - | 9.8 | 1531-115T51-614/816-45-31 |
| | 115 | 4 1/2 | 4×13, 2×13 | 8×14 | 35° | 4 | - | 9.8 | 1533-115T51-613/814-45-31 |
| | 115 | 4 1/2 | 4×13, 3×13 | 8×14 | 35° | 4 | - | 9.8 | 1533-115T51-713/814-45-31 |
| 115 | 4 1/2 | 4×14, 2×14 | 8×16 | 35° | 4 | - | 9.8 | 1533-115T51-614/816-45-31 | |
|  | 127 | 5 | 4×14, 3×14 | 8×14 | 35° | 4 | - | 12.0 | 1533-127T51-714/814-45-31 |
| | Parabolic buttons | | | | | | | | |
| | 89 | 3 1/2 | 5×13 | 8×13 | 35° | 2 | 1 | 5.3 | 1531-89T51-513/813-45-51 |
| | 89 | 3 1/2 | 3×11, 2×11 | 6×13 | 35° | 4 | - | 5.3 | 1533-89T51-511/613-45-51 |
| | 89 | 3 1/2 | 4×11, 1×11 | 8×13 | 35° | 4 | - | 5.3 | 1533-89T51-511/813-45-51 |
| | 89 | 3 1/2 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 5.3 | 1632-89T51-513/813-45-51 |
| | 102 | 4 | 4×14 | 8×14 | 40° | 2 | - | 7.3 | 1531-102T51-414/814-45-51 |
| | 102 | 4 | 6×13 | 8×16 | 35° | 2 | 1 | 7.3 | 1531-102T51-613/816-45-51 |
| | 102 | 4 | 4×13, 1×13 | 8×14 | 35° | 4 | - | 7.3 | 1533-102T51-513/814-45-51 |
| | 102 | 4 | 4×13, 2×13 | 8×13 | 35° | 4 | 1 | 7.3 | 1533-102T51-613/813-45-51 |
| | 102 | 4 | 4×13, 1×13 | 8×14 | 35° | 4 | 1 | 7.3 | 1533-102T51-513/814-45-51 |
| | 115 | 4 1/2 | 6×14 | 8×16 | 35° | 2 | - | 9.8 | 1531-115T51-614/816-45-51 |
| | 115 | 4 1/2 | 4×13, 2×13 | 8×14 | 35° | 4 | - | 9.8 | 1533-115T51-613/814-45-51 |
| | 115 | 4 1/2 | 4×13, 3×13 | 8×14 | 35° | 4 | - | 9.8 | 1533-115T51-713/814-45-51 |
| | 115 | 4 1/2 | 4×14, 2×14 | 8×16 | 35° | 4 | - | 9.8 | 1533-115T51-614/816-45-51 |
| Dome bit for reaming  | Spherical buttons | | | | | | | | |
| | 152 | 6 | 2×14 | 18×14 | 35° | 3 | 1 | 10.6 | 1441-152T51-214/1814-45-31 |
| Parabolic buttons | | | | | | | | | |
| 152 | 6 | 2×14 | 18×14 | 35° | 3 | 1 | 10.6 | 1441-152T51-214/1814-45-51 | |

Bench drilling

T51

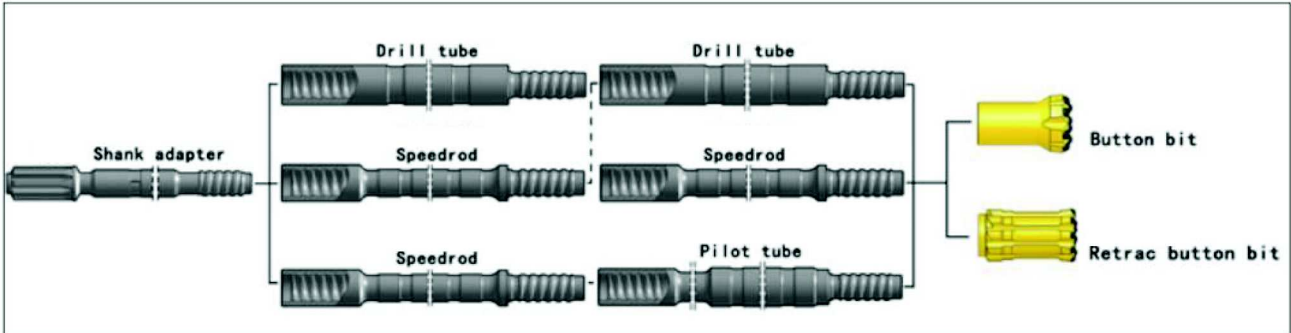
| Drill rod | Length | | Diameter | | Weight approx kg | SANSHAN P./N |
|---|--------|------|----------|------|------------------|----------------------|
| | mm | Foot | mm | inch | | |
| Extension rod T51-Round52-T51 Flushing hole 21.5mm. Wrench flat 45mm. | 3050 | 10' | 52 | 2 | 45.3 | 23R52-T51-3050-23 |
| | 3660 | 12' | 52 | 2 | 54.1 | 23R52-T51-3660-23 |
| | 4270 | 14' | 52 | 2 | 63.0 | 23R52-T51-4270-23 |
| | 4880 | 16' | 52 | 2 | 71.8 | 23R52-T51-4880-23 |
| | 5530 | 18' | 52 | 2 | 81.2 | 23R52-T51-5530-23 |
| | 6095 | 20' | 52 | 2 | 89.4 | 23R52-T51-6095-23 |
| MF-rod T51-Round52-T51 Flushing hole 21.5mm. | 1525 | 5' | 52 | 2 | 26.2 | 24R52-T51/72-1525-23 |
| | 1830 | 6' | 52 | 2 | 30.6 | 24R52-T51/72-1830-23 |
| | 3050 | 10' | 52 | 2 | 48.3 | 24R52-T51/72-3050-23 |
| | 3660 | 12' | 52 | 2 | 57.1 | 24R52-T51/72-3660-23 |
| | 4270 | 14' | 52 | 2 | 66.0 | 24R52-T51/72-4270-23 |
| | 4880 | 16' | 52 | 2 | 74.8 | 24R52-T51/72-4880-23 |
| | 5530 | 18' | 52 | 2 | 84.2 | 24R52-T51/72-5530-23 |
| | 6095 | 20' | 52 | 2 | 92.4 | 24R52-T51/72-6095-23 |

| Guide tube | Length | | Diameter | | Weight approx kg | SANSHAN P./N |
|---|--------|------|----------|-------|------------------|----------------------|
| | mm | inch | mm | inch | | |
| Guide tube D76 89-102 D87: 102-127 D76 for bits from 89-102mm and D87 for bits from 102-127mm | 1830 | 6' | 76 | 3 | 42.0 | 24G76-T51/76-1830-23 |
| | 3660 | 12' | 76 | 3 | 81.0 | 24G76-T51/76-3660-23 |
| | 3660 | 12' | 87 | 3 1/2 | 86.0 | 24G87-T51/87-3660-23 |

| Coupling | Length | | Diameter | | Thread | Weight approx kg | SANSHAN P./N |
|------------------|--------|-------|----------|---------|--------|------------------|------------------|
| | mm | inch | mm | inch | | | |
| Coupling sleeves | 225 | 8 7/8 | 71 | 2 51/64 | T51 | 4.6 | 31-T51-71-225-23 |
| | 225 | 8 7/8 | 76 | 3 | T51 | 4.8 | 31-T51-76-225-23 |
| | 235 | 9 1/4 | 72 | 2 7/8 | T51 | 4.7 | 31-T51-72-235-23 |
| | 235 | 9 1/4 | 77 | 3 1/32 | T51 | 4.9 | 31-T51-77-235-23 |

