TEMBO

Powering Ahead

TEMBO GLOBAL INDUSTRIES LTD.

LEADING MANUFACTURER

SEISMIC BRACINGS, ANTI VIBRATION,
PIPE HANGER, FASTENERS,
SUPPORT SYSTEMS & ACOUSTIC

UL LISTED · FM APPROVED · MSS · CE · ISO 9001 : 2015 · Member of EOTA · NFPA · AEO भारतीय सीमा शुल्क INDIAN CUSTOMS

www.tembo.in

INTRODUCTION

Tembo Global Industries Limited is an industrial powerhouse with a dominant presence in manufacturing and fabrication of metal products used in **Pipe Support Systems, Fasteners, Anchors HVAC Anti-Vibration Systems** and Equipments for industrial commercial, utility and OEM installation

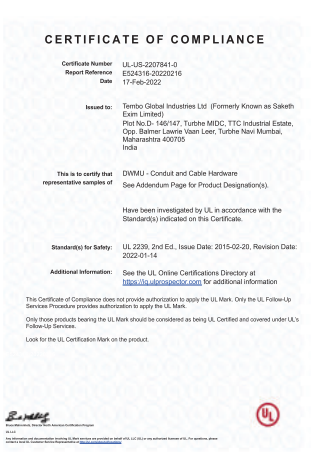
We are a young, able and responsive company growing at a meteoric pace by adhering to the highest standards of research design, engineering and manufacturing. Our products are certified and approved by **Underwriter's Laboratory Inc. (USA) and FM Approval (USA)** for Fire Sprinkler System Installations. All of our products are manufactured to meet and exceed industry standards set for their design and manufacture.

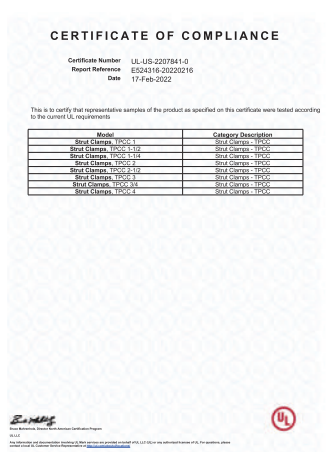
Tembo Global Industries Limited's products are produced in advanced and technologically most advanced modern plants. These facilities are located in the Commercial Capital of the India, Mumbai. We have numerous regional sales and distribution centres located in the United States, UK, Gulf, Asian & European Countries stocking standard products. We also have sales representatives with engineering expertise located throughout the Gulf, European and Asian Countries via our network of distributors for our client's convenience.

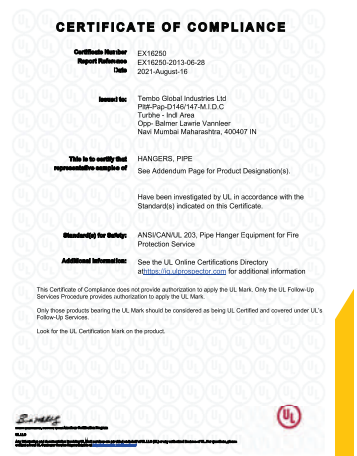
All our products are available in various materials and finishes which can be conducive to any project and requirements. We have various finishes available like Zinc Coating/Electro-galvanized, Pre-galvanized, Hot-dip galvanized, Zinc Flake Coating & Plastic Coating after fabrication. Our Customers can choose from these wide range of customizations according to their needs and requirements.

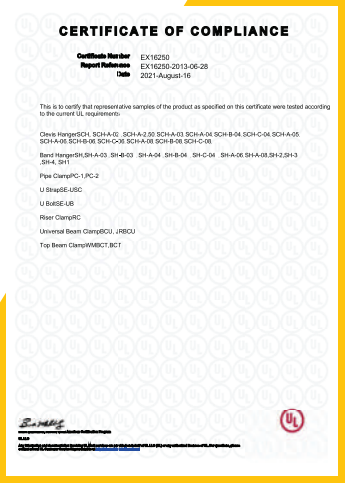
Furthermore any project requires any unique application which creates demand for a special product not included in the current product range Tembo Global Industries Limited's engineering personnel are ready to furnish design consultation and realistic material estimates to all our prospective clients

CERTIFICATES









TEMBO IS FIRST AND ONLY COMPANY FROM INDIA TO HAVE ACCREDITATION FOR PIPE HANGERS FOR PIPE SUPPORT SYSTEM IN INDIA.

CERTIFICATES

Certificate of Compliance

This certificate is issued for the following:

Pipe Hanger Components for Automatic Sprinkler Systems

Product Designation	Hanger Rod Size, in. (mm)	Component Description	For Nominal Pipe Sizes, in.	Remarks
RC	3/8 (10)	Steel Clamp	3/4, 1, 1-1/4, 1-1/2, 2	-
RC	½ (12)	Steel Clamp	2-1/2, 3, 4	-
RC	5/8 (16)	Steel Clamp	6	-

Prepared for:

Tembo Global Industries Ltd
Plot No. 146/147 MIDC – Turbhe -
TTC, Navi Mumbai,
Maharashtra 400703
India

Manufactured by:

Tembo Global Industries Ltd
Unit No. 1/B – Bodrianh, Ground Floor,
Tungareshwar Industrial Complex Sativali Village,
Vasai (East), Dist. Thane, Maharashtra 401208
India

FM Approvals Class: 1951, 1952, 1953 Issue Date December 2016

Approval Identification: 3059204
Superseded by: RR223825

Approval Granted: May 23, 2018
Date Approved: June 15, 2020

To verify the availability of the Approved product, please refer to www.approvalguide.com

Said Approval is subject to satisfactory field performance, continuing Surveillance Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

David B. Fuller
VP, Manager of Fire Protection
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062 USA

Certificate of Compliance

This certificate is issued for the following:

Pipe Hanger Components for Automatic Sprinkler Systems

Product Designation	Hanger Rod Size, in. (mm)	Component Description	For Nominal Pipe Sizes, in.	Remarks
UBC	3/8 (10)	U-Strap Hangers	3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2	-
UBC	½ (12)	U-Strap Hangers	3, 3-1/2, 4, 5, 6	-

Prepared for:

Tembo Global Industries Ltd
Plot No. 146/147 MIDC – Turbhe -
TTC, Navi Mumbai,
Maharashtra 400703,
India

Manufactured by:

Tembo Global Industries Ltd
Unit No. 1/B – Bodrianh, Ground Floor,
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India

FM Approvals Class: 1951, 1952, 1953 Issue Date December 2016

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FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062 USA

Certificate of Compliance

This certificate is issued for the following:

Pipe Hanger Components for Automatic Sprinkler Systems

Product Designation	Hanger Rod Size, in. (mm)	Component Description	For Nominal Pipe Sizes, in.	Remarks
CH	3/8 (10)	Clevis Hanger	3/4, 1, 1-1/4, 1-1/2	-
CH	1/2 (12)	Clevis Hanger	2-1/2, 3, 4	-
CH	5/8 (16)	Clevis Hanger	5, 6, 8	-

Prepared for:

Tembo Global Industries Ltd
Plot No. 146/147 MIDC – Turbhe -
TTC, Navi Mumbai,
Maharashtra 400703,
India

Manufactured by:

Tembo Global Industries Ltd
Unit No. 1/B – Bodrianh, Ground Floor,
Tungareshwar Industrial Complex Sativali Village,
Vasai (East), Dist. Thane, Maharashtra 401208,
India

FM Approvals Class: 1951, 1952, 1953 Issue Date December 2016

Approval Identification: 3056408
Superseded by: RR223825

Approval Granted: April 25, 2016
Date Approved: June 15, 2020

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David B. Fuller
VP, Manager of Fire Protection
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062 USA

Certificate of Compliance

This certificate is issued for the following:

Pipe Hanger Components for Automatic Sprinkler Systems

Product Designation	Hanger Rod Size, in. (mm)	Component Description	For Nominal Pipe Sizes, in.	Remarks
SH	3/8 (10)	Loop Hanger	3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4	-
SH	1/2 (12)	Loop Hanger	5, 6, 8	-

Prepared for:

Tembo Global Industries Ltd
Plot No. 146/147 MIDC – Turbhe -
TTC, Navi Mumbai,
Maharashtra 400703,
India

Manufactured by:

Tembo Global Industries Ltd
Unit No. 1/B – Bodrianh, Ground Floor,
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Vasai (East), Dist. Thane, Maharashtra 401208,
India

FM Approvals Class: 1951, 1952, 1953 Issue Date December 2016

Approval Identification: 3056408
Superseded by: RR223825

Approval Granted: April 25, 2016
Date Approved: June 15, 2020

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David B. Fuller
VP, Manager of Fire Protection
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062 USA

Certificate of Compliance

This certificate is issued for the following:

Pipe Hanger Components for Automatic Sprinkler Systems

Sprinkler Hanger Models SH1, SH2, SH3, SH4
C-type Clamp Models BCU, BCT
(see attached listing)

Prepared for:

Tembo Global Industries Ltd
Plot No. 146/147 Turbhe MIDC – TTC
Navi Mumbai, Maharashtra 400705
India

FM Approvals Class: 1951 (December 2014)

Approval Identification: PM456429

Approval Granted: May 13, 2021

To verify the availability of the Approved product, please refer to www.approvalguide.com

Said Approval is subject to satisfactory field performance, continuing Surveillance Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

David B. Fuller
VP, Manager – Fire Protection
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062

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Certificate of Compliance

Loop Hangers

Model No.	Description	Hanger Rod Size, in (mm)	Nominal Pipe Size in	(mm)
SH	Loop Hanger	3/8 (10)	3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4	(20, 25, 32, 40, 50, 65, 80, 100)
SH	Loop Hanger	1/2 (12)	5, 6, 8	(125, 150, 200)
SH2	Loop Hanger	3/8 (10)	3/4, 1, 1 1/4, 1 1/2, 2	(20, 25, 32, 40, 50)
SH3	Loop Hanger	3/8 (10)	2 1/2	(65)
SH4	Loop Hanger	1/2 (12)	3, 4, 5, 6	(80, 100, 125, 150)
SH1	Loop Hanger	3/8 (10)	3/4, 1, 1 1/4, 1 1/2, 2	(20, 25, 32, 40, 50)

C-Type Clamps

Model No.	Description	Hanger Rod Size, in (mm)	Nominal Pipe Size in	(mm)
BCU	Beam Clamp	3/8 (10)	3/4 through 4	(20 through 100)
BCT	Beam Clamp	1/2 (12)	5, 6, 8	(125, 150, 200)

Page 2 of 2

Certificate of Compliance

This certificate is issued for the following:

Pipe Hanger Components for Automatic Sprinkler Systems

Tembo Global, Pipe Clamps

Product Designation	Hanger Rod Size, in. (mm)	Component Description	For Nominal Pipe Sizes, in.	Remarks
NCR	3/8 (10)	Pipe Hanger with Lining	3/4, 1, 1 ¼, 1 ½, 2, 2 ½, 3, 4	-

Prepared for:

Tembo Global Industries Ltd
Plot No. 146/147 MIDC – Turbhe -
TTC, Navi Mumbai,
Maharashtra 400703,
India

Manufactured by:

Tembo Global Industries Ltd
Unit No. 1/B – Bodrianh, Ground Floor,
Tungareshwar Industrial Complex
Sativali Village, Vasai (East), Dist.
Thane, Maharashtra 401208,
India

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To verify the availability of the Approved product, please refer to www.approvalguide.com

Said Approval is subject to satisfactory field performance, continuing Surveillance Audits, and strict conformity to the constructions as shown in the Approval Guide, an online resource of FM Approvals.

David B. Fuller
VP, Manager of Fire Protection
FM Approvals
1151 Boston-Providence Turnpike
Norwood, MA 02062 USA

MSS
Since 1924

MANUFACTURERS STANDARDIZATION SOCIETY
OF THE
VALVE AND FITTING INDUSTRY, INC.

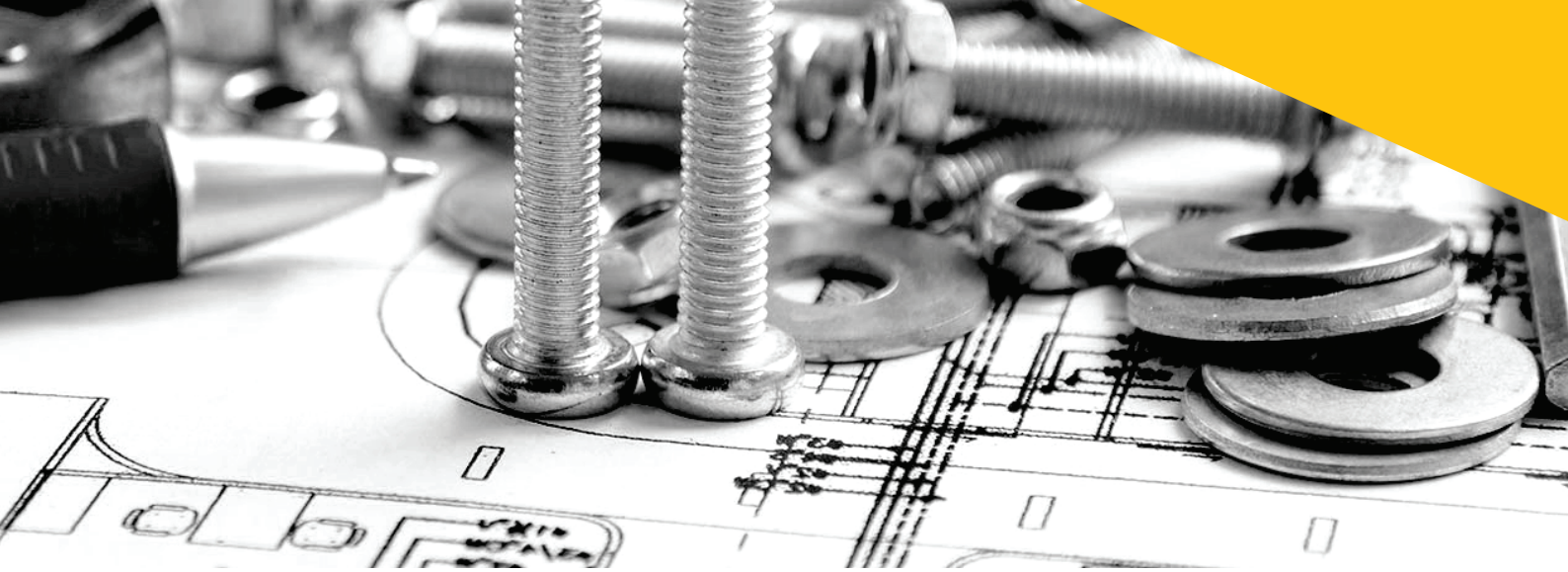
HEREBY CERTIFIES THAT

TEMBO GLOBAL INDUSTRIES LTD.

IS A MEMBER IN GOOD STANDING FOR THE YEAR 2022

James Barker
President

David Thompson
Executive Director



TECHNICAL DATA

MATERIALS

MILD STEEL
Mild steel is used in the manufacture of Tembo pipe hangers and supports. Excellent strength characteristics and adaptability to cold forming provide a well engineered design. By cold forming the steel, mechanical properties are increased, adding to the structural integrity of the fabricated hanger.

STAINLESS STEEL
AISI Type 304 and Type 316 are non-magnetic members of the austenitic stainless steel group. Several conditions make the use of stainless steel ideal. These include reducing long term maintenance costs, high ambient temperatures, appearance, and stable structural properties such as yield strength, and high creep resistance.

CORROSION
All metal surfaces exposed to the environment are affected by corrosion. Depending on the physical properties of the metal and its proximity to other dissimilar metals, an electrochemical reaction may occur which causes an attack on the metal itself, resulting in corrosion. Chemical corrosion is limited to highly corrosive environments, high temperatures, or a combination of both.

FINISHES
ZINC COATINGS
Protective zinc coatings are available on a number of pipe hangers and accessories in three basic forms:
Electro-galvanized, pre-galvanized, and hot-dip galvanized after fabrication. In all cases, the zinc protects the steel first as a sacrificial anode to repair bare areas on cut edges and gouges. When exposed to air and moisture, zinc forms a tough, adherent protective film consisting of a mixture of zinc oxides, hydroxides, and carbonates. The corrosion resistance of zinc is directly related to its thickness and the environment. For example a 0.2 mil (5 µm) coating will last twice as long as a 0.1 mil (2.5 µm) coating in the same environment.

ELECTRO-GALVANIZED
(ASTM B633 SC1 OR Sc3)
An electro-galvanized process deposits a coating of zinc on the steel by electrolysis from a bath of zinc salts. This coating is pure zinc and adheres to the steel with a molecular bond. A maximum of 0.5 mils (12.7 µm) of zinc can be applied by this method. This coating is recommended for in-door use in relatively dry areas.

PRE-GALVANIZED ZINC
(ASTM A653 COATING DESIGNATION G90)
Pre-galvanized zinc is produced by continuously rolling the steel coils or sheets through molten zinc at the steel mills. This is also known as "mill galvanized" or "hot-dipped mill galvanized". Coils are then slit to size for fabrication of pipe hangers. Coating thicknesses of G90, is 0.90 ounces per square foot (0.27 kg/m2) of steel surface.

Protection of cut edges with zinc coatings.

Cut edges and welded areas are not zinc coated; however, zinc near the uncoated metal becomes a sacrificial anode which protects the bar areas after a short period of time. Pre-galvanized steel is not generally recommended for use outdoors in industrial environments, but is suitable for extended exposure in dry or mildly corrosive atmospheres.

HOT-DIP GALVANIZED AFTER FABRICATION (ASTM A123)
After a pipe hanger or fitting has been fabricated, it is completely immersed in a bath of molten zinc. A metallurgical bond is formed, resulting in a zinc coating that completely coats all surfaces, including edges. Zinc coatings of this specification have a minimum thickness of 1.50 ounces per square foot (0.45 kg/m2) on each side or a total of 3.0 ounces per square foot (0.9 kg/m2) of steel.

ZINC FLAKE COATING
Zinc flake coating - Zinc flake coatings are non-electrolytically applied coatings, which provide good protection against corrosion. These coatings consist of a mixture of zinc and aluminium flakes, which are bonded together by an inorganic matrix. Generally, for the Zinc flake coatings, the coating thickness ranges from 5-15 microns. The corrosion resistance can be achieved over 1500 hours by ASTM B117 in Salt Spray test. This layer provides very durable corrosion resistance for normal outdoor applications, and it visually resembles a hot dip galvanized layer in some respects, as both are matte grey. The layer thickness of the zinc flake coatings may be somewhat thicker compared to zinc electroplating (approximately 6 to 12 microns).

Hot dip galvanized after fabrication is recommended for outdoor exposure. For best results, a zinc rich paint should be applied to field cuts. The zinc rich paint will provide immediate protection for field cuts and eliminate the short time period for galvanic action to "heal" the damaged coating.

PLASTIC COATING
Some products offered by Tembo are plastic or vinyl coated for prevention of galvanic reaction between materials or for noise reduction. These coated products can also be used where contact between glass pipe and hanger is not desirable. Felt lined hangers may be substituted for same purpose.

RED PRIMER
A corrosion resistant metal primer containing rust inhibitive pigments.

QUALITY ASSURANCE
Tembo's Quality Assurance Program has been developed and implemented for compliance to various industry standards and specifications.

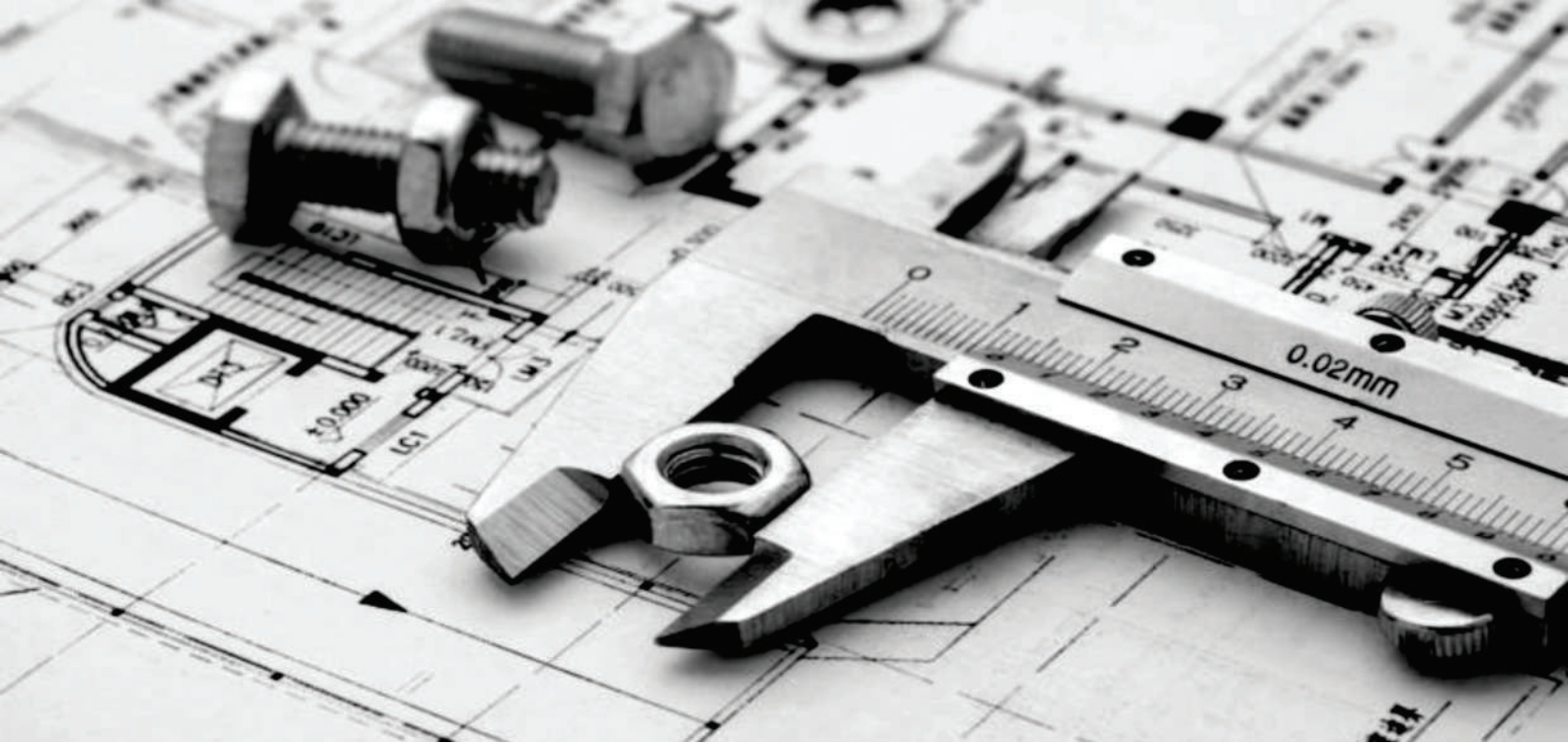
GENERAL
TORQUE
The torque values in this catalog are to be used as a guide only. The relationship between the applied torque or torque wrench reading and the actual tension created in the bolt may be substantially different. Important factors affecting torque-tension relationships include friction under the bolt head or nut, hole tolerances, and torque wrench tolerances. Accuracy of many commercial torque wrenches may vary as much as plus or minus 25%.

CHARTS AND TABLES
Charts and tables in this section are compiled from information published by nationally recognized organizations and are intended for use as a guide only. Tembo recommends that users of this information determine the validity of such information as applied to their own applications.

TEMBO RESERVES THE RIGHT TO MAKE SPECIFICATION CHANGES WITHOUT NOTICE.
SECTION 15140 - PIPE HANGERS AND SUPPORTS

PART I – GENERAL
1.01 SECTION INCLUDES
A. The work covered under this section consists of the furnishing of all necessary labor, supervision, materials, equipment, and services to completely execute the pipe hanger and supports as described in this specification.

1.02 REFERENCES
A. ASTM B633 - Specification for Electro deposited Coatings of Zinc on Iron and Steel.
B. ASTM A123 - Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.
C. ASTM A653 - Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.



D. ASTM A1011 - Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, and High-Strength Low-Alloy with Improved Form ability.
E. ANSI/MSS SP-58 - Manufacturers Standardization Society: Pipe Hangers and Supports - Materials, Design, and Manufacture.
F. ANSI/MSS SP-69 - Manufacturers Standardization Society: Pipe Hangers and Supports - Selection and Application.
G. NFPA 13 - Installation of Sprinkler Systems.

1.03 QUALITY ASSURANCE

A. Hangers and supports used in fire protection piping systems shall be listed and labeled by Underwriters Laboratories FM APPROVALS.
B. Steel pipe hangers and supports shall have the manufacturer's BRAND name and applicable size stamped in the part itself for identification.
C. Hangers and supports shall be designed and manufactured in conformance with ANSI/MSS SP-58.
D. Supports for sprinkler piping shall be in conformance with NFPA 13.

1.04 SUBMITTALS

A. Submit product data on all hanger and support devices, including shields and attachment methods. Product data to include, but not limited to materials, finishes, approvals, load ratings, and dimensional information.

PART II – PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Manufacturer: Subject to compliance with these specifications, pipe hanger and support systems shall be as manufactured by Tembo Global Industries Ltd.

2.02 PIPE HANGERS AND SUPPORTS

A. HANGERS
1. Uninsulated pipes 2 inches and smaller:
a. Sprinkler Hanger.
b. Pipe Hanger.
c. Clevis Hanger.

B. VERTICAL SUPPORTS
1. Steel Riser Clamp sized to fit outside diameter of pipe.

C. COPPER TUBING SUPPORTS
1. Hangers shall be sized to fit copper tubing outside diameters.
a. Sprinkler Hanger.
b. Pipe Hanger.
c. Clevis Hanger.

D. SUPPLEMENTARY STRUCTURAL SUPPORTS

1. Design and fabricate supports using structural quality steel bolted framing materials as manufactured by Tembo. Channels shall be roll formed, 12 gauge ASTM A1011 SS Grade 33 steel, 15/8" x 15/8" or greater as required by loading conditions. Submit designs for pipe tunnels, pipe galleries, etc., to engineer for approval. Use clamps and fittings designed for use with the strut system.

2.04 UPPER ATTACHMENTS

A. BEAM CLAMPS

1. Beam clamps shall be used where piping is to be suspended from building steel. Clamp type shall be selected on the basis of load to be supported, and load configuration.
2. C-Clamps shall have locknuts and cup point set screws.
3. Center loaded beam clamps shall be used where specified.

B. CONCRETE INSERTS

1. Cast in place spot concrete inserts shall be used where applicable; either steel or malleable iron body. Spot inserts shall allow for lateral adjustment and have means for attachment to forms. Select insert nuts to suit threaded hanger rod sizes.
2. Continuous concrete inserts shall be used where applicable. Channels shall be 12 gauge, ASTM A 1011 SS Grade 33 structural quality carbon steel, complete with Styrofoam inserts and end caps with nail holes for attachment to forms. The continuous concrete insert shall have a load rating of 2,000 lbs/ft. suitable for strut and rod sizes.

2.05 VIBRATION ISOLATION AND SUPPORTS

A. For refrigeration, air conditioning, hydraulic, pneumatic, and other vibrating system applications, uses a clamp that has a vibration dampening insert and a nylon inserted locknut.
B. For larger tubing or piping subjected to vibration, use neoprene or spring hangers as required.
C. For base mounted equipment use vibration pads, molded neoprene mounts, or spring mounts as required.
D. Vibration isolation products are manufactured by Tembo Global Industries Ltd.

2.06 ACCESSORIES

A. Hanger rods shall be threaded both ends. Or continuous threaded rods of circular cross section. Use adjusting locknuts at upper attachments and hangers. No wire, chain, or perforated straps are allowed.
B. Shields shall be 180° galvanized sheet metal, 12 inch minimum length, 18 gauge minimum thickness, designed to match outside diameter of the insulated pipe.
C. Pipe protection saddles shall be formed from carbon steel, 1/8 inch minimum thickness, sized for insulation thickness. Saddles for pipe sizes greater than 12 inch shall have a center support rib.

2.07 FINISHES

INDOOR FINISHES

A. Hangers and clamps for support of bare copper piping shall be coated with copper colored epoxy paint. Additionally a plastic coating or a felt lining in hanger can be used.
B. Hangers for other than bare copper pipe shall be zinc plated in accordance with ASTM B633-SC3.
C. Strut channels shall be Pre-Galvanized in accordance with ASTM A653 G90 or have an electro-deposited Green Epoxy finish.

OUTDOOR AND CORROSIVE AREA FINISHES

A. Hangers and strut located outdoors shall be hot dip galvanized after fabrication in accordance with ASTM A123. All hanger hardware shall be hot-dip galvanized or stainless steel. Zinc plated hardware is not acceptable for outdoor or corrosive use.
B. Hangers and strut located in corrosive areas shall be Type 304 (316) stainless steel with stainless steel hardware.

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	TGFW00	FLAT WASHERS	136-139
	TGDPA0	DROP IN ANCHORS	140
	TGDWA0	DRAW IN ANCHOR	140
	TGWA00	WEDGE ANCHOR	141
	TGTBA0	ETA THROUGH BOLT ANCHOR	142-150
	TGDIA0	ETA DROP IN ANCHOR	151-156
	TGFB00	FOUNDATION BOLT	157
	TGCA00	ACCESSORY SERIES	158
	TGDRPH	PHILLIPS BUGLE HEAD DRYWALL SCREWS	159
	TGDRCS	CSK PHILLIPS HEAD SELF DRILLING SCREWS AS PER DIN 7504 P	159
	TGDRPN	PAN PHILLIPS HEAD SELF DRILLING SCREWS AS PER DIN 7540 N	160
	TGDRTP	TRUSS PHILLIPS HEAD SELF DRILLING SCREWS ASPER DIN 7504 T	160
	TGBC00	BEAM CLAMP	163-166
	TGCF00	CEILING FLANGE	167
	TGWBA0	WELDING BEAM ATTACHMENT	168-169
	TGSLP0	SINGLE LUG PLATE	170
	TGCRP0	CONCRETE ROD ATTACHMENT PLATE	171-172
	TGFD00	FLOOR DRAINS	175-179
	TGTPA0	TEST PLUG	180
	TGAA00	AUTOMATIC AIR VENT	180
	TGGC00	GAUGE COCKS	181
	TGSBP0	SEISMIC BRACING	184-202
	TGF000	FLANGES	205-210
	TGSMF0	SOLAR MOUNTING BRACKETS	213-226
	TGHU00	HOSE UNION FITTINGS	227-228
		INSTALLATION INSTRUCTION TESTING OF PRODUCT	230-232

TEMBO
Powering Ahead

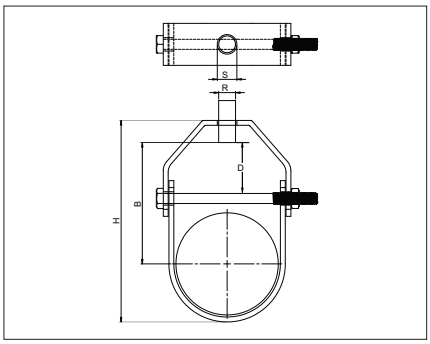
PIPE HANGERS











APPLICATION:

A CLEVIS HANGER provides for sizeable loads to be supported and for an elevation adjustment depending upon the pipe diameter. The lower nut adjusts the piping to the proper elevation and the upper nut, when locked into position, prevents loosening due to vibration.

CONSTRUCTION:

A CLEVIS HANGER consists of a yoke and a support strap made from shaped Mild steel strip and a joining bolt. 15° swing in either direction allows pipe to easily feed through. Pipe will not pinch when installing. Engineered design aligns bolt holes for quicker overhead installation.

MATERIAL:

Mild Steel. Also other materials can be provided on request

APPROVALS:

ANSI/MSS SP-58 & SP-69(Type 1)
Federal Specification WW-H-171E & A-A-1192A(Type 1)

MAXIMUM TEMPERATURE: 343°C(650°F)

FINISH AVAILABLE:

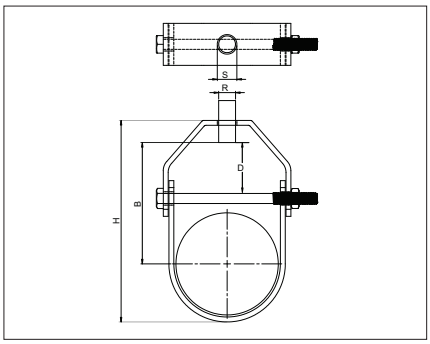
Electro-Galvanized.

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM) D	MATERIAL HEIGHT H	DIMENSION (MM) TOP HOLE DIA. S	HANGER ROD SIZE (MM) R	CROSS BOLT DIA. (CRD)	MAX LOAD (KG)
TGCH00ULE0022*	1/2"	DN15	21.3	68	11	M10	M8	350
TGCH00UFE0027	3/4"	DN20	26.7	72	11	M10	M8	350
TGCH00UFE0034	1"	DN25	33.4	76	11	M10	M8	350
TGCH00UFE0042	1 1/4"	DN32	42.1	87	11	M10	M8	350
TGCH00UFE0048	1 1/ 2"	DN40	48.2	97	11	M10	M8	350
TGCH00UFE0060	2"	DN50	60.3	114	11	M10	M8	350
TGCH00UFE0073	2 1/ 2"	DN65	73.0	142	13	M12	M10	780
TGCH00UFE0089	3"	DN80	88.9	165	13	M12	M10	780
TGCH00UFE0114	4"	DN100	114.3	202	13	M12	M10	780
TGCH00UFE0141	5"	DN125	141.3	236	13	M12	M12	1250
TGCH00UFE0168	6"	DN150	168.3	278	13	M12	M12	1250
TGCH00UFE0219	8"	DN200	219.1	338	13	M12	M12	2100

APPLICATION EXAMPLES:

NOTE : * Only UL Listed.

CLEVIS HANGER TGCH000000000



APPLICATION:

A CLEVIS HANGER provides for sizeable loads to be supported and for an elevation adjustment depending upon the pipe diameter. The lower nut adjusts the piping to the proper elevation and the upper nut, when locked into position, prevents loosening due to vibration.

CONSTRUCTION:

A CLEVIS HANGER consists of a yoke and a support strap made from shaped Mild steel strip and a joining bolt. 15° swing in either direction allows pipe to easily feed through. Pipe will not pinch when installing. Engineered design aligns bolt holes for quicker overhead installation.

MATERIAL:

Mild Steel. Also other materials can be provided on request

APPROVALS:

ANSI/MSS SP-58 & SP-69(Type 1)

Federal Specification WW-H-171E & A-A-1192A(Type 1)

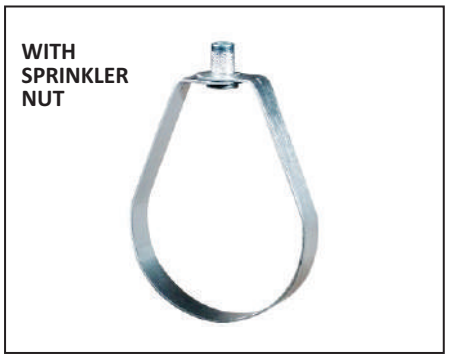
MAXIMUM TEMPERATURE: 343°C(650°F)

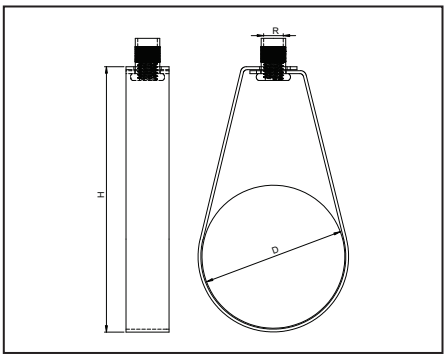
FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized, Zinc Flake & Epoxy Coated.

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM) D	MATERIAL HEIGHT H	DIMENSION (MM) TOP HOLE DIA. S	HANGER ROD SIZE (MM) R	CROSS BOLT DIA. (CRD)	MAX LOAD (KG)
TGCH0000E0022	1/2"	DN15	21.3	68	11	M10	M8	350
TGCH0000E0027	3/4"	DN20	26.7	72	11	M10	M8	350
TGCH0000E0034	1"	DN25	33.4	76	11	M10	M8	350
TGCH0000E0042	1 1/4"	DN32	42.1	87	11	M10	M8	350
TGCH0000E0048	1 1/ 2"	DN40	48.2	97	11	M10	M8	350
TGCH0000E0060	2"	DN50	60.3	114	11	M10	M8	350
TGCH0000E0073	2 1/ 2"	DN65	73.0	142	13	M12	M10	780
TGCH0000E0089	3"	DN80	88.9	165	13	M12	M10	780
TGCH0000E0114	4"	DN100	114.3	202	13	M12	M10	780
TGCH0000E0141	5"	DN125	141.3	236	13	M12	M12	1250
TGCH0000E0168	6"	DN150	168.3	278	13	M12	M12	1250
TGCH0000E0219	8"	DN200	219.1	338	13	M12	M12	2100
TGCH0000E0273	10"	DN250	273.1	419	17	M16	M16	2100
TGCH0000E0323	12"	DN300	323.8	490	21	M20	M20	2100
TGCH0000E0356	14"	DN350	355.6	556	21	M20	M20	3800
TGCH0000E0406	16"	DN400	406.4	610	25	M24	M20	3800
TGCH0000E0457	18"	DN450	457.2	675	25	M24	M24	4000
TGCH0000E0508	20"	DN500	508.0	715	32	M30	M24	4000
TGCH0000E0610	24"	DN 600	609.6	850	32	M30	M24	9400
TGCH0000E0762	30"	DN750	762.0	995	32	M30	M24	9400

APPLICATION EXAMPLES:





APPLICATION:
A SPRINKLER HANGER recommended to provide vertical support to non insulated piping systems. By adjusting the position of the sprinkler nut on the hanger rod at the top of the hanger, pipe elevation can be altered.

CONSTRUCTION:
A SPRINKLER HANGER consists of a piece of mild steel shaped to support pipe. Gives Double thickness at the support. Most suitable for fire extinguishing pipes installation.

MATERIAL:
Mild Steel. Also other materials can be provided on request

APPROVALS:
UL LISTED FM APPROVED
ANSI/MSS SP-58 & SP-69(Type 10) MSS
Federal Specification WW-H-171E & A-A-1192A(Type 10)

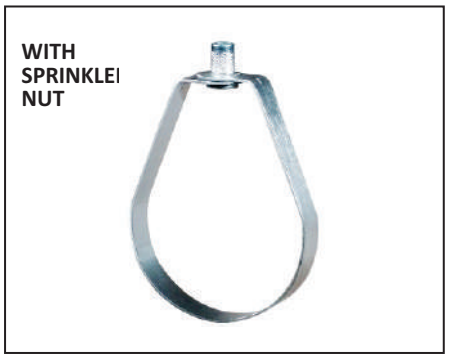
MAXIMUM TEMPERATURE: 343°C(650°F)

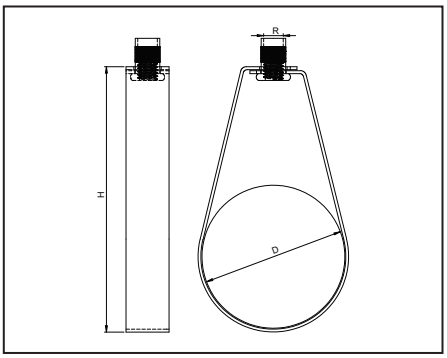
FINISH AVAILABLE:
Plain, Electro-Galvanized, Hot Dip Galvanized, Zinc Flake & Epoxy Coated.

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM) D	HEIGHT H	HANGER ROD SIZE (MM) R	MAX LOAD (KG)
TGSHN0UFE0027	3/4"	DN20	26.7	61	M10	220
TGSHN0UFE0034	1"	DN25	33.4	70	M10	220
TGSHN0UFE0042	1 1/4"	DN32	42.1	78	M10	220
TGSHN0UFE0048	1 1/2"	DN40	48.2	84	M10	220
TGSHN0UFE0060	2"	DN50	60.3	102	M10	220
TGSHN0UFE0073	2 1/2"	DN65	73.0	118	M10	300
TGSHN0UFE0089	3"	DN80	88.9	144	M10	300
TGSHN0UFE0114	4"	DN100	114.3	176	M10	300
TGSHN0UFE0168	6"	DN150	168.3	262	M12	550
TGSHN0UFE0219	8"	DN200	219.1	305	M12	1300

APPLICATION EXAMPLES:

SPRINKLER HANGER WITH NUT TGSHN00000000





APPLICATION:
A SPRINKLER HANGER recommended to provide vertical support to non insulated piping systems. By adjusting the position of the sprinkler nut on the hanger rod at the top of the hanger, pipe elevation can be altered.

CONSTRUCTION:
A SPRINKLER HANGER consists of a piece of mild steel shaped to support pipe. Gives Double thickness at the support. Most suitable for fire extinguishing pipes installation.

MATERIAL:
Mild Steel. Also other materials can be provided on request

APPROVALS:
ANSI/MSS SP-58 & SP-69(Type 10) MSS
Federal Specification WW-H-171E & A-A-1192A(Type 10)

MAXIMUM TEMPERATURE: 343°C(650°F)

FINISH AVAILABLE:
Plain, Electro-Galvanized, Hot Dip Galvanized, Zinc Flake & Epoxy Coated.

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM) D	HEIGHT (MM) H	HANGER ROD SIZE (MM) R	MAX LOAD (KG)
TGSHN000E0027	3/4"	DN20	26.7	61	M10	220
TGSHN000E0034	1"	DN25	33.4	70	M10	220
TGSHN000E0042	1 1/4"	DN32	42.1	78	M10	220
TGSHN000E0048	1 1/2"	DN40	48.2	84	M10	220
TGSHN000E0060	2"	DN50	60.3	102	M10	220
TGSHN000E0073	2 1/2"	DN65	73.0	118	M10	300
TGSHN000E0089	3"	DN80	88.9	144	M10	300
TGSHN000E0114	4"	DN100	114.3	176	M10	300
TGSHN000E0168	6"	DN150	168.3	262	M12	550
TGSHN000E0219	8"	DN200	219.1	305	M12	1300

APPLICATION EXAMPLES:

APPLICATION:
A SPRINKLER HANGER recommended to provide vertical support to non insulated piping systems. By adjusting the position of the sprinkler nut on the hanger rod at the top of the hanger, pipe elevation can be altered.

CONSTRUCTION:
A SPRINKLER HANGER consists of a piece of mild steel shaped to support pipe. Gives Double thickness at the support. Most suitable for fire extinguishing pipes installation.

MATERIAL:
Mild Steel. Also other materials can be provided on request

APPROVALS:
ANSI/MSS SP-58 & SP-69(Type 10) MSS
Federal Specification WW-H-171E & A-A-1192A(Type 10)

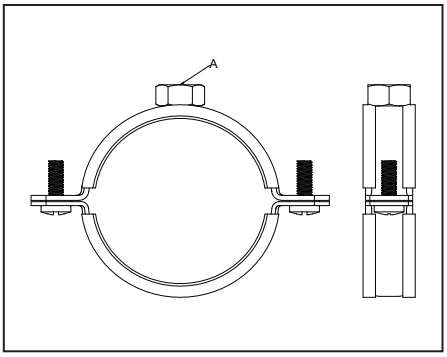
MAXIMUM TEMPERATURE: 343°C(650°F)

FINISH AVAILABLE:
Plain, Electro-Galvanized, Hot Dip Galvanized, Zinc Flake & Epoxy Coated.

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM) D	HEIGHT H	HANGER ROD SIZE (MM) R	MAX LOAD (KG)
TGSH0000E0027	3/4"	DN20	26.7	61	M10	220
TGSH0000E0034	1"	DN25	33.4	70	M10	220
TGSH0000E0042	1 1/4"	DN32	42.1	78	M10	220
TGSH0000E0048	1 1/2"	DN40	48.2	84	M10	220
TGSH0000E0060	2"	DN50	60.3	102	M10	220
TGSH0000E0073	2 1/2"	DN65	73.0	118	M10	300
TGSH0000E0089	3"	DN80	88.9	144	M10	300
TGSH0000E0114	4"	DN100	114.3	176	M10	300
TGSH0000E0168	6"	DN150	168.3	262	M12	550
TGSH0000E0219	8"	DN200	219.1	305	M12	1300

APPLICATION EXAMPLES:

PIPE HANGER WITH EPDM LINING TGNC0LUF00000



APPLICATION:

PIPE HANGER WITH EPDM LINING is recommended for non-insulated stationary pipelines in a horizontal position. It can be used for supporting pipes along with the roof.

CONSTRUCTION:

PIPE HANGER with EPDM lining consists of piece of mild steel shaped to wrap around the pipe. The selection of the proper PIPE HANGER WITH EPDM LINING depends upon load to be carried. Permits installation before and after pipe is in place. Reduces noise upto 18 dB.

MATERIAL:

Mild Steel. Also other materials can be provided on request

APPROVALS:

UL LISTED FM APPROVED

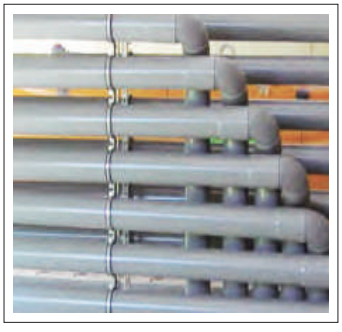
MAXIMUM TEMPERATURE: -20°C to 110°C

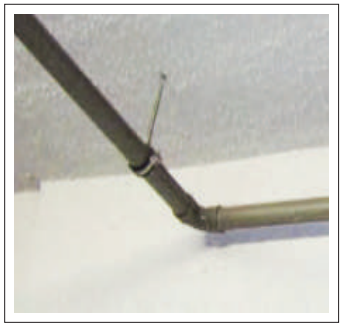
FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized, Zinc Flake & Epoxy Coated.

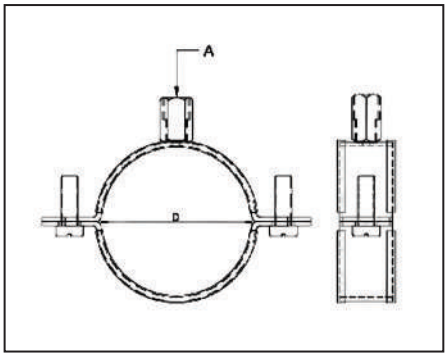
PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	RANGE (MM)	HANGER ROD SIZE (MM) (A)	SIDE SCREW SIZE	MAX LOAD (KG)
TGNC0LULE0022*	1/ 2"	DN15	21.3	20-25	M10	M6	460
TGNC0LUFE0027	3/4"	DN20	26.7	26-30	M10	M6	460
TGNC0LUFE0034	1"	DN25	33.4	32-36	M10	M6	460
TGNC0LUFE0042	1 1/4"	DN32	42.1	38-43	M10	M6	460
TGNC0LUFE0048	1 1/2"	DN40	48.2	47-51	M10	M6	460
TGNC0LUFE0060	2"	DN50	60.3	60-64	M10	M6	460
TGNC0LUFE0073	2 1/2"	DN65	73.0	74-80	M10	M6	570
TGNC0LUFE0089	3"	DN80	88.9	87-92	M10	M6	570

APPLICATION EXAMPLES:





NOTE : * Only UL Listed.



APPLICATION:

PIPE HANGER WITH EPDM LINING is recommended for non-insulated stationary pipelines in a horizontal position. It can be used for supporting pipes along with the roof.

CONSTRUCTION:

PIPE HANGER with EPDM lining consists of piece of mild steel shaped to wrap around the pipe. The selection of the proper PIPE HANGER WITH EPDM LINING depends upon the temperature of the piping system and load to be carried. Permits installation before and after pipe is in place. Reduces noise upto 18 dB.

MATERIAL:

Mild Steel. Also other materials can be provided on request

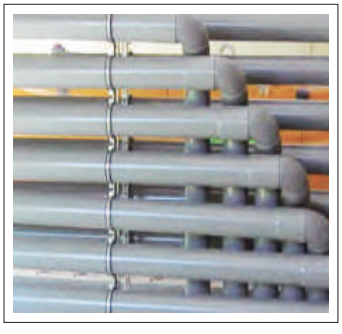
MAXIMUM TEMPERATURE: -20°C to 110°C

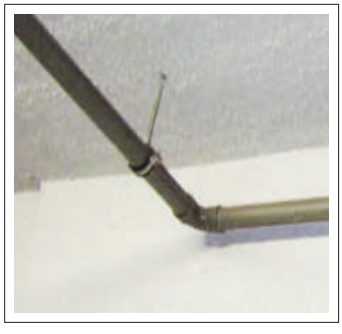
FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

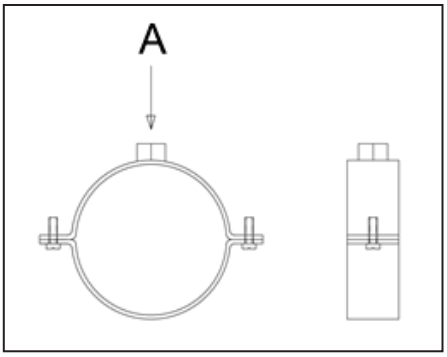
PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	RANGE (MM)	NUT SIZE (A)	SIDE SCREW SIZE	MAX LOAD (KG)
TGNC0L00E0017	3/8"	DN10	17.1	15-19	M8 X M10	M6	450
TGNC0L00E0022	1/ 2"	DN15	21.3	20-25	M8 X M10	M6	450
TGNC0L00E0027	3/4"	DN20	26.7	26-30	M8 X M10	M6	450
TGNC0L00E0034	1"	DN25	33.4	32-36	M8 X M10	M6	450
TGNC0L00E0042	1 1/4"	DN32	42.1	38-43	M8 X M10	M6	450
TGNC0L00E0048	1 1/2"	DN40	48.2	47-51	M8 X M10	M6	450
TGNC0L00E0054		-	54	53-58	M8 X M10	M6	450
TGNC0L00E0060	2"	DN50	60.3	60-64	M8 X M10	M6	450
TGNC0L00E0070		-	70	68-72	M8 X M10	M6	450
TGNC0L00E0073	2 1/2"	DN65	73.0	74-80	M8 X M10	M6	600
TGNC0L00E0083		-	83	81-86	M8 X M10	M6	600
TGNC0L00E0089	3"	DN80	88.9	87-92	M8 X M10	M6	600
TGNC0L00E0102	3 1/ 2"	DN90	101.6	99-105	M8 X M10	M6	600
TGNC0L00E0110		-	110	107-112	M8 X M10	M6	600
TGNC0L00E0114	4"	DN100	114.3	113-118	M8 X M10	M6	600
TGNC0L00E0125		-	125	125-130	M8 X M10	M6	600
TGNC0L00E0141	5"	DN125	141.3	138-142	M8 X M10	M6	600
TGNC0L00E0160		-	160	159-166	M8 X M10	M6	600
TGNC0L00E0168	6"	DN150	168.3	168-172	M8 X M10	M8	600
TGNC0L00E0219	8"	DN200	219.1	215-220	M8 X M10	M8	950
TGNC0L00E0273	10"	DN250	273.0	269-274	M8 X M10	M8	950

APPLICATION EXAMPLES:





PIPE HANGER WITHOUT LINING TGNC00UL00000



APPLICATION:

PIPE HANGER is recommended for non-insulated stationary pipe lines in either a horizontal or vertical position. It can be used for supporting pipes along with the roof as well as wall.

CONSTRUCTION:

PIPE HANGER consists of piece of mild steel shaped to wrap around the pipe, The selection of the PIPE CLAMP depends upon the temperature of piping system and load to be carried. Pipe hanger permits installation before and after pipe is placed.

MATERIAL:

Mild Steel. Also other materials can be provided on request

APPROVALS:

UL LISTED

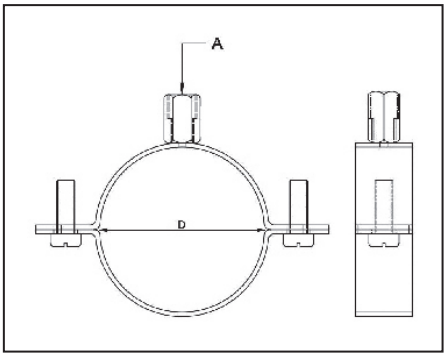
MAXIMUM TEMPERATURE: 343°C (650°F)

FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	RANGE (MM)	HANGER ROD SIZE (MM) (A)	SIDE SCREW SIZE	MAX LOAD (KG)
TGNC00ULE0022	1/ 2"	DN15	21.3	20-25	M10	M6	460
TGNC00ULE0027	3/4"	DN20	26.7	26-30	M10	M6	460
TGNC00ULE0034	1"	DN25	33.4	32-36	M10	M6	460
TGNC00ULE0042	1 1/4"	DN32	42.1	38-43	M10	M6	460
TGNC00ULE0048	1 1/2"	DN40	48.2	47-51	M10	M6	460
TGNC00ULE0060	2"	DN50	60.3	60-64	M10	M6	460
TGNC00ULE0073	2 1/2"	DN65	73.0	74-80	M10	M6	570
TGNC00ULE0089	3"	DN80	88.9	87-92	M10	M6	570

APPLICATION EXAMPLES:



APPLICATION:

PIPE HANGER is recommended for non-insulated stationary pipelines in a horizontal position. It can be used for supporting pipes along with the roof.

CONSTRUCTION:

PIPE HANGER consists of piece of mild steel shaped to wrap around the pipe. The selection of the proper 3 BOLT PIPE CLAMP depends upon the temperature of the piping system and load to be carried. Permits installation before and after pipe is in place.

MATERIAL:

Mild Steel. Also other materials can be provided on request

MAXIMUM TEMPERATURE: 343°C (650°F)

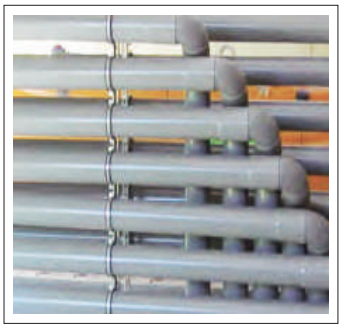
FINISH AVAILABLE:

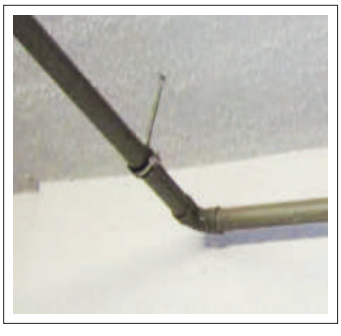
Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	RANGE (MM)	NUT SIZE (A)	SIDE SCREW SIZE	MAX LOAD (KG)
TGNC0000E0017	3/8"	DN10	17.1	15-19	M8 X M10	M6	450
TGNC0000E0022	1/2"	DN15	21.3	20-25	M8 X M10	M6	450
TGNC0000E0027	3/ 4"	DN20	26.7	26-30	M8 X M10	M6	450
TGNC0000E0034	1"	DN25	33.4	32-36	M8 X M10	M6	450
TGNC0000E0042	1 1/4"	DN32	42.1	38-43	M8 X M10	M6	450
TGNC0000E0048	1 1/2"	DN40	48.2	47-51	M8 X M10	M6	450
TGNC0000E0054	-	-	54	53-58	M8 X M10	M6	450
TGNC0000E0060	2"	DN50	60.3	60-64	M8 X M10	M6	450
TGNC0000E0070	-	-	70	68-72	M8 X M10	M6	450
TGNC0000E0073	2 1/2"	DN65	73.0	74-80	M8 X M10	M6	600
TGNC0000E0083	-	-	83	81-86	M8 X M10	M6	600
TGNC0000E0089	3"	DN80	88.9	87-92	M8 X M10	M6	600
TGNC0000E0102	3 1/2"	DN90	101.6	99-105	M8 X M10	M6	600
TGNC0000E0110	-	-	110	107-112	M8 X M10	M6	600
TGNC0000E0114	4"	DN100	114.3	113-118	M8 X M10	M6	600
TGNC0000E0125	-	-	125	125-130	M8 X M10	M6	600
TGNC0000E0141	5"	DN125	141.3	138-142	M8 X M10	M6	600
TGNC0000E0160	-	-	160	159-166	M8 X M10	M6	600
TGNC0000E0168	6"	DN150	168.3	168-172	M8 X M10	M8	600
TGNC0000E0219	8"	DN200	219.1	215-220	M8 X M10	M8	950
TGNC0000E0273	10"	DN250	273.0	269-274	M8 X M10	M8	950

NOTE : Pipe Hanger of all Non Standard Sizes to fit upon Rubber Support Insert can be manufactured.

APPLICATION EXAMPLES:



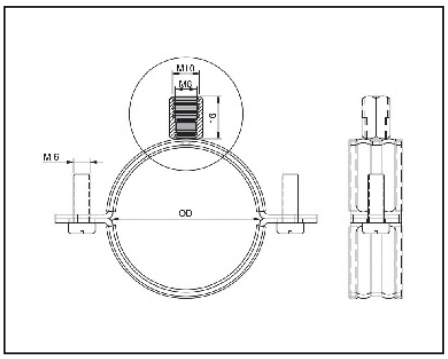


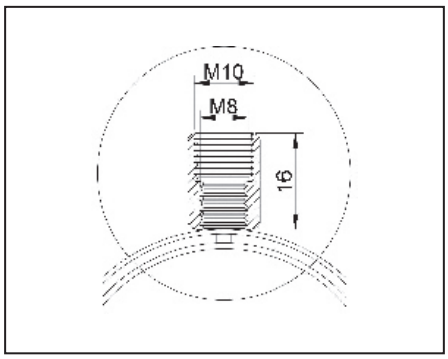
ABS = Acrylonitrile-Butadiene-Styrene
UPVC = unplasticized polyvinyl chloride
pe = Polyethylene

SELECTION TABLE FOR DIFFERENT TYPES OF PIPES

NPS (in)	PIPE OUTSIDE DIA(mm)	uPVC/ PE (mm)	ABS (mm)	COPPER (mm)
-	16	-	-	15,18
1/2"	22	20	DN15(21.4)	22
3/4"	28	25	DN20(26.8)	24, 28
1"	35	32, 38	DN25(33.6)	35
1 1/4"	42	40, 43	DN32(42.3)	42
1 1/2"	48	45	DN40(48.3)	-
-	-	54	-	54
2"	60	60	DN50(60.4)	64
-	-	-	-	-
-	-	70		67, 70
2 1/2"	75	75	DN65(75.4)	76
-	-	83	-	80
3"	90	90	-	-
-	-	102	DN80(88.9)	102, 105
-	-	110	-	108
4"	115	115	DN100(114.3)	-
-	-	125	-	125
-	-	135	-	-
5"	140	140	DN125(121.4)	-
-	-	152	-	-
-	-	160	-	159
6"	168	-	DN150(168.3)	167
-	-	200	-	206
8"	219	220, 225	DN200(225.0)	-
-	-	250	DN225(250.4)	-
-	-	-	DN300(315.5)	-

APPLICATION EXAMPLES:





APPLICATION:

HEAVY DUTY PIPE HANGER WITH LINING is recommended for non-insulated stationary heavy pipe lines in either a horizontal or vertical position. It can be used for supporting pipes along with roof as well as along wall. it is Used where loads to be carried are larger in magnitude.

CONSTRUCTION:

HEAVY DUTY PIPE HANGER WITH LINING consists of piece of mild steel shaped to wrap around the pipe. Quick-Locking permits simple and fast installation. Large opening angles for easy insertion of the pipes. Clamping range without gaps. Reduces noise upto 18 dB.

MATERIAL:

Mild Steel. Also other materials can be provided on request

MAXIMUM TEMPERATURE: -20°C to 110°C

FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	RANGE (MM)	NUT SIZE (A)	SIDE SCREW SIZE	MAX LOAD (KG)
TGHNCL00E0022	1/2"	DN15	21.3	20-25	M8 X M10	M6	500
TGHNCL00E0027	3/ 4"	DN20	26.7	26-30	M8 X M10	M6	500
TGHNCL00E0034	1"	DN25	33.4	32-36	M8 X M10	M6	500
TGHNCL00E0042	1 1/4"	DN32	42.1	38-43	M8 X M10	M6	500
TGHNCL00E0048	1 1/2"	DN40	48.2	47-51	M8 X M10	M6	500
TGHNCL00E0054	-	-	54	53-58	M8 X M10	M6	500
TGHNCL00E0060	2"	DN50	60.3	60-64	M8 X M10	M6	500
TGHNCL00E0070	-	-	70	68-72	M8 X M10	M6	550
TGHNCL00E0073	2 1/2"	DN65	73.0	74-80	M8 X M10	M6	700
TGHNCL00E0083	-	-	83	81-86	M8 X M10	M6	700
TGHNCL00E0089	3"	DN80	88.9	87-92	M8 X M10	M6	700
TGHNCL00E0102	3 1/2"	DN90	101.6	99-105	M8 X M10	M6	700
TGHNCL00E0110	-	-	110	107-112	M8 X M10	M6	700
TGHNCL00E0114	4"	DN100	114.3	113-118	M8 X M10	M6	700
TGHNCL00E0125	-	-	125	125-130	M8 X M10	M6	700
TGHNCL00E0141	5"	DN125	141.3	138-142	M8 X M10	M6	700

APPLICATION EXAMPLES:

EASY FIX PIPE HANGER WITH EPDM LINING TGENCL0000000

APPLICATION:

EASY FIX PIPE HANGER WITH EPDM LINING is recommended for non-insulated stationary pipelines in a horizontal position. It can be used for supporting pipes along roof, Where Quick installation is required.

CONSTRUCTION:

EASY FIX PIPE HANGER WITH EPDM LINING consists of piece of carbon steel shaped to wrap around the pipe, made from shaped carbon steel plate. The selection of the proper EASY FIX PIPE HANGER WITH EPDM LINING depends upon the temperature of the piping system &load to be carried. Permits installation before and after pipe is in place. Reduces noise upto 18 dB.

MATERIAL:

Mild Steel. Also other materials can be provided on request

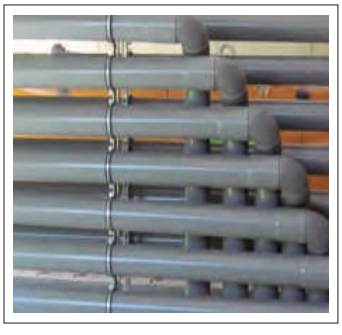
MAXIMUM TEMPERATURE: -20°C to 110°C

FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	RANGE (MM)	NUT SIZE	SIDE SCREW SIZE	MAX LOAD (KG)
TGENCL00E0022	1/2"	DN15	21.3	20-25	M8 X M10	M6	450
TGENCL00E0027	3/ 4"	DN20	26.7	26-30	M8 X M10	M6	450
TGENCL00E0034	1"	DN25	33.4	32-36	M8 X M10	M6	450
TGENCL00E0042	1 1/4"	DN32	42.1	38-43	M8 X M10	M6	450
TGENCL00E0048	1 1/2"	DN40	48.2	47-51	M8 X M10	M6	450
TGENCL00E0054	-	-	54	53-58	M8 X M10	M6	450
TGENCL00E0060	2"	DN50	60.3	60-64	M8 X M10	M6	450
TGENCL00E0070	-	-	70	68-72	M8 X M10	M6	450
TGENCL00E0073	2 1/2"	DN65	73.0	74-80	M8 X M10	M6	600
TGENCL00E0083	-	-	83	81-86	M8 X M10	M6	600
TGENCL00E0089	3"	DN80	88.9	87-92	M8 X M10	M6	600
TGENCL00E0102	3 1/2"	DN90	101.6	99-105	M8 X M10	M6	600
TGENCL00E0110	-	-	110	107-112	M8 X M10	M6	600
TGENCL00E0114	4"	DN100	114.3	113-118	M8 X M10	M6	600
TGENCL00E0125	-	-	125	125-130	M8 X M10	M6	600
TGENCL00E0141	5"	DN125	141.3	138-142	M8 X M10	M6	600
TGENCL00E0160	-	-	160	159-166	M8 X M10	M6	600
TGENCL00E0168	6"	DN150	168.3	168-172	M8 X M10	M8	600
TGENCL00E0219	8"	DN200	219.1	215-220	M8 X M10	M8	950
TGENCL00E0273	10"	DN250	273.0	269-274	M8 X M10	M8	950

APPLICATION EXAMPLES:



APPLICATION:

PIPE HANGER WITH LINING- LIGHT DUTY WITH STUD is recomm ended for non-insulatedstationary pipelines in a horizontal position. It can be used for supporting pipes along with roof.

CONSTRUCTION:

PIPE HANGER WITH LINING- LIGHT DUTY WITH STUD consists of piece of mild steel shaped to wrap around the pipe. The selection of the proper PIPE HANGER WITH LINING- LIGHT DUTY WITH STUD depends upon the temperature of the piping system and load to be carried. Permits installation before and after pipe is in place. Reduces noise upto 18 dB.

MATERIAL:

Mild Steel. Also other materials can be provided on request

MAXIMUM TEMPERATURE: -20°C to 110°C

FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	PIPE SIZE	RANGE	SIDE SCREW	TOP NUT	HANGER BOLT	PLASTIC PLUG
TGLNCL00E0022	1/2"	20-24	M5 x 15	M 8	M8 x 80	S10 x 50
TGLNCL00E0027	3/4"	25-28	M5 x 15	M 8	M8 x 80	S10 x 50
TGLNCL00E0034	1"	23-35	M5 x 15	M 8	M8 x 80	S10 x 50
TGLNCL00E0042	1 1/4"	39-46	M6 x 20	M 8	M8 x 80	S10 x 50
TGLNCL00E0048	1 1/2"	48-53	M6 x 20	M 8	M8 x 80	S10 x 50
TGLNCL00E0060	2"	59-66	M6 x 20	M 8	M8 x 80	S10 x 50
TGLNCL00E0073	2 1/2"	74-80	M6 x 25	M8 x M10	M8 x 80	S10 x 50
TGLNCL00E0089	3"	87-94	M6 x 25	M8 x M10	M8 x 80	S10 x 50
TGLNCL00E00114	4"	107-115	M6 x 30	M8 x M10	M8 x 100	S10 x 50
TGLNCL00E00141	5"	135-143	M6 x 30	M10	M10 x 100	S14 x 75
TGLNCL00E00168	6"	162-170	M6 x 30	M10	M10 x 100	S14 x 75
TGLNCL00E00219	8"	207-219	M6 x 30	M10	M10 x 100	S14 x 75

APPLICATION EXAMPLES:

PIPE HANGER WITHOUT LINING-LIGHT DUTY WITH STUD TGLNC00000000

APPLICATION:

PIPE HANGER WITHOUT LINING - LIGHT DUTY WITH STUD is recommended for non-insulated stationary pipe lines in either a horizontal or vertical position. It can be used for supporting pipes along with roof as well as wall.

CONSTRUCTION:

PIPE HANGER WITHOUT LINING - LIGHT DUTY WITH STUD consists of piece of mild steel shaped to wrap around the pipe. The selection of the proper 3-Bolt PIPE CLAMP depends upon the temperature of the piping system and load to be carried. Permits installation before and after pipe is in place.

MATERIAL:

Mild Steel. Also other materials can be provided on request

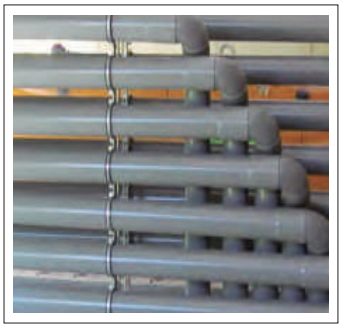
MAXIMUM TEMPERATURE: 343°C (650°F)

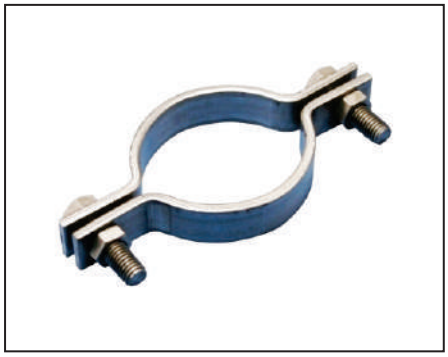
FINISH AVAILABLE:

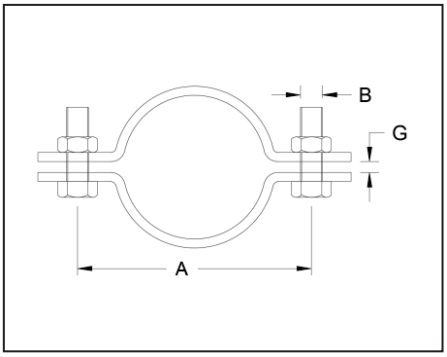
Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	PIPE SIZE	RANGE	SIDE SCREW	TOP NUT	HANGER BOLT	PLASTIC PLUG
TGLNC00E0022	1/2"	20-24	M5 x 15	M 8	M8 x 80	S10 x 50
TGLNC00E0027	3/4"	25-28	M5 x 15	M 8	M8 x 80	S10 x 50
TGLNC00E0034	1"	23-35	M5 x 15	M 8	M8 x 80	S10 x 50
TGLNC00E0042	1 1/4"	39-46	M6 x 20	M 8	M8 x 80	S10 x 50
TGLNC00E0048	1 1/2"	48-53	M6 x 20	M 8	M8 x 80	S10 x 50
TGLNC00E0060	2"	59-66	M6 x 20	M 8	M8 x 80	S10 x 50
TGLNC00E0073	2 1/2"	74-80	M6 x 25	M8 x M10	M8 x 80	S10 x 50
TGLNC00E0089	3"	87-94	M6 x 25	M8 x M10	M8 x 80	S10 x 50
TGLNC00E00114	4"	107-115	M6 x 30	M8 x M10	M8 x 100	S10 x 50
TGLNC00E00141	5"	135-143	M6 x 30	M10	M10 x 100	S14 x 75
TGLNC00E00168	6"	162-170	M6 x 30	M10	M10 x 100	S14 x 75
TGLNC00E00219	8"	207-219	M6 x 30	M10	M10 x 100	S14 x 75

APPLICATION EXAMPLES:







APPLICATION:

TWO BOLT PIPE CLAMPS is recommended for suspension of cold pipe lines or hot lines where no insulation is required.

CONSTRUCTION:

TWO BOLT PIPE CLAMPS consists of two mild steel flat bars bent to shape and held together by two bolts.

FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

MATERIAL:

Mild Steel. Also other materials can be provided on request

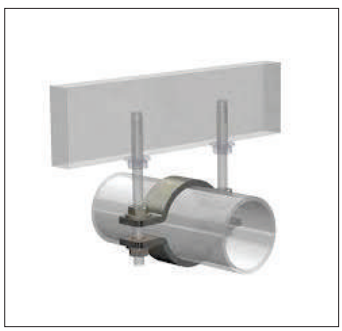
APPROVALS:

ANSI/MSS SP-58 & SP-69(Type 4) MSS
Federal Specification WW-H-171E & A-A-1192A (Type 4)

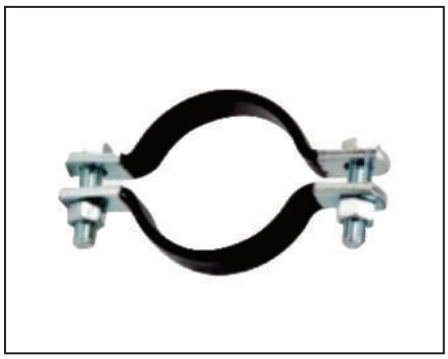
MAXIMUM TEMPERATURE: 343°C (650°F)

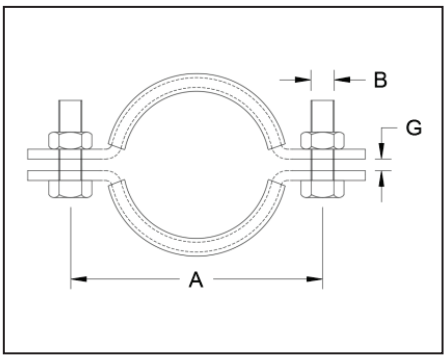
PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	DIMESNSIONS(MM)		
				LENGTH	BOLT SIZE	GAP G
TGTBC000E0022	1/ 2"	DN15	21.3	200	M10	12
TGTBC000E0027	3/4"	DN20	26.7	210	M10	12
TGTBC000E0034	1"	DN25	33.4	230	M10	12
TGDBC000E0042	1 1/4"	DN32	42.1	260	M10	12
TGDBC000E0048	1 1/ 2"	DN40	48.2	260	M10	12
TGDBC000E0060	2"	DN50	60.3	260	M10	16
TGDBC000E0073	2 1/ 2"	DN65	73.0	290	M12	16
TGDBC000E0089	3"	DN80	88.9	290	M12	16
TGDBC000E0102	3 1/ 2"	DN90	101.6	330	M12	16
TGDBC000E0114	4"	DN100	114.3	330	M12	19
TGDBC000E0141	5"	DN125	141.3	350	M16	19
TGDBC000E0168	6"	DN150	168.3	380	M16	22
TGDBC000E0219	8"	DN200	219.1	470	M16	25
TGDBC000E0273	10"	Dn250	273.0	520	M16	25
TGDBC000E0323	12"	DN300	323.8	580	M20	25
TGDBC000E0356	14"	DN350	355.6	610	M20	28
TGDBC000E0406	16"	DN400	406.4	660	M20	28
TGDBC000E0457	18"	DN450	457.2	710	M20	32
TGDBC000E0508	20"	DN500	508.0	760	M20	35
TGDBC000E0610	24"	DN 600	609.6	880	M20	42

APPLICATION EXAMPLES:



TWO BOLT PIPE CLAMPS WITH LINING TGTBCL0000000





APPLICATION:

TWO BOLT PIPE CLAMP WITH LINING is recommended for suspension of cold pipe lines or hot lines where no insulation is required.

