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**DESIGNER AND MANUFACTURER
OF QUALITY PARTS**

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WIRING AND TUBE CLAMPS

LIGHT DUTY CLAMPS

pg. 5



Series CFV-CF

Flared edges around clamping loop help prevent wire or tube abrasion. Furnished open to allow the clip to be snapped over wiring or tube, then closed with the bolt at assembly. Contoured to minimize distortion during clamping.

- Round top hole, slotted lower hole for easy alignment
- HD galvanized steel, G90 treated - ASTM A653/A653M
- .187" - 1" clamping diameter

pg. 6



Series CWV-CW

Furnished open to allow the clip to be snapped over wiring or tube, then closed with the bolt at assembly. Contoured to minimize distortion during clamping.

- Round top hole, round lower hole
- HD galvanized steel, G90 treated - ASTM A653/A653M
- .187" - 1" clamping diameter

MEDIUM DUTY CLAMPS

pg. 7



Series COV-CO

KMC's most popular clamp for holding wiring and tubes. Furnished open to allow the clip to be snapped over wiring or tube, then closed with the bolt at assembly. Contoured to minimize distortion during clamping.

- Round top hole, slotted lower hole for easy alignment
- HD galvanized steel, G90 treated - ASTM A653/A653M
- .187" - 4" clamping diameter

pg. 14



Series COL

Extruded EPDM cushion for added protection and durability. Stainless steel available, as well as neoprene or silicone cushions. Offset in lower leg (through 2.75" clamping diameter) to allow flush surface mount.

- Round top hole, slotted lower hole for easy alignment
- HD galvanized or stainless steel
- .187" - 4" clamping diameter

HEAVY DUTY CLAMPS

pg. 22



Series CCV-CC

Up to .060 gage clamps for use where maximum clamp strength is required. Furnished closed. Contoured to minimize distortion during clamping.

- Round top hole, round lower hole
- HD galvanized steel, G90 treated per ASTM A653/A653M
- Also available in cold rolled steel
- Plating or pre-plated material available
- .250" - 2" clamping diameter

Clamping diameters, materials and other specifications indicated reflect the most commonly used standard products. Please contact KMC for quick-turnaround custom configurations, designed and manufactured to exact requirements.

The terms "clamp" and "clip" may be used interchangeably; however, the general practice is to refer to products having two bolt holes as clamps, and products having one bolt hole or no bolt hole as clips.

Products with series names ending in "V" are cushioned with 1/32" thick vinyl



pg. 26



Series CDV-CD

Standard products designed for clamping two tubes of equal diameters. Custom models available for other configurations.

- Round top hole, slotted lower hole for easy alignment
- HD galvanized steel, G90 treated - ASTM A653/A653M
- .187" - 1" clamping diameter

pg. 28



Series CDL

Featuring an extruded EPDM cushion for added protection and durability. Stainless steel available, as well as neoprene or silicone cushions.

- Round top hole, slotted lower hole for easy alignment
- HD galvanized or stainless steel
- .187" - 1.5" clamping diameter

pg. 31



Series CMV-CM

- Center mount style
- HD galvanized steel, G90 treated per ASTM A653/A653M
- Also available in hot rolled (pickled and oiled) and cold rolled steel
- Plating or pre-plated material available
- .187" - 1.5" clamping diameter

pg. 32



Series CHV-CH

Used to hold wire or tube against a solid surface.

- HD galvanized steel, G90 treated per ASTM A653 / A653M
- .125" - 1" clamping diameter

pg. 34



Series CJV-CJ

For applications where clip is installed first and wiring added later. Clip can be pinched shut with screwdriver blade or pliers.

- HD galvanized steel, G90 treated per ASTM A653 / A653M
- .125" - 1" clamping diameter

pg. 36



Series FC

Spring steel clip holds wires to structures such as truck or trailer frames; snap mount.

pg. 30



Series SC

Saddle clamp anchors steel or aluminum grating; bolt mounted.

pg. 37



Series SW/MW/BW

Hold push/pull control cable to tubing, usually on outdoor power equipment; snap mount.

pg. 37



Series CE

Locks onto wire casing; bolt mounted.

CONTROL CABLE CLIPS

pg. 38



Series PF

Flat-bottom core hole plugs.

pg. 39



Series PC

Concave bottom core hole plugs.

- Carbon steel standard
- Also available in brass, aluminum, galvanized or stainless steel
- 3/8" - 3" nominal diameter
- Tapered walls

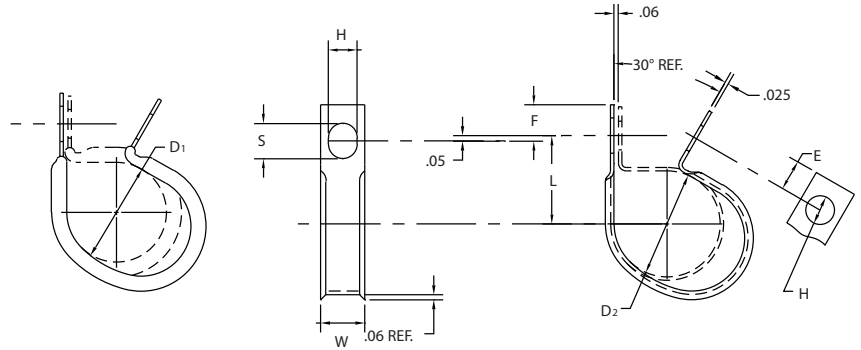
DOUBLE TUBE CLAMPS

TUBE, WIRING & GRATE CLIPS

EXPANSION PLUGS

FLARED EDGE CLAMPS Closed Type – Furnished Open

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M
 CUSHION: Black Vinyl, 1/32" Thick



D ₁		D ₂		L	H	W	E	F	S
Clamping Diameter	Part Number	Clamping Diameter	Part Number	Center To Center	Hole Diameter	Width	Hole Center To End	Slot Center To End	Slot Length
± .031		± .015		± .031	± .005	± .010	± .015	± .015	± .020
.187	CFV-0409	.250	CF-0409	.500	.281	.500	.250	.296	.375
.250	CFV-0509	.312	CF-0509	.531					
.312	CFV-0609	.375	CF-0609	.562					
.375	CFV-0709	.437	CF-0709	.593					
.437	CFV-0809	.500	CF-0809	.625					
.500	CFV-0909	.562	CF-0909	.656					
.562	CFV-1009	.625	CF-1009	.687					
.625	CFV-1109	.687	CF-1109	.718					
.687	CFV-1209	.750	CF-1209	.750					
.750	CFV-1309	.812	CF-1309	.781					
.812	CFV-1409	.875	CF-1409	.812					
.875	CFV-1509	.937	CF-1509	.843					
.937	CFV-1609	1.000	CF-1609	.875					
1.000	CFV-1709	1.062	CF-1709	.906					
.125	CFV-0311	.187	CF-0311	.500	.343	.562	.281	.328	.437
.187	CFV-0411	.250	CF-0411	.531					
.250	CFV-0511	.312	CF-0511	.562					
.312	CFV-0611	.375	CF-0611	.594					
.375	CFV-0711	.437	CF-0711	.625					
.437	CFV-0811	.500	CF-0811	.656					
.500	CFV-0911	.562	CF-0911	.688					
.562	CFV-1011	.625	CF-1011	.719					
.625	CFV-1111	.687	CF-1111	.750					
.687	CFV-1211	.750	CF-1211	.781					
.750	CFV-1311	.812	CF-1311	.812					
.812	CFV-1411	.875	CF-1411	.844					
.875	CFV-1511	.937	CF-1511	.875					
.937	CFV-1611	1.000	CF-1611	.906					
1.000	CFV-1711	1.062	CF-1711	.938					
.125	CFV-0313	.187	CF-0313	.562	.406	.625	.312	.359	.500
.187	CFV-0413	.250	CF-0413	.593					
.250	CFV-0513	.312	CF-0513	.625					
.312	CFV-0613	.375	CF-0613	.656					
.375	CFV-0713	.437	CF-0713	.687					
.437	CFV-0813	.500	CF-0813	.718					
.500	CFV-0913	.562	CF-0913	.750					
.562	CFV-1013	.625	CF-1013	.781					
.625	CFV-1113	.687	CF-1113	.812					
.687	CFV-1213	.750	CF-1213	.843					
.750	CFV-1313	.812	CF-1313	.875					
.812	CFV-1413	.875	CF-1413	.906					
.875	CFV-1513	.937	CF-1513	.937					
.937	CFV-1613	1.000	CF-1613	.968					
1.000	CFV-1713	1.062	CF-1713	1.000					

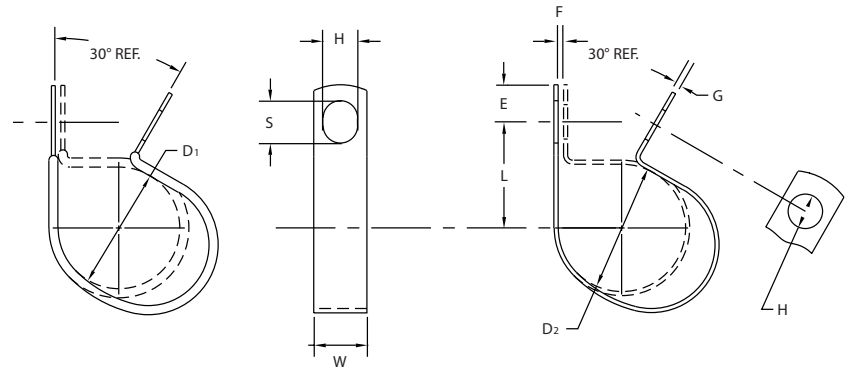
Except for clamping diameter, dimensions of cushioned and plain parts are identical.



WIRING AND TUBE CLAMPS Closed Type – Furnished Open

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M
 CUSHION: Black Vinyl, 1/32" Thick
 CWV-CW: Parts Have Two Round Holes

LIGHT DUTY CLAMPS



D ₁		D ₂		H	L	W	E	F	G
Clamping Diameter	Part Number	Clamping Diameter	Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Gap	Gage
± .031		± .015		± .005	± .031	± .010	± .015	± .031	See Pg. 40
		.125	CW-0205*	.172	.297	.375	.188	.062	.032
			CW-0207	.203	.375	.500	.218	.062	.032
.125	CWV-0305*	.187	CW-0305*	.172	.328	.375	.187	.062	.032
	CWV-0307		CW-0307	.203	.375	.500	.218	.062	.032
.187	CWV-0405*	.250	CW-0405*	.172	.344	.375	.187	.062	.032
	CWV-0407		CW-0407	.203	.406	.500	.218	.062	.032
.250	CWV-0505*	.312	CW-0505*	.172	.375	.375	.187	.062	.032
	CWV-0507		CW-0507	.203	.437	.500	.218	.062	.032
.312	CWV-0605*	.375	CW-0605*	.172	.406	.375	.187	.062	.032
	CWV-0607		CW-0607	.203	.468	.500	.218	.062	.032
.375	CWV-0705*	.437	CW-0705*	.172	.437	.375	.187	.062	.032
	CWV-0707		CW-0707	.203	.500	.500	.218	.062	.032
.437	CWV-0805*	.500	CW-0805*	.172	.468	.375	.187	.062	.032
	CWV-0807		CW-0807	.203	.531	.500	.218	.062	.032
.500	CWV-0905*	.562	CW-0905*	.172	.500	.375	.187	.062	.032
	CWV-0907		CW-0907	.203	.562	.500	.218	.062	.032
.562	CWV-1005*	.625	CW-1005*	.172	.531	.375	.187	.062	.032
	CWV-1007		CW-1007	.203	.593	.500	.218	.062	.032
.625	CWV-1105*	.687	CW-1105*	.172	.562	.375	.187	.062	.032
	CWV-1107		CW-1107	.203	.625	.500	.218	.062	.032
.687	CWV-1207	.750	CW-1207	.203	.656	.500	.218	.062	.032
.750	CWV-1307	.812	CW-1307	.203	.687	.500	.218	.062	.032
.812	CWV-1407	.875	CW-1407	.203	.718	.500	.218	.062	.032
.875	CWV-1507	.937	CW-1507	.203	.750	.500	.218	.062	.032
.937	CWV-1607	1.000	CW-1607	.203	.781	.500	.218	.062	.032
1.000	CWV-1707	1.062	CW-1707	.203	.812	.500	.218	.062	.032

Except for clamping diameter, dimensions of cushioned and plain parts are identical.
 NOTE: Part numbers shown with asterisk (*) are produced from CRCQ Steel, Zinc Plated.

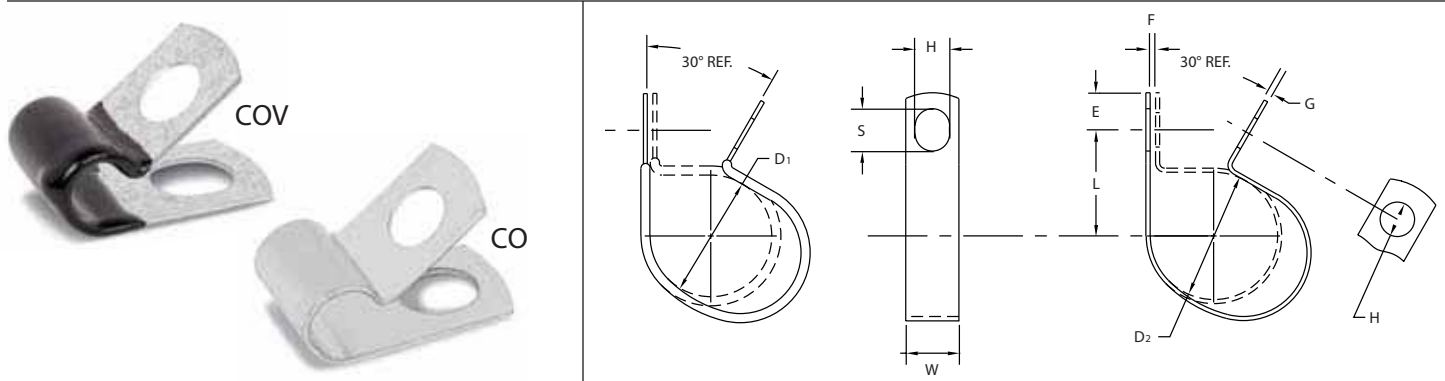


WIRING AND TUBE CLAMPS Closed Type – Furnished Open

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M

CUSHION: Black Vinyl, 1/32" Thick

COV-CO: Parts Have One Round and One Slotted Hole



D ₁		D ₂		H	L	W	E	F	G	S
Clamping Diameter	Part Number	Clamping Diameter	Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Gap	Gage	Slot Length
± .031		± .015		± .005	± .031	± .010	± .015	± .031	See Pg. 40	± .020
		.125	CO-0209	.281	.468	.500	.312	.031	.032	.375
			CO-0211	.343	.531	.625	.375	.031	.032	.437
			CO-0213	.406	.593	.750	.437	.031	.032	.500
.125	COV-0309	.187	CO-0309	.281	.468	.500	.312	.031	.032	.375
	COV-0311		CO-0311	.343	.531	.625	.375	.031	.032	.437
	COV-0313		CO-0313	.406	.593	.750	.437	.031	.032	.500
.187	COV-0409	.250	CO-0409	.281	.500	.500	.312	.031	.032	.375
	COV-0411		CO-0411	.343	.562	.625	.375	.031	.032	.437
	COV-0413		CO-0413	.406	.625	.750	.437	.031	.032	.500
	COV-0415		CO-0415	.468	.687	.750	.500	.031	.032	.562
.250	COV-0509	.312	CO-0509	.281	.531	.500	.312	.031	.032	.375
	COV-0511		CO-0511	.343	.593	.625	.375	.031	.032	.437
	COV-0513		CO-0513	.406	.656	.750	.437	.031	.032	.500
	COV-0515		CO-0515	.468	.718	.750	.500	.031	.032	.562
	COV-0517		CO-0517	.531	.781	.875	.562	.031	.032	.625
.312	COV-0609	.375	CO-0609	.281	.562	.500	.312	.031	.032	.375
	COV-0611		CO-0611	.343	.625	.625	.375	.031	.032	.437
	COV-0613		CO-0613	.406	.687	.750	.437	.031	.032	.500
	COV-0615		CO-0615	.468	.750	.750	.500	.031	.032	.562
	COV-0617		CO-0617	.531	.812	.875	.562	.031	.032	.625
.375	COV-0709	.437	CO-0709	.281	.593	.500	.312	.062	.032	.375
	COV-0711		CO-0711	.343	.656	.625	.375	.062	.032	.437
	COV-0713		CO-0713	.406	.718	.750	.437	.062	.032	.500
	COV-0715		CO-0715	.468	.781	.875	.500	.062	.032	.562
	COV-0717		CO-0717	.531	.843	.875	.562	.062	.032	.625
.437	COV-0809	.500	CO-0809	.281	.625	.500	.312	.062	.048	.375
	COV-0811		CO-0811	.343	.687	.625	.375	.062	.048	.437
	COV-0813		CO-0813	.406	.750	.750	.437	.062	.048	.500
	COV-0815		CO-0815	.468	.812	.875	.500	.062	.048	.562
	COV-0817		CO-0817	.531	.875	1.000	.562	.062	.048	.625
.500	COV-0909	.562	CO-0909	.281	.656	.500	.312	.062	.048	.375
	COV-0911		CO-0911	.343	.718	.625	.375	.062	.048	.437
	COV-0913		CO-0913	.406	.781	.750	.437	.062	.048	.500
	COV-0915		CO-0915	.468	.843	.875	.500	.062	.048	.562
	COV-0917		CO-0917	.531	.906	1.000	.562	.062	.048	.625
.562	COV-1009	.625	CO-1009	.281	.687	.500	.312	.062	.048	.375
	COV-1011		CO-1011	.343	.750	.625	.375	.062	.048	.437
	COV-1013		CO-1013	.406	.812	.750	.437	.062	.048	.500
	COV-1015		CO-1015	.468	.875	.875	.500	.062	.048	.562
	COV-1017		CO-1017	.531	.937	1.000	.562	.062	.048	.625

Except for clamping diameter, dimensions of cushioned and plain parts are identical.
NOTE: Part numbers shown with asterisk (*) are produced from CRCQ Steel, Zinc Plated.

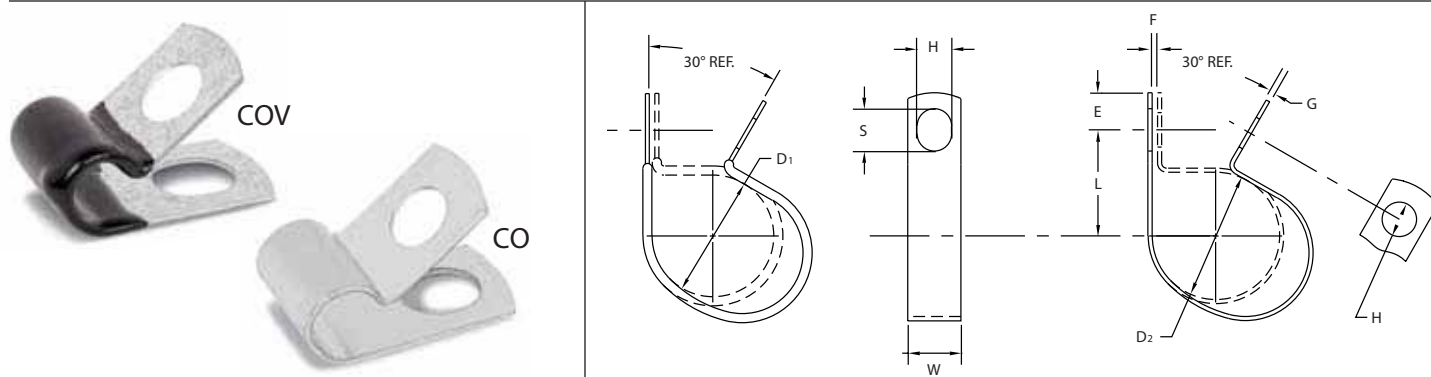


WIRING AND TUBE CLAMPS Closed Type – Furnished Open

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M

CUSHION: Black Vinyl, 1/32" Thick

COV-CO: Parts Have One Round and One Slotted Hole



D ₁		D ₂		H	L	W	E	F	G	S
Clamping Diameter	Part Number	Clamping Diameter	Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Gap	Gage	Slot Length
± .031		± .015		± .005	± .031	± .010	± .015	± .031	See Pg. 40	± .020
.625	COV-1109	.687	CO-1109	.281	.718	.500	.312	.062	.048	.375
	COV-1111		CO-1111	.343	.781	.625	.375	.062	.048	.437
	COV-1113		CO-1113	.406	.843	.750	.437	.062	.048	.500
	COV-1115		CO-1115	.468	.906	.875	.500	.062	.048	.562
	COV-1117		CO-1117	.531	.968	1.000	.562	.062	.048	.625
.687	COV-1209	.750	CO-1209	.281	.750	.500	.312	.062	.048	.375
	COV-1211		CO-1211	.343	.812	.625	.375	.062	.048	.437
	COV-1213		CO-1213	.406	.875	.750	.437	.062	.048	.500
	COV-1215		CO-1215	.468	.937	.875	.500	.062	.048	.562
	COV-1217		CO-1217	.531	1.000	1.000	.562	.062	.048	.625
.750	COV-1309	.812	CO-1309	.281	.781	.500	.312	.062	.048	.375
	COV-1311		CO-1311	.343	.843	.625	.375	.062	.048	.437
	COV-1313		CO-1313	.406	.906	.750	.437	.062	.048	.500
	COV-1315		CO-1315	.468	.968	.875	.500	.062	.048	.562
	COV-1317		CO-1317	.531	1.031	1.000	.562	.062	.048	.625
.812	COV-1409	.875	CO-1409	.281	.812	.500	.312	.062	.048	.375
	COV-1411		CO-1411	.343	.875	.625	.375	.062	.048	.437
	COV-1413		CO-1413	.406	.937	.750	.437	.062	.048	.500
	COV-1415		CO-1415	.468	1.000	.875	.500	.062	.048	.562
	COV-1417		CO-1417	.531	1.062	1.000	.562	.062	.048	.625
.875	COV-1509	.937	CO-1509	.281	.843	.500	.312	.062	.048	.375
	COV-1511		CO-1511	.343	.906	.625	.375	.062	.048	.437
	COV-1513		CO-1513	.406	.968	.750	.437	.062	.048	.500
	COV-1515		CO-1515	.468	1.031	.875	.500	.062	.048	.562
	COV-1517		CO-1517	.531	1.093	1.000	.562	.062	.048	.625

