

## Chicago® Grips – for Bare Wire

- Designed for working with solid and stranded bare wire from .08" (2 mm) to .20" (5.1 mm).
- Lightweight, especially economical grip.
- Single "V" groove jaw.

Cat. No.	Minimum Cable	Maximum Cable	Maximum Safe Load	Jaw Length	Approx. Weight Each
1613-30	12 B&S solid .08" (2.03 mm)	4 B&S solid .20" (5.08 mm)	1500 lbs. (680 kg)	3" (76 mm)	1.50 lbs. (.68 kg)



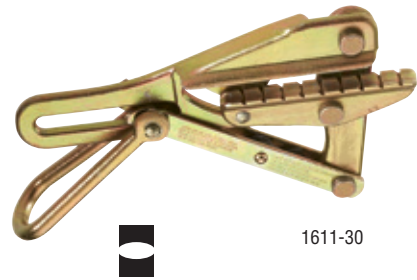
1613-30

## Chicago® Grips – for Weatherproof Wire

- Round inside jaw contour for weatherproof coated wire.
- Notches in jaw provide firm grip on insulation.

Cat. No.	Minimum Cable	Maximum Cable	Maximum Safe Load	Jaw Length	Approx. Weight Each
1611-20	.20" (5.08 mm)	.40" (10.16 mm)	4500 lbs. (2045 kg)	4-3/16" (106 mm)	3 lbs. (1.36 kg)
1611-30	.31" (7.87 mm)	.53" (13.46 mm)	4500 lbs. (2045 kg)	4-3/4" (121 mm)	3.75 lbs. (1.70 kg)
1611-40	.53" (13.46 mm)	.74" (18.80 mm)	8000 lbs. (3636 kg)	5-11/16" (144 mm)	7.75 lbs. (3.52 kg)
1611-50	.78" (19.81 mm)	.88" (22.35 mm)	8000 lbs. (3636 kg)	5-11/16" (144 mm)	7.75 lbs. (3.52 kg)

Note: Due to various types of weatherproof coatings available, selection of proper grips is determined by outside diameter of cable.

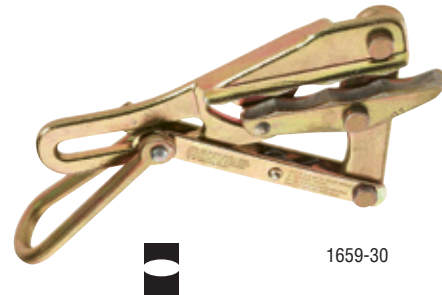


1611-30

## Chicago® Grips – for PVC-Covered Conductors

- Serpentine jaws are specially machined to allow insertion of insulated conductor through the jaws, which reduces danger of slippage which might result in insulation damage.
- Eliminates necessity of stripping insulation from conductor.
- Round inside-jaw contour.

Cat. No.	Minimum Cable	Maximum Cable	Maximum Safe Load	Jaw Length	Approx. Weight Each
1659-20	.20" (5.08 mm)	.42" (10.67 mm)	4500 lbs. (2045 kg)	4-3/16" (106 mm)	3 lbs. (1.36 kg)
1659-30	.31" (7.87 mm)	.50" (12.70 mm)	4500 lbs. (2045 kg)	4-3/4" (121 mm)	3.75 lbs. (1.70 kg)
1659-40	.49" (12.45 mm)	.79" (20.07 mm)	8000 lbs. (3636 kg)	5-11/16" (144 mm)	7.75 lbs. (3.52 kg)
1659-50	.79" (20.07 mm)	1.01" (25.56 mm)	8000 lbs. (3636 kg)	5-11/16" (144 mm)	7.75 lbs. (3.52 kg)



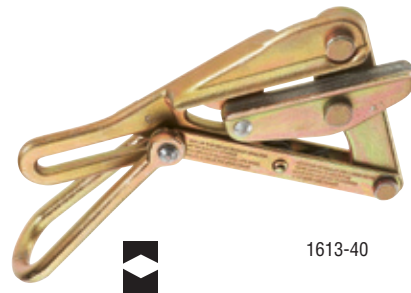
1659-30

## Chicago® Grips – for Extra-High-Strength Cables, Messenger, Guy Strand, and Conductors

- A family of grips designed for cable sizes from .12" (3.10 mm) to 1" (25.4 mm).
- Double "V" grooves give four-point contact, reducing chance of slipping and providing proper alignment of wire and cable.
- For larger conductors, see our grips with round inside-jaw contour.

