EMPIRE
INDUSTRIES INC.

Empire Industries Inc. is proud to present its new Engineering Catalog, Number 2004. This catalog contains a complete line of pipe hangers, supports and related products. Most of the products listed in this catalog service the residential, commercial and industrial piping markets.

Established in 1943, Empire is a privately owned, third generation family business with its main plant (55,000sq. ft.) located in Manchester, CT. Empire also supplies specialty stampings and castings for the marine, hardware, aftermarket automotive and sporting good industries.

Empire products are manufactured to meet or exceed industry standards. Many of Empire's products are (UL) Underwriters Laboratory listed and meet (FM) Factory Mutual approvals. Empire Industries is a member of (MSS) Manufacturers' Standardization Society Committee 403, with many products that meet the MSS-SP-69 and Federal Specification A-A-1192 A (formerly WW-H-171-E).

Empire Industries ownership, management and employees take a tremendous amount of pride in making sure its customers receive the best quality and customer service in the industry. We have the people and knowledge to respond to customer requirements for standard items and special fabrication.

Products offered for sale in this catalog are designed and manufactured for use in piping systems only as described herein. Empire is not responsible for injuries and damage which may result from improper and or negligent installation of these products. Product design is subject to change without notification.

If you should need additional information about our company or products, please call or contact our factory direct or visit our web site at www.empireindustries.com.

We appreciate the opportunity to serve your needs.

Sincerely,

Empire Industries and its Employees

180 Olcott St Manchester, CT 06040

USA 800-243-4844 Local 860-647-1431 Fax 860-647-1160

FINISHES

Empire can coat any product it manufactures with plastic, red and yellow oxide primer, epoxy, hot-dip galvanized, electro zinc, copper, *COPPER-GARD*, chrome, color coordinated finishes and just about any coating required.

ZINC COATING

Electro-Plated Zinc (ASTM B633)

This type of coating is recommended for indoor use in relatively dry areas. This process deposits a coating of zinc on the steel or iron by electrolysis from a bath of zinc salts. This coating is pure zinc and adheres to the steel or iron with a molecular bond. A maximum of .5 mills of zinc can be applied using this method.

Pre-Galvanized Zinc (ASTM A653)

This type of coating is suitable for extended exposure in dry or mildly corrosive atmospheres, but not generally recommended for outdoor use, or in industrial environments. This coating is also referred to as “mill galvanized” or “hot-dip mill galvanized”. This process continuously rolls steel coils or sheets through molten zinc. The steel is then cut or slit to size. Coating thickness of .90 ounces per square foot of steel surface (referred to as G90) is used on Empire’s Figures 310G and 310NFPA. Cut edges are not zinc coated, however, zinc near the uncoated steel becomes a sacrificial anode, which protects the bare areas after a short period of time.

Hot-Dip Galvanized (ASTM 123)

This type of coating provides extended corrosion protection for steel and iron products exposed to extreme humidity commonly evident in outdoor exposure or in uncontrolled atmospheric conditions. This coating provides superior corrosion resistance to that of electro-plating. The process calls for the steel or iron product to be completely immersed into a bath of molten zinc, which creates a metallurgical bond. The minimum coating thickness is 1.5 ounces per square foot per side (3 ounces per square foot of steel or iron). Caution should be taken when specifying Hot-Dip Galvanizing on certain products. Products with threaded components should either have the threads protected from the galvanizing process or chase the threads subsequent to hot-dipping. Products with critical size tolerances should account for the thickness of the coating.

PRIMER

Empire offers Red Primer and Yellow Primer. Both offer a degree of protection from the elements. These coatings are also used in applications where painting of the metal is desired. EPA is restricting the use of certain primers. Consult Empire Industries for specific primer chemical components, as well as corrosive capabilities of specific primers.

PLASTIC COATING

Vinyl coating of the metal prevents galvanic reaction between dissimilar metals, provides corrosion resistance, reduces noise, and can be used where glass or plastic pipe contact with metal is not desired.

FINISHES

(continued)

EPOXY COATING

Empire Industries offers various epoxy finishes in both commercial and military grades. These finishes offer a high degree of corrosion resistance.

Empire Industries provides its *COPPER-GARD* finish for copper tubing installations. The finish provides superior corrosion protection and insulates against dissimilar metal contact, thus preventing electrolysis. The process applies a baked-on epoxy paint to steel stampings and iron castings. In the three-step process, the parts are zinc plated to .0002" thick, an epoxy copper colored powder is then applied by an electrostatic method, and finally, the coated parts are baked at 180 degrees for 20 minutes.

COPPER PLATING

This coating is designed for copper tubing installations. The coating is intended to identify the product size only. This finish is not intended for corrosion resistance.

CHROME PLATING

This coating is intended to support chrome plated pipe and provides corrosion resistance for commercial installations such as hospitals, schools and prisons.

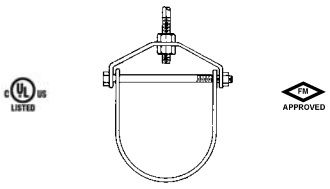


FIG. 11 - Page 12
ADJUSTABLE
CLEVIS HANGER
WW-H-171-E TYPE 1
A-A-1192 A TYPE 1
MSS SP-58 and SP-69 TYPE 1

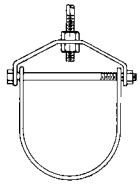


FIG. 11CI - Page 13
CLEVIS HANGER FOR AWWA DUC-TILE
IRON AND PVC C-900 PIPE
MSS SP-58 and SP-69 TYPE 1

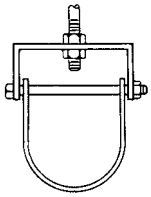


FIG. 11F - Page 14
FLAT TOP CLEVIS HANGER

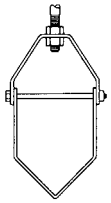


FIG. 11V - Page 15
V-BOTTOM CLEVIS HANGER

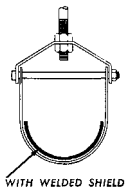


FIG. 11WS - Page 16
CLEVIS WITH
WELDED SHIELD

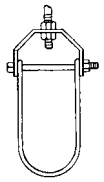


FIG. 11X - Page 17
CLEVIS HANGER WITH
EXTENDED BOTTOM
WW-H-171-E TYPE 1
A-A-1192 A TYPE 1
MSS SP-58 and SP-69 TYPE 1

FIG. 12 - Page 18
V-CHANNEL

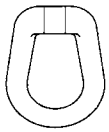


FIG. 13, 13I & 13L - Page 18
WELDLESS EYE NUT
WW-H-171-E TYPE 17
A-A-1192 A TYPE 17
MSS SP-58 and SP-69 TYPE 17

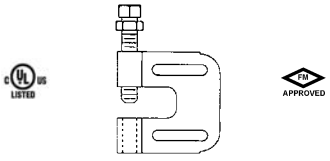


FIG. 21, 21L - Page 19
STEEL C-CLAMP
WW-H-171-E TYPE 23
A-A-1192 A TYPE 23
MSS SP-58 and SP-69 TYPE 23

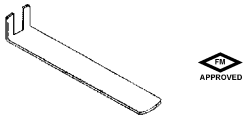


FIG. 21R - Page 20
C-CLAMP RETAINING STRAP

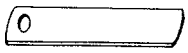


FIG. 22R - Page 20
BEAM CLAMP RETAINING STRAP

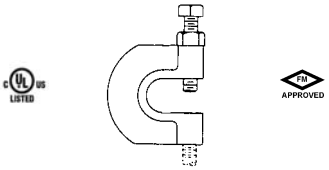


FIG. 23L - Page 21
DUCTILE IRON C-CLAMP
WW-H-171-E TYPE 23
A-A-1192 A TYPE 23
MSS SP-58 and SP-69 TYPE 23

FIG. 24 - Page 21
PURLIN CLAMP

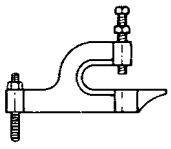


FIG. 25L - Page 22
EXTENDED C-CLAMP

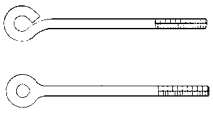


FIG. 26 & 26W - PAGE 22
PLAIN & WELDED EYE ROD

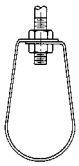


FIG. 31 - Page 23
ADJUSTABLE BAND HANGER
WW-H-171-E TYPE 7
A-A-1192 A TYPE 7
MSS SP-58 and SP-69 TYPE 7

FIG. 31CT, 31CTI - Page 24
COPPER PLATED AND EPOXY COATED
***(COPPER-GARD),* COPPER TUBING**
BAND HANGER
WW-H-171-E TYPE 7
A-A-1192 A TYPE 7
MSS SP-58 and SP-69 TYPE 7

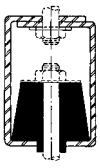


FIG. 34 - Page 25
VIBRATION HANGER - NEOPRENE
SERIES- "RH"/"RHD"

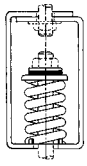


FIG. 35 - Page 26-27
VIBRATION SPRING-FLEX
HANGER - "SH" SERIES

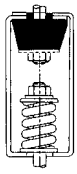


FIG. 36 - Page 28-29
VIBRATION SPRING-FLEX AND NEO-
PRENE HANGER - "RSH" SERIES

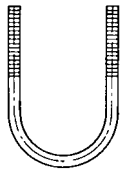


FIG. 37 - Page 29
LIGHT DUTY U-BOLT

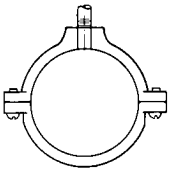


FIG. 41 - Page 30
SPLIT RING
EXTENSION HANGER
WW-H-171-E TYPE 25
A-A-1192 A TYPE 12
MSS SP-58 and SP-69 TYPE 12

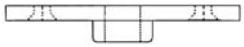


FIG. 41A, 41ACT - Page 30
HANGER FLANGE PLATE

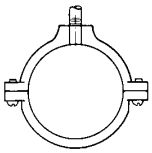


FIG. 41CT - Page 31
COPPER SPLIT RING
EXTENSION HANGER
WW-H-171-E TYPE 25
A-A-1192 A TYPE 12
MSS SP-58 and SP-69 TYPE 12

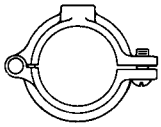


FIG. 41H - Page 31
HINGE TYPE SPLIT RING
EXTENSION HANGER
WW-H-171-E TYPE 25
A-A-1192 A TYPE 12
MSS SP-58 and SP-69 TYPE 12

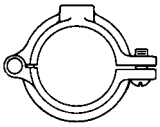


FIG. 41HCT - Page 32
COPPER HINGE TYPE SPLIT RING
EXTENSION HANGER
WW-H-171-E TYPE 25
A-A-1192 A TYPE 12
MSS SP-58 and SP-69 TYPE 12

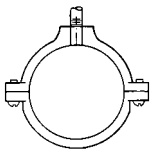


FIG. 41SSI & 41SXI - Page 33
STAINLESS STEEL SPLIT RING
EXTENSION HANGER
MSS SP-58 and SP-69 TYPE 12

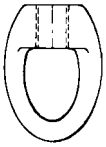


FIG. 47 - Page 33
EYE SOCKET
WW-H-171-E TYPE 16
A-A-1192 A TYPE 16
MSS SP-58 and SP-69 TYPE 16

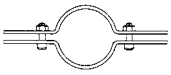


FIG. 48, 49PC - Page 34
PLASTIC PIPE and PLASTIC COATED
PVC RISER CLAMP
WW-H-171-E TYPE 8
A-A-1192 A TYPE 8
MSS SP-58 and SP-69 TYPE 8

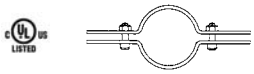


FIG. 50 - Page 35
RISER CLAMP
WW-H-171-E TYPE 8
A-A-1192 A TYPE 8
MSS SP-58 and SP-69 TYPE 8

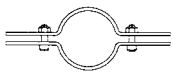


FIG. 50CT, 50CTI - Page 36
COPPER PLATED AND EPOXY COATED
***(COPPER-GARD)* COPPER TUBING RISER**
CLAMP
WW-H-171-E TYPE 8
A-A-1192 A TYPE 8
MSS SP-58 and SP-69 TYPE 8

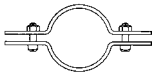


FIG. 50SA - Page 37
SHORT ARM RISER CLAMP
WW-H-171-E TYPE 8
A-A-1192 A TYPE 8
MSS SP-58 and SP-69 TYPE 8

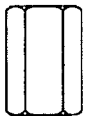


FIG. 51 - Page 37
ROD COUPLING

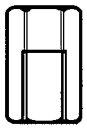


FIG. 51R - Page 38
REDUCING ROD COUPLING

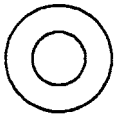


FIG. 52 - Page 38
ROUND STEEL WASHER

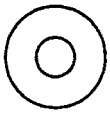


FIG. 52F - PAGE 39
FENDER WASHER

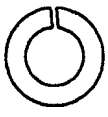


FIG. 52L - Page 39
LOCK WASHER

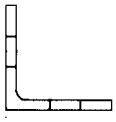


FIG. 53 - Page 40
ANGLE BRACKET
WW-H-171-E TYPE 35
A-A-1192 A TYPE 34
MSS SP-58 and SP-69 TYPE 34

FIG. 54 - Page 40
CONTINUOUS THREADED ROD

FIG. 55 - Page 41
HANGER BOLTS

FIG. 56 - Page 41
STANDARD HEX NUT

FIG. 57 - Page 42
HANGER ROD

FIG. 58 - Page 42
HEX HEAD BOLT

FIG. 59 - Page 43
DRIVE SCREW

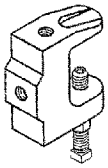


FIG. 60 - Page 43
1/4" BEAM CLAMP

FIG. 61 - Page 43
TOP BEAM CLAMP
A-A-1192 A TYPE 19
MSS SP-58 and SP-69 TYPE 19

FIG. 62 - Page 44
JUNIOR TOP BEAM CLAMP
A-A-1192 A TYPE 19
MSS SP-58 and SP-69 TYPE 19

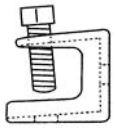


FIG. 63 - Page 44
ELECTRICAL ROD
SUPPORT CLAMP

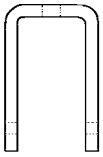


FIG. 66 - Page 45
WELDING BEAM ATTACHMENT
WITH AND WITHOUT BOLT
WW-H-171-E TYPE 22
A-A-1192 A TYPE 22
MSS SP-58 and SP-69 TYPE 22

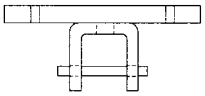


FIG. 67 - Page 46
CONCRETE CLEVIS PLATE

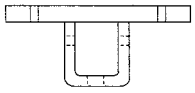


FIG. 68 - Page 46
CONCRETE ROD ATTACHMENT

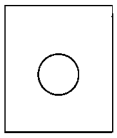


FIG. 69 - Page 47
STRUCTURAL WELDING LUG
LONG AND SHORT
WW-H-171-E TYPE 57
A-A-1192 A TYPE 57
MSS SP-58 and SP-69 TYPE 57

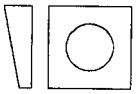


FIG. 72 - Page 48
BEVEL WASHER

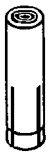


FIG. 73 - Page 48
DROP IN ANCHOR

FIG. 74 - Page 49
HEX LAG SCREW

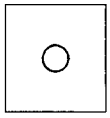


FIG. 75 - Page 49
STEEL WASHER PLATE

FIG. 77 - Page 50
ANCHOR BOLT

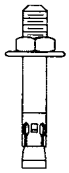


FIG. 80 - Page 50
WEDGE ANCHOR

FIG. 81, 81N - Page 51
CONCRETE INSERT, CONCRETE
INSERT NUT
WW-H-171-E TYPE 19
A-A-1192 A TYPE 18
MSS SP-58 and SP-69 TYPE 18

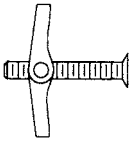


FIG. 83 - Page 51
SPRING WING TOGGLE & BOLT

FIG. 84 - PAGE 52
SPRING WING TOGGLE HEAD ONLY

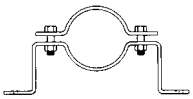


FIG. 95 - Page 52
OFFSET PIPE CLAMP

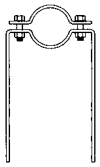


FIG. 97 - Page 53
EXTENDED PIPE CLAMP

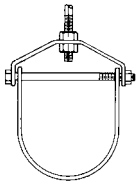


FIG. 110 - Page 54
ADJUSTABLE CLEVIS HANGER, LIGHTWEIGHT
WW-H-171-E TYPE 12
MSS SP-58 and SP-69 TYPE 1

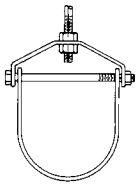


FIG. 110CT, 110CTI - Page 55
COPPER PLATED AND COPPER EPOXY *(COPPER-GARD)* TUBING SIZE CLEVIS HANGER.
WW-H-171-E TYPE 12
MSS SP-58 and SP-69 TYPE 1

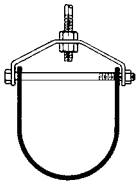


FIG. 110PC - Page 56
ADJUSTABLE CLEVIS HANGER, PLASTIC COATED
WW-H-171-E TYPE 12
MSS SP-58 and SP-69 TYPE 1

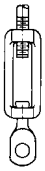


FIG. 114 - Page 56
TURNBUCKLE ADJUSTER
WW-H-171-E TYPE 15
A-A-1192 A TYPE 15
MSS SP-58 and SP-69 TYPE 15

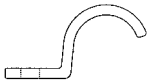


FIG. 126 - Page 57
ONE HOLE CLAMP

FIG. 127CT - Page 57
NATICK HANGER, COPPER TUBE SIZE

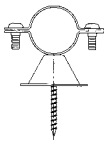


FIG. 129CT - Page 58
VAN (BELL TYPE) HANGER, COPPER PLATED

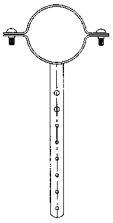


FIG. 131CT - Page 58
MILFORD HANGER, COPPER TUBE SIZE

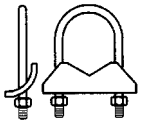


FIG. 136 - Page 59
RIGHT ANGLE CLAMP

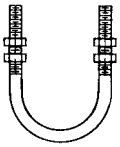


FIG. 137 - Page 60
STANDARD U-BOLT WITH 4 HEX NUTS
WW-H-171-E TYPE 24
A-A-1192 A TYPE 24
MSS SP-58 and SP-69 TYPE 24

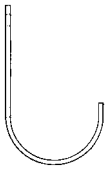


FIG. 145 - Page 61
STRAIGHT J-HOOK

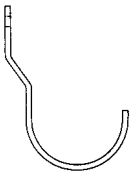


FIG. 146 - Page 61
OFFSET J-HOOK

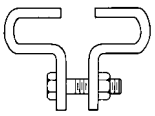


FIG. 150 - Page 62
BEAM CLAMP
WW-H-171-E TYPE 21
A-A-1192 A TYPE 21
MSS SP-58 and SP-69 TYPE 21

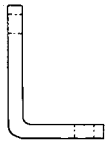


FIG. 152 - Page 62
RETURN LINE ANGLE

FIG. 153 - Page 63
SIDE BEAM CONNECTOR

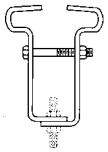


FIG. 155 - Page 63
STEEL BEAM CLAMP

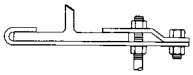


FIG. 156 - Page 64
STEEL BEAM CLAMP
WW-H-171-E TYPE 53
A-A-1192 A TYPE 25
MSS SP-58 and SP-69 TYPE 25

FIG. 157 - PAGE 64
EXTENSION PIECE

FIG. 158 - Page 65
TOP BEAM HOOK

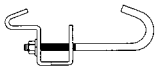


FIG. 159 - Page 65
ADJUSTABLE ROD
BEAM CLAMP
WW-H-171-E TYPE 54
A-A-1192 A TYPE 27
MSS SP-58 and SP-69 TYPE 27

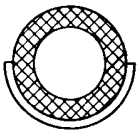


FIG. 167 - Page 66-67
PIPE COVERING
PROTECTION SHIELD
WW-H-171-E TYPE 41
A-A-1192 A TYPE 40
MSS SP-58 and SP-69 TYPE 40

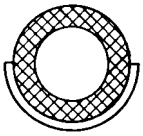


FIG. 167MSS - Page 68-69
MSS PIPE COVERING
PROTECTION SHIELD
WW-H-171-E TYPE 41
A-A-1192 A TYPE 40
MSS SP-58 and SP-69 TYPE 40

FIG. 180 - Page 70
SHORT CLIP

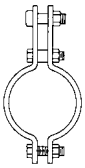


FIG. 189 - Page 71
DOUBLE BOLT PIPE CLAMP
WW-H-171-E TYPE 3
A-A-1192 A TYPE 3
MSS SP-58 and SP-69 TYPE 3

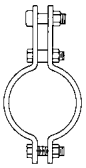


FIG. 189A - Page 72
ALLOY DOUBLE
BOLT PIPE CLAMP
WW-H-171-E TYPE 3
A-A-1192 A TYPE 3
MSS SP-58 and SP-69 TYPE 3

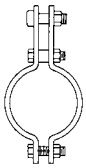


FIG. 189H - Page 73
HEAVY DUTY DOUBLE
BOLT PIPE CLAMP
WW-H-171-E TYPE 3
A-A-1192 A TYPE 3
MSS SP-58 and SP-69 TYPE 3

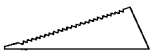


FIG. 200 - Page 73
BATH TUB WEDGE

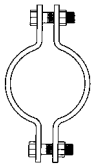


FIG. 212 - Page 74
STANDARD STEEL PIPE CLAMP
WW-H-171-E TYPE 4
A-A-1192 A TYPE 4
MSS SP-58 and SP-69 TYPE 4

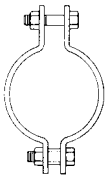


FIG. 216 - Page 75
HEAVY DUTY TWO-BOLT
PIPE CLAMP
WW-H-171-E TYPE 4
A-A-1192 A TYPE 4
MSS SP-58 and SP-69 TYPE 4

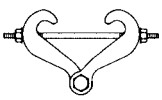


FIG. 218 - Page 75
MALLEABLE IRON CENTER
LOAD BEAM CLAMP

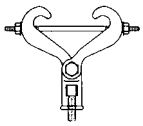


FIG. 229 - Page 76
MALLEABLE BEAM CLAMP
WITH EXTENSION PIECE
WW-H-171-E TYPE 30
A-A-1192 A TYPE 30
MSS SP-58 and SP-69 TYPE 30

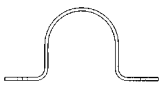


FIG. 231 - Page 76
TWO HOLE PIPE STRAP

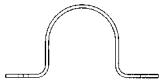


FIG. 231CT - Page 77
COPPER TWO HOLE
TUBING STRAP

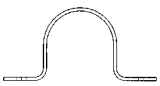


FIG. 231SS - Page 77
TWO HOLE PIPE STRAP,
STAINLESS STEEL

FIG. 233 - Page 78
ONE HOLE PIPE STRAP

FIG. 233SS - Page 78
ONE HOLE PIPE STRAP,
STAINLESS STEEL

FIG. 235 - Page 79
WIRE PIPE HOOK

FIG. 235CT - PAGE 79
WIRE PIPE HOOK, COPPER

FIG. 237, 237CT - Page 80
DWV (DRAIN, WASTE, VENT) HANGER

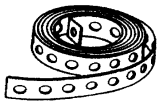


FIG. 239, 239CT - Page 80
PERFORTED HANGER STRAPPING

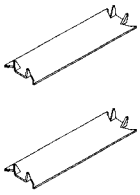


FIG. 240, 245 - Page 81
STUD GUARD, TRIANGLE POINT & TWISTED POINT

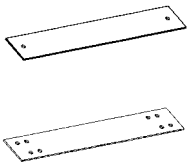


FIG. 241, 243 - Page 81
NAIL PLATE

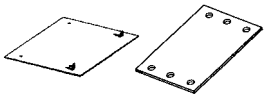


FIG. 242, 242GSN - Page 82
BOCA SAFETY PLATES

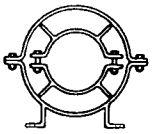


FIG. 255 - Page 83
PIPE ALIGNMENT GUIDE (SINGLE SPIDER CLAMP)

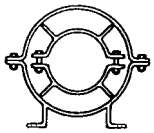


FIG. 256 - Page 84
PIPE ALIGNMENT GUIDE

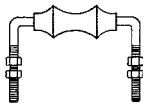


FIG. 271 - Page 85
ADJUSTABLE ROLLER SUPPORT

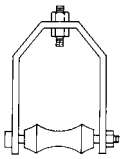


FIG. 272 - Page 86
ADJUSTABLE ROLLER HANGER
WW-H-171-E TYPE 44
A-A-1192 A TYPE 43
MSS SP-58 and SP-69 TYPE 43

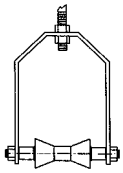


FIG. 272SS - Page 87
ADJUSTABLE ROLLER HANGER, STAINLESS STEEL
WW-H-171-E TYPE 44
A-A-1192 A TYPE 43
MSS SP-58 and SP-69 TYPE 43

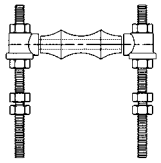


FIG. 273 - Page 88
ADJUSTABLE TWO-ROD ROLLER SUPPORT

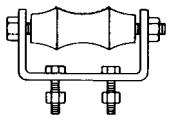


FIG. 275 - Page 89
ROLLER CHAIR

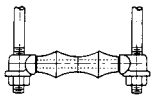


FIG. 277 - Page 90
ADJUSTABLE TWO ROD ROLLER HANGER
WW-H-171-E TYPE 42
A-A-1192 A TYPE 41
MSS SP-58 and SP-69 TYPE 41

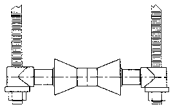


FIG. 277SS - Page 91
ADJUSTABLE TWO ROD ROLLER HANGER, STAINLESS STEEL
WW-H-171-E TYPE 42
A-A-1192 A TYPE 41
MSS SP-58 and SP-69 TYPE 41

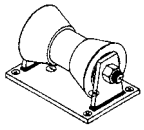


FIG. 279S & 279SS - Page 92
PIPE ROLL STAND, CARBON STEEL & 304 STAINLESS STEEL
WW-H-171-E TYPE 45
A-A-1192 A TYPE 44
MSS SP-58 and SP-69 TYPE 44

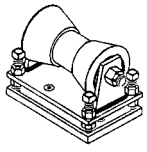


FIG. 280S & 280SS - Page 93
ADJUSTABLE PIPE ROLL STAND, CARBON STEEL & STAINLESS STEEL
WW-H-171-E TYPE 47
A-A-1192 A TYPE 46
MSS SP-58 and SP-69 TYPE 46

FIG. 310 - Page 94
"EM-LOK" ADJUSTABLE SWIVEL RING HANGER
WW-H-171-E TYPE 10
A-A-1192 A TYPE 10
MSS SP-58 and SP-69 TYPE 10

FIG. 310CT, 310CTI- Page 95
COPPER PLATED AND EPOXY COATED *(COPPER-GARD)* "EM-LOK" ADJUSTABLE SWIVEL RING HANGER,TUBING SIZE
WW-H-171-E TYPE 10
A-A-1192 A TYPE 10
MSS SP-58 and SP-69 TYPE 10

FIG. 310NF - Page 96
"EM-LOK" ADJUSTABLE SWIVEL RING HANGER, NFPA
WW-H-171-E TYPE 10
A-A-1192 A TYPE 10
MSS SP-58 and SP-69 TYPE 10

FIG. 320, 320I - Page 97
TURNBUCKLE ADJUSTER
WW-H-171-E TYPE 13
A-A-1192 A TYPE 13
MSS SP-58 and SP-69 TYPE 13

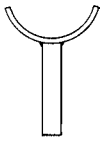


FIG. 420 - Page 97
PIPE SADDLE SUPPORT
WW-H-171-E TYPE 37
A-A-1192 A TYPE 36
MSS SP-58 and SP-69 TYPE 36

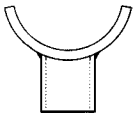


FIG. 421 - Page 98
ADJUSTABLE PIPE SADDLE SUPPORT WITH COUPLING

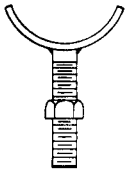


FIG. 422 - PAGE 98
ADJUSTABLE PIPE SUPPORT

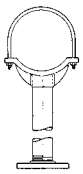


FIG. 425 - Page 99
PIPE SADDLE SUPPORT WITH U-BOLT
WW-H-171-E TYPE 38
A-A-1192 A TYPE 37
MSS SP-58 and SP-69 TYPE 37

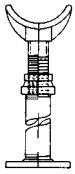


FIG. 426 - Page 100
ADJUSTABLE PIPE SADDLE SUPPORT
WW-H-171-E TYPE 39
A-A-1192 A TYPE 38
MSS SP-58 and SP-69 TYPE 38

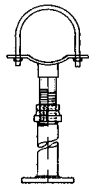


FIG. 427 - Page 101
ADJUSTABLE PIPE SADDLE SUPPORT WITH U-BOLT

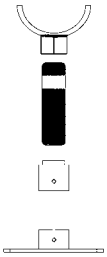


FIG. 428 - Page 102
ADJUSTABLE PIPE SADDLE SUPPORT KIT

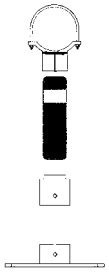


FIG. 429 - Page 103
ADJUSTABLE PIPE SADDLE SUPPORT KIT, WITH U-BOLT

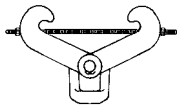


FIG. 450 - Page 104
HEAVY BEAM CLAMP ASSEMBLY
WW-H-171-E TYPE 28 WITHOUT LINKS, TYPE 29 WITH LINKS
A-A-1192 A TYPE 28 WITHOUT LINKS, TYPE 29 WITH LINKS
MSS SP-58 and SP-69 TYPE 28 WITHOUT LINKS, TYPE 29 WITH LINKS

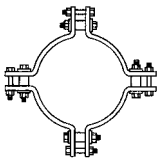


FIG. 570 - Page 104
FOUR SECTION RODDING BAND

FIG. 575 - Page 105
CORPORATION EYE BOLT

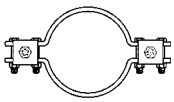


FIG. 595 - Page 105
FOUR BOLT SOCKET CLAMP

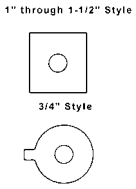


FIG. 599 - Page 106
SOCKET CLAMP WASHER

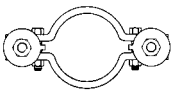


FIG. 600 - Page 107
SOCKET CLAMP

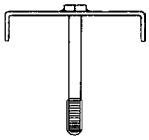


FIG. 685 - Page 107
METAL DECK ANCHOR BOLT

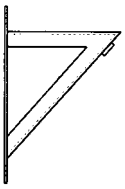


FIG. 801 - Page 108
MEDIUM WELDED BRACKET
WW-H-171-E TYPE 33
A-A-1192 A TYPE 32
MSS SP-58 and SP-69 TYPE 32

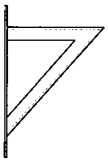


FIG. 802 - Page 108
HEAVY WELDED BRACKET
WW-H-171-E TYPE 34
A-A-1192 A TYPE 33
MSS SP-58 and SP-69 TYPE 33

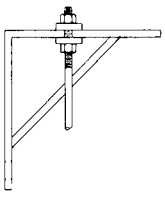


FIG. 820 - Page 109
LIGHT WELDED STEEL BRACKET & CLIP
WW-H-171-E TYPE 32
A-A-1192 A TYPE 31
MSS SP-58 and SP-69 TYPE 31

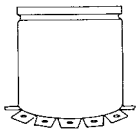


FIG. 900 - Page 109
NAILING SLEEVE

FIG. 909, 909I - Page 110
FORGED STEEL CLEVIS
WW-H-171-E TYPE 14
A-A-1192 A TYPE 14
MSS SP-58 and SP-69 TYPE 14

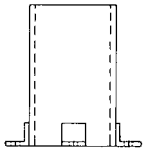


FIG. 910 - Page 111
PIPE SLEEVE
WITH WELDED LUGS

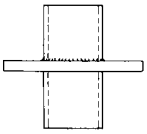


FIG. 915 - Page 111
WATER PROOF SLEEVE

FIG. 1900-1905 - Page 112-114
PIPE COVERING
PROTECTION SADDLE
WW-H-171-E TYPE 40A & 40B
A-A-1192 A TYPE 39A & 39B
MSS SP-58 and SP-69 TYPE 39A & 39B

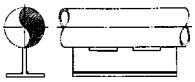


FIG. 4000 SERIES - Page 115
PIPE SLIDE TEE
A-A-1192 A TYPE 35
MSS SP-58 and SP-69 TYPE 35

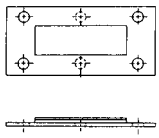


FIG. 4100 SERIES - Page 116
SLIDE PLATE

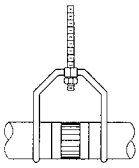
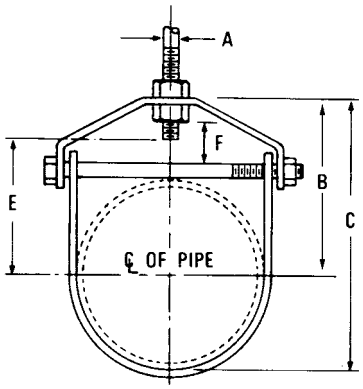


FIG. V6600 - PAGE 117
CAST IRON DWV HANGER

FIG. 11 STANDARD CLEVIS HANGER, DOMESTIC
FIG. 11GI STANDARD CLEVIS HANGER, ELECTRO-GALVANIZED



"E" dimension includes exposed rod threads beyond bottom of the hex nut. Exposed rod thread dimension is equal to the diameter of the rod used.

FM APPROVED

c UL us LISTED

Domestically Manufactured
EXCLUDING 11GI

Material: Carbon steel, 304 (11SS) and 316 (11SX) stainless steel.

Finish: Plain, painted, electro-galvanized, hot dip galvanized.

Service: Designed for the suspension of non-insulated, stationary pipe lines.

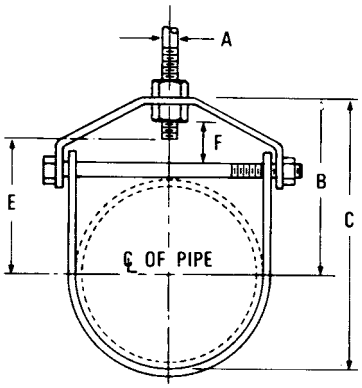
Approvals: U.L. - U.L.C. listed (sizes 2½" - 8") and FM approved (¾" - 8"). Complies with Federal Specification WW-H-171-E (Type# 1), A-A-1192 A (Type# 1) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 1).

Ordering: Specify pipe size, figure number and finish.

Notes: Upper locknut must be tightened securely to assure proper hanger performance. Stainless steel hangers are recommended for applications where protection from corrosive environments is needed.

PIPE SIZE	PIPE OD	MATERIAL SIZE		BOLT	A	B	C	E	F	WGT EACH (lbs)	MAX REC LOAD (lbs)
		TOP	BOTTOM								
½	0.840	13ga x ⅞	13ga x ⅞	¼	⅜	1 11/16	2 1/16	15/16	7/16	0.18	610
¾	1.050	13ga x ⅞	13ga x ⅞	¼	⅜	1 11/16	2 9/16	15/16	7/16	0.18	610
1	1.315	13ga x ⅞	13ga x ⅞	¼	⅜	2 1/16	2 11/16	1 ¼	⅝	0.22	610
1¼	1.660	13ga x ⅞	13ga x ⅞	¼	⅜	2½	3 3/16	1 11/16	⅞	0.26	610
1½	1.900	12ga x ⅞	12ga x ⅞	¼	⅜	2 7/8	3 11/16	2 1/16	1 1/16	0.34	610
2	2.375	12ga x ⅞	12ga x ⅞	¼	⅜	3 5/16	4 7/16	2½	1¼	0.38	610
2½	2.875	9ga x 1 3/16	10ga x 1 3/16	5/16	½	4½	5 7/8	3 3/8	1 15/16	0.86	1130
3	3.500	9ga x 1 3/16	10ga x 1 3/16	5/16	½	4¾	6½	3 11/16	1¾	0.96	1130
3½	4.000	8ga x 1 3/16	10ga x 1 3/16	5/16	½	5 7/8	7 15/16	4 13/16	2 9/16	1.14	1130
4	4.500	8ga x 1 3/16	10ga x 1 3/16	⅜	⅝	5 15/16	8 3/16	4 9/16	2⅛	1.26	1430
5	5.563	4ga x 1¼	8ga x 1¼	½	⅝	5 11/16	8 7/16	4 5/16	1 7/16	2.04	1430
6	6.625	3ga x 1½	8ga x 1½	½	¾	6 13/16	10⅛	5 3/16	1¾	2.80	1940
7	7.625	3ga x 1½	8ga x 1½	½	¾	7 13/16	11⅝	6 3/16	2	3.24	2000
8	8.625	3ga x 1¾	8ga x 1¾	⅝	¾	8 1/16	12 7/16	6¼	1⅞	4.46	2000
10	10.750	⅜ x 1 ¾	3ga x 1¾	¾	⅞	10	15 7/16	8	2¼	8.06	3600
12	12.750	⅜ x 2	3ga x 2	¾	⅞	11 9/16	18	9 9/16	2 13/16	10.34	3800
14	14.000	½ X 2	¼ X 2	⅞	1	12 9/16	19 9/16	10 9/16	2 9/16	14.80	4200
16	16.000	½ X 2½	¼ X 2½	1	1	13 15/16	21 15/16	11 15/16	2 13/16	21.00	4600
18	18.000	½ X 2½	¼ X 2½	1	1	16	25	13⅞	3¾	24.40	4800
20	20.000	⅝ X 3	⅜ X 3	1¼	1¼	17½	27½	15⅛	3¾	47.00	4800
24	24.000	⅝ X 3	⅜ X 3	1¼	1¼	19¾	31¾	17⅜	4	54.00	4800
30	30.000	¾ X 3	⅜ X 3	1¼	1¼	24⅛	39⅛	21½	4¾	69.50	6000

FIG. 11CI
CLEVIS HANGER
FOR AWWA DUCTILE IRON AND PVC C-900 PIPE



"E" dimension includes exposed rod threads beyond bottom of the hex nut. Exposed rod thread dimension is equal to the diameter of the rod used.

Domestically Manufactured

Material: Carbon steel, 304 (11SSCI) and 316 (11SXCI) stainless steel.

Finish: Plain, electro-galvanized, hot-dip galvanized (11CIHDG)

Service: Designed for the suspension of stationary AWWA ductile iron pipe and PVC C-900 pipe.

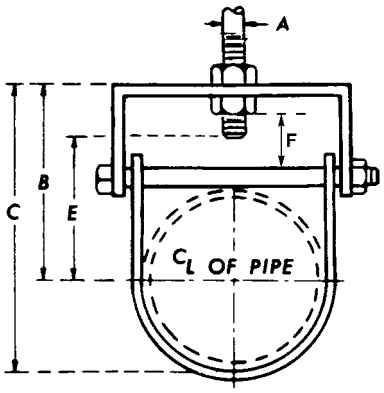
Approvals: Complies with Federal Specifications WW-H-171-E (Type# 1), A-A-1192 A (Type# 1), and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 1).

Ordering: Specify pipe size, material, finish and figure number.

Notes: For sizes 12" and larger a spacer sleeve is added over the cross bolt. Upper locknut must be tightened securely to assure proper hanger performance. Stainless steel hangers are recommended for applications where protection from corrosive environments is needed.

PIPE SIZE AWWA	PIPE OD	MATERIAL SIZE		BOLT	A	B	C	E	F	WGT EACH (lbs)	MAX REC LOAD (lbs)
		TOP	BOTTOM								
3	3.960	8ga x 1.187	10ga x 1.187	5/16	1/2	5 5/8	8	4 9/16	2 9/16	1.14	1130
4	4.800	8ga x 1.187	10ga x 1.187	3/8	5/8	6	8 1/2	4 5/8	2 1/8	1.32	1430
6	6.900	3ga x 1.50	8ga x 1.50	1/2	3/4	6 13/16	10 1/8	5 3/16	1 3/4	2.86	1940
8	9.050	3ga x 1.75	8ga x 1.75	5/8	3/4	8 5/16	13	6 7/8	1 7/8	4.56	2000
10	11.100	3/8 x 1.75	3ga x 1.75	3/4	7/8	10 1/2	16 1/4	8 1/2	2 1/4	8.70	3600
12	13.200	3/8 x 2.00	3ga x 2.00	3/4	7/8	11 3/4	18 3/4	9 3/4	2 13/16	11.08	3800
14	15.300	1/2 x 2	1/4 x 2	1	1	13 1/2	21 1/2	11 3/4	2 1/2	17.57	4200
16	17.400	1/2 x 2 1/2	1/4 x 2 1/2	1	1	15 1/4	24 1/4	13 1/2	3 3/8	25.38	4600
18	19.500	1/2 x 2 1/2	1/4 x 2 1/2	1 1/4	1	16 3/4	26 3/4	14 7/8	3 3/8	47.00	4800
20	21.600	5/8 x 3	3/8 x 3	1 1/4	1 1/4	18 1/2	29 3/4	16 3/8	3 3/4	50.50	4800
24	25.800	5/8 x 3	3/8 x 3	1 1/4	1 1/4	20 3/4	34	18 5/8	4	58.00	4800

11F
FLAT TOP CLEVIS HANGER



"E" dimension includes exposed rod threads beyond bottom of the hex nut. Exposed rod thread dimension is equal to the diameter of the rod used.

Material: Carbon steel.

Finish: Plain, electro-galvanized.

Service: Designed for the suspension of non-insulated stationary pipe where space is limited.

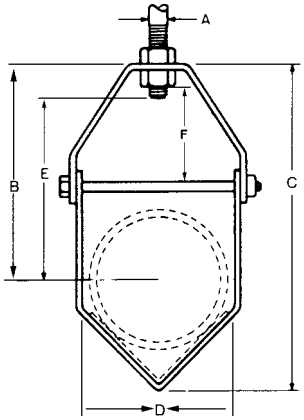
Ordering: Specify pipe size, figure number and finish.

Notes: Upper locknut must be tightened securely to assure proper hanger performance.

Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL SIZE		BOLT	A	B	C	E	F	WGT EACH (lbs)	MAX REC LOAD (lbs)
		TOP	BOTTOM								
1 1/2	1.900	8ga x 1	12ga x 7/8	1/4	3/8	2 1/8	3 1/8	1 5/16	5/16	0.42	250
2	2.375	8ga x 1	12ga x 7/8	1/4	3/8	2 1/2	3 11/16	1 11/16	7/16	0.46	300
2 1/2	2.875	8ga x 1 1/4	10ga x 1 3/16	5/16	1/2	2 7/8	4 3/16	1 13/16	7/16	0.78	500
3	3.500	8ga x 1 1/4	10ga x 1 3/16	5/16	1/2	3 5/8	5 3/8	2 9/16	11/16	0.98	500
3 1/2	4.000	8ga x 1 1/4	10ga x 1 3/16	5/16	1/2	4 1/16	6 1/16	2 15/16	3/4	1.36	500
4	4.500	4ga x 1 1/4	10ga x 1 3/16	3/8	5/8	4 1/16	6 5/16	2 11/16	3/16	1.38	700
5	5.563	4ga x 1 1/4	8ga x 1 1/4	1/2	5/8	4 7/8	7 5/8	3 1/2	5/8	2.08	700
6	6.625	3ga x 1 1/2	8ga x 1 1/2	1/2	3/4	5 1/2	8 7/8	3 7/8	7/16	2.82	900
8	8.625	3ga x 1 3/4	8ga x 1 3/4	5/8	3/4	6 3/8	10 7/8	4 5/8	5/16	4.34	1000

FIG. 11V
V BOTTOM CLEVIS HANGER



"E" dimension includes exposed rod threads beyond bottom of the hex nut. Exposed rod thread dimension is equal to the diameter of the rod used.

Domestically Manufactured

Material: Carbon steel.

Finish: Plain, electro-galvanized.

Service: Designed for the suspension of flexible plastic pipe lines. Used in conjunction with figure #12 channel.

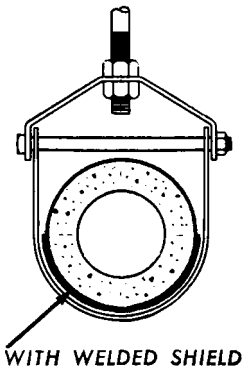
Ordering: Specify size number and figure number.

Notes: Hanger and channel sold separately. Upper locknut must be tightened securely to assure proper hanger performance.

PIPE SIZE	SIZE NUMBER	MATERIAL SIZE		BOLT	A	B	C	D	E	F	WGT EACH (lbs)	MAX REC LOAD (lbs)
		TOP	BOTTOM									
1/2	1	14ga x 7/8	16ga x 7/8	1/4	3/8	5 3/16	5 7/8	2 9/16	4 7/16	1 1/4	.30	150
3/4	1	14ga x 7/8	16ga x 7/8	1/4	3/8	5	5 7/8	2 9/16	4 1/4	1 1/4	.30	150
1	1	14ga x 7/8	16ga x 7/8	1/4	3/8	4 7/8	5 7/8	2 9/16	4 1/16	1 1/4	.30	150
1 1/4	1	14ga x 7/8	16ga x 7/8	1/4	3/8	4 5/8	5 7/8	2 9/16	3 7/8	1 1/4	.30	150
1 1/2	1	14ga x 7/8	16ga x 7/8	1/4	3/8	4 7/16	5 7/8	2 9/16	3 11/16	1 1/4	.30	150
2	1	14ga x 7/8	16ga x 7/8	1/4	3/8	4 1/8	5 7/8	2 9/16	3 3/8	1 1/4	.30	150
2 1/2	2	11ga x 1 3/16	14ga x 1 3/16	3/8	1/2	6 13/16	8 15/16	4 11/16	5 3/4	2 3/8	.96	250
3	2	11ga x 1 3/16	14ga x 1 3/16	3/8	1/2	6 3/8	8 15/16	4 11/16	5 5/16	2 3/8	.96	250
4	2	11ga x 1 3/16	14ga x 1 3/16	3/8	1/2	5 11/16	8 15/16	4 11/16	4 1/2	2 3/8	.96	250

HANGER SIZING CHART

FIG. 11WS
CLEVIS WITH WELDED SHIELD



Material: Carbon steel clevis hanger with pre-galvanized shield.

Finish: Plain, electro-galvanized.

Service: Designed for the suspension of stationary insulated pipe lines. Insulation protection shield is spot welded in place.

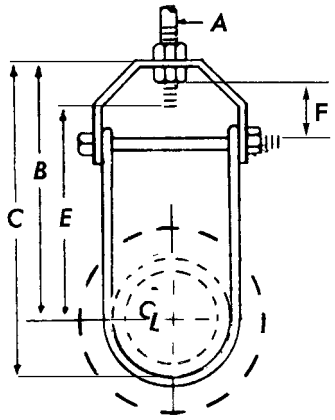
Ordering: Specify hanger size number and figure number.

Notes: To determine proper hanger size use hanger selection guide below. Upper locknut must be tightened securely to assure proper hanger performance.

Domestically Manufactured

PIPE SIZE	THICKNESS OF PIPE INSULATION					
	½"	1"	1½"	2"	2½"	3"
½	1½	2½	3½	5	6	7
¾	2	3	3½	5	6	7
1	2	3	4	5	6	7
1¼	2½	3½	4	5	6	7
1½	2½	3½	5	6	7	8
2	3	4	5	6	7	8
2½	3½	5	6	7	8	10
3	4	5	6	7	8	10
3½	5	6	7	8	10	10
4	5	6	7	8	10	10
5	6	7	8	10	10	12
6	7	8	10	10	12	12
8	10	10	12	12	14	16
10	12	12	14	16	16	18
12	14	16	16	18	18	20
14	16	16	18	18	20	20
16	18	18	20	20	24	24

FIG. 11X
CLEVIS HANGER WITH EXTENDED BOTTOM



"E" dimension includes exposed rod threads beyond bottom of the hex nut. Exposed rod thread dimension is equal to the diameter of the rod used.

Material: Carbon steel.

Finish: Plain, electro-galvanized.

Service: Designed for the suspension of non-insulated stationalry pipe lines. The bottom section of the hanger is elongated to allow for easier installation of insulation.

Approvals: Complies with Federal Specifications WW-H-171-E (Type# 1), A-A-1192 A (Type# 1), and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 1).

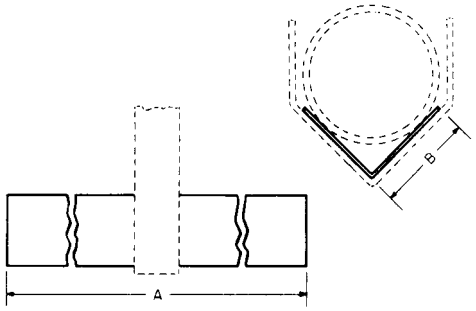
Ordering: Specify pipe size, figure number and finish.

Notes: Upper locknut must be tightened securely to assure proper hanger performance.

Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL SIZE		BOLT	A	B	C	E	F	WGT EACH (lbs)	MAX REC LOAD (lbs)
		TOP	BOTTOM								
1/2	0.840	13ga x 7/8	12ga x 7/8	1/4	3/8	3 13/16	4 1/4	3	7/16	.30	610
3/4	1.050	13ga x 7/8	12ga x 7/8	1/4	3/8	3 3/4	4 3/16	2 15/16	7/16	.33	610
1	1.315	13ga x 7/8	12ga x 7/8	1/4	3/8	4 1/8	4 3/4	3 5/16	5/8	.34	610
1 1/4	1.660	13ga x 7/8	12ga x 7/8	1/4	3/8	4 7/16	5 1/4	3 5/8	7/8	.39	610
1 1/2	1.900	12ga x 7/8	12ga x 7/8	1/4	3/8	4 3/4	5 3/4	3 15/16	1 1/16	.47	610
2	2.375	12ga x 7/8	12ga x 7/8	1/4	3/8	7 1/4	8 7/16	6 7/16	1 1/4	.65	610
2 1/2	2.875	9ga x 1 3/16	10ga x 1 3/16	5/16	1/2	8 13/16	10 3/16	7 3/4	1 15/16	1.24	1130
3	3.500	9ga x 1 3/16	10ga x 1 3/16	5/16	1/2	9	10 3/4	7 15/16	1 3/4	1.34	1130
4	4.500	8ga x 1 3/16	10ga x 1 3/16	3/8	5/8	10 1/8	12 3/8	8 13/16	2 1/8	1.92	1430
5	5.563	4ga x 1 1/4	8ga x 1 1/4	1/2	5/8	9 7/8	12 9/16	8 7/16	1 7/16	2.58	1430
6	6.625	3ga x 1 1/2	8ga x 1 1/2	1/2	3/4	10 7/8	14 1/8	9 1/4	1 3/4	3.36	1940
8	8.625	3ga x 1 3/4	8ga x 1 3/4	5/8	3/4	12 1/4	16 9/16	10 7/16	1 7/8	5.08	2000
10	10.7500	3/8 x 1 3/4	3ga x 1 3/4	3/4	7/8	14 1/2	19 7/8	12 1/2	2 1/4	9.08	3600
12	12.7500	3/8 x 2	3ga x 2	3/4	7/8	15 7/8	22 1/4	13 7/8	2 13/16	11.54	3800

FIG. 12
V-CHANNEL



Material: Carbon steel.

Finish: Pre-galvanized.

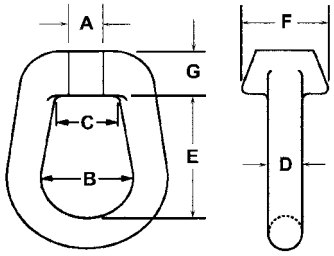
Service: Designed for the support of plastic or other flexible pipe systems. Use with FIG. 11V "V" bottom clevis hanger. Hangers should be placed as close to channel joints as possible.

Ordering: Specify size number and figure number.

Domestically Manufactured

SIZE NO.	FOR PIPE SIZE	MATERIAL SIZE	CHANNEL LENGTH A	B	WGT EACH (lbs)	MAX REC LOAD (lbs)
1	½ TO 2	18 ga	10'	1½	5.4	150
2	2½ TO 4	18 ga	10'	3	10.8	250

FIG. 13 WELDLESS EYENUT, DOMESTIC, RIGHT HAND THREADS
FIG. 13I WELDLESS EYE NUT, RIGHT HAND THREADS
FIG. 13L WELDLESS EYENUT, DOMESTIC, LEFT HAND THREAD



Material: Forged carbon steel, 316 stainless steel.

Finish: Plain, electro-galvanized, hot-dip galvanized.

Service: Designed for use on high temperature piping applications.

Approvals: Complies with Federal Specifications WW-H-171-E (Type# 17), A-A-1192 A (Type# 17), and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 17).

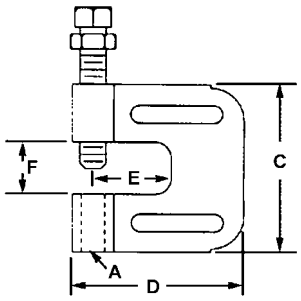
Ordering: Specify rod size, figure number and finish.

Notes: Supports loads equal to the full limitation of the hanger rod. When figure 13I is supplied in hot-dip galvanized finish, it is not tapped oversized.

Domestically Manufactured
EXCLUDING 13I

SIZE A	B	C	D	E	F	G	WGT EACH (lbs)	MAX REC LOAD (lbs)	
								650°F	750°F
3/8-16	1¼	13/16	3/8	1 9/16	1	5/8	0.23	610	540
½-13	1¼	13/16	3/8	1 9/16	1	5/8	0.55	1130	1010
5/8-11	1½	1 3/16	½	2	1 3/8	11/16	0.52	1810	1610
3/4-10	1½	1 3/16	½	2	1 3/8	11/16	1.70	2710	2420
7/8-9	2	1 13/16	¾	2 3/8	1 15/16	1	1.70	3770	3360
1-8	2	1 13/16	¾	2 3/8	1 15/16	1	1.70	4960	4420
1 1/8-7	2½	1 13/16	1	3 3/8	2 3/8	1¼	3.70	6230	5560
1¼-7	2½	1 13/16	1	3 3/8	2 3/8	1¼	3.50	8000	7140
1½-6	2½	1 13/16	1	3 3/8	2 3/8	1¼	3.50	11630	10370

FIG. 21 STEEL C-CLAMP
FIG. 21L STEEL C-CLAMP WITH LOCKNUT, DOMESTIC
FIG 21LI STEEL C-CLAMP WITH LOCKNUT



Material: Carbon steel, 304 stainless steel (21LSS) and 316 stainless steel (21LSX).

Finish: Plain, electro-galvanized.

Service: Designed for attaching hanger rod to the bottom flange of a beam. Features the ribbed design for added strength. Hardened steel cup point set screw secures clamp to beam.

Approvals: UL - U.L.C. listed 3/8 and 1/2 (1/2 for 4" IPS max) **with locknut only**.

FM approved for 3/8 only **with and without locknut.**

Complies with Federal Specification WW-H-171-E (Type# 23), A-A-1192 A (Type# 23), Manufacturers' Standard Society SP-58 and MSS SP-69 (Type# 23)

Ordering: Specify rod size, figure number and finish.

Notes: See MSS SP-69 for proper set screw torque recommendations.

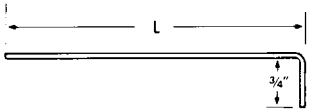
FM APPROVED

c UL us LISTED

Domestically Manufactured
EXCLUDING 21LI

SIZE A	SET SCREW	C	D	E	F	MAX PIPE SIZE	WGT EACH (lbs)		MAX REC LOAD (lbs)
							21 (W/OUT NUT)	21L (W/NUT)	
3/8-16	3/8-16	2 3/8	2 3/8	1	3/4	4	.38	.40	400
1/2-13	3/8-16	2 3/8	2 3/8	1	3/4	4	.38	.40	500
5/8-11	1/2-13	2 3/8	2 5/16	7/8	3/4	5	.56	.60	550
3/4-10	5/8-11	2 3/8	2 5/16	7/8	3/4	6	.60	.68	630
7/8-9	3/4-10	3	3 5/16	1 1/4	1	8	1.76	1.88	1200

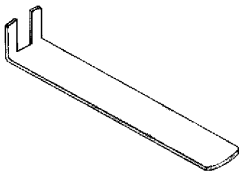
FIG. 21R
RETAINING STRAP

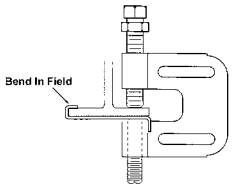


Material: Carbon steel.
Finish: Plain, electro-galvanized.
Service: Designed for use with figure FIG. 21, FIG. 21L (⅜"-¾") and FIG. 23L (⅜" and ½") to eliminate movement of the beam clamp due to vibration.
Ordering: Specify part number, length and finish.
Notes: Add 2" minimum to flange width to determine length.

FM APPROVED

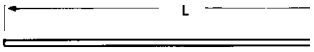
Domestically Manufactured

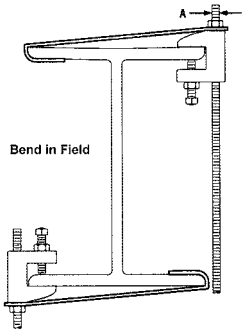




MATERIAL	WGT EACH (lbs)					
	LENGTH L					
	4½	6	8	10	12	14
11GA X 1¼	.22	.30	.36	.44	.48	.66

FIG. 22R
RETAINING STRAP



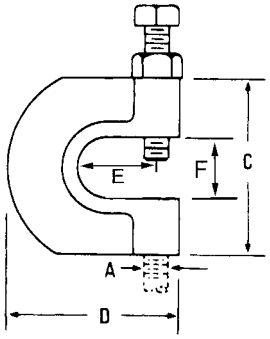


Domestically Manufactured

Material: Carbon steel.
Finish: Plain, electro-galvanized.
Service: Designed for use with FIG. 61 and FIG. 62.
Ordering: Specify part number, length and finish.
Notes: Add 2" minimum to flange width to determine length.

ROD SIZE A	MATERIAL	WGT EACH (lbs)					
		LENGTH L					
		4½	6	8	10	12	14
⅜	11ga x 1.0	.14	.18	.26	.32	.40	.46
½	11ga x 1.0	.14	.18	.24	.32	.38	.44
⅝	11ga x 1.25	.17	.22	.30	.40	.47	.55
¾	11ga x 1.25	.17	.22	.30	.40	.47	.55
⅞	11ga x 2.00	.28	.36	.48	.64	.76	.88

FIG. 23L
MALLEABLE IRON C-CLAMP WITH LOCKNUT



Material: Malleable iron.

Finish: Plain, electro-galvanized.

Service: Designed for attaching hanger rod to the bottom flange of a beam.

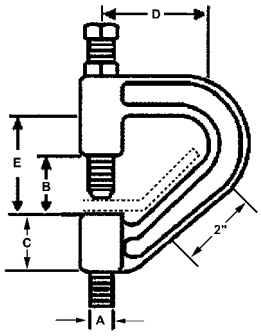
Approvals: U.L. - U.L.C. listed and FM approved 3/8 and 1/2 ONLY. Complies with Federal Specification WW-H-171-E (Type# 23), A-A-1192 A (Type# 23) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 23).

Ordering: Specify rod size, figure number and finish.

Notes: See MSS SP-69 for proper set screw torque recommendations.

SIZE A	SET SCREW	C	D	E	F	MAX PIPE SIZE	WGT EACH (lbs)	MAX REC LOAD (lbs)
3/8-16	3/8-16	1 3/4	1 3/4	5/8	3/4	4	0.40	400
1/2-13	3/8-16	1 3/4	1 3/4	5/8	3/4	4	0.39	500
5/8-11	3/8-16	2	2	5/8	3/4	5	0.65	550
3/4-10	3/8-16	2	2	5/8	3/4	6	0.76	630

FIG. 24
PURLIN CLAMP



Material: Ductile Iron.

Finish: Plain, electro-galvanized.

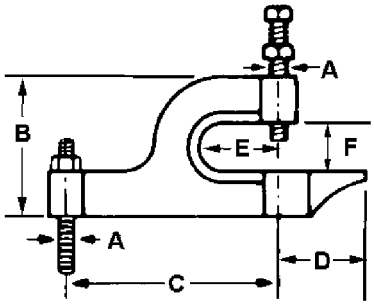
Service: Designed for use with large-lip steel Purlin beams.

Ordering: Specify figure number and finish.

Notes: See MSS SP-69 for proper set screw torque recommendations.

SIZE A	SET SCREW	B	C	D	E	WGT EACH (lbs)	MAX REC LOAD (lbs)
3/8-16	3/8-16 X 3	1	1	1 7/8	1 5/8	0.92	400

FIG. 25L
EXTENDED C-CLAMP WITH LOCKNUT



Material: Ductile iron.

Finish: Plain, electro-galvanized.

Service: Designed for attachment to beams where flange thickness does not exceed ¾" and where it is desired to have the rod support offset from the beam.

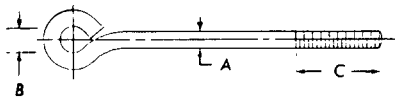
Ordering: Specify figure number and finish.

Notes: See MSS SP-69 for proper set screw torque recommendations.

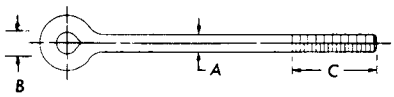
SIZE A	SET SCREW	B	C	D	E	F	WGT EACH (lbs)
⅜-16	⅜-16 X 2	2.362	3.600	1.515	1.000	0.787	0.716

FIG. 26 PLAIN EYE ROD
FIG. 26W WELDED EYE ROD

Not welded FIG.26



Welded FIG. 26W



Material: Carbon steel.

Finish: Plain, electro-galvanized.

Service: Designed for use in hanger assemblies and supports.

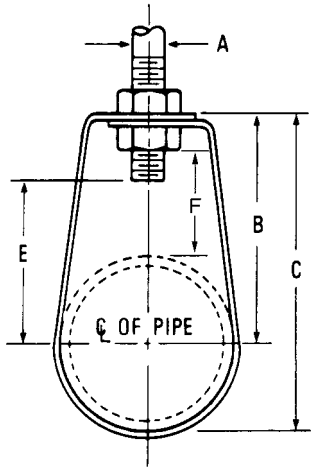
Ordering: Specify rod size, length, figure number and finish.

Notes: Other lengths, rod diameters and thread lengths available on request.

Domestically Manufactured

ROD SIZE A	B	C	MAX REC LOAD (lbs)		
			FIG# 26 (NOT WELDED) 650°F	FIG# 26W (WELDED)	
				650°F	750°F
⅜-16	0.500	2.500	240	610	540
½-13	0.625	2.500	440	1130	1010
⅝-11	0.750	2.500	705	1810	1610
¾-10	0.875	3.000	1050	2710	2420
⅞-9	1.000	3.500	1470	3770	3360
1-8	1.125	4.000	1940	4960	4420
1⅛-7	1.250	4.500	2430	6230	5560
1¼-7	1.375	5.000	3120	8000	7140
1½-6	1.625	6.000	4650	11630	10370

FIG. 31
BAND HANGER



Material: Carbon steel, 304 (31SS) stainless steel.

Finish: Plain, electro-galvanized, plastic coated.

Service: Designed for the suspension of non-insulated stationary pipe lines. The plastic coated band hanger protects the pipe from the steel surface of the hanger and is designed to reduce noise, vibration and prevents electrolysis between pipe and the hanger. Stainless steel hangers are recommended for applications where protection from corrosive environments is needed.

Approvals: Complies with Federal Specification WWH-171-E (Type# 7), A-A-1192A (Type# 7), Manufacturers' Standardization Society SP-58 and MSS SP-69 (Type# 7).

Ordering: Specify pipe size, figure number and finish.

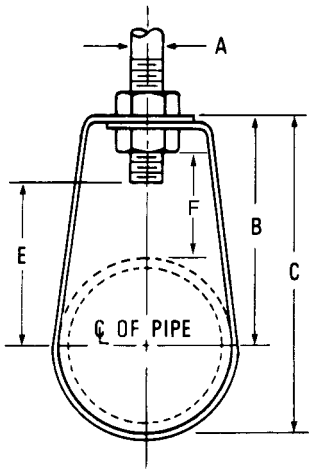
Notes: Upper locknut must be tightened securely to assure proper hanger performance.

"E" dimension includes exposed rod threads beyond bottom of the hex nut. Exposed rod thread dimension is equal to the diameter of the rod used.

Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL SIZE	A	B	C	E	F	WGT EACH (lbs)	MAX REC LOAD (lbs)
3/8	0.675	16ga x .875	3/8	2 1/4	2 5/8	1 7/16	1 1/2	.100	610
1/2	0.840	16ga x .875	3/8	2 3/16	2 9/16	1 3/8	1 5/16	.100	610
3/4	1.050	16ga x .875	3/8	2	2 9/16	1 3/16	1 1/16	.100	610
1	1.315	16ga x .875	3/8	2 3/16	2 13/16	1 5/16	1 1/16	.120	610
1 1/4	1.660	16ga x .875	3/8	2 5/16	3 1/8	1 1/2	1 1/16	.120	610
1 1/2	1.900	16ga x .875	3/8	2 3/8	3 3/8	1 9/16	1	.140	610
2	2.375	16ga x .875	3/8	2 13/16	4	2	1 3/16	.160	610
2 1/2	2.875	14ga x 1.0	1/2	3 3/8	4 13/16	2 1/4	1 5/16	.280	970
3	3.500	13ga x 1.0	1/2	3 3/4	5 9/16	2 5/8	1 3/8	.380	970
3 1/2	4.000	13ga x 1.0	1/2	4 3/16	6 3/16	3 1/16	1 9/16	.420	970
4	4.500	11ga x 1.0	1/2	4 5/8	6 15/16	3 7/16	1 11/16	.600	1130
5	5.563	11ga x 1.0	1/2	5 1/16	7 7/8	3 15/16	1 5/8	.700	1130
6	6.625	11ga x 1.5	3/4	6 3/8	9 3/4	4 3/4	2 3/16	1.340	1600
8	8.625	11ga x 1.5	3/4	8 1/16	12 7/16	6 7/16	2 7/8	1.640	1800

FIG. 31CT COPPER BAND HANGER
FIG. 31CTI EPOXY COATED (*COPPER-GARD*) BAND HANGER



"E" dimension includes exposed rod threads beyond bottom of the hex nut. Exposed rod thread dimension is equal to the diameter of the rod used.

Material: Carbon steel.

Finish: Copper plated (31CT) or *Copper e*poxy coated *COPPER-GARD* (31CTI). *COPPER-GARD* products offer superior corrosion protection due to the epoxy coating over electro-galvanized steel. The alternative, copper plating that has been done historically, is for identification purposes only and is not intended for corrosion protection. Refer to MSS-SP58 13.3.

Approvals: Complies with Federal Specifications WW-H-171-E (Type# 7), A-A-1192 A (Type# 7), and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 7).

Service: Designed for the suspension of non-insulated stationary pipe.

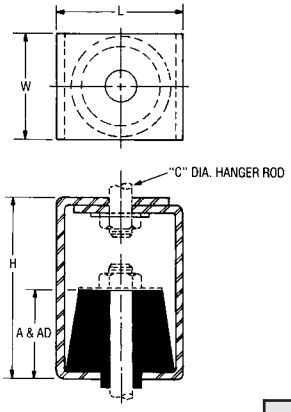
Ordering: Specify tube size, figure number and finish.

Notes: Upper locknut must be tightened securely to assure proper hanger performance.

Domestically Manufactured
EXCLUDING 31CTI

PIPE SIZE	TUBE OD	MATERIAL SIZE	A	B	C	E	F	WGT EACH (lbs)	MAX REC LOAD (lbs)
1/2	0.625	16ga x .875	3/8	2 5/16	2 5/8	1 1/2	1 9/16	.10	610
3/4	0.875	16ga x .875	3/8	2 1/8	2 9/16	1 5/16	1 1/4	.10	610
1	1.125	16ga x .875	3/8	2	2 9/16	1 3/16	1	.10	610
1 1/4	1.375	16ga x .875	3/8	2 1/16	2 13/16	1 1/4	15/16	.12	610
1 1/2	1.625	16ga x .875	3/8	2 5/16	3 1/8	1 1/2	1 1/16	.12	610
2	2.125	16ga x .875	3/8	2 5/8	3 11/16	1 13/16	1 1/8	.14	610
2 1/2	2.625	14ga x 1.0	1/2	3 3/16	4 1/2	2 1/16	1 1/4	.30	610
3	3.125	14ga x 1.0	1/2	3 1/2	5	2 3/8	1 5/16	.32	970
3 1/2	3.625	13ga x 1.0	1/2	3 13/16	5 9/16	2 11/16	1 3/8	.38	970
4	4.125	13ga x 1.0	1/2	4	6 1/16	2 7/8	1 5/16	.44	1130
5	5.125	11ga x 1.0	1/2	4 15/16	7 1/2	3 11/16	1 5/8	.68	1130
6	6.125	11ga x 1.0	1/2	5 5/8	8 11/16	4 17/16	1 7/8	.84	1130

FIG. 34
VIBRATION HANGER- NEOPRENE
"RH"/"RHD" SERIES



Domestically Manufactured

Material: Carbon steel housing with neoprene rubber element.

Finish: Painted steel housing with color coded neoprene.

Service: Designed for effective vibration isolation for piping or suspended equipment. Typical applications include fans, air handling units, piping and suspended ceilings. Deflections to ¼" with type RH and ½" with type RHD.

Ordering: Specify type, pipe size, rod size and load.

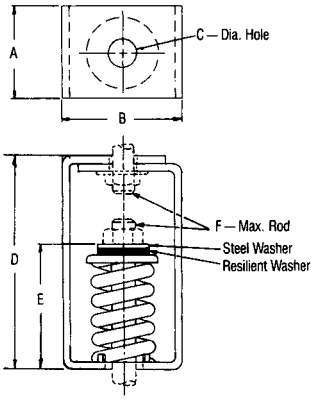
Notes: See hanger selection guide.

TYPE	COLOR CODE	MAX LOAD		DEFLECTION INCHES (mm)	
		lbs	(KG)	RH	RHD
RH-1 or RHD-1	BLUE BLACK RED GREEN	35 45 75 120	(15.8) (20.4) (34.0) (54.5)	0.20 (5.0)	0.40 (10.1)
RH-2 or RHD-2	BLACK RED GREEN GRAY	170 240 380 550	(77.0) (109.0) (172.5) (249.7)	0.25 (6.35)	0.50 (12.7)
RH-3 or RHD-3	BLACK RED GREEN GRAY	250 525 750 1250	(113.5) (238.3) (340.5) (567.5)	0.25 (6.35)	0.50 (12.7)
RH-4 or RHD-4	BLACK RED GREEN GRAY	1500 2250 3000 4000	(681.0) (1021.5) (1362.0) (1816.0)	0.25 (6.35)	0.50 (12.7)

DIMENSIONS: INCHES (mm)						
TYPE	L	W	H	A*	AD*	C
RH-1 or RHD-1	2 1/4 (57.2)	2 (50.8)	3 (76.2)	1 1/8 (28.6)	1 3/8 (35.0)	3/8 (9.6)
RH-2 or RHD-2	3 (76.2)	2 1/4 (57.2)	5 1/2 (139.7)	1 3/8 (35.0)	1 7/8 (47.8)	5/8 (16.0)
RH-3 or RHD-3	3 3/4 (95.2)	3 1/4 (82.5)	6 1/4 (158.7)	2 (50.8)	3 1/8 (79.4)	3/4 (19.0)
RH-4 or RHD-4	4 1/2 (114.3)	4 (101.6)	8 3/16 (208.0)	2 (50.8)	3 1/8 (79.4)	1 (25.4)

* Dimension "A" is for single deflection type RH hangers.
**Dimension "AD" is for double deflection type RHD hangers.

FIG. 35
VIBRATION SPRING-FLEX HANGER
"SH" SERIES



Material: Carbon steel housing with steel spring.

Finish: Painted steel housing and spring.

Service: Designed to isolate low frequency vibrations for piping or suspended equipment. Typical applications include fans, duct work, air handling units, piping, and suspended ceilings.

Ordering: Specifiy type, pipe size, rod size and load.

Notes: See spring-flex hanger selection guide.

Domestically Manufactured

TYPE & SIZE	DEFLECTION		MAX LOAD		SPRING CONSTR.		SPRING COLOR
	in	(mm)	lbs	(kg)	lbs/in	(kg/mm)	
SHS-6	1.3	(33.0)	21	(9.5)	16	(0.3)	BLUE
SHS-7	1.3	(33.0)	39	(17.7)	30	(0.5)	BLACK
SHS-8	1.1	(28.0)	50	(22.7)	46	(0.8)	RED
SHS-9	1.0	(25.4)	80	(36.3)	80	(1.4)	GREEN
SHS-10	1.0	(25.4)	105	(47.6)	105	(1.8)	GRAY
SHS-11	1.3	(33.0)	60	(27.2)	46	(0.8)	BLUE
SHS-12	1.3	(33.0)	100	(45.4)	78	(1.4)	ORANGE
SHS-13	1.2	(30.5)	165	(74.9)	133	(2.3)	BROWN
SHS-14	1.0	(25.4)	260	(118.0)	263	(4.7)	BLACK
SHS-16	0.8	(20.3)	370	(167.9)	493	(8.8)	YELLOW
SHS-17	0.5	(12.7)	450	(204.3)	900	(16.1)	RED
SHS-18	0.5	(12.7)	700	(317.8)	1556	(27.8)	GREEN
SH-19	1.4	(35.5)	85	(38.5)	62.5	(1.1)	PINK
SH-21	1.3	(33.0)	115	(52.2)	87	(1.5)	BLACK
SH-22	1.3	(33.0)	170	(77.1)	133	(2.3)	BLUE
SH-23	1.3	(33.0)	225	(102.1)	179	(3.2)	YELLOW
SH-24	1.2	(30.5)	325	(147.5)	264	(4.7)	BROWN
SH-25	1.2	(30.5)	450	(204.3)	368	(6.5)	RED
SH-26	1.2	(30.5)	600	(272.4)	513	(9.1)	PURPLE
SH-27	1.1	(28.0)	750	(340.5)	707	(12.6)	ORANGE
SH-28	1.0	(25.4)	900	(408.6)	881	(15.7)	GREEN
SH-31	0.8	(20.3)	1100	(499.4)	1327	(23.7)	GRAY
SH-32	0.8	(20.3)	1300	(589.6)	1758	(31.4)	WHITE
SHW-200	1.3	(33.0)	125	(56.7)	100	(1.7)	BLUE
SHW-400	1.3	(33.0)	400	(181.6)	303	(5.4)	BLACK
SHW-600	1.3	(33.0)	700	(317.8)	620	(11.0)	RED
SHW-1000	1.1	(28.0)	1060	(481.2)	952	(17.0)	GREEN
SHW-1300	1.0	(25.4)	1300	(590.2)	1300	(23.2)	YELLOW
SHW-1600	1.0	(25.4)	1600	(726.4)	1600	(28.6)	GRAY
SHW-1625	1.0	(25.4)	2050	(930.7)	1968	(35.2)	GRAY/RED
SHW-1628	1.0	(25.4)	2500	(1135.0)	2481	(44.3)	GRAY/GREEN
SHW-2-1600	1.0	(25.4)	3200	(1451.5)	3200	(47.6)	GRAY
SHW-2-1625	1.0	(25.4)	4100	(1859.7)	3936	(58.7)	GRAY/RED
SHW-2-1628	1.0	(25.4)	5000	(2268.0)	4962	(73.8)	GRAY/GREEN

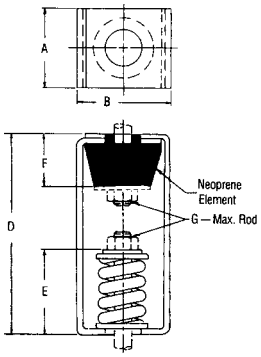
(additional chart on the following page)

FIG. 35 VIBRATION SPRING-FLEX HANGER - “SH” SERIES

(continued from previous page)

DIMENSIONS: INCHES (mm)						
TYPE & SIZE	**A**	**B**	**C**	**D**	**E**	**F**
SHS-6 thru 10	2 1/4 (57.5)	2 3/4 (69.8)	9/16 (14.2)	4 1/2 (114.3)	2 7/8 (73.0)	3/8 (9.5)
SHS-11 thru 18	2 1/4 (57.5)	3 (76.2)	13/16 (20.6)	5 1/2 (139.7)	3 1/8 (79.3)	5/8 (15.8)
SH-19 thru 32	3 (76.2)	3 1/4 (76.2)	1 3/16 (30.2)	7 (177.8)	4 3/4 (120.6)	3/4 (19.0)
SHW-200 thru 1628	4 (101.6)	4 3/4 (120.6)	1 1/2 (38.1)	8 3/16 (208.0)	4 5/8 (117.4)	1 (25.4)
SHW-2 1600/1625/1628	5 (127.0)	10 (254.0)	1 1/4 (31.7)	12 (304.8)	6 5/8 (168.2)	1 1/8 (28.5)

FIG. 36
VIBRATION SPRING-FLEX AND NEOPRENE HANGER - "RSH" SERIES



Material: Carbon steel housing and spring with neoprene rubber element.

Finish: Painted steel housing and spring with color coded neoprene.

Service: Designed to isolate both noise and vibration for piping or suspended equipment.

Ordering: Specifiy type, pipe size, rod size and load.

Notes: See spring-flex hanger selection guide.

Domestically Manufactured

TYPE & SIZE	DEFLECTION		MAX LOAD		SPRING CONSTR.		SPRING COLOR
	in	(mm)	lbs	(kg)	lbs/in	(kg/mm)	
RSHS-6	1.5	(38.1)	21	(9.5)	16	(0.2)	BLUE
RSHS-7	1.5	(38.1)	39	(17.7)	30	(0.5)	BLACK
RSHS-8	1.3	(33.0)	50	(22.7)	46	(0.8)	RED
RSHS-9	1.2	(30.4)	80	(36.3)	80	(1.4)	GREEN
RSHS-10	1.2	(30.4)	105	(47.6)	105	(1.8)	GRAY
RSHS-11	1.5	(38.1)	60	(27.2)	46	(0.8)	BLUE
RSHS-12	1.5	(38.1)	100	(45.4)	78	(1.4)	ORANGE
RSHS-13	1.4	(35.5)	165	(74.9)	133	(2.3)	BROWN
RSHS-14	1.2	(30.4)	260	(118.0)	263	(4.7)	BLACK
RSHS-16	1.1	(27.9)	370	(167.9)	493	(8.8)	YELLOW
RSHS-17	0.7	(17.7)	450	(204.3)	900	(16.1)	RED
RSHS-18	0.7	(17.7)	700	(317.8)	1556	(27.8)	GREEN
RSH-19	1.6	(40.6)	85	(38.5)	62.5	(1.1)	PINK
RSH-21	1.5	(38.1)	115	(52.2)	87	(1.5)	BLACK
RSH-22	1.5	(38.1)	170	(77.1)	133	(2.3)	BLUE
RSH-23	1.5	(38.1)	225	(102.1)	179	(3.2)	YELLOW
RSH-24	1.4	(35.5)	325	(147.5)	264	(4.7)	BROWN
RSH-25	1.4	(35.5)	450	(204.3)	368	(6.5)	RED
RSH-26	1.4	(35.5)	600	(272.4)	513	(9.1)	PURPLE
RSH-27	1.3	(33.0)	750	(340.5)	707	(12.6)	ORANGE
RSH-28	1.2	(30.4)	900	(408.6)	881	(15.7)	GREEN
RSH-31	1.0	(25.4)	1100	(499.4)	1327	(23.7)	GRAY
RSH-32	0.9	(22.8)	1300	(590.2)	1758	(31.4)	WHITE
RSHW-200	1.5	(38.1)	125	(56.7)	100	(1.7)	BLUE
RSHW-400	1.5	(38.1)	400	(181.6)	303	(5.4)	BLACK
RSHW-600	1.3	(33.0)	700	(317.8)	620	(11.0)	RED
RSHW-1000	1.3	(33.0)	1060	(481.2)	952	(17.0)	GREEN
RSHW-1300	1.2	(30.4)	1300	(590.2)	1300	(23.2)	YELLOW
RSHW-1600	1.2	(30.4)	1600	(726.4)	1600	(28.6)	GRAY
RSHW-1625	1.2	(30.4)	2050	(930.7)	1968	(35.2)	GRAY/RED
RSHW-1628	1.2	(30.4)	2500	(1135.0)	2481	(44.3)	GRAY/GREEN
RSHW-2-1600	1.2	(30.4)	3200	(1451.5)	3200	(47.6)	GRAY
RSHW-2-1625	1.2	(30.4)	4100	(1859.7)	3936	(58.7)	GRAY/RED
RSHW-2-1628	1.2	(30.4)	5000	(2268.0)	4962	(73.8)	GRAY/GREEN

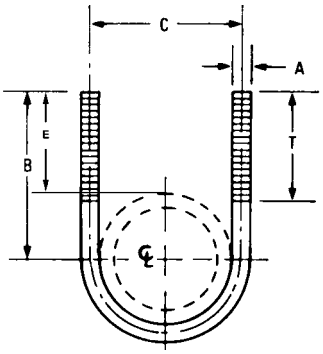
(additional chart on the following page)

FIG. 36 VIBRATION SPRING-FLEX AND NEOPRENE HANGER - "RSH" SERIES

(continued from previous page)

DIMENSIONS: INCHES (mm)						
TYPE & SIZE	**A**	**B**	**D**	**E**	**F**	**G**
RSHS-6 thru 10	2 1/4 (57.0)	2 3/4 (69.8)	5 1/4 (133.3)	2 7/8 (73.0)	15/16 (23.8)	3/8 (9.5)
RSHS-11 thru 18	3 (76.2)	3 1/4 (95.2)	7 (177.8)	3 (76.2)	1 1/2 (38.0)	5/8 (15.8)
RSH-19 thru 32	3 (76.2)	3 3/4 (95.2)	8 1/4 (209.5)	4 3/8 (111.0)	2 1/8 (53.6)	3/4 (19.0)
RSHW-200 thru 1000	4 1/2 (114.3)	5 (127.0)	10 3/16 (260.0)	4 5/8 (117.4)	2 1/8 (53.9)	1 (25.4)
RSHW-1300 thru 1628	4 1/2 (114.3)	5 (127.0)	10 3/16 (260.0)	4 5/8 (117.4)	2 1/8 (53.9)	1 (25.4)
RSHW-2-1600 thru 1628	5 (127.0)	11 (279.4)	16 (406.4)	6 1/2 (165.0)	4 (101.6)	1 1/8 (28.5)

FIG. 37
LIGHT DUTY U-BOLT (LESS NUTS)



Material: Carbon steel.

Finish: Plain, electro-galvanized.

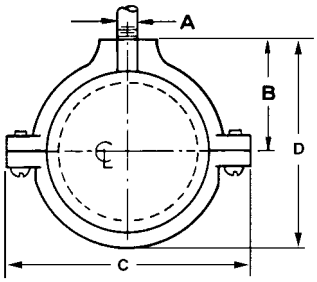
Service: Designed as a support, guide or anchor for light duty pipe.

Ordering: Specifiy pipe size, figure number and finish. Hex nuts can be ordered separately.

Notes: **Available domestic**

PIPE SIZE	PIPE OD	A	B	C	E	T	WGT EACH (lbs)	MAX REC LOAD (lbs)
3/8	0.675	1/4	1 1/8	1	13/16	3/4	.04	485
1/2	0.840	1/4	2 1/16	1 1/4	1 5/8	1 3/4	.06	485
3/4	1.050	1/4	2 1/8	1 3/8	1 5/8	1 3/4	.06	485
1	1.315	1/4	2 5/16	1 5/8	1 5/8	1 3/4	.06	485
1 1/4	1.660	1/4	2 7/16	2	1 5/8	1 3/4	.08	485
1 1/2	1.900	1/4	2 1/2	2 1/4	1 9/16	1 3/4	.08	485
2	2.375	1/4	2 3/4	2 11/16	1 9/16	1 3/4	.10	485
2 1/2	2.875	3/8	3 1/8	3 3/8	1 11/16	2	.28	1220
3	3.500	3/8	3 1/2	3 7/8	1 3/4	2	.32	1220
3 1/2	4.000	3/8	3 11/16	4 1/2	1 11/16	2	.34	1220
4	4.500	3/8	3 7/8	4 7/8	1 5/8	2	.38	1220
5	5.563	3/8	4 5/8	6	1 13/16	2 1/4	.46	1220
6	6.625	1/2	5 1/8	7 1/4	1 13/16	2 1/4	.94	2260
8	8.625	1/2	6 1/8	9 1/8	1 13/16	2 1/4	1.16	2260

FIG. 41
SPLIT RING EXTENSION HANGER



Material: Malleable iron.

Finish: Plain, electro-galvanized.

Service: Designed for the suspension of non-insulated stationary pipe lines horizontally and vertically.

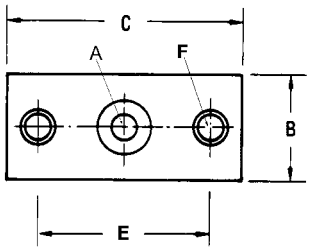
Approvals: Complies with Federal Specification WWH-171-E (Type# 25), A-A-1192A (Type# 12), Manufacturers' Standardization Society SP-58 and MSS SP-69 (Type# 12).

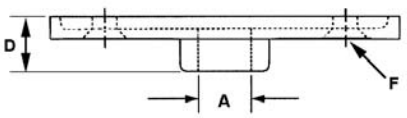
Ordering: Specify pipe size, figure number and finish.

