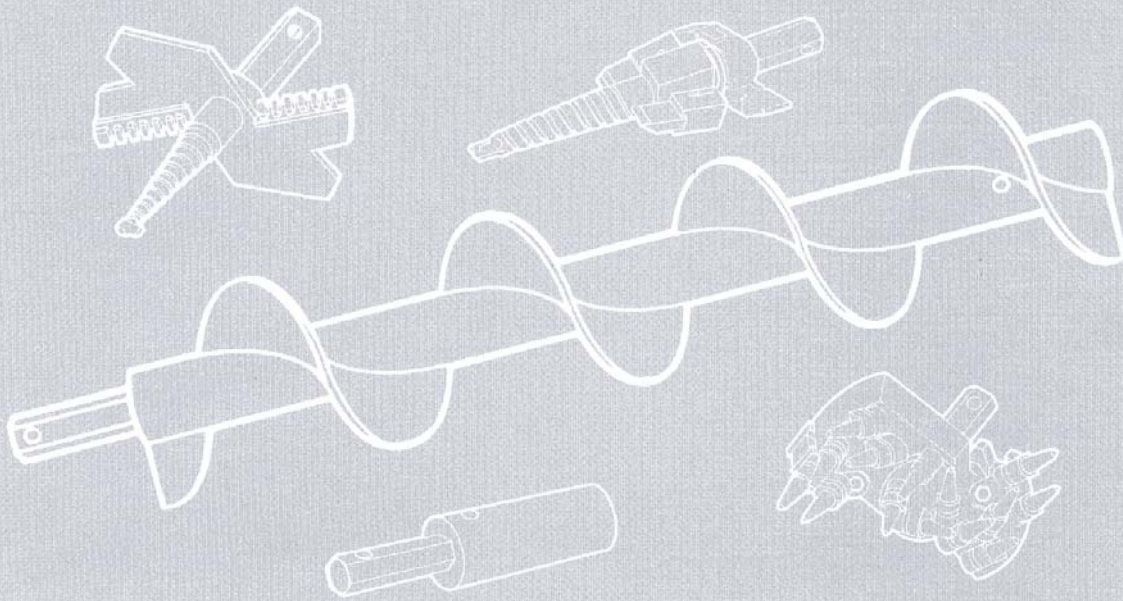


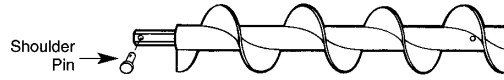
AUGER

BORING TOOLS & ACCESSORIES

Catalog 501-4



Horizontal Augers



| NOMINAL SIZE | ACTUAL O.D. | HEX CONNEC-TION | FLIGHT THICK-NESS | AUGER PART # | WEIGHT PER FOOT (LBS.) | SHANK PART # | SOCKET PART # |
|--------------|-------------|-----------------|-------------------|--------------|------------------------|--------------|---------------|
| 2" | 1 7/8" | 13/16" | | R01710C1 | 3.25 | R500100 | R600100 |
| 3" | 2 7/8" | 3/8" | | R02711C1 | 4.60 | R500105 | R600105 |
| 3" | 3" | 1 1/8" | | R03014E1 | 4.50 | R500125 | R600125 |
| 4" | 3 3/4" | 13/16" | | R03611C1 | 5.50 | R500105 | R600105 |
| 4" | 3 3/4" | 1 1/8" | | R03611E1 | 6.00 | R500120 | R600120 |
| 4" | 3 3/4" | 1 1/8" | | R03614E2 | 5.50 | R500130 | R600130 |
| 4" | 3 3/4" | 1 3/8" | | R03620W2 | 6.50 | R500140 | R600140 |
| 5" | 4 3/4" | 1 1/8" | | R04614E1 | 7.00 | R500125 | R600125 |
| 6" | 5" | 1 3/8" | | R05020W2 | 9.00 | R500140 | R600140 |
| 6" | 5" | 1 5/8" | | R05026F2 | 10.80 | R500150 | R600150 |
| 6" | 5 3/4" | 1 1/8" | | R05620E1 | 8.70 | R500127 | R600127 |
| 8" | 7" | 1 5/8" | | R07026F2 | 15.00 | R500150 | R600150 |
| 8" | 7" | 2 1/4" | | R07036Q2 | 18.50 | R500165 | R600160 |
| 8" | 7 1/4" | 1 1/8" | | R07220E1 | 11.50 | R500127 | R600127 |
| 10" | 9" | 1 5/8" | | R09026F2 | 18.00 | R500150 | R600150 |
| 10" | 9" | 2 1/4" | | R09036Q2 | 18.75 | R500165 | R600160 |
| 12" | 11" | 1 5/8" | | R11026F2 | 21.75 | R500150 | R600150 |
| 12" | 11" | 2 1/4" | | R11036Q2 | 25.75 | R500165 | R600160 |
| 12" | 11" | 3" | | R11050T2 | 39.00 | R500170 | R600170 |
| 14" | 13" | 1 5/8" | | R13026F2 | 24.00 | R500150 | R600150 |
| 14" | 13" | 2 1/4" | | R13036Q2 | 27.50 | R500165 | R600160 |
| 14" | 13" | 3" | | R13050T2 | 43.00 | R500170 | R600170 |
| 16" | 15" | 1 5/8" | | R15026F2 | 22.75 | R500150 | R600150 |
| 16" | 15" | 2 1/4" | | R15036Q2 | 29.75 | R500165 | R600160 |
| 16" | 15" | 3" | | R15050T2 | 46.00 | R500170 | R600170 |
| 18" | 17" | 2 1/4" | | R17036Q2 | 35.00 | R500165 | R600160 |
| 18" | 17" | 3" | | R17050T2 | 51.00 | R500170 | R600170 |
| 20" | 19" | 2 1/4" | | R19036Q2 | 37.00 | R500165 | R600160 |
| 20" | 19" | 3" | | R19050T2 | 53.00 | R500170 | R600170 |
| 20" | 19" | 4" | 3/8" | R19064X2 | 71.00 | R500175 | R600175 |
| 20" | 19" | 4" | 1/2" | R19064X3 | 80.00 | R500175 | R600175 |
| 22" | 21" | 2 1/4" | | R21036Q2 | 40.00 | R500165 | R600160 |
| 22" | 21" | 3" | | R21050T2 | 56.00 | R500170 | R600170 |
| 24" | 23" | 2 1/4" | | R23036Q2 | 49.00 | R500165 | R600160 |
| 24" | 23" | 3" | | R23050T2 | 58.00 | R500170 | R600170 |
| 24" | 23" | 4" | 3/8" | R23064X2 | 76.00 | R500175 | R600175 |
| 24" | 23" | 4" | 1/2" | R23064X3 | 87.00 | R500175 | R600175 |
| 30" | 28 1/2" | 3" | | R29050T2 | 65.00 | R500170 | R600170 |
| 30" | 28 1/2" | 4" | 3/8" | R29064X2 | 83.00 | R500175 | R600175 |
| 30" | 28 1/2" | 4" | 1/2" | R29064X3 | 96.00 | R500175 | R600175 |
| 36" | 34 1/2" | 3" | | R35050T2 | 82.50 | R500170 | R600170 |
| 36" | 34 1/2" | 4" | 3/8" | R35064X2 | 100.00 | R500175 | R600175 |
| 36" | 34 1/2" | 4" | 1/2" | R35064X3 | 117.00 | R500175 | R600175 |
| 42" | 40 1/2" | 3" | | R41050T2 | 93.00 | R500170 | R600170 |
| 42" | 40 1/2" | 4" | 3/8" | R41064X2 | 111.00 | R500175 | R600175 |
| 42" | 40 1/2" | 4" | 1/2" | R41064X3 | 144.00 | R500175 | R600175 |
| 48" | 46 1/2" | 4" | 3/8" | R47064X2 | 135.00 | R500175 | R600175 |
| 48" | 46 1/2" | 4" | 1/2" | R47064X3 | 167.00 | R500175 | R600175 |
| 54" | 52" | 4" | 3/8" | R53064X2 | 172.00 | R500175 | R600175 |
| 54" | 52" | 4" | 1/2" | R53064X3 | 214.00 | R500175 | R600175 |
| 60" | 58" | 4" | 3/8" | R59064X2 | 201.00 | R500175 | R600175 |
| 60" | 58" | 4" | 1/2" | R59064X3 | 253.00 | R500175 | R600175 |

