



## Hollow Stem Auger Components - Section 2

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Please call for custom options and other accessories.

## Overview

### Heavy Duty Flighting

Our standard flighting is 3/8" (9.5mm) at the outer edge with hardfacing material applied to the working edge. Where severe conditions exist, cobble chasers are available featuring double-thick heavy duty flighting.

### Wide Flighting

Each auger size has a standard flighting width as listed on the catalog sheet. Oftentimes, however, there are needs for wider flighted augers to drill larger holes. Mills Machine can custom manufacture augers to whatever width you require.

### Flighting Pitch

The pitch on an auger is the distance between the flights. The standard pitch for our augers is listed on each individual catalog sheet. However, the flighting pitch can be custom manufactured to fit your requirements.

### Auger I.D.

The I.D. (inside diameter) of Hollow Stem Augers is considered to be the working area of the auger. We manufacture to industry standards, however, we can manufacture any I.D. you might need.

### Auger Length

Our stocked augers are available in a standard industry length of 5 feet. We can, however, manufacture augers to any length you need. We have, in the past, manufactured augers up to 40 feet long.

### Special Connections

Special connections are available: Tapered threads, Acker connections, Diedrich connection, etc. We also manufacture extra heavy duty tool joints for extreme harsh applications.

### Special Materials

Our standard auger comes with 4142 heat-treated steel alloy tool joints, mild steel tube, and 3/8" (9.5 mm) heavy-duty steel flighting with hard-faced carbide along the outer edge. These materials can be modified to meet special or unusual needs, such as non-magnetic or corrosion-resistant material.

### Laser Slotted Augers

These special hollow stem augers are designed to enable sampling of the ground water as it flows through the inside of the auger tube. To maintain the integrity and strength of the auger, we use an industrial laser to cut the slots through the auger tube wall. The vertically cut slots are .0015" wide, with the number of slots depending on diameter of the auger.

### Other Modifications

There continue to be special needs for augers that have yet to be defined. Mills Machine stands ready to satisfy those needs. We stock a full line of augers and continue to be a leader in the development and design of custom-made augers fitting the individual requirements of our customers.

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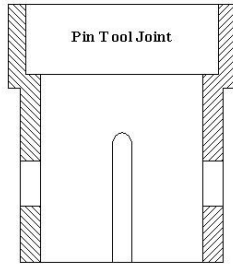
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## Auger Tool Joints

Mills Machine sells auger tool joints on an as-needed basis for repair of Mills augers.

### Pin Tool Joints



Description	Part #	Weight	
		Lbs.	Kg.
<b>Double Key</b>			
2 1/4" (57mm) DK Pin Tool Joint	ATJ2142P	6.0	2.7
3 1/4" (83mm) DK Pin Tool Joint	ATJ3142P	7.0	3.2
3 3/4" (95mm) DK Pin Tool Joint	ATJ3342P	6.0	2.7
4 1/4" (108mm) DK Pin Tool Joint	ATJ4142P	8.0	3.6
6 1/4" (159mm) DK Pin Tool Joint	ATJ6142P	13.0	5.9

### Double Key Heavy Duty

8 1/4" (210mm) DK HD Pin Tool Joint	ATJ8142PHD	13.0	5.9
7 1/4" (184mm) DK HD Pin Tool Joint	ATJ7142PHD	12.0	5.4
6 1/4" (210mm) DK HD Pin Tool Joint	ATJ6142PHD	13.0	5.9
4 1/4" (108mm) DK HD Pin Tool Joint	ATJ4142PHD	12.0	7.6
3 3/4" (95mm) DK HD Pin Tool Joint	ATJ3342PHD	8.0	3.6

### Triple Key

6 5/8" (168mm) TK Pin Tool Joint	ATJ6583P	13.0	5.9
4 1/4" (105mm) TK Pin Tool Joint	ATJ4143P	8.0	3.6
3 1/4" (83mm) TK Pin Tool Joint	ATJ3143P	6.0	2.7

### Triple Key Heavy Duty

12 1/4" (311mm) TK HD Pin Tool Joint	ATJ12143PHD	13.0	5.9
10 1/4" (260mm) TK HD Pin Tool Joint	ATJ10143PHD	32.0	14.1
8 1/4" (210mm) TK HD Pin Tool Joint	ATJ8143PHD	13.0	5.9
6 5/8" (168mm) TK HD Pin Tool Joint	ATJ6583PHD	16.0	7.3
4 1/4" (105mm) TK HD Pin Tool Joint	ATJ4143PHD	8.0	3.6

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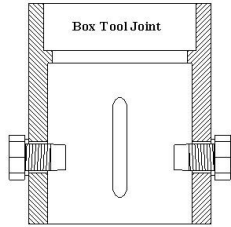
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## Box Tool Joints