Bench drilling

T60

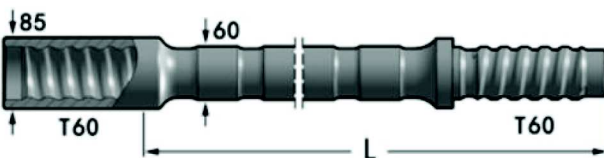
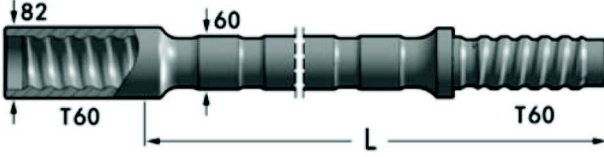
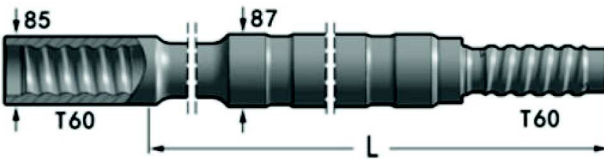



| Drill bit | Diameter | | No X button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N |
|-----------------------|-------------------|-------|----------------------|-------|-------|---------------|------|----------------------------|----------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | |
| Button bit | Spherical buttons | | | | | | | | |
| | 92 | 3 5/8 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 5.3 | 1432-92T60-513/813-45-31 |
| | 96 | 3 3/4 | 4×13, 1×13 | 8×14 | 35° | 4 | - | 5.6 | 1432-96T60-513/814-45-31 |
| | 102 | 4 | 9×11 | 9×13 | 35° | 3 | - | 6.0 | 1431-102T60-911/913-45-31 |
| | 115 | 4 1/2 | 10×12 | 9×14 | 35° | 3 | - | 6.8 | 1431-115T60-1012/914-45-31 |
| | 127 | 5 | 10×13 | 9×14 | 35° | 3 | - | 7.5 | 1431-127T60-1013/914-45-31 |
| | 140 | 5 1/2 | 10×14 | 9×16 | 35° | 3 | - | 9.0 | 1431-140T60-1014/916-45-31 |
| | 152 | 6 | 12×14 | 9×16 | 35° | 3 | - | 10.6 | 1431-152T60-1214/916-45-31 |
| | Parabolic buttons | | | | | | | | |
| | 92 | 3 5/8 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 5.3 | 1432-92T60-513/813-45-51 |
| | 96 | 3 3/4 | 4×13, 1×13 | 8×14 | 35° | 4 | - | 5.6 | 1432-96T60-513/814-45-51 |
| | 102 | 4 | 9×11 | 9×13 | 35° | 3 | - | 6.0 | 1431-102T60-911/913-45-51 |
| | 115 | 4 1/2 | 10×12 | 9×14 | 35° | 3 | - | 6.8 | 1431-115T60-1012/914-45-51 |
| | 127 | 5 | 10×13 | 9×14 | 35° | 3 | - | 7.5 | 1431-127T60-1013/914-45-51 |
| 140 | 5 1/2 | 10×14 | 9×16 | 35° | 3 | - | 9.0 | 1431-140T60-1014/916-45-51 | |
| 152 | 6 | 12×14 | 9×16 | 35° | 3 | - | 10.6 | 1431-152T60-1214/916-45-51 | |

| | | | | | | | | | |
|------------------------------|-------------------|-------|-------|------|-----|---|------|----------------------------|----------------------------|
| Retrac button bit | Spherical buttons | | | | | | | | |
| | 92 | 3 5/8 | 9×12 | 9×12 | 40° | 2 | - | 5.4 | 1531-92T60-912/912-45-31 |
| | 96 | 3 3/4 | 9×12 | 9×12 | 40° | 2 | - | 6.3 | 1531-96T60-912/912-45-31 |
| | 102 | 4 | 10×12 | 9×13 | 40° | 2 | - | 7.3 | 1531-102T60-1012/913-45-31 |
| | 115 | 4 1/2 | 10×12 | 9×14 | 35° | 3 | - | 9.8 | 1531-115T60-1012/914-45-31 |
| | 118 | 4 5/8 | 6×13 | 9×16 | 35° | 3 | - | 10.0 | 1531-118T60-613/916-45-31 |
| | 127 | 5 | 10×13 | 9×14 | 35° | 3 | - | 12.0 | 1531-127T60-1013/914-45-31 |
| | 140 | 5 1/2 | 10×14 | 9×16 | 35° | 3 | - | 14.0 | 1531-140T60-1014/916-45-31 |
| | 152 | 6 | 12×14 | 9×16 | 35° | 3 | - | 16.0 | 1531-152T60-1214/916-45-31 |
| | Parabolic buttons | | | | | | | | |
| | 92 | 3 5/8 | 9×12 | 9×12 | 40° | 2 | - | 5.4 | 1531-92T60-912/912-45-51 |
| | 96 | 3 3/4 | 9×12 | 9×12 | 40° | 2 | - | 6.3 | 1531-96T60-912/912-45-51 |
| | 102 | 4 | 10×12 | 9×13 | 40° | 2 | - | 7.3 | 1531-102T60-1012/913-45-51 |
| | 115 | 4 1/2 | 10×12 | 9×14 | 40° | 3 | - | 9.8 | 1531-115T60-1012/914-45-51 |
| 118 | 4 5/8 | 6×13 | 9×16 | 35° | 3 | - | 10.0 | 1531-118T60-613/916-45-51 | |
| 127 | 5 | 10×13 | 9×14 | 35° | 3 | - | 12.0 | 1531-127T60-1013/914-45-51 | |
| 140 | 5 1/2 | 10×14 | 9×16 | 35° | 3 | - | 14.0 | 1531-140T60-1014/916-45-51 | |
| 152 | 6 | 12×14 | 9×16 | 35° | 3 | - | 16.0 | 1531-152T60-1214/916-45-51 | |