- All shank and socket connections made of alloy steel and heat treated for greater wear resistance and strength.
- Flight thickness on sectional auger 3/8" standard. 1/2" Flt. optional on augers.
- Lead auger sections available on request, customer to specify exact O.D.

Lead Augers for Uncased Bores



| NOMINAL SIZE | ACTUAL O.D. | LEAD AUGER PART # | WEIGHT PER FOOT (LBS.) | SHANK PART # | SOCKET PART # |
|--------------|-------------|-------------------|------------------------|--------------|---------------|
| 4" | 3 3/4" | R03611E1LX_ _ | 6.00 | R500125 | R600125 |
| 4" | 3 3/4" | R03620W2LX_ _ | 6.50 | R500140 | R600140 |
| 6" | 5 3/4" | R05620E1LX_ _ | 8.70 | R500125 | R600125 |
| 6" | 5" | R05020W2LX_ _ | 9.00 | R500140 | R600140 |
| 6" | 5" | R05026F2LX_ _ | 10.80 | R500150 | R600150 |
| 8" | 7" | R07026F2LX_ _ | 15.00 | R500150 | R600150 |
| 10" | 9" | R09026F2LX_ _ | 18.00 | R500150 | R600150 |
| 12" | 11" | R11026F2LX_ _ | 21.75 | R500150 | R600150 |

Repair/Replacement Parts

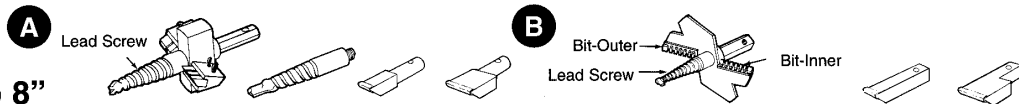


| HEX CONNECTION | LINE UP | SHANK PART # | WT. LBS. | SOCKET PART # | WT. LBS. | SHANK PART # | WT. LBS. | SOCKET PART # | WT. LBS. |
|----------------|---------|--------------|----------|---------------|----------|--------------|----------|---------------|----------|
| 13/16" | 9/16" | R500100 | 1 | R600100 | 1 | | | | |
| 13/16" | 3/4" | R500105 | 1 | R600105 | 1 | | | | |
| 1 1/8" | 3/4" | R500120 | 1 1/2 | R600120 | 2 | | | | |
| 1 1/8" | 1" | R500125 | 1 1/2 | R600125 | 2 | | | | |
| 1 1/8" | 1 1/2" | R500127 | 2 1/2 | R600127 | 2 1/2 | | | | |
| 1 1/8" | 1" | R500130 | 1 1/2 | R600130 | 2 | | | | |
| 1 3/8" | 1 1/2" | R500140 | 3 | R600140 | 4 | | | | |
| 1 5/8" | 2 1/4" | R500150 | 6 | R600150 | 6 | | | | |
| 2 1/4" | | R500165 | 17 | | | R500160 | 12 | R600160 | 11 |
| 3" | | | | | | R500170 | 24 | R600170 | 27 |
| 4" | | | | | | R500175 | 48 | R600175 | 48 |



| HEX CONNECTION | SHOULDER PIN w/AUGER CLIP PART # | WT. LBS. | DRIVE PIN PART # | WT. LBS. | WELD PIN PART # | WT. LBS. | AUGER CLIP PART # |
|----------------|----------------------------------|----------|------------------|----------|-----------------|----------|-------------------|
| 13/16" | | | R700750 | 1/4 | | | R700160 |
| 1" | R700100 | 1/4 | | | | | |
| 1 1/8" | R700110 | 1/4 | R700760 | 1/4 | | | R700165 |
| 1 1/8" | R700110 | 1/4 | R700760 | 1/4 | | | R700165 |
| 1 3/8" | R700120 | 1/4 | | | | | R700175 |
| 1 5/8" | R700130 | 1/2 | R700770 | 1/2 | | | R700180 |
| 2 1/4" | R700140 | 3/4 | | | R700500 | 1 | R700180 |
| 3" | R700150 | 1 | | | R700510 | 1 | R700180 |
| 4" | R700155 | 2 | | | R700520 | 2 | R700180 |

Dirt Heads without Wing Cutters



Type A - 3" to 8"

| NOMINAL SIZE | ACTUAL CUTTING SIZE | HEX CONNECTION | DIRT HEAD PART # | WT. LBS. | LEAD SCREW PART # | INNER BIT PART # (# REQ) | OUTER BIT PART # (2 REQ) |
|--------------|---------------------|----------------|------------------|----------|-------------------|--------------------------|--------------------------|
| 3" | 3 1/2" | 13/16" | S030DC100 | 7 | S601120 | | S600270 |
| 3" | 3 1/2" | 1" | S030DD200 | 7 | S601120 | | S600270 |
| 3" | 3 1/2" | 1 1/8" | S030DE100 | 7 | S601120 | | S600270 |
| 4" | 4 1/2" | 13/16" | S040DC100 | 7 | S601120 | | S600280 |
| 4" | 4 1/2" | 1 1/8" | S040DE100 | 7 | S601120 | | S600280 |
| 4" | 4 1/2" | 1 3/8" | S040DW200 | 8 | S601120 | | S600280 |
| 6" | 6" | 1 1/8" | S050DE100 | 8 | S601120 | S600260 (2) | S600280 |
| 6" | 6" | 1 3/8" | S050DW200 | 10 | S601120 | S600260 (2) | S600280 |
| 6" | 6" | 1 5/8" | S050DF200 | 11 | S601120 | S600260 (2) | S600280 |
| 8" | 8 1/2" | 1 1/8" | S070DE100 | 20 | S601130 | S600290 (2) | S600310 |
| 8" | 8 1/2" | 1 5/8" | S070DF200 | 23 | S601130 | S600290 (2) | S600310 |
| 8" | 8 1/2" | 2 1/4" | S070DQ200 | 28 | S601130 | S600290 (2) | S600310 |