Description	Part #	Weight	
		Lbs.	Kg.
<b>Double Key</b>			
6 1/4" (159mm) DK Box Tool Joint	ATJ6142B	12.0	5.4
4 1/4" (108mm) DK Box Tool Joint	ATJ4142B	7.0	3.2
3 3/4" (95mm) DK Box Tool Joint	ATJ3342B	5.0	2.3
3 1/4" (83mm) DK Box Tool Joint	ATJ3142B	6.0	2.7
2 1/4" (57mm) DK Box Tool Joint	ATJ2142B	5.0	2.3
<b>Double Key Heavy Duty</b>			
8 1/4" (210mm) DK HD Box Tool Joint	ATJ8142BHD	12.0	5.4
7 1/4" (184mm) DK HD Box Tool Joint	ATJ7142BHD	11.0	5.0
6 1/4" (210mm) DK HD Box Tool Joint	ATJ6142BHD	12.0	5.4
4 1/4" (108mm) DK HD Box Tool Joint	ATJ4142BHD	11.0	7.2
3 3/4" (95mm) DK HD Box Tool Joint	ATJ3342BHD	7.0	3.2
<b>Triple Key</b>			
6 5/8" (168mm) TK Box Tool Joint	ATJ6583B	12.0	5.4
4 1/4" (105mm) TK Box Tool Joint	ATJ4143B	8.0	3.6
3 1/4" (83mm) TK Box Tool Joint	ATJ3143B	5.0	2.3
<b>Triple Key Heavy Duty</b>			
12 1/4" (311mm) TK HD Box Tool Joint	ATJ12143BHD	12.0	5.4
10 1/4" (260mm) TK HD Box Tool Joint	ATJ10143BHD	31.0	14.0
8 1/4" (210mm) TK HD Box Tool Joint	ATJ8143BHD	12.0	5.4
6 5/8" (168mm) TK HD Box Tool Joint	ATJ6583BHD	13.0	5.8
4 1/4" (105mm) TK HD Box Tool Joint	ATJ4143BHD	8.0	3.6

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## Auger Cutterheads

## Blade Cutterhead



Our Blade Cutterhead features carbide-tipped Blade Cutters, most effective in soft to medium/soft formations such as dirt, clay, mild sandstone, and light shale.

Description	Part #	Weight	
		Lbs.	Kg.
3 1/4" (83mm) DK Blade Cutterhead - 7 1/2" (190mm) O.D.	ACH314250	11.0	5
3 3/4" (95mm) DK Blade Cutterhead - 8 1/2" (216mm) O.D.	ACH334250	16.0	7.3
3 3/4" (95mm) DK HD Blade Cutterhead - 8 1/2" (216mm) O.D.	ACH334250HD	16.0	7.3
4 1/4" (108mm) DK Blade Cutterhead - 8 3/4" (222mm) O.D.	ACH414250	16.0	7.3
4 1/4" (108mm) DK HD Blade Cutterhead - 8 3/4" (222mm) O.D.	ACH414250HD	16.0	7.3
6 1/4" (159mm) DK Blade Cutterhead - 11" (279mm) O.D.	ACH614250	23.0	10.4
6 1/4" (159mm) DK HD Blade Cutterhead - 11" (279mm) O.D.	ACH614250HD	23.0	10.4
7 1/4" (184mm) DK HD Blade Cutterhead - 12" (310mm) O.D.	ACH714250HD	33.0	15.0
8 1/4" (210mm) DK HD Blade Cutterhead - 13" (330mm) O.D.	ACH814250HD	35.0	15.9
3 1/4" (83mm) TK Blade Cutterhead - 7 1/2" (190mm) O.D.	ACH314350	11.0	5.0
4 1/4" (108mm) TK Blade Cutterhead - 8 3/4" (222mm) O.D.	ACH414350	12.0	5.4
4 1/4" (108mm) TK HD Blade Cutterhead - 8 3/4" (222mm) O.D.	ACH414350HD	16.0	7.3
6 5/8" (169mm) TK Blade Cutterhead - 11 1/2" (292mm) O.D.	ACH658350	28.0	12.7
6 5/8" (169mm) TK HD Blade Cutterhead - 11 1/2" (292mm) O.D.	ACH658350HD	29.0	13.2
8 1/4" (210mm) TK HD Blade Cutterhead - 13" (330mm) O.D.	ACH814350HD	35.0	15.9
10 1/4" (260mm) TK HD Blade Cutterhead - 15" (381mm) O.D.	ACH1014350HD	52.0	23.6
12 1/4" (311mm) TK HD Blade Cutterhead - 17 3/4" (451mm) O.D.	ACH1214350HD	80.0	36.3

## Spade Cutterhead



Our Spade Cutterhead feature carbide-tipped Spade Cutters, most effective in soft to medium formations such as clay, hard sandstone, and light to medium shale.

Description	Part #	Weight	
		Lbs.	Kg.
2 1/4" (57mm) DK Spade Cutterhead - 6 1/2" (165mm) O.D.	ACH214251	10.0	4.5
3 1/4" (83mm) DK Spade Cutterhead - 7 1/2" (190mm) O.D.	ACH314251	12.0	5.5
3 3/4" (95mm) DK Spade Cutterhead - 8 1/2" (216mm) O.D.	ACH334251	20.0	9.1
3 3/4" (95mm) DK HD Spade Cutterhead - 8 1/2" (216mm) O.D.	ACH334251HD	20.0	9.1
4 1/4" (108mm) DK Spade Cutterhead - 8 3/4" (222mm) O.D.	ACH414251	20.0	9.1
4 1/4" (108mm) DK HD Spade Cutterhead - 8 3/4" (222mm) O.D.	ACH414251HD	20.0	9.1
6 1/4" (159mm) DK Spade Cutterhead - 11" (279mm) O.D.	ACH614251	22.0	10
6 1/4" (159mm) DK HD Spade Cutterhead - 11" (279mm) O.D.	ACH614251HD	22.0	10
7 1/4" (184mm) DK HD Spade Cutterhead - 12" (310mm) O.D.	ACH714251HD	33.0	15.0
8 1/4" (210mm) DK HD Spade Cutterhead - 13" (330mm) O.D.	ACH814251HD	35.0	15.9
3 1/4" (83mm) TK Spade Cutterhead - 7 1/2" (190mm) O.D.	ACH314351	12.0	5.5
4 1/4" (108mm) TK Spade Cutterhead - 8 3/4" (222mm) O.D.	ACH414351	14.0	6.4
4 1/4" (108mm) TK HD Spade Cutterhead - 8 3/4" (222mm) O.D.	ACH414351HD	20.0	9.1
6 5/8" (169mm) TK Spade Cutterhead - 11 1/2" (292mm) O.D.	ACH658351	25.0	11.8
6 5/8" (169mm) TK HD Spade Cutterhead - 11 1/2" (292mm) O.D.	ACH658351HD	26.0	11.8
8 1/4" (210mm) TK HD Spade Cutterhead - 13" (330mm) O.D.	ACH814351HD	35.0	15.9
10 1/4" (260mm) TK HD Spade Cutterhead - 15" (381mm) O.D.	ACH1014351HD	48.0	21.8
12 1/4" (311mm) TK HD Spade Cutterhead - 17 3/4" (451mm) O.D.	ACH1214351HD	74.0	33.6

