Hollow stem augers are used extensively for soil sampling and ground water monitoring in industrial and commercial installations. The auger flighting acts as a screw conveyor to move the dirt from the bottom of the hole while the cutterhead and pilot bit break up and drill the material. The auger pitch determines the efficiency and lifting speed of the auger. The cutterhead is slightly larger than the auger flighting diameter to increase the life of the flighting edges and improve soil removal.

The advantages of hollow stem augers are many. Unlike the solid stem method, drill rods can pass through the center of the auger section and an **undisturbed sample** of the soil can be taken for analysis or **ground water monitoring** pipe can be installed.

Mills Machine Augers

Mills Machine Company has been a leader in the development of Hollow Stem Augers and their related components. Several of our designs have **established** a standard in the industry.

Mills Machine hollow stem augers are fully **reversible** through the use of drive keys that transfer the torque directly from auger to auger. The auger lock bolts are used when **lifting** the auger string. We furnish double key or triple key systems depending on the application along with standard and heavy-duty tool joints.

For normal hole advancement, a **pilot bit** is inserted through the **cutterhead** to drill the center of the hole. The drill rod is bolted to the inside of the drive cap with a rod to cap adapter so that the pilot bit can turn in tandem with the augers.

Drill rods must be added each time an auger is added. In soft formations (dirt and sand), a **tapered plug** may be inserted into the end of the cutterhead to prevent material from going up inside the augers and to eliminate the use of drill rod. When the hole is completed the plug may be knocked out the bottom of the auger string. The next step is to insert the monitoring screen and casing which is then grouted into place to prevent contamination from the top of the hole.

The center section may also be used for intermittent or continuous sampling. Mills Machine Company, Inc. manufactures a broad line of soil sampling tools.

In some applications hollow stem augers are used as temporary casings to **prevent caving and sloughing** of the borehole wall. In other applications, the auger walls may be **slotted** to allow water to pass through the center of the auger for sampling of the ground water as it passes through the auger.

Drilling Operation

Hollow Stem Augers

Hollow Stem Auger Specifications

The tubing and flighting are made from premium carbon steel, the tool joint ends are manufactured from 4142 heat-treated alloy steel and the flighting has continuous hardfacing for durability. Our flighting is thicker than most of our competitors' augers with 3/8 being the standard on 2 1/4 to 12 1/4 I.D. augers.

The standard outside diameter of the Mills hollow stem augers ranges from 5 5/8 to 17. The inside diameters of the stocked augers range from 2 1/4 to 12 1/4. Special internal and external diameters are available upon request. Auger lengths are normally 5 feet or metric versions at 1.5 meters with shorter or longer lengths available with or without flighting to meet specific requirements.

The **standard duty augers** are designed for use in shallow hole applications and are recommended for depths up to seventy feet. For deeper drilling, the tapered, heavy-duty augers should be used. These augers have heavier tool joints and feature larger drive keys, nuts, and bolts for added strength.

The heavy-duty auger tool joints are tapered for easy makeup and breakout and can be

used in depths exceeding 70 feet. We also have extra heavy-duty augers available that features our heavy-duty tapered tool joints and a thicker wall tube.

Often the first step is to drill through a layer of concrete to reach the soil to be examined. Mills Machine was the **first** manufacturer to design and market an efficient and economical concrete cutting bit that fits on the bottom of the auger. The Mills Concrete Bullet Bit is available in sizes ranging from 6 - 24 O.D. with any size or make of tool joint.

Variations in auger specifications are common. Mills Machine stands ready to meet those differences with a strong history of design and development that has established us as a leader in the field. We carry an **inventory** of all the standard components and are ready to meet your special needs with rapid design and delivery time.

The auger line complements the standard line of rotary drilling equipment manufactured by Mills Machine Company.

Call on us for drag bits, claw bits, core bits, rock bits, underreamers, backreamers, holeopeners, stabilizers, fishing tools and related accessories

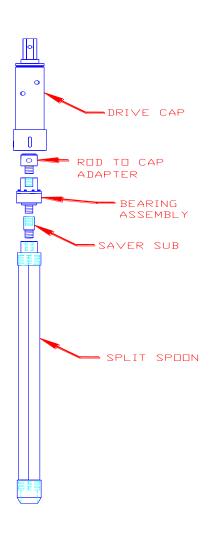
- → 3/8 THICK FLIGHTING <u>STANDARD</u>
- → CONTINUOUS MACHINE WELDS
- → KEY AND BOLT CONNECTIONS
- → DOUBLE OR TRIPLE KEY

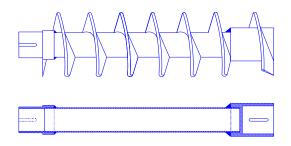
- → STANDARD AND HEAVY DUTY CONSTRUCTION
- → SIX STYLES OF CUTTERHEADS
- → HARD FACED EDGES

Hollow Stem Auger Variations

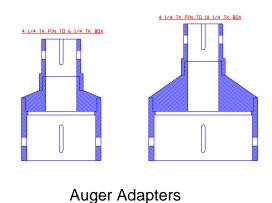
Wireline Systems, Auger Extensions, Tool Joints, Adapters

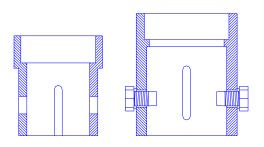
Standard Continuous Sampling System.





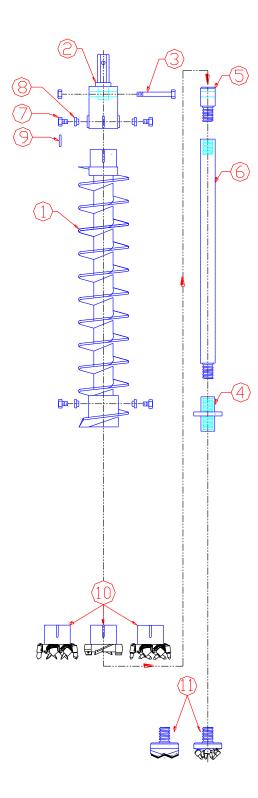
Auger Extensions - Flighted and Flightless.





Auger Tool Joints

Hollow Stem Auger Construction



The complete Hollow Stem Auger string is shown at the left. The numbers correspond with the numbers on each page of the auger sizes. The 2 1/4, 3 1/4 and 3 3/4 size augers are single bolt (only one lock bolt and nut), items (7) and (8), (Double bolt is available on the 3 1/4 and all 3 3/4 On request)

The heavy-duty versions of the augers have a taper on the tool joint to make them easier to remove. All 8 1/4, 10 1/4 and 12 1/4 augers are heavy-duty.

Augers are connected in 5' strings to reach the depth required (we also make the augers in 1 1/2 meter sections); the flighting is timed so the sections match.

The outside components are the drive cap (2) that connects the auger string to your drive, the auger (1) that moves the material from the bottom of the hole and the cutterhead (10). Depending on the size, there are up to six different cutterheads available depending on the formation of material being drilled. The spade/bullet style is the most universal type available.

The inside components will drill a complete hole using the drill-string and a pilot bit or act as a sampling center hole when the auger reaches the desired sampling area. The inner string consists of the nut and bolt that holds the rod to cap adapter (3), the drill rod (6), and the pilot bit connector (4) that centers the pilot bit (11).

Sampling can be done using the center pipe and sampling tubes or one of the four other sampling systems as shown in section three of this catalog.

