

CHANCE® EPOXIGLAS™ WIRE TONG INSTRUCTION MANUAL



! WARNING

Failure to follow these instructions and all safety rules and guidelines while using this tool may result in serious injury or death. This tool should only be used by competent individuals properly trained on its use. DO NOT exceed the Working Load Limit for load bearing tools.

! CAUTION

These instructions are not intended as a substitute for proper training or experience in the safe operation of the tool. Only competent technicians familiar with the tool should maintain or repair it. Always follow applicable laws, regulations, and company work practices and procedures.

! DANGER

Always maintain proper working clearances and Minimum Approach Distances (MAD) when working on or near energized lines or equipment. If using rubber gloves in combination with a stick that does not meet OSHA requirements, the gloves must be rated for full system voltage.

1. Before and After Each Use

- a. Clean the Epoxiglas™ surfaces using CHANCE Silicone Wipes ([C4002568](#)) or Wiping Cloths ([M1904](#)). They both clean and leave a protective layer of silicone on the finish of the stick. For heavier contamination, Moisture Eater II ([C4002364](#) or [C4002538](#)) can be used. Moisture Eater II was designed specifically for cleaning hot sticks and will remove both contamination and moisture from the surface. It also removes silicone, so a Silicone Wipe should ALWAYS be used after using Moisture Eater II. To maintain cleanliness, keep tools off the ground and other contaminated surfaces while working. Use of CHANCE Hot Line Tool Racks ([M4660](#)) or a clean tarp is recommended at the worksite.
- b. Thoroughly inspect the tool for any damage, excessive wear, or missing components per IEEE 516. DO NOT USE if damaged, components are missing, or there is any reason to suspect the mechanical and/or electrical properties of the tool may be compromised. Tools that have been damaged and show exposed fibers must be removed from service and destroyed.
- c. Verify the tool functions correctly and smoothly.
- d. If desired or specified for certain jobs by local regulations or company work practices (e.g. before extra high voltage transmission work), the tool can be field tested using the [CHANCE Wet/Dry Hotstick Tester](#) prior to use.

2. Maintenance

- a. Periodic electrical testing – The tools shall be electrically tested at a minimum once every two years or more frequently per applicable government and/or company safety rules and regulations. Consideration should be given to more frequent testing based on frequency of use, work conditions, care and maintenance, etc. Always test tools before returning to service after a repair or refinishing. ASTM F3121 may be referenced for in-service electrical testing.
- b. Refinishing – The original glossy finish on CHANCE Epoxiglas™ tools can often be refinished. Use CHANCE Gloss Restorer Kit ([C4001520](#)) or Epoxy Refinishing Kit ([C4002365](#)).



- c. Repair - The CHANCE Epoxiglas™ Bond Kit (H1917) is recommended for many repairs. See kit instructions for more details. Hardware, bolts, and pins should be replaced only with OEM replacement parts. Tools that have been subjected to overstressing should be permanently removed from service. All repairs and refinishing should be followed by electrical testing of the tool before putting the tool back into service.

3. Applications and Working Loads

Wire Tong Applications

The following information is intended to assist in the selection of the proper Wire Tongs for a particular application and greatest load. Four popular application methods are shown on these pages.

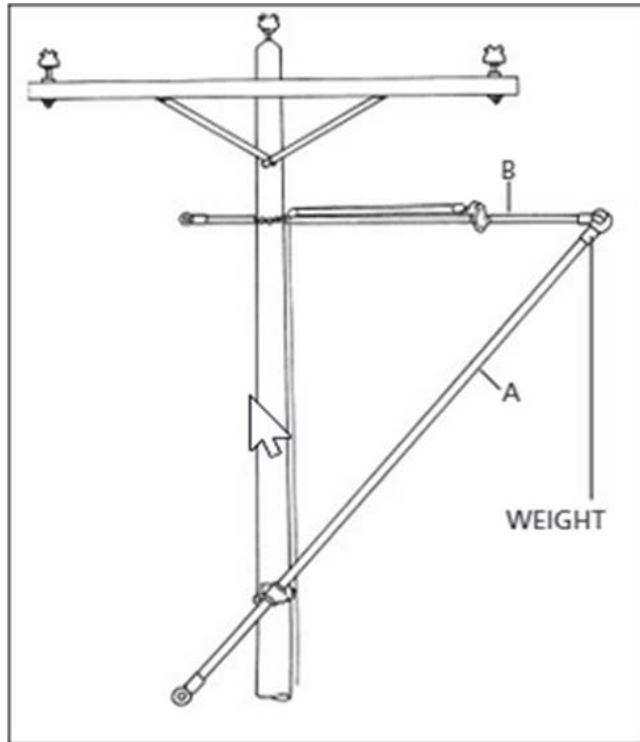


Figure 1 - Wire Tongs with saddles and wire tong blocks clamp on holding stick.