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## Blade/Bullet Cutterhead



Our Blade/Bullet Cutterhead features both our Blade Cutters and our Bullet Cutters. It is most effective in soft to medium formations such as clay, hard sandstone, and hard shale.

Description	Part #	Weight	
		Lbs.	Kg.
3 1/4" (83mm) DK Blade/Bullet Cutterhead - 7 1/2" (190mm) O.D.	ACH314260	14.0	6.4
6 1/4" (159mm) DK Blade/Bullet Cutterhead - 11" (279mm) O.D.	ACH614260	28.0	12.7
4 1/4" (108mm) DK HD Blade/Bullet Cutterhead - 8 3/4" (222mm) O.D.	ACH414260HD	20.0	9.1
4 1/4" (108mm) DK Blade/Bullet Cutterhead - 8 3/4" (222mm) O.D.	ACH414260	20.0	9.1
3 3/4" (95mm) DK HD Blade/Bullet Cutterhead - 8 1/2" (216mm) O.D.	ACH334260HD	20.0	9.1
3 3/4" (95mm) DK Blade/Bullet Cutterhead - 8 1/2" (216mm) O.D.	ACH334260	20.0	9.1
4 1/4" (108mm) TK HD Blade/Bullet Cutterhead - 8 3/4" (222mm) O.D.	ACH414360HD	20.0	9.1
4 1/4" (108mm) TK Blade/Bullet Cutterhead - 8 3/4" (222mm) O.D.	ACH414360	18.0	8.2
3 1/4" (83mm) TK Blade/Bullet Cutterhead - 7 1/2" (190mm) O.D.	ACH314360	14.0	6.4
8 1/4" (210mm) DK HD Blade/Bullet Cutterhead - 13" (330mm) O.D.	ACH814260HD	40.0	18.1
7 1/4" (184mm) DK HD Blade/Bullet Cutterhead - 12" (310mm) O.D.	ACH714260HD	38.0	17.2
6 1/4" (159mm) DK HD Blade/Bullet Cutterhead - 11" (279mm) O.D.	ACH614260HD	28.0	12.7
6 5/8" (169mm) TK Blade/Bullet Cutterhead - 11 1/2" (292mm) O.D.	ACH658360	33.0	15
6 5/8" (169mm) TK HD Blade/Bullet Cutterhead - 11 1/2" (292mm) O.D.	ACH658360HD	34.0	15.4
8 1/4" (210mm) TK HD Blade/Bullet Cutterhead - 13" (330mm) O.D.	ACH814360HD	40.0	18.1
10 1/4" (260mm) TK HD Blade/Bullet Cutterhead - 15" (381mm) O.D.	ACH1014360HD	55.0	24.9
12 1/4" (311mm) TK HD Blade/Bullet Cutterhead - 17 3/4" (451mm) O.D.	ACH1214360HD	69.0	31.3

## Spade/Bullet Cutterhead



Our Spade/Bullet Cutterhead features both our Spade Cutters and our Bullet Cutters. It is most effective in soft to medium hard formations such as clay, sandstone, hard shale, and soft limestone.

Description	Part #	Weight	
		Lbs.	Kg.
3 3/4" (95mm) DK Spade/Bullet Cutterhead - 8 1/2" (216mm) O.D.	ACH334261	22.0	10
3 1/4" (83mm) DK Spade/Bullet Cutterhead - 7 1/2" (190mm) O.D.	ACH314261	9.0	4.1
2 1/4" (57mm) DK Spade/Bullet Cutterhead - 6 1/2" (165mm) O.D.	ACH214261	9.0	4.1
12 1/4" (311mm) TK HD Spade/Bullet Cutterhead - 17 3/4" (451mm) O.D.	ACH1214361HD	78.0	35.4
10 1/4" (260mm) TK HD Spade/Bullet Cutterhead - 15" (381mm) O.D.	ACH1014361HD	54.0	24.5
8 1/4" (210mm) TK HD Spade/Bullet Cutterhead - 13" (330mm) O.D.	ACH814361HD	37.0	16.8
6 5/8" (169mm) TK HD Spade/Bullet Cutterhead - 11 1/2" (292mm) O.D.	ACH658361HD	30.0	13.6
6 5/8" (169mm) TK Spade/Bullet Cutterhead - 11 1/2" (292mm) O.D.	ACH658361	30.0	13.6
4 1/4" (108mm) TK HD Spade/Bullet Cutterhead - 8 3/4" (222mm) O.D.	ACH414361HD	22.0	10
4 1/4" (108mm) TK Spade/Bullet Cutterhead - 8 3/4" (222mm) O.D.	ACH414361	16.0	7.3
3 1/4" (83mm) TK Spade/Bullet Cutterhead - 7 1/2" (190mm) O.D.	ACH314361	12.0	5.5
8 1/4" (210mm) DK HD Spade/Bullet Cutterhead - 13" (330mm) O.D.	ACH814261HD	37.0	16.8
7 1/4" (184mm) DK HD Spade/Bullet Cutterhead - 12" (310mm) O.D.	ACH714261HD	35.0	15.9
6 1/4" (159mm) DK HD Spade/Bullet Cutterhead - 11" (279mm) O.D.	ACH614261HD	27.0	12.2
6 1/4" (159mm) DK Spade/Bullet Cutterhead - 11" (279mm) O.D.	ACH614261	27.0	12.2
4 1/4" (108mm) DK HD Spade/Bullet Cutterhead - 8 3/4" (222mm) O.D.	ACH414261HD	22.0	10
4 1/4" (108mm) DK Spade/Bullet Cutterhead - 8 3/4" (222mm) O.D.	ACH414261	22.0	10
3 3/4" (95mm) DK HD Spade/Bullet Cutterhead - 8 1/2" (216mm) O.D.	ACH334261HD	22.0	10