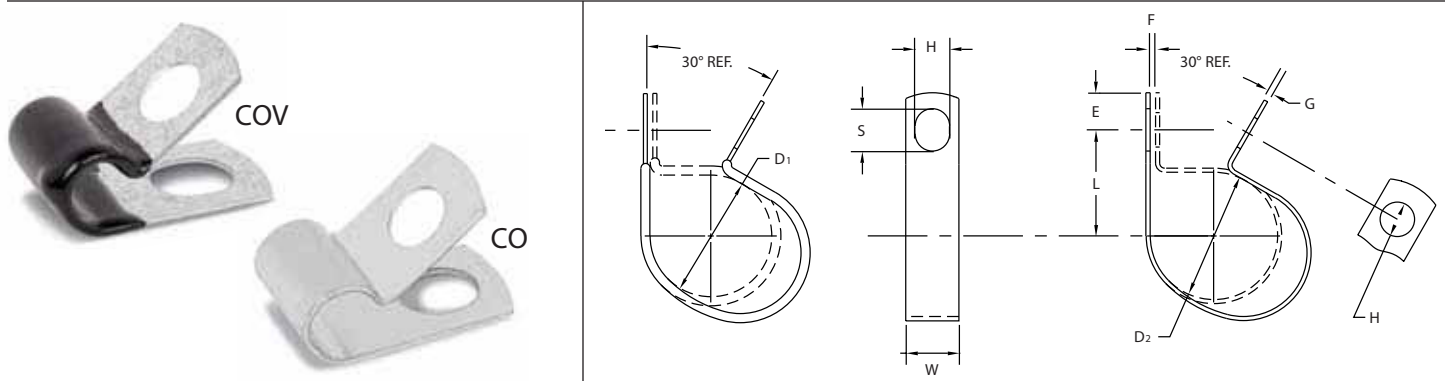
Except for clamping diameter, dimensions of cushioned and plain parts are identical.
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WIRING AND TUBE CLAMPS Closed Type – Furnished Open

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M

CUSHION: Black Vinyl, 1/32" Thick

COV-CO: Parts Have One Round and One Slotted Hole



D ₁		D ₂		H	L	W	E	F	G	S
Clamping Diameter	Part Number	Clamping Diameter	Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Gap	Gage	Slot Length
± .031		± .015		± .005	± .031	± .010	± .015	± .031	See Pg. 40	± .020
.937	COV-1609	1.000	CO-1609	.281	.875	.500	.312	.062	.048	.375
	COV-1611		CO-1611	.343	.937	.625	.375	.062	.048	.437
	COV-1613		CO-1613	.406	1.000	.750	.437	.062	.048	.500
	COV-1615		CO-1615	.468	1.062	.875	.500	.062	.048	.562
	COV-1617		CO-1617	.531	1.125	1.000	.562	.062	.048	.625
1.000	COV-1709	1.062	CO-1709	.281	.906	.500	.312	.062	.048	.375
	COV-1711		CO-1711	.343	.968	.625	.375	.062	.048	.437
	COV-1713		CO-1713	.406	1.031	.750	.437	.062	.048	.500
	COV-1715		CO-1715	.468	1.093	.875	.500	.062	.048	.562
	COV-1717		CO-1717	.531	1.156	1.000	.562	.062	.048	.625
1.062	COV-1809	1.125	CO-1809	.281	.937	.500	.312	.062	.048	.375
	COV-1811		CO-1811	.343	1.000	.625	.375	.062	.048	.437
	COV-1813		CO-1813	.406	1.062	.750	.437	.062	.048	.500
	COV-1815		CO-1815	.468	1.125	.875	.500	.062	.048	.562
	COV-1817		CO-1817	.531	1.187	1.000	.562	.062	.048	.625
1.125	COV-1909	1.187	CO-1909	.281	.968	.500	.312	.062	.048	.375
	COV-1911		CO-1911	.343	1.031	.625	.375	.062	.048	.437
	COV-1913		CO-1913	.406	1.093	.750	.437	.062	.048	.500
	COV-1915		CO-1915	.468	1.156	.875	.500	.062	.048	.562
	COV-1917		CO-1917	.531	1.218	1.000	.562	.062	.048	.625
1.187	COV-2009	1.250	CO-2009	.281	1.000	.500	.312	.062	.048	.375
	COV-2011		CO-2011	.343	1.062	.625	.375	.062	.048	.437
	COV-2013		CO-2013	.406	1.125	.750	.437	.062	.048	.500
	COV-2015		CO-2015	.468	1.187	.875	.500	.062	.048	.562
	COV-2017		CO-2017	.531	1.250	1.000	.562	.062	.048	.625
1.250	COV-2109	1.312	CO-2109	.281	1.031	.500	.312	.062	.048	.375
	COV-2111		CO-2111	.343	1.093	.625	.375	.062	.048	.437
	COV-2113		CO-2113	.406	1.156	.750	.437	.062	.048	.500
	COV-2115		CO-2115	.468	1.218	.875	.500	.062	.048	.562
	COV-2117		CO-2117	.531	1.281	1.000	.562	.062	.048	.625

Except for clamping diameter, dimensions of cushioned and plain parts are identical.
NOTE: Part numbers shown with asterisk (*) are produced from CRCQ Steel, Zinc Plated.

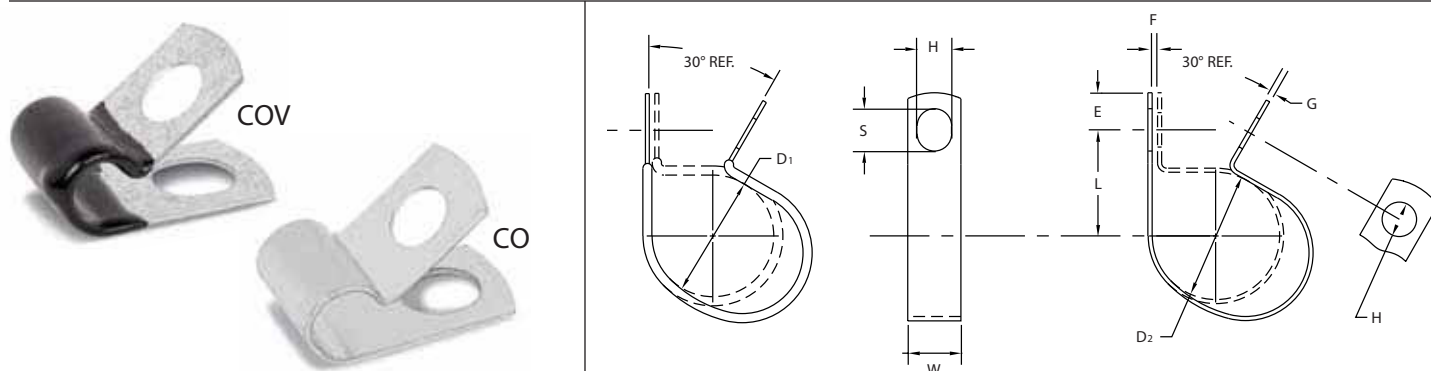


WIRING AND TUBE CLAMPS Closed Type – Furnished Open

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M

CUSHION: Black Vinyl, 1/32" Thick

COV-CO: Parts Have One Round and One Slotted Hole



D ₁		D ₂		H	L	W	E	F	G	S
Clamping Diameter	Part Number	Clamping Diameter	Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Gap	Gage	Slot Length
± .031		± .015		± .005	± .031	± .010	± .015	± .031	See Pg. 40	± .020
1.312	COV-2209	1.375	CO-2209	.281	1.062	.500	.312	.062	.048	.375
	COV-2211		CO-2211	.343	1.125	.625	.375	.062	.048	.437
	COV-2213		CO-2213	.406	1.187	.750	.437	.062	.048	.500
	COV-2215		CO-2215	.468	1.250	.875	.500	.062	.048	.562
	COV-2217		CO-2217	.531	1.312	1.000	.562	.062	.048	.625
1.375	COV-2309	1.437	CO-2309	.281	1.093	.500	.312	.062	.048	.375
	COV-2311		CO-2311	.343	1.156	.625	.375	.062	.048	.437
	COV-2313		CO-2313	.406	1.218	.750	.437	.062	.048	.500
	COV-2315		CO-2315	.468	1.281	.875	.500	.062	.048	.562
	COV-2317		CO-2317	.531	1.343	1.000	.562	.062	.048	.625
1.437	COV-2409	1.500	CO-2409	.281	1.125	.500	.312	.062	.048	.375
	COV-2411		CO-2411	.343	1.187	.625	.375	.062	.048	.437
	COV-2413		CO-2413	.406	1.250	.750	.437	.062	.048	.500
	COV-2415		CO-2415	.468	1.312	.875	.500	.062	.048	.562
	COV-2417		CO-2417	.531	1.375	1.000	.562	.062	.048	.625
1.500	COV-2509	1.562	CO-2509	.281	1.156	.500	.312	.062	.048	.375
	COV-2511		CO-2511	.343	1.218	.625	.375	.062	.048	.437
	COV-2513		CO-2513	.406	1.281	.750	.437	.062	.048	.500
	COV-2515		CO-2515	.468	1.343	.875	.500	.062	.048	.562
	COV-2517		CO-2517	.531	1.406	1.000	.562	.062	.048	.625
1.562	COV-2609	1.625	CO-2609	.281	1.187	.500	.312	.062	.048	.375
	COV-2611		CO-2611	.343	1.250	.625	.375	.062	.048	.437
	COV-2613		CO-2613	.406	1.312	.750	.437	.062	.048	.500
	COV-2615		CO-2615	.468	1.375	.875	.500	.062	.048	.562
	COV-2617		CO-2617	.531	1.437	1.000	.562	.062	.048	.625
1.625	COV-2709	1.687	CO-2709	.281	1.218	.500	.312	.062	.048	.375
	COV-2711		CO-2711	.343	1.281	.625	.375	.062	.048	.437
	COV-2713		CO-2713	.406	1.343	.750	.437	.062	.048	.500
	COV-2715		CO-2715	.468	1.406	.875	.500	.062	.048	.562
	COV-2717		CO-2717	.531	1.468	1.000	.562	.062	.048	.625

Except for clamping diameter, dimensions of cushioned and plain parts are identical.
NOTE: Part numbers shown with asterisk (*) are produced from CRCQ Steel, Zinc Plated.

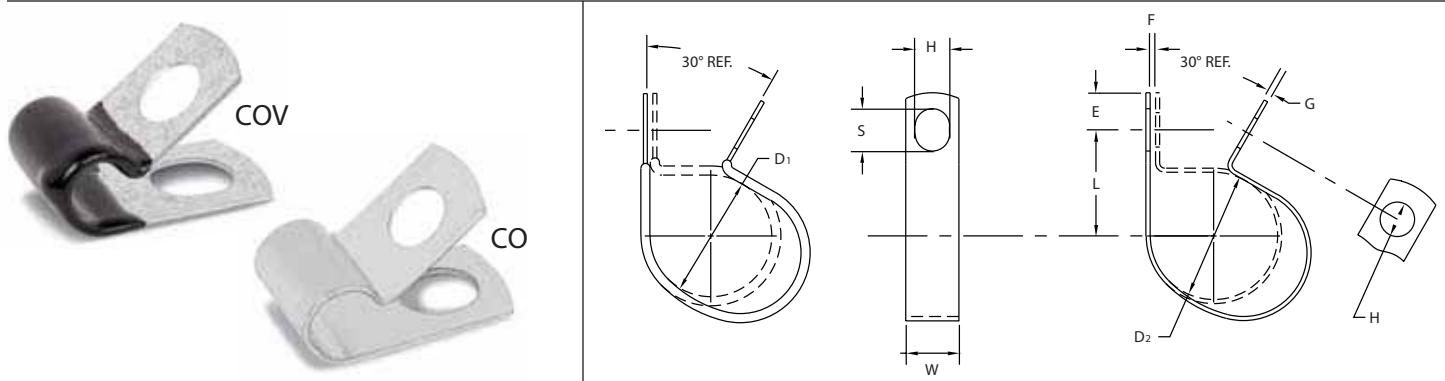
MEDIUM DUTY CLAMPS

WIRING AND TUBE CLAMPS Closed Type – Furnished Open

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M

CUSHION: Black Vinyl, 1/32" Thick

COV-CO: Parts Have One Round and One Slotted Hole



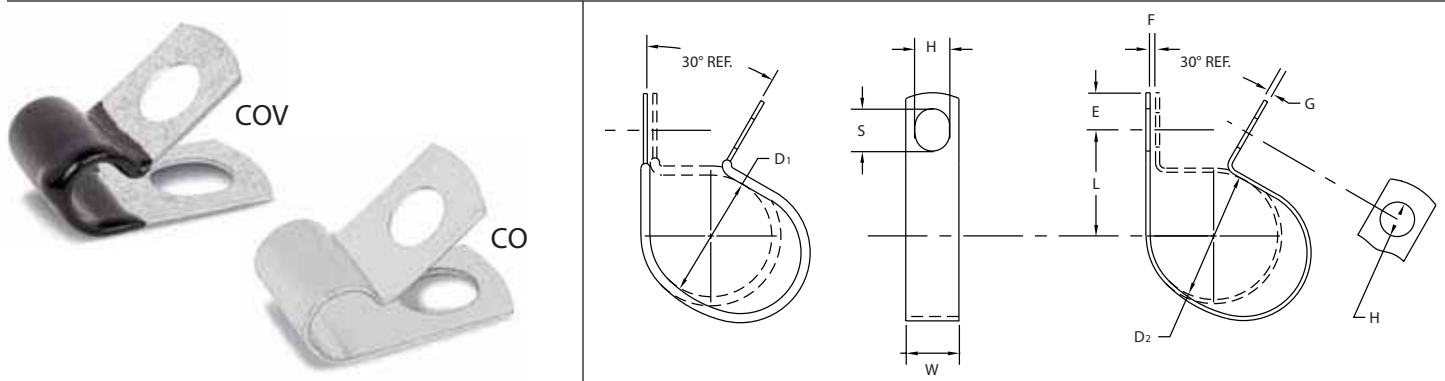
D ₁		D ₂		H	L	W	E	F	G	S
Clamping Diameter	Part Number	Clamping Diameter	Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Gap	Gage	Slot Length
± .031		± .015		± .005	± .031	± .010	± .015	± .031	See Pg. 40	± .020
1.687	COV-2809	1.750	CO-2809	.281	1.250	.500	.312	.062	.048	.375
	COV-2811		CO-2811	.343	1.312	.625	.375	.062	.048	.437
	COV-2813		CO-2813	.406	1.375	.750	.437	.062	.048	.500
	COV-2815		CO-2815	.468	1.437	.875	.500	.062	.048	.562
	COV-2817		CO-2817	.531	1.500	1.000	.562	.062	.048	.625
1.750	COV-2909	1.812	CO-2909	.281	1.281	.500	.312	.062	.048	.375
	COV-2911		CO-2911	.343	1.343	.625	.375	.062	.048	.437
	COV-2913		CO-2913	.406	1.406	.750	.437	.062	.048	.500
	COV-2915		CO-2915	.468	1.468	.875	.500	.062	.048	.562
	COV-2917		CO-2917	.531	1.531	1.000	.562	.062	.048	.625
1.812	COV-3009	1.875	CO-3009	.281	1.312	.500	.312	.062	.048	.375
	COV-3011		CO-3011	.343	1.375	.625	.375	.062	.048	.437
	COV-3013		CO-3013	.406	1.437	.750	.437	.062	.048	.500
	COV-3015		CO-3015	.468	1.500	.875	.500	.062	.048	.562
	COV-3017		CO-3017	.531	1.562	1.000	.562	.062	.048	.625
1.875	COV-3109	1.937	CO-3109	.281	1.343	.500	.312	.062	.048	.375
	COV-3111		CO-3111	.343	1.406	.625	.375	.062	.048	.437
	COV-3113		CO-3113	.406	1.468	.750	.437	.062	.048	.500
	COV-3115		CO-3115	.468	1.531	.875	.500	.062	.048	.562
	COV-3117		CO-3117	.531	1.593	1.000	.562	.062	.048	.625
1.937	COV-3209	2.000	CO-3209	.281	1.375	.500	.312	.062	.048	.375
	COV-3211		CO-3211	.343	1.437	.625	.375	.062	.048	.437
	COV-3213		CO-3213	.406	1.500	.750	.437	.062	.048	.500
	COV-3215		CO-3215	.468	1.562	.875	.500	.062	.048	.562
	COV-3217		CO-3217	.531	1.625	1.000	.562	.062	.048	.625
2.000	COV-3309	2.062	CO-3309	.281	1.437	.500	.312	.062	.048	.375
	COV-3311		CO-3311	.343	1.500	.625	.375	.062	.048	.437
	COV-3313		CO-3313	.406	1.562	.750	.437	.062	.048	.500
	COV-3315		CO-3315	.468	1.625	.875	.500	.062	.048	.562
	COV-3317		CO-3317	.531	1.687	1.000	.562	.062	.048	.625

Except for clamping diameter, dimensions of cushioned and plain parts are identical.
NOTE: Part numbers shown with asterisk (*) are produced from CRCQ Steel, Zinc Plated.

WIRING AND TUBE CLAMPS Closed Type – Furnished Open

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M
 CUSHION: Black Vinyl, 1/32" Thick
 COV-CO: Parts Have One Round and One Slotted Hole

MEDIUM DUTY CLAMPS



D ₁		D ₂		H	L	W	E	F	G	S
Clamping Diameter	Part Number	Clamping Diameter	Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Gap	Gage	Slot Length
± .031		± .015		± .005	± .031	± .010	± .015	± .031	See Pg. 40	± .020
2.062	COV-3409	2.125	CO-3409	.281	1.468	.500	.312	.062	.048	.375
	COV-3411		CO-3411	.343	1.531	.625	.375	.062	.048	.437
	COV-3413		CO-3413	.406	1.593	.750	.437	.062	.048	.500
	COV-3415		CO-3415	.468	1.656	.875	.500	.062	.048	.562
	COV-3417		CO-3417	.531	1.718	1.000	.562	.062	.048	.625
2.125	COV-3509	2.187	CO-3509	.281	1.500	.500	.312	.062	.048	.375
	COV-3511		CO-3511	.343	1.562	.625	.375	.062	.048	.437
	COV-3513		CO-3513	.406	1.625	.750	.437	.062	.048	.500
	COV-3515		CO-3515	.468	1.688	.875	.500	.062	.048	.562
	COV-3517		CO-3517	.531	1.750	1.000	.562	.062	.048	.625
2.187	COV-3609	2.250	CO-3609	.281	1.531	.500	.312	.062	.048	.375
	COV-3611		CO-3611	.343	1.593	.625	.375	.062	.048	.437
	COV-3613		CO-3613	.406	1.656	.750	.437	.062	.048	.500
	COV-3615		CO-3615	.468	1.718	.875	.500	.062	.048	.562
	COV-3617		CO-3617	.531	1.781	1.000	.562	.062	.048	.625
2.250	COV-3709	2.312	CO-3709	.281	1.562	.500	.312	.062	.048	.375
	COV-3711		CO-3711	.343	1.625	.625	.375	.062	.048	.437
	COV-3713		CO-3713	.406	1.687	.750	.437	.062	.048	.500
	COV-3715		CO-3715	.468	1.750	.875	.500	.062	.048	.562
	COV-3717		CO-3717	.531	1.8 12	1.000	.562	.062	.048	.625
2.375	COV-3909	2.437	CO-3909	.281	1.625	.500	.312	.062	.048	.375
	COV-3911		CO-3911	.343	1.687	.625	.375	.062	.048	.437
	COV-3913		CO-3913	.406	1.750	.750	.437	.062	.048	.500
	COV-3915		CO-3915	.468	1.812	.875	.500	.062	.048	.562
	COV-3917		CO-3917	.531	1.875	1.000	.562	.062	.048	.625
2.500	COV-4109	2.562	CO-4109	.281	1.687	.500	.312	.062	.048	.375
	COV-4111		CO-4111	.343	1.750	.625	.375	.062	.048	.437
	COV-4113		CO-4113	.406	1.812	.750	.437	.062	.048	.500
	COV-4115		CO-4115	.468	1.875	.875	.500	.062	.048	.562
	COV-4117		CO-4117	.531	1.937	1.000	.562	.062	.048	.625
2.625	COV-4309	2.687	CO-4309	.281	1.750	.500	.312	.062	.048	.375
	COV-4311		CO-4311	.343	1.812	.625	.375	.062	.048	.437
	COV-4313		CO-4313	.406	1.875	.750	.437	.062	.048	.500
	COV-4315		CO-4315	.468	1.937	.875	.500	.062	.048	.562
	COV-4317		CO-4317	.531	2.000	1.000	.562	.062	.048	.625

Except for clamping diameter, dimensions of cushioned and plain parts are identical.
 NOTE: Part numbers shown with asterisk (*) are produced from CRCQ Steel, Zinc Plated.