CONSTRUCTION:

TWO BOLT PIPE CLAMP WITH LINING consists of two mild steel flat bars bent to shape and held together by two bolts. Reduces noise upto 18 dB.

MAXIMUM TEMPERATURE: -20°C to 110°C

MATERIAL:

Mild Steel. Also other materials can be provided on request

APPROVALS:

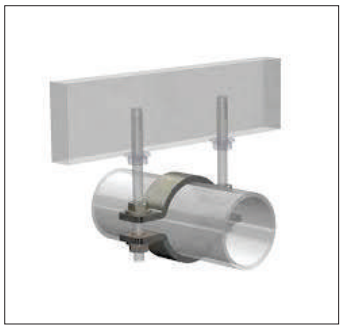
ANSI/MSS SP-58 & SP-69(Type 4)
Federal Specification WW-H-171E & A-A-1192A (Type 4)

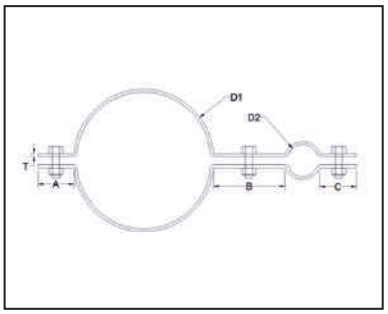
FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	DIMESNSIONS(MM)		
				LENGTH	BOLT SIZE	GAP G
TGTBCL00E0022	1/ 2"	DN15	21.3	200	M10	12
TGTBCL00E0027	3/4"	DN20	26.7	210	M10	12
TGTBCL00E0034	1"	DN25	33.4	230	M10	12
TGTBCL00E0042	1 1/4"	DN32	42.1	260	M10	12
TGTBCL00E0048	1 1/ 2"	DN40	48.2	260	M10	12
TGTBCL00E0060	2"	DN50	60.3	260	M10	16
TGTBCL00E0073	2 1/ 2"	DN65	73.0	290	M12	16
TGTBCL00E0089	3"	DN80	88.9	290	M12	16
TGTBCL00E0102	3 1/ 2"	DN90	101.6	330	M12	16
TGTBCL00E0114	4"	DN100	114.3	330	M12	19
TGTBCL00E0141	5"	DN125	141.3	350	M16	19
TGTBCL00E0168	6"	DN150	168.3	380	M16	22
TGTBCL00E0219	8"	DN200	219.1	470	M16	25
TGTBCL00E0273	10"	DN250	273.0	520	M16	25
TGTBCL00E0323	12"	DN300	323.8	580	M20	25
TGTBCL00E0356	14"	DN350	355.6	610	M20	28
TGTBCL00E0406	16"	DN400	406.4	660	M20	28
TGTBCL00E0457	18"	DN450	457.2	710	M20	32
TGTBCL00E0508	20"	DN500	508.0	760	M20	35
TGTBCL00E0610	24"	DN 600	609.6	880	M20	42

APPLICATION EXAMPLES:





APPLICATION:

DOUBLE PIPE HANGER WITH EPDM LINING is recommended for non-insulated stationary pipelines in a horizontal position. It can be used for supporting pipes along with the roof.

CONSTRUCTION:

DOUBLE PIPE HANGER WITH EPDM LINING consists of piece mild steel shaped to wrap around the pipe. The selection of the proper DOUBLE PIPE HANGER WITH EPDM LINING depends upon the temperature of the piping system and load to be carried. Permits installation before and after pipe is in place. Reduces noise upto 18 dB.

MATERIAL:

Mild Steel. Also other materials can be provided on request

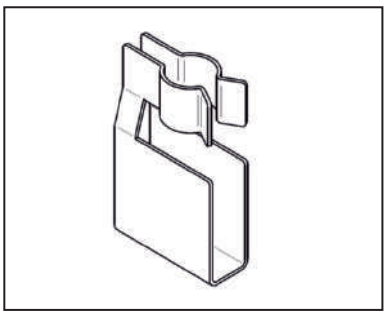
MAXIMUM TEMPERATURE: -20°C to 150°C

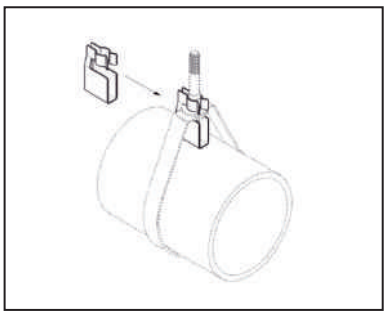
FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	PIPE SIZE		DIMESNSIONS(MM)					MAX LOAD (KG)
	DN	INCH	D1	D2	A	B	C	
TGDNCL00E0114	DN 100	4"	114	53	50	100	50	400
TGDNCL00E0219	DN 200	8"	219	53	50	100	50	630
TGDNCL00E0323	DN 300	12"	323	53	50	100	50	950

TGSR000000000 SURGE RESTRAINER





APPLICATION:

Designed to be used in conjunction with Sprinkler Hanger to restrict the upward movement of piping as it occurs during sprinkler head activation or earthquake type activity. The surge restrainer is easily and efficiently installed by snapping into a locking position on the sprinkler hanger.

MATERIAL:

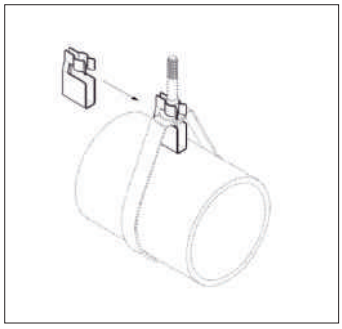
Mild Steel.

SIZE RANGE: 3/4" to 2" .

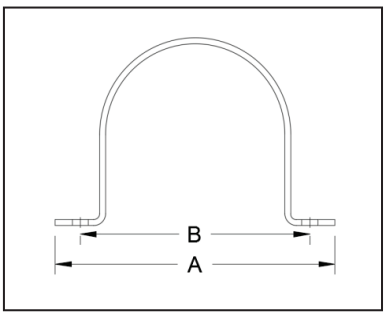
FINISH AVAILABLE:

Pre-Galvanized, Hot Dip Galvanized, Electro-Galvanized.

APPLICATION EXAMPLES:



U STRAP TGUS00UF00000



APPLICATION:
A standard pipe strap is recommended for supporting a piping system with fittings vertically or horizontally to walls or ceilings. It can be used as a restrainer when installed on top of structural wood beams for beam, for limiting pipe movements due to thrust loads during sprinkler system start-up.

CONSTRUCTION:
A standard Pipe Strap consists of a piece of mild steel shaped to hold the pipe down to walls or ceilings.

MATERIAL:
Mild Steel. Also other materials can be provided on request

APPROVALS:
UL LISTED FM APPROVED

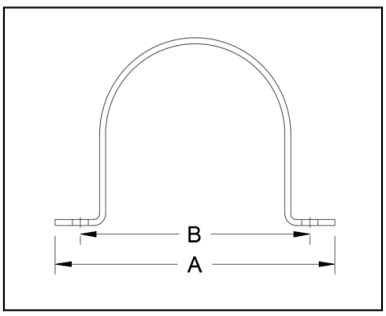
ANSI/MSS SP-58 & SP-69 (Type 26) MSS
Federal Specification WW-H-171E & A-A-1192A (Type 26)

MAXIMUM TEMPERATURE: 343°C (650°F)

FINISH AVAILABLE:
Plain, Electro-Galvanized, Hot Dip Galvanized, Zinc Flake, & Epoxy Coated.

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	HANGER DIMENSION (MM)		BOLT SIZE (MM)	MAX LOAD (KG)
				OVERALL DIMENSION A	DISTANCE BETWEEN TWO BOLT B		
TGUS00UFE0027	3/4"	DN20	26.7	82	57	M8	500
TGUS00UFE0034	1"	DN25	33.4	89	64	M8	500
TGUS00UFE0042	1 1/4"	DN32	42.1	96	71	M8	500
TGUS00UFE0048	1 1/2"	DN40	48.2	102	77	M8	500
TGUS00UFE0060	2"	DN50	60.3	114	89	M8	500
TGUS00UFE0073	2 1/2"	DN65	73.0	145	113	M8	600
TGUS00UFE0089	3"	DN80	88.9	160	128	M8	600
TGUS00FME0102	3 1/2"	DN 90	101.6	170	138	M8	600
TGUS00UFE0114	4"	DN100	114.3	185	153	M8	600
TGUS00UFE0141	5"	DN125	141.3	210	178	M10	600
TGUS00UFE0168	6"	DN150	168.3	237	205	M10	600
TGUS00ULE0219	8"	DN200	219.1	289	257	M10	800
TGUS00ULE0323	12"	DN300	323.8	417	376	M18	1250

APPLICATION EXAMPLES:



APPLICATION:

A standard pipe strap is recommended for supporting a piping system with fittings vertically or horizontally to walls or ceilings. It can be used as a restrainer when installed on top of structural wood beams for beam, for limiting pipe movements due to thrust loads during sprinkler system start-up.

CONSTRUCTION:

A standard Pipe Strap consists of a piece of mild steel shaped to hold the pipe down to walls or ceilings.

MATERIAL:

Mild Steel. Also other materials can be provided on request

APPROVALS:

ANSI/MSS SP-58 & SP-69 (Type 26)
Federal Specification WW-H-171E & A-A-1192A (Type 26)

MAXIMUM TEMPERATURE: 343°C (650°F)

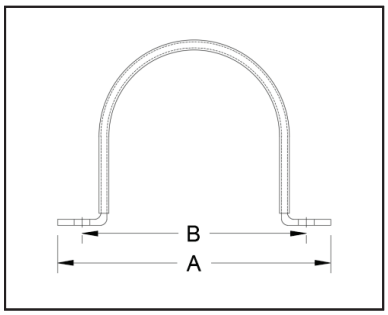
FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized, Zinc Flake, & Epoxy Coated.

APPLICATION EXAMPLES:

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	HANGER DIMENSION (MM)		BOLT SIZE (MM)	MAX LOAD (KG)
				OVERALL DIMENSION A	DISTANCE BETWEEN TWO BOLT B		
TGUS0000E0022	1/2"	DN15	21.3	76	51	M8	500
TGUS0000E0027	3/4"	DN20	26.7	82	57	M8	500
TGUS0000E0034	1"	DN25	33.4	89	64	M8	500
TGUS0000E0042	1 1/4"	DN32	42.1	96	71	M8	500
TGUS0000E0048	1 1/2"	DN40	48.2	102	77	M8	500
TGUS0000E0054	-	-	54	108	83	M8	500
TGUS0000E0060	2"	DN50	60.3	114	89	M8	500
TGUS0000E0067	-	-	67	121	96	M8	500
TGUS0000E0073	2 1/2"	DN65	73.0	145	113	M8	600
TGUS0000E0082	-	-	82	152	120	M8	600
TGUS0000E0089	3"	DN80	88.9	160	128	M8	600
TGUS0000E0102	3 1/2"	DN90	101.6	170	138	M8	600
TGUS0000E0108	-	-	108	178	146	M8	600
TGUS0000E0114	4"	DN100	114.3	185	153	M8	600
TGUS0000E0126	-	-	126	196	164	M8	600
TGUS0000E0141	5"	DN125	141.3	210	178	M10	600
TGUS0000E0148	-	-	148	218	186	M10	600
TGUS0000E0155	-	-	155	225	193	M10	600
TGUS0000E0168	6"	DN150	168.3	237	205	M10	600
TGUS0000E0179	-	-	179	249	217	M10	600
TGUS0000E0190	-	-	190	260	228	M10	800
TGUS0000E0205	-	-	205	275	243	M10	800
TGUS0000E0219	8"	DN200	219.1	289	257	M10	800
TGUS0000E0230	-	-	230	300	268	M10	800
TGUS0000E0241	-	-	241	332	291	M12	1250
TGUS0000E0263	-	-	263	354	313	M12	1250
TGUS0000E0273	10"	DN250	273.0	364	323	M18	1250
TGUS0000E0295	-	-	295	386	345	M18	1250
TGUS0000E0323	12"	DN300	323.8	417	376	M18	1250
TGUS0000E0356	14"	DN350	355.6	447	409	M18	1800
TGUS0000E0374	-	-	374	465	427	M18	1800
TGUS0000E0406	16"	DN400	406.4	497	459	M18	1800
TGUS0000E0432	-	-	432	523	485	M18	1800
TGUS0000E0457	18"	DN450	457.2	547	509	M18	1800
TGUS0000E0482	-	-	482	573	535	M18	1800
TGUS0000E0508	20"	DN500	508.2	599	561	M18	1800
TGUS0000E0533	-	-	533	624	586	M18	1800
TGUS0000E0559	-	-	559	650	612	M18	1800
TGUS0000E0583	-	-	583	674	636	M18	1800
TGUS0000E0610	24"	DN 600	609.6	701	663	M18	1800
TGUS0000E0658	-	-	658	766	721	M18	2300
TGUS0000E0690	-	-	690	798	753	M18	2300
TGUS0000E0760	-	-	760	868	823	M18	2300
TGUS0000E0863	-	-	863	971	926	M18	2300
TGUS0000E0918	-	-	918	1026	981	M18	2300

NOTE : U Strap of all Non Standard Sizes to fit upon Rubber Support Insert can be manufactured.



APPLICATION:

A Standard PIPE STRAP WITH LINING is recommended for supporting a piping system with fittings vertically or horizontally to walls or ceilings. It can be used as a restrainer when installed on top of structural wood beams for beam, for limiting pipe movements due to thrust loads during sprinkler system start-up.

CONSTRUCTION:

A Standard PIPE STRAP WITH LINING consists of a single piece of mild steel shaped to hold the pipe down to walls or ceilings. Reduces noise upto 18 dB.

MATERIAL:

Mild Steel. Also other materials can be provided on request.

APPROVALS:

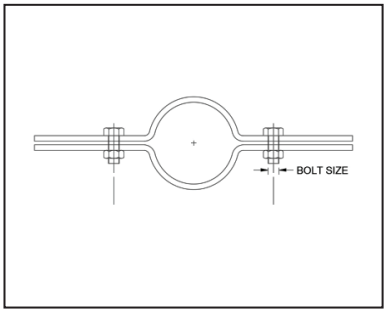
ANSI/MSS SP-58 & SP-69 (Type 26) MSS
Federal Specification WW-H-171E & A-A-1192A (Type 26)

MAXIMUM TEMPERATURE: -20°C to 110°C

FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	HANGER DIMENSION (MM)		BOLT SIZE (MM)	MAX LOAD (KG)
				OVERALL DIMENSION A	DISTANCE BETWEEN TWO BOLT B		
TGUS0L00E0022	1/2″	DN15	21.3	76	51	M8	500
TGUS0L00E0027	3/4″	DN20	26.7	82	57	M8	500
TGUS0L00E0034	1″	DN25	33.4	89	64	M8	500
TGUS0L00E0042	1 1/4″	DN32	42.1	96	71	M8	500
TGUS0L00E0048	1 1/2″	DN40	48.2	102	77	M8	500
TGUS0L00E0054	-	-	54	108	83	M8	500
TGUS0L00E0060	2″	DN50	60.3	114	89	M8	500
TGUS0L00E0067	-	-	67	121	96	M8	500
TGUS0L00E0073	2 1/2″	DN65	73.0	145	113	M8	600
TGUS0L00E0082	-	-	82	152	120	M8	600
TGUS0L00E0089	3″	DN80	88.9	160	128	M8	600
TGUS0L00E0102	3 1/2″	DN90	101.6	170	138	M8	600
TGUS0L00E0108	-	-	108	178	146	M8	600
TGUS0L00E0114	4″	DN100	114.3	185	153	M8	600
TGUS0L00E0126	-	-	126	196	164	M8	600
TGUS0L00E0141	5"	DN125	141.3	210	178	M10	600
TGUS0L00E0148	-	-	148	218	186	M10	600
TGUS0L00E0155	-	-	155	225	193	M10	600
TGUS0L00E0168	6″	DN150	168.3	237	205	M10	600
TGUS0L00E0179	-	-	179	249	217	M10	600
TGUS0L00E0190	-	-	190	260	228	M10	800
TGUS0L00E0205	-	-	205	275	243	M10	800
TGUS0L00E0219	8″	DN200	219.1	289	257	M10	800
TGUS0L00E0230	-	-	230	300	268	M10	800
TGUS0L00E0241	-	-	241	332	291	M12	1250
TGUS0L00E0263	-	-	263	354	313	M12	1250
TGUS0L00E0273	10″	DN250	273.0	364	323	M18	1250
TGUS0L00E0295	-	-	295	386	345	M18	1250
TGUS0L00E0323	12″	DN300	323.8	417	376	M18	1250
TGUS0L00E0356	14″	DN350	355.6	447	409	M18	1800
TGUS0L00E0374	-	-	374	465	427	M18	1800
TGUS0L00E0406	16″	DN400	406.4	497	459	M18	1800
TGUS0L00E0432	-	-	432	523	485	M18	1800
TGUS0L00E0457	18″	DN450	457.2	547	509	M18	1800
TGUS0L00E0482	-	-	482	573	535	M18	1800
TGUS0L00E0508	20″	DN500	508.2	599	561	M18	1800
TGUS0L00E0533	-	-	533	624	586	M18	1800
TGUS0L00E0559	-	-	559	650	612	M18	1800
TGUS0L00E0583	-	-	583	674	636	M18	1800
TGUS0L00E0610	24″	DN600	609.6	701	663	M18	1800
TGUS0L00E0658	-	-	658	766	721	M18	2300
TGUS0L00E0690	-	-	690	798	753	M18	2300
TGUS0L00E0760	-	-	760	868	823	M18	2300
TGUS0L00E0863	-	-	863	971	926	M18	2300
TGUS0L00E0918	-	-	918	1026	981	M18	2300



APPLICATION:

RISER CLAMPS are recommended for the support and / or restraint of vertical steel pipes. A RISER CLAMP is designed to attach to the pipe and to rest on a structural member or floor; It is not designed to have hanger rods attached to it to support the pipe.

CONSTRUCTION:

RISER CLAMPS consists of two mild steel flat bars bent to shape and held together by two bolts. Designed to act as a rigid support or guide vertical pipes. The clamp should be bolted to the pipe just below support lugs or other attachments that can carry a shear load.

MATERIAL:

Mild Steel. Also other materials can be provided on request

APPROVALS:

ANSI/MSS SP-58 & SP-69(Type 8)
Federal Specification WW-H-171E & A-A-1192A (Type 8)

MAXIMUM TEMPERATURE: 343°C (650°F)

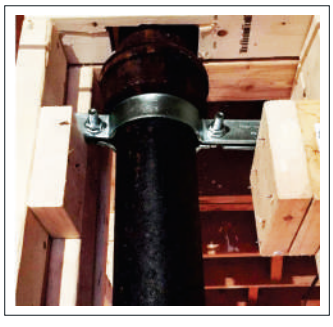
FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

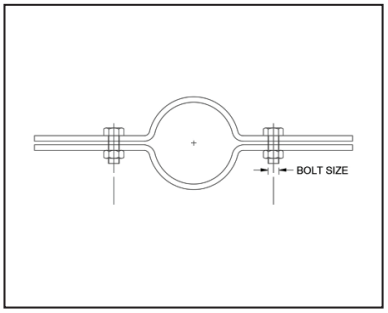
PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	LENGTH BETWEEN HOLE CENTRE (MM)	BOLT SIZE	MAX LOAD (KG)
TGRC00FME0027*	3/4"	DN20	26.7	68	M10	1250
TGRC00FME0034*	1"	DN25	33.4	76	M10	1250
TGRC00FME0042*	1 1/4"	DN32	42.1	90	M10	1250
TGRC00FME0048*	1 1/2"	DN40	48.2	110	M10	1250
TGRC00UFE0060	2"	DN50	60.3	130	M10	1850
TGRC00UFE0073	2 1/2"	DN65	73.0	142	M12	1850
TGRC00FME0089*	3"	DN80	88.9	161	M12	2250
TGRC00UFE0114	4"	DN100	114.3	190	M12	3600
TGRC00UFE0168	6"	DN150	168.3	258	M16	4500

Note : 1) Riser Clamp of all Non Standard Sizes to fit upon Rubber Support Insert can be manufactured.
2) * Only FM Approved, Other UL & FM both Approved.

APPLICATION EXAMPLES:



RISER CLAMP TGRC000000000



APPLICATION:

RISER CLAMPS are recommended for the support and / or restraint of vertical steel pipes. A RISER CLAMP is designed to attach to the pipe and to rest on a structural member or floor; It is not designed to have hanger rods attached to it to support the pipe.

CONSTRUCTION:

RISER CLAMPS consists of two mild steel flat bars bent to shape and held together by two bolts. Designed to act as a rigid support or guide vertical pipes. The clamp should be bolted to the pipe just below support lugs or other attachments that can carry a shear load.

MATERIAL:

Mild Steel. Also other materials can be provided on request

APPROVALS:

ANSI/MSS SP-58 & SP-69(Type 8)
Federal Specification WW-H-171E & A-A-1192A (Type 8)

MAXIMUM TEMPERATURE: 343°C (650°F)

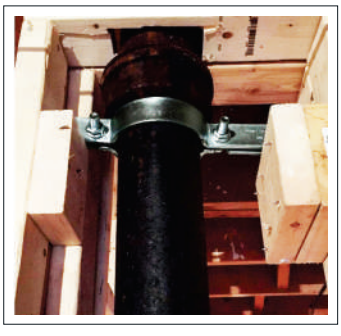
FINISH AVAILABLE:

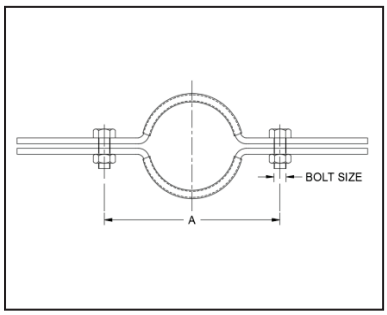
Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	LENGTH BETWEEN HOLE CENTRE (MM)	BOLT SIZE	MAX LOAD (KG)
TGRC0000E0022	1/2"	DN15	21.3	57	M10	1250
TGRC0000E0027	3/4"	DN20	26.7	68	M10	1250
TGRC0000E0034	1"	DN25	33.4	76	M10	1250
TGRC0000E0042	1 1/4"	DN32	42.1	90	M10	1250
TGRC0000E0048	11/2"	DN40	48.2	110	M10	1250
TGRC0000E0060	2"	DN50	60.3	130	M10	1850
TGRC0000E0073	21/2"	DN65	73.0	142	M12	1850
TGRC0000E0089	3"	DN80	88.9	161	M12	2250
TGRC0000E0114	4"	DN100	114.3	190	M12	3600
TGRC0000E0168	6"	DN150	168.3	258	M16	4500
TGRC0000E0219	8"	DN200	219.1	333	M16	4500
TGRC0000E0273	10"	DN250	273.0	409	M16	5800
TGRC0000E0323	12"	DN300	323.8	467	M20	7300
TGRC0000E0406	16"	DN400	406.4	583	M20	7300
TGRC0000E0508	20"	DN5 00	508.0	708	M20	13400
TGRC0000E0610	24"	DN 600	609.6	833	M20	13400

Note : Riser Clamp of all Non Standard Sizes to fit upon Rubber Support Insert can be manufactured.

APPLICATION EXAMPLES:





APPLICATION:

RISER CLAMPS WITH LINING are recommended for the support and/or restraint of vertical steel pipes. A RISER CLAMP with lining is designed to attach to the pipe and to rest on a structural member or floor; It is not designed to have hanger rods attached to it to support the pipe.

CONSTRUCTION:

RISER CLAMPS WITH LINING consists of two mild steel flat bars bent to shape and held together by two bolts. Designed to act as a rigid support or guide for vertical pipes. The clamp should be bolted to the pipe just below support lugs or other attachments that can carry a shear load. Reduces noise upto 18dB.

MATERIAL:

Mild Steel. Also other materials can be provided on request

APPROVALS:

ANSI/MSS SP-58 & SP-69(Type 8) MSS
Federal Specification WW-H-171E & A-A-1192A (Type 8)

MAXIMUM TEMPERATURE: -20°C to 110°C

FINISH AVAILABLE:

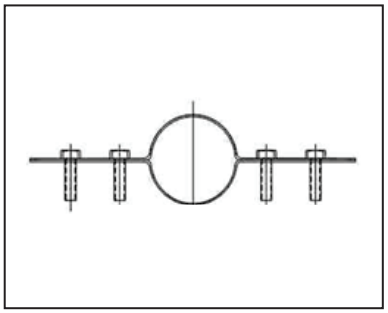
Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	LENGTH BETWEEN HOLE CENTRE (MM)	BOLT SIZE	MAX LOAD (KG)
TGRC0L00E0022	1/2"	DN15	21.3	57	M10	1250
TGRC0L00E0027	3/4"	DN20	26.7	68	M10	1250
TGRC0L00E0034	1"	DN25	33.4	76	M10	1250
TGRC0L00E0042	1 1/4"	DN32	42.1	90	M10	1250
TGRC0L00E0048	1 1/2"	DN40	48.2	110	M10	1250
TGRC0L00E0060	2"	DN50	60.3	130	M10	1850
TGRC0L00E0073	2 1/2"	DN65	73.0	142	M12	1850
TGRC0L00E0089	3"	DN80	88.9	161	M12	2250
TGRC0L00E0114	4"	DN100	114.3	190	M12	3600
TGRC0L00E0168	6"	DN150	168.3	258	M16	4500
TGRC0L00E0219	8"	DN200	219.1	333	M16	4500
TGRC0L00E0273	10"	DN250	273.0	409	M16	5800
TGRC0L00E0323	12"	DN300	323.8	467	M20	7300
TGRC0L00E0406	16"	DN400	406.4	583	M20	7300
TGRC0L00E0508	20"	DN5 00	508.0	708	M20	13400
TGRC0L00E0610	24"	DN 600	609.6	833	M20	13400

Note : Riser Clamp of all Non Standard Sizes to fit upon Rubber Support Insert can be manufactured.

APPLICATION EXAMPLES:

RISER CLAMP-FOUR BOLTS TGFBC00000000



APPLICATION:

FOUR BOLT RISER CLAMPS are recommended for the support and/or restraint of more heavy vertical steel pipes. A RISER CLAMP with four bolts is designed to attach to the pipe and to rest on a structural member or floor; It is not designed to have hanger rods attached to it to support the pipe.

CONSTRUCTION:

RISER CLAMPS WITH FOUR BOLTS consists of two mild steel flat bars bent to shape and held together by four bolts.

MATERIAL:

Mild Steel. Also other materials can be provided on request

APPROVALS:

ANSI/MSS SP-58 & SP-69 MSS
Federal Specification WW-H-171E & A-A-1192A

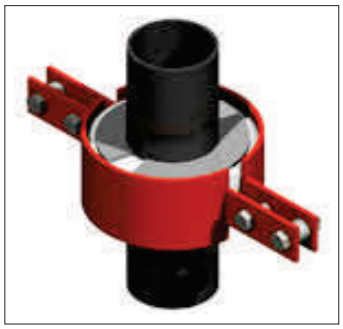
MAXIMUM TEMPERATURE: 343°C (650°F)

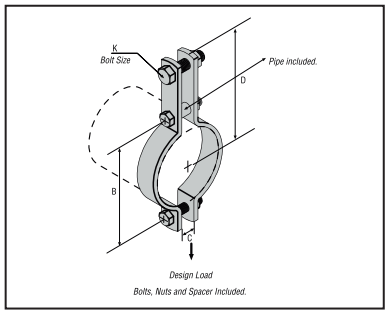
FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized, Zinc Flake, & Epoxy Coated.

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	DIMESNSIONS(MM)		MAX LOAD (KG)
				LENGTH	BOLT SIZE	
TGFBC000E0022	1/2"	DN15	21.3	57	M10	1250
TGFBC000E0027	3/4"	DN20	26.7	68	M10	1250
TGFBC000E0034	1"	DN25	33.4	76	M10	1250
TGFBC000E0042	1 1/4"	DN32	42.1	90	M10	1250
TGFBC000E0048	1 1/ 2"	DN40	48.2	110	M10	1250
TGFBC000E0060	2"	DN50	60.3	130	M10	1850
TGFBC000E0073	2 1/ 2"	DN65	73.0	142	M12	1850
TGFBC000E0089	3"	DN80	88.9	161	M12	2250
TGFBC000E0102	3 1 /2"	DN90	101.6	170	M12	2250
TGFBC000E0114	4"	DN100	114.3	190	M12	3600
TGFBC000E0114	5"	DN125	141.3	224	M16	3600
TGFBC000E0168	6"	DN150	168.3	258	M16	4500
TGFBC000E0219	8"	DN200	219.1	333	M16	4500
TGFBC000E0273	10"	DN250	273.0	409	M16	5800
TGFBC000E0323	12"	DN300	323.8	467	M20	7300
TGFBC000E0356	14"	DN350	355.6	519	M20	7300
TGFBC000E0406	16"	DN400	406.4	571	M20	7300
TGFBC000E0457	18"	DN450	457.2	710	M20	11000
TGFBC000E0508	20"	DN500	508.0	760	M20	13400
TGFBC000E0610	24"	DN600	609.6	833	M20	13400

APPLICATION EXAMPLES:





APPLICATION:

THREE BOLT PIPE CLAMP is designed for high static loading requirement in plant construction. Pipe clamps manufactured according to DIN 3567

MATERIAL:

Mild Steel. Also other materials can be provided on request

APPROVALS:

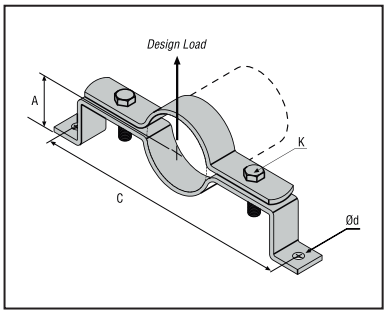
ANSI/MSS SP-58 & SP-69(Type 3) MSS
Federal Specification WW-H-171E & A-A-1192A (Type 3)

FINISH AVAILABLE:

Electro-Galvanized, Hot dip Galvanized & Zinc Flake.

PRODUCT CODE	PIPE SIZE		B	C	D	BOLT SIZE K	DESIGN LOAD
	INCH	MM	MM	MM	MM	MM	KN
TGTHC000E0022	1/2"	15	58	7	96	M10	3.29
TGTHC000E0027	3/4"	20	66	7	104	M10	3.29
TGTHC000E0034	1"	25	72	7	110	M10	3.29
TGTHC000E0042	1 1/4"	32	76	7	120	M12	3.29
TGTHC000E0048	1 1/2"	40	88	7	126	M12	5.34
TGTHC000E0060	2"	50	108	9	153	M12	5.34
TGTHC000E0073	2 1/2"	65	122	9	167	M12	5.34
TGTHC000E0089	3"	80	136	9	181	M16	5.34
TGTHC000E0114	4"	100	178	11	237	M16	8.67
TGTHC000E0168	6"	150	222	11	281	M20	9.96
TGTHC000E0219	8"	200	284	11	343	M20	9.96
TGTHC000E0273	10"	250	348	14	421	M20	11.25
TGTHC000E0323	12"	300	392	14	465	M24	11.25
TGTHC000E0356	14"	350	444	14	517	M24	14.94
TGTHC000E0406	16"	400	498	18	586	M24	14.94
TGTHC000E0457	18"	450	580	18	668	M24	14.94
TGTHC000E0508	20"	500	614	18	702	M27	15.65

OFFSET PIPE CLAMP TGOPC00000000



APPLICATION:

OFFSET PIPE CLAMPS is designed for high static loading requirement in plant construction. Pipe clamps manufactured according to DIN 3567.

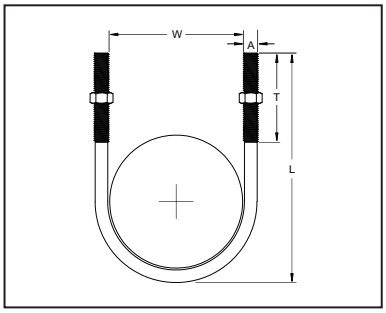
MATERIAL:

Mild Steel. Also other materials can be provided on request

FINISH AVAILABLE:

Electro-Galvanized, Hot dip Galvanized & Zinc Flake.

PRODUCT CODE	PIPE SIZE		BOLT SIZE K MM	A MM	ØD MM	C MM	DESIGN LOAD KN
	INCH	MM					
TGOPC000E0022	1/2"	15	M10	63	11	152	0.84
TGOPC000E0027	3/4"	20	M10	63	11	186	0.84
TGOPC000E0034	1"	25	M10	67	11	192	0.84
TGOPC000E0042	1 1/4"	32	M10	71	11	200	0.84
TGOPC000E0048	1 1/2"	40	M10	75	11	209	0.84
TGOPC000E0060	2"	50	M10	81	11	232	1.87
TGOPC000E0073	2 1/2"	65	M10	87	11	267	1.87
TGOPC000E0089	3"	80	M10	95	11	283	1.87
TGOPC000E0114	4"	100	M12	108	14	317	2.71
TGOPC000E0140	5"	125	M12	120	14	349	2.71
TGOPC000E0168	6"	150	M16	135	18	419	3.87
TGOPC000E0219	8"	200	M16	160	18	473	3.87
TGOPC000E0273	10"	250	M16	197	18	584	3.87
TGOPC000E0323	12"	300	M20	222	22	635	3.87



APPLICATION:

U-BOLTS are used to secure piping to structural members. When the piping is below the structural member, the U-Bolt provides vertical support and restricts lateral movement while allowing for axial movement. When the piping system is above the structural member, the U-Bolt restricts lateral movement and upward movement while allowing axial movement of the piping.

CONSTRUCTION:

U-Bolt is provided with two standard hex nuts and has a longer straight threaded length.

MATERIAL:

Mild Steel. Also other materials can be provided on request

APPROVALS:

UL LISTED

ANSI/MSS SP-58 & SP-69(Type 24) MSS
Federal Specification WW-H-171E & A-A-1192A (Type 24)

MAXIMUM TEMPERATURE: 399°C (750°F)

FINISH AVAILABLE:

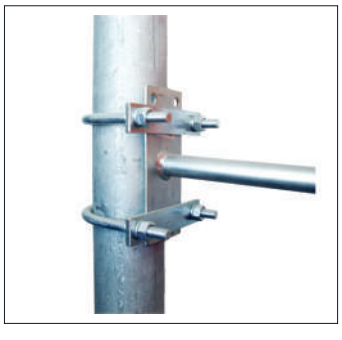
Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

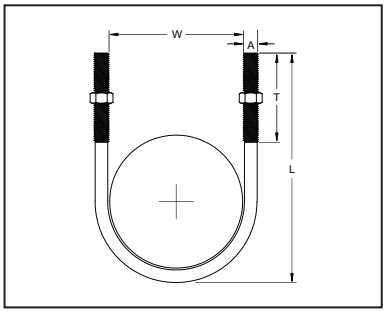
PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	MATERIAL DIMENSION (MM) ROD DIA. W	HEIGHT L	THREAD LENGTH T	ROD SIZE (MM) A	MAX LOAD (KG)
TGUB00ULE0027	3/4"	DN20	26.7	27	77	50	M10	550
TGUB00ULE0034	1"	DN25	33.4	34	85	50	M10	550
TGUB00ULE0042	1 1/4"	DN32	42.1	43	93	50	M10	550
TGUB00ULE0048	1 1/2"	DN40	48.2	48	100	50	M10	550
TGUB00ULE0060	2"	DN50	60.3	60	110	50	M10	550
TGUB00ULE0073	2 1/2"	DN65	73.0	76	127	50	M12	900
TGUB00ULE0089	3"	DN80	88.9	89	140	50	M12	900
TGUB00ULE0114	4"	DN100	114.3	115	165	50	M12	900
TGUB00ULE0141	5"	DN125	141.3	140	190	50	M12	900
TGUB00ULE0168	6"	DN150	168.3	168	220	50	M12	900

• Also can manufacture with different Rod size as per requirement.

NOTE : U bolt of all Non Standard Sizes to fit upon Rubber Support Insert can be manufactured.

APPLICATION EXAMPLES:





APPLICATION:

U-BOLTS are used to secure piping to structural members. When the piping is below the structural member, the U-Bolt provides vertical support and restricts lateral movement while allowing for axial movement. When the piping system is above the structural member, the U-Bolt restricts lateral movement and upward movement while allowing axial movement of the piping.

CONSTRUCTION:

U-Bolt is provided with two standard hex nuts and has a longer straight threaded length.

MATERIAL:

Mild Steel. Also other materials can be provided on request

APPROVALS:

ANSI/MSS SP-58 & SP-69(Type 24) MSS
Federal Specification WW-H-171E & A-A-1192A (Type 24)

MAXIMUM TEMPERATURE: 399°C (750°F)

FINISH AVAILABLE:

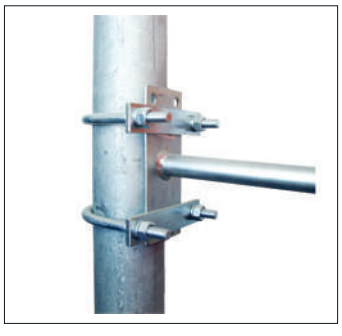
Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

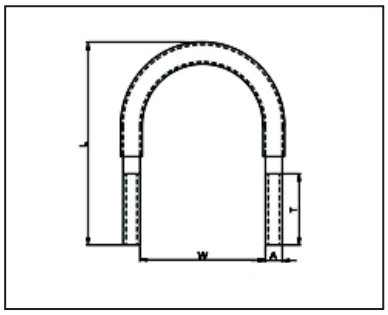
PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	MATERIAL DIMENSION ROD DIA. W	(MM) HEIGHT L	THREAD LENGTH T	ROD SIZE (MM) A	MAX LOAD (KG)
TGUB0000E0022	1/2"	DN15	21.3	21	65	50	M10	550
TGUB0000E0027	3/4"	DN20	26.7	27	77	50	M10	550
TGUB0000E0034	1"	DN25	33.4	34	85	50	M10	550
TGUB0000E0042	1 1/4"	DN32	42.1	43	93	50	M10	550
TGUB0000E0048	1 1/2"	DN40	48.2	48	100	50	M10	550
TGUB0000E0060	2"	DN50	60.3	60	110	50	M10	550
TGUB0000E0073	2 1/2"	DN65	73.0	76	127	50	M12	900
TGUB0000E0089	3"	DN80	88.9	89	140	50	M12	900
TGUB0000E0114	4"	DN100	114.3	115	165	50	M12	900
TGUB0000E0141	5"	DN125	141.3	140	190	50	M12	900
TGUB0000E0168	6"	DN150	168.3	168	220	50	M12	900
TGUB0000E0219	8"	DN200	219.1	219	295	75	M16	1900
TGUB0000E0273	10"	DN250	273.0	273	370	100	M20	3200
TGUB0000E0323	12"	DN300	323.8	324	420	100	M20	3200
TGUB0000E0356	14"	DN350	355.6	356	455	100	M20	3200
TGUB0000E0406	16"	DN400	406.4	406	505	100	M20	3200
TGUB0000E0457	18"	DN450	457.2	457	555	100	M24	4400
TGUB0000E0508	20"	DN500	508.0	508	605	100	M24	4400
TGUB0000E0610	24"	DN600	609.6	610	710	100	M24	4400

- Also can manufacture with different Rod size as per requirement.

NOTE : U bolt of all Non Standard Sizes to fit upon Rubber Support Insert can be manufactured.

APPLICATION EXAMPLES:





APPLICATION:

U-BOLTS WITH LINING are used to secure piping to structural members. When the piping is below the structural member, U-BOLT WITH LINING provides vertical support and restricts lateral movement while allowing for axial movement. When the piping system is above the structural member, the U-BOLTS WITH LINING restricts lateral movement and upward movement while allowing axial movement of the piping.

CONSTRUCTION:

U-BOLTS WITH LINING is provided with two standard hex nuts and has a longer straight threaded length. Reduces noise upto 18dB.

MATERIALS:

Mild Steel. Also other materials can also be provided on request

APPROVALS:

ANSI/MSS SP-69 & SP-58(Type 24) MSS
Federal Specification WW-H-171E & A-A-1192A (Type 24)

MAXIMUM TEMPERATURE: 110°C

MINIMUM TEMPERATURE: -20°C

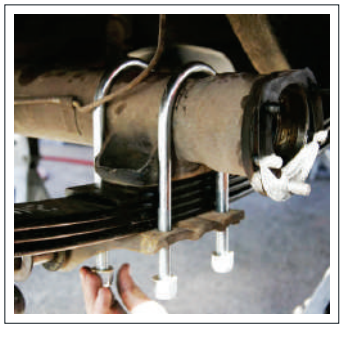
FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	MATERIAL DIMENSION ROD DIA. W	(MM) HEIGHT L	THREAD LENGTH T	BOLT SIZE (MM) A	MAX LOAD (KG)
TGUB0L00E0022	1/2"	DN15	21.3	21	65	50	M10	550
TGUB0L00E0027	3/ 4"	DN20	26.7	27	77	50	M10	550
TGUB0L00E0034	1"	DN25	33.4	34	85	50	M10	550
TGUB0L00E0042	1 1/4"	DN32	42.1	43	93	50	M10	550
TGUB0L00E0048	1 1/2"	DN40	48.2	48	100	50	M10	550
TGUB0L00E0060	2"	DN50	60.3	60	110	50	M10	550
TGUB0L00E0073	2 1/2"	DN65	73.0	76	127	50	M12	900
TGUB0L00E0089	3"	DN80	88.9	89	140	50	M12	900
TGUB0L00E00114	4"	DN100	114.3	115	165	50	M12	900
TGUB0L00E00141	5"	DN125	141.3	140	190	50	M12	900
TGUB0L00E00168	6"	DN150	168.3	168	220	50	M12	900
TGUB0L00E00219	8"	DN200	219.1	219	295	75	M16	1900
TGUB0L00E00273	10"	DN250	273.0	273	370	100	M20	3200
TGUB0L00E00323	12"	DN300	323.8	324	420	100	M20	3200
TGUB0L00E00356	14"	DN350	355.6	356	455	100	M20	3200
TGUB0L00E00406	16"	DN400	406.4	406	505	100	M20	3200
TGUB0L00E00457	18"	DN450	457.2	457	555	100	M24	4400
TGUB0L00E00508	20"	DN500	508.0	508	605	100	M24	4400
TGUB0L00E00610	24"	DN600	609.6	610	710	100	M24	4400

- Also can manufacture with different Rod size as per requirement.
- PVC Lining also available.

APPLICATION EXAMPLES:



HALF SADDLE TGHS000000000

APPLICATION:

HALF SADDLE is recommended for support of standard conduit, cable and steel pipe on walls or sides of beams. Not recommended for use horizontally on ceilings, bottoms of beams and similar installations since the factor of safety is greatly reduced when so used.

CONSTRUCTION:

HALF SADDLE consists of single piece of mild steel shaped to proper configuration as shown in above diagram.

MATERIALS:

Mild Steel. Also other materials can be provided on request

MAXIMUM TEMPERATURE: 343°C (650°F)

FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	NOMINAL (INCH)	PIPE SIZE (MM)	DIA (MM)	SCREW
TGHS0000E0022	1/2"	DN 15	21.3	M 6
TGHS0000E0027	3/4"	DN 20	26.7	M 6
TGHS0000E0034	1"	DN 25	33.4	M 6
TGHS0000E0042	1 1/4"	DN 32	42.1	M 6
TGHS0000E0048	1 1/2"	DN 40	48.2	M 6
TGHS0000E0060	2"	DN 50	60.3	M 6
TGHS0000E0073	2 1/2"	DN 65	73	M 8
TGHS0000E0089	3"	DN 80	88.9	M 8
TGHS0000E00114	4"	DN 100	114.3	M 8
TGHS0000E00168	6"	DN 150	168.3	M 8

APPLICATION EXAMPLES:

APPLICATION:
LIGHT SADDLE is recommended for supporting a piping system with vertically or horizontally to walls or ceilings.

CONSTRUCTION:
LIGHT SADDLE consists of single piece of mild steel shaped to the proper configuration as shown in the diagram.

MATERIALS:
Mild Steel. Also other materials can be provided on request

MAXIMUM TEMPERATURE: 343°C (650°F)

FINISH AVAILABLE:
Plain, Electro-Galvanized & Zinc Flake.

PRODUCT CODE	NOMINAL (INCH)	PIPE SIZE (MM)	DIA (MM)	SCREW
TGLS0000E0022	1/2"	DN 15	21.3	M 6
TGLS0000E0027	3/4"	DN 20	26.7	M 6
TGLS0000E0034	1"	DN 25	33.4	M 6
TGLS0000E0042	1 1/4"	DN 32	42.1	M 6
TGLS0000E0048	1 1/2"	DN 40	48.2	M 6
TGLS0000E0060	2"	DN 50	60.3	M 6
TGLS0000E0073	2 1/2"	DN 65	73	M 6
TGLS0000E0089	3"	DN 80	55.9	M 6
TGLS0000E0114	4"	DN 100	114.3	M 6
TGLS0000E0168	6"	DN 150	168.3	M 6

APPLICATION EXAMPLES:

HEAVY SADDLE TGHS000000000

APPLICATION:

HEAVY SADDLE is recommended for supporting a piping system of heavy weight with fittings vertically or horizontally to walls or ceilings. It can be used to mount electrical & insulated pipes, corner locking & better gripping of electrical conduits.

CONSTRHSTION:

A HEAVY SADDLE consists of single piece of mildsteel shaped to the proper configuration as shown in the diagram.

MATERIALS:

Mild Steel. Also other materials can be provided on request

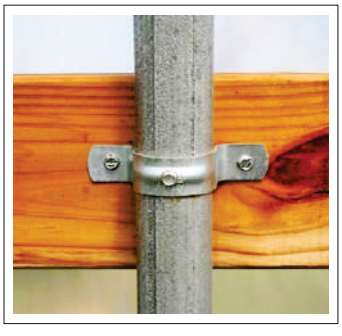
MAXIMUM TEMPERATURE: 343°C (650°F)

FINISH AVAILABLE:

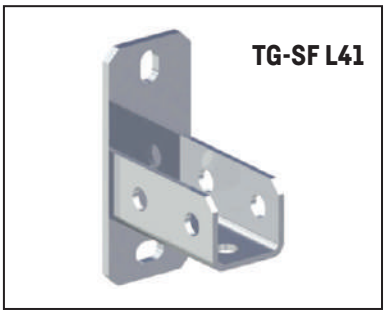
Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

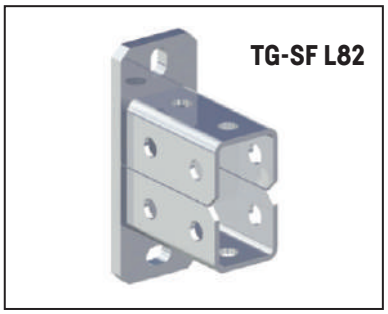
PRODHST CODE	NOMINAL INCH	PIPE SIZE MM	DIAMETER (MM)	SCREW SIZE
TGHS0000E0022	1/2 "	DN15	21.3	M6
TGHS0000E0027	3/4 "	DN20	26.7	M6
TGHS0000E0034	1 "	DN25	33.4	M6
TGHS0000E0042	1 1/4"	DN32	42.1	M6
TGHS0000E0048	1 1/2 "	DN 40	48.2	M6
TGHS0000E0054			54	M6
TGHS0000E0060	2 "	DN50	60.3	M6
TGHS0000E0067			67	M6
TGHS0000E0073	2 1/2 "	DN65	73.0	M6
TGHS0000E0082			82	M6
TGHS0000E0089	3 "	DN80	88.9	M6
TGHS0000E0102	3 1/2"	DN90	101.6	M6
TGHS0000E0108			108	M6
TGHS0000E0114	4 "	DN100	114.3	M6
TGHS0000E0126			126	M6
TGHS0000E0141	5"	DN125	141.3	M6
TGHS0000E0148			148	M6
TGHS0000E0155			155	M6
TGHS0000E0168	6"	DN150	168.3	M6

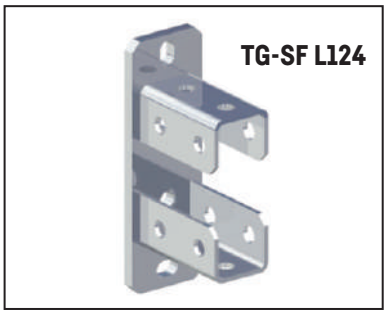
APPLICATION EXAMPLES:



TGSF000000000 SADDLE FLANGE





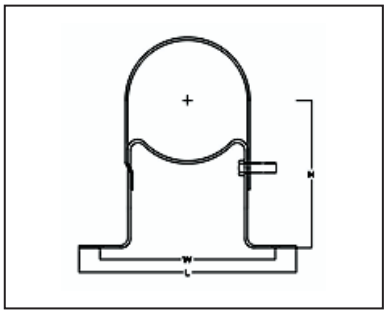


MATERIAL:
Mild Steel. Also other materials can be provided on request

FINISH AVAILABLE:
Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

ITEM	FOR PROFILE FUS
TGSF0000E0L41	21;41;21D;62
TGSF0000E0L82	41D
TGSF0000EL124	62D
TGSF0000H0L41	21;41;21D;62
TGSF0000S0L41	FUS 21 + FUS 41

TGAS000000000 OFFSET HANGER



APPLICATION:
OFFSET HANGER is recommended for support of pipe lines running at a definite distance from the wall or floor of a building or structure. Used where removing and installing of pipe is done periodically.

CONSTRUCTION:
An OFFSET HANGER consists of single piece of mild steel shaped to the proper configuration.

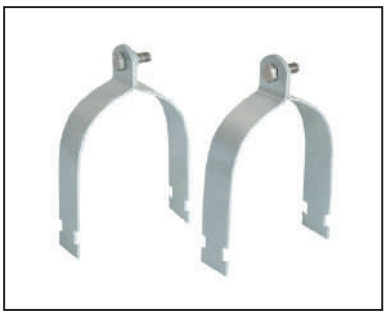
MATERIALS:
Mild Steel. Also other materials can be provided on request

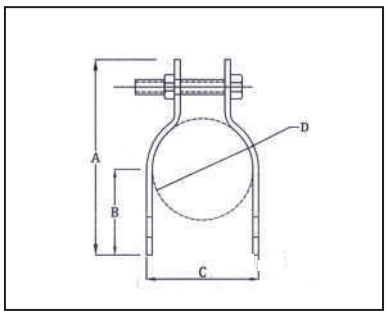
MAXIMUM TEMPERATURE: 343°C (650°F)

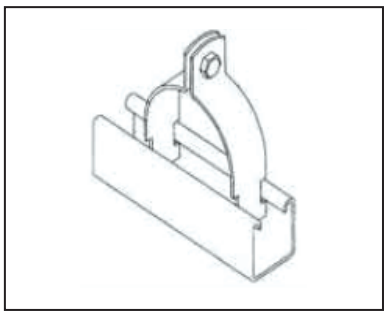
FINISH AVAILABLE:
Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	NOMINAL INCH	PIPE SIZE MM	PIPE OD (MM)	DIMENSION		
				L	W	H
TGAS0000E0060	2 "	DN50	60.3	214	186	83
TGAS0000E0073	2 1/2 "	DN65	73	269	231	113
TGAS0000E0089	3 "	DN80	88.9	284	246	113
TGAS0000E0110	-	-	110	298	259	113
TGAS0000E0114	4 "	DN100	114.3	311	271	113
TGAS0000E0141	5 "	DN125	141.3	386	336	138
TGAS0000E0168	6 "	DN150	168.3	411	361	138
TGAS0000E0219	8 "	DN200	219.1	469	419	138

STRUT CLAMP-TWO PIECE CHANNEL CLIP TGTPC0UL00000







APPLICATION:

STRUT CLAMP - TWO PIECE CHANNEL CLIP is designed as a guide to permit longitudinal movement of pipe.

APPROVALS:

UL LISTED

MATERIALS:

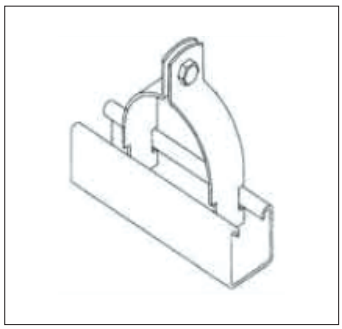
Mild Steel. Also other materials can also be provided on request

FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized, Zinc Flake & Epoxy Coated.

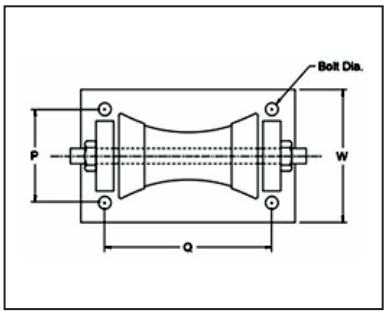
PRODUCT CODE	NOMINAL INCH	PIPE SIZE MM	O.D. OF PIPE 'D' MM	A	B	C	FASTENER SIZE
TGTPC0ULE0027	3/4"	20	27	72	17.5	30.00	M 6 x 25
TGTPC0ULE0034	1"	25	34	75	20.6	38.00	M 6 x 25
TGTPC0ULE0042	1 1/4"	32	42	86	25.4	46.00	M 6 x 25
TGTPC0ULE0048	1 1/2"	40	48	95	28.4	52.00	M 6 x 25
TGTPC0ULE0060	2"	50	60	107	34.8	65.00	M 8 x 35
TGTPC0ULE0073	2 1/2"	65	73	122	41.1	78.00	M 8 x 35
TGTPC0ULE0089	3"	80	89	138	50.8	94.00	M 8 x 35
TGTPC0ULE0114	4"	100	114	165	63.5	120.00	M 8 x 35

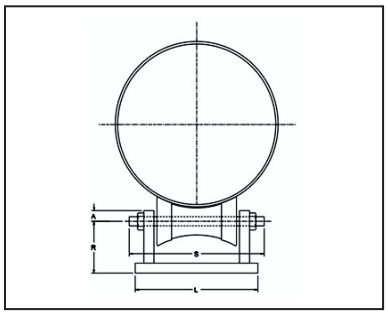
APPLICATION EXAMPLES:



TEMBO
Powering Ahead

ROLLER SUPPORTS





APPLICATION:

PIPE ROLLER STAND is recommended to support pipes in applications where horizontal movement, due to expansion and contraction will occur.

ROLLER MATERIALS:

Malleable Iron.
Mild Steel.

MATERIALS:

Mild Steel. Also other materials can be provided on request

APPROVALS:

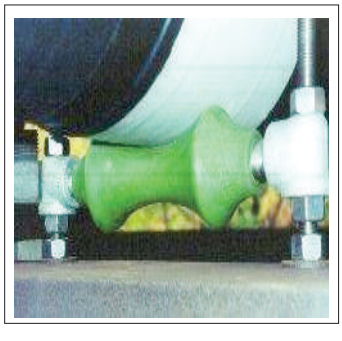
ANSI/MSS SP-58 & SP-69(Type 45) MSS
Federal Specification WW-H-171E & A-A-1192A (Type 44)

FINISH AVAILABLE:

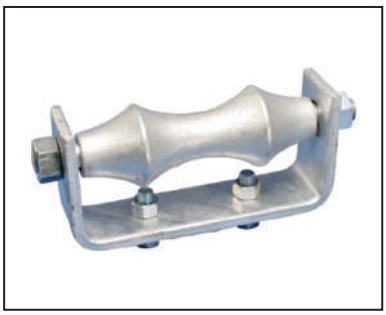
Plain, Electro-Galvanized & Hot Dip Galvanized & Zinc Flake.

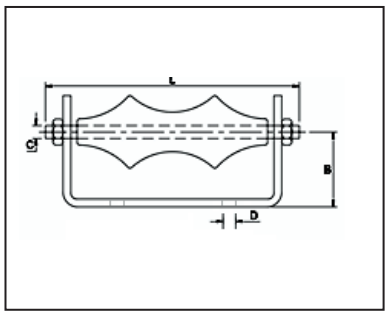
PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	S	BASE PLATE		R	Q	P
					L	W			
TGPRS000E0060	2"	DN50	60	80	90	145	50	40	100
TGPRS000E0073	2 1/2"	DN65	73	90	100	145	50	48	100
TGPRS000E0089	3"	DN80	89	95	105	145	50	55	100
TGPRS000E0102	3 1/2"	DN90	102	100	110	145	50	61	100
TGPRS000E0114	4"	DN100	114	115	125	155	50	72	115
TGPRS000E0141	5"	DN125	141	130	140	155	55	85	115
TGPRS000E0168	6"	DN150	168	160	170	165	65	100	125
TGPRS000E0219	8"	DN200	219	190	200	170	75	125	130
TGPRS000E0273	10"	DN250	273	225	235	170	90	155	130
TGPRS000E0323	12"	DN300	323	260	270	170	90	180	130
TGPRS000E0356	14"	DN350	356	275	285	170	120	197	130
TGPRS000E0406	16"	DN400	406	300	310	205	120	220	165
TGPRS000E0457	18"	DN450	457	345	355	205	130	250	165
TGPRS000E0508	20"	DN500	508	370	380	205	130	275	165
TGPRS000E0610	24"	DN600	610	480	490	230	160	330	190
TGPRS000E0660	26"	DN650	661	500	510	245	180	355	200
TGPRS000E0711	28"	DN700	712	530	540	245	180	385	200
TGPRS000E0762	30"	DN750	755	550	560	245	200	405	200

APPLICATION EXAMPLES:



PIPE ROLLER CHAIR TGPRC00000000





APPLICATION:

PIPE ROLLER CHAIR is recommended to support pipes where longitudinal movement due to expansion and contraction may occur, but where no vertical adjustment is required.

MAXIMUM TEMPERATURE: 343°C (650°F)

MATERIALS:

Mild Steel. Also other materials can be provided on request

APPROVALS:

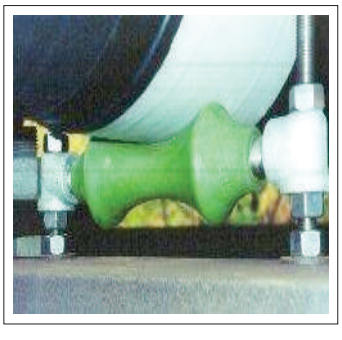
ANSI/MSS SP-58 & SP-69(Type 44)
Federal Specification WW-H-171E & A-A-1192A (Type 45)

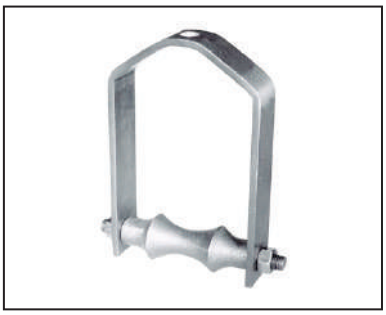
FINISH AVAILABLE:

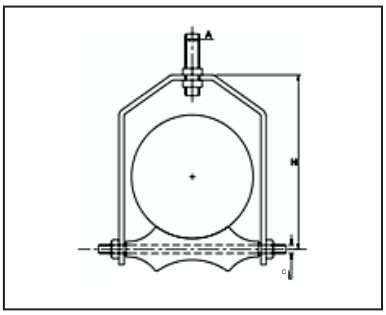
Plain, Electro-Galvanized & Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	NPS (IN)	NPS (MM)	WIDTH	THICKNESS	DIMENSIONS (MM)			
					B	C	D	L
TGPRC000E0060	2"	60	30	6	40	M12	M12	115
TGPRC000E0073	2 1/2"	73	30	6	40	M12	M12	125
TGPRC000E0089	3"	89	30	6	45	M12	M12	145
TGPRC000E0102	3 1/2"	102	30	6	45	M12	M12	160
TGPRC000E0114	4"	114	40	10	55	M12	M16	175
TGPRC000E0141	5"	141	40	10	55	M12	M16	200
TGPRC000E0168	6"	168	50	10	65	M20	M16	245
TGPRC000E0219	8"	219	50	10	75	M24	M20	305
TGPRC000E0273	10"	273	50	12	90	M24	M20	365
TGPRC000E0323	12"	323	50	12	90	M24	M20	425
TGPRC000E0356	14"	356	50	12	120	M24	M24	460
TGPRC000E0406	16"	406	75	12	120	M24	M24	515
TGPRC000E0457	18"	457	75	12	130	M33	M24	580
TGPRC000E0508	20"	508	75	12	130	M33	M24	630
TGPRC000E0610	24"	610	100	16	160	M50	M24	780
TGPRC000E0660	26"	661	100	16	180	M50	M24	845
TGPRC000E0711	28"	712	100	16	180	M50	M24	895
TGPRC000E0762	30"	755	100	16	200	M50	M24	940

APPLICATION EXAMPLES:







APPLICATION:

ADJUSTABLE ROLLER HANGER is recommended for suspended pipes in applications where horizontal movement, due to expansion and contraction, will occur and vertical adjustment is necessary.

FINISH AVAILABLE:

Plain, Electro-Galvanized & Hot Dip Galvanized & Zinc Flake.

MATERIALS:

Mild Steel. Also other materials can be provided on request

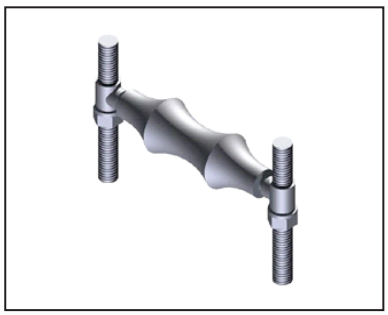
APPROVALS:

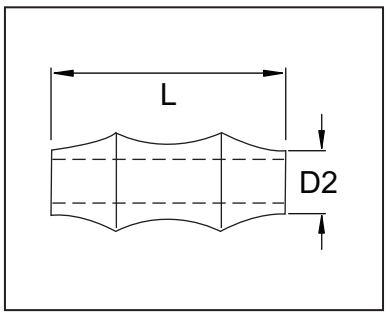
ANSI/MSS SP-58 & SP-69(Type 43) MSS
Federal Specification WW-H-171E & A-A-1192A (Type 44)

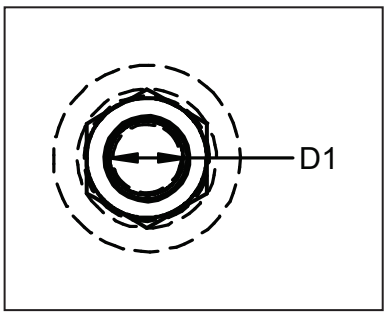
PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	DIMENSIONS (MM)		
				A	C	H
TGARH000E0060	2"	DN50	60	M12	M12 x 115	105
TGARH000E0073	2 1/2"	DN65	73	M12	M12 x 125	125
TGARH000E0089	3"	DN80	89	M12	M12 x 145	140
TGARH000E0102	3 1/ 2"	DN90	102	M16	M12 x 160	155
TGARH000E0114	4"	DN100	114	M16	M12 x 175	170
TGARH000E0141	5"	DN125	141	M20	M12 x 200	200
TGARH000E0168	6"	DN150	168	M20	M20 x 245	230
TGARH000E0219	8"	DN200	219	M20	M24 x 305	290
TGARH000E0273	10"	DN250	273	M24	M24 X 365	350
TGARH000E0323	12"	DN300	323	M24	M24 x 425	400
TGARH000E0356	14"	DN350	356	M24	M24 x 460	445
TGARH000E0406	16"	DN400	406	M24	M24 x 515	500
TGARH000E0457	18"	DN450	457	M30	M33 x 580	555
TGARH000E0508	20"	DN500	508	M30	M33 x 630	610
TGARH000E0610	24"	DN600	610	M30	M50 x 780	725
TGARH000E0660	26"	DN350	661	M36	M50 x 845	785
TGARH000E0711	28"	DN700	712	M36	M50 x 895	840
TGARH000E0762	30"	DN750	755	M36	M50 x 940	885

APPLICATION EXAMPLES:

PIPE ROLLER WITH SOCKET TGPR000000000







APPLICATION:

PIPE ROLLER is recommended for supporting pipe in applications where horizontal movement, due to expansion and contraction, will occur.

ROLLER MATERIALS:

Malleable Iron, Mild Steel also available.

MATERIALS:

Mild Steel. Also other materials can be provided on request

APPROVALS:

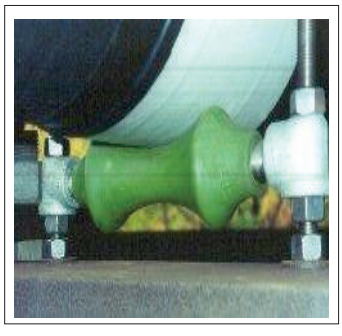
ANSI/MSS SP-58 & SP-69(Type 41)
Federal Specification WW-H-171E & A-A-1192A (Type 42)

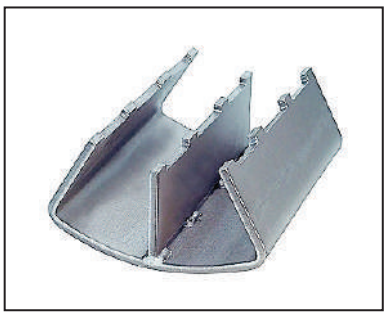
FINISH AVAILABLE:

Plain, Electro-Galvanized & Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	NOMINAL IN.	PIPE SIZE MM	PIPE OD (MM)	DIMENSIONS (MM)			
				D	L	D1	D2
TGPR0000E0060	2″	DN50	60	27.90	66	20	18
TGPR0000E0073	2 1/ 2″	DN65	73	32.05	79	22	20
TGPR0000E0089	3″	DN80	89	33.92	95	22	20
TGPR0000E0102	3 1/ 2″	DN90	102	35.67	108	22	20
TGPR0000E0114	4″	DN100	114	41.41	121	26	24
TGPR0000E0141	5″	DN125	141	48.89	148	30	28
TGPR0000E0168	6″	DN150	168	58.51	175	36	34
TGPR0000E0219	8″	DN200	219	67.34	227	38	36
TGPR0000E0273	10″	DN250	273	80.58	281	44	42
TGPR0000E0323	12″	DN300	323	93.27	330	50	48
TGPR0000E0356	14″	DN350	356	115.69	362	68	66
TGPR0000E0406	16″	DN400	406	122.39	413	68	66
TGPR0000E0457	18″	DN450	457	131.23	464	70	68
TGPR0000E0508	20″	DN500	508	144.06	514	76	74
TGPR0000E0610	24″	DN600	610	173.72	616	92	90
TGPR0000E0660	26″	DN650	661	188.56	669	100	98
TGPR0000E0711	28″	DN700	712	201.39	722	106	104
TGPR0000E0762	30″	DN750	755	215.15	768	114	112

APPLICATION EXAMPLES:





APPLICATION:
PIPE INSULATION SADDLE is designed for use on insulated high temperature systems where heat losses are to be kept to a minimum and to protect insulation against damage.

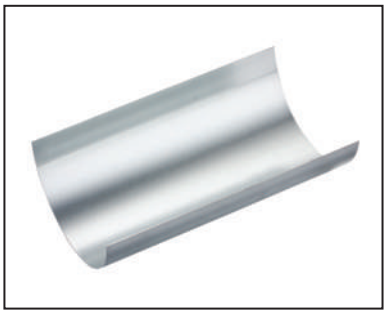
MATERIALS:
Mild Steel. Also other materials can be provided on request

APPROVALS:
ANSI/MSS SP-58 & SP-69 (Type 39A & 39B) MSS
Federal Specification WW-H-171E & A-A-1192A (Type 40A & 40B)

FINISH AVAILABLE:
Plain, Electro-Galvanized & Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	NOMINAL (in)	PIPE SIZE (mm)	PIPE OD (mm)	INSULATION
TGPIS00E25034	1"	DN 25	33.4	1"
TGPIS00E50034	1"	DN 25	33.4	2"
TGPIS00E25042	1 1/4"	DN 32	42	1"
TGPIS00E50042	1 1/4"	DN 32	42	2"
TGPIS00E25048	1 1/2"	DN 40	48	1"
TGPIS00E50048	1 1/2"	DN 40	48	2"
TGPIS00E25060	2"	DN 50	60	1"
TGPIS00E50060	2"	DN 50	60	2"
TGPIS00E75060	2"	DN 50	60	3"
TGPIS00E25073	2 1/2"	DN 65	73	1"
TGPIS00E50073	2 1/2"	DN 65	73	2"
TGPIS00E75073	2 1/2"	DN 65	73	3"
TGPIS00E25089	3"	DN 80	89	1"
TGPIS00E50089	3"	DN 80	89	2"
TGPIS00E75089	3"	DN 80	89	3"
TGPIS00E25114	4"	DN 100	114	1"
TGPIS00E50114	4"	DN 100	114	2"
TGPIS00E75114	4"	DN 100	114	3"
TGPIS00E25141	5"	DN 125	141	1"
TGPIS00E50141	5"	DN 125	141	2"
TGPIS00E75141	5"	DN 125	141	3"
TGPIS00E25168	6"	DN 150	168	1"
TGPIS00E50168	6"	DN 150	168	2"
TGPIS00E75168	6"	DN 150	168	3"
TGPIS00E25219	8"	DN 200	219	1"
TGPIS00E50219	8"	DN 200	219	2"
TGPIS00E75219	8"	DN 200	219	3"
TGPIS00E25273	10"	DN 250	273	1"
TGPIS00E50273	10"	DN 250	273	2"
TGPIS00E75273	10"	DN 250	273	3"
TGPIS00E25323	12"	DN 300	323	1"
TGPIS00E50323	12"	DN 300	323	2"
TGPIS00E75323	12"	DN 300	323	3"
TGPIS00E50356	14"	DN 350	356	1"
TGPIS00E75356	14"	DN 350	356	2"

PIPE COVERING SADDLE TGPCS00000000



APPLICATION:
PIPE COVERING SADDLE is Ideal for protecting pipe insulation

MATERIALS:
Mild Steel. Also other materials can be provided on request

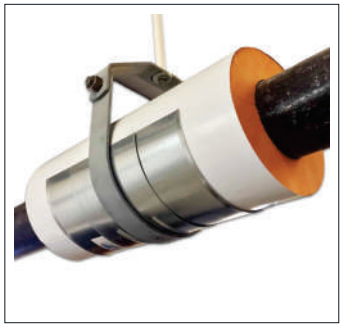
APPROVALS:
MSS-SP-58 & MSS-SP-69 (Type 40) MSS
Federal Specification WW-H-171E & A-A-1192A (Type 41)

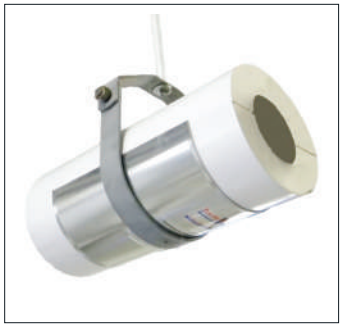
FINISH AVAILABLE:
Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

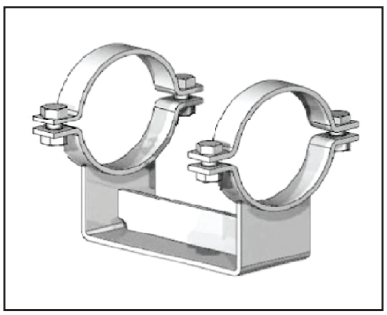
PRODUCT CODE	PIPE SIZE (in)	PIPE SIZE (mm)	PIPE OD (mm)	INSULATION
TGPCS00E25034	1"	DN 25	33.4	1"
TGPCS00E32034	1"	DN 25	33.4	1 2/7"
TGPCS00E50034	1"	DN 25	33.4	2"
TGPCS00E25042	1 1/4"	DN 32	42.2	1"
TGPCS00E32042	1 1/4"	DN 32	42.2	1 2/7"
TGPCS00E50042	1 1/4"	DN 32	42.2	2"
TGPCS00E25048	1 1/2"	DN 40	48.3	1"
TGPCS00E32048	1 1/2"	DN 40	48.3	1 2/7"
TGPCS00E50048	1 1/2"	DN 40	48.3	2"
TGPCS00E25060	2"	DN 50	60.3	1"
TGPCS00E32060	2"	DN 50	60.3	1 2/7"
TGPCS00E50060	2"	DN 50	60.3	2"
TGPCS00E25073	2 1/2"	DN 65	73	1"
TGPCS00E32073	2 1/2"	DN 65	73	1 2/7"
TGPCS00E50073	2 1/2"	DN 65	73	2"
TGPCS00E25089	3"	DN 80	88.9	1"
TGPCS00E32089	3"	DN 80	88.9	1 2/7"
TGPCS00E50089	3"	DN 80	88.9	2"
TGPCS00E25114	4"	DN 100	114.3	1"
TGPCS00E32114	4"	DN 100	114.3	1 2/7"
TGPCS00E50114	4"	DN 100	114.3	2"
TGPCS00E25141	5"	DN 125	141.3	1"
TGPCS00E32141	5"	DN 125	141.3	1 2/7"
TGPCS00E50141	5"	DN 125	141.3	2"
TGPCS00E25168	6"	DN 150	168.3	1"
TGPCS00E32168	6"	DN 150	168.3	1 2/7"
TGPCS00E50168	6"	DN 150	138.3	2"
TGPCS00E25219	8"	DN 200	219.1	1"
TGPCS00E32219	8"	DN 200	219.1	1 2/7"
TGPCS00E50219	8"	DN 200	219.1	2"
TGPCS00E25273	10"	DN 250	273.1	1"
TGPCS00E32273	10"	DN 250	273.1	1 2/7"
TGPCS00E50273	10"	DN 250	273.1	2"

PRODUCT CODE	PIPE SIZE (in)	PIPE SIZE (mm)	PIPE OD (mm)	INSULATION
TGPCS00E25323	12"	DN 300	323.6	1"
TGPCS00E32323	12"	DN 300	323.6	1 2/7"
TGPCS00E50323	12"	DN 300	323.6	2"
TGPCS00E25356	14"	DN 350	355.6	1"
TGPCS00E32356	14"	DN 350	355.6	1 2/7"
TGPCS00E50356	14"	DN 350	355.6	2"
TGPCS00E25400	16"	DN 406	406.4	1"
TGPCS00E32400	16"	DN 406	406.4	1 2/7"
TGPCS00E50400	16"	DN 406	406.4	2"
TGPCS00E25457	18"	DN 450	457.2	1"
TGPCS00E32457	18"	DN 450	457.2	1 2/7"
TGPCS00E50457	18"	DN 450	457.2	2"
TGPCS00E25508	20"	DN 500	508	1"
TGPCS00E32508	20"	DN 500	508	1 2/7"
TGPCS00E50508	20"	DN 500	508	2"
TGPCS00E25556	22"	DN 550	558.8	1"
TGPCS00E32556	22"	DN 550	558.8	1 2/7"
TGPCS00E50556	22"	DN 550	558.8	2"
TGPCS00E25610	24"	DN 600	609.6	1"
TGPCS00E32610	24"	DN 600	609.6	1 2/7"
TGPCS00E50610	24"	DN 600	609.6	2"
TGPCS00E25660	26"	DN 650	660.4	1"
TGPCS00E32660	26"	DN 650	660.4	1 2/7"
TGPCS00E50660	26"	DN 650	660.4	2"
TGPCS00E25711	28"	DN 700	711.2	1"
TGPCS00E32711	28"	DN 700	711.2	1 2/7"
TGPCS00E50711	28"	DN 700	711.2	2"
TGPCS00E25812	30"	DN 750	762	1"
TGPCS00E32812	30"	DN 750	762	1 2/7"
TGPCS00E50812	30"	DN 750	762	2"
TGPCS00E25812	32"	DN 800	812.8	1"
TGPCS00E32812	32"	DN 800	812.8	1 2/7"
TGPCS00E50812	32"	DN 800	812.8	2"

APPLICATION EXAMPLES:







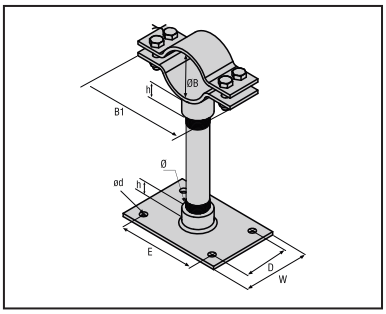
TECHNICAL DATA :

Material : Mild Steel. Also other materials can be provided on request
Finish : Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.
Temperature : Upto 300 C.