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**2-6**

## Bullet Cutterhead



Our Bullet Cutterhead features carbide-tipped Bullet Cutters. Rated to cut up to 10,000 p.s.i. rock, these cutters create a ripping, gouging effect, best suited for medium soft to hard formations such as hard clay, sandstone, shale, and limestone.

Description	Part #	Weight	
		Lbs.	Kg.
2 1/4" (57mm) DK Bullet Cutterhead - 6 1/2" (165mm) O.D.	ACH214270	10.0	4.5
3 1/4" (83mm) DK Bullet Cutterhead - 7 1/2" (190mm) O.D.	ACH314270	10.0	4.5
3 3/4" (95mm) DK Bullet Cutterhead - 8 1/2" (216mm) O.D.	ACH334270	22.0	10
3 3/4" (95mm) DK HD Bullet Cutterhead - 8 1/2" (216mm) O.D.	ACH334270HD	22.0	10
4 1/4" (108mm) DK Bullet Cutterhead - 8 3/4" (222mm) O.D.	ACH414270	22.0	10
4 1/4" (108mm) DK HD Bullet Cutterhead - 8 3/4" (222mm) O.D.	ACH414270HD	22.0	10
6 1/4" (159mm) DK Bullet Cutterhead - 11" (279mm) O.D.	ACH614270	29.0	13.2
6 1/4" (159mm) DK HD Bullet Cutterhead - 11" (279mm) O.D.	ACH614270HD	29.0	13.2
7 1/4" (184mm) DK HD Bullet Cutterhead - 12" (310mm) O.D.	ACH714270HD	35.0	15.9
8 1/4" (210mm) DK HD Bullet Cutterhead - 13" (330mm) O.D.	ACH814270HD	37.0	16.8
3 1/4" (83mm) TK Bullet Cutterhead - 7 1/2" (190mm) O.D.	ACH314370	12.0	5.5
4 1/4" (108mm) TK Bullet Cutterhead - 8 3/4" (222mm) O.D.	ACH414370	16.0	7.3
4 1/4" (108mm) TK HD Bullet Cutterhead - 8 3/4" (222mm) O.D.	ACH414370HD	22.0	10
6 5/8" (169mm) TK Bullet Cutterhead - 11 1/2" (292mm) O.D.	ACH658370	34.0	15.4
6 5/8" (169mm) TK HD Bullet Cutterhead - 11 1/2" (292mm) O.D.	ACH658370HD	34.0	15.4
8 1/4" (210mm) TK HD Bullet Cutterhead - 13" (330mm) O.D.	ACH814370HD	37.0	16.8
10 1/4" (260mm) TK HD Bullet Cutterhead - 15" (381mm) O.D.	ACH1014370HD	56.0	25.4
12 1/4" (311mm) TK HD Bullet Cutterhead - 17 3/4" (451mm) O.D.	ACH1214370HD	69.0	31.3

## 5-T Cutterhead



Our 5-T Cutterhead features carbide-tipped 5-T (square finger) cutters, most effective in hard compacted clay formations.

Description	Part #	Weight	
		Lbs.	Kg.
2 1/4" (57mm) DK 5-T Cutterhead - 6 1/2" (165mm) O.D.	ACH214271	-	-
3 1/4" (83mm) DK 5-T Cutterhead - 7 1/2" (190mm) O.D.	ACH314271	-	-
3 3/4" (95mm) DK 5-T Cutterhead - 8 1/2" (216mm) O.D.	ACH334271	22.0	10
3 3/4" (95mm) DK HD 5-T Cutterhead - 8 1/2" (216mm) O.D.	ACH334271HD	22.0	10
4 1/4" (108mm) DK 5-T Cutterhead - 8 3/4" (222mm) O.D.	ACH414271	22.0	10
4 1/4" (108mm) DK HD 5-T Cutterhead - 8 3/4" (222mm) O.D.	ACH414271HD	22.0	10
6 1/4" (159mm) DK 5-T Cutterhead - 11" (279mm) O.D.	ACH6142718	-	-
6 1/4" (159mm) DK HD 5-T Cutterhead - 11" (279mm) O.D.	ACH614271HD8	-	-
3 1/4" (83mm) TK 5-T Cutterhead - 7 1/2" (190mm) O.D.	ACH314371	-	-
4 1/4" (108mm) TK 5-T Cutterhead - 8 3/4" (222mm) O.D.	ACH414371	-	-
4 1/4" (108mm) TK HD 5-T Cutterhead - 8 3/4" (222mm) O.D.	ACH414371HD	-	-
6 5/8" (169mm) TK 5-T Cutterhead - 11 1/2" (292mm) O.D.	ACH6583718	-	-
6 5/8" (169mm) TK HD 5-T Cutterhead - 11 1/2" (292mm) O.D.	ACH6583718HD	-	-