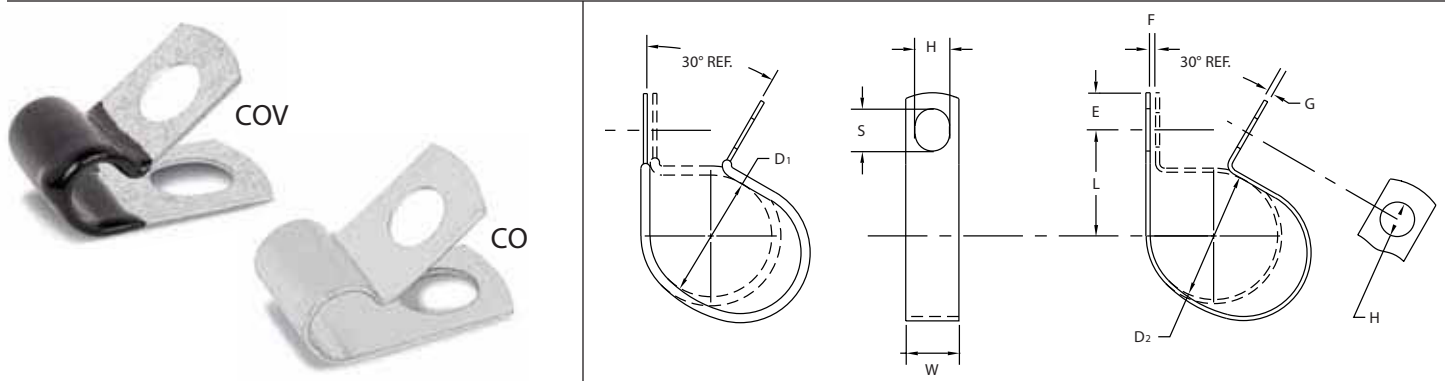


WIRING AND TUBE CLAMPS Closed Type – Furnished Open

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M

CUSHION: Black Vinyl, 1/32" Thick

COV-CO: Parts Have One Round and One Slotted Hole



D ₁		D ₂		H	L	W	E	F	G	S
Clamping Diameter	Part Number	Clamping Diameter	Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Gap	Gage	Slot Length
± .031		± .015		± .005	± .031	± .010	± .015	± .031	See Pg. 40	± .020
2.750	COV-4509	2.812	CO-4509	.281	1.812	.500	.312	.062	.048	.375
	COV-4511		CO-4511	.343	1.875	.625	.375	.062	.048	.437
	COV-4513		CO-4513	.406	1.937	.750	.437	.062	.048	.500
	COV-4515		CO-4515	.468	2.000	.875	.500	.062	.048	.562
	COV-4517		CO-4517	.531	2.062	1.000	.562	.062	.048	.625
2.875	COV-4709	2.937	CO-4709	.281	1.875	.500	.312	.062	.048	.375
	COV-4711		CO-4711	.343	1.937	.625	.375	.062	.048	.437
	COV-4713		CO-4713	.406	2.000	.750	.437	.062	.048	.500
	COV-4715		CO-4715	.468	2.062	.875	.500	.062	.048	.562
	COV-4717		CO-4717	.531	2.125	1.000	.562	.062	.048	.625
3.000	COV-4909	3.062	CO-4909	.281	1.937	.500	.312	.062	.048	.375
	COV-4911		CO-4911	.343	2.000	.625	.375	.062	.048	.437
	COV-4913		CO-4913	.406	2.062	.750	.437	.062	.048	.500
	COV-4915		CO-4915	.468	2.125	.875	.500	.062	.048	.562
	COV-4917		CO-4917	.531	2.187	1.000	.562	.062	.048	.625
3.250	COV-5309	3.312	CO-5309	.281	2.062	.500	.312	.062	.048	.375
	COV-5311		CO-5311	.343	2.125	.625	.375	.062	.048	.437
	COV-5313		CO-5313	.406	2.187	.750	.437	.062	.048	.500
	COV-5315		CO-5315	.468	2.250	.875	.500	.062	.048	.562
	COV-5317		CO-5317	.531	2.312	1.000	.562	.062	.048	.625
3.500	COV-5709	3.562	CO-5709	.281	2.187	.500	.312	.062	.048	.375
	COV-5711		CO-5711	.343	2.250	.625	.375	.062	.048	.437
	COV-5713		CO-5713	.406	2.312	.750	.437	.062	.048	.500
	COV-5715		CO-5715	.468	2.375	.875	.500	.062	.048	.562
	COV-5717		CO-5717	.531	2.437	1.000	.562	.062	.048	.625
3.750	COV-6109	3.812	CO-6109	.281	2.312	.500	.312	.062	.048	.375
	COV-6111		CO-6111	.343	2.375	.625	.375	.062	.048	.437
	COV-6113		CO-6113	.406	2.437	.750	.437	.062	.048	.500
	COV-6115		CO-6115	.468	2.500	.875	.500	.062	.048	.562
	COV-6117		CO-6117	.531	2.562	1.000	.562	.062	.048	.625
4.000	COV-6509	4.062	CO-6509	.281	2.437	.500	.312	.062	.048	.375
	COV-6511		CO-6511	.343	2.500	.625	.375	.062	.048	.437
	COV-6513		CO-6513	.406	2.562	.750	.437	.062	.048	.500
	COV-6515		CO-6515	.468	2.625	.875	.500	.062	.048	.562
	COV-6517		CO-6517	.531	2.687	1.000	.562	.062	.048	.625

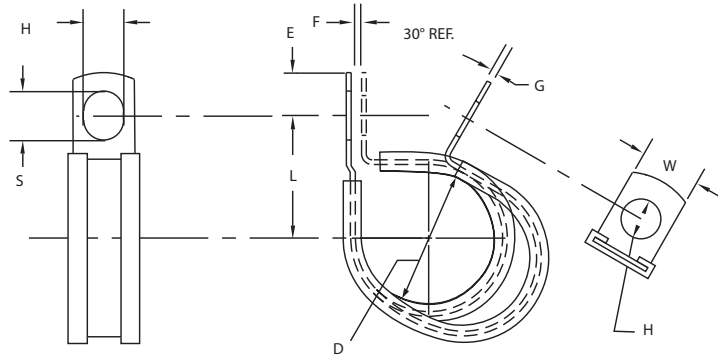
Except for clamping diameter, dimensions of cushioned and plain parts are identical.
NOTE: Part numbers shown with asterisk (*) are produced from CRCQ Steel, Zinc Plated.

WIRING AND TUBE CLAMPS Closed Type – Furnished Open – Extruded Liner

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M; Type 304 Annealed Stainless Steel, Per ASTM A240/A666
 CUSHION: EPDM per SAE J200/ASTM D2000 BC715A
 OPTIONAL CUSHION: Neoprene per AMS3209 SAE J200/ASTM D2000 BC717A14B14EO34, Silicone per AMS3303 SAE J200/ASTMD2000 M2GE506



COL



D	Part Number		H	L	W	E	F	S	Gage	
Clamping Diameter	HD Galv Part Number	Stainless Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Slot Gap	Length	HD Galv Gage	Stainless Gage
± .031			± .005	± .031	± .010	± .015	± .031	± .020	± .002	± .002
.187	COL0307Z1	COL0307SS	.203	.916	.500	.250	.062	.297	.032	.032
	COL0309Z1	COL0309SS	.281	.854	.500	.312	.062	.375	.032	.032
	COL0311Z1	COL0311SS	.343	.791	.625	.375	.062	.437	.032	.032
	COL0313Z1	COL0313SS	.406	.729	.750	.437	.062	.500	.032	.032
.250	COL0407Z1	COL0407SS	.203	.711	.500	.250	.062	.297	.032	.032
	COL0409Z1	COL0409SS	.281	.674	.500	.312	.062	.375	.032	.032
	COL0411Z1	COL0411SS	.343	.611	.625	.375	.062	.437	.032	.032
	COL0413Z1	COL0413SS	.406	.656	.750	.437	.062	.500	.032	.032
	COL0415Z1	COL0415SS	.468	.718	.750	.500	.062	.562	.032	.032
.312	COL0417Z1	COL0417SS	.531	.781	1.000	.562	.062	.625	.032	.032
	COL0507Z1	COL0507SS	.203	.569	.500	.250	.062	.297	.032	.032
	COL0509Z1	COL0509SS	.281	.562	.500	.312	.062	.375	.032	.032
	COL0511Z1	COL0511SS	.343	.625	.625	.375	.062	.437	.032	.032
	COL0513Z1	COL0513SS	.406	.687	.750	.437	.062	.500	.032	.032
	COL0515Z1	COL0515SS	.468	.750	.750	.500	.062	.562	.032	.032
.375	COL0517Z1	COL0517SS	.531	.812	1.000	.562	.062	.625	.032	.032
	COL0607Z1	COL0607SS	.203	.500	.500	.250	.062	.297	.032	.032
	COL0609Z1	COL0609SS	.281	.593	.500	.312	.062	.375	.032	.032
	COL0611Z1	COL0611SS	.343	.656	.625	.375	.062	.437	.032	.032
	COL0613Z1	COL0613SS	.406	.718	.750	.437	.062	.500	.032	.032
	COL0615Z1	COL0615SS	.468	.781	.750	.500	.062	.562	.032	.032
.437	COL0617Z1	COL0617SS	.531	.843	1.000	.562	.062	.625	.032	.032
	COL0707Z1	COL0707SS	.203	.531	.500	.250	.062	.297	.032	.032
	COL0709Z1	COL0709SS	.281	.625	.500	.312	.062	.375	.032	.032
	COL0711Z1	COL0711SS	.343	.687	.625	.375	.062	.437	.048	.032
	COL0713Z1	COL0713SS	.406	.750	.750	.437	.062	.500	.048	.032
	COL0715Z1	COL0715SS	.468	.812	.750	.500	.062	.562	.048	.032
.500	COL0717Z1	COL0717SS	.531	.875	1.000	.562	.062	.625	.048	.032
	COL0807Z1	COL0807SS	.203	.562	.500	.250	.062	.297	.032	.032
	COL0809Z1	COL0809SS	.281	.656	.500	.312	.062	.375	.032	.032
	COL0811Z1	COL0811SS	.343	.718	.625	.375	.062	.437	.048	.032
	COL0813Z1	COL0813SS	.406	.781	.750	.437	.062	.500	.048	.032
	COL0815Z1	COL0815SS	.468	.843	.750	.500	.062	.562	.048	.032
COL0817Z1	COL0817SS	.531	.906	1.000	.562	.062	.625	.048	.032	

Additional clamping diameters and configurations available.

WIRING AND TUBE CLAMPS Closed Type – Furnished Open – Extruded Liner

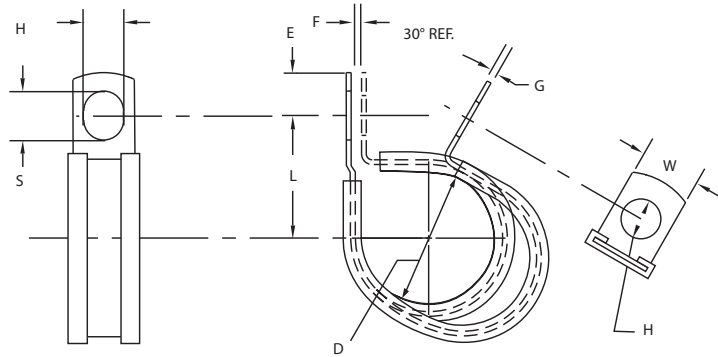
MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M; Type 304 Annealed Stainless Steel, Per ASTM A240/A666

CUSHION: EPDM per SAE J200/ASTM D2000 BC715A

OPTIONAL CUSHION: Neoprene per AMS3209 SAE J200/ASTM D2000 BC717A14B14EO34, Silicone per AMS3303 SAE J200/ASTMD2000 M2GE506



COL



D Clamping Diameter ± .031	Part Number		H Hole Diameter ± .005	L Center To Center ± .031	W Width ± .010	E Hole Center To End ± .015	F Slot Gap ± .031	S Length ± .020	Gage	
	HD Galv Part Number	Stainless Part Number							HD Galv Gage ± .002	Stainless Gage ± .002
.562	COL0907Z1	COL0907SS	.203	.687	.500	.250	.062	.297	.032	.032
	COL0909Z1	COL0909SS	.281	.750	.500	.312	.062	.375	.032	.032
	COL0911Z1	COL0911SS	.343	.812	.625	.375	.062	.437	.048	.032
	COL0913Z1	COL0913SS	.406	.875	.750	.437	.062	.500	.048	.032
	COL0915Z1	COL0915SS	.468	.937	.750	.500	.062	.562	.048	.032
	COL0917Z1	COL0917SS	.531	1.000	1.000	.562	.062	.625	.048	.032
.625	COL1007Z1	COL1007SS	.203	.718	.500	.250	.062	.297	.032	.032
	COL1009Z1	COL1009SS	.281	.781	.500	.312	.062	.375	.032	.032
	COL1011Z1	COL1011SS	.343	.843	.625	.375	.062	.437	.048	.032
	COL1013Z1	COL1013SS	.406	.906	.750	.437	.062	.500	.048	.032
	COL1015Z1	COL1015SS	.468	.968	.750	.500	.062	.562	.048	.032
	COL1017Z1	COL1017SS	.531	1.031	1.000	.562	.062	.625	.048	.032
.687	COL1107Z1	COL1107SS	.203	.750	.500	.250	.062	.297	.032	.032
	COL1109Z1	COL1109SS	.281	.812	.500	.312	.062	.375	.032	.032
	COL1111Z1	COL1111SS	.343	.875	.625	.375	.062	.437	.048	.032
	COL1113Z1	COL1113SS	.406	.937	.750	.437	.062	.500	.048	.032
	COL1115Z1	COL1115SS	.468	1.000	.750	.500	.062	.562	.048	.032
	COL1117Z1	COL1117SS	.531	1.062	1.000	.562	.062	.625	.048	.032
.750	COL1207Z1	COL1207SS	.203	.781	.500	.250	.062	.297	.032	.032
	COL1209Z1	COL1209SS	.281	.843	.500	.312	.062	.375	.032	.032
	COL1211Z1	COL1211SS	.343	.906	.625	.375	.062	.437	.048	.032
	COL1213Z1	COL1213SS	.406	.968	.750	.437	.062	.500	.048	.032
	COL1215Z1	COL1215SS	.468	1.031	.750	.500	.062	.562	.048	.032
	COL1217Z1	COL1217SS	.531	1.095	1.000	.562	.062	.625	.048	.032
.812	COL1307Z1	COL1307SS	.203	.812	.500	.250	.062	.297	.032	.032
	COL1309Z1	COL1309SS	.281	.875	.500	.312	.062	.375	.032	.032
	COL1311Z1	COL1311SS	.343	.937	.625	.375	.062	.437	.048	.032
	COL1313Z1	COL1313SS	.406	1.000	.750	.437	.062	.500	.048	.032
	COL1315Z1	COL1315SS	.468	1.062	.750	.500	.062	.562	.048	.032
	COL1317Z1	COL1317SS	.531	1.125	1.000	.562	.062	.625	.048	.032

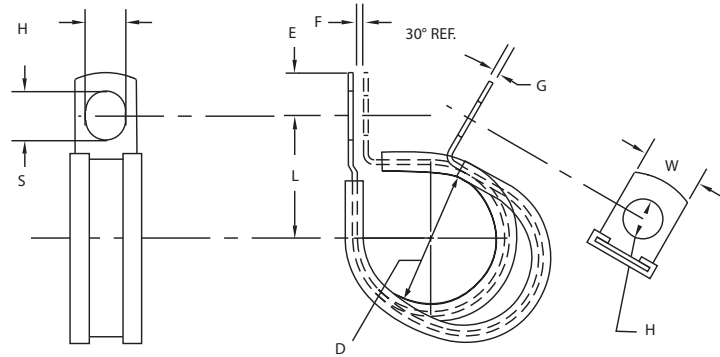
Additional clamping diameters and configurations available.

WIRING AND TUBE CLAMPS Closed Type – Furnished Open – Extruded Liner

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M; Type 304 Annealed Stainless Steel, Per ASTM A240/A666
 CUSHION: EPDM per SAE J200/ASTM D2000 BC715A
 OPTIONAL CUSHION: Neoprene per AMS3209 SAE J200/ASTM D2000 BC717A14B14EO34, Silicone per AMS3303 SAE J200/ASTMD2000 M2GE506



COL



D	Part Number		H	L	W	E	F	S	Gage	
Clamping Diameter	HD Galv Part Number	Stainless Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Slot Gap	Length	HD Galv Gage	Stainless Gage
± .031			± .005	± .031	± .010	± .015	± .031	± .020	± .002	± .002
.875	COL1407Z1	COL1407SS	.203	.843	.500	.250	.062	.297	.032	.032
	COL1409Z1	COL1409SS	.281	.906	.500	.312	.062	.375	.032	.032
	COL1411Z1	COL1411SS	.343	.968	.625	.375	.062	.437	.048	.032
	COL1413Z1	COL1413SS	.406	1.031	.750	.437	.062	.500	.048	.032
	COL1415Z1	COL1415SS	.468	1.093	.750	.500	.062	.562	.048	.032
	COL1417Z1	COL1417SS	.531	1.156	1.000	.562	.062	.625	.048	.032
.937	COL1507Z1	COL1507SS	.203	.875	.500	.250	.062	.297	.032	.032
	COL1509Z1	COL1509SS	.281	.937	.500	.312	.062	.375	.032	.032
	COL1511Z1	COL1511SS	.343	1.000	.625	.375	.062	.437	.048	.032
	COL1513Z1	COL1513SS	.406	1.062	.750	.437	.062	.500	.048	.032
	COL1515Z1	COL1515SS	.468	1.125	.750	.500	.062	.562	.048	.032
	COL1517Z1	COL1517SS	.531	1.187	1.000	.562	.062	.625	.048	.032
1.000	COL1607Z1	COL1607SS	.203	.906	.500	.250	.062	.297	.032	.032
	COL1609Z1	COL1609SS	.281	.968	.500	.312	.062	.375	.032	.032
	COL1611Z1	COL1611SS	.343	1.031	.625	.375	.062	.437	.048	.032
	COL1613Z1	COL1613SS	.406	1.093	.750	.437	.062	.500	.048	.032
	COL1615Z1	COL1615SS	.468	1.156	.750	.500	.062	.562	.048	.032
	COL1617Z1	COL1617SS	.531	1.218	1.000	.562	.062	.625	.048	.032
1.062	COL1709Z1	COL1709SS	.281	1.000	.500	.312	.062	.375	.048	.048
	COL1711Z1	COL1711SS	.343	1.062	.625	.375	.062	.437	.048	.048
	COL1713Z1	COL1713SS	.406	1.125	.750	.437	.062	.500	.048	.048
	COL1715Z1	COL1715SS	.468	1.187	.750	.500	.062	.562	.048	.048
	COL1717Z1	COL1717SS	.531	1.250	1.000	.562	.062	.625	.048	.048
1.125	COL1809Z1	COL1809SS	.281	1.031	.500	.312	.062	.375	.048	.048
	COL1811Z1	COL1811SS	.343	1.093	.625	.375	.062	.437	.048	.048
	COL1813Z1	COL1813SS	.406	1.156	.750	.437	.062	.500	.048	.048
	COL1815Z1	COL1815SS	.468	1.218	.750	.500	.062	.562	.048	.048
	COL1817Z1	COL1817SS	.531	1.281	1.000	.562	.062	.625	.048	.048

Additional clamping diameters and configurations available.