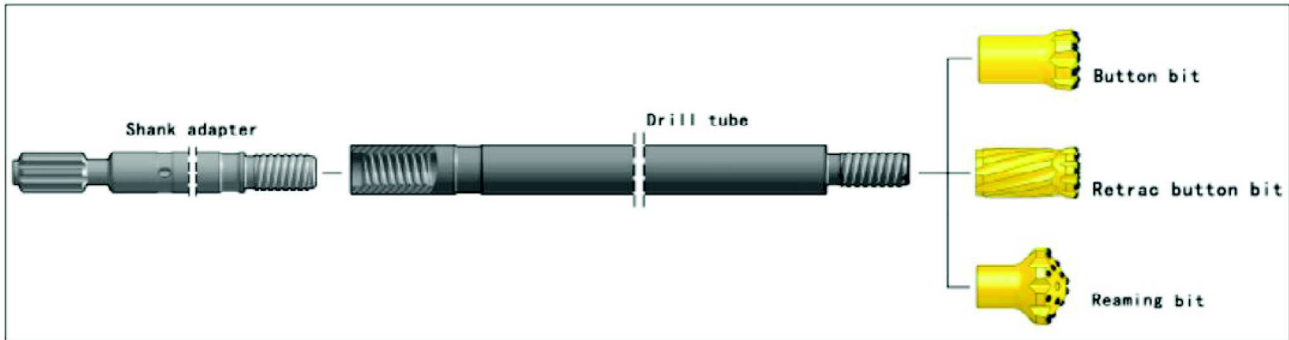
Bench drilling

T60

| Drill rod | Length | | Diameter | | Weight approx kg | SANSHAN P/N |
|--|--------|--------|----------|-------|------------------|----------------------|
| | mm | Foot | mm | inch | | |
| MF-rod, For bits from 96mm Flushing hole 22.5mm.  | 3660 | 12' | 60 | 2 3/8 | 73.9 | 24R60-T60/85-3600-23 |
| | 4265 | 14' | 60 | 2 3/8 | 85.5 | 24R60-T60/85-4265-23 |
| | 6095 | 20' | 60 | 2 3/8 | 116.6 | 24R60-T60/85-6095-23 |
| | 4265 | 14' | 64 | 2 1/2 | 95.0 | 24R64-T60/85-4265-23 |
| MF-rod, For bits from 92-115mm Flushing hole 22.6mm.  | 3660 | 12' | 60 | 2 3/8 | 73.9 | 24R60-T60/82-3600-23 |
| | 4265 | 14' | 60 | 2 3/8 | 85.5 | 24R60-T60/82-4265-23 |
| | 6095 | 20' | 60 | 2 3/8 | 116.6 | 24R60-T60/82-6095-23 |
| Pilot Tube Female end OD 85mm (82mm on 76mm tubes)  | 1600 | 5' 3" | 87 | 3 1/2 | 39.0 | 24G87-T60/85-1600-23 |
| | 4265 | 14' | 87 | 3 1/2 | 99.0 | 24G87-T60/85-4265-23 |
| | 5335 | 17' 6" | 76 | 3 | 124.9 | 24G76-T60/85-5335-23 |
| Drill Tube  | 3660 | 12' | 87 | 3 1/2 | 87.8 | 24G87-T60/87-3660-23 |
| | 4265 | 14' | 87 | 3 1/2 | 99.0 | 24G87-T60/87-4265-23 |

Tube drilling tools


ST58

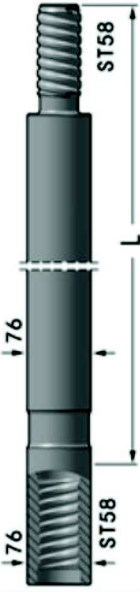


| Drill bit | Diameter | | No X button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N |
|------------------------------|-------------------|-------|----------------------|-------|-------|---------------|------|------------------|----------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | |
| Button bit | Spherical buttons | | | | | | | | |
| | 89 | 3 1/2 | 6×12 | 8×12 | 35° | 2 | 1 | 4.1 | 1431-89ST58-612/812-45-31 |
| | 89 | 3 1/2 | 6×13 | 8×13 | 35° | 2 | 1 | 4.1 | 1431-89ST58-613/813-45-31 |
| | 89 | 3 1/2 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 4.1 | 1432-89ST58-513/813-45-31 |
| | 89 | 3 1/2 | 4×12, 2×12 | 8×12 | 35° | 4 | - | 4.1 | 1433-89ST58-612/812-45-31 |
| | 95 | 3 3/4 | 4×13, 1×13 | 8×14 | 35° | 4 | - | 4.6 | 1433-95ST58-513/814-45-31 |
| | 102 | 4 | 6×14 | 8×14 | 35° | 2 | - | 6.0 | 1431-102ST58-614/814-45-31 |
| | 102 | 4 | 6×13 | 8×16 | 35° | 2 | 1 | 6.0 | 1431-102ST58-613/816-45-31 |
| | 115 | 4 1/2 | 6×14 | 8×16 | 35° | 2 | - | 7.0 | 1431-115ST58-614/816-45-31 |
| | Parabolic buttons | | | | | | | | |
| | 89 | 3 1/2 | 6×12 | 8×12 | 35° | 2 | 1 | 4.1 | 1431-89ST58-612/812-45-51 |
| | 89 | 3 1/2 | 6×13 | 8×13 | 35° | 2 | 1 | 4.1 | 1431-89ST58-613/813-45-51 |
| | 89 | 3 1/2 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 4.1 | 1432-89ST58-513/813-45-51 |
| | 89 | 3 1/2 | 4×12, 2×12 | 8×12 | 35° | 4 | - | 4.1 | 1433-89ST58-612/812-45-51 |
| | 95 | 3 3/4 | 4×13, 1×13 | 8×14 | 35° | 4 | - | 4.6 | 1433-95ST58-513/814-45-51 |
| | 102 | 4 | 6×14 | 8×14 | 35° | 2 | - | 6.0 | 1431-102ST58-614/814-45-51 |
| | 102 | 4 | 6×13 | 8×16 | 35° | 2 | 1 | 6.0 | 1431-102ST58-613/816-45-51 |
| | 115 | 4 1/2 | 6×14 | 8×16 | 35° | 2 | - | 7.0 | 1431-115ST58-614/816-45-51 |
| | Spherical buttons | | | | | | | | |
| Retrac button bit | 89 | 3 1/2 | 6×12 | 8×14 | 35° | 2 | 1 | 5.1 | 1531-89ST58-612/814-45-31 |
| | 89 | 3 1/2 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 5.1 | 1632-89ST58-513/813-45-31 |
| | 102 | 4 | 7×12 | 8×14 | 35° | 2 | 1 | 6.5 | 1531-102ST58-712/814-45-31 |
| | 115 | 4 1/2 | 6×14 | 8×16 | 35° | 2 | - | 8.5 | 1531-115ST58-614/816-45-31 |
| | Parabolic buttons | | | | | | | | |
| | 89 | 3 1/2 | 6×12 | 8×14 | 35° | 2 | 1 | 5.1 | 1531-89ST58-612/814-45-51 |
| | 89 | 3 1/2 | 4×13, 1×13 | 8×13 | 35° | 4 | - | 5.1 | 1632-89ST58-513/813-45-51 |
| | 102 | 4 | 7×12 | 8×14 | 35° | 2 | 1 | 6.5 | 1531-102ST58-712/814-45-51 |
| | 115 | 4 1/2 | 6×14 | 8×16 | 35° | 2 | - | 8.5 | 1531-115ST58-614/816-45-51 |

