

INSTRUCTIONS FOR USING NO. 31 TYPE NICOPRESS® TOOLS

With these tools each sleeve-pressing die-groove is designated by a letter. This letter is stamped in the tool head immediately adjacent to the die-groove to which it applies. Each tool has two die grooves. The tools are available with the following combinations: No. 31-DC, No. 31-DJ, No. 31-CE, No. 31-DE, No. 31-CJ, No. 31-EJ, and No. 31-QC.

All the items that are compressed in each die-groove are listed together in the following tables under the particular die-groove heading that applies. Thus all the items that can be compressed in a No. 31-DC tool are in the table "Die-Groove C" plus the items in table "Die-Groove D". Items for the other tools are identified in a similar manner.

SPLICING LINE WIRES

Clean all wires with abrasive for the full length entering the sleeve except old galvanized wire. Old galvanized wire is to be cleaned to 1/2 the length entering the sleeve.

Push wires into sleeve until they strike the center stop. If the wire will not go all the way in to the center stop, do not twist it. Remove the wire, straighten it, and clear the burrs from the end. Then push STRAIGHT in.

First make two inside presses, closing the tool on each press until the bumpers meet.



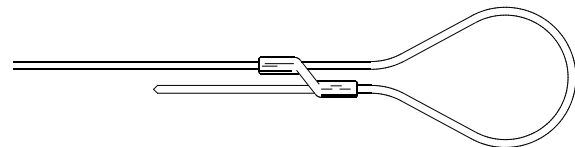
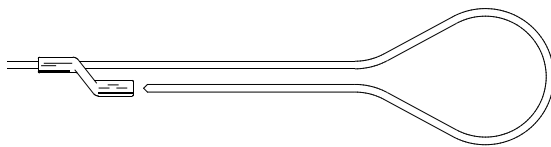
Then continue pressing; there should normally be about 1/16" space between presses.



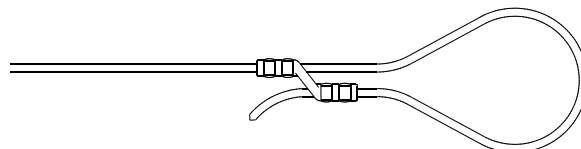
DEAD-ENDING LINE WIRE with NICOPRESS® OFFSET DEAD-END SLEEVES

Pass a sufficient length of the line wire through either end of the dead-end sleeve to form the loop. If jumper or tail is required, push through as much wire as needed.

Bend the protruding wire around the insulator, then bring line and tail parallel so that dead-end sleeve can be pushed up on both wires at the same time.



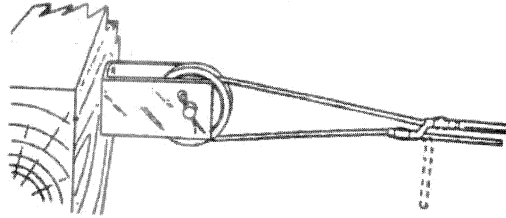
Then make the exact number of presses specified in the table.



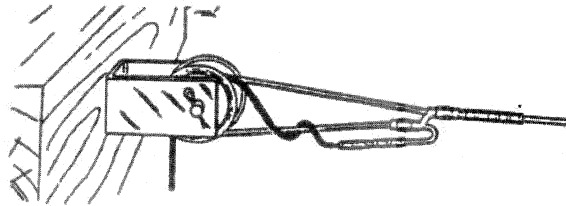
Keep the presses centered away from the ends and away from the bent part of the sleeve.

DEAD-ENDING LINE WIRE USING NICOPRESS® LOOP-TYPE MADE-UP DEAD ENDS

Loop-Type Dead-Ends are for use in dead-ending the extra high strength steel of Copper-covered steel wires that are difficult to bend into the loops necessary for the usual type of dead ending. These dead-ends can also be used on the lower strength steel, copper, or copper-covered steel conductors.



