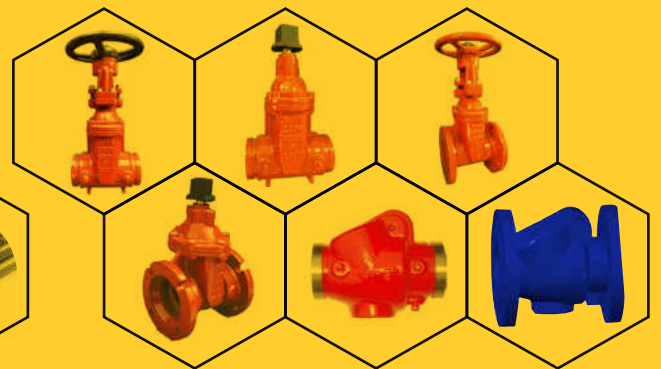




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Pipe Hangers & Support Systems



Valves



FIRST AND ONLY COMPANY FROM INDIA TO  
HAVE **UL AND FM** APPROVALS FOR PIPE  
HANGERS AND SUPPORT SYSTEMS

★ **Certificates** ★



## Certificate of Compliance

This certificate is issued for the following:

### Pipe Hanger Components

**Model CH – Clevis Hangers**  
 Sizes 3/4, 1, 1-1/4 and 1-1/2 inch NPS

**Model SH – Loop Hangers**  
 Sizes 3/4, 1, 1-1/4, 1-1/2, 2 and 2-1/2 inch NPS

**Model NCR – Pipe Clamp Hanger with Lining**  
 Size 3/4 inch NPS

**Prepared for:**

**Saketh Exim Pvt. Ltd.**  
 Plot No. D 146/147 MIDC – Turbhe - TTC  
 Navi Mumbai, Maharashtra 400 703  
 India

**Manufactured at:**

**Saketh Exim Pvt. Ltd.**  
 Unit No. 1/B – Badrinath, Ground Floor  
 Tungareshwar Industrial Complex  
 Sativali Village, Vasai (East), Dist. Thane,  
 Maharashtra 401 208  
 India

FM Approvals Class: 1951, 1952, 1953

Approval Identification: 0003056409

Approval Granted: April 25, 2016

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://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*

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

**CERTIFICATE OF COMPLIANCE**

<b>Certificate Number</b>	20141208-EX16250
<b>Report Reference</b>	EX16250-20130628
<b>Issue Date</b>	2014-DECEMBER-08

**Issued to:**

SAKETH EXIM PRIVATE LIMITED  
 PLT-FAP-D146/147-M.I.D.C  
 TURBHE - INDL AREA  
 OPP- BALMER LAWRIE VANNLEER  
 NAVI MUMBAI MH 400407 INDIA

**This is to certify that representative samples of**

**HANGERS, PIPE**  
 SCH : Clevis hanger  
 (Sizes : 3/4, 1, 1 1/4, 1 1/2, 2, 2 1/2, 3, 4, 5, 6 and 8 inches);  
 SH : Band hanger  
 (Sizes : 1, 1-1/4, 1-1/2, 2, 2-1/2, 3, 4, 6 inches)  
 PC-1: Pipe Clamp  
 (Sizes : 1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3 inches)  
 PC-2: Pipe Clamp  
 (Sizes : 1/2, 3/4, 1, 1-1/4, 1-1/2, 2, 2-1/2, 3 inches)

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

**Standard(s) for Safety:** Pipe Hanger: Equipment for Fire Protection Service, UL 203  
**Additional Information:** See the UL Online Certifications Directory at [www.ul.com/database](http://www.ul.com/database) for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.  
 Look for the UL Certification Mark on the product.

*Barak*  
 UL

Page 1 of 1

**SGI SGI SGI SGI SGI SGI**

## Certificate of Registration

*This is to Certify that the Quality Management System of*

**SAKETH EXIM PVT. LTD.**  
 PLOT NO. D-146-147, TURBHE MIDC, TTC INDUSTRIAL ESTATE, OPP. BALMER LAWRIE  
 VAN LEER CO, TURBHE, NAVI MUMBAI- 400709, MAHARASHTRA, INDIA

**FACTORY ADDRESS :-** APL HOUSE B-1, BADRINATH, GROUND FLOOR, TUNGARESHWAR  
 INDUSTRIAL COMPLEX, SR.NO-1, SURVEY NO-62, NEAR SHIV MANDIR, SATIVALI  
 VILLAGE, VASAI ( EAST), 401208, MAHARASHTRA, INDIA

Has been assessed and found to be in accordance with the requirements of standard detailed below

## ISO 9001:2015

This Certificate is applicable to the following scope  
 "UL AND FM APPROVED PIPE HANGERS AND SUPPORT SYSTEMS, ANTI VIBRATION PRODUCTS, RUBBER SUPPORT INSERTS, VALVES, S/S FLOOR DRAINS"  
 Certificate No: 10Q/SEN/08003

<b>Issue Date</b>	03 Aug 2016	<b>Valid Until:</b>	02 Aug 2019
<b>1<sup>st</sup> Surveillance on or before</b>	02 July 2017	<b>Recertification Date</b>	02 Aug 2019
<b>2<sup>nd</sup> Surveillance on or before</b>	02 July 2018		

To Check Validity of this certificate please  
 Visit [www.sgicert.org](http://www.sgicert.org)

M5551141N

*Approved*  
 Auth. Sign

HQ: E-48 , GROUND FLOOR , NEW MULTAN NAGAR , NEW DELHI-110006 , INDIA

Email: [info@sgicert.org](mailto:info@sgicert.org), [cert.sp@gmail.com](mailto:cert.sp@gmail.com) , Website : [www.sgicert.org](http://www.sgicert.org)

Validity of this certificate is subject to successful completion of surveillance audits. The certificate remains the property of SGI Management Private Limited and must be returned on request. It is not an Accreditation Scope of Awards & New Orders. [www.iso.org/iso/Registration](http://www.iso.org/iso/Registration)

**SGI SGI SGI SGI SGI SGI**

## INTRODUCTION

**SAKETH EXIM** is an Industrial Powerhouse with a dominant presence in Manufacturing and Fabrication of Metal Products used in Pipe Support Systems, HVAC Anti Vibration System and Equipments for Industrial, Commercial, Utility and OEM Installation. Saketh Exim is Young, Agile and responsive company which is constantly expanding its capabilities to fuel its fairy tale journey that has seen it grow its standards of Research, Design, Engineering and Manufacturing that go into each and every product that comprise our Pipe Hangers Products Line. Our customer have access to the most complete Support Systems offered in the Industry, including Pipe Hangers, Metal Framing, Cable Tray, Slotted Angle, Fasteners, Rubber Support Inserts, Threaded Bars and Anchors.

Saketh's products are listed by **Underwriter's Laboratory Inc. (U.S.A.) and FM Global Approved (U.S.A.) for Fire Sprinklers System Installations**. All Saketh products are manufactured to meet or exceed industry standards set for their design and manufacture.

Saketh products are produced in Five advanced and technologically most advanced modern plants. These facilities are located in Commercial Capital of the India i.e. Mumbai. Regional sales and distribution centre in United States, Gulf, Asian, Countries stocking standards products.

This catalogue is designed to be helpful to engineers and contractors in the application and selection of pipe hangers, support and HVAC for construction, maintenance, fire & safety.

If a unique application require a special products not included in this catalogue, Saketh engineer personnel are ready to furnish design consultation and realistic material estimates in addition, sales representative with engineering expertise are located throughout the United States, Gulf and Asian Countries through its net work of distributors for your convenience.

## NOTICE

Saketh reserve the right to change the specification, materials and process or the availability of products at any time without prior notice. While every effort had been made to assure the accuracy of information contained in this catalogue at the time of publication, Saketh is not responsible for in accuracies resulting from undetected errors or omissions.

## TECHNICAL DATA

### MATERIALS

#### Carbon Steel

Carbon steel is used in the manufacture of Saketh 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  $\mu\text{m}$ ) coating will last twice as long as a 0.1 mil (2.5  $\mu\text{m}$ ) 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  $\mu\text{m}$ ) 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  $\text{kg}/\text{m}^2$ ) 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 bare 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  $\text{kg}/\text{m}^2$ ) on each side or a total of 3.0 ounces per square foot (0.9  $\text{kg}/\text{m}^2$ ) of steel.

Hot-dip galvanized after fabrication is recommended for outdoor exposure. For best results, a zinc rich paint (available from B-Line) 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 Saketh 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**

Saketh'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. Saketh recommends that users of this information determine the validity of such information as applied to their own applications.

**Saketh 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 Electrodeposited 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 Formability.
- 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 Tembo Sevenstar / Etalia, 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 Saketh Exim Pvt. 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 Saketh. 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 Saketh Exim Pvt. 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**

- D. 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.
- E. Hangers and strut located in corrosive areas shall be Type 304 (316) stainless steel with stainless steel hardware.

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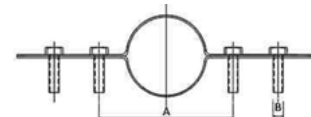
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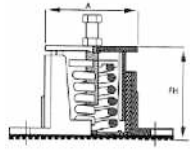
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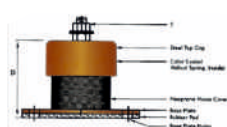
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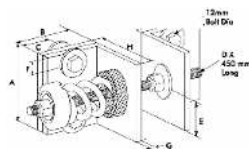
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# Pipe Hangers





# CLEVIS HANGER

**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 carbon 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:**

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

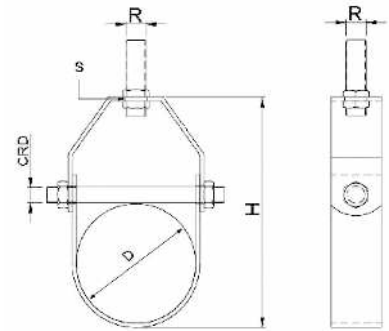
**APPROVALS:**

Underwriter's Laboratory (UL)  
 Factory Mutual's (FM)  
 Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58 (Type 1)  
 Federal Specification WW-H-171E & A-A-1192A (Type 1)

**MAXIMUM TEMPERATURE:** 343°C (650°F)

**FINISH AVAILABLE:**

Plain, Hot Dip Galvanized, Electro-Galvanized.



Product Code	Nominal Pipe Size		Pipe OD (mm) D	Material Dimension (mm)		Hanger Rod Size (mm) R	Cross Bolt Dia. (CRD)	MAX LOAD (KG)
	In.	mm		Height H	Top Hole Dia. S			
SE-CH- 0.50	½"	DN15	21.3	68	11	M10	M8	350
SE-CH- 0.75	¾"	DN20	26.7	72	11	M10	M8	350
SE-CH- 01	1"	DN25	33.4	76	11	M10	M8	350
SE-CH- 1.25	1 ¼"	DN32	42.1	87	11	M10	M8	350
SE-CH- 1.50	1 ½"	DN40	48.2	97	11	M10	M8	350
SE-CH- 02	2"	DN50	60.3	114	11	M10	M8	350
SE-CH- 2.50	2 ½"	DN65	73.0	142	13	M12	M10	780
SE-CH- 03	3"	DN80	88.9	165	13	M12	M10	780
SE-CH- 04	4"	DN100	114.3	202	13	M12	M10	780
SE-CH- 05	5"	DN125	141.3	236	13	M12	M12	1250
SE-CH- 06	6"	DN150	168.3	278	13	M12	M12	1250
SE-CH- 08	8"	DN200	219.1	338	13	M12	M12	2100
SE-CH- 10	10"	DN250	273.1	419	17	M16	M16	2100
SE-CH- 12	12"	DN300	323.8	490	21	M20	M20	2100
SE-CH- 14	14"	DN350	355.6	556	21	M20	M20	3800
SE-CH- 16	16"	DN400	406.4	610	25	M24	M20	3800
SE-CH- 18	18"	DN450	457.2	675	25	M24	M24	4000
SE-CH- 20	20"	DN500	508.0	715	32	M30	M24	4000
SE-CH- 14	24"	DN600	609.6	850	32	M30	M24	9400
SE-CH- 30	30"	DN750	762.0	995	32	M30	M24	9400

## SPRINKLER HANGER



**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 carbon steel shaped to support pipe. Gives Double thickness at the support. Most suitable for fire extinguishing pipes installation.

**MATERIAL:**

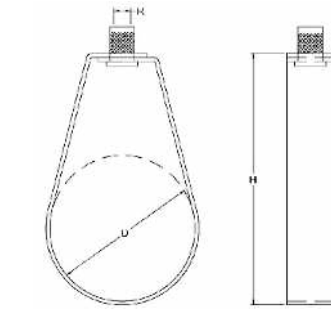
Carbon Steel. Also other materials can also be provided on request

**MAXIMUM TEMPERATURE:**

343°C (650°F)

**APPROVALS:**

Underwriter's Laboratories (UL)  
 Factory Mutual Approved (FM)  
 Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58 (Type10)  
 Federal Specification WW-H-171E & A-A-1192A (Type 10)



WITH SPRINKLER NUT

**FINISH AVAILABLE:**

Plain, Hot Dip Galvanized, Electro-Galvanized.