Double Key Design

Featuring continuous hardfaced flighting design, 3/8 (9.5 mm) thick on outer edge with single bolt connection. The 4142 alloy steel connectors ensure strength and durability for environmental ground water monitoring well installations. The auger pitch is 5 (127 mm).

Standard Duty

				Auger	Secti	ion
	2 1/4 ID			3 1/4 ID		
DESCRIPTION	PART#	Lbs.	Kg.	PART#	Lbs.	Kg
1 Auger 2 1/4 (57 mm) ID x 5 5/8 (143 mm) OD x 5' (1524 mm)	A214200	52	23.5			
1 Auger 3 1/4 (83 mm) ID x 6 5/8 (168 mm) OD x 5' (1524 mm)				A314200	81	36.7
Manufactured with Bushing Nuts, Lock Bolts and Drive Keys						
2 DRIVE CAP W/ 1 5/8 (41 mm) HEX MALE SHANK	ADC214210	16	7.3	ADC314210	22	10.0
2 DRIVE CAP W/ 2 (51 mm) HEX MALE SHANK				ADC314211	23	10.4
3 NUT AND BOLT FOR ROD TO CAP ADAPTER	ANAB2	0.9	0.4	ANAB3	0.9	0.4
4 PILOT BIT CONNECTOR (AW BOX - A-ROD BOX)	APBC218AWB	5	2.3			
4 PILOT BIT CONNECTOR (AW BOX - A-ROD BOX)	APBC218AWJB	5	2.3			
4 PILOT BIT CONNECTOR (AW BOX – 4 THREAD N-ROD BOX)	7 II BOZIO/WOB		2.0	APBC318AWB	11	5.0
4 PILOT BIT CONNECTOR (AWJ BOX - 4 THREAD N-ROD BOX)	1			APBC318WJB	12	5.4
4 PILOT BIT CONNECTOR (NW BOX – 4 THREAD N-ROD BOX)				APBC318NW	8	3.6
4 PILOT BIT CONNECTOR (NWJ BOX - 4 THREAD N-ROD BOX)]			APBC318NWJ	11	5.0
5 ROD TO CAP ADAPTER - AW PIN	ARCAAWP	3	1.4	Same		
5 ROD TO CAP ADAPTER - AWJ PIN	ARCAAWJP	3	1.4	Same		
5 ROD TO CAP ADAPTER - NW PIN				ARCNWP	7	3.2
5 ROD TO CAP ADAPTER - NWJ PIN				ARCNWJP	6	2.7
6 AW DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5AW	31	9.5	Same		
6 AWJ DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5AWJ		10.4	Same		
6 NW DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NW	31	9.5	Same		
6 NWJ DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NWJ		10.4	Same		
				Auger Rep	air Pa	arts
1A TOOL JOINT - 2 1/4 (57 mm) DOUBLE KEY PIN	ATJ2142P	6	2.7	rugetep		
1B TOOL JOINT - 2 1/4 (57 mm) DOUBLE KEY BOX	ATJ2142B	5	2.3			
1A TOOL JOINT - 3 1/4 (83 mm) DOUBLE KEY PIN				ATJ3142P	7	3.2
1B TOOL JOINT - 3 1/4 (83 mm) DOUBLE KEY BOX				ATJ2142B	6	2.7
Box Tool Joint Manufactured with Nuts, Bolts and Drive Keys	_					
- DEDLA OFMENT LOOK DOLTO (4 DEGLEDED (4 10 FD)	Luba				1	
7 REPLACEMENT LOCK BOLTS (1 REQUIRED/ AUGER) 8 REPLACEMENT BUSHING NUTS (1 REQUIRED/AUGER)	ALB2 ABN2	0.3	0.1	Same		
9 REPLACEMENT DRIVE KEYS (2 REQUIRED/ AUGER)	ADK1	0.3	0.1	Same Same		
3 REFEROLINENT BRIVE RETO (2 REGOINED/ AGGER)					ilat D	:10
				neads and P	liot B	its.
10 SPADE CUTTERHEAD - 6 1/2 (165 mm) 2 1/4	ACH214251	10	4.5			
10 SPADE/BULLET COMBO CUTTERHEAD - 6 1/2 (165 mm) 2 ¼ 10 BULLET CUTTERHEAD - 6 1/2 (165 mm) 2 ¼	ACH214261 ACH214270	9 10	4.1 4.5			
10 4 BIT 5-T SQUARE FINGER BIT - 6 1/2 (165 mm) 2 1/4	ACH214271	10	4.5			
10 BLADE CUTTERHEAD – 7 1/2 (190 mm) 3 1/4	7.011214271			ACH314250	11	5.0
10 SPADE CUTTERHEAD - 7 1/2 (190 mm) 3 1/4				ACH314251	12	5.5
10 BLADE/BULET CUTTERHEAD - 7 1/2 (190 mm) 3 1/4				ACH314260	14	
10 SPADE/BULLET COMBO CUTTERHEAD - 7 1/2 (190 mm) 3 1/4				ACH214261	9	4.1
10 BULLET CUTTERHEAD - 7 1/2 (190 mm) 3 1/4				ACH214270	10	4.5
10 4 BIT 5-T SQUARE FINGER BIT – 7 1/2 (190 mm) 3 1/4				ACH214271		
11 2 1/8 (54 mm), PILOT BIT, HEAVY DUTY APEX TYPE, A-ROD PIN	APB218APX	2.5	1.3			
11 3 1/8 (79 mm), PILOT BIT, HEAVY DUTY APEX TYPE, 4-THD N-ROD PIN		0		APB318APX	2.5	1.3
11 3 1/8 (79 mm), PILOT BIT, BULLET TYPE, 4-THD N-ROD PIN				APB318APX	5	2.3
12 KNOCK OUT WRENCH FOR BULLET CUTTERS	C123	4.4	2.0	Same		
13 FLEX HEAD SOCKET WRENCH FOR AUGER BOLT	KP078	3	1.4	Same	1	
See Deference Dage 2.10 for specific component inform			looks	Janie		

See Reference Page 2-10 for specific component information (# of cutters, blocks, etc.)

Double Key Design

Featuring continuous hardfaced flighting design, 3/8 (9.5 mm) thick on outer edge with double bolt connection. The 4142 alloy steel connectors ensure strength and durability for environmental ground water monitoring well installations. The auger pitch is 5 (127 mm) and single key design on the Standard Duty and 6 (152.4 mm) and double key design on the Heavy Duty