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**2-7**

## Auger Cutterhead Components

## Blade Cutterhead Components

Description	Part #	Weight (lbs)
C011 Carbide-Tipped Blade Cutter	C011	0.0
C012 Blade Cutter Bolt	C012	0.0

## Number of Parts Required

Size	C011 Blade Cutters	C012 Blade Cutter Bolts
3 1/4" (83mm)	2	2
3 3/4" (95mm)	3	3
4 1/4" (108mm)	3	3
6 1/4" (159mm)	4	4
6 5/8" (168mm)	4	4
7 1/4" (184mm)	5	5
8 1/4" (210mm)	5	5
10 1/4" (260mm)	6	6
12 1/4" (311mm)	7	7

## Spade Cutterhead Components

Description	Part #	Weight (lbs)
C87L Carbide-Tipped Spade Cutter	C87L	0.0
C87B Spade Cutter Holding Block	C87B	0.0

## Number of Parts Required

Size	C87L Spade Cutters	C87B Spade Blocks
2 1/4" (57mm)	2	2
3 1/4" (82mm)	3	3
3 3/4" (95mm)	4	4
4 1/4" (108mm)	4	4
6 1/4" (159mm)	5	5
6 5/8" (168mm)	5	5
7 1/4" (184mm)	5	5
8 1/4" (210mm)	5	5
10 1/4" (260mm)	8	8
12 1/4" (311mm)	10	10

Please call for custom options and other accessories.

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## Blade/Bullet Cutterhead Components

Description	Part #	Weight (lbs)
C011 Carbide-Tipped Blade Cutter	C011	0.0
C012 Blade Cutter Bolt	C012	0.0
C23 Carbide-Tipped Bullet Cutter	C23	0.0
C20B Bullet Cutter Holding Block	C20B	0.0

## Number of Parts Required

Size	C011 Blade Cutters	C012 Blade Cutter Bolts	C23 Bullet Cutters	C20B Bullet Blocks
3 1/4" (83mm)	2	2	2	2
3 3/4" (95mm)	3	3	3	3
4 1/4" (108mm)	3	3	3	3
6 1/4" (159mm)	4	4	4	4
6 5/8" (168mm)	4	4	4	4
7 1/4" (184mm)	5	5	5	5
8 1/4" (210mm)	5	5	5	5
10 1/4" (260mm)	6	6	6	6
12 1/4" (311mm)	7	7	7	7

## Spade/Bullet Cutterhead Components

Description	Part #	Weight (lbs)
C23 Carbide-Tipped Bullet Cutter	C23	0.0
C20B Bullet Cutter Holding Block	C20B	0.0
C87L Carbide-Tipped Spade Cutter	C87L	0.0
C87B Spade Cutter Holding Block	C87B	0.0

## Number of Parts Required

Size	C87L Spade Cutters	C87B Spade Blocks	C23 Bullet Cutters	C20B Bullet Blocks
2 1/4" (57mm)	2	2	2	2
3 1/4" (95mm)	2	2	2	2
3 3/4" (95mm)	3	3	3	3
4 1/4" (108mm)	3	3	3	3
6 1/4" (159mm)	4	4	4	4
6 5/8" (168mm)	4	4	4	4
7 1/4" (184mm)	4	4	4	4
8 1/4" (210mm)	4	4	4	4
10 1/4" (260mm)	5	5	5	5
12 1/4" (311mm)	6	6	6	6

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## Bullet Cutterhead Components

Description	Part #	Weight (lbs)
C23 Carbide-Tipped Bullet Cutter	C23	0.0
C20B Bullet Cutter Holding Block	C20B	0.0

## Number of Parts Required

Size	C23 Bullet Cutters	C20B Bullet Blocks
2 1/4" (57mm)	4	4
3 1/4" (95mm)	4	4
3 3/4" (95mm)	6	6
4 1/4" (108mm)	6	6
6 1/4" (159mm)	8	8
6 5/8" (168mm)	8	8
7 1/4" (184mm)	10	10
8 1/4" (210mm)	10	10
10 1/4" (260mm)	10	10
12 1/4" (311mm)	12	12

## 5-T Cutterhead Components

Description	Part #	Weight (lbs)
5-T Carbide-Tipped Cutter	C5T	0.0
5-T Cutter Holding Block	C5TB	0.0
5-T Cutter Flighted Holding Block	C5TBP	0.0

## Number of Parts Required

Size	5-T Cutters	5-T Cutter Blocks	5-T Flighted Blocks
2 1/4" (57mm)	4	2	2
3 1/4" (83mm)	4	2	2
3 3/4" (95mm)	4	2	2
4 1/4" (108mm)	4	2	2
6 1/4" (159mm)	8	4	4
6 5/8" (168mm)	8	4	4

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**Auger Pilot Bits**

Auger Pilot Bits are designed to fit snugly into the center of the auger I.D. for drilling without sampling. The Auger Pilot Bit O.D. is 1/8" smaller than the I.D. of the auger. Designed to match the Auger Cutterhead style, the Auger Pilot Bit compliments the cutterhead for smooth, rapid drilling.