Type B - 10" to 12"

| | | | | | | | |
|-----|-----|--------|-----------|----|---------|-------------|---------|
| 10" | 10" | 1 5/8" | S090DF200 | 28 | S601140 | S600320 (2) | S600340 |
| 10" | 10" | 2 1/4" | S090DQ200 | 32 | S601140 | S600320 (2) | S600340 |
| 12" | 12" | 1 5/8" | S110DF200 | 37 | S601140 | S600320 (2) | S600340 |
| 12" | 12" | 2 1/4" | S110DQ200 | 42 | S601140 | S600320 (2) | S600340 |

Combination Heads without Wing Cutters

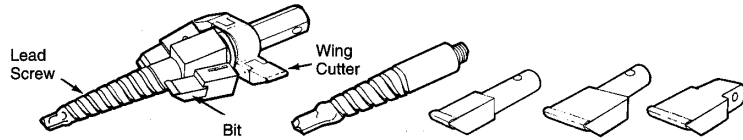
Type A - 3" to 8"

| NOMINAL SIZE | ACTUAL CUTTING SIZE | HEX CONNECTION | COMBO HEAD PART # | WT LBS. | LEAD SCREW PART # | INNER BIT PART # (# REQ) | OUTER BIT PART # (2 REQ) |
|--------------|---------------------|----------------|-------------------|---------|-------------------|--------------------------|--------------------------|
| 3" | 3 1/2" | 1" | S030RD200 | 5 | S601260 | | S600520 |
| 3" | 3 1/2" | 1 1/8" | S030RE100 | 5 | S601260 | | S600520 |
| 4" | 4 1/2" | 13/16" | S040RC100 | 6 | S601260 | | S600530 |
| 4" | 4 1/2" | 1 1/8" | S040RE100 | 6 | S601260 | | S600530 |
| 4" | 4 1/2" | 1 1/8" | S040RE200 | 7 | S601260 | | S600530 |
| 6" | 6" | 1 3/8" | S040RW200 | 8 | S601260 | | S600530 |
| 6" | 6" | 1 1/8" | S050RE100 | 9 | S601260 | S600510 (2) | S600530 |
| 6" | 6" | 1 3/8" | S050RW200 | 9 | S601260 | S600510 (2) | S600530 |
| 6" | 6" | 1 5/8" | S050RF200 | 10 | S601260 | S600510 (2) | S600530 |
| 8" | 8 1/2" | 1 1/8" | S070RE100 | 18 | S601270 | S600540 (2) | S600560 |
| 8" | 8 1/2" | 1 5/8" | S070RF200 | 21 | S601270 | S600540 (2) | S600560 |
| 8" | 8 1/2" | 2 1/4" | S070RQ200 | 26 | S601270 | S600540 (2) | S600560 |

Type B - 10" to 12"

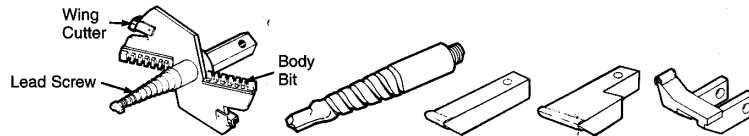
| | | | | | | | |
|-----|---------|--------|-----------|----|---------|-------------|---------|
| 10" | 10" | 1 5/8" | S090RF200 | 26 | S601270 | S600570 (2) | S600590 |
| 10" | 10" | 2 1/4" | S090RQ200 | 30 | S601270 | S600570 (2) | S600590 |
| 12" | 11 3/4" | 1 5/8" | S110RF200 | 35 | S601270 | S600570 (4) | S600590 |
| 12" | 11 3/4" | 2 1/4" | S110RQ200 | 40 | S601270 | S600570 (4) | S600590 |

Dirt Heads with Wing Cutters



Type A - 4" to 8"

| NOMINAL SIZE | ACTUAL CUTTING SIZE ² | HEX CONNECTION | DIRT HEAD PART # ¹ | WT. LBS. | LEAD SCREW PART # | INNER BIT PART # (# REQ) | OUTER BIT PART # (2 REQ) | WING CUTTER PART # (2 REQ) |
|--------------|----------------------------------|----------------------------------|-------------------------------|----------|-------------------|--------------------------|--------------------------|----------------------------|
| 4" | 5 ⁷ / ₈ " | 1 ³ / ₁₆ " | S040DC1WC | 9 | S601120 | | S600270 | S600140 |
| 4" | 5 ⁷ / ₈ " | 1 ¹ / ₈ " | S040DE1WC | 9 | S601120 | | S600270 | S600140 |
| 4" | 5 ⁷ / ₈ " | 1 ¹ / ₈ " | S040DE2WC | 9 | S601120 | | S600270 | S600140 |
| 4" | 5 ⁷ / ₈ " | 1 ³ / ₈ " | S040DW2WC | 11 | S601120 | | S600270 | S600140 |
| 6" | 7 ⁷ / ₈ " | 1 ¹ / ₈ " | S050DE1WC | 11 | S601120 | S600260 (2) | S600280 | S600140 |
| 6" | 7 ⁷ / ₈ " | 1 ³ / ₈ " | S050DW2WC | 13 | S601120 | S600260 (2) | S600280 | S600140 |
| 6" | 7 ⁷ / ₈ " | 1 ⁵ / ₈ " | S050DF2WC | 16 | S601120 | S600260 (2) | S600280 | S600140 |
| 8" | 9 ³ / ₄ " | 1 ¹ / ₈ " | S070DE1WC | 25 | S601130 | S600290 (2) | S600300 | S600140 |
| 8" | 9 ³ / ₄ " | 1 ⁵ / ₈ " | S070DF2WC | 27 | S601130 | S600290 (2) | S600300 | S600140 |
| 8" | 9 ³ / ₄ " | 2 ¹ / ₄ " | S070DQ2WC | 33 | S601130 | S600290 (2) | S600300 | S600140 |



