

### **ASTM TABLES**



# **SALISBURY**

by Honeywell

## **ASTM F855-09 TABLE 1 - PROTECTIVE GROUNDING CLAMP RATINGS**

TABLE 1 Protective Ground Cable, Ferrule, Clamp and Assembly Ratings for Symmetrical Current

	Grounding Clamp Torque Strength, min			Short Circuit Properties <sup>A</sup>								
Grade	Yield <sup>B</sup>		Ultimate		Withs	Withstand Rating, Symmetrical kA RMS, 60 Hz		Ultimate Rating Capacity <sup>CD</sup> , Symmetrical kA RMS, 60 Hz			Continuous Current Rating, A	
	lbf·in.	n∙m	lbf∙in.	n∙m	15 cycles (250 ms)	30 cycles (500 ms)	Copper Cable Size	15 cycles (250 ms)	30 cycles (500 ms)	60 cycles (1 s)	Maximum Copper Test Cable Size	RMS, 60 Hz
1	280	32	330	37	14	10	#2	18	13	9	2/0	200
2	280	32	330	37	21	15	1/0	29	21	14	4/0	250
3	280	32	330	37	27	20	2/0	37	26	18	4/0	300
4	330	37	400	45	34	25	3/0	47	33	23	250 kcmil	350
5	330	37	400	45	43	30	4/0	59	42	29	250 kcmil	400
6	330	37	400	45	54	39	250 kcmil or 2 2/0	70	49	35	350 kcmil	450
7	330	37	400	45	74	54	350 kcmil or 2 4/0	98	69	48	550 kcmil	550

A Withstand and ultimate short circuit properties are based on performance with surges not exceeding 20 % asymmetry factor (see 9.1 and 12.3.4.2).

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### ASTM F855-09 TABLE 2 - GROUNDING CABLE FERRULE AND ASSEMBLY RATINGS

TABLE 2 Ultimate Assembly Rating for High X/R Ratio Applications

	High Asymmetrical Test Requirements						
Grade	Size	Rating Rated Current (kA)	X/R = 30 1st Cycle Current Peak (kA) X 2.69	Last Cycle Current Peak (kA)	Test Duration (cycles)		
1H	No. 2	15	41	23	15		
2H	1/0	25	65	37	15		
3H	2/0	31	84	46	15		
4H	3/0	39	105	58	15		
5H	4/0	47	126	70	15		
6H	250 MCM	55	148	82	15		
7H	350 MCM	68	183	101	15		

Note 1—The above current values are based on electromechanical test values.

Note 2-Assemblies that have been subjected to these shall not be re-used.

Note 3—For use with currents exceeding 20 % asymmetry factor.

Note 4—See X4.7.2 for additional information.

Note 5—Alternate testing circuits are available for laboratories that cannot achieve the above requirements. See Appendix X4 for details.

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<sup>&</sup>lt;sup>B</sup> Yield shall mean no permanent deformation such that the clamp cannot be reused throughout its entire range of application.

<sup>&</sup>lt;sup>C</sup> Ultimate rating represents a symmetrical current which the assembly or individual components shall carry for the specified time.

<sup>&</sup>lt;sup>D</sup> Ultimate values are based upon application of Onderdonk's equation to 98 % of nominal circular mil area allowed by Specifications B 172 and B 173.



The **BALL STUDS** and the **OFFSET NEMA PAD BALL STUDS** are made from tin-plated copper alloy or copper. They each have a 1" (25.4 mm) diameter ball. Recommended installation torque of 300 in. lbs. The short stud is used conventionally. The long stud can also be used as the grounding point for "C" or Duck bill clamps that have a jaw width of 2.75" or less. The Offset Nema Pad Ball Stud has the standard Nema bolt hole spacing and also comes in both long and short lengths.

The **BALL STUD COVER** is made from orange SALCOR® which allows for multiple angle application when installed using a clampstick.