double key design on the fleavy buty	Standard	l Duty	Heavy	Dut	
Auger Section	<u> Otariaara</u>	WEIGHT	Houry	WEIG	_
DESCRIPTION	PART#	Lbs. Kg	PART#		. Kg
1 3 3/4 (95 mm) I. D. X 7 1/8 (181 mm) O.D. X 5' (1524 mm)	A334200	81 36.7	A334200HD	84	
Manufactured with Bushing Nuts, Lock Bolts and Drive Keys		1 21 221	. 100 1200112		
2 DRIVE CAP W/ 1 5/8 (41 mm) HEX MALE SHANK	ADC334210	22 10.0	ADC334210HD	25	11.3
2 DRIVE CAP W/ 2 (51 mm) HEX MALE SHANK	ADC334211	25 11.3	ADC334211HD	28	12.7
3 NUT AND BOLT FOR ROD TO CAP ADAPTER	ANAB4	0.9 0.4	Same		
4 PILOT BIT CONNECTOR (AW BOX –2 3/8 REG. BOX)	APBC358AWB	8 3.6	Same		
4 PILOT BIT CONNECTOR (AWJ BOX – 2 3/8 REG. BOX)	APBC358AWJB	11 5.0	Same		
4 PILOT BIT CONNECTOR (NW BOX – 2 3/8 REG. BOX)	APBC358NWB	11 5.0	Same		
4 PILOT BIT CONNECTOR (NWJ BOX – 2 3/8 REG. BOX)	APBC358NWJ	12 5.4	Same		
5 ROD TO CAP ADAPTER - AW PIN	ARCAAWP	3 1.4	Same		
5 ROD TO CAP ADAPTER - AWJ PIN	ARCAAWJP	3 1.4	Same		
5 ROD TO CAP ADAPTER - NW PIN	ARCANWP	7 3.2	Same		
5 ROD TO CAP ADAPTER - NWJ PIN	ARCANWJP	6 2.7	Same		
6 AW DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5AW	21 9.5	Same		
6 AWJ DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5AWJ	23 10.4	Same		
6 NW DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NW	31 14.1	Same		
6 NWJ DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NWJ	35 15.9	Same		
Auger Repair Parts					
1A TOOL JOINT - 3 3/4 (95 mm) DOUBLE KEY PIN	ATJ3342P	6 2.7	ATJ3342PHD	8	3.6
1B TOOL JOINT – 3 3/4 (95 mm) DOUBLE KEY BOX	ATJ3342B	5 2.3	ATJ3342BHD	7	3.2
Box Tool Joint Manufactured with Nuts, Bolts and Drive Keys					
7 REPLACEMENT LOCK BOLTS (1 REQUIRED/ AUGER)	ALB2	0.3 0.1			
8 REPLACEMENT BUSHING NUTS (1 REQUIRED/AUGER)	ABN2	0.3 0.1			
9 REPLACEMENT DRIVE KEYS (2 REQUIRED/ AUGER)	ADK1	0.3 0.1	ADK2	0.3	0.1
7 REPLACEMENT LOCK BOLTS (2 REQUIRED/ AUGER)			ALB3	0.4	0.2
8 NUTS (REPLACEMENT BUSHING 2 REQUIRED/AUGER)			ABN3	0.2	0.1
Auger Cutterheads and Pilot Bits.					
10 BLADE CUTTERHEAD – 8 1/2 (216 mm)	ACH334250	16 7.3	ACH334250HD	16	7.3
10 SPADE CUTTERHEAD – 8 1/2 (216 mm)	ACH334251	20 9.1	ACH334261HD	20	9.1
10 BLADE/BULLET COMBO CUTTERHEAD – 8 1/2 (216 mm)	ACH334260	20 9.1	ACH334260HD	20	9.1
10 SPADE/BULLET COMBO CUTTERHEAD – 8 1/2 (216 mm)	ACH334261	22 10.0	ACH334261HD	22	10.0
10 BULLET CUTTERHEAD – 8 1/2 (216 mm)	ACH334270	22 10.0	ACH334270HD	22	10.0
10 5-T SQUARE FINGER BIT – 8 ½ (216 mm)	ACH334271	22 10.0		22	10.0
11 APEX PILOT BIT - 3 5/8 (92 mm), 2 3/8 PIN	APB358APX	5 2.3	Same		
11 BULLET PILOT BIT - 3 5/8 (92 mm), 2 3/8 PIN	APB358BUL	8 4.1	Same		
, , , , ,					
12 KNOCK OUT WRENCH FOR BULLET CUTTERS	C123	4.4 2.0	Same		
13 FLEX HEAD SOCKET WRENCH FOR AUGER BOLT	KP078	3 1.4	Same		
~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	(!! ^				

See Reference Page 2-8 for specific component information (# of cutters, blocks, etc.)

Double Key Design

Featuring continuous hardfaced flighting design, 3/8 (9.5 mm) thick on outer edge with double bolt connection. The 4142 alloy steel connectors ensure strength and durability for environmental ground water monitoring well installations. The auger pitch is 5 (127 mm) on the Standard Duty and 6 (152.4 mm) on the Heavy Duty.

Standard Duty Heavy Duty

Auger Section

		WEIG	HT		WEIG	HT
DESCRIPTION	PART#	Lbs.	Kg	PART#	Lbs.	Kg
1 4 1/4 (108 mm) I. D. X 7 5/8 (194 mm) O.D. X 5' (1524 mm)	A414200	99	44.9	A334200HD	102	46.2
Manufactured with Bushing Nuts, Lock Bolts and Drive Keys						
2 DRIVE CAP W/ 1 5/8 (41 mm) HEX MALE SHANK	ADC414210	22	10.0	ADC414210HD	25	11.3
2 DRIVE CAP W/ 2 (51 mm) HEX MALE SHANK	ADC414211	25	11.3	ADC414211HD	28	12.7
3 NUT AND BOLT FOR ROD TO CAP ADAPTER	ANAB4	0.9	0.4	Same		
4 PILOT BIT CONNECTOR (AW BOX - 2 3/8 REG. BOX)	APBC418AWB	8	3.6	Same		
4 PILOT BIT CONNECTOR (AWJ BOX – 2 3/8 REG. BOX)	APBC418AWJB	11	5.0	Same		
4 PILOT BIT CONNECTOR (NW BOX – 2 3/8 REG. BOX)	APBC418NWB	11	5.0	Same		
4 PILOT BIT CONNECTOR (NWJ BOX – 2 3/8 REG. BOX)	APBC418NWJB	12	5.4	Same		
5 ROD TO CAP ADAPTER - AW PIN	ARCAAWP	3	1.4	Same		
5 ROD TO CAP ADAPTER - AWJ PIN	ARCAAWJP	3	1.4	Same		
5 ROD TO CAP ADAPTER - NW PIN	ARCANWP	7	3.2	Same		
5 ROD TO CAP ADAPTER - NWJ PIN	ARCANWJP	6	2.7	Same		
6 AW DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5AW	21	9.5	Same		
AWJ DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5AWJ	23	10.4	Same		
6 NW DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NW	31	14.1	Same		
6 NWJ DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NWJ	35	15.9	Same		

Auger Repair Parts 8 3.6 ATJ3342PHD 9 4.1

0.3 0.1

1A TOOL JOINT - 2 1/4 (57 mm) DOUBLE KEY PIN	ATJ4142P	8	3.6	ATJ3342PHD	9	4.1
1B TOOL JOINT - 2 1/4 (57 mm) DOUBLE KEY BOX	ATJ4142B	7	3.2	ATJ3342BHD	8	3.6
Box Tool Joint Manufactured with Nuts, Bolts and Drive Keys						
7 REPLACEMENT LOCK BOLTS (2 REQUIRED/ AUGER)	ALB2	0.3	0.1	ALB3	0.4	0.2
8 REPLACEMENT BUSHING NUTS (2 REQUIRED/ AUGER)	ABN2	0.3	0.1	ABN3	0.2	0.1

ADK1

Auger Cutterheads and Pilot Bits.

