

Fittings, Clevis Style, Strain Insulator



1. Scope

This standard covers the requirements for forged steel, clevis style strain insulator fittings. The insulator fitting consists of the body, a clevis pin, and cotter pin(s).

This standard applies to the following Seattle City Light (SCL) stock numbers:

Stock No.	Description
695540	Socket clevis, 90°
695545	Socket clevis
695550	Socket clevis, long
695970	Clevis eye, 90°

2. Application

Clevis style strain insulator fittings are used in hot line work, primarily for connecting associated hardware to ball and socket type insulators. The clevis eye is used to connect quadrant type deadends to clevis tongue insulator or yoke plates.

Clevis style strain insulator fittings are for use with class 52-3 insulators specified in ANSI C-29.2.

3. Industry Standards

Clevis style strain insulator fittings shall meet the applicable requirements of the following industry standards:

ANSI/NEMA C29.2B-2013; American National Standard for Insulators – Wet Process Porcelain and Toughened Glass – Transmission Suspension Type

ASTM A47-2014; Standard Specification for Ferritic Malleable Iron Castings

ASTM A153-2005; Standard Specification for Zinc Coating (Hot Dip) on Iron and Steel Hardware

ASTM A668-2016; Standard Specification for Steel Forgings, Carbon and Alloy, for General Industrial Use

4. Requirements

Clevis style strain insulator fittings shall meet the following requirements:

- Dimensions and strengths cited in Table 4 and Figures 4a through 4d.
- Fittings shall be made of heat-treated, drop-forged steel or malleable iron.
- The dimensions of the socket clevis fittings shall meet the requirements of ANSI/NEMA C29.2B as it applies to ball-and-socket gauge for Class 52-3 insulators.
- The fittings shall be galvanized in accordance with ASTM specification A153.
- Cotter pins shall meet the applicable requirements of SCL 5825.90.

Table 4. Dimensions

Stock No.	Type of Ball Fitting	Fig.	Dimensions, Nominal (in)							Ultimate Strength Minimum (lb)
			W	B	C	L	PD	D	A	
695540	Socket clevis, 90°	4a	13/16	1-3/16	1-1/2	2-1/8	5/8	-	3/4	18,000
695545	Socket clevis	4b	7/8	1-5/8	1-3/4	2-5/8	5/8	-	7/8	30,000
695550	Socket clevis, long	4c	7/8	1-15/16	1-3/4	4-1/2	5/8	11/16	7/8	30,000
695570	Clevis eye, 90°	4d	7/8	1-1/4	1-1/2	2-3/4	5/8	1/2	7/8	18,000