Product Code	Nominal Pipe Size		Pipe OD (mm) D	Height H	Hanger Rod Size (mm) R	MAX LOAD (KG)
	In.	mm				
SE-SH - 0.75	¾"	DN20	26.7	61	M10	220
SE-SH - 01	1"	DN25	33.4	70	M10	220
SE-SH - 1.25	1 ¼"	DN32	42.1	78	M10	220
SE-SH - 1.5	1 ½"	DN40	48.2	84	M10	220
SE-SH - 02	2"	DN50	60.3	102	M10	220
SE-SH - 2.5	2 ½"	DN65	73.0	118	M10	300
SE-SH - 03	3"	DN80	88.9	144	M10	300
SE-SH - 04	4"	DN100	114.3	176	M10	300
SE-SH - 06	6"	DN150	168.3	262	M12	550
SE-SH - 08	8"	DN200	219.1	305	M12	1300
SE-SH - 10	10"	DN250	273.0	315	M12	1300
SE-SH - 12	12"	DN300	323.8	378	M12	1300

## SPRINKLER HANGER WITHOUT NUT

Product Code	Nominal Pipe Size		Pipe OD (mm) D	Height H	Hole Size (mm) R	MAX LOAD (KG)
	In.	mm				
SE-SHWN - 0.75	¾"	DN20	26.7	61	M10	220
SE-SHWN - 01	1"	DN25	33.4	70	M10	220
SE-SHWN - 1.25	1 ¼"	DN32	42.1	78	M10	220
SE-SHWN - 1.5	1 ½"	DN40	48.2	84	M10	220
SE-SHWN - 02	2"	DN50	60.3	102	M10	220
SE-SHWN - 2.5	2 ½"	DN65	73.0	118	M10	300
SE-SHWN - 03	3"	DN80	88.9	144	M10	300
SE-SHWN - 04	4"	DN100	114.3	176	M10	300
SE-SHWN - 06	6"	DN150	168.3	262	M12	550
SE-SHWN - 08	8"	DN200	219.1	305	M12	1300
SE-SHWN - 10	10"	DN250	273.0	315	M12	1300
SE-SHWN - 12	12"	DN300	323.8	378	M12	1300



WITHOUT SPRINKLER NUT

# PIPE HANGER WITH EPDM LINING

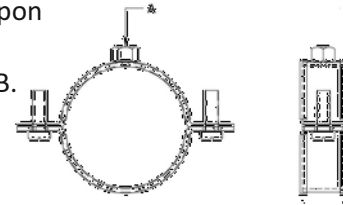


**APPLICATION:**

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

**CONSTRUCTION:**

PIPE HANGER with EPDM lining consists of piece carbon steel shaped to wrap around the pipe, made from shaped carbon steel plate. 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:**

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

**APPROVALS:**

- Underwriter's Laboratories Listed (UL)
- Factory Mutual (FM)
- Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58 (Type 12)
- Federal Specification WW-H-171E & A-A-1192A (Type25)



**TEMPERATURE RANGE:-**

-20°C 110°C

**FINISH AVAILABLE:**

Plain, Hot Dip Galvanized, Electro-Galvanized.

Product Code	Nominal Pipe Size		Pipe OD (mm)	Range (mm)	Hanger Rod Size (mm) ( A )	Side Screw size	MAX LOAD (KG)
	In.	mm					
SE-ULNCL 0.5	½"	DN15	21.3	20-25	M10	M6	460
SE-ULNCL 0.75	¾"	DN20	26.7	26-30	M10	M6	460
SE-ULNCL 01	1"	DN25	33.4	32-36	M10	M6	460
SE-ULNCL 1.25	1 ¼"	DN32	42.1	38-43	M10	M6	460
SE-ULNCL 1.50	1 ½"	DN40	48.2	47-51	M10	M6	460
SE-ULNCL 02	2"	DN50	60.3	60-64	M10	M6	460
SE-ULNCL 2.50	2 ½"	DN65	73.0	74-80	M10	M6	570
SE-ULNCL 03	3"	DN80	88.9	87-92	M10	M6	570
SE-ULNCL 3.50	3 ½"	DN90	101.6	99-105	M10	M6	570
SE-ULNCL 04	4"	DN100	114.3	113-118	M10	M6	570
SE-ULNCL 05	5"	DN125	141.3	138-142	M12	M6	570
SE-ULNCL 06	6"	DN150	168.3	168-172	M12	M8	570
SE-ULNCL 08	8"	DN200	219.1	215-220	M12	M8	930

# PIPE HANGER WITHOUT LINING



**APPLICATION:**

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

**CONSTRUCTION:**

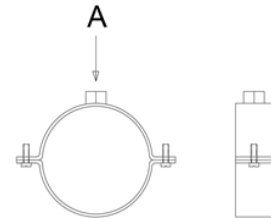
PIPE HANGER consists of piece of carbon steel shaped to wrap around the pipe, made from shaped carbon steel plate. The selection of the PIPE CLAMP depends upon the temperature of piping system and load to be carried. Pipe hanger permits installation before and after pipe is placed.

**MATERIAL:**

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

**APPROVALS:**

- Underwriter's Laboratories Listed (UL)
- Factory Mutual (FM)
- Manufacturers Standardization Society ANSI/MSS SP-69 & SP – 58 (Type 58)
- Federal Specification WW-H-171E & A-A-1192A (Type 25)



**MAXIMUM TEMPERATURE:**

343°c (650°F)

**FINISH AVAILABLE:**

Plain, Hot dipped Galvanised, Electro-Galvanized.

Product Code	Nominal Pipe Size		Pipe OD (mm)	Range (mm)	Hanger Rod Size (mm) ( A )	Side Screw size	MAX LOAD (KG)
	In.	mm					
SE-ULNC 0.5	½"	DN15	21.3	20-25	M10	M6	460
SE-ULNC 0.75	¾"	DN20	26.7	26-30	M10	M6	460
SE-ULNC 01	1"	DN25	33.4	32-36	M10	M6	460
SE-ULNC 1.25	1 ¼"	DN32	42.1	38-43	M10	M6	460
SE-ULNC 1.50	1 ½"	DN40	48.2	47-51	M10	M6	460
SE-ULNC 02	2"	DN50	60.3	60-64	M10	M6	460
SE-ULNC 2.50	2 ½"	DN65	73.0	74-80	M10	M6	570
SE-ULNC 03	3"	DN80	88.9	87-92	M10	M6	570
SE-ULNC 3.50	3 ½"	DN90	101.6	99-105	M10	M6	570
SE-ULNC 04	4"	DN100	114.3	113-118	M10	M6	570
SE-ULNC 05	5"	DN125	141.3	138-142	M12	M6	570
SE-ULNC 06	6"	DN150	168.3	168-172	M12	M8	570
SE-ULNC 08	8"	DN200	219.1	215-220	M12	M8	930



## PIPE HANGER WITH EPDM LINING

**APPLICATION:** PIPE HANGER WITH EPDM LINING is recommended for non-insulated stationary pipelines in a horizontal position. It can be use for supporting pipes along roof.

**CONSTRUCTION:** PIPE HANGER with EPDM lining consists of piece carbon steel shaped to wrap around the pipe, made from shaped carbon steel plate. 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.

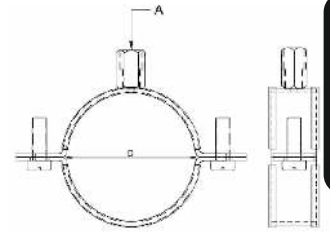
**MATERIAL:** Carbon Steel. Also other materials can also be provided on request

**APPROVALS:**

- Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58 (Type 12)
- Federal Specification WW-H-171E & A-A-1192A (Type25)

**TEMPERATURE RANGE:** -20°C 110°C

**FINISH AVAILABLE:** Plain, Hot Dip Galvanized, Electro-Galvanized.



Pipe Hangers

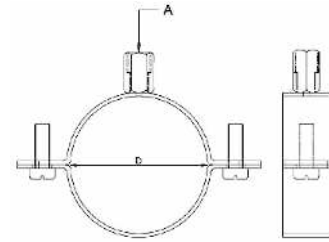
Product Code	Nominal Pipe Size		Pipe OD (mm)	Range (mm)	Nut Size ( A )	Side Screw size	MAX LOAD (KG)
	In.	mm					
SE-NCL 0.375	3/8"	DN10	17.1	15-19	M8 X M10	M6	450
SE-NCL 0.5	1/2"	DN15	21.3	20-25	M8 X M10	M6	450
SE-NCL 0.75	3/4"	DN20	26.7	26-30	M8 X M10	M6	450
SE-NCL 01	1"	DN25	33.4	32-36	M8 X M10	M6	450
SE-NCL 1.25	1 1/4"	DN32	42.1	38-43	M8 X M10	M6	450
SE-NCL 1.50	1 1/2"	DN40	48.2	47-51	M8 X M10	M6	450
SE-NCL 54		-	54	53-58	M8 X M10	M6	450
SE-NCL 02	2"	DN50	60.3	60-64	M8 X M10	M6	450
SE-NCL 63		-	63	63-66	M8 X M10	M6	450
SE-NCL 70		-	70	68-72	M8 X M10	M6	450
SE-NCL 2.15	2 1/2"	DN65	73.0	74-80	M8 X M10	M6	600
SE-NCL 83		-	83	81-86	M8 X M10	M6	600
SE-NCL 03	3"	DN80	88.9	87-92	M8 X M10	M6	600
SE-NCL 3.5	3 1/2"	DN90	101.6	99-105	M8 X M10	M6	600
SE-NCL 110		-	110	107-112	M8 X M10	M6	600
SE-NCL 04	4"	DN100	114.3	113-118	M8 X M10	M6	600
SE-NCL 125		-	125	125-130	M8 X M10	M6	600
SE-NCL 133		-	133	131-137	M8 X M10	M6	600
SE-NCL 05	5"	DN125	141.3	138-142	M8 X M10	M6	600
SE-NCL 150		-	150	148-153	M8 X M10	M6	600
SE-NCL 160		-	160	159-166	M8 X M10	M6	600
SE-NCL 06	6"	DN150	168.3	168-172	M8 X M10	M8	600
SE-NCL 210		-	210	200-212	M8 X M10	M8	950
SE-NCL 08	8"	DN200	219.1	215-220	M8 X M10	M8	950
SE-NCL 10	10"	DN250	273.0	269-274	M8 X M10	M8	950
SE-NCL 12	12"	DN300	323.8	313-318	M8 X M10	M8	1200

# PIPE HANGER

**APPLICATION:**

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

**CONSTRUCTION:** PIPE HANGER consists of piece carbon steel shaped to wrap around the pipe, made from shaped carbon steel plate. 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:** Steel. Also other materials can also be provided on request

**APPROVALS:**Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58 (Type 12)  
Federal Specification WW-H-171E & A-A-1192A (Type25)

**MAXIMUM TEMPERATURE:** 343°C (650°F)

**FINISH AVAILABLE:** Plain, Hot Dip Galvanized, Electro-Galvanized.

Product Code	Nominal Pipe Size		Size (mm)	Range (mm)	Nut Size (mm) ( A )	Side Screw size	MAX LOAD (KG)
	In.	mm					
SE-NC 0.375	3/8"	DN10	17.1	15-19	M8 X M10	M6	450
SE-NC 0.50	1/2"	DN15	21.3	20-25	M8 X M10	M6	450
SE-NC 0.75	3/4"	DN20	26.7	26-30	M8 X M10	M6	450
SE-NC 01	1"	DN25	33.4	32-36	M8 X M10	M6	450
SE-NC 1.25	1 1/4"	DN32	42.1	38-43	M8 X M10	M6	450
SE-NC 1.50	1 1/2"	DN40	48.2	47-51	M8 X M10	M6	450
SE-NC 54	-		54	53-58	M8 X M10	M6	450
SE-NC 02	2"	DN50	60.3	60-64	M8 X M10	M6	450
SE-NC 63	-		63	63-66	M8 X M10	M6	450
SE-NC 70	-		70	68-72	M8 X M10	M6	450
SE-NC 2.50	2 1/2"	DN65	73.0	74-80	M8 X M10	M6	600
SE-NC 83	-		83	81-86	M8 X M10	M6	600
SE-NC 03	3"	DN80	88.9	87-92	M8 X M10	M6	600
SE-NC 3.50	3 1/2"	DN90	101.6	99-105	M8 X M10	M6	600
SE-NC 110	-		110	107-112	M8 X M10	M6	600
SE-NC 04	4"	DN100	114.3	113-118	M8 X M10	M6	600
SE-NC 125	-		125	125-130	M8 X M10	M6	600
SE-NC 133	-		133	131-137	M8 X M10	M6	600
SE-NC 05	5"	DN125	141.3	138-142	M8 X M10	M6	600
SE-NC 150	-		150	148-153	M8 X M10	M6	600
SE-NC 160	-		160	159-166	M8 X M10	M6	600
SE-NC 06	6"	DN150	168.3	168-172	M8 X M10	M8	600
SE-NC 210	-		210	200-212	M8 X M10	M8	950
SE-NC 08	8"	DN200	219	215-220	M8 X M10	M8	950
SE-NC 10	10"	DN250	273.0	269-274	M8 X M10	M8	950
SE-NC 12	12"	DN300	323.8	313-318	M8 X M10	M8	1200



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

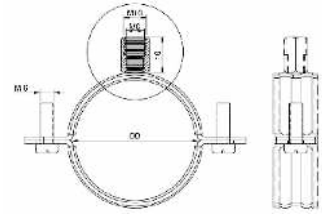
SELECTION TABLE FOR DIFFERENT TYPES OF PIPES

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)	-

## PIPE HANGER – HEAVY DUTY

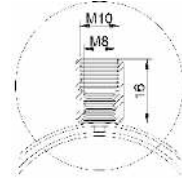
**APPLICATION:**

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



**CONSTRUCTION:**

HEAVY DUTY PIPE HANGER consists of piece carbon steel shaped to wrap around the pipe, made from shaped carbon steel plate. 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:** Steel. Also other materials can also be provided on request

**APPROVAL:** Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58 (Type 12)  
Federal Specification WW-H-171E & A-A-1192A (Type25)



**MAXIMUM TEMPERATURE:** 110°C

**MINIMUM TEMPERATURE:** -20°C

**FINISH AVAILABLE:** Plain, Hot Dip Galvanized, Electro-Galvanized.

Product Code	Nominal Pipe Size		Pipe OD (mm)	Range (mm)	Nut Size (mm) ( A )	Side Screw size	MAX LOAD (KG)
	In.	mm					
SE-HNCL 0.375	3/8"	DN10	17.1	15-19	M8 X M10	M6	500
SE-HNCL 0.5	1/2"	DN15	21.3	20-25	M8 X M10	M6	500
SE-HNCL 0.75	3/4"	DN20	26.7	26-30	M8 X M10	M6	500
SE-HNCL 01	1"	DN25	33.4	32-36	M8 X M10	M6	500
SE-HNCL 1.25	1 1/4"	DN32	42.1	38-43	M8 X M10	M6	500
SE-HNCL 1.50	1 1/2"	DN40	48.2	47-51	M8 X M10	M6	500
SE-HNCL 54	-		54	53-58	M8 X M10	M6	500
SE-HNCL 02	2"	DN50	60.3	60-64	M8 X M10	M6	500
SE-HNCL 63	-		63	63-66	M8 X M10	M6	550
SE-HNCL 70	-		70	68-72	M8 X M10	M6	550
SE-HNCL 2.15	2 1/2"	DN65	73.0	74-80	M8 X M10	M6	700
SE-HNCL 83	-		83	81-86	M8 X M10	M6	700
SE-HNCL 03	3"	DN80	88.9	87-92	M8 X M10	M6	700
SE-HNCL 3.5	3 1/2"	DN90	101.6	99-105	M8 X M10	M6	700
SE-HNCL 110	-		110	107-112	M8 X M10	M6	700
SE-HNCL 04	4"	DN100	114.3	113-118	M8 X M10	M6	700
SE-HNCL 125	-		125	125-130	M8 X M10	M6	700
SE-HNCL 133	-		133	131-137	M8 X M10	M6	700
SE-HNCL 05	5"	DN125	141.3	138-142	M8 X M10	M6	700

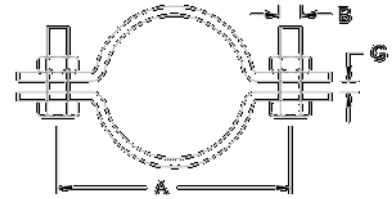
## TWO BOLT PIPE CLAMPS

**APPLICATION:**

Recommended for suspension of cold pipe lines or hot lines where no insulation is required.