CAT. NO.	DESCRIPTION	DIM	IENSIONS in. (	mm)	ASTM	WEIGHT EA.
		OAL	THREAD	SHANK	GRADE	lbs. (kgs)
THREAD SIZE -	1/2" - 13 UNC - 2A					
21191	Ball Stud Short, Tin-Plated Copper Alloy	4.38 (111)	2.12 (54)	1 (25)	5	.53 (.24)
7542121BS	Ball Stud, Copper Alloy	4.7 (119)	2.25 (57)	1 (25)	5	.56 (.25)
21192	Ball Stud Long, Tin-Plated Copper Alloy	6.13 (156)	2.12 (54)	2.75 (70)	5	.81 (.37)
7542123BST	Ball Stud, Tin-Plated Copper Alloy	6.78 (172)	2.5 (64)	2.875 (73)	5	.81 (.37)
7542123BS	Ball Stud, Copper Alloy	6.78 (172)	2.5 (64)	2.875 (73)	5	.81 (.37)
7542905BST	900 Ball Stud, Tin-Plated Copper Alloy	7 (178)x 5.2 (132)	2.12 (54)	5.5 (140), 2 (51)	3	1.25 (.57)
7542385BST	3/8" - 16 UNC - 2A  Ball Stud, Tin-Plated Copper Alloy  ND POTHEAD STUD	9 (229)	2.12 (54)	5.5 (140)	5	1 (.45)
21846	90° Offset Nema Pad, Tin-Plated Copper Alloy	5.75 (147)	-	2.7 (69)	5	1 (.45)
21228	Offset NEMA Pad Short, Tin-Plated Copper Alloy	5.14 (131)	-	1 (25)	5	.84 (.38)
24087	Offset NEMA Pad Long, Tin-Plated Copper Alloy	6.9 (175)	-	2.7 (69)	5H	1 (.45)
INTERNAL THR	EAD - 1/2" - 13 UNC - 2A					
24082	Internal Thread Ball Stud, Tin-Plated Copper Allo	y 3.85 (98)	1.5 (38)	.75 (19)	5	.54 (.25)
7542K	3/4" Ground Knob, Brass	1.4 (36)	1 (25)	.75 (19)	3	.38 (.17)
7542001BSF	Female Ball Stud, Brass	-	1.5 (38)	1 (25)	2	.88 (.40)
21236	Cover for Ball Stud	3 (76)	n/a	n/a	n/a	.09 (.04)

# **GROUNDING CLAMP HANGER STUDS**

**HANGER STUDS** are designed to be used with all "C" and Duck Bill ground clamps. Hanger Studs are used to hold one clamp of a set while the other is being installed on the de-energized line. Hanger Studs are not designed or tested to carry current.

21754 Grounding Clamp Hanger Stud can only be placed on clamps designed with a screw down strain relief system.

CAT. NO.	STUD	FOR USE WITH	WEIGHT EA. lbs. (kgs)
1858	Hanger	Aluminum Duck Bill 1", 1.25", 1.66"	.5 (.2)
1928	Hanger	Aluminum "C" Clamps 1.25", 1.5", 2.4", 3.5"	.5 (.2)
2427	Double Hanger	Aluminum "C" Clamps 1.25", 1.5", 2.4", 3.5"	.5 (.2)
2537	Hanger	Aluminum "C" Clamps 1"	.5 (.2)
2093	Hanger	556 Bronze Duck Bill, 477 Brz. "C"Clamp	.5 (.2)
9983	Hanger	Brass 1", 1.25", 2.4" "C"Clamps	.5 (.2)
21754*	Hanger	Bronze 1", 1.25", 2.4" "C"Clamps	.5 (.2)

<sup>\*</sup>For use with only Plain Ferrule Clamps and Threaded Ferrule Clamps with a screw down strain relief restraint system.



# **ADAPTERS & TRUCK GROUNDING REEL**



760001HDL





The **"T" HANDLE ADAPTER** allows the user to quickly and easily change an eye screw into a "T" handle screw.

**ADAPTERS** are used on any pin type ground clamps. Meets ASTM F-855 Grade 5 specifications. Maximum fault duty is 43 kA for 15 cycles.