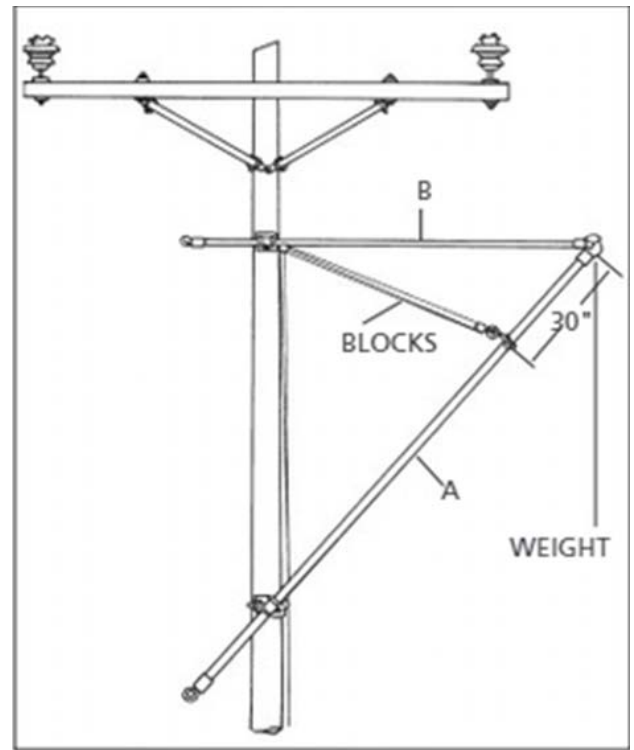


Figure 2 - Wire Tong with saddles and swivel wire tong band on lift stick.

WORKING LOADS FOR CHANCE WIRE TONGS*

Figure No.	Epoxiglas Pole Diameter		Type Support	Maximum Working Load Per Conductor	Maximum Wire Size and Span (Level Ground)			
	A	B			ACSR		Copper	
					Size	Span	Size	Span
1	2 in. (51 mm)	1.5 in. (38 mm)	Saddles	275 lb. (124 kg)	4/0	700 ft. (213m)	4/0	300 ft. (91m)
	2.5 in. (64 mm)	1.5 in. (38 mm)	Lever Lift	475 lb. (215 kg)	4/0	1200 ft. (366m)	4/0	500 ft. (152m)
2	2 in. (51 mm)	1.5 in. (38 mm)	Saddles	275 lb. (124 kg)	4/0	700 ft. (213m)	4/0	300 ft. (91m)
	2.5 in. (64 mm)	1.5 in. (38 mm)	Lever Lift	475 lb. (215 kg)	4/0	1200 ft. (366m)	4/0	500 ft. (152m)

*Based on Tong "B" substantially horizontal. The lower the top "B" saddle is placed below the conductor level, the greater the strain on Tong "A" and therefore the less load it can support.



NOTE:

(1) Supports

- Maximum recommended load for Saddles with extensions is 800 lb.
- Lever Lift will exceed Wire Tong strength when load is properly applied in line with pole.

(2) Working Loads

- Any elevated structure requires an analysis in determining the load.
- When calculations are impractical or unnecessary, and a pole is slightly higher than neighboring poles, consider total weight of span on each side as maximum working load.
- Does not apply to hilltop structures where special analysis must be made to determine load.

(3) Epoxiglas™ Working Loads

- When working load is greater than that given in the table for a particular Wire Tong, it will be necessary to use double Wire Tongs with double-type lever lift, or use larger Wire Tong Epoxiglas™ Working Loads.
- Maximum working loads are based on a pole deflection of approximately one inch when used in manner shown.
- Cantilever values, with a safety factor of more than two, are: 1.5 in. - 375 ft.-lb.; 2 in. - 900 ft.-lb.; 2.5 in. - 1500 ft.-lb.; and 3 in. - 2500 ft.-lb.
- Tensile strength values, with a safety factor more than two, are: 1.5 in. - 1500 lb.; 2 in. - 2000 lb.; 2.5 in. - 2500 lb.; and 3 in. - 3000 lb.