**CONSTRUCTION:**

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



**MATERIAL:**

Steel. Also other materials can also be provided on request

**APPROVALS:**

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

**MAXIMUM TEMPERATURE:**

343°C (650°F)



**FINISH AVAILABLE:**

Plain, Hot Dip Galvanized, Electro-Galvanized.

Product Code	Nominal Pipe Size		Pipe OD (mm)	DIMENSIONS(mm)			MAX LOAD (kg)
	In.	mm		LENGTH A	BOLT SIZE B	GAP G	
SE-TBC 0.5	½"	DN15	21.3	200	M10	12	170
SE-TBC 0.75	¾"	DN20	26.7	210	M10	12	170
SE-TBC 1	1"	DN25	33.4	230	M10	12	170
SE-TBC 1.25	1 ¼"	DN32	42.1	260	M10	12	170
SE-TBC 1.5	1 ½"	DN40	48.2	260	M10	12	170
SE-TBC 2	2"	DN50	60.3	260	M10	16	170
SE-TBC 2.5	2 ½"	DN65	73.0	290	M12	16	400
SE-TBC 3	3"	DN80	88.9	290	M12	16	400
SE-TBC 3.5	3 ½"	DN90	101.6	330	M12	16	400
SE-TBC 4	4"	DN100	114.3	330	M12	19	400
SE-TBC 5	5"	DN125	141.3	350	M16	19	600
SE-TBC 6	6"	DN150	168.3	380	M16	22	600
SE-TBC 8	8"	DN200	219.1	470	M16	25	1100
SE-TBC 10	10"	DN250	273.0	520	M16	25	1200
SE-TBC 12	12"	DN300	323.8	580	M20	25	1500
SE-TBC 14	14"	DN350	355.6	610	M20	28	1500
SE-TBC 16	16"	DN400	406.4	660	M20	28	2200
SE-TBC 18	18"	DN450	457.2	710	M20	32	2200
SE-TBC 20	20"	DN500	508.0	760	M20	35	2200
SE-TBC 24	24"	DN600	609.6	880	M20	42	2200

## TWO BOLT PIPE CLAMP WITH LINING

**APPLICATION:**

Recommended for suspension of cold pipe lines or hot lines where no insulation is required.

**CONSTRUCTION:**

RISER PIPE CLAMPS consists of two carbon steel flat bars bent to shape and held together by two bolts. Reduces noise upto 18 dB.

**MATERIAL:**

Steel. Also other materials can also be provided on request

**MAXIMUM TEMPERATURE:**

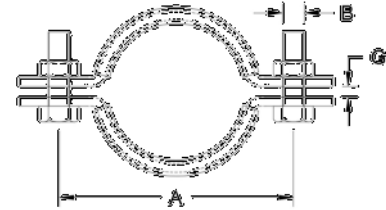
110°C

**MINIMUM TEMPERATURE:**

-20°C

**FINISH AVAILABLE:**

Plain, Hot Dip Galvanized, Electro-Galvanized.

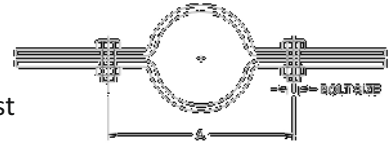


Product Code	Nominal Pipe Size		Pipe OD (mm)	DIMENSIONS(mm)			MAX LOAD (KG)
	In.	mm		LENGHT	BOLT SIZE	GAP G	
SE-TBCL 0.5	½"	DN15	21.3	200	M10	12	150
SE- TBCL 0.75	¾"	DN20	26.7	210	M10	12	150
SE- TBCL 1	1"	DN25	33.4	230	M10	12	150
SE- TBCL 1.25	1 ¼"	DN32	42.1	260	M10	12	150
SE- TBCL 1.5	1 ½"	DN40	48.2	260	M10	12	150
SE- TBCL 2	2"	DN50	60.3	260	M10	16	150
SE- TBCL 2.5	2 ½"	DN65	73.0	290	M12	16	350
SE- TBCL 3	3"	DN80	88.9	290	M12	16	350
SE- TBCL 3.5	3 ½"	DN90	101.6	330	M12	16	350
SE- TBCL 4	4"	DN100	114.3	330	M12	19	350
SE- TBCL 5	5"	DN125	141.3	350	M16	19	500
SE- TBCL 6	6"	DN150	168.3	380	M16	22	500
SE- TBCL 8	8"	DN200	219.1	470	M16	25	1000
SE- TBCL 10	10"	DN250	273.0	520	M16	25	1000
SE- TBCL 12	12"	DN300	323.8	580	M20	25	1200
SE- TBCL 14	14"	DN350	355.6	610	M20	28	1200
SE- TBCL 16	16"	DN400	406.4	660	M20	28	1800
SE- TBCL 18	18"	DN450	457.2	710	M20	32	1800
SE- TBCL 20	20"	DN500	508.0	760	M20	35	1800
SE- TBCL 24	24"	DN600	609.6	880	M20	42	1800

## RISER CLAMP

### 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 carbon 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.



### MATERIAL:

Steel. Also other materials can also be provided on request

### APPROVALS:

Underwriters Laboratories (UL)

Factory Mutual (FM)

Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58 (Type 8)

Federal Specification WW-H-171E & A-A-1192A (Type 8)

### MAXIMUM TEMPERATURE:

343°C (650°F)

### FINISH AVAILABLE:

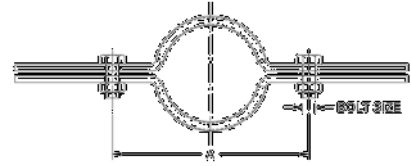
Plain, Hot Dip Galvanized, Electro-Galvanized.

Product Code	Nominal Pipe Size		Pipe OD (mm)	Length between Hole centre (mm)	Bolt Size	MAX LOAD (KG)
	In.	mm				
SE – RC 0.50	½"	DN15	21.3	57	M10	1250
SE – RC 0.75	¾"	DN20	26.7	68	M10	1250
SE – RC 01	1"	DN25	33.4	76	M10	1250
SE – RC 1.25	1 ¼"	DN32	42.1	90	M10	1250
SE – RC 1.50	1 ½"	DN40	48.2	110	M10	1250
SE – RC 02	2"	DN50	60.3	130	M10	1850
SE – RC 2.50	2 ½"	DN65	73.0	142	M12	1850
SE – RC 03	3"	DN80	88.9	161	M12	2250
SE – RC 04	4"	DN100	114.3	190	M12	3600
SE – RC 06	6"	DN150	168.3	258	M16	4500
SE – RC 08	8"	DN200	219.1	333	M16	4500
SE – RC 10	10"	DN250	273.0	409	M16	5800
SE – RC 12	12"	DN300	323.8	467	M20	7300
SE – RC 16	16"	DN400	406.4	583	M20	7300
SE – RC 20	20"	DN500	508.0	708	M20	13400
SE – RC 24	24"	DN600	609.6	833	M20	13400

## RISER CLAMP WITH LINING

**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 carbon 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:**

Steel. Also other materials can also be provided on request

**APPROVALS:**

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

**TEMPERATURE RANGE:**

-20°C to 110°C

**FINISH AVAILABLE:**

Plain, Hot Dip Galvanized, Electro-Galvanized.

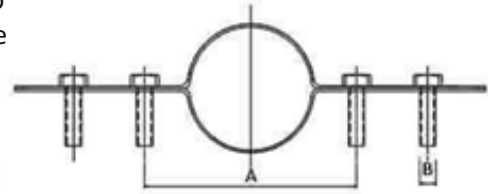
Product Code	Nominal Pipe Size		Pipe OD (mm)	Length between Hole centre (mm)	Bolt Size	MAX LOAD (KG)
	In.	mm				
SE – RCL 0.50	½"	DN15	21.3	57	M10	1250
SE – RCL 0.75	¾"	DN20	26.7	68	M10	1250
SE – RCL 01	1"	DN25	33.4	76	M10	1250
SE – RCL 1.25	1 ¼"	DN32	42.1	90	M10	1250
SE – RCL 1.50	1 ½"	DN40	48.2	110	M10	1250
SE – RCL 02	2"	DN50	60.3	130	M10	1850
SE – RCL 2.50	2 ½"	DN65	73.0	142	M12	1850
SE – RCL 03	3"	DN80	88.9	161	M12	2250
SE – RCL 04	4"	DN100	114.3	190	M12	3600
SE – RCL 06	6"	DN150	168.3	258	M16	4500
SE – RCL 08	8"	DN200	219.1	333	M16	4500
SE – RCL 10	10"	DN250	273.0	409	M16	5800
SE – RCL 12	12"	DN300	323.8	467	M20	7300
SE – RCL 16	16"	DN400	406.4	583	M20	7300
SE – RCL 20	20"	DN500	508.0	708	M20	13400
SE – RCL 24	24"	DN600	609.6	833	M20	13400



## RISER CLAMP – FOUR BOLTS

**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 carbon steel flat bars bent to shape and held together by four bolts.

**MATERIAL:**

Steel. Also other materials can also be provided on request

**APPROVALS:**

Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58 (Type ##)

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

**MAXIMUM TEMPERSTURE:**

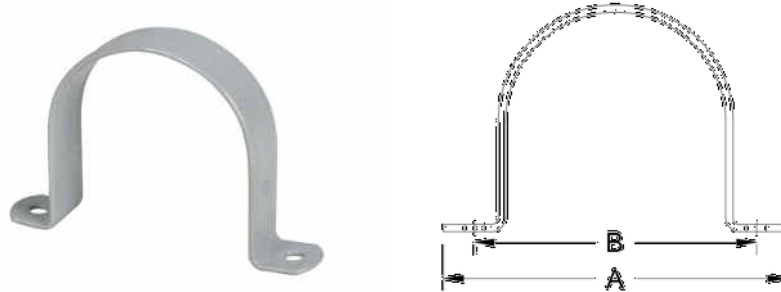
343°C (650°F)

**FINISH AVAILABLE:**

Plain, Hot Dip Galvanized, Electro-Galvanized.

Product Code	Nominal Pipe Size		Pipe OD (mm)	DIMESNSIONS(mm)		MAX LOAD (KG)
	In.	mm		LENGHT	BOLT SIZE	
SE-RCT 0.5	½"	DN15	21.3	57	M10	1250
SE-RCT 0.75	¾"	DN20	26.7	68	M10	1250
SE-RCT 1	1"	DN25	33.4	76	M10	1250
SE-RCT 1.25	1 ¼"	DN32	42.1	90	M10	1250
SE-RCT 1.5	1 ½"	DN40	48.2	110	M10	1250
SE-RCT 2	2"	DN50	60.3	130	M10	1850
SE-RCT 2.5	2 ½"	DN65	73.0	142	M12	1850
SE-RCT 3	3"	DN80	88.9	161	M12	2250
SE-RCT 3.5	3 ½"	DN90	101.6	170	M12	2250
SE-RCT 4	4"	DN100	114.3	190	M12	3600
SE-RCT 5	5"	DN125	141.3	224	M16	3600
SE-RCT 6	6"	DN150	168.3	258	M16	4500
SE-RCT 8	8"	DN200	219.1	333	M16	4500
SE-RCT 10	10"	DN250	273.0	409	M16	5800
SE-RCT 12	12"	DN300	323.8	467	M20	7300
SE-RCT 14	14"	DN350	355.6	519	M20	7300
SE-RCT 16	16"	DN400	406.4	571	M20	7300
SE-RCT 18	18"	DN450	457.2	710	M20	11000
SE-RCT 20	20"	DN500	508.0	760	M20	13400
SE-RCT 24	24"	DN600	609.6	833	M20	13400

## U STRAP



**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 carbon steel shaped to hold the pipe down to walls or ceilings.

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

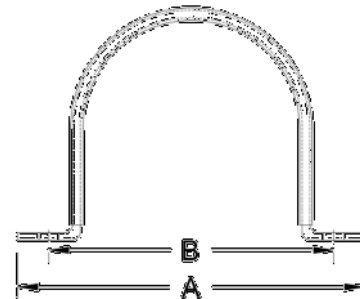
**APPROVALS:** Underwriter's Laboratories Listed (UL)  
 Factory Mutual Engineering Approved (FM)  
 Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58 (Type 26)  
 Federal Specification WW-H-171E (Type 26) & A-A-1192A (Type 26)

**MAXIMUM TEMPERATURE:** 343°C (650°F)

**FINISH AVAILABLE:** Plain, Hot Dip Galvanized, Electro-Galvanized.

Product Code	Nominal Pipe Size		Pipe OD (mm)	Hanger Dimension (mm)		Bolt Size (mm)	MAX LOAD (KG)
	In.	mm		Overall dimension A	Distance Between two bolt B		
SE-US 0.50	½"	DN15	21.3	76	51	M8	500
SE-US 0.75	¾"	DN20	26.7	82	57	M8	500
SE-US 01	1"	DN25	33.4	89	64	M8	500
SE-US 1.25	1 ¼"	DN32	42.1	96	71	M8	500
SE-US 1.50	1 ½"	DN40	48.2	102	77	M8	500
SE-US 54	-		54	108	83	M8	500
SE-US 02	2"	DN50	60.3	114	89	M8	500
SE-US 67	-		67	121	96	M8	500
SE-US 2.50	2 ½"	DN65	73.0	145	113	M8	600
SE-US 82	-		82	152	120	M8	600
SE-US 03	3"	DN80	88.9	160	128	M8	600
SE-US 3.50	3 ½"	DN90	101.6	170	138	M8	600
SE-US 108	-		108	178	146	M8	600
SE-US 04	4"	DN100	114.3	185	153	M8	600
SE-US 126	-		126	196	164	M8	600
SE-US 05	5"	DN125	141.3	210	178	M10	600
SE-US 148	-		148	218	186	M10	600
SE-US 155	-		155	225	193	M10	600
SE-US 06	6"	DN150	168.3	237	205	M10	600
SE-US 179	-		179	249	217	M10	600
SE-US 190	-		190	260	228	M10	800
SE-US 205	-		205	275	243	M10	800
SE-US 08	8"	DN200	219.1	289	257	M10	800
SE-US 230	-		230	300	268	M10	800
SE-US 241	-		241	332	291	M12	1250
SE-US 263	-		263	354	313	M12	1250
SE-US 10	10"	DN250	273.0	364	323	M18	1250
SE-US 295	-		295	386	345	M18	1250
SE-US 12	12"	DN300	323.8	417	376	M18	1250
SE-US 14	14"	DN350	355.6	447	409	M18	1800
SE-US 374	-		374	465	427	M18	1800
SE-US 16	16"	DN400	406.4	497	459	M18	1800
SE-US 432	-		432	523	485	M18	1800
SE-US 18	18"	DN450	457.2	547	509	M18	1800
SE-US 482	-		482	573	535	M18	1800
SE-US 20	20"	DN500	508.2	599	561	M18	1800
SE-US 533	-		533	624	586	M18	1800
SE-US 559	-		559	650	612	M18	1800
SE-US 583	-		583	674	636	M18	1800
SE-US 24	24"	DN600	609.6	701	663	M18	1800
SE-US 658	-		658	766	721	M18	2300
SE-US 690	-		690	798	753	M18	2300
SE-US 760	-		760	868	823	M18	2300
SE-US 863	-		863	971	926	M18	2300
SE-US 918	-		918	1026	981	M18	2300

## U STRAP WITH LINING

**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 carbon steel shaped to hold the pipe down to walls or ceilings. Reduces noise upto 18 dB.