CAT. NO.	DESCRIPTION	WEIGHT lbs. (kgs)		
ADAPTERS				
7300ABC	Pin to Threaded Adapter	0.5 (0.21)		
7310G	Eye Bolt Assembly	0.5 (0.21)		
7300AET	Pin to Threaded Adapter	0.5 (0.21)		
"T" HANDLE ADAPTER				
760001HDL	"T" Handle Adapter	0.5 (0.21)		

**TRUCK GROUNDING REELS** are designed to provide a secure and efficient way to ground trucks and equipment when working on or near energized lines. Bolt-down design allows easy removal of reels for installation on vehicles. Heavy duty construction for rugged field use. Independently tested to 14.5 kA for 30 cycles. Reels with factory installed cable include 6-foot equal gauge and frame bonding jumper. Other end must be attached to frame of vehicle.

CAT. NO.	CABLE LENGTH	CABLE SIZE	FAULT DUTY 15 CYCLES	ASTM F-855 GRADE	WEIGHT lbs. (kgs)
RUCK GROU	NDING REEL SPRING R	REWIND, 7600	001E CLAMP		
HSCR0250	50' (15.2 m)	#2	14.5 kA	1	42 (19.0)
HSCR1040	40' (12.2 m)	1/0	21 kA	2	48 (21.7)
HSCR1050	50' (15.2 m)	1/0	21 kA	2	53 (24.0)
DITCK CDOIT	NDING DEEL HAND DE	WIND 76000	ME CLAMD		
	NDING REEL HAND RE				00 (10 0)
HCR0240	40' (12.2 m)	#2	14.5 kA	1	36 (16.3)
RUCK GROU HCR0240 HCR0250				1 1	36 (16.3) 39 (17.7)
HCR0240	40' (12.2 m)	#2	14.5 kA	1 1 2	, ,
HCR0240 HCR0250	40' (12.2 m) 50' (15.2 m) 50' (15.2 m)	#2 #2	14.5 kA 14.5 kA	<u> </u>	39 (17.7)

#### **NOTE:**

• Reel model HCR1 will store a maximum length of 150 feet (45.8 m) of #2 cable and 85 feet (25.9m) of 1/0 cable.

## **GROUNDING ACCESSORIES**

POLE MOUNTED CONTACT BARS are designed to act as a convenient common point for electrical connections and also as a hanger for grounding sets during installation and removal. Supplied with a chain and an adjustable wheel binder that will accommodate most common pole diameters. Catalog #20880 has one 5/8-11UNC tapped hole for the permanent connection of a ground lead. The Salisbury 21840 is a lighter-weight pole mounted contact bar.

The POLE BAND is lightweight and easy to install. It is a required component of equiotential zone grounding systems.

TRUCK GROUNDING KIT contains 2/0 cable, 24 inches (61 cm) long, with a chassis/frame attachment on one end and a grounding stud on the other for Cat. No. 7542TGK. Brings body and chassis to the same ground potential. Other lengths are available. Meets ASTM F-855 Grade 3 specifications.

The Salisbury 2103 SCREW TYPE TEMPORARY **GROUND ROD** is used when an adequate system ground is not available. The design incorporates a copperweld rod with bronze fittings screwed and pinned on both ends. The terminal on the handle is designed to accept cables equipped with a 5/8-11 UNC threaded ferrule. As an alternative, a "C" clamp may also be attached directly to the ground rod shaft.

CAT. NO.	DESCRIPTION	WEIGHT lbs. (kgs)
TRUCK GROUI	NDING KIT	
7542TGK	Truck Grounding Kit w/ Stud	2 (0.91)
SCREW GROU	ND ROD	
2103	75" (1.9m)long	8 (3.6)

CAT. NO.	DESCRIPTION	FAULT DUTY 15 CYCLES	GRADE	WEIGHT lbs. (kgs)	
POLE BAND					
760001PB	Aluminum Bar	27 kA	3	4 (1.81)	
760045PB	Copper Bar	43 kA	5	5 (2.27)	