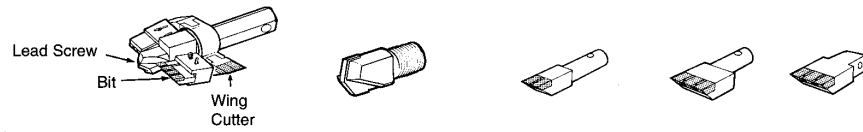
Type B - 10" to 60"

| | | | | | | | | |
|-----|----------------------------------|---------------------------------|-----------|-----|---------|--------------|---------|-------------|
| 10" | 11 ³ / ₄ " | 1 ⁵ / ₈ " | S090DF2WC | 33 | S601130 | S600320 (2) | S600330 | S600100 |
| 10" | 11 ³ / ₄ " | 2 ¹ / ₄ " | S090DQ2WC | 37 | S601130 | S600320 (2) | S600330 | S600100 |
| 12" | 13 ³ / ₄ " | 1 ⁵ / ₈ " | S110DF2WC | 40 | S601130 | S600320 (4) | S600330 | S600100 |
| 12" | 13 ³ / ₄ " | 2 ¹ / ₄ " | S110DQ2WC | 45 | S601130 | S600320 (4) | S600330 | S600100 |
| 12" | 13 ³ / ₄ " | 3" | S110DT2WC | 55 | S601130 | S600320 (4) | S600330 | S600100 |
| 14" | 15" | 1 ⁵ / ₈ " | S130DF2WC | 53 | S601130 | S600320 (4) | S600330 | S600100 |
| 14" | 15" | 2 ¹ / ₄ " | S130DQ2WC | 58 | S601130 | S600320 (4) | S600330 | S600100 |
| 14" | 15" | 3" | S130DT2WC | 68 | S601130 | S600320 (4) | S600330 | S600100 |
| 16" | 17" | 1 ⁵ / ₈ " | S150DF2WC | 66 | S601130 | S600320 (6) | S600330 | S600100 |
| 16" | 17" | 2 ¹ / ₄ " | S150DQ2WC | 71 | S601130 | S600320 (6) | S600330 | S600100 |
| 16" | 17" | 3" | S150DT2WC | 81 | S601130 | S600320 (6) | S600330 | S600100 |
| 18" | 19" | 2 ¹ / ₄ " | S170DQ2WC | 87 | S601140 | S600320 (6) | S600330 | S600110 |
| 18" | 19" | 3" | S170DT2WC | 98 | S601140 | S600320 (6) | S600330 | S600110 |
| 20" | 21" | 2 ¹ / ₄ " | S190DQ2WC | 95 | S601140 | S600320 (8) | S600330 | S600110 |
| 20" | 21" | 3" | S190DT2WC | 105 | S601140 | S600320 (8) | S600330 | S600110 |
| 20" | 21" | 4" | S190DX2WC | 130 | S601140 | S600320 (8) | S600330 | S600110 |
| 22" | 23" | 2 ¹ / ₄ " | S210DQ2WC | 114 | S601140 | S600320 (10) | S600330 | S600110 |
| 22" | 23" | 3" | S210DT2WC | 125 | S601140 | S600320 (10) | S600330 | S600110 |
| 24" | 25" | 2 ¹ / ₄ " | S230DQ2WC | 135 | S601140 | S600320 (10) | S600330 | S600110 |
| 24" | 25" | 3" | S230DT2WC | 145 | S601140 | S600320 (10) | S600330 | S600110 |
| 24" | 25" | 4" | S230DX2WC | 170 | S601140 | S600320 (10) | S600330 | S600110 |
| 30" | 31" | 3" | S290DT2WC | 195 | S601140 | S600320 (14) | S600330 | S600110 |
| 30" | 31" | 4" | S290DX2WC | 220 | S601140 | S600320 (14) | S600330 | S600110 |
| 36" | 37" | 3" | S350DT2WC | 305 | S601140 | S600320 (16) | S600330 | S600110 (4) |
| 36" | 37" | 4" | S350DX2WC | 330 | S601140 | S600320 (16) | S600330 | S600110 (4) |
| 42" | 43" | 3" | S410DT2WC | 385 | S601140 | S600320 (18) | S600330 | S600110 (4) |
| 42" | 43" | 4" | S410DX2WC | 410 | S601140 | S600320 (18) | S600330 | S600110 (4) |
| 48" | 49" | 4" | S470DX2WC | 470 | S601140 | S600320 (20) | S600330 | S600110 (4) |
| 54" | 55" | 4" | S530DX2WC | 530 | S601140 | S600320 (23) | S600330 | S600110 (6) |
| 60" | 61" | 4" | S590DX2WC | 590 | S601140 | S600320 (24) | S600330 | S600110 (6) |

1. Customer *must* specify casing I.D. and O.D. when ordering.

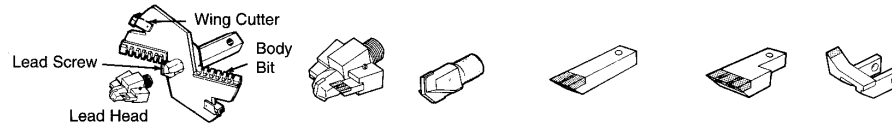
Type A Heads for SCH 40 PVC or .250 steel pipe. If using thicker wall pipe consult your local distributor.

Combination Heads with Wing Cutters



Type A - 4" to 8"

| NOMINAL SIZE | ACTUAL CUTTING SIZE ² | HEX CONNECTION | DIRT HEAD PART # ¹ | WT. LBS. | LEAD SCREW PART # | INNER BIT PART # (# REQ) | OUTER BIT PART # (2 REQ) | WING CUTTER PART # (2 REQ) |
|--------------|----------------------------------|----------------------------------|-------------------------------|----------|-------------------|--------------------------|--------------------------|----------------------------|
| 4" | 5 ⁷ / ₈ " | 1 ³ / ₁₆ " | S040RC1WC | 8 | S601260 | | S600520 | S600150 |
| 4" | 5 ⁷ / ₈ " | 1 ¹ / ₈ " | S040RE1WC | 8 | S601260 | | S600520 | S600150 |
| 4" | 5 ⁷ / ₈ " | 1 ¹ / ₈ " | S040RE2WC | 8 | S601260 | | S600520 | S600150 |
| 4" | 5 ⁷ / ₈ " | 1 ³ / ₈ " | S040RW2WC | 10 | S601260 | | S600520 | S600150 |
| 6" | 7 ⁷ / ₈ " | 1 ¹ / ₈ " | S050RE1WC | 10 | S601260 | S600510 (2) | S600530 | S600150 |
| 6" | 7 ⁷ / ₈ " | 1 ³ / ₈ " | S050RW2WC | 12 | S601260 | S600510 (2) | S600530 | S600150 |
| 6" | 7 ⁷ / ₈ " | 1 ³ / ₈ " | S050RF2WC | 15 | S601260 | S600510 (2) | S600530 | S600150 |
| 8" | 9 ³ / ₄ " | 1 ¹ / ₈ " | S070RE1WC | 24 | S601270 | S600540 (2) | S600550 | S600150 |
| 8" | 9 ³ / ₄ " | 1 ³ / ₈ " | S070RF2WC | 26 | S601270 | S600540 (2) | S600550 | S600150 |
| 8" | 9 ³ / ₄ " | 2 ¹ / ₄ " | S070RQ2WC | 32 | S601270 | S600540 (2) | S600550 | S600150 |