Notes: Split ring extension hangers with hinged design available in ⅜" - 4" (41H).

PIPE SIZE	PIPE OD	SCREW	A	B	C	D	WGT EACH (lbs)	MAX REC LOAD (lbs)
½	0.840	10-24	⅜-16	¾	2⅛	1 3/16	0.098	180
¾	1.050	10-24	⅜-16	⅞	2½	1 9/16	0.112	180
1	1.315	10-24	⅜-16	1⅛	2¾	2	0.147	180
1¼	1.660	10-24	⅜-16	1 5/16	3 3/16	2⅜	0.181	180
1½	1.900	10-24	⅜-16	1 7/16	3⅜	2⅝	0.214	180
2	2.375	10-24	⅜-16	1⅝	3 15/16	3 1/16	0.300	180

FIG. 41A
HANGER FLANGE PLATE





Material: Malleable iron, 304 (41ASSI) and 316 (41ASXI) stainless steel.

Finish: Electro-galvanized, Copper epoxy coated (*COPPER-GARD*). *COPPER-GARD* products offer superior corrosion protection due to the epoxy coating over electro-galvanized material. The alternative copper plating that has been done historically is for identification purposes and is not intended for corrosion protection. Refer to MSS SP-58, 13.3.

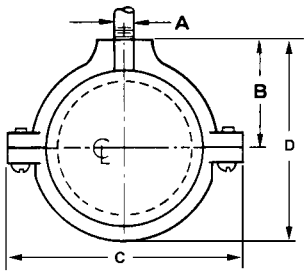
Service: Designed for attaching hanger rod to wood beams, ceilings, walls and floor.

Ordering: Specify rod size, figure number and finish.

Notes: Stainless flange plates are recommended for applications where protection from corrosive environments is needed.

ROD SIZE A	B	C	D	E	F SCREW SIZE	WGT EACH (lbs)
⅜-16	1⅜	2¾	7/16	1 11/16	#12	0.18
½-13	1⅜	2¾	7/16	1 11/16	#12	0.18

FIG. 41CT
EPOXY COATED (*COPPER-GARD*) COPPER TUBE SPLIT RING EXTENSION HANGER



Material: Malleable iron.

Finish: Copper epoxy coated (*COPPER-GARD*). *COPPER-GARD* products offer superior corrosion protection due to the epoxy coating over electro-galvanized material. The alternative copper plating that has been done historically identifies the product and is not intended for protection. Refer to MSS SP58, 13.3.

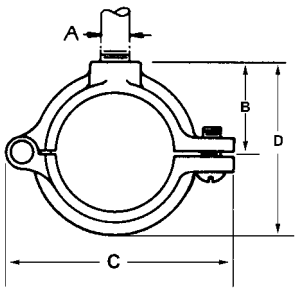
Service: Designed for the suspension of non-insulated stationary copper tubing, horizontally or vertically.

Approvals: Complies with Federal Specification WWH-171-E (Type# 25), A-A-1192A (Type# 12), Manufacturers' Standardization Society SP-58 and MSS SP-69 (Type# 12).

Ordering: Specify tube size and figure number.

TUBE SIZE	TUBE OD	SCREW	A	B	C	D	WGT EACH (lbs)	MAX REC LOAD (lbs)
1/2	0.625	10-24	3/8-16	11/16	1 7/8	1 1/8	0.087	180
3/4	0.875	10-24	3/8-16	13/16	2 1/4	1 3/8	0.096	180
1	1.125	10-24	3/8-16	15/16	2 1/2	1 5/8	0.128	180
1 1/4	1.375	10-24	3/8-16	1 1/16	2 7/8	1 7/8	0.141	180
1 1/2	1.625	10-24	3/8-16	1 3/16	3	2 3/16	0.179	180
2	2.125	10-24	3/8-16	1 7/16	3 1/2	2 11/16	0.229	180

FIG. 41H
SPLIT RING EXTENSION HANGER, HINGE DESIGN



Material: Malleable iron.

Finish: Plain, electro-galvanized.

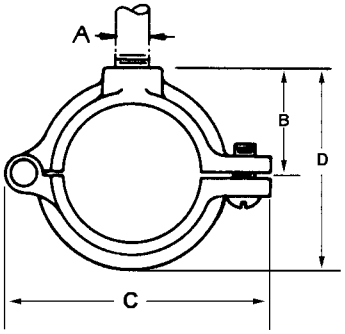
Service: Designed for the suspension of non-insulated stationary pipe lines horizontally or vertically.

Approvals: Complies with Federal Specification WWH-171-E (Type# 25), A-A-1192A (Type# 12), Manufacturers' Standardization Society SP-58 and MSS SP-69 (Type# 12).

Ordering: Specify pipe size, figure number and finish.

PIPE SIZE	PIPE OD	SCREW	A	B	C	D	WGT EACH (lbs)	MAX REC LOAD (lbs)
3/8	0.675	10-24	3/8-16	11/16	1 13/16	1 3/16	0.084	180
1/2	0.840	10-24	3/8-16	3/4	2 1/8	1 3/16	0.098	180
3/4	1.050	10-24	3/8-16	7/8	2 1/2	1 9/16	0.112	180
1	1.315	10-24	3/8-16	1 1/8	2 3/4	2	0.147	180
1 1/4	1.660	10-24	3/8-16	1 5/16	3 3/16	2 3/8	0.181	180
1 1/2	1.900	10-24	3/8-16	1 7/16	3 3/8	2 5/8	0.214	180
2	2.375	10-24	3/8-16	1 5/8	3 15/16	3 1/16	0.299	180
2 1/2	2.875	1/4	1/2-13	2 1/8	5 3/16	3 13/16	0.583	300
3	3.500	1/4	1/2-13	2 1/2	5 11/16	4 5/8	0.713	300
4	4.500	1/4	1/2-13	2 7/8	6 3/4	5 9/16	1.019	300

FIG. 41HCT
EPOXY COATED (*COPPER-GARD*)
COPPER TUBING SPLIT RING EXTENSION HANGER, HINGE DESIGN



Material: Malleable iron.

Finish: Copper epoxy coated (*COPPER-GARD*). *COPPER-GARD* products offer superior corrosion protection due to the epoxy coating over electro-galvanized material. The alternative copper plating that has been done historically identifies the product and is not intended for protection. Refer to MSS SP58, 13.3.

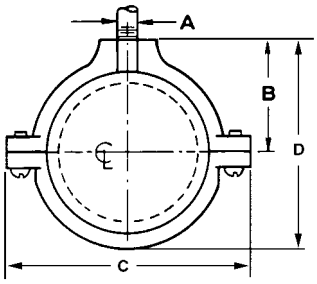
Service: Designed for the suspension of non-insulated stationary copper tubing, horizontally or vertically.

Approvals: Complies with Federal Specification WWH-171-E (Type# 25), A-A-1192A (Type# 12), Manufacturers' Standardization Society SP-58 and MSS SP-69 (Type# 12).

Ordering: Specify tube size, and figure number.

TUBE SIZE	TUBE OD	SCREW	A	B	C	D	WGT EACH (lbs)	MAX REC LOAD (lbs)
1/4	0.375	10-24	3/8-16	9/16	1 3/4	7/8	0.073	180
3/8	0.500	10-24	3/8-16	5/8	1 3/4	1 1/16	0.080	180
1/2	0.625	10-24	3/8-16	11/16	1 7/8	1 3/16	0.084	180
3/4	0.875	10-24	3/8-16	13/16	2 5/16	1 7/16	0.106	180
1	1.125	10-24	3/8-16	15/16	2 7/16	1 5/8	0.122	180
1 1/4	1.375	10-24	3/8-16	1 1/16	2 13/16	1 15/16	0.152	180
1 1/2	1.625	10-24	3/8-16	1 3/16	3 1/16	2 3/16	0.172	180
2	2.125	10-24	3/8-16	1 7/16	3 5/8	2 11/16	0.233	180
2 1/2	2.625	1/4-20	1/2-13	1 7/8	4 15/16	2 7/16	0.449	300
3	3.125	1/4-20	1/2-13	2 1/8	5 1/2	4 1/16	0.663	300
4	4.125	1/4-20	1/2-13	2 5/8	6 5/8	5 1/16	0.753	300

FIG. 41SSI 304 STAINLESS STEEL
FIG. 41SXI 316 STAINLESS STEEL
SPLIT RING EXTENSION HANGER



Material: 304 (41SSI) and 316 (41SXI) stainless steel.

Service: Designed for the suspension of non-insulated stationary pipe lines, horizontally or vertically.

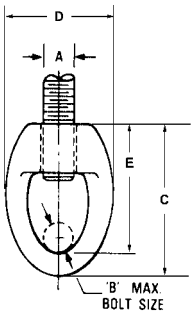
Approvals: Complies with Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 12).

Ordering: Specify pipe size, material, and figure number.

Notes: 304 and 316 stainless steel are recommended for applications where protection from corrosive environments is needed.

PIPE SIZE	PIPE OD	SCREW	A	B	C	D	WGT EACH (lbs)	MAX REC LOAD (lbs)
3/8	0.675	10-24	3/8-16	11/16	1 13/16	1 3/16	0.084	180
1/2	0.840	10-24	3/8-16	3/4	2 1/8	1 3/16	0.098	180
3/4	1.050	10-24	3/8-16	7/8	2 1/2	1 9/16	0.112	180
1	1.315	10-24	3/8-16	1 1/8	2 3/4	2	0.147	180
1 1/4	1.660	10-24	3/8-16	1 5/16	3 3/16	2 3/8	0.181	180
1 1/2	1.900	10-24	3/8-16	1 7/16	3 3/8	2 5/8	0.214	180
2	2.375	10-24	3/8-16	1 5/8	3 15/16	3 1/16	0.300	180
2 1/2	2.875	1/4	1/2-13	2 1/8	5 3/16	3 13/16	0.580	300
3	3.500	1/4	1/2-13	2 1/2	5 11/16	4 5/8	0.720	300
4	4.500	1/4	1/2-13	2 7/8	6 3/4	5 9/16	1.020	300

FIG. 47
EYE SOCKET



Material: Malleable iron.

Finish: Plain, electro-galvanized, copper plated.

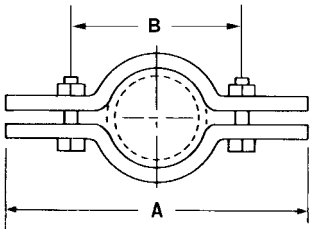
Service: Designed for attaching hanger rod to various types of hangers.

Approvals: Complies with Federal Specification WWH-171E (Type# 16), A-A-1192A (Type# 16), Manufacturers' Standardization Society SP-58 and MSS SP-69 (Type# 16).

Ordering: Specify rod size, figure number and finish.

SIZE A	PIPE SIZE	B	C	D	E	WGT EACH (lbs)	MAX REC LOAD (lbs)
1/4-20	3/8	1/4	1 3/8	7/8	1 1/8	0.05	230
3/8-16	1/2 to 2	1/4	1 9/16	1 1/8	1 1/4	0.07	610
1/2-13	2 1/2 to 3 1/2	1/4	1 7/8	1 1/4	1 1/2	0.14	1000
5/8-11	4 to 5	3/8	2 1/4	1 9/16	1 3/4	0.22	1400
3/4-10	6	1/2	2 7/16	1 7/8	2 1/16	0.32	2200
7/8-9	8	1/2	2 3/4	1 1/8	2 5/16	0.53	2300

FIG. 48 RISER CLAMP FOR PLASTIC PIPE
FIG. 49PC RISER CLAMP FOR PLASTIC PIPE, PLASTIC COATED



Material: Carbon steel.

Finish: Plain, electro-galvanized, plastic coated.

Service: Designed for the support of plastic DWV pipe.

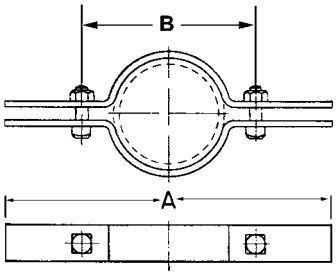
Approvals: Complies with Federal Specification WWH-171E (Type# 8), A-A-1192A (Type# 8), Manufacturers' Standardization Society SP-58 and MSS SP-69 (Type# 8).

Ordering: Specify pipe size, figure number and finish.

Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL SIZE	BOLT	A	B	WGT EACH (lbs)	MAX REC LOAD (lbs)
1½	1.900	11ga x 1.250	5/16	5½	3½	.56	225
2	2.375	11ga x 1.250	5/16	6 1/16	4 1/16	.60	225
3	3.500	11ga x 1.250	3/8	7¼	5¼	.80	225
4	4.500	11ga x 1.250	3/8	8½	6½	.98	225

FIG. 50 STANDARD RISER CLAMP



Material: Carbon steel, 304 (50SS) and 316 (50SX) stainless steel.

Finish: Plain, painted, electro-galvanized, hot-dip galvanized, plastic coated.

Service: Designed for supporting and stabilizing vertical pipe runs.

Approvals: U.L. - U.L.C. listed (sizes 2" - 8"). Complies with Federal Specification WW-H-171-E (Type# 8), A-A-1192 A (Type# 8) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 8).

Ordering: Specify pipe size, figure number and finish.

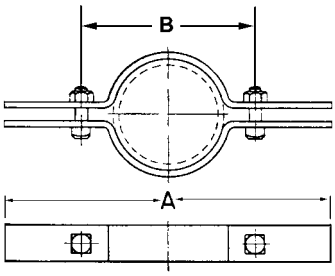
Notes: Plastic coated riser clamps are completly plastic coated with zinc plated hardware. The plastic coating prevents pipe from coming in contact with the clamp and is designed to reduce noise, vibration and prevent electrolysis between pipe and clamp. Stainless steel riser clamps are recommended for applications where protection from corrosive environments is needed.

c UL us LISTED

Domestically Manufactured
EXCLUDING 50PC

PIPE SIZE	PIPE OD	MATERIAL SIZE	BOLT	A	B	WGT EACH (lbs)	MAX REC LOAD (lbs)
1/2	0.840	8ga x 1.0	3/8	8 5/8	2 1/8	0.88	220
3/4	1.050	8ga x 1.0	3/8	8 13/16	2 5/16	0.92	220
1	1.315	8ga x 1.0	3/8	9 1/16	2 5/8	0.94	220
1 1/4	1.660	8ga x 1.0	3/8	9 7/16	2 15/16	1.00	250
1 1/2	1.900	8ga x 1.0	3/8	10	3 7/16	1.04	250
2	2.375	8ga x 1.0	3/8	10 9/16	4	1.14	300
2 1/2	2.875	3ga x 1.0	3/8	11 1/8	4 9/16	1.60	400
3	3.500	3ga x 1.0	3/8	11 13/16	5 1/4	1.70	500
3 1/2	4.000	3ga x 1.0	1/2	13	6	2.06	600
4	4.500	3ga x 1.0	1/2	13 5/8	6 5/8	2.20	750
5	5.563	3ga x 1.5	1/2	14 1/8	7 5/8	3.40	1500
6	6.625	3ga x 1.5	1/2	15 3/8	8 7/8	3.72	1600
8	8.625	3/8 x 1.5	5/8	18 5/8	12	7.22	2500
10	10.750	3/8 x 2.0	5/8	21	14 1/2	10.94	2500
12	12.750	1/2 x 2.0	5/8	22 3/4	16 3/4	16.10	2700
14	14.000	1/2 x 2.0	5/8	24	17 7/8	17.00	2700
16	16.000	5/8 x 2 1/2	3/4	26	21	29.16	2900
18	18.000	5/8 x 2 1/2	3/4	28	23 1/8	31.91	2900
20	20.000	5/8 x 2 1/2	3/4	30	25	35.00	2900

FIG. 50CT COPPER PLATED COPPER TUBING RISER CLAMP
FIG. 50CTI EPOXY COATED (*COPPER-GARD*) COPPER TUBING RISER CLAMP



Material: Carbon steel.

Finish: Copper plated (50CT) or Copper epoxy coated (*COPPER-GARD*-50CTI). *COPPER-GARD* products offer superior corrosion protection due to the epoxy coating over electro-galvanized steel. The alternative copper plating that has been done historically identifies the product and is not intended for protection. Refer to MSS SP58, 13.3.

Service: Designed for supporting and stabilizing vertical tubing runs.

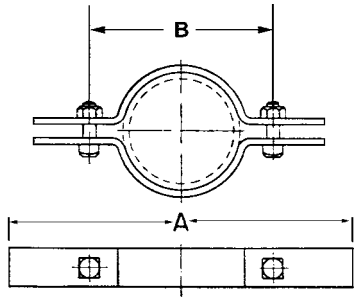
Approvals: Complies with Federal Specification WW-H-171-E (Type# 8), A-A-1192A (Type# 8), Manufacturers' Standardization Society SP-58 and MSS SP-69 (Type# 8).

Ordering: Specify pipe size, figure number and finish.

Domestically Manufactured
EXCLUDING 50CTI

TUBE SIZE	TUBE OD	MATERIAL SIZE	BOLT	A	B	WGT EACH (lbs)	MAX REC LOAD (lbs)
1/2	0.625	11ga x 1.0	1/4	6 11/16	1 11/16	0.48	225
3/4	0.875	11ga x 1.0	1/4	7	2	0.50	225
1	1.125	11ga x 1.0	1/4	8 3/4	2 1/4	0.64	250
1 1/4	1.375	11ga x 1.0	1/4	9	2 1/2	0.66	250
1 1/2	1.625	11ga x 1.0	1/4	9 3/8	2 7/8	0.68	250
2	2.125	8ga x 1.0	3/8	9 15/16	3 3/8	1.06	500
2 1/2	2.625	8ga x 1.0	3/8	10 1/2	4	1.08	500
3	3.125	8ga x 1.0	3/8	11	4 7/16	1.16	500
3 1/2	3.625	8ga x 1.25	3/8	12 3/16	5 1/8	1.58	500
4	4.125	8ga x 1.25	3/8	12 5/8	5 9/16	1.66	500
5	5.125	3ga x 1.50	1/2	14 1/8	7 1/8	3.42	815
6	6.125	3ga x 1.50	1/2	15	8	3.76	815

FIG. 50SA
SHORT ARM RISER CLAMP



Material: Carbon steel.

Finish: Plain, electro-galvanized.

Service: Designed for supporting and stabilizing vertical pipe runs. Overall length of clamp is shorter than standard to accommodate field requirements.

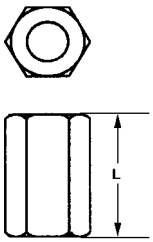
Approvals: Complies with Federal Specification WWH-171-E (Type# 8), A-A-1192A (Type# 8), Manufacturers' Standardization Society SP-58 and MSS SP-69 (Type# 8).

Ordering: Specify pipe size, figure number and finish.

Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL SIZE	BOLT	A	B	WGT EACH (lbs)	MAX REC LOAD (lbs)
1	1.315	8ga x 1.0	5/16	4 11/16	2 11/16	0.50	170
1 1/4	1.660	8ga x 1.0	5/16	5 3/16	3 3/16	0.58	260
1 1/2	1.900	8ga x 1.0	5/16	5 1/2	3 1/2	0.60	260
2	2.375	8ga x 1.0	5/16	6	4	0.6	260
2 1/2	2.875	3ga x 1.0	3/8	6 5/8	4 5/8	1.12	260
3	3.500	3ga x 1.0	3/8	7 5/16	5 5/16	1.18	260
4	4.500	3ga x 1.0	1/2	8 9/16	6 9/16	1.54	450
5	5.563	3ga x 1.5	1/2	9 3/4	7 3/4	2.64	770
6	6.625	3ga x 1.5	1/2	10 7/8	8 7/8	2.80	770

FIG. 51
ROD COUPLING



Material: Carbon steel, 304 stainless steel.

Finish: Plain or electro-galvanized.

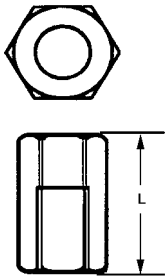
Service: Designed for connecting two lengths of rod with equal diameters.

Ordering: Specify rod size, figure number and finish.

Notes: Stainless steel rod couplings are recommended for applications where protection from corrosive environment is needed.

SIZE	LENGTH L	HEX WIDTH	WGT EACH (lbs)	MAX REC LOAD (lbs)
1/4-20	7/8	3/8	.02	230
3/8-16	1 3/4	5/8	.11	610
1/2-13	1 3/4	11/16	.10	1130
5/8-11	2 1/8	13/16	.18	1810
3/4-10	2 1/4	1	.28	2710
7/8-9	2 1/2	1 1/4	.55	3770
1-8	2 3/4	1 3/8	.71	4960
1 1/8-7	3	1 1/2	.86	6230
1 1/4-7	3	1 5/8	.95	8000
1 1/2-6	3 1/2	2	1.88	11,630

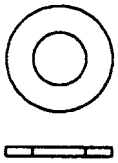
FIG. 51R
REDUCING ROD COUPLING



Material: Carbon steel.
Finish: Electro-galvanized.
Service: Designed for connecting two lengths of rod with different diameters.
Ordering: Specify rod sizes and figure number.

SIZE	LENGTH	HEX WIDTH	WGT EACH (lbs)	MAX REC LOAD (lbs)
3/8-16 x 1/4-20	1	1/2	.04	225
1/2-13 x 3/8-16	1 1/4	5/8	.07	610
5/8-11 x 1/2-13	1 1/4	13/16	.14	1130
3/4-10 x 5/8-11	1 1/2	1	.21	1810
7/8-9 x 3/4-10	1 3/4	1 1/4	.40	2710
1-8 x 7/8-9	2	1 3/8	.55	3770

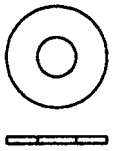
FIG. 52
ROUND STEEL WASHER



Material: Carbon steel, stainless steel (52SS).
Finish: Plain, electro-galvanized or hot-dip galvanized.
Ordering: Specify size, figure number and finish.
Notes: Available packaged and bulk.

SIZE	OD	ID	WGT EACH (lbs)
1/4	3/4	5/16	.01
3/8	1	7/16	.02
1/2	1 3/8	9/16	.04
5/8	1 3/4	11/16	.08
3/4	2	13/16	.11
7/8	2 1/4	15/16	.15
1	2 1/2	1 1/16	.19
1 1/8	2 3/4	1 1/4	.22
1 1/4	3	1 3/8	.26
1 1/2	3 1/2	1 5/8	.39

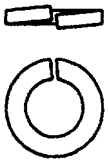
FIG. 52F
FENDER WASHER



Material: Carbon steel.
Finish: Electro-galvanized.
Service: Designed to produce a greater bearing surface.
Ordering: Specify size and figure number.

SIZE	OD	ID	PCS/50 lbs (approx)	WGT EACH (lbs)
1/4	1 1/2	9/32	1575	.03
3/8	1 1/2	13/32	1650	.03
1/2	2	17/32	925	.05

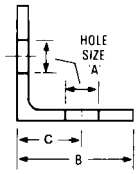
FIG. 52L
LOCK WASHER

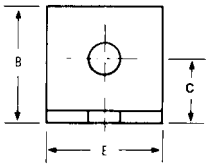


Material: Carbon steel.
Finish: Plain or electro-galvanized.
Ordering: Specify size, figure number and finish.

SIZE	WGT EACH (lbs)
1/4	.01
3/8	.01
1/2	.01
5/8	.02
3/4	.03

FIG. 53
ANGLE BRACKET





Domestically Manufactured

Material: Carbon steel.

Finish: Plain or electro-galvanized.

Service: Designed for attaching hanger rod to the side of beams or walls.

Approvals: Complies with Federal Specification WW-H-171-E (Type# 35), A-A-1192 A (Type# 34), and MSS SP-58 and 7SP-69 (Type# 34).

Ordering: Specify rod size, figure number and finish.

Notes: Also available in stainless steel.

SIZE	HOLE SIZE A	MATERIAL THICKNESS	B	C	E	WGT EACH (lbs)	MAX REC LOAD (lbs)
3/8-16	7/16	8ga	2 1/16	1 5/16	1 1/2	0.225	300
1/2-13	9/16	3ga	2 1/8	1 3/8	1 1/2	0.330	560
5/8-11	11/16	3/8	2 3/4	1 5/8	2 1/2	1.130	900
3/4-10	13/16	3/8	3 1/4	2 3/16	2 1/2	1.390	900

FIG. 54
CONTINUOUS THREADED ROD

Material: Carbon steel, stainless steel (54SS).

Finish: Plain, electro-galvanized, hot-dip galvanized.

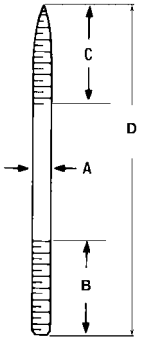
Service: Useful in applications for attaching hangers to structural attachments.

Ordering: Specify rod size, figure number and finish.

Notes: Stainless steel rod is recommended for applications where protection from corrosive environments is needed.

SIZE A	WGT/FT (lbs)	MAX REC LOAD (lbs)	
		650°F	750°F
1/4-20	0.12	240	210
3/8-16	0.29	610	540
1/2-13	0.54	1130	1010
5/8-11	0.83	1810	1610
3/4-10	1.25	2710	2420
7/8-9	1.70	3770	3360
1-8	2.23	4960	4420
1 1/8-7	2.81	6230	5560
1 1/4-7	3.54	8000	7140
1 1/2-6	5.12	11630	10370

FIG. 55
Hanger Bolts



Material: Carbon steel.
Finish: Plain, electro-galvanized.
Service: Designed for suspending pipe supports from wood structures.
Ordering: Specify rod size, length, figure number and finish.
Notes: Also available in stainless steel.

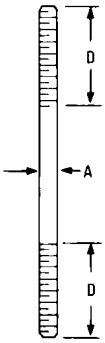
SIZE A	MINIMUM LENGTH		WGT EACH (lbs) LENGTH D						
	MACHINE B	COACH C	3½	4	4½	6	8	10	12
¼-20	1⅝	1¾	0.04	-	-	-	-	-	-
⅜-16	1⅝	1¾	0.08	-	0.11	0.14	0.19	0.23	0.29
½-13	1⅝	1¾	-	0.14	0.21	0.22	0.32	0.36	0.40
⅝-11	1⅝	1¾	-	0.24	-	-	-	-	-

FIG. 56 STANDARD HEX NUT, PACKAGED
FIG. 56H HEAVY HEX NUT, PACKAGED

Material: Carbon steel, 304 stainless steel (56SS).
Finish: Plain, electro-galvanized.
Ordering: Specify rod size, figure number and finish.
Notes: Also available in bulk.

SIZE	WGT EACH (lbs)	
	56	56H
¼-20	0.01	0.01
⅜-16	0.02	0.03
½-13	0.04	0.07
⅝-11	0.07	0.12
¾-10	0.12	0.19
⅞-9	0.19	0.30
1-8	0.28	0.43
1⅛-7	0.40	0.59
1¼-7	0.54	0.79
1½-6	0.95	1.31

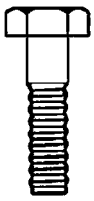
FIG. 57
HANGER ROD, RIGHT HAND THREADS



Material: Carbon steel.
Finish: Plain, electro-galvanized.
Service: Designed for use in pipe hanger assemblies.
Ordering: Specify rod size, length, figure number and finish.
Notes: Available in both right and left hand threads.

SIZE A	THREAD LENGTH D	WGT/FT (lbs)	MAX REC LOAD (lbs)	
			650°F	750°F
1/4-20	SPECIFY	0.12	240	210
3/8-16	SPECIFY	0.29	610	540
1/2-13	SPECIFY	0.54	1130	1010
5/8-11	SPECIFY	0.83	1810	1610
3/4-10	SPECIFY	1.25	2710	2420
7/8-9	SPECIFY	1.70	3770	3360
1-8	SPECIFY	2.23	4960	4420
11/8-7	SPECIFY	2.81	6230	560
114/-7	SPECIFY	3.54	8000	7140
11/2-6	SPECIFY	5.12	11630	10370

FIG. 58
HEX HEAD BOLT



Material: Carbon steel.
Finish: Plain, electro-galvanized.
Service: Designed for use as a fastening device.
Ordering: Specify rod size, length, figure number and finish.
Notes: Also available in stainless steel. Available packaged or in bulk.

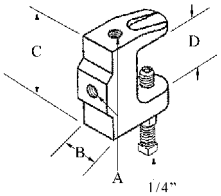
SIZE A	WGT EACH (lbs)												
	LENGTH												
	2	2 1/4	2 1/2	2 3/4	3	3 1/4	3 1/2	3 3/4	4	4 1/2	5	5 1/2	6
3/8-16	0.072	0.080	0.087	0.095	0.103	0.111	0.119	0.126	0.134	0.150	0.165	0.181	0.196
1/2-13	0.144	0.157	0.171	0.185	0.199	0.213	0.226	0.240	0.254	0.282	0.309	0.337	0.364
5/8-11	0.228	0.250	0.271	0.293	0.314	0.336	0.358	0.379	0.401	0.444	0.487	0.530	0.573
3/4-10	0.351	0.382	0.413	0.445	0.476	0.507	0.538	0.569	0.600	0.662	0.724	0.787	0.849
7/8-9	0.511	0.550	0.592	0.634	0.677	0.719	0.761	0.803	0.846	0.930	1.015	1.100	1.184
1-8	0.701	0.748	0.799	0.854	0.910	0.965	1.020	1.075	1.130	1.241	1.351	1.462	1.572
1 1/8-7	--	--	--	--	1.240	--	1.370	--	1.510	1.650	1.780	1.920	2.050
1 1/4-7	--	--	--	--	1.610	--	1.780	--	1.950	2.120	2.290	2.450	2.620
1 1/2-6	--	--	--	--	2.460	--	2.690	--	2.940	3.190	3.440	3.690	3.940

FIG. 59
DRIVE SCREW

Material: Carbon steel.
Finish: Plain.
Service: Designed for fastening attachments to wood beams.
Ordering: Specify size and figure number.

SIZE A	LENGTH	WGT EACH (lbs)
12	1½	0.014
14	1½	0.016
16	2	0.025

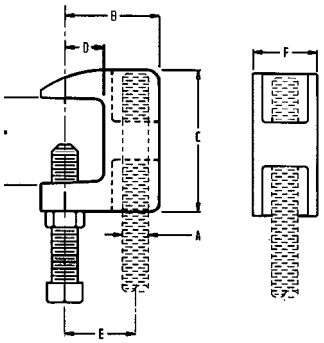
FIG. 60G
1/4" BEAM CLAMP



Material: Malleable iron.
Finish: Electro-galvanized
Service: Designed to attach 1/4" hanger rod from metal beams, channel or angle iron.
Ordering: Specify figure number and finish.

ROD SIZE A	SET SCREW	B	C	D	WGT EACH (lbs)	MAX REC LOAD (lbs) TOP	MAX REC LOAD (lbs) BOTTOM
¼-20	¼-20	⅝	1 9/16	15/16	0.18	250	100

FIG. 61
TOP BEAM CLAMP



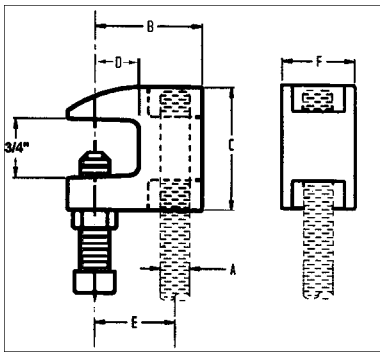
Material: Ductile iron body with hardened steel set screw.
Finish: Plain or electro-galvanized.
Service: Designed to attach hanger rod to the top flange of a beam or bar.
Approvals: U.L. - U.L.C. listed ⅜ and ½ (½ for 4" IPS max). FM approved for ⅜ only. Complies with Federal Specification A-A-1192A (Type# 19) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 19).
Ordering: Specify rod size, figure number and finish.
Notes: See MSS SP-69 for proper set screw torque recommendations.
Order 61D for domestic

FM APPROVED

c UL us LISTED

ROD SIZE A	SET SCREW	B	C	D	E	F	MAX PIPE SIZE	WGT EACH (lbs)	MAX REC LOAD (lbs)
⅜-16	⅜-16	1⅜	2	½	1	⅞	4	0.55	400
½-13	⅜-16	1⅜	2	½	1	⅞	4	0.56	500
⅝-11	⅜-16	1⅞	2⅜	⅝	1⅜	1¼	5	0.66	850
¾-10	⅜-16	1⅞	2⅜	⅝	1⅜	1¼	6	0.83	900

FIG. 62
JUNIOR TOP BEAM CLAMP



FM APPROVED

c UL us LISTED

Material: Ductile iron with hardened steel set screw. 304 (62SS) and 316 (62SX) stainless steel.

Finish: Plain or electro-galvanized.

Service: Designed to attach hanger rod to the top flange of a beam or bar joist where flange thickness does not exceed 5/8 of an inch.

Approvals: U.L. - U.L.C. listed 3/8 and 1/2 (1/2 for 4" IPS max). FM approved for 3/8 only. Complies with Federal Specification A-A-1192 A (Type# 19) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 19).

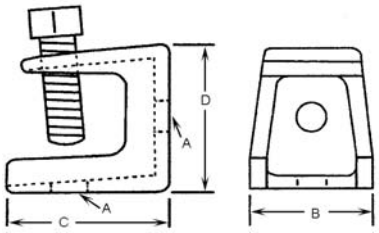
Ordering: Specify rod size, material, figure number and finish.

Notes: See MSS SP-69 for proper set screw recommendations. Stainless steel beam clamps are recommended for corrosive environments.

Order 62D for domestic

ROD SIZE A	SET SCREW	B	C	D	E	F	MAX PIPE SIZE	MAX REC LOAD (lbs)	WGT EACH (lbs)
3/8-16	3/8-16	1 5/16	1 1/2	1/2	1	7/8	4	350	0.320
1/2-13	3/8-16	1 5/16	1 1/2	1/2	1	7/8	4	470	0.320
5/8-11	3/8-16	1 3/4	1 3/4	5/8	1 3/8	1 1/8	5	550	0.580
3/4-10	3/8-16	1 7/8	1 7/8	5/8	1 3/8	1 3/8	6	700	0.820
7/8-9	1/2-13	2 3/8	1 7/8	5/8	1 3/8	1 3/8	8	1000	0.795

FIG. 63
ELECTRICAL ROD SUPPORT CLAMP



Material: Malleable iron.

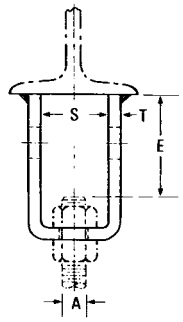
Finish: Electro-galvanized.

Service: Designed to attach hanger rod to beam or framework where thickness does not exceed 1/2 inch. Rod tap on both bottom and back of clamp.

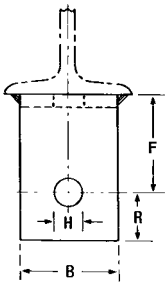
Ordering: Specify rod size and figure number.

SIZE A	SET SCREW	B	C	D	WGT EACH (lbs)	MAX REC LOAD (lbs)
1/4-20	5/16-18	1 3/16	1 3/8	1 3/8	0.260	335
5/16-18	5/16-18	1 3/16	1 3/8	1 3/8	0.250	335
3/8-16	1/2-13	2 1/16	1 7/8	1 3/4	0.700	525
1/2-13	1/2-13	2 1/2	2 3/8	2 3/16	1.260	750

FIG. 66L WELDING BEAM ATTACHMENT
FIG. 66W WELDING BEAM ATTACHMENT WITH BOLT & NUT



USING HANGER ROD WITH ATTACHMENT



USING BOLT AND EYE ROD

Material: Carbon steel.

Finish: Plain, painted or electro-galvanized.

Service: Designed for the attachment of hanger rod to the bottom flange of steel beams where heavy loads and large hanger rod sizes are required.

Approvals: Complies with Federal Specification WW-H-171-E (Type# 22), A-A-1192A (Type# 22), and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 22).

Ordering: Specify rod size, figure number and finish.

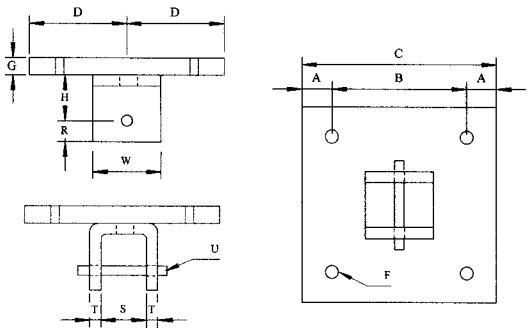
Notes: Can be welded in either the upright or inverted position when ordered with hardware. 3/8 to 1 1/8 supplied with bolts and nuts. 1 1/4 and larger supplied with pins and cotters.

"E" dimension includes exposed rod threads beyond bottom of the hex nut. Exposed rod thread dimension is equal to the diameter of the rod used.

Domestically Manufactured

SIZE A	BOLT OR PIN SIZE	B	E	F	H	R	S	T	WGT EACH (lbs)		MAX REC LOAD (lbs)	
									W/O BOLT & NUT	WITH BOLT & NUT	650°F	750°F
3/8	1/2 X 2 3/4	2	1 7/8	2	9/16	7/8	1 1/2	3ga	0.835	1.055	610	510
1/2	5/8 X 2 3/4	2	1 5/8	2	11/16	7/8	1 1/2	3ga	0.790	1.150	1130	940
5/8	3/4 X 3	2	1 3/8	2	13/16	7/8	1 1/2	3ga	0.770	1.350	1810	1510
3/4	7/8 X 3 1/2	2 1/2	1 3/8	2	29/32	1 1/8	1 9/16	3/8	1.640	2.560	2710	2260
7/8	1 X 4	2 1/2	2 1/4	3	1 1/16	1 1/4	2 1/16	3/8	2.240	3.600	3770	3150
1	1 1/8 X 5	3	2 3/4	3	1 1/4	1 1/2	2 3/4	1/2	4.270	6.290	4960	4150
1 1/4	1 3/8 X 6 1/2	4	2 7/8	3	1 1/2	2	3	5/8	8.090	10.220	8000	6660
1 1/2	1 5/8 X 6 1/2	5	4	4	1 3/4	2 1/2	3 1/2	3/4	15.600	19.020	11630	9700
1 3/4	1 7/8 X 6 7/8	5	5	5	2	2 3/4	3 3/4	3/4	18.700	24.180	15700	14000
2	2 1/4 X 6 7/8	6	5 1/4	5	2 3/8	3 1/4	3 3/4	3/4	22.800	30.550	20700	18460

FIG. 67
CONCRETE CLEVIS PLATE



Material: Carbon steel.

Finish: Plain or electro-galvanized.

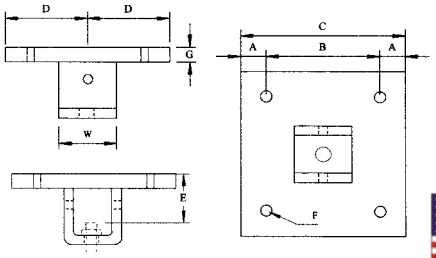
Service: Designed for the attachment to concrete ceilings where flexibility is desired. Normally used in conjunction with FIG. 13 weldless eye nut or FIG. #26W welded eye rod.

Ordering: Specify rod size, figure number and finish.

Domestically Manufactured

ROD SIZE (inch)	A	B	C	D	F	G	H	R	S	T	U	W	WGT EACH (lbs)	MAX REC LOAD (lbs)
3/8	1	8	10	5	9/16	3/8	2	7/8	1 1/2	1/4	1/2	2	11.87	610
1/2	1	8	10	5	9/16	3/8	2	7/8	1 1/2	1/4	5/8	2	12.01	1130
5/8	1	8	10	5	9/16	1/2	2	7/8	1 1/2	1/4	3/4	2	15.75	1810
3/4	1	8	10	5	11/16	1/2	2	1 1/8	1 3/4	3/8	7/8	2 1/2	16.99	2710
7/8	1	8	10	5	11/16	1/2	3	1 1/4	2 1/4	3/8	1	2 1/2	18.14	3770
1	2	8	12	6	13/16	3/4	3	1 1/2	2 3/4	1/2	1 1/8	3	37.01	4960
1 1/8	2	8	12	6	15/16	3/4	3	1 3/4	2 3/4	5/8	1 3/8	3	37.90	6230
1 1/4	2	8	12	6	15/16	3/4	3	2	3	5/8	1 3/8	4	40.72	8000
1 1/2	2	8	12	6	1 1/8	1	4	2 1/2	3 1/2	3/4	1 5/8	5	60.00	11630

FIG. 68
CONCRETE ROD ATTACHMENT



Material: Carbon steel.

Finish: Plain or electro-galvanized.

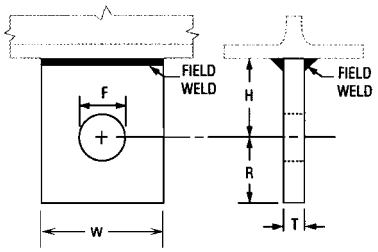
Service: Designed for the attachment of hanger rod to concrete ceilings where vertical adjustment of hanger is desired. the

Ordering: Specify rod size, figure number and finish.

Domestically Manufactured

ROD SIZE (inch)	A	B	C	D	E	F	G	W	WGT EACH (lbs)	MAX REC LOAD (lbs)
3/8	1	8	10	5	2 1/4	9/16	3/8	2	11.66	610
1/2	1	8	10	5	2 1/8	9/16	3/8	2	11.66	1130
5/8	1	8	10	5	2 1/4	9/16	1/2	2	15.16	1810
3/4	1	8	10	5	2 1/4	11/16	1/2	2 1/2	16.12	2710
7/8	1	8	10	5	3 1/8	11/16	1/2	2 1/2	16.73	3770
1	2	8	12	6	3 1/2	13/16	3/4	3	34.99	4960
1 1/8	2	8	12	6	3 5/8	13/16	3/4	3	35.22	6230
1 1/4	2	8	12	6	3 5/8	13/16	3/4	4	38.81	8000

FIG. 69LONG
FIG. 69SHORT
STRUCTURAL WELDING LUG



Material: Carbon steel.

Finish: Plain or electro-galvanized.

Service: Designed to be welded to structural members and used in conjunction with figure #909 forged steel clevis with pin and cotters.

Approvals: Complies with Federal Specification WW-H-171-E (Type# 57), A-A-1192A (Type# 57), and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 57).

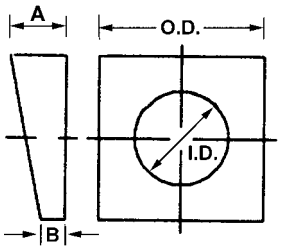
Ordering: Specify rod size, figure number, finish and whether long or short lug is required.