Cat. No.	Minimum Cable	Maximum Cable	Maximum Safe Load	Jaw Length	Approx. Weight Each
1613-40	.12" (3.05 mm)	.37" (9.40 mm)	4500 lbs. (2045 kg)	4-3/16" (106 mm)	3 lbs. (1.36 kg)
1684-5	.218" (5.54 mm)	.55" (13.97 mm)	8000 lbs. (3636 kg)	5" (127 mm)	6.25 lbs. (2.84 kg)
1692-5	.218" (5.54 mm)	.55" (13.97 mm)	8000 lbs. (3636 kg)	5" (127 mm)	6.40 lbs. (2.89 kg)
1684-5F*	.16" (4.06 mm)	.55" (13.97 mm)	8000 lbs. (3636 kg)	5" (127 mm)	6.25 lbs. (2.84 kg)
1628-16	.31" (7.87 mm)	.62" (15.75 mm)	15,000 lbs. (6818 kg)	7-1/4" (184 mm)	15.30 lbs. (7.00 kg)
1628-17	.50" (12.70 mm)	.75" (19.05 mm)	15,000 lbs. (6818 kg)	7-1/4" (184 mm)	16.30 lbs. (7.40 kg)
1628-18	.75" (19.05 mm)	1.00" (25.40 mm)	15,000 lbs. (6818 kg)	7-1/4" (184 mm)	15.70 lbs. (7.10 kg)

\* Similar to Cat. No. 1684-5 except with a file inserted in jaw for extra gripping power. Replacement file No. 578 and screws No. 573 are also available.



1613-40

All dimensions are in inches and (millimeters) unless otherwise specified.

**▲WARNING:** Grips are to be used for temporary installation, not for permanent anchorage.

**▲WARNING:** When used on/or near energized lines, ground, insulate, or isolate grip before pulling.

**▲WARNING:** Do not exceed rated capacity.

**▲WARNING:** Always match proper size and type of grip to application.

**▲WARNING:** Before each use, clean jaw area and inspect grip for proper operation to avoid slippage.



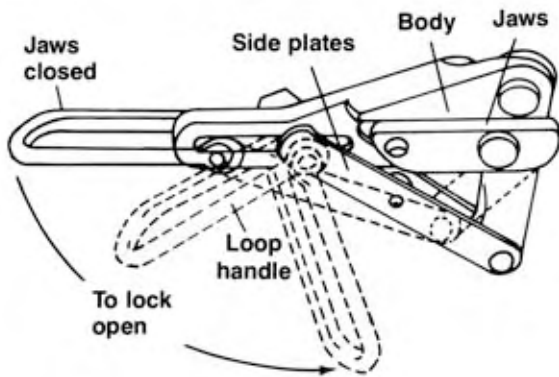
# Introduction – Wire Pulling Grips

## Forged-Steel Grips

- Total wire and cable-pulling capability for the power, utility, telecommunication, and many other industries.
- Klein Chicago® and Haven's® Grips are widely used in the power, communications, and general construction fields to pull wire and cable, and to maintain temporary tension until it can be permanently terminated.
- Used for pulling up lines to tension only; not to be used as anchors.
- Complete line includes a type and size for every application, and for virtually every type of wire and cable, including:
  - Extra-high-strength cables, messenger, guy strand, and conductors
  - Bare wire
  - Large-diameter conductors
  - Bare ACSR, aluminum and stranded-copper cables
  - PVC-covered conductors
  - Weatherproof wire
  - Telephone cable

## Klein Chicago® Grips

Locking loop handles are standard on most Chicago grips, and available on hot-line grips by adding the prefix letter "S" before catalog number. The locking feature allows the jaws to be held in an open position for easier placement on wire and cable. Also makes grip positioning easier than with wedge or bolt-on designs. To lock, open jaws and fold loop handle toward the side plates.