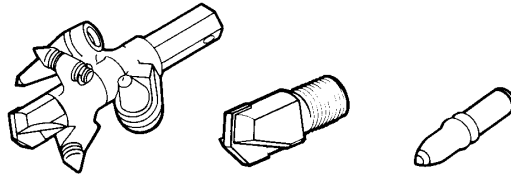
Type B - 10" to 60"

| NOMINAL SIZE | ACTUAL CUTTING SIZE | HEX CONNECTION | COMBO HEAD PART # ¹ | T. LBS. | LEAD HEAD PART # | LEAD SCREW PART # | INNER BIT PART # (2 REQ) | OUTER BIT PART # (2 REQ) | WING CUTTER PART # (2 REQ) |
|--------------|----------------------------------|---------------------------------|--------------------------------|---------|------------------|-------------------|--------------------------|--------------------------|----------------------------|
| 10" | 11 ³ / ₄ " | 1 ⁵ / ₈ " | S090RF2WC | 32 | | S601270 | S600570 (2) | S600580 | S600120 |
| 10" | 11 ³ / ₄ " | 2 ¹ / ₄ " | S090RQ2WC | 35 | | S601270 | S600570 (2) | S600580 | S600120 |
| 12" | 13 ³ / ₄ " | 1 ⁵ / ₈ " | S110RF2WC | 40 | | S601270 | S600570 (4) | S600580 | S600120 |
| 12" | 13 ³ / ₄ " | 2 ¹ / ₄ " | S110RQ2WC | 45 | | S601270 | S600570 (4) | S600580 | S600120 |
| 12" | 13 ³ / ₄ " | 3" | S110RT2WC | 55 | | S601270 | S600570 (4) | S600580 | S600120 |
| 14" | 15" | 1 ⁵ / ₈ " | S130RF2WC | 53 | | S601270 | S600570 (4) | S600580 | S600120 |
| 14" | 15" | 2 ¹ / ₄ " | S130RQ2WC | 58 | | S601270 | S600570 (4) | S600580 | S600120 |
| 14" | 15" | 3" | S130RT2WC | 68 | | S601270 | S600570 (4) | S600580 | S600120 |
| 16" | 17" | 1 ⁵ / ₈ " | S150RF2WC | 51 | | S601270 | S600570 (6) | S600580 | S600120 |
| 16" | 17" | 2 ¹ / ₄ " | S150RQ2WC | 56 | | S601270 | S600570 (6) | S600580 | S600120 |
| 16" | 17" | 3" | S150RT2WC | 66 | | S601270 | S600570 (6) | S600580 | S600120 |
| 18" | 19" | 2 ¹ / ₄ " | S170RQ2WC | 86 | S601280 | | S600570 (6) | S600580 | S600130 |
| 18" | 19" | 3" | S170RT2WC | 96 | S601280 | | S600570 (6) | S600580 | S600130 |
| 20" | 21" | 2 ¹ / ₄ " | S190RQ2WC | 95 | S601280 | | S600570 (8) | S600580 | S600130 |
| 20" | 21" | 3" | S190RT2WC | 105 | S601280 | | S600570 (8) | S600580 | S600130 |
| 20" | 21" | 4" | S190RX2WC | 130 | S601280 | | S600570 (8) | S600580 | S600130 |
| 22" | 23" | 2 ¹ / ₄ " | S210RQ2WC | 114 | S601280 | | S600570 (10) | S600580 | S600130 |
| 22" | 23" | 3" | S210RT2WC | 125 | S601280 | | S600570 (10) | S600580 | S600130 |
| 24" | 25" | 2 ¹ / ₄ " | S230RQ2WC | 135 | S601280 | | S600570 (10) | S600580 | S600130 |
| 24" | 25" | 3" | S230RT2WC | 145 | S601280 | | S600570 (10) | S600580 | S600130 |
| 24" | 25" | 4" | S230RX2WC | 170 | S601280 | | S600570 (10) | S600580 | S600130 |
| 30" | 31" | 3" | S290RT2WC | 195 | S601290 | | S600570 (14) | S600580 | S600130 |
| 30" | 31" | 4" | S290RX2WC | 220 | S601290 | | S600570 (14) | S600580 | S600130 |
| 36" | 37" | 3" | S350RT2WC | 305 | S601290 | | S600570 (16) | S600580 | S600130 (4) |
| 36" | 37" | 4" | S350RX2WC | 330 | S601290 | | S600570 (16) | S600580 | S600130 (4) |
| 42" | 43" | 3" | S410RT2WC | 385 | S601290 | | S600570 (18) | S600580 | S600130 (4) |
| 42" | 43" | 4" | S410RX2WC | 410 | S601290 | | S600570 (18) | S600580 | S600130 (4) |
| 48" | 49" | 4" | S470RX2WC | 470 | S601290 | | S600570 (20) | S600580 | S600130 (4) |
| 54" | 55" | 4" | S530RX2WC | 530 | S601290 | | S600570 (22) | S600580 | S600130 (6) |
| 60" | 61" | 4" | S590RX2WC | 590 | S601290 | | S600570 (24) | S600580 | S600130 (6) |

1. Customer *must* specify casing I.D. and O.D. when ordering.
 Type A Heads for SCH 40 PVC or .250 steel pipe. If using thicker wall pipe consult your local distributor.

Rock Heads

Rock Heads without Wing Cutters



| NOMINAL SIZE | ACTUAL CUTTING SIZE | HEX CONNECTION | ROCK HEAD PART # ² | WT. BS. | LEAD SCREW PART # | BIT PART # (# REQ) | WING CUTTER PART # (2 REQ) |
|--------------|---------------------|----------------|-------------------------------|---------|-------------------|--------------------|----------------------------|
| 4" | 5" | 1 1/8" | S040CE100 | 6 | S601260 | S600760 (2) | NOT APPLICABLE |
| 4" | 5" | 1 1/8" | S040CE200 | 6 | S601260 | S600760 (2) | |
| 4" | 5" | 1 3/8" | S040CW200 | 7 | S601260 | S600760 (2) | |
| 6" | 7" | 1 1/8" | S050CE100 | 7 | S601260 | S600750 (2) | |
| | | | | | | S600760 (2) | |
| 6" | 7" | 1 3/8" | S050CW200 | 9 | S601260 | S600750 (2) | |
| | | | | | | S600760 (2) | |
| 6" | 7" | 1 5/8" | S050CF200 | 12 | S601260 | S600750 (2) | |
| | | | | | | S600760 (2) | |