CAT. NO.	ASTM GRADE	DESCRIPTION	WEIGHT EA. lbs. (kgs)
POLE MOUN	TED CONTACT	T BARS	
9998	5	Contact Bar No Connection 40" Chain w/ Adjustable Wheel Binder	9.1 (4.1)
21840	5	Contact Bar No Connection 40" Chain w/ Adjustable Wheel Binder	7 (3.3)
20880	5	Contact Bar One Connection 40" Chain w/ Adjustable Wheel Binder	9.1 (4.1)

# **CONDUCTOR & CLEANING TOOLS**



4110



4337





**TUBULAR BRUSHES** are preferred when rubber gloving or when working on de-energized conductors. The steel bristles are internal to prevent damaging rubber gloves. The 2.5" tubular brush is used in confined areas such as between two connectors or clamps.

The **"V" TYPE WIRE BRUSHES** are available with epoxy-coated handle or universal attachment that can be used with hotsticks. Replacement brushes are available.

CAT. NO.	DESCRIPTION in. (mm)	WEIGHT EA. lbs. (kgs)
4108	Universal Tubular	1.3 (0.6)
4110	5" (127)Tubular	0.4 (0.2)
4111	Universal "V" Line Cleaner	1 (0.5)
4112	"V" Type handle w/ brushes	1.2 (0.6)
4113	"V" Type carton of 10 replacement brushes	3 (1.4)
4337	2.5" (63.5)Tubular	0.2 (0.1)



## **GROUND ELBOW & ACCESSORIES**

### 200 AMP & 600 AMP

The **200 AMP GROUND ELBOW WITH CONNECTIONS** may be used on single phase or three phase installations. Grounding sets come complete with extra flexible cable and connections. Elbows are rated for a maximum fault current of 10,000 amps for 10 cycles. All the clamps come with grip-all eyes for use with a clampstick.

The **200 AMP AND 600 AMP ELBOW CONNECTOR TOOLS** are designed to fit all of the 15 kV and 25 kV rated loadbreak and non-loadbreak elbows. The jaws are contoured to provide a positive grip and not interfere with the contact interface area, allowing the elbow to operate properly while connecting or disconnecting.

The **INSULATED ELBOW REMOVER** is used by inserting a hook in the loop on the back of any elbow while applying a hammering action. This tool can also be used to seal elbows when installing them. Other lengths may be available upon request.

CAT. NO.	DESCRIPTION	WEIGHT lbs. (kgs)
200 AMP GROUND EI	BOW WITH CONNECTIONS DEAD BREAK	
764015GE	15 kV	1 (0.45)
200 AMP GROUND EI	LBOW WITH CONNECTIONS TLOAD BREAK	
764150015LGE	15 kV	1 (0.45)
764150025LGE	25/35 kV Small Interface	2 (0.91)
200 AMP ELBOW CO	NNECTOR TOOL	
9202Q	Quick Change Fitting	2 (0.91)
9202GA	Grip-All Fitting	2 (0.91)
600 AMP ELBOW CO	NNECTOR TOOL	
9206Q	Quick Change	2 (0.91)
9206U	Universal	2 (0.91)
9206GA	Grip-All	2 (0.91)
9206GAS	With Insert Pair for 200 AMP Elbows	2 (0.91)
92021	Insert Pair	8 (0.22)
INSULATED ELBOW F	REMOVER	
9206HIP	6' (1.83 m) with 9202HQ	11 (4.99)
9208HIP	8' (2.44 m) with 9202HQ	12 (5.44)
PARTS		
9202HQ	Elbow Remover Head with Quick Change	2 (0.91)
12524HH	Insulated Stick for 2' (0.61 m) Remover	2 (0.91)
12548HH	Insulated Stick for 4' (1.22 m) Remover	3 (1.36)







## **UNDERGROUND GROUNDING STUDS**



The 1712 and 1725 grounding stud series are used for grounding when the fault duty on the 600 amp Deadbreak elbow/ "T" body exceeds the rating of a 200 amp grounding elbow, as rated by IEEE 386 at 10kA for 10 cycles. Grounding studs consist of a 10" conductor stud with male or female threads for replacing 200 amp bushing wells and/or insulating plugs and a ground clamp bar for use with regular grounding jumper assemblies. After the cable has been proven de-energized, the stud is installed and a ground is applied.