## How to select the proper grip

Care should be taken in choosing grips to assure correct handling of wire and cable. Three basic factors determine the selection of the proper grip for each specific application:

1. Type of wire or cable.
2. Outside diameter of wire or cable.
3. Maximum safe load required.

All three of these factors are included in the description of each Klein grip along with the type of inside jaw contour available. Correct selection of gripping jaws is essential to avoid damage to wire or cable. In pulling stranded wire, the jaws should be long enough to take a full lay of cable to avoid damage to the conductor.

The tables in this grip section are supplied to assist you in determining outside diameters and breaking points of the various types and sizes of wire and cable in general use. For our recommendations of the proper grip to meet your needs, provide exact cable description and pulling requirements.

## Inside-jaw contours

Klein Chicago® Grips are offered with three types of jaw contour: Single V, Double V, and Round. Each grip comes with the proper inside-jaw contour for the type of wire or cable to be worked.



### Single V

Simple three-point contact jaws designed for use on small-diameter bare wire and cable (solid and stranded).

### Double V

Four-point contact provides greater gripping pressure and assures proper alignment of wire and cable within the jaws. Designed for high-strength steel guy wire and messenger wire, and extra-high-strength cables and conductors.

### Round

Round jaws provide maximum contact and gripping power to minimize conductor damage. This jaw design is recommended for use on bare aluminum, ACSR, and copper conductors.

## Repair or replace?

Never repair any grip. Grip jaws can sometimes be replaced if the grip is returned to Klein, but structural wear or damage cannot be safely corrected. Grips that are bent, misaligned, or otherwise distorted should be discarded and replaced.

Before each use, check all grips for jaw condition, proper alignment of jaws and all parts, and possible distortion caused by exceeding safe-load specifications. Grips should operate smoothly. Spring-loaded grips should lock open with loop handle in "Down" position and should close automatically with loop handle "Up."

The Klein parallel jaw grip may be tested by opening and closing the jaws by hand, exercising proper caution. All parts and rivets which may be distorted due to exceeding the safe load should be checked.

## Recommended Care and Maintenance

The following guidelines have been established in order to maintain all grips in good condition:

1. **Clean the grip jaws.** Use emery cloth or a clean wire brush to periodically clean the surfaces of grip jaws. (Note: Aluminum-strand conductors may have a die-grease coating which can deposit on grip jaws. New aluminum conductors should be wiped clean before grip application. Grip jaws should be wiped clean of all grease before use.) Be sure to clean grip jaws before and after each use on wire or cable which has been galvanized or otherwise coated.
2. **Clean all working parts.** Use a high-quality degreaser to clean all joints and moving parts, then apply an appropriate lubricant.
3. **Check all parts.** Look carefully for distortion or misalignment.
4. **Never repair any grip.** If there is ever any question about the safe condition of any grip, please consult us directly. Please remember this rule.

**OSHA Information:** OSHA requires that all hand tools and equipment be maintained in good working order and that they be free from damage caused by wear or abuse (OSHA Part 1910, Subpart P, Section 1910.242). In addition, OSHA Part 1926, Subpart V, Section 1926.955, paragraph (C) (7) (ii) and (C) (8) specifically state that: "The manufacturer's load rating shall not be exceeded for stringing lines, pulling lines, sock connectors, and all load-bearing hardware and accessories." "Conductor grips shall not be used on wire rope unless designed for this application."