PRODUCT CODE GALVANIZED	NOMINAL SIZE	INSULATION THICKNES	OUTSIDE DIAMETER (MM)	DIMENSIONS			
				HEIGHT	LENGTH OF GUIDE	CLAMPING FASTENER	SAFE LOAD (KG)
TGSPS000E0219	200	-	219.1	107	290	M 16	3000
TGSPS000E0283	200	32 MM	283.1	107	290	M 16	3000
TGSPS000E0319	200	50 MM	319.1	142	290	M 16	3000
TGSPS000E0273	250	-	273	107	290	M 16	3000
TGSPS000E0337	250	32 MM	337	107	290	M 16	3000
TGSPS000E0373	250	50 MM	373	142	290	M 16	3000
TGSPS000E0324	300	-	323.6	107	290	M 16	3000
TGSPS000E0388	300	32 MM	387.6	107	290	M 16	3500
TGSPS000E0424	300	50 MM	423.6	142	290	M 16	3500
TGSPS000E0356	350	-	355.6	142	290	M 16	3500
TGSPS000E0420	350	32 MM	419.6	142	290	M 16	3500
TGSPS000E0456	350	50 MM	455.6	192	290	M 16	3500
TGSPS000E0406	400	-	406.4	142	290	M 16	3500
TGSPS000E0470	400	32 MM	470.4	142	290	M 16	3500
TGSPS000E0506	400	50 MM	506.4	192	290	M 16	3500
TGSPS000E0457	450	-	457.2	142	290	M 16	3500
TGSPS000E0521	450	32 MM	521.2	142	290	M 16	4500
TGSPS000E0557	450	50 MM	557.2	192	290	M 16	4500
TGSPS000E0508	500	-	508	142	290	M 16	4500
TGSPS000E0572	500	32 MM	572	142	290	M 16	4500
TGSPS000E0608	500	50 MM	608	192	290	M 16	4500
TGSPS000E0610	600	-	609.6	142	290	M 16	4500
TGSPS000E0674	600	32 MM	673.6	142	290	M 16	4500
TGSPS000E0710	600	50 MM	709.6	192	290	M 16	4500

APPLICATION EXAMPLES:

PIPE CLAMP WITH SLEEVE TGPCL00000000



SERVICE:

PIPE CLAMP WITH SLEEVE is designed for suspending and fixing of vertical and expanded pipes. For bending - fastening at greater distances from the building structure.

MATERIALS:

Mild Steel. Also other materials can be provided on request

FINISH AVAILABLE:

Plain, Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

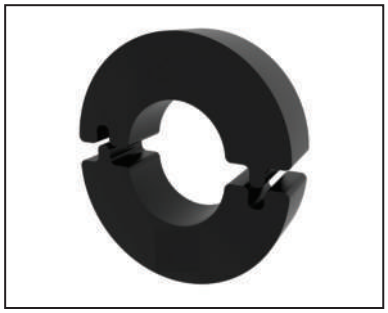
PRODUCT CODE	PIPE SIZE		ØB MM	B1 MM	Ø INCH.	L MM	W MM	H MM	D MM	D MM	E MM	DESIGN LOAD KN
	INCH	MM										
TGPCL000E0022	1/2"	15	20-26	82	1/2"	120	75	34	8.50	55	100	4.50
TGPCL000E0027	3/4"	20	26-32	104	1/2"	120	75	34	8.50	55	100	4.50
TGPCL000E0034	1"	25	32-39	99	1/2"	120	75	34	9.00	55	100	4.50
TGPCL000E0042	1 1/4"	32	41-48	115	3/4"	130	85	36	9.00	58	98	6.80
TGPCL000E0048	1 1/2"	40	46-55	135	3/4"	130	85	36	9.00	58	98	6.80
TGPCL000E0060	2"	50	56-66	148	1"	150	100	42	11.00	64	113	6.80
TGPCL000E0073	2 1/2"	65	72-84	155	1"	150	100	42	11.00	64	113	6.80
TGPCL000E0089	3"	80	85-94	185	1"	150	100	42	11.00	64	113	7.40
TGPCL000E0114	4"	100	110-118	214	1 1/4"	175	125	46	11.00	88	138	8.50
TGPCL000E0141	5"	125	137-148	230	1 1/4"	175	125	46	11.00	88	138	9.20
TGPCL000E0168	6"	150	158-172	262	1 1/2"	200	150	47	14.00	110	160	10.40
TGPCL000E0219	8"	200	208-230	335	1 1/2"	200	150	47	14.00	110	160	10.40
TGPCL000E0273	10"	250	265-280	405	1 1/2"	200	150	47	14.00	110	160	16.00

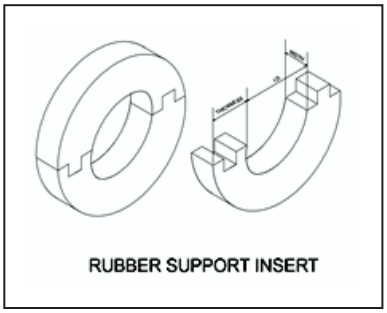
APPLICATION EXAMPLES:

TEMBO
Powering Ahead

RUBBER SUPPORT INSERTS

RUBBER SUPPORT INSERTS TGRSI00000000





APPLICATION:

RUBBER SUPPORT INSERTS is recommended to use at the supporting points of insulated pipes to prevent crushing of insulation.

CONSTRUCTION:

Dimensionally accurate as each piece is moulded. It has excellent resistance to deterioration / distortion. Steel reinforcement gives higher strength and load bearing capacity.

DENSITY : 1400kg/m^3

THERMAL CONDUCTIVITY : 0.16W/m°C

TEMPERATURE RANGE : -20°C to 110°C

APPLICATION EXAMPLES:

NOMINAL PIPE SIZE		SCHEDULE 40 STEEL PIPE	PRODUCT CODE FOR RUBBER SUPPORT INSERT							
			1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"
INC	MM	OD (MM)	13 MM	19 MM	25 MM	32 MM	38 MM	50 MM	65 MM	75 MM
1/2"	15	21.3	TGRSI00221325	TGRSI00221925	TGRSI00222525	TGRSI00223225	TGRSI00223825	TGRSI00225025	TGRSI00226525	TGRSI00227525
3/4"	20	26.7	TGRSI00271325	TGRSI00271925	TGRSI00272525	TGRSI00273225	TGRSI00273825	TGRSI00275025	TGRSI00276525	TGRSI00277525
1"	25	33.4	TGRSI00341325	TGRSI00341925	TGRSI00342525	TGRSI00343225	TGRSI00343825	TGRSI00345025	TGRSI00346525	TGRSI00347525
1 1/4"	32	42.1	TGRSI00421325	TGRSI00421925	TGRSI00422525	TGRSI00423225	TGRSI00423825	TGRSI00425025	TGRSI00426525	TGRSI00427525
1 1/2"	40	48.2	TGRSI00481325	TGRSI00481925	TGRSI00482525	TGRSI00483225	TGRSI00483825	TURSI00485025	TGRSI00486525	TGRSI00487525
2"	50	60.3	TGRSI00601325	TGRSI00601925	TGRSI00602525	TGRSI00603225	TGRSI00603825	TGRSI00605025	TGRSI00606525	TGRSI00607525
2 1/2"	65	73.0	TGRSI00731338	TGRSI00731938	TGRSI00732538	TGRSI00733238	TGRSI00733838	TGRSI00735038	TGRSI00736538	TGRSI00737538
3"	80	88.9	TGRSI00891338	TGRSI00891938	TGRSI00892538	TGRSI00893238	TGRSI00893838	TGRSI00895038	TGRSI00896538	TGRSI00897538
3 1/2"	90	101.6	TGRSI01021338	TGRSI01021938	TGRSI01022538	TGRSI01023238	TGRSI01023838	TGRSI01025038	TGRSI01026538	TGRSI01027538
4"	100	114.3	TGRSI01141338	TGRSI01141938	TGRSI01142538	TGRSI01143238	TGRSI01143838	TGRSI01145038	TGRSI01146538	TGRSI01147538
5"	125	141.3	TGRSI01411338	TGRSI01411938	TGRSI01412538	TGRSI01413238	TGRSI01413838	TGRSI01415038	TGRSI01416538	TGRSI01417538
6"	150	168.3	TGRSI01681350	TGRSI01681950	TGRSI01682550	TGRSI01683250	TGRSI01683850	TGRSI01685050	TGRSI01686550	TGRSI01687550
8"	200	219.3	TGRSI02191350	TGRSI02191950	TGRSI02192550	TGRSI02193250	TGRSI02193850	TGRSI02195050	TGRSI02196550	TGRSI02197550
10"	250	273.0	TGRSI02731350	TGRSI02731950	TGRSI02732550	TGRSI02733250	TGRSI02733850	TGRSI02735050	TGRSI02736550	TGRSI02737550
12"	300	323.6	TGRSI03231350	TGRSI03231950	TGRSI03232550	TGRSI03233250	TGRSI03233850	TGRSI03235050	TGRSI03236550	TGRSI03237550
14"	350	355.6	TGRSI03561350	TGRSI03561950	TGRSI03562550	TGRSI03563250	TGRSI03563850	TGRSI03565050	TGRSI03566550	TGRSI03567550
16"	400	406.4	TGRSI04061350	TGRSI04061950	TGRSI04062550	TGRSI04063250	TGRSI04063850	TGRSI04065050	TGRSI04066550	TGRSI04067550
18"	450	457.2	TGRSI04571350	TGRSI04571950	TGRSI04572550	TGRSI04573250	TGRSI04573850	TGRSI04575050	TGRSI04576550	TGRSI04577550
20"	500	508.0	TGRSI05081350	TGRSI05081950	TGRSI05082550	TGRSI05083250	TGRSI05083850	TGRSI05085050	TGRSI05086550	TGRSI05087550
24"	600	609.6	TGRSI06101350	TGRSI06101950	TGRSI06102550	TGRSI06103250	TGRSI06103850	TGRSI06105050	TGRSI06106550	TGRSI06107550

SIZE	OD	RSI SIZE	TOTAL OD
1/2 "	21.3	1/2" X 13mm X 25mm	47.3
3/4 "	26.7	3/4 " X 13mm X 25mm	52.7
1 "	33.4	1 " X 13mm X 25mm	59.4
1 1/4"	42.1	1 1/4" X 13mm X 25mm	68.1
1 1/2"	48.2	1 1/2" X 13mm X 25mm	74.2
2 "	60.3	2 " X 13mm X 25mm	86.3
2 1/2 "	73	2 1/2 " X 13mm X 38mm	99
3 "	88.9	3 " X 13mm X 38mm	114.9
3 1/2 "	101.6	3 1/2 " X 13mm X 38mm	127.6
4 "	114.3	4 " X 13mm X 38mm	140.3
5 "	141.3	5 " X 13mm X 38mm	167.3
6 "	168.3	6 " X 13mm X 50mm	194.3
8 "	219.1	8 " X 13mm X 50mm	245.1
10 "	273	10 " X 13mm X 50mm	299
12 "	323.8	12 " X 13mm X 50mm	349.8
14 "	355.6	14 " X 13mm X 50mm	381.6
16 "	406.4	16 " X 13mm X 50mm	432.4
18 "	457.2	18 " X 13mm X 50mm	483.2
20 "	508	20 " X 13mm X 50mm	534
24 "	609.6	24 " X 13mm X 50mm	635.6

SIZE	OD	RSI SIZE	TOTAL OD
1/2 "	21.3	1/2" X 19mm X 25mm	59.3
3/4 "	26.7	3/4 " X 19mm X 25mm	64.7
1 "	33.4	1 " X 19mm X 25mm	71.4
1 1/4"	42.1	1 1/4" X 19mm X 25mm	80.1
1 1/2"	48.2	1 1/2" X 19mm X 25mm	86.2
2 "	60.3	2 " X 19mm X 25mm	98.3
2 1/2 "	73	2 1/2 " X 19mm X 38mm	111
3 "	88.9	3 " X 19mm X 38mm	126.9
3 1/2 "	101.6	3 1/2 " X 19mm X 38mm	139.6
4 "	114.3	4 " X 19mm X 38mm	152.3
5 "	141.3	5 " X 19mm X 38mm	179.3
6 "	168.3	6 " X 19mm X 50mm	206.3
8 "	219.1	8 " X 19mm X 50mm	257.1
10 "	273	10 " X 19mm X 50mm	311
12 "	323.8	12 " X 19mm X 50mm	361.8
14 "	355.6	14 " X 19mm X 50mm	393.6
16 "	406.4	16 " X 19mm X 50mm	444.4
18 "	457.2	18 " X 19mm X 50mm	495.2
20 "	508	20 " X 19mm X 50mm	546
24 "	609.6	24 " X 19mm X 50mm	647.6

SIZE	OD	RSI SIZE	TOTAL OD
1/2 "	21.3	1/2" X 25mm X 25mm	71.3
3/4 "	26.7	3/4 " X 25mm X 25mm	76.7
1 "	33.4	1 " X 25mm X 25mm	83.4
1 1/4"	42.1	1 1/4" X 25mm X 25mm	92.1
1 1/2"	48.2	1 1/2" X 25mm X 25mm	98.2
2 "	60.3	2 " X 25mm X 25mm	110.3
2 1/2	73	2 1/2 " X 25mm X 38mm	123
3 "	88.9	3 " X 25mm X 38mm	138.9
3 1/2 "	101.6	3 1/2 " X 25mm X 38mm	151.6
4 "	114.3	4 " X 25mm X 38mm	164.3
5 "	141.3	5 " X 25mm X 38mm	191.3
6 "	168.3	6 " X 25mm X 50mm	218.3
8 "	219.1	8 " X 25mm X 50mm	269.1
10 "	273	10 " X 25mm X 50mm	323
12 "	323.8	12 " X 25mm X 50mm	373.8
14 "	355.6	14 " X 25mm X 50mm	405.6
16 "	406.4	16 " X 25mm X 50mm	456.4
18 "	457.2	18 " X 25mm X 50mm	507.2
20 "	508	20 " X 25mm X 50mm	558
24 "	609.6	24 " X 25mm X 50mm	659.6

SIZE	OD	RSI SIZE	TOTAL OD
1/2 "	21.3	1/ 2" X 32mm X 25mm	85.3
3/4 "	26.7	3/4 " X 32mm X 25mm	90.7
1 "	33.4	1 " X 32mm X 25mm	97.4
1 1/4"	42.1	1 1/4" X32mm X 25mm	106.1
1 1/2"	48.2	1 1/2" X 32mm X 25mm	112.2
2"	60.3	2 " X 32mm X 25mm	124.3
21/2"	73	2 1/2 " X 32mm X 38mm	137
3 "	88.9	3 " X 32mm X 38mm	152.9
31/2"	101.6	3 1/2 " X 32mm X 38mm	165.6
4 "	114.3	4 " X 32mm X 38mm	178.3
5 "	141.3	5 " X 32mm X 38mm	205.3
6 "	168.3	6 " X 32mm X 50mm	232.3
8 "	219.1	8 " X32mm X 50mm	283.1
10 "	273	10 " X 32mm X 50mm	337
12 "	323.8	12 " X 32mm X 50mm	387.8
14 "	355.6	14 " X 32mm X 50mm	419.6
16 "	406.4	16 " X32mm X 50mm	470.4
18 "	457.2	18 " X 32mm X 50mm	521.2
20 "	508	20 " X 32mm X 50mm	572
24 "	609.6	24 " X 32mm X 50mm	673.6

SIZE	OD	RSI SIZE	TOTAL OD
1/2 "	21.3	1/2" X 38mm X 25mm	97.3
3/4 "	26.7	3/4 " X 38mm X 25mm	102.7
1 "	33.4	1 " X 38mm X 25mm	109.4
1 1/4"	42.1	1 1/4" X 38mm X 25mm	118.1
1 1/2"	48.2	1 1/2" X 38mm X 25mm	124.2
2 "	60.3	2 " X 38mm X 25mm	136.3
2 1/2 "	73	2 1/2 " X 38mm X 38mm	149
3 "	88.9	3 " X 38mm X 38mm	164.9
3 1/2 "	101.6	3 1/2 " X 38mm X 38mm	177.6
4 "	114.3	4 " X 38mm X 38mm	190.3
5 "	141.3	5 " X 38mm X 38mm	217.3
6 "	168.3	6 " X 38mm X 50mm	244.3
8 "	219.1	8 " X 38mm X 50mm	295.1
10 "	273	10 " X 38mm X50mm	349
12 "	323.8	12 " X 38mm X 50mm	399.8
14 "	355.6	14 " X 38mm X 50mm	431.6
16 "	406.4	16 " X 38mm X 50mm	482.4
18 "	457.2	18 " X 38mm X 50mm	533.2
20 "	508	20 " X 38mm X 50mm	584
24 "	609.6	24 " X 38mm X 50mm	685.6

SIZE	OD	RSI SIZE	TOTAL OD
1/2 "	21.3	1/2" X 50mm X 25mm	121.3
3/4 "	26.7	3/4 " X 50mm X 25mm	126.7
1 "	33.4	1 " X 50mm X 25mm	133.4
1 1/4"	42.1	1 1/4" X 50mm X 25mm	142.1
1 1/2"	48.2	1 1/2" X 50mm X 25mm	148.2
2 "	60.3	2 " X 50mm X 25mm	160.3
2 1/2 "	73	2 1/2 " X 50mm X 38mm	173
3 "	88.9	3 " X 50mm X 38mm	188.9
3 1/2 "	101.6	3 1/2 " X 50mm X 38mm	201.6
4 "	114.3	4 " X 50mm X 38mm	214.3
5 "	141.3	5 " X 50mm X 38mm	241.3
6 "	168.3	6 " X 50mm X 50mm	268.3
8 "	219.1	8 " X 50mm X 50mm	319.1
10 "	273	10 " X 50mm X 50mm	373
12 "	323.8	12 " X 50mm X 50mm	423.8
14 "	355.6	14 " X 50mm X 50mm	455.6
16 "	406.4	16 " X 50mm X 50mm	506.4
18 "	457.2	18 " X 50mm X 50mm	557.2
20 "	508	20 " X 50mm X 50mm	608
24 "	609.6	24 " X 50mm X 50mm	709.6

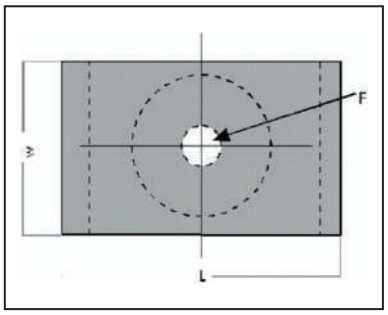
SIZE	OD	RSI SIZE	TOTAL OD
1/2 "	21.3	1/2" X 65mm X 25mm	151.3
3/4 "	26.7	3/4 " X 65mm X 25mm	156.7
1 "	33.4	1 " X 65mm X 25mm	163.4
1 1/4"	42.1	1 1/4" X 65mm X 25mm	172.1
1 1/2"	48.2	1 1/2" X 65mm X 25mm	178.2
2 "	60.3	2 " X 65mm X 25mm	190.3
2 1/2"	73	2 1/2" X 65mm X 38mm	203
3 "	88.9	3 " X 65mm X 38mm	218.9
3 1/2"	101.6	3 1/2" X 65mm X 38mm	231.6
4 "	114.3	4 " X 65mm X 38mm	244.3
5 "	141.3	5 " X 65mm X 38mm	271.3
6 "	168.3	6 " X 65mm X 50mm	298.3
8 "	219.1	8 " X 65mm X 50mm	349.1
10 "	273	10 " X 65mm X 50mm	403
12 "	323.8	12 " X 65mm X 50mm	453.8
14 "	355.6	14 " X 65mm X 50mm	485.6
16 "	406.4	16 " X 65mm X 50mm	536.4
18 "	457.2	18 " X 65mm X 50mm	587.2
20 "	508	20 " X 65mm X 50mm	638
24 "	609.6	24 " X 65mm X 50mm	739.6

SIZE	OD	RSI SIZE	TOTAL OD
1/2 "	21.3	1/2" X 75mm X 25mm	171.3
3/4 "	26.7	3/4 " X 75mm X 25mm	176.7
1 "	33.4	1 " X 75mm X 25mm	183.4
1 1/4"	42.1	1 1/4" X 75mm X 25mm	192.1
1 1/2"	48.2	1 1/2" X 75mm X 25mm	198.2
2 "	60.3	2 " X 75mm X 25mm	210.3
2 1/2 "	73	2 1/2 " X 75mm X 38mm	223
3 "	88.9	3 " X 75mm X 38mm	238.9
3 1/2 "	101.6	3 1/2 " X 75mm X 38mm	251.6
4 "	114.3	4 " X 75mm X 38mm	264.3
5 "	141.3	5 " X 75mm X 38mm	291.3
6 "	168.3	6 " X 75mm X 50mm	318.3
8 "	219.1	8 " X 75mm X 50mm	369.1
10 "	273	10 " X 75mm X 50mm	423
12 "	323.8	12 " X 75mm X 50mm	473.8
14 "	355.6	14 " X 75mm X 50mm	505.6
16 "	406.4	16 " X 75mm X 50mm	556.4
18 "	457.2	18 " X 75mm X 50mm	607.2
20 "	508	20 " X 75mm X 50mm	658
24 "	609.6	24 " X 75mm X 50mm	759.6

TEMBO
Powering Ahead

ANTI VIBRATION

SPRING HANGER TGSPH00000000



APPLICATION:

SPRING HANGERS are used to isolate suspended sources of both noise and vibration. Suspended mechanical equipment such as air handling units, FCU's cabinet fans, piping and ductwork in close proximity to rotating mechanical equipment are typical applications of model hangers.

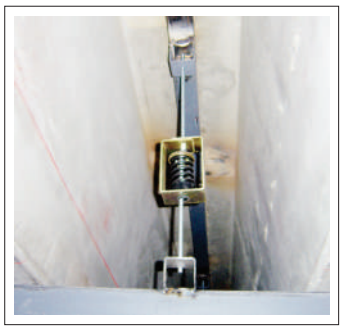
FEATURES:

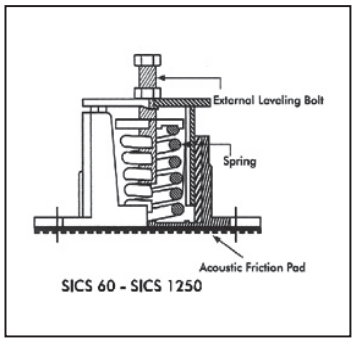
SPRING HANGERS consist of freestanding; laterally stable steel springs in series with a moulded elastomeric element assemble into a stamped and welded hanger bracket. The hanger brackets and the springs are powder coated. Spring Vibration isolation hangers are designed to provide high efficiency isolation from structure-borne vibration and noise. Springs are colour-coded according to load ratings and are designed for 50% overload.

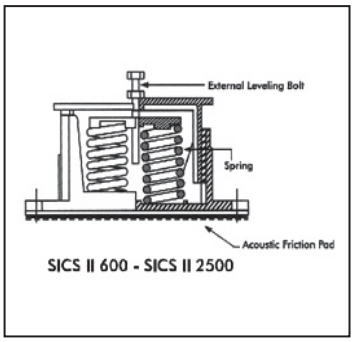
PRODUCT CODE	COLOUR CODE	RATED LOAD (KG)	DEFLECTION (MM)	M (MM)	L (MM)	W (MM)	H (MM)	F (MM)	TOP HOLE (MM)
TGSPH02500010	PURPLE	10	25	53	62	52	100	12	13
TGSPH02500015	YELLOW	15	25	53	62	52	100	12	13
TGSPH02500020	GREY	20	25	53	62	52	100	12	13
TGSPH02500040	LIGHT BLUE	40	25	53	62	52	100	12	13
TGSPH02500060	GREEN	60	25	53	62	52	100	12	13
TGSPH02500100	GREEN	100	25	83	90	65	125	14	15
TGSPH02500160	ORANGE	160	25	83	90	65	125	14	15
TGSPH02500200	RED	200	25	83	90	65	125	14	15
TGSPH02500250	PURPLE	250	25	83	90	65	125	14	15
TGSPH02500300	GREY	300	25	102	112	95	165	18	19
TGSPH02500400	ORANGE	400	25	102	112	95	165	18	19
TGSPH02500500	BROWN	500	25	102	112	95	165	18	19
TGSPH02500600	BLACK	600	25	102	112	95	165	18	19
TGSPH02500800	RED	800	25	102	112	95	165	18	19
TGSPH02501050	WHITE	1050	25	102	112	95	165	18	19
TGSPH02501250	GREEN	1250	25	102	112	95	165	18	19

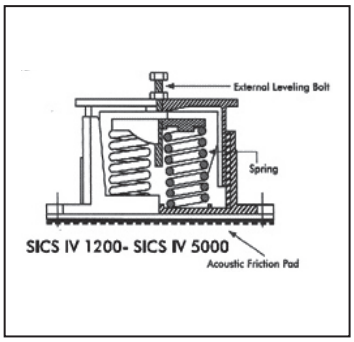
Due to policy of continual improvement, the specifications are subject to change without prior notice.
Measurements are subject to 5% tolerance.
To achieve good sound suppressions do not over load fitting.
Compliance – Springs designed according to BS 1726 (Part 1) : 1987 and recommendations made by SAE (US)

APPLICATION EXAMPLES:









DESIGN FEATURES:-

- Colour coded spring to facilitate identification.
- Powder coated springs.
- Load upto 5000 kgs.
- Deflection upto 25mm.
- 4 Models
- 26 Load Ranges
- Deflection is at rated load with 15% Tolerances
- All mounts have approximately 50% over load capacity.
- Unique mount design provides horizontal stability, high loading capacity and protective spring enclosure.
- All Mounts have external leveling casing arrangement, capable of compensating for full static deflection.
- Inner walls of lower casing have resilient rubber snubbers which
  - Eliminates possibility of binding by providing a smooth guide path for the top casing
  - Limits lateral movement, particularly due to start up, start – up, shut – down and horizontal wind load
- Prevents isolator short – circuiting by avoiding metal to metal contact.
- Neoprene inserts below springs and 6 mm thick ribbed base pad act as noise breaks for high frequencies in the audible range, which can otherwise get transmitted to building structure.
- Mounting must be adjusted so that upper housing clears lower housing by at least 6mm & not more than 12mm

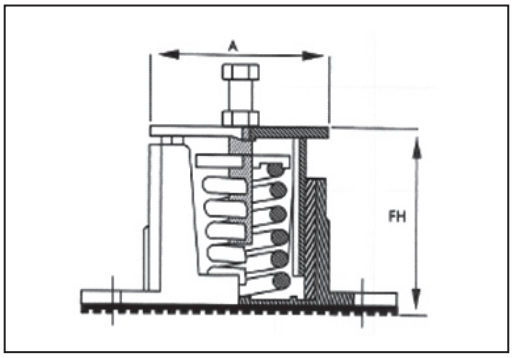
TYPICAL APPLICATION:

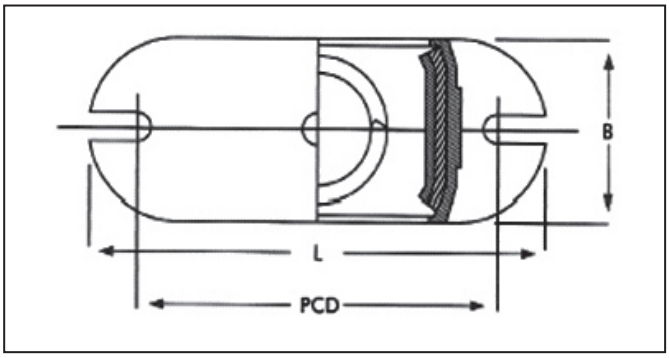
Application examples include – Chillers, AHU pumps, centrifugal / Axial Fans, Condensing Units, Rooftop Packaged units, Reciprocating compressors , DG sets , Punch presses, Drop Hammers, Floor Pipe supports
(Normally at first few pipe supports points leading from isolated equipments.)

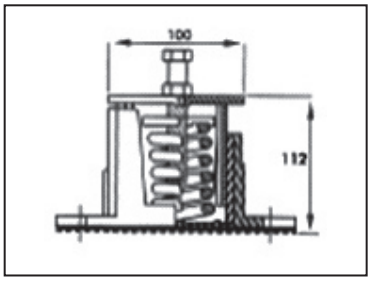
NOTE:

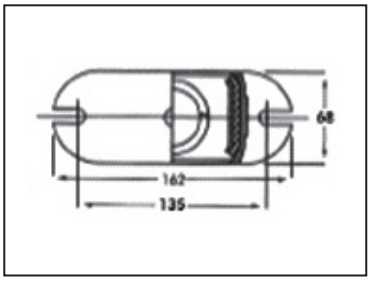
Custom load and deflection are also available.
Compliance – Springs designed according to BS 1726 (Part 1) : 1987 and recommendations made by SAE (US)

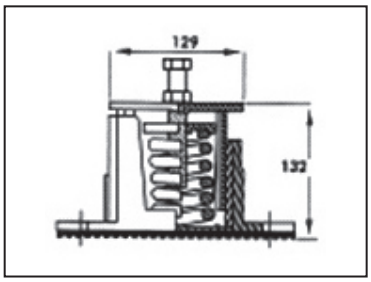
APPLICATION EXAMPLES:

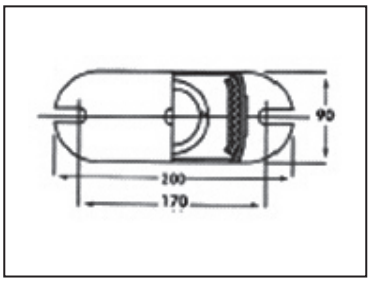


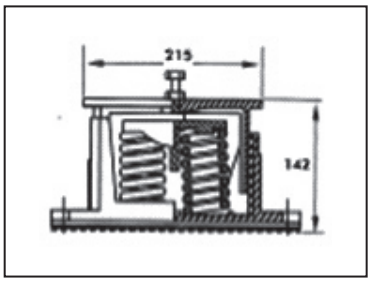


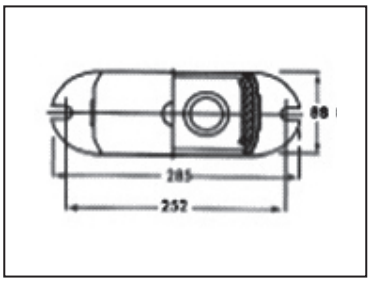


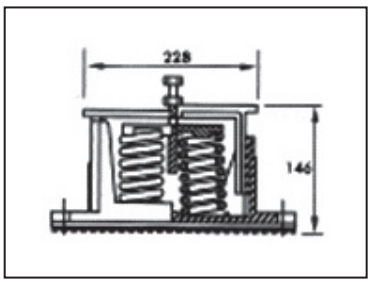


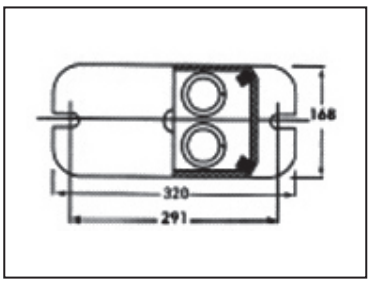












PRODUCT CODE	COLOUR CODE	RATED LOAD (KG)	DEFLECTION (MM)
TGCSM00250060	BLUE	60	25
TGCSM00250100	GREEN	100	25
TGCSM00250160	ORANGE	160	25
TGCSM00250200	RED	200	25
TGCSM00250250	PURPLE	250	25
TGCSM00250300	GREY	300	25
TGCSM00250400	ORANGE	400	25
TGCSM00250500	BROWN	500	25
TGCSM00250600	BLACK	600	25
TGCSM00250800	RED	800	25
TGCSM00251050	WHITE	1050	25
TGCSM00251250	GREEN	1250	25
TGCSMII250600	GREY	600	25
TGCSMII250800	ORANGE	800	25
TGCSMII251050	BROWN	1000	25
TGCSMII251250	BLACK	1250	25
TGCSMII251600	RED	1600	25
TGCSMII252100	WHITE	2100	25
TGCSMII252500	GREEN	2500	25
TGCSMIV251200	GREY	1200	25
TGCSMIV251600	ORANGE	1600	25
TGCSMIV252000	BROWN	2000	25
TGCSMIV252400	BLACK	2400	25
TGCSMIV253200	RED	3200	25
TGCSMIV254200	WHITE	4200	25
TGCSMIV255000	GREEN	5000	25

Compliance – spring designed according to BS 1726 (PART 1): 1987 and recommendations made by SAE (US)

This unique range of open spring mounting uses an integral rubber and fixing of the spring which sets them apart from all other designs. Loose spring and plats are now history and high frequency and noise attenuation is provided regardless of whether rubber seating pad is used or not.

Originally designed for use with type IPF inertia pouring frames the mountings are now widely used to isolate vibration from every conceivable type of rotating and reciprocating machine. Some examples being air handing units axial and centrifugal fans, low level pipe work. Ductwork condensing units, pumps generating sets, chillers, etc. where control of transient motion is required, Open spring mountings can be used in conjunction with our viscous dampers type.

DESIGN FEATURES:

Unique expanding rubber and fixing of spring which also provides high frequency attenuation Spring with 50% overload capacity.
Can be bolted to supporting structure or free standing on 6 mm thick rubber pad.
Fully height adjustable
Zinc plated metals
No snubbing gives maximum efficiency.

SIZE	LOAD RANGE (KG)	NOMINAL DEFLECTION (MM)
TGOSM02500000	30-2300	25
TGOSM05000000	510-1300	50

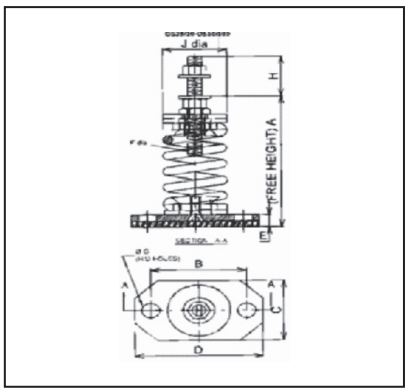
ISOLATION EFFICIENCY AT TYPICAL MACHINE SPEEDS:

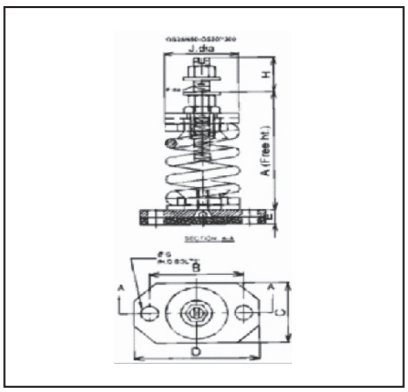
M/C SPEED (RPM)	EFFICIENCY %		
	15 MM DEFL	25 MM DEFL	50 MM DEFL
300	DO NOT USE	34.0	75.2
500	68.7	83.3	92.3
150	88.1	93.2	96.7
1000	93.7	96.3	98.2
1200	95.5	97.4	98.7
1500	97.3	98.4	99.2
1750	98.0	99.8	99.4
2000	98.5	99.1	99.5

These above figures are theoretical values only based on the vertical natural frequency of the spring system assuming in infinity stiff structural supports. The effects of high frequency spring coil resonances on low frequency performance are also ignored.
Due to policy of continual improvement, the specifications are subject to change without prior notice.
Measurements are subject to 5% tolerance.
To achieve good sound suppressions do not over load fitting.
Compliance – Springs designed according to BS 1726 (Part 1) : 1987 and recommendations made by SAE (US)

APPLICATION EXAMPLES:

INSTALLATION INSTRUCTION

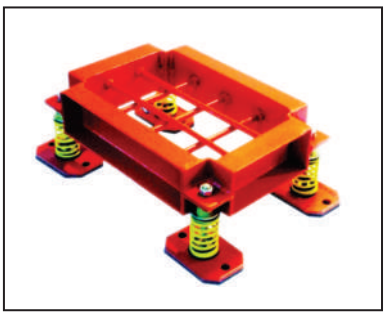




PRODUCT CODE	COLOUR CODE	RATED LOAD (KG)	DEFLECTION AT RATED LOAD	DIMENSIONS (MM)								
				A	B	C	D	E	F	G	H	J
TGOSM02500030	YELLOW	30	25	115	85	70	110	10	M10	10	20	55
TGOSM02500060	GREEN	60	25									
TGOSM02500100	BLUE	100	25									
TGOSM02500160	WHITE	160	25									
TGOSM02500250	RED	250	25									
TGOSM02500200	RED	200	25	160	110	100	140	11	M16	12	27	75
TGOSM02500300	PURPLE	300	25									
TGOSM02500400	GREY	400	25									
TGOSM02500500	ORANGE	500	25									
TGOSM02500600	BROWN	600	25									
TGOSM02500700	ORANGE	700	25									
TGOSM02500800	BLACK	800	25									
TGOSM05000100	YELLOW	100	50	188	110	100	140	11	M16	12	27	75
TGOSM05000200	GREEN	200	50									
TGOSM05000300	BLUE	300	50									
TGOSM05000400	WHITE	400	50									
TGOSM05000500	BLACK	500	50									
TGOSM02500650	YELLOW	650	25	182	110	110	140	11	M16	12	27	75
TGOSM02500850	GREEN	850	25									
TGOSM02501050	BLUE	1050	25									
TGOSM02501250	WHITE	1250	25									
TGOSM02501300	RED	1300	25	225	210	150	250	18	M24	16	51	75
TGOSM02501600	PURPLE	1600	25									
TGOSM02502000	GREY	2000	25									
TGOSM02502300	BROWN	2300	25									
TGOSM05000510	PURPLE	510	50	240	210	150	250	18	M20	16	42	72
TGOSM05000760	GREY	760	50									
TGOSM05001000	ORANGE	1000	50									
TGOSM05001300	BROWN	1300	50									

*Spring Stiffness is linear over its working range.

- Due to policy of continual improvement, the specifications are subject to change without prior notice.
- Measurements are subject to 5% tolerance.
- To achieve good sound suppressions do not over load fitting.
- Compliance – Springs designed according to BS 1726 (Part 1) : 1987 and recommendations made by SAE (US)



INTRODUCTION:

Inertia Base should be used where the machine to be vibration isolated produces large unbalanced forces which would result in excessive motion if supported directly on spring or rubber based isolators. They should also be used where the machine is subject to external forces or is inherently unstable.

Saketh's Inertia Base come in several standard sizes as listed in our catalogue. However these bases can also manufactured to any size and specifications, even for heavier and more complex vibration isolation would normally recommend 6 isolators or more for exceptionally large bases.

EXAMPLES OF EQUIPMENT REQUIRING INERTIA BASE ARE AS FOLLOWS:-

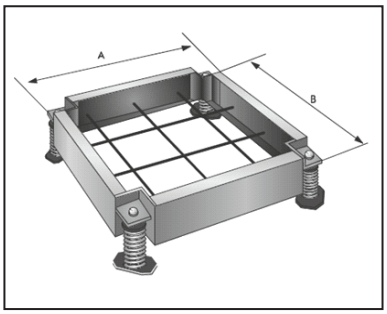
Reciprocating Compressors
Diesel Generating Sets
Engine / Dynamometer Test Rigs
Refrigeration Plants
Pumps (Particularly Belt Driven Types)

FEATURES:-

Fully welded steel construction with integral concrete reinforcement fixed at 40 mm above bottom of frame.
Recessed height reducing corner brackets designed to accept standard Tembo's type TGOSM open spring mountings.
Range of standard size frames available in three thicknesses 150, 200, 300 & 350 mm.
Frame thicknesses not less than L/12 where 'L' is the longest side of the frame.
Finished with a single coat of red oxide primer on external surface only.

Due to policy of continual improvement, the specifications are subject to change without prior notice.
Measurements are subject to 5% tolerance.
To achieve good sound suppressions do not over load fitting.

APPLICATION EXAMPLES:



ORDERING INFORMATION REQUIRED:-

- Equipment Model / Make
- HP/ RPM Of motor
- Static weight of equipment.
- Operating / Dynamic weight of equipment
- Outside Dimensions L X B X H
- Concrete Plinth Y/N.
- Height / Space constraint if any
- Required Deflection offspring(25 mm /50mm)
- Location- Ground / Roof / Basement.

NOTES:

Frame weights include concrete density at 2400 kg/m^3 and mounting selections are base allowing 50% additional weight for the equipment to be supported Nominal 25 mm deflection type (open Spring Isolators) have been listed, however the exact deflection will vary depending on the applied load. When ordering bases should be specified as follows - 150 - 600 X 900 other size .Type and Thickness required and plan dimensions commencing with smallest length. Mounting should also be listed e.g. "25/100 - BULE"

IMPORTANT:

The equipment should be located on the base such that the load is evenly distributed over the 4 mountings. Equipment and ancillary parts should not overhang frame and hold down 100 mm from the outer edge of the bolts must not be at a distance less than base. All the connections to the equipment should incorporate flexible sections and pipe work etc. must independently supported. Concrete plinth if any should be at least 200 mm more than the size of base in all directions. In case of installation of snubbers it should be increased to 300 mm.

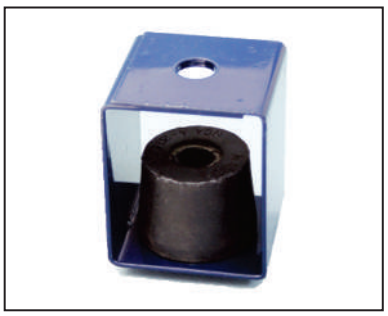
AVAILABLE FRAME SIZES:

SR. NO	FRAME SIZE	THICKNESS AVAILABLE		
1	600 x 600	50 MM	100 MM	150 MM
2	600 x 750	50 MM	100 MM	150 MM
3	600 x 900	50 MM	100 MM	150 MM
4	600 x 1200	50 MM	100 MM	150 MM
5	600 x 1500	50 MM	100 MM	150 MM
6	700 x 700	50 MM	100 MM	150 MM
7	700 x 900	50 MM	100 MM	150 MM
8	700 x 1200	50 MM	100 MM	150 MM
9	700 x 1400	50 MM	100 MM	150 MM
10	700 x 1600	50 MM	100 MM	150 MM
11	800 x 800	50 MM	100 MM	150 MM
12	800 x 1000	50 MM	100 MM	150 MM
13	800 x 1200	50 MM	100 MM	150 MM
14	800 x 1600	50 MM	100 MM	150 MM
15	1200 x 1600	50 MM	100 MM	150 MM
16	800 x 1800	50 MM	100 MM	150 MM
17	900 x 1800	50 MM	100 MM	150 MM
18	1000 x 1000	50 MM	100 MM	150 MM
19	1000 x 1200	50 MM	100 MM	150 MM
20	1000 x 1500	50 MM	100 MM	150 MM
21	1000 x 1700	50 MM	100 MM	150 MM
22	1000 x 2000	50 MM	100 MM	150 MM
23	1200 x 2200	50 MM	100 MM	150 MM

NOTE : - Any non standard size inertia base can be manufacture suitable to pump & motor assembly.
- Selection of vibration isolators is base on motor & pump weigh.

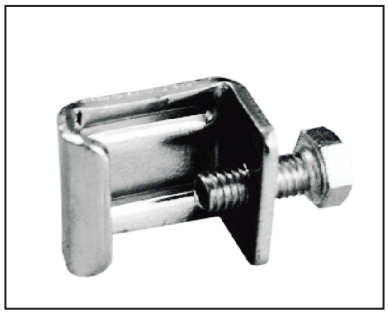
APPLICATION EXAMPLES:

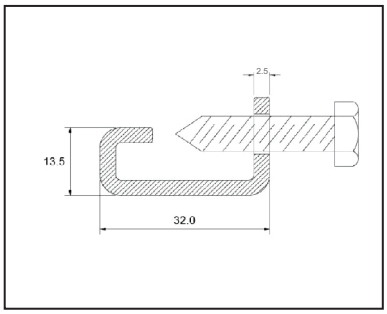
TGRH000000000 RUBBER HANGER



PRODUCT CODE	POINT LOAD KGS	DEFLECTION MM	ROD SIZE MM
TGRH000000010	10	8	10
TGRH000000020	20	8	10
TGRH000000030	30	8	10
TGRH000000050	50	8	10
TGRH000000070	70	10	10
TGRH000000120	120	10	10

TGGC000000000 40 MM G CLAMP





BOLT: M10 X 25 MM

MATERIAL: Mild Steel

THICKNESS: 2.5 MM

FINISH: Electro-Galvanized

DIMENSIONS: Mention in above drawing

APPLICATION EXAMPLES:

DUCT MOUNT TGDM000000000

- Duct Mount consist of a resilient rubber mount held between two plated steel caps
- For uniform distribution of load.If has an integral extended rubber sleeve which prevents direct metal-to-metal contact,thereby minimising transmission of noise and vibration.

TYPICAL APPLICATIONS

SUSPENSION OF

- Fan Coil Units
- Pipes
- Ducts
- Brackets
- Light Weight Equipment

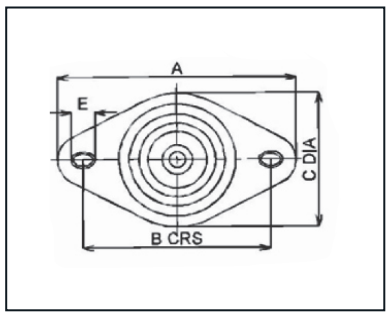
FLOOR MOUNTING OF

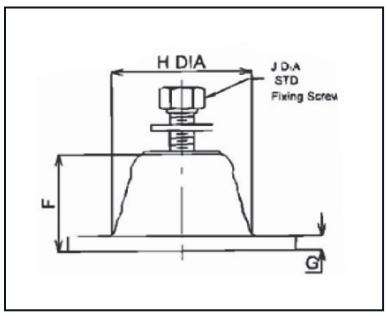
(using rubber element only)

- Refrigerators
- Domestic Appliances
- Industrial Equipments

PRODUCT CODE	POINT LOAD KGS	DEFLECTION MM	ROD SIZE MM
TGDM0S0000050	50	4	10
TGDM0B0000100	100	4	10

APPLICATION EXAMPLES:





TURRET MOUNT rubber mountings are designed to provide superior attenuation of medium to high frequency vibration and noise emanating from wide range of motor driven machines particularly axial and centrifugal fans, high resilience rubber with low dynamic to static stiffness ratio ensures maximum efficiency, good creep performance and long service life.

DESIGN FEATURES:

Moulded in first grade natural rubber with integral steel base and upper fixing boss.
Also available with oil & environment resistant durable neoprene/Nitrile Rubber.
Manufactured in three sizes, each available in three rubber compounds identified by a colour spot.
Static deflections of up to 8mm with loads from 5kg to 400 kg.

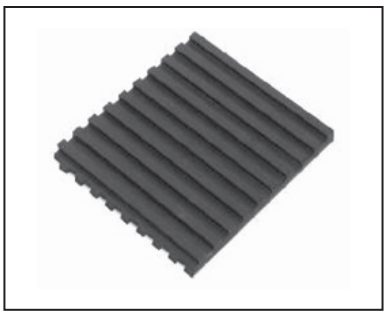
TYPICAL APPLICATIONS:

Axial and Centrifugal Fans
Air Handling Units
Air Conditioning equipments
Packaged Air Conditioners
Floating Floors
Generators & Mobile Equipments
Pumps & Refrigeration Plants
Rotary and Multi Cylinder Compressors.

NOTE: Turret mountings should not be used on machines exhibiting high out of balance forces without restraining bolt.

PRODUCT CODE	COLOUR CODE	RATE LOAD (KG)	DEFLECTION AT RATE	NOMINAL DIMENSION (MM)									APPROX WT. (KG)
				A	B	C	D	E	F	G	H	J	
TGTM0100Y0028	YELLOW	28											
TGTM0100B0050	BLUE	50	6	80	57	45	9	12	32	5	41	M8 X 20	0.11
TGTM0100R0080	RED	80											
TGTM0101Y0110	YELLOW	110											
TGTM0101B0180	BLUE	180	8	95	71	60	9	14	45	5	56	M10 X 25	0.25
TGTM0101R0280	RED	280											
TGTM0102Y0150	YELLOW	150											
TGTM0102B0260	BLUE	260	8	150	115	86	11	22	70	6	82	M12 X 30	0.73
TGTM0102R0400	RED	400											

- Due to policy of continual improvement, the specifications are subject to change without prior notice.
- Measurements are subject to 5% tolerance.
- To achieve good sound suppressions do not over load fitting

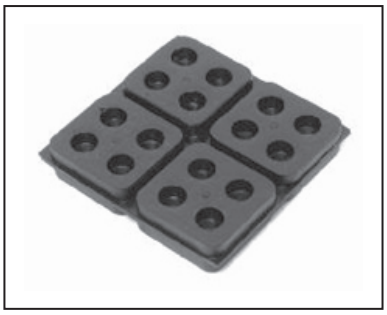


RIBBED MOUNTING PAD

Specifications:

- Alternate High/ Low Ribbed Construction.
- Easy to Cut.
- Pads can be cut slightly larger than the size of leg of machines using shear or knife
- Easy Field Installation.
- Multiple layers of Ribbed Mounting Pad can be used to increase deflection.

PRODUCT CODE	SIZE (INCHES)
TGRMP38003003	3/8" x 3" x 3"
TGRMP38004004	3/8" x 4" x 4"
TGRMP38006006	3/8" x 6" x 6"
TGRMP38008008	3/8" x 8" x 8"
TGRMP38012012	3/8" x 12" x 12"
TGRMP38018018	3/8" x 18" x 18"



WAFFLE PADS

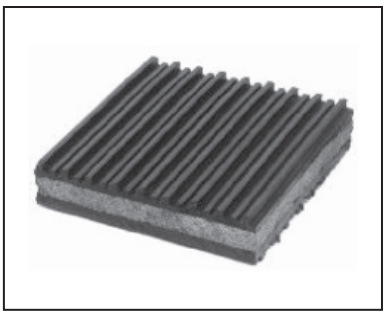
Specifications:

- Designed within built suction cups.
- Easy Cut design without tools allows job site flexibility
- No need for bolting.
- Easy field Installation.

PRODUCT CODE	SIZE (INCHES)
TGWP034003003	3/4" x 3" x 3"
TGWP034004004	3/4" x 4" x 4"
TGWP034006006	3/4" x 6" x 6"
TGWP034008008	3/4" x 8" x 8"
TGWP034012012	3/4" x 12" x 12"
TGWP034018018	3/4" x 18" x 18"

- Due to policy of continual improvement, the specifications are subject to change without prior notice.
- Measurements are subject to 5% tolerance.
- To achieve good sound suppressions do not over load fitting.

APPLICATION EXAMPLES:

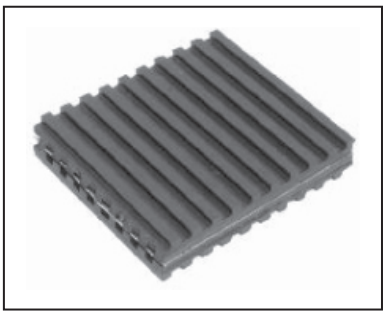


CORK SANDWICH PADS

Specifications:-

- Cork sandwich Pads are laminated pads having 1/2'' thick close grained cork securely bonded between two layers of 1/4'' alternate low high ribbed Neoprene rubber pads.
- Offers highest level of sound attenuation and vibration isolation.
- No need for bolting.

PRODUCT CODE	SIZE (INCHES)
TGCSP78003003	7/8" x 3" x 3"
TGCSP78004004	7/8" x 4" x 4"
TGCSP78006006	7/8" x 6" x 6"
TGCSP78008008	7/8" x 8" x 8"
TGCSP78012012	7/8" x 12" x 12"
TGCSP78018018	7/8" x 18" x 18"



METAL SANDWICH PADS

Specifications:-

- Metal Sandwich Pads are constructed of a steel plate bonded
- Ribbed Anti Vibration Pads.
- Designed for very high load capacity.

PRODUCT CODE	SIZE (INCHES)
TGMSP78003003	7/8" x 3" x 3"
TGMSP78004004	7/8" x 4" x 4"
TGMSP78006006	7/8" x 6" x 6"
TGMSP78008008	7/8" x 8" x 8"
TGMSP78012012	7/8" x 12" x 12"
TGMSP78018018	7/8" x 18" x 18"

- Due to policy of continual improvement, the specifications are subject to change without prior notice.
- Measurements are subject to 5% tolerance.
- To achieve good sound suppressions do not over load fitting.

APPLICATION EXAMPLES:

SINGLE ARC FLOATING FLANGE EXPANSION JOINT TGSAF00000000

This Rubber Expansion Joint is a totally effective for unwanted vibration in heating and air conditioning systems. Available in the common HVAC, plumbing and Fire Fighting pipeline sizes, it is ideal for motion compensation, vibration elimination, and noise control and stress relief.

Manufactured to a fully moulded spherical design the style has a high pressure rating with the added benefit of a non-clogging, long radius Arch. available in Natural rubber and many different polymers like EPDM, Neoprene, and Butyl having a wide range of flange drilling standards to your building services requirements.

This Floating Flange is designed as per the latest International Standards of FSA & EJMA (USA) are used all over the world. Further, the most beneficial advantage is that if replacement is required it can be replaced without distributing the welded flange due to floating / rotating

PRODUCT CODE	SIZE I.D (MM)	STANDARD F/F LENGTH (MM)	OPERATING CONDITION				EXPRESSION JOINTS STYLE
			AXIAL COMPOSITION (MM)	ELONGATION (MM)	LATERAL (MM)	ANGULAR DEGREES	
TGSAF00000073	65	150	13	12	13	15"	SI 400
TGSAF00000089	80	150	13	12	13	15"	SI 400
TGSAF00000114	100	150	16	12	16	15"	SI 400
TGSAF00000141	125	150	16	12	16	15"	SI 400
TGSAF00000168	150	150	16	12	16	15"	SI 400
TGSAF00000219	200	150	16	12	16	15"	SI 400
TGSAF00000273	250	200	16	15	16	15"	SI 400
TGSAF00000323	300	200	16	15	16	15"	SI 400
TGSAF00000356	350	200	16	15	16	15"	SI 400

TEMPERATURE / PRESSURE RATINGS :-

Maximum Temperature Maximum Pressure Rating	115°C (Neoprene /EPDM) 16 bar
Working pressure depends on temperature and at higher temperature and the pressure ratings are reduced slightly	

FLANGE DRILLING TO

BS table D/ E/ F ANSI B16.5 Class 125/ 150 BS 4504 / DIN 2501 or as per customer requirement

ELASTOMERS

Neoprene - Provides excellent resistance to oxidation, ozone and sunlight ageing. Good resistance to oil.

EPDM

Good for hot and cold water service and chemicals.

FLANGES

Expansion joints are furnished with zinc plated steel flanges.They rotate easily on the bellow which allows for simple bolt alignment.

CONTROL UNITS

Tie rods and gusset plates are normally recommended and can be supplied along with the bellows.

WARNINGS :

Control unit must be used unless piping is properly anchored. When Expansion joints are installed pipelines or equipment carrying fluids and gases at a elevated temperatures and precautions should be taken to ensure proper installation and regular inspection . Care is required to protect personnel in the event of leakage or splash.

NOTE : Maximum pressure rating is based on 40 C operating temperature.

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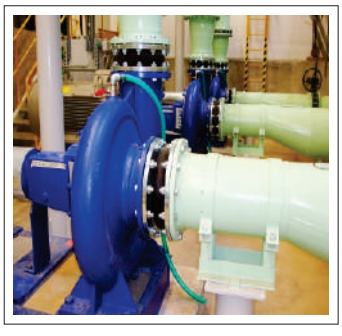
APPLICATION EXAMPLES:



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This Floating Flange is designed as per the latest International Standards of FSA & EJMA (USA) which are used all over the world. Further, the most beneficial advantage is that if replacement is required it can be replaced without distributing the welded flange due to floating/rotating flange

		OPERATING CONDITION				
SIZE I.D (MM)	STANDARD F/F LENGTH (MM)	AXIAL COMPOSITION (MM)	ELONGATION (MM)	LATERAL (MM)	ANGULAR DEGREES	EXPRESSION JOINTS STYLE
25	150	13	12	13	15°	SI 400
32	150	13	12	13	15°	SI 400
40	150	13	12	13	15°	SI 400
50	150	13	12	13	15°	SI 400
65	150	13	12	13	15°	SI 400
80	150	13	12	13	15°	SI 400
100	150	16	12	16	15°	SI 400
125	150	16	12	16	15°	SI 400
150	150	16	12	16	15°	SI 400
200	150	16	12	16	15°	SI 400
250	200	16	15	16	15°	SI 400
300	200	16	15	16	15°	SI 400
350	200	16	15	16	15°	SI 400

TEMPERATURE / PRESSURE RATINGS :-

Maximum Temperature Maximum Pressure Vacuum Rating	115°C (Neoprene /EPDM) 16 bar
Working pressure depends on temperature and at higher temperature and at higher temperature , the pressure ratings are reduced slightly	

FLANGE DRILLING TO

BS table D/ E/ F ANSI B16.5 Class 125/ 150 BS 4504 / DIN 2501 or as per customer requirement

ELASTOMERS

Neoprene - Provides excellent resistance to oxidation, ozone and sunlight ageing. Good resistance to oil.

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Expansion joints are furnished with zinc plated steel flanges.They rotate easily on the bellow which allows for simple bolt alignment.

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Tie rods and gusset plates are normally recommended and can be supplied along with the bellows.

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NOTE : Maximum pressure rating is based on 40°C operating temperature.

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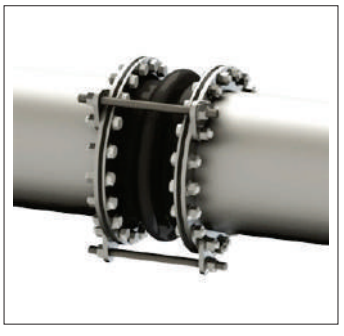
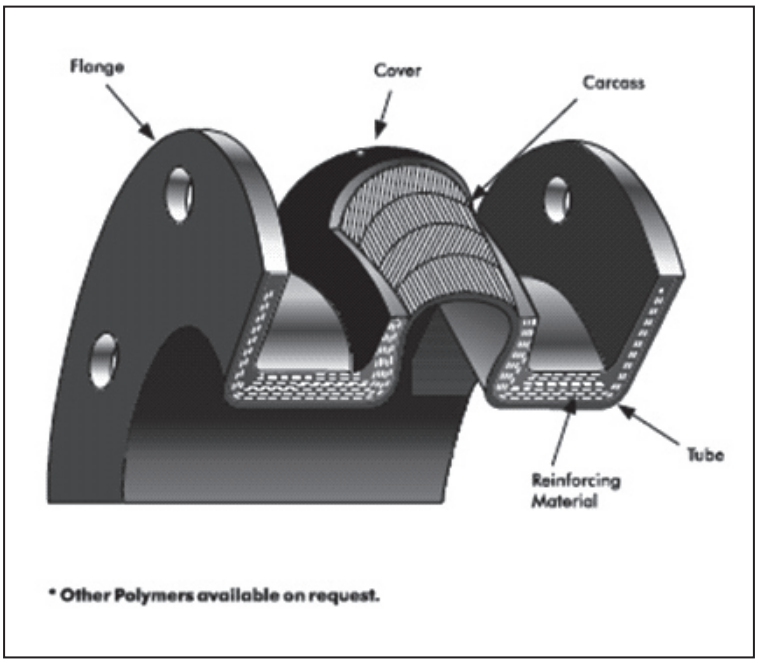
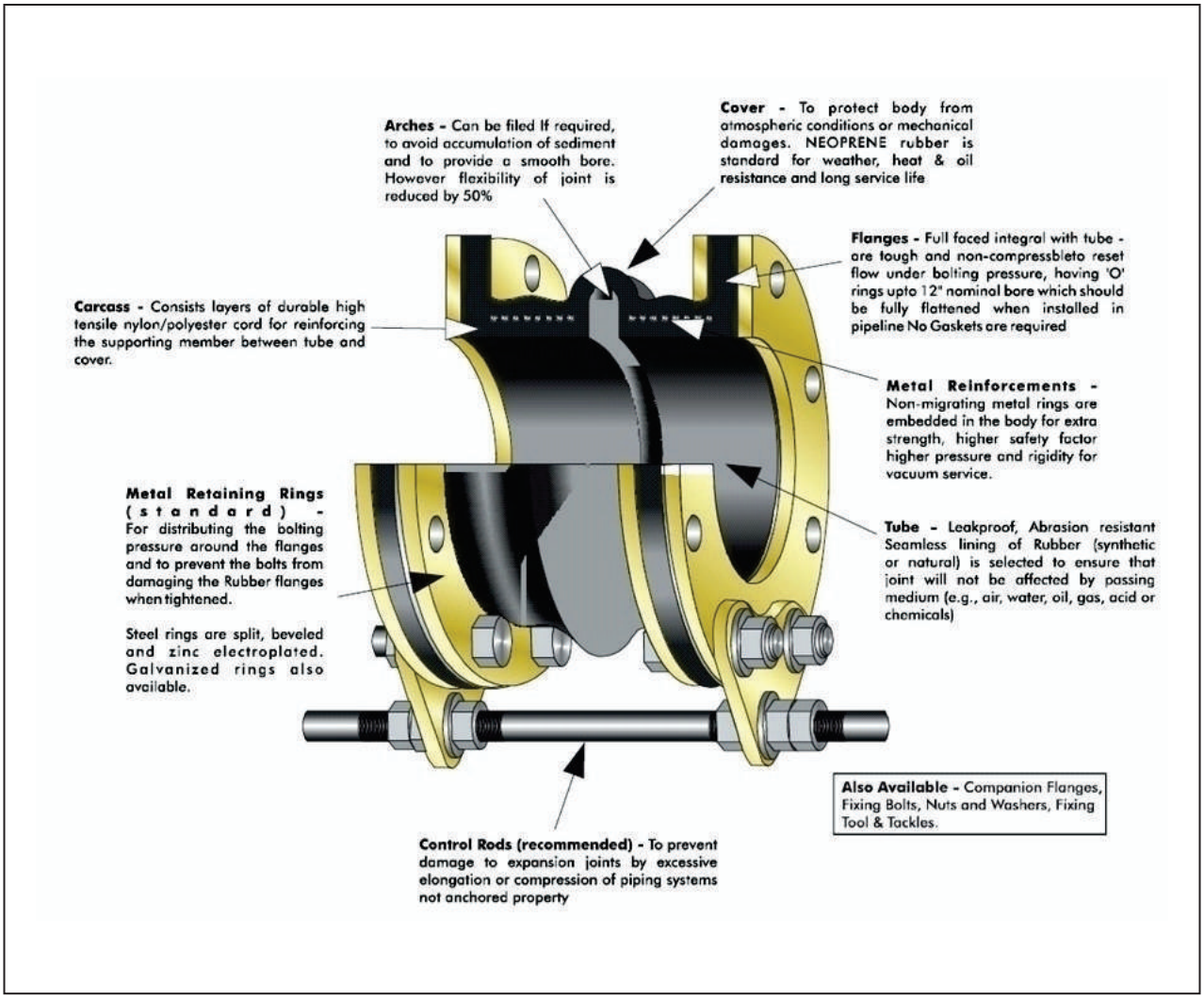
APPLICATION EXAMPLES:







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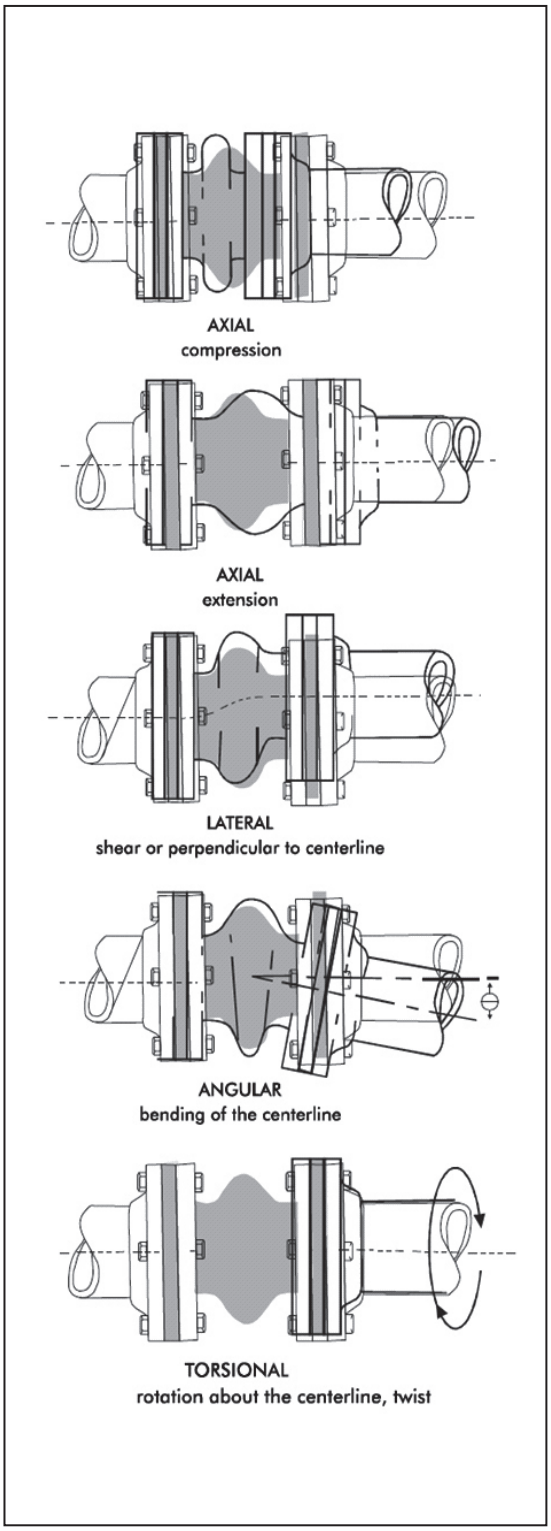

The purpose of an Expansion joints in general, regardless of design or materials of construction, is to provide a point of flexibility in a piping or duct system in order to absorb the growth of the piping due to thermal changes in the media and/or the environment, and to absorb the dynamic movements of machinery, buildings and structures that the piping is attached to or a part of.

The Rubber Expansion joints, because of the non-metallic nature of its construction, offers the piping and ductwork designer advantages within the temperature and pressure ranges of these joints, which cannot be matched by all metal expansion, joints. Consisting of flanged ends and a flexible section, much the same as a flanged metal bellows, the rubber expansion joints can absorb within its free length more movements, particularly lateral, than any other joint of similar overall size and pressure rating.

The flexible section of a Rubber Expansion Joints is most often a single convolution, which, because of the inherent flexibility of the material, can accept large lateral movements with low force, phenomena which requires multiple convolutions in metal bellows. During axial and angular movements, the rubber convolution deflects much the same way that the metal convolution does. The limits of these motions are determined by the geometric shape and size of the convolution and the inherent pressure resisting capacity of the design.

The manner in which the pressure loads are resisted in a Rubber Expansion joints is the major difference between Rubber and Metal Bellows. Circumferential (hoop) loads due to pressure are carried by the convolution itself in metallic bellows. In a Rubber Expansion joint, the convolution is basically incapable of resisting pressure by itself, but is supported by the djacent rubber tube with its internal fabric and / or fabricmetal reinforcing, or by the attachment flanges themselves.

All Tembo's Units have integrally moulded flanges, sized and drilled to much standard flanges. All Rubber Expansion joints require metallic split retaining rings behind the flanges to back up protect the rubber integral flanges. Control rods must be used to protect expansion joints from excessive movement if piping system is not properly anchored and are normally recommended for most piping installations.

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FLEXIBLE PIPE CONNECTORS-TRIANGULAR TYPE TGTFC00000000

APPLICATION:

- Inlet and outlet of fan coil Units, Air Handling Units, Chillers and Condensers.
- Air Suction and discharge of pumps.
- Intervals in Chilled water piping .
- Installation of flexible Pipe Connectors is recommended to allow for axial pipe movement due to thermal expansion or contraction, thereby protecting the building structure from damaging stress. These connectors also help to isolate the low and high frequency vibration transmitted through pipe walls.
- The triangular flange design offer much better reliability, safety and convenience as compared to union type connectors.
- Allows for both Axial and Horizontal movement.
- Unique pressurized steel wire strand for addiitional safely.