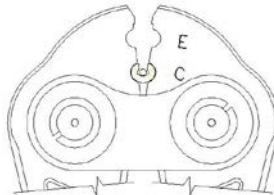
This shows the general arrangement. It may be advisable to first thread the insulated wire behind the knob, twist it around a leg of the loop and then terminate it in a reducing-sleeve before attaching the reducing-sleeve to the dead-end tail.



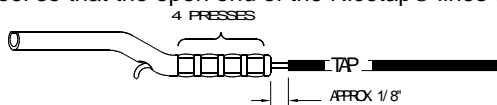
To install on a cross-arm dead-end bracket, first remove the porcelain knob and place the loop over it so that the tail end is underneath. Replace knob and bend tail wire downward to allow the Nicopress® tool to be used on the line end of the sleeve. Make the first press near the center stop to insure that line wire is all the way in. Then put on the number of presses shown in table.

If a tap-off is required use a reducing-sleeve as shown in the table.

NICOTAP® SLEEVES



Prepare wires as described. Hold the tool so that the open end of the Nicotap® lines up with the open end of tool.



Always attach the Nicotap® sleeve to the tap-wire first. The last operation is to attach the partly finished Nicotap® to the wire.



If tap-wire is insulated, wrap it two or three turns around line wire before attaching the line end of the Nicotap®.

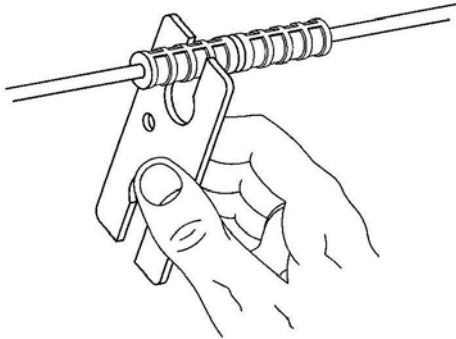


It is always advisable to tape the splice, even on bare wire to bare wire. This keeps splices clean and reduces the vibration strains. Taping is necessary in localities subject to drop-wire corrosion.

ADJUSTMENT OF NICOPRESS® TOOL

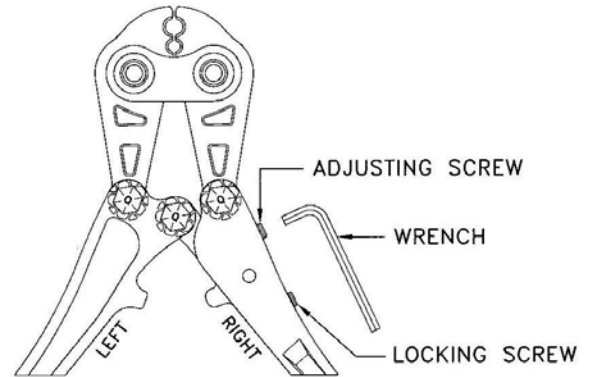
To make a satisfactory Nicopress® Splice, it is important that the proper press diameter be maintained. Splices should be checked occasionally with the gauge provided for this purpose.

When using the gauge, it should be held so that it contacts the presses portion of sleeve at right angles to the fins.



With the tool handles in the open position use the wrench provided with the tool to loosen the locking screw one or two turns. Then turn the adjustment screw clockwise only a fraction of a turn. Make a press and check with gauge. Continue adjustment if necessary, until press passes easily into gauge. When the correct setting is obtained, tighten the locking screw hard so that tool will hold its adjustment.

The compressed portion of the sleeve should enter the gauge opening easily. If it does not, then adjust the tool as follows.



In addition to checking and adjusting, tools should be cleaned and oiled. An empty tool should work freely with a slight spring at the final closing. If the tool binds, it can be eased by slightly loosening the particular bolt which is causing the binding.

The following tables list items that are compressed in the tools covered by this instruction. The items are separated according to the die-grooves. Thus a No. 31-DC tool will compress all "C" and "D" die-groove items. Items for the other tools are determined in the same manner.