The **1725001** grounding stud is made of 7/8" diameter copper with a 5/8-11 female thread on one end and a 1" (2.5 cm) hex drive on the other end. This stud is fitted with a tapered guide and a 3/8" diameter copper cross bar perch used for installing the ground. A socket drive is used for installation. For application, use catalog number 5900CS captured socket.

The **17250003**, **17250004** and **17250005** are steel grounding plugs and studs with one 5/8" diameter perch. The perch has a sturdy lip to ensure clamp contact during faults. These models are supplied with grip-all attachments for application with insulated clampstick tools and connectors. These studs are used for grounding equipment such as non load-break connectors or power distribution connectors.

The **1735** grounding stud is made of 7/8" diameter copper with a 5/8-11 female thread on one end and a 1" (2.5 cm) hex drive on the other end for application with a socket drive. The cross bar perch is 3/4" diameter copper, providing heavy duty service. This ground plug also comes equipped with a tapered guide and the yellow protective cap.

				AST	M F855	
CAT. NO.	DESCRIPTION	THREADS	MATERIAL (Stud)	GRADE 15	FAULT DUTY Cycles	WEIGHT lbs. (kgs)
UNDERGROUND	GROUNDING STUDS					
1725001	Copper Electrode, Female, Hex Drive, w/Guide	5/8-11 (F)	Cu	1	17 kA	2.2 (1.0)
17250003	Steel Electrode, Male, Grip-All, w/Guide	5/8-11 (M)	Steel	3	27 kA	2.0 (0.9)
17250004	Steel Electrode, Female, Grip-All, w/Guide	5/8-11 (F)	Steel	3	27 kA	2.0 (0.9)
17250005	Steel Electrode, Male, Grip-All	3/4-10 (M)	Steel	3	27 kA	1.8 (0.8)
1735	Copper Electrode, Female, Hex Drive, w/Guide	5/8-11 (F)	Cu	4	35 kA	3.5 (1.6)
5900CS	Captured Socket for 1725001 and 1735	-	-	-	-	-

## **UNDERGROUND TOOLS & GROUND ADAPTER DEVICE KIT**

The **PADMOUNT SWITCH HOOK** is designed to operate the secondary switch on a padmount transformer. Also used as a standard switch hook for cutouts. Weight - 1 lbs. (0.45 kgs).

The **UNDERGROUND SPANNER WRENCH** is designed for installing and removing the connector bushing, and reducing bushing inserts. Can be used when the conductor is de-energized, but not grounded. The tool is used one way for installation, and turned over for removal. A universal toggle and spring is used with this tool and should be ordered separately (5900Q). Weight -1 lbs. (0.45 kgs).

The **PLUG INSTALLING TOOL** is used to install or remove 600 amp reducing plugs. Weight:2 lbs. (0.91 kgs).

The **GROUND ADAPTER DEVICE KIT** enables application of personal grounds up to a 600 amp separable pre-molded component system when used with a clampstick.

CAT. NO.	DESCRIPTION			
PADMOUNT SWIT	CH HOOK			
190UGQ	With Quick Change			
190UGU	With Universal			
	DANNED WEEKOU			
<u>UNDERGROUND S</u>	PANNER WRENCH			
UNDERGROUND S 1720	PANNER WRENCH For 600 AMP Connector			
1720	For 600 AMP Connector			
	For 600 AMP Connector			

DECCRIPTION

CAI. NO.	DESCRIPTION	QIY	lbs. (kgs)
GROUND ADAP	TER DEVICE KIT - NON-LOAD BREAK		
76174459	Ground Adapter Device Kit with Bag	1	15 (6.8)
	LUDES THE FOLLOWING:		0 (0 01)
44C	Ratchet Wrench with Ball and Ring	1	2 (0.91)
5900Q	Universal Toggle and Spring	1	1 (0.45)
5900CS	Captured Socket with Friction Balls	1	8 oz (0.22 kgs)
9206GAS	Elbow Connector Tool with Inserts	1	2.5 (1.1)
1725001	Ground Stud	3	2.5 (1.1)
B1715	Protective Bag with Zipper	1	1 (0.45)





The **HYDRAULIC CABLE SPIKE** is designed to verify that underground cable, up to 1000 MCM, is de-energized before cutting, repairing, splicing or replacing.