Description	Part #	Weight		Diagram	
		Lbs.	Kg.		
<b>Apex Pilot Bits</b>					
12 1/8" (308mm) Apex Pilot Bit, 3 1/2" API Reg. Pin	APB1218APX	48.0	21.8		
10 1/8" (257mm) Apex Pilot Bit, 3 1/2" API Reg. Pin	APB1018APX	33.0	15.0		
8 1/8" (206mm) Apex Pilot Bit, 3 1/2" API Reg. Pin	APB818APX	22.0	10.0		
7 1/8" (181mm) Apex Pilot Bit, 3 1/2" API Reg. Pin	APB718APX	22.0	10.0		
6 1/2" (165mm) Apex Pilot Bit, 3 1/2" API Reg. Pin	APB612APX	15.0	6.8		
6 1/8" (156mm) Apex Pilot Bit, 3 1/2" API Reg. Pin	APB618APX	-	-		
4 1/8" (105mm) Apex Pilot Bit, 2 3/8" API Reg. Pin	APB418APX	5.0	2.3		
3 5/8" (92mm) Apex Pilot Bit, 2 3/8" API Reg. Pin	APB358APX	5.0	2.3		
3 1/8" (79mm) Apex Pilot Bit, 4-Thrd N-Rod Pin	APB318APX	2.5	1.3		
2 1/8" (54mm) Apex Pilot Bit, A-Rod Pin	APB218APX	2.5	1.3		
<b>Bullet Pilot Bits</b>					
12 1/8" (308mm) Bullet Pilot Bit, 3 1/2" API Reg. Pin	APB1218BUL	61.0	27.7		
10 1/8" (257mm) Bullet Pilot Bit, 3 1/2" API Reg. Pin	APB1018BUL	46.0	20.9		
8 1/8" (206mm) Bullet Pilot Bit, 3 1/2" API Reg. Pin	APB818BUL	27.0	12.2		
7 1/8" (181mm) Bullet Pilot Bit, 3 1/2" API Reg. Pin	APB718BUL	27.0	12.2		
6 1/2" (165mm) Bullet Pilot Bit, 3 1/2" API Reg. Pin	APB612BUL	20.0	9.1		
6 1/8" (156mm) Bullet Pilot Bit, 3 1/2" API Reg. Pin	APB618BUL	-	-		
4 1/8" (105mm) Bullet Pilot Bit, 2 3/8" API Reg. Pin	APB418BUL	8.0	4.1		
3 5/8" (92mm) Bullet Pilot Bit, 2 3/8" API Reg. Pin	APB358BUL	8.0	4.1		
3 1/8" (79mm) Bullet Pilot Bit, 4-Thrd N-Rod Pin	APB318BUL	5.0	2.3		

**Concrete Bullet Bits**



Concrete Bullet Bits are specially designed to drill through concrete to set manhole covers and give access to the earth below the concrete. The bits feature our inexpensive field-replaceable bullet carbide cutters, which rapidly penetrate to make a clean round hole. They are not manufactured to drill below the concrete. Our Concrete Bullet Bits are available for any auger or threaded tool joint type, with some of our more common configurations listed below:

Description	Part #	Weight	
		Lbs.	Kg.
7" Concrete Bullet Bit with 3 1/4" DK Pin	ACBB7003142P	-	-
8" Concrete Bullet Bit with 4 1/4" TK Pin	ACBB8004143P	-	-
9" Concrete Bullet Bit with 4 1/4" TK HD Pin	ACBB9004143PHD	-	-
10" Concrete Bullet Bit with 4 1/4" DK Pin	ACBB10004142P	-	-
12" Concrete Bullet Bit with 6 1/4" DK Pin	ACBB12006142P	-	-
14" Concrete Bullet Bit with 6 1/4" DK HD Pin	ACBB14006142PHD	-	-
15" Concrete Bullet Bit with 6 5/8" TK Pin	ACBB15006583P	-	-
16" Concrete Bullet Bit with 6 5/8" TK HD Pin	ACBB16006583PHD	-	-
18" Concrete Bullet Bit with 8 1/4" DK Pin	ACBB18008142P	-	-
20" Concrete Bullet Bit with 8 1/4" TK Pin	ACBB20008143P	-	-
22" Concrete Bullet Bit with 10 1/4" TK Pin	ACBB220010143P	-	-
24" Concrete Bullet Bit with 12 1/4" TK Pin	ACBB240012143P	-	-

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**2-11**

**Auger Hooks**



Auger Hooks fit into the lockbolt hole of the Hollow Stem Auger. They provide a fast, easy, and inexpensive method for handling augers.

Description	Part #	Weight	
		Lbs.	Kg.
Auger Hook	AHO75	-	

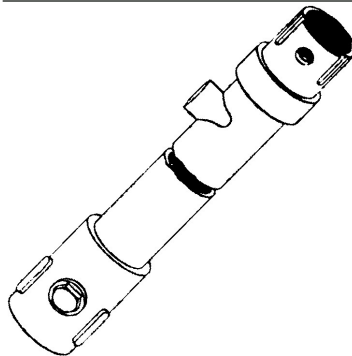
**Auger Forks**



Auger Forks are used as temporary supports to hold augers out of the ground. They feature side handles for easy handling.

Description	Part #	Weight	
		Lbs.	Kg.
2 1/4" (57mm) Auger Fork	AFRK214	6.0	2.7
3 1/4" (83mm) Auger Fork	AFRK314	7.0	3.2
3 3/4" (95mm) Auger Fork	AFRK334	10.0	4.5
4 1/4" (108mm) Auger Fork	AFRK414	10.0	4.5
4 7/8" (124mm) Auger Fork	AFRK487	10.0	4.5
6 1/4" (159mm) Auger Fork	AFRK614	14.0	6.4
6 5/8" (168mm) Auger Fork	AFRK658	14.0	6.4
8 1/4" (210mm) Auger Fork	AFRK814	21.0	9.5
10 1/4" (260mm) Auger Fork	AFRK1014	25.0	11.3
12 1/4" (311mm) Auger Fork	AFRK1214	38.0	17.2

**Hollow Stem Wash Tees**







Used for mud rotary drilling, the hollow stem wash tee has a pipe thread coupling located on the side of the tube (2" NPT on the smaller sizes and 3" NPT on the larger sizes). Wash Tees have tool joints that are the same as the auger string. We can supply special tool joints to meet your specific needs or lengths as required. Standard length is 18" (457 mm) shoulder to shoulder and the Wash Tee coupling is located 6" below the top tool joint connection.