WIRING AND TUBE CLAMPS Closed Type – Furnished Open – Extruded Liner

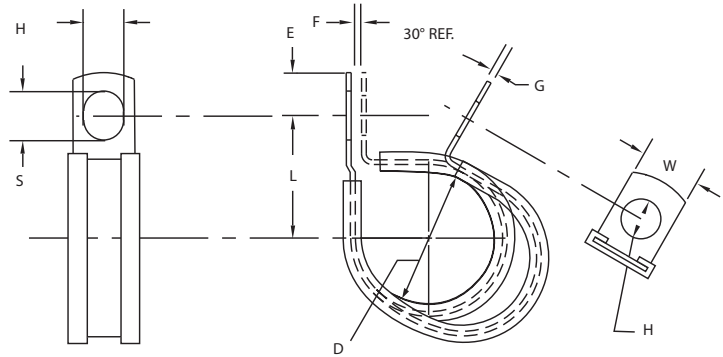
MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M; Type 304 Annealed Stainless Steel, Per ASTM A240/A666

CUSHION: EPDM per SAE J200/ASTM D2000 BC715A

OPTIONAL CUSHION: Neoprene per AMS3209 SAE J200/ASTM D2000 BC717A14B14E034, Silicone per AMS3303 SAE J200/ASTMD2000 M2GE506



COL



D	Part Number		H	L	W	E	F	S	Gage	
Clamping Diameter	HD Galv Part Number	Stainless Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Slot Gap	Length	HD Galv Gage	Stainless Gage
± .031			± .005	± .031	± .010	± .015	± .031	± .020	± .002	± .002
1.187	COL1909Z1	COL1909SS	.281	1.062	.500	.312	.062	.375	.048	.048
	COL1911Z1	COL1911SS	.343	1.125	.625	.375	.062	.437	.048	.048
	COL1913Z1	COL1913SS	.406	1.187	.750	.437	.062	.500	.048	.048
	COL1915Z1	COL1915SS	.468	1.250	.750	.500	.062	.562	.048	.048
	COL1917Z1	COL1917SS	.531	1.312	1.000	.562	.062	.625	.048	.048
1.250	COL2009Z1	COL2009SS	.281	1.093	.500	.312	.062	.375	.048	.048
	COL2011Z1	COL2011SS	.343	1.156	.625	.375	.062	.437	.048	.048
	COL2013Z1	COL2013SS	.406	1.218	.750	.437	.062	.500	.048	.048
	COL2015Z1	COL2015SS	.468	1.281	.750	.500	.062	.562	.048	.048
	COL2017Z1	COL2017SS	.531	1.343	1.000	.562	.062	.625	.048	.048
1.312	COL2109Z1	COL2109SS	.281	1.125	.500	.312	.062	.375	.048	.048
	COL2111Z1	COL2111SS	.343	1.187	.625	.375	.062	.437	.048	.048
	COL2113Z1	COL2113SS	.406	1.250	.750	.437	.062	.500	.048	.048
	COL2115Z1	COL2115SS	.468	1.312	.750	.500	.062	.562	.048	.048
	COL2117Z1	COL2117SS	.531	1.375	1.000	.562	.062	.625	.048	.048
1.375	COL2209Z1	COL2209SS	.281	1.156	.500	.312	.062	.375	.048	.048
	COL2211Z1	COL2211SS	.343	1.218	.625	.375	.062	.437	.048	.048
	COL2213Z1	COL2213SS	.406	1.281	.750	.437	.062	.500	.048	.048
	COL2215Z1	COL2215SS	.468	1.343	.750	.500	.062	.562	.048	.048
	COL2217Z1	COL2217SS	.531	1.406	1.000	.562	.062	.625	.048	.048
1.437	COL2309Z1	COL2309SS	.281	1.187	.500	.312	.062	.375	.048	.048
	COL2311Z1	COL2311SS	.343	1.250	.625	.375	.062	.437	.048	.048
	COL2313Z1	COL2313SS	.406	1.312	.750	.437	.062	.500	.048	.048
	COL2315Z1	COL2315SS	.468	1.375	.750	.500	.062	.562	.048	.048
	COL2317Z1	COL2317SS	.531	1.437	1.000	.562	.062	.625	.048	.048
1.500	COL2409Z1	COL2409SS	.281	1.218	.500	.312	.062	.375	.048	.048
	COL2411Z1	COL2411SS	.343	1.281	.625	.375	.062	.437	.048	.048
	COL2413Z1	COL2413SS	.406	1.343	.750	.437	.062	.500	.048	.048
	COL2415Z1	COL2415SS	.468	1.406	.750	.500	.062	.562	.048	.048
	COL2417Z1	COL2417SS	.531	1.468	1.000	.562	.062	.625	.048	.048

Additional clamping diameters and configurations available.

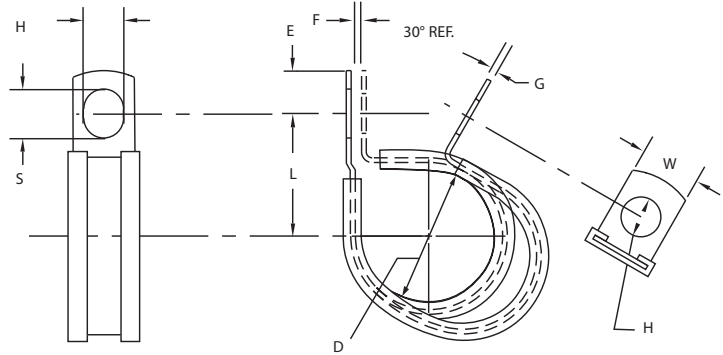
WIRING AND TUBE CLAMPS

closed Type – Furnished Open – Extruded Liner

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M; Type 304 Annealed Stainless Steel, Per ASTM A240/A666
 CUSHION: EPDM per SAE J200/ASTM D2000 BC715A
 OPTIONAL CUSHION: Neoprene per AMS3209 SAE J200/ASTM D2000 BC717A14B14EO34, Silicone per AMS3303 SAE J200/ASTMD2000 M2GE506



COL



D	Part Number		H	L	W	E	F	S	Gage	
Clamping Diameter	HD Galv Part Number	Stainless Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Slot Gap	Length	HD Galv Gage	Stainless Gage
± .031			± .005	± .031	± .010	± .015	± .031	± .020	± .002	± .002
1.562	COL2509Z1	COL2509SS	.281	1.250	.500	.312	.062	.375	.048	.048
	COL2511Z1	COL2511SS	.343	1.312	.625	.375	.062	.437	.048	.048
	COL2513Z1	COL2513SS	.406	1.375	.750	.437	.062	.500	.048	.048
	COL2515Z1	COL2515SS	.468	1.437	.750	.500	.062	.562	.048	.048
	COL2517Z1	COL2517SS	.531	1.500	1.000	.562	.062	.625	.048	.048
1.625	COL2609Z1	COL2609SS	.281	1.281	.500	.312	.062	.375	.048	.048
	COL2611Z1	COL2611SS	.343	1.343	.625	.375	.062	.437	.048	.048
	COL2613Z1	COL2613SS	.406	1.406	.750	.437	.062	.500	.048	.048
	COL2615Z1	COL2615SS	.468	1.468	.750	.500	.062	.562	.048	.048
	COL2617Z1	COL2617SS	.531	1.531	1.000	.562	.062	.625	.048	.048
1.687	COL2709Z1	COL2709SS	.281	1.312	.500	.312	.062	.375	.048	.048
	COL2711Z1	COL2711SS	.343	1.375	.625	.375	.062	.437	.048	.048
	COL2713Z1	COL2713SS	.406	1.437	.750	.437	.062	.500	.048	.048
	COL2715Z1	COL2715SS	.468	1.500	.750	.500	.062	.562	.048	.048
	COL2717Z1	COL2717SS	.531	1.562	1.000	.562	.062	.625	.048	.048
1.750	COL2809Z1	COL2809SS	.281	1.343	.500	.312	.062	.375	.048	.048
	COL2811Z1	COL2811SS	.343	1.406	.625	.375	.062	.437	.048	.048
	COL2813Z1	COL2813SS	.406	1.468	.750	.437	.062	.500	.048	.048
	COL2815Z1	COL2815SS	.468	1.531	.750	.500	.062	.562	.048	.048
	COL2817Z1	COL2817SS	.531	1.593	1.000	.562	.062	.625	.048	.048
1.812	COL2909Z1	COL2909SS	.281	1.375	.500	.312	.062	.375	.048	.048
	COL2911Z1	COL2911SS	.343	1.437	.625	.375	.062	.437	.048	.048
	COL2913Z1	COL2913SS	.406	1.500	.750	.437	.062	.500	.048	.048
	COL2915Z1	COL2915SS	.468	1.562	.750	.500	.062	.562	.048	.048
	COL2917Z1	COL2917SS	.531	1.624	1.000	.562	.062	.625	.048	.048
1.875	COL3009Z1	COL3009SS	.281	1.406	.500	.312	.062	.375	.048	.048
	COL3011Z1	COL3011SS	.343	1.468	.625	.375	.062	.437	.048	.048
	COL3013Z1	COL3013SS	.406	1.531	.750	.437	.062	.500	.048	.048
	COL3015Z1	COL3015SS	.468	1.593	.750	.500	.062	.562	.048	.048
	COL3017Z1	COL3017SS	.531	1.656	1.000	.562	.062	.625	.048	.048

Additional clamping diameters and configurations available.

MEDIUM DUTY CLAMPS

WIRING AND TUBE CLAMPS Closed Type – Furnished Open – Extruded Liner

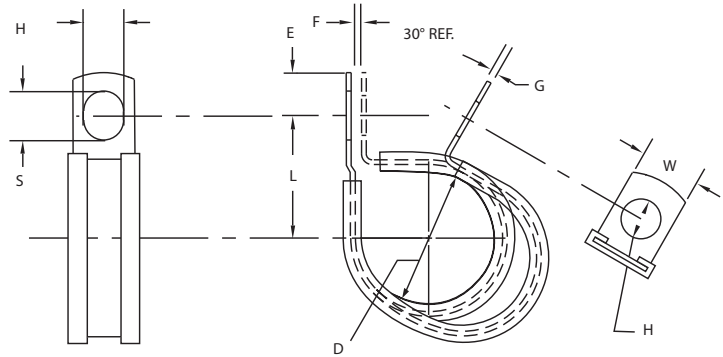
MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M; Type 304 Annealed Stainless Steel, Per ASTM A240/A666

CUSHION: EPDM per SAE J200/ASTM D2000 BC715A

OPTIONAL CUSHION: Neoprene per AMS3209 SAE J200/ASTM D2000 BC717A14B14E034, Silicone per AMS3303 SAE J200/ASTMD2000 M2GE506



COL



D Clamping Diameter ± .031	Part Number		H Hole Diameter ± .005	L Center To Center ± .031	W Width ± .010	E Hole Center To End ± .015	F Slot Gap ± .031	S Length ± .020	Gage	
	HD Galv Part Number	Stainless Part Number							HD Galv Gage ± .002	Stainless Gage ± .002
1.937	COL3109Z1	COL3109SS	.281	1.437	.500	.312	.062	.375	.048	.048
	COL3111Z1	COL3111SS	.343	1.500	.625	.375	.062	.437	.048	.048
	COL3113Z1	COL3113SS	.406	1.562	.750	.437	.062	.500	.048	.048
	COL3115Z1	COL3115SS	.468	1.625	.750	.500	.062	.562	.048	.048
	COL3117Z1	COL3117SS	.531	1.687	1.000	.562	.062	.625	.048	.048
2.000	COL3209Z1	COL3209SS	.281	1.500	.500	.312	.062	.375	.048	.048
	COL3211Z1	COL3211SS	.343	1.562	.625	.375	.062	.437	.048	.048
	COL3213Z1	COL3213SS	.406	1.625	.750	.437	.062	.500	.048	.048
	COL3215Z1	COL3215SS	.468	1.687	.750	.500	.062	.562	.048	.048
	COL3217Z1	COL32017SS	.531	1.750	1.000	.562	.062	.625	.048	.048
2.062	COL3309Z1	COL3309SS	.281	1.531	.500	.312	.062	.375	.048	.048
	COL3311Z1	COL3311SS	.343	1.593	.625	.375	.062	.437	.048	.048
	COL3313Z1	COL3313SS	.406	1.656	.750	.437	.062	.500	.048	.048
	COL3315Z1	COL3315SS	.468	1.718	.750	.500	.062	.562	.048	.048
	COL3317Z1	COL3317SS	.531	1.781	1.000	.562	.062	.625	.048	.048
2.125	COL3409Z1	COL3409SS	.281	1.562	.500	.312	.062	.375	.048	.048
	COL3411Z1	COL3411SS	.343	1.625	.625	.375	.062	.437	.048	.048
	COL3413Z1	COL3413SS	.406	1.688	.750	.437	.062	.500	.048	.048
	COL3415Z1	COL3415SS	.468	1.750	.750	.500	.062	.562	.048	.048
	COL3417Z1	COL3417SS	.531	1.812	1.000	.562	.062	.625	.048	.048
2.187	COL3509Z1	COL3509SS	.281	1.593	.500	.312	.062	.375	.048	.048
	COL3511Z1	COL3511SS	.343	1.656	.625	.375	.062	.437	.048	.048
	COL3513Z1	COL3513SS	.406	1.718	.750	.437	.062	.500	.048	.048
	COL3515Z1	COL3515SS	.468	1.781	.750	.500	.062	.562	.048	.048
	COL3517Z1	COL3517SS	.531	1.844	1.000	.562	.062	.625	.048	.048

Additional clamping diameters and configurations available.

WIRING AND TUBE CLAMPS Closed Type – Furnished Open – Extruded Liner

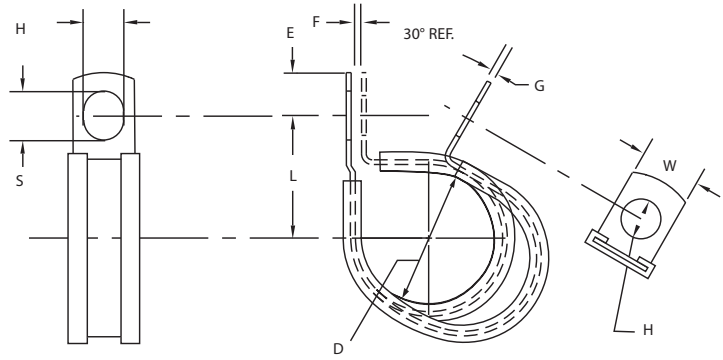
MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M; Type 304 Annealed Stainless Steel, Per ASTM A240/A666

CUSHION: EPDM per SAE J200/ASTM D2000 BC715A

OPTIONAL CUSHION: Neoprene per AMS3209 SAE J200/ASTM D2000 BC717A14B14E034, Silicone per AMS3303 SAE J200/ASTMD2000 M2GE506



COL



D	Part Number		H	L	W	E	F	S	Gage	
Clamping Diameter	HD Galv Part Number	Stainless Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Slot Gap	Length	HD Galv Gage	Stainless Gage
± .031			± .005	± .031	± .010	± .015	± .031	± .020	± .002	± .002
2.250	COL3609Z1	COL3609SS	.281	1.625	.500	.312	.062	.375	.048	.048
	COL3611Z1	COL3611SS	.343	1.687	.625	.375	.062	.437	.048	.048
	COL3613Z1	COL3613SS	.406	1.750	.750	.437	.062	.500	.048	.048
	COL3615Z1	COL3615SS	.468	1.812	.750	.500	.062	.562	.048	.048
	COL3617Z1	COL3617SS	.531	1.875	1.000	.562	.062	.625	.048	.048
2.375	COL3809Z1	COL3809SS	.281	1.687	.500	.312	.062	.375	.048	.048
	COL3811Z1	COL3811SS	.343	1.750	.625	.375	.062	.437	.048	.048
	COL3813Z1	COL3813SS	.406	1.812	.750	.437	.062	.500	.048	.048
	COL3815Z1	COL3815SS	.468	1.875	.750	.500	.062	.562	.048	.048
	COL3817Z1	COL3817SS	.531	1.937	1.000	.562	.062	.625	.048	.048
2.500	COL4009Z1	COL4009SS	.281	1.750	.500	.312	.062	.375	.048	.048
	COL4011Z1	COL4011SS	.343	1.812	.625	.375	.062	.437	.048	.048
	COL4013Z1	COL4013SS	.406	1.875	.750	.437	.062	.500	.048	.048
	COL4015Z1	COL4015SS	.468	1.937	.750	.500	.062	.562	.048	.048
	COL4017Z1	COL4017SS	.531	2.000	1.000	.562	.062	.625	.048	.048
2.625	COL4209Z1	COL4209SS	.281	1.812	.500	.312	.062	.375	.048	.048
	COL4211Z1	COL4211SS	.343	1.875	.625	.375	.062	.437	.048	.048
	COL4213Z1	COL4213SS	.406	1.937	.750	.437	.062	.500	.048	.048
	COL4215Z1	COL4215SS	.468	2.000	.750	.500	.062	.562	.048	.048
	COL4217Z1	COL4217SS	.531	2.062	1.000	.562	.062	.625	.048	.048
2.750	COL4409Z1	COL4409SS	.281	1.875	.500	.312	.062	.375	.048	.048
	COL4411Z1	COL4411SS	.343	1.937	.625	.375	.062	.437	.048	.048
	COL4413Z1	COL4413SS	.406	2.000	.750	.437	.062	.500	.048	.048
	COL4415Z1	COL4415SS	.468	2.062	.750	.500	.062	.562	.048	.048
	COL4417Z1	COL4417SS	.531	2.125	1.000	.562	.062	.625	.048	.048

Additional clamping diameters and configurations available.



WIRING AND TUBE CLAMPS Closed Type – Furnished Open – Extruded Liner

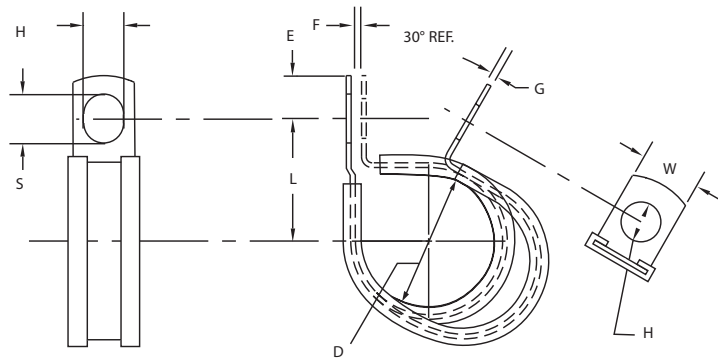
MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M; Type 304 Annealed Stainless Steel, Per ASTM A240/A666

CUSHION: EPDM per SAE J200/ASTM D2000 BC715A

OPTIONAL CUSHION: Neoprene per AMS3209 SAE J200/ASTM D2000 BC717A14B14E034, Silicone per AMS3303 SAE J200/ASTMD2000 M2GE506



COL



D	Part Number		H	L	W	E	F	S	Gage	
Clamping Diameter ± .031	HD Galv Part Number	Stainless Part Number	Hole Diameter ± .005	Center To Center ± .031	Width ± .010	Hole Center To End ± .015	Slot Gap ± .031	Length ± .020	HD Galv Gage ± .002	Stainless Gage ± .002
2.875	COL4609Z1	COL4609SS	.281	1.937	.500	.312	.062	.375	.048	.048
	COL4611Z1	COL4611SS	.343	2.000	.625	.375	.062	.437	.048	.048
	COL4613Z1	COL4613SS	.406	2.062	.750	.437	.062	.500	.048	.048
	COL4615Z1	COL4615SS	.468	2.125	.750	.500	.062	.562	.048	.048
	COL4617Z1	COL4617SS	.531	2.188	1.000	.562	.062	.625	.048	.048
3.000	COL4809Z1	COL4809SS	.281	2.000	.500	.312	.062	.375	.048	.048
	COL4811Z1	COL4811SS	.343	2.062	.625	.375	.062	.437	.048	.048
	COL4813Z1	COL4813SS	.406	2.125	.750	.437	.062	.500	.048	.048
	COL4815Z1	COL4815SS	.468	2.187	.750	.500	.062	.562	.048	.048
	COL4817Z1	COL4817SS	.531	2.250	1.000	.562	.062	.625	.048	.048
3.250	COL5209Z1	COL5209SS	.281	2.125	.500	.312	.062	.375	.048	.048
	COL5211Z1	COL5211SS	.343	2.187	.625	.375	.062	.437	.048	.048
	COL5213Z1	COL5213SS	.406	2.250	.750	.437	.062	.500	.048	.048
	COL5215Z1	COL5215SS	.468	2.312	.750	.500	.062	.562	.048	.048
	COL5217Z1	COL5217SS	.531	2.375	1.000	.562	.062	.625	.048	.048
3.500	COL5609Z1	COL5609SS	.281	2.250	.500	.312	.062	.375	.048	.048
	COL5611Z1	COL5611SS	.343	2.312	.625	.375	.062	.437	.048	.048
	COL5613Z1	COL5613SS	.406	2.375	.750	.437	.062	.500	.048	.048
	COL5615Z1	COL5615SS	.468	2.437	.750	.500	.062	.562	.048	.048
	COL5617Z1	COL5617SS	.531	2.500	1.000	.562	.062	.625	.048	.048
3.750	COL6009Z1	COL6009SS	.281	2.375	.500	.312	.062	.375	.048	.048
	COL6011Z1	COL6011SS	.343	2.437	.625	.375	.062	.437	.048	.048
	COL6013Z1	COL6013SS	.406	2.500	.750	.437	.062	.500	.048	.048
	COL6015Z1	COL6015SS	.468	2.562	.750	.500	.062	.562	.048	.048
	COL6017Z1	COL6017SS	.531	2.625	1.000	.562	.062	.625	.048	.048
4.000	COL6409Z1	COL6409SS	.281	2.500	.500	.312	.062	.375	.048	.048
	COL6411Z1	COL6411SS	.343	2.562	.625	.375	.062	.437	.048	.048
	COL6413Z1	COL6413SS	.406	2.625	.750	.437	.062	.500	.048	.048
	COL6415Z1	COL6415SS	.468	2.687	.750	.500	.062	.562	.048	.048
	COL6417Z1	COL6417SS	.531	2.750	1.000	.562	.062	.625	.048	.048

Additional clamping diameters and configurations available.