The cable spike, a solid brass body with a stainless steel piercing tip, is fitted to hydraulic compression tools so that the cable can be accurately spiked from a safe distance. An anodized aluminum insert is included to position the cable precisely.

The **CABLE PENETRATING GROUND CLAMP** is designed to be used either as a tool for "spiking" jacketed cable or as a part of a grounding assembly used to bond both ends of an opened cable. The 7/8" long plated steel point is inserted into the eye screw making a low resistant one piece spear. If one point becomes blunted it may be sharpened or replaced with a new spear. Clamps are aluminum body with either smooth or serrated upper jaws. The hard aluminum serrated insert makes optimum contact with the stranded neutral shield.

Adapter fits the following tools:
Huskie EP610H
Burndy Y46
Brock 13-H



2607

### WARNING: ELECTRIC SHOCK HAZARD

THIS TOOL IS NOT INSULATED. USE ONLY CERTIFIED, NON-CONDUCTIVE HOSES, DIELECTRIC FLUIDS, AND PROPER PERSONAL PROTECTIVE EQUIPMENT WHEN USING THIS UNIT. FAILURE TO DO SO COULD RESULT IN SEVERE INJURY OR DEATH.

CAT. NO.	CABLE LENGTH ft (m)	<b>DESCRIPTION</b> SPIKING TOOL & GROUNDING ASSEMBLY:	WEIGHT EA. lbs. (kgs)
24320	6 (1.8)	Cable Spiking Tool & Insert 4388 C Clamp	9.5 (4.3)
24321	8 (2.4)	2139 4/0 Cu Cable 2025 4/0 Cu Ferrules (Pair) 616 Bag	11.2 (5.1)
24322	10 (3)	US Patent # 544 7450	12.9 (5.86)
RPT1	-	Replacement Piercing Tip	1 oz (28 g)
	ATING GROUND CLAMP - ACME	THREAD - POINTED LOWER JAW	
2607	-	Aluminum 1.5" Opening, Class B, Serrated Jaw	1.7 (.8)
20867	-	Aluminum 2.40" Opening, Class B, Serrated Jaw	2.2 (1)
4290		Aluminum 2.40" Opening, Class A, Smooth Jaw	2.1 (1)