**MATERIALS:**

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

**APPROVALS:**

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

**MAXIMUM TEMPERATURE:**

110°C

**MINIMUM TEMPERATURE:**

-20°C

**FINISH AVAILABLE:**

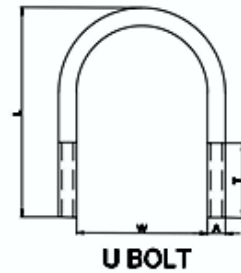
Plain, Hot Dip Galvanized, Electro-Galvanized.

Product Code	Nominal Pipe Size		Pipe OD (mm)	Hanger Dimension (mm)		Bolt Size (mm)	MAX LOAD (KG)
	In.	mm		Overall dimension A	Distance Between two bolt B		
SE-USL 0.50	½"	DN15	21.3	76	51	M8	500
SE-USL 0.75	¾"	DN20	26.7	82	57	M8	500
SE-USL 01	1"	DN25	33.4	89	64	M8	500
SE-USL 1.25	1 ¼"	DN32	42.1	96	71	M8	500
SE-USL 1.50	1 ½"	DN40	48.2	102	77	M8	500
SE-USL 54	-		54	108	83	M8	500
SE-USL 02	2"	DN50	60.3	114	89	M8	500
SE-USL 67	-		67	121	96	M8	500
SE-USL 2.50	2 ½"	DN65	73.0	145	113	M8	600
SE-USL 82	-		82	152	120	M8	600
SE-USL 03	3"	DN80	88.9	160	128	M8	600
SE-USL 3.50	3 ½"	DN90	101.6	170	138	M8	600
SE-USL 108	-		108	178	146	M8	600
SE-USL 04	4"	DN100	114.3	185	153	M8	600
SE-USL 126	-		126	196	164	M8	600
SE-USL 05	5"	DN125	141.3	210	178	M10	600
SE-USL 148	-		148	218	186	M10	600
SE-USL 155	-		155	225	193	M10	600
SE-USL 06	6"	DN150	168.3	237	205	M10	600
SE-USL 179	-		179	249	217	M10	600
SE-USL 190	-		190	260	228	M10	800
SE-USL 205	-		205	275	243	M10	800
SE-USL 08	8"	DN200	219.1	289	257	M10	800
SE-USL 230	-		230	300	268	M10	800
SE-USL 241	-		241	332	291	M12	1250
SE-USL 263	-		263	354	313	M12	1250
SE-USL 10	10"	DN250	273.0	364	323	M18	1250
SE-USL 295	-		295	386	345	M18	1250
SE-USL 12	12"	DN300	323.8	417	376	M18	1250
SE-USL 14	14"	DN350	355.6	447	409	M18	1800
SE-USL 374	-		374	465	427	M18	1800
SE-USL 16	16"	DN400	406.4	497	459	M18	1800
SE-USL 432	-		432	523	485	M18	1800
SE-USL 18	18"	DN450	457.2	547	509	M18	1800
SE-USL 482	-		482	573	535	M18	1800
SE-USL 20	20"	DN500	508.2	599	561	M18	1800
SE-USL 533	-		533	624	586	M18	1800
SE-USL 559	-		559	650	612	M18	1800
SE-USL 583	-		583	674	636	M18	1800
SE-USL 24	24"	DN600	609.6	701	663	M18	1800
SE-USL 658	-		658	766	721	M18	2300
SE-USL 690	-		690	798	753	M18	2300
SE-USL 760	-		760	868	823	M18	2300
SE-USL 863	-		863	971	926	M18	2300
SE-USL 918	-		918	1026	981	M18	2300

# U BOLT

**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 four standard hex nuts and has a longer straight threaded length.

**MATERIALS:**

Steel. Also other materials can also be provided on request

**APPROVALS:**

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



**MAXIMUM TEMPERATURE:**

399°C (750°F)

**FINISH AVAILABLE:**

Plain, Hot Dip Galvanized, Electro-Galvanized.

Product Code	Nominal Pipe Size		Pipe OD (mm)	Material Dimension (mm)			Bolt Size (mm) A	MAX LOAD (KG)
	In.	mm		Rod Dia. W	Height L	Thread Length T		
SE-UB 0.50	½"	DN15	21.3	21	65	50	M10	550
SE-UB 0.75	¾"	DN20	26.7	27	77	50	M10	550
SE-UB 01	1"	DN25	33.4	34	85	50	M10	550
SE-UB 1.25	1 ¼"	DN32	42.1	43	93	50	M10	550
SE-UB 1.50	1 ½"	DN40	48.2	48	100	50	M10	550
SE-UB 02	2"	DN50	60.3	60	110	50	M10	550
SE-UB 2.50	2 ½"	DN65	73.0	76	127	50	M12	900
SE-UB 03	3"	DN80	88.9	89	140	50	M12	900
SE-UB 04	4"	DN100	114.3	115	165	50	M12	900
SE-UB 05	5"	DN125	141.3	140	190	50	M12	900
SE-UB 06	6"	DN150	168.3	168	220	50	M12	900
SE-UB 08	8"	DN200	219.1	219	295	75	M16	1900
SE-UB 10	10"	DN250	273.0	273	370	100	M20	3200
SE-UB 12	12"	DN300	323.8	324	420	100	M20	3200
SE-UB 14	14"	DN350	355.6	356	455	100	M20	3200
SE-UB 16	16"	DN400	406.4	406	505	100	M20	3200
SE-UB 18	18"	DN450	457.2	457	555	100	M24	4400
SE-UB 20	20"	DN500	508.0	508	605	100	M24	4400
SE-UB 24	24"	DN600	609.6	610	710	100	M24	4400

## U BOLT WITH LINING

**APPLICATION:**

U-BOLTS are used to secure piping to structural members. When the piping is below the structural member, 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 four standard hex nuts and has a longer straight threaded length. Reduces noise upto 18dB.

**MATERIALS:**

Steel. Also other materials can also be provided on request

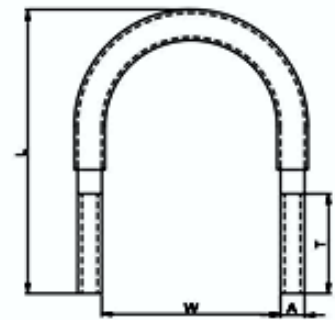
**APPROVALS:**

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

**MAXIMUM TEMPERATURE:** 110°C

**MINIMUM TEMPERATURE:** -20°C

**FINISH AVAILABLE:** Plain, Hot Dip Galvanized, Electro-Galvanized.



Product Code	Nominal Pipe Size		Pipe OD (mm)	Material Dimension (mm)			Bolt Size (mm) A	MAX LOAD (KG)
	inch	mm		Rod Dia. W	Height L	Thread Length T		
SE-UBL 0.50	½"	DN15	21.3	21	65	50	M10	550
SE-UBL 0.75	¾"	DN20	26.7	27	77	50	M10	550
SE-UBL 01	1"	DN25	33.4	34	85	50	M10	550
SE-UBL 1.25	1 ¼"	DN32	42.1	43	93	50	M10	550
SE-UBL 1.50	1 ½"	DN40	48.2	48	100	50	M10	550
SE-UBL 02	2"	DN50	60.3	60	110	50	M10	550
SE-UBL 2.50	2 ½"	DN65	73.0	76	127	50	M12	900
SE-UBL 03	3"	DN80	88.9	89	140	50	M12	900
SE-UBL 04	4"	DN100	114.3	115	165	50	M12	900
SE-UBL 05	5"	DN125	141.3	140	190	50	M12	900
SE-UBL 06	6"	DN150	168.3	168	220	50	M12	900
SE-UBL 08	8"	DN200	219.1	219	295	75	M16	1900
SE-UBL 10	10"	DN250	273.0	273	370	100	M20	3200
SE-UBL 12	12"	DN300	323.8	324	420	100	M20	3200
SE-UBL 14	14"	DN350	355.6	356	455	100	M20	3200
SE-UBL 16	16"	DN400	406.4	406	505	100	M20	3200
SE-UBL 18	18"	DN450	457.2	457	555	100	M24	4400
SE-UBL 20	20"	DN500	508.0	508	605	100	M24	4400
SE-UBL 24	24"	DN600	609.6	610	710	100	M24	4400

## HALF SADDLE

### APPLICATION:

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 piece of steel shaped to proper configuration as shown in above diagram.

### MATERIAL:

Steel. Also other materials can also be provided on request

### APPROVALS:

### MAXIMUM TEMPERATURE:

343°C (650°F)

### FINISH AVAILABLE:

Plain, Hot Dip Galvanized, Electro-Galvanized.



Product Code	Nominal Pipe Size		Diameter (mm)	Screw Size
	inch	mm		
SE- HS 0.50	½"	DN15	21.3	M6
SE- HS 0.75	¾"	DN20	26.7	M6
SE- HS 01	1 "	DN25	33.4	M6
SE- HS 1.25	1 1/4"	DN32	42.1	M6
SE- HS 1.50	1 1/2 "	DN40	48.2	M6
SE- HS 54	-		54	M6
SE- HS 02	2 "	DN50	60.3	M6
SE- HS 67	-		67	M6
SE- HS 2.50	2 1/2 "	DN65	73.0	M6
SE- HS 10	-		82	M6



## LIGHT SADDLE

### APPLICATION:

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

### CONSTRUCTION:

A LIGHT SADDLE consists of piece of steel shaped to the proper configuration as shown in the diagram.

### MATERIAL:

Steel. Also other materials can also be provided on request

### MAXIMUM TEMPERATURE:

343°C (650°F)

### FINISH AVAILABLE:

Plain, Hot Dip Galvanized, Electro-Galvanized.



Product Code	Nominal Pipe Size		Diameter (mm)	Screw Size
	inch	mm		
SE-LS 0.50	1/2 "	DN15	21.3	M6
SE-LS 0.75	3/4 "	DN20	26.7	M6
SE-LS 01	1 "	DN25	33.4	M6
SE-LS 1.25	1 1/4"	DN32	42.1	M6
SE-LS 1.50	1 1/2 "	DN40	48.2	M6
SE-LS 54	-	-	54	M6
SE-LS 02	2 "	DN50	60.3	M6
SE-LS 67	-	-	67	M6
SE-LS 2.50	2 1/2 "	DN65	73.0	M6
SE-LS 82	-	-	82	M6
SE-LS 03	3 "	DN80	88.9	M6
SE-LS 3.50	3 1/2"	DN90	101.6	M6
SE-LS 108	-	-	108	M6
SE-LS 04	4 "	DN100	114.3	M6
SE-LS 126	-	-	126	M6
SE-LS 05	5"	DN125	141.3	M6
SE-LS 148	-	-	148	M6
SE-LS 155	-	-	155	M6
SE-LS 06	6"	DN150	168.3	M6
SE-LS 179	-	-	179	M6
SE-LS 190	-	-	190	M6
SE-LS 205	-	-	205	M6
SE-LS 08	8"	DN200	219.1	M8

# HEAVY SADDLE

**APPLICATION:**

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 and better gripping of electrical conduits.

**CONSTRUCTION:**

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



**MATERIALS:**

Steel. Also other materials can also be provided on request

**APPROVALS:**

**MAXIMUM TEMP:**

343°C (650°F)

**FINISH AVAILABLE:**

Plain, Hot Dip Galvanized, Electro-Galvanized.

Product Code	Nominal Pipe Size		Diameter (mm)	Screw Size
	inch	mm		
SE-UC 0.50	1/2 "	DN15	21.3	M6
SE-UC 0.75	3/4 "	DN20	26.7	M6
SE-UC 01	1 "	DN25	33.4	M6
SE-UC 1.25	1 1/4"	DN32	42.1	M6
SE-UC 1.50	1 1/2 "	DN40	48.2	M6
SE-UC 54			54	M6
SE-UC 02	2 "	DN50	60.3	M6
SE-UC 67			67	M6
SE-UC 2.50	2 1/2 "	DN65	73.0	M6
SE-UC 82			82	M6
SE-UC 03	3 "	DN80	88.9	M6
SE-UC 3.50	3 1/2"	DN90	101.6	M6
SE-UC 108			108	M6
SE-UC 04	4 "	DN100	114.3	M6
SE-UC 126			126	M6
SE-UC 05	5"	DN125	141.3	M6
SE-UC 148			148	M6
SE-UC 155			155	M6
SE-UC 06	6"	DN150	168.3	M6
SE-UC 179			179	M6
SE-UC 190			190	M6
SE-UC 205			205	M6
SE-UC 08	8"	DN200	219.1	M8
SE-UC 230			230	M8
SE-UC 240			241	M8
SE-UC 263			263	M8
SE-UC 10	10 "	DN250	273.1	M8

## OFFSET HANGER

**APPLICATION:**

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 piece of steel shaped to the proper configuration.