Please call for custom options and other accessories.

## Auger Plugs

Auger plugs are used to block the ID of the auger when drilling without the pilot bit. Plugs may be left in the hole when sampling or the sampling tube will pass through the flex plug.

Description	Part #	Weight		Diagram
		Lbs.	Kg.	
<b>High Density Polyethylene Auger Plugs</b>				
3 1/4" High Density Polyethylene Auger Plug	APEP314HD	-		
4 1/4" High Density Polyethylene Auger Plug	APEP414HD	0.5	0.2	
6 1/4" High Density Polyethylene Auger Plug	APEP614HD	0.7	0.3	
6 5/8" High Density Polyethylene Auger Plug	APEP658HD	-		
8 1/4" High Density Polyethylene Auger Plug	APEP814HD	-		
<b>Plastic Flex Auger Plugs</b>				
2 1/4" Plastic Flex Auger Plug	APFP214	0.1	0.05	
3 1/4" Plastic Flex Auger Plug	APFP314	0.2	0.1	
4 1/4" Plastic Flex Auger Plug	APFP414	0.3	0.1	
6 1/4" Plastic Flex Auger Plug	APFP614	0.4	0.2	
<b>Wooden Auger Plugs</b>				
2 1/4" Wooden Auger Plug	APW214	2.0	0.9	
3 1/4" Wooden Auger Plug	APW314	3.0	1.4	
4 1/4" Wooden Auger Plug	APW414	4.0	1.8	
6 1/4" Wooden Auger Plug	APW614	5.0	2.3	
6 5/8" Wooden Auger Plug	APW658	5.0	2.3	
8 1/4" Wooden Auger Plug	APW814	-		
10 1/4" Wooden Auger Plug	APW1014	-		
12 1/4" Wooden Auger Plug	APW1214	-		
<b>Wooden Auger Plugs, Heavy Duty</b>				
3 1/4" Wooden Auger Plug, Heavy Duty	APW314HD	4.0	1.8	
4 1/4" Wooden Auger Plug, Heavy Duty	APW414HD	5.0	2.3	

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## Hoist Plugs

Mills Machine carries Swivel Hoist Plugs, Swivel-Hinged Hoist Plugs, Lifting Plugs, and Murphy Fast Plugs. The full line is described in the Pipe Handling Tools section of this catalog. Listed below are some of the specific hoist plugs we stock:

Description	Part #	Weight	
		Lbs.	Kg.
<b>AW Pin</b>			
Swivel Hoist Plug, AW Pin	HPAWPS	-	
Swivel-Hinged Hoist Plug, AW Pin	HPAWPH	-	
<b>AWJ Pin</b>			
Swivel Hoist Plug, AWJ Pin	HPAWJPS	-	
Swivel-Hinged Hoist Plug, AWJ Pin	HPAWJPH	-	
<b>NW Pin</b>			
Swivel Hoist Plug, NW Pin	HPNWPS	-	
Swivel-Hinged Hoist Plug, NW Pin	HPNWPH	-	
<b>NWJ Pin</b>			
Swivel Hoist Plug, NWJ Pin	HPNWJS	-	
Swivel-Hinged Hoist Plug, NWJ Pin	HPNWJPH	-	
Murphy Fast Plug, NWJ Pin	HPFPNWJPH	-	

## Hoisting Assemblies



The hoisting assembly is used to lift the auger string hoist and features a heavy-duty wire cable bridal assembly with two snap on safety hooks.

Description	Part #	Weight	
		Lbs.	Kg.
2 1/4" (57 mm) DK	AHA2142	20.0	9.1
3 1/4" (83 mm) DK	AHA3142	21.0	9.5
3 1/4" (83 mm) DK HD	AHA3142HD	21.0	9.5
3 1/4" (83 mm) TK	AHA3143	21.0	9.5
3 1/4" (83 mm) TK HD	AHA3143HD	21.0	9.5
4 1/4" (108 mm) DK	AHA4142	22.0	10
4 1/4" (108 mm) DK HD	AHA4142HD	22.0	10
4 1/4" (108 mm) TK	AHA4143	22.0	10
4 1/4" (108 mm) TK HD	AHA4143HD	22.0	10
6 1/4" (159 mm) DK	AHA6142	27.0	12.2
6 1/4" (159 mm) DK HD	AHA6142HD	27.0	12.2
6 5/8" (168 mm) TK	AHA6583	28.0	12.7
6 5/8" (168 mm) TK HD	AHA6583HD	28.0	12.7
8 1/4" (210 mm) DK HD	AHA8142HD	36.0	16.3
8 1/4" (210 mm) TK	AHA8143HD	36.0	16.3
10 1/4" (260 mm) TK HD	AHA10143HD	48.0	12.1
12 1/4" (311 mm) TK HD	AHA12143HD	59.0	26.8

Please call for custom options and other accessories.