Tube drilling tools

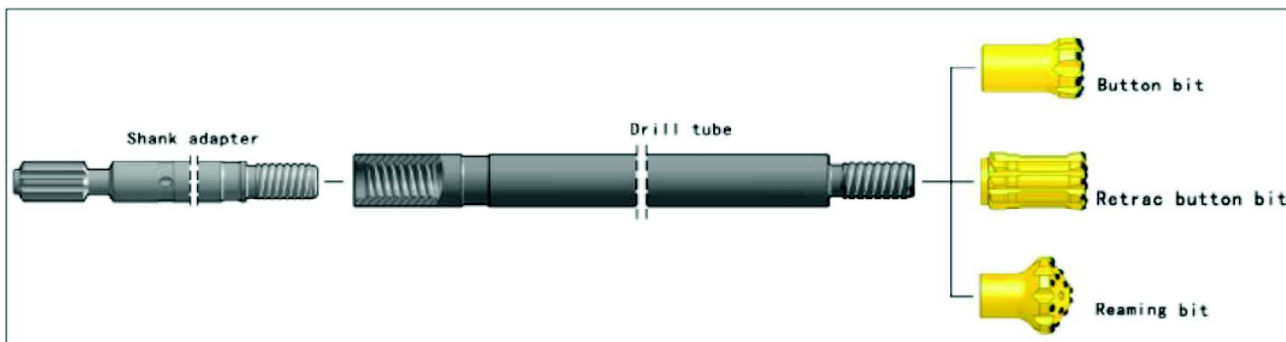
ST58

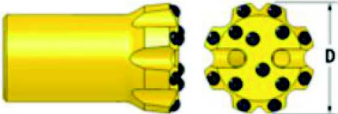
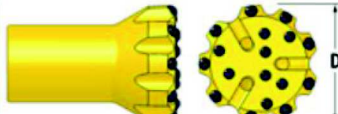
| Drill bit | | Diameter | | No x button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P / N |
|--|---|----------|---------|----------------------|---------|-------|---------------|-----------------------------|-----------------------------|-----------------------------|
| | | mm | inch | Front | Gauge | Angle | Front | Side | | |
| Spherical buttons | | | | | | | | | | |
|  Reaming bit | | 152 | 6 | 6 x 16 | 9 x 16 | 35° | 3 | - | 13.0 | 1441-152ST58-616/916-45-31 |
| | | 152 | 6 | 2 x 14 | 18 x 14 | 35° | 3 | 3 | 10.4 | 1441-152ST58-214/1814-45-31 |
| Parabolic buttons | | | | | | | | | | |
| 152 | 6 | 6 x 16 | 9 x 16 | 35° | 3 | - | 13.0 | 1441-152ST58-616/916-45-51 | 1441-152ST58-214/1814-45-51 | |
| 152 | 6 | 2 x 14 | 18 x 14 | 35° | 3 | 3 | 10.4 | 1441-152ST58-214/1814-45-51 | | |

| Drill rod | | Length | | Diameter | | Weight approx kg | SANSHAN P / N |
|--|--|--------|------|----------|-------|------------------|-----------------------|
| | | mm | Foot | mm | inch | | |
|  Drill tube, Flushing hole 26mm. | | 1525 | 5' | 76 | 2 3/8 | 34.0 | 24676-ST58/76-1525-23 |
| | | 1830 | 6' | 76 | 2 3/8 | 40.0 | 24676-ST58/76-1830-23 |
| | | 3660 | 12' | 76 | 2 3/8 | 76.3 | 24676-ST58/76-3660-23 |

Tube drilling tools

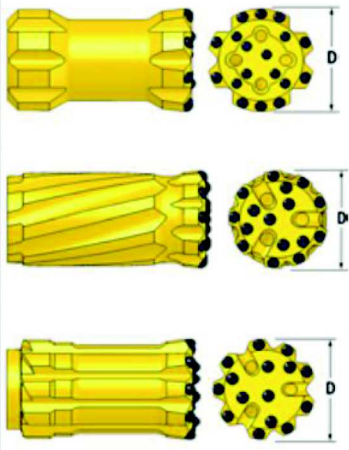
ST68

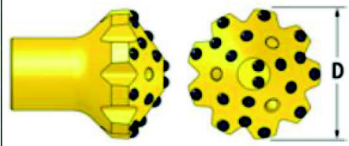


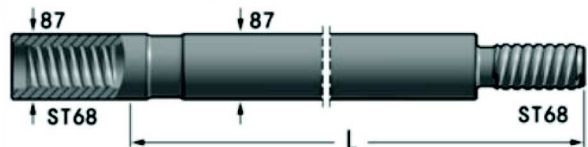
| Drill bit | Diameter | | No x button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N |
|---|----------|------------|----------------------|-------|-------|---------------|------|-----------------------------|-----------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | |
| Spherical buttons | | | | | | | | | |
|  | 102 | 4 | 6×14 | 8×14 | 35° | 2 | - | 8.7 | 1431-102ST68-614/814-45-31 |
| | 102 | 4 | 4×12, 4×12 | 10×12 | 35° | 4 | - | 8.7 | 1432-102ST68-812/1012-45-31 |
| | 105 | 4 1/8 | 6×14 | 8×14 | 35° | 2 | - | 8.9 | 1431-105ST68-614/814-45-31 |
| | 105 | 4 1/8 | 4×14, 2×12 | 8×14 | 35° | 4 | - | 8.9 | 1433-105ST68-614/814-45-31 |
| | 110 | 4 3/8 | 6×14 | 8×16 | 35° | 2 | - | 9.4 | 1431-110ST68-614/816-45-31 |
| | 110 | 4 3/8 | 4×14, 2×14 | 8×16 | 35° | 4 | - | 8.9 | 1433-110ST68-614/816-45-31 |
| | 115 | 4 1/2 | 6×14 | 8×16 | 35° | 2 | - | 9.6 | 1431-115ST68-614/816-45-31 |
| | 115 | 4 1/2 | 4×14, 2×14 | 8×16 | 35° | 4 | - | 9.5 | 1433-115ST68-614/816-45-31 |
| | 115 | 4 1/2 | 4×14, 4×14 | 10×14 | 35° | 4 | - | 9.5 | 1433-115ST68-814/1014-45-31 |
| | 127 | 5 | 8×14 | 9×16 | 35° | 3 | - | 11.0 | 1431-127ST68-814/916-45-31 |
| | 127 | 5 | 4×14, 3×14 | 8×16 | 35° | 4 | - | 10.8 | 1433-127ST68-714/816-45-31 |
| | 152 | 6 | 8×16 | 9×16 | 35° | 3 | - | 16.2 | 1431-152ST68-816/916-45-31 |
| 152 | 6 | 9×16 | 9×16 | 35° | 3 | - | 16.2 | 1431-152ST68-916/916-45-31 | |
| 152 | 6 | 9×14, 3×14 | 9×16 | 35° | 3 | - | 16.2 | 1433-152ST68-1214/916-45-31 | |
| Parabolic buttons | | | | | | | | | |
|  | 102 | 4 | 6×14 | 8×14 | 35° | 2 | - | 8.7 | 1431-102ST68-614/814-45-51 |
| | 102 | 4 | 4×12, 4×12 | 10×12 | 35° | 4 | - | 8.7 | 1432-102ST68-812/1012-45-51 |
| | 105 | 4 1/8 | 6×14 | 8×14 | 35° | 2 | - | 8.9 | 1431-105ST68-614/814-45-51 |
| | 105 | 4 1/8 | 4×14, 2×12 | 8×14 | 35° | 4 | - | 8.9 | 1433-105ST68-614/814-45-51 |
| | 110 | 4 3/8 | 6×14 | 8×16 | 35° | 2 | - | 9.4 | 1431-110ST68-614/816-45-51 |
| | 110 | 4 3/8 | 4×14, 2×14 | 8×16 | 35° | 4 | - | 8.9 | 1433-110ST68-614/816-45-51 |
| | 115 | 4 1/2 | 6×14 | 8×16 | 35° | 2 | - | 9.6 | 1431-115ST68-614/816-45-51 |
| | 115 | 4 1/2 | 4×14, 2×14 | 8×16 | 35° | 4 | - | 9.5 | 1433-115ST68-614/816-45-51 |
| | 115 | 4 1/2 | 4×14, 4×14 | 10×14 | 35° | 4 | - | 9.5 | 1433-115ST68-814/1014-45-51 |
| | 127 | 5 | 8×14 | 9×16 | 35° | 3 | - | 11.0 | 1431-127ST68-814/916-45-51 |
| | 127 | 5 | 4×14, 3×14 | 8×16 | 35° | 4 | - | 10.8 | 1433-127ST68-714/816-45-51 |
| | 152 | 6 | 8×16 | 9×16 | 35° | 3 | - | 16.2 | 1431-152ST68-816/916-45-51 |
| 152 | 6 | 9×16 | 9×16 | 35° | 3 | - | 16.2 | 1431-152ST68-916/916-45-51 | |
| 152 | 6 | 9×14, 3×14 | 9×16 | 35° | 3 | - | 16.2 | 1433-152ST68-1214/916-45-51 | |