Rock Heads with Wing Cutters



| | | | | | | | |
|-----|-----|--------|-----------|-----|----------------|--------------|-------------|
| 8" | 10" | 1 5/8" | S070CF2WC | 45 | NOT APPLICABLE | S600760 (6) | S600175 |
| 8" | 10" | 2 1/4" | S070CQ2WC | 49 | | S600760 (6) | S600175 |
| 10" | 12" | 1 5/8" | S090CF2WC | 57 | | S600760 (8) | S600175 |
| 10" | 12" | 2 1/4" | S090CQ2WC | 61 | | S600760 (8) | S600175 |
| 12" | 14" | 1 5/8" | S110CF2WC | 73 | | S600760 (10) | S600210 |
| 12" | 14" | 2 1/4" | S110CQ2WC | 77 | | S600760 (10) | S600210 |
| 12" | 14" | 3" | S110CT2WC | 87 | | S600760 (10) | S600210 |
| 14" | 16" | 1 5/8" | S130CF2WC | 85 | | S600760 (12) | S600210 |
| 14" | 16" | 2 1/4" | S130CQ2WC | 89 | | S600760 (12) | S600210 |
| 14" | 16" | 3" | S130CT2WC | 99 | | S600760 (12) | S600210 |
| 16" | 18" | 1 5/8" | S150RF2WC | 97 | | S600760 (14) | S600210 |
| 16" | 18" | 2 1/4" | S150CQ2WC | 101 | | S600760 (14) | S600210 |
| 16" | 18" | 3" | S150CT2WC | 111 | | S600760 (14) | S600210 |
| 18" | 20" | 2 1/4" | S170CQ2WC | 115 | | S600760 (16) | S600210 |
| 18" | 20" | 3" | S170CT2WC | 125 | | S600760 (16) | S600210 |
| 20" | 22" | 2 1/4" | S190CQ2WC | 136 | | S600760 (18) | S600210 |
| 20" | 22" | 3" | S190CT2WC | 146 | | S600760 (18) | S600210 |
| 20" | 22" | 4" | S190CX2WC | 171 | | S600760 (18) | S600210 |
| 22" | 24" | 2 1/4" | S210CQ2WC | 150 | | S600760 (20) | S600210 |
| 22" | 24" | 3" | S210CT2WC | 160 | | S600760 (20) | S600210 |
| 24" | 26" | 2 1/4" | S230CQ2WC | 162 | | S600760 (22) | S600210 |
| 24" | 26" | 3" | S230CT2WC | 172 | | S600760 (22) | S600210 |
| 24" | 26" | 4" | S230CX2WC | 197 | | S600760 (22) | S600210 |
| 30" | 32" | 3" | S290CT2WC | 257 | | S600760 (28) | S600210 |
| 30" | 32" | 4" | S290CX2WC | 282 | | S600760 (28) | S600210 (4) |
| 36" | 38" | 3" | S350CT2WC | 331 | | S600760 (34) | S600210 (4) |
| 36" | 38" | 4" | S350CX2WC | 356 | | S600760 (34) | S600210 (4) |
| 42" | 44" | 3" | S410CT2WC | 395 | | S600760 (40) | S600210 (4) |
| 42" | 44" | 4" | S420CX2WC | 420 | | S600760 (40) | S600210 (4) |
| 48" | 50" | 4" | S470CX2WC | 480 | | S600760 (46) | S600210 (4) |
| 54" | 56" | 4" | S530CX2WC | 540 | | S600760 (52) | S600210 (4) |
| 60" | 62" | 4" | S590CX2WC | 600 | | S600760 (58) | S600210 (6) |

1. Customer *must* specify casing I.D. and O.D. when ordering.

2. 4" and 6" heads cannot be retracted through casing.

Replacement Head Parts

Body Bits



| DESCRIPTION | HARD SURFACE PART # | WT. LBS | CARBIDE PART # | WT. LBS. |
|---------------|---------------------|---------|----------------|----------|
| 1/2" x 1/2" | S600260 | 1/4 | S600510 | 1/4 |
| 1/2" x 1" | S600270 | 1/2 | S600520 | 1/2 |
| 1/2" x 1 1/2" | S600280 | 3/4 | S600530 | 3/4 |
| 3/4" x 3/4" | S600290 | 3/4 | S600540 | 3/4 |
| 3/4" x 1 1/2" | S600300 | 1 | S600550 | 1 |
| 3/4" x 2" | S600310 | 1 1/4 | S600560 | 1 1/4 |



| | | | | |
|-------------|---------|-----|---------|-----|
| 1" x 1" | S600320 | 1/4 | S600510 | 1/4 |
| 1" x 1 1/2" | S600330 | 1/2 | S600520 | 1/2 |
| 1" x 2" | S600340 | 3/4 | S600530 | 3/4 |

Lead Screws



| THREAD SIZE | DIRT PART # | WT. LBS | CARBIDE PART # | WT. LBS. |
|----------------|-------------|---------|----------------|----------|
| 7/8" V | S601120 | 2 | S601260 | 3/4 |
| 1" V | S601130 | 3 | S601270 | 1 |
| 1 1/2" V | S601140 | 6 | S601280 | 6 |
| 1 1/2" V Large | | | S601290 | 8 |

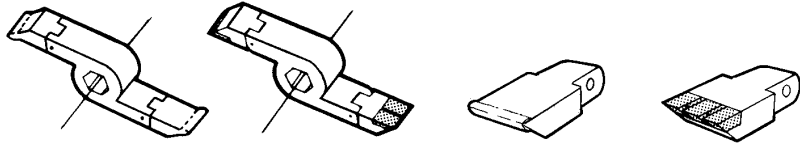
Conical Rock Bits & Accessories



| DESCRIPTION | PART # | WT. LBS. | TYPE | BIT CLIPS PART # | SIZE |
|-----------------------------|---------|----------|---------------|------------------|----------------|
| Small Bit for 6" Head | S600750 | 1/2 | Type "A" Head | U320020 | 1/8" x 1 1/2" |
| Large Bit for 4"-36" Head | S600760 | 1/2 | | U320040 | 1/8" x 2" |
| HD Large Bit | S600765 | 3/4 | | U320060 | 3/16" x 1 1/2" |
| Small Block for 6" Head | S600770 | 1/4 | Type "B" Head | | |
| Large Block for 4"-36" Head | S600780 | 1 | | U320120 | |
| Bit Puller | S600790 | 4 | | | |
| Extra Bit Keeper—Small Bit | S600775 | N/A | | | |

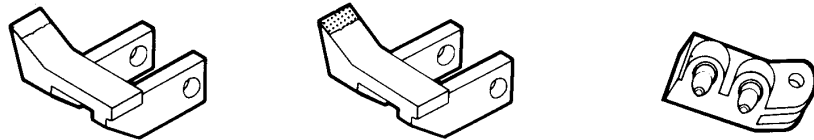
Replacement Head Parts

Type A Wing Cutter Assemblies

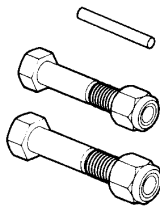


| PIPE SIZE | ACTUAL CUTTING SIZE | HEX CONNECTION | DIRT PART # | WT. LBS. | CARBIDE PART # | WT. LBS. | WING CUTTER REPLACEMENT BITS | |
|-----------|---------------------------------|----------------------------------|-------------|----------|----------------|----------|--------------------------------|-----------------------------------|
| | | | | | | | DIRT PART # (2 REQ) 1/2 LB. | CARBIDE PART # (2 REQ) 1/2 LB. |
| 4" | 5 ⁷ / ₈ " | 1 ³ / ₁₆ " | S50110 | 2 | S500115 | 2 | S600140 | S600150 |
| 4" | 5 ⁷ / ₈ " | 1 ¹ / ₈ " | S500150 | 2 | S500155 | 2 | S600140 | S600150 |
| 4" | 5 ⁷ / ₈ " | 1 ³ / ₈ " | S500170 | 3 | S500175 | 3 | S600140 | S600150 |
| 6" | 7 ⁷ / ₈ " | 1 ¹ / ₈ " | S500190 | 3 | S500195 | 3 | S600140 | S600150 |
| 6" | 7 ⁷ / ₈ " | 1 ³ / ₈ " | S500210 | 3 | S500215 | 3 | S600140 | S600150 |
| 6" | 7 ⁷ / ₈ " | 1 ⁵ / ₈ " | S500230 | 3 | S500233 | 3 | S600140 | S600150 |
| 8" | 9 ³ / ₄ " | 1 ¹ / ₈ " | S500250 | 4 | S500255 | 4 | S600140 | S600150 |
| 8" | 9 ³ / ₄ " | 1 ⁵ / ₈ " | S500270 | 4 | S500275 | 4 | S600140 | S600150 |
| 8" | 9 ³ / ₄ " | 2 ¹ / ₄ " | S500280 | 4 | S500285 | 4 | S600140 | S600150 |