0.3 0.1 ADK2

ACH414250	16	7.3	ACH414250HD	16	7.3
ACH414251	20	9.1	ACH414261HD	20	9.1
ACH414260	20	9.1	ACH414260HD	20	9.1
ACH414261	22	10.0	ACH414261HD	22	10.0
ACH414270	22	10.0	ACH414270HD	22	10.0
ACH414271	22	10.0	ACH414271HD	22	10.0
APB418APX	5	2.3	Same		
APB418BUL	8	4.1	Same		
C123	4.4	2.0	Same		
				•	
KP078	3	1.4	Same		
	ACH414251 ACH414260 ACH414261 ACH414270 ACH414271 APB418APX APB418BUL	ACH414251 20 ACH414260 20 ACH414261 22 ACH414270 22 ACH414271 22 APB418APX 5 APB418BUL 8 C123 4.4	ACH414251 20 9.1 ACH414260 20 9.1 ACH414261 22 10.0 ACH414270 22 10.0 ACH414271 22 10.0 ACH414271 22 10.0 APB418APX 5 2.3 APB418BUL 8 4.1 C123 4.4 2.0	ACH414251 20 9.1 ACH414260 20 9.1 ACH414260HD ACH414260HD ACH414270 22 ACH414271 22 ACH414271HD ACH41427HD ACH41427HD ACH41427HD ACH41427HD ACH41427HD ACH41426HD ACH41427HD ACH41426HD ACH414270HD ACH41426HD ACH41426HD ACH41426HD </td <td>ACH414251 20 9.1 ACH414260 20 9.1 ACH414261 22 10.0 ACH414270 22 10.0 ACH414271 22 10.0 ACH414271 22 10.0 ACH414271HD 22 APB418APX 5 2.3 APB418BUL 8 4.1 C123 4.4 2.0 Same C123 5 Same</td>	ACH414251 20 9.1 ACH414260 20 9.1 ACH414261 22 10.0 ACH414270 22 10.0 ACH414271 22 10.0 ACH414271 22 10.0 ACH414271HD 22 APB418APX 5 2.3 APB418BUL 8 4.1 C123 4.4 2.0 Same C123 5 Same

See Reference Page 2-8 for specific component information (# of cutters, blocks, etc.)

9 REPLACEMENT DRIVE KEYS (2 REQUIRED/ AUGER)

6 1/4" I D (159 mm) HOLLOW STEM AUGER COMPONENTS

Double Key Design

Featuring continuous hardfaced flighting design, 3/8 (9.5 mm) thick on outer edge with double bolt connection. The 4142 alloy steel connectors ensure strength and durability for environmental ground water monitoring well installations. The auger pitch is 6 (152.4 mm) on both styles.

installations. The augor profits of (102.11 illin) on both office	Standard	d b	uty	Heavy	Dut	y
Auger Section		WEI	GHT		WEIG	- HT
DESCRIPTION	PA RT#	Lbs.	_	PART#	Lbs. K	
1 6 1/4 (159 mm) I. D. X 9 5/8 (244 mm) O.D. X 5' (1524 mm)	A614200		59.4	A614200HD		61.2
Manufactured with Bushing Nuts, Lock Bolts and Drive Keys						
2 DRIVE CAP W/ 1 5/8 (41 mm) HEX MALE SHANK	ADC614210	39	17.7	ADC614210HD	40	
2 DRIVE CAP W/ 2 (51 mm) HEX MALE SHANK	ADC614211	42	19.1	ADC614211HD	43	19.5
3 NUT AND BOLT FOR ROD TO CAP ADAPTER	ANAB6	1.3	0.4	Same		
4 PILOT BIT CONNECTOR (AW BOX –3 1/2 REG. BOX)	APBC618AWB	8	3.6	Same		
4 PILOT BIT CONNECTOR (AWJ BOX – 3 1/2 REG. BOX)	APBC618AWJB	11	5.0	Same		
4 PILOT BIT CONNECTOR (NW BOX – 3 1/2 REG. BOX)	APBC618NWB	11	5.0	Same		
4 PILOT BIT CONNECTOR (NWJ BOX – 3 1/2 REG. BOX)	APBC618NWJB	12	5.4	Same		
5 ROD TO CAP ADAPTER - AW PIN	ARCAAWP	3	1.4	Same		
5 ROD TO CAP ADAPTER - AWJ PIN	ARCAAWJP	3	1.4	Same		
5 ROD TO CAP ADAPTER - NW PIN	ARCANWP	7	3.2	Same		
5 ROD TO CAP ADAPTER - NWJ PIN	ARCANWJP	6	2.7	Same		
6 NW DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NW	31	14.1	Same		
6 NWJ DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NWJ	35	15.9	Same		
Auger Repair Parts 1A TOOL JOINT - 6 1/4 (210 mm) DOUBLE KEY PIN 1B TOOL JOINT - 6 1/4 (210 mm) DOUBLE KEY BOX Box Tool Joint Manufactured with Nuts, Bolts and Drive Keys	ATJ6142P ATJ6142B	13 12	5.9 5.4	ATJ6142PHD ATJ6142BHD	13 12	5.9 5.4
7 REPLACEMENT LOCK BOLTS (2 REQUIRED/ AUGER)	ALB2	0.3	0.1	ALB3	0.4	0.2
8 REPLACEMENT BUSHING NUTS (2 REQUIRED/AUGER)	ABN2	0.3	0.1	ABN3	0.2	0.1
9 REPLACEMENT DRIVE KEYS (2 REQUIRED/ AUGER)	ADK1	0.3	0.1	ADK2	0.3	0.1
Auger Cutterheads and Pilot Bits.	Ta 01104 4050	00	40.4		- 00	40.4
10 BLADE CUTTERHEAD –11 (279 mm)	ACH614250	23		ACH614250HD ACH614251HD		10.4 10.0
10 SPADE CUTTERHEAD – 11 (279 mm) 10 BLADE/BULLET COMBO CUTTERHEAD – 11 (279 mm)	ACH614251 ACH614260	22 28		ACH614251HD ACH614260HD	22 28	
10 SPADE/BULLET COMBO CUTTERHEAD – 11 (279 mm)	ACH614261	27	12.7	ACH614260HD	27	12.7
10 BULLET CUTTERHEAD – 11 (279 mm)	ACH614270	29		ACH614270HD	29	
10 6 BIT, 5-T SQUARE FINGER BIT – 11 (279 mm)	ACH614271-6	23	10.2	ACH614271HD-6	23	10.2
8 BIT, 5-T SQUARE FINGER BIT – 11 (279 mm)	ACH614271-8			ACH614271HD-8		
44 ADEV DIL OT DIT. C 4/0 (450 mm) 2 4/0 DEC DIN	IADDC40ADV	1		Come		
11 APEX PILOT BIT – 6 1/8 (156 mm), 3 1/2 REG PIN 11 BULLET PILOT BIT – 6 1/8 (156 mm), 3 1/2 REG PIN	APB618APX APB618BUL			Same Same		
BULLET FILOT BIT - 6 1/6 (130 IIIIII), 3 1/2 REG FIIN	AFBOTOBUL	<u> </u>		Same		
12 KNOCK OUT WRENCH FOR BULLET CUTTERS	C123	4.4	2.0	Same		
13 FLEX HEAD SOCKET WRENCH FOR AUGER BOLT	KP078	3	1.4	Same		
See Reference Page 2-8 for specific component infor	mation (# of c	nitte	rs bl	ocks etc)		

See Reference Page 2-8 for specific component information (# of cutters, blocks, etc.)

Double Key Design

Featuring continuous hardfaced flighting design, 3/8 (9.5 mm) thick on outer edge with double bolt connection. The 4142 alloy steel connectors ensure strength and durability for environmental ground water monitoring well installations. The auger pitch is 6 (152.4 mm). All 7 1/4 and 8 1/4 augers are Heavy Duty.