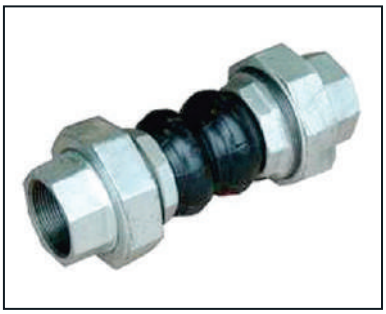
CONSTRUCTION FEATURES:

Bellow	: Neoprene / EPDM
Reinforcement	: Nylon cord fabric
Pressurized Ring	: Steel Wire Strand
Flanges	: Forged Steel, Threaded to BS 21. NPT on request
	: Epoxy powder coated for corrosion resistance
	: Nut and bolts electrogalvanized.
	: Floating triangular thread design

TECHNICAL DATA:

Working Pressure	: 290 psi / 20 Bar
Temperture Range	: -15 deg C to 115 deg C .
Working Media	: Water, Compressed Air, Oil, Weak Acids / Alkalines

PRODUCT CODE	SIZE INCHES	AXIAL DISPLACEMENT		LENGTH MM	DEFLECTION ANGLE
		ELONGATION	COMPRESSION		
TGTFC00000027	3/4"	6	22	160	45
TGTFC00000034	1"	6	22	160	45
TGTFC00000042	1 1/4"	6	22	160	45
TGTFC00000048	1 1/2"	6	22	160	45
TGTFC00000060	2"	6	22	180	45



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Bellow	: Neoprene / EPDM
Reinforcement	: Nylon cord fabric
Pressurized Ring	: Steel Wire Strand
Flanges	: Forged Steel, Threaded to BS 21. NPT on request
	: Epoxy powder coated for corrosion resistance
	: Nut and bolts electrogalvanized.
	: Floating triangular thread design

TECHNICAL DATA:

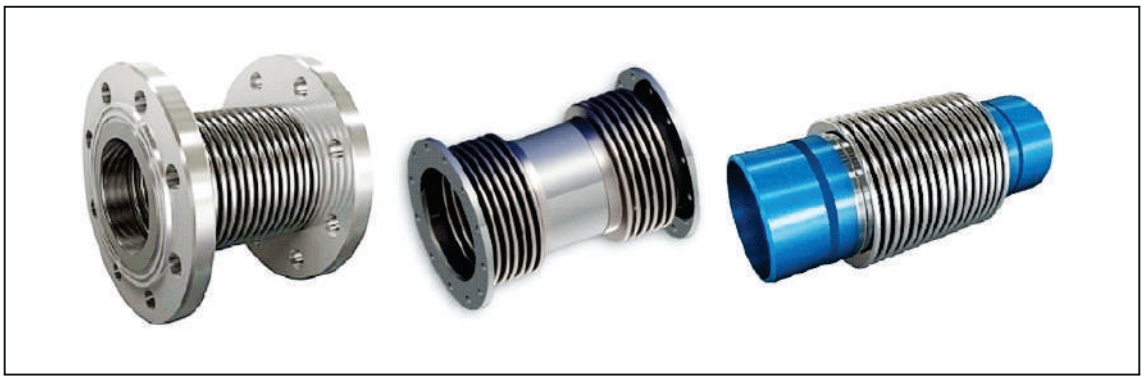
Maximum Pressure	: 250 psi / 17 Bar
Burst pressure	: 650 psi / 45 bar
Temperature Range	: -15 deg C to 115 deg C.
Working Media	: Water Compressed Air, Oil , Weak Acids / Alkaline.
Vacuum	: 700 mm Hg
CONNECTION	: FEMALE THREAD BOTH SIDES

PRODUCT CODE	SIZE INCHES	LENGTH MM	AXIAL DISPLACEMENT ELONGATION (MM)	AXIAL DISPLACEMENT COMPRESSION (MM)	DEFLECTION ANGLE
TGUFC00000022	1/2"	155	6	22	45
TGUFC00000027	3/4"	155	6	22	45
TGUFC00000034	1"	155	6	22	45
TGUFC00000042	1 1/4"	155	6	22	45
TGUFC00000048	1 1/2"	175	6	22	45
TGUFC00000060	2"	175	6	22	45
TGUFC00000073	2 1/2"	240	10	24	45

Bellows are a flexible piping element. The corrugation of the expansion joint is designed to be flexible in order to absorb pipe expansion and contraction due changes in temperature. The number of corrugation of bellows is decided according to the displacement amount and the expansionary and contracting force that the bellows have to absorb. Bellows have to be strong to the design pressure an operating pressure of piping and pressure and installation and they also have to be flexible to absorb thermal movement. The thrust force of the flow In the piping has to be buttressed by things other than bellow.

Tembo Industries bellows are fabricated from cylindrical tubes made of high ductility material. The cylindrical body is formed onto parallel corrugation which accommodates all basic movements without encountering wear and tear as associated with conventional mechanical devices. Bellows are designed and manufactures as per the latest additional of EJMA, ASME, GIS, BS, DIN, IS standards under the supervision of highly qualified team of engineers and technocrats.

To attain high flexibility and above average life expectancy, our Bellows are made from tested S.S. 316 / 321 / 304 stainless steel material. These bellows retain the flexibility when subject to internal pressure. Tembo's Industries Bellows have been their out standing performance in a wide variety of application



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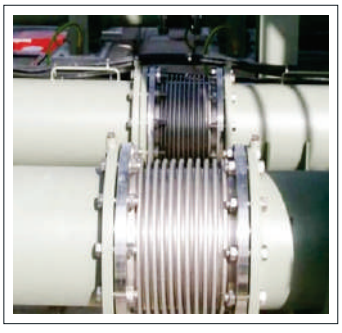
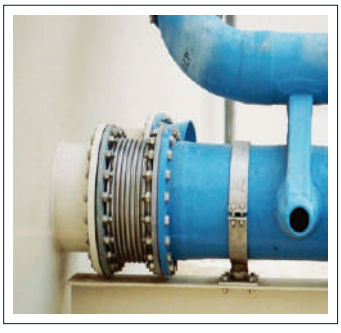
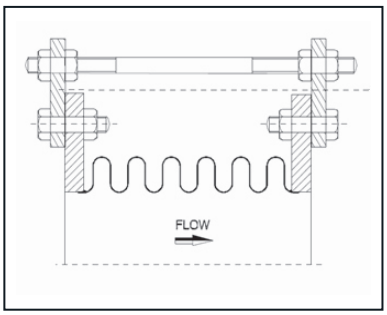
APPLICATION EXAMPLES:

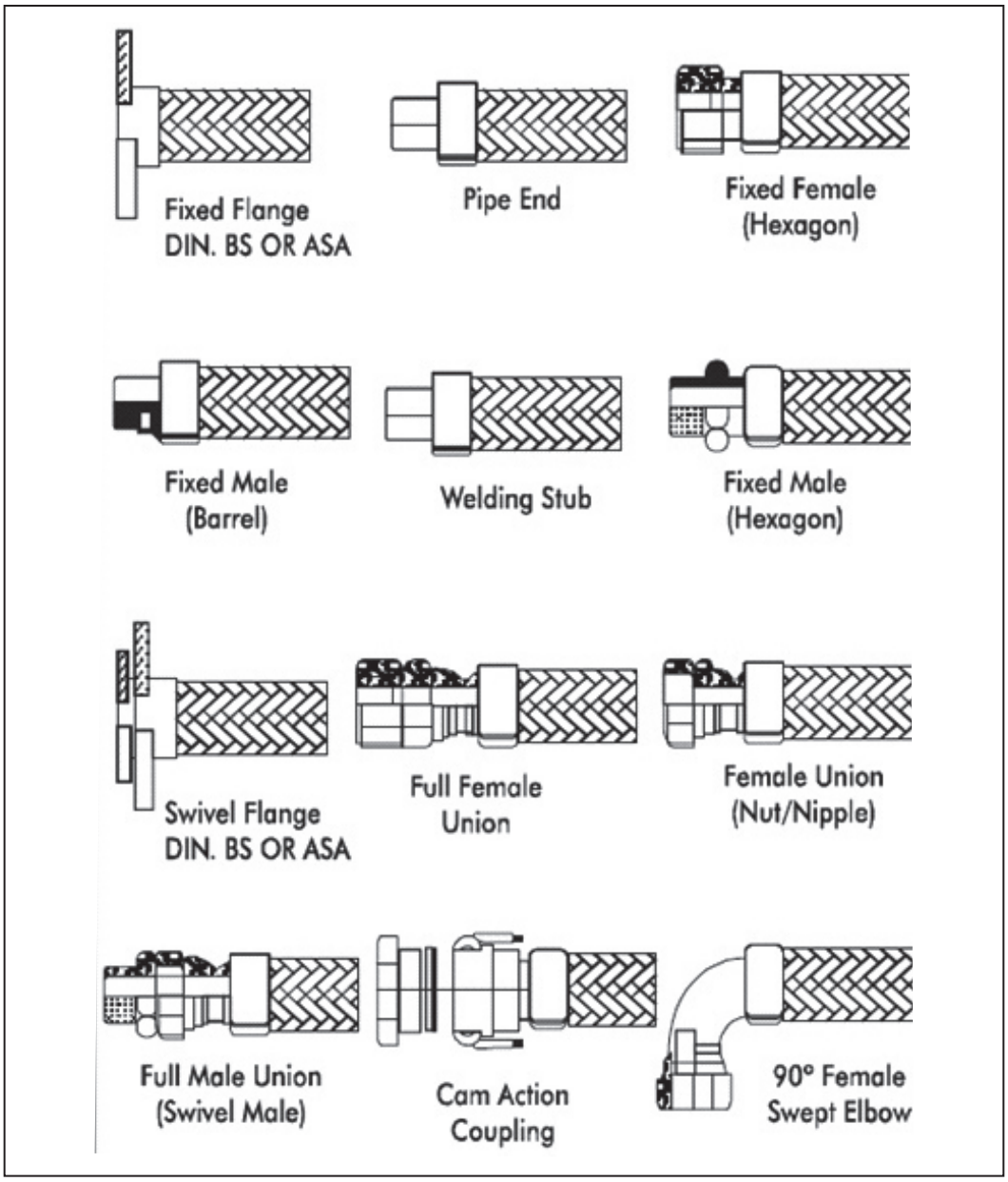






PRODUCT CODE NOMINAL BORE X OVERALL LENGTH	DESIGN TEMPERATURE UPTO	MAXIMUM WORKING PRESSURE (KG/CM^2)	LATERAL MOVEMENT PRESSURE (MM)	AXIAL MOVEMENT PRESSURE (MM)
TGMEB006S0200	600°C	20	20	±10
TGMEB006S0250	600°C	20	40	±15
TGMEB006S0300	600°C	20	60	±20
TGMEB006S0300	600°C	20	20	±10
TGMEB008S0250	600°C	20	40	±15
TGMEB008S0300	600°C	20	60	±20
TGMEB010S0200	600°C	20	20	±10
TGMEB010S0250	600°C	20	40	±15
TGMEB010S0300	600°C	20	60	±20
TGMEB012S0200	600°C	20	20	±10
TGMEB012S0250	600°C	20	40	±15
TGMEB012S0300	600°C	20	60	±20
TGMEB014S0200	600°C	20	20	±10
TGMEB014S0250	600°C	20	40	±15
TGMEB014S0300	600°C	20	60	±20
TGMEB016S0200	600°C	20	20	±10
TGMEB016S0250	600°C	20	40	±15
TGMEB016S0300	600°C	20	60	±20
TGMEB018S0200	600°C	20	20	±10
TGMEB018S0250	600°C	20	40	±15
TGMEB018S0300	600°C	20	60	±20
TGMEB020S0200	600°C	20	20	±10
TGMEB020S0250	600°C	20	40	±15
TGMEB020S0300	600°C	20	60	±20
TGMEB022S0200	600°C	20	20	±10
TGMEB022S0250	600°C	20	40	±15
TGMEB022S0300	600°C	20	60	±20
TGMEB024S0200	600°C	20	20	±10
TGMEB024S0250	600°C	20	40	±15
TGMEB024S0300	600°C	20	60	±20

- Metallic of standard Metallic Bellow SA 240 TP 321, SA 240 TP 304 also available.
- Material of End Flanges IS 2062 Grade 2 (Carbon Steel)
- Custom Made Bellows as per customer specification available for additional movements.
- End flanges as per customer s specification available.
- Accessories like nut bolts / gaskets / tie rods assembly / mating flanges available at extra cost.
- Compliance – Springs designed according to BS 1726 (Part 1) : 1987 and recommendations made by SAE (US)



Tembo manufactures Corrugated Hoses and Hose Assemblies at an ultra-modern facility under the supervision of a qualified team of engineers and technocrats. They are suitable for wide range of chemicals, petroleum products, super heated steam, liquefied gas and cooling lines.

SIZE: 1/4" (6mm) to 12" (300mm)

TEMPERATURE: -200°C to 700°C

MATERIAL: Hose S.S. 3016/321/304, Braiding S.S.304. End Connections

MATERIAL OF END CONNECTION: M.S., Carbon Steel, brass, NPTF, METRIC.

FLANGE: As per BS, ASA, DIN, Slipon, or as per your requirement.

END FITTINGS:
Manufactured from Mild Steel, Stainless Steel or Brass.These are fitted by Argon welding (TIG) or brazing on S.S. Hose depending upon hose type and service conditions to from a complete hose assembly

SIZE NOMINAL SIZE DN		SINGLE BRAID					OUBLE BRAID		
INCH	MM	MAX. WORKING PRESSURE (KG/CM²)	TEST PRESSURE (KG/CM²)	BURST BEND (KG/CM²)	STATIC BEND RADIUS (MM)	DYNAMIC BEND RADIUS (MM)	MAX. WORKING PRESSURE (KG/CM²)	TEST PRESSURE (KG/CM²)	BURST BEND (KG/CM²)
1/4"	6	100	150	400	25	100	160	240	640
3/8"	10	90	135	360	40	150	144	216	576
1/2"	12	80	120	320	50	200	128	192	512
5/8"	16	70	105	280	50	200	112	168	448
3/4"	20	64	96	256	70	200	102	153	408
1"	25	50	75	200	90	200	80	120	320
1 1/4"	32	40	60	160	110	250	64	96	256
1 1/2"	40	32	48	128	130	250	48	72	192
2"	50	28	42	112	175	350	44	66	176
2 1/2"	65	24	36	96	200	410	42	61	152
3"	80	18	27	72	205	450	28	42	112
4"	100	16	24	64	230	560	26	39	104
5"	125	12	18	48	280	660	20	30	80
6"	150	10	15	40	320	815	16	24	64
8"	200	8	12	32	435	1015	12	18	48

- Due to policy of continual improvement, the specifications are subject to change without prior notice.
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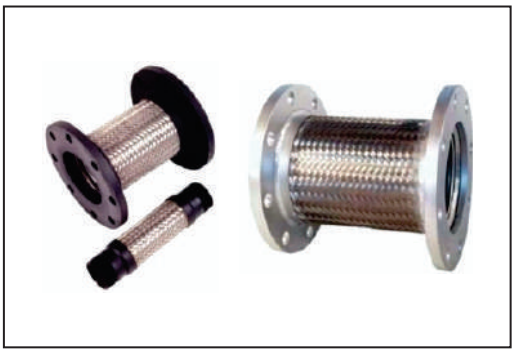
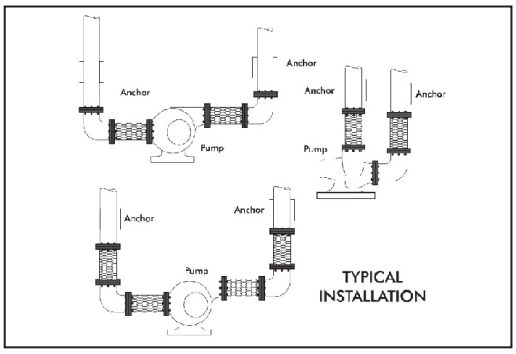
FLEXIBLE METALLIC PUMP CONNECTOR TGFMC00000000





APPLICATION:

Tembo's stainless steel pump connectors have been optimally designed for use in pipe work systems for pumps or compressors and used to suppress noise, absorb vibration, to correct and accommodate for minor lateral misalignment or thermal movements and to adjust for any building settlement.

CONSTRUCTION:

Manufactured with AISI 32 stainless steel corrugated tubing (to BS 6501pt.1) with AISI 304 stainless steel single over braid & carbon or stainless steel end fittings, TIG welded AISI 304/316 stainless steel Corrugated Hose also available.

END FITTINGS:

Screwed assemblies-Threaded BSP Taper Male Hexagon or Half Barrel Fittings Flanged assemblies, to Bs10 table D/BS4504 & ANSI/ ASA standards.

INSTALLATION:

Braided pump connectors are not designed to absorb lateral movements and vibration. For maximum efficiency the connectors should be placed in both the pipe work on the away from the source.

Nominal I.D. of S.S. Braised Bellow	Overall Length Inch/mm	Max. Working Pressure At Room Temp.(BAR)
1/2"	6"/150	16
3/4"	6"/150	16
1"	6"/150	16
1 1/4"	6"/150	16
1 1/2"	6"/150	16
2"	6"/150	16
2 1/2"	6"/150	16
3"	6"/150	16
4"	6"/150	16
5"	6"/150	16
6"	6"/150	16
8"	6"/150	10
10"	12"/300	4.5
12"	12"/300	4.5

- End flanges as per customer specification available
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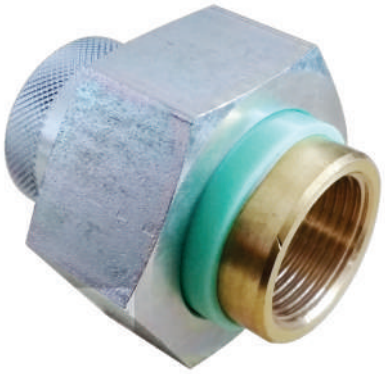
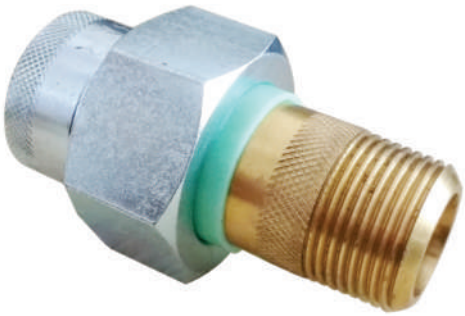
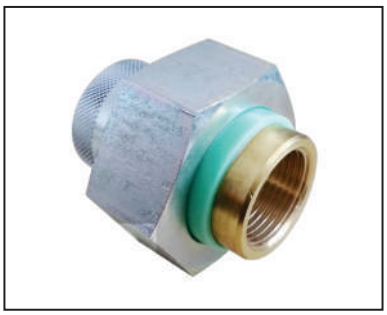
TEMBO
Powering Ahead





DIELECTRIC UNION

DIELECTRIC UNION - FPT x FPT TGDEUFF000000



FEATURES:

- Female NPT iron pipe thread to female brass pipe threaded connections.
- Designed & manufactured to the highest quality standards

MAXIMUM TEMPERATURE: 180°F (82°C)

MAXIMUM PRESSURE: 25 bar (362 psi)

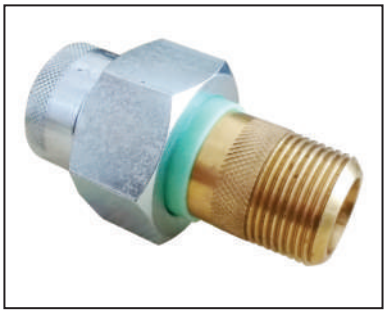
MATERIAL SPECIFICATIONS :

NO.	PART	MATERIAL
1	IPS Connection	Zinc Coat Steel
2	Nut	Zinc Coat Steel
3	Gasket	Nitrile
4	FPT Connection	Brass
5	Insert	Nylon

SIZES AVAILABLE :

MODEL	SIZE
TGDEUFF000022	1/2"
TGDEUFF000027	3/4"
TGDEUFF000034	1"
TGDEUFF000042	1-1/4"
TGDEUFF000048	1-1/2"
TGDEUFF000060	2"

DIELECTRIC UNION - FPT x MPT TGDEUFM000000



FEATURES:

- Female NPT iron pipe thread to male brass pipe threaded connections.
- Designed & manufactured to the highest quality standards

MAXIMUM TEMPERATURE: 180°F (82°C)

MAXIMUM PRESSURE: 25 bar (362 psi)

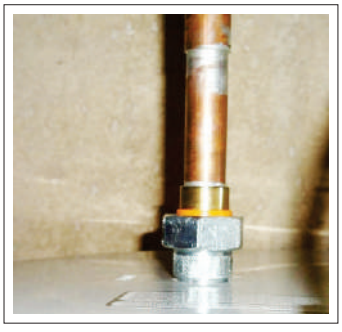
MATERIAL SPECIFICATIONS :

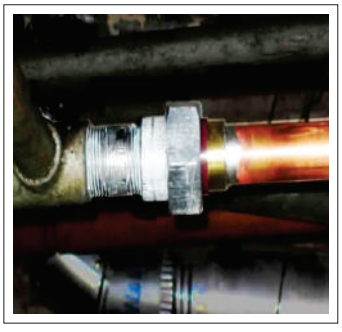
NO.	PART	MATERIAL
1	IPS Connection	Zinc Coat Steel
2	Nut	Zinc Coat Steel
3	Gasket	Nitrile
4	MPT Connection	Brass
5	Insert	Nylon

SIZES AVAILABLE :

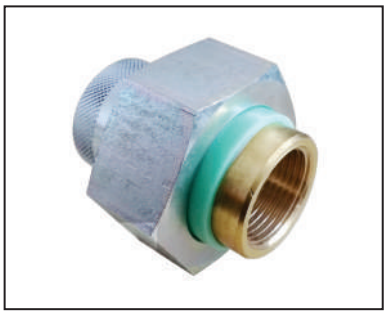
MODEL	SIZE
TGDEUFM000022	1/2"
TGDEUFM000027	3/4"
TGDEUFM000034	1"
TGDEUFM000042	1-1/4"
TGDEUFM000048	1-1/2"
TGDEUFM000060	2"

APPLICATION EXAMPLES:





TGDEUFW000000 DIELECTRIC UNION - FPT x BRASS WELD



FEATURES:

- Female NPT iron pipe thread to Brass tube end connection threaded connections.
- Designed & manufactured to the highest quality standards

MAXIMUM TEMPERATURE: 180°F (82°C)

MAXIMUM PRESSURE: 25 bar (362 psi)

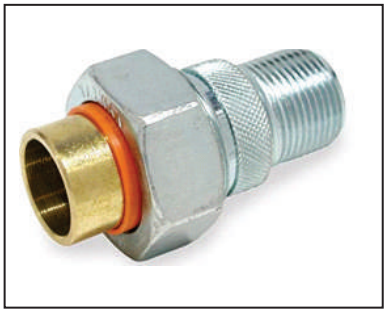
MATERIAL SPECIFICATIONS :

NO.	PART	MATERIAL
1	IPS Connection	Zinc Coat Steel
2	Nut	Zinc Coat Steel
3	Gasket	Nitrile
4	Solder Connection	Brass
5	Insert	Nylon

SIZES AVAILABLE :

MODEL	SIZE
TGDEUFW000022	1/2"
TGDEUFW000027	3/4"
TGDEUFW000034	1"
TGDEUFW000042	1-1/4"
TGDEUFW000048	1-1/2"
TGDEUFW000060	2"

TGDEUMW000000 DIELECTRIC UNION - STEEL MPT X BRASS WELD



FEATURES:

- Male NPT Iorn Pipe Thread To Brass Tube End Connection Threaded Connections
- Designed & Manufactured To The Highest Quality Standards

MAXIMUM TEMPERATURE: 180°F (82°C)

MAXIMUM PRESSURE: 25 bar (362 psi)

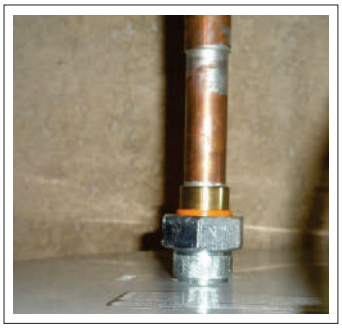
MATERIAL SPECIFICATIONS :

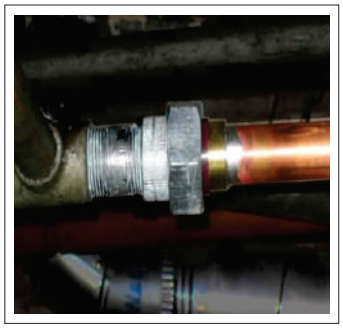
NO.	PART	MATERIAL
1	IPS Connection	Zinc Coat Steel
2	Nut	Zinc Coat Steel
3	Gasket	Nitrile
4	Tube Connection	Brass
5	Insert	Nylon

SIZES AVAILABLE :

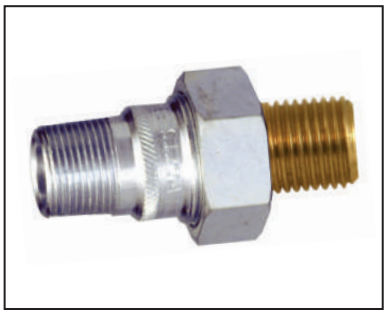
MODEL	SIZE
TGDEUMW000022	1/2"
TGDEUMW000027	3/4"
TGDEUMW000034	1"
TGDEUMW000042	1-1/4"
TGDEUMW000048	1-1/2"
TGDEUMW000060	2"

APPLICATION EXAMPLES:





DIELECTRIC UNION - STEEL MPT X BRASS MPT TGDEUMM000000



FEATURES:

- Male NPT Iorn pipe thread to Male Brass pipe threaded connections
- Designed & Manufactured To The Highest Quality Standards

MAXIMUM TEMPERATURE: 180°F (82°C)

MAXIMUM PRESSURE: 25 bar (362 psi)

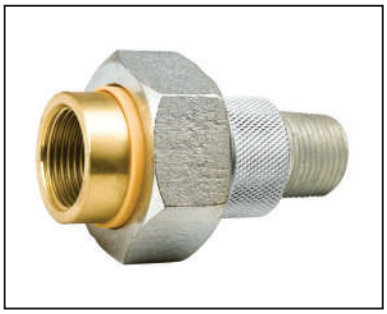
MATERIAL SPECIFICATIONS :

NO.	PART	MATERIAL
1	IPS Connection	Zinc Coat Steel
2	Nut	Zinc Coat Steel
3	Gasket	Nitrile
4	MPT Connection	Brass
5	Insert	Nylon

SIZES AVAILABLE :

MODEL	SIZE
TGDEUMM000022	1/2"
TGDEUMM000027	3/4"
TGDEUMM000034	1"
TGDEUMM000042	1-1/4"
TGDEUMM000048	1-1/2"
TGDEUMM000060	2"

DIELECTRIC UNION - STEEL MPT X BRASS FPT TGDEUMF000000



FEATURES:

- Male NPT Iorn pipe thread to Female Brass pipe threaded connections
- Designed & Manufactured To The Highest Quality Standards

MAXIMUM TEMPERATURE: 180°F (82°C)

MAXIMUM PRESSURE: 25 bar (362 psi)

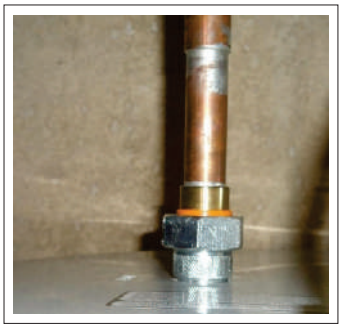
MATERIAL SPECIFICATIONS :

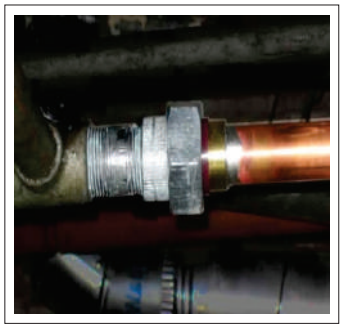
NO.	PART	MATERIAL
1	IPS Connection	Zinc Coat Steel
2	Nut	Zinc Coat Steel
3	Gasket	Nitrile
4	FPT Connection	Brass
5	Insert	Nylon

SIZES AVAILABLE :

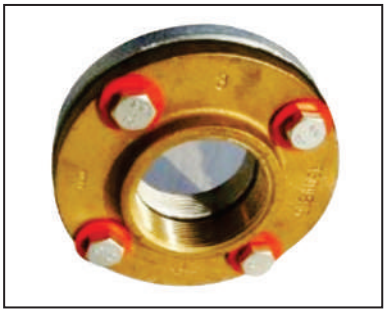
MODEL	SIZE
TGDEUMF000022	1/2"
TGDEUMF000027	3/4"
TGDEUMF000034	1"
TGDEUMF000042	1-1/4"
TGDEUMF000048	1-1/2"
TGDEUMF000060	2"

APPLICATION EXAMPLES:





TGFF000000000 DIELECTRIC FLANGED UNION - FEMALE x BPT



FEATURES:

- Female iron pipe thread to female brass pipe threaded connections.
- Designed & manufactured to the highest quality standards

MAXIMUM TEMPERATURE: 180°F (82°C)

MAXIMUM PRESSURE: 16 Bar (232.06 psi)

MATERIAL SPECIFICATIONS :

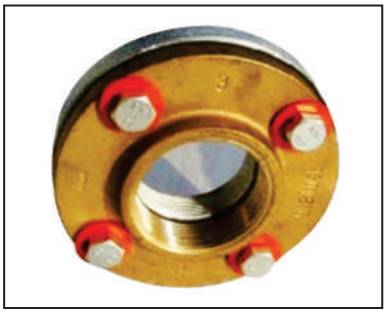
NO.	PART	MATERIAL
1	Flange	Cast Iron W/Galvanized
2	Gasket	EPDM
3	Flange	Bronze
4	Insulator	Nylon
5	Bolts	Zinc Coated Steel

SIZES AVAILABLE :

MODEL	SIZE
TGFF000000073	2-1/2"
TGFF000000089	3"
TGFF000000114	4"

*6" dia and 8" dia sizes are available on request

TGDEFWB000000 DIELECTRIC FLANGED UNION - WELDED WITH STEEL PIPE X BRAZED WITH CU



FEATURES:

- Iorn Pipe Tube To Brass Pipe Tube
- Designed & manufactured to the highest quality standards

MAXIMUM TEMPERATURE: 180°F (82°C)

MAXIMUM PRESSURE: 12.1 BAR (175 psi)

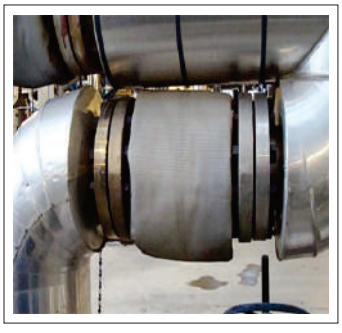
MATERIAL SPECIFICATIONS :

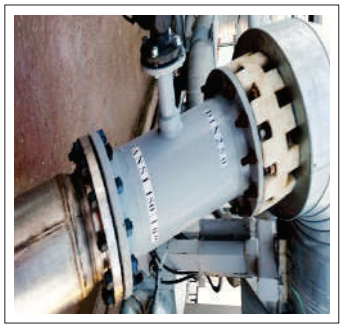
1	Flange	Cast Iron W/Galvanized
2	Gasket	EPDM
3	Flange	Bronze
4	Insulator	Nylon
5	Bolts	Zinc Coated Steel

SIZES AVAILABLE :

MODEL	SIZE
TGDEFWB000065	2-1/2"
TGDEFWB000080	3"
TGDEFWB000100	4"
TGDEFWB000125	5"
TGDEFWB000150	6"
TGDEFWB000200	8"

APPLICATION EXAMPLES:





DIELECTRIC FLANGED UNION - WELDED WITH STEEL PIPE X FPT BRASS TGDEFWF000000

FEATURES:

- Iorn pipe tube to female brass pipe threaded connections
- Designed & manufactured to the highest quality standards

MAXIMUM TEMPERATURE: 180°F (82°C)

MAXIMUM PRESSURE: 12.1 BAR (175 psi)

MATERIAL SPECIFICATIONS :

NO.	PART	MATERIAL
1	Flange	Cast Iron W/Galvanized
2	Gasket	EPDM
3	Flange	Bronze
4	Insulator	Nylon
5	Bolts	Zinc Coated Steel

SIZES AVAILABLE :

MODEL	SIZE
TGDEFWF000065	2-1/2"
TGDEFWF000080	3"
TGDEFWF000100	4"
TGDEFWF000125	5"
TGDEFWF000150	6"
TGDEFWF000200	8"

DIELECTRIC FLANGED UNION - WELDED WITH STEEL PIPE X MPT BRASS TGDEFWM000000

FEATURES:

- Male NPT Iorn pipe thread to Male Brass pipe threaded connections
- Designed & manufactured to the highest quality standards

MAXIMUM TEMPERATURE: 180°F (82°C)

MAXIMUM PRESSURE: 12.1 BAR (175 psi)

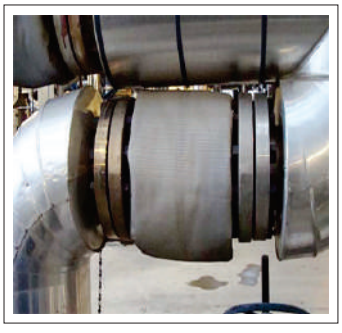
MATERIAL SPECIFICATIONS :

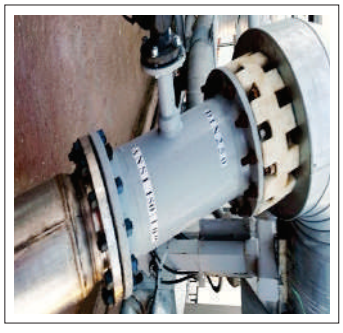
NO.	PART	MATERIAL
1	Flange	Cast Iron W/Galvanized
2	Gasket	EPDM
3	Flange	Bronze
4	Insulator	Nylon
5	Bolts	Zinc Coated Steel

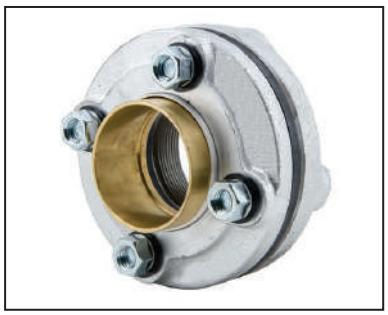
SIZES AVAILABLE :

MODEL	SIZE
TGDEFWM000065	2-1/2"
TGDEFWM000080	3"
TGDEFWM000100	4"
TGDEFWM000125	5"
TGDEFWM000150	6"
TGDEFWM000200	8"

APPLICATION EXAMPLES:







FEATURES:

- Female NPT iorn pipe thread to male brass pipe threaded connections
- Designed & manufactured to the highest quality standards

MAXIMUM TEMPERATURE: 180°F (82°C)

MAXIMUM PRESSURE: 12.1 BAR (175 psi)

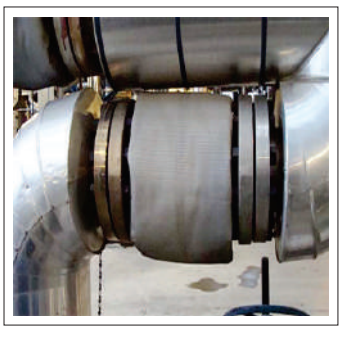
MATERIAL SPECIFICATIONS :

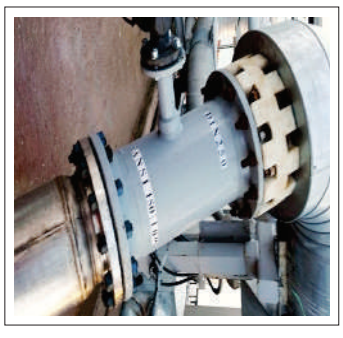
NO.	PART	MATERIAL
1	Flange	Cast Iron W/Galvanized
2	Gasket	EPDM
3	Flange	Bronze
4	Insulator	Nylon
5	Bolts	Zinc Coated Steel

SIZES AVAILABLE :

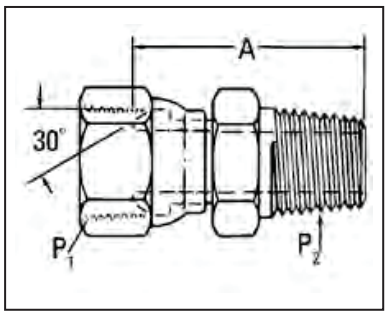
MODEL	SIZE
TGDEFFM000065	2-1/2"
TGDEFFM000080	3"
TGDEFFM000100	4"
TGDEFFM000125	5"
TGDEFFM000150	6"
TGDEFFM000200	8"

APPLICATION EXAMPLES:





UNION - FPT x MPT TGUNIFM00S000



PRODUCT DESCRIPTION:
Pipe fittings are components used for connecting, terminating, controlling flow, and changing the direction of piping in many different industries. When purchasing pipe fittings, consider the application, as this will affect material type, shape, size and required durability. Fittings are available threaded or unthreaded, in many shapes, styles, sizes, and schedules (pipe wall thickness).

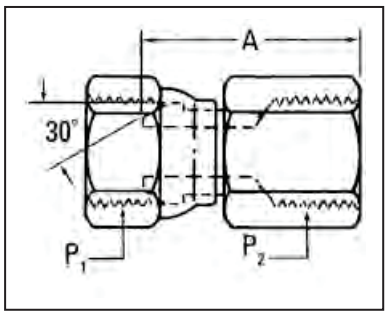
FEATURES:
- Pipe swivel adapter for joining pipes in a range of fluid transfer applications
- Zinc-plated steel for strength, durability, and resistance to corrosion
- Meets SAE 140130 specifications

TEMPERATURE RANGE: -42°C To 210°C

WORKING PRESSURE: 320 bar (4641.21psi)

FINISH: Zinc Plated

PRODUCT CODE	DASH SIZE	THREADS P1	THREADS P2	A	
				mm	In
TGUNIFM02S006	2-2S	1/8"- 27	1/8"- 27	24,4	0.96
TGUNIFM04S006	2-4S	1/8"- 27	1/4"- 18	29,0	1.14
TGUNIFM04S008	4-4S	1/4"- 18	1/4"- 18	32,0	1.26
TGUNIFM06S008	4-6S	1/4"- 18	3/8"- 18	32,0	1.26
TGUNIFM08S008	4-8S	1/4"- 18	1/2"- 14	38,4	1.51
TGUNIFM04S010	6-4S	3/8"- 18	1/4"- 18	32,0	1.26
TGUNIFM06S010	6-6S	3/8"- 18	3/8"- 18	33,5	1.32
TGUNIFM08S010	6-8S	3/8"- 18	1/2"- 14	40,1	1.58
TGUNIFM06S015	8-6S	1/2"- 14	3/8"- 18	34,8	1.37
TGUNIFM08S015	8-8S	1/2"- 14	1/2"- 14	41,1	1.62
TGUNIFM12S015	8-12S	1/2"- 14	3/4"- 14	41,1	1.62
TGUNIFM12S020	12-12S	3/4"- 14	3/4"- 14	44,5	1.75
TGUNIFM16S020	12-16S	3/4"- 14	1"- 11 1/2	50,8	2.00
TGUNIFM12S025	16-12S	1"- 11 1/2	3/4"- 14	44,7	1.76
TGUNIFM16S025	16-16S	1"- 11 1/2	1"- 11 1/2	51,3	2.02
TGUNIFM16S032	20-16S	1 1/4"- 11 1/2	1"- 11 1/2	53,3	2.10
TGUNIFM20S032	20-20S	1 1/4"- 11 1/2	1 1/4" - 11 1/2	52,8	2.08
TGUNIFM20S040	24-20S	1 1/2" - 11 1/2	1 1/4" - 11 1/2	55,1	2.17
TGUNIFM24S040	24-24S	1 1/2" - 11 1/2	1 1/2" - 11 1/2	55,9	2.20
TGUNIFM32S050	32-32S	2" - 11 1/2	2"- 11 1/2	60,7	2.39



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Pipe fittings are components used for connecting, terminating, controlling flow, and changing the direction of piping in many different industries. When purchasing pipe fittings, consider the application, as this will affect material type, shape, size and required durability. Fittings are available threaded or unthreaded, in many shapes, styles, sizes, and schedules (pipe wall thickness).

FEATURES:
- Pipe swivel adapter for joining pipes in a range of fluid transfer applications
- Zinc-plated steel for strength, durability, and resistance to corrosion
- Meets SAE 140130 specifications

TEMPERATURE RANGE: -42°C To 210°C

WORKING PRESSURE: 320 bar (4641.21psi)

FINISH: Zinc Plated

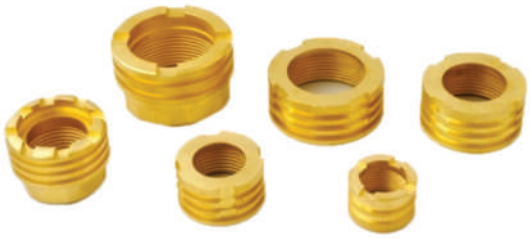
PRODUCT CODE	DASH SIZE	THREADS P1	THREADS P2	A	
				mm	In
TGUNIMM02S006	2-2S	1/8"- 27	1/8"- 27	23,9	0.94
TGUNIMM04S006	2-4S	1/8"- 27	1/4"- 18	26,9	1.06
TGUNIMM02S008	4-2S	1/4"- 18	1/8"- 27	26,4	1.04
TGUNIMM04S008	4-4S	1/4"- 18	1/4"- 18	33,0	1.30
TGUNIMM06S008	4-6S	1/4"- 18	3/8"- 18	33,3	1.31
TGUNIMM06S010	6-6S	3/8"- 18	3/8"- 18	33,8	1.33
TGUNIMM08S010	6-8S	3/8"- 18	1/2"- 14	36,8	1.45
TGUNIMM08S015	8-8S	1/2"- 14	1/2"- 14	39,6	1.56
TGUNIMM12S020	12-12S	3/4"- 14	3/4"- 14	45,0	1.77
TGUNIMM16S020	12-16S	3/4"- 14	1"- 11 1/2	51,8	2.04
TGUNIMM16S025	16-16S	1"- 11 1/2	1"- 11 1/2	52,3	2.06
TGUNIMM20S032	20-20S	1 1/4"- 11 1/2	1 1/4" - 11 1/2	52,3	2.06
TGUNIMM24S040	24-24S	1 1/2" - 11 1/2	1 1/2" - 11 1/2	55,4	2.18
TGUNIMM32S050	32-32S	2" - 11 1/2	2"- 11 1/2	58,4	2.30

MALE-FEMALE CPVC FITTINGS

CPVC MALE ADAPTOR

BRASS MALE INSERTS FOR PPR FITTINGS

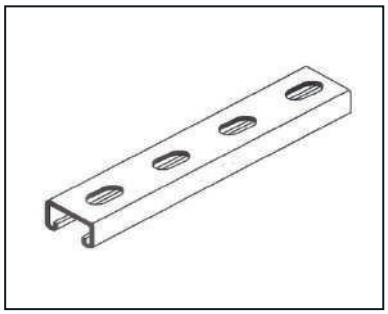
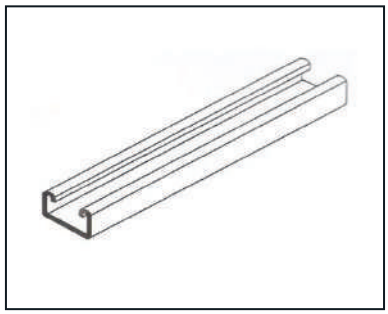
BRASS MALE & FEMALE INSERTS FOR PPR FITTINGS



BRASS FEMALE INSERTS FOR PPR FITTINGS

TEMBO
Powering Ahead

CHANNEL SUPPORT

APPLICATION:

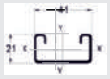
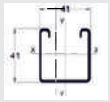
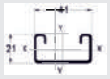
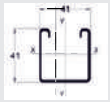
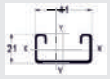
Mechanical Application
Piping Racks
Tunnel Pipe Stanchions
Concrete Inserts
Beam Attachments
Pipeline Height Adjustment

Electrical Application
Pipe & Conduit Supports
Raceway Systems
Raceway Systems
Lighting Fixture Supports
Cable Tray Supports
Beam Adjustments

Industrial Application
Racks and Shelving
Partitions
Production Line Supports
Trolley Systems
Wall Framing

MATERIAL:
Mild Steel. Also other materials can also be provided on request.

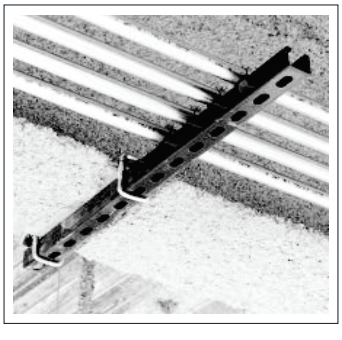
FINISH AVAILABLE:
Plain, Electro-Galvanized, Hot dip Galvanized, Pre Galvanized & Zinc Flake.

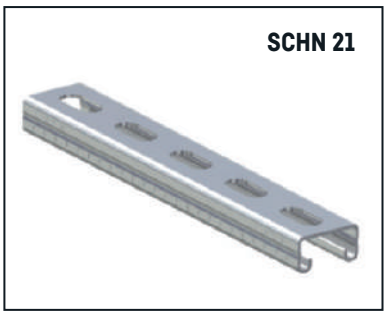






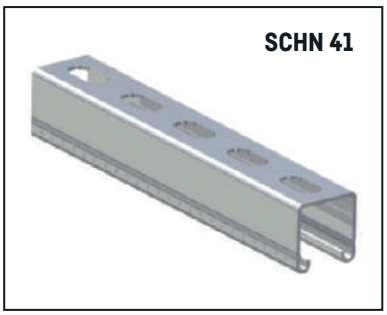

Product Code		TGSCH0P412115	TGSCH0P414115	TGSCH0P412120	TGSCH0P414120	TGSCH0P412125	TGSCH0P414125
Size	**Unit**	**41 X 21 X 1.5**	**41 X 41 X 1.5**	**41 X 21 X 2.0**	**41 X 41 X 2.0**	**41 X 21 X 2.5**	**41 X 41 X 2.5**
Area of Shear	cm^2	0.42	1.02	0.55	1.34	0.67	1.67
Moment of Inertia (xx)	cm	0.7	3.87	0.88	4.59	1.03	5.87
Moment of Inertia (yy)	cm	3.34	5.68	4.25	6.99	5.07	8.76
Min.Section Modulus	cm	0.6	1.76	0.75	2.18	0.89	2.72
Wraping Constant	cm	17.49	114.17	21.34	138.49	24.34	171.52
Torsional Constant	cm	0.01	0.02	0.02	0.03	0.06	0.07
Allowable Bending Stress	kN/cm^2	21.82	21.82	21.82	21.82	21.82	21.82
Allowable Shrear Stress	kN/cm^2	12.6	12.6	12.6	12.6	12.6	12.6

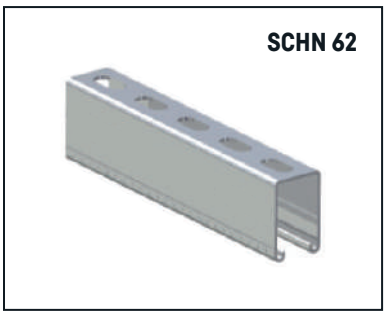
SLOT SIZE : 12/30, 14/28.
Requested slot size can be manufactured.

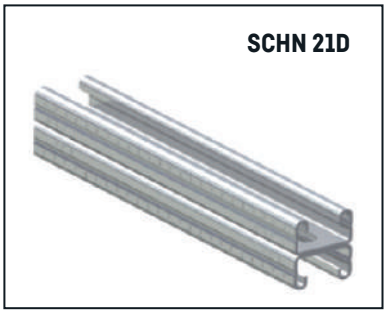
APPLICATION EXAMPLES:

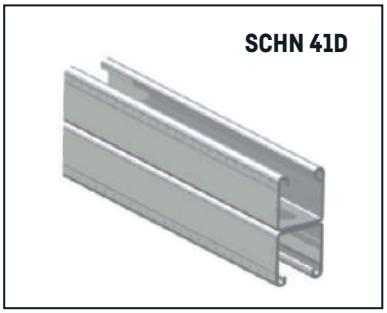


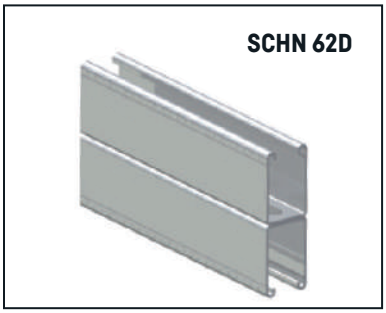










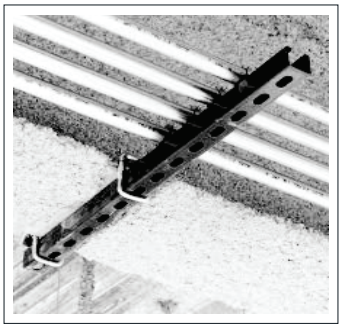


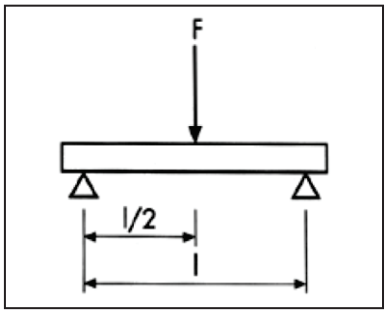
MATERIAL:
Mild Steel. Also other materials can be provided on request

FINISH AVAILABLE:
Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	ITEM	LENGTH L (M)	THICKNESS S (M)
TGSCHP2102002	SCHN 21/2.0 - 2M	2	2.0
TGSCHP2102003	SCHN 21/2.0 - 3M	3	2.0
TGSCHP2102503	SCHN 21/2.5 - 3M	3	2.5
TGSCHP2102506	SCHN 21/2.5 - 6M	6	2.5
TGSCHP4102002	SCHN 41/2.0 - 2M	2	2.0
TGSCHP4102003	SCHN 41/2.0 - 3M	3	2.0
TGSCHP4102006	SCHN 41/2.0 - 6M	6	2.0
TGSCHP4102502	SCHN 41/2.5 - 2M	2	2.5
TGSCHP4102503	SCHN 41/2.5 - 3M	3	2.5
TGSCHP4102506	SCHN 41/2.5 - 6M	6	2.5
TGSCHP6202506	SCHN 62/2.5 - 6M	6	2.5
TGSCHP21D2003	SCHN 21D/2.0 - 3M	3	2.0
TGSCHP41D2506	SCHN 41D/2.5 - 6M	6	2.5
TGSCHP62D2506	SCHN 62D/2.5 - 6M	6	2.5

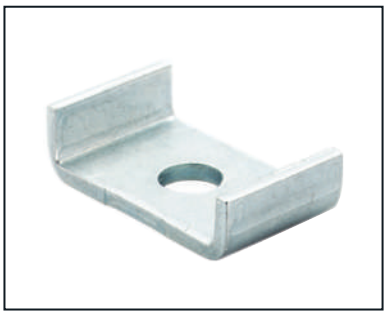
APPLICATION EXAMPLES:





Item	Weight W (kg/m)	Area A (mm^2)	Moment of inertia Iy (mm)	Moment of inertia Iz (mm)	Section modulus Wy (mm^3)	Section modulus Wz (mm^3)	Max recommended static load Length = 5 M Frec (KN)	Length = 1 M Frec (KN)	1.5 M Frec (KN)	Length = 2 M Frec (KN)	Length = 3 M Frec (KN)
SCHN 21/2.0	1.44	172	9700	46600	890	2270	1.14	0.49	0.22	0.12	0.05
SCHN 21/2.5	1.67	199	10300	52800	930	2580	1.19	0.52	0.23	0.13	0.06
SCHN 41/2	2.06	252	53300	76900	2580	3750	3.3	1.65	1.10	0.67	0.30
SCHN 41/2.5	2.45	300	60000	89900	285	4380	3.65	1.82	1.22	0.76	0.34
SCHN 62/2.5	3.27	405	177000	129000	5620	6290	7.19	3.60	2.40	1.80	0.99
SCHN 21D/2	2.87	344	54900	93100	2610	4540	3.34	1.67	1.11	0.69	0.31
SCHN 41D/2.5	4.89	600	350100	179000	8760	8780	11.21	5.61	3.74	2.80	1.57
SCHN 62D/2.5	6.55	809	1110000	258000	17900	12580	22.91	11.46	7.64	5.73	3.82

CHANNEL WASHER TGCW000000000

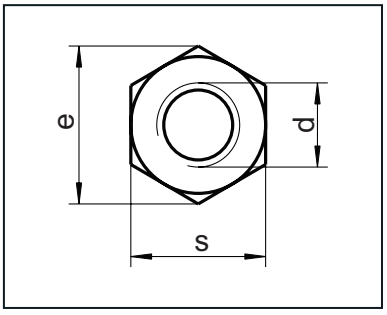


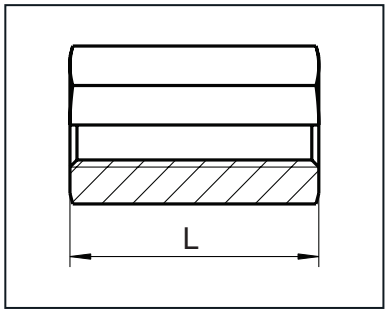
MATERIAL:
Mild Steel. Also other materials can be provided on request

FINISH AVAILABLE:
Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

ITEM	FOR CHANNEL
TGCW000000008	M8
TGCW000000010	M10
TGCW000000012	M12

COUPLING NUT TGCPN00M00000





MATERIAL:
Mild Steel. Also other materials can be provided on request

FINISH AVAILABLE:
Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

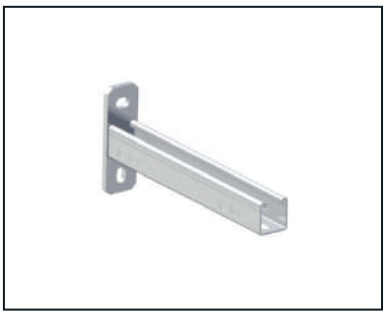
ITEM	LENGTH L (MM)	THREAD D	S	E
TGCPN00ME0006	18	M6	10	11.1
TGCPN00ME0008	24	M8	13	15.0
TGCPN00ME0010	30	M10	17	19.6
TGCPN00ME0012	36	M12	19	21.9
TGCPN00ME0016	48	M16	24	27.7

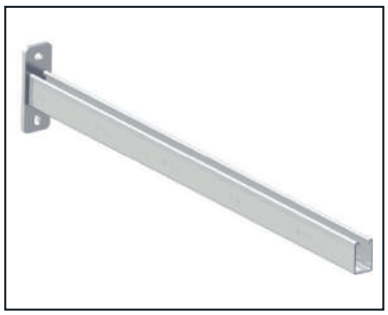
MATERIAL:
Mild Steel. Also other materials can be provided on request

FINISH AVAILABLE:
Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

ITEM	THREAD M	THICKNESS S (MM)	FOR CHANNEL
TGRN000028006	M6	4	27/18-28/30
TGRN000028008	M8	5	27/18-28/30
TGRN000028010	M10	5	27/18-28/30
TGRN000041006	M6	-	38/40-40/62
TGRN000041008	M8	-	38/40-40/62
TGRN000041010	M10	-	38/40-40/62

CANTILEVER ARM TGCA000000000

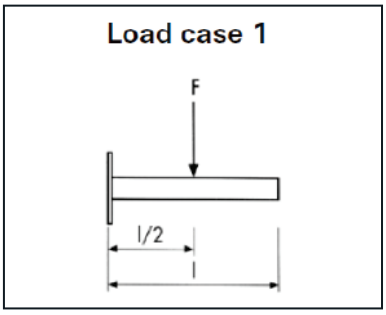


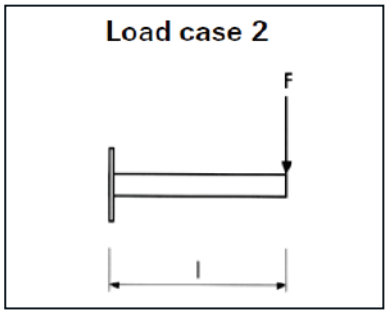


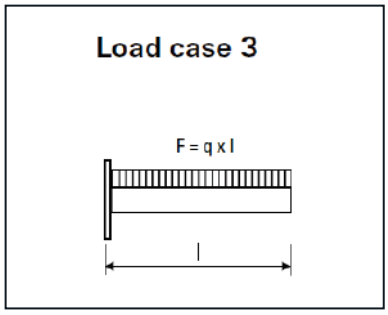
MATERIAL:
Mild Steel. Also other materials can be provided on request

FINISH AVAILABLE:
Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	PRODUCT DESCRIPTION	LENGTH
TGCA0E4100300	41/2.5	300
TGCA0E4100450	41/2.5	450
TGCA0E4100600	41/2.5	600
TGCA0E4100750	41/2.5	750
TGCA0E6201000	62/2.5	1000

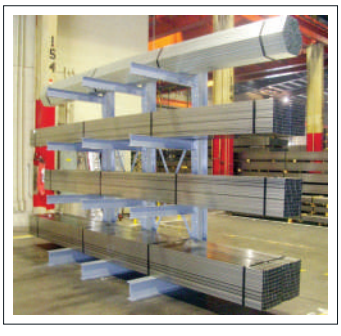


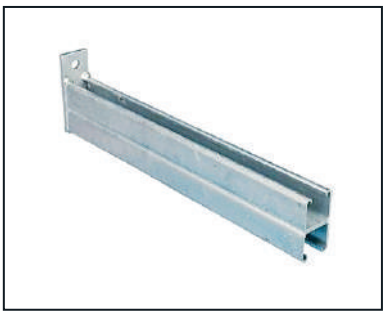


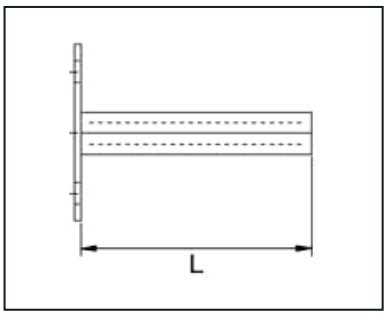


PRODUCT CODE	MAX RECOMMENDED STATIC LOAD		
	LOAD CASE 1 FREC (kN)	LOAD CASE 2 FREC (kN)	LOAD CASE 3 FREC (kN)
TGCA0E4100300	2.67	1.3	2.67
TGCA0E4100450	1.8	0.9	1.8
TGCA0E4100600	1.33	0.67	1.33
TGCA0E4100750	1.05	0.45	1.05
TGCA0E6201000	1.7	0.74	1.7

APPLICATION EXAMPLES:







APPLICATION:
Provides strength and stability to various support system application.

MATERIAL:
Mild Steel. Also other materials can also be provided on request

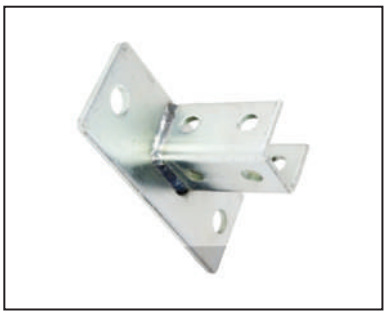
FINISH AVAILABLE:
Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	PRODUCT DESCRIPTION	LENGTH
TGDCAE4100150	41 X 41	150
TGDCAE4100300	41 X 41	300
TGDCAE4100450	41 X 41	450
TGDCAE4100600	41 X 41	600
TGDCAE4100750	41 X 41	750
TGDCAE4100900	41 X 41	900

NOTE : Any non standard size also can manufacture.

APPLICATION EXAMPLES:

WALL BRACKET FOR CHANNEL TGWBC00000000



Saddle Support : 41/21 , 41/41

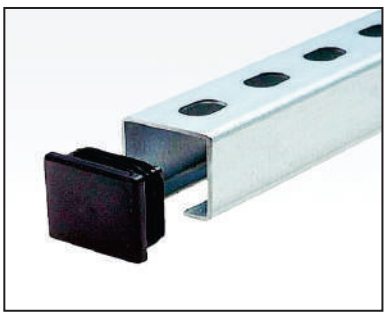
FIELD OF APPLICATION :

- Simple assembly of strong cross-beams using Support channels
- Applicable for cramped installtion
- Conditions in shafts and ducts

ADVANTAGES:

- The vertical and horizontal holes in the base plate enable simple alignment of the Saddle support
- Good load transfer due to the high bending stiffness of the saddle connection
- Ideal connecting element for channel section structures
- The section 38/80 provides torque-resistant support as channel is encompassed on both sides

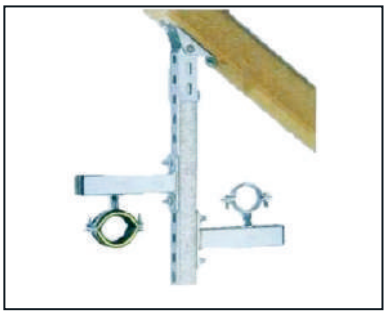
PROTECTION CAPS TGPC000000000



FOR SUPPORT CHANNEL

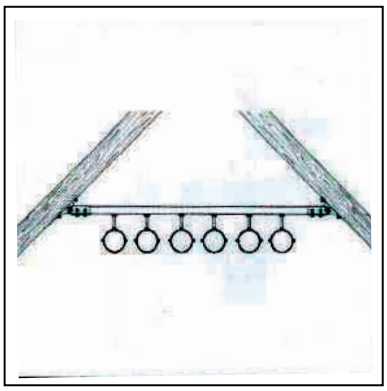
41mm X 41mm

41mm X 21mm

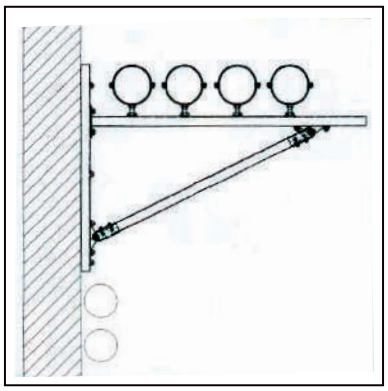


ADVANTAGES:

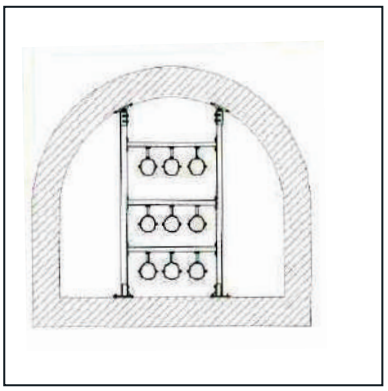
- The specialist product in solving problems when connecting Support Channels to inclined surfaces
- Flexible angle adjustment during installation possible
- Easy and quick fastening owing to pre-mounted Double Rail Nut
- Fixing to the Support Channel in any direction possible when using profile 38/40
- Ideal for installation at slope main truss, vaults and semicircular cable shafts



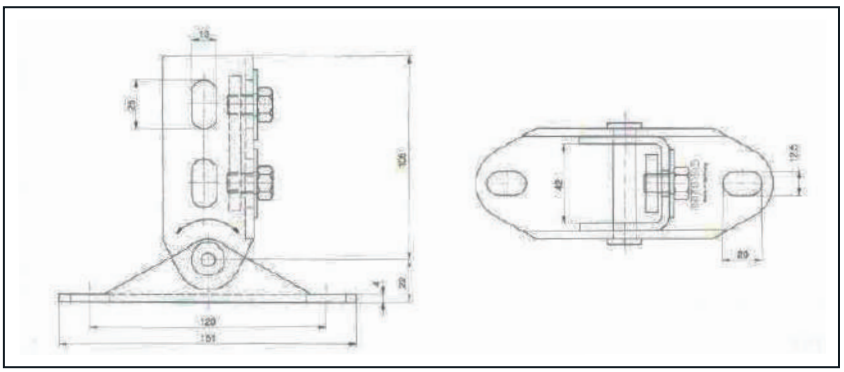
Installation of a pipe bracket at slope main truss



Pipe installation to Wall Bracket with diagonal strut



Installation of a support frame in vaults or semicircular shafts



DATA :

Pre-mounted consists of:

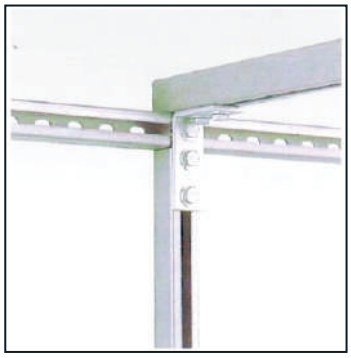
-1 Saddle Support

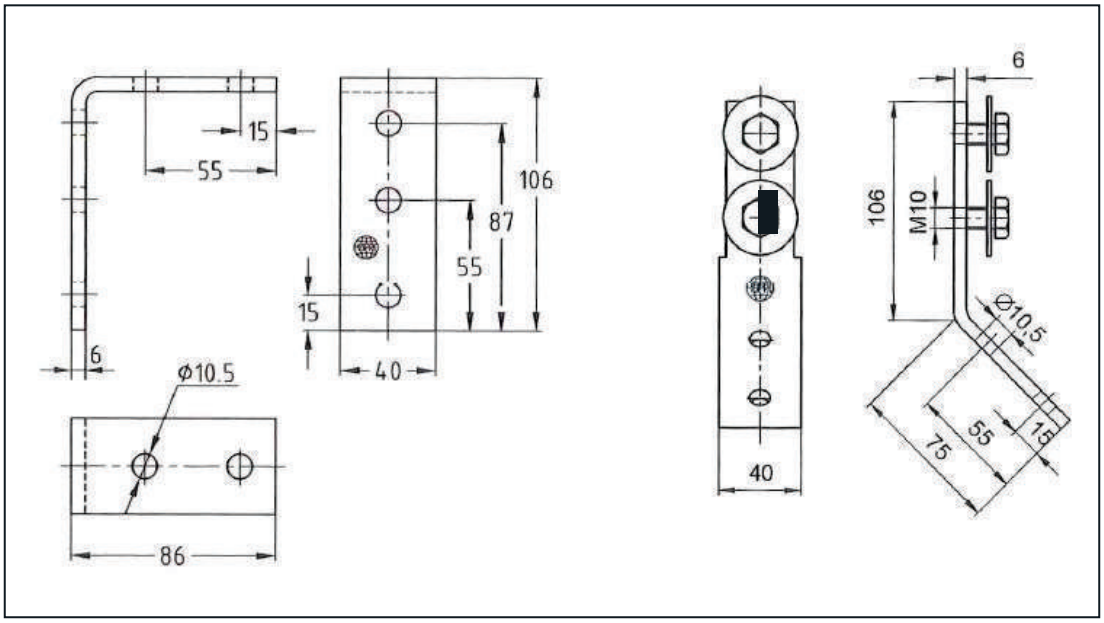
-1 Double Rail Nut

-2 Hexagon Head bolts M10

-2 Washers





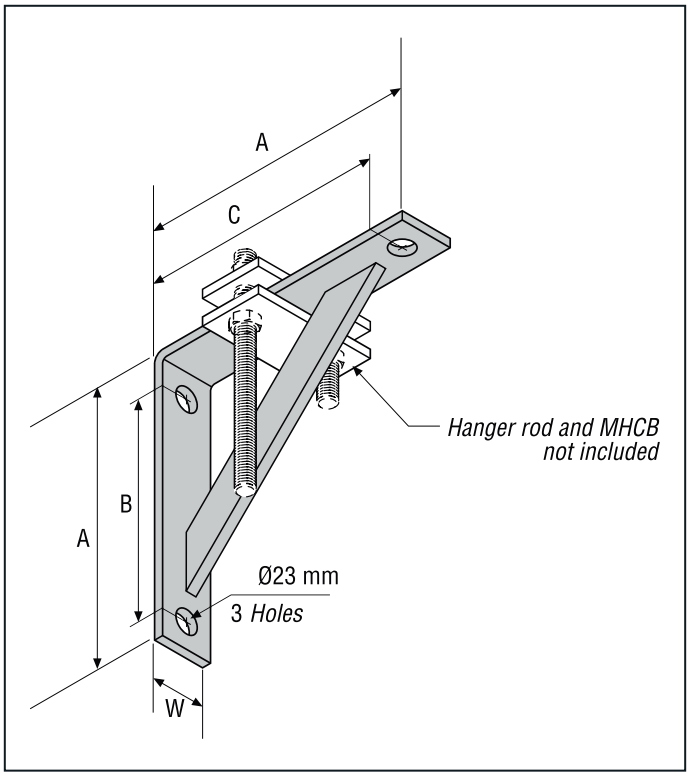


APPLICATION:

- Solid fixing element for construction of pre-wall installations and shelves as well as for channel constructions for attachments of pipelines and air ducts without welding
- Also applicable for direct mounting on walls, ceilings or floors
- Suitable for outdoor use

ADVANTAGES:

- Versatile in use due to oblong holes
  e.g. as:
- Angular support bracket Angular load-bearing bracket
- Connection element
- Angular bracket
- Multi-purpose component for professional, practical installation solutions

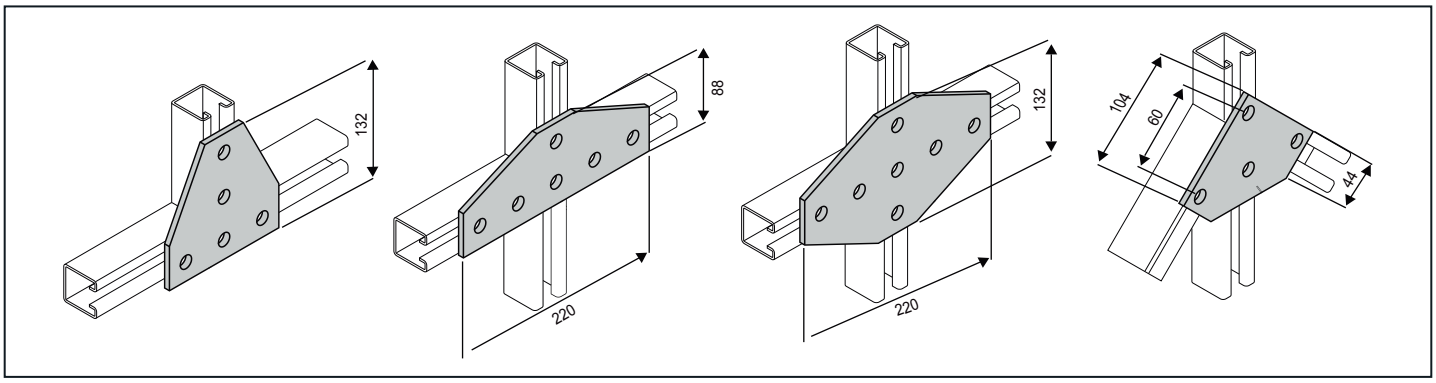


MATERIAL :
Mild Steel.

FINISH AVAILABLE :
Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

SERVICE :
Designed for suspend hanger rod for support of
lights loads under 3.33 kN from a wall or structure.

PRODUCT CODE	A MM	B MM	C MM	W MM	DESIGN LOAD (KN)
TGLWB000E0229	229	155	203	50	3,33
TGLWB000E0330	330	257	305	50	3,33
TGLWB000E0483	483	409	457	50	3,33



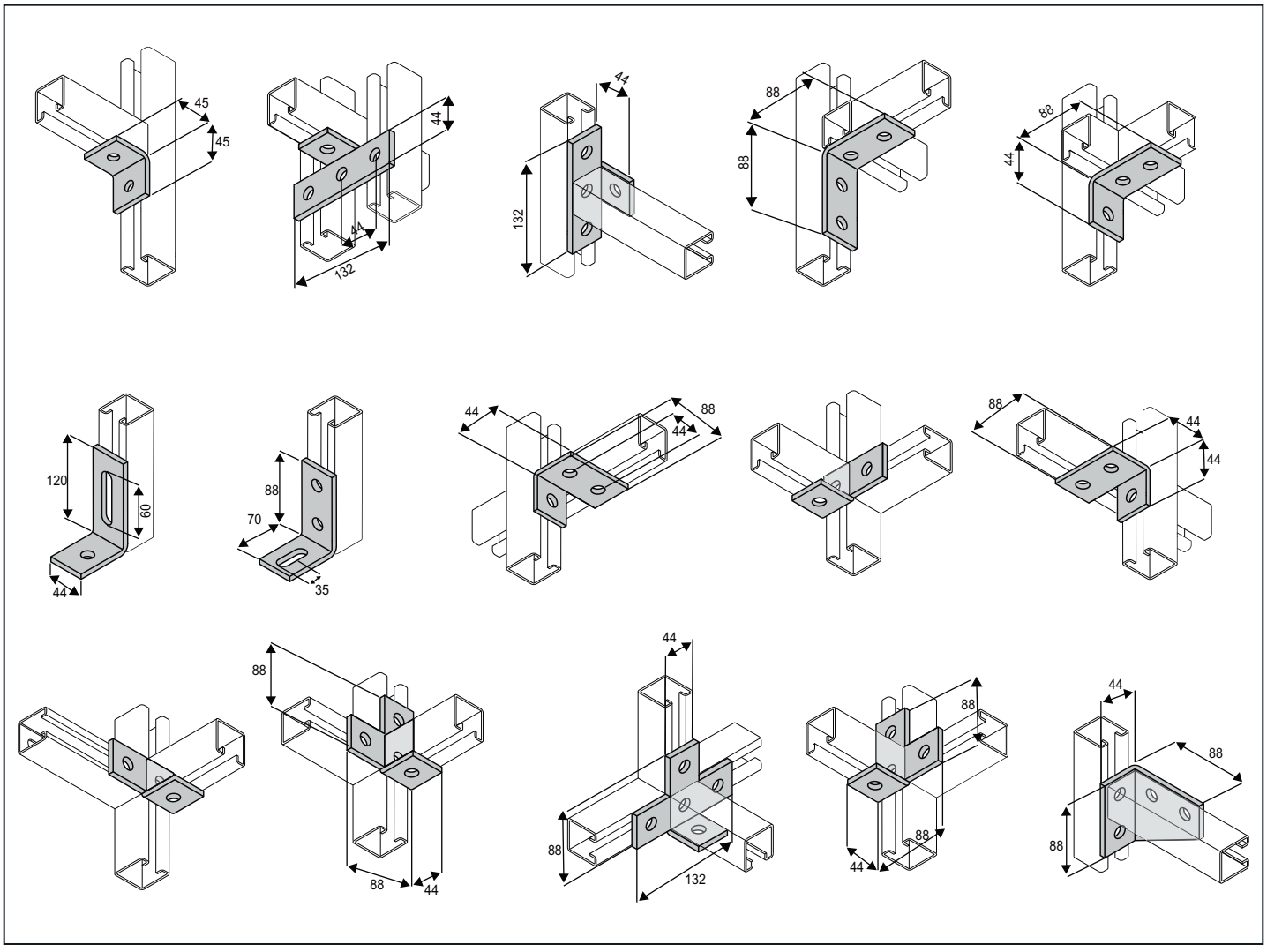
Unless otherwise specified assume that all holes dia 14 mm, thickness 6mm and for 41 - 45 - 60 series.