**MATERIALS:**

Steel. Also other materials can also be provided on request

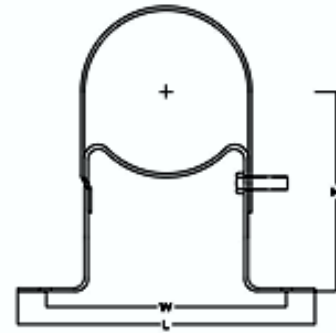
**APPROVALS:**

**MAXIMUM TEMP:**

343°C (650°F)

**FINISH AVAILABLE:**

Plain, Hot Dip Galvanized, Electro-Galvanized.



Product Code	Nominal Pipe Size		Pipe OD (mm)	Dimension		
	inch	mm		L	W	H
SE-AC 02	2 "	DN50	60.3	214	186	83
SE-AC 2.50	2 1/2 "	DN65	73	269	231	113
SE-AC 03	3 "	DN80	88.9	284	246	113
SE-AC 110	-		110	298	259	113
SE-AC 04	4 "	DN100	114.3	311	271	113
SE-AC 05	5 "	DN125	141.3	386	336	138
SE-AC 06	6 "	DN150	168.3	411	361	138
SE-AC 168	-		168	431	394	138
SE-AC 08	8 "	DN200	219.1	469	419	138

## TWO PIECE CHANNEL CLIP (STRUT PIPE | TUBE CLAMP / STRUT MOUNTING PIPE GUIDE)

**APPLICATION:**

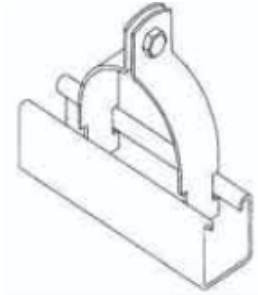
Designed as a guide to permit longitudinal movement of pipe.

**MATERIALS:**

Steel. Also other materials can also be provided on request

**FINISH AVAILABLE:**

Plain, Hot Dip Galvanized, Electro-Galvanized.



Product Code	Pipe Size
TPCC 01	8cu
TPCC 02	10cu
TPCC 03	15cu
TPCC 04	17cu
TPCC 05	20cu
TPCC 06	15nb
TPCC 07	25cu
TPCC 08	20nb
TPCC 09	29ns
TPCC 10	32cu
TPCC 11	25nb
TPCC 12	40cu
TPCC 13	32nb
TPCC 14	40nb
TPCC 15	50cu
TPCC 16	54ns
TPCC 17	57ns
TPCC 18	50nb
TPCC 19	65cu
TPCC 20	67ns
TPCC 21	70ns
TPCC 22	65nb/sched40
TPCC 23	65nb/80cu
TPCC 25	83ns
TPCC 26	86ns
TPCC 27	80nb
TPCC 28	92ns
TPCC 29	95ns

Product Code	Pipe Size
TPCC 30	98ns
TPCC 31	102cu
TPCC 32	105ns
TPCC 33	108ns
TPCC 34	110ns
TPCC 35	100nb
TPCC 36	117ns
TPCC 37	121ns
TPCC 38	125cu
TPCC 39	133ns
TPCC 40	125nb
TPCC 41	146ns
TPCC 42	152cu
TPCC 43	159ns
TPCC 44	150nb
TPCC 45	50/nb/sched40
TPCC 46	171ns
TPCC 47	178ns
TPCC 48	190ns
TPCC 49	200cu
TPCC 50	200nb
TPCC 51	228ns
TPCC 52	240ns
TPCC 53	252cu
TPCC 54	268ns
TPCC 55	250nb
TPCC 56	300cu
TPCC 57	300nb

# PIPE ROLLER STAND

**APPLICATION:**

Recommended to support pipe in applications where horizontal movement, due to expansion and contraction, will occur.

**MATERIALS:**

Steel. Also other materials can also be provided on request

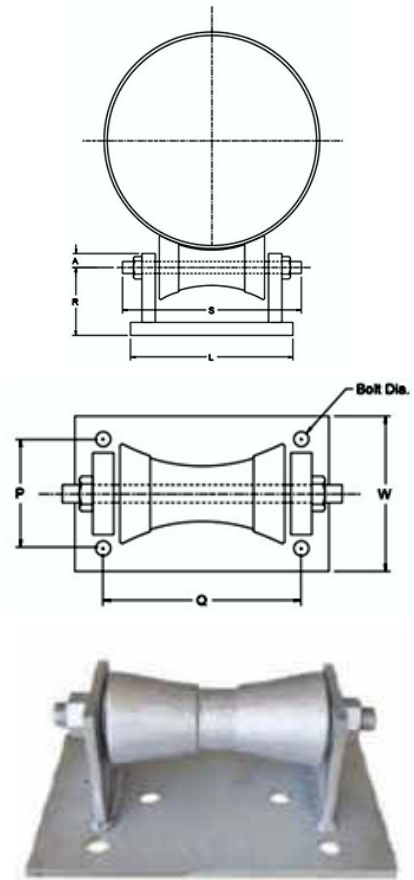
**APPROVALS:**

Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58 (Type 44)

Federal Specification WW-H-171E & A-A-1192A (Type 45)

**FINISH AVAILABLE:**

Plain, Hot Dip Galvanized, Electro-Galvanized.



Product Code	Nominal Pipe Size		Pipe OD (mm)	S	Base Plate		R	Q	P
	In.	mm			L	W			
SE-ROS 02	2"	DN50	59	80	90	145	50	40	100
SE-ROS 2.50	2 1/2"	DN65	75	90	100	145	50	48	100
SE-ROS 03	3"	DN80	89	95	105	145	50	55	100
SE-ROS 3.50	3 1/2"	DN90	102	100	110	145	50	61	100
SE-ROS 04	4"	DN100	115	115	125	155	50	72	115
SE-ROS 05	5"	DN125	141	130	140	155	55	85	115
SE-ROS 06	6"	DN150	168	160	170	165	65	100	125
SE-ROS 08	8"	DN200	219	190	200	170	75	125	130
SE-ROS 10	10"	DN250	273	225	235	170	90	155	130
SE-ROS 12	12"	DN300	323	260	270	170	90	180	130
SE-ROS 14	14"	DN350	356	275	285	170	120	197	130
SE-ROS 16	16"	DN400	406	300	310	205	120	220	165
SE-ROS 18	18"	DN450	457	345	355	205	130	250	165
SE-ROS 20	20"	DN500	508	370	380	205	130	275	165
SE-ROS 24	24"	DN600	610	480	490	230	160	330	190
SE-ROS 26	26"	DN650	661	500	510	245	180	355	200
SE-ROS 28	28"	DN700	712	530	540	245	180	385	200
SE-ROS 30	30"	DN750	755	550	560	245	200	405	200

## PIPE ROLLER CHAIR

**APPLICATION:**

Recommended for support of pipe where longitudinal movement due to expansion and contraction may occur, but where no vertical adjustment is required.

**MATERIALS:**

Steel. Also other materials can also be provided on request

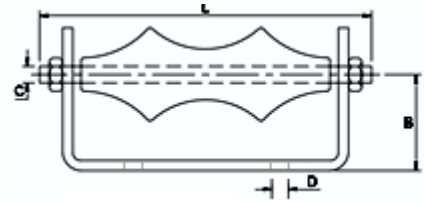
**APPROVALS:**

Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58 (Type 44)

Federal Specification WW-H-171E & A-A-1192A (Type 45)

**FINISH AVAILABLE:**

Plain, Hot Dip Galvanized, Electro-Galvanized.



Product Code	NPS (in)	NPS (mm)	Width	Thickness	Dimensions (mm)				
					A	B	C	D	L
SE-PRC 02	2"	59	30	6	35	40	M12	M12	115
SE-PRC 2.50	2 ½"	75	30	6	35	40	M12	M12	125
SE-PRC 03	3"	89	30	6	50	45	M12	M12	145
SE-PRC 3.50	3 ½"	102	30	6	50	45	M12	M12	160
SE-PRC 04	4"	115	40	10	50	55	M12	M16	175
SE-PRC 05	5"	141	40	10	75	55	M12	M16	200
SE-PRC 06	6"	168	50	10	80	65	M20	M16	245
SE-PRC 08	8"	219	50	10	85	75	M24	M20	305
SE-PRC 10	10"	273	50	12	130	90	M24	M20	365
SE-PRC 12	12"	323	50	12	140	90	M24	M20	425
SE-PRC 14	14"	356	50	12	165	120	M24	M24	460
SE-PRC 16	16"	406	75	12	210	120	M24	M24	515
SE-PRC 18	18"	457	75	12	235	130	M33	M24	580
SE-PRC 20	20"	508	75	12	260	130	M33	M24	630
SE-PRC 24	24"	610	100	16	310	160	M50	M24	780
SE-PRC 26	26"	661	100	16	335	180	M50	M24	845
SE-PRC 28	28"	712	100	16	360	180	M50	M24	895
SE-PRC 30	30"	755	100	16	385	200	M50	M24	940

## ADJUSTABLE ROLLER HANGER

**APPLICATION:**

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

**MATERIALS:**

Steel. Also other materials can also be provided on request

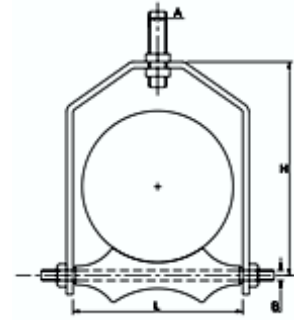
**APPROVALS:**

Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58 (Type 43)

Federal Specification WW-H-171E & A-A-1192A (Type 43)

**FINISH AVAILABLE:**

Plain, Hot Dip Galvanized, Electro-Galvanized.



Product Code	Nominal Pipe Size		Pipe OD (mm)	Dimensions (mm)			
	In.	mm		A	C	E	H
SE-ARH 02	2"	DN50	59	M12	M12 x 115	70	105
SE-ARH 2.50	2 ½"	DN65	75	M12	M12 x 125	83	125
SE-ARH 03	3"	DN80	89	M12	M12 x 145	99	140
SE-ARH 3.50	3 ½"	DN90	102	M16	M12 x 160	112	155
SE-ARH 04	4"	DN100	115	M16	M12 x 175	125	170
SE-ARH 05	5"	DN125	141	M20	M12 x 200	152	200
SE-ARH 06	6"	DN150	168	M20	M20 x 245	179	230
SE-ARH 08	8"	DN200	219	M20	M24 x 305	231	290
SE-ARH 10	10"	DN250	273	M24	M24 X 365	285	350
SE-ARH 12	12"	DN300	323	M24	M24 x 425	336	400
SE-ARH 14	14"	DN350	356	M24	M24 x 460	368	445
SE-ARH 16	16"	DN400	406	M24	M24 x 515	419	500
SE-ARH 18	18"	DN450	457	M30	M33 x 580	470	555
SE-ARH 20	20"	DN500	508	M30	M33 x 630	520	610
SE-ARH 24	24"	DN600	610	M30	M50 x 780	626	725
SE-ARH 26	26"	DN350	661	M36	M50 x 845	679	785
SE-ARH 28	28"	DN700	712	M36	M50 x 895	732	840
SE-ARH 30	30"	DN750	755	M36	M50 x 940	778	885

# PIPE ROLLER

**APPLICATION:**

Recommended for supporting pipe in applications where horizontal movement, due to expansion and contraction, will occur.

**MATERIALS:**

Steel. Also other materials can also be provided on request

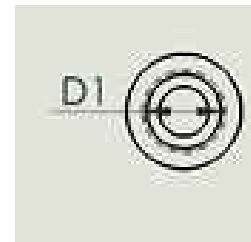
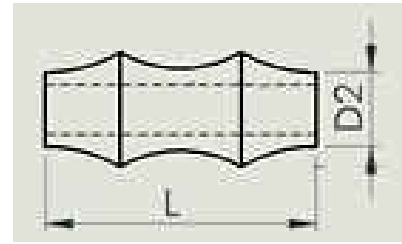
**APPROVALS:**

Manufacturers Standardization Society ANSI/MSS SP-69 & SP-58 (Type 41)

Federal Specification WW-H-171E & A-A-1192A (Type 42)

**FINISH AVAILABLE:**

Plain, Hot Dip Galvanized, Electro-Galvanized.



Product Code	Nominal Pipe Size		Pipe OD (mm)	Dimensions (mm)			
	In.	mm		D	L	D1	D2
SE-PR 02	2"	DN50	59	27.90	66	20	18
SE-PR 2.50	2 ½"	DN65	75	32.05	79	22	20
SE-PR 03	3"	DN80	89	33.92	95	22	20
SE-PR 3.50	3 ½"	DN90	102	35.67	108	22	20
SE-PR 04	4"	DN100	115	41.41	121	26	24
SE-PR 05	5"	DN125	141	48.89	148	30	28
SE-PR 06	6"	DN150	168	58.51	175	36	34
SE-PR 08	8"	DN200	219	67.34	227	38	36
SE-PR 10	10"	DN250	273	80.58	281	44	42
SE-PR 12	12"	DN300	323	93.27	330	50	48
SE-PR 14	14"	DN350	356	115.69	362	68	66
SE-PR 16	16"	DN400	406	122.39	413	68	66
SE-PR 18	18"	DN450	457	131.23	464	70	68
SE-PR 20	20"	DN500	508	144.06	514	76	74
SE-PR 24	24"	DN600	610	173.72	616	92	90
SE-PR 26	26"	DN650	661	188.56	669	100	98
SE-PR 28	28"	DN700	712	201.39	722	106	104
SE-PR 30	30"	DN750	755	215.15	768	114	112



## PIPE INSULATION SADDLE

**APPLICATION:** 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:** Steel. Also other materials can also be provided on request

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



**FINISH AVAILABLE:** Plain, Hot Dip Galvanized, Electro-Galvanized.

Product Code	Nominal Pipe Size		Pipe OD (mm)	Insulation (mm)
	In.	mm		
SE-PS 1-25	1"	DN25	33.4	25
SE-PS 1-50	1"	DN25	33.4	50
SE-PS 1.25-25	1 ¼"	DN32	42	25
SE-PS 1.25-50	1 ¼"	DN32	42	50
SE-PS 1.5-25	1 ½"	DN40	48	25
SE-PS 1.5-50	1 ½"	DN40	48	50
SE-PS 2-25	2"	DN50	60	25
SE-PS 2-50	2"	DN50	60	50
SE-PS 2-75	2"	DN50	60	75
SE-PS 2.5-25	2 ½"	DN65	73	25
SE-PS 2.5-50	2 ½"	DN65	73	50
SE-PS 2.5-75	2 ½"	DN65	73	75
SE-PS 3-25	3"	DN80	90	25
SE-PS 3-50	3"	DN80	90	50
SE-PS 3-75	3"	DN80	90	75
SE-PS 4-25	4"	DN100	115	25
SE-PS 4-50	4"	DN100	115	50
SE-PS 4-75	4"	DN100	115	75
SE-PS 5-25	5"	DN125	140	25
SE-PS 5-50	5"	DN125	140	50
SE-PS 5-75	5"	DN125	140	75
SE-PS 6-25	6"	DN150	168	25
SE-PS 6-50	6"	DN150	168	50
SE-PS 6-75	6"	DN150	168	75
SE-PS 8-25	8"	DN200	219	25
SE-PS 8-50	8"	DN200	219	50
SE-PS 8-75	8"	DN200	219	75
SE-PS 10-25	10"	DN250	273	25
SE-PS 10-50	10"	DN250	273	50
SE-PS 10-75	10"	DN250	273	75
SE-PS 12-25	12"	DN300	323	25
SE-PS 12-50	12"	DN300	323	50
SE-PS 12-75	12"	DN300	323	75
SE-PS 14-25	14"	DN350	356	25
SE-PS 14-50	14"	DN350	356	50

## BRACKET FOR U BOLT

**APPLICATION:** Designed to install U Bolts on wall or floor. Brackets helps to maintain distance between wall surface and pipeline.

