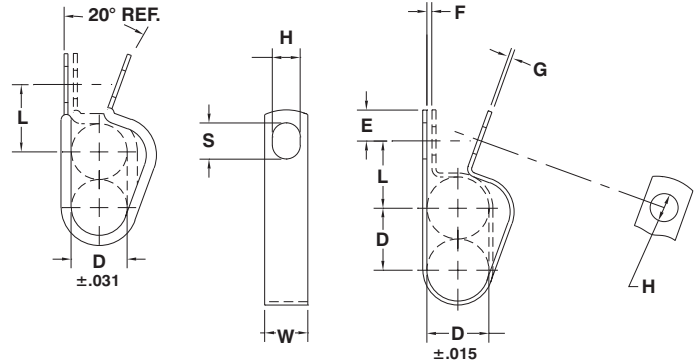


DOUBLE TUBE CLAMPS

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

DOUBLE TUBE CLAMPS



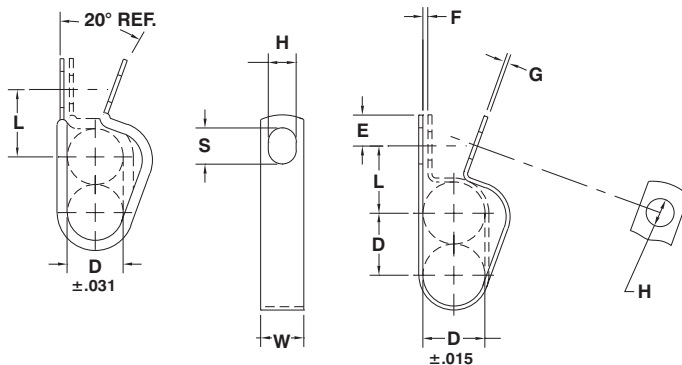
D					H	S	W	E	F	G
Diameter Of Tubes	Part Number	L	Part Number	L	Hole Diameter	Slot Length	Width	Hole Center To End	Gap	Gage
		±.031		±.031	±.005	±.020	±.010	±.015	±.031	See Pg. 40
.187	CDV-0307	.468	CD-0307	.437	.203	.203	.500	.218	.031	.032
	CDV-0309	.500	CD-0309	.468	.281	.375	.500	.312		
	CDV-0311	.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.

VINYL PLASTISOL COATING Vinyl Plastisol Specifications

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

Chrysler CorporationMS-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	Coil Widths										
				Temper	.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			Meaning Of Numerical Suffix
Part	Prefix	Explanation Of Prefix	
	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

OUR QUALITY COMMITMENT

The KMC quality system ensures adherence to customer specifications through contract review, advanced quality planning, production part approval processes, and a comprehensive inspection and test program. An active continuous improvement philosophy drives refinement of our products and processes, and improves service to our customers.

Evidence of KMC's commitment to quality is our certification to ISO/TS 16949 and ISO 9001:2000 quality standards. While ISO/TS is specific to customers in the automotive industry, this certification signifies to all customers that KMC is committed to the highest quality in product, engineering and manufacturing processes, and customer service.

Prototype Through Production



Kickhaefer Manufacturing Company

1221 South Park Street, P.O. Box 348
Port Washington, Wisconsin 53074-0348

Phone: (262) 377-5030

Fax: (262) 284-9774

E-mail: sales@kmcstampings.com
www.kmcstampings.com