Tube drilling tools

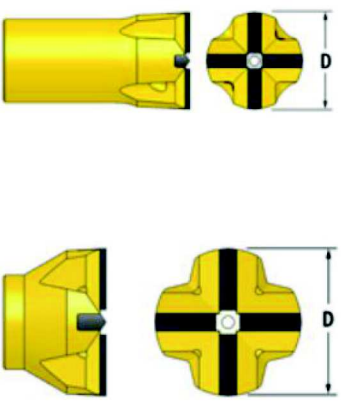
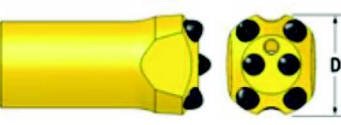
ST68

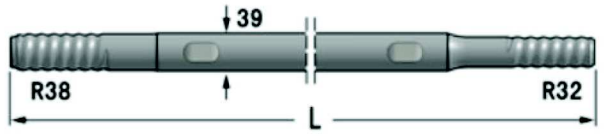

| Drill bit | Diameter | | No x button diameter | | | Flushing hole | | Weight approx kg | SANSHAN P/N |
|--|-------------------|-------|----------------------|-------|-------|---------------|------|------------------|-----------------------------|
| | mm | inch | Front | Gauge | Angle | Front | Side | | |
| Retrac button bit  | Spherical buttons | | | | | | | | |
| | 102 | 4 | 4×12, 4×12 | 10×12 | 35° | 4 | - | 9.3 | 1632-102ST68-812/1012-45-31 |
| | 102 | 4 | 4×14, 2×12 | 8×14 | 35° | 4 | - | 9.3 | 1533-102ST68-614/814-45-31 |
| | 110 | 4 3/8 | 6×14 | 8×16 | 35° | 2 | - | 10.0 | 1531-110ST68-614/816-45-31 |
| | 115 | 4 1/2 | 6×14 | 8×16 | 35° | 2 | - | 10.0 | 1531-115ST68-614/816-45-31 |
| | 127 | 5 | 8×14 | 9×16 | 35° | 3 | - | 15.0 | 1531-127ST68-814/916-45-31 |
| | 140 | 5 1/2 | 9×14 | 9×16 | 35° | 3 | - | 17.8 | 1531-140ST68-914/916-45-31 |
| | Parabolic buttons | | | | | | | | |
| | 102 | 4 | 4×12, 4×12 | 10×12 | 35° | 4 | - | 9.3 | 1632-102ST68-812/1012-45-51 |
| | 102 | 4 | 4×14, 2×12 | 8×14 | 35° | 4 | - | 9.3 | 1533-102ST68-614/814-45-51 |
| | 110 | 4 3/8 | 6×14 | 8×16 | 35° | 2 | - | 10.0 | 1531-110ST68-614/816-45-51 |
| | 115 | 4 1/2 | 6×14 | 8×16 | 35° | 2 | - | 10.0 | 1531-115ST68-614/816-45-51 |
| | 127 | 5 | 8×14 | 9×16 | 35° | 3 | - | 15.0 | 1531-127ST68-814/916-45-51 |
| | 140 | 5 1/2 | 9×14 | 9×16 | 35° | 3 | - | 17.8 | 1531-140ST68-914/916-45-51 |

| | | | | | | | | | |
|---|-------------------|---|------|-------|-----|---|---|------|-----------------------------|
| Reaming bit  | Spherical buttons | | | | | | | | |
| | 152 | 6 | 6×16 | 9×16 | 35° | 3 | - | 13.0 | 1441-152ST68-616/916-45-31 |
| | 152 | 6 | 2×14 | 18×14 | 35° | 3 | 3 | 10.4 | 1441-152ST68-214/1814-45-31 |
| | Parabolic buttons | | | | | | | | |
| | 152 | 6 | 6×16 | 9×16 | 35° | 3 | - | 13.0 | 1441-152ST68-616/916-45-51 |
| | 152 | 6 | 2×14 | 18×14 | 35° | 3 | 3 | 10.4 | 1441-152ST68-214/1814-45-51 |

| Drill rod | Length | | Diameter | | Weight approx kg | SANSHAN P/N |
|---|--------|------|----------|--------|------------------|-----------------------|
| | mm | Foot | mm | inch | | |
| Drill tube Flushing hole 30mm.  | 1525 | 5' | 87 | 3 7/16 | 35.5 | 24687-ST68/87-1525-23 |
| | 1830 | 6' | 87 | 3 7/16 | 43.8 | 24687-ST68/87-1830-23 |
| | 3660 | 12' | 87 | 3 7/16 | 80.0 | 24687-ST68/87-3660-23 |
| | 6110 | 20' | 87 | 3 7/16 | 133.0 | 24687-ST68/87-6110-23 |