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

**FINISH AVAILABLE:** Plain, Hot Dip Galvanized, Electro-Galvanized.

**SIZES:** 4"X2", 5"X2", 6"X2", 8"X2", 8"X4", 10"X2"

**Note:** Any non standard size also can manufacture.



## SUPPORT CHANNELS

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

**FINISH AVAILABLE:** Plain, Hot Dip Galvanized, Electro-Galvanized.

**SIZES:** 4' X 2", 4' X 4"

**Note:** Any non standard size also can manufacture.



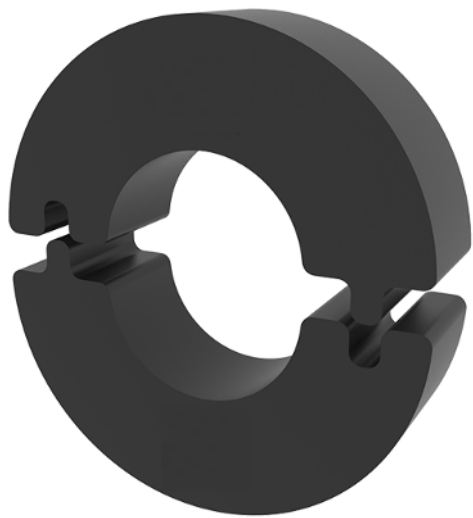
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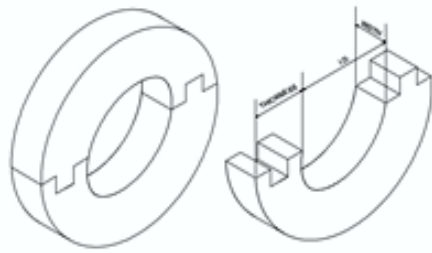






R.S.I

## RUBBER SUPPORT INSERTS



RUBBER SUPPORT INSERT



**APPLICATION:**

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.

**MATERIAL:**

**DENSITY:** 1400kg/m<sup>3</sup>

**THERMAL CONDUCTIVITY:**

0.16W/m°C

**MAXIMUM TEMPERATURE:**

110°C

**MINIMUM TEMPERATURE:**

-20°C



Nominal Pipe Sizes		Schedule 40 Steel Pipe OD (mm)	Part number for Rubber Support Inserts							
Inches	mm		1/2" (13 mm)	3/4" (19 mm)	1" (25 mm)	1 1/4" (32 mm)	1 1/2" (38 mm)	2" (50 mm)	2 1/2" (65 mm)	3" (75 mm)
1/2"	15	21.3	SE RSI 13-01	SE RSI 19-01	SE RSI 25-01	SE RSI 32-01	SE RSI 38-01	SE RSI 50-01	SE RSI 65-01	SE RSI 75-01
3/4"	20	26.7	SE RSI 13-02	SE RSI 19-02	SE RSI 25-02	SE RSI 32-02	SE RSI 38-02	SE RSI 50-02	SE RSI 65-02	SE RSI 75-02
1"	25	33.4	SE RSI 13-03	SE RSI 19-03	SE RSI 25-03	SE RSI 32-03	SE RSI 38-03	SE RSI 50-03	SE RSI 65-03	SE RSI 75-03
1 1/4"	32	42.1	SE RSI 13-04	SE RSI 19-04	SE RSI 25-04	SE RSI 32-04	SE RSI 38-04	SE RSI 50-04	SE RSI 65-04	SE RSI 75-04
1 1/2"	40	48.2	SE RSI 13-05	SE RSI 19-05	SE RSI 25-05	SE RSI 32-05	SE RSI 38-05	SE RSI 50-05	SE RSI 65-05	SE RSI 75-05
2"	50	60.3	SE RSI 13-06	SE RSI 19-06	SE RSI 25-06	SE RSI 32-06	SE RSI 38-06	SE RSI 50-06	SE RSI 65-06	SE RSI 75-06
2 1/2"	65	73	SE RSI 13-07	SE RSI 19-07	SE RSI 25-07	SE RSI 32-07	SE RSI 38-07	SE RSI 50-07	SE RSI 65-07	SE RSI 75-07
3"	80	88.9	SE RSI 13-08	SE RSI 19-08	SE RSI 25-08	SE RSI 32-08	SE RSI 38-08	SE RSI 50-08	SE RSI 65-08	SE RSI 75-08
3 1/2"	90	101.6	SE RSI 13-09	SE RSI 19-09	SE RSI 25-09	SE RSI 32-09	SE RSI 38-09	SE RSI 50-09	SE RSI 65-09	SE RSI 75-09
4"	100	114.3	SE RSI 13-10	SE RSI 19-10	SE RSI 25-10	SE RSI 32-10	SE RSI 38-10	SE RSI 50-10	SE RSI 65-10	SE RSI 75-10
5"	125	141.3	SE RSI 13-11	SE RSI 19-11	SE RSI 25-11	SE RSI 32-11	SE RSI 38-11	SE RSI 50-11	SE RSI 65-11	SE RSI 75-11
6"	150	168.3	SE RSI 13-12	SE RSI 19-12	SE RSI 25-12	SE RSI 32-12	SE RSI 38-12	SE RSI 50-12	SE RSI 65-12	SE RSI 75-12
8"	200	219.3	SE RSI 13-13	SE RSI 19-13	SE RSI 25-13	SE RSI 32-13	SE RSI 38-13	SE RSI 50-13	SE RSI 65-13	SE RSI 75-13
10"	250	273	SE RSI 13-14	SE RSI 19-14	SE RSI 25-14	SE RSI 32-14	SE RSI 38-14	SE RSI 50-14	SE RSI 65-14	SE RSI 75-14
12"	300	232.8	SE RSI 13-15	SE RSI 19-15	SE RSI 25-15	SE RSI 32-15	SE RSI 38-15	SE RSI 50-15	SE RSI 65-15	SE RSI 75-15
14"	350	355.6	SE RSI 13-16	SE RSI 19-16	SE RSI 25-16	SE RSI 32-16	SE RSI 38-16	SE RSI 50-16	SE RSI 65-16	SE RSI 75-16
16"	400	406.4	SE RSI 13-17	SE RSI 19-17	SE RSI 25-17	SE RSI 32-17	SE RSI 38-17	SE RSI 50-17	SE RSI 65-17	SE RSI 75-17
18"	450	457.2	SE RSI 13-18	SE RSI 19-18	SE RSI 25-18	SE RSI 32-18	SE RSI 38-18	SE RSI 50-18	SE RSI 65-18	SE RSI 75-18
20"	500	508	SE RSI 13-19	SE RSI 19-19	SE RSI 25-19	SE RSI 32-19	SE RSI 38-19	SE RSI 50-19	SE RSI 65-19	SE RSI 75-19
24"	600	609.6	SE RSI 13-20	SE RSI 19-20	SE RSI 25-20	SE RSI 32-20	SE RSI 38-20	SE RSI 50-20	SE RSI 65-20	SE RSI 75-20

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 32mm	85.3
3/4 "	26.7	3/4 " X 32mm X 32mm	90.7
1 "	33.4	1 " X 32mm X 32mm	97.4
1 1/4"	42.1	1 1/4" X 32mm X 32mm	106.1
1 1/2"	48.2	1 1/2" X 32mm X 32mm	112.2
2 "	60.3	2 " X 32mm X 32mm	124.3
2 1/2 "	73	2 1/2 " X 32mm X 38mm	137
3 "	88.9	3 " X 32mm X 38mm	152.9
3 1/2 "	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 " X 32mm 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 " X 32mm 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	1/2" X 38mm X 25mm	97.3
3/4 "	27	3/4 " X 38mm X 25mm	102.7
1 "	33	1 " X 38mm X 25mm	109.4
1 1/4"	42	1 1/4" X 38mm X 25mm	118.1
1 1/2"	48	1 1/2" X 38mm X 25mm	124.2
2 "	60	2 " X 38mm X 25mm	136.3
2 1/2 "	73	2 1/2 " X 38mm X 38mm	149
3 "	89	3 " X 38mm X 38mm	164.9
3 1/2 "	102	3 1/2 " X 38mm X 38mm	177.6
4 "	114	4 " X 38mm X 38mm	190.3
5 "	141	5 " X 38mm X 38mm	217.3
6 "	168	6 " X 38mm X 50mm	244.3
8 "	219	8 " X 38mm X 50mm	295.1
10 "	273	10 " X 38mm X 50mm	349
12 "	324	12 " X 38mm X 50mm	399.8
14 "	356	14 " X 38mm X 50mm	431.6
16 "	406	16 " X 38mm X 50mm	482.4
18 "	457	18 " X 38mm X 50mm	533.2
20 "	508	20 " X 38mm X 50mm	584
24 "	610	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



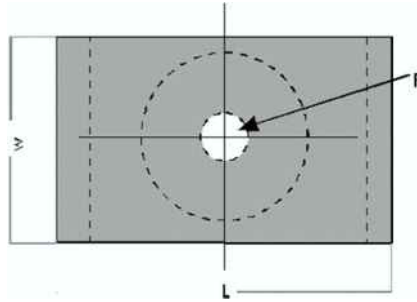
# Anti-Vibration Products



Anti-Vibration  
Products



## SPRING HANGER



### 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.

### Applications:-

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.

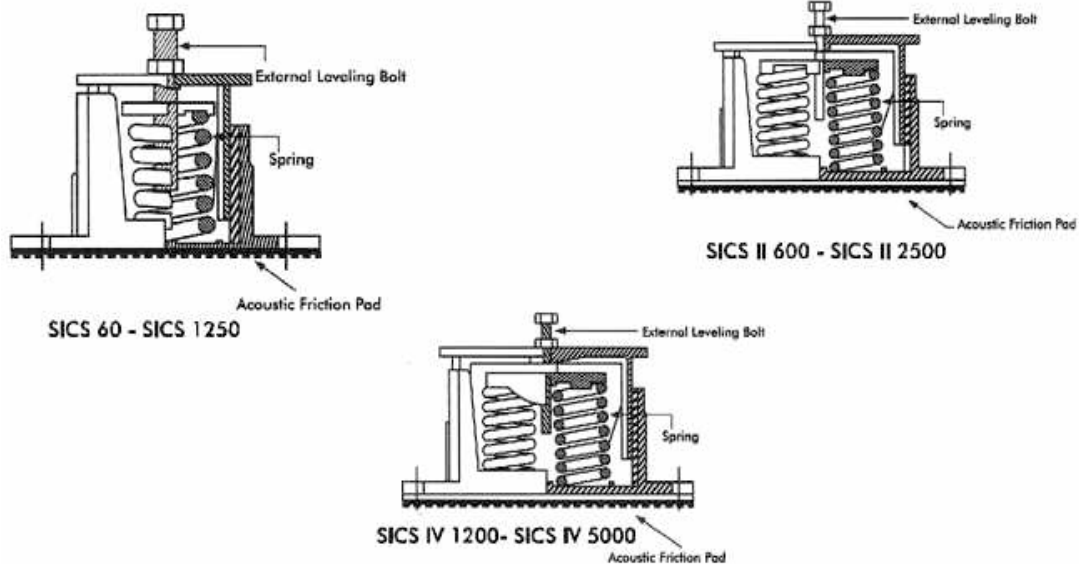
Product Code	COLOUR CODE	RATED LOAD (kg)	DEFLECTION (mm)	M (mm)	L (mm)	W (mm)	H (mm)	F (mm)	TOP HOLE (mm)
SESH 20/15	WHITE	15	20	53	57	38	70	10	12
SESH 20/30	YELLOW	30	20	53	57	38	70	10	12
SESH 20/50	PURPLE	50	20	53	57	38	70	10	12
SESH 25/10	PURPLE	10	25	53	62	52	100	12	13
SESH 25/15	YELLOW	15	25	53	62	52	100	12	13
SESH 25/20	GREY	20	25	53	62	52	100	12	13
SESH 25/40	LIGHT BLUE	40	25	53	62	52	100	12	13
SESH 25/60	GREEN	60	25	53	62	52	100	12	13
SESH 25/100	GREEN	100	25	83	90	65	125	14	15
SESH 25/160	ORANGE	160	25	83	90	65	125	14	15
SESH 25/200	RED	200	25	83	90	65	125	14	15
SESH 25/250	PURPLE	250	25	83	90	65	125	14	15
SESH 25/300	GREY	300	25	102	112	95	165	18	19
SESH 25/400	ORANGE	400	25	102	112	95	165	18	19
SESH 25/500	BROWN	500	25	102	112	95	165	18	19
SESH 25/600	BLACK	600	25	102	112	95	165	18	19
SESH 25/800	RED	800	25	102	112	95	165	18	19
SESH 25/1050	WHITE	1050	25	102	112	95	165	18	19
SESH 25/1250	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)