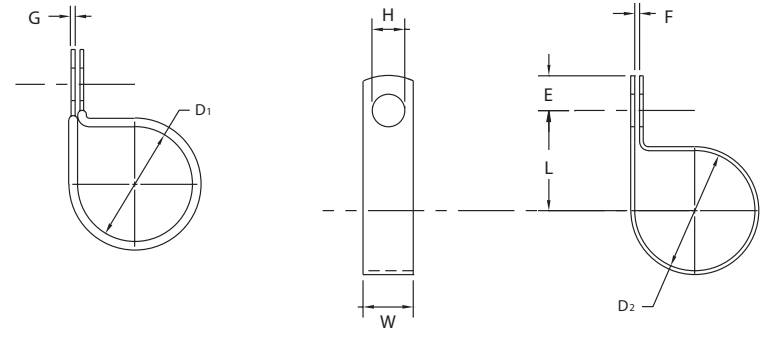


TUBE CLAMPS Furnished Closed

MATERIAL: CR or HD Galv Steel G90
 FINISH: None (Plain), Zinc Plated or Pre-plated
 CU SH ION: Black Vinyl, 1/32" Thick. We Recommend Vinyl Coated Parts Be Produced With HD Galv Steel G90.

NOTE: CCV-CC Clamps Are Formed Closed – Natural Spring Back Allowed.

HEAVY DUTY CLAMPS



D ₁		D ₂		H	L	W	E	F	S
Clamping Diameter	Part Number	Clamping Diameter	Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Gap	Gage
±.031		±.015		±.005	±.031	±.010	±.015	±.031	See Pg. 40
		.250	CC-0409	.281	.531	.625	.250	.062	.032
			CC-0411	.343	.594	.625	.312		
			CC-0413	.406	.656	.750	.375		
			CC-0415	.468	.718	.750	.437		
.250	CCV-0509	.312	CC-0509	.281	.562	.625	.250	.062	.032
	CCV-0511		CC-0511	.343	.625	.625	.312		
	CCV-0513		CC-0513	.406	.688	.750	.375		
.312	CCV-0609	.375	CC-0609	.281	.593	.625	.250	.062	.032
	CCV-0611		CC-0611	.343	.656	.625	.312		
	CCV-0613		CC-0613	.406	.718	.750	.375		
	CCV-0615		CC-0615	.468	.781	.750	.437		
.375	CCV-0617	.437	CC-0617	.531	.843	.875	.500	.062	.048
	CCV-0709		CC-0709	.281	.625	.625	.250		
	CCV-0711		CC-0711	.343	.687	.625	.312		
	CCV-0713		CC-0713	.406	.750	.750	.375		
	CCV-0715		CC-0715	.468	.812	.750	.437		
.437	CCV-0717	.500	CC-0717	.531	.875	.875	.500	.062	.048
	CCV-0809		CC-0809	.281	.687	.625	.250		
	CCV-0811		CC-0811	.343	.750	.625	.312		
	CCV-0813		CC-0813	.406	.812	.750	.375		
	CCV-0815		CC-0815	.468	.875	.875	.437		
.500	CCV-0817	.562	CC-0817	.531	.937	1.000	.500	.062	.048
	CCV-0909		CC-0909	.281	.718	.625	.250		
	CCV-0911		CC-0911	.343	.781	.625	.312		
	CCV-0913		CC-0913	.406	.843	.750	.375		
	CCV-0915		CC-0915	.468	.906	.875	.437		
.562	CCV-0917	.625	CC-0917	.531	.968	1.000	.500	.062	.048
	CCV-1009		CC-1009	.281	.750	.625	.250		
	CCV-1011		CC-1011	.343	.812	.625	.312		
	CCV-1013		CC-1013	.406	.875	.750	.375		
	CCV-1015		CC-1015	.468	.937	.875	.437		
.625	CCV-1017	.687	CC-1017	.531	1.000	1.000	.500	.062	.048
	CCV-1109		CC-1109	.281	.781	.625	.250		
	CCV-1111		CC-1111	.343	.843	.625	.312		
	CCV-1113		CC-1113	.406	.906	.750	.375		
	CCV-1115		CC-1115	.468	.968	.875	.437		
	CCV-1117		CC-1117	.531	1.031	1.000	.500		

Except for clamping diameter, dimensions of cushioned and plain parts are identical.



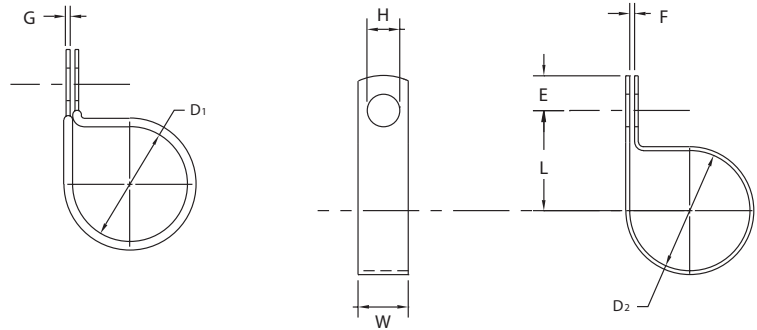
TUBE CLAMPS Furnished Closed

MATERIAL: CR or HD Galv Steel G90

FINISH: None (Plain), Zinc Plated or Pre-plated

CUSHION: Black Vinyl, 1/32" Thick. We Recommend Vinyl Coated Parts Be Produced With HD Galv Steel G90.

NOTE: CCV-CC Clamps Are Formed Closed – Natural Spring Back Allowed.



D ₁		D ₂		H	L	W	E	F	S
Clamping Diameter	Part Number	Clamping Diameter	Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Gap	Gage
±.031		±.015		±.005	±.031	±.010	±.015	±.031	See Pg. 40
.687	CCV-1209	.750	CC-1209	.281	.843	.625	.250	.062	.060
	CCV-1211		CC-1211	.343	.906	.625	.312		
	CCV-1213		CC-1213	.406	.968	.750	.375		
	CCV-1215		CC-1215	.468	1.031	.875	.437		
	CCV-1217		CC-1217	.531	1.093	1.000	.500		
.750	CCV-1309	.812	CC-1309	.281	.906	.625	.250	.062	.060
	CCV-1311		CC-1311	.343	.968	.625	.312		
	CCV-1313		CC-1313	.406	1.031	.750	.375		
	CCV-1315		CC-1315	.468	1.093	.875	.437		
	CCV-1317		CC-1317	.531	1.156	1.000	.500		
.812	CCV-1409	.875	CC-1409	.281	.937	.625	.250	.062	.060
	CCV-1411		CC-1411	.343	1.000	.625	.312		
	CCV-1413		CC-1413	.406	1.062	.750	.375		
	CCV-1415		CC-1415	.468	1.125	.875	.437		
	CCV-1417		CC-1417	.531	1.187	1.000	.500		
.875	CCV-1509	.937	CC-1509	.281	1.000	.625	.250	.062	.060
	CCV-1511		CC-1511	.343	1.062	.625	.312		
	CCV-1513		CC-1513	.406	1.125	.750	.375		
	CCV-1515		CC-1515	.468	1.187	.875	.437		
	CCV-1517		CC-1517	.531	1.250	1.000	.500		
.937	CCV-1609	1.000	CC-1609	.281	1.062	.625	.250	.062	.060
	CCV-1611		CC-1611	.343	1.125	.750	.312		
	CCV-1613		CC-1613	.406	1.187	.750	.375		
	CCV-1615		CC-1615	.468	1.250	.875	.437		
	CCV-1617		CC-1617	.531	1.312	1.000	.500		
1.000	CCV-1709	1.062	CC-1709	.281	1.125	.625	.250	.062	.060
	CCV-1711		CC-1711	.343	1.187	.750	.312		
	CCV-1713		CC-1713	.406	1.250	.750	.375		
	CCV-1715		CC-1715	.468	1.312	.875	.437		
	CCV-1717		CC-1717	.531	1.375	1.000	.500		

Except for clamping diameter, dimensions of cushioned and plain parts are identical.



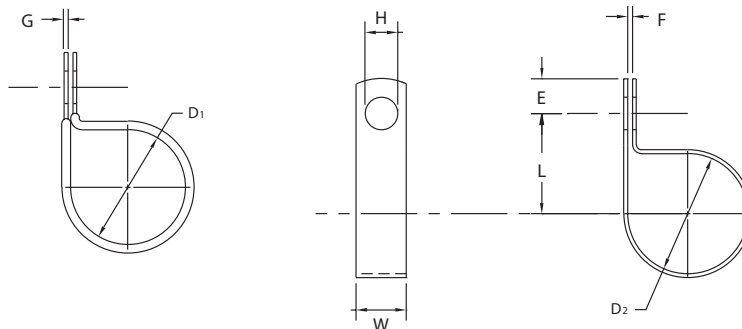
TUBE CLAMPS Furnished Closed

MATERIAL: CR or HD Galv Steel G90

FINISH: None (Plain), Zinc Plated or Pre-plated

CUSHION: Black Vinyl, 1/32" Thick. We Recommend Vinyl Coated Parts Be Produced With HD Galv Steel G90.

NOTE: CCV-CC Clamps Are Formed Closed – Natural Spring Back Allowed.



D ₁		D ₂		H	L	W	E	F	S
Clamping Diameter	Part Number	Clamping Diameter	Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Gap	Gage
±.031		±.015		±.005	±.031	±.010	±.015	±.031	See Pg. 40
1.062	CCV-1809	1.125	CC-1809	.281	1.156	.625	.250	.093	.060
	CCV-1811		CC-1811	.343	1.218	.750	.312		
	CCV-1813		CC-1813	.406	1.281	.750	.375		
	CCV-1815		CC-1815	.468	1.343	.875	.437		
	CCV-1817		CC-1817	.531	1.406	1.000	.500		
1.125	CCV-1911	1.187	CC-1911	.343	1.250	.750	.312	.093	.060
	CCV-1913		CC-1913	.406	1.312	.750	.375		
	CCV-1915		CC-1915	.468	1.375	.875	.437		
	CCV-1917		CC-1917	.531	1.437	1.000	.500		
1.187	CCV-2011	1.250	CC-2011	.343	1.281	.750	.437	.093	.060
	CCV-2013		CC-2013	.406	1.343	.750	.500		
	CCV-2015		CC-2015	.468	1.406	.875	.500		
	CCV-2017		CC-2017	.531	1.468	1.000	.562		
1.250	CCV-2111	1.312	CC-2111	.343	1.312	.750	.437	.093	.060
	CCV-2113		CC-2113	.406	1.375	.750	.500		
	CCV-2115		CC-2115	.468	1.437	.875	.500		
	CCV-2117		CC-2117	.531	1.500	1.000	.562		
1.312	CCV-2211	1.375	CC-2211	.343	1.343	.750	.437	.093	.060
	CCV-2213		CC-2213	.406	1.406	.750	.500		
	CCV-2215		CC-2215	.468	1.468	.875	.500		
	CCV-2217		CC-2217	.531	1.531	1.000	.562		
1.375	CCV-2311	1.437	CC-2311	.343	1.375	.750	.437	.093	.060
	CCV-2313		CC-2313	.406	1.437	.750	.500		
	CCV-2315		CC-2315	.468	1.500	.875	.500		
	CCV-2317		CC-2317	.531	1.562	1.000	.562		
1.437	CCV-2411	1.500	CC-2411	.343	1.437	.750	.437	.093	.060
	CCV-2413		CC-2413	.406	1.500	.750	.500		
	CCV-2415		CC-2415	.468	1.562	.875	.500		
	CCV-2417		CC-2417	.531	1.625	1.000	.562		
1.500	CCV-2511	1.562	CC-2511	.343	1.468	.750	.437	.125	.060
	CCV-2513		CC-2513	.406	1.531	.750	.500		
	CCV-2515		CC-2515	.468	1.593	.875	.500		
	CCV-2517		CC-2517	.531	1.656	1.000	.562		

Except for clamping diameter, dimensions of cushioned and plain parts are identical.



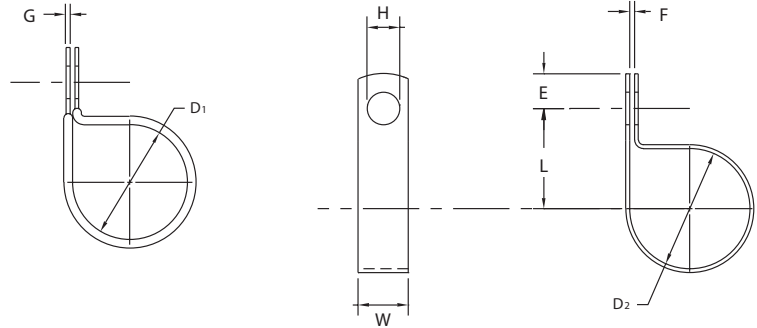
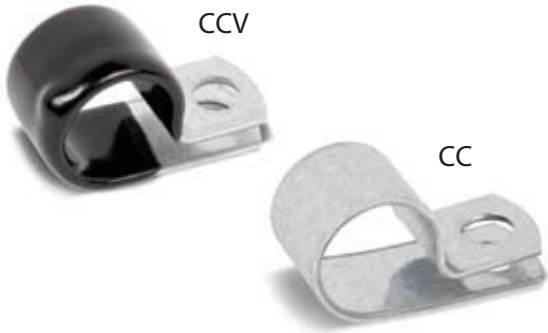
TUBE CLAMPS Furnished Closed

MATERIAL: CR or HD Galv Steel G90

FINISH: None (Plain), Zinc Plated or Pre-plated

CUSHION: Black Vinyl, 1/32" Thick. We Recommend Vinyl Coated Parts Be Produced With HD Galv Steel G90.

NOTE: CCV-CC Clamps Are Formed Closed – Natural Spring Back Allowed.



D ₁		D ₂		H	L	W	E	F	S
Clamping Diameter	Part Number	Clamping Diameter	Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Gap	Gage
±.031		±.015		±.005	±.031	±.010	±.015	±.031	See Pg. 40
1.562	CCV-2611	1.625	CC-2611	.343	1.500	.750	.437	.125	.060
	CCV-2613		CC-2613	.406	1.562	.750	.500		
	CCV-2615		CC-2615	.468	1.625	.875	.500		
	CCV-2617		CC-2617	.531	1.687	1.000	.562		
1.625	CCV-2711	1.687	CC-2711	.343	1.531	.750	.437	.125	.060
	CCV-2713		CC-2713	.406	1.593	.750	.500		
	CCV-2715		CC-2715	.468	1.656	.875	.500		
	CCV-2717		CC-2717	.531	1.718	1.000	.562		
1.687	CCV-2811	1.750	CC-2811	.343	1.562	.750	.437	.125	.060
	CCV-2813		CC-2813	.406	1.625	.750	.500		
	CCV-2815		CC-2815	.468	1.687	.875	.500		
	CCV-2817		CC-2817	.531	1.750	1.000	.562		
1.750	CCV-2911	1.812	CC-2911	.343	1.625	.750	.437	.125	.060
	CCV-2913		CC-2913	.406	1.687	.750	.500		
	CCV-2915		CC-2915	.468	1.750	.875	.500		
	CCV-2917		CC-2917	.531	1.812	1.000	.562		
1.812	CCV-3011	1.875	CC-3011	.343	1.656	.750	.437	.125	.060
	CCV-3013		CC-3013	.406	1.718	.750	.500		
	CCV-3015		CC-3015	.468	1.781	.875	.500		
	CCV-3017		CC-3017	.531	1.843	1.000	.562		
1.875	CCV-3111	1.937	CC-3111	.343	1.687	.750	.437	.125	.060
	CCV-3113		CC-3113	.406	1.750	.750	.500		
	CCV-3115		CC-3115	.468	1.812	.875	.500		
	CCV-3117		CC-3117	.531	1.875	1.000	.562		
1.937	CCV-3211	2.000	CC-3211	.343	1.781	.750	.437	.125	.060
	CCV-3213		CC-3213	.406	1.843	.750	.500		
	CCV-3215		CC-3215	.468	1.906	.875	.500		
	CCV-3217		CC-3217	.531	1.968	1.000	.562		
2.000	CCV-3311	2.062	CC-3311	.343	1.812	.750	.437	.125	.060
	CCV-3313		CC-3313	.406	1.875	.750	.500		
	CCV-3315		CC-3315	.468	1.937	.875	.500		
	CCV-3317		CC-3317	.531	2.000	1.000	.562		

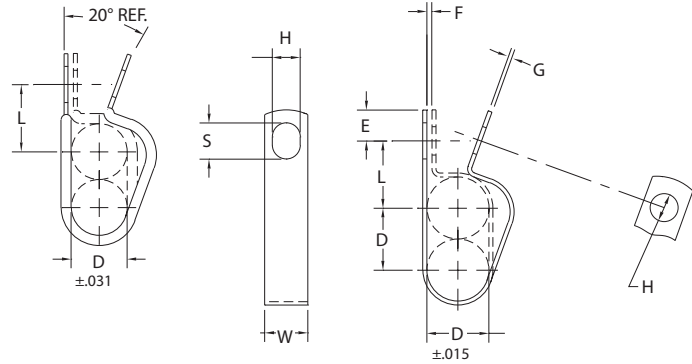
Except for clamping diameter, dimensions of cushioned and plain parts are identical.



DOUBLE TUBE CLAMPS

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M
 CUSHION: Black Vinyl, 1/32" Thick

DOUBLE TUBE CLAMPS

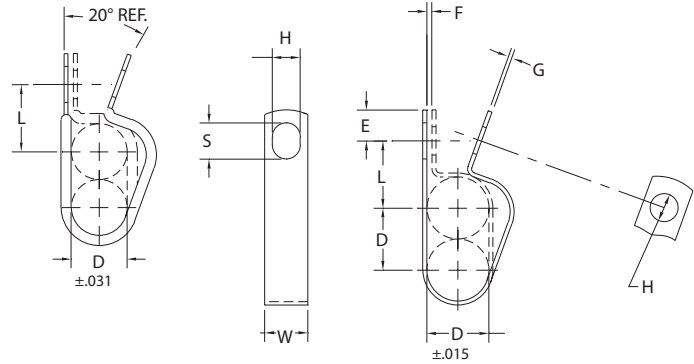


D					H	S	W	E	F	G
Diameter Of Tubes	Part Number	L	Part Number	L	Hole Diameter	Slot Length	Width	Hole Center To End	Gap	Gage
		± .031		± .031	± .005	± .020	± .010	± .015	± .031	See Pg. 40
.187	CDV-0307	.468	CD-0307	.437	.203	.203	.500	.218	.031	.032
	CDV-0309	.500	CD-0309	.468	.281	.375	.500	.312		
	CDV-0311	.562	CD-0311	.531	.343	.437	.625	.375		
	CDV-0313	.625	CD-0313	.593	.406	.500	.750	.437		
.250	CDV-0407	.500	CD-0407	.468	.203	.203	.500	.218	.031	.032
	CDV-0409	.531	CD-0409	.500	.281	.375	.500	.312		
	CDV-0411	.593	CD-0411	.562	.343	.437	.625	.375		
	CDV-0413	.656	CD-0413	.625	.406	.500	.750	.437		
.312	CDV-0509	.562	CD-0509	.531	.281	.375	.500	.312	.031	.032
	CDV-0511	.625	CD-0511	.593	.343	.437	.625	.375		
	CDV-0513	.687	CD-0513	.656	.406	.500	.750	.437		
.375	CDV-0609	.593	CD-0609	.562	.281	.375	.500	.312	.062	.032
	CDV-0611	.656	CD-0611	.625	.343	.437	.625	.375		
	CDV-0613	.718	CD-0613	.687	.406	.500	.750	.437		
	CDV-0615	.781	CD-0615	.750	.468	.562	.875	.500		
	CDV-0617	.843	CD-0617	.812	.531	.625	1.000	.562		
.437	CDV-0709	.625	CD-0709	.593	.281	.375	.500	.312	.062	.032
	CDV-0711	.687	CD-0711	.656	.343	.437	.625	.375		
	CDV-0713	.750	CD-0713	.718	.406	.500	.750	.437		
	CDV-0715	.812	CD-0715	.781	.468	.562	.875	.500		
	CDV-0717	.875	CD-0717	.843	.531	.625	1.000	.562		
.500	CDV-0809	.656	CD-0809	.625	.281	.375	.500	.312	.062	.048
	CDV-0811	.718	CD-0811	.687	.343	.437	.625	.375		
	CDV-0813	.781	CD-0813	.750	.406	.500	.750	.437		
	CDV-0815	.843	CD-0815	.812	.468	.562	.875	.500		
	CDV-0817	.906	CD-0817	.875	.531	.625	1.000	.562		
.562	CDV-0909	.687	CD-0909	.656	.281	.375	.500	.312	.062	.048
	CDV-0911	.750	CD-0911	.718	.343	.437	.625	.375		
	CDV-0913	.812	CD-0913	.781	.406	.500	.750	.437		
	CDV-0915	.875	CD-0915	.843	.468	.562	.875	.500		
	CDV-0917	.937	CD-0917	.906	.531	.625	1.000	.562		

Inspection note: Ends of legs may not line up if clamp is closed around non-rigid tubing or hose. For inspection, close around a hard mandrel.