Wire Tong Applications

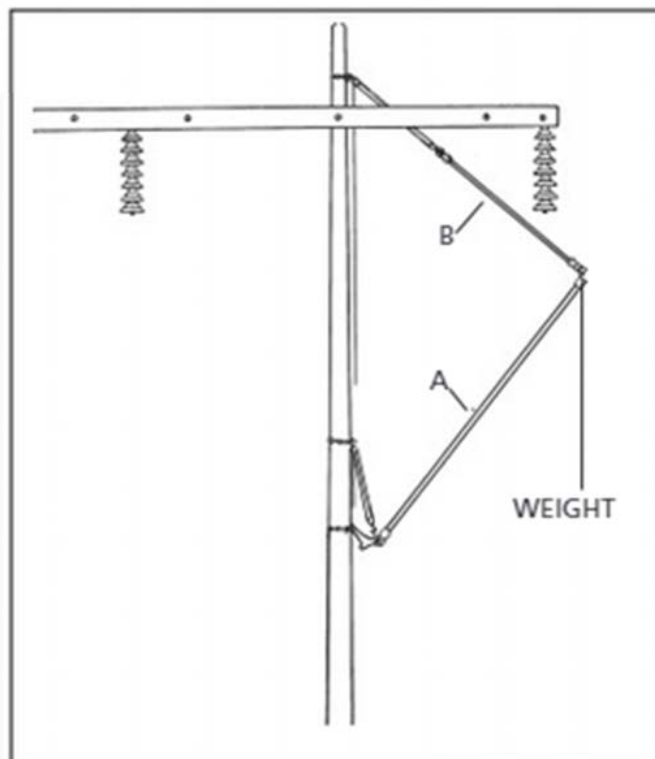


Figure 3 - Wire Tongs, lever lift, link stick, and rope blocks used on heavy conductors.

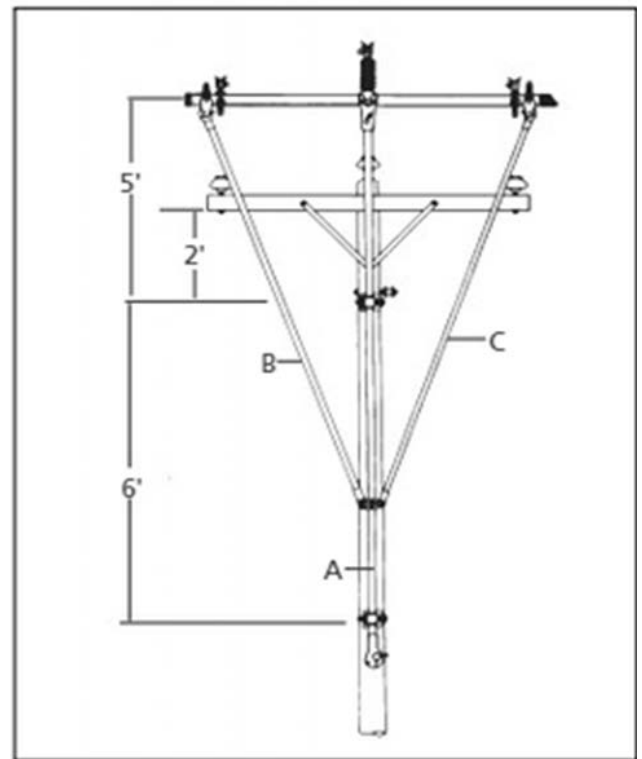


Figure 4 - Three Phase Lift Set where all three wires are lifted at once.

WORKING LOADS FOR CHANCE WIRE TONGS

Figure No.	Epoxyglas Pole Diameter (inches)			Type Support	Maximum Working Load Per Conductor	Maximum Wire Size and Span (Level Ground)			
	A	B	C			ACSR		Copper	
						Size	Span	Size	Span
3	2 in. (51 mm)	1.5 in. (38 mm)		Lever Lift	350 lb. (158 kg)	4/0	850 ft. (259m)	4/0	375ft. (114m)
	2.5 in. (64 mm)	1.5 in. (38 mm)			1000 lb. (453 kg)	397/5	1150 ft. (350m)	250	850 (259m)
4	2.5 in. (64 mm)	2 in. (51 mm)	2 in. (51 mm)	Saddles	225 lb. (102 kg) *	4/0	550 ft. (168m)	4/0	230 (70m)

*With max. lift of 5' above saddle, max. unbalance of 225 lb. on one side.

NOTE:

(1) Supports

- Maximum recommended load for Saddles with extensions is 800 lb.
- Lever Lift will exceed Wire Tong strength when load is properly applied in line with pole.

(2) Working Loads

- Any elevated structure requires an analysis in determining the load.
- When calculations are impractical or unnecessary, and a pole is slightly higher than neighboring poles, consider total weight of span on each side as maximum working load.
- Does not apply to hilltop structures where special analysis must be made to determine load.