Figures in parentheses are not part of the respective stock numbers. In the case of Straight Splicing Sleeves and Reducing Sleeves these numbers specify the tool compressions per half of sleeve. In the case of Offset Dead-End Sleeves and Nicotap® Sleeves, they designate compressions per leg. In the case of Made-Up Loop-Type Dead-Ends, they give the total compressions.

"C" DIE-GROOVE ITEMS

LINE CONDUCTORS		STRAIGHT SPLICING SLEEVE	OFFSET DEAD-END SLEEVE	TAP CONDUCTORS		NICOTAP® SLEEVES	REDUCING SLEEVES
MATERIAL	WIRE SIZE			A.W.G.	B.W.G.		
COPPER	12 A.W.G.	1-080 C (2)	91-080 C (1)				
	10 A.W.G.	1-102 C (2)	91-102 C (1)				
	150 lbs./mile 2.5 MM	1-097 C (2)	91-097 C (1)				
COPPER OR COPPER-COVERED STEEL	14 A.W.G.	1-064 C (2)	91-064 C (1)	14		T1-064 C (3)	---
				22, 20, 19		T1-064 x 036 C (3)	1-064 x 036 C (2)
				18, 17		T1-064 x 045 C (3)	1-064 x 045 C (2)
				10		T1-064 x 102 C (3)	---
	12 A.W.G.		91-080 C (1)	12		T1-080 C (3)	----
				22, 20, 19		T1-080 x 036 C (3)	1-080 x 036 C (2)
				18, 17		T1-080 x 045 C (3)	1-080 x 045 C (2)
				16		T1-080 x 051 C (3)	1-080 x 051 C (2)
				14		T1-080 x 064 C (3)	1-080 x 064 C (2)
				10		T1-080 x 102 C (3)	----
	10 A.W.G.			22, 20, 19			1-102 x 036 C (2)
				18, 17			1-102 x 045 C (2)
				16			1-102 x 051 C (2)
				14			1-102 x 064 C (2)
				12			1-102 x 080 C (2)
GALVANIZED STEEL	14 B.W.G. ALL GRADES			22-20-19		T2-083 x 036 C (3)	2-083 x 036 C (2)
				18-17		T2-083 x 045 C (3)	2-083 x 045 C (2)
				16		T2-083 x 051 C (3)	2-083 x 051 C (2)
				14		T2-083 x 064 C (3)	2-083 x 064 C (2)
				---		14	T2-083 C (3)
	14 B.W.G. BB or "85"	2-083 C (2)	92-083 C (1)				
	14 B.W.G. "85" to "135"	5-083 C (2)	95-083 C (1)				
	12 B.W.G. ALL GRADES						
	18-17			4-109 x 045 C (2)			
	16			4-109 x 051 C (2)			
14	4-109 x 064 C (2)						
---	14	---	4-109 x 083 C (2)				
12 B.W.G. BB	4-109 C (2)	94-109 C (1)					
12 B.W.G. BB or "85"	5-109 C (2)	95-109 C (1)					
12 B.W.G. (RUSTY)	2-102 C (2)	92-102 C (1)					

"C" DIE-GROOVE TUBULAR REPAIR SLEEVES

LINE CONDUCTORS		TUBULAR REPAIR SLEEVE
MATERIAL	WIRE SIZE	
COPPER (SOLID)	12 A.W.G.	R1-080 C (2)
	10 A.W.G.	R1-102 C (2)
GALVANIZED STEEL (BB)	14 B.W.G.	R2-083 C (2)
	12 B.W.G.	R4-109 C (2)