Domestically Manufactured

FIG. 69S, 69L								FIG. 69S (Short)		FIG. 69L (Long)	
ROD SIZE A*	Pin or Bolt Dia	F	R	T	W	MAX LOAD		Rod Take Out - H	Weight (lbs)	Rod Take Out - H	Weight (lbs)
						650°F	750°F				
1/2	5/8	11/16	1 1/4	1/4	2 1/2	1350	1057	1 1/2	0.48	3	0.75
5/8	3/4	13/16				2160	1692		0.41		0.68
3/4	7/8	15/16		3/8		3230	2530		0.60		1.0
7/8	1	1 1/8				4480	3508	2	0.71		0.98
1	1 1/8	1 1/4	1 1/2	1/2	3	5900	4620		1.2		1.6
1 1/4	1 3/8	1 1/2	2	5/8	4	9500	7440	3	3.0	4	3.7
1 1/2	1 5/8	1 3/4	2 1/2	3/4	5	13800	10807		4.8	4 1/2	6.4
1 3/4	1 7/8	2				18600	14566		4.7		6.3
2	2 1/4	2 3/8	3		6	24600	19265	4	7.2		8.8
2 1/4	2 1/2	2 5/8				32300	25295	4 1/2	7.6	--	--
2 1/2	2 3/4	2 7/8	4	1	8	39800	31169		15.5	--	--
2 3/4	3	3 1/8				49400	38687		15.1	--	--
3	3 1/4	3 3/8				60100	47066	5	16.0	--	--
3 1/4	3 1/2	3 5/8	4 1/2		9	71900	56307		18.9	--	--
3 1/2	3 3/4	3 7/8		1 1/2		84700	66331	6	31.3	--	--
3 3/4	4	4 1/8		1 3/4		98500	77139		35.9	--	--

* Note: Rod size "A" is the assembly rod diameter. Dimension not shown on drawing

FIG. 72
BEVEL WASHER



Material: Malleable iron.

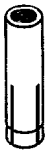
Finish: Plain or electro-galvanized.

Service: Designed to compensate for taper of “S” shape beam flanges so that bearing surface of bolt or nut will seat flush.

Ordering: Specify bolt size, finish and figure number.

SIZE A	OD	ID	THICKNESS		WGT EACH (lbs)
			A	B	
3/8	1 1/4	7/16	11/32	5/32	0.09
1/2	1 1/4	9/16	11/32	5/32	0.09
5/8	1 1/2	11/16	13/32	5/32	0.14
3/4	1 1/2	13/16	15/32	7/32	0.16
7/8	2	15/16	9/16	7/32	0.34

FIG. 73
DROP IN ANCHOR



Material: Carbon steel.

Finish: Electro-galvanized.

Service: Designed to be inserted into a pre-drilled hole and set by means of a setting tool to provide attachment point for bolts or hanger rods.

Ordering: Specify bolt or rod size and figure number.

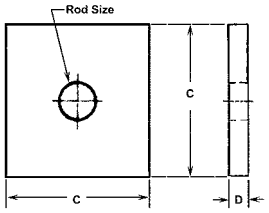
SIZE	DRILL DIAMETER	MIN DEPTH	THREAD DEPTH	WGT EACH (lbs)
1/4	3/8	1 1/4	7/16	0.020
3/8	1/2	1 7/8	5/8	0.060
1/2	5/8	2 3/8	13/16	0.120
5/8	7/8	3	1 3/16	0.320
3/4	1	3 1/2	1 3/8	0.480

FIG. 74
HEX LAG SCREW

Material: Carbon steel.
Finish: Electro-galvanized.
Service: Designed for fastening devices to wood.
Ordering: Specify fastener diameter, length (excluding head), and figure number.

SIZE DIA	WGT EACH (lbs) LENGTH								
	1 1/2	2	2 1/2	3	3 1/2	4	4 1/2	5	6
1/4-20	0.02	0.03	0.03	0.04	0.04	0.05	0.06	0.06	0.07
3/8-16	0.06	0.07	0.08	0.09	0.10	0.12	0.13	0.14	0.17
1/2-13	--	0.14	0.16	0.19	0.20	0.23	0.25	0.27	0.31
5/8-11	--	0.23	0.27	0.31	0.34	0.38	0.41	0.45	0.52
3/4-10	--	--	--	--	--	0.58	0.63	0.68	0.78

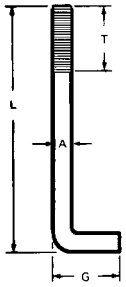
FIG. 75
STEEL WASHER PLATE



Material: Carbon steel.
Finish: Plain, electro-galvanized.
Service: Designed as a heavy duty washer to suspend hanger rods.
Ordering: Specify rod size, thickness, length and width, and figure number.
Note: Other sizes and dimensions available on request.

PLATE SIZE D x C x C	WGT EACH (lbs) LENGTH					
	3/8	1/2	5/8	3/4	7/8	1
1/4 x 2 x 2	0.26	0.26	-	-	-	-
1/4 x 3 x 3	0.64	0.64	0.64	0.64	0.63	0.63
1/4 x 4 x 4	1.15	1.15	1.15	1.10	1.10	1.06
3/8 x 4 x 4	1.72	1.72	1.72	1.71	1.70	1.70

FIG. 77
ANCHOR BOLT



Material: Carbon steel.

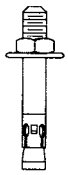
Finish: Plain, Electro-galvanized or painted.

Service: Designed to be embedded in concrete to provide a means to fasten devices to concrete surfaces.

Ordering: Specify rod size (A): ⅜", ½", ⅝" or ¾", length (L): 8", 10", 12" or 14", thread length (T), figure number and finish.

Notes: "G" dimension is 2 inches unless specified otherwise. Left hand thread can be furnished.

FIG. 80
WEDGE ANCHOR



Material: Carbon steel.

Finish: Electro-galvanized.

Service: Designed to be driven into a pre-drilled hole. Tightening nut sets anchor.

Ordering: Specify rod size and length.

SIZE	MIN DEPTH	THREAD LENGTH	WGT EACH (lbs)
¼ x 1¾	1⅛	¾	0.032
¼ x 2¼	1⅛	⅞	0.037
¼ x 3	1⅛	⅞	0.052
⅜ x 2¼	1¾	1⅛	0.087
⅜ x 2¾	1¾	1⅛	0.105
⅜ x 3	1¾	1⅛	0.110
⅜ x 3½	1¾	1⅛	0.125
⅜ x 3¾	1¾	1⅛	0.130
⅜ x 5	1¾	1⅛	0.172
½ x 2¾	2¼	1¼	0.180
½ x 3¾	2¼	1¼	0.240
½ x 4½	2¼	1¼	0.300
½ x 5½	2¼	1¼	0.340
½ x 7	2¼	1¼	0.440
⅝ x 3½	2⅞	1⅝	0.400
⅝ x 4½	2⅞	1⅝	0.540
⅝ x 5	2⅞	1⅝	0.570
⅝ x 6	2⅞	1⅝	0.640

Larger sizes available. Drill size is anchor size.

FIG. 81 CONCRETE INSERT
FIG. 81N CONCRETE INSERT NUT

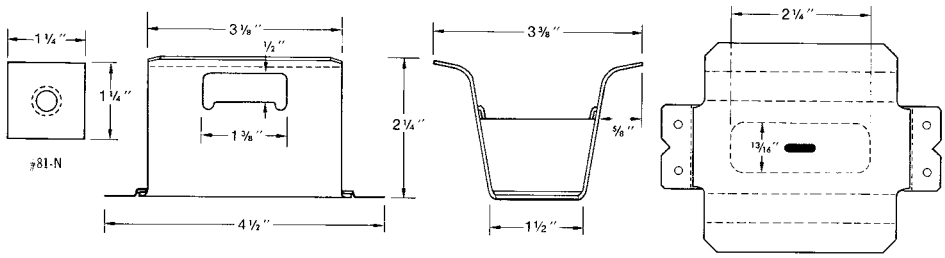
Material: Carbon steel.

Finish: Plain, electro-galvanized or painted.

Service: Heavy gauge insert box is nailed to concrete form. When concrete has set, knock out plug can be removed and insert nut installed. Side openings accommodate up to ½" reinforcing rods.

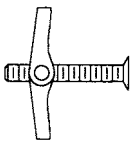
Approvals: Complies with Federal Specification WW-H-171-E (Type# 19), A-A-1192A (Type# 18), and Manufacturers' Standardization Society MSS SP-58 (Type# 18) and SP-69 (Type# 18).

Ordering: Specify figure number and finish. For insert nuts specify figure number, finish and rod size.



SIZE A	WGT EACH (lbs)		MAX REC LOAD (lbs)
	INSERT (FIG# 81)	NUT (FIG# 81N)	
⅜-16	0.61	0.12	610
½-13	0.61	0.12	800
⅝-11	0.61	0.10	800
¾-10	0.61	0.10	800

FIG. 83
SPRING WING TOGGLE AND BOLT



Material: Carbon steel.

Finish: Electro-galvanized.

Service: Designed as a fastener for hollow walls.

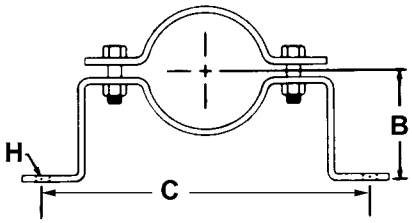
Ordering: Specify size and figure number.

SIZE	WGT EACH (lbs)
¼ x 3	.06
⅜ x 4	.18

FIG. 84
SPRING WING TOGGLE HEAD ONLY

Material: Carbon steel.
Finish: Electro-galvanized.
Service: Designed to be used with threaded rod in hollow walls.
Ordering: Specify size (1/4" or 3/8") and figure number.

FIG. 95
OFFSET PIPE CLAMP

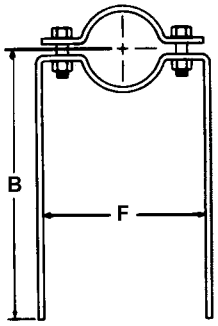


Domestically Manufactured

Material: Carbon steel. Also available in 304 and 316 stainless steel.
Finish: Plain, electro-galvanized.
Service: Designed for supporting horizontal or vertical pipe lines at a fixed distance from wall or floor. This clamp can be furnished with "B" dimensions to suit field conditions.
Ordering: Specify pipe size, figure number and finish.

PIPE SIZE	PIPE OD	MATERIAL SIZE	BOLT	B	C	H	WGT EACH (lbs)	MAX REC LOAD (lbs)
3/4	1.050	1 1/4 X 1/4	3/8	2 1/2	7 3/16	7/16	1.25	200
1	1.315	1 1/4 X 1/4	3/8	2 5/8	7 9/16	7/16	1.33	200
1 1/4	1.660	1 1/4 X 1/4	3/8	2 13/16	7 7/8	7/16	1.42	200
1 1/2	1.900	1 1/4 X 1/4	3/8	2 15/16	8 1/4	7/16	1.49	200
2	2.375	1 1/4 X 1/4	3/8	3 3/16	9 1/8	7/16	2.03	410
2 1/2	2.875	1 1/4 X 1/4	3/8	3 7/16	10 1/2	7/16	2.25	410
3	3.500	1 1/4 X 1/4	3/8	3 3/4	11 1/8	7/16	2.50	410
3 1/2	4.000	1 1/4 X 1/4	3/8	4	11 5/8	7/16	2.75	410
4	4.500	1 1/2 X 1/4	1/2	4 1/4	12 1/2	9/16	3.68	600
5	5.563	1 1/2 X 1/4	1/2	4 3/4	13 3/4	9/16	4.25	600
6	6.625	1 1/2 X 3/8	1/2	5 5/16	16 1/2	9/16	6.80	850
8	8.625	1 1/2 X 3/8	1/2	6 5/16	18 5/8	9/16	8.20	850

FIG. 97
EXTENDED PIPE CLAMP



Material: Carbon steel. Also available in 304 and 316 stainless steel.

Finish: Plain, electro-galvanized.

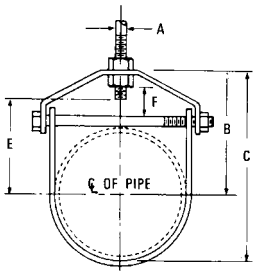
Service: Designed for suspending or supporting pipe lines where exact distance between structure and pipe cannot be determined until installation.

Ordering: Specify pipe size, figure number and finish.

Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL SIZE	BOLT	B	F	WGT EACH (lbs)
3/4	1.050	1 1/4 X 1/4	3/8	12	4 7/16	1.85
1	1.315	1 1/4 X 1/4	3/8	12	4 11/16	2.34
1 1/4	1.660	1 1/4 X 1/4	3/8	12	5	2.40
1 1/2	1.900	1 1/4 X 1/4	3/8	12	5 1/4	2.45
2	2.375	1 1/2 X 1/4	1/2	12	6	3.13
2 1/2	2.875	1 1/2 X 1/4	1/2	12	7 1/4	4.20
3	3.500	1 1/2 X 1/4	1/2	12	7 7/8	4.47
3 1/2	4.000	1 1/2 X 1/4	1/2	12	8 3/8	4.74
4	4.500	1 1/2 X 1/4	1/2	12	9 1/4	4.90
5	5.563	1 1/2 X 1/4	1/2	12	10 1/2	5.32
6	6.625	2 X 3/8	5/8	12	12 1/2	11.15
8	8.625	2 X 3/8	5/8	12	14 5/8	12.65

FIG. 110 ADJUSTABLE CLEVIS HANGER, LIGHTWEIGHT, DOMESTIC
FIG 110GI ADJUSTABLE CLEVIS HANGER, ELECTRO-GALVANIZED LIGHTWEIGHT



"E" dimension includes exposed rod threads beyond bottom of the hex nut. Exposed rod thread dimension is equal to the diameter of the rod used.

Material: Carbon steel.

Finish: Plain, electro-galvanized or painted.

Service: Designed for the suspension of light stationary pipe or conduit.

Approvals: Complies with Federal Specification WW-H-171-E (Type# 12) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 1). Galvanized and coated only.

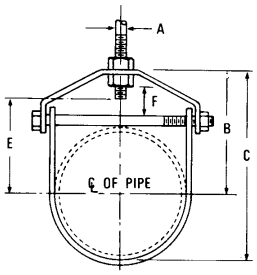
Ordering: Specify pipe size, figure number and finish.

Notes: Conduit comes in various outside diameters. Verify outside diameter of conduit is equal to outside diameter of schedule 4**0** steel pipe.

Domestically Manufactured
EXCLUDING 110GI

PIPE SIZE	PIPE OD	MATERIAL SIZE		BOLT	A	B	C	E	F	WGT EACH (lbs)	MAX REC LOAD (lbs)
		TOP	BOTTOM								
1/2	0.840	18ga x 7/8	18ga x 7/8	1/4	3/8	1 3/4	2 1/8	1	1/2	0.12	150
3/4	1.050	18ga x 7/8	18ga x 7/8	1/4	3/8	1 13/16	2 5/16	1 1/16	1/2	0.12	250
1	1.315	18ga x 7/8	18ga x 7/8	1/4	3/8	2 1/8	2 3/4	1 5/16	3/4	0.12	250
1 1/4	1.660	18ga x 7/8	18ga x 7/8	1/4	3/8	2 1/2	3 1/4	1 3/4	15/16	0.18	250
1 1/2	1.900	14ga x 7/8	16ga x 7/8	1/4	3/8	2 13/16	3 13/16	2 1/16	1 1/8	0.24	250
2	2.375	14ga x 7/8	16ga x 7/8	1/4	3/8	3 5/16	4 1/2	2 9/16	1 1/4	0.26	250
2 1/2	2.875	12ga x 1 3/16	14ga x 1 3/16	1/4	1/2	4 1/2	5 5/16	3 7/16	2 1/16	0.58	350
3	3.500	12ga x 1 3/16	14ga x 1 3/16	1/4	1/2	4 13/16	6 9/16	3 3/4	1 7/8	0.66	350
3 1/2	4.000	11ga x 1 3/16	14ga x 1 3/16	5/16	1/2	5 15/16	7 7/8	4 7/8	2 5/8	0.82	350
4	4.500	11ga x 1 3/16	14ga x 1 3/16	3/8	1/2	6 1/16	8 5/16	5	2 3/8	0.94	400

FIG. 110CT COPPER PLATED CLEVIS HANGER, TUBING SIZE
FIG. 110CTI EPOXY COATED *(COPPER-GARD)* CLEVIS HANGER, TUBING SIZE



"E" dimension includes exposed rod threads beyond bottom of the hex nut. Exposed rod thread dimension is equal to the diameter of the rod used.

Domestically Manufactured
EXCLUDING 110CTI

Material: Carbon Steel.

Finish: Copper plated (110CT) or Copper epoxy coated (*COPPER-GARD*). *COPPER-GARD* products offer superior corrosion protection due to the epoxy coating over electro-galvanized steel. The alternative copper plating, that has been done historically, identifies the product and is not intended for protection. Refer to MSS SP-58, 13.3.

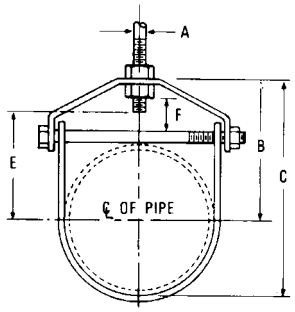
Service: Designed for the suspension of stationary copper tubing.

Approvals: Complies with Federal Specifications WW-H-171-E (Type# 1), A-A-1192 A (Type# 1), and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 1).

Ordering: Specify tube size and figure number.

TUBE SIZE	PIPE OD	MATERIAL SIZE		BOLT	A	B	C	E	F	WGT EACH (lbs)	MAX REC LOAD(lbs)
		TOP	BOTTOM								
1/2	0.625	18ga x 7/8	18ga x 7/8	1/4	3/8	1 7/8	2 3/16	1 1/8	1/2	0.12	150
3/4	0.875	18ga x 7/8	18ga x 7/8	1/4	3/8	1 3/4	2 1/8	1	1/2	0.12	250
1	1.125	18ga x 7/8	18ga x 7/8	1/4	3/8	1 13/16	2 5/16	1 1/16	1/2	0.12	250
1 1/4	1.375	18ga x 7/8	18ga x 7/8	1/4	3/8	2 1/8	2 3/4	1 5/16	3/4	0.12	250
1 1/2	1.625	18ga x 7/8	18ga x 7/8	1/4	3/8	2 1/2	3 1/4	1 3/4	15/16	0.18	250
2	2.125	14ga x 7/8	16ga x 7/8	1/4	3/8	2 15/16	4	2 3/16	1 1/16	0.24	250
2 1/2	2.625	12ga x 1 3/16	14ga x 1 3/16	1/4	1/2	4 7/8	5 3/4	3 3/8	2 1/16	0.58	350
3	3.125	12ga x 1 3/16	14ga x 1 3/16	1/4	1/2	4 1/2	6 1/8	3 7/16	2	0.60	350
3 1/2	3.625	12ga x 1 3/16	14ga x 1 3/16	5/16	1/2	4 3/4	6 1/2	3 11/16	1 13/16	0.66	350
4	4.125	11ga x 1 3/16	14ga x 1 3/16	5/16	1/2	5 7/8	7 7/8	4 3/4	2 9/16	1.02	400
5	5.125	8ga x 1 1/4	8ga x 1 1/4	3/8	5/8	5 7/8	8 3/4	4 3/4	1 5/8	1.68	550
6	6.125	8ga x 1 1/4	8ga x 1 1/4	3/8	5/8	6 1/16	9	4 3/4	1 1/2	1.84	550

FIG. 110PC
PLASTIC COATED CLEVIS HANGER



Material: Carbon steel.

Finish: Top of hanger as well as nut and cross bolt are electro-galvanized and bottom of hanger is plastic coated.

Service: Designed for the suspension of non-insulated stationary pipe lines in light duty applications. Plastic coating prevents pipe from coming in contact with hanger; resulting in noise and vibration reduction as well as the prevention of electrolysis between pipe and hanger.

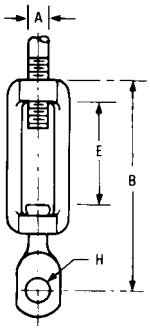
Approvals: Complies with Federal Specification WW-H-171-E (Type# 12) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 1).

Ordering: Specify pipe size and figure number.

Notes: **Available domestic**

PIPE SIZE	PIPE OD	MATERIAL SIZE		BOLT	A	B	C	E	F	WGT EACH (lbs)	MAX REC LOAD (lbs)
		TOP	BOTTOM								
1/2	0.840	18ga x 7/8	18ga x 7/8	1/4	3/8	1 3/4	2 1/8	1	1/2	0.12	150
3/4	1.050	18ga x 7/8	18ga x 7/8	1/4	3/8	1 13/16	2 5/16	1 1/16	1/2	0.12	250
1	1.315	18ga x 7/8	18ga x 7/8	1/4	3/8	2 1/8	2 3/4	1 5/16	3/4	0.12	250
1 1/4	1.660	18ga x 7/8	18ga x 7/8	1/4	3/8	2 1/2	3 1/4	1 3/4	1 5/16	0.18	250
1 1/2	1.900	14ga x 7/8	16ga x 7/8	1/4	3/8	2 13/16	3 13/16	2 1/16	1 1/8	0.24	250
2	2.375	14ga x 7/8	16ga x 7/8	1/4	3/8	3 5/16	4 1/2	2 9/16	1 1/4	0.26	250
2 1/2	2.875	12ga x 1 3/16	14ga x 1 3/16	1/4	1/2	4 1/2	5 5/16	3 7/16	2 1/16	0.58	350
3	3.500	12ga x 1 3/16	14ga x 1 3/16	1/4	1/2	4 13/16	6 9/16	3 3/4	1 7/8	0.66	350
3 1/2	4.000	11ga x 1 3/16	14ga x 1 3/16	5/16	1/2	5 15/16	7 7/8	4 7/8	2 5/8	0.82	350
4	4.500	11ga x 1 3/16	14ga x 1 3/16	3/8	1/2	6 1/16	8 5/16	5	2 3/8	0.94	400
5	5.563	4ga x 1 1/4	8ga x 1 1/4	1/2	5/8	5 11/16	8 7/16	4 5/16	1 7/16	2.04	1430
6	6.625	3ga x 1 1/2	8ga x 1 1/2	1/2	3/4	6 13/16	10 1/8	5 3/16	1 3/4	2.80	1940
7	7.625	3ga x 1 1/2	8ga x 1 1/2	1/2	3/4	7 13/16	11 5/8	6 3/16	2	3.24	2000
8	8.625	3ga x 1 3/4	8ga x 1 3/4	5/8	7/8	8 1/16	12 7/16	6 1/4	1 7/8	4.46	2000
10	10.750	3/8 x 1 3/4	3ga x 1 3/4	3/4	7/8	10	15 7/16	8	2 1/4	8.06	3600
12	12.750	3/8 x 2	3ga x 2	3/4	7/8	11 9/16	18	9 9/16	2 13/16	10.34	3800

FIG. 114
TURNBUCKLE ADJUSTER



Material: Malleable iron.

Finish: Plain, copper plated.

Service: Designed to provide vertical rod adjustment with split ring hangers.

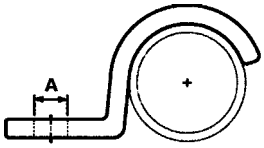
Approvals: Complies with Federal Specification WW-H-171-E (Type# 15), A-A-1192 A (Type# 15) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 15).

Ordering: Specify rod size and figure number.

Notes: **Available domestic**

SIZE A	PIPE SIZE	B	E	H	WGT EACH (lbs)	MAX REC LOAD (lbs)
3/8-16	1/2 to 2	4.300	2.000	0.410	0.30	610
1/2-13	2 1/2 to 3 1/2	4.300	2.000	0.410	0.28	610

FIG. 126
ONE HOLE CLAMP



Material: Malleable iron.

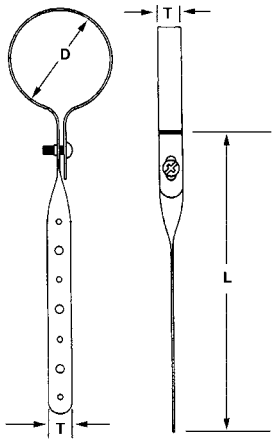
Finish: Electro-galvanized.

Service: Designed for the support of conduit, cable or pipe on walls or sides of beams. Not recommended for horizontal use on ceilings or bottom of beams.

Ordering: Specify pipe size and figure number.

PIPE SIZE	PIPE/CABLE/CONDUIT OD	HOLE DIAM A	BOLT/SCREW SIZE	WGT EACH (lbs)
1/2	0.840	5/16	1/4	0.04
3/4	1.050	5/16	1/4	0.05
1	1.315	5/16	1/4	0.09
1 1/4	1.660	3/8	1/4	0.12
1 1/2	1.900	7/16	3/8	0.16
2	2.375	7/16	3/8	0.25
2 1/2	2.875	11/16	5/8	0.49
3	3.500	11/16	5/8	0.82
4	4.500	3/4	5/8	1.30

FIG. 127CT
NATICK HANGERS, COPPER TUBE SIZE



Material: Carbon steel.

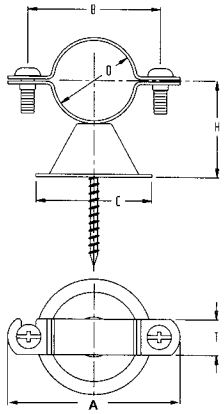
Finish: Copper epoxy coated (*COPPER-GARD*)

Service: Designed for the support of copper tube supply lines. Attaches to wood members.

Ordering: Specify tube size, length and figure number.

TUBE SIZE	D TUBE OD	T	L (6" OR 12")	WGT EACH (lbs)	
				6"	12"
1/2	0.625	1/2	6" or 12"	0.07	0.09
3/4	0.875	1/2	6" or 12"	0.07	0.09
1	1.125	1/2	6" or 12"	0.08	0.10
1 1/4	1.375	1/2	6" or 12"	0.08	0.10
1 1/2	1.625	1/2	6" or 12"	0.10	0.12
2	2.125	1/2	6" or 12"	0.10	0.12

FIG. 129CT VAN (BELL TYPE) HANGER, EPOXY COATED (*COPPER-GARD*)
FIG. 129CTP VAN (BELL TYPE) HANGER, COPPER PLATED



Material: Carbon steel.

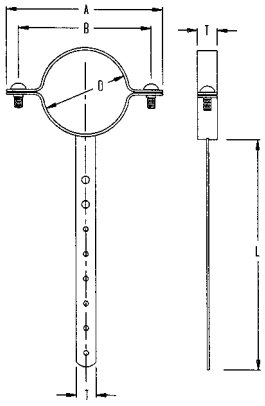
Finish: Copper plated, copper epoxy coated (*COPPER-GARD)* (with stainless steel screws).

Service: Designed to support copper tubing to wall. Supports the pipe 1" from the back of pipe to wall. The wood screw is concealed upon installation.

Ordering: Specify tube size, finish and figure number.

TUBE SIZE	D TUBE OD	A	B	C	H	T	WGT EACH (lbs) WITH SCREW
1/2	0.625	2 3/16	1 9/16	1 5/8	1 1/16	1/2	0.06
3/4	0.875	2 3/8	1 3/4	1 5/8	1 3/16	1/2	0.06
1	1.125	2 7/16	1 7/8	1 5/8	1 5/16	1/2	0.06
1 1/4	1.375	2 11/16	2 1/8	1 5/8	1 7/16	1/2	0.08
1 1/2	1.625	3 1/16	2 7/16	1 5/8	1 9/16	1/2	0.08
2	2.125	4 7/16	2 13/16	1 5/8	1 13/16	1/2	0.09
ASSEMBLED WITH #6 X 2 COARSE THREAD DRYWALL SCREW							

FIG. 131CT
MILFORD HANGER, COPPER TUBE SIZE



Material: Carbon Steel.

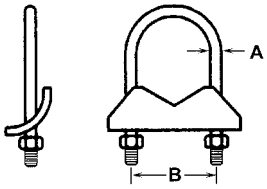
Finish: Copper epoxy coated (*COPPER-GARD*)

Service: Designed for the support of copper tube supply lines. Attaches to wood members.

Ordering: Specify tube size, length and figure number.

TUBE SIZE	D TUBE OD	A	B	T	L	WGT EACH (lbs)	
						6"	12"
1/2	0.625	2 3/16	1 9/16	1/2	6" or 12"	0.08	0.12
3/4	0.875	2 3/8	1 3/4	1/2	6" or 12"	0.08	0.12
1	1.125	2 7/16	1 7/8	1/2	6" or 12"	0.08	0.12
1 1/4	1.375	2 11/16	2 1/8	1/2	6" or 12"	0.10	0.14
1 1/2	1.625	3 1/16	2 7/16	1/2	6" or 12"	0.10	0.14
2	2.125	3 7/16	2 13/16	1/2	6" or 12"	0.10	0.14

FIG. 136
RIGHT ANGLE CLAMP



Material: Malleable iron with carbon steel u-bolt and nuts.

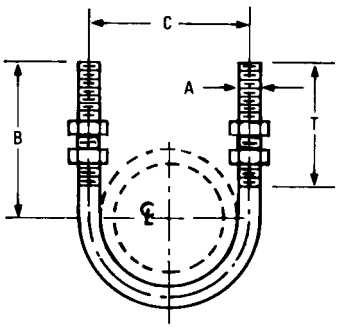
Finish: Electro-galvanized.

Service: Designed for anchoring pipe or conduit at a right angle to structural members.

Ordering: Specify pipe size and figure number.

PIPE SIZE	PIPE OD	A	B	WGT EACH (lbs)
1/2	0.840	5/16	2	0.40
3/4	1.050	5/16	2 1/8	0.42
1	1.315	5/16	2 3/8	0.48
1 1/4	1.660	5/16	3	0.55
1 1/2	1.900	5/16	3 1/2	0.57
2	2.375	3/8	4	0.89
2 1/2	2.875	3/8	4 3/8	1.10
3	3.500	3/8	5	1.14
3 1/2	4.000	3/8	5 1/2	1.30
4	4.500	3/8	6	1.40

FIG. 137
STANDARD U-BOLT WITH 4 HEX NUTS



Material: Carbon steel, 304 (137SS) and 316 (137SX) stainless steel

Finish: Plain, electro-galvanized.

Service: Designed for support or guide of heavy loads.

Approvals: Complies with Federal Specifications WW-H-171-E (Type# 24), A-A-1192 A (Type# 24), and MSS SP-58 and SP-69 (Type# 24).

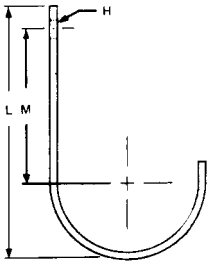
Ordering: Specify pipe size, figure number and finish. Sizes ½" to 1" can be furnished with ⅜" rod size.

Notes: U-bolts with longer tangents or longer threads are available. Also available with plastic coating.

Available domestic

PIPE SIZE	PIPE OD	A	B	C	T	WGT EACH (lbs)	MAX REC LOAD (lbs)
½	0.840	¼-20	2¾	1 3/16	2⅜	0.10	485
¾	1.050	¼-20	2¾	1⅜	2⅜	0.10	485
1	1.315	¼-20	2¾	1⅝	2⅜	0.10	485
1¼	1.660	⅜-16	2⅞	2 1/16	2⅜	0.26	1220
1½	1.900	⅜-16	3	2⅜	2½	0.28	1220
2	2.375	⅜-16	3¼	2 13/16	2½	0.32	1220
2½	2.875	½-13	3¾	3 7/16	3	0.70	2260
3	3.500	½-13	4	4 1/16	3	0.76	2260
3½	4.000	½-13	4¼	4 9/16	3	0.80	2260
4	4.500	½-13	4½	5 1/16	3	0.86	2260
5	5.563	½-13	5	6⅛	3	1.00	2260
6	6.625	⅝-11	6⅛	7⅜	3¾	1.98	3620
8	8.625	⅝-11	7⅛	9⅜	3¾	2.26	3620
10	10.750	¾-10	8⅜	11⅝	4	3.94	5420
12	12.750	⅞-9	9⅝	13¾	4¼	6.40	7540
14	14.000	⅞-9	10¼	15	4¾	8.30	7540
16	16.000	⅞-9	11¼	17	4¾	9.20	7540
18	18.000	1-8	12⅝	19⅛	4¾	13.50	9920
20	20.000	1-8	13⅝	21⅛	4¾	14.60	9920
24	24.000	1-8	15⅝	25⅛	4¾	16.90	9920

FIG. 145
RETURN LINE STRAIGHT J-HOOK

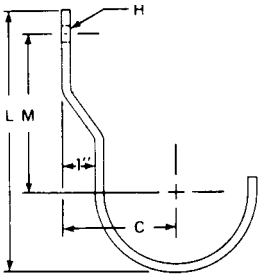


Material: Carbon steel.
Finish: Plain, electro-galvanized.
Service: Designed for supporting light pipe loads next to wall.
Ordering: Specify pipe size, figure number and finish.

Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL SIZE	H	L	M	WGT EACH (lbs)	MAX REC LOAD (lbs)
1/2	0.840	1 1/4 x 1/4	9/16	6 3/8	5	0.55	350
3/4	1.050	1 1/4 x 1/4	9/16	6 1/2	5	0.59	350
1	1.315	1 1/4 x 1/4	9/16	6 11/16	5	0.82	350
1 1/4	1.660	1 1/4 x 1/4	9/16	6 13/16	5	0.84	350
1 1/2	1.900	1 1/2 x 1/4	9/16	6 15/16	5	1.09	600
2	2.375	1 1/2 x 1/4	9/16	7 3/16	5	1.15	600
2 1/2	2.875	1 1/2 x 1/4	9/16	7 7/16	5	1.23	600
3	3.500	1 1/2 x 1/4	9/16	7 3/4	5	1.39	600
3 1/2	4.000	1 1/2 x 1/4	9/16	8	5	1.48	600
4	4.500	1 1/2 x 1/4	9/16	8 1/4	5	1.58	600

FIG. 146
OFFSET J-HOOK

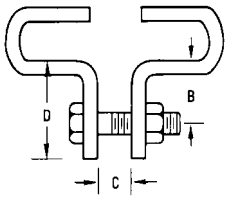


Material: Carbon steel.
Finish: Plain, electro-galvanized.
Service: Designed for supporting light pipe loads with 1" offset from wall to provide clearance for fittings.
Ordering: Specify pipe size, figure number and finish.

Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL SIZE	C	H	L	M	WGT EACH (lbs)	MAX REC LOAD (lbs)
1/2	0.840	1 1/4 x 1/4	1 5/8	9/16	6 3/8	5	0.55	350
3/4	1.050	1 1/4 x 1/4	1 11/16	9/16	6 1/2	5	0.59	350
1	1.315	1 1/4 x 1/4	1 15/16	9/16	6 11/16	5	0.82	350
1 1/4	1.660	1 1/4 x 1/4	2 1/16	9/16	6 13/16	5	0.84	350
1 1/2	1.900	1 1/2 x 1/4	2 7/16	9/16	6 15/16	5	1.09	600
2	2.375	1 1/2 x 1/4	2 7/16	9/16	7 3/16	5	1.15	600
2 1/2	2.875	1 1/2 x 1/4	2 11/16	9/16	7 7/16	5	1.23	600
3	3.500	1 1/2 x 1/4	3	9/16	7 3/4	5	1.39	600
3 1/2	4.000	1 1/2 x 1/4	3 1/4	9/16	8	5	1.48	600
4	4.500	1 1/2 x 1/4	3 1/2	9/16	8 1/4	5	1.58	600
5	5.563	2 x 1/4	4 3/16	9/16	10	6 1/4	2.40	700
6	6.625	2 x 1/4	4 11/16	9/16	11	7	2.80	700

FIG. 150
BEAM CLAMP



Material: Carbon steel.

Finish: Plain, electro-galvanized.

Service: Designed for attaching hanger rods from the center of an I-beam. Normally used with figure 26, 26W eyerods, or figure 13 weldless eye nut.

Approvals: Complies with Federal Specifications WW-H-171-E (Type# 21), A-A-1192 A (Type# 21), and MSS SP-58 and SP-69 (Type# 21).

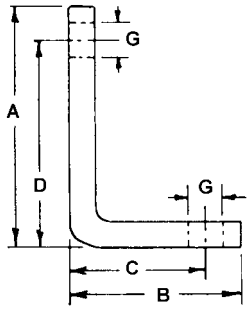
Ordering: Specify clamp size, flange width, beam thickness, figure number and finish.

Notes: Not recommended for beams greater than 12 inches wide.

Domestically Manufactured

CLAMP SIZE	MATERIAL	BOLT	B	C	D	MAX REC LOAD
1	1/4 x 1 1/4	1/2	1 1/8	5/8	1 3/4	1000
2	1/2 x 2	3/4	1 5/8	7/8	2 5/8	3000

FIG. 152
RETURN LINE ANGLE



Material: Carbon steel.

Finish: Plain.

Service: Designed to enable the field mechanic to obtain different distances from wall to center of pipe line by turning the angle to distance required. They are made in light and heavy material and will support pipes 2, 3 or 4 inches from wall to center of pipe.

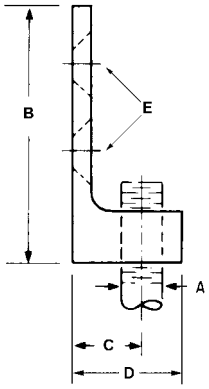
Approvals: Complies with Federal Specifications WW-H-171-E (Type# 21), A-A-1192 A (Type# 21), and MSS SP-58 and SP-69 (Type# 21).

Ordering: Specify size number, figure number and finish.

Domestically Manufactured

SIZE NO.	MATERIAL	A	B	C	D	G	WGT EACH (lbs)	MAX REC LOAD (lbs)
1	4ga	3 13/16	2 13/16	2	3	9/16	0.425	180
2	4ga	4 13/16	3 13/16	3	4	9/16	0.585	180
3	3/8	3 7/8	2 7/8	2	3	9/16	0.870	390
4	3/8	4 7/8	3 7/8	3	4	9/16	1.175	390
5	4ga	6 15/16	4 15/16	4	6	9/16	0.825	180
6	3/8	6 15/16	4 15/16	4	6	9/16	1.650	190

FIG. 153
SIDE BEAM CONNECTOR



Material: Malleable iron.

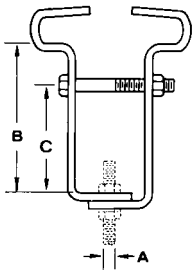
Finish: Plain or electro-galvanized.

Service: Designed for mounting to sides of wood beams using figure 59 drive screws. Bottom hole is tapped for rod.

Ordering: Specify rod size, figure number and finish.

SIZE A	B	C	D	E SCREW SIZE	WGT EACH (lbs)	MAX REC LOAD (lbs)
3/8-16	2 1/8	5/8	15/16	#12	0.13	250
1/2-13	2 3/4	3/4	1 3/16	#14	0.29	480

FIG. 155
STEEL BEAM CLAMP



Material: Carbon steel.

Finish: Plain, electro-galvanized or painted.

Service: Designed for attaching hanger rods to be centered under beam flanges. The clamp provides a vertical adjustment of approximatly 2 inches.

Ordering: Specify clamp size, beam thickness, flange width, figure number and finish.

Notes: Not recommended for beams greater than 12 inches wide.

Domestically Manufactured

CLAMP SIZE	STOCK SIZE	A	B	C	MAX REC LOAD (lbs)
1	1/4 x 1 1/4	3/8	4	3	550
2	1/4 x 1 1/2	1/2	4	3	850
3	3/8 x 1 1/2	5/8	4 1/2	3 1/4	1100
4	3/8 x 2	3/4	4 1/2	3 1/4	1500
5	1/2 x 2	7/8	5	3 1/2	2600
6	1/2 x 2 1/2	1	5	3 1/2	4300

FIG. 156
STEEL BEAM CLAMP

Material: Carbon steel.

Finish: Plain, electro-galvanized or painted.

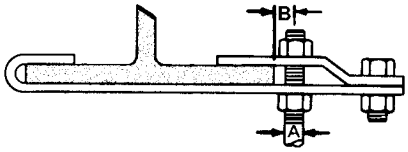
Service: Designed to be used where it is necessary for the hanger rod to run vertically close to the beam's edge, eliminating drilling of holes in structural member.

Approvals: Complies with Federal Specifications WW-H-171-E (Type# 53), A-A-1192 A (Type# 25), and MSS SP-58 and SP-69 (Type# 25).

Ordering: Specify clamp size, flange width and thickness, figure number and finish.

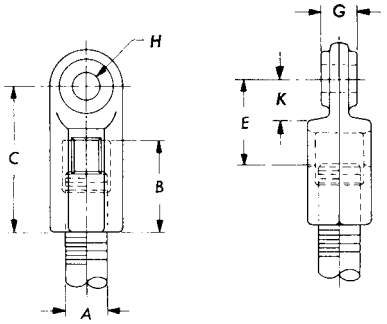
Notes: Not recommended for beams greater than 12 inches wide.

Domestically Manufactured



SIZE NO.	STOCK SIZE	A	B
1	1¼ x ¼	⅜	5/16
2	1¼ x ¼	½	5/16
3	1½ x ⅜	⅝	7/16
4	2 x ⅜	¾	½
5	2½ x ½	⅞	9/16

FIG. 157
EXTENSION PIECE



Material: Malleable iron.

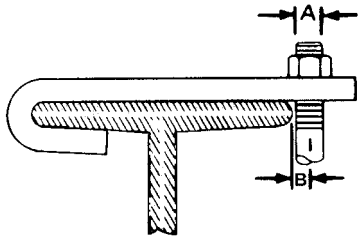
Finish: Plain or electro-galvanized.

Service: Designed for attaching hanger rod to various type of attachments. Allows a 1 inch vertical adjustment of the rod.

Ordering: Specify rod size, figure number and finish.

SIZE A	PIPE SIZE	B	C	E	G	H	K	WGT EACH (lbs)	MAX REC LOAD (lbs)
⅜-16	½ to 2	1 5/16	2 1/16	1 3/16	½	½	9/16	0.19	610
½-13	2½ to 3½	1 7/16	2 5/16	1 5/16	⅝	½	11/16	0.41	1130
⅝-11	4 to 5	1 9/16	2 7/16	1 7/16	⅝	½	¾	0.42	1810
¾-10	6	1 ⅞	2 ⅞	1 9/16	⅝	½	⅞	0.68	2710
⅞-9	8 to 12	2	3 1/16	1 11/16	¾	9/16	⅞	0.78	2950

FIG. 158
TOP BEAM HOOK



Material: Carbon steel.

Finish: Plain, electro-galvanized or painted.

Service: Designed for attaching hanger rod to the top flange of a beam.

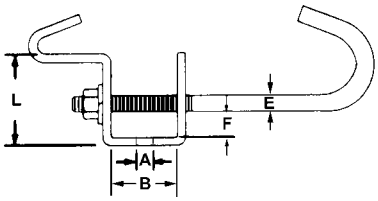
Ordering: Specify size, flange width, thickness and finish.

Notes: Not recommended for beams greater than 12 inches wide.

Domestically Manufactured

HOOK SIZE	MATERIAL SIZE	A	B
1	1 1/4 x 1/4	3/8	5/16
2	1 1/4 x 1/4	1/2	3/8
3	1 1/2 x 3/8	5/8	7/16
4	2 x 3/8	3/4	1/2
5	2 1/2 x 1/2	7/8	9/16

FIG. 159
ADJUSTABLE ROD BEAM CLAMP



Material: Carbon steel.

Finish: Plain or electro-galvanized.

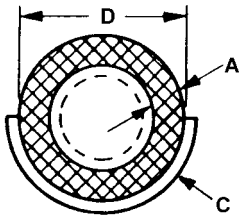
Service: Designed to be used in the suspension of a hanger rod from an I-beam. Recommended for flange widths from 4 inches minimum to 8 inches maximum.