## CLOSED SPRING MOUNT

### 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 6 mm and not more than 12 mm



### Typical Application:-

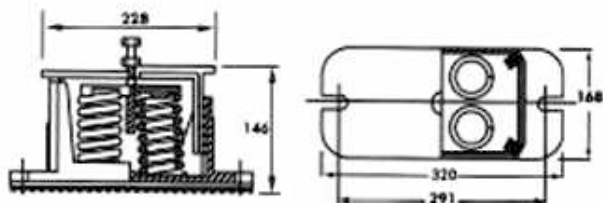
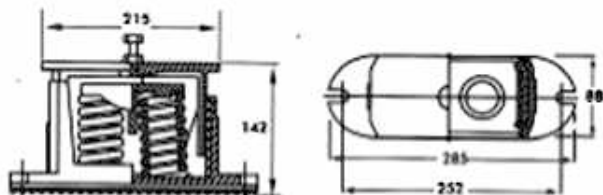
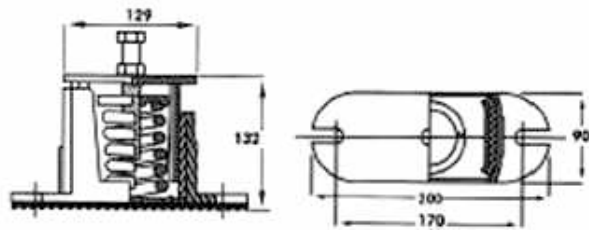
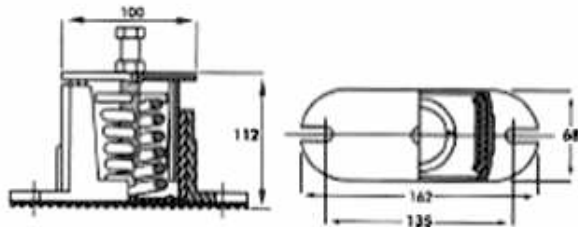
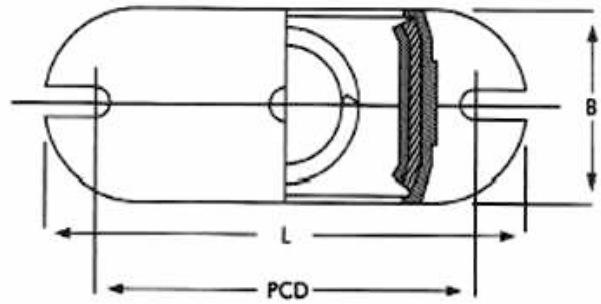
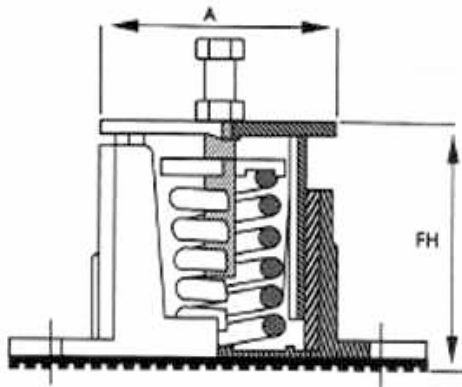
Application examples include – Chillers, AHU'S pumps, centrifugal / Axial Fans, Condensing Units, Rooftop Packaged units, Reciprocating compressors , DG sets , Punch presses, Drop Hammers, Floor Pipe supports

( 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)

# TECHNICAL SPECIFICATION



Product Code	Colour Code	Rated Load (mm)	Deflection (mm)
SECS 060	BLUE	60	25
SECS 100	GREEN	100	25
SECS 160	ORANGE	160	25
SECS 200	RED	200	25
SECS 250	PURPLE	150	25
SECS 300	GREY	300	25
SECS 400	ORANGE	400	25
SECS 500	BROWN	500	25
SECS 600	BLACK	600	25
SECS 800	RED	800	25
SECS 1050	WHITE	1050	25
SECS 1250	GREEN	1250	25
SECS II 600	GREY	6000	25
SECS II 800	ORANGE	800	25
SECS II 1000	BROWN	1000	25
SECS II 1200	BLACK	1200	25
SECS II 1600	RED	1600	25
SECS II 2100	WHITE	2100	25
SECS II 2500	GREEN	2500	25
SECS IV 1200	GREY	1200	25
SECS IV 1600	ORANGE	1600	25
SECS IV 2000	BROWN	2000	25
SECS IV 2400	BLACK	2400	25
SECS IV 3200	RED	3200	25
SECS IV 4200	WHITE	4200	25
SECS IV 5000	GREEN	5000	25

Anti-Vibration Products

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

# SINGLE ARCH EXPANSION JOINT

## DESIGN FEATURES :

- Greater Movements
- Higher Pressure Ratings
- No gaskets required
- Absorbs & Isolates Vibrations/Noise/shock
- Reduces System Noise
- Absorbs pipe Movement/Stress.
- Compensates for Misalignment/Offset
- Available with tie rod assembly



## Temperature Ratings:-

Standard (-) 10° to 70° C

Special (-) 10° to 150° C

- \* Expansion Joints for special applications in different Polymers and Pressure ratings available as per customer specifications.

## MOVING CAPABILITY

Nominal Bore (mm)	Length(mm)	Axial Comp.(mm)	Axial Elongation(mm)	Transverse Deflection (mm)	Angular Movement		Torsional Movement Deg.
					Bore (mm)	Deg.	
25	150	12	6	12	25	14.5	3
32-200	150	12	6	12	50	14.5	3
					75	10	3
					100	7.5	3
					125	6	3
					150	5	3
250-350	200	19	10	12	200	5	3
					250-300	4	3
					350	2.5	2

\* Standard PN10 and PN16 REJ design chart for sizes 25NB to 350NB available on next page

- 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 – As per FSA Standards USA.



# SINGLE ARCH EXPANSION JOINTS

## PN – 10

Nominal Size (I.D.)		Length Nominal f.f.	Flange Dia. Nominal	Flange Thick	Operating Conditions		Expansion Joint Style
INS.	mm				Pressure Design(Bar)	Test Pressure (Bar)	
1"	25	150	114	14	10	15	SI 100
1.25"	32	150	121	14	10	15	SI 100
1.5"	40	150	127	14	10	15	SI 100
2"	50	150	152	14	10	15	SI 100
2.5"	65	150	178	14	10	15	SI 100
3"	80	150	191	14	10	15	SI 100
4"	100	150	229	14	10	15	SI 100
5"	125	150	254	14	10	15	SI 100
6"	150	150	280	16	10	15	SI 100
8"	200	150	343	19	10	15	SI 100
10"	250	200	406	19	10	15	SI 100
12"	300	200	483	19	10	15	SI 100
14"	350	200	533	22	10	15	SI 100

## PN – 16

Nominal Size (I.D.)		Length Nominal f.f.	Flange Dia. Nominal	Flange Thick	Operating Conditions		Expansion Joint Style
INS.	mm				Pressure Design(Bar)	Test Pressure (Bar)	
1"	25	150	114	14	16	24	SI 200
1.25"	32	150	121	14	16	24	SI 200
1.5"	40	150	127	14	16	24	SI 200
2"	50	150	152	14	16	24	SI 200
2.5"	65	150	178	14	16	24	SI 200
3"	80	150	191	14	16	24	SI 200
4"	100	150	229	14	16	24	SI 200
5"	125	150	254	14	16	24	SI 200
6"	150	150	280	16	16	24	SI 200
8"	200	150	343	19	16	24	SI 200
10"	250	200	406	19	16	24	SI 200
12"	300	200	483	19	16	24	SI 200
14"	350	200	533	22	16	24	SI 200

- Flange Drilling to: BS 10 Table D/E/F, ANSI B16.5 125 / 150 or as per customer requirement
- Higher Pressure Ratings and Movement Capabilities Available.
- Expansion Joints are available in a variety of polymers for different applications duty conditions.
- Vacuums – 26 inches of Hg

## FLOATING FLANGE EXPANSION JOINT

**This Type Rubber Expansion Joint** is a totally effective Saketh's solution 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, Nitrile, and Butyl having a wide range of flange drilling standards to your building services requirements.

Type **Floating Flange is designed** as per the latest International Standards of FSA and 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 design.

Size I.D (mm)	Standard F/F length (mm)	Operating Condition				Expression Joints Style
		Axial Comp <sup>n</sup> (mm)	Elongation (mm)	Lateral (mm)	Angular Degrees	
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	115°C (Neoprene/EPDM)
Pressure	Vacuum Rating	16 bar Full vacuum (26" Hg)
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.

### 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 bellows which allows for simple bolt alignment.

### Control Units

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

**Warning:** Control unit must be used unless piping is properly anchored. When Expansion joints are installed in pipelines or equipment carrying fluids and gases at elevated temperatures and pressures, 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 pressures rating is based on 40°C operating temperature.

- Due to policy of continual improvement, the specifications are subject to change without prior notice.
- Measurements are subject to 5% tolerance.

## ANTI VIBRATION PADS

### 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.



Size (Inches)	Load(PSI)	Load (kg/cm <sup>2</sup> )
3/8" x 18" x 18"	12960	911
3/8" x 12" x 12"	5760	404
3/8" x 8" x 8"	2560	180
3/8" x 6" x 6"	1440	101
3/8" x 4" x 4"	640	45
3/8" x 3" x 3"	360	25

### WAFFLE PADS

**Specifications:**

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



Size(Inches)	Load(PSI)	Load (kg/cm <sup>2</sup> )
3/8" x 18" x 18"	12960	911
3/8" x 12" x 12"	5760	404
3/8" x 8" x 8"	2560	180
3/8" x 6" x 6"	1440	101
3/8" x 4" x 4"	640	45
3/8" x 3" x 3"	360	25

- 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.

## 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.



Size (inches)	Load (PSI)	Load (kg/cm <sup>2</sup> )
7/8" X 18" X 18"	16200	1139
7/8" X 12" X 12"	7200	506
7/8" X 8" X 8"	3200	225
7/8" X 6" X 6"	100	126
7/8" X 4" X 4"	860	56
7/8" X 3" X 3"	450	31

## METAL SANDWICH PADS

### Specifications:-

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



Size (inches)	Load (PSI)	Load (kg/cm <sup>2</sup> )
1" X 18" X 18"	19440	1368
1" X 12" X 12"	8640	607
1" X 8" X 8"	3840	270
3/4" X 6" X 6"	2160	152
3/4" X 4" X 4"	960	67
3/4" X 3" X 3"	540	38

- 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.

# TURRET MOUNT

SITM 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 three rubber compounds identified by a colour spot.
- Static deflections of up to 8mm with loads from 5kg to 400 kg.

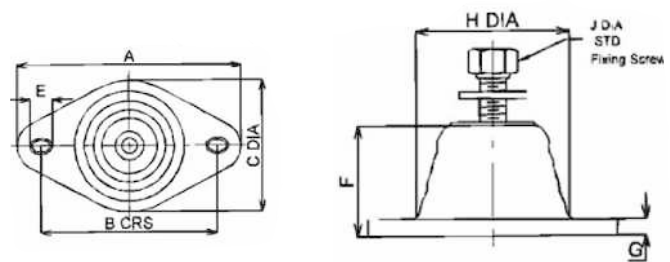
## Typical Applications:

- 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.

## TECHINICAL SPECIFICATION :



Product Code	Colour Code	Rate load	Deflection at Rate	Nominal Dimension (mm)									Approx Wt. (kg)
				A	B	C	D	E	F	G	H	J	
SETM 100.Y	YELLOW	28	6	80	57	45	9	12	32	5	41	M8 X 20	0.11
SETM 100.B	BLUE	50											
SETM 100.R	RED	80											
SETM 101.Y	YELLOW	110	8	95	71	60	9	14	45	5	56	M10 X 25	0.25
SETM 101.B	BLUE	180											
SETM 101.R	RED	280											
SETM 102.Y	YELLOW	150	8	150	115	86	11	22	70	6	82	M12 X 30	0.73
SETM 102.B	BLUE	260											
SETM 102.R	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



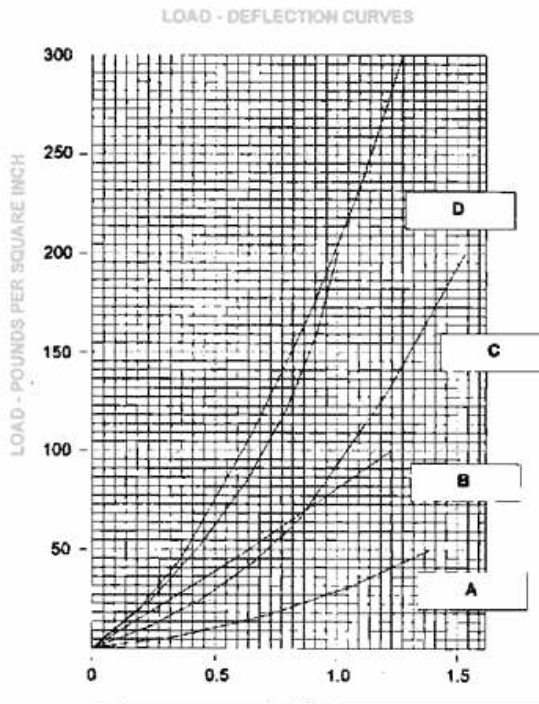
### Selection Procedure:

- Compute the total load in kg. To be supported by Saketh's Pads. This includes machine weight and work load it carries and also concrete or steel base or inertia block if used.
- Determine unit loading to suit type of machine and supporting ground structure.
- Divide the static weight by unit load to get total area of Saketh's Pad that is required.
- Arrange the total area of into adequate number of pads that are necessary to give stable support and to avoid base distortion. The area of each pad should be in proportion to the load carried by it so that the unit loading or stress on all pads will be approximately the same.
- The pads should be placed in such way that uniform deflection is obtained. Uniform load distribution pre-vents over loading and possible premature failure of some of the mountings, prevents sagging and enables the machine to maintain the normal horizontal position and make maximum isolation possible.

### Features:

- Scientifically designed resilient material that isolates shock and all the six modes of Vibration and reduce acoustic noise.
- They give more deflection than any other material i.e. cork, felt etc.
- They are cheaper than metal springs and have greater sound insulation ability.
- They are highly resistant to oil, cleaning compounds, dirt, water, strength, heat aging and fatigue.
- These are mostly used for machine tools, production equipments, heating and ventilation equipments, pumps, generators, compressors, air handling units, under heavy concrete bases, electronics or sensitive laboratory apparatus, business machines, computers and data processor etc.
- Due to policy of continual improvement, the specifications are subject to change without prior notice. Measurements are subject to 5% tolerance.