"D" DIE-GROOVE ITEMS

LINE CONDUCTORS		STRAIGHT SPlicing SLEEVE	OFFSET DEAD-END SLEEVE	LOOP TYPE DEAD-END	TAP CONDUCTORS		NICOTAP® SLEEVES	REDUCING SLEEVES
MATERIAL	WIRE SIZE				A.W.G.	B.W.G.		
ALUMINUM COVERED STEEL	12 A.W.G.	8-080 D (4)		68-080 D (4)	12		T8-080 D (4)	
					14		T8-080 x 064 D (4)	
	11 A.W.G.	8-091 D (4)		68-091 D (4)	11 or 12		T8-091 D (4)	
					19 or 20		T8-091 x 036 D (4)	
					17 or 18		T8-091 x 045 D (4)	
					14		T8-091 x 064 D (4)	
	10 A.W.G.				10		T8-091 x 102 D (4)	
					10		T8-102 D (4)	
					19 or 20		T8-102 x 036 D (4)	
					17 or 18		T8-102 x 045 D (4)	
				14		T8-102 x 064 D (4)		
COPPER	70-lbs/mile	1-066 D (3)	91-066 D (2)	---				
	10 A.W.G.	1-102 D (3)	91-102 D (2)	67-102 D (4)				
	9 A.W.G.	1-114 D (3)	91-114 D (2)	---				
	3 MM	1-118 D (3)	---	---				
COPPER OR COPPER COVERED STEEL	14 A.W.G.	1-064 D (3)	91-064 D (2)	---				
	12 A.W.G.	1-080 D (3)	91-080 D (2)	67-080 D (3)	---		---	
					12		T1-080 D (4)	
					19 or 20		T1-080 x 036 D (4)	
					17 or 18		T1-080 x 045 D (4)	1-080 x 045 D (3)
					14		T1-080 x 064 D (4)	1-080 x 064 D (3)
	10 A.W.G.	3-102 D (4)	93-102 D (4)		10		T1-102 D (4)	
					19-20		T1-102 x 036 D (4)	
					17-18		T1-102 x 045 D (4)	1-102 x 045 D (3)
					16		T1-102 x 051 D (4)	1-102 x 051 D (3)
					14		T1-102 x 064 D (4)	1-102 x 064 D (3)
					12		T1-102 x 080 D (4)	1-102 x 080 D (3)
					8		T1-109 x 128 D (4)	---
	9 A.W.G.				9		T1-114 D (4)	
					19 or 20		T1-114 x 036 D (4)	
					17-18		T1-114 x 045 D (4)	1-114 x 045 D (3)
					16		T1-114 x 051 D (4)	1-114 x 051 D (3)
					14		T1-114 x 064 D (4)	1-114 x 064 D (3)
					12			1-114 x 080 D (3)
					10			1-114 x 102 D (3)
GALVANIZED STEEL	14 B.W.G. BB or "85"	2-083 D (3)	92-083 D (2)			---	2-083 x 045 D (3)	
				17 or 18			---	
					14		T2-083 x 064 D (4)	---
	12 B.W.G. ALL GRADES				19 or 20		T2-109 x 036 D (4)	---
					17 or 18		T2-109 x 045 D (4)	2-109 x 045 D (3)
					16		T2-109 x 051 D (4)	2-109 x 051 D (3)
					14		T2-109 x 064 D (4)	2-109 x 064 D (3)
					---	14	T2-109 x 083 D (4)	2-109 x 083 D (3)
					8	---	T2-109 x 128 D (4)	
					10	12	T2-109 D (4)	
10					---	---	2-109 D (3)	

"D" DIE-GROOVE TUBULAR REPAIR SLEEVES

LINE CONDUCTORS		TUBULAR REPAIR SLEEVE
MATERIAL	WIRE SIZE	
COPPER (solid)	12 A.W.G.	R1-080 D (3)
	10 A.W.G.	R1-102 D (3)
	9 A.W.G.	R1-114 D (3)