MATERIAL:

Mild Steel.

FINISH AVAILABLE :

Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

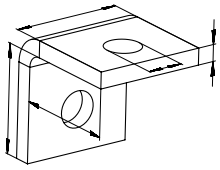


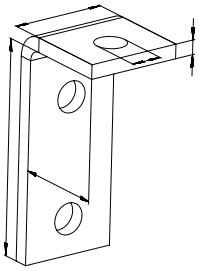
TG-AF 2

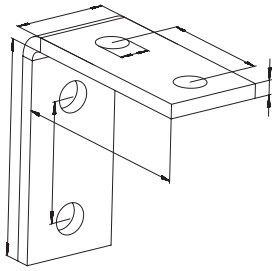
TG-AF 3

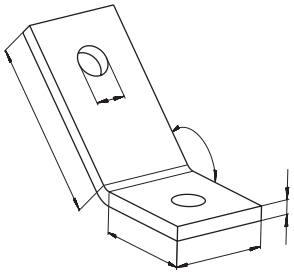
TG-AF 4

TG-AF 2/135^0







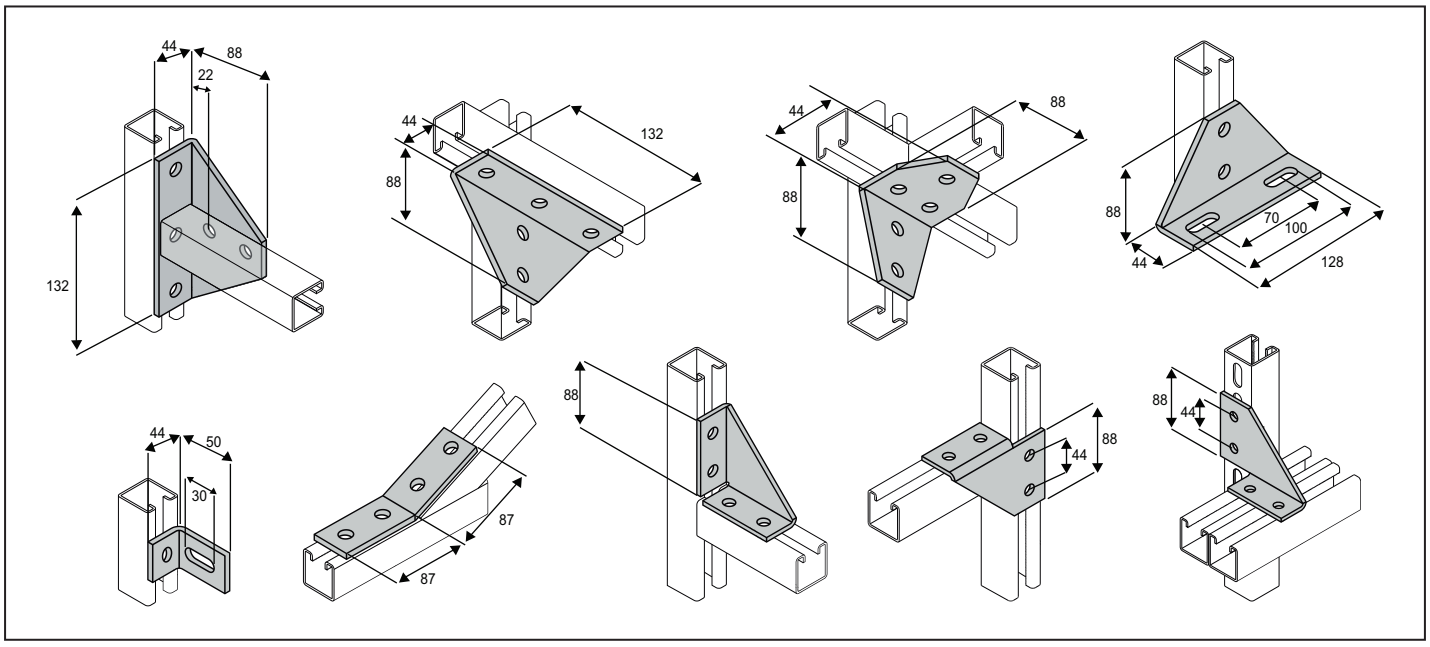


MATERIAL:

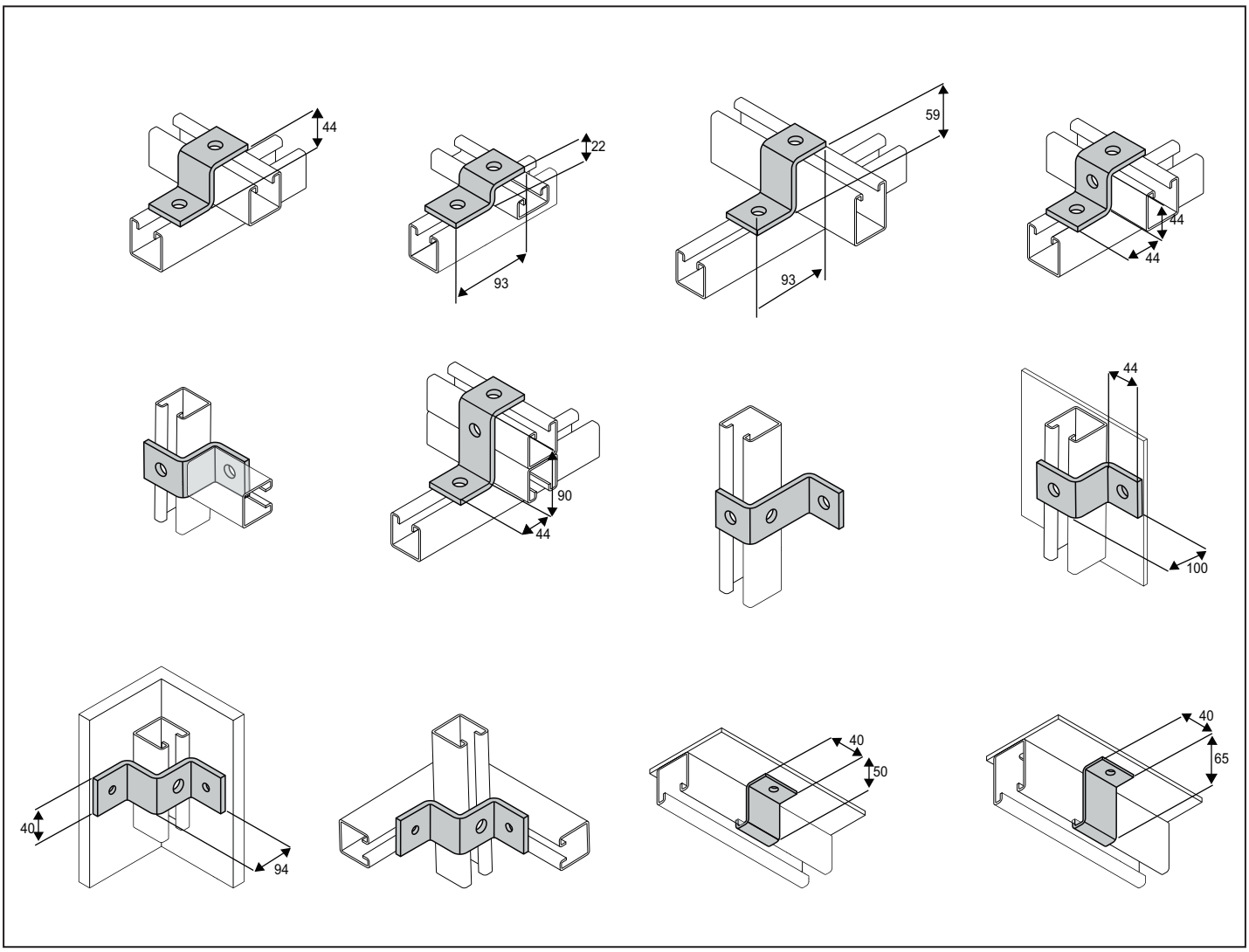
Mild Steel. Also other materials can be provided on request

FINISH AVAILABLE:

Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.



Unless otherwise specified assume that all holes dia 14 mm, thickness 6mm and for 41 - 45 - 60 series.



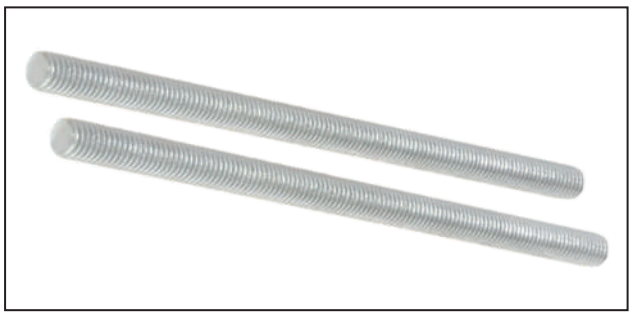
Unless otherwise specified assume that all holes dia 14 mm, thickness 6mm and for 41 series.

MATERIAL:
Mild Steel.

FINISH AVAILABLE :
Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

TEMBO
Powering Ahead

THREADED ROD & FASTENERS



FULL THREADED BARS

STANDARDS:

ASTM/ASMS/BS/DIN/BS EN ISO/JIS

MATERIAL:

Mild Steel, Carbon Steel, Alloy Steel & Stainless Steel

FINISH AVAILABLE :

Plain, Electro-Galvanized, Hot Dip Galvanized, Zinc Flake, Yellow, Cadmium & Nickel.

SIZE RANGE:

M6 to M100 in Metric Series

1/4" to 4" in Imperial

THREADS:

UNC, 8UN, UNF, Metric Coarse and Metric Fine

TYPICAL GRADES & STANDARDS:

ASTM A193 Grade B7, B7M, B8, B8M & B16

ASTM A320 Grade L7 & L7M

Stainless Steel 304,304L, 326, 316L, A2-70/80, A4-70/80

BS 3692/BS 4190 Grade 4.6, 4.8, 5.6, 5.8, 8.8

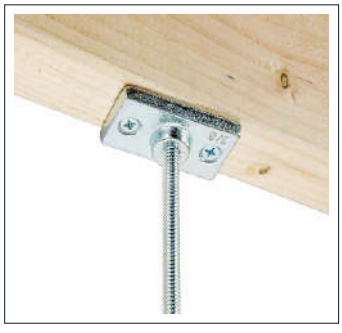
Any other specific grade can be manufactured upon request with short lead times.

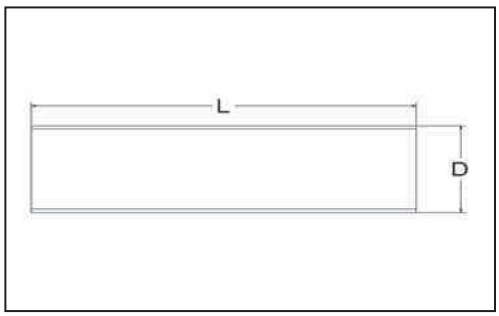
ORDERING INFORMATION:

Dimensions - Dia and Length

Standard and Grade

APPLICATION EXAMPLES:





Steel ThreadedRod

ANSI B.1.1/BS4882

Material To ASMT

A193-B7/B7M/B16/B8 & B8M

Steel Threaded

Rod to DIN 975

Material To ASMT

A193M-B7/B7M/B16/B8 & B8M

PRODUCT CODE	DIA(D)	THREAD PER INCH
TGTR00UE01400	1/4"UNC	20
TGTR00UE51600	5/16"UNC	18
TGTR00UE03800	3/8"UNC	16
TGTR00UE71600	7/16"UNC	14
TGTR00UE01200	1/2"UNC	13
TGTR00UE91600	9/16"UNC	12
TGTR00UE05800	5/8"UNC	11
TGTR00UE03400	3/4"UNC	10
TGTR00UE07800	7/8"UNC	9
TGTR00UE00100	1"UNC	8
TGTR00UE11800	1.1/8"UNC	7
TGTR00UE11800	1.1/8"UNC	8
TGTR00UE11400	1.1/4"UNC	7
TGTR00UE11400	1.1/4"UNC	8
TGTR00UE13800	1.3/8"UNC	6
TGTR00UE13800	1.3/8"UNC	8
TGTR00UE12200	1.2/2"UNC	6
TGTR00UE12200	1.2/2"UNC	8
TGTR00UE15800	1.5/8"UNC	8
TGTR00UE13400	1.3/4"UNC	8
TGTR00UE17800	1.7/8"UNC	8
TGTR00UE00200	2"UNC	8
TGTR00UE21400	2.1/4"UNC	8
TGTR00UE21200	2.1/2"UNC	8
TGTR00UE23400	2.3/4"UNC	8
TGTR00UE00300	3"UNC	8

PRODUCT CODE	DIA(D)	THREAD PITCH (mm)
TGTR00ME00600	M6	1
TGTR00ME00800	M8	1.25
TGTR00ME01000	M10	1.5
TGTR00ME01200	M12	1.75
TGTR00ME01400	M14	2
TGTR00ME01600	M16	2
TGTR00ME01800	M18	2.5
TGTR00ME02000	M20	2.5
TGTR00ME02200	M22	2.5
TGTR00ME02400	M24	3
TGTR00ME02700	M27	3
TGTR00ME03000	M30	3.5
TGTR00ME03300	M33	3.5
TGTR00ME03600	M36	4
TGTR00ME03900	M39	4
TGTR00ME04200	M42	4.5
TGTR00ME04500	M45	4.5
TGTR00ME04800	M48	5
TGTR00ME05200	M52	5
TGTR00ME05600	M56	5.5
TGTR00ME06400	M64	6
TGTR00ME07200	M72	6

Full Threaded Studs and Engineering Studs

STANDARDS:-

ASTM/ASME/BS/DIN/BS EN ISO /JIS

MATERIAL:-

Mild Steel, Carbon Steel, Alloy Steel & Stainless Steel.

FINISH AVAILABLE :

Plain, Electro-Galvanized, Hot Dip Galvanized, Zinc Flake, Yellow, Cadmium & Nickel.

SIZE RANGE:-

M6 to M100 in metric series

¼" to 4" in imperial

THREADS:-

UNC, 8UN, UNF, Metric Coarse and Metric Fine

TYPICAL GRADES & STANDARDS:-

ASTM A193 Grade B, B7M, B8, B8M & B16

ASTM A320 Grade L7 & L7M

Any other specific grade can be manufactured upon request with short lead times.

ORDERING INFORMATION:-

Dimensions - Dia and length.

Standard and Grade.

Nut and washer quantity

Anchor bolts, Foundation bolts, holding down Bolts, U Bolts, Sag Rods & Tie Rods can be manufactured as per customer's drawing and as per grade required.

STANDARDS:-

ASTM/ASME/BS/DIN/BS EN ISO /JIS

MATERIAL:-

Mild Steel, Carbon Steel, Alloy Steel & Stainless Steel.

FINISH AVAILABLE :

Plain, Electro-Galvanized, Hot Dip Galvanized, Zinc Flake, Yellow, Cadmium & Nickel.

SIZE RANGE:-

M6 to M100 in metric series

¼" to 4" in imperial

THREADS:-

UNC, 8UN, UNF, Metric Coarse and Metric Fine

Typical Grades & Standards:-

BS 3692 / BS 4190 grade 4.6, 4.8, 5.6, 5.8, 8.8, 10.9 and 12.9

ASTM A307, A325, A193, B7 & B16, ASTM A320 L7

Stainless Steel 304, 304L, 316, 316L, A2-70/80, A4-70/80, ASTM A193 Grade B8 & B8M

ASTM A675 Grade 90, ASTM A572 Grade 50 and ASTM F1554 grade 36, 55 and 105

Any other specific grade can be manufactured upon request with short lead times.

ORDERING INFORMATION:-

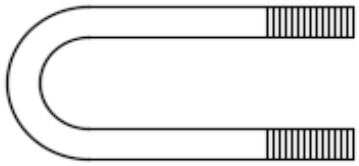
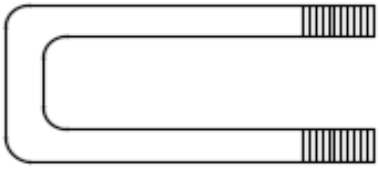
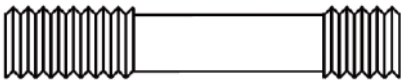
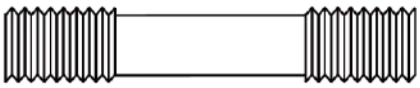
Dimensions.

Standard and Grade.

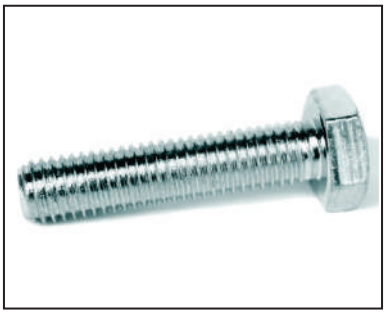
Nut and washer quantity

Plate and sleeve dimensions (if required).

SPECIALLY MANUFACTURED ITEMS:-

	'U' Bolts Grip and Non Grip Type	N.B. (1/2") M15-(24") M600 DIA. Bar Size Range (1/4") M6 - (4") M100
	Square Bend 'U' Bolts	Bar Size Range (1/4") M6 - (4") M100
	'J' Foundation Bolts	Bar Size Range (1/4") M6 - (4") M100
	Double Ended Engineer Studs	Bar Size Range (1/4") M6 - (4") M100
	Waisted Double Ended Engineer Studs	Bar Size Range (1/4") M6 - (4") M100
	Tie Bars & Foundation Bolts	Bar Size Range (1/4") M6 - (4") M100

- All products are available with the appropriate grades of nuts and washers
- All forms of plating and coating can be carried out



Hex Head and Heavy Hex Head in Full and Partial Threading

STANDARDS:-

ASTM/ASME/BS/DIN/BS EN ISO /JIS

MATERIAL:-

Mild Steel, Carbon Steel, Alloy Steel & Stainless Steel.

FINISH AVAILABLE :

Plain, Electro-Galvanized, Hot Dip Galvanized, Zinc Flake, Yellow, Cadmium & Nickel.

SIZE RANGE:-

M6 to M64 in metric series
¼" to 2½" in imperial
Bigger sizes can be manufactured as per order.

THREADS:-

UNC, 8UN, UNF, Metric Coarse and Metric Fine

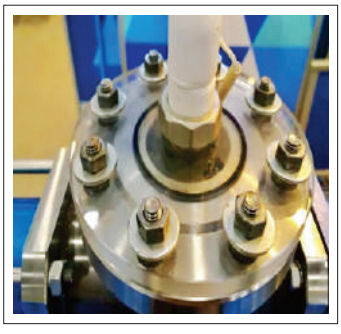
TYPICAL GRADES & STANDARDS:-

BS3692 / BS4190 grade 4.6, 4.8, 5.6, 5.8, 8.8, 10.9 and 12.9
ASTM A307 Grade A and B
ASTM A325
ASTM A193 Grade B7, B7M, B8, B8M & B16
ASTM A320 Grade L7 & L7M
Stainless Steel 304, 304L, 316, 316L, A2-70/80, A4-70/80
Any other specific grade can be manufactured upon request with short lead times.

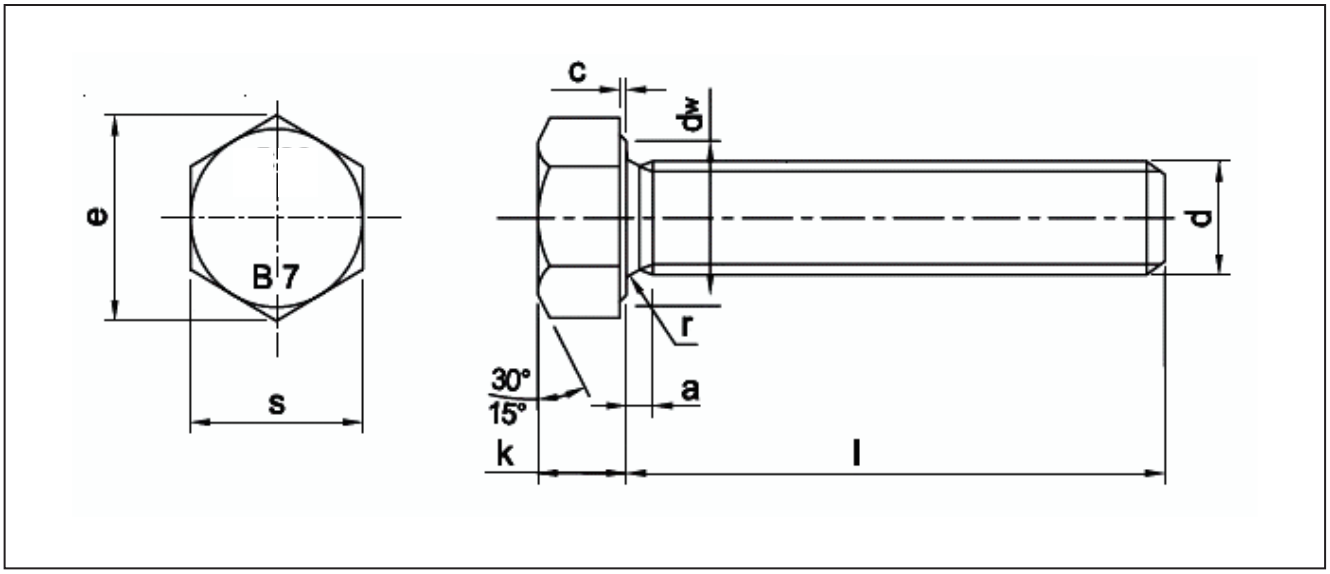
ORDERING INFORMATION:-

Dimensions – Size Dia and Length.
Standards and Grade

APPLICATION EXAMPLES:

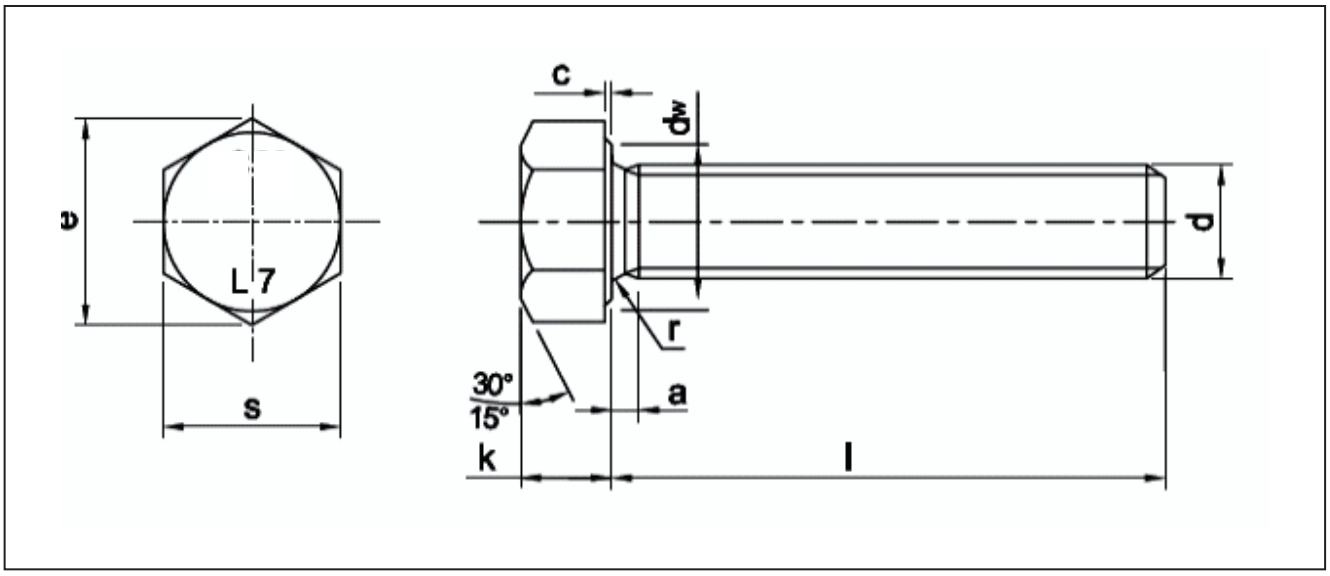


DIN 93 HEXAGON HEAD BOLT
Material ASTM A193 Grade B7



Threads (d)		M6	M8	M10	M12	M16	M20	M24	M27	M30	M33	M36	M39	M42	M45	M52
Across flat (s)	Min	9.78	12.73	16.73	18.67	23.67	29.67	35.38	40.00	45.00	49.00	53.80	58.80	63.10	68.10	78.10
	Max	10.00	13.00	17.00	19.00	24.00	30.00	36.00	41.00	46.00	50.00	55.00	60.00	65.00	70.00	80.00
Across corner(e)	Min	11.05	14.38	18.90	21.10	26.75	33.53	39.98	45.20	50.85	55.37	60.79	66.44	71.30	76.95	88.25
Head Thickness(k)	Min	3.85	5.15	6.22	7.32	9.82	12.28	14.78	16.65	18.28	20.58	22.08	24.58	25.58	27.58	32.50
	Max	4.15	5.45	6.58	7.68	10.18	12.72	15.22	17.35	19.12	21.42	22.92	25.42	26.42	28.42	33.50
Unthreaded Length (a)	Min	1.00	1.25	1.5	1.75	2.00	2.50	3.00	3.00	3.50	3.50	4.00	4.00	4.50	4.50	5.00
	Max	3.00	4.00	4.50	5.30	6.00	7.50	9.00	9.00	10.50	10.50	12.00	12.00	13.50	13.50	5.00
Washer face Depth (c)	Min	0.15	0.15	0.15	0.15	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.30	0.30	0.30	0.30
	Max	0.50	0.60	0.60	0.60	0.80	0.80	0.80	0.80	0.80	0.80	0.80	1.00	1.00	1.00	1.00
Washer face Dia (dw)	Min	8.88	11.63	15.60	17.40	22.49	28.19	33.61	38.00	42.70	46.50	51.10	55.90	55.90	64.70	74.20
Head junction Radius(r)	Min	0.25	0.40	0.40	0.60	0.60	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.60

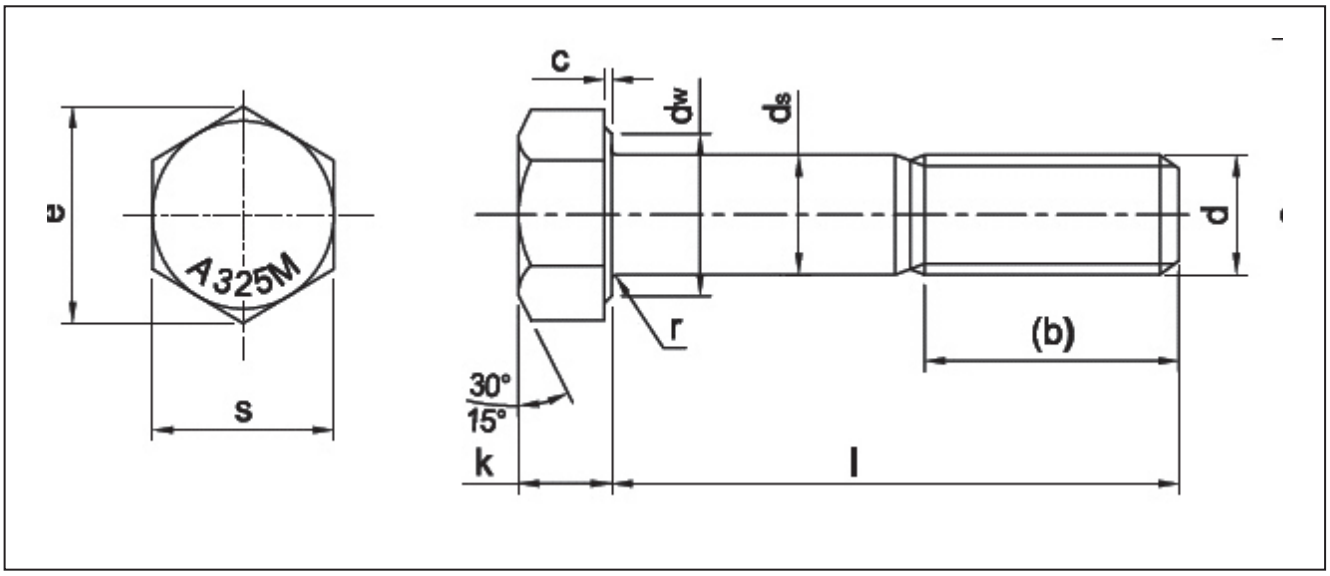
DIN 933 HEXAGON HEAD BOLT
Material ASTM A320 Grade L7



A320 L7 HEX BOLTS

Threads (d)		M6	M8	M10	M12	M16	M20	M24	M27	M30	M33	M36	M39	M42	M45	M52
Across flat (s)	Min	9.78	12.73	16.73	18.67	23.67	29.67	35.38	40.00	45.00	49.00	53.80	58.80	63.10	68.10	78.10
	Max	10.00	13.00	17.00	19.00	24.00	30.00	36.00	41.00	46.00	50.00	55.00	60.00	65.00	70.00	80.00
Across corner(e)	Min	11.05	14.38	18.90	21.10	26.75	33.53	39.98	45.20	50.85	55.37	60.79	66.44	71.30	76.95	88.25
Head Thickness(k)	Min	3.85	5.15	6.22	7.32	9.82	12.28	14.78	16.65	18.28	20.58	22.08	24.58	25.58	27.58	32.50
	Max	4.15	5.45	6.58	7.68	10.18	12.72	15.22	17.35	19.12	21.42	22.92	25.42	26.42	28.42	33.50
Unthreaded Length (a)	Min	1.00	1.25	1.5	1.75	2.00	2.50	3.00	3.00	3.50	3.50	4.00	4.00	4.50	4.50	5.00
	Max	3.00	4.00	4.50	5.30	6.00	7.50	9.00	9.00	10.50	10.50	12.00	12.00	13.50	13.50	5.00
Washer face Depth (c)	Min	0.15	0.15	0.15	0.15	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.30	0.30	0.30	0.30
	Max	0.50	0.60	0.60	0.60	0.80	0.80	0.80	0.80	0.80	0.80	0.80	1.00	1.00	1.00	1.00
Washer face Dia (dw)	Min	8.88	11.63	15.60	17.40	22.49	28.19	33.61	38.00	42.70	46.50	51.10	55.90	55.90	64.70	74.20
Head junction Radius(r)	Min	0.25	0.40	0.40	0.60	0.60	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.60

ASTM A325M HEX BOLTS

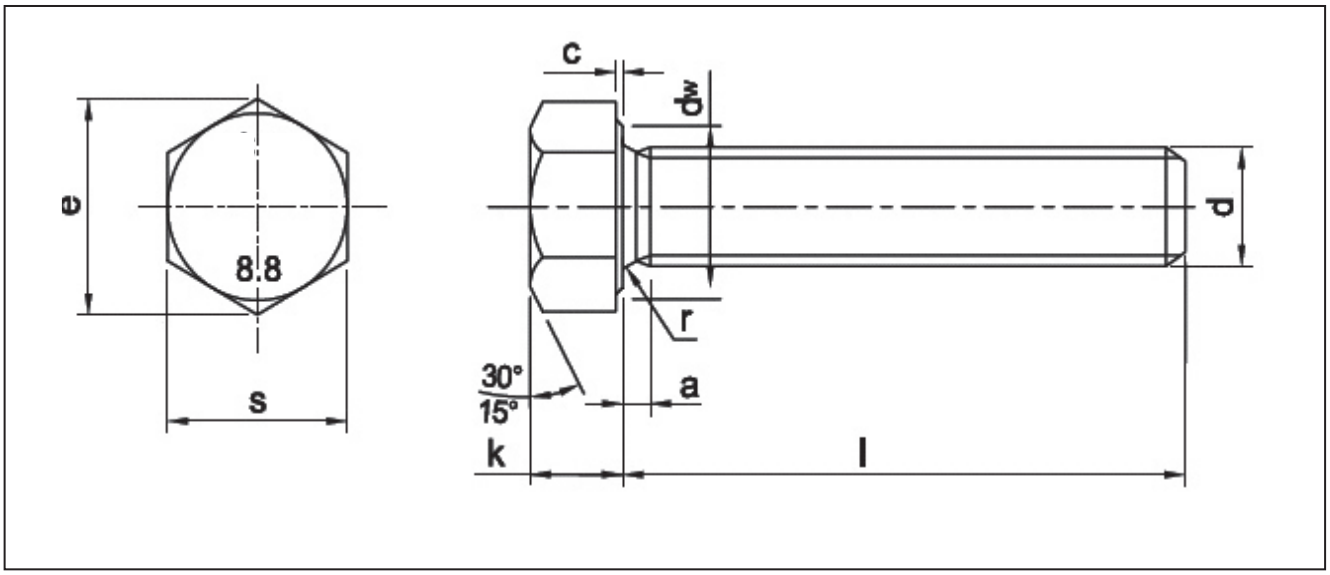


A325M HEX BOLTS

Threads (d)		M16	M20	M24	M27	M30	M33	M36
Across flat (s)	Min	26.16	33.00	35.00	40.00	45.00	49.00	58.80
	Max	27.00	34.00	36.00	41.00	46.00	50.00	60.00
Across corner(e)	Min	29.56	37.29	39.55	45.20	50.85	55.37	66.44
	Max	31.18	39.26	41.57	47.34	53.12	57.74	69.28
Head Thickness(k)	Min	9.25	11.60	13.10	14.10	16.10	17.65	21.45
	Max	10.75	13.40	14.90	15.90	17.90	19.75	23.55
Washer face Depth (c)	Min	0.40	0.40	0.40	0.40	0.40	0.40	0.40
	Max	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Washer face Dia (dw)	Min	24.90	31.40	33.30	38.00	42.80	46.50	55.90
Shank Diameter (d s)	Min	15.30	19.16	21.16	23.16	26.16	29.16	35.00
	Max	16.70	20.84	22.84	24.84	27.84	30.84	37.00
Head junction Radius(r)	Min	0.60	0.80	0.80	1.00	1.20	1.20	1.50
Thread Length (b)	1<100	31	36	38	41	44	49	56
	1>100	38	43	45	48	51	56	63

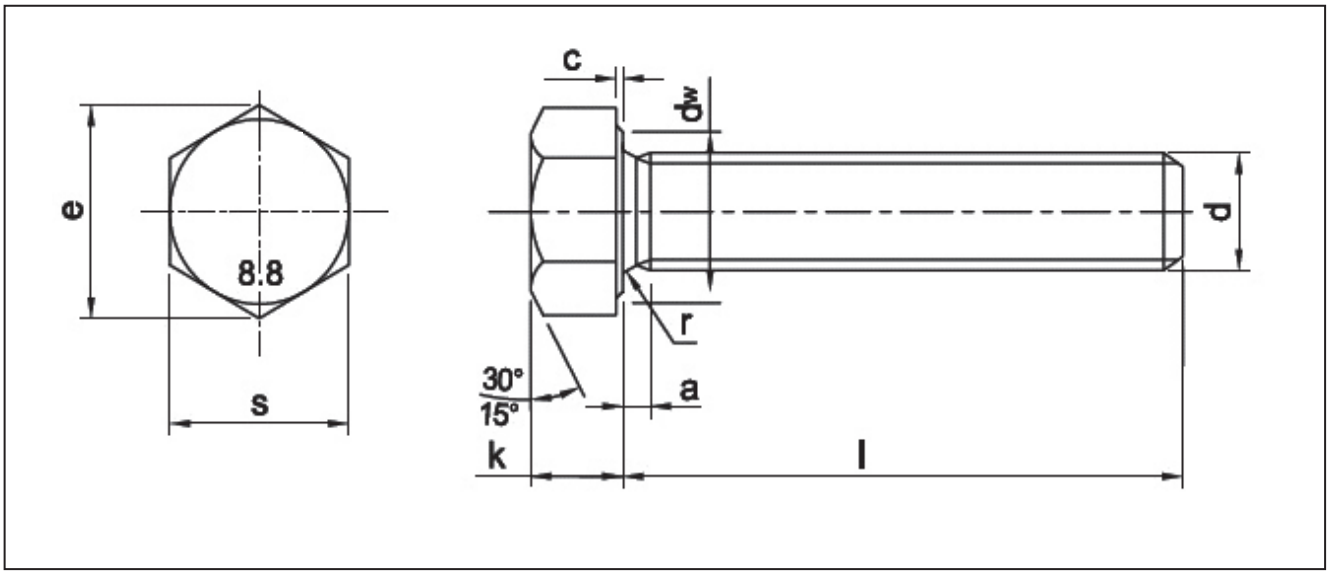
l = Overall length of the Bolt

DIN 933 HEX SCREWS (FULL THREAD)
Grades 4.6, 8.8, 10.9, 12.9, A2 70, A2 80, A4 70 and A4 80



Threads (d)		M6	M8	M10	M12	M16	M20	M24	M27	M30	M33	M36	M39	M42	M45	M52
Across flat (s)	Min	9.78	12.73	16.73	18.67	23.67	29.67	35.38	40.00	45.00	49.00	53.80	58.80	63.10	68.10	78.10
	Max	10.00	13.00	17.00	19.00	24.00	30.00	36.00	41.00	46.00	50.00	55.00	60.00	65.00	70.00	80.00
Across corner(e)	Min	11.05	14.38	18.90	21.10	26.75	33.53	39.98	45.20	50.85	55.37	60.79	66.44	71.30	76.95	88.25
Head Thickness(k)	Min	3.85	5.15	6.22	7.32	9.82	12.28	14.78	16.65	18.28	20.58	22.08	24.58	25.58	27.58	32.50
	Max	4.15	5.45	6.58	7.68	10.18	12.72	15.22	17.35	19.12	21.42	22.92	25.42	26.42	28.42	33.50
Unthreaded Length (a)	Min	1.00	1.25	1.5	1.75	2.00	2.50	3.00	3.00	3.50	3.50	4.00	4.00	4.50	4.50	5.00
	Max	3.00	4.00	4.50	5.30	6.00	7.50	9.00	9.00	10.50	10.50	12.00	12.00	13.50	13.50	5.00
Washer face Depth (c)	Min	0.15	0.15	0.15	0.15	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.30	0.30	0.30	0.30
	Max	0.50	0.60	0.60	0.60	0.80	0.80	0.80	0.80	0.80	0.80	0.80	1.00	1.00	1.00	1.00
Washer face Dia (dw)	Min	8.88	11.63	15.60	17.40	22.49	28.19	33.61	38.00	42.70	46.50	51.10	55.90	55.90	64.70	74.20
Head junction Radius(r)	Min	0.25	0.40	0.40	0.60	0.60	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.60

DIN 931 HEX BOLTS (HALF THREAD)
Grades - 4.6, 8.8, A2 70, A2 80, A4 70 and A4 80

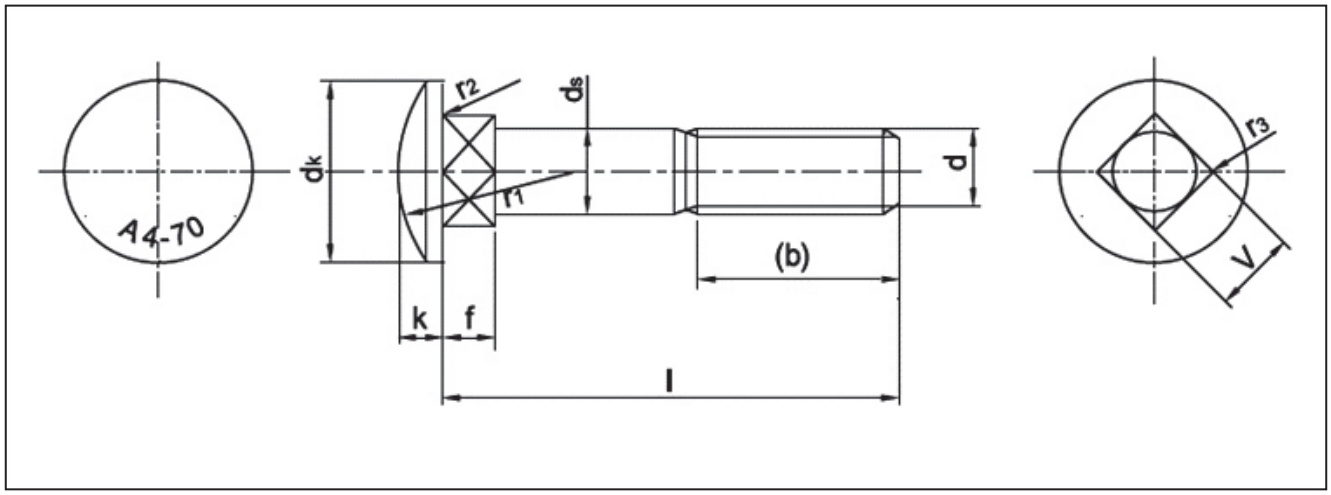


A320 L7 HEX BOLTS

Threads (d)		M6	M8	M10	M12	M16	M20	M24	M27	M30	M33	M36	M39	M42	M45	M52
Across flat (s)	Min	9.78	12.73	16.73	18.7	23.67	29.67	35.38	40.00	45.00	49.00	53.80	58.80	63.10	68.10	78.10
	Max	10.00	13.00	17.00	19.00	24.00	30.00	36.00	41.00	46.00	50.00	55.00	60.00	65.00	70.00	80.00
Across corner(e)	Min	11.05	14.38	18.90	21.10	26.75	33.53	39.98	45.20	50.85	55.37	60.79	66.44	71.30	76.95	88.25
Head Thickness(k)	Min	3.85	5.15	6.22	7.32	9.82	12.28	14.78	16.65	18.28	20.58	22.08	24.58	25.58	27.58	32.50
	Max	4.15	5.45	6.58	7.68	10.18	12.72	15.22	17.35	19.12	21.42	22.92	25.42	26.42	28.42	33.50
Washer face Depth (c)	Min	0.15	0.15	0.15	0.15	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.30	0.30	0.30	0.30
	Max	0.50	0.60	0.60	0.60	0.80	0.80	0.80	0.80	0.80	0.80	0.80	1.00	1.00	1.00	1.00
Washer face Dia (dw)	Min	0.15	0.15	0.15	0.15	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.30	0.30	0.30	0.30
	Max	0.50	0.60	0.60	0.60	0.80	0.80	0.80	0.80	0.80	0.80	0.80	1.00	1.00	1.00	1.00
Shank Diameter (ds)	Min	5.82	7.78	9.78	11.73	15.73	19.67	23.67	27.00	30.00	33.00	36.00	39.00	42.00	45.00	52.00
	Max	6.00	8.00	10.00	12.00	16.00	20.00	24.00	26.48	29.48	32.38	35.38	38.38	41.38	44.38	51.26
Head junction Radius(r)	Min	0.25	0.40	0.40	0.60	0.60	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.60
Thread Length (b)	l<125*	18	22	26	30	38	46	54	60	66						
	125<200	24	28	32	36	44	52	60	66	72	78	84	90	96	102	116
	l>200*	37	41	45	49	57	65	73	79	85	91	97	103	109	115	129

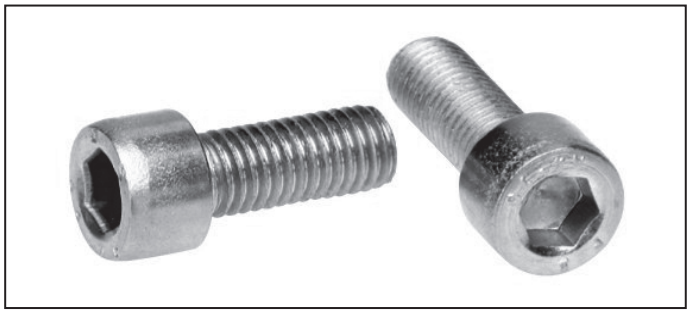
l = Overall length of the Bolt

DIN 603 STAINLESS STEEL CARRIAGE BOLT/MUSHROOM BOLT



Threads (d)		M6	M8	M10	M12
dk	Min	15.45	19.35	23.35	29.35
	Max	16.55	20.65	24.65	30.65
ds	Min	5.52	7.42	9.42	11.30
	Max	6.00	8.00	10.00	12.00
f	Min	3.40	4.40	5.40	7.25
	Max	4.60	5.60	6.60	8.75
k	Min	3.12	4.12	4.62	6.05
	Max	3.88	4.88	5.38	6.95
r1	Approx	12.60	16.00	19.20	24.10
r2	Max	0.50	0.50	0.50	1.00
r3	Max	0.90	1.20	1.50	1.80
v	Min	5.52	7.42	9.42	11.30
	Max	6.48	8.58	10.58	12.70
(b)	1<125*	18	22	26	30
	125<200	24	28	32	36
	1>200*	37	41	45	49

l = Overall length of the Bolt



Socket Screws are also known as Allen Head Bolts and are fastened with a hex Allen wrench. Socket Screws are available in various head styles and materials.

STANDARDS:-
DIN/BS EN ISO

MATERIAL:-
Alloy Steel & Stainless Steel (304, 304L, 316, 316L)

FINISH AVAILABLE :
Plain & Electro-Galvanized.

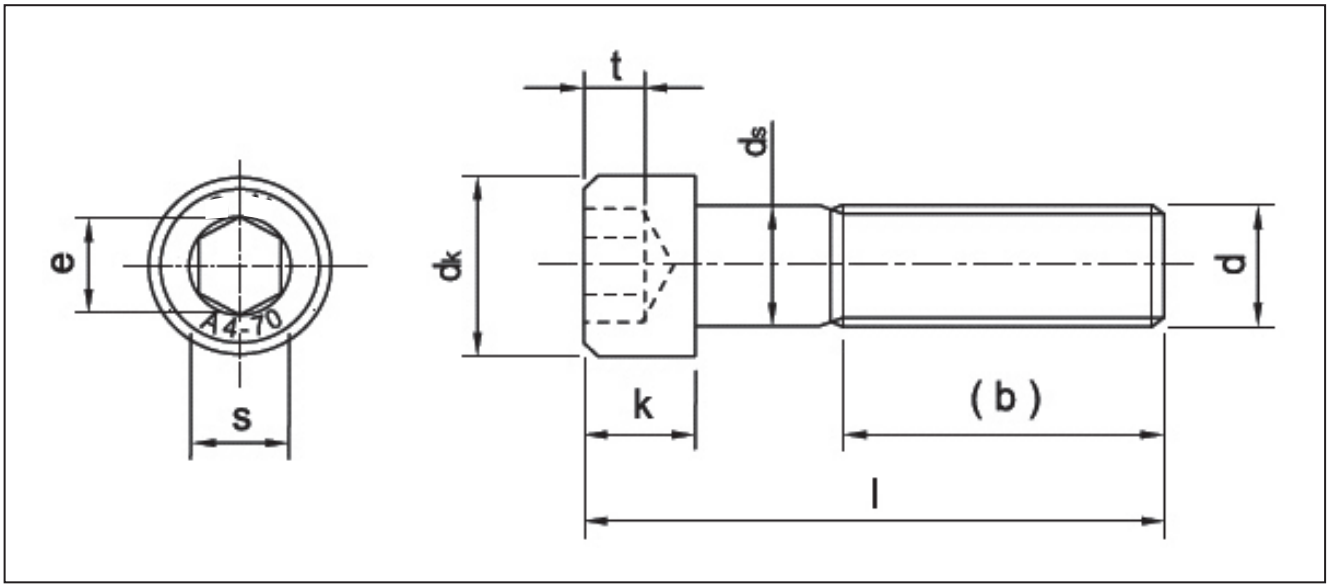
SIZE RANGE:-
M5 to M24 in metric series
Bigger sizes can be manufactured as per order.

THREADS:-
Metric Coarse and Metric Fine

TYPICAL GRADES & STANDARDS:-
A2-70/80, A4-70/80
DIN 912
DIN 7991
ISO 7380
Any other specific grade can be manufactured upon request with short lead times.

ORDERING INFORMATION:-
Dimensions - Size Dia and Length.
Standard and Material Grade
Nut and Washer quantity

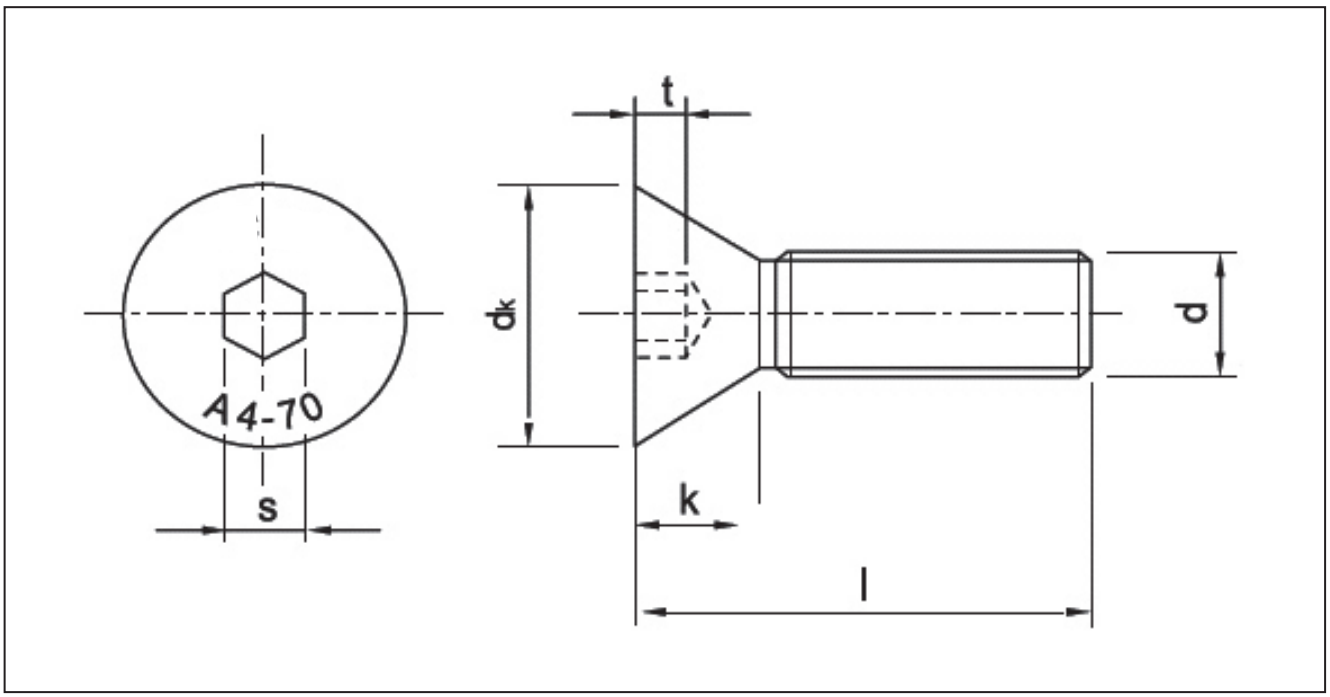
DIN 912 STAINLESS STEEL HEXAGON SOCKET HEAD CAPSCREW



Threads (d)		M6	M8	M10	M12
dk	Min	9.78	12.73	15.73	17.73
	Max For Plain Heads	10.00	13.00	16.00	18.00
	Max For Knurled Heads	10.22	13.27	16.27	18.27
ds	Min	5.82	7.78	9.78	11.73
	Max	6.00	8.00	10.00	12.00
s	Min	5.02	6.02	8.03	10.03
	Max	5.14	6.14	8.175	10.175
e	Min	5.723	6.863	9.149	11.429
k	Min	5.70	7.64	9.64	11.57
	Max	6.00	8.00	10.00	12.00
t	Min	3.00	4.00	5.00	6.00
(b)	Ref	24	28	32	36

l = Overall length of the Bolt

DIN 7991 STAINLESS STEEL HEXAGON SOCKET COUNTERSUNK SCREW



Threads (d)	M6	M8	M10	M12
dk	12.00	16.00	20.00	24.00
s	4.00	5.00	6.00	8.00
k	3.30	4.40	5.50	6.50
t	2.50	3.50	4.40	4.60

l = Overall length of the Bolt

Standard Hex Nut, Heavy Hex Nut, Hex Coupling Nut, Nylon Lock Nut, Spring Nut, Dome Nut and Wing Nut

STANDARDS:-
ASTM/ASME/BS/DIN/BS EN ISO /JIS

MATERIAL:-
Mild Steel, Carbon Steel, Alloy Steel & Stainless Steel.

FINISH AVAILABLE :
Plain, Electro-Galvanized, Hot Dip Galvanized, Zinc Flake, Yellow, Cadmium & Nickel.

SIZE RANGE:-
M6 to M64 in metric series
¼" to 2-½" in imperial
Bigger sizes can be manufactured as per order.

THREADS:-
UNC, 8UN, UNF, Metric Coarse and Metric Fine

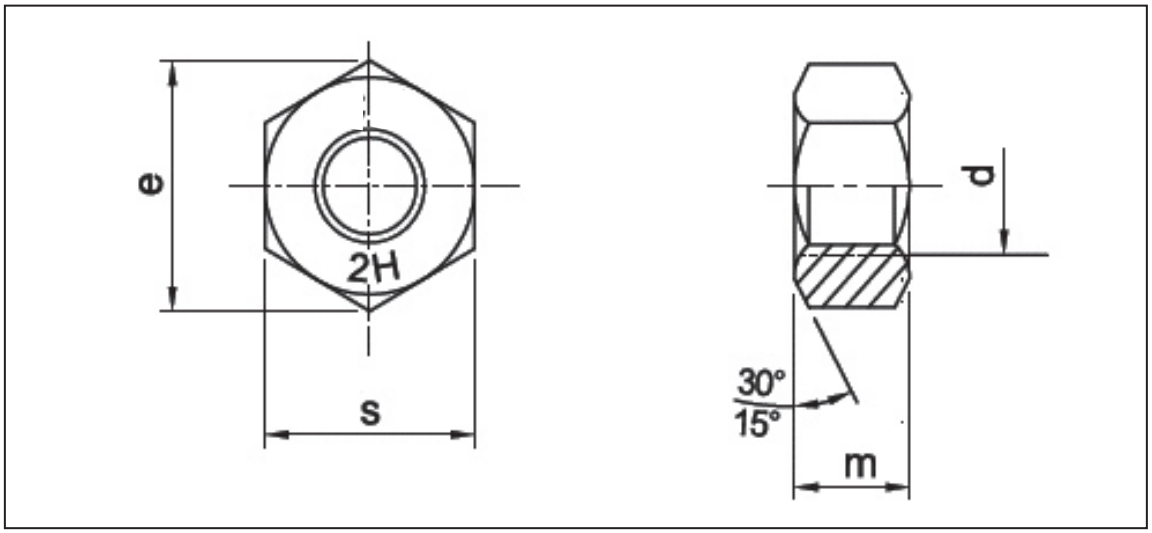
TYPICAL GRADES & STANDARDS:-
DIN 934 Class 4, 8, 10, 12, A270, A280, A470 and A480
ASTM A194/A194M Grades 2H, 2HM, 4L, 7L and 7LM
ASTM A563/563M Grades 8, 10S, A, B, C, D, DH, DH3

ORDERING INFORMATION:-
Dimensions - Size.
Standard and Grade

APPLICATION EXAMPLES:

HEAVY HEX NUTS TO DIN 934 (H=D)

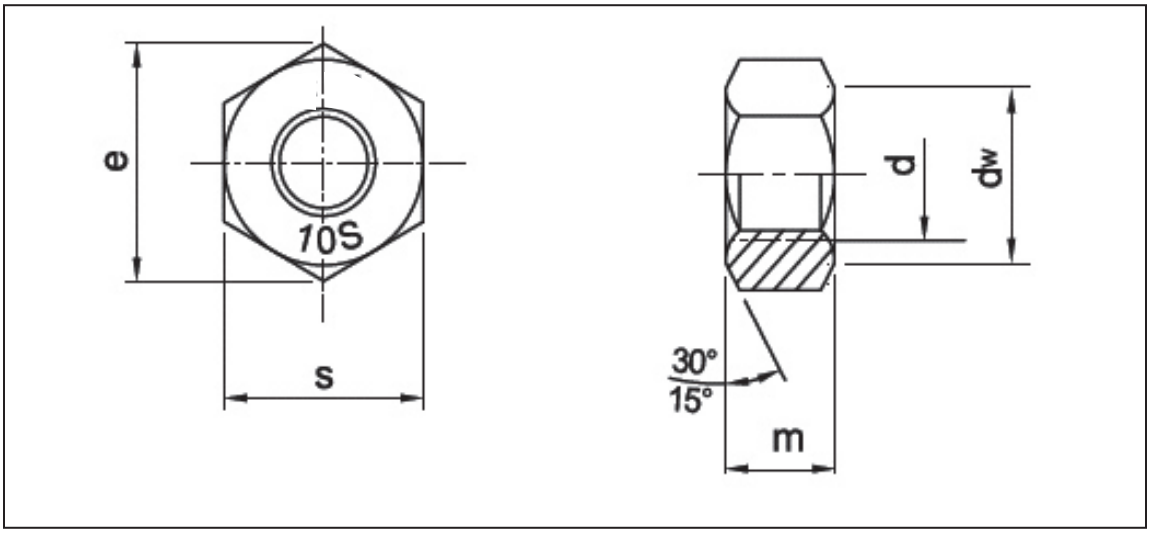
Material ASTM A194 Grade 2H/2HM/4L, 7L, 7LM



A194 HEAVY HEX BOLTS

DIA.(D)	THREAD PITCH	ACROSS FLATS AF	THICKNESS (M)	WEIGHT KG/100
M8	1.25	13	8	0.65
M10	1.5	17	10	1.45
M12	1.75	19	12	2.17
M14	2	22	14	3.13
M16	2	24	16	4.16
M18	2.5	27	18	6.20
M20	2.5	30	20	8.05
M22	2.5	32	22	9.85
M24	3	36	24	13.80
M27	3	41	27	20.65
M30	3.5	46	30	27.90
M33	3.5	50	33	36.00
M36	4.0	55	36	49.15
M39	4.0	60	39	42.75
M42	4.5	65	42	81.50
M45	4.5	70	45	100.00
M48	5.0	75	48	122.00
M52	5.0	80	52	152.50
M56	5.5	85	56	177.50
M64	6.0	95	64	247.50
M72	6.0	105	72	334.50
M76	6.0	110	76	380.00

A563M - 10S HEAVY HEX NUTS

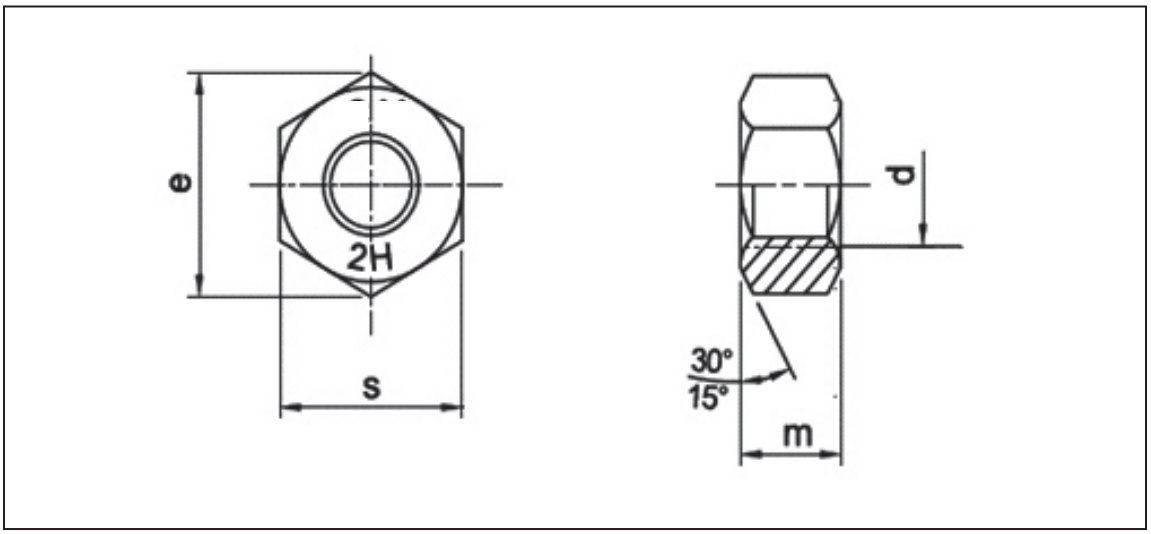


A563-10S HEAVY HEX BOLTS

Threads (d)		M12	M16	M20	M22	M24	M27	M30	M36
Across flat (s)	Min	20.16	26.16	33.00	35.00	40.00	45.00	49.00	58.80
	Max	21.00	27.00	34.00	36.00	41.00	46.00	50.00	60.00
Across corner (e)	Min	22.78	29.56	37.29	39.55	45.20	50.85	55.37	66.44
Nut Thickness (m)	Min	11.90	16.40	19.40	22.30	22.90	26.30	29.10	35.00
	Max	12.30	17.10	20.70	23.60	24.20	27.60	30.70	36.60
Bearing face Dia(dw)	Min	19.20	24.90	31.40	33.30	38.00	42.80	46.60	55.90

HEAVY HEX NUTS TO ANSI B18.2.2

Material ASTM A194 Grade 2H/2HM/4L, 7L, 7LM



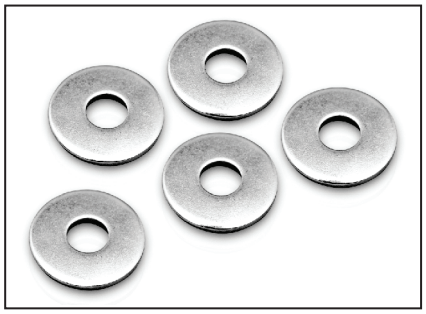
A194 HEAVY HEX BOLTS

DIA.(D)	THREAD PITCH	ACROSS FLATS AF	THICKNESS(M)	WEIGHT KG/100
1/4" UNC	20	7/16"	1/4"	0.3
5/16" UNC	18	1/2"	5/16"	0.4
3/8" UNC	16	11/16"	3/8"	1.4
7/16" UNC	14	3/4"	3/16"	1.9
1/2" UNC	13	7/8"	1/2"	3.0
9/16" UNC	12	15/16"	9/6"	3.7
5/8" UNC	11	1.1/16"	5/8"	5.4
3/4" UNC	10	1.14"	3/4"	8.8
7/8" UNC	9	1.7/16"	7/8"	13.5
1" UNC	8	1.5/8"	1"	19.3
1.1/8" UNC	8	1.13/16"	1.1/8"	26.9
1.1/4" UNC	8	2"	1.1/4"	35.7
1.3/8" UNC	8	2.3/16"	1.3/8"	46.3
1.1/2" UNC	8	2.3/8"	1.1/2"	59.5
1.5/8" UNC	8	2.9/16"	1.5/8"	73.6
1.3/4" UNC	8	2.3/4"	1.3/4"	92.7
1.7/8" UNC	8	2.15/16"	1.7/8"	109.5
2" UNC	8	3.1/8"	2"	135.8
2.1/4" UNC	8	3.1/2"	2.1/4"	190.3
2.1/2" UNC	8	3.7/8"	2.1/4"	256
2.3/4" UNC	8	4.1/4"	2.3/4"	335
3" UNC	8	4.5/8"	3"	432
3.1/4" UNC	8	5"	3.1/4"	543
3.1/2" UNC	8	5.3/8"	3 1/2"	694

DIN 934 HEX NUTS

DIN 934 HEX NUTS

THREADS (D)	ACROSS FLAT (S)	ACROSS CORNER (E)	NUT THICKNESS (M)
M6	10.00	11.05	6.00
M8	13.00	14.38	6.50
M10	17.00	18.90	8.00
M12	19.00	21.10	10.00
M16	24.00	26.75	13.00
M20	30.00	32.95	16.00
M24	36.00	39.55	19.00
M27	41.00	45.20	22.00
M30	46.00	50.85	24.00
M33	50.00	55.37	26.00
M36	55.00	60.79	29.00
M39	60.00	66.44	31.00
M42	65.00	71.30	34.00
M45	70.00	76.95	36.00
M48	75.00	82.60	38.00
M52	80.00	88.25	42.00
M56	85.00	93.56	45.00
M64	95.00	104.86	51.00
M72	105.00	116.16	58.00



Plain Washers, Spring Lock Washers and Hardened Steel Washers

STANDARDS:-

ASTM/ASME/BS/DIN/BS EN ISO /JIS

MATERIAL:-

Mild Steel, Carbon Steel, Alloy Steel & Stainless Steel.

FINISH AVAILABLE :
Plain, Electro-Galvanized, Hot Dip Galvanized, Zinc Flake, Yellow, Cadmium & Nickel.

SIZE RANGE:-

M6 to M64 in metric series
¼" to 2-½" in imperial
Bigger sizes can be manufactured as per order.