Rock Tools For Furnace

| Name of product | Diameter | | Tip size(mm) | Thread | Weight approx kg | SANSHAN P / N | |
|---|----------|---------|--------------|--------|------------------|-----------------------|----------------------|
| | mm | inch | H×W | | | | |
| <p>Cross-type bit</p>  | 45 | 1 3/4 | 7×8 | R32 | 0.5 | 1222-45R32-7/8-40-24 | |
| | 50 | 1 31/32 | 7×8 | R32 | 0.6 | 1222-50R32-7/8-40-24 | |
| | 55 | 2 1/8 | 7×8 | R32 | 0.6 | 1222-55R32-7/8-40-24 | |
| | 55 | 2 1/8 | 7×8 | R38 | 0.7 | 1222-55R38-7/8-40-24 | |
| | 55 | 2 1/8 | 7×8 | T38 | 1.0 | 1222-55T38-7/8-40-24 | |
| | 60 | 2 3/8 | 7×8 | R32 | 0.7 | 1222-60R32-7/8-40-24 | |
| | 60 | 2 3/8 | 7×8 | R38 | 1.2 | 1222-60R38-7/8-40-24 | |
| | 60 | 2 3/8 | 7×8 | T38 | 1.3 | 1222-60T38-7/8-40-24 | |
| | 65 | 2 1/2 | 7×8 | R32 | 0.9 | 1222-65R32-7/8-40-24 | |
| | 65 | 2 1/2 | 7×8 | R38 | 1.3 | 1222-65R38-7/8-40-24 | |
| | 65 | 2 1/2 | 7×8 | T38 | 1.4 | 1222-65T38-7/8-40-24 | |
| | 70 | 2 3/4 | 7×8 | R32 | 1.3 | 1222-70R32-7/8-40-24 | |
| | | 70 | 2 3/4 | 7×8 | T38 | 1.5 | 1222-70T38-7/8-40-24 |
| | | 80 | 3 1/8 | 7×8 | R32 | 1.7 | 1222-80R32-7/8-40-24 |
| | 100 | 3 3/4 | 7×8 | R32 | 1.8 | 1222-100R32-7/8-40-24 | |
| <p>Button bit</p>  | 48 | 1 7/8 | 6×10 | R32 | 0.6 | 1431-48R32-6/10-42-53 | |
| | 51 | 2 | 6×10 | R32 | 0.7 | 1431-51R32-6/10-42-53 | |
| | 54 | 2 1/8 | 6×11 | R32 | 0.7 | 1431-54R32-6/11-42-53 | |
| | 57 | 2 1/4 | 6×11 | R32 | 0.8 | 1431-57R32-6/11-42-53 | |

| Name of product | Length | | Weight (kg) | SANSHAN P / N |
|--|--------|--------|-------------|-----------------------|
| | mm | Foot | | |
| <p>R38-Round39-R32</p>  | 2800 | 9' 2" | 22.7 | 25R39-R32/R38-2800-40 |
| | 3400 | 11' 2" | 27.8 | 25R39-R32/R38-3400-40 |
| | 3600 | 11' 9" | 29.4 | 25R39-R32/R38-3600-40 |
| | 4100 | 13' 5" | 34.5 | 25R39-R32/R38-4100-40 |
| | 4300 | 14' 1" | 35.3 | 25R39-R32/R38-4300-40 |
| <p>T38-Round39-T38</p>  | 3000 | 9' 8" | 24.9 | 25R39-T38-3000-40 |
| | 3200 | 10' 5" | 26.5 | 25R39-T38-3200-40 |
| | 4000 | 13' 1" | 33.4 | 25R39-T38-4000-40 |

Shank adapter

| Atlas Copco | Rock drill | Thread | Length (mm) | Weight (Kg) | Flushing (mm) | SANSHAN P / N |
|-------------|---|--------------------------|--------------------------|--------------------------|------------------|--|
| | Atlas Copco BBC 43, BBC 44, BBC 45, BBC 100 | R32 | 380 | 2.2 | 10 | 4BBC43-32R32-10380-23 |
| | Atlas Copco BBC 51, BBC 52, BBC 54, BBC 120 | R32 T38 | 380 390 | 2.9 3.4 | 10 10 | 4BBC51-38R32-10380-23 4BBC51-38T38-10390-23 |
| | Atlas Copco BBE 57 | T38 | 538 | 5.6 | 14 | 4BBE57-44T38-14538-23 |
| | Atlas Copco COP 125, COP 130, COP 131 | T38 | 380 | 3.3 | 14 | 4125-39T38-14380-23 |
| | Atlas Copco COP 1032HD | R32 | 340 | 3.7 | - | 41032HD-45R32-0340-23 |
| | | R38 | 340 | 4.4 | - | 41032HD-55R32-0340-23 |
| | Atlas Copco COP 1032 | R32 R35 R38 T38 | 550 550 550 550 | 5.3 5.6 5.7 5.7 | - - - - | 41032-45R32-0550-23 41032-45R35-0550-23 41032-45R38-0550-23 41032-45T38-0550-23 |
| | Atlas Copco COP 1036 COP 1038HB | R32 T38 | 500 500 | 4.3 4.7 | - - | 41036-38R32-0500-23 41036-38T38-0500-23 |
| | | T45 | 500 | 5.3 | - | 41036-45T45-0500-23 |
| | Atlas Copco COP 1038HD COP 1238 | R32 R38 T38 | 485 485 485 | 4.3 4.5 4.5 | - - - | 41238-38R32-0485-23 41238-38R38-0485-23 41238-38T38-0485-23 |

Shank adapter

| Atlas Copco | Rock drill | Thread | Length (mm) | Weight (Kg) | Flushing (mm) | SANSHAN P/N |
|-------------|---|--------|-------------|-------------|---------------|--|
| | Atlas Copco COP 1038HL | R32 | 575 | 4.9 | - | 41038HL-38R32-0575-23 41038HL-38T38-0575-23 |
| | | T38 | 575 | 5.2 | - | |
| | | T45 | 575 | 6.1 | - | 41038HL-45T45-0575-23 |
| | Atlas Copco COP 1238 | R32 | 500 | 4.0 | - | 41238-38R32-0500-23 41238-38T38-0500-23 41238-38R38-0485-23 41238-38T38-0485-23 |
| | | T38 | 500 | 4.4 | - | |
| | | T45 | 500 | 5.0 | - | |
| | | | | | | |
| | | R32 | 575 | 4.9 | - | 41238-38R32-0575-23 41238-38R38-0575-23 41238-38T38-0575-23 |
| | | R38 | 575 | 5.0 | - | |
| | | T38 | 575 | 5.7 | - | |
| | | T45 | 575 | 6.1 | - | 41238-45T38-0575-23 41238-45T45-0575-23 |
| | Atlas Copco COP 1432, COP 1532, COP 1440, COP 1838 HD, COP 1838 ME | R32 | 435 | 3.9 | - | 41432-38R32-0435-23 41432-38R38-0435-23 41432-38T38-0435-23 |
| | | R38 | 435 | 4.2 | - | |
| | | T38 | 435 | 4.2 | - | |
| | | R32 | 525 | 4.8 | - | 41432-38R32-0525-23 41432-38T38-0525-23 |
| | | T38 | 525 | 5.0 | - | |
| | Atlas Copco COP 1432, COP 1532 | R32 | 341 | 4.7 | - | 41432-55R32-0341-23 41432-55R38-0341-23 |
| | | R38 | 341 | 5.2 | - | |
| | Atlas Copco COP 1550, COP 1838ME/HE | T38 | 525 | 6.2 | - | 41550-52T38-0525-23 41550-52T45-0525-23 41550-52T51-0525-23 |
| | | T45 | 525 | 6.4 | - | |
| | | T51 | 525 | 6.8 | - | |