	7 1/4 Heavy	<u>Duty</u>	8 1/4 Heav	y Duty
DESCRIPTION	Part #	Weight Lbs. Kgs.	Part #	WEIGHT Lbs. Kgs.
1 7 1/4 (184 mm) I. D. 11 (279 mm) O. D. X 5' (1524 mm)	A714200HD			
1 8 1/4 (210 mm) I. D. 12 (305 mm) O.D. X 5' (1524 mm)			A814200HD	183 83.0
Manufactured with Bushing Nuts, Lock Bolts and Drive Keys				
2 DRIVE CAP W/ 2 (51 mm) HEX MALE SHANK	ADC714211HD	39 17.6	ADC814211HD	42 19.1
3 NUT AND BOLT FOR ROD TO CAP ADAPTER	ANAB7	1 0.5	ANAB4	1 0.5
4 PILOT BIT CONNECTOR (NW BOX – 3 1/2 REG. BOX)	APBC718NWB	11 5.0	APBC818NWB	11 5.0
4 PILOT BIT CONNECTOR (NWJ BOX – 3 1/2 REG. BOX)	APBC718NWJB	12 5.4	APBC818NWJB	12 5.4
5 ROD TO CAP ADAPTER - NW PIN	ARCANWP	7 22	Same	
5 ROD TO CAP ADAPTER - NW PIN 5 ROD TO CAP ADAPTER - NWJ PIN	ARCANWJP	7 3.2 6 2.7		
	ARCANVJP	6 2.7	Same	
6 NW DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NW	31 14.1	Same	
6 NWJ DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NWJ	35 15.9	Same	
	_		Auger Re	
1A TOOL JOINT – 7 1/4 (184 mm) DOUBLE KEY PIN			ATJ7142PHD	12 5.4
1B TOOL JOINT - 7 1/4 (184 mm) DOUBLE KEY BOX	A.T. 10.4.40.DU.D		ATJ7142BHD	11 5.0
1A TOOL JOINT - 8 1/4 (210 mm) DOUBLE KEY PIN	ATJ8142PHD	13 5.9 12 5.4		
1B TOOL JOINT - 8 1/4 (210 mm) DOUBLE KEY BOX Box Tool Joint Manufactured with Nuts, Bolts and Drive Keys	ATJ8142BHD	12 5.4		
Box 1001 Joint Manuactured With Nuts, Bolts and Drive Reys				
7 REPLACEMENT LOCK BOLTS (2 REQUIRED/ AUGER)	ALB3	0.3 0.1	ALB3	0.3 0.1
8 REPLACEMENT BUSHING NUTS (2 REQUIRED/ AUGER)	ABN3	0.3 0.1	ABN3	0.3 0.1
9 REPLACEMENT DRIVE KEYS (2 REQUIRED/ AUGER)	ADK2	0.3 0.1	ADK3	0.3 0.1
		Auger (Cutterheads and	Pilot Bits.
10 BLADE CUTTERHEAD – 12 (310 mm) for 7 1/4 Auger	ACH714250	33 15.0		
10 SPADE CUTTERHEAD – 12 (310 mm) for 7 1/4 Auger	ACH714251	33 15.0		
10 BLADE/BULLET COMBO CUTTERHEAD – 12 (310 mm) for 7 1/4 Auger	ACH714260	38 17.2		
10 SPADE/BULLET COMBO CUTTERHEAD – 12 (310 mm) for 7 1/4 Auger 10 BULLET CUTTERHEAD – 12 (310 mm) for 7 1/4 Auger	ACH714261 ACH714270	35 15.9 35 15.9		
10 BLADE CUTTERHEAD – 13 (330 mm) for 8 1/4 Auger	ACH7 14270	35 15.9	ACH814250	35 15.9
10 SPADE CUTTERHEAD – 13 (330 mm) for 8 1/4 Auger			ACH814251	35 15.9
10 BLADE/BULLET COMBO CUTTERHEAD – 13 (330 mm) for 8 1/4 Auger			ACH814260	40 18.1
10 SPADE/BULLET COMBO CUTTERHEAD – 13 (330 mm) for 8 1/4 Auger	1		ACH814261	37 16.8
10 BULLET CUTTERHEAD – 13 (330 mm) for 8 1/4 Auger			ACH814270	37 16.8
	ľ			
11 APEX PILOT BIT – 7 1/8 (184 mm), 3 1/2 REG PIN for 7 1/4 Auger	APB718APX	22 10.0		
11 BULLET PILOT BIT – 7 1/8 (184 mm), 3 1/2 REG PIN for 7 1/4 Auger	APB718BUL	27 12.2	A DD040 A DV	00 40 0
11 APEX PILOT BIT – 8 1/8 (206 mm), 3 1/2 REG PIN for 8 1/4 Auger 11 BULLET PILOT BIT – 8 1/8 (206 mm), 3 1/2 REG PIN for 8 1/4 Auger	_		APB818APX APB818BUL	22 10.0 27 12.2
TI BOLLET FILOT BIT - 8 1/8 (200 IIIII), 3 1/2 REG FIN 101 8 1/4 Auger			AFDOTOBUL	21 12.2
12 KNOCK OUT WRENCH FOR BULLET CUTTERS	C123	4.4 2.0	Same	
13 FLEX HEAD SOCKET WRENCH FOR AUGER BOLT	KP078	3 1.4	Same	
See Reference Page 2-8 for specific component informati	ion (# of cutter		tc.)	
211 = 1711 1 1 1 2 1 2 2 2 1 2 promie component intornation	(01 04000	, ~)	

3 1/4" I D (83 mm) HOLLOW STEM AUGER COMPONENTS

TRIPLE KEY DESIGN

Featuring continuous hardfaced flighting design, 3/8 (9.5 mm) thick on outer edge with double bolt connection. The 4142 alloy steel connectors ensure strength and durability for environmental ground water monitoring well installations. The auger pitch is 5 (117 mm).

Standard Duty

		Standard	ı Du	ι <u>y</u>
Α	uger Section		WEI	SHT
	DESCRIPTION	PART#	Lbs.	Kg.
1	3 1/4 (83 mm) I.D. X 6 5/8 (169 mm) O.D. X 5' (1525 MM)	A314300	81	36.7
	Manufactured with Bushing Nuts, Lock Bolts and Drive Keys			
2	DRIVE CAP W/ 1 5/8 (41 mm) HEX MALE SHANK	ADC314310	21	9.5
2	DRIVE CAP W/ 2 (51 mm) HEX MALE SHANK	ADC314311	25	11.3
3	NUT AND BOLT FOR ROD TO CAP ADAPTER	ANAB3	.9	.4
4	PILOT BIT CONNECTOR (AW BOX - 4-THREAD BOX)	APBC318AWB	11	5.0
4	PILOT BIT CONNECTOR (AWJ BOX - 4-THREAD BOX)	APBC318AWJB	12	5.4
4	PILOT BIT CONNECTOR (NW BOX - 4-THREAD BOX)	APBC318NWB	8	3.6
4	PILOT BIT CONNECTOR (NWJ BOX - 4-THREAD BOX)	APBC318NWJB	11	5.0
5	ROD TO CAP ADAPTER - AW PIN	ARCAWP	3	1.4
5	ROD TO CAP ADAPTER - AWJ PIN	ARCAWJP	3	1.4
5	ROD TO CAP ADAPTER - NW PIN	ARCNWP	7	3.2
5	ROD TO CAP ADAPTER - NWJ PIN	ARCNWJP	6	2.7
6	AW DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5AW	21	9.5
6	AWJ DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5AWJ	23	10.4
6	NW DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NWRD	31	14.1
6	NWJ DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NWJ	35	15.9
1A	Iger Repair Parts TOOL JOINT - 3 1/4 (83 mm) TRIPLE KEY PIN TOOL JOINT - 3 1/4 (83 mm) TRIPLE KEY BOX	ATJ3143P ATJ3143B	7	3.2
	Box Tool Joint Manufactured with Nuts, Bolts and Drive Keys			
	REPLACEMENT LOCK BOLTS (1 REQUIRED/ AUGER)	ALB1	0.3	0.1
	REPLACEMENT BUSHING NUTS (1 REQUIRED/ AUGER)	ABN1	0.2	0.1
ξ	REPLACEMENT DRIVE KEYS (3 REQUIRED/ AUGER)	ADK1	0.3	0.1
Αι	uger Cutterheads and Pilot Bits			
10	BLADE CUTTERHEAD -7 1/2 (190 mm)	ACH314350	11	5.0
10	SPADE CUTTERHEAD - 7 1/2 (190 mm)	ACH314351	12	5.5
10	BLADE/BULLET COMBO CUTTERHEAD - 7 1/2 (190 mm)	ACH314360	14	6.4
10	SPADE/BULLET COMBO CUTTERHEAD - 7 1/2 (190 mm)	ACH314361	12	5.5
10	BULLET CUTTERHEAD - 7 1/2 (190 mm)	ACH314370	12	5.5