Type B Wing Cutters



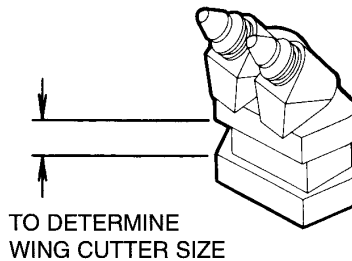
| DESCRIPTION | DIRT PART # (2 REQ) | WT. LBS. | CARBIDE PART # (2 REQ) | WT. LBS. | 1.0" SPACER CONICAL PART # (2 REQ) | WT. LBS. |
|------------------------------|------------------------|----------|---------------------------|----------|---------------------------------------|----------|
| Wing Cutter for 8" Head | | | | | S600175 | 4 |
| Wing Cutter for 10" Head | S600100 | 2 | S600120 | 2 | S600175 | 4 |
| Wing Cutter for 12"-16" Head | S600100 | 2 | S600120 | 2 | S600210 | 6 |
| Wing Cutter for 18"-36" Head | S600100 | 4 | S600120 | 4 | S600210 | 6 |



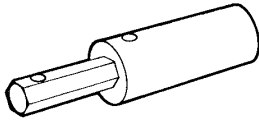
Wing Cutter Pin
Type A - #S600185

Small Wing Cutter Bolt
Type B - #S600190

Large Wing Cutter Bolt
Type B - #S600195

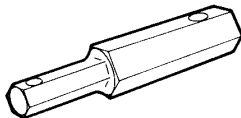


Adapters/Extensions



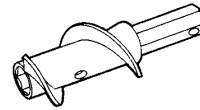
Adapters

| ADAPTER PART # | WT. LBS. | HEX MALE | X | HEX FEMALE |
|----------------|----------|----------------------------------|---|----------------------------------|
| R800050 | 2 | 1 ³ / ₁₆ " | x | 1" |
| R800105 | 3 | 1 ³ / ₁₆ " | x | 1 ¹ / ₈ "* |
| R800110 | 3 | 1 ¹ / ₈ "* | x | 1 ³ / ₁₆ " |
| R800115 | 4 | 1 ¹ / ₈ "* | x | 1 ³ / ₈ " |
| R800120 | 6 | 1 ¹ / ₈ "* | x | 1 ⁵ / ₈ " |
| R800125 | 3 | 1 ¹ / ₈ " | x | 1 ³ / ₁₆ " |
| R800130 | 4 | 1 ¹ / ₈ " | x | 1 ³ / ₈ " |
| R800135 | 6 | 1 ¹ / ₈ " | x | 1 ⁵ / ₈ " |
| R800140 | 6 | 1 ³ / ₈ " | x | 1 ³ / ₁₆ " |
| R800145 | 6 | 1 ³ / ₈ " | x | 1" |
| R800150 | 7 | 1 ³ / ₈ " | x | 1 ¹ / ₈ "* |
| R800155 | 7 | 1 ³ / ₈ " | x | 1 ¹ / ₈ " |
| R800160 | 10 | 1 ³ / ₈ " | x | 1 ⁵ / ₈ " |
| R800165 | 14 | 1 ³ / ₈ " | x | 2 ¹ / ₄ " |
| R800170 | 5 | 1 ⁵ / ₈ " | x | 1 ³ / ₁₆ " |
| R800175 | 9 | 1 ⁵ / ₈ " | x | 1 ¹ / ₈ "* |
| R800180 | 11 | 1 ⁵ / ₈ " | x | 1 ³ / ₈ " |
| R800185 | 19 | 1 ⁵ / ₈ " | x | 2 ¹ / ₄ " |
| R800190 | 24 | 1 ⁵ / ₈ " | x | 3" |
| R800195 | 10 | 2 ¹ / ₄ " | x | 1 ¹ / ₈ "* |
| R800200 | 17 | 2 ¹ / ₄ " | x | 1 ³ / ₈ " |
| R800205 | 20 | 2 ¹ / ₄ " | x | 1 ⁵ / ₈ " |
| R800210 | 42 | 2 ¹ / ₄ " | x | 3" |
| R800212 | 69 | 2 ¹ / ₄ " | x | 4" |
| R800215 | 32 | 3" | x | 1 ⁵ / ₈ " |
| R800220 | 39 | 3" | x | 2 ¹ / ₄ " |
| R800225 | 85 | 3" | x | 4" |
| R800230 | 50 | 4" | x | 2 ¹ / ₄ " |
| R800214 | 54 | 4" | x | 3" |



| | | | | |
|---------|----|---------------------------------|---|---------------------------------|
| R800470 | 2 | 1 ¹ / ₈ " | x | 1 ³ / ₈ " |
| R800475 | 5 | 1 ³ / ₈ " | x | 1 ⁵ / ₈ " |
| R800480 | 9 | 1 ⁵ / ₈ " | x | 2 ¹ / ₄ " |
| R800485 | 20 | 2 ¹ / ₄ " | x | 3" |
| R800495 | 43 | 3" | x | 4" |
| R800487 | 35 | 2 ¹ / ₄ " | x | 4" |

Other sizes available upon request.



Safety Chuck Extension - Flighted

| EXTENSION PART # | WT. LBS. | HEX MALE | X | HEX FEMALE | FLT SIZE |
|------------------|----------|----------------------------------|---|----------------------------------|---------------------------------|
| R800505 | 6 | 1 ¹ / ₈ "* | x | 1 ¹ / ₈ "* | 3 ³ / ₄ " |
| R800510 | 8 | 1 ⁵ / ₈ " | x | 1 ¹ / ₈ "* | 3 ³ / ₄ " |
| R800515 | 8 | 1 ⁵ / ₈ " | x | 1 ³ / ₈ " | 3 ³ / ₄ " |
| R800520 | 11 | 1 ⁵ / ₈ " | x | 1 ⁵ / ₈ " | 5" |
| R800525 | 18 | 1 ⁵ / ₈ " | x | 2 ¹ / ₄ " | 7" |
| R800530 | 11 | 2 ¹ / ₄ " | x | 1 ¹ / ₈ "* | 3 ³ / ₄ " |
| R800535 | 18 | 2 ¹ / ₄ " | x | 1 ³ / ₈ " | 3 ³ / ₄ " |
| R800540 | 20 | 2 ¹ / ₄ " | x | 1 ⁵ / ₈ " | 5" |
| R800545 | 25 | 2 ¹ / ₄ " | x | 2 ¹ / ₄ " | 7" |
| R800550 | 30 | 3" | x | 1 ⁵ / ₈ " | 5" |
| R800555 | 40 | 3" | x | 2 ¹ / ₄ " | 7" |
| R800560 | 57 | 3" | x | 3" | 11" |
| R800565 | 72 | 3" | x | 4" | 11" |
| R800570 | 48 | 4" | x | 2 ¹ / ₄ " | 7" |
| R800575 | 65 | 4" | x | 3" | 11" |
| R800580 | 87 | 4" | x | 4" | 11" |