## Diameters, stranding, and ultimate strength of ACSR and all-aluminum bare cables

AWG or cmil Cable Size	ACSR				All-Aluminum			
	Code Word	Number of Alum. & Steel Strands	Diameter	Ultimate Strength in Pounds (Class A Galv. Steel)	Code Word	Number of Strands	Diameter	Ultimate Strength in Pounds
6	Turkey	6x1	.198"	1190	Peachbell	7	.184"	563
4	Swan	6x1	.250"	1860	Rose	7	.232"	881
4	Swanate	7x1	.257"	2360	—	—	—	—
2	Sparrow	6x1	.316"	2850	Iris	7	.292"	1350
2	Sparate	7x1	.325"	3640	—	—	—	—
1	Robin	6x1	.354"	3550	Pansy	7	.328"	1640
1/0	Raven	6x1	.398"	4380	Poppy	7	.368"	1990
2/0	Quail	6x1	.447"	5300	Aster	7	.414"	2510
3/0	Pigeon	6x1	.502"	6620	Phlox	7	.464"	3040
4/0	Penquin	6x1	.563"	8350	Oxlip	7	.522"	3830
266800 C.M.	Waxwing	18x1	.609"	6880	Daisy	7	.586"	4830
266800	Partridge	26x7	.642"	11,300	Laurel	19	.593"	4970
300000	Ostrich	26x7	.680"	12,700	—	—	—	—
336400	Oriole	30x7	.741"	17,300	Tulip	19	.666"	6150
336400	Linnet	26x7	.720"	14,100	—	—	—	—
397500	Lark	30x7	.806"	20,300	Canna	19	.724"	7110
397500	Ibis	26x7	.783"	16,300	—	—	—	—
477000	Hen	30x7	.883"	23,800	Cosmos	19	.792"	8360
477000	Hawk	26x7	.858"	19,500	Syringa	37	.795"	8690
500000	Heron	30x7	.904"	24,950	Zinnia	19	.811"	8760
500000	—	—	—	—	Hycinth	37	.813"	9110
556500	Eagle	30x7	.953"	27,800	Dahlia	19	.856"	9750
556500	Dove	26x7	.927"	22,600	Mistletoe	37	.858"	9940
600000	—	—	—	—	Meadowsweet	37	.891"	10,700
605000	Squab	26x7	.966"	24,300	—	—	—	—
605000	Peacock	24x7	.953"	21,600	—	—	—	—
636000	Egret	30x19	1.019"	31,500	Orchid	37	.918"	11,400
636000	Grosbeak	26x7	.990"	25,200	—	—	—	—
636000	Goose	54x7	.977"	23,300	—	—	—	—
666600	Flamingo	24x7	1.000"	23,700	—	—	—	—
715500	Redwing	30x19	1.081"	34,600	Violet	37	.974"	12,800
715500	Starling	26x7	1.051"	28,400	Nasturtium	61	.975"	13,100
715500	Crow	54x7	1.036"	25,900	—	—	—	—
795000	Mallard	30x19	1.140"	38,400	Arbutus	37	1.026"	13,900
795000	Drake	26x7	1.108"	31,500	Lilac	61	1.028"	14,300
795000	Condor	54x7	1.092"	28,200	—	—	—	—
874500	Crane	54x7	1.146"	31,000	Anemone	37	1.076"	15,000
874500	—	—	—	—	Crocus	61	1.077"	15,800
900000	Canary	54x7	1.162"	31,900	—	—	—	—
954000	Cardinal	54x7	1.196"	33,800	Magnolia	37	1.124"	16,400
954000	—	—	—	—	Goldenrod	61	1.126"	16,900
1033500	Curlew	54x7	1.245"	36,600	Bluebell	37	1.170"	17,700
1113000	Finch	54x19	1.293"	39,100	Marigold	61	1.216"	19,700
1192500	Grackle	54x19	1.338"	41,900	Hawthorn	61	1.258"	21,100
1272000	Pheasant	54x19	1.382"	43,600	Narcissus	61	1.297"	22,000
1351500	Martin	54x19	1.424"	46,300	Columbine	61	1.339"	23,400
1431000	Plover	54x19	1.465"	49,100	Carnation	61	1.379"	24,300
1510500	Parrot	54x19	1.505"	51,700	—	—	—	—
1510500	—	—	—	—	Gladiolus	61	1.417"	25,600
1590000	Falcon	54x19	1.545"	54,500	Coreopsis	61	1.453"	27,000
80000	Grouse	8x1	.367"	5200	—	—	—	—
101800	Petrel	12x7	.461"	10,400	—	—	—	—
110800	Minorca	12x7	.481"	11,300	—	—	—	—
134600	Leghorn	12x7	.530"	13,600	—	—	—	—
159000	Guinea	12x7	.576"	16,000	—	—	—	—
176900	Dotterel	12x7	.607"	17,300	—	—	—	—
190800	Dorking	12x7	.631"	18,700	—	—	—	—
203200	Brahma	16x19	.714"	28,400	—	—	—	—
211300	Cochin	12x7	.664"	20,700	—	—	—	—

The above information is from data published by the Aluminum Association. For diameters of weatherproof cables, see table published by the manufacturer.