(3) Epoxyglas™ Working Loads

- When working load is greater than that given in the table for a particular Wire Tong, it will be necessary to use double Wire Tongs with double-type lever lift, or use larger Wire Tong Epoxyglas™ Working Loads.
- Maximum working loads are based on a pole deflection of approximately one inch when used in manner shown.
- Cantilever values, with a safety factor of more than two, are: 1.5 in. - 375 ft.-lb.; 2 in. - 900 ft.-lb.; 2.5 in. - 1500 ft.-lb.; and 3 in. - 2500 ft.-lb.
- Tensile strength values, with a safety factor more than two, are: 1.5 in. - 1500 lb.; 2 in. - 2000 lb.; 2.5 in. - 2500 lb.; and 3 in. - 3000 lb.

4. Storage & Transportation

- Store tools in a clean and dry location out of direct sunlight. Tubes, bags, racks, or a tool trailer are recommended. Surfaces should be well padded and secure the tools to prevent damage.
- DO NOT store where moisture, oil, caustic chemicals or their vapors, or other degrading material may be present.

5. Disposal

- Always follow local laws and regulations. The metallic parts can be removed and recycled. The fiberglass pole and other components can be repurposed or disposed of as solid waste (except where prohibited by law).



6. Dimensions

CATALOG NUMBER	POLE DIAMETER	Overall Length	WIRE SIZE	
			Min.	Max
H46458	1.5 in. (38mm)	8 ft. 7.5 in. (2.6m)	0.16 in. (4mm)	2.25 in. (57mm)
H464510	1.5 in. (38mm)	10 ft. 7.5 in. (3.2m)	0.16 in. (4mm)	2.25 in. (57mm)
H46468	2 in. (51mm)	8 ft. 8 in. (2.7m)	0.16 in. (4mm)	2.25 in. (57mm)
H464610	2 in. (51mm)	10 ft. 8 in. (3.3m)	0.16 in. (4mm)	2.25 in. (57mm)
H464612	2 in. (51mm)	12 ft. 8 in. (3.9m)	0.16 in. (4mm)	2.25 in. (57mm)
H464710	2 in. (51mm)	10 ft. 8 in. (3.3m)	0.16 in. (4mm)	2.25 in. (57mm)
H464712	2.5 in. (64mm)	12 ft. 8 in. (3.9m)	0.16 in. (4mm)	2.25 in. (57mm)
H464714	2.5 in. (64mm)	14 ft. 8 in. (4.4m)	0.16 in. (4mm)	2.25 in. (57mm)
H464716	2.5 in. (64mm)	17 ft. 2 in. (5.2m)	0.16 in. (4mm)	2.25 in. (57mm)
C4000171	3 in. (76mm)	12 ft. 10 in. (3.9m)	0.16 in. (4mm)	2.25 in. (57mm)
C4000172	3 in. (76mm)	14 ft. 10 in. (4.5m)	0.16 in. (4mm)	2.25 in. (57mm)
H467712	2.5 in. (64mm)	12 ft. 10 in. (3.9m)	1.50 in. (38mm)	2.88 in. (73mm)
H467714	2.5 in. (64mm)	14 ft. 10 in. (4.5m)	1.50 in. (38mm)	2.88 in. (73mm)

All Epoxiglas™ Pole is manufactured and tested according to ASTM F711, IEC 60855, and CHANCE specifications including 100% electrical testing at the factory.

These instructions do not claim to cover all details or variations concerning installation, operation, or maintenance of this tool. If further information is desired, contact Hubbell Power Systems.

Phone: 573-682-5521

Email: hpsliterature@hubbell.com

Web: hubbellpowersystems.com

Hubbell Power Systems, Inc. reserves the right to make changes to this manual at any time, without notice, and without incurring any obligation.



TRAINING

CHANCE Lineman Grade Tools offers in-person live line training. Learn more and inquire online at <https://info.hubbellpowersystems.com/lineman-tools-training>.

DISCLAIMER

These products should only be installed, used, or serviced by adequately trained personnel. These instructions are not a substitute for adequate training in the safe use of these products, and they do not address all situations that may be encountered when using these products. When using any product, always read and follow the installation and operating instructions and warnings for the product, all applicable federal, state, and local safety regulations, industry standards, and your employer's internal safety guidelines and operating instructions. Failure to follow applicable safety rules and instructions may result in serious injury, death, and/or property damage.

The user is responsible for the safe installation and use of any product, and must evaluate the conditions at the time of use and consult with their employer's internal safety guidelines or safety experts hired by your employer, as needed.

Hubbell Power Systems, Inc. is not liable for death, serious injury, or property damage resulting from the use of these products in any manner that is inconsistent with the product installation and operating instructions, your employer's internal safety guidelines, or recommendations from safety experts hired by your company.

If further information is desired or if particular problems are encountered which are not sufficiently covered in these instructions, contact Hubbell Power Systems, Inc. for additional information. Operating and installation instructions are available on the Hubbell Power Systems, Inc. website: hubbellpowersystems.com



For product inquiries, please contact your local sales representative or customer service representative.

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