# **HYDRAULIC GROUND, BLADE, & CABLE SPIKE CLAMPS**



DESCRIPTION		PUMP MDL / P.S.I.	CABLE ASSEMBLY CABLE	ASTM FAULT / DUTY CYCLES / GRADE	WEIGHT lbs. (kgs)
D SPIKE CLAMPS: CLA	MP CAT. NO. 7	60001E, SPIKE DEPTH 1	5/8", CONDUCTOR MIN. 1	' - MAX. 3"	
Spike Point w/ Eye So	rew	1715PE / 1200	1/0 Clear	14.5 kA / 15 / 1	28 (12.7)
Spike Point w/ Eye-T	Screw	1715PE / 1200	1/0 Clear	14.5 kA / 15 / 1	28 (12.7)
Spike Point w/ Eye-T	Screw	1715PE / 1200	1/0 Clear	14.5 kA /15 /1	32 (14.5)
PUMP MDL / P.S.I.	SPIKE DEPTH IN. (CM)	CONDUCTOR MAX CYCLES / GRADE	CABLE ASSEMBLY CABLE	ASTM FAULT / DUTY	WEIGHT lbs. (kgs)
SPIKE CLAMPS: SPIKE	BLADE W/ EY	E SCREW, CLAMP CAT. N	IO. 760001E		
1715EP25 / 2500	3"	2 1/4 (5.7)	1/0 Clear	14.5 kA / 15 / 1	30 (13.6)
1715PF25 / 2500	3"	2 1/4 (5.7)	1/0 Clear	14.5 kA / 15 / 1	34 (15.4)
1715P392 / 10000	6"	4 1/2 (10.8)	1/0 Clear	14.5 kA / 15 / 1	85 (38.6)
	D SPIKE CLAMPS: CLA Spike Point w/ Eye Sc Spike Point w/ Eye-T Spike Point w/ Eye-T  PUMP MDL / P.S.I.  SPIKE CLAMPS: SPIKE 1715EP25 / 2500  1715PF25 / 2500	D SPIKE CLAMPS: CLAMP CAT. NO. 7 Spike Point w/ Eye Screw Spike Point w/ Eye-T Screw Spike Point w/ Eye-T Screw  PUMP MDL / P.S.I. DEPTH IN. (CM)  SPIKE CLAMPS: SPIKE BLADE W/EY 1715EP25 / 2500 3" 1715PF25 / 2500 3"	MDL / P.S.I.  D SPIKE CLAMPS: CLAMP CAT. NO. 760001E, SPIKE DEPTH 1 Spike Point w/ Eye Screw 1715PE / 1200 Spike Point w/ Eye-T Screw 1715PE / 1200 Spike Point w/ Eye-T Screw 1715PE / 1200  PUMP SPIKE CONDUCTOR MAX IN. (CM) CYCLES / GRADE  SPIKE CLAMPS: SPIKE BLADE W/ EYE SCREW, CLAMP CAT. N 1715EP25 / 2500 3" 2 1/4 (5.7)  1715PF25 / 2500 3" 2 1/4 (5.7)	MDL / P.S.I. CABLE  D SPIKE CLAMPS: CLAMP CAT. NO. 760001E, SPIKE DEPTH 1 5/8", CONDUCTOR MIN. 1' Spike Point w/ Eye Screw 1715PE / 1200 1/0 Clear  Spike Point w/ Eye-T Screw 1715PE / 1200 1/0 Clear  Spike Point w/ Eye-T Screw 1715PE / 1200 1/0 Clear  PUMP SPIKE CONDUCTOR CABLE ASSEMBLY MDL / P.S.I. DEPTH MAX CABLE IIN. (CM) CYCLES / GRADE  SPIKE CLAMPS: SPIKE BLADE W/ EYE SCREW, CLAMP CAT. NO. 760001E  1715EP25 / 2500 3" 2 1/4 (5.7) 1/0 Clear  1715PF25 / 2500 3" 2 1/4 (5.7) 1/0 Clear	MDL / P.S.I.  CABLE  FAULT / DUTY CYCLES / GRADE  D SPIKE CLAMPS: CLAMP CAT. NO. 760001E, SPIKE DEPTH 1 5/8", CONDUCTOR MIN. 1" - MAX. 3"  Spike Point w/ Eye Screw  1715PE / 1200  1/0 Clear  14.5 kA / 15 / 1  Spike Point w/ Eye-T Screw  1715PE / 1200  1/0 Clear  14.5 kA / 15 / 1  Spike Point w/ Eye-T Screw  1715PE / 1200  1/0 Clear  14.5 kA / 15 / 1  PUMP SPIKE CONDUCTOR MAX CABLE ASSEMBLY FAULT / DUTY IN. (CM) CYCLES / GRADE  SPIKE CLAMPS: SPIKE BLADE W/ EYE SCREW, CLAMP CAT. NO. 760001E  1715EP25 / 2500  3" 2 1/4 (5.7)  1/0 Clear  14.5 kA / 15 / 1  1715PF25 / 2500  3" 2 1/4 (5.7)  1/0 Clear  14.5 kA / 15 / 1