TYPICAL GRADES & STANDARDS:-

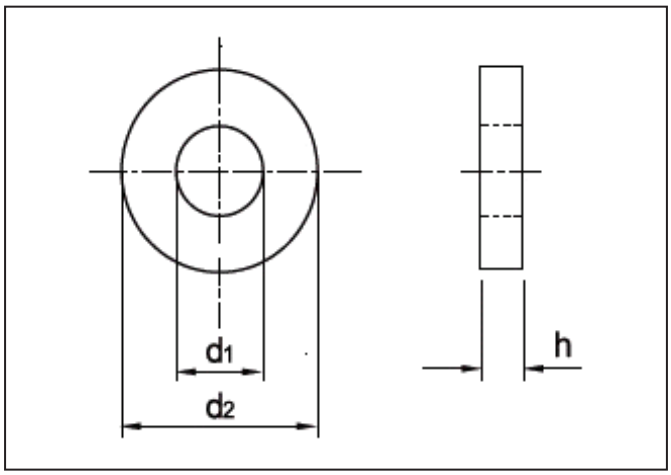
DIN 125/A
DIN 127/B
DIN 9021
ASTM F436 and F436M
Any other specific grade can be manufactured upon request with short lead times

ORDERING INFORMATION:-

Dimensions – Size.
Standard and Grade

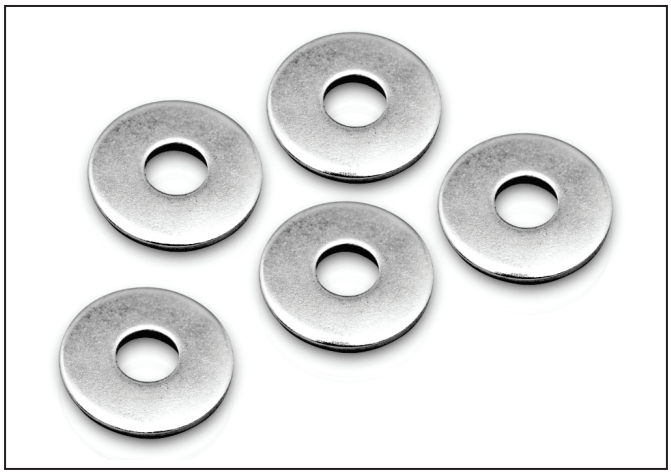
APPLICATION EXAMPLES:

DIN 125 FLAT WASHER



WASHER SIZE	INNER DIAMETER (D1)	OUTER DIAMETER (D2)	THICKNESS (H)
M6	6.40	12.00	1.60
M8	8.40	16.00	1.60
M10	10.50	20.00	2.00
M12	13.00	24.00	2.50
M16	17.00	30.00	3.00
M20	21.00	37.00	3.00
M24	25.00	44.00	4.00
M27	28.00	50.00	4.00
M30	31.00	56.00	4.00
M33	34.00	60.00	5.00
M36	37.00	66.00	5.00
M39	40.00	72.00	6.00
M42	43.00	78.00	7.00
M45	46.00	85.00	7.00
M48	50.00	92.00	8.00
M52	54.00	98.00	8.00
M56	58.00	105.00	9.00
M64	66.00	115.00	9.00
M72	74.00	125.00	10.00

F436M WASHER



WASHER SIZE	INNER DIAMETER (D1)		OUTER DIAMETER (D2)		THICKNESS(H)	
	MAX.	MIN.	MAX.	MIN.	MAX.	MIN.
12	14.40	14.00	27.00	25.70	4.60	3.10
14	16.40	16.00	30.00	28.70	4.60	3.10
16	18.40	18.00	34.00	32.40	4.60	3.10
20	22.50	22.00	42.00	40.40	4.60	3.10
22	24.50	24.00	44.00	42.40	4.60	3.40
24	26.50	26.00	50.00	48.40	4.60	3.40
27	30.50	30.00	56.00	54.10	4.60	3.40
30	33.60	33.00	60.00	58.10	4.60	3.40
36	39.60	39.00	72.00	70.10	4.60	3.40
42	45.60	45.00	84.00	81.10	7.20	4.60
48	52.70	52.00	95.00	92.80	7.20	4.60
56	62.70	62.00	101.00	104.50	8.70	6.10
64	70.70	70.00	187.00	115.80	8.70	6.10
72	78.70	76.00	130.00	127.50	8.70	6.10

Hot Dip Galvanizing:-

STD	COMPONENTS
ASTM A153	Rolled/ Pressed/ steel/ Hardware
ASTM A641	Carbon Steel Wire(Nails/ Straples etc)
ASTM B695	Iron & Steel
ASTM A123	Iron & Steel Anchor Bolts, Fabricated Products
BS EN ISO 461	Heavy Zinc Deposit 388.1 to 76.2 microns

ELECTRO-DEPOSITED Zinc Plating:-

ASTM B633	Iron & Steel Products
BS 3382 PART 2	Bright Finish

ELECTRO-DEPOSITED Cadmium Plating:-

BS 3382 PART 1	Semi- Bright Finish

ELECTRO-DEPOSITED Nickel Cadmium Plating:-

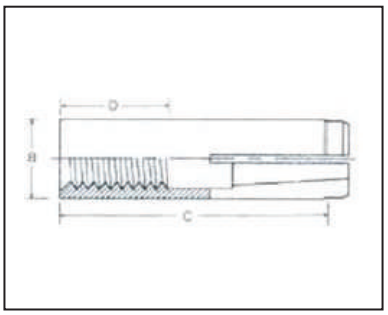
AMS 2416	Steel

ELECTRO-DEPOSITED Nickel & Nickel Plus Chromium:-

BS 3382 PART 3 & 4	Steel & Copper Alloy

PTFE (FLUOROPOLYMER Coating):-

XYLAN 1070	Colour- Red, Medium Dark Blue, Green, Orange, Yellow, Black
XYLAN 1052	Blue
XYLAN 1424	Water Base Blue
xylan standard	Aluminium "cermet" Coating
XYLAN Cobalt Blue 1514	Blue

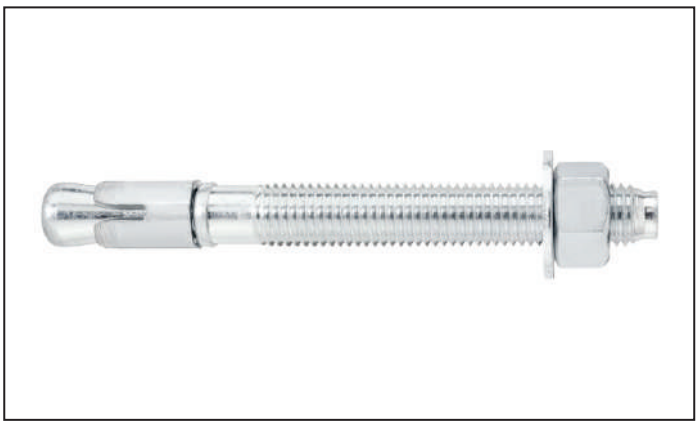


PRODUCT CODE	SIZE	DRILL BIT (B)	ANCHOR LENGTH (C)	THREAD LENGTH (D)
TGDPA000E0830	M8	10	30	13
TGDPA000E1040	M10	12	40	16
TGDPA000E1250	M12	16	50	21
TGDPA000E1665	M16	20	65	30
TGDPA000E2080	M20	25	80	30

TGDWA00000000 DRAW IN ANCHOR

PRODUCT CODE	SIZE	SHIELD LENGTH	HOLE DIAMETER	LENGTH OF ANCHOR
TGDWA00E00650	M6	45	12	50
TGDWA00E00860	M8	50	14	60
TGDWA00E01070	M10	60	16	70
TGDWA00E01290	M12	75	20	90
TGDWA00E16120	M16	115	25	120

WEDGE ANCHOR TGWA000000000

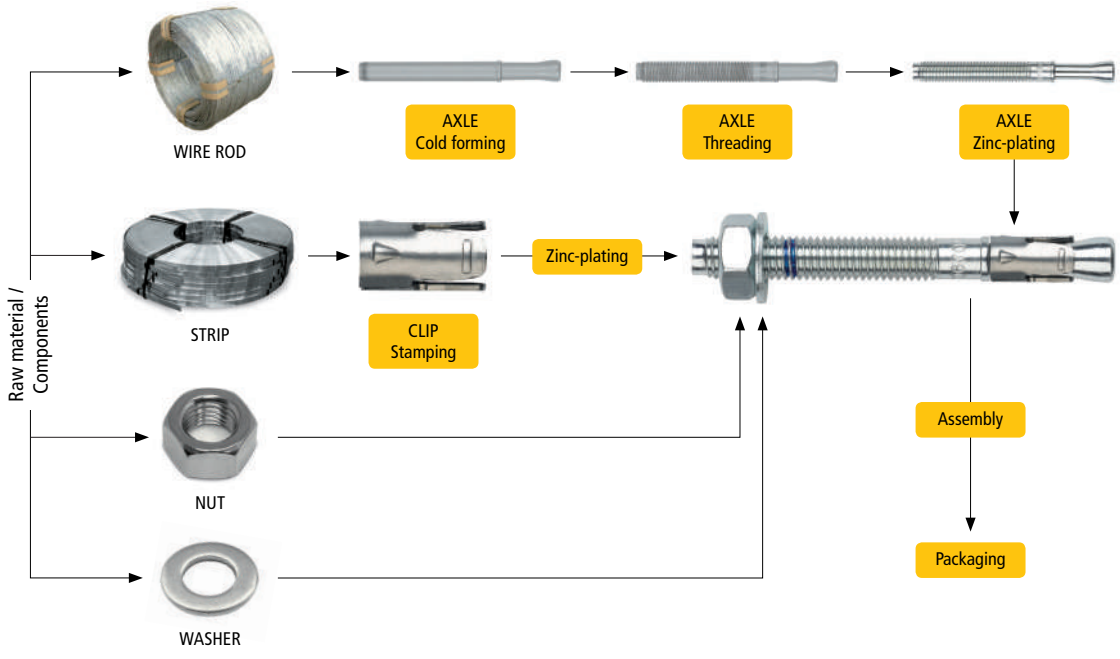


PRODUCT CODE	SIZE
TGWDA00E00650	M6
TGWDA00E00875	M8
TGWDA00E10100	M10
TGWDA00E12120	M12
TGWDA00E16150	M16
TGWDA00E20200	M20
TGWDA00E24300	M24

	Measure	M6	M8	M10	M12	M16	M20	M24
Thread Diameter	mm	6	8	10	12	16	20	24
Drill Hole Diameter	mm	6	8	10	12	16	20	24
Clearence Hole Diameter	mm	7	9	12	14	18	22	26
Embedment Depth	mm	35	40	50	60	70	100	120
Minimum Structure Thickness	mm	50	60	80	100	110	130	180
Ultimate Tensile Strength	N/mm^2	500	500	500	500	400	400	400
Yield Strength	N/mm^2	400	400	400	400	240	240	240
Recommended Tightening Torque	Nm	6	10	28	34	85	160	300
Characteristic Tensile Load	kN	5.4	8.4	12.9	20.4	24	32.4	57.6
Recommended Tensile Load	kN	1.8	2.8	4.3	6.8	8	10.8	26.2
Characteristic Shear Load	kN	5.8	8	14.5	18	26	35	74
Recommended Shear Load	kN	2.3	3.2	5.8	7.2	10.4	14	49.3
Minimum Centre Spacing	mm	70	80	100	120	140	200	240
Mininmum Edge Distance	mm	50	60	80	100	130	160	200

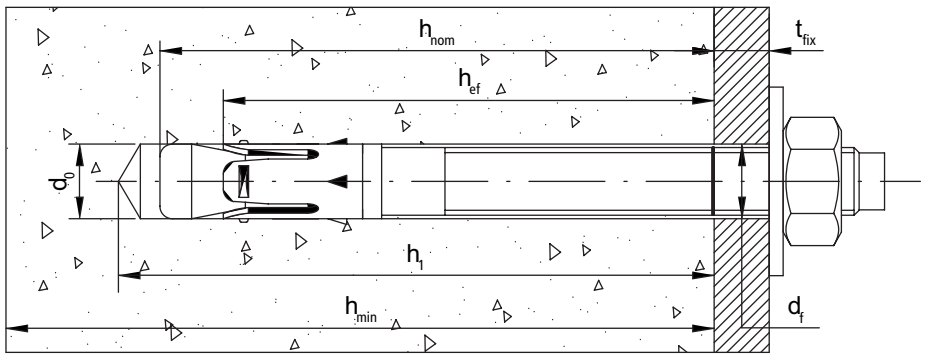
THROUGH BOLT ANCHOR

MANUFACTURING PROCESS OF THE THROUGH BOLT ANCHOR



RANGE

PRODUCT	PICTURE	ASSESSMENT	METRIC/ INCHES	MAT.	BASE MATERIALS	LOADS
Option 1 ETA Assessed		Fire Resistance Seismic C2&C1	METRIC	Zn		
Sherardized shaft. Option 1 ETA Assessed. A4 Stainless clip		Fire Resistance	METRIC	Sh		
Option 1 ETA Assessed. Zinc-plated shaft. A4 Stainless clip		Fire Resistance Seismic C2&C1	METRIC	Zn		
Option 7 Zinc-plated shaft. Zinc-plated clip			METRIC	Zn		
Zinc-plated shaft. Zinc-plated clip			METRIC	Zn		
Inches. Zinc plated wedgebolt. Zinc plated clip			INCHES	Zn		



THROUGH BOLT ANCHOR

Option 1 ETA Assessed

PRODUCT CODE	SIZE	UNIT BOX	UNIT MASTER BOX	UNIT PALLET	HOLE DEPTH MIN. "F"	TORQUE (NM)	MIN. SUBSTRATE THICKNESS "hmin"	MAX. FIXTURE THICKNESS "tfix"
TGTBA08050	M8 x 50	100	800	43,200	40	15	100	2
TGTBA08075	M8 x 75	100	600	21,600	60	15	100	9
TGTBA08095	M8 x 95	100	600	21,600	60	15	100	29
TGTBA08115	M8 x 115	100	400	14,400	60	15	100	49
TGTBA01090	M10 x 90	100	400	14,400	75	40	120	10
TGTBA10105	M10 x 105	50	300	10,800	75	40	120	25
TGTBA10115	M10 x 115	50	200	7,200	75	40	120	35
TGTBA10135	M10 x 135	50	200	7,200	75	40	120	55
TGTBA10165	M10 x 165	50	200	7,200	75	40	120	85
TGTBA10185	M10 x 185	50	150	5,400	75	40	120	105
TGTBA12080	M12 x 80	50	300	10,800	65	60	100	4
TGTBA12100	M12 x 100	50	200	10,800	85	60	140	4
TGTBA12110	M12 x 110	50	200	10,800	85	60	140	14
TGTBA12120	M12 x 120	50	200	7,200	85	60	140	24
TGTBA12130	M12 x 130	50	200	7,200	85	60	140	34
TGTBA12150	M12 x 150	50	100	5,400	85	60	140	54
TGTBA12180	M12 x 180	50	150	5,400	85	60	140	84
TGTBA12200	M12 x 200	50	150	5,400	85	60	140	104
TGTBA16145	M16 x 145	25	100	3,600	105	100	170	28
TGTBA16175	M16 x 175	25	50	3,600	105	100	170	58
TGTBA16220	M16 x 220	25	50	2,700	105	100	170	103
TGTBA16250	M16 x 250	25	50	1,800	105	100	170	133
TGTBA20170	M20 x 170	20	40	2,880	125	200	200	32
TGTBA20200	M20 x 200	20	40	2,160	125	200	200	62

TENSION

SIZE	MAXIMUM RECOMMENDED LOAD (kN)		DESIGN LOAD (kN)	
	NON CRACKED CONCRETE	CRACKED CONCRETE	NON CRACKED CONCRETE	CRACKED CONCRETE
M8	3.6	2.4	5.0	3.3
M10	7.6	4.3	10.7	6.0
M12	11.9	7.6	16.7	10.7
M16	16.7	11.9	23.3	16.7
M20	23.8	14.3	33.3	20.0

SHEAR

SIZE	MAXIMUM RECOMMENDED LOAD (kN)		DESIGN LOAD (kN)	
	NON CRACKED CONCRETE	CRACKED CONCRETE	NON CRACKED CONCRETE	CRACKED CONCRETE
M8	6.3	6.3	8.8	8.8
M10	9.9	9.9	13.9	13.9
M12	14.5	14.5	20.2	20.2
M16	26.9	26.9	37.7	37.7
M20	41.8	41.8	58.5	58.5

THROUGH BOLT ANCHOR

Sherardized shaft.
Option 1 ETA Assessed.
A4 Stainless clip

Fire Resistance

PRODUCT CODE	SIZE	UNIT BOX	UNIT MASTER BOX	UNIT PALLET	HOLE DEPTH MIN. "F"	TORQUE (NM)	MIN. SUBSTRATE THICKNESS "h_{min}"	MAX. FIXTURE THICKNESS "t_{fix}"
TGTBAFSS06060	M6 x 60	200	1200	43,200	50	7	100	10
TGTBAFSS06070	M6 x 70	200	1200	43,200	50	7	100	20
TGTBAFSS06100	M6 x 100	200	800	43,200	50	7	100	50
TGTBAFSS08050	M8 x 50	100	800	43,200	40	15	100	2
TGTBAFSS08060	M8 x 60	100	800	43,200	40	15	100	12
TGTBAFSS08075	M8 x 75	100	600	21,600	60	15	100	9
TGTBAFSS08095	M8 x 95	100	600	21,600	60	15	100	29
TGTBAFSS08115	M8 x 115	100	400	14,400	60	15	100	49
TGTBAFSS10070	M10 x 70	100	400	21,600	60	40	100	5
TGTBAFSS10090	M10 x 90	100	400	14,400	75	40	120	10
TGTBAFSS10105	M10 x 105	50	300	10,800	75	40	120	25
TGTBAFSS10115	M10 x 115	50	200	7,200	75	40	120	35
TGTBAFSS10135	M10 x 135	50	200	7,200	75	40	120	55
TGTBAFSS10165	M10 x 165	50	200	7,200	75	40	120	85
TGTBAFSS10185	M10 x 185	50	150	5,400	75	40	120	105
TGTBAFSS12080	M12 x 80	50	300	10,800	65	60	100	4
TGTBAFSS12110	M12 x 110	50	200	10,800	85	60	140	14
TGTBAFSS12130	M12 x 130	50	200	10,800	85	60	140	34
TGTBAFSS12150	M12 x 150	50	100	7,200	85	60	140	54
TGTBAFSS12180	M12 x 180	50	150	5,400	85	60	140	84
TGTBAFSS12200	M12 x 200	50	150	5,400	85	60	140	104
TGTBAFSS16125	M16 x 125	25	100	3,600	105	100	170	8
TGTBAFSS16145	M16 x 145	25	100	3,600	105	100	170	28
TGTBAFSS16175	M16 x 175	25	50	3,600	105	100	170	58
TGTBAFSS16220	M16 x 220	25	50	2,700	105	100	170	103
TGTBAFSS20170	M20 x 170	20	40	2,880	125	200	200	32
TGTBAFSS20200	M20 x 200	20	40	2,160	125	200	200	62

TENSION

SIZE	MAXIMUM RECOMMENDED LOAD (kN)		DESIGN LOAD (kN)	
	NON CRACKED CONCRETE	CRACKED CONCRETE	NON CRACKED CONCRETE	CRACKED CONCRETE
M8	3.6	2.4	5.0	3.3
M10	7.6	4.3	10.7	6.0
M12	14.3	7.6	20.0	10.7
M16	16.7	11.9	23.3	16.7
M20	23.8	14.3	33.3	20.0

SHEAR

SIZE	MAXIMUM RECOMMENDED LOAD (kN)		DESIGN LOAD (kN)	
	NON CRACKED CONCRETE	CRACKED CONCRETE	NON CRACKED CONCRETE	CRACKED CONCRETE
M8	6.3	6.3	8.8	8.8
M10	9.9	9.9	13.9	13.9
M12	14.5	14.5	20.2	20.2
M16	26.9	26.9	37.7	37.7
M20	41.8	41.8	58.5	58.5

THROUGH BOLT ANCHOR

Option 1 ETA Assessed.
Zinc-plated shaft.
A4 Stainless clip

Fire Resistance

Seismic C2&C1

PRODUCT CODE	SIZE	UNIT BOX	UNIT MASTER BOX	UNIT PALLET	HOLE DEPTH MIN. "F"	TORQUE (NM)	MIN. SUBSTRATE THICKNESS "h_{min}"	MAX. FIXTURE THICKNESS "t_{fix}"
TGTBAZS08050	M8 x 50	100	800	43,200	40	20	100	2
TGTBAZS08075	M8 x 75	100	600	21,600	60	20	100	9
TGTBAZS08095	M8 x 95	100	600	21,600	60	20	100	29
TGTBAZS08115	M8 x 115	100	400	14,400	60	20	100	49
TGTBAZS10090	M10 x 90	100	400	14,400	75	40	120	10
TGTBAZS10105	M10 x 105	50	300	10,800	75	40	120	25
TGTBAZS10115	M10 x 115	50	200	7,200	75	40	120	35
TGTBAZS10135	M10 x 135	50	200	7,200	75	40	120	55
TGTBAZS10165	M10 x 165	50	200	7,200	75	40	120	85
TGTBAZS10185	M10 x 185	50	150	5,400	75	40	120	105
TGTBAZS12080	M12 x 80	50	300	10,800	65	60	100	4
TGTBAZS12100	M12 x 100	50	400	21,600	85	60	140	4
TGTBAZS12110	M12 x 110	50	200	10,800	85	60	140	14
TGTBAZS12120	M12 x 120	50	200	7,200	85	60	140	24
TGTBAZS12130	M12 x 130	50	200	7,200	85	60	140	34
TGTBAZS12150	M12 x 150	50	100	7,200	85	60	140	54
TGTBAZS12180	M12 x 180	50	150	5,400	85	60	140	84
TGTBAZS12200	M12 x 200	50	150	5,400	85	60	140	104
TGTBAZS16145	M16 x 145	25	100	3,600	105	100	170	28
TGTBAZS16175	M16 x 175	25	50	3,600	105	100	170	58
TGTBAZS16220	M16 x 220	25	50	2,700	105	100	170	103
TGTBAZS16250	M16 x 250	25	50	1,800	105	100	170	133
TGTBAZS20170	M20 x 170	20	40	2,880	125	200	200	32
TGTBAZS20200	M20 x 200	20	40	2,160	125	200	200	62
TGTBAZS24205	M24 x 205	10	30	1,080	155	250	250	35
TGTBAZS24235	M24 x 235	10	20	720	155	250	250	65

TENSION

SIZE	MAXIMUM RECOMMENDED LOAD (kN)		DESIGN LOAD (kN)	
	NON CRACKED CONCRETE	CRACKED CONCRETE	NON CRACKED CONCRETE	CRACKED CONCRETE
M8	3.5	2.0	5.0	2.7
M10	7.6	4.2	10.6	6.0
M12	9.5	5.7	13.3	8
M16	16.6	11.9	23.3	16.6
M20	23.8	14.2	33.3	20.0
M24	19.8	11.9	27.7	16.6

SHEAR

SIZE	MAXIMUM RECOMMENDED LOAD (kN)		DESIGN LOAD (kN)	
	NON CRACKED CONCRETE	CRACKED CONCRETE	NON CRACKED CONCRETE	CRACKED CONCRETE
M8	6.3	6.3	8.8	8.8
M10	9.9	9.9	13.9	13.9
M12	14.4	14.4	20.2	20.2
M16	26.9	26.9	37.6	37.4
M20	41.7	41.7	58.4	58.4
M24	48.4	48.4	67.7	67.7

THROUGH BOLT ANCHOR

Option 7
Zinc-plated shaft.
Zinc-plated clip

PRODUCT CODE	SIZE	UNIT BOX	UNIT MASTER BOX	UNIT PALLET	HOLE DEPTH MIN. "F"	TORQUE (NM)	MIN. SUBSTRATE THICKNESS "h_{min}"	MAX. FIXTURE THICKNESS "t_{fix}"
TGTBAZ06060	M6 x 60	200	1200	43,200	55	7	100	2
TGTBAZ06070	M6 x 70	200	1200	43,200	55	7	100	12
TGTBAZ06080	M6 x 80	200	1200	43,200	55	7	100	22
TGTBAZ06090	M6 x 90	200	1200	43,200	55	7	100	32
TGTBAZ06100	M6 x 100	200	800	43,200	55	7	100	42
TGTBAZ06110	M6 x 110	200	800	28,800	55	7	100	52
TGTBAZ06120	M6 x 120	100	600	21,600	55	7	100	62
TGTBAZ08060	M8 x 60	100	600	21,600	50	20	100	3
TGTBAZ08075	M8 x 75	100	600	21,600	65	20	100	5
TGTBAZ08090	M8 x 90	100	600	21,600	65	20	100	20
TGTBAZ08100	M8 x 100	100	400	14,400	65	20	100	30
TGTBAZ08115	M8 x 115	100	400	14,400	65	20	100	45
TGTBAZ08120	M8 x 120	100	400	14,400	65	20	100	50
TGTBAZ08130	M8 x 130	100	400	14,400	65	20	100	60
TGTBAZ08155	M8 x 155	100	200	14,400	65	20	100	85
TGTBAZ10070	M10 x 70	100	400	21,600	60	35	100	3
TGTBAZ10080	M10 x 80	100	400	14,400	60	35	100	13
TGTBAZ10090	M10 x 90	100	400	14,400	75	35	110	10
TGTBAZ10100	M10 x 100	100	400	14,400	75	35	110	20
TGTBAZ10120	M10 x 120	50	300	10,800	75	35	110	40
TGTBAZ10140	M10 x 140	50	200	10,800	75	35	110	60
TGTBAZ10150	M10 x 150	50	200	10,800	75	35	110	70
TGTBAZ10160	M10 x 160	50	200	7,200	75	35	110	80
TGTBAZ10170	M10 x 170	50	200	7,200	75	35	110	90
TGTBAZ10210	M10 x 210	50	150	5,400	75	35	110	130
TGTBAZ10230	M10 x 230	50	100	3,600	75	35	110	150
TGTBAZ12090	M12 x 90	50	200	10,800	70	60	100	13
TGTBAZ12100	M12 x 100	50	200	10,800	85	60	130	8
TGTBAZ12110	M12 x 110	50	200	10,800	85	60	130	18
TGTBAZ12120	M12 x 120	50	200	10,800	85	60	130	28
TGTBAZ12130	M12 x 130	50	200	7,200	85	60	130	38
TGTBAZ12140	M12 x 140	50	200	7,200	85	60	130	48
TGTBAZ12160	M12 x 160	50	100	7,200	85	60	130	68
TGTBAZ12180	M12 x 180	50	150	5,400	85	60	130	88
TGTBAZ12200	M12 x 200	50	100	5,400	85	60	130	108
TGTBAZ12220	M12 x 220	50	100	3,600	85	60	130	128
TGTBAZ12250	M12 x 250	25	50	1,800	85	60	130	158
TGTBAZ14120	M14 x 120	25	100	5,400	100	90	150	12
TGTBAZ14145	M14 x 145	25	100	5,400	100	90	150	37
TGTBAZ14170	M14 x 170	25	100	3,600	100	90	150	62
TGTBAZ14220	M14 x 220	25	75	2,700	100	90	150	112
TGTBAZ14250	M14 x 250	25	50	2,700	100	90	150	142
TGTBAZ16125	M16 x 125	25	100	3,600	110	120	168	3
TGTBAZ16145	M16 x 145	25	100	3,600	110	120	168	23
TGTBAZ16170	M16 x 170	25	50	3,600	110	120	168	48
TGTBAZ16220	M16 x 220	25	50	2,700	110	120	168	98
TGTBAZ16250	M16 x 250	25	50	1,800	110	120	168	128
TGTBAZ16280	M16 x 280	25	50	1,800	110	120	168	158
TGTBAZ20170	M20 x 170	20	40	2,880	135	240	206	23
TGTBAZ20220	M20 x 220	20	40	2,160	135	240	206	73
TGTBAZ20270	M20 x 270	20	40	1,440	135	240	206	123

TENSION

SIZE	MAXIMUM RECOMMENDED LOAD (kN)		DESIGN LOAD (kN)	
	NON CRACKED DEPTH	CRACKED DEPTH	NON CRACKED DEPTH	CRACKED DEPTH
M6	3.8	-	5.3	-
M8	6.6	4.8	9.2	6.7
M10	9.0	6.5	12.7	9.1
M12	12.6	8.5	17.6	11.9
M14	15.6	-	21.8	-
M16	18.5	12.6	25.9	17.6
M20	25.1	15.6	35.1	21.8

SHEAR

SIZE	MAXIMUM RECOMMENDED LOAD (kN)		DESIGN LOAD (kN)	
	NON CRACKED DEPTH	CRACKED DEPTH	NON CRACKED DEPTH	CRACKED DEPTH
M6	2.9	-	4.1	-
M8	5.3	4.9	7.4	7.0
M10	8.4	6.5	11.8	9.1
M12	11.8	8.5	16.4	11.9
M14	16.0	-	22.5	-
M16	21.9	12.9	30.7	30.7
M20	32.1	31.2	45.1	43.7

THROUGH BOLT ANCHOR

Zinc-plated shaft.
Zinc-plated clip

PRODUCT CODE	SIZE	UNIT BOX	UNIT MASTER BOX	UNIT PALLET	HOLE DEPTH MIN. "F"	TORQUE (NM)	MIN. SUBSTRATE THICKNESS "h_{min}"	MAX. FIXTURE THICKNESS "t_{fix}"
TGTBAZM06045	M6 x 45	200	1,200	43,200	40	7	100	1
TGTBAZM06055	M6 x 55	200	1,200	43,200	40	7	100	11
TGTBAZM06060	M6 x 60	200	1,200	43,200	55	7	100	2
TGTBAZM06065	M6 x 65	200	1,200	43,200	55	7	100	7
TGTBAZM06070	M6 x 70	200	1,200	43,200	55	7	100	12
TGTBAZM06080	M6 x 80	200	1,200	43,200	55	7	100	22
TGTBAZM06085	M6 x 85	200	1,200	43,200	55	7	100	27
TGTBAZM06090	M6 x 90	200	1,200	43,200	55	7	100	32
TGTBAZM06100	M6 x 100	200	800	43,200	55	7	100	42
TGTBAZM06110	M6 x 110	200	800	28,800	55	7	100	52
TGTBAZM06120	M6 x 120	100	600	21,600	55	7	100	62
TGTBAZM06130	M6 x 130	100	600	21,600	55	7	100	72
TGTBAZM06140	M6 x 140	100	600	21,600	55	7	100	82
TGTBAZM06150	M6 x 150	100	600	21,600	55	7	100	92
TGTBAZM06160	M6 x 160	100	400	14,400	55	7	100	102
TGTBAZM06170	M6 x 170	100	400	14,400	55	7	100	112
TGTBAZM06180	M6 x 180	100	300	10,800	55	7	100	122
TGTBAZM08050	M8 x 50	100	800	43,200	40	20	100	4
TGTBAZM08060	M8 x 60	100	800	43,200	50	20	100	3
TGTBAZM08065	M8 x 65	100	600	21,600	50	20	100	8
TGTBAZM08075	M8 x 75	100	600	21,600	65	20	100	5
TGTBAZM08090	M8 x 90	100	600	21,600	65	20	100	20
TGTBAZM08115	M8 x 115	100	400	14,400	65	20	100	45
TGTBAZM08120	M8 x 120	100	400	14,400	65	20	100	50
TGTBAZM08130	M8 x 130	100	400	14,400	65	20	100	60
TGTBAZM08155	M8 x 155	100	200	14,400	65	20	100	85
TGTBAZM10065	M10 x 65	100	400	21,600	55	35	100	1
TGTBAZM10070	M10 x 70	100	400	21,600	60	35	100	3
TGTBAZM10080	M10 x 80	100	400	21,600	60	35	100	13
TGTBAZM10090	M10 x 90	100	400	14,400	70	35	110	10
TGTBAZM10100	M10 x 100	100	400	14,400	70	35	110	20
TGTBAZM10120	M10 x 120	50	300	10,800	70	35	110	40
TGTBAZM10140	M10 x 140	50	200	10,800	70	35	110	60
TGTBAZM10150	M10 x 150	50	200	10,800	70	35	110	70
TGTBAZM10160	M10 x 160	50	200	7,200	70	35	110	80
TGTBAZM10170	M10 x 170	50	200	7,200	70	35	110	90
TGTBAZM10210	M10 x 210	50	150	5,400	70	35	110	130
TGTBAZM10230	M10 x 230	50	100	3,600	70	35	110	150
TGTBAZM12075	M12 x 75	50	300	10,800	60	60	100	5
TGTBAZM12080	M12 x 80	50	300	10,800	70	60	100	3
TGTBAZM12090	M12 x 90	50	200	10,800	70	60	100	13

See more references

THROUGH BOLT ANCHOR

PRODUCT CODE	SIZE	UNIT BOX	UNIT MASTER BOX	UNIT PALLET	HOLE DEPTH MIN. "F"	TORQUE (NM)	MIN. SUBSTRATE THICKNESS "h_{min}"	MAX. FIXTURE THICKNESS "t_{fix}"
TGTBAZM12100	M12 x 100	50	200	10,800	85	60	130	8
TGTBAZM12110	M12 x 110	50	200	10,800	85	60	130	18
TGTBAZM12120	M12 x 120	50	200	7,200	85	60	130	28
TGTBAZM12140	M12 x 140	50	200	7,200	85	60	130	48
TGTBAZM12160	M12 x 160	50	100	7,200	85	60	130	68
TGTBAZM12180	M12 x 180	50	150	5,400	85	60	130	88
TGTBAZM12220	M12 x 220	50	100	5,400	85	60	130	128
TGTBAZM12250	M12 x 250	25	50	1,800	85	60	130	158
TGTBAZM14080	M14 x 80	50	200	10,800	65	90	100	5
TGTBAZM14100	M14 x 100	50	100	7,200	85	90	125	5
TGTBAZM14120	M14 x 120	25	100	5,400	100	90	150	12
TGTBAZM14145	M14 x 145	25	100	5,400	100	90	150	37
TGTBAZM14170	M14 x 170	25	100	3,600	100	90	150	62
TGTBAZM14220	M14 x 220	25	75	2,700	100	90	150	112
TGTBAZM14250	M14 x 250	25	50	1,800	100	90	150	142
TGTBAZM16090	M16 x 90	25	150	5,400	75	120	100	4
TGTBAZM16110	M16 x 110	25	150	5,400	75	120	100	24
TGTBAZM16125	M16 x 125	25	100	3,600	110	120	168	3
TGTBAZM16145	M16 x 145	25	100	3,600	110	120	168	23
TGTBAZM16170	M16 x 170	25	50	3,600	110	120	168	48
TGTBAZM16220	M16 x 220	25	50	2,700	110	120	168	98
TGTBAZM16250	M16 x 250	25	50	1,800	110	120	168	128
TGTBAZM16280	M16 x 280	25	50	1,800	110	120	168	158
TGTBAZM20120	M20 x 120	20	40	2,880	105	240	145	5
TGTBAZM20170	M20 x 170	20	40	2,160	135	240	206	23
TGTBAZM20220	M20 x 220	20	40	2,160	135	240	206	73
TGTBAZM20270	M20 x 270	20	40	1,440	135	240	206	123
TGTBAZM24180	M24 x 180	10	20	1,440	160	350	250	4
TGTBAZM24260	M24 x 260	10	20	720	160	350	250	84

See more references

TENSION

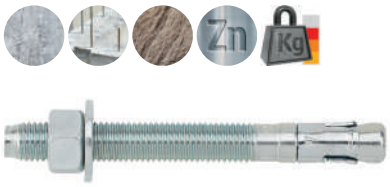
SIZE	MAXIMUM RECOMMENDED LOAD (kN)	DESIGN LOAD (kN)
M6	3.7	5.2
M8	6.6	9.3
M10	9.0	12.6
M12	12.6	17.6
M14	15.6	21.8
M16	18.5	25.9
M20	25.1	35.1
M24	19.8	27.7

SHEAR

SIZE	MAXIMUM RECOMMENDED LOAD (kN)	DESIGN LOAD (kN)
M6	2.9	4.0
M8	5.3	7.4
M10	8.4	11.7
M12	11.7	16.4
M14	16.0	22.4
M16	21.9	30.7
M20	32.1	45.0
M24	48.4	67.7

THROUGH BOLT ANCHOR

Inches.
Zinc plated wedgebolt.
Zinc plated clip



	SIZE	MAXIMUM RECOMMENDED LOAD (kN)	DESIGN LOAD (kN)
TENSION	1/4"	3.7	5.2
	5/16"	6.6	9.3
	3/8"	9.0	12.6
	1/2"	12.6	17.6
	5/8"	18.5	25.9
	3/4"	25.1	35.1
	1"	19.8	27.7

	SIZE	MAXIMUM RECOMMENDED LOAD (kN)	DESIGN LOAD (kN)
SHEAR	1/4"	2.9	4.0
	5/16"	5.3	7.4
	3/8"	8.4	11.7
	1/2"	11.7	16.4
	5/8"	21.9	30.7
	3/4"	32.1	45.0
	1"	48.4	67.7

PRODUCT CODE	SIZE	UNIT BOX	UNIT MASTER BOX	UNIT PALLET	HOLE DEPTH MIN. "F"	TORQUE (NM)	MIN. SUBSTRATE THICKNESS "h_{min}"	MAX. FIXTURE THICKNESS "t_{fix}"
TGTBAZI14134	1/4" x 1 3/4"	200	1,200	43,200	1 1/2"	5	2"	0.20"
TGTBAZI14214	1/4" x 2 1/4"	200	1,200	43,200	2"	5	4"	0.20"
TGTBAZI14314	1/4" x 3 1/4"	200	800	43,200	2"	5	4"	1.20"
TGTBAZI51200	5/16" x 2"	100	800	43,200	1 13/16"	14	2 1/8"	0.23"
TGTBAZI51234	5/16" x 2 3/4"	100	600	21,600	2 1/2"	14	4"	0.29"
TGTBAZI51312	5/16" x 3 1/2"	100	600	21,600	2 1/2"	14	4"	1.04"
TGTBAZI51500	5/16" x 5"	100	400	14,400	2 1/2"	14	4"	2.54"
TGTBAZI38214	3/8" x 2 1/4"	100	600	21,600	2"	27	2 1/2"	0.71"
TGTBAZI38234	3/8" x 2 3/4"	100	600	21,600	2"	27	2 1/2"	1.21"
TGTBAZI38300	3/8" x 3"	100	400	14,400	2 3/4"	27	4"	0.24"
TGTBAZI38312	3/8" x 3 1/2"	100	400	14,400	2 3/4"	27	4"	0.74"
TGTBAZI38334	3/8" x 3 3/4"	100	400	14,400	2 3/4"	27	4"	0.99"
TGTBAZI38500	3/8" x 5"	50	200	7,200	2 3/4"	27	4"	2.24"
TGTBAZI12234	1/2" x 2 3/4"	50	200	10,800	2 1/4"	54	3"	0.27"
TGTBAZI12300	1/2" x 3"	50	200	10,800	2 1/4"	54	3"	1.02"
TGTBAZI12334	1/2" x 3 3/4"	50	200	10,800	3 1/4"	54	5"	0.27"
TGTBAZI12414	1/2" x 4 1/4"	50	200	10,800	3 1/4"	54	5"	0.77"
TGTBAZI12412	1/2" x 4 1/2"	50	200	7,200	3 1/4"	54	5"	1.02"
TGTBAZI12500	1/2" x 5"	50	200	7,200	3 1/4"	54	5"	1.52"
TGTBAZI12512	1/2" x 5 1/2"	50	100	7,200	3 1/4"	54	5"	2.02"
TGTBAZI12700	1/2" x 7"	50	100	5,400	3 1/4"	54	5"	3.52"
TGTBAZI12100	1/2" x 10"	25	50	1,800	3 1/4"	54	5"	6.52"
TGTBAZI58412	5/8" x 4 1/2"	25	100	3,600	4 1/8"	108	6"	0.21"
TGTBAZI58500	5/8" x 5"	25	100	3,600	4 1/8"	108	6"	0.71"
TGTBAZI58600	5/8" x 6"	25	50	1,800	4 1/8"	108	6"	1.71"
TGTBAZI58700	5/8" x 7"	25	75	2,700	4 1/8"	108	6"	2.71"
TGTBAZI58100	5/8" x 10"	25	50	1,800	4 1/8"	108	6"	5.71"
TGTBAZI34414	3/4" x 4 1/4"	20	80	2,880	3 1/2"	149	4 1/2"	0.54"
TGTBAZI34512	3/4" x 5 1/2"	20	40	2,880	4 3/4"	149	7 1/2"	0.54"
TGTBAZI34700	3/4" x 7"	20	400	2,160	4 3/4"	149	7 1/2"	2.04"
TGTBAZI34812	3/4" x 8 1/2"	20	40	2,160	4 3/4"	149	7 1/2"	3.54"
TGTBAZI34100	3/4" x 10"	20	40	1,440	4 3/4"	149	7 1/2"	5.04"
TGTBAZI10600	1" x 6"	10	40	1,440	5 1/4"	250	9"	0.51"
TGTBAZI10900	1" x 9"	10	20	1,080	6 1/2"	250	9"	2.23"
TGTBAZI10120	1" x 12"	10	20	720	6 1/2"	250	9"	5.23"

DROP IN ANCHOR

CHARACTERISTICS

- Functioning by deformation.
- European assessment for structural applications in non cracked concrete.
- European assessment for non structural applications in cracked and non cracked concrete.
- Installation prior to the material to be fixed.
- Bolt can be disassembled so that the surface of the base material is smooth.
- Bolt not included.

APPLICATIONS

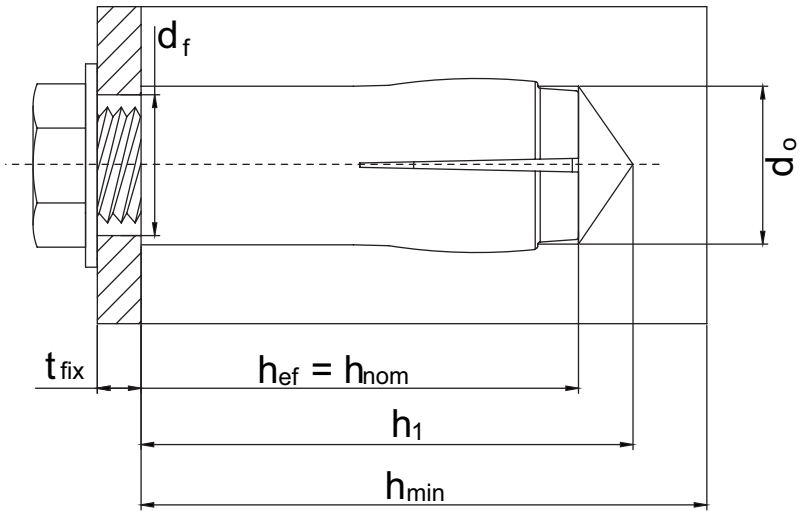
- Fixing suspended ceilings, sprinklers and ventilation systems.
- Structural fixing, inner and outer ironworks.
- Fixing threaded bars.

BASE MATERIALS

Concrete | Stone | Reinforced concrete

RANGE

PRODUCT	PICTURE	ASSESSMENT	MATERIAL	BASE MATERIALS	LOADS
Option 7 ETA Assessed		ETA CE Fire Resistance	Zn		
Option 7 ETA Assessed		ETA CE Fire Resistance	Zn		
Stainless steel A4			STAINLESS A4 STEEL		



DROP IN ANCHOR

Option 7 ETA Assessed for structural and non-structural uses

Fire Resistance

PRODUCT CODE	SIZE	UNIT BOX	UNIT MASTER BOX	HOLE DEPTH MIN. (MM)	TORQUE (NM)	EFFECTIVE DEPTH (MM)	DRILL (MM)
TGDIA06025	M6 x 25	100	4,000	27	4	25	8
TGDIA08030	M8 x 30	100	2,200	33	11	30	10
TGDIA01040	M10 x 40	50	1,000	43	17	40	12
TGDIA01250	M12 x 50	50	600	54	38	50	15
TGDIA01665	M16 x 65	25	250	70	60	65	20
TGDIA02080	M20 x 80	25	100	86	100	80	25

	SIZE	CHARACTERISTIC LOAD CRACKED CONCRETE (kN)	MAXIMUM RECOMMENDED LOAD (kN) CRACKED CONCRETE	DESIGN LOAD (kN) CRACKED CONCRETE
TENSION	M6	2.00	0.8	1.1
	M8	3.00	1.2	1.7
	M10	5.00	1.7	2.4
	M12	7.50	2.6	3.6
	M16	12.00	4.1	5.7
	M20	20.00	6.8	9.5

DROP IN ANCHOR

Option 7 ETA Assessed for structural and non-structural uses. With flared lip

Fire Resistance

PRODUCT CODE	SIZE	UNIT BOX	UNIT MASTER BOX	HOLE DEPTH MIN. (MM)	TORQUE (NM)	EFFECTIVE DEPTH (MM)	DRILL (MM)
TGDIAF06025	M6 x 25	100	4,000	27	4	25	8
TGDIAF08030	M8 x 30	100	2,200	33	11	30	10
TGDIAF01040	M10 x 40	50	1,000	43	17	40	12
TGDIAF01250	M12 x 50	50	600	54	38	50	15
TGDIAF01665	M16 x 65	25	250	70	60	65	20

	SIZE	MAXIMUM RECOMMENDED LOAD (kN) NON-CRACKED CONCRETE	DESIGN LOAD (kN) NON-CRACKED CONCRETE
TENSION	M6	2.5	3.5
	M8	3.3	4.6
	M10	4.4	6.1
	M12	6.1	8.5
	M16	9.0	12.6

DROP IN ANCHOR

Stainless steel A4

PRODUCT CODE	SIZE	UNIT BOX	UNIT MASTER BOX	HOLE DEPTH MIN. "F"	TORQUE (NM)	EFFECTIVE DEPTH	DRILL
TGDIASS0625	M6 x 25	100	4,000	27	4	25	8
TGDIASS0830	M8 x 30	100	2,200	32	11	30	10
TGDIASS1040	M10 x 40	50	1,000	42	22	40	12
TGDIASS1250	M12 x 50	50	600	52	38	50	15
TGDIASS1665	M16 x 65	25	250	70	60	65	20
TGDIASS2080	M20 x 80	25	100	85	100	80	25

	SIZE	MAXIMUM RECOMMENDED LOAD (kN) NON-CRACKED CONCRETE	DESIGN LOAD (kN) NON-CRACKED CONCRETE
TENSION	M6	2.50	3.5
	M8	3.29	4.6
	M10	4.34	6.07
	M12	6.06	8.49
	M16	8.89	12.58
	M20	12.27	17.17

	SIZE	MAXIMUM RECOMMENDED LOAD (kN) NON-CRACKED CONCRETE	DESIGN LOAD (kN) NON-CRACKED CONCRETE
SHEAR	M6	3.0	4.20
	M8	3.94	5.52
	M10	5.20	7.28
	M12	8.49	11.88
	M16	18.57	26.00
	M20	27.14	38.00

DROP IN ANCHOR

Stainless steel A4

PRODUCT CODE	SIZE	UNIT BOX	UNIT MASTER BOX	HOLE DEPTH MIN. "F"	TORQUE (NM)	EFFECTIVE DEPTH	DRILL
TGDIASS0625	M6 x 25	100	4,000	27	4	25	8
TGDIASS0830	M8 x 30	100	2,200	32	11	30	10
TGDIASS1040	M10 x 40	50	1,000	42	22	40	12
TGDIASS1250	M12 x 50	50	600	52	38	50	15
TGDIASS1665	M16 x 65	25	250	70	60	65	20
TGDIASS2080	M20 x 80	25	100	85	100	80	25

	SIZE	MAXIMUM RECOMMENDED LOAD (kN) NON-CRACKED CONCRETE	DESIGN LOAD (kN) NON-CRACKED CONCRETE
TENSION	M6	2.50	3.5
	M8	3.29	4.6
	M10	4.34	6.07
	M12	6.06	8.49
	M16	8.89	12.58
	M20	12.27	17.17

	SIZE	MAXIMUM RECOMMENDED LOAD (kN) NON-CRACKED CONCRETE	DESIGN LOAD (kN) NON-CRACKED CONCRETE
SHEAR	M6	3.0	4.20
	M8	3.94	5.52
	M10	5.20	7.28
	M12	8.49	11.88
	M16	18.57	26.00
	M20	27.14	38.00

FOUNDATION BOLT TGFB000000000

J TYPE

EYE TYPE

L TYPE

PLATE TYPE

APPLICATION:

Cement Plant

Petrochemical Plant

Marine Industry

Construction Industry

Sugar Plant

Railway Industries

Nuclear power Plants ant More

FINISH:

Plain, Electro-Galvanized, Hot Dip Galvanized, Epoxy Coated & Zinc Flake.

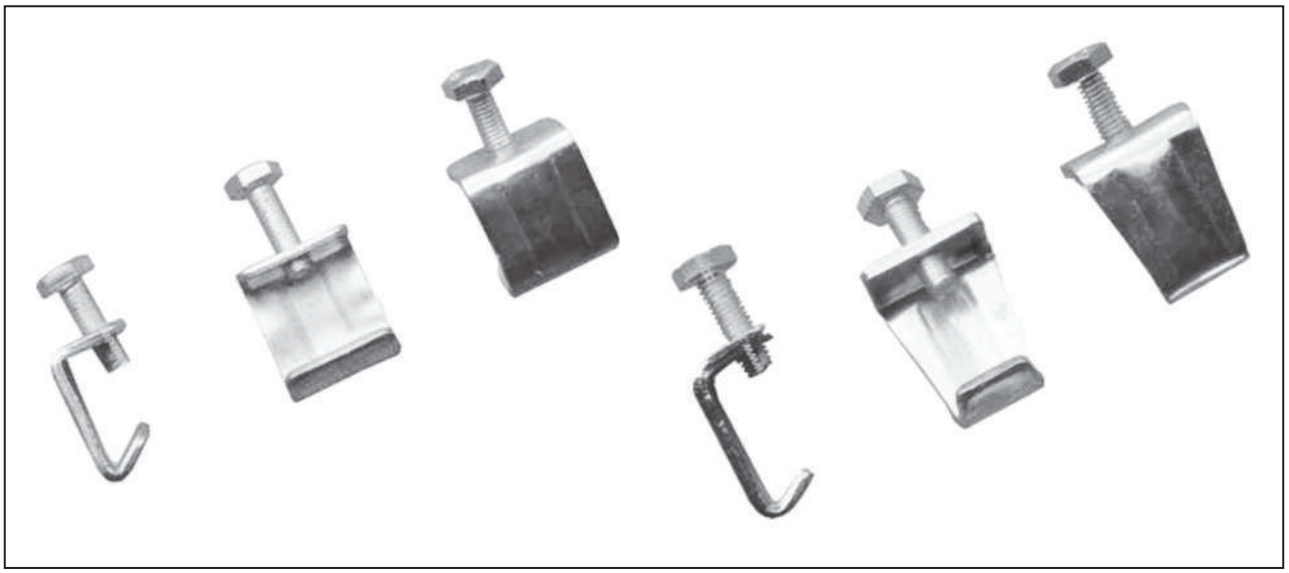
MATERIAL OF CONSTRUCTION	BOLT AND NUT STANDARDS	
MILD STEEL	ASTM A 307, Gr. A OR A 36	ASTM A 563
MEDIUM STRENGTH,MILD STEEL	ASTM F 1554 Gr. 55 WITH SUPPLIMENTRY REQ. S1	ASTM A194 Gr. 2H OR A 563 Gr. D OR BETTER
HIGH STRENGTH STEEL	ASTM A 325 OR A 321	ASTM A 194 OR A 563, HEAVY HEX
ALLOY STEEL	ASTM A 193 Gr. B7	ASTM A 194 Gr. 2H OR A 563 Gr. DH, HEAVY HEX

SIZES :

DIAMETER	LENGTH
12 MM DIA TO 90 MM DIA	UPTO 3 METRES

DUCT CORNER PIECE

G - CLAMP



PHILLIPS BUGLE HEAD DRYWALL SCREWS TGDRPH0000000

SIZE
3.5mm x 13mm Pan
3.5mm x 13mm (#6 x 1/2")
3.5mm x 16mm (#6 x 5/8")
3.5mm x 19mm (#6 x 3/4")
3.5mm x 25mm (#6 x 1")
3.5mm x 32mm (#6 x 1 1/4")
3.5mm x 38mm (#6 x 1 1/2")
3.5mm x 50mm (#6 x 2")
3.5mm x 65mm (#6 x 2 1/2")
3.5mm x 75mm (#6 x 3")
4.2mm x 25mm (#8 x 1")
4.2mm x 32mm (#8 x 1 1/4")
4.2mm x 38mm (#8 x 1 1/2")
4.2mm x 50mm (#8 x 2")
4.2mm x 65mm (#8 x 2 1/2")
4.2mm x 75mm (#8 x 3")
4.2mm x 100mm (#8 x 4")

DRY WALL SCREWS, WHITE ZINC PLATED
3.5mm x 19mm (#6 x 3/4")
3.5mm x 25mm (#6 x 1")
3.5mm x 32mm (#6 x 1 1/4")
3.5mm x 38mm (#6 x 1 1/2")
3.5mm x 50mm (#6 x 2")

DRY WALL SCREWS, NICKEL PLATED
3.5mm x 19mm (#6 x 3/4")
3.5mm x 25mm (#6 x 1")
3.5mm x 32mm (#6 x 1 1/4")
3.5mm x 38mm (#6 x 1 1/2")
3.5mm x 50mm (#6 x 2")

TGDRCS0000000 CSK PHILLIPS HEAD SELF DRILLING SCREWS AS PER DIN 7504 P

SIZE
3.5mm x 13mm (#6 x 1/2")
3.5mm x 16mm (#6 x 5/8")
3.5mm x 19mm (#6 x 3/4")
3.5mm x 25mm (#6 x 1")
3.5mm x 32mm (#6 x 1 1/4")
3.5mm x 38mm (#6 x 1 1/2")
3.9mm x 13mm (#7 x 1/2")
3.9mm x 16mm (#7 x 5/8")
3.9mm x 19mm (#7 x 3/4")
3.9mm x 25mm (#7 x 1")
3.9mm x 32mm (#7 x 1 1/4")
3.9mm x 38mm (#7 x 1 1/2")
3.9mm x 50mm (#7 x 2")
4.2mm x 13mm (#8 x 1/2")
4.2mm x 16mm (#8 x 5/8")
4.2mm x 19mm (#8 x 3/4")
4.2mm x 25mm (#8 x 1")
4.2mm x 32mm (#8 x 1 1/4")
4.2mm x 38mm (#8 x 1 1/2")
4.2mm x 50mm (#8 x 2")
4.2mm x 75mm (#8 x 3")
4.8mm x 19mm (#10 x 3/4")
4.8mm x 32mm (#10 x 1 1/4")

TGDRPN0000000 PAN PHILLIPS HEAD SELF DRILLING SCREWS AS PER DIN 7540 N

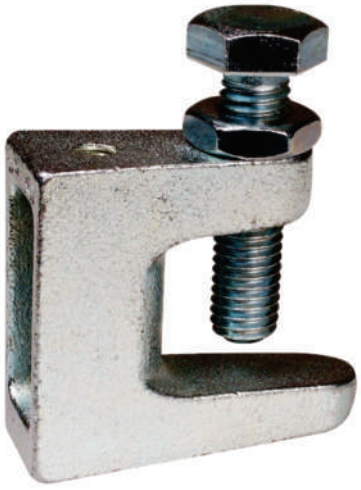
SIZE
3.5mm x 13mm (#6 x 1/2")
3.5mm x 16mm (#6 x 5/8")
3.5mm x 19mm (#6 x 3/4")
4.2mm x 13mm (#8 x 1/2")
4.2mm x 16mm (#8 x 5/8")
4.2mm x 19mm (#8 x 3/4")
4.2mm x 25mm (#8 x 1")
4.2mm x 32mm (#8 x 1 1/4")
4.2mm x 38mm (#8 x 1 1/2")
4.2mm x 50mm (#8 x 2")
4.8mm x 19mm (#10 x 3/4")
4.8mm x 25mm (#10 x 1")
4.8mm x 32mm (#10 x 1 1/4")
4.8mm x 38mm (#10 x 1 1/2")
4.8mm x 50mm (#10 x 2")

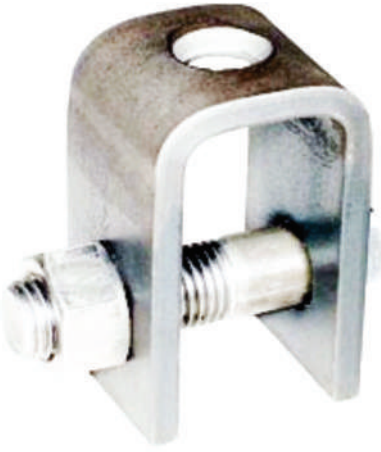
TRUSS PHILLIPS HEAD SELF DRILLING SCREWS ASPER DIN 7504 T TGDRTP0000000

SIZE
4.2mm x 13mm (#8 x 1/2")
4.2mm x 16mm (#8 x 5/8")
4.2mm x 19mm (#8 x 3/4")
4.2mm x 25mm (#8 x 1")
4.2mm x 32mm (#8 x 1 1/4")
4.2mm x 38mm (#8 x 1 1/2")
4.2mm x 50mm (#8 x 2")

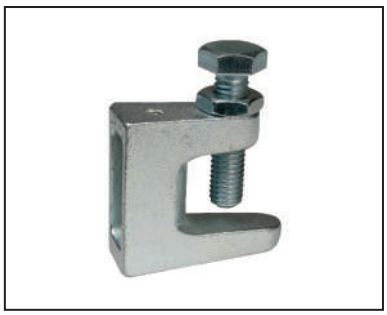
TEMBO
Powering Ahead

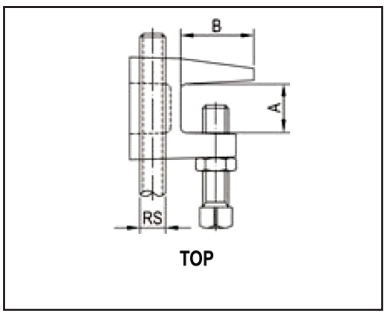
HANGING ATTACHMENT

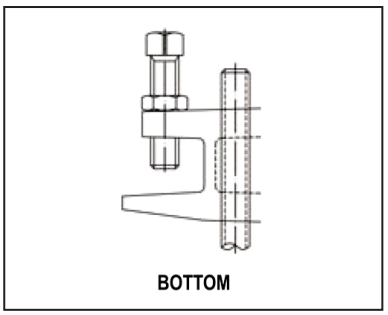




BEAM CLAMP TGBC000000000







SIZE RANGE:
3/8" and 1/2" or M10 and M12

MATERIAL:
Ductile Iron, Hardened Steel cup point set screw and lock nut.

FINISH:
Plain, Electro-Galvanized & Zinc Flake.

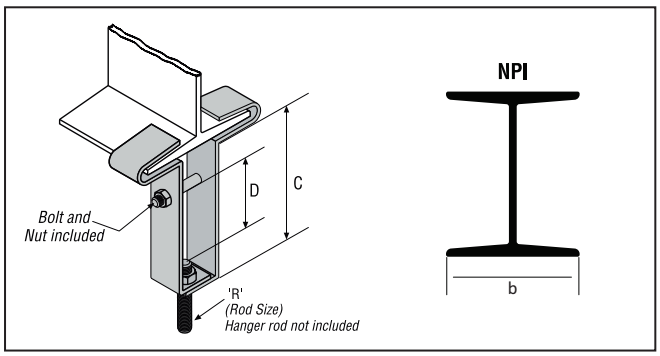
SERVICE:
Structural attachment to top or bottom of metal beams, purlins,channels or angel iron

APPROVAL:
UL LISTED FM APPROVED
Complies with Federal Specification A-A-1192A (Type 19 & 23) WW-H-171-E (Type 23) and MSS-SP-69 (Type 19 & 23). MSS

PRODUCT CODE	SIZE	A (MM)	B (MM)	LOAD (KG)
TGBC000ME0010	M10	19	29	250
TGBC000ME0012	M12	19	31	350

PRODUCT CODE	SIZE (INCH)	A (INCH)	B (INCH)	LOAD (KG)
TGBC000UE0318	3/8	3/4	1 1/8	250
TGBC000UE0112	1/2	3/4	1 1/4	350

NOTE: Available with threading & without threading



SERVICE:

Designed for attaching a hanger rod to be centered under beam flanges vertical adjusment is provided in the clamp. Can be used with swivel unit when connecting to inclined sections.

MATERIAL:

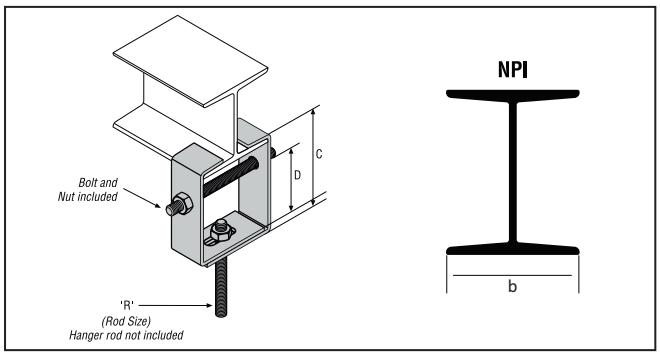
Mild Steel

FINISH AVAILABLE:

Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	R	NPI MM	b MM	C MM	MAX.VERTICAL ADJ. D MM	BOLT	DESIGN LOAD KN
TGCBC0E080100	M12	80-100	64	84	51	M10	0.85
TGCBC0E120140	M12	120-140	66	80	51	M10	0.85
TGCBC0E160200	M12	160-200	90	100	51	M10	1.35
TGCBC0E000240	M12	240	106	100	51	M10	1.35

BOX STEEL BEAM CLAMP TGBBC00000000



SERVICE:

Designed for attaching a hanger rod to be centered under beam flanges. 51 mm vertical adjustment is provided in the clamp.

MATERIAL:

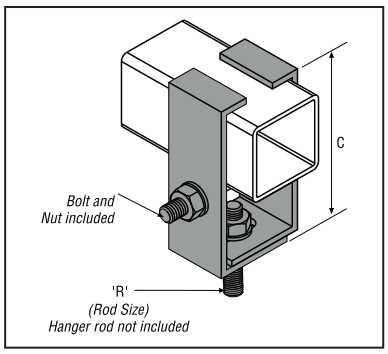
Mild Steel

FINISH AVAILABLE:

Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	R	NPI MM	b MM	C MM	MAX.VERTICAL ADJ. D MM	DESIGN LOAD KN
TGBBC000E0010	M10	80-100	42-50	100	51	2.44
TGBBC000E0012	M12	120-140	58-66	100	51	3.78

BOX BEAM CLAMP TGBBC00000000



SERVICE:

Designed for attaching a hanger rod to be centered under beam flanges. 30 mm vertical adjustment is provided in the clamp.

MATERIAL:

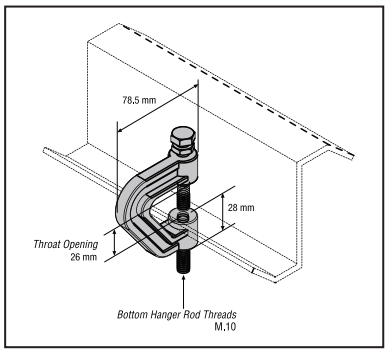
Mild Steel

FINISH AVAILABLE:

Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	R	C MM	DESIGN LOAD KN
TGBBC10E04060	M10	130	1.3/1.7
TGBBC12E04060	M12	130	1.3/1.8
TGBBC10E30100	M10	170	1.6
TGBBC12E60100	M12	170	2.3/1.7
TGBBC12E100120	M12	200	3.2/1.25

TGPBC00E00000 PURLIN BEAM CLAMP



SERVICE:

Designed for attaching a M.10 hanger rod to the bottom flange of a z-purlin

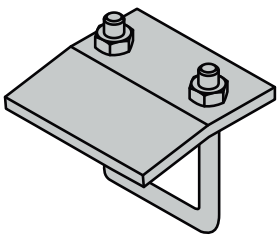
MATERIAL:

Malleable Iron

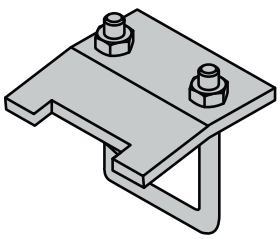
FINISH AVAILABLE:

Electro-Galvanized

PRODUCT CODE	DESIGN LOAD KN
TGPBC00E00010	1.78



Type 1



Type 2

SERVICE:

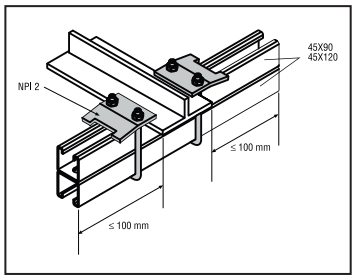
Designed for establishing the suspension systems to the NPI - NPH profiles.

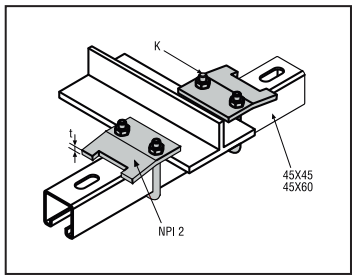
MATERIAL:

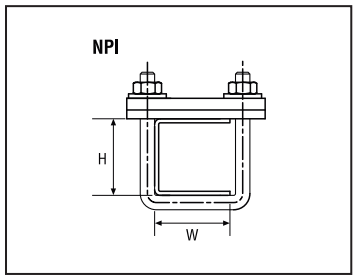
Mild Steel

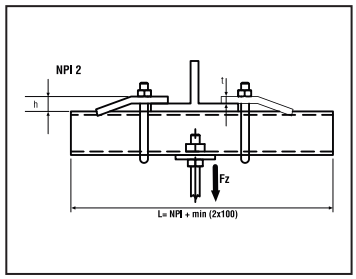
FINISH AVAILABLE:

Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.









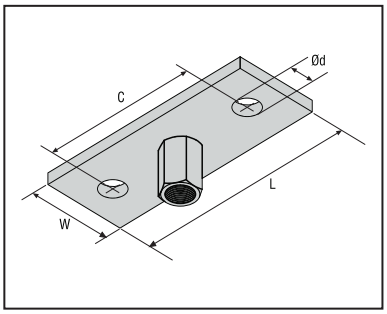
PRODUCT CODE	K MM	t MM	FZ KN	APP.FRAMING CHANNELS	
				W MM	H MM
TGSBC000E1008	M8	6	3.70	max.30	50
TGSBC000E1010	M10	8	4.50	max.40	70
TGSBC000E1012	M12	8	5.60	max.60	110
TGSBC000E1016	M16	10	8.00	max.76	125

Loads per clamp pair.

PRODUCT CODE	K MM	t MM	FZ KN	APP.FRAMING CHANNELS
TGSBC000E2010	M10	8	4.50	4522 4545 4560
TGSBC000E2012	M12	8	5.60	4590 45120

Loads per clamp pair.

CEILING FLANGE TGCF000000000



SERVICE:

Designed for attaching a hanger rod to beam, ceiling or strut channel.

MATERIAL:

Mild Steel

FINISH AVAILABLE:

Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	R	L MM	W MM	Ød MM	C MM	DESIGN LOAD
TGCF0000E0010	M10	110	50	11	65	3.5
TGCF0000E0012	M12	152	50	13	100	5.2
TGCF0000E0016	M16	152	50	13	100	9.71
TGCF0000E0020	M20	152	50	18	100	14.37
TGCF0000E0022	M22	203	76	18	125	19.93
TGCF0000E0024	M24	203	76	18	125	26.24

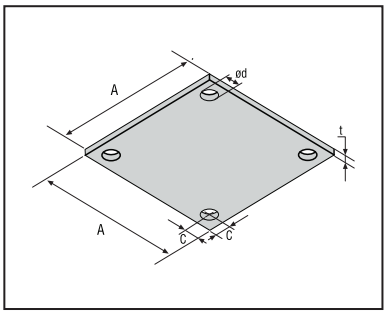


PLATE
SERVICE:

Designed for attaching unstallation plate.

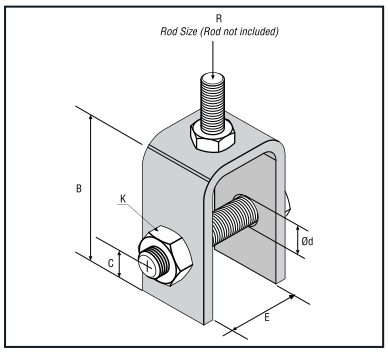
MATERIAL:

Mild Steel

FINISH AVAILABLE:

Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

Ød MM	A MM	t MM	C MM
11	100	6	25
11	150	8	25
13	200	10	25
23	250	12	35
23	300	15	35



SERVICE:

Designed for attaching a hanger rod to bottom of structural steel where heavy load and large hanger rod size are required. can be welded in place in either the upright or inverted position.

MATERIAL:

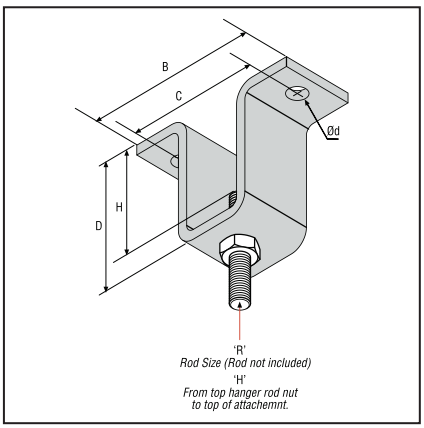
Mild Steel

FINISH AVAILABLE:

Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	R ROD	K MM	B MM	C MM	Ød MM	E MM	DESIGN LOAD KN	
							350°	400°
TGWBA000E0010	M10	M10	72	22	14	32	3.25	2.54
TUWBA000E0012	M12	M12	72	22	18	32	6.00	4.70
TGWBA000E0016	M16	M16	72	22	22	32	9.61	7.52
TGWBA000E0020	M20	M20	78	28	24	38	14.37	11.25
TGWBA000E0022	M22	M22	108	32	30	50	19.93	15.60
TGWBA000E0024	M24	M24	113	38	32	50	26.24	20.55
TGWBA000E0027	M27	M27	113	38	34	70	33.14	25.93
TGWBA000E0030	M30	M30	126	51	38	76	42.25	33.09
TGWBA000E0036	M36	M36	163	63	44	89	61.38	48.07
TGWBA000E0042	M42	M42	195	70	50	95	82.73	64.79
TGWBA000E0048	M48	M48	207	82	60	95	109.42	87.29

UPPER ATTACHMENT TGUA000000000



SERVICE:

Designed for to be used in steel construction structures as a suspension material.

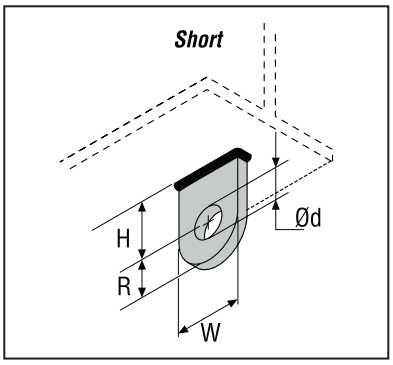
MATERIAL:

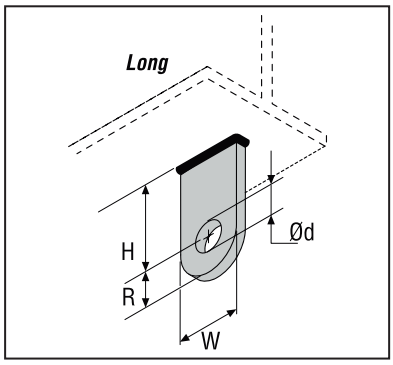
Mild Steel

FINISH AVAILABLE:

Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

PRODUCT CODE	R MM	B MM	C MM	D MM	Ød MM	ADJUSMENT H	DESIGN LOAD WITH BOLTS KN
TGUA0000E0010	M10	100	79	86	11	70	3.25
TGUA0000E0012	M12	136	105	92	14	70	6.00
TGUA0000E0016	M16	150	114	94	18	68	9.61
TGUA0000E0020	M20	168	117	121	23	89	14.37
TGUA0000E0022	M22	184	133	125	23	90	19.93





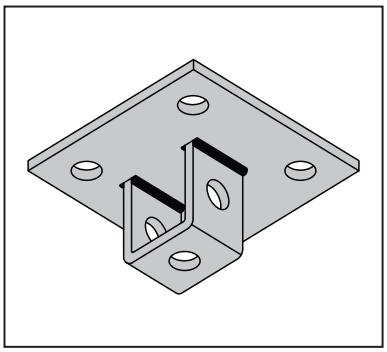
SERVICE:
Designed for attachment to structural steel.

FINISH AVAILABLE:
Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

MATERIAL:
Mild Steel

PRODUCT CODE	Ød MM	R MM	SHORT H MM	LONG H MM	W MM	DESIGN LOAD kN
TGSLP000ES018	18	32	38	76	63	6.00
TGSLP000ES020	20	32	38	76	63	9.60
TGSLP000ES024	24	32	38	76	63	14.40
TGSLP000ES028	28	32	51	76	63	19.90
TGSLP000ES032	32	38	51	76	76	26.20
TGSLP000ES036	36	38	76	102	76	33.10
TGSLP000ES038	38	51	76	102	102	42.20
TGSLP000ES044	44	64	76	114	127	61.40
TGSLP000ES050	50	64	76	114	127	82.70
TGSLP000ES060	60	76	102	114	152	109.50

CONCRETE ROD ATTACHMENT PLATE TGCRP00000000



SERVICE:

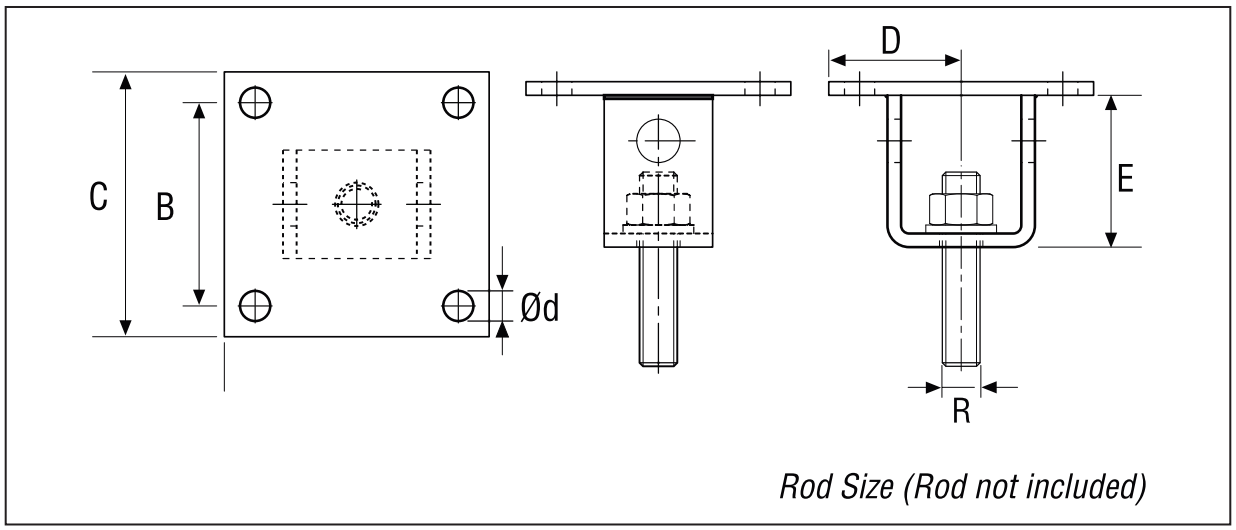
Structural attachment to concrete ceilings where vertical adjustment is desired. Normally used with threaded rod and nut.

MATERIAL:

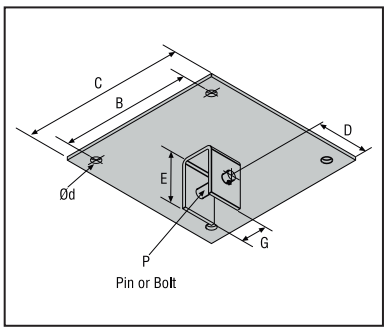
Mild Steel

FINISH AVAILABLE:

Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.



PRODUCT CODE	R MM	B MM	C MM	D MM	E MM	Ød MM	DESIGN LOAD WITH BOLT kN
TGCRP000E0010	M10	200	250	125	73	14	3.20
TGCRP000E0012	M12	200	250	125	73	14	6.00
TGCRP000E0016	M16	200	250	125	73	14	9.50
TGCRP000E0020	M20	200	250	125	80	18	14.30
TGCRP000E0022	M22	200	250	125	108	18	19.90
TGCRP000E0024	M24	200	300	150	114	20	26.20
TGCRP000E0027	M27	200	300	150	121	24	33.10
TGCRP000E0030	M30	200	300	150	127	24	42.20
TGCRP000E0036	M36	200	300	150	165	28	61.30



SERVICE:

Structural attachment to concrete ceilings where vertical adjustment is desired. Normally used with threaded rod and nut.

MATERIAL:

Mild Steel

FINISH AVAILABLE:

Electro-Galvanized, Hot Dip Galvanized & Zinc Flake.

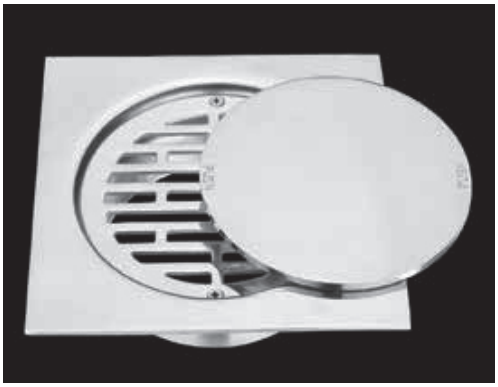
PRODUCT CODE	P	B MM	C MM	D MM	Ød MM	G MM	DESIGN LOAD WITH BOLT kN
TGCAP000E0012	M12	200	250	125	14	32	3.20
TGCAP000E0016	M16	200	250	125	14	32	6.00
TGCAP000E0020	M20	200	250	125	14	32	9.50
TGCAP000E0022	M22	200	250	125	18	38	14.30
TGCAP000E0024	M24	200	250	125	18	50	19.90
TGCAP000E0027	M27	200	300	150	20	50	26.20
TGCAP000E0030	M30	200	300	150	24	70	33.10
TGCAP000E0036	M36	200	300	150	24	75	42.20
TGCAP000E0042	M42	200	300	150	28	90	61.30

TEMBO
Powering Ahead

FLOOR DRAIN

Stainless Steel Floor Drains – Non Magnetic

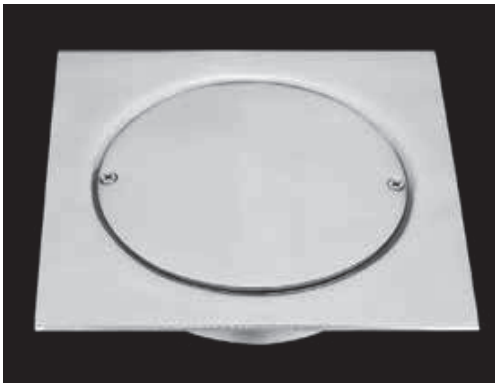
SS FLOOR DRAINOUT 3PC GRADE NON MAGNETIC (BODY + SCREWED GRATING + LID)



Techinical Discription:

200mm x 200mm x 102mm Fits Inside 4"Pipe
150mm x 150mm x 102mm Fits Inside 4"Pipe
109mm x 109mm x 78mm Fits Inside 3"Pipe
79mm x 79mm x 51mm Fits Inside 2"Pipe

SS FLOOR CLEANOUT 2PC. - NON MAGNETIC (BODY + LID)



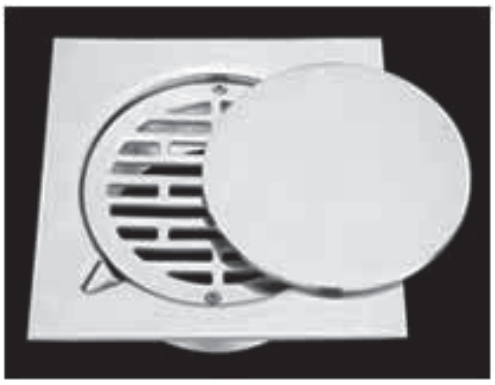
Techinical Discription:

150mm x 150mm x 102mm Fits Inside 4"Pipe
109mm x 109mm x 78mm Fits Inside 3"Pipe
79mm x 79mm x 51mm Fits Inside 2"Pipe
63 mm x63 mm x38 mm Fits Inside 1.1/2"Pipe

SS Floor Grating 2pc. - Non Magnetic (Body + Screwed Grating)

Techinical Discription:

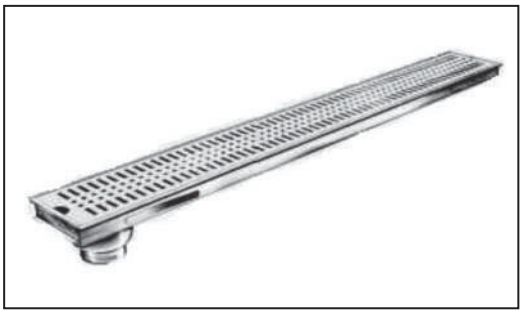
200mm x 200mm x 102mm Fits Inside 4"Pipe
150mm x 150mm x 102mm Fits Inside 4"Pipe
109mm x 109mm x 78mm Fits Inside 3"Pipe
79mm x 79mm x 51mm Fits Inside 2"Pipe
63 mm x63 mm x38 mm Fits Inside 1.1/2"Pipe

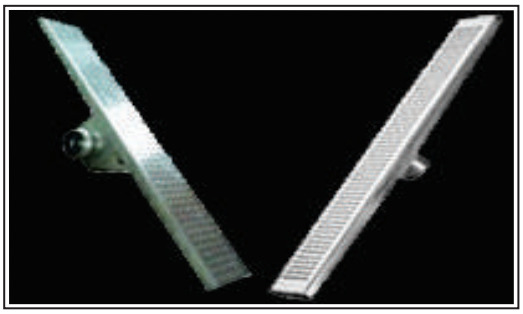


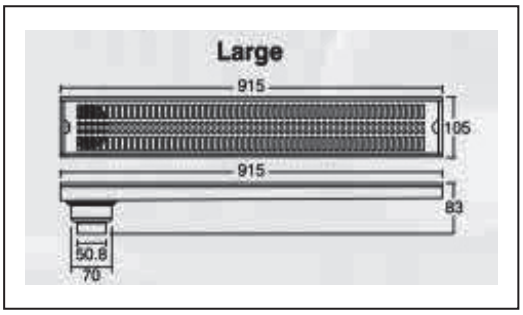
Thumb Type

Shower Channel Drains

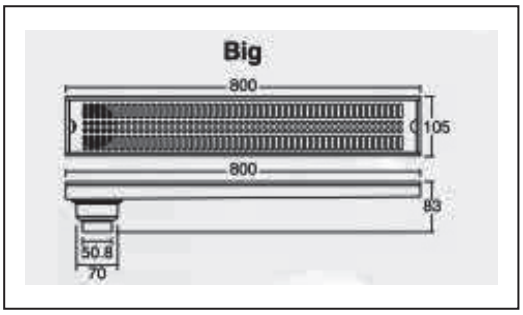
This channel drain is manufactured using the finest quality material in conformity with the international quality standards. The offered channel drain finds immense application in residential and commercial sectors. Available in multiple specifications, this is admired for the features like durable nature, high strength, dimensional accuracy, corrosion resistance, etc.