"PLEASE CALL FOR CUSTOM OPTIONS AND OTHER ACCESSORIES"

ACH314371

APB318APX

APB318BUL

C123

KP078

1.8

2.3

2.0

1.4

4.4

10 4 BIT 5-T SQUARE FINGER BIT - 7 1/2 (190 mm)

Pilot Bits have a 4-Thread Pin Connection

12 KNOCK OUT WRENCH FOR BULLET CUTTERS

13 FLEX HEAD SOCKET WRENCH FOR AUGER BOLT

11 3 1/8 (79 mm), PILOT BIT, BULLET TYPE

11 3 1/8 (79 mm), PILOT BIT, HEAVY DUTY APEX TYPE

3 1/4" I D (83 mm) HOLLOW STEM AUGER COMPONENTS See Reference Page 2-8 for specific component information (# of cutters, blocks, etc.)

Triple Key Design

Featuring continuous hardfaced flighting design, 3/8 (9.5 mm) thick on outer edge with double bolt connection. The 4142 alloy steel connectors feature bigger nuts, bolts and drive keys for added strength and have a tapered surface. The taper provides a better seal and reduced friction, enabling the tool joint to slide in and out easier. The auger pitch is 5 on Standard Duty and 6 (152.4 mm) on Heavy Duty.

Standard Duty Heavy Duty

Auger Section

		WEIGHT			WI	EIGHT	Γ
	DESCRIPTION	Part #	Lbs.	Kg.	Part #	Lbs.	Kg.
1	4 1/4 (108 mm) I.D. X 7 5/8 (194 mm) O.D. X 5' (1525 MM)	A414300	103	46.7	A414300HD	107	48.5
	Manufactured with Bushing Nuts, Lock Bolts and Drive Keys						•
	-						
2	DRIVE CAP W/ 1 5/8 (41 mm) HEX MALE SHANK - HD TPRD	ADC414310	26	11.8	ADC414310HD	25	11.3
2	DRIVE CAP W/ 2 (51 mm) HEX MALE SHANK - HD TPRD	ADC414311		13.6	ADC414311HD	28	
3	NUT AND BOLT FOR ROD TO CAP ADAPTER	ANAB4	1	.5	Same		
_		A DDO 440 A M/D	04		0		
4	PILOT BIT CONNECTOR (AW BOX - 2 3/8 REG BOX)	APBC418AWB	21	9.5	Same		
4	PILOT BIT CONNECTOR (AWJ BOX - 2 3/8 REG BOX)	APBC418AWJB	20	9.1	Same		
4	PILOT BIT CONNECTOR (NW BOX - 2 3/8 REG BOX)	APBC418NWB	19	8.6	Same		
4	PILOT BIT CONNECTOR (NWJ BOX - 2 3/8 REG BOX)	APBC414NWJB	20	9.1	Same		
5	ROD TO CAP ADAPTER - AW PIN	ARCAAWP	3	1.4	Same		
5	ROD TO CAP ADAPTER - AWJ PIN	ARCAAWJP	3	1.4	Same		
5	ROD TO CAP ADAPTER - NW PIN	ARCANWP	7	3.2	Same		
5	ROD TO CAP ADAPTER - NWJ PIN	ARCANWJP	6	2.7	Same		
6	AW DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5AW	21	9.5	Same		
6	AWJ DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5AWJ	23	10.4	Same		
6	NW DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NW	31	14.1	Same		
6	NWJ DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NWJ	35	15.9	Same		
J	,						
					Auger Rep	air P	arts
1A	TOOL JOINT - 4 1/4 (105 mm) TRIPLE KEY PIN	ATJ41433P	8	3.6	ATJ41433PHD	8	3.6
1B	TOOL JOINT - 4 1/4 (105 mm) TRIPLE KEY BOX	ATJ41433B	8	3.6	ATJ41433BHD	8	3.6
	Box Tool Joint Manufactured with Nuts, Bolts and Drive Keys						
	REPLACEMENT LOCK BOLTS (2 REQUIRED/ AUGER)	ALB1	0.3	0.1	ALB3	0.4	0.2
8	REPLACEMENT BUSHING NUTS (2 REQUIRED/ AUGER)	ABN1	0.3	0.1	ABN3	0.2	0.1
9	REPLACEMENT DRIVE KEYS (3 REQUIRED/ AUGER)	ADK1	0.3	0.1	ADK2	0.3	0.1
				. ^11		N'I - 4	D:4-
4.5	DI ADE CUTTEDUE D. C. C. (1999)				erheads and F		
	BLADE CUTTERHEAD -8 3/4 (222 mm)	ACH414350	12	5.4	ACH414350HD	16	7.3
	SPADE CUTTERHEAD - 8 3/4 (222 mm)	ACH414351	14	6.4	ACH414351HD	20	9.1
	BLADE/BULLET COMBO CUTTERHEAD - 8 3/4 (222 mm)	ACH414360	18	8.2	ACH414360HD	20	9.1
	SPADE/BULLET COMBO CUTTERHEAD - 8 3/4 (222 mm)	ACH414361	16	7.3	ACH414361HD	22	
	BULLET CUTTERHEAD - 8 3/4 (222 mm)	ACH414370	16	7.3	ACH414370HD ACH414371HD	22	10.0
710							
10	4 BIT 5-T SQUARE FINGER BIT - 8 3/4 (222 mm)	ACH414371			ACI 1437 II ID		
11	4 1/8 (104 mm), PILOT BIT, HEAVY DUTY APEX TYPE	APB418APX	5	2.3	Same		
11 11	4 1/8 (104 mm), PILOT BIT, HEAVY DUTY APEX TYPE 4 1/8 (104 mm), PILOT BIT, BULLET TYPE		5 9	2.3			
11 11	4 1/8 (104 mm), PILOT BIT, HEAVY DUTY APEX TYPE	APB418APX	5 9		Same		
11 11	4 1/8 (104 mm), PILOT BIT, HEAVY DUTY APEX TYPE 4 1/8 (104 mm), PILOT BIT, BULLET TYPE	APB418APX APB418BUL		4.1	Same Same		
11 11 11	4 1/8 (104 mm), PILOT BIT, HEAVY DUTY APEX TYPE 4 1/8 (104 mm), PILOT BIT, BULLET TYPE 4 1/8 (104 mm), PILOT BIT, SPADE TYPE BLADE	APB418APX APB418BUL		4.1	Same Same		

See Reference Page 2-8 for specific component information (# of cutters, blocks, etc.)