DOUBLE TUBE CLAMPS

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M
 CUSHION: Black Vinyl, 1/32" Thick



D					H	S	W	E	F	G
Diameter Of Tubes	Part Number	L	Part Number	L	Hole Diameter	Slot Length	Width	Hole Center To End	Gap	Gage
		± .031		± .031	± .005	± .020	± .010	± .015	± .031	See Pg. 40
.625	CDV-1009	.750	CD-1009	.718	.281	.375	.500	.312	.062	.048
	CDV-1011	.781	CD-1011	.750	.343	.437	.625	.375		
	CDV-1013	.843	CD-1013	.812	.406	.500	.750	.437		
	CDV-1015	.906	CD-1015	.875	.468	.562	.875	.500		
	CDV-1017	.968	CD-1017	.937	.531	.625	1.000	.562		
.687	CDV-1111	.812	CD-1111	.781	.343	.437	.625	.375	.062	.048
	CDV-1113	.875	CD-1113	.843	.406	.500	.750	.437		
	CDV-1115	.937	CD-1115	.906	.468	.562	.875	.500		
	CDV-1117	1.000	CD-1117	.968	.531	.625	1.000	.562		
.750	CDV-1211	.843	CD-1211	.812	.343	.437	.625	.375	.062	.048
	CDV-1213	.906	CD-1213	.875	.406	.500	.750	.437		
	CDV-1215	.968	CD-1215	.937	.468	.562	.875	.500		
	CDV-1217	1.031	CD-1217	1.000	.531	.625	1.000	.562		
.812	CDV-1311	.875	CD-1311	.843	.343	.437	.625	.375	.062	.060
	CDV-1313	.937	CD-1313	.906	.406	.500	.750	.437		
	CDV-1315	1.000	CD-1315	.968	.468	.562	.875	.500		
	CDV-1317	1.062	CD-1317	1.031	.531	.625	1.000	.562		
.875	CDV-1411	.906	CD-1411	.875	.343	.437	.625	.375	.062	.060
	CDV-1413	.968	CD-1413	.937	.406	.500	.750	.437		
	CDV-1415	1.031	CD-1415	1.000	.468	.562	.875	.500		
	CDV-1417	1.093	CD-1417	1.062	.531	.625	1.000	.562		
.937	CDV-1511	.937	CD-1511	.906	.343	.437	.625	.375	.062	.060
	CDV-1513	1.000	CD-1513	.968	.406	.500	.750	.437		
	CDV-1515	1.062	CD-1515	1.031	.468	.562	.875	.500		
	CDV-1517	1.125	CD-1517	1.093	.531	.625	1.000	.562		
1.000	CDV-1611	.968	CD-1611	.937	.343	.437	.625	.375	.062	.060
	CDV-1613	1.031	CD-1613	1.000	.406	.500	.750	.437		
	CDV-1615	1.093	CD-1615	1.062	.468	.562	.875	.500		
	CDV-1617	1.156	CD-1617	1.125	.531	.625	1.000	.562		

Inspection note: Ends of legs may not line up if clamp is closed around non-rigid tubing or hose. For inspection, close around a hard mandrel.



DOUBLE TUBE CLAMPS Extruded Liner

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M; Type 304 Annealed Stainless Steel, Per ASTM A240/A666

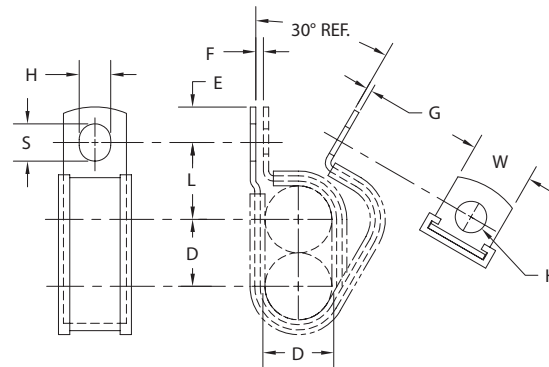
CUSHION: EPDM per SAE J200/ASTM D2000 BC715A

OPTIONAL CUSHION: Neoprene per AMS3209 SAE J200/ASTM D2000 BC717A14B14E034, Silicone per AMS3303 SAE J200/ASTMD2000 M2GE506

DOUBLE TUBE CLAMPS



CDL



D	Part Number		H	L	W	E	F	S	Gage	
Diameter of Tubes	HD Galv Part Number	Stainless Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Gap	Slot Length	HD Galv Gage	Stainless Gage
± .031			± .005	± .031	± .010	± .015	± .031	± .020	± .002	± .002
.187	CDL0307Z1	CDL0307SS	.203	.511	.500	.250	.062	.297	.032	.032
	CDL0309Z1	CDL0309SS	.281	.531	.500	.312	.062	.375	.032	.032
	CDL0311Z1	CDL0311SS	.343	.593	.625	.375	.062	.437	.032	.032
	CDL0313Z1	CDL0313SS	.406	.656	.750	.437	.062	.500	.032	.032
.250	CDL0407Z1	CDL0407SS	.203	.531	.500	.250	.062	.297	.032	.032
	CDL0409Z1	CDL0409SS	.281	.593	.500	.312	.062	.375	.032	.032
	CDL0411Z1	CDL0411SS	.343	.656	.625	.375	.062	.437	.032	.032
	CDL0413Z1	CDL0413SS	.406	.718	.750	.437	.062	.500	.032	.032
.312	CDL0507Z1	CDL0507SS	.203	.593	.500	.250	.062	.297	.032	.032
	CDL0509Z1	CDL0509SS	.281	.625	.500	.312	.062	.375	.032	.032
	CDL0511Z1	CDL0511SS	.343	.687	.625	.375	.062	.437	.032	.032
	CDL0513Z1	CDL0513SS	.406	.750	.750	.437	.062	.500	.032	.032
.375	CDL0607Z1	CDL0607SS	.203	.625	.500	.250	.062	.297	.032	.032
	CDL0609Z1	CDL0609SS	.281	.656	.500	.312	.062	.375	.032	.032
	CDL0611Z1	CDL0611SS	.343	.718	.625	.375	.062	.437	.032	.032
	CDL0613Z1	CDL0613SS	.406	.781	.750	.437	.062	.500	.032	.032
	CDL0615Z1	CDL0615SS	.468	.843	.750	.500	.062	.562	.032	.032
.437	CDL0617Z1	CDL0617SS	.531	.906	1.000	.562	.062	.625	.032	.032
	CDL0707Z1	CDL0707SS	.203	.656	.500	.250	.062	.297	.032	.032
	CDL0709Z1	CDL0709SS	.281	.687	.500	.312	.062	.375	.032	.032
	CDL0711Z1	CDL0711SS	.343	.750	.625	.375	.062	.437	.032	.032
	CDL0713Z1	CDL0713SS	.406	.812	.750	.437	.062	.500	.032	.032
	CDL0715Z1	CDL0715SS	.468	.875	.750	.500	.062	.562	.032	.032
.500	CDL0717Z1	CDL0717SS	.531	.937	1.000	.562	.062	.625	.032	.032
	CDL0807Z1	CDL0807SS	.203	.687	.500	.250	.062	.297	.032	.032
	CDL0809Z1	CDL0809SS	.281	.718	.500	.312	.062	.375	.032	.032
	CDL0811Z1	CDL0811SS	.343	.781	.625	.375	.062	.437	.048	.032
	CDL0813Z1	CDL0813SS	.406	.843	.750	.437	.062	.500	.048	.032
	CDL0815Z1	CDL0815SS	.468	.906	.750	.500	.062	.562	.048	.032
.562	CDL0817Z1	CDL0817SS	.531	.968	1.000	.562	.062	.625	.048	.032
	CDL0907Z1	CDL0907SS	.203	.718	.500	.250	.062	.297	.032	.032
	CDL0909Z1	CDL0909SS	.281	.750	.500	.312	.062	.375	.032	.032
	CDL0911Z1	CDL0911SS	.343	.812	.625	.375	.062	.437	.048	.032
	CDL0913Z1	CDL0913SS	.406	.875	.750	.437	.062	.500	.048	.032
	CDL0915Z1	CDL0915SS	.468	.937	.750	.500	.062	.562	.048	.032
CDL0917Z1	CDL0917SS	.531	1.000	1.000	.562	.062	.625	.048	.032	

Inspection note: Ends of legs may not line up if clamp is closed around non-rigid tubing or hose. For inspection, close around a hard mandrel. Additional clamping diameters and configurations are available.



DOUBLE TUBE CLAMPS Extruded Liner

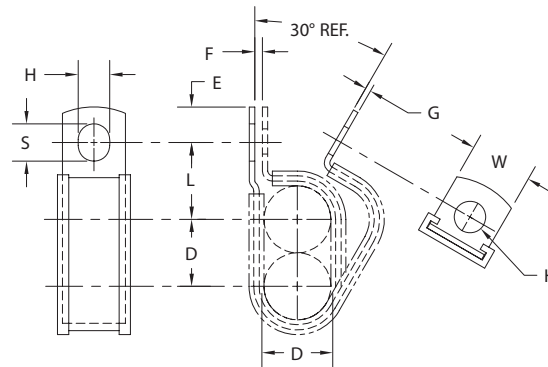
MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M; Type 304 Annealed Stainless Steel, Per ASTM A240/A666

CUSHION: EPDM per SAE J200/ASTM D2000 BC715A

OPTIONAL CUSHION: Neoprene per AMS3209 SAE J200/ASTM D2000 BC717A14B14E034, Silicone per AMS3303 SAE J200/ASTMD2000 M2GE506



CDL



D	Part Number		H	L	W	E	F	S	Gage	
Diameter of Tubes	HD Galv Part Number	Stainless Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Gap	Slot Length	HD Galv Gage	Stainless Gage
± .031			± .005	± .031	± .010	± .015	± .031	± .020	± .002	± .002
.625	CDL1009Z1	CDL1009SS	.281	.812	.500	.312	.062	.375	.032	.032
	CDL1011Z1	CDL1011SS	.343	.843	.625	.375	.062	.437	.048	.032
	CDL1013Z1	CDL1013SS	.406	.906	.750	.437	.062	.500	.048	.032
	CDL1015Z1	CDL1015SS	.468	.968	.750	.500	.062	.562	.048	.032
	CDL1017Z1	CDL1017SS	.531	1.031	1.000	.562	.062	.625	.048	.032
.687	CDL1109Z1	CDL1109SS	.281	.843	.500	.312	.062	.375	.032	.032
	CDL1111Z1	CDL1111SS	.343	.875	.625	.375	.062	.437	.048	.032
	CDL1113Z1	CDL1113SS	.406	.937	.750	.437	.062	.500	.048	.032
	CDL1115Z1	CDL1115SS	.468	1.000	.750	.500	.062	.562	.048	.032
	CDL1117Z1	CDL1117SS	.531	1.062	1.000	.562	.062	.625	.048	.032
.750	CDL1209Z1	CDL1209SS	.281	.875	.500	.312	.062	.375	.032	.032
	CDL1211Z1	CDL1211SS	.343	.906	.625	.375	.062	.437	.048	.032
	CDL1213Z1	CDL1213SS	.406	.968	.750	.437	.062	.500	.048	.032
	CDL1215Z1	CDL1215SS	.468	1.031	.750	.500	.062	.562	.048	.032
	CDL1217Z1	CDL1217SS	.531	1.093	1.000	.562	.062	.625	.048	.032
.812	CDL1309Z1	CDL1309SS	.281	.906	.500	.312	.062	.375	.032	.032
	CDL1311Z1	CDL1311SS	.343	.937	.625	.375	.062	.437	.048	.032
	CDL1313Z1	CDL1313SS	.406	1.000	.750	.437	.062	.500	.048	.032
	CDL1315Z1	CDL1315SS	.468	1.062	.750	.500	.062	.562	.048	.032
	CDL1317Z1	CDL1317SS	.531	1.125	1.000	.562	.062	.625	.048	.032
.875	CDL1409Z1	CDL1409SS	.281	.937	.500	.312	.062	.375	.032	.032
	CDL1411Z1	CDL1411SS	.343	.968	.625	.375	.062	.437	.048	.032
	CDL1413Z1	CDL1413SS	.406	1.031	.750	.437	.062	.500	.048	.032
	CDL1415Z1	CDL1415SS	.468	1.093	.750	.500	.062	.562	.048	.032
	CDL1417Z1	CDL1417SS	.531	1.156	1.000	.562	.062	.625	.048	.032
.937	CDL1509Z1	CDL1509SS	.281	.968	.500	.312	.062	.375	.032	.032
	CDL1511Z1	CDL1511SS	.343	1.000	.625	.375	.062	.437	.048	.032
	CDL1513Z1	CDL1513SS	.406	1.062	.750	.437	.062	.500	.048	.032
	CDL1515Z1	CDL1515SS	.468	1.125	.750	.500	.062	.562	.048	.032
	CDL1517Z1	CDL1517SS	.531	1.187	1.000	.562	.062	.625	.048	.032
1.000	CDL1609Z1	CDL1609SS	.281	1.000	.500	.312	.062	.375	.032	.032
	CDL1611Z1	CDL1611SS	.343	1.031	.625	.375	.062	.437	.048	.032
	CDL1613Z1	CDL1613SS	.406	1.093	.750	.437	.062	.500	.048	.032
	CDL1615Z1	CDL1615SS	.468	1.156	.750	.500	.062	.562	.048	.032
	CDL1617Z1	CDL1617SS	.531	1.218	1.000	.562	.062	.625	.048	.032

Inspection note: Ends of legs may not line up if clamp is closed around non-rigid tubing or hose. For inspection, close around a hard mandrel.
Additional clamping diameters and configurations are available.



DOUBLE TUBE CLAMPS Extruded Liner

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M; Type 304 Annealed Stainless Steel, Per ASTM A240/A666

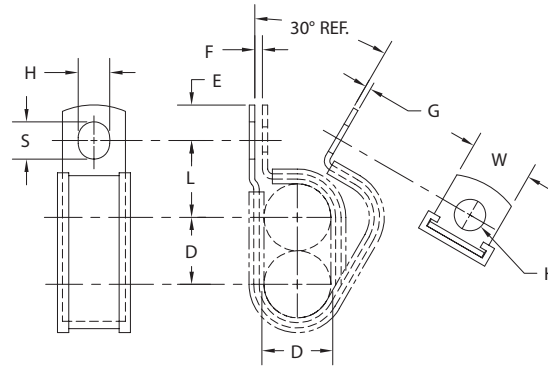
CUSHION: EPDM per SAE J200/ASTM D2000 BC715A

OPTIONAL CUSHION: Neoprene per AMS3209 SAE J200/ASTM D2000 BC717A14B14E034, Silicone per AMS3303 SAE J200/ASTMD2000 M2GE506

DOUBLE TUBE CLAMPS



CDL



D	Part Number		H	L	W	E	F	S	Gage	
Diameter of Tubes	HD Galv Part Number	Stainless Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	Gap	Slot Length	HD Galv Gage	Stainless Gage
± .031			± .005	± .031	± .010	± .015	± .031	± .020	± .002	± .002
1.062	CDL1709Z1	CDL1709SS	.281	1.031	.500	.312	.062	.375	.048	.048
	CDL1711Z1	CDL1711SS	.343	1.062	.625	.375	.062	.437	.048	.048
	CDL1713Z1	CDL1713SS	.406	1.125	.750	.437	.062	.500	.048	.048
	CDL1715Z1	CDL1715SS	.468	1.187	.750	.500	.062	.562	.048	.048
	CDL1717Z1	CDL1717SS	.531	1.250	1.000	.562	.062	.625	.048	.048
1.125	CDL1809Z1	CDL1809SS	.281	1.062	.500	.312	.062	.375	.048	.048
	CDL1811Z1	CDL1811SS	.343	1.093	.625	.375	.062	.437	.048	.048
	CDL1813Z1	CDL1813SS	.406	1.156	.750	.437	.062	.500	.048	.048
	CDL1815Z1	CDL1815SS	.468	1.218	.750	.500	.062	.562	.048	.048
	CDL1817Z1	CDL1817SS	.531	1.281	1.000	.562	.062	.625	.048	.048
1.187	CDL1909Z1	CDL1909SS	.281	1.093	.500	.312	.062	.375	.048	.048
	CDL1911Z1	CDL1911SS	.343	1.125	.625	.375	.062	.437	.048	.048
	CDL1913Z1	CDL1913SS	.406	1.187	.750	.437	.062	.500	.048	.048
	CDL1915Z1	CDL1915SS	.468	1.250	.750	.500	.062	.562	.048	.048
	CDL1917Z1	CDL1917SS	.531	1.312	1.000	.562	.062	.625	.048	.048
1.250	CDL2009Z1	CDL2009SS	.281	1.125	.500	.312	.062	.375	.048	.048
	CDL2011Z1	CDL2011SS	.343	1.156	.625	.375	.062	.437	.048	.048
	CDL2013Z1	CDL2013SS	.406	1.218	.750	.437	.062	.500	.048	.048
	CDL2015Z1	CDL2015SS	.468	1.281	.750	.500	.062	.562	.048	.048
	CDL2017Z1	CDL2017SS	.531	1.343	1.000	.562	.062	.625	.048	.048
1.312	CDL2109Z1	CDL2109SS	.281	1.156	.500	.312	.062	.375	.048	.048
	CDL2111Z1	CDL2111SS	.343	1.187	.625	.375	.062	.437	.048	.048
	CDL2113Z1	CDL2113SS	.406	1.250	.750	.437	.062	.500	.048	.048
	CDL2115Z1	CDL2115SS	.468	1.312	.750	.500	.062	.562	.048	.048
	CDL2117Z1	CDL2117SS	.531	1.375	1.000	.562	.062	.625	.048	.048
1.375	CDL2209Z1	CDL2209SS	.281	1.187	.500	.312	.062	.375	.048	.048
	CDL2211Z1	CDL2211SS	.343	1.218	.625	.375	.062	.437	.048	.048
	CDL2213Z1	CDL2213SS	.406	1.281	.750	.437	.062	.500	.048	.048
	CDL2215Z1	CDL2215SS	.468	1.343	.750	.500	.062	.562	.048	.048
	CDL2217Z1	CDL2217SS	.531	1.406	1.000	.562	.062	.625	.048	.048
1.437	CDL2309Z1	CDL2309SS	.281	1.218	.500	.312	.062	.375	.048	.048
	CDL2311Z1	CDL2311SS	.343	1.250	.625	.375	.062	.437	.048	.048
	CDL2313Z1	CDL2313SS	.406	1.312	.750	.437	.062	.500	.048	.048
	CDL2315Z1	CDL2315SS	.468	1.375	.750	.500	.062	.562	.048	.048
	CDL2317Z1	CDL2317SS	.531	1.437	1.000	.562	.062	.625	.048	.048
1.500	CDL2409Z1	CDL2409SS	.281	1.250	.500	.312	.062	.375	.048	.048
	CDL2411Z1	CDL2411SS	.343	1.281	.625	.375	.062	.437	.048	.048
	CDL2413Z1	CDL2413SS	.406	1.343	.750	.437	.062	.500	.048	.048
	CDL2415Z1	CDL2415SS	.468	1.406	.750	.500	.062	.562	.048	.048
	CDL2417Z1	CDL2417SS	.531	1.468	1.000	.562	.062	.625	.048	.048

Inspection note: Ends of legs may not line up if clamp is closed around non-rigid tubing or hose. For inspection, close around a hard mandrel.
Additional clamping diameters and configurations are available.



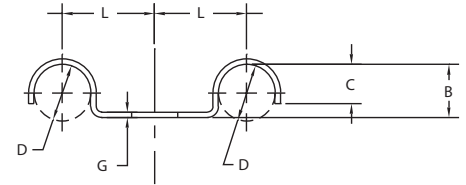
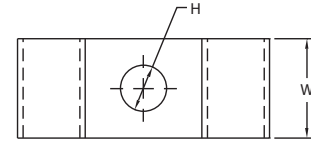
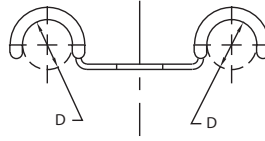
DOUBLE PIPE CLAMPS Center Mounting Hole

MATERIAL: HRP&O, CR or HD Galv Steel G90

FINISH: None (Plain), Zinc Plated or Pre-plated

CUSHION: Black Vinyl, 1/32" Thick. We Recommend Vinyl Coated Parts Be Produced With HD Galv Steel G90

CMV



Part Number	D	H	L	B	C	G	W
	Clamping Diameter ±.015	Hole Diameter ±.005	Center To Center ±.031	Base To Top Of Radius ±.015	Ref Only Closure ±.015	Gage See Pg. 40	Width ±.010
CM-0307	.187	.218	.437	.156	.093	.048	.500
CM-0309	.187	.281	.437	.156	.093	.048	.500
CM-0407	.250	.218	.437	.093	.093	.048	.500
CM-0409	.250	.281	.437	.125	.093	.048	.500
CM-0507	.312	.218	.531	.296	.265	.048	.625
CM-0509	.312	.281	.531	.296	.265	.048	.625
CM-0511	.312	.343	.531	.296	.265	.048	.625
CM-0607	.375	.218	.625	.343	.281	.048	.625
CM-0609	.375	.281	.625	.343	.281	.048	.625
CM-0611	.375	.343	.625	.343	.281	.048	.625
CM-0613	.375	.406	.625	.343	.281	.048	.625
CM-0709	.437	.281	.687	.375	.343	.048	.750
CM-0711	.437	.343	.687	.375	.343	.048	.750
CM-0713	.437	.406	.687	.375	.343	.048	.750
CM-0809	.500	.281	.812	.437	.250	.060*	.750
CM-0811	.500	.343	.812	.437	.250	.060*	.750
CM-0813	.500	.406	.812	.437	.250	.060*	.750
CM-0909	.562	.281	.875	.468	.400	.060*	.750
CM-0911	.562	.343	.875	.468	.400	.060*	.750
CM-0913	.562	.406	.875	.468	.400	.060*	.750
CM-1009	.625	.281	.625	.625	.500	.060*	.750
CM-1011	.625	.343	.625	.625	.500	.060*	.750
CM-1013	.625	.406	.625	.625	.500	.060*	.750
CM-1109	.687	.281	.625	.625	.437	.060*	1.000
CM-1209	.750	.281	.875	.718	.500	.060*	.750
CM-1211	.750	.343	.875	.718	.500	.060*	.750
CM-1213	.750	.406	.875	.718	.500	.060*	.750
CM-1309	.812	.281	1.250	.718	.406	.090	1.000
CM-1311	.812	.343	1.250	.718	.406	.090	1.000
CM-1313	.812	.406	1.250	.718	.406	.090	1.000
CM-1409	.875	.281	.906	.843	.687	.090	.750
CM-1411	.875	.343	.906	.843	.687	.090	.750
CM-1413	.875	.406	.906	.843	.687	.090	.750
CM-1609	1.000	.281	1.062	.906	.750	.090	.750
CM-1611	1.000	.343	1.062	.906	.750	.090	.750
CM-1613	1.000	.406	1.062	.906	.750	.090	.750
CM-1713	1.062	.406	1.156	.968	.968	.120	1.000
CM-1813	1.125	.406	1.000	.468	.562	.120	1.000
CM-1913	1.187	.406	1.250	1.000	.750	.120	1.000
CM-2009	1.250	.281	.875	.500	.375	.120	.750
CM-2113	1.312	.406	1.187	.531	.531	.120	.750
CM-2209	1.375	.281	1.187	1.375	.687	.120	1.000
CM-2313	1.437	.406	1.421	.562	.718	.187	1.000
CM-2517	1.562	.531	1.625	.687	.500	.187	1.250

Most of these parts over 1" diameter, and many of the other parts, can be furnished with other bolt hole sizes, subject to the type of tooling and bolt head size.