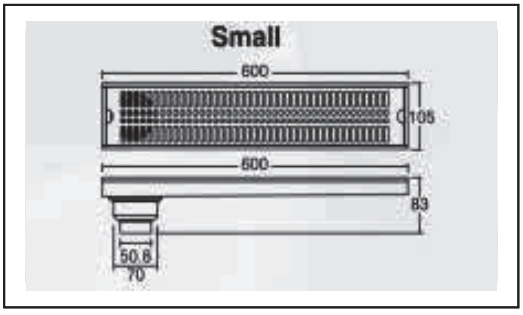




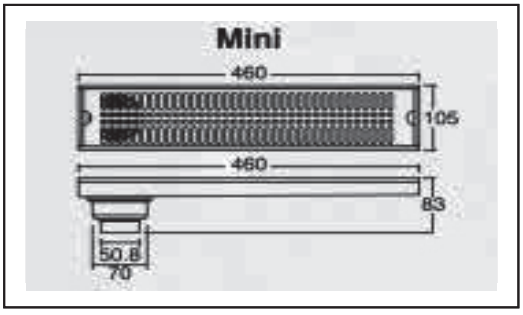
Overall Size:
915 x 105 x 83mm (36 x 4 x 3.1/4 Inch)



Overall Size:
800 x 105 x 83mm (31.1/2 x 4 x 3.1/4 Inch)

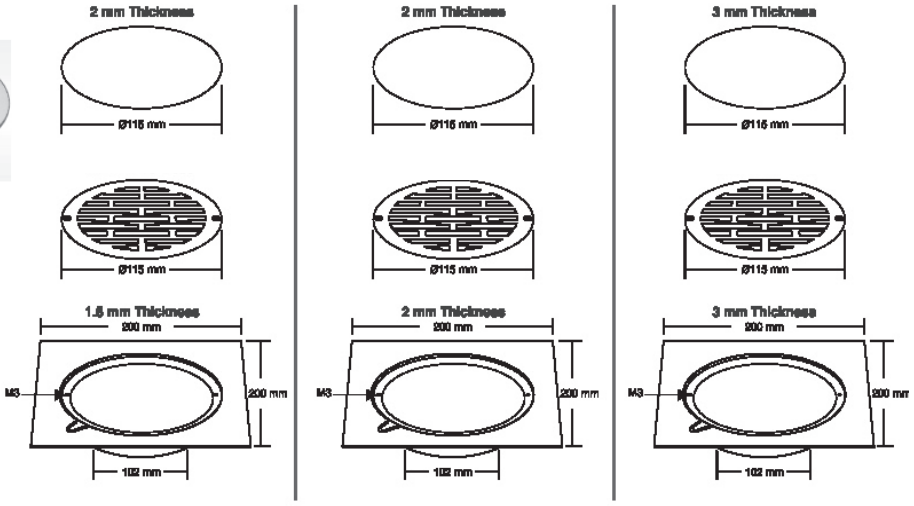


Overall Size:
600 x 105 x 83mm (23.1/2 x 4 x 3.1/4 Inch)



Overall Size:
460 x 105 x 83mm (18 x 4 x 3.1/4 Inch)

200 mm x 200 mm (3 PC.)



200 mm x 200 mm (3 PC.)

150 mm x 150 mm (3 PC.)

100 mm x 100 mm (3 PC.)

200 mm x 200 mm (2 PC.)

150 mm x 150 mm (2 PC.)

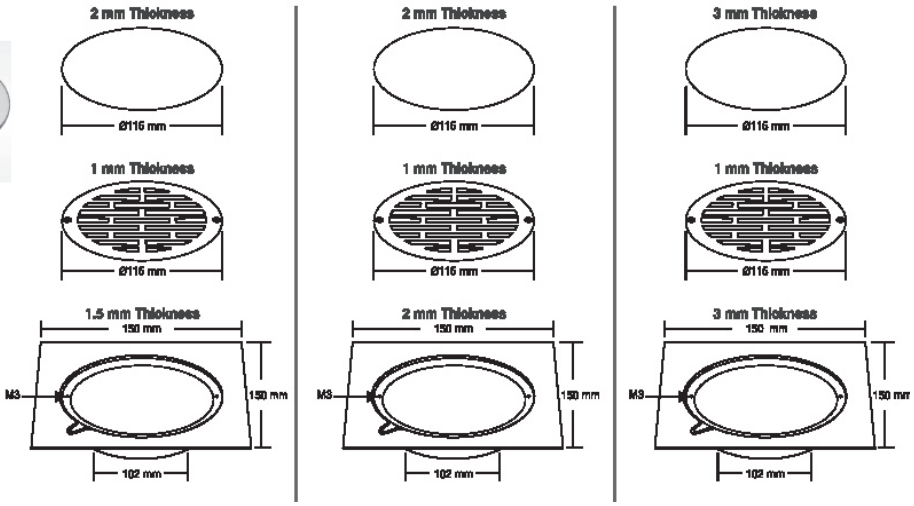
100 mm x 100 mm (2 PC.)

79 mm x 79 mm (2 PC.)

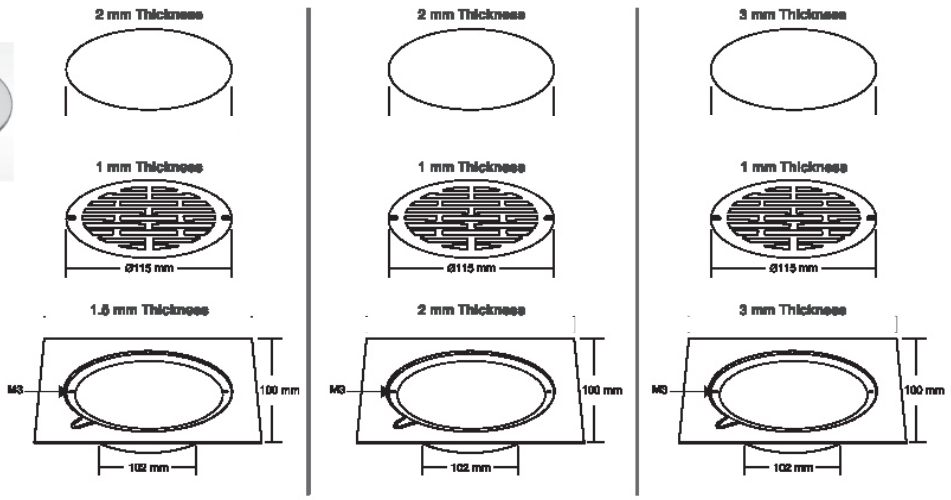
Clean Out

150 mm x 150 mm (2 PC.)

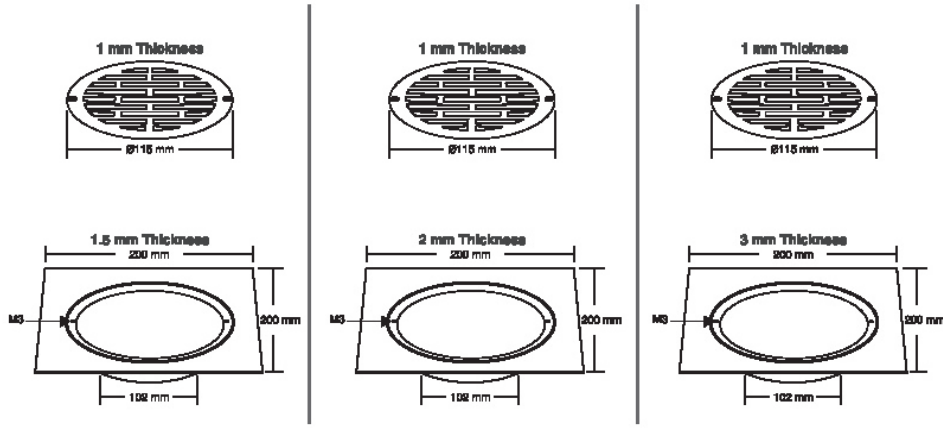
150 mm x 150 mm (3 PC.)



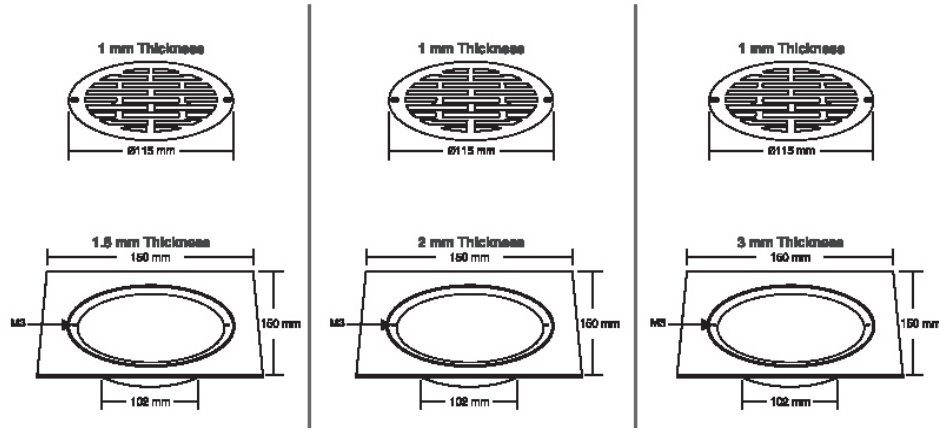
100 mm x 100 mm (3 PC.)



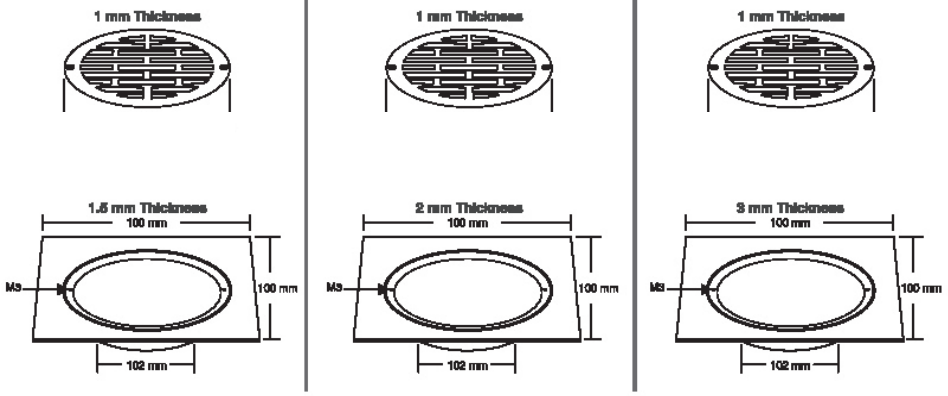
200 mm x 200 mm (2 PC.)



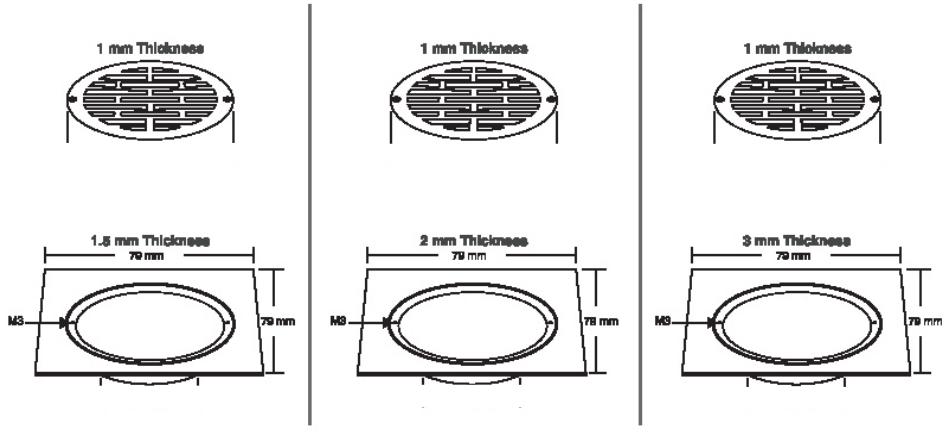
150 mm x 150 mm (2 PC.)



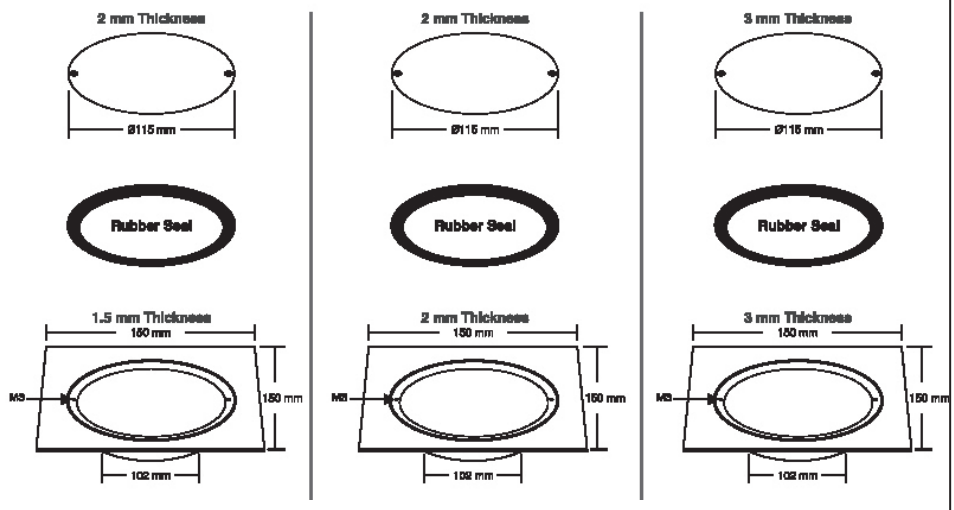
100 mm x 100 mm (2 PC.)



79 mm x 79 mm (2 PC.)



Clean Out
150 mm x 150 mm (2 PC.)



Cost effective aids for measuring pressure and temperature in fluid lines.
Used at inlet and outlet of equipment, DRVs and metering stations.
Feature leakproof neoprene twin-core design.

Construction: Full brass body supplied as standard.
SS construction available on application.
Supplied complete with restraining strap for the cap.

Connection Sizes : 1/4", 1/2".
Pressure : 35Kg/cm^2, Temperature : -20^{0}C. to 105^{0}C.
Each unit is individually pressure tested before dispatch.
Extended Test Plugs are suitable for piping with insulation up to 50mm thickness.

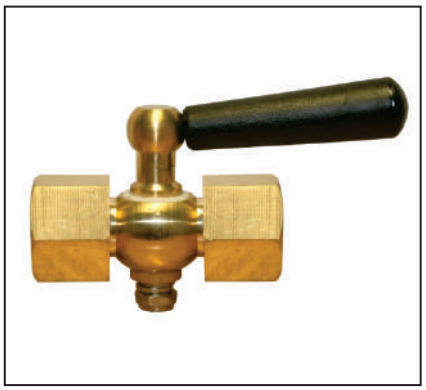
AUTOMATIC AIR VENT TGAA000000000

APPLICATION :
Air enters all chilled or hot water HVAC systems. This adversely impacts heat transfer and causes corrosion, leading to premature wear of components. Therefore, effective venting of air crucial for ensuring optimal performance of the heat exchanger equipment and protecting against high maintenance costs.

INSTALLATION OF AIR VENTS IS RECOMMENDED AT:
- Top of air bottles, air vessels & air separators.
- All high points of the piping system.
- Top of cooling coils, evaporators, radiators.

FEATURES :
- Flare metal connection at outlet
- Leakproof Float
- Complete with check valve
- High air discharge capacity.

SPECIFICATIONS:
Check Valve :1/2" MPT
Connection :3/8" & 3/4"
Working Pressure : 15 bar (217 psi)
Max Temperature : 120°C



Three-port brass gauge cocks with Teflon seals, air bleed holes and nylon handles.
Designed for realiable and efficient operation.
Option of forged of machine body available.

PRODUCT FEATURES:

- Rated maximum working pressure : 25 kg/cm^2
- Connection sizes -1/2", 3/8" BSPT
- Provide with integral Telfon seating to ensure leakproof and smooth operation.
- Glass-reinforced Nylon handle.
- Air bleed hole provided to purge trapped air which can affect accuracy of gauge.
- Functioning of each unit is individually tested at 150% of rated pressure.

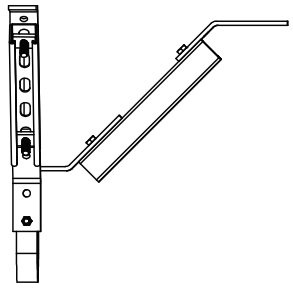
PRODUCT APPLICATION:

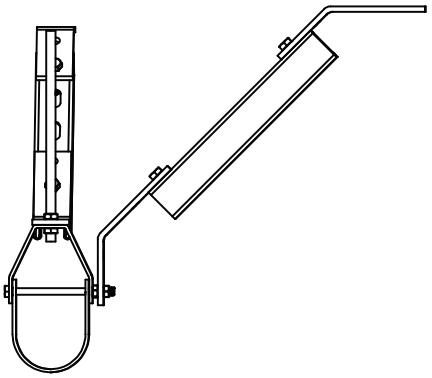
Gauge cocks are isolating valves for pressure gauges. The key advantage of their three-port design is the purging of trapped air when the gauge is connected to the fluid system.

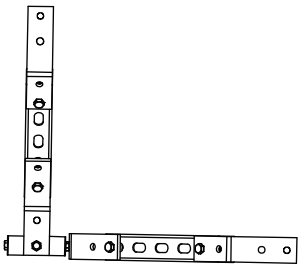
TEMBO

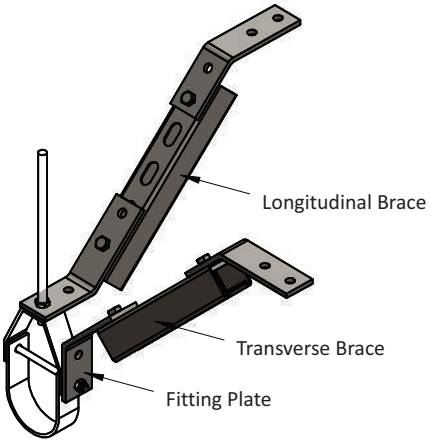
Powering Ahead

SINGLE PIPE, TRANSVERSE BRACE



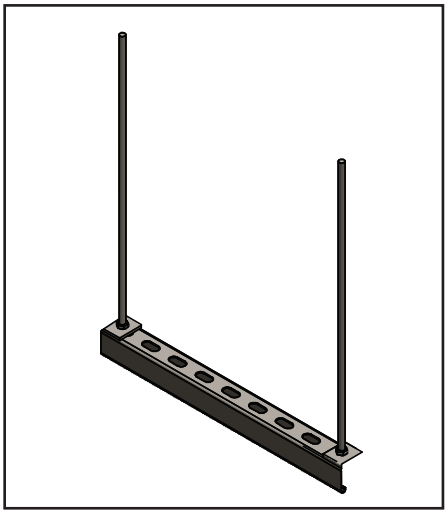




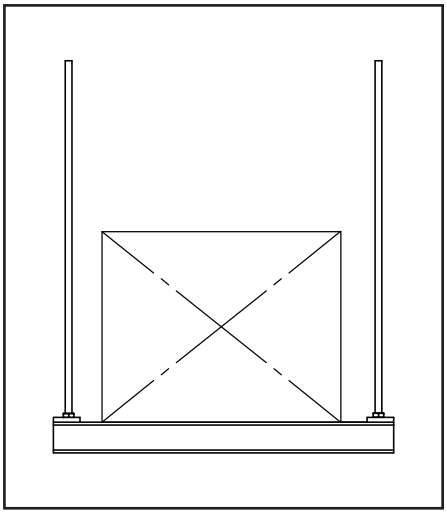


A trapeze pipe hanger, like the one shown in figure (A), can be braced in twodifferent ways using metal framing channel.

Figure (B) illustrates simple transverse bracing. The hanger is attached via strut to structural supports. Since the channel is rigid, the transverse brace is only required on one side of the trapeze.



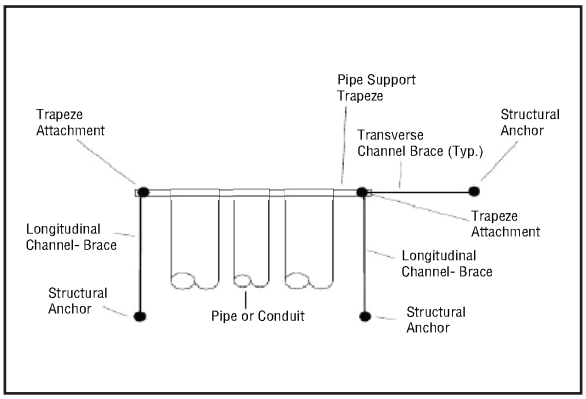
(A) Support System



(B) Transverse Brace

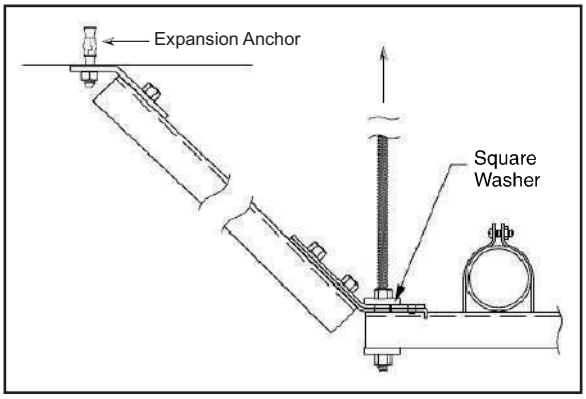
Figure (C) illustrates both transverse and longitudinal bracing. In this case. the hanger is attached via strut to three structural supports.

The are different methods for attaching the bracing strut to the hanger depending upon the hanger style. There are also different methods for attaching the bracing strut to structural supports depending upon the type of structure involved. Thus, a complete solution is obtained by selecting a hanger attachment and a corresponding structural attachment.



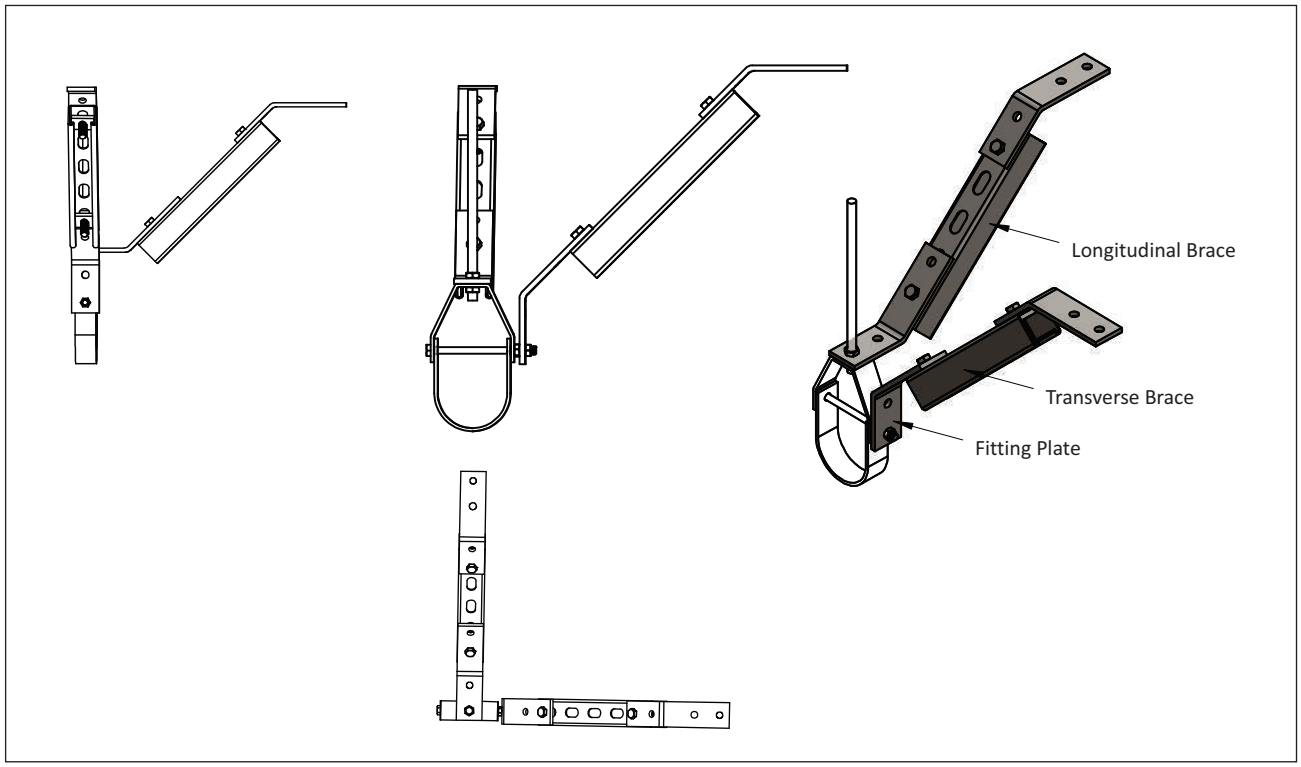
(C) Transverse & Longitudinal Brace

Figure (C) illustrates one example of combining the hanger attachment and the structural attachement.
The following pages illustrate various methods of attaching the bracing strut to the trapeze or other fixture.



(D) Braced Trapeze

CHANNEL BRACING-SINGLE PIPE SEISMIC SUPPORT



APPLICATION:

Bracing systems are designed & constructed to resist virtually all code specified seismic forces in the event of an earthquake, there fore keeping non-building structural components operational and intact.

Actual application may very are not limited to support methods shown. However, any changes to the support methods, hardware & designs depicted in these guideline should only be made in accordance with standard engineering practices

MATERIAL:

Mild Steel, Carbon Steel. Also other materials can be provided on request

FINISH AVAILABLE:

Electro-Galvanized, Hot Dip Galvanized.

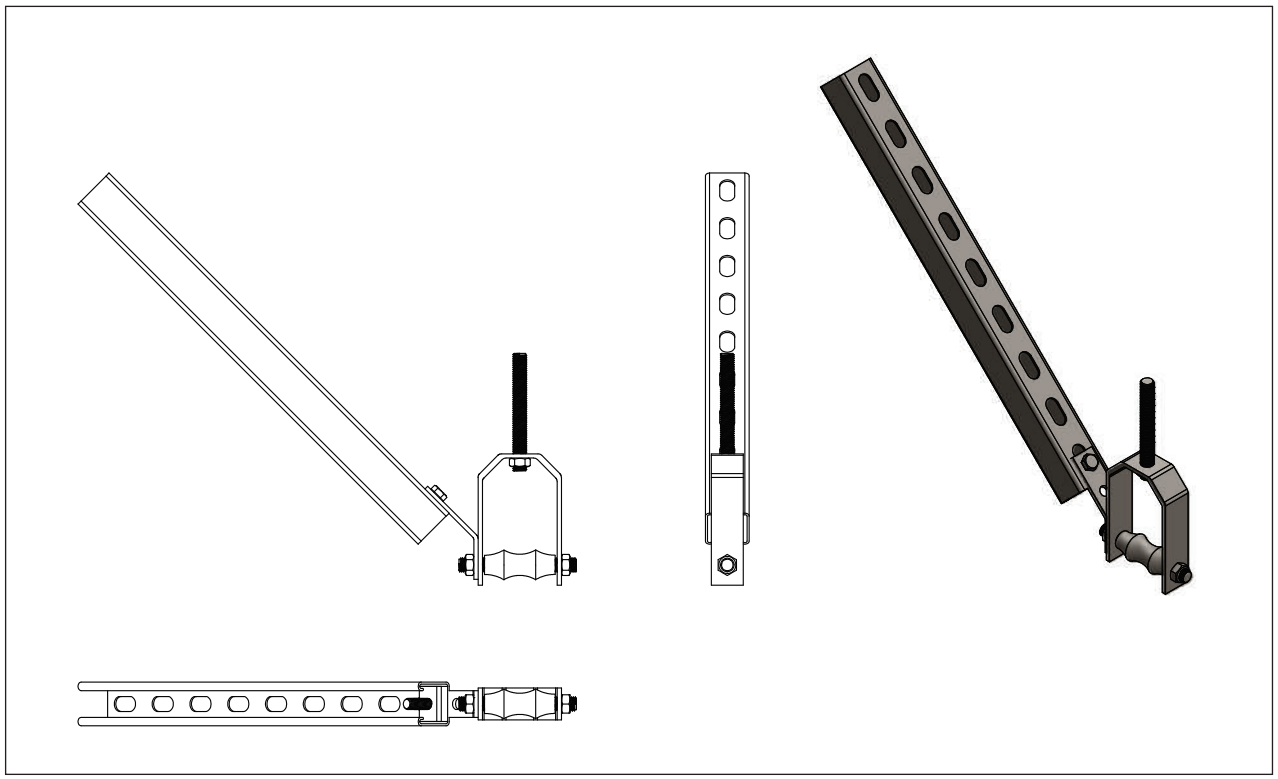
NOTE:

For a single pipe hanger, the longitudinal & transverse channel brace is attached to both side of the pipe

There are two different methods of attaching the channel brace to a clevis hanger. One is to attached the braces to the drop rod. The other alternative shown at the top of the page is to attached a channel brace to both side of clevis hanger.

The transverse brace is attached to one side of the hanger. The specific connection depends upon the type of pipe hanger used.

The longitudinal brace is attached to the top of the hanger. The simplest method is using flat fitting and a pipe clamp.



APPLICATION:

Bracing systems are designed & constructed to resist virtually all code specified seismic forces in the event of an earthquake, there fore keeping non-building structural components operational and intact.

Actual application may very are not limited to support methods shown. However, any changes to the support methods, hardware & designs depicted in these guideline should only be made in accordance with standard engineering practices

Adjustable Roller Hanger is recommended for suspended pipes in applications where horizontal movement, due to expansion and contraction, will occur and vertical adjustment is necessary.

MATERIAL:

Mild Steel, Carbon Steel. Also other materials can be provided on request

FINISH AVAILABLE:

Electro-Galvanized, Hot Dip Galvanized.

NOTE:

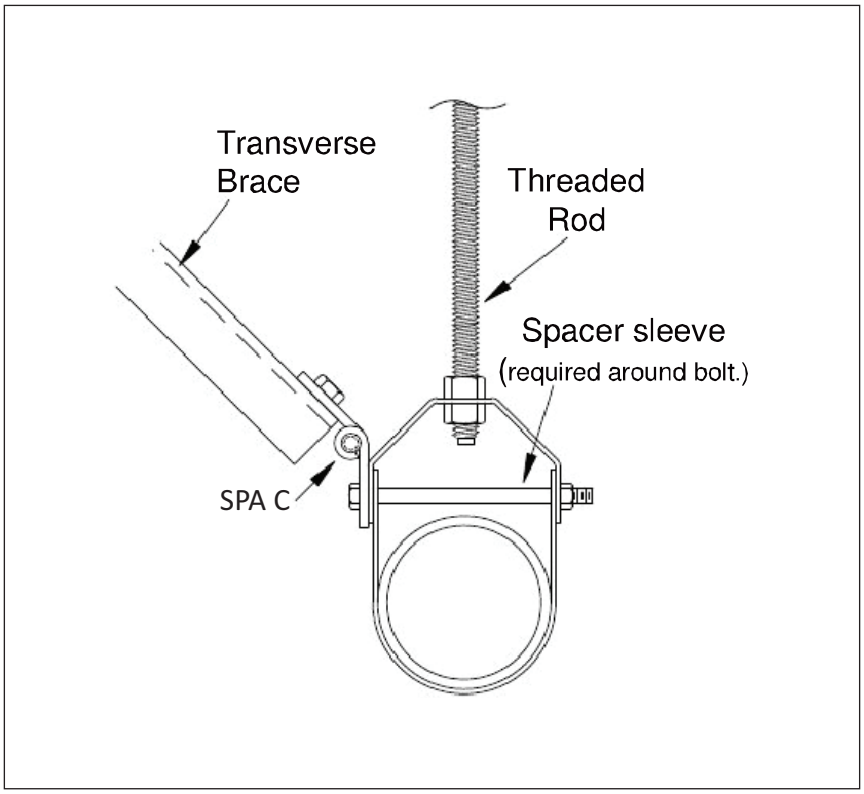
For a single pipe hanger, the longitudinal & transverse channel brace is attached to both side of the pipe

There are two different methods of attaching the channel brace to a Adjustable Roller Hanger. One is to attached the braces to the drop rod. The other alternative shown at the top of the page is to attached a channel brace to both side of Adjustable Roller Hanger.

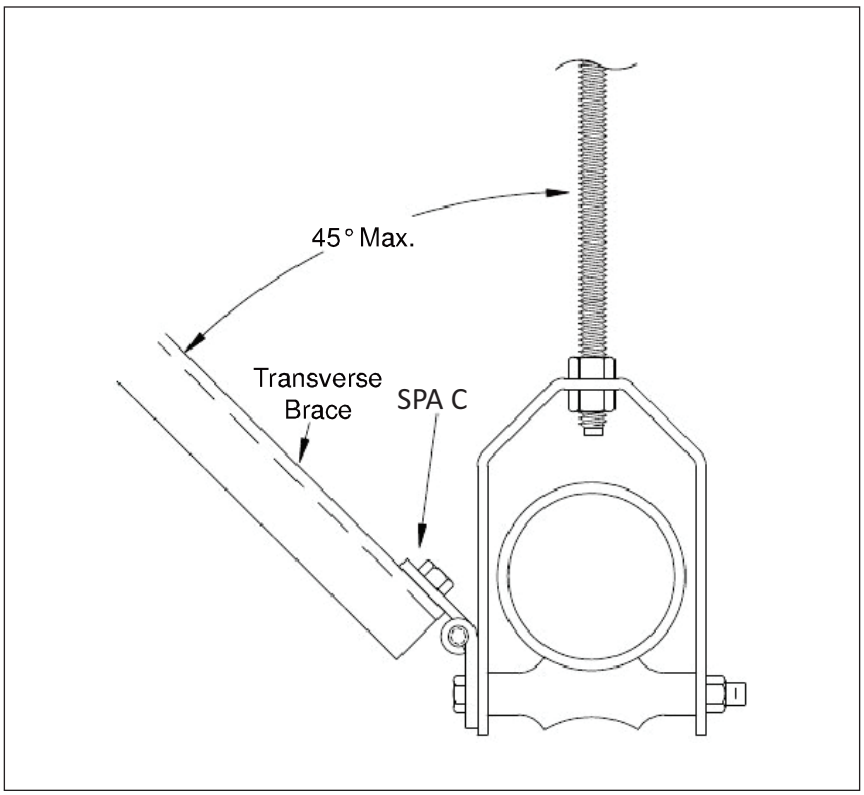
The transverse brace is attached to one side of the hanger. The specific connection depends upon the type of pipe hanger used.

The longitudinal brace is attached to the top of the hanger. The simplest method is using flat fitting and a pipe clamp.

The Transverse brace is attached to one side of the hanger.
The specific connection depends upon the type of pipe hanger used.

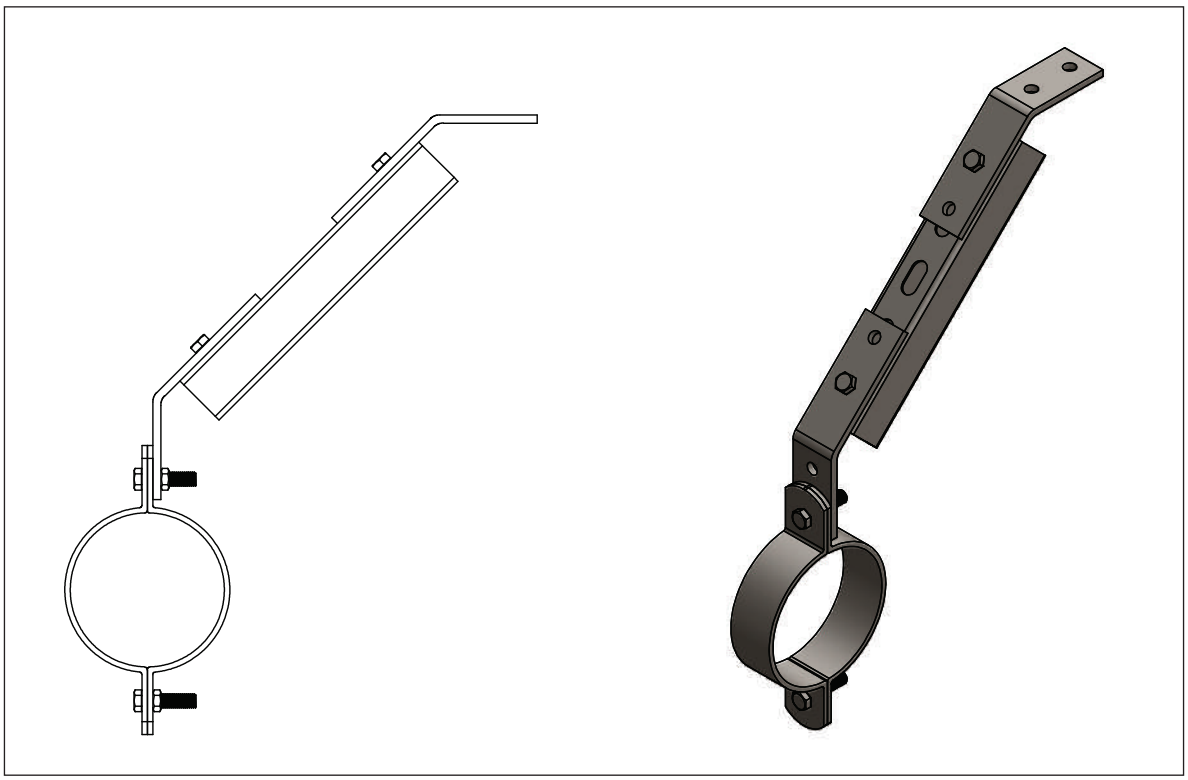


Transverse Brace

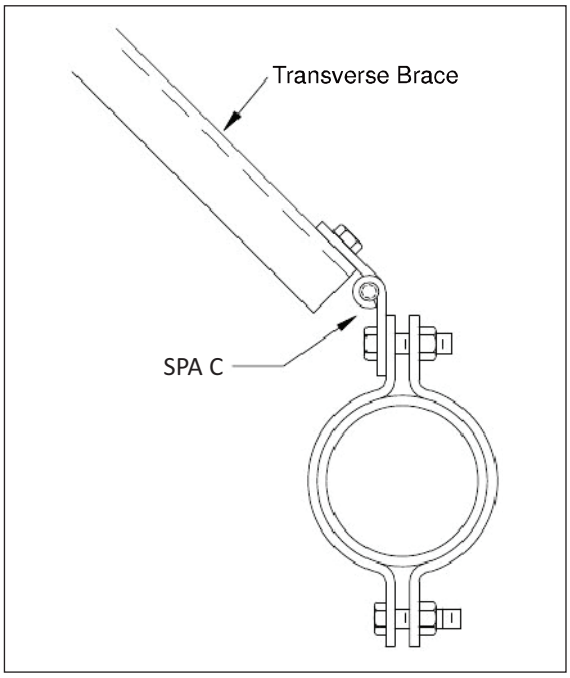


Transverse Brace

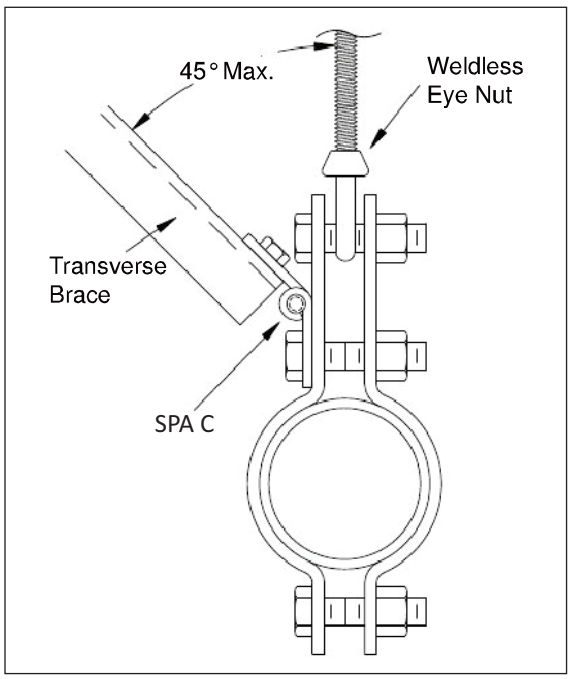
The Transverse brace is attached to one side of the clamp.
The specific connection depends upon the type of pipe clamp used.



Seismic Assembly For Two Bolt Clamp



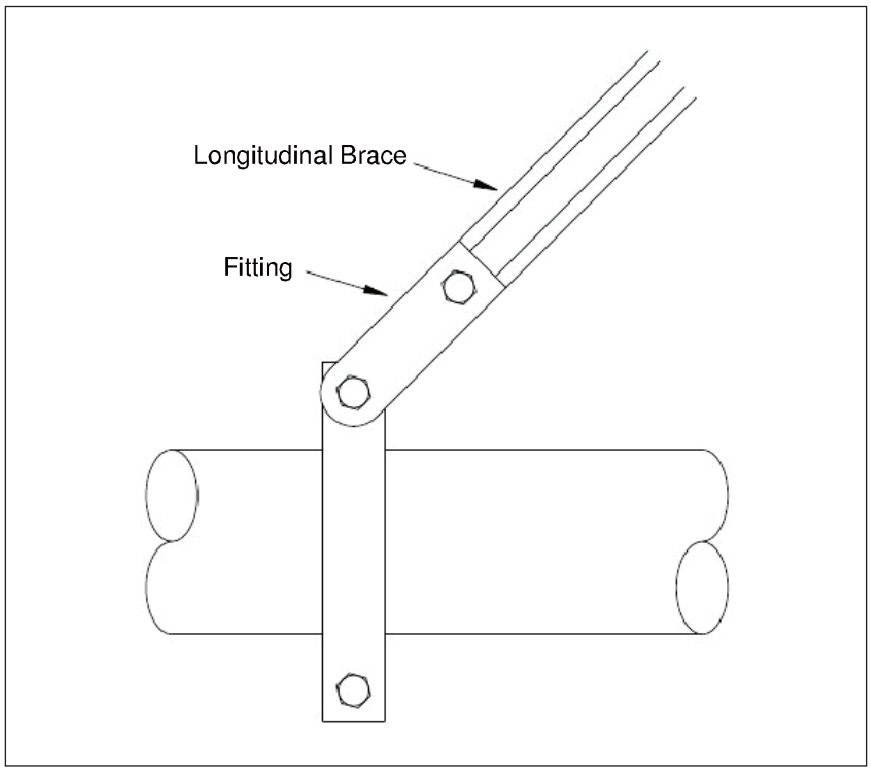
Transverse Brace



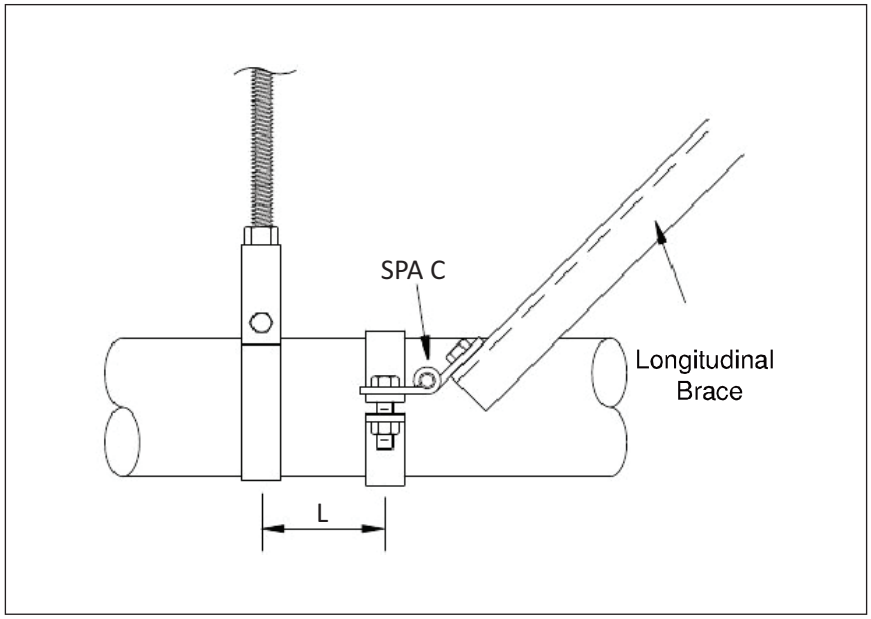
Transverse Brace

Unlike the trapeze, only one longitudinal brace is attached to the pipe hanger. The simplest method is using a flat fitting and a pipe clamp as shown on the left.

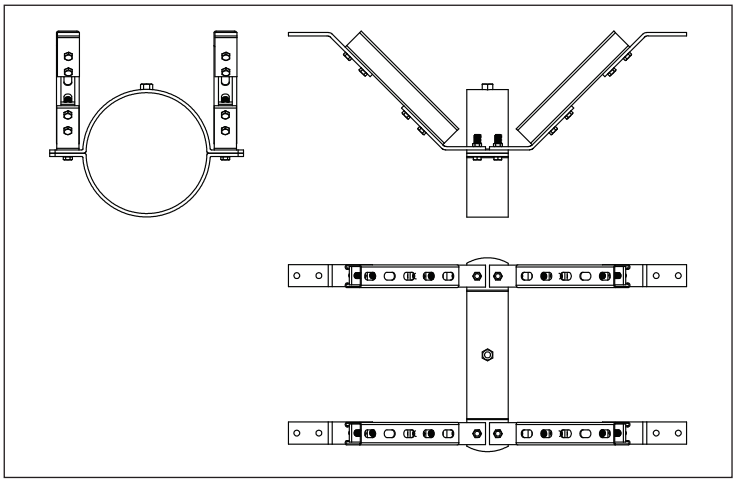
An alternative is to connect a hinge to the pipe clamp as shown below. This method allows some adjustment in the connection of the longitudinal brace to the anchor above.

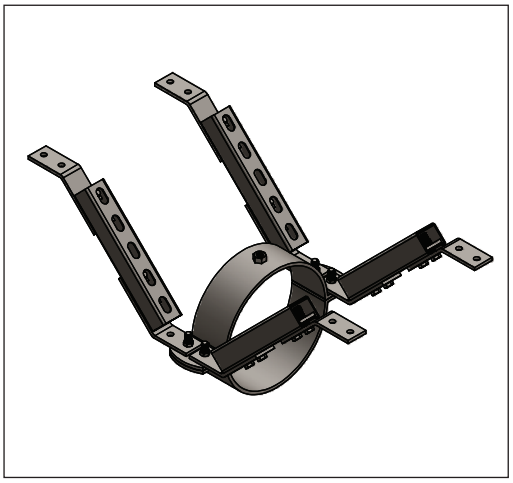


Transverse Brace



Longitudinal Brace





APPLICATION:

HEAVY DUTY PIPE HANGER is recommended for non-insulated stationary heavy pipe lines in either a horizontal or vertical position. It can be used for supporting pipes along with roof as well as along wall. it is Used where loads to be carried are larger in magnitude.

CONSTRUCTION:

HEAVY DUTY PIPE HANGER consists of piece of mild steel shaped to wrap around the pipe. Quick – Locking permits simple and fast installation. Large opening angles for easy insertion of the pipes. Clamping range without gaps. Reduces noise upto 18 dB.

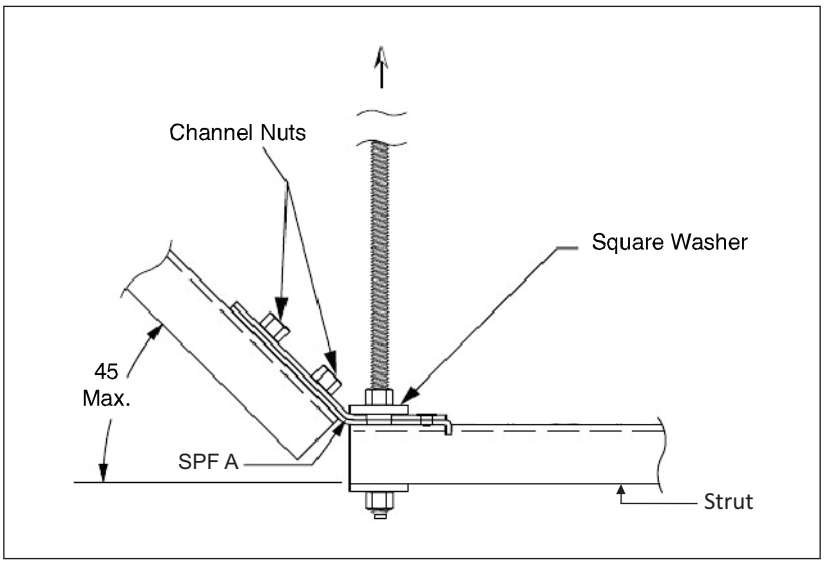
MATERIAL:

Mild Steel. Also other materials can be provided on request

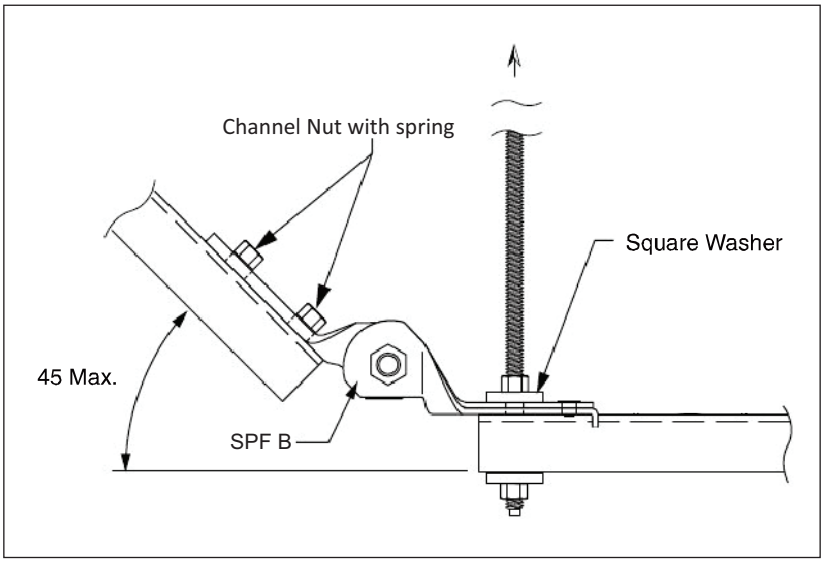
FINISH AVAILABLE:

Electro-Galvanized, Hot Dip Galvanized, Plain .

The Transverse channel brace is typically attached to just one side of the trapeze, The specific connection depends upon the type of pipe hanger used.

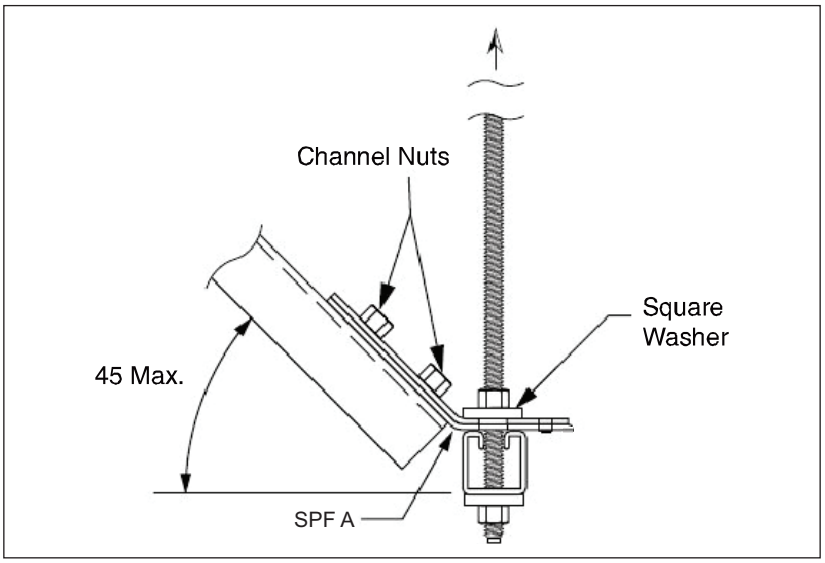


Transverse Brace with Seismic Pivot Fitting

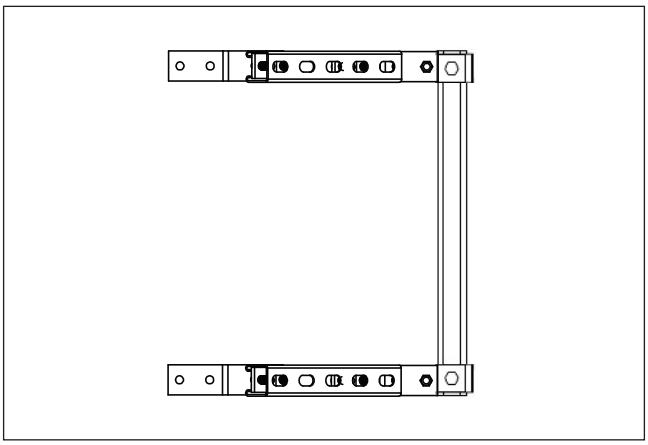


Transverse Brace with Seismic Pivot Fitting

The longitudinal channel brace is must be attached to both side of the trapeze.



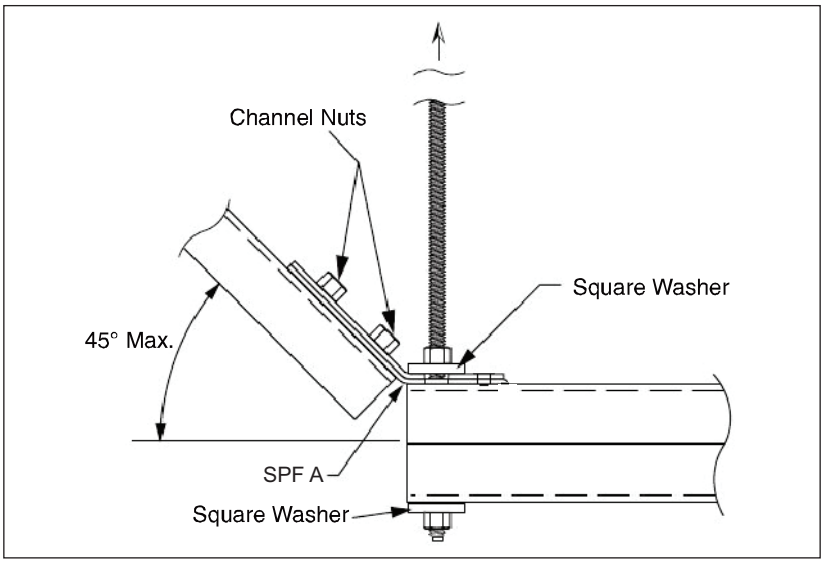
Longitudinal Brace with Seismic Pivot Fitting



Longitudinal Brace

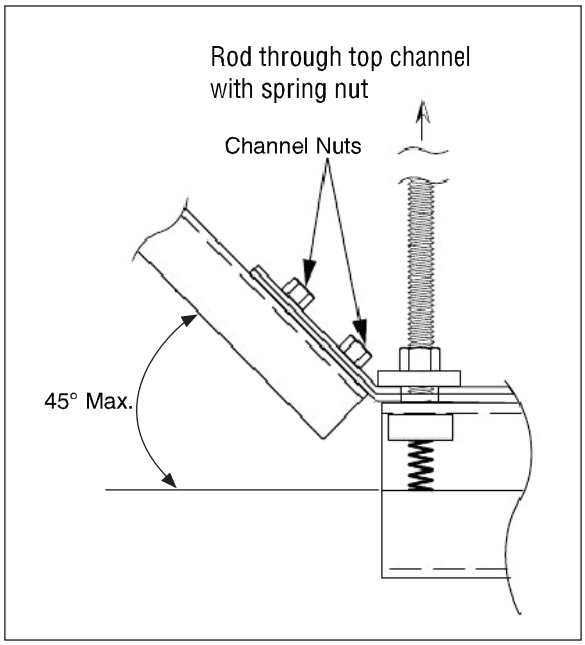
The Transverse channel brace is typically attached to just one side of the trapeze.

There are two different methods of attaching the hanger rod to the trapeze. One is to allow the rod to go through the channel and add a square washer on the bottom side as shown in the examples.



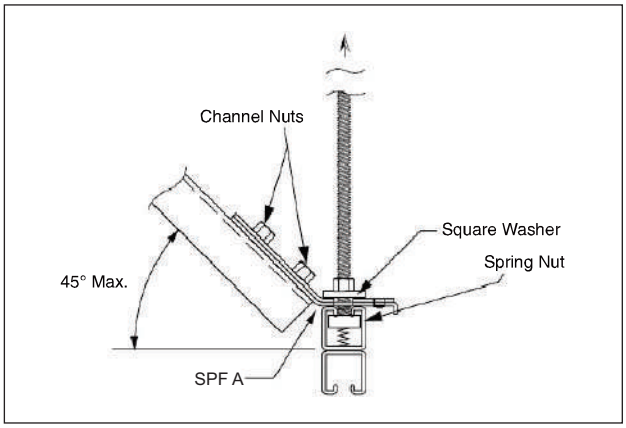
Transverse Brace

Another method, shown below, is to use a channel nut in the top half of the back-to-back channel.

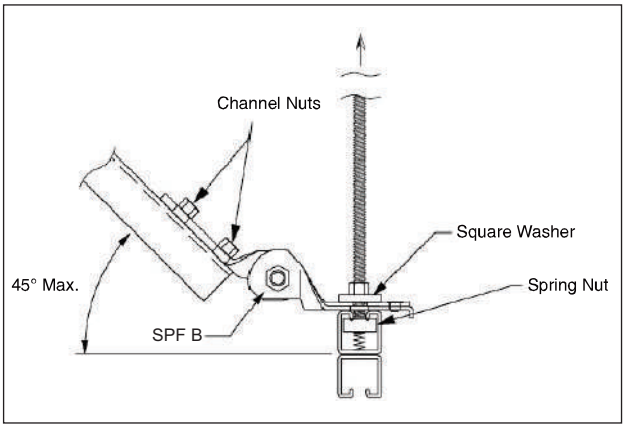


The longitudinal channel brace is must be attached to both side of the trapeze.

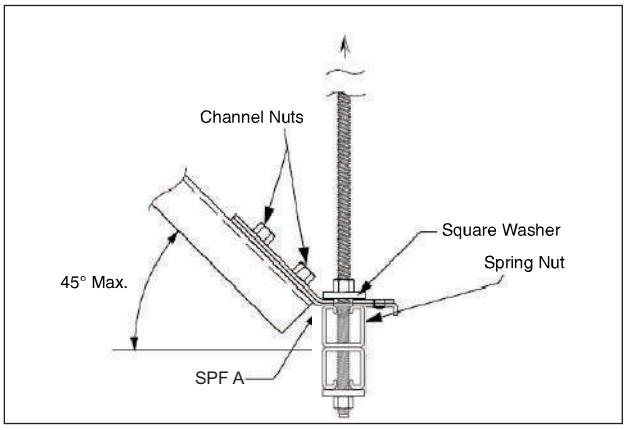
There method of attaching the hanging rod to the trapeze. One is using the channel nut as shown in the examples. The other is to extend the rod through the channel and use a square washer and nut to hold it as shown below.



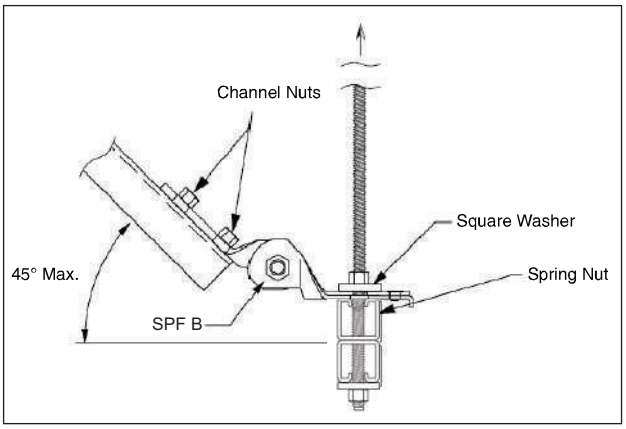
Longitudinal Brace (Install in Pairs)



Longitudinal Brace



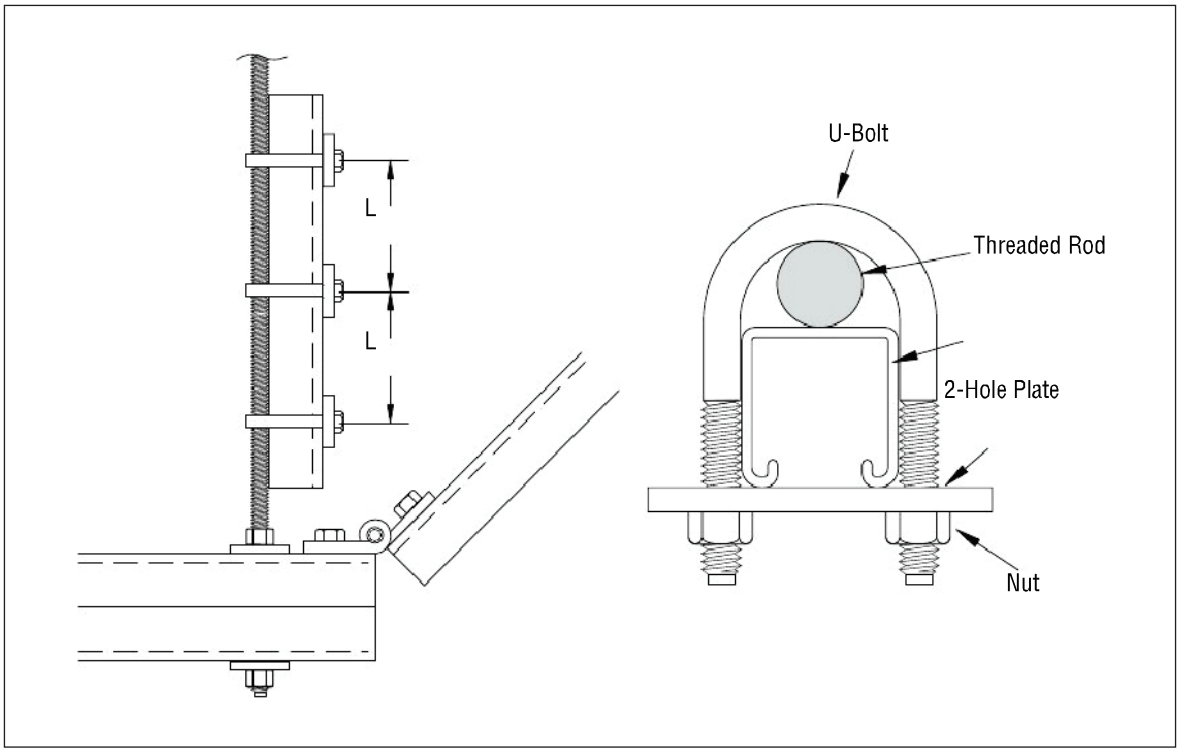
Optional Attachment



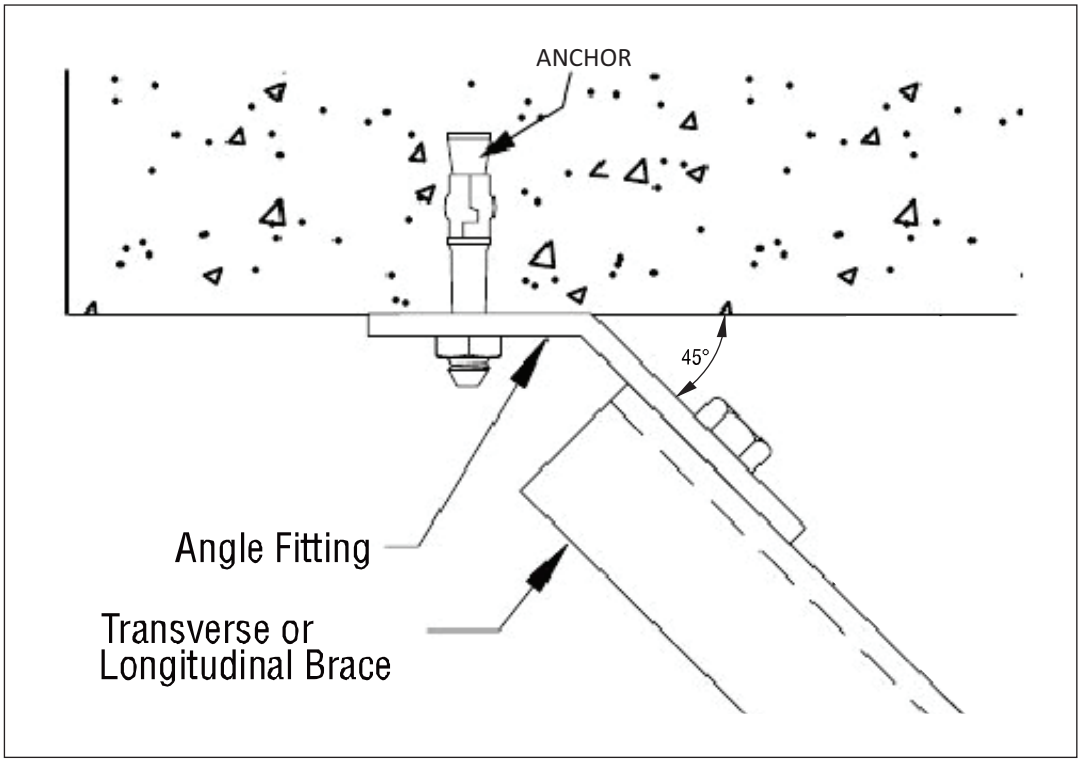
Optional Attachment

BRACING STIFFENER - PRIMARY TRAPEZE SUPPORT

Another technique to secure the channel to the drop rod and provide vertical stiffening is to utilize standard U bolts and a 2-hole plate as shown below...



This section of the document describes how to attach a brace to an overhead anchor. The main criteria for selecting the top anchor scheme is the type of construction for the building.

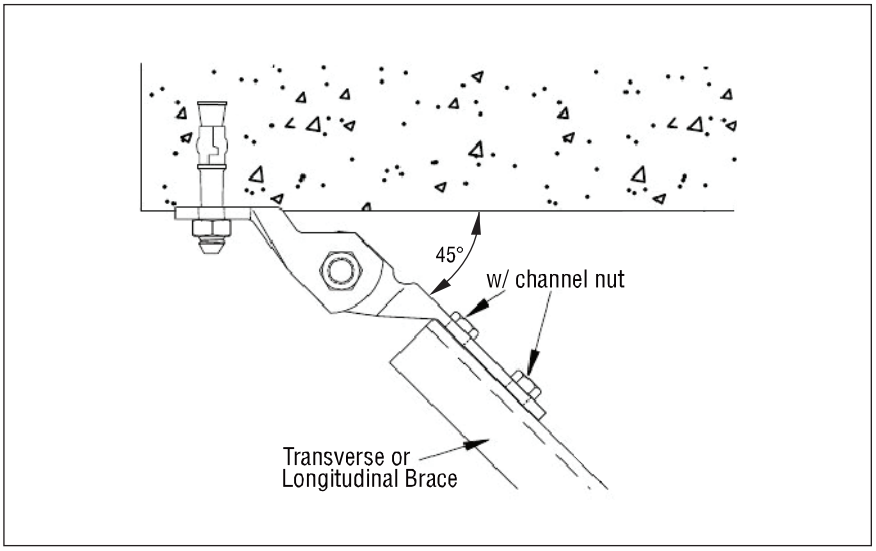


In both of the cases shown on the left, metal framing channel is anchored to the concrete structure and then the cable brace is anchored to the channel.

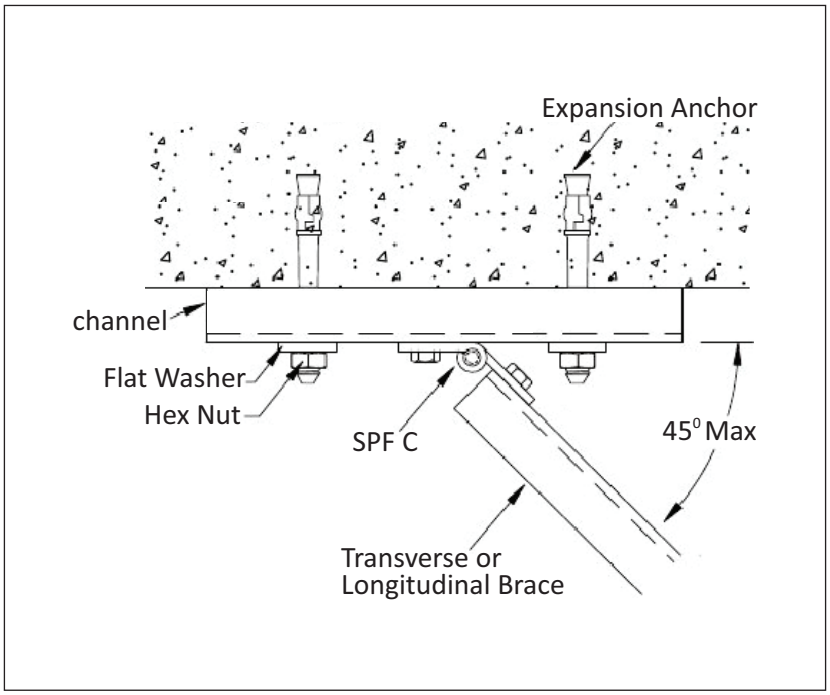
This technique provides for greater load capacity and some adjustment in the connection.

In the first example, standard channel is used and a square washer and bolt anchor the channel to the structure.

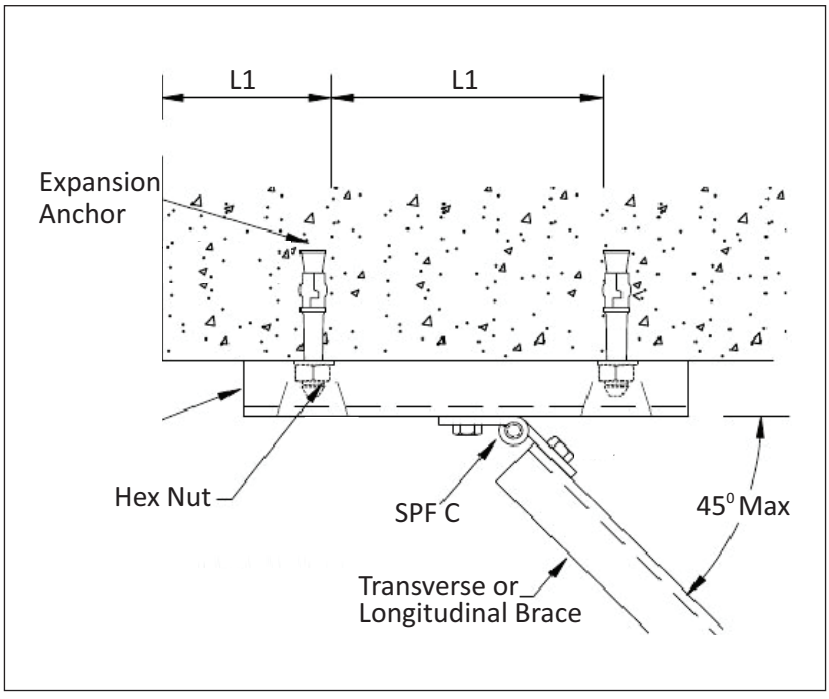
In the bottom example, the channel is used. This elminates the need for the bolt to go all the way through the channel since the channel is enlarged at the point of anchor so that a socket will fit on the bolt head.