TRIPLE KEY DESIGN

Featuring continuous hardfaced flighting design, 3/8 (9.5 mm) thick on outer edge with double bolt connection. The 4142 alloy steel connectors ensure strength and durability for environmental ground water monitoring well installations. The auger pitch is 6 (152.4 mm).

1118	stallations. The auger pitch is 0 (192.4 min).	Standar	- -	4	Царупи	D	4
		<u>a D</u>	uty	<u>Heavy</u>	<u> </u>	ty	
A	uger Section						
			WE	IGHT		WEI	GHT
	DESCRIPTION	PART#	_	s. Kg.	PART#		. Kg
•	6 5/8 (169 mm) I. D. X 10 1/8 (257 mm) O.D. X 5' (1524	A658300	143	64.9	A658300HD	145	65.8
	mm) Manufactured with Bushing Nuts, Lock Bolts and Drive Keys						
	DRIVE CAP W/ 1 5/8 (41 mm) HEX MALE SHANK	ADC658310	47	21.3	ADC658310HD	48	
2	DRIVE CAP W/ 2 (51 mm) HEX MALE SHANK	ADC658311	50	22.7	ADC658311HD	51	23.1
;	NUT AND BOLT FOR ROD TO CAP ADAPTER	ANAB6	1.3	0.6	Same		
4	PILOT BIT CONNECTOR (AW BOX - 3 1/2 REG BOX)	APBC612AWB	64	29.0	Same		
	PILOT BIT CONNECTOR (AWJ BOX - 3 1/2 REG BOX)	APBC612AWJB	64	29.0	Same		
	PILOT BIT CONNECTOR (NW BOX - 3 1/2 REG BOX)	APBC612NWB	64	29.0	Same		
	PILOT BIT CONNECTOR (NWJ BOX - 3 1/2 REG BOX)	APBC612NWJB	64	29.0	Same		
	ROD TO CAP ADAPTER - AW PIN	ARCAAWP	3	1.4	Same		
	ROD TO CAP ADAPTER - AWJ PIN	ARCAAWJP	3	1.4	Same		
	ROD TO CAP ADAPTER - NW PIN	ARCANWP	7	3.2	Same		
	ROD TO CAP ADAPTER - NWJ PIN	ARCANWJP	6	2.7	Same		
	· · · · · · · · · · · · · · · · · · ·	ADR5AW	21	9.5	Same		
	AWJ DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)		23		Same		
	1	ADR5NW	31	14.1	Same		
(NWJ DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NWJ	35	15.9	Same		
	uger Repair Parts	Г			[
	TOOL JOINT - 6 5/8 (168 mm) TRIPLE KEY PIN	ATJ6583P	13	5.9	ATJ6583PHD	16	7.3
18	TOOL JOINT - 6 5/8 (168 mm) TRIPLE KEY BOX	ATJ6583B	12	5.4	ATJ6583BHD	13	5.8
_	Box Tool Joint Manufactured with Nuts, Bolts and Drive Keys	AL D4		0.4	AL DO	0.4	0.0
	REPLACEMENT LOCK BOLTS (2 REQUIRED/AUGER)	ALB1	0.3	0.1	ALB3 ABN3	0.4	0.2
	REPLACEMENT BUSHING NUTS (2 REQUIRED/AUGER) REPLACEMENT DRIVE KEYS (3 REQUIRED/ AUGER)	ABN1 ADK1	0.3	0.1	ADK3	0.2	0.1
	REPLACEMENT DRIVE RETS (3 REQUIRED/ AUGER)	ADNI	0.3	0.1	ADNO	0.3	0.1
Δι	uger Cutterheads and Pilot Bits						
	BLADE CUTTERHEAD -11 1/2 (292 mm)	ACH658350	28	12.7	ACH658350HD	29	13.2
	SPADE CUTTERHEAD - 11 1/2 (292 mm)	ACH658351	25	11.8	ACH658351HD	26	11.8
	BLADE/BULLET COMBO CUTTERHEAD - 11 1/2 (292 mm)	ACH658360	33	15.0	ACH658360HD	34	15.4
10	SPADE/BULLET COMBO CUTTERHEAD - 11 1/2 (292 mm)	ACH658361	30	13.6	ACH658361HD	30	13.6
	BULLET CUTTERHEAD - 11 1/2 (292 mm)	ACH658370	34	15.4	ACH658370HD	34	15.4
	6 BIT 5-T SQUARE FINGER BIT - 11 1/2 (292 mm)	ACH658371-6			ACH658371-6HD		
10	8 BIT 5-T SQUARE FINGER BIT - 11 1/2 (292 mm)	ACH658371-8			ACH658371-8HD		
11	6 1/2 (165 mm), PILOT BIT, HEAVY DUTY APEX TYPE	APB612APX	15	6.8	Same		
11	6 1/2 (165 mm), PILOT BIT, BULLET TYPE	APB612BUL	20	9.1	Same		
11	6 1/2 (165 mm), PILOT BIT, SPADE TYPE BLADE	APB612SPD	21	9.5	Same		
	Pilot Bits have a 3 1/2 Reg. Pin Connection]					
12	KNOCK OUT WRENCH FOR BULLET CUTTERS	C123	4.4	2.0	Same		
13	FLEX HEAD SOCKET WRENCH FOR AUGER BOLT	KP078	3	1.4	Same	$\overline{}$	

See Reference Page 2-8 for specific component information (# of cutters, blocks, etc.)

Triple Key Design

Featuring continuous hardfaced flighting design, 3/8 (9.5 mm) thick on outer edge with double bolt connection. The 4142 alloy steel connectors feature bigger nuts, bolts and drive keys for added strength and have a tapered surface. The taper provides a better seal and reduced friction, enabling the tool joint to slide in and out easier. The auger pitch is 6 (152.4 mm). All 8 1/4 augers are Heavy Duty.

Heavy Duty

Auger Section

		WEIG	HT
DESCRIPTION	PART#	Lbs.	Kg.
1 8 1/4 (210 mm) I. D. X 12 (305 mm) O.D. X 5' (1524 mm)	A814300HD	183	83.0
Manufactured with Bushing Nuts, Lock Bolts and Drive Keys			
2 DRIVE CAP W/ 2 (51 mm) HEX MALE SHANK	ADC814311HD	71	32.2
3 NUT AND BOLT FOR ROD TO CAP ADAPTER	ANAB4	1	0.5
4 PILOT BIT CONNECTOR (NW BOX - 3 1/2 REG BOX)	APBC818NWB	55	24.9
4 PILOT BIT CONNECTOR (NWJ BOX - 3 1/2 REG BOX)	APBC818NWJB	56	25.4
5 ROD TO CAP ADAPTER - NW PIN	ARCANWP	7	3.2
5 ROD TO CAP ADAPTER - NWJ PIN	ARCANWJP	6	2.7
6 NW DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NW	31	14.1
6 NWJ DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NWJ	35	15.9