Approvals: Complies with Federal Specifications WW-H-171-E (Type# 54), A-A-1192 A (Type# 27), and MSS SP-58 and SP-69 (Type# 27).

Ordering: Specify rod size, figure number and finish.

SIZE A	MATERIAL	FLANGE WIDTH		B	E	F	L	WEIGHT EACH (lbs)	MAX REC LOAD (lbs)
		MIN	MAX						
3/8-16	3ga x 1 1/4	3 1/2	8	2	3/8	1	2 3/4	0.98	300
1/2-13	3ga x 1 1/2	3 1/2	8	2	1/2	15/16	2 3/4	1.38	700
5/8-11	3ga x 1 3/4	3 1/2	8	2	5/8	7/8	2 3/4	1.86	1000

FIG. 167
PIPE COVERING PROTECTION SHIELD



Domestically Manufactured

Material: Pre-galvanized carbon steel.

Finish: Pre-galvanized.

Service: Designed for outside of foam or fiberglass insulation on stationary pipe lines (not designed for pipe rollers) to prevent crushing of insulation without breaking the vapor barrier.

Approvals: Complies with Federal Specifications WW-H-171-E (Type# 41), A-A-1192 A (Type# 40), and MSS SP-58 and SP-69 (Type# 40).

Ordering: Specify shield size and figure number.

Notes: Also available in 304 stainless steel.

SIZE NO. SHIELD	B LENGTH	C STOCK SIZE	D DIA.	HANGER SIZE	WGT EACH (lbs)
0	12	24ga	1 7/8	1 1/2	0.25
1	12	24ga	2 3/8	2	0.31
2	12	24ga	2 7/8	2 1/2	0.37
3	12	18ga	3 1/2	3	0.90
4	12	18ga	4	3 1/2	0.95
5	12	18ga	4 1/2	4	1.10
6	12	18ga	5	5	1.25
7	12	18ga	5 9/16	5	1.40
8	12	18ga	6 5/8	6	1.65
9	12	18ga	7 5/8	8	1.90
10	12	18ga	8 5/8	8	2.10
13	12	18ga	9 5/8	10	2.35
14	12	18ga	10 3/4	10	2.65
15	12	18ga	11 3/4	12	2.95
16	12	18ga	12 3/4	12	3.15
17	12	16ga	14	14	4.45
18	12	16ga	15	16	4.46
19	12	16ga	16	16	4.90
20	12	16ga	17	18	5.15
21	12	16ga	18	18	5.50
22	12	16ga	19	20	5.70
23	12	16ga	20	20	6.35
24	12	16ga	21	24	6.45
25	12	16ga	22	24	6.60
26	12	16ga	23	24	7.00
27	12	16ga	24	24	7.85
28	12	16ga	26	30	7.90
29	12	16ga	27	30	8.05
30	12	16ga	28	30	8.60

(additional charts on the following page)

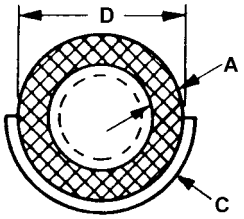
FIG. 167 PIPE COVERING PROTECTION SHIELD

(continued from previous page)

PIPE SIZE	A - Insulation Thickness				
	1/2	3/4	1	1 1/2	2
1/2	0	1	--	--	--
3/4	1	1	2	4	6
1	1	2	3	5	7
1 1/4	2	3	3	6	7
1 1/2	2	3	4	6	7
2	3	4	5	7	8
2 1/2	4	5	6	7	8
3	5	6	7	8	9
3 1/2	--	--	8	9	10
4	--	--	8	9	10
5	--	--	9	10	13
6	--	--	10	13	14
8	--	--	14	15	16
10	--	--	16	17	18
12	--	--	18	19	20
14	--	--	19	20	21
16	--	--	21	22	23
18	--	--	23	24	25
20	--	--	25	26	27
24	--	--	28	29	30

TUBING SIZE	A - Insulation Thickness				
	1/2	3/4	1	1 1/2	2
1/2	0	1	2	4	5
3/4	0	1	2	4	6
1	1	2	3	4	6
1 1/4	1	2	3	5	7
1 1/2	2	3	3	5	7
2	3	4	4	6	8
2 1/2	4	5	5	7	8
3	5	6	6	8	9
3 1/2	6	7	7	8	9
4	7	7	8	9	10
5	8	8	9	10	13
6	9	9	10	13	14

FIG. 167MSS
"MSS" PIPE COVERING PROTECTION SHIELD



Material: Pre-galvanized carbon steel.

Finish: Pre-galvanized.

Service: Designed for outside of foam or fiberglass insulation on stationary pipe lines (not designed for pipe rollers) to prevent crushing of insulation without breaking the vapor barrier.

Approvals: Complies with Federal Specifications WW-H-171-E (Type# 26), A-A-1192 A (Type# 26), and MSS SP-58 and SP-69 (Type# 26).

Ordering: Specify shield size and figure number.

Notes: Also available in 304 stainless steel.

Domestically Manufactured

SIZE NO. SHIELD	B LENGTH	C STOCK SIZE	SHIELD ID/ INSULATION OD	HANGER SIZE	WGT EACH (lbs)
X1A	12	18ga	1 7/8	1 1/2	0.53
1A	12	18ga	2 3/8	2	0.68
2A	12	18ga	2 7/8	2 1/2	0.82
3A	12	18ga	3 1/2	3	1.02
4A	12	18ga	4	3 1/2	1.13
5A	12	18ga	4 1/2	4	1.26
6A	12	18ga	5	5	1.42
7A	12	18ga	5 9/16	5	1.58
8A	12	16ga	6 5/8	6	2.33
9A	12	16ga	7 5/8	7	2.66
10A	12	16ga	8 5/8	8	3.00
9B	18	16ga	7 5/8	7	3.99
10B	18	16ga	8 5/8	8	4.49
11B	18	16ga	9 5/8	10	5.03
12B	18	16ga	10 3/4	10	5.62
13C	24	14ga	11 3/4	12	10.12
14C	24	14ga	12 3/4	12	10.94
15C	24	14ga	14	14	12.03
16C	24	14ga	15	16	12.92
17C	24	14ga	16	16	13.74
18C	24	14ga	17	18	14.63
19C	24	12ga	18	18	21.33
20C	24	12ga	19	20	22.56
21C	24	12ga	20	20	23.79
22C	24	12ga	21	24	24.92
23C	24	12ga	22	24	26.15
24C	24	12ga	23	24	27.37
25C	24	12ga	24	24	28.51
26C	24	12ga	26	30	30.87
27C	24	12ga	27	30	32.09
28C	24	12ga	28	30	33.22

(additional charts on the following page)

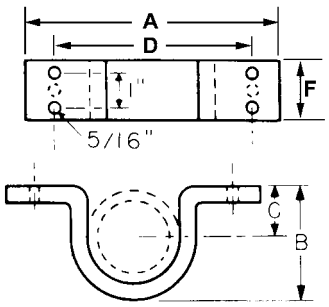
FIG. 167MSS “MSS” PIPE COVERING PROTECTION SHIELD

(continued from previous page)

SHIELD SIZE SELECTION FOR NOMINAL PIPE					
PIPE SIZE	A - Insulation Thickness				
	1/2	3/4	1	1 1/2	2
1/2	1A	1A	--	--	--
3/4	1A	2A	3A	4A	6A
1	1A	2A	3A	5A	7A
1 1/4	2A	3A	4A	6A	7A
1 1/2	2A	3A	4A	6A	8A
2	3A	4A	5A	7A	8A
2 1/2	4A	5A	--	8A	9A
3	5A	6A	7A	8A	9A
3 1/2	--	--	8A	9A	10A
4	--	--	8A	9A	10A
5	--	--	9A/9B	10A/10B	11B
6	--	--	10A/10B	11B	12B
8	--	--	12B	13C	14C
10	--	--	14C	15C	16C
12	--	--	16C	17C	18C
14	--	--	17C	18C	19C
16	--	--	19C	20C	21C
18	--	--	21C	22C	23C
20	--	--	23C	24C	25C
24	--	--	26C	27C	28C

SHIELD SIZE SELECTION FOR COPPER TUBING					
TUBING SIZE	A - INSULATION THICKNESS				
	1/2	3/4	1	1 1/2	2
1/2	X1A	1A	2A	4A	5A
3/4	X1A	1A	2A	4A	6A
1	1A	2A	3A	5A	7A
1 1/4	1A	2A	3A	5A	7A
1 1/2	2A	3A	4A	6A	8A
2	3A	4A	5A	7A	8A
2 1/2	4A	5A	6A	8A	8A
3	5A	6A	7A	8A	9A
3 1/2	6A	7A	8A	8A	9A/9B
4	7A	8A	8A	9A	10A/10B
5	8A	8A	9A	10A	11B
6	9A	9A	10A	11B	12B

FIG. 180
SHORT CLIP



Material: Carbon steel.

Finish: Plain or electro-galvanized.

Service: Designed to support pipe close to ceiling or wall.

Ordering: Specify size, figure number and finish.

Notes: Available in stainless steel and hot-dip galvanized. Sizes ½" to 2" are furnished with two screw holes. Sizes 2½" to 4" are furnished with four screw holes.

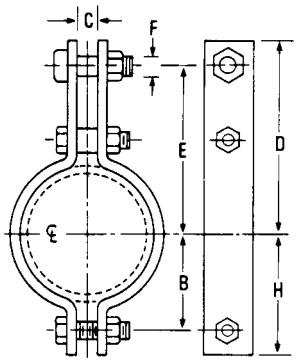
* Radius edge ½" to 2" with 2 holes.

* Square edge 2½" to 4" with four holes.

Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL	A	B	C	D	F	WGT EACH (lbs)	MAX REC LOAD (lbs)
½	0.840	11ga	3 3/16	1 1/8	9/16	2 1/16	1 1/4	0.165	300
¾	1.050	11ga	3 1/2	1 3/8	5/8	2 3/8	1 1/4	0.190	300
1	1.315	11ga	4	1 5/8	3/4	2 7/8	1 1/4	0.235	300
1 1/4	1.660	11ga	4 7/16	1 7/8	15/16	3 5/16	1 1/4	0.260	300
1 1/2	1.900	8ga	4 13/16	2 3/16	1 1/8	3 11/16	1 1/4	0.400	300
2	2.375	8ga	5 1/2	2 3/4	1 3/8	4 3/8	1 1/4	0.490	300
2 1/2	2.875	8ga	6 3/8	3 1/8	1 5/8	5 3/8	1 3/4	0.910	400
3	3.500	8ga	7 1/8	3 3/4	1 15/16	6 1/8	1 3/4	0.950	400
3 1/2	4.000	8ga	7 3/8	4 5/16	2 3/16	6 3/8	1 3/4	1.050	400
4	4.500	8ga	7 3/4	4 13/16	2 7/16	6 3/4	1 3/4	1.160	400

FIG. 189
DOUBLE BOLT PIPE CLAMP



Material: Carbon steel.

Finish: Plain, electro-galvanized.

Service: Designed for the suspension of insulated pipe lines. Normally used with weldless eye nut, figure #13.

Approvals: Complies with Federal Specifications WW-H-171-E (Type# 3), A-A-1192 A (Type# 3), and MSS SP-58 and SP-69 (Type# 3).

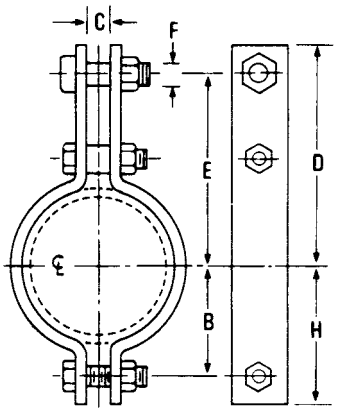
Ordering: Specify pipe size, figure number and finish.

Notes: Available in 304 and 316 stainless steel.

Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL SIZE	F BOLT	B	C	D	E	H	WGT EACH (lbs)	MAX REC LOAD (lbs)
1/2	0.840	8ga x 1.00	3/8	1	5/8	2 7/8	2 5/16	1 9/16	0.540	950
3/4	1.050	8ga x 1.00	3/8	1 1/16	5/8	3	2 7/16	1 5/8	0.570	950
1	1.315	8ga x 1.00	3/8	1 3/8	5/8	3 3/16	2 5/8	1 15/16	0.605	950
1 1/4	1.660	8ga x 1.00	3/8	1 1/2	5/8	3 1/2	2 15/16	2 1/16	0.675	950
1 1/2	1.900	4ga x 1.250	5/8	1 15/16	7/8	4 11/16	3 13/16	2 13/16	1.715	1545
2	2.375	4ga x 1.250	5/8	2 3/16	7/8	5 9/16	4 11/16	3 1/16	1.925	1545
2 1/2	2.875	4ga x 1.250	5/8	2 7/16	7/8	6 7/16	5 9/16	3 5/16	2.115	1545
3	3.500	4ga x 1.250	5/8	2 3/4	1	7	6 1/8	3 5/8	2.260	1545
3 1/2	4.000	4ga x 1.250	5/8	2 7/8	1	7 1/4	6 3/8	3 3/4	2.365	1545
4	4.500	3/8 x 2	3/4	3 1/2	1 1/16	7 5/8	6 1/2	4 1/2	7.50	2500
5	5.563	3/8 x 2	3/4	4	1 1/16	8 1/8	7	5	8.13	2500
6	6.625	3/8 x 2 1/2	1	5	1 7/16	9 15/16	8 9/16	6 1/8	13.11	2865
8	8.625	3/8 x 2 1/2	1	6	1 7/16	10 15/16	9 9/16	7 1/8	14.67	2865
10	10.750	1/2 x 2 1/2	1	7 1/2	1 7/16	12	10 5/8	8 7/8	21.67	3240
12	12.750	1/2 x 2 1/2	1	8 1/2	1 7/16	13	11 5/8	9 7/8	23.83	3240
14	14.000	5/8 x 3	1 1/4	9 3/8	2	14 5/16	12 11/16	11	37.50	4300
16	16.000	5/8 x 3	1 1/4	10 3/8	2	15 5/16	13 11/16	12	41.00	4300
18	18.000	5/8 x 3	1 1/4	11 3/8	2	16 5/16	14 11/16	13	46.46	4300
20	20.000	3/4 x 3	1 1/2	12 3/4	2	17 1/2	15 7/8	14 3/8	60.00	5490
24	24.000	3/4 x 3	1 1/2	14 3/4	2	19 1/2	17 7/8	16 3/8	70.43	4500

FIG. 189A
ALLOY DOUBLE BOLT PIPE CLAMP



Material: Alloy steel (ASTM A387 grade 22).

Finish: Plain.

Service: Designed for suspension of high temperature insulated pipe lines, maximum temperature is 1,050°F.

Approvals: Complies with Federal Specifications WW-H-171-E (Type# 3), A-A-1192 A (Type# 3), and MSS SP-58 and SP-69 (Type# 3).

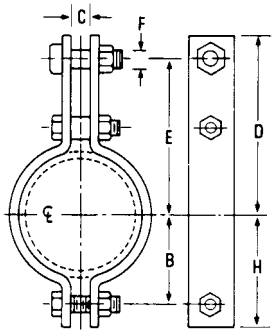
Ordering: Specify pipe size and figure number.

Notes: Galvanizing is not recommended for alloy products.

Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL SIZE	B	C	D	E	H	WGT EACH (lbs)	MAX REC LOAD (lbs) FOR SERVICE TEMP			
									650°F	750°F	1000°F	1050°F
1½	1.900	¼ x 1¼	1 13/16	1 1/16	4 7/8	4 1/8	2 3/8	2.3	1545	1410	1000	745
2	2.375	¼ x 1¼	2 1/8	1 1/16	5 7/8	5 1/8	2 11/16	2.6	1545	1410	1000	745
2½	2.875	¼ x 1¼	2 5/16	1 1/16	6 1/8	5 3/8	2 15/16	2.7	1545	1410	1000	745
3	3.500	¼ x 1¼	2 3/4	1 1/16	6 11/16	5 15/16	3 1/2	3.0	1545	1410	1000	745
4	4.500	⅜ x 2	3 3/8	1 1/16	7 5/8	6 1/2	4 1/2	6.7	2500	2290	1625	1200
5	5.563	⅜ x 2	3 15/16	1 1/16	8 1/8	7	5	7.0	2500	2290	1625	1200
6	6.625	⅜ x 2½	4 3/4	1 7/16	9 15/16	8 9/16	6 1/8	11.5	2865	2620	1860	1380
8	8.625	⅜ x 2½	5 3/4	1 7/16	10 15/16	9 9/16	7 1/8	13.2	2865	2620	1860	1380
10	10.750	½ x 2½	7 1/16	1 7/16	12	10 5/8	8 1/4	19.8	3240	2970	2100	1565
12	12.750	½ x 2½	8 1/16	1 7/16	12 15/16	11 5/8	9 5/16	22.3	3240	2970	2095	1555
14	14.000	⅝ x 3	9 1/16	2	14 5/16	12 11/16	10 11/16	37.7	4300	3915	2795	2060
16	16.000	⅝ x 3	10 1/16	2	15 5/16	13 11/16	11 11/16	41.4	4300	3915	2795	2060
18	18.000	⅝ x 3	11 1/16	2	16 5/16	14 11/16	12 11/16	44.9	4300	3915	2780	2060
20	20.000	¾ x 3	12 3/8	2	17 1/2	15 7/8	14	57.3	5490	4995	3550	2635
24	24.000	¾ x 4	14 3/8	2	19 1/2	17 7/8	16	65.9	4500	4095	2910	2160

FIG. 189H
HEAVY DUTY DOUBLE BOLT PIPE CLAMP



Material: Carbon steel.

Finish: Plain or electro-galvanized.

Service: Designed for suspension of high temperature pipe lines within the limitation of temperature and loads shown below.

Approvals: Complies with Federal Specifications WW-H-171-E (Type# 3), A-A-1192 A (Type# 3), and MSS SP-58 and SP-69 (Type# 3).

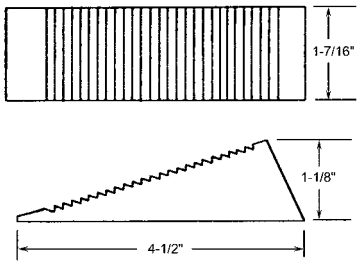
Ordering: Specify pipe size, figure number and finish.

Notes: Maximum temperature is 750°F and accommodates up to 4" thick insulation.

Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL SIZE	F (BOLT)	B	C	D	E	H	WGT EACH (lbs)	MAX REC LOAD (lbs)	
										650°F	750°F
6	6.625	2 1/2 x 3/8	1	4 3/4	1 3/4	10 3/16	8 15/16	6	12.00	3500	3125
8	8.625	2 1/2 x 1/2	1 1/8	6	2	11 3/8	10 1/8	7 1/4	18.50	4800	4285
10	10.750	3 1/2 x 1/2	1 1/4	7 1/4	2 1/4	13 1/8	11 3/8	9	30.25	5500	4910
12	12.750	4 x 5/8	1 1/2	8 5/8	2 1/2	14 5/16	12 9/16	10 3/8	42.00	7000	6250
14	14.000	4 x 3/4	1 1/2	9 5/8	2 1/2	15 1/2	13 1/2	11 5/8	60.00	9500	8485
16	16.000	4 1/2 x 3/4	1 3/4	10 7/8	3	17 1/8	14 7/8	13 1/8	80.00	10000	8930
18	18.000	4 x 1	2	12 1/2	3 1/2	18 1/4	16 1/4	14 1/2	115.00	13800	12325
20	20.000	5 x 1	2	13 1/2	3 1/2	19 3/4	17 1/4	16	140.00	15300	13665
24	24.000	6 x 1	2	15 1/2	3 1/2	22 5/16	19 5/16	18 1/2	190.00	16300	14555

FIG. 200
BATH TUB WEDGE



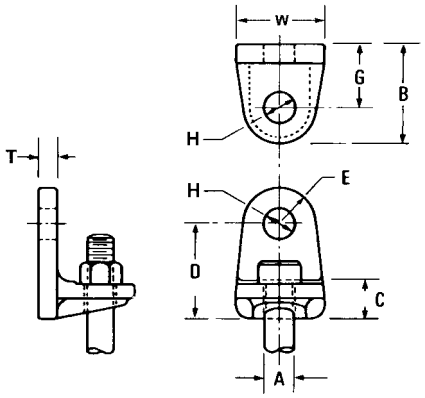
Material: Malleable iron.

Service: Used for leveling and shimming tubs during and after installation.

Ordering: Specify figure number.

WEIGHT EACH (lbs)	0.80

FIG. 202
SIDE BEAM BRACKET



Material: Malleable iron.

Finish: Plain.

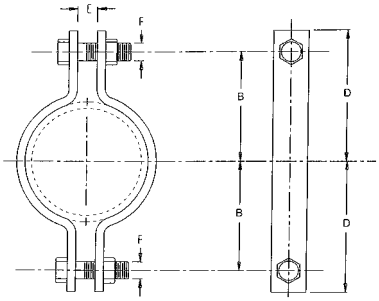
Service: Designed for attaching hanger rod to the side of steel or wooden beams.

Approvals: Complies with Federal Specifications WW-H-171-E (Type# 35), A-A-1192 A (Type# 35), and MSS SP-58 and SP-69 (Type# 35).

Ordering: Specify rod size and figure number.

SIZE A	PIPE SIZE	B	C	D	E	G	H	T	W	WGT EACH (lbs)
3/8-16	1/2 to 2	1 5/16	9/16	1 1/2	1/2	15/16	7/16	1/4	1 5/16	0.27
1/2-13	2 1/2 to 3 1/2	1 13/16	5/8	1 7/8	5/8	1 3/16	9/16	5/16	1 5/8	0.48

FIG. 212
STANDARD STEEL PIPE CLAMP



Domestically Manufactured

Material: Carbon steel.

Finish: Plain or electro-galvanized.

Service: Designed for the suspension of cold pipe lines or hot pipe lines where no insulation is required.

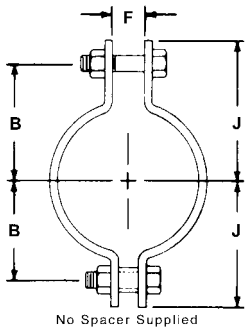
Approvals: Complies with Federal Specifications WW-H-171-E (Type# 4), A-A-1192 A (Type# 4), and MSS SP-58 and SP-69 (Type# 4).

Ordering: Specify pipe size, figure number and finish.

Notes: Available in 304 and 316 stainless steel and alloy steel.

PIPE SIZE	PIPE OD	MATERIAL SIZE S	BOLT F	B	C	D	WGT EACH (lbs)	MAX REC LOAD (lbs)
1/2	0.840	11ga x 1	5/16	1 1/8	7/16	1 11/16	0.27	500
3/4	1.050	11ga x 1	5/16	1 1/4	7/16	1 13/16	0.30	500
1	1.315	11ga x 1	5/16	1 7/16	7/16	2	0.33	500
1 1/4	1.660	11ga x 1	5/16	1 9/16	7/16	2 1/8	0.36	500
1 1/2	1.900	11ga x 1	5/16	1 11/16	1/2	2 1/4	0.37	800
2	2.375	3ga x 1	1/2	2 5/16	1/2	3 3/16	1.04	1040
2 1/2	2.875	3ga x 1	1/2	2 5/8	3/4	3 1/2	1.19	1040
3	3.500	3ga x 1	1/2	2 7/8	3/4	3 3/4	1.27	1040
3 1/2	4.000	3ga x 1	1/2	3 1/8	3/4	4	1.43	1040
4	4.500	4ga x 1 1/4	5/8	3 5/8	3/4	4 1/2	1.94	1040
5	5.563	4ga x 1 1/4	5/8	4 1/8	7/8	5	2.20	1040
6	6.625	3/8 x 1 1/2	3/4	5	7/8	5 7/8	5.42	1615
8	8.625	3/8 x 1 1/2	3/4	6 1/8	1	7	6.51	1615
10	10.750	1/2 x 2	7/8	7 7/16	1	8 9/16	13.60	2490
12	12.750	1/2 x 2	7/8	8 7/16	1	9 9/16	16.05	2490
14	14.000	1/2 x 2 1/2	7/8	9 1/4	1 1/8	10 5/8	20.00	2490
16	16.000	1/2 x 2 1/2	7/8	10 1/4	1 1/8	11 5/8	22.00	2490
18	18.000	5/8 x 2 1/2	1	11 5/8	1 1/4	13	32.00	3060
20	20.000	5/8 x 2 1/2	1 1/8	12 3/4	1 3/8	14 1/8	36.00	3060

FIG. 216
HEAVY DUTY TWO-BOLT PIPE CLAMP



No Spacer Supplied

Material: Carbon steel.

Finish: Plain, electro-galvanized.

Service: Designed for the suspension of cold or hot pipe lines with heavy loads where no insulation is required.

Approvals: Complies with Federal Specifications WW-H-171-E (Type# 4), A-A-1192 A (Type# 4), and MSS SP-58 and SP-69 (Type# 4).

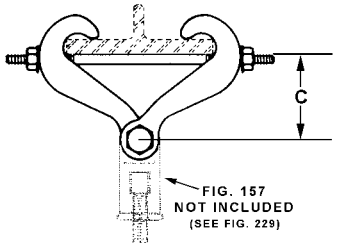
Ordering: Specify pipe size, figure number and finish.

Notes: Available in 304 and 316 stainless and alloy steel.

Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL SIZE	BOLT	B	F	J	WGT EACH (lbs)	MAX REC LOADS (lbs)	
								650° F	750° F
3	3.500	1/4 x 1 1/2	3/4	3 1/8	1	4	2.67	3300	3235
3 1/2	4.000	1/4 x 1 1/2	3/4	3 5/16	1	4 3/16	3.36	3300	3235
4	4.500	3/8 x 2	7/8	3 3/4	1	4 7/8	5.93	3515	3135
5	5.563	3/8 x 2	7/8	4 3/8	1	5 1/2	6.56	3515	3135
6	6.625	1/2 x 2 1/2	1	5 1/4	1 1/8	6 5/8	12.40	4865	4340
8	8.625	1/2 x 2 1/2	1	6 1/4	1 1/8	7 5/8	14.66	4865	4340
10	10.750	5/8 x 2 1/2	1 1/4	7 11/16	1 1/4	9 1/16	24.07	6010	5360
12	12.750	3/4 x 3	1 1/2	9 1/4	1 5/8	10 7/8	40.95	8675	7740
14	14.000	3/4 x 4	1 1/2	10	1 5/8	11 7/8	55.50	9120	8135
16	16.000	3/4 x 4	1 1/2	11	1 5/8	12 7/8	59.40	9120	8135
18	18.000	3/4 x 6	2	12 3/16	1 5/8	14 5/16	70.12	9150	8160
20	20.000	1 x 5	2	13 5/16	1 5/8	15 7/16	74.68	9150	8160
24	24.000	1 x 6	2	15 3/8	1 3/4	17 3/4	126.29	9200	8205

FIG. 218
MALLEABLE IRON CENTER LOAD BEAM CLAMP



Material: Malleable iron.

Finish: Plain or electro-galvanized.

Service: Designed for the suspension of a hanger rod from the center of an I-beam. The clamp accommodates flange widths of 2 3/8" - 7". Flange thickness not to exceed .60 inches. Normally used in conjunction with figure 157 extension piece. Figure 157 provides 1" of vertical adjustment.

Approvals: When used with FIG. 157 Extension Piece, complies with Federal Specification WW-H-171-E (Type# 30), A-A-1192 A (Type# 30) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 30).

Ordering: Specify figure number and finish.

Notes: For complete assembly with extension piece see FIG. 229.

A (7/8 MAX ROD)	C ROD TAKE OUT FOR WIDTH OF BEAM FLANGE						BOLT DIA	WGT EACH (lbs)	MAX REC LOAD (lbs)
	2 3/8	3	4	5	6	7			
CLAMP ONLY	3 1/2	3 7/16	3 5/16	2 15/16	2 9/16	1 7/8	7/16	2.49	1365

FIG. 229
MALLEABLE BEAM CLAMP WITH EXTENSION PIECE

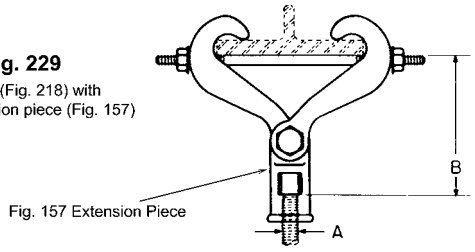


Fig. 229
Clamp (Fig. 218) with Extension piece (Fig. 157)

Material: Malleable iron.

Finish: Plain or electro-galvanized.

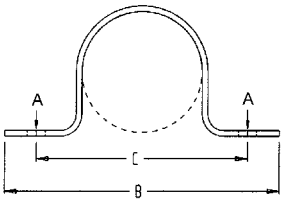
Service: Designed for the suspension of a hanger rod from the center of an I-beam. The clamp accomodates flange widths of 2⅜" to 7". Flange thickness not to exceed .60 inches. Extension piece provides 1" of vertical adjustment.

Approvals: Complies with Federal Specification WW-H-171-E (Type# 30), A-A-1192 A (Type# 30) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 30).

Ordering: Specify rod size, figure number and finish.

SIZE A	B ROD TAKE-OUT FOR WIDTH OF BEAM FLANGE						BOLT DIA	WGT EACH (lbs)	MAX REC LOAD (lbs)
	2⅜	3	4	5	6	7			
⅜-16	4¾	4 11/16	4 9/16	4 3/16	3 13/16	3⅛	7/16	2.42	610
½-13	4⅞	4 13/16	4 11/16	4 5/16	3 15/16	3¼	7/16	2.63	1130
⅝-11	4 15/16	4⅞	4¾	4⅜	4	3 5/16	7/16	2.67	1365
¾-10	5 3/16	5⅛	5	4⅝	4¼	3 9/16	7/16	2.87	1365
⅞-9	51/4	5 3/16	5 1/16	4 11/16	4 5/16	3⅝	7/16	3.01	1365

FIG. 231
TWO HOLE PIPE STRAP



Material: Pre-galvanized carbon steel.

Finish: Pre-galvanized.

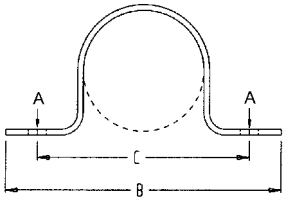
Service: Designed as a light duty support of schedule 40/80 sized pipe. Attaches directly to horizontal or vertical structural member.

Ordering: Specify pipe size and figure number.

Notes: **Available domestic**

PIPE SIZE	PIPE OD	MATERIAL SIZE	A HOLE SIZE	B	C	WGT EACH (lbs)
¼	0.540	22ga x ¾	7/32	2⅛	1¼	0.01
⅜	0.675	22ga x ¾	7/32	2¼	1½	0.03
½	0.840	18ga x ¾	7/32	2⅝	1⅞	0.04
¾	1.050	18ga x ¾	7/32	2¾	2	0.07
1	1.315	16ga x 1	9/32	3⅜	2⅝	0.09
1¼	1.660	16ga x 1	9/32	4¼	3¼	0.10
1½	1.900	15ga x 1	9/32	4⅜	3⅜	0.13
2	2.375	14ga x 1	9/32	5	4	0.18
2½	2.875	12ga x 1	11/32	6¼	4¾	0.26
3	3.500	12ga x 1	11/32	7¼	5¾	0.32
4	4.500	12ga x 1	11/32	8⅜	6⅞	0.40
6	6.625	12ga x 1¼	11/32	11⅛	9⅝	0.75

FIG. 231CT
COPPER TWO HOLE TUBING STRAP



Material: Carbon steel.

Finish: Copper plated.

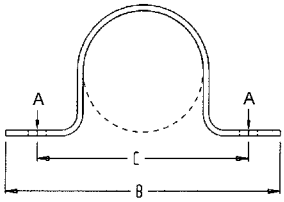
Service: Designed as a light duty support for copper tubing. Attaches directly to horizontal or vertical structural member.

Ordering: Specify tube size and figure number.

Notes: **Available domestic**

PIPE SIZE	PIPE OD	MATERIAL SIZE	A HOLE SIZE	B	C	WGT EACH (lbs)
1/4	0.375	20ga x 1/2	3/16	1 3/4	1 1/8	0.01
3/8	0.500	20ga x 1/2	3/16	1 7/8	1 1/4	0.01
1/2	0.625	20ga x 1/2	3/16	2 1/8	1 1/2	0.01
3/4	0.875	20ga x 1/2	3/16	2 3/8	1 5/8	0.02
1	1.125	20ga x 1/2	3/16	2 7/8	2 1/4	0.02
1 1/4	1.375	20ga x 1/2	3/16	3 1/8	2 1/2	0.04
1 1/2	1.625	18ga x 3/4	7/32	3 5/8	2 3/4	0.05
2	2.125	18ga x 3/4	7/32	4 1/4	3 3/8	0.06

FIG. 231SS TWO HOLE PIPE STRAP, 304 STAINLESS STEEL, IPS
FIG. 231OD TWO HOLE PIPE STRAP, 304 STAINLESS STEEL, O.D.



Material: Type 304 stainless steel.

Service: Designed as a light duty support for schedule 40/80 sized pipe. Attaches directly to horizontal or vertical structural member.

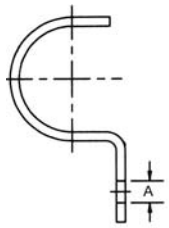
Ordering: Specify pipe size or o.d. tubing size and figure number.

Notes: Stainless steel hangers are recommended for applications where protection from corrosive environment is needed.

Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL SIZE	A HOLE SIZE	B	C	WGT EACH (lbs)
1/4 OD	0.250	16ga x 7/8	9/32	2 9/16	1 9/16	.030
1/4	0.540	16ga x 7/8	9/32	2 3/4	1 3/4	.035
3/8 OD	0.375	16ga x 7/8	9/32	2 5/8	1 5/8	.030
3/8	0.675	16ga x 7/8	9/32	3	2	.045
1/2 OD	0.500	16ga x 7/8	9/32	2 13/16	1 13/16	.035
1/2	0.840	16ga x 7/8	9/32	3 1/8	2 1/8	0.45
3/4 OD	0.750	16ga x 7/8	9/32	3	2	.040
3/4	1.050	16ga x 7/8	9/32	3 3/8	2 3/8	.060
1 OD	1.000	16ga x 7/8	9/32	3 1/4	2 1/4	.050
1	1.315	16ga x 7/8	9/32	3 7/8	2 7/8	.060
1 1/4	1.660	13ga x 3/4	9/32	4 1/4	3 1/4	.105
1 1/2	1.900	13ga x 3/4	9/32	4 7/16	3 7/16	.115
2	2.375	13ga x 3/4	9/32	5	4	.135
2 1/2	2.875	13ga x 3/4	11/32	5 1/4	4 1/4	.165
3	3.500	13ga x 3/4	11/32	6	5	.190
4	4.500	11ga x 1	7/16	7 1/4	6 1/4	.405
6	6.625	8ga x 1 1/4	9/16	11	9 7/16	1.15

FIG. 233
ONE HOLE PIPE STRAP



Material: Pre-galvanized carbon steel.

Finish: Pre-galvanized.

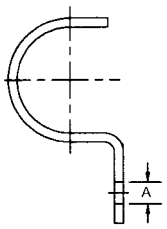
Service: Designed to support schedule 40/80 steel sized piping or sizes in a horizontal position from sides of structural member. Fastener hole may be above or below the pipe.

Ordering: Specify pipe size and figure number.

Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL SIZE	A HOLE SIZE	WGT EACH (lbs)
1/4	0.540	16ga x 1/2	9/32	0.02
3/8	0.675	13ga x 3/4	9/32	0.04
1/2	0.840	13ga x 3/4	9/32	0.05
3/4	1.050	13ga x 3/4	9/32	0.06
1	1.315	11ga x 1	13/32	0.06
1 1/4	1.660	11ga x 1	13/32	0.17
1 1/2	1.900	11ga x 1	13/32	0.18
2	2.375	11ga x 1	21/32	0.36

FIG. 233SS ONE HOLE PIPE STRAP, 304 STAINLESS STEEL, IPS
FIG. 233OD ONE HOLE PIPE STRAP, 304 STAINLESS STEEL, O.D.



Material: 304 stainless steel.

Service: Designed to support schedule 40/80 steel sized piping or tubing sizes in a horizontal position from sides of structural member. Fastener hole may be above or below the pipe.

Ordering: Specify pipe size or OD tube size, and figure number.

Notes: Stainless steel hangers are recommended for applications where protection from corrosive environments is needed.

Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL SIZE	A HOLE SIZE	WGT EACH (lbs)
1/4 OD	0.250	16ga x 7/8	9/32	.015
1/4	0.540	16ga x 7/8	9/32	.030
3/8 OD	0.375	16ga x 7/8	9/32	.015
3/8	0.675	16ga x 7/8	9/32	.030
1/2 OD	0.500	13ga x 3/4	9/32	.035
1/2	0.840	13ga x 3/4	9/32	.040
3/4 OD	0.750	13ga x 3/4	9/32	.045
3/4	1.050	13ga x 3/4	9/32	.055
1 OD	1.000	13ga x 3/4	9/32	.055
1	1.315	13ga x 3/4	9/32	.065
1 1/4	1.660	11ga x 1	5/16	.145
1 1/2	1.900	11ga x 1	5/16	.170
2	2.375	11ga x 1	5/16	.195

FIG. 235
WIRE PIPE HOOK

Material: Carbon steel.

Finish: Plain (235B) or plastic coated .

Service: Designed to support steel pipe horizontally by driving nail points into wood members.

Ordering: Specify pipe size, length and figure number and finish.

Domestically Manufactured

PIPE SIZE	WGT EACH (lbs) LENGTH				
	4"	6"	8"	10"	12"
1/2	0.05	0.06	0.08	0.1	0.12
3/4	0.05	0.06	0.08	0.1	0.12
1	0.05	0.06	0.08	0.1	0.12
1 1/4	0.05	0.06	0.08	0.1	0.12
1 1/2	0.05	0.06	0.08	0.1	0.12
2	0.05	0.06	0.08	0.1	0.12

FIG. 235CT
WIRE PIPE HOOK, COPPER

Material: Pre-copper plated carbon steel.

Finish: Copper plated.

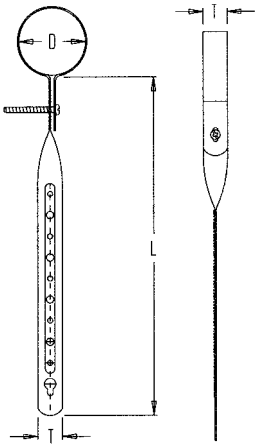
Service: Designed to support copper tubing horizontally by driving nail points into wood members.

Ordering: Specify tube size, length and figure number.4"

Domestically Manufactured

PIPE SIZE	WGT EACH (lbs) LENGTH				
	4"	6"	8"	10"	12"
1/2	0.05	0.06	0.08	0.1	0.12
3/4	0.05	0.06	0.08	0.1	0.12
1	0.05	0.06	0.08	0.1	0.12
1 1/4	0.05	0.06	0.08	0.1	0.12
1 1/2	0.05	0.06	0.08	0.1	0.12
2	0.05	0.06	0.08	0.1	0.12

FIG. 237
DWV (DRAIN, WASTE, VENT) HANGER



Material: Pre-galvanized carbon steel, pre-copper plated carbon steel.

Finish: Pre-galvanized (237G), copper plated (237CT) or plastic coated (237PC).

Service: Designed for the support of PVC or ABS DWV pipe from wood joists. Evenly spaced holes allow for proper pipe pitch.

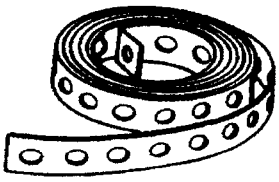
Ordering: Specify pipe size, figure number and finish.

Notes: *FIG. 237CT copper plated DWV hangers are NOT designed for copper DWV pipe.*

Domestically Manufactured
EXCLUDING 237PC

PIPE SIZE	PIPE OD D	T	L	WGT EACH (lbs)
1½	1.900	¾	12	0.20
2	2.375	¾	12	0.22
3	3.500	¾	12	0.24
4	4.500	¾	12	0.26

FIG. 239
PERFORATED HANGER STRAPPING



Material: Plain or pre-galvanized carbon steel, pre-copper plated carbon steel, type 304 stainless steel (239SS).

Finish: Plain, pre-galvanized or copper plated

Service: Designed for various light duty applications.

Ordering: Specify gauge, length, figure number and finish.

Notes: Stainless steel hangers are recommended for applications where protection from corrosive environmemts is needed.

Domestically Manufactured

SIZE	WGT EACH (lbs) LENGTH		
	10'	50'	100'
¾ X 20ga	0.83	4.15	8.30
¾ x 22ga	0.70	3.50	7.00
¾ x 24ga	0.54	2.70	5.40

FIG. 240 STUD GUARD, TRIANGLE POINT
FIG. 245 STUD GUARD, TWIST POINT

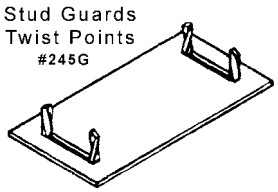
Material: Carbon steel.

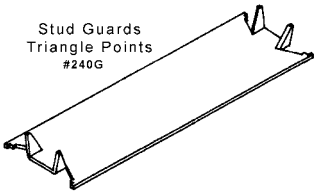
Finish: Pre-galvanized.

Service: Designed to protect piping and electrical lines that pass though wood framing from damage due to penetration from drywall or other fasteners. Simple installation with a hammer.

Ordering: Specify size & figure number.

Domestically Manufactured





PART NUMBER	GAUGE	SIZE WIDTH x LENGTH	STYLE	WGT EACH (lbs)
240G	18	1½ x 3	TRIANGLE POINT	0.06
240G	18	1½ x 5	TRIANGLE POINT	0.10
240G	18	1½ x 6	TRIANGLE POINT	0.12
245G	19	1½ x 3	TWIST POINT	0.06
245G	19	1½ x 6	TWIST POINT	0.11

FIG. 241 NAIL PLATES(NON-FHA)
FIG. 243 NAIL PLATES(FHA)

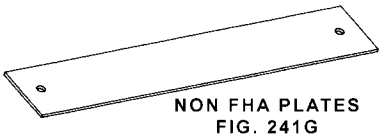
Material: Carbon steel.

Finish: Pre-galvanized.

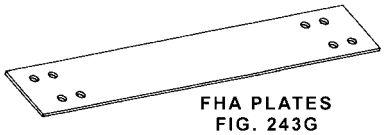
Service: Designed to protect piping and electrical lines that pass through metal framing from damage due to penetration from drywall or other fasteners. Attach with metal framing screws.

Ordering: Specify size, gauge and figure number.