A connection similar to the ones using an embedded concrete insert can be created by attaching a piece of channel to the concrete using anchors. Than, appropriate fittings can be used to anchor the brace.

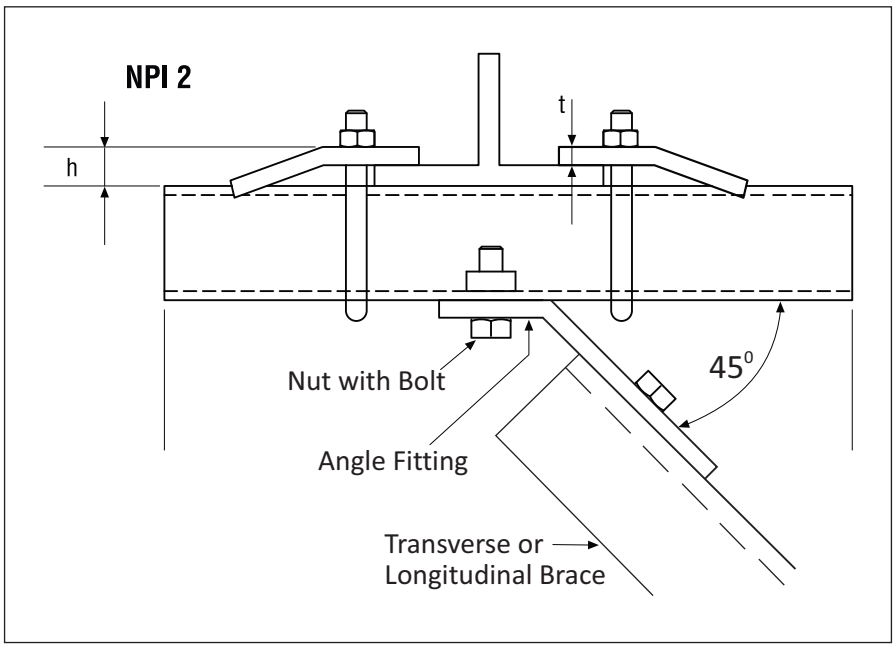


Attachment to Concrete

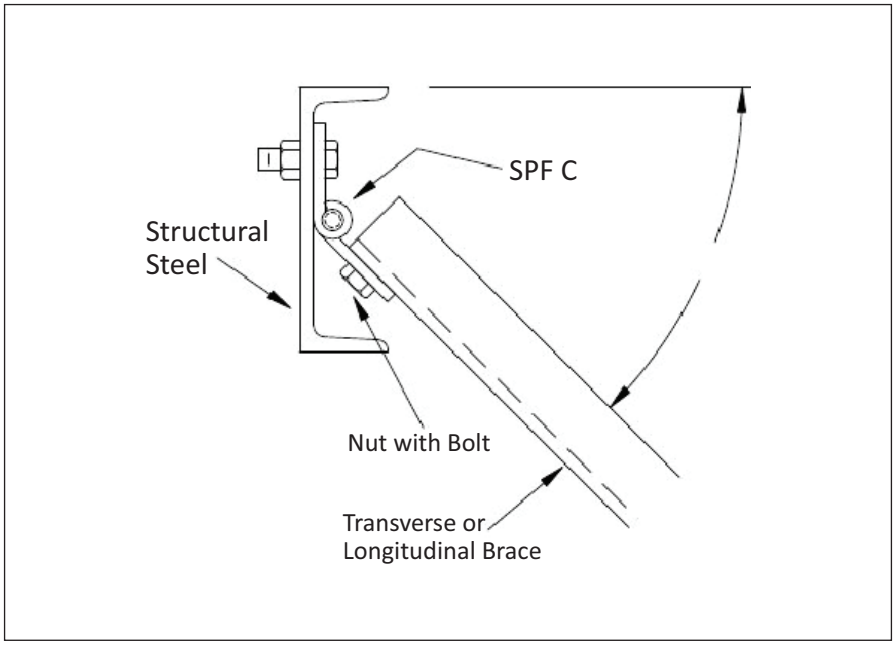


Attachment to Concrete

The options for attaching the brace to a structural steel anchor are nearly limitless. One concept is to attach a piece of channel to the beam using appropriate beam clamps. Refer to the Unistrut General Engineering Catalog for other beam clamping options.

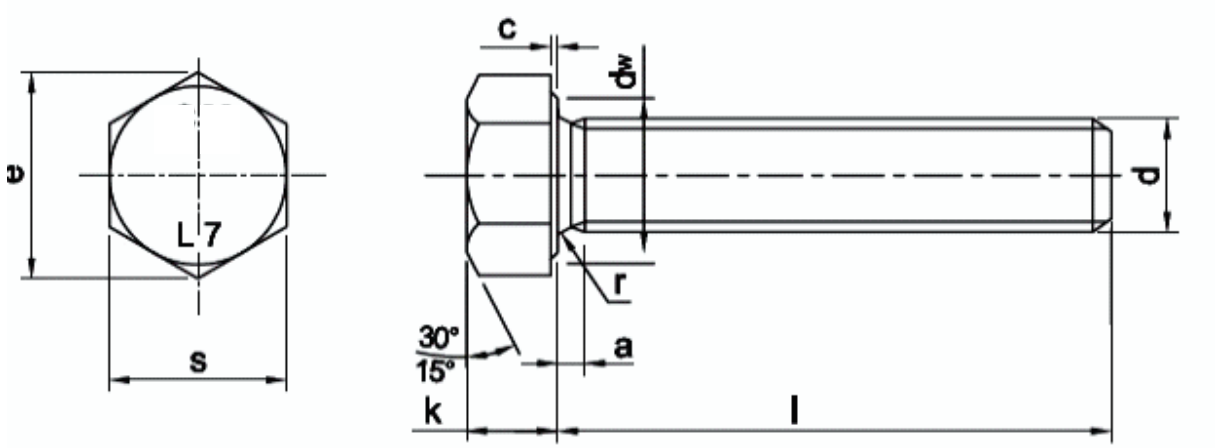


Attachment to Structural Steel



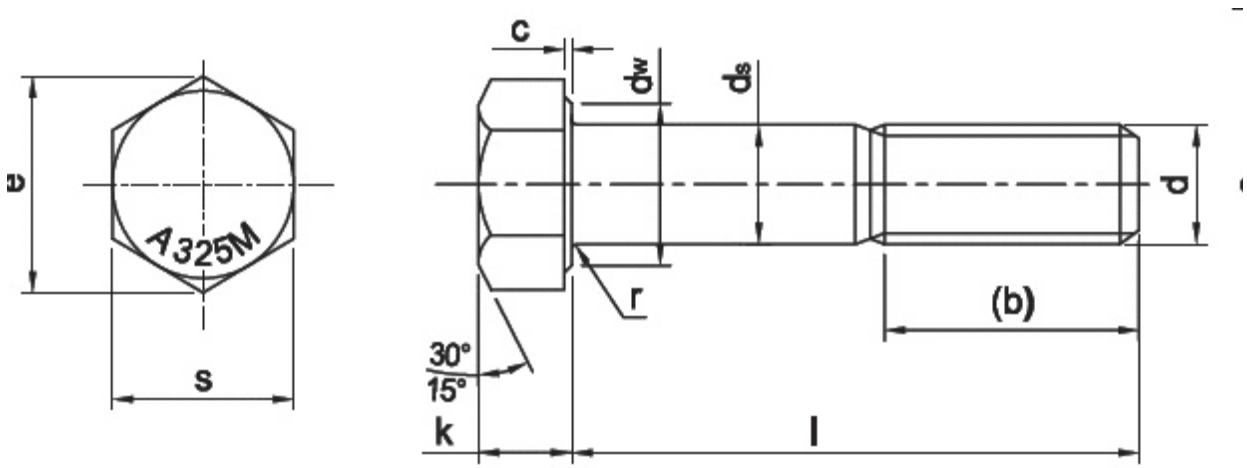
Attachment to Structural Steel

DIN 933 HEXAGON HEAD BOLT
Material ASTM A320 Grade L7



A320 L7 HEX BOLTS																
Threads (d)		M6	M8	M10	M12	M16	M20	M24	M27	M30	M33	M36	M39	M42	M45	M52
Across flat (s)	Min	9.78	12.73	16.73	18.7	23.67	29.67	35.38	40.00	45.00	49.00	53.80	58.80	63.10	68.10	78.10
	Max	10.00	13.00	17.00	19.00	24.00	30.00	36.00	41.00	46.00	50.00	55.00	60.00	65.00	70.00	80.00
Across corner(e)	Min	11.05	14.38	18.90	21.10	26.75	33.53	39.98	45.20	50.85	55.37	60.79	66.44	71.30	76.95	88.25
Head Thickness(k)	Min	3.85	5.15	6.22	7.32	9.82	12.28	14.78	16.65	18.28	20.58	22.08	24.58	25.58	27.58	32.50
	Max	4.15	5.45	6.58	7.68	10.18	12.72	15.22	17.35	19.12	21.42	22.92	25.42	26.42	28.42	33.50
Unthreaded Length (a)	Min	1.00	1.25	1.5	1.75	2.00	2.50	3.00	3.00	3.50	3.50	4.00	4.00	4.50	4.50	5.00
	Max	3.00	4.00	4.50	5.30	6.00	7.50	9.00	9.00	10.50	10.50	12.00	12.00	13.50	13.50	5.00
Washer face Depth (c)	Min	0.15	0.15	0.15	0.15	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.30	0.30	0.30	0.30
	Max	0.50	0.60	0.60	0.60	0.80	0.80	0.80	0.80	0.80	0.80	0.80	1.00	1.00	1.00	1.00
Washer face Dia (dw)	Min	8.88	11.63	15.60	17.40	22.49	28.19	33.61	38.00	42.70	46.50	51.10	55.90	55.90	64.70	74.20
Head junction Radius(r)	Min	0.25	0.40	0.40	0.60	0.60	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.60

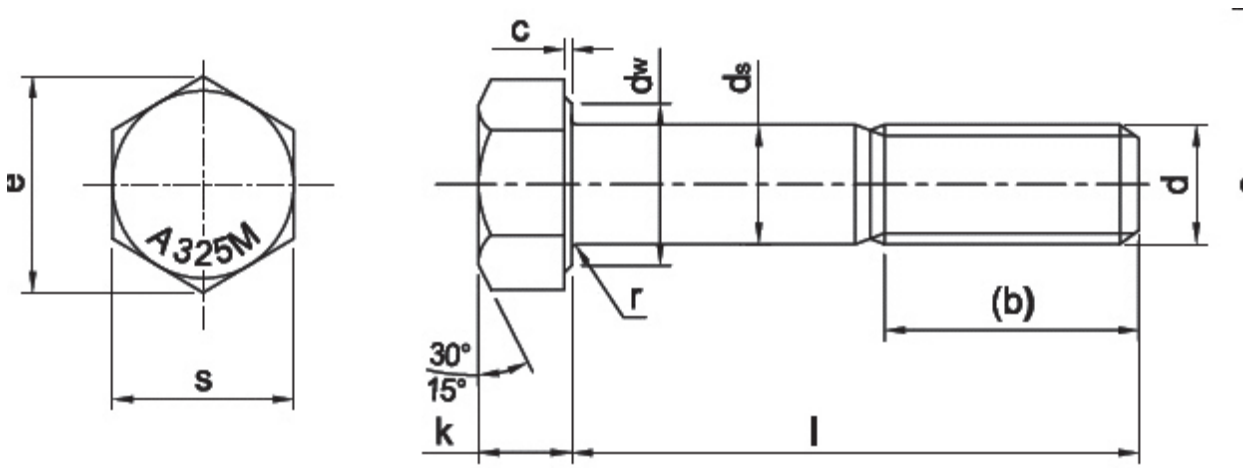
ASTM A325M HEX BOLTS



A325M HEX BOLTS								
Threads (d)		M16	M20	M24	M27	M30	M33	M36
Across flat (s)	Min	26.16	33.00	35.00	40.00	45.00	49.00	58.80
	Max	27.00	34.00	36.00	41.00	46.00	50.00	60.00
Across corner(e)	Min	29.56	37.29	39.55	45.20	50.85	55.37	66.44
	Max	31.18	39.26	41.57	47.34	53.12	57.74	69.28
Head Thickness(k)	Min	9.25	11.60	13.10	14.10	16.10	17.65	21.45
	Max	10.75	13.40	14.90	15.90	17.90	19.75	23.55
Washer face Depth (c)	Min	0.40	0.40	0.40	0.40	0.40	0.40	0.40
	Max	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Washer face Dia (dw)	Min	24.90	31.40	33.30	38.00	42.80	46.50	55.90
Shank Diameter (d s)	Min	15.30	19.16	21.16	23.16	26.16	29.16	35.00
	Max	16.70	20.84	22.84	24.84	27.84	30.84	37.00
Head junction Radius(r)	Min	0.60	0.80	0.80	1.00	1.20	1.20	1.50
Thread Length (b)	1<100	31	36	38	41	44	49	56
	1>100	38	43	45	48	51	56	63

l = Overall length of the Bolt

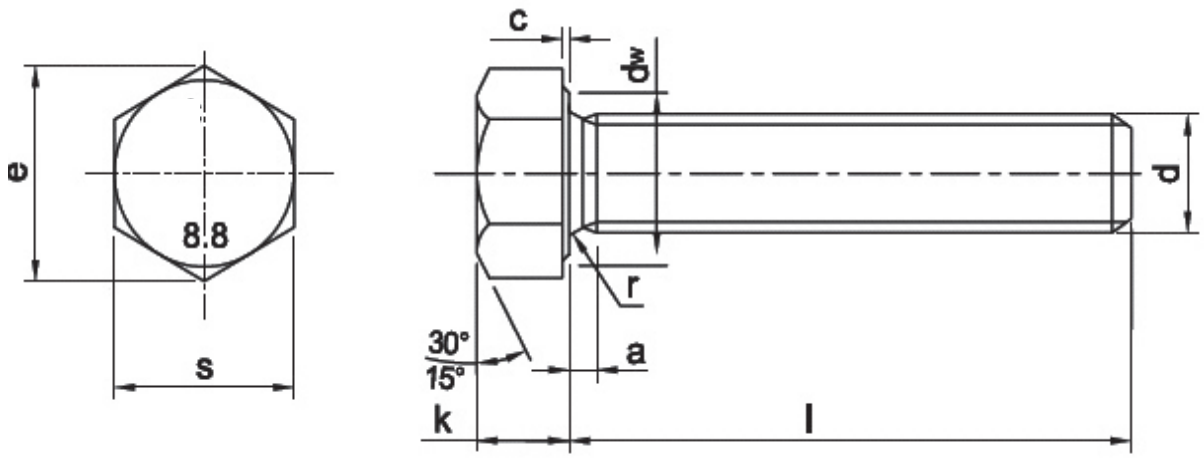
ASTM A325M HEX BOLTS



A325M HEX BOLTS								
Threads (d)		M16	M20	M24	M27	M30	M33	M36
Across flat (s)	Min	26.16	33.00	35.00	40.00	45.00	49.00	58.80
	Max	27.00	34.00	36.00	41.00	46.00	50.00	60.00
Across corner(e)	Min	29.56	37.29	39.55	45.20	50.85	55.37	66.44
	Max	31.18	39.26	41.57	47.34	53.12	57.74	69.28
Head Thickness(k)	Min	9.25	11.60	13.10	14.10	16.10	17.65	21.45
	Max	10.75	13.40	14.90	15.90	17.90	19.75	23.55
Washer face Depth (c)	Min	0.40	0.40	0.40	0.40	0.40	0.40	0.40
	Max	0.80	0.80	0.80	0.80	0.80	0.80	0.80
Washer face Dia (dw)	Min	24.90	31.40	33.30	38.00	42.80	46.50	55.90
Shank Diameter (d s)	Min	15.30	19.16	21.16	23.16	26.16	29.16	35.00
	Max	16.70	20.84	22.84	24.84	27.84	30.84	37.00
Head junction Radius(r)	Min	0.60	0.80	0.80	1.00	1.20	1.20	1.50
Thread Length (b)	1<100	31	36	38	41	44	49	56
	1>100	38	43	45	48	51	56	63

l = Overall length of the Bolt

DIN 933 HEX SCREWS (FULL THREAD)
Grades 4.6, 8.8, 10.9, 12.9, A2 70, A2 80, A4 70 and A4 80



Threads (d)		M6	M8	M10	M12	M16	M20	M24	M27	M30	M33	M36	M39	M42	M45	M52
Across flat (s)	Min	9.78	12.73	16.73	18.7	23.67	29.67	35.38	40.00	45.00	49.00	53.80	58.80	63.10	68.10	78.10
	Max	10.00	13.00	17.00	19.00	24.00	30.00	36.00	41.00	46.00	50.00	55.00	60.00	65.00	70.00	80.00
Across corner(e)	Min	11.05	14.38	18.90	21.10	26.75	33.53	39.98	45.20	50.85	55.37	60.79	66.44	71.30	76.95	88.25
Head Thickness(k)	Min	3.85	5.15	6.22	7.32	9.82	12.28	14.78	16.65	18.28	20.58	22.08	24.58	25.58	27.58	32.50
	Max	4.15	5.45	6.58	7.68	10.18	12.72	15.22	17.35	19.12	21.42	22.92	25.42	26.42	28.42	33.50
Unthreaded Length (a)	Min	1.00	1.25	1.5	1.75	2.00	2.50	3.00	3.00	3.50	3.50	4.00	4.00	4.50	4.50	5.00
	Max	3.00	4.00	4.50	5.30	6.00	7.50	9.00	9.00	10.50	10.50	12.00	12.00	13.50	13.50	5.00
Washer face Depth (c)	Min	0.15	0.15	0.15	0.15	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.30	0.30	0.30	0.30
	Max	0.50	0.60	0.60	0.60	0.80	0.80	0.80	0.80	0.80	0.80	0.80	1.00	1.00	1.00	1.00
Washer face Dia (dw)	Min	8.88	11.63	15.60	17.40	22.49	28.19	33.61	38.00	42.70	46.50	51.10	55.90	55.90	64.70	74.20
Head junction Radius(r)	Min	0.25	0.40	0.40	0.60	0.60	0.80	0.80	1.00	1.00	1.00	1.00	1.00	1.20	1.20	1.60

TEMBO
Powering Ahead

STAINLESS STEEL FLANGES

BLIND FLANGE

WELD NECK FLANGE

SOCKET WELD FLANGE

SLIP ON FLANGE

Tembo is the world leader in stainless steel forged flanges. We serve customers across 90 countries and six continents. Tembo flanges are reputed and well known across the PVFF Industry for their reliability and quality.

The flanges division encompasses an integrated forge shop which manufactures all types of pipe fitting i.e. flanges, but welding fittings (stubends) in various specifications (ASME, EN, DIN, AFNOR, AWWA, GOST, BS, JIS, AS, MSS, SA, UNI SABS / SANS, NS, VSM.) as well as forged bars.

Flanges are produced in size ranges from 1/2" to 40".

Tembo has an established and stringent quality system with 90 approvals / certificates till date in accordance with various specific requirements and applications. These approvals and certifications enable our customers to supply Tembo flanges to major end users across a variety of industries.

Our integrated operations include facilities for cutting, forging, ring rolling and machining with CNC lathes, VMC (machining centre), high capacity forging press and mobile manipulator for making big diameter forged round bars. We also have an in-house heat treatment shop and well equipped laboratory facilities for mechanical and metallurgical testing, PMI testing with X-ray and Optical emission spectroscopy also we have fully equipped radiation Contamination monitoring facilities.

INDUSTRIES WE SERVE:

- Pipeline Engineering
- Oil & Gas - Upstream & Downstream
- Mechanical & Plant Engineering
- Ship Building
- Boiler And Pressure Vessels
- Fertilizer Industry
- Wastewater
- Chemical & Petrochemical
- Power Industries (nuclear, Natural Gas, Wind, Solar)
- Aerospace
- Food Processing

MAKEABILITY CHART:

Dimensional Specifications With Size Range.

SPECIFICATION	ITEM DESCRIPTION	SIZE RANGE	PRESSURE CLASS
ASME-B 16.5	Slip on flange, Welding neck flange, Blind flange,	½" to 24"	150, 300, 400, 600, 900, 1500
	Threaded flange, Lap joint flange, RTJ flange	½" to 12"	2500
ASME-B 16.47	Wlding neck flange, Blind flange	26" to 40" (A-MSS) 26" to 30" (A-MSS) 26" to 36" (B-API) 26" to 32" (A-MSS)	150, 300, 400, 600, 900 75, 150, 300, 400, 600 900
ASME-B 16.36	Wlding neck flange Slip on flange,	1" to 24"	300, 400, 600, 900, 1500,
	Threaded flange	1" to 12"	2500
DIN FLANGE	DIN2512, DIN2513, DIN2514, DIN2527, DIN2566, DIN2573, DIN2576, DIN2627, DIN2628, DIN2629, DIN2631, DIN2632, DIN2633, DIN2434, DIN2635, DIN2637, DIN2628, DIN2641, DIN2642, DIN2655, DIN2656, DIN2673	10 to 1000	PN6 TO PN 320
PR EN 1092-1	Plate flange (01) Loose plate flange (02, 04) / Blind flange (05) Welding neck flange (11)/ Hubbed slip onn flange (12) Hubbed threaded flange (13) / Integral flange (21), weld - on collar (32) Lapped pipe end (33) Weldneck coller (34)	10 to 1000	ISO-PN2.5 to PN100

SPECIFICATION	ITEM DESCRIPTION	SIZE RANGE	PRESSURE CLASS
EN 1759 - 1	Plate flange (01)/ blind flange (05) Welding neck flange (11) Hubbed slip on flange (12) Hubbed threaded flange (13)/ Hubbed socket weld (14) Loose Hubbed flange (15) Integral flange (21)	½" to 24" (15 to 600)	150, 300, 400, 600, 900, 1500 2500 (12")
AFNOR NEF 29-203	Plate flange (01)/ Loose plate flange (02,04)/ Blind flange (05) Welding neck flange (11)/ Hubbed slip on flange (12) Screwed flange (13) Hubbed socket welding (14) Loose Hubbed (15)/ Integral flange (21)	10 to 600	ISO-PN2.5 to PN420
JIS B2220/B2291	Slipon plate flange (SOP), Slipon Hub (SOH), Socket Welding flange (SW), Welding Neck flange (WN), Lapjoint (LJ), Threaded flange (TR)/ Itegral flange (IT), Blank flange (BL)	10 to 600	5K, 10K, 15K, 20K, 30K
BS4504 SECTION 3.1	Welding neck (111)/ slipon plate (101)/ screwed boss (113)/ slipon boss (112)/ blind plate flange (105)	0.375" to 36"	PN 2.5 to PN 40
BS4504 PART 1	Welding neck (2), Plate slip on (30), Screwed Boss (4), Slip on Boss (5), Blind Plate Flange (8)	0.375" to 36"	PN 2.5 to PN 400
BS1560 SECTION 3.1	Welding neck (111)/ Socket weld (114)/ screwed boss (113)/ slip on boss (112)/ blind plate flange (105), Lepped flange (115)	1/2" to 24"	150 LBS to 2500 LBS
BS10:1962	Welding neck, Plate slip on, Screwed Boss, Slip on Boss, Blind Plate Flange	1/2" to 36"	TABLE D/E/F/H
SABS/SANS 1123	Integral (1), Welding neck (2), Plate for welding (3), Screwed Boss (4), Slip-on Boss (5), Plate Blank (8)	10 to 600	250,600,1000, 1600, 2500, 4000 kPa
AWWA C22B	Ring type slipon flanges, blind flanges	2" to 40"	SA (50Psi), SB (86Psi), SD (150/75si), SE (275Psi), SFPsi)
ITALIAN STANDARD UNI FLANGES	Plan flanges (2276, 2277, 2278, 6083, 6084) welding neck (2280, 22BI, 2282, 2283, 2284, 2285, 2286) Lapped flanges (6088, 6089, 6090, 2999, 2300) Blind flanges (6091, 6092, 6093, 6093, 6094, 6095, 6096, 6097) Threaded flanges (2253, 2254)	15 to 200	PN 6 to PN 40

SPECIFICATION	ITEM DESCRIPTION	SIZE RANGE	PRESSURE CLASS
Norwegian Standard (NS)	Blind flanges, Plain welding flanges	150 to 800	PN 6 to PN 40
Flanges to VSM (Swiss) Standards	Flat Flange for welding (18695, 19696, 18697) Weld neck (18716, 18718), blind flange (18703)	150 to 800	PN 6 to PN 40
AS 4087 AS 2129	Blank, Plate, Screwed, Weld Neck (W.N / W.O.N), Integral Flange Blank, Plate, Boss, Weld Neck, Integral Flange	50 to 1000 15 to 1000	PN16, PN21, PN35, TABLE D & E
GOST	Plate Flange (GOST 12820-80), Weld Neck Flange GOST 12821-80, Blind Flange (GOST 12836-67)	10 to 1000	0.6Mpa to 6.3 Mpa
ASME/ANSI B 16.9 MASS SP-43	STUB END - TYPE A,B,C (Short pattern)	1/2" to 24"	All Schedules

GRADES

ASTM182/182M, ASMESA182/182M, ASTM A403/403M

F304, F304L, F304H, F310, F316, F316L, F316H, F347, F347H, F317, F317L, F321, F321H, F316Ti, F347, F347H, F51, F60, F53, A105 and as per your requirement

JIS G3214

SUS F304, SUS F304L, SUS F304H, SUS F316, SUS F316L, SUS F316H, SUS F347, SUS F347H, SUS F3117, SUS F317L, SUS F321, SUS F321H

NF E29 - 204 (AFNOR)

BF Z7 CN 18-09 (F304), BF Z3 CN 19-09 (304LO), BF Z7 CND 17.11.02 (F316), BF Z3 CND 17.11.02 (F316L), BF Z6 CNDT 17-12 (316 Ti), BF Z6 CN Nb18-10 (F347), BF Z6 CNT 18-10 (F321)

JIS G3214

SUS F304, SUS F304L, SUS F304H, SUS F316, SUS F316L, SUS F316H, SUS F347, SUS F347H, SUS F3117, SUS F317L, SUS F321, SUS F321H

OTHER PRODUCTS

Long welding neck, Plate flanges (Light weight pattern), Backup flanges (BEV & STD), Beveled ID flanges, Reducing flanges, Case-end

FLANGES BORE SCHEDULES

SSS, S10, S10S, S20, S30, S40, S40S, S60, S80, S80S, S100, S120, S140, S160, STD, XS, XXS

FLANGE FACING TYPES

Flat face, Raised face, Large Raised face, Ring joint, Tongue & Groove face (large & small), Male-Female face

FLANGES FACE FINISH:

Stock Finish serration, Spiral or Phonographic Serration, Concentric Serration, Smooth Finish

MANUFACTURING FACILITIES:

- Raw material cutting: band saw
- Open / Close Die Forging & Rolling : Hammer / Press / Ring Rolling
- Machining: CNC Lathes / SPM lathes
- Bolt Hole Drilling : High speed CNC Vertical Machining Center
- Heat treatment : Solution Annealing (Batch Annealing Furnaces)

PACKING:

Protect raised face and bevel end with plastic protection caps
Using playwood boxes size 800 x 1200mm (Euro pallet) for shipment

TESTING FACILITIES:

- Hardness Testing Machine
- Mobile spectrometers for PMI test : x -ray fluorescence test-gun & OES-Optical Emission Spectrometry

BLIND FLANGE

WELD NECK FLANGE

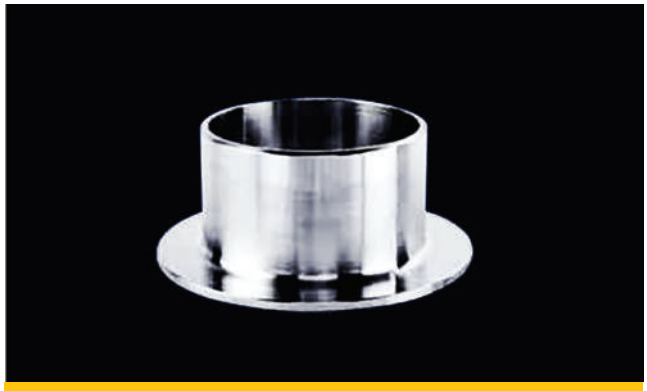
SLIP ON FLANGE

SOCKET WELD FLANGE

THREADED FLANGE

LAP JOINT FLANGE

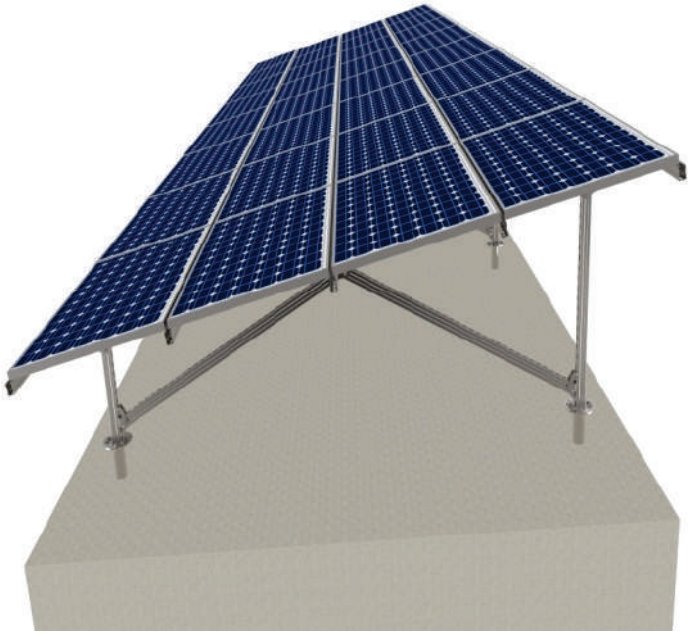
ORIFICE FLANGE



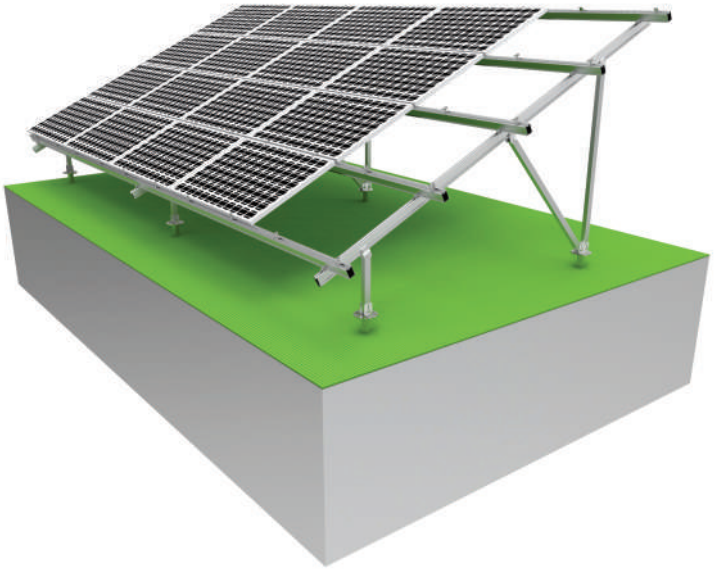
STUBEND

TEMBO
Powering Ahead

GROUND SOLAR MOUNTING BRACKETS



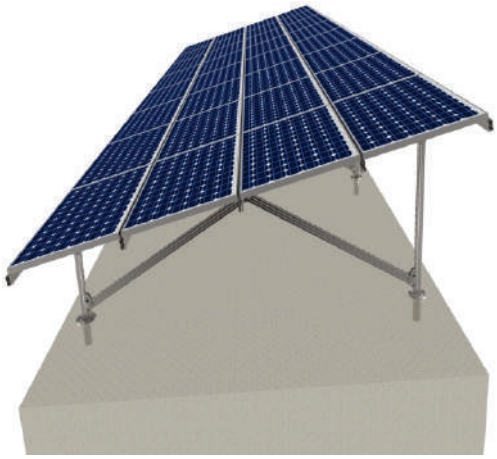
GALVANIZED STEEL SOLAR PILE GROUND MOUNTING SYSTEM



ALUMINUM SOLAR GROUND MOUNTING SYSTEMS

Ground Mounting System is applicable for open field, it can be installed for residential or large commercial scale installations with easy installation and lowing labor cost. galvanized steel or anodized aluminum alloy material are both available.

There are 4 types: Aluminum ground mounting system, steel ground mounting system, pile mounting system, single pole ground mounting system.

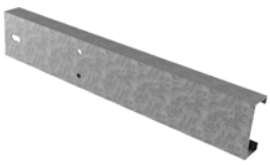


PRODUCT NAME:
Solar pile ground mounting system

PRODUCT DESCRIPTION:
Pole Solar Ground Mounting System is applicable for open field. It is designed for easy installation and lowing labor cost. This pole ground solar mounting system can be applied to large commercial scale installations. Structure is made by hot dipped galvanized steel.

INTRODUCTION:
Install Site: open ground field
Module Tilt Angle: 5-40 degree
Max Wind Speed: 60 m/s
Material: Hot Dipped Galvanized Steel

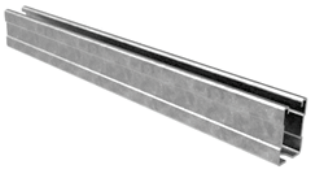
COMPONENTS:



Rails

Rails

Rails



Rails

Mid Clamp

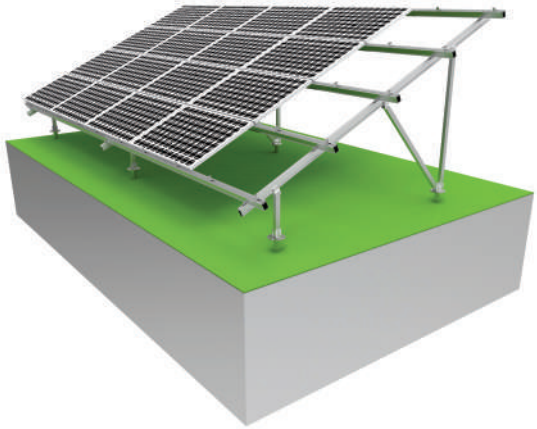
End Clamp

Spring Nut

APPLICATION EXAMPLES:

ALUMINUM SOLAR GROUND MOUNTING SYSTEMS

Aluminum solar ground mounting systems is applicable for open field, it can be installed for residential or commercial project. High pre-assembled makes install efficient and easy. The structure is made by high quality Aluminum alloy.



PRODUCT NAME:
Aluminum solar ground mounting systems

PRODUCT DESCRIPTION:
Aluminum Ground Mounting is applicable for open field, it can be installed for residential or commercial project. High pre-assembled makes install efficient and easy. The structure is made by high quality Aluminum alloy.

INTRODUCTION:
Install Site: Open Filed
Module Tilt Angle: 5-40 degree
Max Wind Speed: 60 m/s
Material: Aluminum 6005-T5
Foundation: Ground screw or concrete block

COMPONENTS:


Base


Rails


Rails


Rails


Foundation Screw


Connectors


Connectors


Mid Clamp


End Clamp


Spring Nut

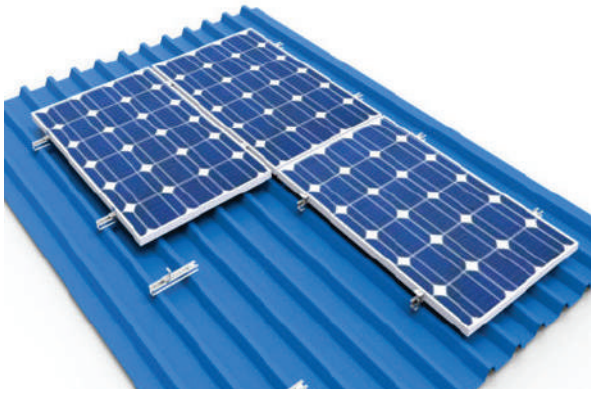
APPLICATION EXAMPLES:

Metal Roof Mounting Bracket is made by high quality extruded Aluminum profile, the weight is light and it's convenient when install. It's easy to install and can work for framed solar panel or frameless solar panel. Install type be solar L foot with rail or railless hook without rail.

KLIPLOK 700 STAND SEAM ROOF MOUNTING SYSTEM

RAILLESS ROOF MOUNTING SYSTEM

ADJUSTABLE SOLAR PANEL MOUNTING SYSTEM FOR FLAT SURFACE



PITCHED TIN ROOF MOUNTING FOR SOLAR PANEL ROOFTOP

KLIPLOK 700 STAND SEAM ROOF MOUNTING SYSTEM

Klip Lok Standing Seam Roof Mounting is 100% no damage roof and is flexible for commercial and residential areas. Don't need rail to make installation which make it easy & lower the cost.

PRODUCT NAME:
Kliplok 700 stand seam roof mounting system

PRODUCT DESCRIPTION:
Klip Lok Standing Seam Roof Mounting is 100% no damage roof and is flexible for commercial and residential areas. Do not need rail to make installation easy and lower cost.

INTRODUCTION:
Install Site: Klip Lok 700 Roof
Max Building Height: Up to 20m(≈65ft).
Max Wind Speed: 60 m/s
Material: Aluminum 6005-T5 & Alu 6005-T5, Alu 6063-T6 & SS304

COMPONENTS:

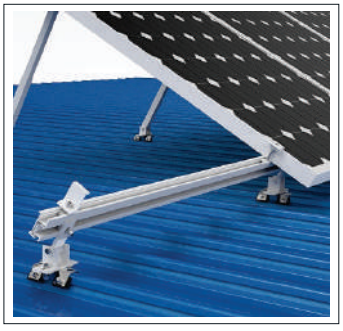
Hook

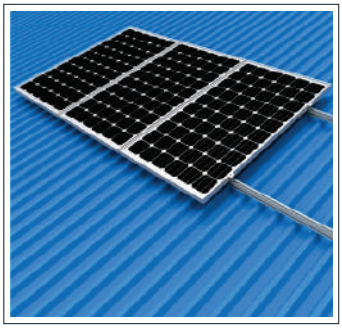
Mid Clamp

End Clamp

Spring Nut

APPLICATION EXAMPLES:





Railless Roof Mounting is designed for trapezoid steel roofing sheet, the installation is easy and convenient.

PRODUCT NAME:
Railless roof mounting system

PRODUCT DESCRIPTION:
Railless Roof Mounting is designed for trapezoid steel roofing sheet. It can be fixed on roof directly without Alu rail, the installation is easy and convenient.

INTRODUCTION:
Install Site: Trapezoid tin roof
Require: "a" should ≥20mm
Max Building Height: Up to 20m(≈65ft).
Material: Aluminum 6005-T5 & Alu 6005-T5, Alu 6063-T6 & SS304

COMPONENTS:

Hook

Mid Clamp

End Clamp

Spring Nut

APPLICATION EXAMPLES:

ADJUSTABLE SOLAR PANEL MOUNTING SYSTEM FOR FLAT SURFACE

Adjustable Tin Roof Mounting is designed to meet the adjustable tilt angle requirement, tilt angle adjustable make solar mounting system get the best effciency on each season.

PRODUCT NAME:
Adjustable solar panel mounting system for flat surface

PRODUCT DESCRIPTION:
Adjustable Solar Panel Tilt Mount Brackets Support most Solar Panel on the market for Roof, RV, Boat and Any Flat Surface, for on-Grid/Off-Grid Systems
Ideal for easy transportation and safe mounting
Maximum tilt angles depend on the size of solar panels.
Used on flat surface or tin roof.
Easy installation.
Material: Aluminum 6005-T5 & Alu 6005-T5, Alu 6063-T6 & SS304

COMPONENTS:

Adjustable Base

Adjustable Rail

Rail

Connecting rail

Mid Clamp

End Clamp

Spring Nut

APPLICATION EXAMPLES:

Pitched tin roof mounting have wide application on trapezoid roofing or corrugated roofing. standard components: solar L foot, aluminum rail profiles and solar clamp.

PRODUCT NAME:
Pitched tin roof mounting for solar panel rooftop

PRODUCT DESCRIPTION:
Pitched Tin Roof Mounting is made by high quality extruded Aluminum, the weight is light and it's convenient. It's easy to install and can work for any solar modules.

INTRODUCTION:
Install Site: Pitch Tin Roof
Max Building Height: Up to 20m(≈65ft).
Max Wind Speed: 60 m/s
Material: Aluminum 6005-T5 & Alu 6005-T5, Alu 6063-T6 & SS304

COMPONENTS:

Rail

L shape Mount

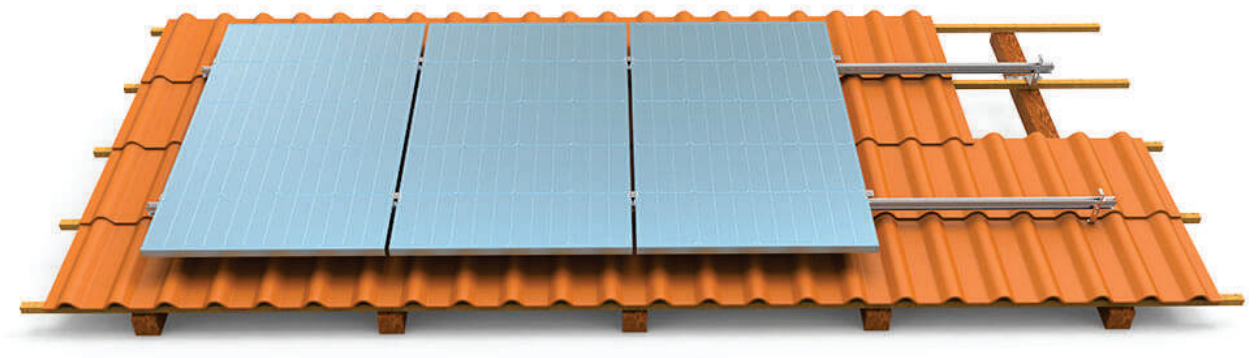
End Clamp

Mid Clamp

Spring Nut

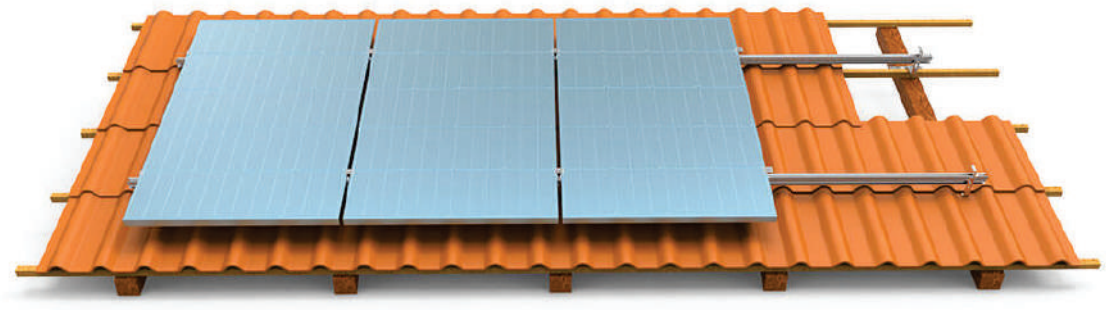
APPLICATION EXAMPLES:

Tile Roof Solar Mounting is suitable for installing framed or frameless modules flushed to pitch roof. Special design and pre-assembled clamp make installation easy. Components list: solar tile hook, Aluminum rail, solar clamp, etc.



PITCH TILE ROOF MOUNTING SYSTEM

Tile Roof Mounting is suitable for all the solar mould on pitched tile roof, it can install for commercial and residential roof solar system just need some standard components: Aluminum rail profile, solar tile hook and solar clamp and some others little solar mounting accessories.



PRODUCT NAME:
Pitch tile roof mounting system

PRODUCT DESCRIPTION:
Pitched Tile Roof Mounting is suitable for installing framed or frameless modules flushed to pitch roof. Special design and pre-assembled clamp make installation easy, as follow are some advantage:

FEATURE:
Light Weight, Convenient and Durable.
Install Site: Pitch Tile Roof
Max Building Height: Up to 20m(≈65ft).
Max Wind Speed: 60 m/s
Snow Load: 1.4 KN/m²
Material: Aluminum 6005-T5 & Alu 6005-T5, Alu 6063-T6 & SS304

COMPONENTS:

Tile Hook

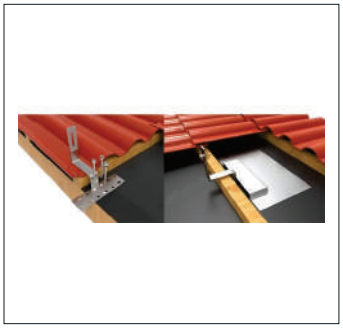
Rail

Mid Clamp

End Clamp

Spring Nut

APPLICATION EXAMPLES:



SOLAR ACCESSORIES

T SHAPE MID CLAMP

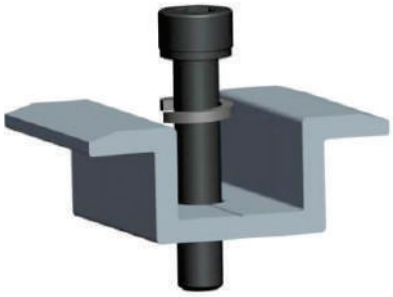
PRODUCT DESCRIPTION:

This PV module inter clamp is suitable for carports, roofing, ground mounting structures .Our fasten parts for mid clamp is made of high quality hex SS304 stainless bolts with sliding nuts .We can customized nuts for any aluminum extrusion / carbon steel profile besides our standard nuts for rails .By using our different length M8 Hex bolts, this PV module inter clamps can fit different frame solar panel depth well : 30mm, 35mm, 40mm, 45mm, 50mm.This inter clamp for PV module mounting can be pre-assembled together with our hexagon screws and other kits .

MATERIAL:

Aluminum 6005-T5 & Alu 6005-T5, Alu 6063-T6 & SS304

U SHAPE INTER SOLAR CLAMP



PRODUCT DESCRIPTION:

Universal solar panel mid clamp series which applied to 35 mm-50 mm framed solar panel. To complete this system, you would also need Solar L Foot, Mid Clamps, Rail Splice, and Rails

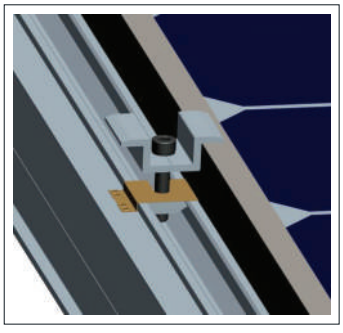
FEATURES:

Vertical or horizontal panel mounting
Suits any solar panel width
Suitable for aluminum framed solar panels
Roof slope: up to 60°

MATERIAL:

Aluminum 6005-T5 & Alu 6005-T5, Alu 6063-T6 & SS304

APPLICATION EXAMPLES:



SOLAR END CLAMP

PRODUCT DESCRIPTION:

Universal solar panel end clamp series which applied to 35 mm-50 mm framed solar panel, it is used to the top slot of Aluminum roof rail profiles, end clamps are not dependent upon the module's backside mounting holes.

There are two color for your choice, one is nature (silver), the other is black, all the solar clamp will do anodized before delivery. Standard length of solar end clamp is 40mm, 50mm or 60mm length or other customized lengths are all available.

MATERIAL:

Aluminum 6005-T5 & Alu 6005-T5, Alu 6063-T6 & SS304

APPLICATION EXAMPLES:

L FOOT FOR METAL ROOF SOLAR MOUNTS

PRODUCT DESCRIPTION:

Solar Panel L Foot kit exceeds the competition in quality, reliability and efficiency, it not only can be used with Aluminum rail profiles, but also with other manufacturers rail is ok.

Application to metal roof or flashed mounting systems.

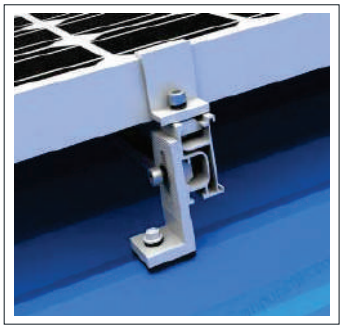
FEATURES:

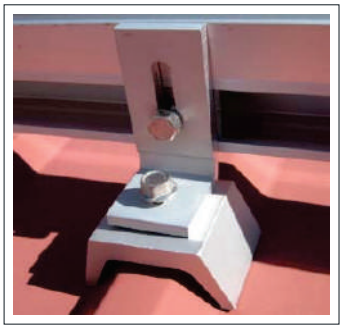
Special long vertical slot design for adjustment rail height;
Serrated on the sides for secure mounting on the rail more stronger;
With or without hardware depend on your request.
Made of high strength Aluminum 6005-T5 alloy.

MATERIAL:

Aluminum 6005-T5 & Alu 6005-T5, Alu 6063-T6 & SS304

APPLICATION EXAMPLES:





SOLAR MOUNT RAIL ALUMINIUM PROFILE

PRODUCT DESCRIPTION:

Roof solar racking rail is made of Alu6005-T5 alloy, for solar aluminum profile rail, length=2100mm, 4200mm is our standard length, what's more, customized of solar mounting rail is welcome, we make it as per your request. L=2100mm, L=3200mm, L=3450mm, L=4200mm, L=5200mm.

FEATURES:

Made of high strength extrusion aluminum 6005-T5;
Light weight and easy installation;
Solar PV Mounting Rails is in good quality with cost-effective solar rails price;
This kind of Solar Rails is very suitable for installation on rooftop;
You can customize the solar panel mount aluminum rail as per your exact need.

MATERIAL:

Aluminum 6005-T5 & Alu 6005-T5, Alu 6063-T6

SOLAR PANEL MOUNTING ALUMINIUM RAIL CONNECTOR

PRODUCT DESCRIPTION:

1.Easy Installation. Most of our components will be pre-assembled to save your installation time and labor cost.
2. Great Flexibility with roof rail.
3. Material: Aluminum 6005-T5 and SS304
4.Anti-corrosion and rust-resistance

MATERIAL:

Aluminum 6005-T5 & Alu 6005-T5, Alu 6063-T6

APPLICATION EXAMPLES:

PRODUCT DESCRIPTION:

Spring Nuts are used inside Rail channel to mount or hang outlet boxes, light fixtures, and other devices with threaded rods, or bolts. Spring makes nut tightened against the internal channel edges to hold the nut in position.

FEATURES:

Made of high strength extrusion Aluminum 6005-T5 & Aluminum 6063-T6
Light weight and easy installation;
Strut channel nuts are used to place and secure fittings, electrical panels, junction boxes, or piping clamps within channels or conduits. They consist of a nut with grooves on the side that fit over side of the channel edge and a screw hole. Tightening a screw in the nut causes teeth in the grooves to lock into the channel edge, holding the nut in place.

MATERIAL:

Electro Galvanized, Aluminum & HDG

ADJUSTABLE SOLAR MOUNTING BRACKETS

PRODUCT DESCRIPTION:

1: Adjustable solar panel mounting brackets designed for off-grid solar systems.
2: Quick assembly with stainless steel fasteners and precise hole placement.
3: Great addition for use on top of an RV or other flat surface.
4: Compatible with framed Solar Panels under 100W on the market, mount it as you like, landscape style or portrait style.

MATERIAL:

Aluminum 6005-T5 & Alu 6063-T6

APPLICATION EXAMPLES:

HAMMER UNIONS

Fig. 100
Black Nut Yellow Subs
An economical union with precision machined metal-to-metal sealing surfaces for air, water, oil or gas service to 1,000 psi NSCWP*.

Fig. 200
Blue Nut Gray Subs
A precision metal-to-metal sealing surface between male and female subs for air, water, oil, gas and mud service to 2,000 psi NSCWP*.

Fig. 206
Blue Nut Gray Subs
A precision metal-to-metal seal plus O-ring seal for air, water, oil, gas and mud service to 2,000 psi NSCWP*.

Fig. 207
Blue Cap Gray Subs
Interchangable Fig. 206 sub with blanking cap and O-ring seal to assure no-leak closure of manifolds and lines to 2,000 psi NSCWP*.

Fig. 400
Black Nut Red Subs
Features a precision ball and cone sealing surface for sure metal-to metal seal for air, water, oil, gas and mud service to 4,000 psi NSCWP*.

Fig. 402
Black Nut Black Subs
A resilient lip-type seal for air, water, oil or mud service to 4,000 psi NSCWP*.

Fig. 602
Black Nut Orange Subs
A replaceable lip-type seal ring minimizes fluid flow turbulence and gives pressure seal for air. Water, oil, gas and mud service to 6,000 psi NSCWP*.

Fig. 1002
Red Nut Blue Subs
A resilient lip-type seal protects ball and cone seal against abrasion in air, water, oil, gas and mud service to 10,000 psi NSCWP*.

Fig. 1502
Blue Nut Red Subs
For manifold and truck mountings or installations encountering high pressures including air, water, oil, gas and mud services to 15,000 psi NSCWP*.

Fig. 2002
White Nut White Subs
For cementing , fracturing, acidizing, testing and choke-and-kill lines where extreme pressures are encountered to 20,000 psi NSCWP*.

Fig. 2202
Green Nut Green Subs
Especially for sour gas service; with heat-treated components, fluoroelastomer seal rings. For service to 15,000 psi NSCWP*.

HOSE UNION FITTINGS

TEMBO Figure 206 Hose Fitting is constructed of high quality cast ductile iron. This union is also referred to as a Hose Barb Union. It features a union end connection that is interchangeable with a figure 200/206 connection, and it comes with an integral hose shank on both the male and female sub. The figure 206 union is designed to save time and money by eliminating the need to weld a hose nipple onto a figure 200/206 hammer union. This union is uniquely designed to be tested to twice the rated working pressure, which is often a requirement for hoses used in oilfield applications.

Standard Service		H2S Service**	
NSCWP	Test	NSCWP	TEST
400 PSI	800 PSI	400 PSI	800 PSI

*All Working Pressures are Non-shock Cold Working Pressure Ratings (NSCWP)

PRODUCTS


ADAPTERS FLANGE


ADAPTERS FLANGE


WELD NECK FLANGE


THREADED FLANGE


BLIND FLANGE


TEST BLIND FLANGE

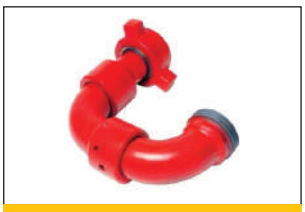

BX RING GASKETS


RX RING GASKETS


R (OCTAGONAL) RING GASKETS


R (OVAL) RING GASKETS


INTEGRAL UNION CONNECTIONS


SWIVEL JOINTS


SWIVEL JOINT/ SHORT RADIUS


HOSE LOOPS


STEEL HOSES (PUP JOINT)


NPST PUP JOINT


PLUG VALVES


POSITIVE CHOKE VALVE


ADJUSTABLE CHOKE VALVE


ADJUSTABLE CHOKE VALVE

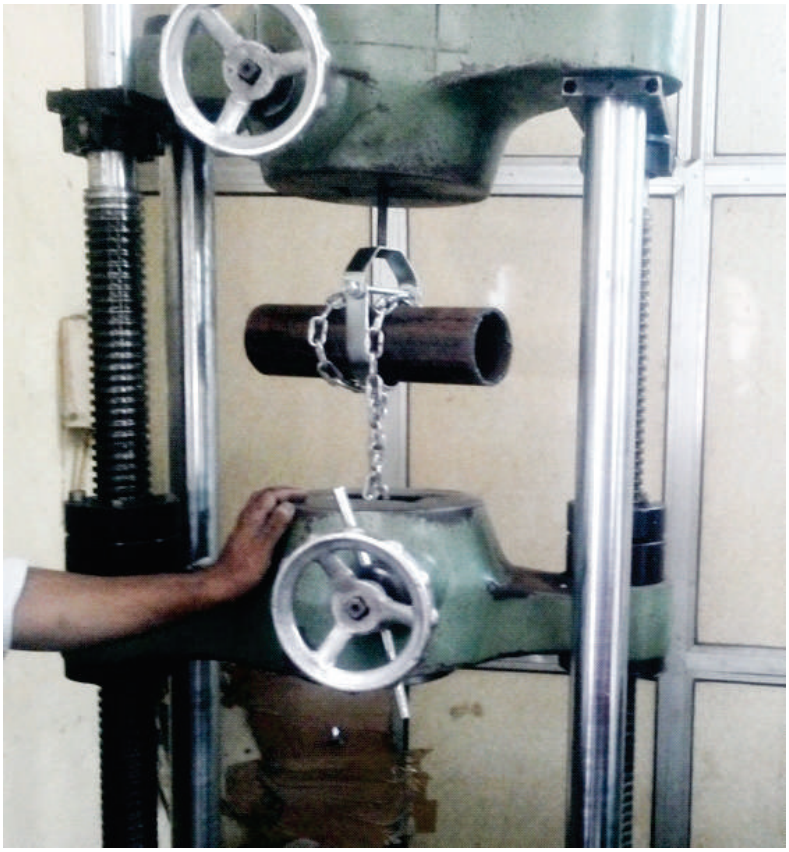

POSITIVE CHOKE VALVE


CHOKE VALVES

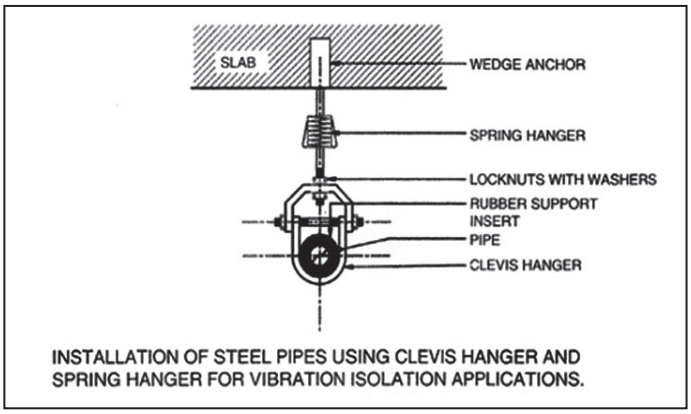
TEMBO

Powering Ahead

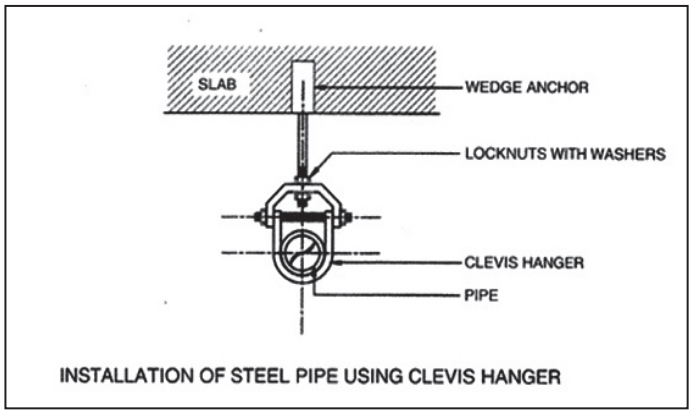
INSTALLATION & TESTING



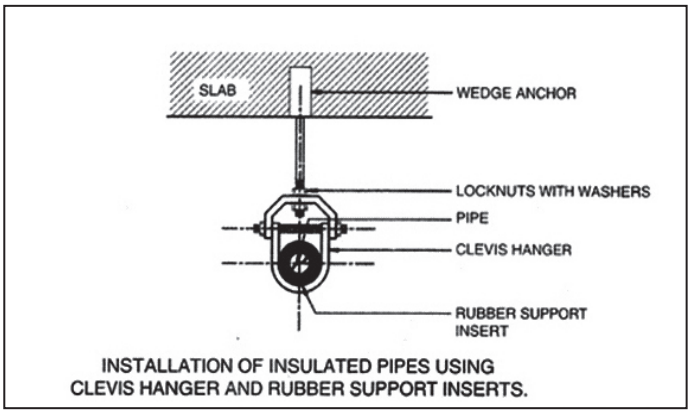
CLEVIS HANGER



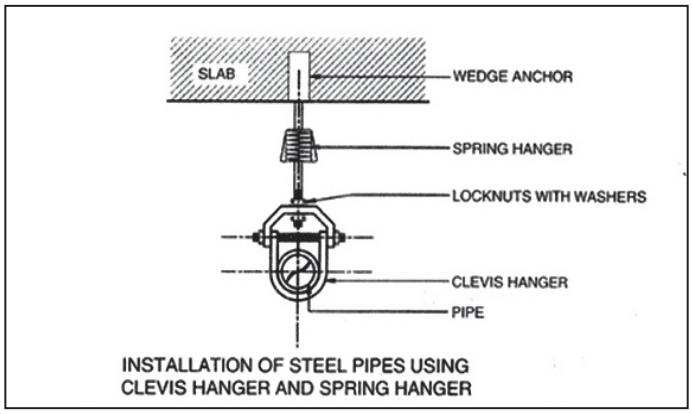
INSTALLATION OF STEEL PIPES USING CLEVIS HANGER AND SPRING HANGER FOR VIBRATION ISOLATION APPLICATIONS.



INSTALLATION OF STEEL PIPE USING CLEVIS HANGER

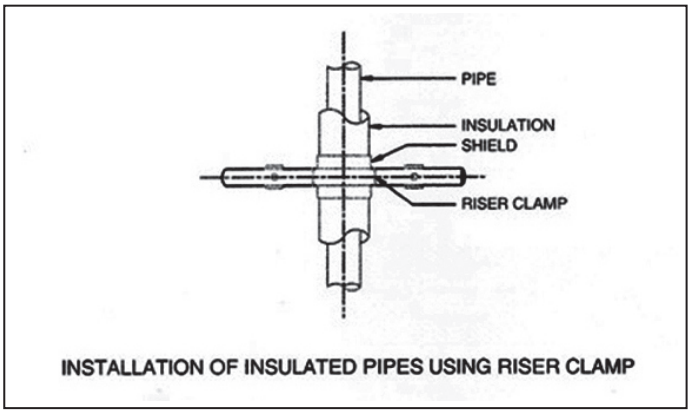


INSTALLATION OF INSUALTED PIPES USING CLEVIS HANGER AND RUBBER SUPPORT INSERTS.

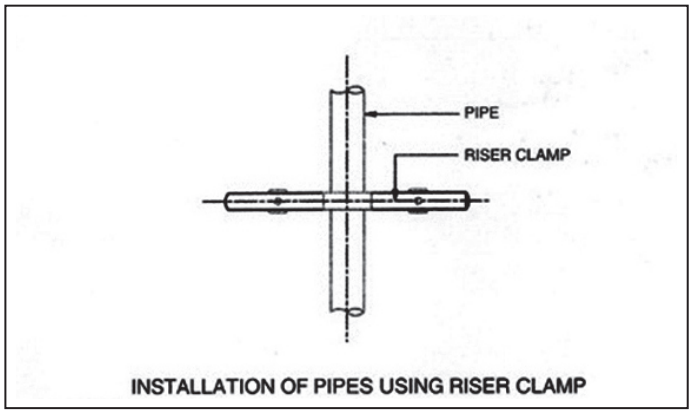


INSTALLATION OF STEEL PIPES USING CLEVIS HANGER AND SPRING HANGER

RISER CLAMP

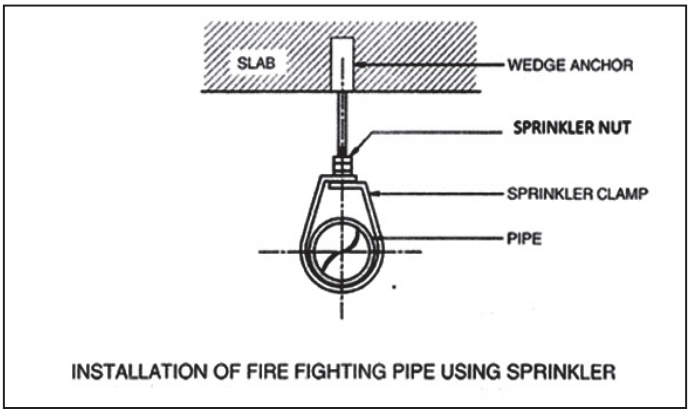


INSTALLATION OF INSULATED PIPES USING RISER CLAMP



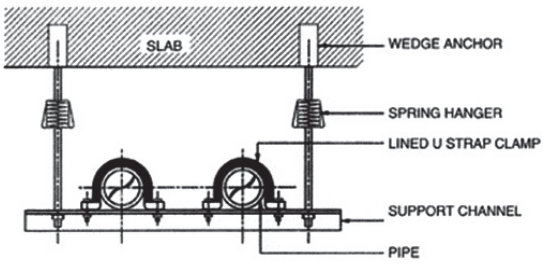
INSTALLATION OF PIPES USING RISER CLAMP

SPRINKLER HANGER

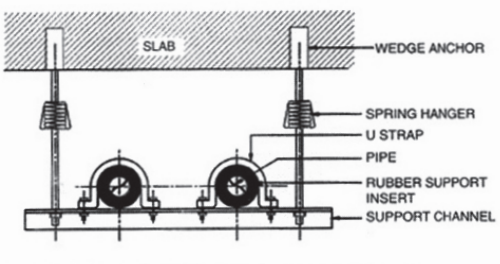


INSTALLATION OF FIRE FIGHTING PIPE USING SPRINKLER

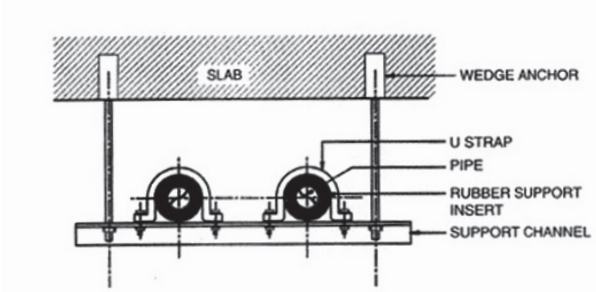
U STRAP



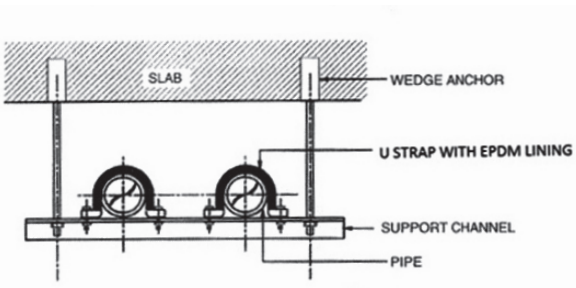
INSTALLATION OF TWO OR MORE PIPES IN PARALLEL USING
U STRAP AND SPRING HANGERS FOR VIBRATION & NOISE ISOLATION



INSTALLATION OF TWO OR MORE PIPES IN PARALLEL USING
RSI U STRAP AND SPRING HANGERS FOR VIBRATION CONTROL APPLICATION

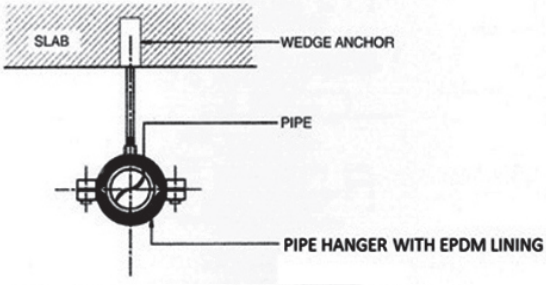


INSTALLATION OF TWO OR MORE PIPES IN PARALLEL
USING RUBBER SUPPORT INSERTS AND U STRAP

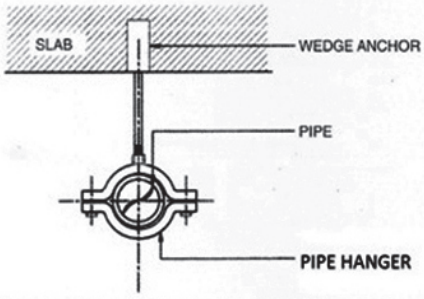


INSTALLATION OF TWO OR MORE PIPES IN PARALLEL USING
U STRAP CLAMP FOR NOISE SUPPRESSION

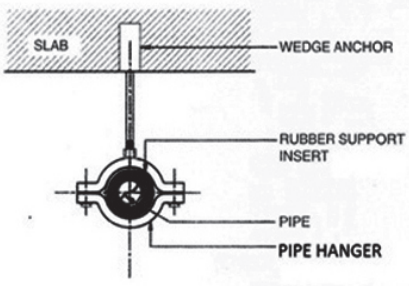
PIPE HANGER WITH EPDM LINING



INSTALLATION OF PIPE USING PIPE HANGER WITH EPDM LINING

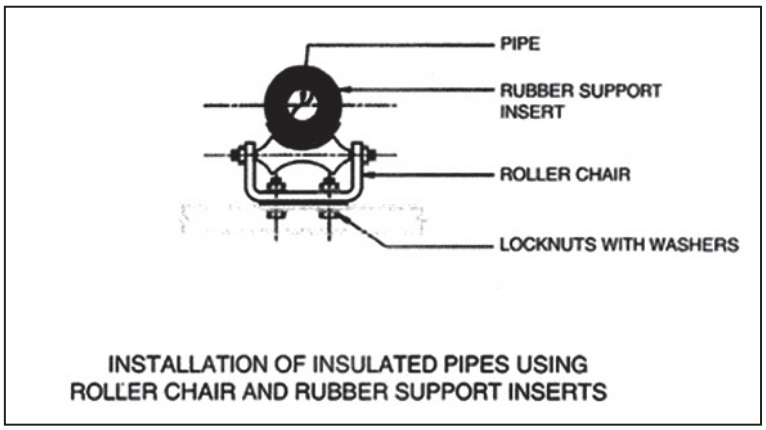


INSTALLATION OF PIPE USING PIPE HANGER

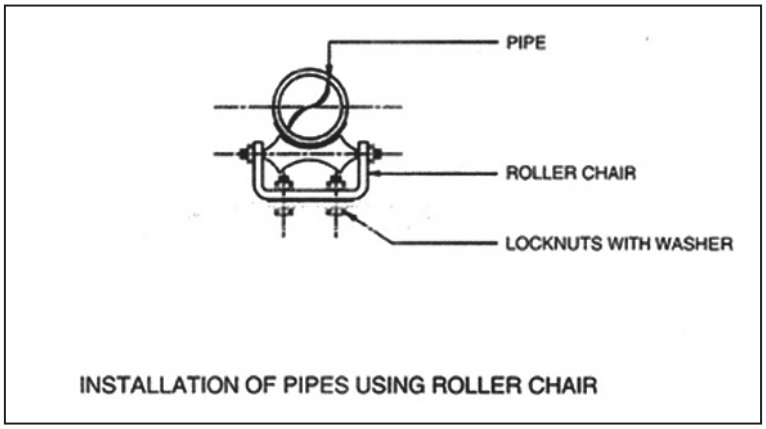


INSTALLATION OF INSULATED PIPES USING
RUBBER SUPPORT INSER & PIPE HANGER

PIPE ROLLER CHAIR

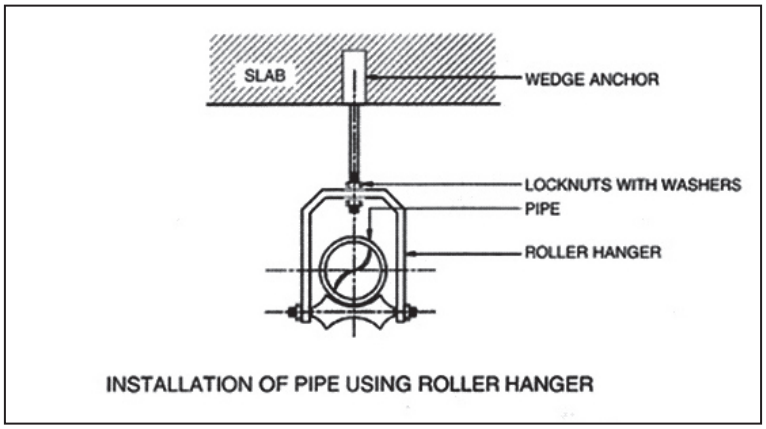


INSTALLATION OF INSULATED PIPES USING ROLLER CHAIR AND RUBBER SUPPORT INSERTS

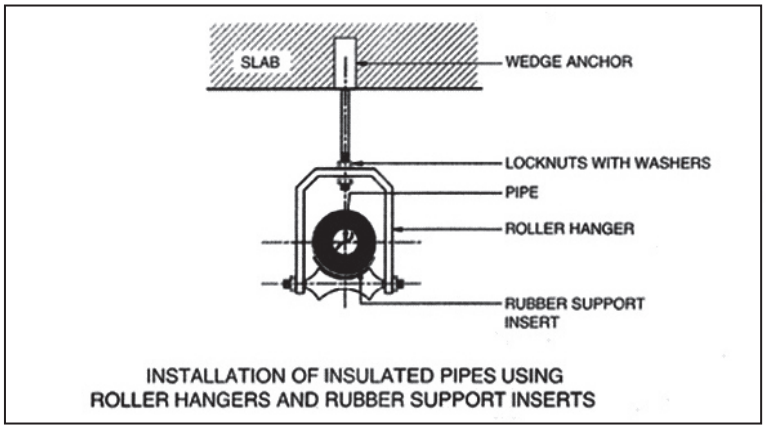


INSTALLATION OF PIPES USING ROLLER CHAIR

ADJUSTABLE ROLLER CHAIR



INSTALLATION OF PIPE USING ROLLER HANGER



INSTALLATION OF INSULATED PIPES USING ROLLER HANGERS AND RUBBER SUPPORT INSERTS