Auger Repair Parts

1A	TOOL JOINT - 8 1/4 (210 mm) TRIPLE KEY PIN	ATJ8143PHD	13	5.9
1B	TOOL JOINT - 8 1/4 (210 mm) TRIPLE KEY BOX	ATJ8143BHD	12	5.4
	Box Tool Joint Manufactured with Nuts, Bolts and Drive Keys			

7	REPLACEMENT LOCK BOLTS (2 REQUIRED/ AUGER)	ALB1	0.3	0.1
8	REPLACEMENT BUSHING NUTS (2 REQUIRED/AUGER)	ABN1-M	0.3	0.1
9	REPLACEMENT DRIVE KEYS (3 REQUIRED/ AUGER)	ADK1-S	0.3	0.1

Auger Cutterheads and Pilot Bits

Au	goi outtorrioudo una r		3110
10 BLADE CUTTERHEAD -13 (330 mm)	ACH814350	35	15.9
10 SPADE CUTTERHEAD - 13 (330 mm)	ACH814351	35	15.9
10 BLADE/BULLET COMBO CUTTERHEAD - 13 (330 mm		40	18.1
10 SPADE/BULLET COMBO CUTTERHEAD - 13 (330 mn	n) ACH814361	37	16.8
10 BULLET CUTTERHEAD - 13 (330 mm)	ACH814370	37	16.8
11 PILOT BIT, HEAVY DUTY APEX TYPE, 3 1/2 REG PIN	APB818APX	22	10.0
11 PILOT BIT, BULLET TYPE , 3 1/2 REG PIN	APB818BUL	27	12.2
12 KNOCK OUT WRENCH FOR BULLET CUTTERS	C123	4.4	2.0
13 FLEX HEAD SOCKET WRENCH FOR AUGER BOLT	KP100	3	1.4

See Reference Page 2-10 for specific component information (# of cutters, blocks, etc.)

HDD Components

Triple Key Design

Featuring continuous hardfaced flighting design, 3/8 (9.5 mm) thick on outer edge with double bolt connection. The 4142 alloy steel connectors feature a taper and bigger nuts, bolts and drive keys for added strength. The taper provides a better seal and reduced friction, enabling the tool joint to slide in and out easier. The auger pitch is 7 1/2 (190.5 mm). All 10 1/4 and 12 1/4 augers are heavy duty.

РΙΙ	ciris 7 1/2 (190.5 mm). <u>Air 10 1/4 and 12 1/4 augers air</u>				12 1/4 ID		
_		<u>10 1/4 ID</u>	-	_	12 1/4 ID		
Auger Section			WEIGHT			WEIG	
	DESCRIPTION	PART#		Kg.	PART#	Lbs.	Kg.
1	10 1/4 (260 mm) I.D. X 14 1/2 (362 mm) O.D. X 5' (1524 mm)	A1014300HD	265	120.2			
	12 1/4 (311 mm) I.D. X 17 (432 mm) O.D. X 5' (1524 mm)				A1214300HD	183	83.0
	Manufactured with Bushing Nuts, Lock Bolts and Drive Keys						
2	DRIVE CAP W/ 3 1/4 (83 mm) AUGER CONNECTOR	ADC101433HD	84	38.1	ADC121433HD	90	40.8
2	DRIVE CAP W/ 4 1/4 (108 mm) AUGER CONNECTOR	ADC101433HD	86	39.0	ADC121434HD	91	
3	NUT AND BOLT FOR ROD TO CAP ADAPTER	ANAB4	1	.5	Same		
4	PILOT BIT CONNECTOR (NW BOX - 3 1/2 REG BOX)	APBC1018NWB	36	16.3	APCB1218NWB	46	20.9
4	PILOT BIT CONNECTOR (NWJ BOX - 3 1/2 REG BOX)	APBC1018NWJB	36	16.3	APCB1218NWJB	46	20.9
5	ROD TO CAP ADAPTER - NW PIN	ARCANWP	7	3.2	Same		
5	ROD TO CAP ADAPTER - NWJ PIN	ARCANWJP	6	2.7	Same		
6	NW DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NW	31	14.1	Same		
6	NWJ DRILL ROD FOR HOLLOW STEM AUGERS - 5' (1524 mm)	ADR5NWJ	35	15.9	Same		
-	uger Repair Parts	/		.0.0	•		
1A	_ 	ATJ10143PHD	22	14.1			
	TOOL JOINT - 10 1/4 (260 mm) TRIPLE KEY PIN	ATJ10143PHD ATJ10143BHD	31	14.1			
10	Box Tool Joint Manufactured with Nuts, Bolts and Drive Keys	A1310143B11D	31	14.0			
1/	TOOL JOINT – 12 1/4 (311 mm) TRIPLE KEY PIN				ATJ12143PHD	13	5.9
	3 TOOL JOINT - 12 1/4 (311 mm) TRIPLE KEY BOX				ATJ12143F11D	12	5.4
''	Box Tool Joint Manufactured with Nuts, Bolts and Drive Keys				A 13 12 143D11D	12	5.4
	Box roof doint managed out man rate, Botto and Brive Reyo	<u>1</u>					
-	REPLACEMENT LOCK BOLTS (2 REQUIRED/ AUGER)	ALB4	0.4	0.2	Same		
	REPLACEMENT BUSHING NUTS (2 REQUIRED/AUGER)	ABN3-M	0.2	0.1	Same		
(REPLACEMENT DRIVE KEYS (3 REQUIRED/ AUGER)	ADK3	0.3	0.1	Same		
A	uger Cutterheads and Pilot Bits						
	BLADE CUTTERHEAD -15 (381 mm)	ACH1014350	52	23.6			
	SPADE CUTTERHEAD - 15 (381 mm)	ACH1014351	48				
	BLADE/BULLET COMBO CUTTERHEAD - 15 (381 mm)	ACH1014360	55	24.9			
	SPADE/BULLET COMBO CUTTERHEAD - 15 (381 mm)	ACH1014361	54	24.5			
	BULLET CUTTERHEAD – 15 (381 mm)	ACH1014370	56	25.4			
	BLADE CUTTERHEAD –17 3/4 (451 mm)				ACH1214350	80	36.3
	SPADE CUTTERHEAD – 17 3/4 (431 mm)	7			ACH1214351	74	33.6
	BLADE/BULLET COMBO CUTTERHEAD – 17 3/4 (431 mm)	7			ACH1214360	69	31.3
	SPADE/BULLET COMBO CUTTERHEAD – 17 3/4 (431 mm)	1			ACH1214361	78	35.4
	BULLET CUTTERHEAD – 17 3/4 (431 mm)				ACH1214370	69	31.3
	(10 4/0 (OFT	IABB4646ABV	1 001	45.0			
	10 1/8 (257 mm), PILOT BIT, APEX, 3 1/2 R. PIN	APB1018APX		15.0			
	10 1/8 (257 mm), PILOT BIT, BULLET, 3 1/2 R. PIN	APB1018BUL	46	20.9	100/0/0/0/		
	1 12 1/8 (308 mm), PILOT BIT, APEX, 3 1/2 R. PIN	4			APB1218APX	48	
11	1 12 1/8 (308 mm), PILOT BIT, BULLET, 3 1/2 R. PIN	_			APB1218BUL	61	27.7
12	KNOCK OUT WRENCH FOR BULLET CUTTERS	C123	4.4	2.0	Same		
13	FLEX HEAD SOCKET WRENCH FOR AUGER BOLT	KP100	3	1.4	Same		
	See Reference Page 2-8 for specific component informati	on (# of cutters, b	olocks	s, etc.)			_