NOTE: Suffix EPP = Enerpac Pump Suffix PFP = Porter Ferguson Pump

# HAND OPERATED GROUND SPIKE & HYDRAULIC CUTTER SPIKE





CAT. NO.	DESCRIPTION	CABLE ASSEMBLY CABLE / CLAMP CAT. NO.		ASTM FAULT / DUTY CYCLES / GRADE	WEIGHT lbs. (kgs)
HAND OPERATI	ED GROUND SPIKE: SPIKE DEPTH	H 1 3/4", CONDUCTOR MIN. 1" - MA	AX. 3 1/2"		
1712CS	3' FG Hndl, Toggle /GA	1/0 Clear / 760001E		14.5 kA / 15 / 1	15 (6.8)
1712U	Spike Point w/U	1/0 Clear / 760001E		14.5 kA / 15 / 1	10 (4.5)
1712GA	Spike Point w/GA	1/0 Clear / 760001E		14.5 kA / 15 / 1	10 (4.5)
CAT. NO.	DESCRIPTION	PUMP MDL / P.S.I.	CABLE ASSEMBLY CABLE CYCLES / GRADE	ASTM FAULT / DUTY	WEIGHT lbs. (kgs)
HYDRAULIC CU	ITTER SPIKE: CLAMP CAT. NO. 70	60001E, CONDUCTOR MIN. 0" - MA	AX. 3 1/2"		
17150050	Huskie Head	N/A / N/A	#2 Clear	14.5 kA / 15 / 1	23 (10.5)
17150050WPH	Huskie Head	1715P392 /10,000	#2 Clear	14.5 kA / 15 / 1	52 (23.6)

# **ACCESSORIES FOR UNDERGROUND SPIKE TOOLS**

CAT. NO.	DESCRIPTION
SPIKES, BLADES A	ND TOOL HEADS
1710E	Spike Point Complete for 1710
1712E	Carbide Spike Point Only
1715E	Spike Point Complete for 1715
1715GS	Ground Shaft Complete for 1715 (Includes Shaft and Spike Point)
171550SP100A	Huskie Cutter Head Only

# HYDRAULIC PUMP ASSEMBLIES AND PUMPS

1715PE	Enerpac Pump w/ Fittings, 1200 psi
1715P142	Enerpac Pump Only, 1200 psi
1715PE25	Enerpac Pump w/ Fittings, 2500 psi
1715PE14225	Enerpac Pump Only, 2500 psi
1715PE100	Enerpac Pump w/ Fittings, 10000 psi
1715P392	Enerpac Pump Only, 10000 psi
1715PF	Porter Ferguson Pump w/ Fittings, 1200 psi
1715SM0033	Porter Ferguson Pump Only, 1200 psi
1715PFSD	Porter Ferguson Pump w/ 1/4" Fittings, 1200 psi
1715PF25	Porter Ferguson Pump w/ Fittings, 2500 psi
1715SM003325	Porter Ferguson Pump Only, 2500 psi

#### HYDRAULIC HOSE ASSEMBLIES AND HOSES

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#### HYDRAULIC RAM ASSEMBLIES AND RAMS

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1715R	Enerpac Ram w/ Fittings, 1 5/8" Stroke
1715RCH121	Enerpac Ram Only, 1 5/8" Stroke
1715RSD	Enerpac Ram w/ 1/4" Fittings, 1 5/8" Stroke
171561RCH123	Enerpac Ram Only, 3" Stroke
17150066R	Enerpac Ram w/ Fittings, 6" Stroke
1715RCH306	Enerpac Ram Only, 6" Stroke

#### PROTECTIVE BAGS

THOTEOTIVE DATE	40
B1710	Bag for 1710: 52" x 15" Yellow Vinyl Strap Tie Bag, 4 Tool Compartments, Outer Pocket
B1715	Bag for 1712, 1715, 17150060: 20" x 14" x 5" Yellow Vinyl, Zipper, Outer Pocket, Straps
B17150050	Bag for 17150050, 17150063: 26" x 12" x 8" Yellow Vinyl, Zipper, Outer Pocket, Straps
1370BF1	Storage Box for 17150066: 44" x 12" x 15" Wooden, Hinged, Latched, Forklift Stringers







B1715