"D" DIE-GROOVE ITEMS

LINE CONDUCTORS		STRAIGHT SPlicing SLEEVE	OFFSET DEAD-END SLEEVE	LOOP TYPE DEAD-END
MATERIAL	WIRE SIZE			
GALVANIZED STEEL	12 B.W.G. BB	2-109 D (3) 5-109 D BB (3)	92-109 D (2) 95-109 D BB (2)	67-109 85-135 (5)
	12 B.W.G. BB or "85"	5-109 D 85 (4)	95-109 D 85 (3)	67-109 85-135 (5)
	12 B.W.G. BB-"85-135"	5-109 D 135 (5)	95-109 D 135 (4)	67-109 85-135 (5)
	12 B.W.G. "190-195"	5-109 D 190 (6)	----	67-109 190 (6)
	3 MM-BB	5-118 D BB (3)		
	200 lbs./mile 11 B.W.G. BB	4-121 D (3)	94-121 D (2)	----
	12-1/2 ga. FENCE WIRE (Regular)	5-109 D 135 (5)		
	12-1/2 ga. FENCE WIRE (High Strength)	5-109 D 190 (6)		

"E" DIE-GROOVE ITEMS

LINE CONDUCTORS		STRAIGHT SPlicing SLEEVE	OFFSET DEAD-END SLEEVE	TAP CONDUCTORS A.W.G.	REDUCING SLEEVES	NICOTAP® SLEEVES	
MATERIAL	WIRE SIZE						
ALUMINUM COATED STEEL	8 A.W.G.			16 or 14		T8-2453 E (3)	
				10		T8-2452 E (3)	
COPPER	10 A.W.G.	1-102 E (2)	91-102 E (1)				
	9 A.W.G.	1-114 E (2)	91-114 E (1)				
	3 MM	1-118 E (2)	---				
	8 A.W.G.	1-128 E (2)	91-128 E (1)				
	8 A.W.G. (7 Wire)	1-128/7 E (2)	---				
COPPER OR COPPER COVERED STEEL	12 A.W.G.	1-080 E (2)	91-080 E (1)	---	---		
	10 A.W.G.	---	---	14	1-102 x 064 E (2)		
	9 A.W.G.	---	---	14	1-114 x 064 E (2)		
	8 A.W.G.				16		1-128 x 051 E (2)
					14		1-128 x 064 E (2)
				12	1-128 x 080 E (2)		
				9	1-128 x 114 E (2)		

"E" DIE-GROOVE TUBULAR REPAIR SLEEVES

LINE CONDUCTORS		TUBULAR REPAIR SLEEVE
MATERIAL	WIRE SIZE	
COPPER (solid)	10 A.W.G.	R1-102 E (2)
	9 A.W.G.	R1-114 E (2)
	8 A.W.G.	R1-128 E (2)

"Q" DIE GROOVE SPlicing SLEEVES

CONDUCTOR MATERIAL	WIRE SIZE	SLEEVE STOCK No.
GALVANIZED STEEL	12 B.W.G. BB or "85"	S-109 Q (4)
	10 B.W.G. BB or "85"	5-134 Q (3)