Shank adapter

| Atlas Copco, Boart and Furukawa | Rock drill | Thread | Length (mm) | Weight (Kg) | Flushing (mm) | SANSHAN P/N |
|---------------------------------|--|--------------------------|--------------------------|--------------------------|------------------------------|--|
| | Atlas Copco COP 1550 EX, COP 1838 EX | T38 T45 T51 | 730 730 730 | 10.1 10.5 10.7 | - - - | 41550EX-60T38-0730-23 41550EX-60T45-0730-23 41550EX-60T51-0730-23 |
| | Atlas Copco COP 1840HE COP 1850 | T45 T51 | 565 565 | 7.2 7.4 | - - | 41850-52T45-0565-23 41850-52T51-0565-23 |
| | Atlas Copco COP 2150PG | T51 | 770 | 11.2 | - | 42150PG-52T51-0770-23 |
| | Atlas Copco COP 2160EX | T45 T51 | 770 770 | 13.2 13.3 | - - | 42160EX-63T45-0770-23 42160EX-63T51-0770-23 |
| | Atlas Copco COP 4050EX | ST68 | 805 | 69.6 | - | 44050EX-70ST68-0805-23 |
| | Atlas Copco COP 4050MUX | ST68 | 835 | 69.9 | - | 44050MUX-90ST68-0835-23 |
| | Boart HD 125, HD 150, HD 160 | R38 T38 | 495 495 | 5.6 5.6 | - - | 4HD125-45R38-0495-23 4HD125-45T38-0495-23 |
| | Furukawa M 120, PD 200 | R32 R38 T38 T38 | 330 350 380 446 | 3.6 3.8 4.0 4.3 | 14.3 14.3 14.3 14.3 | 4M120-44R32-14330-23 4M120-44R38-14350-23 4M120-44T38-14380-23 4M120-44T38-14446-23 |
| | Furukawa PD 200R | T38 T45 | 484 484 | 4.0 4.3 | 14.3 14.3 | 4PD200R-44T38-14484-23 4PD200R-44T45-14484-23 |
| | Furukawa HD 260, HD 300 | T38 T45 | 655 655 | 7.8 7.8 | 16 16 | 4HD260-45T38-16655-23 4HD260-45T45-16655-23 |

Shank adapter

| Furukawa, Gardner-Denver, Ingersoll-Rand and Montabert | Rock drill | Thread | Length (mm) | Weight (Kg) | Flushing (mm) | SANSHAN P/N |
|--|--|--------------------------|--------------------------|--------------------------|------------------------------|--|
| | Furukawa HD 609 | T38 T38 T45 | 620 690 620 | 6.2 6.5 6.9 | - - - | 4HD609-45T38-0620-23 4HD609-45T38-0690-23 4HD609-45T45-0620-23 |
| | Furukawa HD 612 | T45 | 710 | 9.2 | - | 4HD612-51T45-0710-23 |
| | Furukawa HD 712 | T45 | 788 | 11.2 | - | 4HD712-51T45-0788-23 |
| | Gardner-Denver PR 123 | R32 R38 T38 T45 | 380 380 380 380 | 3.6 3.9 3.9 4.2 | 14.3 14.3 14.3 14.3 | 4PR123-44R32-14380-23 4PR123-44R38-14380-23 4PR123-44T38-14380-23 4PR123-44T45-14380-23 |
| | Ingersoll-Rand URD475, URD550, VL120, EVL130, VL140, F16 | R32 R38 T38 T38 | 330 350 380 446 | 3.6 3.8 4.0 4.3 | 14 14 14 14 | 4VL120-44R32-14330-23 4VL120-44R38-14350-23 4VL120-44T38-14380-23 4VL120-44T38-14446-23 |
| | Ingersoll-Rand YH 65, YH 80 | T38 T45 | 500 500 | 5.8 6.1 | 19 19 | 4YH65-45T38-19500-23 4YH65-45T45-19500-23 |
| | Ingersoll-Rand YH 65 RP, YH 70 RP, YH 75 RP, YH 80 RP | T45 | 700 | 8 | 19 | 4YH65RP-45T45-19700-23 |
| | Montabert HC 40 | R32 R38 T38 | 447 447 447 | 3.9 4.1 4.1 | - - - | 4HC40-38R32-0447-23 4HC40-38R38-0447-23 4HC40-38T38-0447-23 |
| | Montabert HC 40 | R32 | 270 | 4.1 | - | 4HC40-52R32-0270-23 |
| | Montabert HC 40 | R38 | 320 | 4.4 | - | 4HC40-55R38-0320-23 |










Shank adapter

| Montabert and SIG | Rock drill | Thread | Length (mm) | Weight (Kg) | Flushing (mm) | SANSHAN P/N |
|-------------------|--|--------------------------|--------------------------|--------------------------|------------------|--|
| | Montabert HC 80, HC 90, HC 105, HC 120 | R32 R38 T38 T38 | 440 440 440 500 | 5.1 5.3 5.3 5.8 | - - - - | 4HC80-38R32-0440-23 4HC80-38R38-0440-23 4HC80-38T38-0440-23 4HC80-38T38-0500-23 |
| | Montabert H 100 | T38 | 540 | 5.6 | 14 | 4H100-45T38-14540-23 |
| | Montabert HC 120, HC 150 | T45 | 490 | 5.9 | - | 4HC120-45T45-0490-23 |
| | Montabert HC 80R, HC 120R, HC 150R | T45 T51 | 670 670 | 8.3 8.3 | - - | 4HC80R-51T45-0670-23 4HC80R-51T51-0670-23 |
| | Montabert HC 200 | T51 T60 | 840 840 | 13.9 14.2 | - - | 4HC200-60T51-0840-23 4HC200-60T60-0840-23 |
| | SIG HBM 50, HBM 100, HBM 120 | R32 | 340 | 3.7 | - | 4HBM50-45R32-0340-23 |
| | SIG HBM 100, HBM 120 | R38 | 340 | 4.4 | - | 4HBM100-55R38-0340-23 |
| | SIG HBM 50, HBM 100, HBM 120 | R32 | 550 | 5.3 | - | 4HBM50-45R32-0550-23 |
| | SIG HBM 101 | R32 | 500 | 4.6 | - | 4HBM101-38R32-0500-23 |

Shank adapter

| Sandvik (Tamrock) | Rock drill | Thread | Length (mm) | Weight (Kg) | Flushing (mm) | SANSHAN P./N |
|-------------------|---|--------------------------|--------------------------|--------------------------|------------------|--|
| | Tamrock HL 300 | R32 | 400 | 2.8 | - | 4HL300-32R32-0400-23 |
| | Tamrock HL 300S | R32 | 245 | 2.8 | - | 4HL300S-45R32-0245-23 |
| | Tamrock HLX 3 | R32 | 324 | 3.8 | - | 4HLX3-45R32-0324-23 |
| | Tamrock HLX 3F | R32 | 205 | 2.6 | - | 4HLX3F-45R32-0205-23 |
| | Tamrock L400, L410, L500, L510, L550 | R32 | 380 | 2.3 | 10 | 4L400-32R32-0380-23 |
| | Tamrock HL 438, HL 538, HLR 438L, HLR 438T | R32 T38 | 380 400 | 3.2 3.6 | 12.7 12.7 | 4HL438-38R32-13380-23 4HL438-38T38-13400-23 |
| | Tamrock HL 438LS, HL 438TS, HL 538, HL 538L, L 550S | R32 R38 T38 T38 | 450 450 455 545 | 4.1 4.3 4.3 4.8 | - - - - | 4HL538-38R32-0450-23 4HL538-38R38-0450-23 4HL538-38T38-0455-23 4HL538-38T38-0545-23 |
| | Tamrock HL500-38, HL510-38 | R32 T38 | 550 550 | 4.3 4.6 | - - | 4HL500-38R32-0550-23 4HL500-38T38-0550-23 |
| | Tamrock HL 500-45, HL 510-45 | R32 T38 T45 | 550 550 550 | 5.6 5.6 6.1 | - - - | 4HL500-45R32-0550-23 4HL500-45T38-0550-23 4HL500-45T45-0550-23 |