Domestically Manufactured


NON FHA PLATES
FIG. 241G

PROTECTIVE PLATES (NON FHA) --241G SERIES		
GAUGE	SIZE WIDTH x LENGTH	WGT EACH (lbs)
18	1½ x 3	0.065
18	1½ x 6	0.125


FHA PLATES
FIG. 243G

PROTECTIVE PLATES (FHA) -- 243G SERIES		
GAUGE	SIZE WIDTH x LENGTH	WGT EACH (lbs)
18	1½ X 9	0.180
18	1½ X 12	0.250
18	1½ X 18	0.380
18	1½ X 24	0.500
18	3 X 6	0.250
18	3 X 9	0.380
18	3 X 12	0.520
18	3 X 18	0.780
16	1½ X 9	0.240
16	1½ X 12	0.320
16	1½ X 18	0.480
16	1½ X 24	0.640
13	1½ X 9	0.350
13	1½ X 12	0.470
13	1½ X 18	0.700
13	1½ X 24	0.980

FIG. 242G (REGULAR)
FIG. 242GSN (SELF NAILING)
BOCA SAFETY PLATE

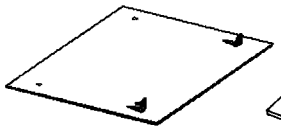
Material: Carbon steel.

Finish: Pre-galvanized.

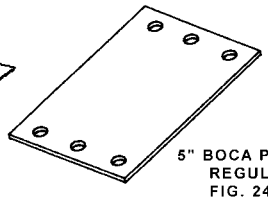
Service: Designed to protect piping and electrical lines that pass through metal framing from damage due to penetration from drywall or other fasteners. Should attach with metal framing screws.

Ordering: Specify regular or self nailing style and figure number.

Domestically Manufactured



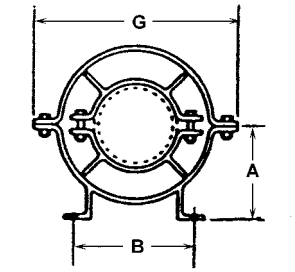
5"X8" BOCA PLATES
SELF NAILING
FIG. 242GSN

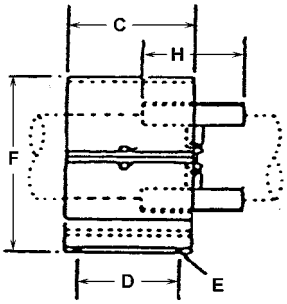


5" BOCA PLATES
REGULAR
FIG. 242G

PART NUMBER	GAUGE	SIZE WIDTH x LENGTH	STYLE	WGT EACH (lbs)
242G	16	5 x 8	Regular (holes)	0.70
242GSN	16	5 x 8	Self Nailing	0.70

FIG. 255
PIPE ALIGNMENT GUIDE
(SINGLE SPIDER CLAMP)





Material: Carbon steel.

Finish: Plain, electro-galvanized, or painted.

Service: Designed for use with insulated or non-insulated pipe lines to maintain alignment of piping through axial expansion and contraction cycles. Proper alignment of the adjoining pipe is of vital importance in the proper functioning of expansion joints in the line. Pipe guides are not designed to support any piping system weight. Therefore additional supports are required. Therefore the use of two or more guides on both sides of the expansion joint is recommended to aviod a pivoting effect in the line. Maximum temperature: 650°F.

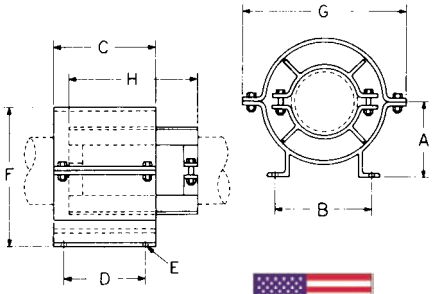
Ordering: Specify pipe size, insulation thickness, figure number and size number.

Domestically Manufactured

SIZE NO.	A	B	C	D	E	F	G	H	WGT EACH (lbs)
2	4	5 3/8	3	1 1/2	9/16	7 1/16	9 1/2	1-6	10.00
3	4 1/2	5 3/4	3	1 1/2	9/16	8 1/4	11 1/4	PIPE	11.00
4	6	7	3	1 1/2	9/16	10 3/4	12 3/4	H=4	13.00
5	7 1/2	8 5/16	3	1 1/2	11/16	13 1/4	15 1/2		17.00
6	8 1/2	8 3/4	4	2	11/16	15 1/2	17 1/2		24.00
7	9 1/4	11 11/16	4	2	13/16	17	18 3/8	8-16	31.00
8	10 1/8	12	4	2	13/16	18 3/8	20 1/2	pipe	34.00
9	11	13 1/4	6	4	13/16	20 1/4	22 3/8	H=6	52.00
10	12	13 9/16	6	4	15/16	22 1/4	24		59.00
11	13 3/4	15 1/4	6	4	15/16	26	28		78.00

GUIDE SIZE SELECTION TABLE								
PIPE SIZE	J-INSULATION THICKNESS							
	0	1	1 1/2	2	2 1/2	3	4	5
1	2	2	2	3	4	4	5	6
1 1/4	2	2	3	4	4	5	5	6
1 1/2	2	2	3	4	4	5	6	7
2	2	2	3	4	4	5	6	7
2 1/2	3	3	4	4	5	5	6	7
3	3	3	4	4	5	5	6	8
3 1/2	4	4	4	5	5	6	7	8
4	4	4	4	5	5	6	7	8
5	5	5	5	5	6	6	8	9
6	5	5	5	6	6	7	8	9
8	7	7	7	7	8	8	9	10
10	9	9	9	9	9	9	10	11
12	10	10	10	10	10	10	11	11
14	11	11	11	11	11	11	11	-
16	11	11	11	11	11	11	-	-

FIG. 256
PIPE ALIGNMENT GUIDE



Domestically Manufactured

Material: Carbon steel.

Finish: Plain, electro-galvanized or painted.

Service: Designed for use with insulated or non-insulated pipe lines to maintain alignment of piping through axial expansion and contraction cycles. Proper alignment of the adjoining pipe is of vital importance in the proper functioning of expansion joints in the line. Pipe guides are not designed to support any piping system weight, therefore additional supports are required. The use of two or more guides on both sides of the expansion joint is recommended to avoid a pivoting effect in the line. Maximum temperature is 750°F.

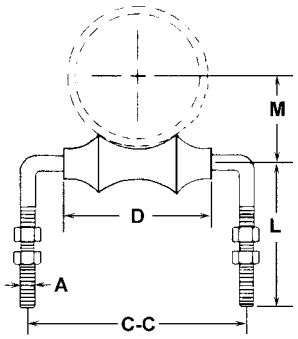
Ordering: Specify pipe size, insulation thickness, figure number and size number.

SIZE NO.	A	B	C	D	E BOLT SIZE	F	G	H	WGT EACH (lbs)
2	4	5 3/8	4	2 1/2	1/2	7 1/16	9 1/2	8	13.00
3	4 1/2	5 3/4	4	2 1/2	1/2	8 1/4	11 1/4	8	15.00
4	6	7	6	4	1/2	10 3/4	12 3/4	10	26.00
5	7 1/2	8 5/16	6	4	5/8	13 1/4	15 1/2	10	35.00
6	8 1/2	8 3/4	8	5	5/8	15 1/2	17 1/2	12	48.00
7	9 1/4	11 1/16	8	5	3/4	17	18 3/8	12	59.00
8	10 1/8	12	8	5	3/4	18 3/4	20 1/2	12	66.00
9	11	13 1/4	8	5	3/4	20 1/4	22 3/8	12	69.00
10	12	13 9/16	8	5	7/8	22 1/4	24	12	88.00
11	13 3/4	15 1/4	8	5	7/8	26	28	12	132.00
12	14 3/4	15 3/4	8	5	7/8	28	30	12	144.00
13	16 1/4	18 3/4	8	5	1	31 1/2	34	12	153.00
14	18 1/4	19 1/2	8	5	1	35 1/2	38	12	172.00

GUIDE SIZE SELECTION TABLE

PIPE SIZE	J-INSULATION THICKNESS							
	0	1	1 1/2	2	2 1/2	3	4	5
1	2	2	2	3	4	4	5	6
1 1/4	2	2	3	4	4	5	5	6
1 1/2	2	2	3	4	4	5	6	7
2	2	2	3	4	4	5	6	7
2 1/2	3	3	4	4	5	5	6	7
3	3	3	4	4	5	5	6	8
3 1/2	4	4	4	5	5	6	7	8
4	4	4	4	5	5	6	7	8
5	5	5	5	5	6	6	8	9
6	5	5	5	6	6	7	8	9
8	7	7	7	7	8	8	9	10
10	9	9	9	9	9	9	10	11
12	10	10	10	10	10	10	11	11
14	11	11	11	11	11	11	11	12
16	11	11	11	11	11	11	12	13
18	12	12	12	12	12	12	13	13
20	13	13	13	13	13	13	13	14
24	14	14	14	14	14	14	14	-

FIG. 271
ADJUSTABLE ROLLER SUPPORT



Material: Carbon steel rod with cast iron roller.

Finish: Plain, galvanized or painted.

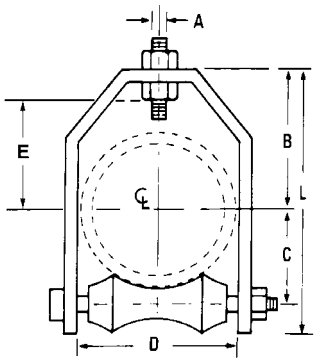
Service: Designed for support of pipe where longitudinal movement of pipe may occur due to expansion and contraction, and where vertical adjustment may be necessary.

Ordering: Specify roller size, figure number and finish. Please remember to consider insulation thickness when sizing rollers.

Notes: **Available domestic**

PIPE SIZE	A	CC	D	L	M	WGT EACH (lbs)	MAX REC LOAD (lbs)
2	3/8	4 1/2	2 5/8	4 1/2	1 5/8	.85	300
2 1/2	1/2	5	3 1/8	4 1/2	1 15/16	1.40	600
3	1/2	6 1/8	3 3/4	4 1/2	2 1/4	1.65	600
3 1/2	1/2	6 1/2	4 1/4	4 1/2	2 9/16	1.63	600
4	1/2	7 3/8	4 3/4	4 1/2	2 13/16	1.85	700
5	5/8	8 1/2	5 13/16	4 1/2	3 7/16	2.92	700
6	3/4	10	6 7/8	4 1/2	4 1/16	4.64	1000
8	7/8	12	8 7/8	5 1/4	5 1/8	7.27	1300
10	7/8	14	11	5 1/2	6 3/8	10.24	1700
12	7/8	16	13	6	7 5/16	12.30	2300
14	1 1/8	17 1/2	14 1/4	7	8 7/16	21.36	3075
16	1 1/4	19	16 1/4	8	9 1/2	27.70	3075

FIG. 272
ADJUSTABLE ROLLER HANGER



"E" dimension includes exposed rod threads beyond bottom of the hex nut. Exposed rod thread dimension is equal to the diameter of the rod used.

Material: Carbon steel yoke and crossbolt with cast iron roller.

Finish: Plain, electro-galvanized or painted.

Service: Designed for the suspension of pipe where longitudinal movement of pipe may occur due to expansion and contraction, and where vertical adjustment may be necessary.

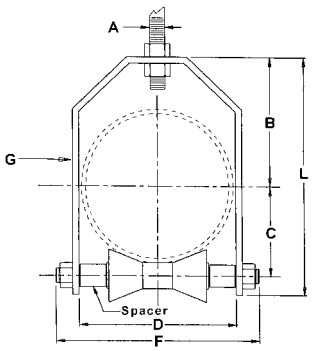
Approvals: Complies with Federal Specification WW-H-171-E (Type# 44), A-A-1192 A (Type# 43) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 43).

Ordering: Specify roller size, figure number and finish. Please remember to consider insulation thickness when sizing rollers.

Notes: **Available domestic**

HANGER SIZE	MATERIAL SIZE	A	B	C	D	E	L	WGT EACH (lbs)	MAX REC LOAD (lbs)
2	8ga x 1.25	1/2	3 3/8	1 9/16	2 7/8	2 1/4	5 5/8	1.14	150
2 1/2	8ga x 1.25	1/2	3 15/16	1 7/8	3 1/4	2 13/16	6 1/2	1.47	225
3	8ga x 1.25	1/2	4 5/16	2 1/8	3 13/16	3 3/16	7 3/16	1.62	310
3 1/2	3ga x 1.50	1/2	4 5/8	2 1/2	4 5/16	3 7/16	7 15/16	2.76	390
4	3ga x 1.50	5/8	4 13/16	2 13/16	4 7/8	3 3/8	8 1/2	3.16	475
5	3ga x 2.00	5/8	5 3/4	3 3/8	5 7/8	4 5/16	9 15/16	4.62	685
6	3ga x 2.00	3/4	6 3/8	3 15/16	7	4 5/8	11 1/4	6.08	780
7	3ga x 2.00	3/4	6 5/16	4 1/2	8	4 9/16	11 5/8	7.59	780
8	3/8 x 2.00	7/8	7 9/16	5 1/8	9	5 7/16	13 7/8	11.83	780
10	3/8 x 2.50	7/8	8 3/4	6 1/4	11 1/8	6 5/8	16 1/4	17.29	965
12	1/2 x 2	7/8	9 5/8	7 3/8	13	7 7/8	18 7/8	22.50	1200
14	1/2 x 2 1/2	1	11 1/4	8 3/8	14 1/4	9 1/4	21 7/8	33.00	1200
16	1/2 x 3	1	12 1/4	9 3/8	16 1/4	10 1/4	24 1/8	46.00	1200
18	1/2 x 3	1	13 1/4	10 1/2	18 1/4	11 1/4	26 1/2	50.50	1400
20	5/8 x 3	1 1/4	14 1/4	11 5/8	20 1/4	12 1/4	28 1/8	65.00	1600

FIG. 272SS
ADJUSTABLE ROLLER HANGER



Material: All 304 stainless steel construction.

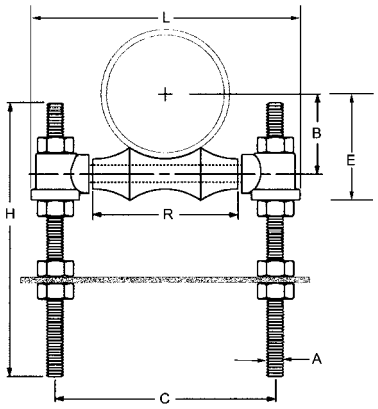
Service: Designed for the suspension of pipe where longitudinal movement of pipe may occur due to expansion and contraction and where vertical adjustment may be necessary. Excellent corrosion resistance.

Approvals: Complies with Federal Specification WW-H-171-E (Type# 44), A-A-1192 A (Type# 43) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 43).

Ordering: Specify roller size and figure number. Please remember to consider insulation thickness when sizing rollers.

Size No.	A	B	C	D	F	G	L	Cross Rod Dia.
4	5/8	5 3/16	2 13/16	4 7/8	6 1/2	1/4 x 2	9 1/4	3/4
6	3/4	6 7/16	3 15/16	7	9 1/2	1/4 x 2	11 5/8	3/4
8	7/8	7 1/2	5 1/4	9	11 7/8	3/8 x 2	14	7/8
10	7/8	8 3/4	6 3/8	11	14 1/4	3/8 x 2 1/2	16 1/2	7/8
12	7/8	10 1/16	7 7/16	13	16 1/4	1/2 x 2	18 7/8	1 1/8
14	1	10 15/16	8 3/16	14 1/4	18	1/2 x 2 1/2	20 5/8	1 1/8
16	1	12 13/16	9 5/16	16 1/4	21	1/2 x 3	24 3/8	1 1/4
18	1	13 3/4	10 3/8	18 1/4	22 7/8	1/2 x 3	26 1/8	1 1/4
20	1 1/4	15 1/16	11 5/16	20 1/4	25 1/2	5/8 x 3	28 11/16	1 1/4

FIG. 273
ADJUSTABLE TWO-ROD ROLLER SUPPORT



Material: Carbon steel axles and rods with cast iron rollers and sockets.

Finish: Plain, electro-galvanized or painted.

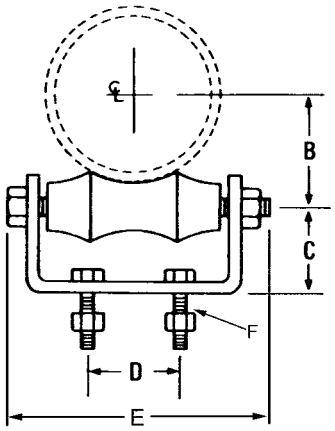
Service: Designed for the support of pipe where longitudinal movement may occur due to expansion and contraction and vertical adjustment of up to 6 inches may be necessary.

Ordering: Specify roller size, figure number and finish. Please remember to consider insulation thickness when sizing rollers.

Notes: **Available domestic**

PIPE ROLLER SIZE	PIPE OD	AXLE SIZE	A	B	C	E	H	L	R	WGT EACH (lbs)	MAX REC LOAD (lbs)
2	2.375	3/8	3/8	1 9/16	4 3/8	2 3/16	12	5 5/8	2 7/8	1.450	600
2 1/2	2.875	1/2	1/2	1 7/8	5 1/8	2 5/8	12	6 1/2	3 1/8	2.535	600
3	3.500	1/2	1/2	2 1/8	5 5/8	2 7/8	12	7	3 3/4	2.735	700
3 1/2	4.000	1/2	1/2	2 1/2	5 7/8	3 1/4	12	7 1/4	3 7/8	2.850	750
4	4.500	1/2	5/8	2 13/16	7	3 13/16	12	8 9/16	4 3/4	4.320	750
5	5.563	5/8	5/8	3 3/8	8 1/8	4 3/8	12	9 3/4	5 3/4	4.780	750
6	6.625	3/4	3/4	3 15/16	9 3/4	4 15/16	12	11 5/8	6 7/8	7.705	1070
7	7.625	3/4	3/4	4 1/2	10 1/2	5 1/4	12	12 1/2	8	8.410	1070
8	8.625	7/8	7/8	5 1/8	12 1/8	6 3/8	12	14 1/4	8 7/8	12.205	1350
10	10.750	7/8	7/8	6 1/4	14	7 1/2	12	16 1/4	11	13.950	1730
12	12.750	7/8	7/8	7 5/16	15 3/4	8 9/16	12	18	13	17.930	2400
14	14.000	1 1/8	1	8 3/8	17 3/4	9 13/16	18	20 1/2	14 1/4	27.545	3130
16	16.000	1 1/4	1	9 1/2	20 9/16	10 15/16	18	23 3/8	16 7/8	33.340	3970
18	18.000	1 1/4	1	10 7/16	22	11 7/8	18	24 7/8	18 5/16	36.000	4200
20	20.000	1 1/4	1 1/4	11 1/2	24	13 3/8	18	27	20 1/4	46.600	4550
24	24.000	1 1/2	1 1/2	13 13/16	28 3/4	16 1/16	24	32	24 1/4	81.220	6160
30	30.000	1 3/4	1 1/2	17 1/4	35 5/8	19 5/8	24	39 3/4	30 1/4	109.220	7290

FIG. 275
ROLLER CHAIR



Material: Carbon steel chair and axle with cast iron roller.

Finish: Plain, electro-galvanized or painted.

Service: Designed for the support of pipe where longitudinal movement may occur due to expansion and contraction, and vertical adjustment is not necessary. May be bolted or welded to supporting member.

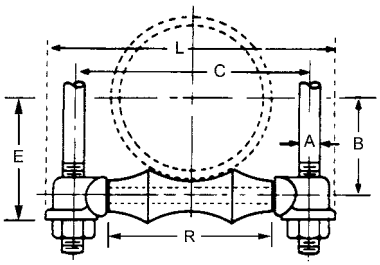
Ordering: Specify roller size, figure number and finish. Please remember to consider insulation thickness when sizing rollers.

NOTES: Also available in 304 stainless steel (275SS).

Available domestic

HANGER SIZE	MATERIAL SIZE	AXLE SIZE	B	C	D	E	F	WGT EACH (lbs)	MAX REC LOAD (lbs)
2	4ga x 1.25	3/8	1 9/16	1 3/8	1 1/4	4 1/4	3/8	0.94	390
2 1/2	4ga x 1.25	1/2	1 7/8	1 5/8	1 1/4	4 7/8	3/8	1.18	390
3	4ga x 1.25	1/2	2 1/8	1 3/4	2	5 11/32	3/8	1.32	390
3 1/2	3/8 x 1.500	1/2	2 1/2	2	2 1/2	6 11/32	3/8	2.58	390
4	3/8 x 1.500	1/2	2 13/16	2 5/16	2	7 11/32	1/2	2.94	950
5	3/8 x 1.500	5/8	3 3/8	2 1/2	3	8 1/4	1/2	3.64	950
6	3/8 x 2.00	3/4	3 15/16	2 3/4	3 1/8	9 1/2	1/2	5.72	950
7	3/8 x 2.00	3/4	4 1/2	2 13/16	3 3/8	10	1/2	6.98	1350
8	3/8 x 2.00	7/8	5 1/8	3	3 3/8	12 1/4	5/8	8.16	1350
10	1/2 x 2	7/8	6 3/8	3 5/8	5	14 1/2	5/8	11.96	1730
12	1/2 x 2	7/8	7 1/2	4 1/8	6	16 1/4	5/8	15.86	2400
14	1/2 x 2.50	1 1/8	8 3/8	4 11/16	6 1/2	18	3/4	21.58	3130
16	1/2 x 3	1 1/4	9 3/8	5 3/8	8 1/4	21	3/4	34.50	3970
18	1/2 x 3	1 1/4	10 7/16	6	9 1/4	22 7/8	3/4	36.50	4200
20	1/2 x 3	1 1/4	11 5/8	6 1/2	10 1/4	25 1/4	3/4	45.00	4550
24	5/8 x 4	1 1/2	14	7 7/8	12 1/4	30	7/8	77.50	6160

FIG. 277
ADJUSTABLE TWO ROD ROLLER HANGER



Material: Carbon steel axle with cast iron roller and socket ends.

Finish: Plain, electro-galvanized or painted.

Service: Designed for the suspension of pipe where longitudinal movement may occur due to expansion and contraction, and vertical adjustment is necessary.

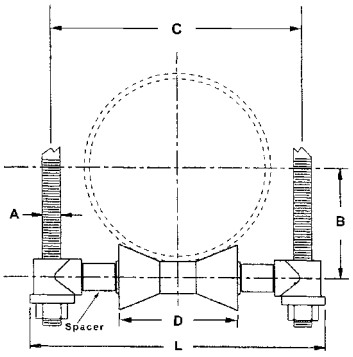
Approvals: Complies with Federal Specification WW-H-171-E (Type# 42), A-A-1192 A (Type# 41) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 41).

Ordering: Specify roller size, figure number and finish. Please remember to consider insulation thickness when sizing rollers.

Notes: **Available domestic**

PIPE ROLLER SIZE	PIPE OD	AXLE SIZE	A	B	C	E	L	R	WGT EACH (lbs)	MAX REC LOAD (lbs)
2	2.375	3/8	3/8	1 9/16	4 3/8	2 3/16	5 5/8	2 7/8	0.760	600
2 1/2	2.875	1/2	1/2	1 7/8	5 1/8	2 5/8	6 1/2	3 1/8	1.185	660
3	3.500	1/2	1/2	2 1/8	5 5/8	2 7/8	7	3 3/4	1.385	700
3 1/2	4.000	1/2	1/2	2 1/2	5 7/8	3 1/4	7 1/4	3 7/8	1.500	750
4	4.500	1/2	5/8	2 13/16	7	3 13/16	8 9/16	4 3/4	2.110	750
5	5.563	5/8	5/8	3 3/8	8 1/8	4 3/8	9 3/4	5 3/4	2.570	750
6	6.625	3/4	3/4	3 15/16	9 3/4	4 15/16	11 5/8	6 7/8	4.395	1070
7	7.625	3/4	3/4	4 1/2	10 1/2	5 1/4	12 1/2	8	5.160	1100
8	8.625	7/8	7/8	5 1/8	12 1/8	6 3/8	14 1/4	8 7/8	7.425	1350
10	10.750	7/8	7/8	6 1/4	14	7 1/2	16 1/4	11	9.170	1730
12	12.750	7/8	7/8	7 5/16	15 3/4	8 9/16	18	13	13.150	2400
14	14.000	1 1/8	1	8 3/8	17 3/4	9 13/16	20 1/2	14 1/4	18.745	3130
16	16.000	1 1/4	1	9 1/2	20 9/16	10 15/16	23 3/8	16 7/8	24.540	3970
18	18.000	1 1/4	1	10 7/16	22	11 7/8	24 7/8	18 5/16	27.200	4200
20	20.000	1 1/4	1 1/4	11 1/2	24	13 3/8	27	20 1/4	32.000	4550
24	24.000	1 1/2	1 1/2	13 13/16	28 3/4	16 1/6	32	24 1/4	54.000	6160
30	30.000	1 3/4	1 1/2	17 1/4	35 5/8	19 5/8	39 3/4	30 1/4	82.000	7290

FIG. 277SS
ADJUSTABLE TWO ROD ROLLER HANGER, 304 STAINLESS STEEL



Material: All 304 stainless steel construction.

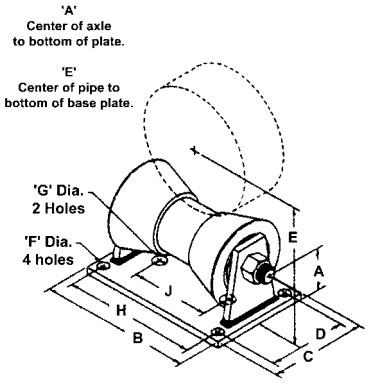
Service: Designed for the suspension of pipe where longitudinal movement of pipe may occur due to expansion and contraction and where vertical adjustment may be necessary. Excellent corrosion resistance.

Approvals: Complies with Federal Specification WW-H-171-E (Type# 42), A-A-1192 A (Type# 41) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 41).

Ordering: Specify roller size and figure number. Please remember to consider insulation thickness when sizing rollers.

Size No.	A	B	C	D	L	Cross Rod Dia.
4	3/4	2 13/16	6 3/4	3 3/4	8 9/16	3/4
6	3/4	3 15/16	9 9/16		11 7/16	3/4
8	7/8	5 1/4	11 15/16	6	14 1/8	7/8
10	7/8	6 3/8	14 1/16		16 1/4	7/8
12	1	7 7/16	16 5/16	8	19 3/4	1 1/8
14	1	8 3/16	17 3/4		20 3/16	1 1/8
16	1 1/4	9 5/16	20 3/4	9	23 9/16	1 1/4
18	1 1/4	10 3/8	21 7/8		24 5/8	1 1/4
20	1 1/4	11 5/16	24 1/4		27 1/16	1 1/4

FIG. 279S PIPE ROLL STAND, CARBON STEEL
FIG. 279SS PIPE ROLLER STAND, 304 STAINLESS STEEL



Material: Carbon steel chair and axle with cast iron roller.

Finish: Plain, galvanized, electro-galvanized, or painted.

Service: Designed for support of pipe where longitudinal movement may occur due to expansion and contraction where vertical adjustment is not necessary.

Approvals: Complies with Federal Specification WW-H-171-E (Type# 45), A-A-1192 A (Type# 44) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 44).

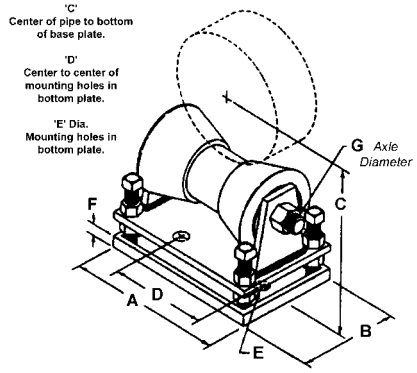
Ordering: Specify roller size, figure number and finish. Please remember to consider insulation thickness when sizing rollers.

Notes: Stainless steel roller chairs are recommended for applications where protection from corrosive environments is needed.

Available domestic

PIPE SIZE	A	B	C	D	E	DIA. F	DIA. G	H	J	WGT EACH (lbs)	MAX REC LOAD (lbs
2	1 3/4	8 3/8	6	4	3 11/16	9/16	1	3 3/8	6 3/8	5.08	390
2 1/2	1 3/4	8 3/8	6	4	3 15/16	9/16	1	3 3/8	6 3/8	5.08	390
3	1 3/4	8 3/8	6	4	4 1/4	9/16	1	3 3/8	6 3/8	5.08	390
3 1/2	1 3/4	8 3/8	6	4	4 1/2	9/16	1	3 3/8	6 3/8	5.08	390
4	2	9 7/8	6	4 1/4	5	9/16	1	4 3/4	7 7/8	6.31	650
5	2	9 7/8	6	4 1/4	5 9/16	9/16	1	4 3/4	7 7/8	6.31	950
6	2	9 7/8	6	4 1/4	6 1/16	9/16	1	4 3/4	7 7/8	6.31	950
8	3 3/8	8 5/8	8	5	8 13/16	11/16	1	7	4	13.65	2100
10	3 3/8	8 5/8	8	5	9 7/8	11/16	1	7	4	13.65	2100
12	3 7/8	11	8	6	11 7/16	13/16	1	9	5 3/4	21.00	3075
14	3 7/8	11	8	6	12 1/16	13/16	1	9	5 3/4	21.00	3075
16	4 1/4	12 3/8	10	6 1/2	13 5/8	13/16	1	10 3/8	6 3/4	34.23	4980
18	4 1/4	12 3/8	10	6 1/2	14 11/16	13/16	1	10 3/8	6 3/4	34.23	4980
20	4 1/4	12 3/8	10	6 1/2	15 11/16	13/16	1	10 3/8	6 3/4	34.23	4980
24	4 3/8	13 1/2	10	6 1/2	17 11/16	13/16	1	11 1/2	7 1/2	40.00	6100
30	5 1/8	17	10	7 3/4	21 3/4	1 1/16	1	14 1/4	10	71.32	7500
36	5 3/4	20	12	9	25 3/4	1 3/8	1	17	12	147	12000
42	5 3/4	20	12	9	28 7/8	1 3/8	1	17	12	147	12000

FIG. 280S ADJUSTABLE PIPE ROLL STAND, CARBON STEEL
FIG. 280SS ADJUSTABLE PIPE ROLLER STAND, 304 STAINLESS STEEL



Material: Carbon steel chair base plate and axle with cast iron roller.

Finish: Plain, galvanized or painted.

Service: Designed for the support of pipe where longitudinal movement may occur due to expansion and contraction, and where vertical adjustment is necessaary**.**

Approvals: Complies with Federal Specification WW-H-171-E (Type# 47), A-A-1192 A (Type# 46) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 46).

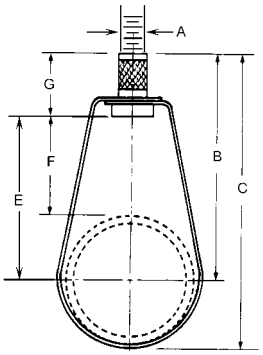
Ordering: Specify roller size, figure number and finish. Please remember to consider insulation thickness when sizing rollers.

Notes: *Stainless steel adjustable roller chair supports are recommended for applications where protection from corrosive environments is needed.

Available domestic

PIPE SIZE	A	B	C MIN	C MAX	D	E	F	G	WGT EACH (lbs)	MAX REC LOAD (lbs)
2	6 7/8	6	4 3/4	5 5/8	3 7/8	1	1	1/2	11.00	390
2 1/2	6 7/8	6	5	5 7/8	3 7/8	1	1	1/2	11.00	390
3	6 7/8	6	5 5/16	6 9/16	3 7/8	1	1	1/2	11.00	390
3 1/2	6 7/8	6	5 9/16	6 7/16	3 7/8	1	1	1/2	11.00	390
4	8 1/2	6	6 3/16	7 7/16	5 1/8	1	1	1/2	13.10	950
5	8 1/2	6	6 3/4	8	5 1/8	1	1	1/2	13.10	950
6	8 1/2	6	7 1/4	8 1/2	5 1/8	1	1	1/2	13.10	950
8	10 1/2	7 1/2	10 1/8	11 11/16	7 3/8	1	1	3/4	29.00	2100
10	10 1/2	7 1/2	11 3/16	12 3/4	7 3/8	1	1	3/4	29.00	2100
12	12 1/2	8 1/4	12 3/4	14 1/8	9 1/2	1	1	7/8	40.00	3075
14	12 1/2	8 1/4	13 3/8	14 3/8	9 1/2	1	1	7/8	40.00	3075
16	14 5/8	10	15 3/8	17 1/4	11 1/8	1	1	1 1/8	63.84	4980
18	14 5/8	10	16 3/8	18 1/4	11 1/8	1	1	1 1/8	63.84	4980
20	14 5/8	10	17 3/8	19 1/4	11 1/8	1	1	1 1/8	63.84	4980
24	15 3/4	10	19 1/4	21 1/4	12 1/4	1	1	1 1/4	71.00	6100
30	19 1/2	10 3/4	24 7/16	26 11/16	15 3/4	1	1 1/2	1 3/4	125.28	7500

FIG. 310G "EM-LOK" ADJUSTABLE SWIVEL RING HANGER, DOMESTIC



Material: Pre-galvanized carbon steel.

Finish: Pre-galvanized and plastic coated.

Service: Designed for the suspension of non-insulated stationary pipe lines. Plastic coating prevents pipe from coming in contact with hanger and is designed to reduce noise, vibration and prevent electrolysis between pipe and hanger.

Approvals: U.L. - U.L.C. listed and FM approved. Complies with Federal Specification WW-H-171-E (Type# 10), A-A-1192 A (Type# 10) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 10).

Ordering: Specify pipe size, figure number and finish.

FM APPROVED

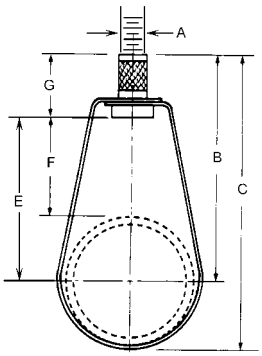
c UL us LISTED

Domestically Manufactured
EXCLUDING 310PC

PIPE SIZE	PIPE OD	MATERIAL SIZE	A	B	C	E	F	G	WGT EACH (lbs)	MAX REC LOAD (lbs)
1/2	0.840	18ga x 5/8	3/8	2 1/2	2 7/8	1 5/8	1 3/16	7/8	0.08	400
3/4	1.050	18ga x 5/8	3/8	2 7/16	2 15/16	1 9/16	1 1/16	7/8	0.08	400
1	1.315	18ga x 5/8	3/8	2 5/8	3 1/4	1 3/4	1 1/16	7/8	0.08	600
1 1/4	1.660	18ga x 5/8	3/8	2 9/16	3 3/8	1 11/16	7/8	7/8	0.10	600
1 1/2	1.900	18ga x 5/8	3/8	2 11/16	3 5/8	1 13/16	7/8	7/8	0.10	600
2	2.375	18ga x 5/8	3/8	3 3/8	4 1/2	2 1/2	1 5/16	7/8	0.12	600
2 1/2	2.875	14ga x 3/4	1/2	3 11/16	5 1/8	2 3/4	1 1/4	1 1/16	0.32	600
3	3.500	14ga x 3/4	1/2	4	5 7/8	3 1/8	1 1/8	1 1/16	0.35	600
3 1/2	4.000	14ga x 3/4	1/2	4 5/16	6 5/8	3 5/8	1 1/2	1 1/16	0.39	600
4	4.500	13ga x 3/4	5/8	4 15/16	7 1/8	3 7/8	1 1/4	1 1/8	0.43	1000
5	5.563	12ga x 1	5/8	5 5/8	8 1/2	4 3/8	1 3/8	1 1/8	0.65	1000
6	6.625	12ga x 1	3/4	6 11/16	10 1/8	5 5/16	2	1 3/8	1.09	1250
8	8.625	11ga x 1	3/4	8 5/16	12 7/8	6 15/16	2 5/8	1 3/8	1.24	1250

FIG. 310CT
COPPER TUBING “EMLOK” ADJUSTABLE SWIVEL RING HANGER

FIG. 310CTI
EPOXY COATED (*COPPER-GARD*) COPPER TUBING “EMLOK” ADJUSTABLE SWIVEL RING HANGER



Material: Carbon steel.

Finish: Copper plated (310CT) or Copper epoxy coated (*COPPER-GARD*).

Service: Designed for the suspension of non-insulated, stationary copper lines.

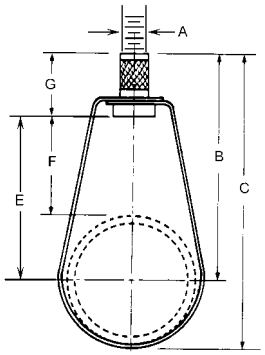
Approvals: Complies with Federal Specification WW-H-171-E (Type# 10), A-A-1192 A (Type# 10) and Manufacturers’ Standardization Society MSS SP-58 and SP-69 (Type# 10).

Ordering: Specify tubing size and figure number.

Domestically Manufactured
EXCLUDING 310CTI

TUBE SIZE	TUBE OD	MATERIAL SIZE	A	B	C	E	F	G	WGT EACH (lbs)	MAX REC LOAD (lbs)
1/2	0.625	18ga x .625	3/8	2 11/16	3	1 13/16	1 1/2	7/8	0.070	300
3/4	0.875	18ga x .625	3/8	2 1/2	2 15/16	1 5/8	1 3/16	7/8	0.070	300
1	1.125	18ga x .625	3/8	2 7/16	3	1 9/16	1	7/8	0.070	300
1 1/4	1.375	18ga x .625	3/8	2 1/2	3 3/16	1 5/8	15/16	7/8	0.080	300
1 1/2	1.625	18ga x .625	3/8	2 9/16	3 3/8	1 11/16	7/8	7/8	0.085	300
2	2.125	18ga x .625	3/8	3 5/16	4 3/8	2 7/16	1 3/8	7/8	0.100	300
2 1/2	2.625	14ga x 1.00	1/2	3 7/8	5 9/16	2 13/16	1 1/2	1 1/16	0.310	525
3	3.125	14ga x 1.00	1/2	4 3/16	5 3/4	3 1/8	1 9/16	1 1/16	0.345	525
3 1/2	3.625	14ga x 1.00	1/2	4 9/16	6 3/8	3 1/2	1 11/16	1 1/16	0.375	525
4	4.125	14ga x 1.00	1/2	4 13/16	6 15/16	3 3/4	1 11/16	1 1/16	0.410	650
5	5.125	14ga x 1.00	1/2	5 3/16	7 13/16	4 1/8	1 9/16	1 1/16	0.475	1000
6	6.125	14ga x 1.00	1/2	5 11/16	8 15/16	4 5/8	1 9/16	1 1/16	0.530	1000

FIG. 310NF “EM-LOK” ADJUSTABLE SWIVEL RING HANGER, NFPA



Material: Pre-galvanized carbon steel.

Finish: Pre-galvanized.

Service: Designed for the suspension of non-insulated stationary pipe lines. Typically used as a pipe support for sprinkler piping. Hanger is manufactured to use minumum rod sizes permitted by NFPA.

Approvals: U.L. - U.L.C. listed and FM approved (3/4"-8"). Complies with Federal Specification WW-H-171-E (Type# 10), A-A-1192 A (Type# 10) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 10).

Ordering: Specify pipe size and figure number.

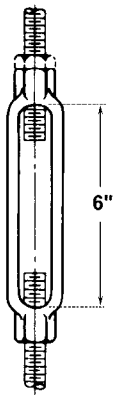
FM APPROVED

c UL us LISTED

Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL SIZE	A	B	C	E	F	G	WGT EACH (lbs)	MAX REC LOAD (lbs)
1/2	0.840	18ga x 5/8	3/8	2 1/2	2 7/8	1 5/8	1 3/16	7/8	0.08	400
3/4	1.050	18ga x 5/8	3/8	2 7/16	2 15/16	1 9/16	1 1/16	7/8	0.08	400
1	1.315	18ga x 5/8	3/8	2 5/8	3 1/4	1 3/4	1 1/16	7/8	0.08	600
1 1/4	1.660	18ga x 5/8	3/8	2 9/16	3 3/8	1 11/16	7/8	7/8	0.10	600
1 1/2	1.900	18ga x 5/8	3/8	2 11/16	3 5/8	1 13/16	7/8	7/8	0.10	600
2	2.375	18ga x 5/8	3/8	3 3/8	4 1/2	2 1/2	1 5/16	7/8	0.12	600
2 1/2	2.875	14ga x 3/4	3/8	3 7/8	5 3/8	3 1/8	1 3/8	7/8	0.24	600
3	3.500	14ga x 3/4	3/8	4 1/2	6 1/4	3 5/8	1 5/8	7/8	0.28	600
3 1/2	4.000	14ga x 3/4	3/8	4 7/8	6 7/8	4	1 3/4	7/8	0.32	600
4	4.500	14ga x 3/4	3/8	5	7 1/4	4 1/8	1 5/8	7/8	0.32	1000
5	5.563	13ga x 3/4	1/2	5 3/4	8 1/2	4 1/4	1 7/8	1 1/16	0.62	1000
6	6.625	12ga x 3/4	1/2	6 3/4	10 1/8	5 1/8	2 1/8	1 1/16	0.65	1250
8	8.625	11ga x 1	1/2	7 7/8	12 1/4	7	2 3/8	1 1/16	1.00	1250
10	10.750	11ga x 1 1/4	1/2	9 11/16	15 1/16	8 5/8	3 1/4	1 1/16	1.675	1250

FIG. 320 (DOMESTIC) & 320I TURNBUCKLE



Material: Forged steel.

Finish: Plain, electro-galvanized, hot-dip galvanized.

Service: Hanger rod connector, tapped right hand x left hand thread to provide up to 6 inches of adjustment. Normally tapped for UNC-2A thread (standard).

Approvals: Complies with Federal Specification WW-H-171-E (Type# 13), A-A-1192 A (Type# 13) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 13).

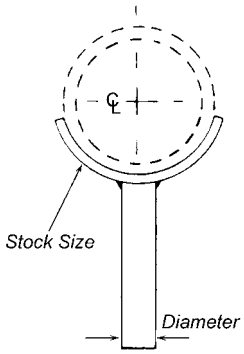
Ordering: Specify size, figure number and finish.

Notes: When figure 320I is supplied hot-dip galvanized, it is not tapped oversize.

Domestically Manufactured
EXCLUDING 320I

SIZE A	WGT EACH (lbs)	MAX REC LOAD (lbs)	
		650°F	700°F
3/8-16	0.42	610	540
1/2-13	0.65	1130	1010
5/8-11	0.98	1810	1610
3/4-10	1.50	2710	2420
7/8-11	1.90	3770	3360
1-8	2.60	4960	4420
1 1/8-7	4.20	6230	5560
1 1/4-7	4.50	8000	7140
1 1/2-6	6.40	11630	10370

FIG. 420 PIPE SADDLE SUPPORT



Material: Carbon steel.

Finish: Plain, electro-galvanized or painted.

Service: Designed to be used in conjunction with a base stand to support pipe running close to the floor.

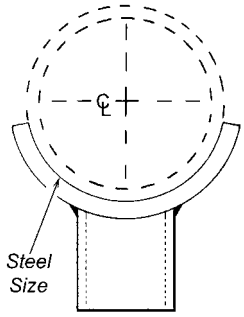
Approvals: Complies with Federal Specification WW-H-171-E (Type# 37), A-A-1192 A and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 36).