"J" DIE-GROOVE ITEMS

LINE CONDUCTORS		STRAIGHT SPLICING SLEEVE	OFFSET DEAD-END SLEEVE	LOOP TYPE DEAD-END	TAP CONDUCTORS		NICOTAP® SLEEVES	REDUCING SLEEVES	
MATERIAL	WIRE SIZE				A.W.G.	B.W.G.			
ALUMINUM COVERED STEEL	10 A.W.G.	8-102 J (6)		68-102 J (7)					
	9 A.W.G.	8-114 J (6)		---					
COPPER	8 A.W.G.	1-128 J (4)	91-128 J (4)						
	8 A.W.G. (7 Wire)	1-128/7 J (4)	91-128/7 J (4)		14		1-128/7 x 064 J (3)		
					12		1-128/7 x 080 J (3)		
					10		1-128/7 x 102 J (5)		
					9		1-128/7 x 114 J (5)		
	3.5 MM 300 lbs./mile	1-137 J (3)	91-137 J (4)						
	7 A.W.G.	1-144 J (4)	---						
	6 A.W.G.	1-162 J (4)	91-162 J (3)						
6 A.W.G. (7 Wire)	1-162/7 J (4)	91-162/7 J (3)		8 (7 Wire)			1-162/7 x 128/7 J (4)		
COPPER OR COPPER COVERED STEEL	10 A.W.G.				14		---	1-102 x 064 J (3)	
	9 A.W.G.				14			1-114 x 064 J (3)	
					10			1-114 x 102 J (5)	
	8 A.W.G.					8		T1-128 J (4)	
						17-18		T1-128 x 045 J (4)	
						16		T1-128 x 051 J (4)	1-128 x 051 J (3)
						14		T1-128 x 064 J (4)	1-128 x 064 J (3)
						12		T1-128 x 080 J (4)	1-128 x 080 J (4)
						10		T1-128 x 102 J (4)	---
	9		---	1-128 x 114 J (5)					
COPPER COVERED STEEL	12 A.W.G.	1-080 J (4)	91-080 J (4)						
	10 A.W.G.	1-102 J (5)	91-102 J (4)						
	9 A.W.G.	1-114 J (5)	91-114 J (4)						
	8 A.W.G.	3-128 J (5)	---						
GALVANIZED STEEL	10 B.W.G. BB or "85"	2-134 J (4)	92-134 J (4)		---	10	T2-134 J (4)		
					17-18		T2-134 x 045 J (4)		
					16		T2-134 x 051 J (4)	2-134 x 051 J (3)	
					14		T2-134 x 064 J (4)	2-134 x 064 J (3)	
					12		T2-134 x 080 J (4)	---	
					10		---	2-134 x 102 J (4)	
	9 B.W.G. BB or "85"	2-148 J (5)	92-148 J (4)			---	12	T2-134 x 109 J (4)	---
						17-18	9	T2-148 J (4)	
						16		T2-148 x 045 J (4)	
						14		T2-148 x 051 J (4)	2-148 x 051 J (3)
						12		T2-148 x 064 J (4)	2-148 x 064 J (3)
						10		T2-148 x 080 J (4)	---
	8 B.W.G. BB	2-165 J (5)	92-165 J (4)			---	12	T2-148 x 109 J (4)	---
						9	---	---	2-148 x 114 J (4)
						---	8	T2-165 J (4)	
						16		T2-165 x 051 J (4)	
						14		T2-165 x 064 J (4)	
						12		T2-165 x 080 J (4)	
				12			2-165 x 109 J (4)		
				10			2-165 x 134 J (4)		
				9			2-165 x 148 J (5)		

"J" DIE-GROOVE TUBULAR FENCE WIRE SLEEVES

FENCE WIRE SIZE	WIRE DIAMETER	SLEEVE STOCK No.	TOOL PRESSES PER HALF OF SLEEVE
9 GAUGE	.148	2-148 J	5
10 GAUGE	.135	2-134 J	4
11 GAUGE	.121	2-120 J	4
12-1/2 BARBED	TWO-.099	125-JFW	5
13-1/2 BARBED	TWO-.086	135-JFW	5
14 BARBED	TWO-.080	140-JFW	4

"J" DIE-GROOVE TUBULAR REPAIR SLEEVES

LINE CONDUCTORS		TUBULAR REPAIR SLEEVE
MATERIAL	WIRE SIZE	
COPPER (solid)	8 A.W.G.	R1-128 J (4)
	6 A.W.G.	R1-162 J (4)
GALVANIZED STEEL BB grade	10 B.W.G.	R2-134 J (4)
	9 B.W.G.	R2-148 J (5)
	8 B.W.G.	R2-165 J (5)

"J" DIE-GROOVE SLEEVES AND TERMINAL LUGS FOR RAILROAD SIGNAL APPLICATIONS

SLEEVE STOCK No.	CONNECTING CONDUCTORS
2367-J (2)	3/16 and 13/64 - 7x19 Bronze Cable and 6 A.W.G. - 7 Wire Copper
2363-J (2)	6 A.W.G. Solid and 8 A.W.G.; 7 or 19 Strand Copper
2364-J (2)	8 A.W.G. Solid and 9 A.W.G.; 7 or 19 Strand Copper
2314-J (2)	9 A.W.G. Solid and 10 A.W.G. Solid Copper
2412-J (1) TERMINAL LUG	1/4 Diameter Binding Post