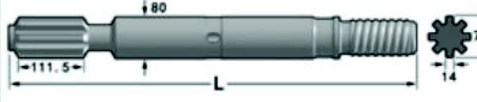

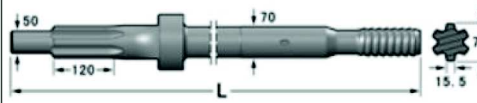

Shank adapter

| Sandvik (Tamrock) | Rock drill | Thread | Length (mm) | Weight (Kg) | Flushing (mm) | SANSHAN P / N |
|---|--|--|--|--|----------------------------|--|
|  | Tamrock HL 500S-38, HL 510S-38, HL 510B, HL 510HL | R32 R38 T38 R38 T38 | 460 460 460 500 500 | 3.9 4.1 4.1 4.3 4.3 | - - - - - | 4HL510B-38R32-0460-23 4HL510B-38R38-0460-23 4HL510B-38T38-0460-23 4HL510B-38R38-0500-23 4HL510B-38T38-0500-23 |
|  | Tamrock HL 500F, HL 510F | R32 | 350 | 3.6 | - | 4HL500F-45R32-0350-23 |
|  | Tamrock HL 550 SUPER, HL 560 SUPER, HL 510S-45 | R38 T38 T45 | 500 500 500 | 5.5 5.5 5.6 | - - - | 4HL550-45R38-0500-23 4HL550-45T38-0500-23 4HL550-45T45-0500-23 |
|  | Tamrock HLX 5, HLX 5T | R32 R38 T38 R32 T38 T45 | 500 500 500 575 575 575 | 5.4 5.5 5.5 6.4 6.5 6.6 | - - - - - - | 4HLX5-45R32-0500-23 4HLX5-45R38-0500-23 4HLX5-45T38-0500-23 4HLX5-45R32-0575-23 4HLX5-45T38-0575-23 4HLX5-45T45-0575-23 |
|  | Tamrock HLX5 PE-45 | R32 T38 | 575 575 | 6.3 6.4 | - - | 4HLX5PE-45R32-0575-23 4HLX5PE-45T38-0575-23 |
|  | Tamrock HL 600-45, HL 600S-45 | T38 T45 R32 T38 T45 | 600 600 525 525 525 | 6.7 6.7 5.9 6.0 6.1 | - - - - - | 4HL600-45T38-0600-23 4HL600-45T45-0600-23 4HL600-45R32-0525-23 4HL600-45T38-0525-23 4HL600-45T45-0525-23 |
|  | Tamrock HL 600-52, HL 600S-52 | T45 T51 | 650 650 | 8.0 8.0 | - - | 4HL600-52T45-0650-23 4HL600-52T51-0650-23 |
|  | Tamrock HL 645, HL 645S | T38 T45 | 600 600 | 6.6 6.8 | - - | 4HL645-45T38-0600-23 4HL645-45T45-0600-23 |
|  | Tamrock HL 650-45, HL 700-45, HL 700T-45, HL 710-45, HL 800T-45 | T38 T45 | 600 600 | 7.3 7.8 | - - | 4HL650-45T38-0600-23 4HL650-45T45-0600-23 |

Shank adapter

| Sandvik (Tamrock) | Rock drill | Thread | Length (mm) | Weight (Kg) | Flushing (mm) | SANSHAN P/N |
|-------------------|---|--------------------------|--------------------------|----------------------------|------------------|--|
| | Tamrock HL 650-52. HL 700-52. HL 710-52. HL 800T-52 | T38 T45 T51 | 600 600 600 | 8.3 8.8 8.8 | - - - | 4HL650-52T38-0600-23 4HL650-52T45-0600-23 4HL650-52T51-0600-23 |
| | Tamrock HL 850 HL 850S | T45 T51 | 670 670 | 9.8 10.1 | - - | 4HL850-52T45-0670-23 4HL850-52T51-0670-23 |
| | Tamrock HL 1000-52. HL 1000S-52 | T45 T51 T45 T51 | 670 670 590 590 | 10.3 11.0 8.7 8.7 | - - - - | 4HL1000-52T45-0670-23 4HL1000-52T51-0670-23 4HL1000-52T45-0590-23 4HL1000-52T51-0590-23 |
| | Tamrock HL 1000-60 | T51 T60 | 670 670 | 13.3 13.4 | - - | 4HL1000-60T51-0670-23 4HL1000-60T60-0670-23 |
| | Tamrock HL 1000-80 | T60 | 670 | 20.9 | - | 4HL1000-80T60-0670-23 |
| | Tamrock HL 1000S-80 | ST58 ST68 | 635 640 | 18.2 19.1 | - - | 4HL1000S-80ST58-0635-23 4HL1000S-80ST68-0640-23 |
| | Tamrock HL 1000 PE-52 | T51 | 840 | 14.2 | - | 4HL1000PE-52T51-0840-23 |
| | Tamrock HL 1000 PE-65. HL 1500 PE-65. HL 1560 T-65 | T51 T60 | 760 760 | 16.8 16.9 | - - | 4HL1000PE-65T51-0760-23 4HL1000PE-65T60-0760-23 |
| | Tamrock HL 1500-52. HL 1500T-52 | T51 | 710 | 11.9 | - | 4HL1500-52T51-0710-23 |

Shank adapter

| Sandvik (Tamrock), Others | Rock drill | Thread | Length (mm) | Weight (Kg) | Flushing (mm) | SANSHAN P/N |
|---|---------------------------------------|--------------|-------------|--------------|---------------|--|
|  | Tamrock HL 1500-60, HL 1500T-60 | T51 T60 | 760 760 | 16.1 16.1 | - - | 4HL1500-60T51-0760-23 4HL1500-60T60-0760-23 |
|  | Tamrock HL 1500-T80 | T60 | 760 | 22.9 | - | 4HL1500-80T60-0760-23 |
|  | Tamrock HL 1500-S80 | ST58 ST68 | 635 635 | 18.8 18.9 | - - | 4HL1500-80ST58-0635-23 4HL1500-80ST68-0635-23 |
|  | Tamrock HL 1500-SPE90 | ST58 ST68 | 635 635 | 21.8 21.9 | - - | 4HL1500-90ST58-0635-23 4HL1500-90ST68-0635-23 |
|  | | HL64 | 1180 | 35.6 | - | 4OTHER-70HL64-1180-23 |
|  | | R32 | 410 | 3.1 | - | 4OTHER-35R32-410-23 |