Parts can be furnished with clamping ends coated with vinyl plastisol. Coating will reduce clamping diameters by 1/16".

Parts should be plated or G90 material used before coating.

*Not available in G90 material.

M&E
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ENTORNO INDUSTRIAL, S.A. DE C.V.

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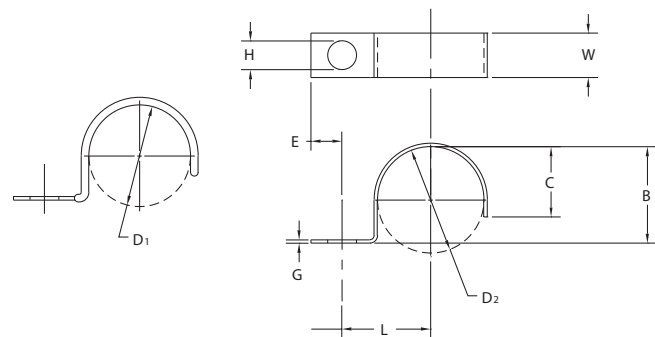
Tels.: (55) 5356-7206 • Fax: (55) 5356-7209

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HALF CLIPS

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M
 CUSHION: Black Vinyl, 1/32" Thick

TUBE, WIRING & GRATE CLIPS



D ₁		D ₂		H	L	E	B	C	G	W
Clamping Diameter	Part Number	Clamping Diameter	Part Number	Hole Diameter	Center To Center	Hole Center To End	Base To Top Of Diameter	Closure	Gage	Width
±.031		±.015		±.005	±.031	±.015	±.015	±.015	See Pg. 40	±.010
		.125	CH-0204*	.125	.203	.093	.125	.125	.025	.375
			CH-0207	.218	.437	.250	.125	.093	.032	.500
			CH-0209	.281	.437	.250	.125	.093	.032	.500
		.187	CH-0307	.218	.437	.250	.156	.093	.032	.500
			CH-0309	.281	.437	.250	.156	.093	.032	.500
.187	CHV-0407	.250	CH-0407	.218	.437	.250	.188	.156	.032	.500
	CHV-0409		CH-0409	.281	.437	.250	.188	.156	.032	.500
.250	CHV-0507	.312	CH-0507	.218	.500	.250	.250	.188	.048	.500
	CHV-0509		CH-0509	.281	.500	.250	.250	.188	.048	.500
	CHV-0511		CH-0511	.343	.500	.250	.250	.188	.048	.625
.312	CHV-0607	.375	CH-0607	.218	.531	.312	.312	.218	.048	.625
	CHV-0609		CH-0609	.281	.531	.312	.312	.218	.048	.625
	CHV-0611		CH-0611	.343	.687	.343	.375	.218	.060	.625
	CHV-0613		CH-0613	.406	.687	.343	.375	.218	.060	.750
.375	CHV-0707	.437	CH-0707	.218	.562	.312	.375	.281	.048	.625
	CHV-0709		CH-0709	.281	.562	.312	.375	.281	.048	.625
	CHV-0711		CH-0711	.343	.687	.375	.375	.281	.060	.625
	CHV-0713		CH-0713	.406	.687	.375	.375	.281	.060	.750
.437	CHV-0807	.500	CH-0807	.218	.625	.312	.437	.312	.060	.625
	CHV-0809		CH-0809	.281	.625	.312	.437	.312	.060	.625
	CHV-0811		CH-0811	.343	.687	.375	.437	.312	.060	.625
	CHV-0813		CH-0813	.406	.687	.375	.437	.312	.060	.750
.500	CHV-0907	.562	CH-0907	.218	.687	.312	.500	.343	.060	.625
	CHV-0909		CH-0909	.281	.687	.312	.500	.343	.060	.625
	CHV-0911		CH-0911	.343	.750	.375	.500	.343	.060	.625
	CHV-0913		CH-0913	.406	.750	.375	.500	.343	.060	.750
.562	CHV-1007	.625	CH-1007	.218	.750	.312	.562	.437	.060	.625
	CHV-1009		CH-1009	.281	.750	.312	.562	.437	.060	.625
	CHV-1011		CH-1011	.343	.812	.375	.562	.437	.060	.625
	CHV-1013		CH-1013	.406	.812	.375	.562	.437	.060	.750

Except for clamping diameter, dimensions of cushioned and plain parts are identical.
 Note: Part Numbers shown with asterisk (*) are produced from CRCQ Steel, Zinc Plated.

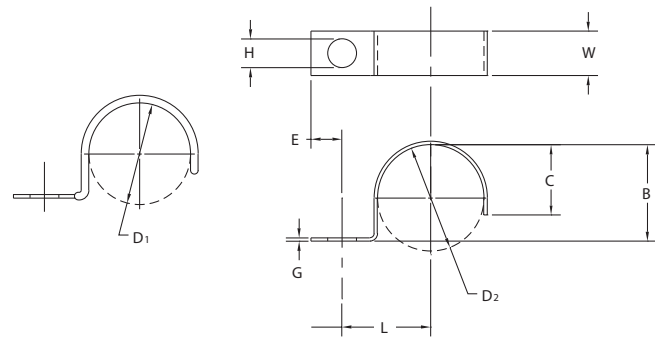
HALF CLIPS



ENTORNO INDUSTRIAL

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M
 CUSHION: Black Vinyl, 1/32" Thick

TUBE, WIRING & GRATE CLIPS



D ₁		D ₂		H	L	E	B	C	G	W
Clamping Diameter	Part Number	Clamping Diameter	Part Number	Hole Diameter	Center To Center	Hole Center To End	Base To Top Of Diameter	Closure	Gage	Width
± .031		± .015		± .005	± .031	± .015	± .015	± .015	See Pg. 40	± .010
.625	CHV-1107	.687	CH-1107	.218	.812	.312	.625	.406	.060	.625
	CHV-1109		CH-1109	.281	.812	.312	.625	.406	.060	.625
	CHV-1111		CH-1111	.343	.875	.375	.625	.406	.060	.625
	CHV-1113		CH-1113	.406	.875	.375	.625	.406	.060	.750
.687	CHV-1207	.750	CH-1207	.218	.812	.312	.687	.437	.060	.625
	CHV-1209		CH-1209	.281	.812	.312	.687	.437	.060	.625
	CHV-1211		CH-1211	.343	.875	.375	.687	.437	.060	.625
	CHV-1213		CH-1213	.406	.875	.375	.687	.437	.060	.750
.750	CHV-1307	.812	CH-1307	.218	.875	.312	.750	.468	.060	.625
	CHV-1309		CH-1309	.281	.875	.312	.750	.468	.060	.625
	CHV-1311		CH-1311	.343	.937	.375	.750	.468	.060	.625
	CHV-1313		CH-1313	.406	.937	.375	.750	.468	.060	.750
.812	CHV-1409	.875	CH-1409	.281	.937	.375	.812	.531	.060	.750
	CHV-1411		CH-1411	.343	.937	.375	.812	.531	.060	.750
	CHV-1413		CH-1413	.406	.937	.375	.812	.531	.060	.750
.875	CHV-1509	.937	CH-1509	.281	.968	.437	.812	.593	.060	.750
	CHV-1511		CH-1511	.343	.968	.437	.812	.593	.060	.750
	CHV-1513		CH-1513	.406	.968	.437	.812	.593	.060	.750
.937	CHV-1609	1.000	CH-1609	.281	1.000	.437	.937	.625	.060	.750
	CHV-1611		CH-1611	.343	1.000	.437	.937	.625	.060	.750
	CHV-1613		CH-1613	.406	1.000	.437	.937	.625	.060	.750
1.000	CHV-1709	1.062	CH-1709	.281	1.062	.437	1.000	.687	.060	.750
	CHV-1711		CH-1711	.343	1.062	.437	1.000	.687	.060	.750
	CHV-1713		CH-1713	.406	1.062	.437	1.000	.687	.060	.750

Except for clamping diameter, dimensions of cushioned and plain parts are identical.
 Note: Part Numbers shown with asterisk (*) are produced from CRCQ Steel, Zinc Plated.

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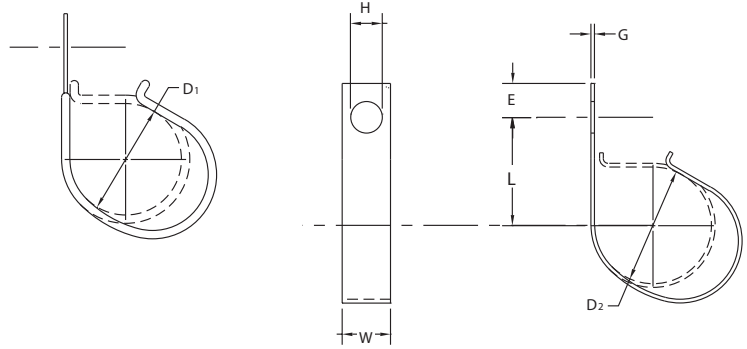
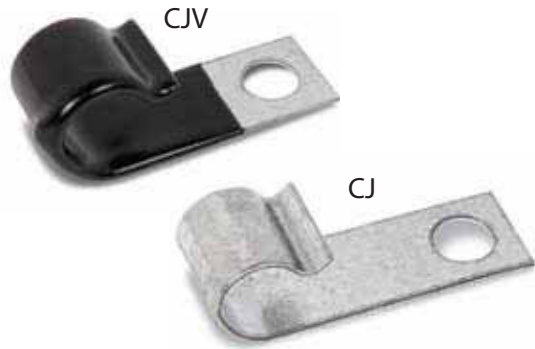
J-CLIPS Open Type



ENTORNO INDUSTRIAL

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M
CUSHION: Black Vinyl, 1/32" Thick

TUBE, WIRING & GRATE CLIPS



D ₁	D ₂		H	L	W	E	G	
Clamping Diameter	Part Number	Clamping Diameter	Part Number	Hole Diameter	Center To Center	Width	Hole Center To End	
± .031		± .015		± .005	± .031	± .010	± .015	
		.125	CJ-0207	.203	.625	.500	.218	.025
			CJ-0209	.281	.656	.500	.250	
			CJ-0211	.343	.687	.625	.312	
			CJ-0213	.406	.718	.625	.375	
.125	CJV-0307	.187	CJ-0307	.203	.687	.500	.218	.025
	CJV-0309		CJ-0309	.281	.718	.500	.250	
	CJV-0311		CJ-0311	.343	.750	.625	.312	
	CJV-0313		CJ-0313	.406	.781	.625	.375	
.187	CJV-0407	.250	CJ-0407	.203	.750	.500	.218	.025
	CJV-0409		CJ-0409	.281	.781	.500	.250	
	CJV-0411		CJ-0411	.343	.812	.625	.312	
	CJV-0413		CJ-0413	.406	.843	.750	.375	
.250	CJV-0507	.312	CJ-0507	.203	.812	.500	.218	.025
	CJV-0509		CJ-0509	.281	.843	.500	.250	
	CJV-0511		CJ-0511	.343	.875	.625	.312	
	CJV-0513		CJ-0513	.406	.906	.750	.375	
.312	CJV-0607	.375	CJ-0607	.203	.875	.500	.218	.032
	CJV-0609		CJ-0609	.281	.906	.500	.250	
	CJV-0611		CJ-0611	.343	.937	.625	.312	
	CJV-0613		CJ-0613	.406	.968	.750	.375	
.375	CJV-0709	.437	CJ-0709	.281	.937	.500	.250	.032
	CJV-0711		CJ-0711	.343	.963	.625	.312	
	CJV-0713		CJ-0713	.406	1.000	.750	.375	
.437	CJV-0809	.500	CJ-0809	.281	1.000	.500	.250	.032
	CJV-0811		CJ-0811	.343	1.031	.625	.312	
	CJV-0813		CJ-0813	.406	1.062	.750	.375	
.500	CJV-0909	.562	CJ-0909	.281	1.062	.500	.250	.032
	CJV-0911		CJ-0911	.343	1.093	.625	.312	
	CJV-0913		CJ-0913	.406	1.125	.750	.375	
.562	CJV-1009	.625	CJ-1009	.281	1.125	.500	.250	.048
	CJV-1011		CJ-1011	.343	1.156	.625	.312	
	CJV-1013		CJ-1013	.406	1.187	.750	.375	
.625	CJV-1109	.687	CJ-1109	.281	1.187	.500	.250	.048
	CJV-1111		CJ-1111	.343	1.218	.625	.312	
	CJV-1113		CJ-1113	.406	1.250	.750	.375	
.687	CJV-1209	.750	CJ-1209	.281	1.250	.500	.250	.048
	CJV-1211		CJ-1211	.343	1.281	.625	.312	
	CJV-1213		CJ-1213	.406	1.312	.750	.375	
.750	CJV-1309	.812	CJ-1309	.281	1.250	.500	.250	.048
	CJV-1311		CJ-1311	.343	1.281	.625	.312	
	CJV-1313		CJ-1313	.406	1.312	.750	.375	

Except for clamping diameter, dimensions of cushioned and plain parts are identical.
 Parts to 2" diameter can be furnished. Dimensional changes can be made. Send your print for quotation.

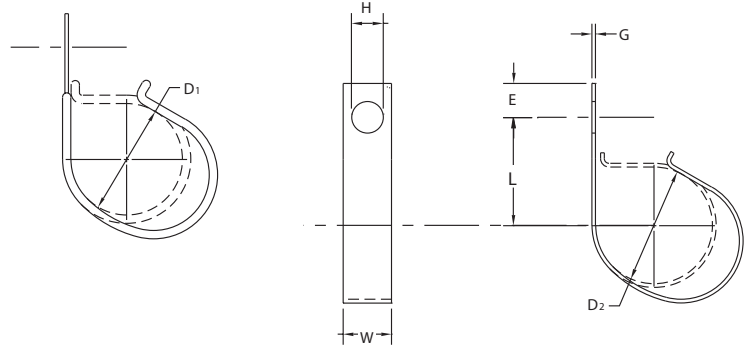
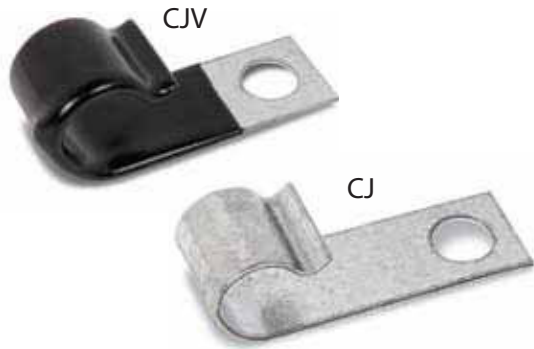
J-CLIPS Open Type



ENTORNO INDUSTRIAL

MATERIAL: HD Galv Steel, Chem-Treated G90, Per ASTM A653/A653M
 CUSHION: Black Vinyl, 1/32" Thick

TUBE, WIRING & GRATE CLIPS



D ₁	D ₂		H	L	W	E	G
Clamping Diameter	Part Number	Clamping Diameter	Part Number	Hole Diameter	Center To Center	Width	Hole Center To End
± .031		± .015		± .005	± .031	± .010	± .015
.812	CJV-1409	.875	CJ-1409	.281	1.312	.500	.250
	CJV-1411		CJ-1411	.343	1.343	.625	.312
	CJV-1413		CJ-1413	.406	1.375	.750	.375
.875	CJV-1509	.937	CJ-1509	.281	1.375	.500	.250
	CJV-1511		CJ-1511	.343	1.406	.625	.312
	CJV-1513		CJ-1513	.406	1.437	.750	.375
.937	CJV-1609	1.000	CJ-1609	.281	1.437	.500	.250
	CJV-1611		CJ-1611	.343	1.468	.625	.312
	CJV-1613		CJ-1613	.406	1.500	.750	.375
1.000	CJV-1709	1.062	CJ-1709	.281	1.500	.500	.250
	CJV-1711		CJ-1711	.343	1.531	.625	.312
	CJV-1713		CJ-1713	.406	1.562	.750	.375
1.062	CJV-1809	1.125	CJ-1809	.281	1.562	.500	.250
	CJV-1811		CJ-1811	.343	1.593	.625	.312
	CJV-1813		CJ-1813	.406	1.625	.750	.375
1.125	CJV-1909	1.187	CJ-1909	.281	1.625	.500	.250
	CJV-1911		CJ-1911	.343	1.656	.625	.312
	CJV-1913		CJ-1913	.406	1.687	.750	.375
1.187	CJV-2009	1.250	CJ-2009	.281	1.687	.500	.250
	CJV-2011		CJ-2011	.343	1.718	.625	.312
	CJV-2013		CJ-2013	.406	1.750	.750	.375
1.250	CJV-2109	1.312	CJ-2109	.281	1.750	.500	.250
	CJV-2111		CJ-2111	.343	1.781	.625	.312
	CJV-2113		CJ-2113	.406	1.812	.750	.375
1.312	CJV-2209	1.375	CJ-2209	.281	1.812	.500	.250
	CJV-2211		CJ-2211	.343	1.843	.625	.312
	CJV-2213		CJ-2213	.406	1.875	.750	.375
1.375	CJV-2309	1.437	CJ-2309	.281	1.875	.500	.250
	CJV-2311		CJ-2311	.343	1.906	.625	.312
	CJV-2313		CJ-2313	.406	1.937	.750	.375
1.500	CJV-2509	1.562	CJ-2509	.281	2.000	.500	.250
	CJV-2511		CJ-2511	.343	2.031	.625	.312
	CJV-2513		CJ-2513	.406	2.062	.750	.375
1.625	CJV-2709	1.687	CJ-2709	.281	2.125	.500	.250
	CJV-2711		CJ-2711	.343	2.156	.625	.312
	CJV-2713		CJ-2713	.406	2.187	.750	.375
1.750	CJV-2909	1.812	CJ-2909	.281	2.250	.500	.250
	CJV-2911		CJ-2911	.343	2.281	.625	.312
	CJV-2913		CJ-2913	.406	2.312	.750	.375
2.000	CJV-3309	2.062	CJ-3309	.281	2.500	.500	.250
	CJV-3311		CJ-3311	.343	2.531	.625	.312
	CJV-3313		CJ-3313	.406	2.562	.750	.375

Except for clamping diameter, dimensions of cushioned and plain parts are identical.
 Parts to 2" diameter can be furnished. Dimensional changes can be made. Send your print for quotation.

M&E
 815-730-0555

ENTORNO INDUSTRIAL, S.A. DE C.V.

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FRAME CLIPS

MATERIAL: Spring Steel*
FINISH: Zinc Plate, Bake and Black Dichromate

TUBE, WIRING & GRATE CLIPS



FC

FC – with barbs

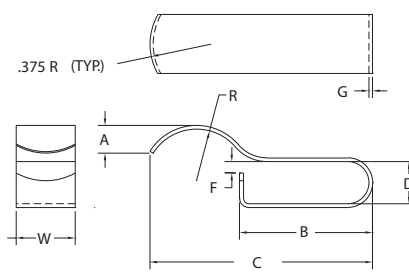


Figure 1

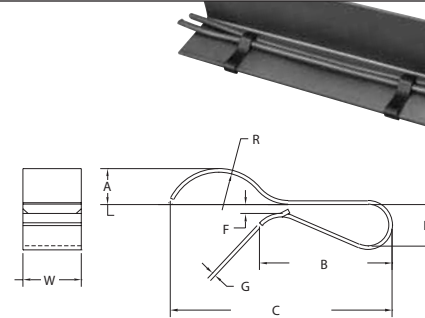


Figure 2

Part Number	Figure	R	A	B	C	D	F	G	W	Use On Metal Thickness	
		±.031	±.031	±.031	±.062	±.031	±.020	See Pg.40	±.010	Min.	Max.
FC-1032	1	.250	.187	.703	1.062	.156	.046	.032	500	.074	.156
FC-2032	1	.375	.250	.937	1.625	.186	.062	.032	500	.120	.175
FC-3032	1	.375	.218	.890	1.562	.344	.125	.032	500	.175	.312
FC-4042	2	.312	.250	1.000	1.531	.187	.100	.042	500	.074	.187
FC-5042	2	.375	.406	1.062	1.812	.312	.141	.042	500	.134	.312

*C-1050 Ann. Spring Steel Heat Treated to Blue Spring Temper.