Ordering: Specify size, figure number and finish. Base stand ordered separately (requires accurate center line of pipe to floor dimension). Base stand can be ordered separately.

Domestically Manufactured

PIPE SIZE	STEEL SIZE	DIAMETER AND LENGTH OF STEM	WGT EACH (lbs)
2	1 1/2 x 3/8	7/8 x 6	1.57
3	1 1/2 x 3/8	7/8 x 6	1.85
4	2 x 3/8	1 x 6	2.70
5	2 x 3/8	1 x 6	3.14
6	2 x 1/2	1 1/4 x 6	4.90
8	2 x 1/2	1 1/4 x 6	5.75
10	3 x 1/2	1 1/2 x 6	9.88
12	3 x 1/2	1 1/2 x 6	11.40

FIG. 421
ADJUSTABLE PIPE SADDLE SUPPORT WITH THREADED COUPLING



Material: Carbon steel.

Finish: Plain, electro-galvanized or painted.

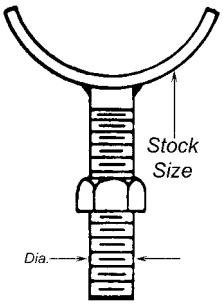
Service: Designed to be used in conjunction with a base stand to support pipe running close to the floor.

Ordering: Specify pipe size, figure number and finish. Base stand can be ordered separately (requires accurate center line of pipe to floor dimension).

Domestically Manufactured

PIPE SIZE	STEEL SIZE	PIPE SIZE, THREADED COUPLING	WGT EACH (lbs)
2	3/8 x 2	1 1/4	1.35
3	3/8 x 2 1/2	1 1/2	2.45
4	3/8 x 3	2	3.63
5	3/8 x 3	2	4.30
6	1/2 x 3 1/2	2 1/2	7.03
8	1/2 x 3 1/2	2 1/2	8.53
10	1/2 x 4	3	13.04
12	1/2 x 4	3	15.07

FIG. 422
ADJUSTABLE PIPE SUPPORT



Material: Carbon steel.

Finish: Plain, electro-galvanized or painted.

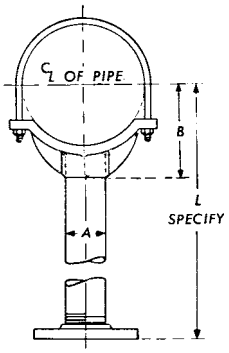
Service: Designed to be used in conjunction with a base stand to support pipe running close to the floor. Threaded stud and nut provide adjustability.

Ordering: Specify size, figure number and finish. Base stand can be ordered separately (requires accurate center line of pipe to floor dimension).

Domestically Manufactured

PIPE SIZE	STEEL SIZE	DIAMETER AND LENGTH OF STEM	WGT EACH (lbs)
2	1 1/2 x 3/8	7/8 x 8	1.92
3	1 1/2 x 3/8	7/8 x 8	2.20
4	2 x 3/8	1 x 8	3.23
5	2 x 3/8	1 x 8	3.67
6	2 x 1/2	1 1/4 x 8	5.92
8	2 x 1/2	1 1/4 x 8	6.77
10	3 x 1/2	1 1/2 x 8	11.56
12	3 x 1/2	1 1/2 x 8	13.08

FIG. 425
PIPE SADDLE SUPPORT WITH U-BOLT



Material: Carbon steel, saddle, support and u-bolt.

Finish: Plain, electro-galvanized or painted.

Service: Designed to be used in conjunction with a base stand to support pipe running close to the floor. U-bolt secures pipe to saddle.

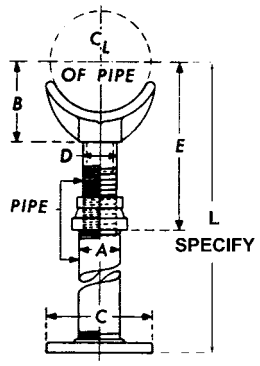
Approvals: Complies with Federal Specification WW-H-171-E (Type# 37), A-A-1192 A (Type# 36) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 36).

Ordering: Specify size, figure number and finish. Base stand ordered separately. Requires accurate center line of pipe to floor dimension ("L") .

Domestically Manufactured

PIPE SIZE	PIPE SIZE	B	WGT EACH (lbs)
	A		
4	3	4 3/16	10.75
5	3	4 13/16	12.10
6	3	5 7/16	12.70
8	3	6 15/16	21.30
10	3	8 7/16	25.70
12	3	9 15/16	31.20
14	4	10 15/16	50.00
16	4	12 3/8	57.00
18	4	13 7/8	64.00
20	6	15 3/8	113.50
24	6	17 15/16	137.00
30	6	21 15/16	174.00
36	8	24 1/2	268.00

FIG. 426
ADJUSTABLE PIPE SADDLE SUPPORT



Material: Carbon steel saddle and nipple with special cast iron reducing coupling.

Finish: Plain, electro-galvanized or painted.

Service: Designed to be used in conjunction with a base stand to support horizontal pipe. Straight cut pipe thread on nipple provides adjustability.

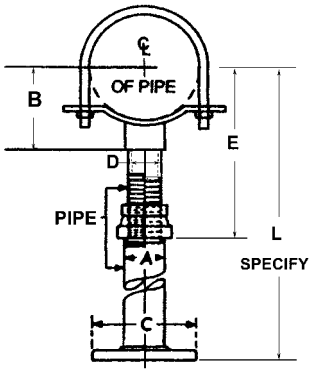
Approvals: Complies with Federal Specification WW-H-171-E (Type# 39), A-A-1192 A (Type# 38) and Manufacturers' Standardization Society MSS SP 58 and SP 69 (Type#38).

Ordering: Specify size, figure number and finish. Base stand ordered separately. Requires accurate center line of pipe to floor dimension ("L") .

Notes: Adjustable pipe saddle supports are available in stainless steel.

PIPE SIZE	PIPE SIZE A	B	C	D	DIMENSION E		WGT EACH (lbs)	
					MIN	MAX	COMPLETE	SADDLE ONLY
2 1/2	2 1/2	3 7/16	8	1 1/2	8	13	9.00	4.80
3	2 1/2	3 11/16	8	1 1/2	8 1/4	13 1/4	9.20	5.00
3 1/2	2 1/2	3 15/16	8	1 1/2	8 1/2	13 1/2	9.40	5.20
4	3	4 3/16	10	2 1/2	9 1/4	14	15.00	7.60
5	3	4 13/16	10	2 1/2	10	14 3/4	16.65	9.25
6	3	5 7/16	10	2 1/2	10 1/2	15 1/4	17.64	10.25
8	3	6 15/16	10	2 1/2	11 3/4	16 1/2	20.20	12.80
10	3	8 7/16	10	2 1/2	13 1/2	18 1/4	25.15	17.75
12	3	9 15/16	10	2 1/2	15	19 3/4	29.00	21.60
14	4	10 15/16	10	3	16 1/4	20 3/4	49.20	38.00
16	4	12 3/8	10	3	17 3/4	22 1/4	53.20	42.00
18	6	13 7/8	12	4	19 1/2	24	70.80	51.00
20	6	15 3/8	12	4	21	25 1/2	104.80	85.00
24	6	17 15/16	12	4	23 3/4	28 1/4	130.00	110.00
30	6	2 15/16	12	4	27	31 1/2	170.00	150.00
32	6	22 1/2	12	4	28 1/4	32 3/4	181.00	161.00
36	6	24 1/2	12	4	30 1/4	34 3/4	249.00	229.00

FIG. 427
ADJUSTABLE PIPE SADDLE SUPPORT WITH U-BOLT



Material: Carbon steel saddle, nipple and u-bolt with special cast iron reducing coupling.

Finish: Plain, galvanized or painted.

Service: Designed to be used in conjunction with a base stand to support horizontal pipe. Straight cut pipe thread on nipple provides adjustability, u-bolt secures pipe to saddle.

Ordering: Specify size, figure number and finish. Base stand ordered separately. Requires accurate center line of pipe to floor dimension ("L") .

Notes: Adjustable pipe saddle supports with u-bolts are available in stainless steel.

PIPE SIZE	PIPE SIZE A	B	C	D	DIMENSION E		WGT EACH	
					MIN	MAX	COMPLETE	SADDLE ONLY
2 1/2	2 1/2	3 7/16	8	1 1/2	8	13	9.00	4.80
3	2 1/2	3 11/16	8	1 1/2	8 1/4	13 1/4	9.20	5.00
3 1/2	2 1/2	3 15/16	8	1 1/2	8 1/2	13 1/2	9.40	5.20
4	3	4 3/16	10	2 1/2	9 1/4	14	15.00	7.60
5	3	4 13/16	10	2 1/2	10	14 3/4	16.65	9.25
6	3	5 7/16	10	2 1/2	10 1/2	15 1/4	17.64	10.25
8	3	6 15/16	10	2 1/2	11 3/4	16 1/2	20.20	12.80
10	3	8 7/16	10	2 1/2	13 1/2	18 1/4	25.15	17.75
12	3	9 15/16	10	2 1/2	15	19 3/4	29.00	21.60
14	4	10 15/16	10	3	16 1/4	20 3/4	49.20	38.00
16	4	12 3/8	10	3	17 3/4	22 1/4	53.20	42.00
18	6	13 7/8	12	4	19 1/2	24	70.80	51.00
20	6	15 3/8	12	4	21	25 1/2	104.80	85.00
24	6	17 15/16	12	4	23 3/4	28 1/4	130.00	110.00
30	6	21 5/16	12	4	27	31 1/2	170.00	150.00
32	6	22 1/2	12	4	28 1/4	32 3/4	181.00	161.00
36	6	24 1/2	12	4	30 1/4	34 3/4	249.00	229.00

FIG. 428KT
ADJUSTABLE PIPE SADDLE SUPPORT, KIT

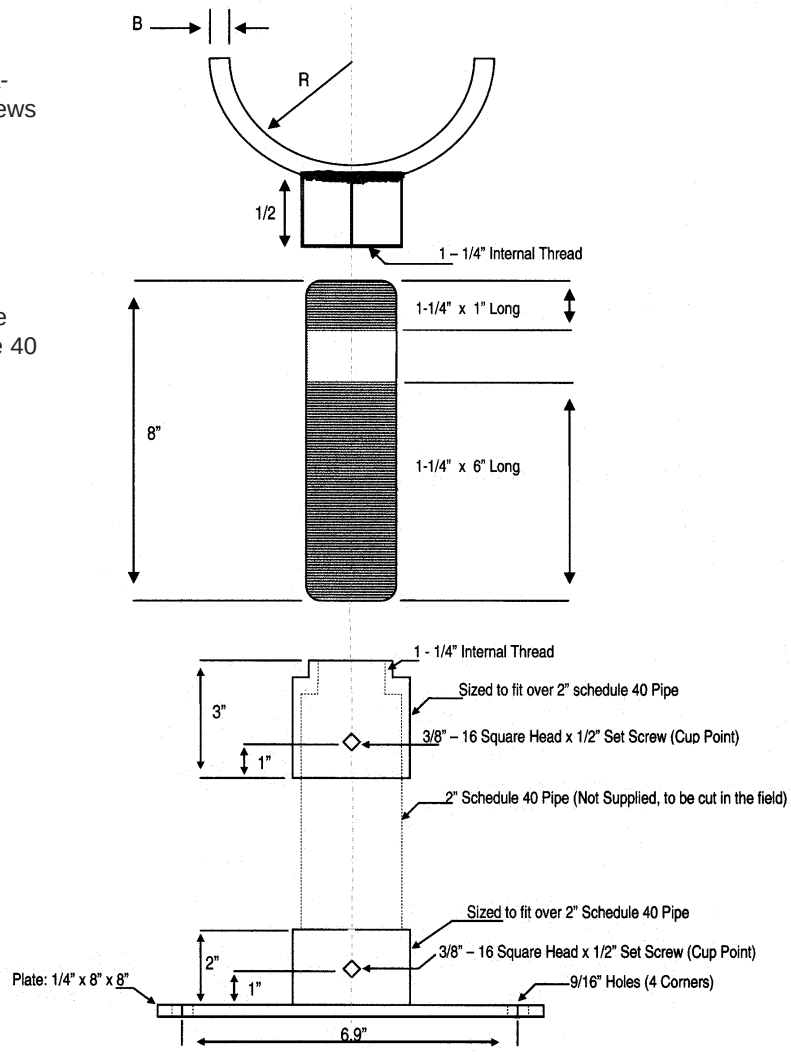
Material: Ductile iron saddle with carbon steel coupling, carbon steel nipple and base plate, cast steel reducing coupling, stainless steel set screws.

Finish: All items listed above are hot-dip galvanized except for stainless steel set screws

Service: Designed to support pipe horizontally. Straight cut pipe thread on nipple provides up to 4-1/2 inches of vertical adjustability.

Ordering: Specify pipe size and figure number.

Notes: Saddles accommodate ductile iron pipe and IPS. Support requires 2" schedule 40 extension pipe to be cut in the field.



PIPE SIZE	R	B
3	2.03"	3/8 x 2
4	2.45"	3/8 x 2
6	3.50"	1/2 x 2
8	4.58"	1/2 x 2
10	5.60"	1/2 x 2
12	6.65"	1/2 x 2

FIG. 429KT
ADJUSTABLE PIPE SADDLE SUPPORT, with U-BOLT, KIT

Material: Ductile iron saddle with carbon steel coupling, carbon steel nipple and base plate, carbon steel U-Bolts and nuts, cast steel reducing coupling, stainless steel set screws.

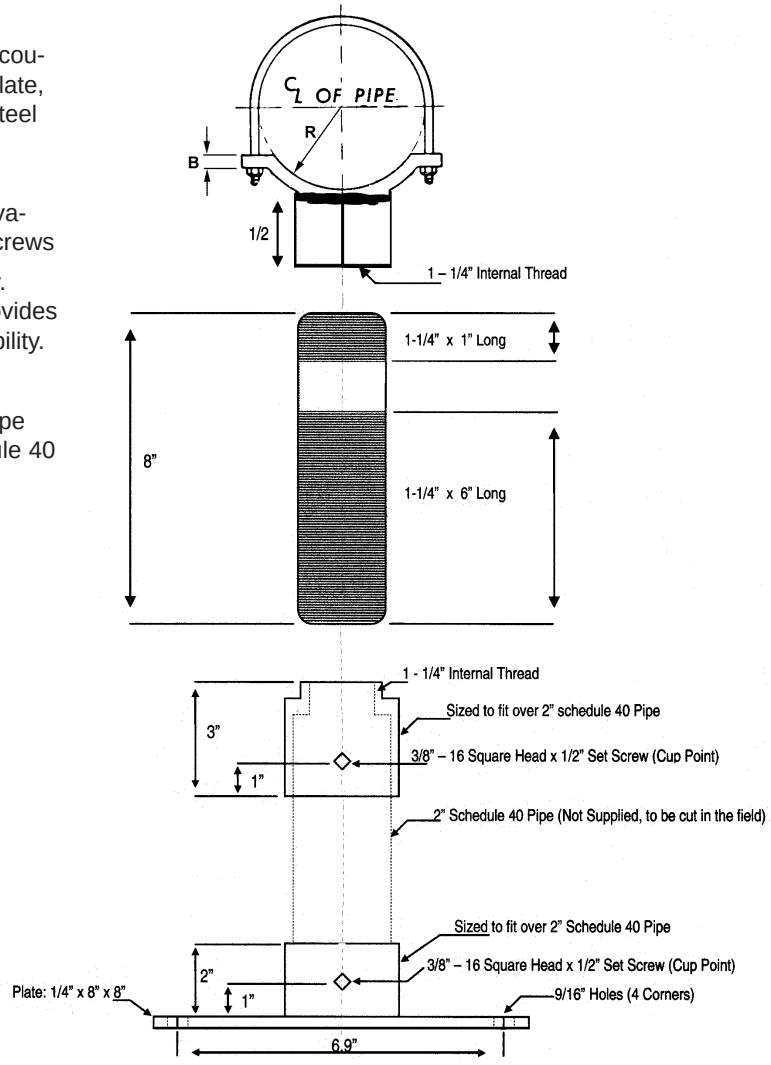
Finish: All items listed above are hot-dip galvanized except for stainless steel set screws

Service: Designed to support pipe horizontally. Straight cut pipe thread on nipple provides up to 4-1/2 inches of vertical adjustability.

Ordering: Specify pipe size and figure number.

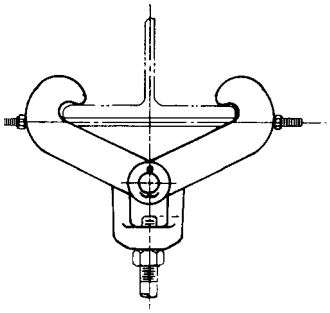
Notes: Saddles accommodate ductile iron pipe and IPS. Support requires 2" schedule 40 extension pipe to be cut in the field.

Also available in 316 stainless steel.



PIPE SIZE	R	B
3	2.03"	3/8 x 2
4	2.45"	3/8 x 2
6	3.50"	1/2 x 2
8	4.58"	1/2 x 2
10	5.60"	1/2 x 2
12	6.65"	1/2 x 2

FIG. 450
HEAVY BEAM CLAMP ASSEMBLY



Material: ASTM A-36 carbon steel with ASTM A-235 class C eye-nut.

Finish: Plain, electro-galvanized or painted.

Service: Designed to be used for the suspension of heavy loads from beams up to 16 inches wide and up to 1 inch thick. Normally used with figure 26, 26W eyerods or figure 13, 13I weldless eye nuts.

Approvals: Complies with Federal Specification WW-H-171-E (Type# 28 without links, Type #29 with links), A-A-1192 A (Type# 28 without links, Type #29 with links) and Manufacturers' Standardization Society MSS SP-58 and SP-69 (Type# 28 without links, Type #29 with links).

Ordering: Specify clamp size, figure number, rod size and finish.

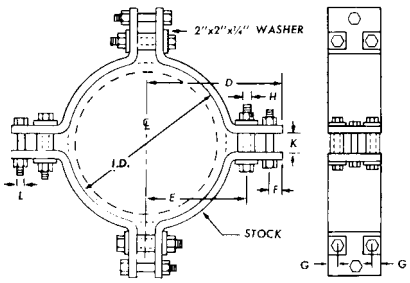
Notes: Maximum loads are based on maximum rod sizes. For load capacity of other rod sizes, see page 117.

Domestically Manufactured

SIZE	FLANGE SIZE		MAX ROD	WGT EACH (lbs)	MAX LOAD (lbs)
	WIDTH	MAX THICKNESS			
1	3-8	5/8	3/4	8	2800
2	7-12*	5/8	3/4	12	2800
3	3-8	3/4	1	11	5000
4	7-15*	3/4	1	16	5000
5	5-11	1	1 1/2	30	11500
6	8-16*	1	1 1/2	48	11500

*Supplied with links

FIG. 570
FOUR SECTION RODDING BAND



Material: Carbon steel.

Finish: Plain, hot-dip galvanized or painted.

Service: Designed to be used to avoid possibility of joint separation on high pressure water mains.

Approvals: Made to specifications of the City of New York and the New York City Port Authority.

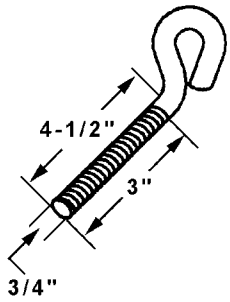
Ordering: Specify size, figure number and finish.

Notes: Four heavy square washer plates drilled for the correct rod size are furnished with each clamp.

Domestically Manufactured

PIPE SIZE	ID	STOCK	D	E	F	G	H	K	L	TIE ROD SIZE
4	4 7/8	3/8 x 3	7 1/2	4 3/8	1	1 1/2	7/8	1 1/4	5/8	3/4
6	7	3/8 x 3	8 1/2	5 3/8	1	1 1/2	7/8	1 1/4	5/8	3/4
8	9 1/8	1/2 x 4	9	6 3/8	1	1	7/8	1 1/4	5/8	3/4
12	13 3/8	1/2 x 4 1/2	12 1/4	8 7/8	1	1	7/8	1 1/2	5/8	1
16	17 1/4	1/2 x 5	14 1/4	10 7/8	1	1	7/8	1 1/2	5/8	1
20	21 1/2	1/2 x 5 1/2	16 3/8	13	1	1 1/4	7/8	1 1/2	5/8	1
24	26	1/2 x 5 1/2	19	15 1/4	1	1 1/4	7/8	1 7/8	5/8	1 3/8
30	32 1/4	5/8 x 6	23	18 3/4	1	1 1/4	7/8	2 1/4	5/8	1 3/4
36	38 1/2	3/4 x 7	26 1/4	22	1	1 1/2	7/8	2 1/4	5/8	1 3/4

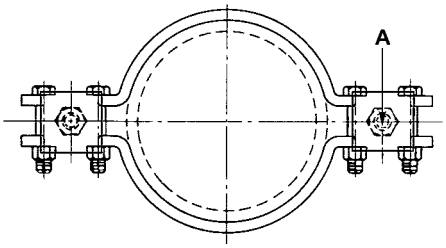
FIG. 575
CORPORATION EYE BOLT

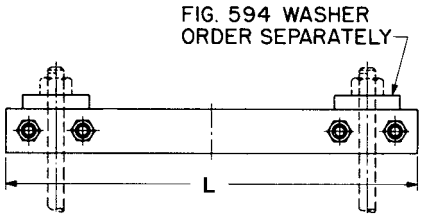


Material: Carbon steel.
Finish: Plain.
Service: Designed to be used with figure number 600 socket clamp.
Ordering: Specify figure number.

BOLT SIZE	WGT (lbs)
3/4	1.0

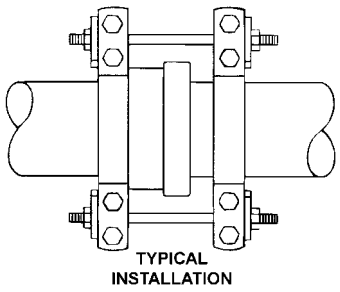
FIG. 595
FOUR BOLT SOCKET CLAMP





Material: Carbon steel.
Finish: Plain or electro-galvanized.
Service: Designed to used to clamp mechanical joint or socket joint piping and fittings together to prevent separation or distortion of pipe lines under excessive water pressure.
Approvals: Complies with the requirements of the National Fire Protection Association standard NFPA 24 for outside protection.
Ordering: Specify size, figure number and finish.

Domestically Manufactured



PIPE SIZE	PIPE OD	MATERIAL SIZE	BOLT	A	L	WGT EACH (lbs)
3	3.960	1/2 x 2	5/8	3/4	13	8.6
4	4.800	1/2 x 2	5/8	3/4	14 5/8	9.38
6	6.900	1/2 x 2	5/8	3/4	16 7/8	11.50
8	9.050	5/8 x 2 1/2	5/8	3/4	19 1/8	20.54
10	11.100	5/8 x 2 1/2	3/4	1	21 3/8	23.15
12	13.200	5/8 x 3	7/8	1	25 1/8	35.85
14	15.300	3/4 x 3	7/8	1 1/4	28 1/4	46.78
16	17.400	3/4 x 4	1	1 1/4	31 3/8	70.53
18	19.500	3/4 x 4	1 1/4	1 1/4	35 1/8	84.65
20	21.600	3/4 x 5	1 1/4	1 3/8	37 3/4	98.65
24	25.800	3/4 x 5	1 1/2	1 1/2	44 1/4	135.50

FIG. 599
SOCKET CLAMP WASHER

Material: Cast Iron/Carbon steel (see notes).

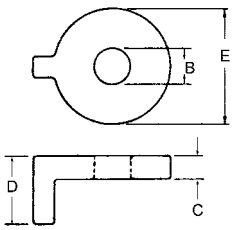
Finish: Plain, electro-galvanized.

Service: Designed to be used with figure 600 socket clamp, washer lugs hook around clamp bolts to secure tie rods within clamp legs.

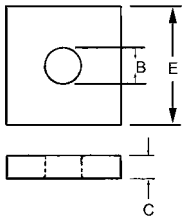
Ordering: Specify size, figure number and finish.

Notes: The ¾" rod size socket clamp washer is a cast iron product with tab feature. This accomodates pipe sizes 4"-12". The 1"-1½" rod size washer are a carbon steel flat style. these accomodate pipe sizes 14"-24".

3/4" Style



1" through 1-1/2" Style



TIE ROD SIZE	B HOLE DIA	C	D	E	FOR USE WITH PIPE SIZE	WGT EACH (lbs)
¾	⅞	⅝	1¾	2⅜	3" - 12"	0.80
1	1⅛	½	-	4	14"	2.16
1⅛	1¼	½	-	4	16"	2.13
1¼	1⅜	¾	-	4	18"	3.14
1⅜	1½	¾	-	4	20"	3.08
1½	1 9/16	¾	-	4	24"	3.02

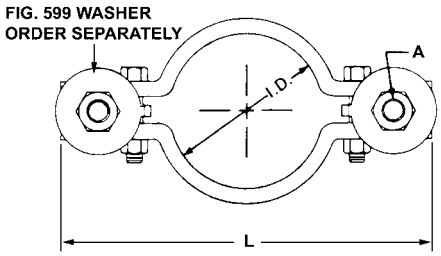
FIG. 600
SOCKET CLAMP

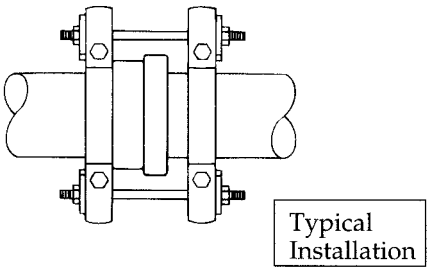
Material: Carbon steel.

Finish: Plain, electro-galvanized.

Service: Designed to be used to clamp joints of underground AWWA ductile iron water lines to prevent joint separation due to excessive water pressure.

Ordering: Specify size, figure number and finish.

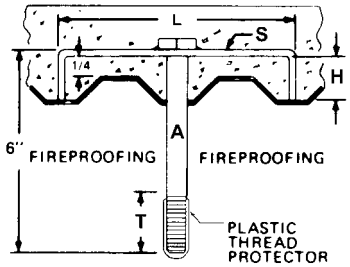




Domestically Manufactured

PIPE SIZE	PIPE OD	MATERIAL SIZE	BOLT	A ROD DIA.	C	L	WGT EACH (lbs)
3	3.960	2 X 3/8	5/8	3/4		12	5.95
4	4.800	2 X 1/2	5/8	3/4		12 3/4	8.00
6	6.900	2 X 1/2	5/8	3/4		15 1/2	10.00
8	9.050	2 X 1/2	5/8	3/4		17 1/2	12.10
10	11.100	2 X 1/2	5/8	3/4		19 1/2	13.63
12	13.200	2 X 1/2	5/8	3/4		22	15.65
14	15.300	3 X 3/4	7/8	1		28 1/2	45.00
16	17.400	4 X 3/4	1	1 1/8		30 3/4	63.00
18	19.500	4 X 3/4	1 1/4	1 1/4		34 5/8	76.00
20	21.600	5 X 3/4	1 1/4	1 3/8		37 1/2	100.50
24	25.800	5 X 3/4	1 1/2	1 1/2		43	118.00

FIG. 685
METAL DECK ANCHOR BOLT



Material: Carbon steel.

Finish: Plain, electro-galvanized, or painted.

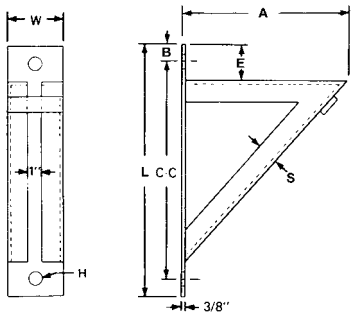
Service: Designed to be used on metal deck concrete forms to provide attachment points for hanger rods. Furnished with “SEEL-PEEL” plastic thread protection.

Ordering: Specify rod size, figure number and finish. Also specify dimensions L and H.

Domestically Manufactured

SIZE NO.	A	H	STOCK SIZE “S”	T	L	WGT EACH (lbs)	MAX REC LOAD (lbs)
1	3/8	SPECIFY	1 1/4 x 1/4	1	SPECIFY	0.80	610
2	1/2		1 1/2 x 1/4	1 1/4		0.99	1130
3	5/8		1 1/2 x 1/4	1 1/2		1.60	1810
4	3/4		1 1/2 x 1/4	1 3/4		2.25	2710
5	7/8		2 x 1/4	2		3.10	3770
6	1		2 x 1/4	2 1/4		3.59	4960

FIG. 801
MEDIUM WELDED BRACKET



Material: Carbon steel.

Finish: Plain, electro-galvanized, hot-dip galvanized or painted.

Service: Recommended for the support of pipe loads up to 1500 lbs Constructed of facing angle iron with 1" space. The bracket provides maximum lateral adjustment when carrying or suspending pipe.

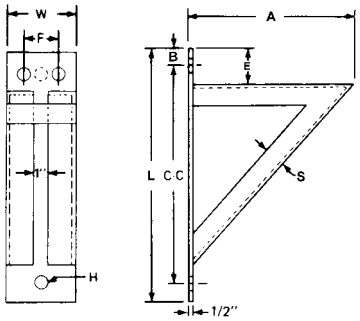
Approvals: Complies with Federal Specification WW-H-171-E (Type# 33), A-A-1192 A (Type# 32) and Manufacturers' Standardization Society MSS SP 58 and SP 69 (Type#32).

Ordering: Specify size number, figure number and finish.

Domestically Manufactured

SIZE NO.	C-C	A	E	H	B	L	ANGLE SIZE S	W	WGT EACH (lbs)
1	15 1/2	12	2 1/2	13/16	1 1/4	18	1 1/2 x 1 1/2 x 3/16	4	16.10
2	21 1/2	18	2 1/2	13/16	1 1/4	24	1 3/4 x 1 3/4 x 3/16	4 1/2	26.00
3	27 1/2	24	2 1/2	13/16	1 1/4	30	2 x 2 x 1/4	5	45.00

FIG. 802
HEAVY WELDED BRACKET



Material: Carbon steel.

Finish: Plain, electro-galvanized, hot-dip galvanized or painted.

Service: Recommended for the support of pipe loads up to 3000 lbs Constructed of facing angle iron with 1" space. The bracket provides maximum lateral adjustment when carrying or suspending pipe.

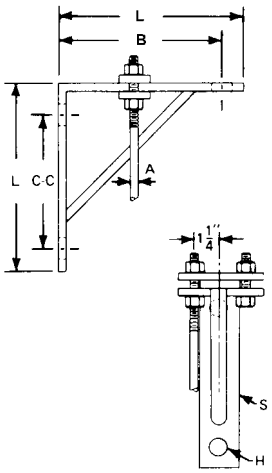
Approvals: Complies with Federal Specification WW-H-171-E (Type# 34), A-A-1192 A (Type# 33) and Manufacturers' Standardization Society MSS SP 58 and SP 69 (Type# 33).

Ordering: Specify size number, figure number and finish.

Domestically Manufactured

SIZE NO.	C-C	A	F	E	H	B	L	ANGLE SIZE S	W	WGT EACH (lbs)
1	15 1/4	12	ONE HOLE	2 3/4	13/16	1 1/2	18	2 x 1 1/2 x 1/4	4	25.00
2	21 3/8	18	2 3/4	2 3/4	15/16	1 3/8	24	2 x 2 x 1/4	5	38.00
3	27 1/2	24	2 1/2	2 3/4	1 1/16	1 1/4	30	2 1/2 x 2 x 5/16	5	69.00
4	33 1/4	30	2 1/2	3	1 1/16	1 1/2	36	2 1/2 x 2 x 5/16	5	82.10
5	39	36	3 1/2	3	1 1/16	1 1/2	42	3 1/2 x 2 1/2 x 3/8	6	130.00
6	46	42	3 1/2	3 1/2	1 1/16	2	50	3 1/2 x 2 1/2 x 3/8	6	155.00

FIG. 820 & 820C
LIGHT WELDED STEEL BRACKET & CLIP



Material: Carbon steel.

Finish: Plain, electro-galvanized, hot-dip galvanized or painted.

Service: Recommended for the suspension of hanger rod for support of light loads up to 750 lbs. Rod can be suspended at any point along the length of the bracket, thus providing horizontal adjustment, using figure #820C clip which consists of two steel plates joined by a bolt and nut in one end.

Approvals: Fig. 820 complies with Federal Specification WW-H-171-E (Type# 32), A-A-1192 A (Type# 31) and Manufacturers' Standardization Society MSS SP 58 and SP 69 (Type# 31).

Ordering: Specify size number, figure number and finish.

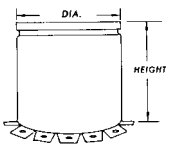
Notes: Piping suspended from FIG. 820C clip shall not exceed 3½" in diameter. Side clip (FIG. 820C) to be ordered separately.

Domestically Manufactured

FIG. 820						
BRACKET SIZE	B	C-C	HOLES H	L	STOCK SIZE S	WGT EACH (lbs)
1	8	6½	13/16	9	2 X 3/8	4.20
2	12	10½	13/16	13	2 X 3/8	6.50
3	18	16½	13/16	19	2 X 3/8	9.40

FIG. 820C			
CLIP NUMBER	PIPE SIZE	ROD SIZE A	WGT EACH (lbs)
1	¾ to 2	3/8	0.80
2	2½ to 3½	½	1.24

FIG. 900
NAILING SLEEVE



Material: Galvanized steel.

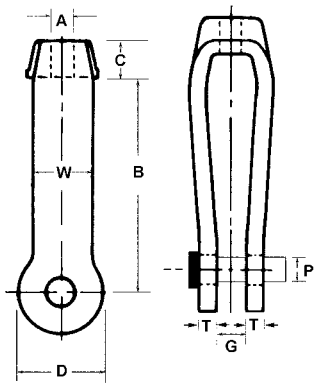
Finish: Galvanized.

Service: When attached to roof decking, sleeve provides a channel for piping, eliminating the need to core drill. Optional tabs facilitate fastening to deck. Optional covers seal out wet cement during pour and safely cover sleeve until pipe installation.

Ordering: Specify diameter, height, and figure number, with or without tabs. Covers must be ordered separately.

Domestically Manufactured

FIG. 909 FORGED STEEL CLEVIS, DOMESTIC
FIG. 909I FORGED STEEL CLEVIS



Material: Forged steel.

Finish: Plain, electro-galvanized, or hot-dip galvanized.

Service: Designed for use on high temperature piping installations.

Approvals: Complies with Federal Specification WW-H-171-E (Type# 14), A-A-1192 A (Type# 14) and Manufacturers' Standardization Society MSS SP 58 and SP 69 (Type# 14).

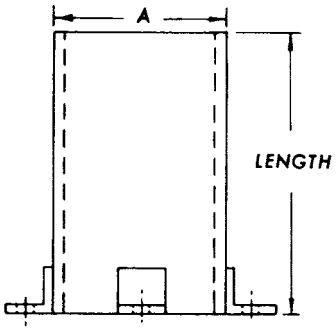
Ordering: Specify size number, rod size, finish and part number. If other than standard dimension sizes required, specify size number, rod size, pin size and grip.

Notes: Forged clevis are standardly supplied with pin and cotter pins. When figure number 909 I is supplied hot-dip galvanized the threading is not tapped oversize.

Domestically Manufactured
EXCLUDING 909I

SIZE A	CLEVIS SIZE NO.	B	C	D	G GRIP	P PIN DIA.	T	W	WGT EACH (lbs)	MAX REC LOAD (lbs)	
										650°F	750°F
3/8-16	2	3 9/16	5/8	1 7/16	1/2	1/2	5/16	1 1/16	1.0	610	540
1/2-13	2	3 9/16	5/8	1 7/16	1/2	5/8	5/16	1 1/16	1.0	1130	1010
5/8-11	2	3 9/16	5/8	1 7/16	5/8	3/4	5/16	1 1/16	1.1	1810	1610
3/4-10	2 1/2	4	1	2 1/2	3/4	7/8	5/16	1 1/4	2.3	2710	2420
7/8-9	2 1/2	4	1	2 1/2	7/8	1	5/16	1 1/4	2.5	3770	3360
1-8	3	5 1/16	1 1/4	3	1	1 1/8	1/2	1 1/2	5.1	4960	4420
1 1/8-7	3	5 1/16	1 1/4	3	1 1/8	1 1/4	1/2	1 1/2	5.2	6230	5560
1 1/4-7	3 1/2	5 1/16	1 1/4	3	1 1/4	1 3/8	1/2	1 1/2	5.6	8000	7140
1 1/2-6	4	6	1 1/2	3 1/2	1 1/2	1 5/8	1/2	1 3/4	8.1	11630	10370
1 3/4-5		6	1 3/4	4	1 3/4	1 7/8	1/2	2	9.0	14700	14000

FIG. 910
PIPE SLEEVE WITH WELDED LUGS



Material: Steel pipe.

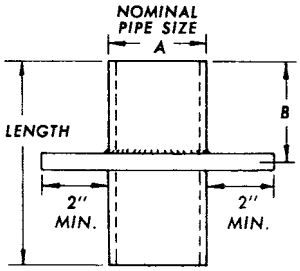
Finish: Plain, electro-galvanized or painted.

Service: When attached to concrete forms, sleeve provides smooth sealable channel for piping, eliminating the need to core drill. Nailing lugs facilitate fastening to forms.

Ordering: Specify pipe size (A dimension), length, figure number and finish.

Domestically Manufactured

FIG. 915
WATERPROOF SLEEVE



Material: Steel pipe and ¼" steel plate (water stop).

Finish: Plain, electro-galvanized or painted.

Service: When installed in concrete forms, sleeve provides smooth, sealable channel for piping. Water stop prevents water migration around outside of sleeve.

Ordering: Specify nominal pipe size (A dimension), overall length, B dimension, figure number and finish.

Domestically Manufactured

FIG. 1900 (1" INSULATION)
FIG. 1901 (1½" INSULATION)
FIG. 1902 (2" INSULATION)
FIG. 1903 (2½" INSULATION)
FIG. 1904 (3" INSULATION)
FIG. 1905 (4" INSULATION)
PIPE COVERING PROTECTION SADDLES

Domestically Manufactured

Material: Carbon steel.

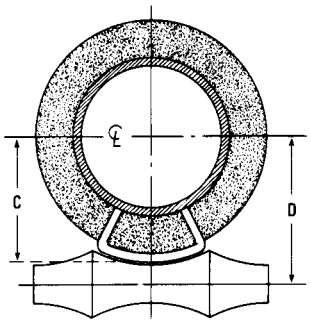
Finish: Plain, electro-galvanized.

Service: Designed for use on insulated high temperature pipe lines to protect insulation from damage and minimize heat loss.

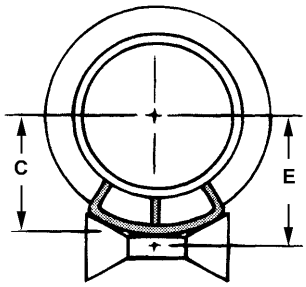
Approvals: Complies with Federal Specification WW-H-171-E (Type# 40A and 40B), A-A-1192 A (Type# 39A and 39B) and Manufacturers' Standardization Society MSS SP 58 and SP 69 (Type#39A and 39B).

Ordering: Specify pipe size, insulation size and/or figure number.

Notes: All saddles are 12 inches long with side edges beveled in. Stainless steel and alloy saddles are available and priced on application.