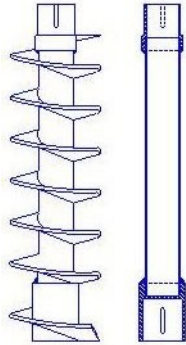
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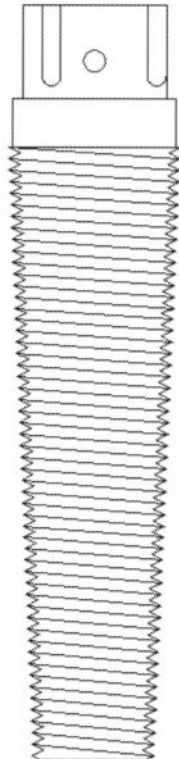
**2-14**

**Auger Extensions - Flighted and Flightless**



Auger Extensions are used to compensate for the distance from the ground up to the rig. Standard lengths for Auger Extensions are 24", 30", 36", 42", and 48" shoulder to shoulder. However, we can custom manufacture any Auger Extension to meet your length requirements.

**Auger Retrievers/Internal Fishing Tools**



Auger Retrievers/Internal Fishing Tools are used to retrieve Hollow Stem Augers lost down-hole. Manufactured for specific auger I.D.s, all of our fishing tools feature heat-treated, case-hardened threads which can cut into the I.D. of both standard and heavy duty tapered augers. Mills Machine stocks threaded ends and tool joints to give fast response to your needs (non-standard tool joints are also readily available).

Description	Part #	Weight	
		Lbs.	Kg.

**2 1/4" (57mm) or 3 1/4" (83mm) HSA**

Auger Retriever Body 1 3/4" - 3 3/4"	AREB-0134-0334	-	
Works with the following tool joints:			
2 1/4" DK	3 1/4" DK, HD		
2 1/4" Diedrich	3 1/4" Diedrich		
3 1/4" DK	3 1/4" Acker		
3 1/4" TK			

**3 1/4" (83mm), 3 3/4" (95mm), or 4 1/4" (108mm) HSA**

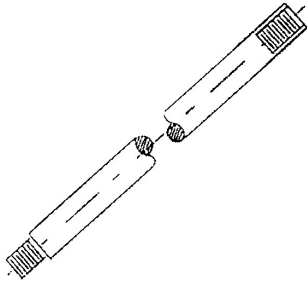
Auger Retriever Body 2 3/4" - 4 3/4"	AREB-0234-0434	-	
Works with the following tool joints:			
3 1/4" DK	4 1/4" TK		
3 1/4" TK	4 1/4" DK, HD		
3 1/4" DK, HD	4 1/4" TK, HD		
3 1/4" Diedrich	4 1/4" Diedrich		
3 1/4" Acker	4 1/4" Acker		
4 1/4" DK			

**6 1/4" (159mm), 6 5/8" (168mm), or 7 1/4" (184mm) HSA**

Auger Retriever Body 5 3/4" - 7 3/4"	AREB-0534-0734	-	
Works with the following tool joints:			
6 1/4" DK	6 5/8" TK		
6 1/4" DK, HD	6 5/8" TK, HD		
6 1/4" Diedrich	7 1/4" DK		
6 1/4" Acker			

Please call for custom options and other accessories.

**Drill Rod**



Auger Drill Rod is available in the following sizes:

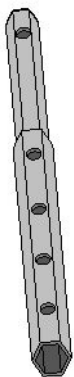
Description	Part #	Weight	
		Lbs.	Kg.
AW Drill Rod - 5' (1524mm)	ADR5AW	21.0	9.5
AW Drill Rod - 10' (3048 mm)	ADR10AW	45.0	20.4
AWJ Drill Rod - 5' (1524mm)	ADR5AWJ	23.0	10.4
AWJ Drill Rod - 10' (3048 mm)	ADR10AWJ	49.0	22.2
NW Drill Rod - 5' (1524mm)	ADR5NW	31.0	14.1
NW Drill Rod - 10' (3048 mm)	ADR10NW	60.0	27.2
NWJ Drill Rod - 5' (1524mm)	ADR5NWJ	35.0	15.9
NWJ Drill Rod - 10' (3048 mm)	ADR10NWJ	68.0	30.8

**Pulling Plates and Holding Irons**

For holding or pulling 1 3/4", 2 3/8", and 2 5/8" O.D. Drill Rod.

Description	Part #	Weight		Diagram
		Lbs.	Kg.	
<b>Pulling Plate Closed</b>				
AW and AWJ Rod	AHIPPCAW-AWJ	11.0	5.0	
NW and NWJ Rod	AHIPPCNW-NWJ	23.0	10.35	
<b>Pulling Plate Open</b>				
AW and AWJ Rod	AHIPPOAW-AWJ	9.0	4.1	
NW and NWJ Rod	AHIPPONW-NWJ	20.0	9.1	
MJR 2 3/4 ID	AHIPPO234ID	21.0	9.5	
<b>Holding Iron Closed</b>				
AW	AHICAW-AWJ	16.0	7.3	
NW	AHICNW-NWJ	16.0	7.3	
<b>Holding Iron Open</b>				
AW	AHIONW-NWJ	13.0	5.9	
NW	AHIOAW-AWJ	15.0	6.8	

**Hex Extension Rods**



Hex Extension Rods are used to compensate for the drill base height above the ground and to extend the drive cap.

Description	Part #	Weight	
		Lbs.	Kg.
<b>Solid Rods</b>			
1 5/8" (41.3 mm) Hex Pin to 1 5/8" (41.3 mm) Hex Box - 5' (1524 mm) length	AEXT158-5	-	
<b>Adjustable Rods</b>			
1 5/8" (41.3 mm) Hex Pin to 1 5/8" (41.3 mm) Hex Box, adjustable from 2' to 3' (610 mm to 914 mm)	AEXT158-2-3	-	

Please call for custom options and other accessories.