McLAUGHLIN LIMITED WARRANTY

The Manufacturer warrants its products to be free from defects in material and workmanship for a period of twelve months from the date of shipment from the factory. The Manufacturer shall not be responsible for any damage resulting to or caused by its products by reason of installation, improper storage, unauthorized service, alteration of the products, neglect or abuse, or use of the product in a manner inconsistent with its design. This warranty does not extend to any component parts not manufactured by Manufacturer; however, Manufacturer's warranty herein shall not limit any warranties made by manufacturers of component parts, which extend to Buyer.

Claims for defects in material and workmanship shall be made in writing to Manufacturer within ten days of discovery of defect. Manufacturer may either send a service representative or have the product returned to its factory at Buyer's expense for inspection. Upon notification of defect, Manufacturer will issue a return goods authorization number to Buyer. The return goods authorization number must accompany the product returned. If judged by the Manufacturer to be defective in material or workmanship, the product will be replaced or repaired at the option of the manufacturer, free from all charges except authorized transportation. Buyer shall be responsible for all maintenance services consisting of lubrication and cleaning of equipment, replacing expandable parts, making minor adjustments, and performing operating checks, all in accordance with procedures outlined in Manufacturer's maintenance literature.

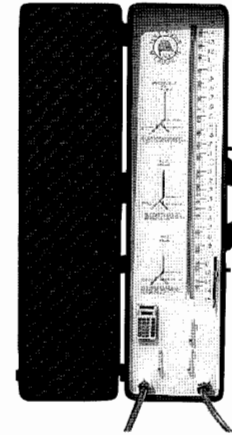
THE FOREGOING WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES AND NO REPRESENTATIONS, GUARANTEES, OR WARRANTIES, EXPRESS OR IMPLIED (INCLUDING BUT NOT LIMITED TO A WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE), ARE MADE BY THE MANUFACTURER IN CONNECTION WITH THE MANUFACTURE OR SALE OF ITS PRODUCTS. NO EMPLOYEE, DISTRIBUTOR, OR REPRESENTATIVE IS AUTHORIZED TO CHANGE THIS WARRANTY ON BEHALF OF MANUFACTURER. THE REMEDIES OF BUYER SET FORTH HEREIN ARE EXCLUSIVE AND ARE IN LIEU OF ALL OTHER REMEDIES. THE LIABILITY OF MANUFACTURER WHETHER IN CONTRACT, TORT, UNDER ANY WARRANTY, OR OTHERWISE SHALL NOT EXTEND BEYOND ITS OBLIGATION TO REPAIR OR REPLACE, AT ITS OPTION ANY PRODUCT OR PART FOUND BY MANUFACTURER TO BE DEFECTIVE IN MATERIAL OR WORKMANSHIP. MANUFACTURER SHALL NOT BE LIABLE FOR COST OF INSTALLATION AND/OR REMOVAL OR BE RESPONSIBLE FOR DIRECT, INDIRECT, SPECIAL OR CONSEQUENTIAL DAMAGES OF ANY NATURE.

Grade Control Accessories

The McLaughlin **Control Mole Grade Maintenance Kit**, or steering head, and **Mole Knows Grade Indicator**, or water level, accurately measure and control the grade of cased bores. They are indispensable for utility service installations where the grade must be precisely maintained as the crossing is made.

Mole Knows Grade Indicator

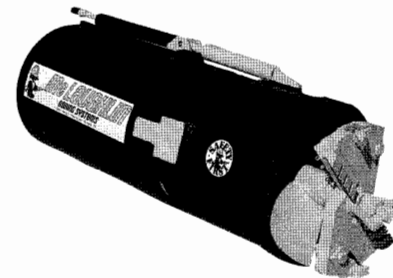
| DESCRIPTION | PART # |
|--------------------|---------|
| Water Level | C400000 |
| Sensing Head | C400010 |
| Steering Kit - 6" | C500006 |
| Steering Kit - 8" | C500008 |
| Steering Kit - 10" | C500010 |
| Steering Kit - 12" | C500012 |
| Steering Kit - 14" | C500014 |
| Steering Kit - 16" | C500016 |
| Steering Kit - 18" | C500018 |
| Steering Kit - 20" | C500020 |
| Steering Kit - 24" | C500024 |
| Steering Kit - 30" | C500030 |
| Steering Kit - 36" | C500036 |
| Steering Kit - 42" | C500042 |
| Steering Kit - 48" | C500048 |
| Steering Kit - 54" | C500054 |
| Steering Kit - 60" | C500060 |



Grade Indicator includes calibrated sight tube and valve controls for purging, charging and topping off the system. All are housed in a high-impact padded case with carrying handle to protect instruments.

Repair Parts-Control Mole Maintenance Kit

| DESCRIPTION | PART # |
|------------------|---------|
| 6" Hinge Set | C500106 |
| 8" Hinge Set | C500108 |
| 10" Hinge Set | C500110 |
| 12" Hinge Set | C500112 |
| 14" Hinge Set | C500114 |
| 16" Hinge Set | C500116 |
| 18" Hinge Set | C500118 |
| 20" Hinge Set | C500120 |
| 24" Hinge Set | C500124 |
| 30" Hinge Set | C500130 |
| 36" Hinge Set | C500136 |
| 42" Hinge Set | C500142 |
| 48" Hinge Set | C500148 |
| 54" Hinge Set | C500154 |
| 60" Hinge Set | C500160 |
| Steering Knuckle | C500200 |
| 10' Steering Rod | M157510 |



Grade Maintenance Kit can be built with a hinged lead casing section which, raised or lowered via a screw adjustment from the boring pit, is used to accurately control boring elevation.

WARNING

The various bit products advertised in this catalog may contain one or more of the following substances: Tungsten, Tungsten Carbide, Nickel, Cobalt, Manganese, Tantalum Carbide, Chromium, Chromium Carbide, or Molybdenum Carbide.

GRINDING OF THIS PRODUCT WILL PRODUCE DUST OF POTENTIALLY HAZARDOUS INGREDIENTS.

To Avoid Hazardous Effects Read MATERIAL SAFETY DATA SHEET for Applicable Product Grade Before Grinding.

Wear approved safety equipment, including goggles or face shield. Inspect bits, blocks, sleeves and bases before use. DO NOT USE if dull, cracked, bent, or broken. Before use be sure tool is properly seated and clamped. Maintain proper tool alignment. Bits may be hot following use. Be careful when handling. Do not strike with metal objects as bits may shatter. Use recommended tools for setting and removing bits.