SADDLE WITH ROLL



(Charts on following 2 pages)

FIG. 1900-1905 PIPE COVERING PROTECTION SADDLES

(continued from previous page)

PIPE SIZE	FIG. NO.	ACTUAL THICKNESS OF COVERING	HANGER ROLLER SIZE			CENTER LINE OF PIPE TO OUTSIDE OF SADDLE, C	CENTER LINE OF PIPE TO CENTER LINE OF ROLL, D	CENTER LINE OF PIPE TO CENTER LINE OF ROLL, E	WGT EACH (lbs)	MAX REC LOAD (lbs)
			USE WITH FIG. NO.							
			273 275 277	272	279-S 280-S					
3/4	1900	7/8	2	2 1/2	2-3 1/2	1 9/16	1 15/16	2 1/4	0.93	1200
3/4	1901	1 7/16	3	3 1/2	2-3 1/2	2 1/8	2 5/8	2 7/8	1.74	1200
3/4	1902	2 1/16	4	5	2-3 1/2	2 3/4	3 3/8	3 3/8	2.60	1200
1	1900	1 1/16	2 1/2	3	2-3 1/2	1 13/16	2 1/4	2 7/16	0.93	1200
1	1901	1 9/16	3	4	2-3 1/2	2 7/16	2 15/16	3	1.74	1200
1	1902	2 1/8	4	5	2-3 1/2	2 7/8	3 1/2	3 1/2	2.60	1200
1 1/4	1900	7/8	2 1/2	3	2-3 1/2	1 15/16	2 1/2	2 9/16	1.32	1200
1 1/4	1901	1 5/8	3 1/2	5	2-3 1/2	2 9/16	3 1/8	3 3/16	1.82	1200
1 1/4	1902	2 1/16	5	5	2-3 1/2	3 1/16	3 11/16	3 11/16	2.60	1200
1 1/2	1900	1	3	3 1/2	2-3 1/2	2 1/8	2 5/8	2 11/16	1.32	1200
1 1/2	1901	1 1/2	3 1/2	5	2-3 1/2	2 11/16	3 1/4	3 5/16	1.82	1200
1 1/2	1902	2 5/16	5	6	4-6	6 7/16	4 1/8	3 7/8	2.75	1800
1 1/2	1903	2 13/16	7	7	4-6	3 13/16	4 5/8	4 1/2	3.01	1800
2	1900	1 1/16	3 1/2	4	2-3 1/2	2 7/16	3	3 1/16	1.34	1200
2	1901	1 9/16	4	5	2-3 1/2	2 7/8	3 1/2	3 9/16	1.98	1200
2	1902	2 1/8	5	6	4-6	3 11/16	4 3/8	4 3/16	2.80	1800
2	1903	2 5/8	7	7	4-6	3 15/16	4 3/4	4 3/4	3.18	1800
2	1904	3 1/8	8	8	4-6	4 11/16	5 1/2	5 1/4	3.97	1800
2 1/2	1900	1 1/16	3 1/2	5	2-3 1/2	2 11/16	3 1/4	3 5/16	1.34	1200
2 1/2	1901	1 7/8	5	6	4-6	3 3/4	4 1/8	3 15/16	1.98	1200
2 1/2	1902	2 5/16	6	7	4-6	3 15/16	4 5/8	4 1/2	2.80	1800
2 1/2	1903	2 7/8	7	7	4-6	4 7/16	5 1/4	5	3.20	1800
2 1/2	1904	3 3/8	8	10	4-6	4 15/16	5 3/4	5 1/2	3.98	1800
3	1900	1	4	5	2-3 1/2	2 15/16	3 1/2	3 9/16	1.48	1200
3	1901	1 9/16	5	6	4-6	3 1/2	4 3/16	4 1/4	2.08	1800
3	1902	2 1/16	7	7	4-6	4 1/8	4 7/8	4 11/16	2.90	1800
3	1903	2 9/16	8	8	4-6	4 11/16	5 3/8	5 5/16	3.01	1800
3	1904	3 1/16	10	10	8-10	5	5 15/16	6 1/16	4.49	1800
3 1/2	1900	1 1/4	5	6	4-6	3 7/16	4	3 15/16	1.48	1200
3 1/2	1901	1 13/16	7	7	4-6	4	4 11/16	4 1/2	2.08	1800
3 1/2	1902	2 1/4	8	8	4-6	4 3/8	5 3/16	5	2.90	1800
3 1/2	1903	2 3/4	8	10	8-10	4 13/16	5 3/4	5 11/16	3.43	1800
3 1/2	1904	3 5/16	10	10	8-10	5 1/2	6 7/16	6 3/8	4.49	1800
4	1900	1 1/16	5	6	4-6	3 9/16	4 3/16	4 3/16	1.58	1800
4	1901	1 9/16	7	7	4-6	3 7/8	4 11/16	4 3/4	2.14	1800
4	1902	2 1/16	8	8	4-6	4 11/16	5 1/2	5 1/4	2.95	1800
4	1903	2 9/16	8	10	8-10	5 1/8	6 1/16	6	3.43	1800
4	1904	3 1/16	10	10	8-10	5 9/16	6 1/2	6 5/8	4.49	1800
4	1905	4 1/16	12	14	8-10	6 9/16	7 11/16	7 9/16	6.09	1800
5	1900	1	7	7	4-6	4 1/8	4 13/16	4 3/4	2.62	1800
5	1901	1 1/2	8	8	4-6	4 1/2	5 5/16	5 3/8	3.30	1800
5	1902	2	8	10	8-10	4 15/16	5 7/8	6 1/8	3.45	1800
5	1903	2 9/16	10	12	8-10	5 9/16	6 1/2	6 5/8	6.85	1800
5	1904	3 1/16	10	12	8-10	6 1/8	7 1/16	7 1/4	4.49	1800
5	1905	4 3/16	12	14	8-10	7 3/16	8 1/4	8 3/16	6.09	1800

(additional chart on the following page)

FIG. 1900-1905 PIPE COVERING PROTECTION SADDLES

(continued from previous page)

PIPE SIZE	FIG. NO.	ACTUAL THICKNESS OF COVERING	HANGER ROLLER SIZE — USE WITH FIG. NO.			CENTER LINE OF PIPE TO OUTSIDE OF SADDLE, C	CENTER LINE OF PIPE TO CENTER LINE OF ROLL, D	CENTER LINE OF PIPE TO CENTER LINE OF ROLL, E	WGT EACH (lbs)	MAX REC LOAD (lbs)
			273 275 277	272	279-S 280-S					
6	1900	1	8	8	4-6	4 9/16	5 3/8	5 1/4	3.82	1800
6	1901	1 1/2	8	10	8-10	5 1/16	5 7/8	6	4.28	1800
6	1902	2	10	12	8-10	5 1/2	6 1/2	6 1/2	5.40	1800
6	1903	2 1/2	10	12	8-10	6 1/16	7 1/16	7 1/4	6.85	1800
6	1904	3	12	12	8-10	6 9/16	7 5/8	7 5/8	7.69	1800
6	1905	4 1/8	14	16	12-14	7 5/8	9 1/8	8 3/4	10.24	1800
8	1901	1 1/2	10	12	8-10	6	7 1/8	7 1/16	5.82	1800
8	1902	2	12	12	8-10	6 1/2	7 5/8	7 9/16	6.41	1800
8	1903	2 11/16	12	14	8-10	7 1/4	8 5/16	8 5/16	7.21	1800
8	1904	3 1/8	14	16	12-14	7 5/8	9 1/8	8 3/4	9.14	1800
8	1905	4 1/8	16	18	12-14	8 11/16	10 1/8	9 7/8	10.24	1800
10	1901	1 9/16	12	14	8-10	7 1/4	8 5/16	8 5/16	6.66	1800
10	1902	2 1/16	14	16	12-14	7 5/8	9 1/16	8 13/16	8.57	1800
10	1903	2 9/16	14	16	12-14	8 3/16	9 5/8	9 5/16	8.91	1800
10	1904	3 1/16	16	18	16-20	8 7/8	10 1/4	10	11.10	1800
10	1905	4 1/16	18	20	16-20	9 11/16	11 5/16	11 1/8	14.10	1800
12	1901	1 1/2	14	16	12-14	8 1/16	9 5/8	9 1/4	7.61	5000
12	1902	2 1/16	16	18	16-20	8 13/16	10 3/16	10	8.73	5000
12	1903	2 5/8	16	18	16-20	9 1/8	10 11/16	10 1/2	9.69	5000
12	1904	3 1/16	18	20	16-20	9 11/16	11 5/16	11	11.38	5000
12	1905	4 1/8	20	--	16-20	10 13/16	12 3/8	12 3/16	14.20	5000
14	1901	1 1/2	16	18	12-14	8 7/8	10 3/16	10 1/16	7.67	5000
14	1902	2	16	18	16-20	9 1/4	10 3/4	10 11/16	9.43	5000
14	1903	2 1/2	18	20	16-20	9 3/4	11 5/16	11 3/16	9.69	5000
14	1904	3	18	20	16-20	10 1/4	11 7/8	11 5/8	11.82	5000
14	1905	4	20	--	24	11 7/16	13 1/8	12 5/8	18.48	7200
16	1901	1 1/2	18	20	16-20	9 7/8	11 3/8	11 1/8	8.35	5000
16	1902	2	18	20	16-20	10 1/4	11 7/8	11 9/16	10.00	5000
16	1903	2 1/2	20	--	16-20	10 7/8	12 7/16	12 3/16	14.62	7200
16	1904	3	24	--	24	11 3/16	13 1/8	12 7/16	18.17	7200
16	1905	4	24	--	24	12 5/16	14 3/16	12 3/16	21.80	7200
18	1901	1 1/2	20	--	16-20	10 7/8	12 1/2	12 3/16	8.92	5000
18	1902	2	20	--	24	11 1/2	13 1/16	12 11/16	13.19	7200
18	1903	2 1/2	24	--	24	12	13 15/16	13 1/16	16.89	7200
18	1904	3	24	--	24	12 5/16	14 1/4	13 5/8	18.20	7200
18	1905	4	24	--	24	13 1/2	15 7/16	14 3/4	21.95	7200
20	1901	1 1/2	24	--	24	11 3/4	13 11/16	13 1/16	13.76	7200
20	1902	2	24	--	24	12 5/16	14 1/4	13 5/8	14.98	7200
20	1903	2 1/2	24	--	24	12 7/8	14 13/16	14 3/16	16.79	7200
20	1904	3	24	--	24	13 1/2	15 1/2	14 3/4	18.40	7200
20	1905	4	30	--	30	14 3/16	16 5/8	15 7/8	22.83	7200
24	1901	1 1/2	30	--	30	13 5/8	16 1/16	15 1/4	16.05	7200
24	1902	2	30	--	30	14 3/16	16 5/8	15 3/4	17.62	7200
24	1903	2 1/2	30	--	30	14 3/4	17 3/16	16 7/16	18.75	7200
24	1904	3	30	--	30	15 3/8	17 13/16	17	19.72	7200
24	1905	4	30	--	30	16 9/16	19	19 1/4	23.14	7200

FIG. 4000 SERIES
PIPE SLIDE TEE

Material: Carbon steel tee with or without PTFE slide pad.

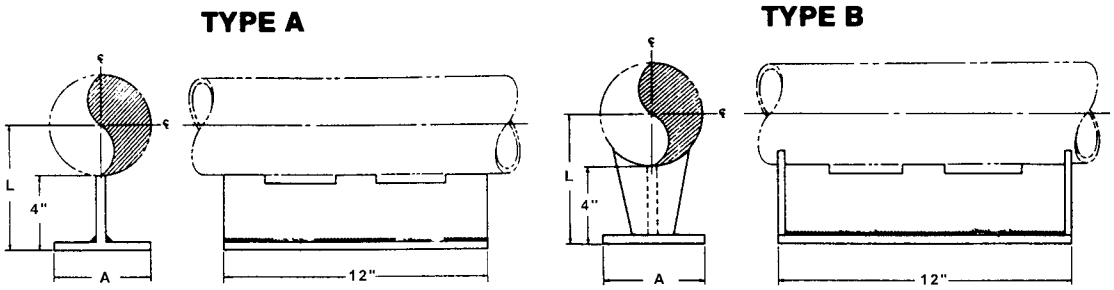
Finish: Plain, galvanized or painted.

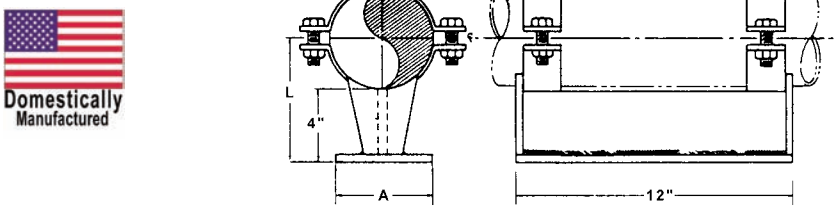
Service: Designed for the support of pipe where horizontal movement may occur due to expansion and contraction and a low coefficient of friction is required. May be welded or clamped to pipe.

Approvals: Complies with Federal Specification A-A-1192 A (Type# 35) and Manufacturers' Standardization Society MSS SP 58 and SP 69 (Type# 35).

Ordering: Specify pipe size, figure number, type, finish and pipe clamp figure number. Order slide base (Fig. 4100) if required.

Notes: Designed to minimize heat loss through tee. Tee without PTFE to be used as a pipe anchor only. No lubrication required.





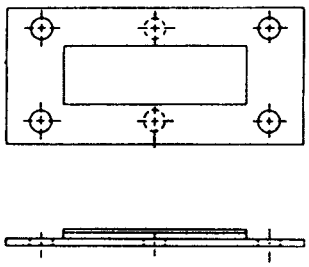
Domestically Manufactured

PIPE SIZE	A	L
2	4	5 3/16
2 1/2	4	5 7/16
3	4	5 3/4
4	4	6 1/4
5	4	6 13/16
6	4	7 5/16
8	4	8 5/16
10	4	9 3/8
12	4	10 3/8
14	4	11
16	4	12
18	7	13
20	7	14
24	7	16

FIG. 4100 SERIES
SLIDE PLATES

Domestically Manufactured

TYPE A



Material: Carbon steel, PTFE bonded base.

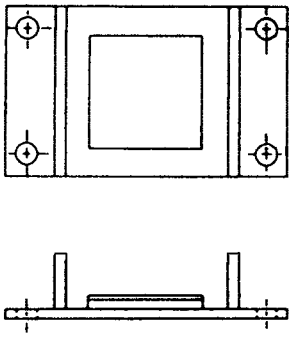
Finish: Plain, galvanized or painted.

Service: Base support for pipe slides.. Wider and longer pads can be furnished for heavier loads and greater movement.

Slide plates must be attached to supporting beam or structure by bolting or tack welding. They are not structural members in themselves. Use only with PTFE pipe slides.

Ordering: Specify figure number, type and size. Indicate if bolt holes are required.

TYPE B



Material: Carbon steel, PTFE bonded base.

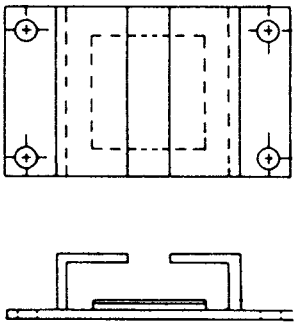
Finish: Plain, galvanized or painted.

Service: Supports pie slides where only axial movement is allowed. Acts as horizontal restraint in one direction.

Slide plates must be attached to supporting beam or structure by bolting or tack welding. They are not structural members in themselves. Use only with PTFE pipe slides.

Ordering: Specify figure number, type and size. Indicate if bolt holes are required.

TYPE C



Material: Carbon steel, PTFE bonded base.

Finish: Plain, galvanized or painted.

Service: Supports pipe slide where horizontal movement on one plane is desired and pipe may have a tendency to buckle or rotate.

Slide plates must be attached to supporting beam or structure by bolting or tack welding. They are not structural members in themselves. Use only with PTFE pipe slides.

Ordering: Specify figure number, type and size. Indicate if bolt holes are required.

This page has been left blank intentionally

Maximum Horizontal Spacing Between Hangers/Supports

Nom. Pipe or Tube Dia.	Standard Weight Steel Pipe		Copper Tube	
	Water Service (Ft)	Vapor Service (Ft)	Water Service (Ft)	Vapor Service (Ft)
1/4	7	8	5	5
3/8	7	8	5	6
1/2	7	8	5	6
3/4	7	9	5	7
1	7	9	6	8
1 1/4	7	9	7	9
1 1/2	9	12	8	10
2	10	13	8	11
2 1/2	11	14	9	13
3	12	15	10	14
3 1/2	13	16	11	15
4	14	17	12	16
5	16	19	13	18
6	17	21	14	20
8	19	24	16	23
10	22	26	18	25
12	23	30	19	28
14	25	32	- -	- -
16	27	35	- -	- -
18	28	37	- -	- -
20	30	39	- -	- -
24	32	42	- -	- -
30	33	44	- -	- -

Support spacings for PVC and CPVC pipe systems are greatly influenced by operating temperature. The charts below recommend horizontal spacing based on pipe size, schedule, material (PVC or industrial grade CPVC), and operating temperature. Hangers/supports should not be clamped tightly because axial movement of plastic pipe would be restricted. These charts are based on continuous spans and uninsulated lines carrying liquids.

Pipe Size (in)	SCHEDULE 40 PVC Temperature °F					SCHEDULE 80 PVC Temperature °F				
	60°	80°	100°	120°	140°	60°	80°	100°	120°	140°
1/4	4	3 1/2	3 1/2	2	2	4	4	3 1/2	2 1/2	2
3/8	4	4	3 1/2	2 1/2	2	4 1/2	4 1/2	4	2 1/2	2 1/2
1/2	4 1/2	4 1/2	4	2 1/2	2 1/2	5	4 1/2	4 1/2	3	2 1/2
3/4	5	4 1/2	4	2 1/2	2 1/2	5 1/2	5	4 1/2	3	2 1/2
1	5 1/2	5	4 1/2	3	2 1/2	6	5 1/2	5	3 1/2	3
1 1/4	5 1/2	5 1/2	5	3	3	6	6	5 1/2	3 1/2	3
1 1/2	6	5 1/2	5	3 1/2	3	6 1/2	6	5 1/2	3 1/2	3 1/2
2	6	5 1/2	5	3 1/2	3	7	6 1/2	6	4	3 1/2
2 1/2	7	6 1/2	6	4	3 1/2	7 1/2	7 1/2	6 1/2	4 1/2	4
3	7	7	6	4	3 1/2	8	7 1/2	7	4 1/2	4
3 1/2	7 1/2	7	6 1/2	4	4	8 1/2	8	7 1/2	5	4 1/2
4	7 1/2	7	6 1/2	4 1/2	4	9	8 1/2	7 1/2	5	4 1/2
5	8	7 1/2	7	4 1/2	4	9 1/2	9	8	5 1/2	5
6	8 1/2	8	7 1/2	5	4 1/2	10	9 1/2	9	6	5
8	9	8 1/2	8	5	4 1/2	11	10 1/2	9 1/2	6 1/2	5 1/2
10	10	9	8 1/2	5 1/2	5	12	11	10	7	6
12	11 1/2	10 1/2	9 1/2	6 1/2	5 1/2	13	12	10 1/2	7 1/2	6 1/2
14	12	11	10	7	6	13 1/2	13	11	8	7
16	12 1/2	11 1/2	10 1/2	7 1/2	6 1/2	14	13 1/2	11 1/2	8 1/2	7 1/2
SDR 41 PVC						**SDR 26 PVC**				
18	13	12	11	8	7	14 1/2	14	12	9	8
20	13 1/2	12 1/2	11 1/2	8 1/2	7 1/2	15	14 1/2	12 1/2	9 1/2	8 1/2
24	14	13	12	9	8	15 1/2	15	13	10	9

Pipe Size (in)	SCHEDULE 40 CPVC Temperature °F						SCHEDULE 80 CPVC Temperature °F					
	73°	100°	120°	140°	160°	180°	73°	100°	120°	140°	160°	180°
1/2	5	4 1/2	4 1/2	4	2 1/2	2 1/2	5 1/2	5	4 1/2	4 1/2	3	2 1/2
3/4	5	5	4 1/2	4	2 1/2	2 1/2	5 1/2	5 1/2	5	4 1/2	3	2 1/2
1	5 1/2	5 1/2	5	4 1/2	3	2 1/2	6	6	5 1/2	5	3 1/2	3
1 1/4	5 1/2	5 1/2	5 1/2	5	3	3	6 1/2	6	6	5 1/2	3 1/2	3
1 1/2	6	6	5 1/2	5	3 1/2	3	7	6 1/2	6	5 1/2	3 1/2	3 1/2
2	6	6	5 1/2	5	3 1/2	3	7	7	6 1/2	6	4	3 1/2
2 1/2	7	7	6 1/2	6	4	3 1/2	8	7 1/2	7 1/2	6 1/2	4 1/2	4
3	7	7	7	6	4	3 1/2	8	8	7 1/2	7	4 1/2	4
3 1/2	7 1/2	7 1/2	7	6 1/2	4	4	8 1/2	8 1/2	8	7 1/2	5	4 1/2
4	7 1/2	7 1/2	7	6 1/2	4 1/2	4	8 1/2	9	8 1/2	7 1/2	5	4 1/2
6	8 1/2	8	7 1/2	7	5	4 1/2	10	9 1/2	9	8	5 1/2	5
8	9 1/2	9	8 1/2	7 1/2	5 1/2	5	11	10 1/2	10	9	6	5 1/2
10	10 1/2	10	9 1/2	8	6	5 1/2	11 1/2	11	10 1/2	9 1/2	6 1/2	6
12	11 1/2	10 1/2	10	8 1/2	6 1/2	6	12 1/2	12	11 1/2	10 1/2	7 1/2	6 1/2

Notes:

1. Charts above are not applicable where loads between supports are concentrated (e.g. valves, flanges, expansion joints, etc.), or where there is a change in line direction. Hangers/supports should be located adacent to joints, branch connections and changes in direction.
2. Risers should be installed independently of adjacent horizontal hangers/supports.
3. Cast Iron Pipe: maximum spacing should be 12 feet with at least one hanger/support for each pipe section.
4. Fire proctection: Refer to current NFPA specifications.

Load Ratings of Carbon Steel Threaded Rod

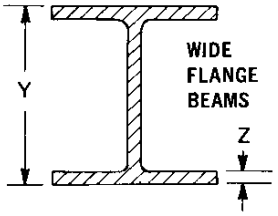
Nominal Rod Diameter (in inches)	Root Area of Coarse Thread (in^2)	Maximum Safe Load (lbs) Rod Temperature, 650°F	Maximum Safe Load (lbs) Rod Temperature, 750°F
1/4	0.027	240	210
3/8	0.068	610	540
1/2	0.126	1130	1010
5/8	0.202	1810	1610
3/4	0.302	2710	2420
7/8	0.419	3770	3360
1	0.552	4960	4420
1 1/8	0.693	6230	5560
1 1/4	0.889	8000	7140
1 1/2	1.293	11630	10370
1 3/4	1.744	15700	14000
2	2.292	20700	18460
2 1/4	3.021	27200	24260
2 1/2	3.716	33500	29880

Maximum Applied Torques C-Clamps & Top Beam Clamps

Thread Size	Torque Value (lbs)
1/4	40
3/8	60
1/2	125
5/8	250
3/4	400
7/8	665
Extracted from MSS-SP-69 (types 19 & 23)	

The ultimate load-carrying capacity of a clamp is rapidly reduced when the set screw is excessively turned upon clamp instalation. Proper installation technique is to set the screw finger tight, then turn the set screw a one half to three quarter turn. Extra turning will open up the clamp and cause the rod hole to be out of alignment.

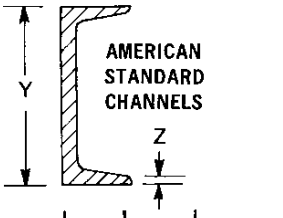
BEAM DIMENSIONS (inches) • WEIGHTS



WIDE FLANGE BEAMS

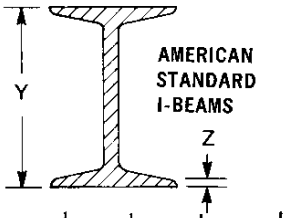
Nominal Size, Y	Wgt. per ft., lb.	Flange width	Thick. of fl'g., Z
5	18.5	5	.420
6	25	6	.456
8	17	5¼	.308
	20	5¼	.378
	24	6½	.398
	28	6½	.463
	31	8	.433
	35	8	.493
	40	8⅛	.558
	48	8⅛	.683
	58	8¼	.808
	67	8¼	.933
10	21	5¾	.340
	25	5¾	.430
	29	5¾	.500
	33	8	.433
	39	8	.528
	45	8	.618
	49	10	.558
	54	10	.618
	60	10⅛	.683
	66	10⅛	.748
	72	10⅛	.808
	77	10¼	.868
	89	10¼	.998
	100	10⅜	1.118
	112	10⅜	1.248
12	27	6½	.400
	31	6½	.465
	36	6⅝	.540
	40	8	.516
	45	8	.576
	50	8⅛	.641
	53	10	.576
	58	10	.641
	65	12	.606
	72	12	.671
	79	12⅛	.736
	85	12⅛	.796
	92	12⅛	.856
	99	12¼	.921
	106	12¼	.986
	120	12⅜	1.106
	133	12⅜	1.236
	161	12½	1.486
	190	12⅝	1.736
14	30	6¾	.383
	34	6¾	.453
	38	6¾	.513
	43	8	.528
	48	8	.593
	53	8	.658
	61	10	.643
	68	10	.718
	74	10⅛	.783
	78	12	.718
	84	12	.778
	87	14½	.688
	95	14½	.748
	103	14⅝	.813

Nominal Size, Y	Wgt. per ft., lb.	Flange width	Thick. of fl'g., Z
14	111	14⅝	.873
	119	14⅝	.938
	127	14¾	.998
	136	14¾	1.063
	142	15½	1.063
	150	15½	1.128
	158	15½	1.188
	167	15⅝	1.248
	176	15⅝	1.313
	184	15⅝	1.378
	193	15¾	1.438
	202	15¾	1.503
	211	15¾	1.563
	219	15⅞	1.623
	228	15⅞	1.688
	237	15⅞	1.748
16	36	7	.428
	40	7	.503
	45	7	.563
	50	7⅛	.628
	58	8½	.645
	64	8½	.715
	71	8½	.795
	78	8⅝	.875
	88	11½	.795
	96	11½	.875
18	50	7½	.570
	55	7½	.630
	60	7½	.695
	64	8¾	.686
	70	8¾	.751
	77	8¾	.831
	85	8⅞	.911
	96	11¾	.831
	105	11¾	.911
	114	11⅞	.991
21	62	8¼	.615
	68	8¼	.685
	73	8¼	.740
	82	9	.795
	96	9	.935
	112	13	.865
	127	13	.985
	142	13⅛	1.095
24	76	9	.682
	84	9	.772
	94	9	.872
	100	12	.775
	110	12	.885
	120	12⅛	.930
	130	14	.900
	145	14	1.020
	160	14⅛	1.135
27	94	10	.747
	102	10	.827
	114	10⅛	.932
	145	14	.975
	160	14	1.075
	177	14⅛	1.190
30	108	10½	.750
	116	10½	.875
	124	10½	.930
	132	10½	1.00
	172	15	1.065
	190	15	1.185
	210	15⅛	1.315



AMERICAN STANDARD CHANNELS

Depth of Section, Y	Wgt. per ft., lb.	Flange width	Mean Thick. of fl'g., Z
3	4.1	1⅜	.25
	5.0	1½	
	6.0	1⅝	
4	5.4	1⅝	.313
	7.25	1¾	
5	6.7	1¾	.313
	9.0	1⅞	
6	8.2	1⅞	.375
	10.5	2	
	13.0	2⅛	
7	9.8	2⅛	.375
	12.25	2¼	
	14.75	2¼	
8	11.5	2¼	.375
	13.75	2⅜	
	18.75	2½	
9	13.4	2⅜	.438
	15.0	2½	
	20.0	2⅝	
10	15.3	2⅝	.438
	20.0	2¾	
	25.0	2⅞	
	30.0	3	
12	20.7	3	.50
	25.0	3	
	30.0	3⅛	
15	33.9	3⅜	.625
	40.0	3½	
	50.0	3¾	
18	42.7	4	.625
	45.8	4	
	51.9	4⅛	
	58	4¼	



AMERICAN STANDARD I-BEAMS

Depth of section, Y	Wgt. per ft., lb.	Flange width	Mean Thick. of fl'g., Z
3	5.7	2⅜	.25
	7.5	2½	
4	7.7	2⅝	.313
	9.5	2¾	
5	10.0	3	.313
	14.75	3¼	
6	12.5	3⅜	.375
	17.25	3⅝	
7	15.3	3⅝	.375
	20.0	3⅞	
8	18.4	4	.438
	23.0	4⅛	
10	25.4	4⅝	.50
	35.0	5	
12	31.8	5	.563
	35.0	5⅛	
	40.8	5¼	.688
	50.0	5½	
15	42.9	5½	.625
	50.0	5⅝	
18	54.7	6	.688
	70.0	6¼	
20	65.4	6¼	.813
	75.0	6⅜	
	85.0	7	.938
	95.0	7¼	
24	79.9	7	.875
	90.0	7⅛	
	100.0	7¼	
	105.9	7⅞	1.125
	120.0	8	

Steel Pipe Data

Schedule 40 & 80

Pipe Size	Pipe O.D.	Schedule No.	Wall Thickness	Weight Per Foot (lbs)	
				Pipe	Pipe filled with water
3/8	0.675	40	0.091	0.567	0.650
		80	0.126	0.740	0.800
1/2	0.84	40	0.109	0.850	0.980
		80	0.147	1.090	1.190
3/4	1.05	40	0.113	1.130	1.360
		80	0.154	1.470	1.660
1	1.315	40	0.133	1.680	2.050
		80	0.179	2.170	2.480
1 1/4	1.66	40	0.140	2.270	2.920
		80	0.191	3.000	3.550
1 1/2	1.9	40	0.145	2.720	3.600
		80	0.200	3.630	4.400
2	2.375	40	0.154	3.650	5.100
		80	0.218	5.020	6.300
2 1/2	2.875	40	0.230	5.790	7.860
		80	0.276	7.660	9.490
3	3.5	40	0.216	7.580	10.780
		80	0.300	10.250	13.110
3 1/2	4	40	0.226	9.110	13.400
		80	0.318	12.510	16.360
4	4.5	40	0.237	10.790	16.300
		80	0.337	14.980	19.960
5	5.563	40	0.258	14.620	23.290
		80	0.375	20.780	28.660
6	6.625	40	0.280	18.970	31.490
		80	0.432	28.570	39.860
8	8.625	40	0.322	28.550	50.150
		80	0.500	43.390	63.190
10	10.75	40	0.365	40.480	74.580
		80	0.593	64.400	95.500
12	12.75	40	0.406	53.600	102.100
		80	0.687	88.600	132.600
14	14	40	0.437	63.000	121.500
		80	0.750	107.000	158.200
16	16	40	0.500	83.000	159.500
		80	0.843	137.000	206.700
18	18	40	0.563	105.000	202.200
		80	0.937	171.000	259.500
20	20	40	0.593	123.000	243.400
		80	1.031	209.000	318.400
24	24	40	0.687	171.000	345.200
		80	1.218	297.000	455.200
30	30	20	0.500	158.000	444.000
36	36	API	0.500	190.000	607.000

Copper Tubing Data

Type L

Tube Size	Tubing O.D.	Tubing O.D. (inches)	Wall Thickness	Weight per Foot (lbs)	
				Tubing	Tubing Filled with Water
1/4	3/8	0.375	0.030	0.126	0.160
3/8	1/2	0.500	0.035	0.198	0.260
1/2	5/8	0.625	0.040	0.285	0.385
5/8	3/4	0.750	0.042	0.362	0.513
3/4	7/8	0.875	0.045	0.455	0.664
1	1 1/8	1.125	0.050	0.655	1.012
1 1/4	1 3/8	1.375	0.055	0.884	1.430
1 1/2	1 5/8	1.625	0.060	1.140	1.910
2	2 1/8	2.125	0.070	1.750	3.091
2 1/2	2 5/8	2.625	0.080	2.480	4.544
3	3 1/8	3.125	0.090	3.330	6.279
3 1/2	3 5/8	3.625	0.100	4.290	8.279
4	4 1/8	4.125	0.110	5.380	10.568
5	5 1/8	5.125	0.125	7.610	15.691
6	6 1/8	6.125	0.140	10.200	21.816
8	8 1/8	8.125	0.200	19.290	39.579
10	10 1/8	10.125	0.250	30.100	61.690
12	12 1/8	12.125	0.280	40.400	85.826

Type K

Tube Size	Tubing O.D.	Tubing O.D. (inches)	Wall Thickness	Weight per Foot (lbs)	
				Tubing	Tubing Filled with Water
1/4	3/8	0.375	0.035	0.145	0.177
3/8	1/2	0.500	0.049	0.269	0.324
1/2	5/8	0.625	0.049	0.344	0.438
5/8	3/4	0.750	0.049	0.418	0.562
3/4	7/8	0.875	0.065	0.641	0.829
1	1 1/8	1.125	0.065	0.839	1.176
1 1/4	1 3/8	1.375	0.065	1.040	1.567
1 1/2	1 5/8	1.625	0.072	1.360	2.103
2	2 1/8	2.125	0.083	2.060	3.370
2 1/2	2 5/8	2.625	0.095	2.920	4.920
3	3 1/8	3.125	0.109	4.000	6.960
3 1/2	3 5/8	3.625	0.120	5.120	9.020
4	4 1/8	4.125	0.134	6.510	11.570
5	5 1/8	5.125	0.160	9.670	17.670
6	6 1/8	6.125	0.192	13.870	25.070
8	8 1/8	8.125	0.271	25.900	45.400
10	10 1/8	10.125	0.338	40.300	70.723
12	12 1/8	12.125	0.405	57.800	101.475

AWWA Ductile Iron Pipe Data

Thickness and dimensions of 3" through 64" Ductile Iron Pipe conform to ANSI/AWWA C151/A21.51.					
Nom. Pipe Size	Thickness Class	O.D. D.I. Pipe	Wall Thickness	Weight per Foot (lbs)	
				Pipe	Pipe Filled with Water
3	53	3.96	.31	11.40	15.20
4	53	4.80	.32	14.40	20.30
6	53	6.90	.34	22.20	35.30
8	53	9.05	.36	31.50	54.50
10	53	11.10	.38	41.10	77.50
12	53	13.20	.40	51.60	103.90
14	53	15.30	.42	63.60	134.70
16	53	17.40	.43	74.30	167.40
18	53	19.50	.44	85.40	203.30
20	53	21.60	.45	96.90	242.70
24	53	25.80	.47	121.10	422.30
30	53	32.00	.51	163.80	490.30
36	53	38.30	.58	223.60	692.90
42	53	44.50	.65	293.60	928.50
48	53	50.80	.72	370.50	1199.40

Weights are based on thickness Class 53. Due to numerous pressure and thickness classes, varying pipe lengths and piping connections (eg. bell and gasket, mechanical, etc.) above weights should be considered an average for all ductile iron piping systems.

AWWA C-900 PVC Water Pipe Data - Class 100, 150, 200

Nom Size	O.D. C-900	Wall Thickness	Weight per Foot (lbs)	
			Pipe	Pipe Filled with Water
DR 25 -- CLASS 100				
4	4.800	0.192	1.846	10.290
6	6.900	0.276	3.831	21.290
8	9.050	0.362	6.618	36.648
10	11.100	0.444	10.005	55.190
12	13.200	0.528	14.180	78.080
DR 18 -- CLASS 150				
4	4.800	0.267	2.522	10.400
6	6.900	0.383	5.226	21.518
8	9.050	0.503	9.040	37.077
10	11.100	0.617	13.666	55.836
12	13.200	0.733	19.354	79.000
DR 14 -- CLASS 200				
4	4.800	0.343	3.182	10.515
6	6.900	0.493	6.605	21.745
8	9.050	0.646	11.410	37.480
10	11.100	0.793	17.250	56.480
12	13.200	0.943	24.450	79.910

SERVICE WEIGHT CAST IRON SOIL PIPE DATA
(Bell & Spigot Type)

Nominal Pipe Size	O.D. of Cast Iron Pipe (Barrel)	Wall Thickness	Weight Per Foot (lbs)	
			Pipe*	Pipe Filled With Water
2	2.30	.170	4.10	5.60
3	3.30	.170	6.00	9.40
4	4.30	.180	7.90	14.10
5	5.30	.180	10.00	22.30
6	6.30	.180	12.40	26.30
8	8.38	.230	18.10	43.80
10	10.50	.280	26.00	66.60
12	12.50	.280	34.60	92.80
15	15.88	.360	52.50	149.10

* Based on 10 foot length

EXTRA HEAVY CAST IRON SOIL PIPE DATA
(Bell & Spigot Type)

Nominal Pipe Size	O.D. of Cast Iron Pipe (Barrel)	Wall Thickness	Weight Per Foot (lbs)	
			Pipe*	Pipe Filled With Water
2	2.38	.190	4.50	6.10
3	3.50	.250	8.40	12.10
4	4.50	.250	10.50	17.00
5	5.50	.250	13.40	23.60
6	6.50	.250	15.70	30.40
8	8.62	.310	24.60	50.70
10	10.75	.370	37.50	78.30
12	12.75	.370	47.10	105.90
15	15.88	.440	67.60	159.40

* Based on 10 foot length

NO-HUB CAST IRON SOIL PIPE DATA

Nominal Pipe Size	O.D. of Cast Iron Pipe	Wall Thickness	Weight Per Foot (lbs)	
			Pipe	Pipe Filled With Water
1½	1.90	.16	2.9	6.40
2	2.35	.16	3.8	8.80
3	3.35	.16	5.4	13.70
4	4.38	.19	7.1	19.90
5	5.30	.19	9.8	27.70
6	6.30	.19	11.8	34.80
8	8.38	.23	16.5	56.00
10	10.56	.28	25.5	68.84
12	12.50	.28	31.8	94.31
15	15.83	.36	49.3	145.50

CPVC Plastic Pipe Data - SCHEDULE 40 & 80

Pipe Size	O.D. CPVC PLASTIC PIPE	Schedule No.	Wall Thickness	Weight Per Foot (in LBS)	
				Pipe	Pipe Filled With Water
3/8	0.675	40	0.091	.122	.205
		80	0.126	.154	.215
1/2	0.840	40	0.109	.180	.312
		80	0.147	.225	.326
3/4	1.050	40	0.113	.239	.469
		80	0.154	.305	.491
1	1.315	40	0.133	.352	.726
		80	0.179	.449	.760
1 1/4	1.660	40	0.140	.475	1.122
		80	0.191	.618	1.173
1 1/2	1.900	40	0.145	.568	1.450
		80	0.200	.751	1.516
2	2.375	40	0.154	.761	2.213
		80	0.218	1.040	2.319
2 1/2	2.875	40	0.203	1.201	3.273
		80	0.276	1.584	3.418
3	3.500	40	0.216	1.572	4.772
		80	0.300	2.124	4.984
3 1/2	4.000	40	0.226	1.905	6.185
		80	0.318	2.607	12.642
4	4.500	40	0.237	2.239	7.749
		80	0.337	3.105	8.085
5	5.563	40	0.258	3.062	11.722
		80	0.375	4.343	12.213
6	6.625	40	0.280	3.945	16.455
		80	0.432	5.929	17.219
8	8.625	40	0.322	5.920	27.520
		80	0.500	9.051	28.851
10	10.750	40	0.365	8.406	42.506
		80	0.593	13.429	44.529
12	12.750	40	0.406	11.172	59.672
		80	0.687	18.458	62.458
14	14.00	40	0.437	13.262	71.762
		80	0.750	22.224	73.424
16	16.00	40	0.500	17.312	93.812
		80	0.843	28.557	98.257

PVC Plastic Pipe Data - SCHEDULE 40 & 80

Pipe Size	O.D. PVC PLASTIC PIPE	Schedule No.	Wall Thickness	Weight Per Foot (lbs)	
				Pipe	Pipe Filled With Water
3/8	0.675	40	0.091	.109	.192
		80	0.126	.138	.199
1/2	0.840	40	0.109	.161	.293
		80	0.147	.202	.303
3/4	1.050	40	0.113	.214	.444
		80	0.154	.273	.459
1	1.315	40	0.133	.315	.689
		80	0.179	.402	.713
1 1/4	1.660	40	0.140	.426	1.073
		80	0.191	.554	1.109
1 1/2	1.900	40	0.145	.509	1.391
		80	0.200	.673	1.438
2	2.375	40	0.154	.682	2.134
		80	0.218	.932	2.211
2 1/2	2.875	40	0.203	1.076	3.148
		80	0.276	1.419	3.253
3	3.500	40	0.216	1.409	4.609
		80	0.300	1.903	4.763
3 1/2	4.000	40	0.226	1.697	5.977
		80	0.318	2.322	6.172
4	4.500	40	0.237	2.006	7.510
		80	0.337	2.782	7.762
5	5.563	40	0.258	2.726	11.386
		80	0.375	3.867	11.737
6	6.625	40	0.280	3.535	16.045
		80	0.432	5.313	16.603
8	8.625	40	0.322	5.305	26.905
		80	0.500	8.058	27.858
10	10.750	40	0.365	7.532	41.632
		80	0.593	11.956	43.056
12	12.750	40	0.406	9.949	58.449
		80	0.687	16.437	60.437
14	14.000	40	0.437	11.810	70.310
		80	0.750	19.790	70.990
16	16.000	40	0.500	15.416	91.916
		80	0.843	25.430	95.130
18	18.000	40	0.563	20.112	117.312
		80	0.937	31.830	120.330
20	20.000	40	0.593	23.624	144.024
		80	1.031	40.091	149.491
24	24.000	40	0.687	32.873	207.073
		80	1.218	56.882	215.082

Vinyl Coated Hanger Supports

Empire Industries offers many products with a vinyl coating which prevents galvanic reaction between materials, reduces noise and can be used where contact between plastic or glass pipe and the metal hanger/support is not desirable. The items shown below are readily available with vinyl coating. Other items are available upon request.

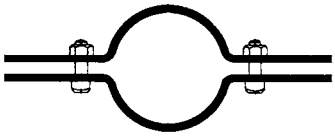


FIG. 50 P.C.
RISER CLAMP

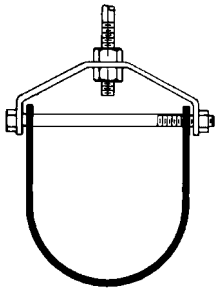


FIG. 110 P.C.
CLEVIS HANGER

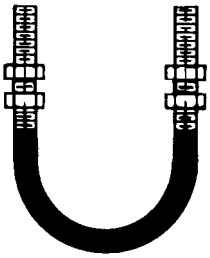


FIG. 137 P.C.
U-BOLT

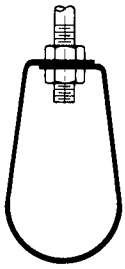


FIG. 31 P.C.
BAND HANGER

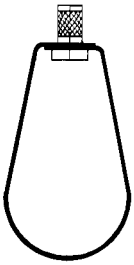


FIG. 310 P.C.
“EM-LOK”

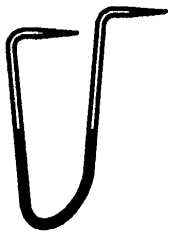


FIG. 235 P.C.
WIRE PIPE HOOK

FIG. 237 P.C.
DWV PIPE HANGER

SDR-35 PVC Sewer Pipe Data

Nominal Size	O.D. SDR-35 PVC Sewer Pipe	Wall Thickness	Weight Per Foot (lbs)
			Pipe*
4	4.215	.120	1.053
6	6.275	.180	2.361
8	8.400	.240	4.222
10	10.500	.300	6.617
12	12.500	.360	9.480
15	15.300	.437	14.219
18	18.701	.536	21.510
21	22.047	.632	30.261
24	24.803	.711	38.642

*** Based on 13 foot lenght**

Glass Pipe Data

Pipe Size	O.D. Glass Pipe	Schedule	Wall Thickness	Weight Per Foot (lbs)	
				Pipe	Pipe Filled With Water
1	1.31	Heavy	.16	.60	.95
11/2	1.84	Regular	.12	.64	1.53
		Heavy	.17	.87	1.63
2	2.34	Regular	.14	.94	2.39
		Heavy	.17	1.10	2.46
3	3.41	Regular	.17	1.60	4.79
		Heavy	.20	2.00	5.06
4	4.53	Regular	.20	2.60	8.39
		Heavy	.26	3.40	8.84
6	6.66	Regular	.24	4.70	17.48
		Heavy	.33	6.30	18.72

Spacing of hangers for glass pipe should be every 8-10 feet.
Hangers should be padded or vinyl coated.

Rigid Steel Conduit Data (Heavy Wall Conduit)

Nominal Size EMT Conduit	O.D. Conduit	Weight Conduit w/coupling	Approx. Weight Conduit and Conductor (lbs/ft.)	
			Lead Covered	Not Lead Covered
3/8	.675	.515	.805	.651
1/2	.840	.80	1.17	1.04
3/4	1.050	1.09	1.75	1.40
1	1.315	1.65	2.62	2.35
1 1/4	1.660	2.15	4.31	3.58
1 1/2	1.900	2.58	5.89	4.55
2	2.375	3.52	8.53	7.21
2 1/2	2.875	5.67	11.51	10.22
3	3.500	7.14	16.51	14.51
3 1/2	4.000	8.60	19.05	17.49
4	4.500	10.00	24.75	21.48
5	5.563	13.20	35.87	30.83
6	6.625	17.85	50.69	43.43

Electrical Metallic Tubing Data

Nominal Size EMT Conduit	O.D. Conduit	Weight Conduit w/cp/g	Approx. Weight Conduit and Conductor lbs/ft.
3/8	.577	.23	.366
1/2	.706	.29	.54
3/4	.922	.45	1.16
1	1.163	.65	1.83
1 1/4	1.510	.96	2.96
1 1/2	1.740	1.11	3.68
2	2.197	1.41	4.45
2 1/2	2.875	2.15	6.41
3	3.500	2.60	9.30
3 1/2	4.000	3.25	12.15
4	4.500	3.90	15.40

Intermediate Metal Conduit Data

Nominal Size EMT Conduit	O.D. Conduit	Weight Conduit w/coupling	Approx. Weight Conduit and Conductor (lbs/ft.)	
			Lead Covered	Not Lead Covered
1/2	.815	.60	.97	.84
3/4	1.029	.82	1.48	1.13
1	1.290	1.16	2.13	1.86
1 1/4	1.638	1.50	3.66	2.93
1 1/2	1.883	1.82	5.13	3.79
2	2.360	2.42	7.43	6.11
2 1/2	2.857	4.28	10.12	8.83
3	3.476	5.26	14.63	12.63
3 1/2	3.971	6.12	16.57	15.01
4	4.466	6.82	21.57	18.30