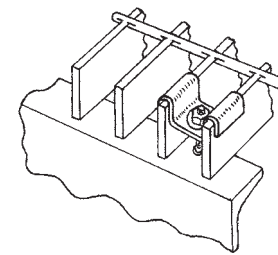
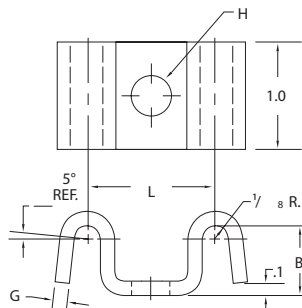
SADDLE CLIPS For Anchoring Grating

For welded steel and pressure-locked aluminum or steel grating having bearing bars at 15/16" (.937) and 1-3/16" (1.188) centers . May be used on installations where grating is subject to frequent removal. Steel clips used on aluminum should be galvanized or zinc plated.

Bolt holes may be distorted by forming, but .281" diameter pin will pass through .312" hole, and .328" diameter pin will pass through .343" hole.



SC



Part Number	Material	Finish	G	L	H	B
			Gage	Center To Center	Bolt Hole Diameter	Base To Top Of Radius
SC-2074	C.R.Steel	None (Plain)	.074	.937	.312	.500
SC-2074-H1	C.R.Steel	Galvanized	.074			
SC-2074-Z1	C.R. Steel	Commercial Zinc Plate	.074			
SC-2074-AL	Aluminum 3003-H14	None (Plain)	.080			
SC-2074-SS	Stainless Steel	None (Plain)	.075			
SC-1074	HRP&O Steel	None (Plain)	.074	1.188	.343	.625
SC-1074-H1	HRP&O Steel	Galvanized	.074			
SC-1074-Z1	HRP&O Steel	Commercial Zinc Plate	.074			
SC-1074-AL	Aluminum 3003-H14	None (Plain)	.080			
SC-1074-SS	Stainless Steel	None (Plain)	.075			
SC-1104	HRP&O Steel	None (Plain)	.104	1.188	.343	.625
SC-1104-H1	HRP&O Steel	Galvanized	.104			
SC-1104-Z1	HRP&O Steel	Commercial Zinc Plate	.104			
SC-1104-AL	Aluminum 3003-H14	None (Plain)	.100			
SC-1104-SS	Stainless Steel	None (Plain)	.105			



CONTROL CABLE CLIPS For Casing and Bowden Wire

Side Mount

MATERIAL: Spring Steel*
FINISH: Zinc Plate, Bake and Clear Chromate

Figure	Part Number	D Tubing Diameter	A Cable Diameter
1	SW-1206	3/4	3/16 - 7/32
1	SW-1210	3/4	5/16
1	SW-1406	7/8	3/16 - 7/32
1	SW-1412	7/8	3/8
1	SW-1606	1	3/16 - 7/32
1	SW-2006	1-1/4	3/16 - 7/32
2	MW-1408	7/8	1/4

*C-1050 Ann. Spring Steel Heat Treated to Blue Spring Temper.

SW

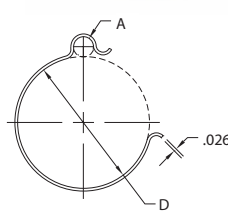
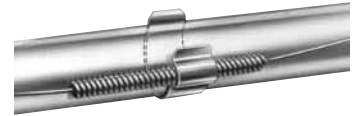


Figure 1 - "SW"

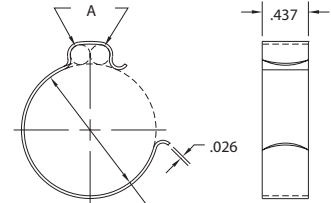
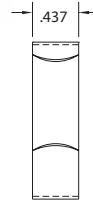


Figure 2 - "MW"

Center Mount

MATERIAL: Spring Steel*
FINISH: Zinc Plate, Bake and Clear Chromate

Figure	Part Number	D Tubing Diameter	A Cable Diameter
3	BW-1206	3/4	3/16 - 7/32
3	BW-1208	3/4	1/4
3	BW-1406	7/8	3/16 - 7/32
3	BW-1408	7/8	1/4
3	BW-1409	7/8	1/4
3	BW-1606	1	3/16 - 7/32
3	BW-1610	1	5/16
3	BW-1810	1-1/8	5/16

*C-1050 Ann. Spring Steel Heat Treated to Blue Spring Temper.

BW

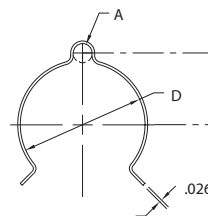


Figure 3 - "BW"

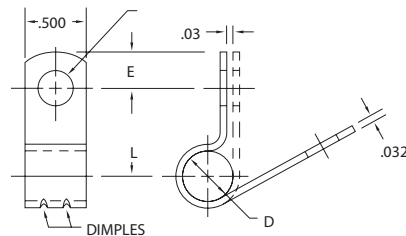
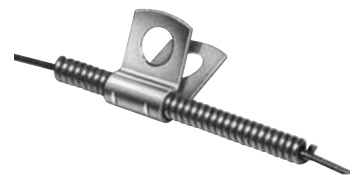


Engine and Deck Mount

MATERIAL: HD Galv Steel, Chem-Treated G90,
Per ASTM A653/A653M

Part Number	D Cable Diameter	H Diameter Of Holes	L Center To Center	E Hole Center To End
		±.005	±.031	±.015
CE-0613	3/16	.203	.375	.218
CE-0618	3/16	.281	.375	.250
CE-0713	7/32	.203	.375	.218
CE-0718	7/32	.281	.375	.250
CE-0813	1/4	.203	.437	.218
CE-0818	1/4	.281	.437	.250

CE

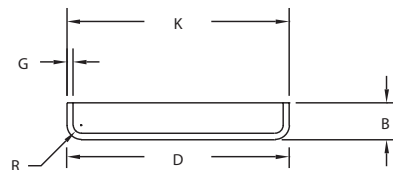
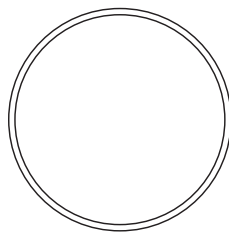


CARBON STEEL EXPANSION PLUGS_{Cup Type – Flat Bottom, Tapered Walls}

MATERIAL: HRP&O or CR Steel, CQ
FINISH: None (Plain), Zinc Plated

EXPANSION PLUGS

PF



Part Number	Nominal Diameter	D Diameter Closed End	K Diameter Open End	B Height ±.020	G Gage	R Inside Radius
PF-0375	3/8	.375 - .381	.383 - .386	.218	.032	.03
PF-0500	1/2	.500 - .502	.508 - .511	.250	.032	.03
PF-0750	3/4	.753 - .756	.760 - .763	.375	.060	.03
PF-0875	7/8	.875 - .877	.877 - .880	.406	.032	.03
PF-1001	1	1.003 - 1.005	1.009 - 1.011	.312	.060	.03
PF-1250	1-1/4	1.255 - 1.257	1.261 - 1.263	.343	.060	.03
PF-2000	2	1.992 - 1.997	2.010 - 2.017	.437	.083	.06
PF-2125	2-1/8	2.127 - 2.129	2.133 - 2.138	.437	.083	.06
PF-2375	2-3/8	2.382 - 2.386	2.382 - 2.386	.281	.032	.03
PF-2501	2-1/2	2.506 - 2.512	2.510 - 2.520	.656	.060	.06
PF-2750	2-3/4	2.752 - 2.754	2.762 - 2.767	.500	.083	.06
PF-3001	3	2.997 - 3.000	3.010 - 3.015	.500	.074	.06

These parts can be furnished from brass, aluminum and galvanized steel. Tolerances will vary slightly from those shown for carb on steel.

Core Hole Preparation and Insertion of Cup-type Core Hole Plugs

WE produces a full line of concave-bottom ("PC") plugs, and flat-bottom tapered-wall ("PF") plugs. The "PC" seals by pressure exerted by the concave bottom against the walls of the plug, much in the same manner as a Belleville washer. The "PF" seals by compression of the tapered walls against the core hole. Although hole preparation is the same for both, each requires a different method of insertion.

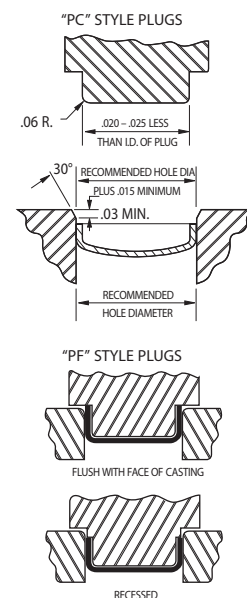
HOLE PREPARATION Inside core hole finish should not exceed 100 micro inches. Eccentricity of the hole should not be greater than .002" for plugs under 1", nor more than .003" for plugs over 1" diameter. With properly prepared holes, plugs can be installed without a sealant. A small amount of lubricant, such as light machine oil with 5% white lead, is desirable to prevent galling.

A 30° x .03" minimum chamfer should be machined on the core hole entry to facilitate plug entry. A .25" minimum radius is preferable to a chamfer, but is seldom used because of tooling cost.

Plugs should be driven square to the hole with the open end approximately .03" below the tangent point of the entry relief. The shoulder on the driver should be bottomed on the casting to control squareness and proper depth. If the surface of the casting is rough or irregular, it should be faced. Plugs should not touch bottom in a counterbored hole.

DRIVING THE PLUG Concave bottom (PC) plugs should be driven on the **inside bottom radius** and **NOT** from the top rim of the cup. The driving arbor should be .015/.025" smaller than the inside diameter of the plug, and have a contact radius of .062", with a flat bottom to prevent contact with the concave bottom to avoid deforming this surface.

Flat bottom, tapered walls (PF) plugs should be driven from the **rim** and not on the bottom. The end of the driving tool should be .015/.025" smaller than the inside diameter of the plug, and should not touch the bottom of the plug. The depth in the hole can be controlled from the face of the casting by a shoulder on the driver.

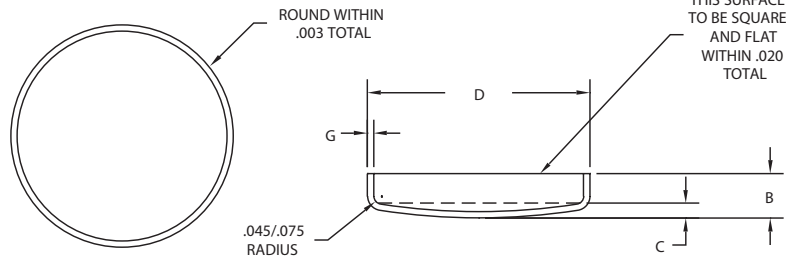




CARBON STEEL EXPANSION PLUGS_{Cup Type – Concave Bottom}

MATERIAL: HRP&O or CR Steel, CQ
FINISH: None (Plain), Zinc Plated

PC



Part Number	Nominal Diameter	D Outside Diameter	B Overall Height	C Crown Height	G Steel Thickness	Recommended Hole Diameter
PC-0375	3/8	.385 - .387	.168 - .208	.049 - .075	.042	.379 - .381
PC-0437	7/16	.447 - .449	.168 - .208	.049 - .075	.042	.440 - .442
PC-0500	1/2	.510 - .512	.230 - .270	.049 - .075	.042	.504 - .506
PC-0562	9/16	.572 - .574	.230 - .270	.049 - .075	.042	.566 - .568
PC-0625	5/8	.635 - .637	.230 - .270	.049 - .075	.042	.629 - .631
PC-0687	11/16	.697 - .699	.230 - .270	.049 - .075	.042	.691 - .693
PC-0750	3/4	.760 - .762	.230 - .270	.057 - .083	.048	.754 - .756
PC-0812	13/16	.823 - .825	.230 - .270	.057 - .083	.048	.817 - .819
PC-0875	7/8	.885 - .887	.230 - .270	.057 - .083	.048	.879 - .881
PC-1000	1	1.010 - 1.012	.290 - .330	.067 - .103	.048	1.002 - 1.005
PC-1062	1-1/16	1.072 - 1.074	.355 - .395	.067 - .103	.048	1.064 - 1.067
PC-1125	1-1/8	1.135 - 1.137	.290 - .330	.067 - .103	.048	1.127 - 1.130
PC-1250	1-1/4	1.260 - 1.262	.290 - .330	.067 - .103	.048	1.252 - 1.255
PC-1375	1-3/8	1.386 - 1.388	.290 - .330	.077 - .113	.060	1.378 - 1.381
PC-1500	1-1/2	1.506 - 1.508	.290 - .330	.077 - .113	.060	1.497 - 1.500
PC-1625	1-5/8	1.640 - 1.642	.340 - .380	.077 - .113	.060	1.631 - 1.634
PD-1625	1-5/8	1.639 - 1.642	.573 - .613	.077 - .113	.060	1.631 - 1.634
PC-1750	1-3/4	1.760 - 1.762	.340 - .380	.077 - .113	.060	1.751 - 1.754
PC-1875	1-7/8	1.885 - 1.887	.340 - .380	.077 - .113	.060	1.876 - 1.879
PC-2000	2	2.010 - 2.012	.340 - .380	.097 - .153	.060	2.001 - 2.004
PD-2000	2	2.010 - 2.012	.420 - .440	.097 - .153	.060	2.001 - 2.004
PC-2500	2-1/2	2.513 - 2.518	.380 - .440	.111 - .167	.060	2.500 - 2.504
PC-2750	2-3/4	2.760 - 2.763	.380 - .440	.111 - .167	.074	2.750 - 2.754
PC-3000	3	3.010 - 3.013	.480 - .540	.111 - .167	.074	3.000 - 3.004

These parts can be furnished from brass, aluminum, galvanized steel and stainless steel. Tolerances will vary slightly from those shown for carbon steel.

VINYL PLASTISOL COATING Vinyl Plastisol Specifications

Vinyl used for parts in this catalog meets the following performance specifications:

Chrysler Corporation	.....MS	-DC513
General Motors	.....GM	7001-M/GMPPVC.025
Ford Motor Company	.....ESB	-M4G69-A
ASTM	.....	D2287
SAE	.....	J200

Standard Coating Thickness and Verification: Normally .032 thick ±.015 excluding trailing/leading edges and drip areas of part. Since thickness is related directly to the temperature of the part when dipped, there will be some slight variation in coating thickness between parts made from widely different metal thicknesses.



Verification of clamping diameter is done before and after vinyl coating using a mandrel. In both inspections, the part must "hold" the appropriate mandrel in place and holes must be visually aligned.

Appearance: Decorative, improves appearance. Dry and glossy surface. Black vinyl standard. Other colors furnished on request.

Hardness: Normally 65 to 75 as measured on a Shore Durometer Type "A" on .25" thick sections properly cured. Hardness can be varied with special formulations.

Tensile Strength: Approximately 2,000 PSI as measured on a Model 1P-4 Scott tester on properly fused film .01-.02" thick. Elongation 300-350%. Both tensile and elongation can be increased or decreased as required by changing specifications.

Dielectric Strength: Approximately 200 volts per mil of coating thickness as measured on properly fused film .03" thick. Formulations that will provide dielectric strength to 700 volts per mil of coating thickness, and vinyls with high arc resistance, can be furnished with special formulations.

Resistance to Heat and Cold: Formulations used by KMC for catalog parts do not deteriorate at 180°F for as long as 2,000 hours, and 300°F for over two hours, and will remain flexible to -30°F. Self-extinguishing; will not support combustion. Formulations that withstand higher temperatures available.

Resistance to Chemical Action: Resist abrasion and chemical action from water, detergents, gasoline, oil, grease, strong alkalis, acids, and many other substances. Not recommended for use with ketones, esters, chlorinated solvents, and aromatic solvents such as toluol and zylol.

AVAILABILITY OF RAW MATERIAL

Steel in coils, indicated by "X" in the chart below, are purchased in large quantities and stocked by KMC. Parts made from these sizes provide fastest delivery and lowest cost. Sizes shown but not identified with an "X" are available on short delivery and at favorable prices.

All gages and widths in all materials can be furnished, but some may require purchase for your order (minimum purchase requirements may affect piece prices).













Nominal	±	Type of Material	Carbon	Temper	Coil Widths										
					.375	.437	.500	.625	.750	.875	1.000	1.125	1.250	3.500	
.025	.002	C.R.	1008-1010	RB65MAX.			X	X							
.025	.002	G90	1008-1010	RB65MAX.			X								
.026	.002	Spring Steel	1050	RB84MAX.		X									
.032	.002	Spring Steel	1050	RB84MAX.			X								
.032	.002	C.R.	1008-1010	RB65MAX.	X			X	X	X	X	X	X		
.032	.002	G90	1008-1010	RB65MAX.			X	X	X						
.042	.002	C.R.	1008-1010	RB65MAX.							X				
.048	.002	C.R.	1008-1010	RB65MAX.				X	X	X	X	X	X		
.048	.002	G90	1008-1010	RB65MAX.			X	X	X		X				
.060	.002	C.R.	1008-1010	RB65MAX.				X	X	X	X	X	X		
.060	.002	G90	1008-1010	RB65MAX.				X	X		X				
.074	+001 -004	HRP&O	1008-1010	RB65MAX.					X		X				
.090	+001 -004	HRP&O	1008-1010	RB65MAX.					X						
.104	.004	HRP&O	1008-1010	RB65MAX.							X			X	
.120	.004	HRP&O	1008-1010	RB65MAX.					X		X			X	

Symbols in chart: G90 – HD Galv, Chem Treated C.R. – Cold Rolled HRP&O – Hot Rolled Pickled and Oiled





PART NUMBERING SYSTEM

The numbering system used for all KMC parts consists of an alpha prefix, which indicates the type of part, and a numeric suffix that defines the size. Together, they fully identify the part. A "V" in the prefix indicates that the part is cushioned with vinyl plastisol and reduces the indicated clamping diameter by 1/16".

Clips and Clamps with Bolt Mounting Holes

Part	Prefix	Explanation Of Prefix	Meaning Of Numerical Suffix
	CF	FLARED Edge Clip, Single Tube, Two Bolt Holes	09 13 Bolt Hole Diameter in 1/32" Clamping Diameter in 1/16"
	CW	WIRING Clip, Closed Type, Furnished Open, Single Tube, Two Bolt Holes, One Slotted Hole	
	CO	OPEN Clip, Closed Type, Furnished Open, Single Tube, Two Bolt Holes	
	COL	Extruded EPDM Cushion, Closed Type, Furnished Open	
	CC	CLOSED Clip, Single Tube, Two Bolt Holes	
	CD	DOUBLE Clamp, Two Tubes, Two Bolt Holes	
	CDL	Extruded EPDM Cushion, Two Tubes, Two Bolt Holes	
	CM	MULTIPLE Clamp, Two Tubes, One Center-Mount Bolt Hole	
	CH	HALF Clip, Single Tube, One Bolt Hole	
	CJ	"J" Clip, Single Tube, One Bolt Hole	
	SC	SADDLE CLIP, For Securing or Holding Grating to Supports	03 13 02 Bolt Hole Diameter in 1/64" Clamping Diameter in 1/32" Number of Wires (CR Only)
	CE	ENGINE MOUNT, For Bowden Wire	1 074 Metal Thickness (Decimal Omitted) Numeric Sequence in Part Series

Clips and Clamps without Bolt Holes

	FC	FRAME Clip, Push-On Spring Clips for Holding Wires on Structural Shapes	14 06 Cable Diameter in 1/32" Tubing Diameter in 1/16"
	SW	SHIELDED (Bowden) Wire Clip, Side Mount	1 032 Metal Thickness (Decimal Omitted) Numeric Sequence in Part Series
	MW	MULTIPLE (Shielded) Wire Clip, Side Mount	
	BW	BOWDEN (Shielded) Wire Clip, Center Mount	

Plugs

	PF	PLUG, Cup Type, Flat Bottom	0750 Nominal Diameter (Decimal Omitted)
	PC	PLUG, Cup Type, Concave Bottom	

EXAMPLES

CO-0809 Clip, "Open" Type, 1/2" (8/16) Clamping Diameter, 9/32" Hole
 COV-0809 Clip, Vinyl Cushion, "Open" Type, 7/16" Diameter (Cushion Reduces Indicated Diameter by 1/16"), 9/32" Hole
 CH-1213 Clip, "Half" Type, 3/4" (12/16) Clamping Diameter, 13/32" Hole
 SW-1406 Clip, Shielded Wire, 7/8" (14/16) Tubing Diameter, 3/16" (6/32) Cable Diameter
 PC-1500 Plug, Concave Bottom, 1-1/2" (1.500) Nominal Diameter
 PF-1250 Plug, Flat Bottom, 1-1/4" (1.250) Nominal Diameter

Please refer to our part number on your purchase order.

SUFFIX TO BE ADDED TO PART NUMBER FOR MATERIAL

Z1 = Hot Dipped Galvanized Steel, Chem Treated G90 (except plugs)
 Z2 = CRCQ Steel, .0002 min. Zinc w/Clear Chromate
 G1 = CRCQ Steel, .00015 min. Zinc w/Yellow Dichromate
 G2 = CRCQ Steel, .0002 min. Zinc w/Yellow Dichromate