Figure 4a. Socket Clevis, 90° Fitting

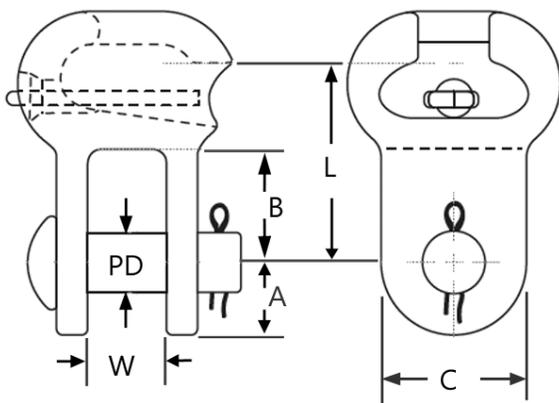


Figure 4b. Socket Clevis Fitting

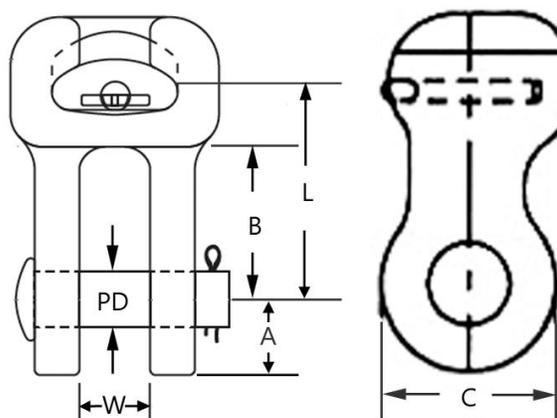


Figure 4c. Socket Clevis, Long Fitting

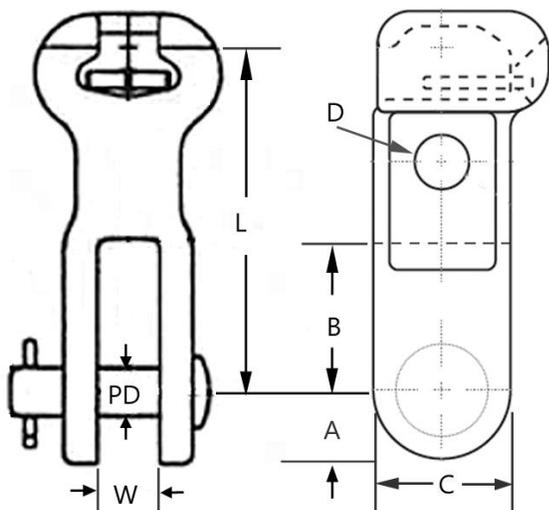
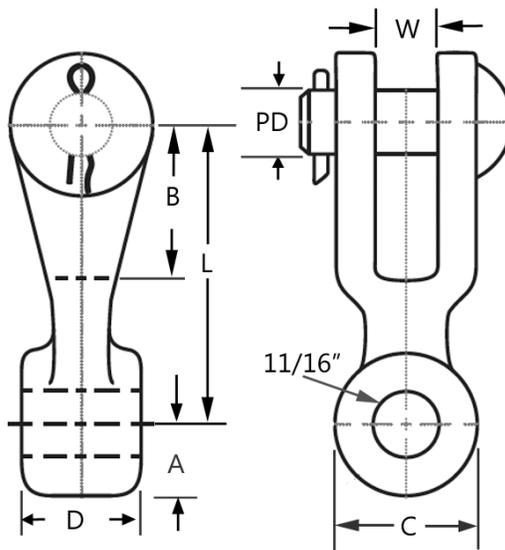


Figure 4d. Clevis Eye Fitting, 90° Fitting



5. Marking

Each fitting shall be permanently and legibly marked in raised or stamped letters.

Marking shall include but not be limited to the following information:

- Manufacturer name or symbol
- Manufacturer part number
- Fitting ultimate strength

6. Packaging

Product shall be packaged to prevent damage during shipping, handling, and storage.

Standard package quantity shall not exceed 50 per box.

Standard package weight shall not exceed 50 pounds.

Individual packages shall be legibly marked with:

- Manufacturer name
- Manufacturer catalog number
- Product description
- SCL stock number

Shipping containers shall be legibly marked with:

- SCL purchase order number

7. Issuance

Stock Unit: EA

8. Approved Manufacturers

Stock No.	Description	Approved Manufacturers		
		Hubbell Power Systems/Anderson	Lindsey Manufacturing Co.	MacLean Power Systems/Reliable
695540	Socket clevis, 90°	11545-2000	–	–
695545	Socket clevis	SC-30	3183	SCR55
695550	Socket clevis, long	SC-30AHM	3180	SCL55B
695970	Clevis eye, 90°	CE025-04	–	RCE-55-625

9. References

SCL Material Standard 5825.90; “Cotter Pin, Humpback, Stainless Steel”

10. Sources

Wang, Quan; SCL Standards Engineer, subject matter expert and originator of 6945.10 (quan.wang@seattle.gov)

SCL Material Standard 6955.2 (canceled); “Fittings Strain Insulator”

ASTM A235-1967; Specification for Carbon Steel Forgings for General Industrial Use (withdrawn 1975, replaced by ASTM A668/A668M)