**Technical Specifications:-**

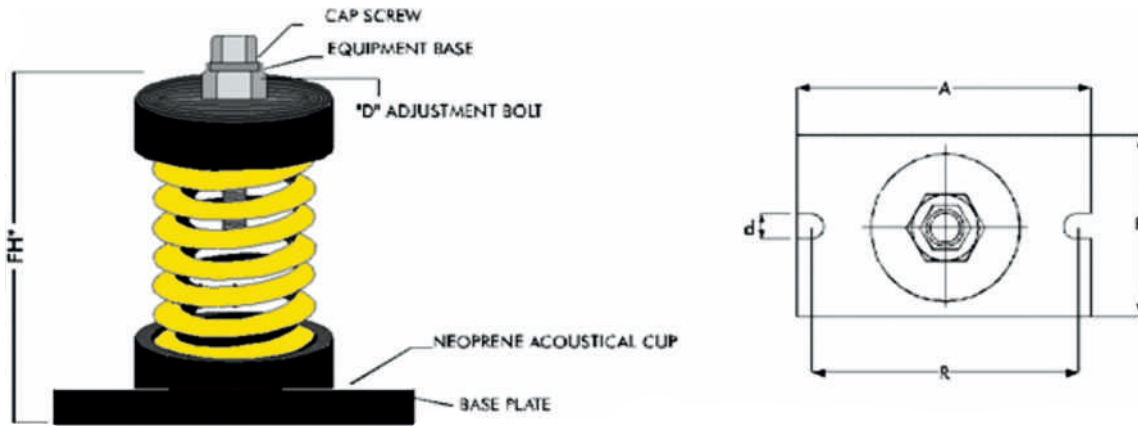


**DEFLECTION IN INCHES**  
**SIRP – 101 - A**  
**SIRP – 102 - B**  
**SIRP - 103 – C**  
**SIRP – 104 – D**

LOADING CHART OF SAKETH PADS			
<b>STYLE : SIRP - 101 (With square cells both sides)</b>			
	Loading 50 Lbs 8mm Tk	(3.5 Kgs/cm)	per Sq. Inch Loading Cap. in Lbs.
Standard Size	450 x 4.50	of 8 mm	
Cut Pieces	225 x 225	of 8 mm	4050
	150 x 150	of 8 mm	1800
	100 x 100	of 8 mm	800
	75 x 75	of 8 mm	450
<b>STYLE : SIRP - 102 (With square cells both sides)</b>			
	Loading 100 Lbs 8mm Tk	(7 Kgs/cm)	per Sq. Inch Loading Cap. in Lbs.
Standard Size	450 x 4.50	of 8 mm	
Cut Pieces	225 x 225	of 8 mm	8102
	150 x 150	of 8 mm	3600
	100 x 100	of 8 mm	1600
	75 x 75	of 8 mm	900
<b>STYLE : SIRP - 103 (With square cells both sides)</b>			
	Loading 200 Lbs 12mm Tk	(14 Kgs/cm)	per Sq. Inch Loading Cap. in Lbs.
Standard Size	450 x 4.50	of 12 mm	
Cut Pieces	225 x 225	of 12 mm	16200
	150 x 150	of 12 mm	7200
	100 x 100	of 12 mm	3200
	75 x 75	of 12 mm	1800
<b>STYLE : SIRP - 104 (With square cells both sides)</b>			
	Loading 350 Lbs 12mm Tk	(17.5 Kgs/cm)	per Sq. Inch Loading Cap. in Lbs.
Standard Size	450 x 4.50	of 12 mm	
Cut Pieces	225 x 225	of 12 mm	20250
	150 x 150	of 12 mm	9000
	100 x 100	of 12 mm	4000
	75 x 75	of 12 mm	2250

Anti-Vibration  
Products

# CUP SPRING MOUNT



## Applications:

SICUS Cup Spring isolators are recommended for use in isolating sources of noise and vibration located near critically quiet areas. They are highly effective for control of both high and low frequency vibration produced by reciprocating refrigeration compressors, pumps, packaged air-handling and air-conditioning equipment, centrifugal and axial fans, inertia bases, internal bases, internal combustion engines etc.

## Features:

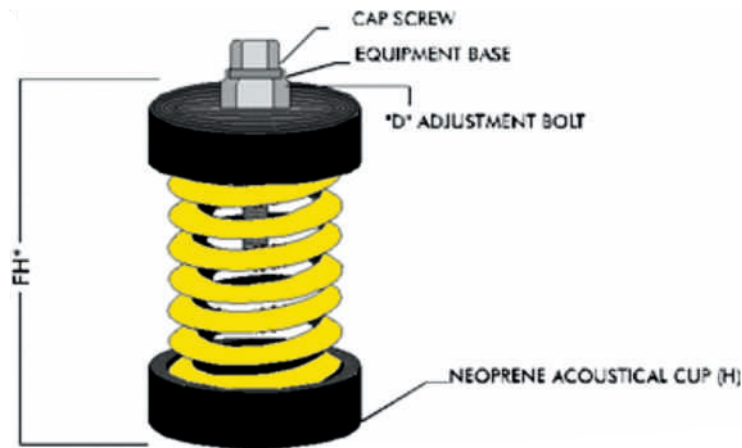
- Laterally stable springs with neoprene tap and base.
- Colour – coded springs according to load ratings.
- Non-skid bolt down base.
- Plated leveling / lock bolt.
- Isolates low frequency vibration.
- Springs are designed for 50% overload capacity.

Product code	COLOUR CODE	RATED LOAD (kg)	DEFLECTION (mm)	A (mm)	B (mm)	R (mm)	FH* (mm)	D	d
SECUS 25 - 30	YELLOW	30	25	112	76	92	116	M 16	M 8
SECUS 25 - 60	BLUE	60	25	112	76	92	116	M 16	M 8
SECUS 25 - 100	GREEN	100	25	112	76	92	116	M 16	M 8
SECUS 25 - 160	ORANGE	160	25	112	76	92	116	M 16	M 8
SECUS 25 - 200	RED	200	25	112	76	92	116	M 16	M 8
SECUS 25 - 250	PURPLE	250	25	112	76	92	116	M 16	M 8
SECUS 25 - 300	GREY	300	25	140	100	115	150	M 18	M 12
SECUS 25 - 400	ORANGE	400	25	140	100	115	150	M 18	M 12
SECUS 25 - 500	BROWN	500	25	140	100	115	150	M 18	M 12
SECUS 25 - 600	BLACK	600	25	140	100	115	150	M 18	M 12
SECUS 25 - 800	RED	800	25	140	100	115	150	M 18	M 12
SECUS 25 - 1050	WHITE	1050	25	140	100	115	150	M 18	M 12
SECUS 25 - 1250	GREEN	1250	25	140	100	115	150	M 18	M 12

- 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.



## CUP SPRING MOUNT "A"



### Applications:

SICUSA Cup Spring isolators are recommended for use in isolating sources of noise and vibration located near critically quiet areas. They are highly effective for control of both high and low frequency vibration produced by reciprocating refrigeration compressors, pumps, packaged air-handling and air conditioning equipments, centrifugal and axial fans, inertia bases, internal combustion engines etc.

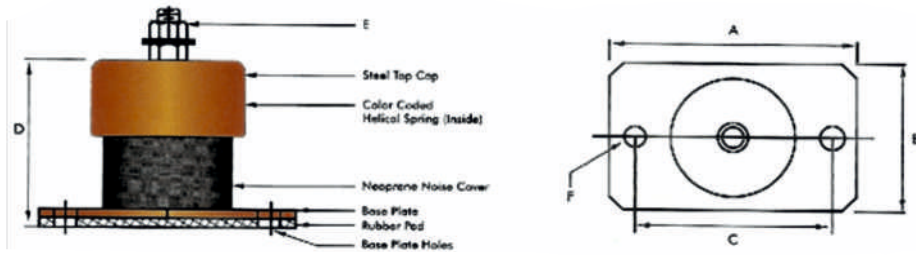
### Features:

- Laterally stable springs with neoprene tap and base.
- Colour – coded springs according to load ratings.
- Non-skid bolt down base.
- Plated leveling / lock bolt.
- Isolates low frequency vibration.
- Springs are designed for 50% overload capacity.

Product Code	COLOUR CODE	RATED LOAD (kg)	DEFLECTION (mm)	FH* (mm)	D (mm)	H (mm)
SICUSA 25-30	YELLOW	30	25	118	M 16	68
SICUSA 25-60	BLUE	60	25	118	M 16	68
SICUSA 25-100	GREEN	100	25	118	M 16	68
SICUSA 25-160	ORANGE	160	25	118	M 16	68
SICUSA 25-200	RED	200	25	118	M 16	68
SICUSA 25-250	PURPLE	250	25	118	M 16	68
SICUSA 25-300	GREY	300	25	142	M 18	90
SICUSA 25-400	ORANGE	400	25	142	M 18	90
SICUSA 25-500	BROWN	500	25	142	M 18	90
SICUSA 25-600	BLACK	600	25	142	M 18	90
SICUSA 25-800	RED	800	25	142	M 18	90
SICUSA 25-1050	WHITE	1050	25	142	M 18	90
SICUSA 25-1250	GREEN	1250	25	142	M 18	90

- 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.

# ENCLOSED SPRING ISOLATOR



## Specifications:

A unique range of spring mountings are designed primarily for building services applications where the control of low frequency vibrations and noise emanating from mechanical plants is of paramount importance. The benefits of a combined rubber and steel housing for the spring have helped establish the Enclosed Spring Isolator mount as an industry standard accepted by specifier, equipment manufacturers and mechanical services installers.

## Design Feature:

- Nitrile rubber (oil resistant) lower spring housing eliminates the possibility of metallic continuity and ensures excellent acoustic performance.
- Full enclosed captive assembly protects the spring and controls transient motion.
- All steel components are zinc plated.
- Nominal 25 & 50 mm deflection colour helical steel springs to BS 1726 Class B
- Laterally Stable Springs with 50% overload capacity.
- Simple single screw height adjustment.
- Ribbed Rubber pads on base.
- Colour coded for easy identification Spring
- Stainless Steel and Zinc Electroplated variants available.

## Typical Application:

- Axial and Centrifugal Fans
- Air Handling Units
- Chillers and Cooling Towers
- Rotary and Multi Cylinder Compressor

Product Code	Colour Code	Rated Load (kg)	Deflection At Rated Load (mm)	Dimension (mm)					
				A	B	C	D	E	F (mm)
SEESI 25/30	YELLOW	30	25						
SEESI 25/60	GREEN	60	25						
SEESI 25/100	BLUE	100	25	110	70	85	82	M 10	10
SEESI 25/160	WHITE	160	25						
SEESI 25/250	RED	250	25						
SEESI 25/200	RED	200	25						
SEESI 25/300	PURPLE	300	25						
SEESI 25/400	GREY	400	25						
SEESI 25/500	ORANGE	500	25	180	95	140	138	M 16	14
SEESI 25/600	BROWN	600	25						
SEESI 25/700	ORANGE	700	25						
SEESI 25/800	BLACK	800	50						
SEESI 50/100	YELLOW	100	50						
SEESI 50/200	GREEN	200	50						
SEESI 50/300	BLUE	300	50	180	95	140	175	M 16	14
SEESI 50/400	WHITE	400	50						
SEESI 50/500	BLACK	50/500	50						

- 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)

## OPEN SPRING MOUNTINGS

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 plates 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 handling 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
- Nominal 20, 25 & 50 mm deflection colour code 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)
SEOS25	30-2300	25
SEOS50	100-1300	30

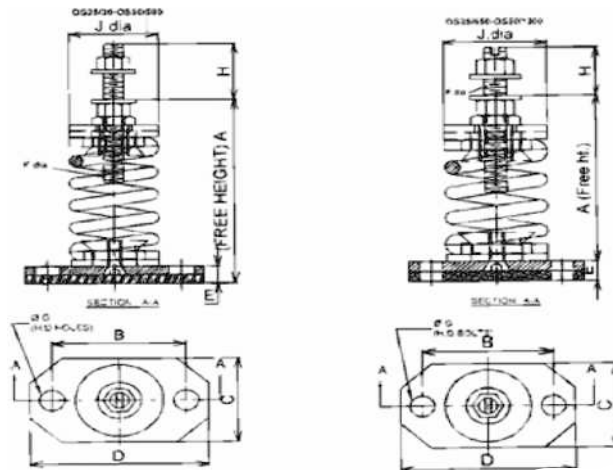
### Isolation Efficiency at Typical Machine Speeds:

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)

# INSTALLATION INSTRUCTION



	Colour code	Rated Load (kg)	Deflection at rated load	Dimensions (mm)									
				A	B	C	D	E	F	G	H	J	
SEOS25/30	YELLOW	30	25										
SEOS25/60	GREEN	60	25										
SEOS25/100	BLUE	100	25	115	85	70	110	10	M10	10	20	55	
SEOS25/160	WHITE	160	25										
SEOS25/250	RED	250	25										
SEOS25/200	RED	200	25										
SEOS25/300	PURPLE	300	25										
SEOS25/400	GREY	400	25										
SEOS25/500	ORANGE	500	25	160	110	100	140	11	M16	12	27	75	
SEOS25/600	BROWN	600	25										
SEOS25/700	ORANGE	700	25										
SEOS25/800	BLACK	800	25										
SEOS50/100	YELLOW	100	50										
SEOS50/200	GREEN	200	50										
SEOS50/300	BLUE	300	50	188	110	100	140	11	M16	12	27	75	
SEOS50/400	WHITE	400	50										
SEOS50/500	BLACK	500	50										
SEOS25/650	YELLOW	650	26										
SEOS25/850	GREEN	850	27	182	110	110	140	11	M16	12	27	75	
SEOS25/1050	BLUE	1050	26										
SEOS25/1250	WHITE	1250	26										
SEOS25/1300	RED	1300	27										
SEOS25/1600	PURPLE	1600	25	225	210	150	250	18	M24	16	51	75	
SEOS25/2000	GREY	2000	26										
SEOS25/2300	BROWN	2300	29										
SEOS50/510	PURPLE	510	51										
SEOS50/760	GREY	760	51	240	210	150	250	18	M20	16	42	72	
SEOS50/1000	ORANGE	1000	50										
SEOS50/1300	BROWN	1300	53										

\*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)

## CLOSED SPRING ISOLATOR



### Introduction:-

This unique range of Closed Spring Isolators uses an integral rubber end fixing of the spring which sets them apart from all other designs. Loose springs and plates are now history and high frequency and noise attenuation is provided with stable mounting.

Originally designed for use for Isolation of heavy equipment the Closed Spring Isolators are now widely used to isolate vibration from every conceivable type of rotating and reciprocating machine. Some examples being big Cooling Towers, Heavy Centrifugal Fans, Heavy Condensing Units, Pumps, Generating Sets, Chillers etc.

These Closed Spring Isolators are cost effective and are a much cheaper option compared to our spring and Viscous Dampers.

### Features:-

- Unique expanding rubber and fixing of spring which also provides high frequency attenuation.
- 25mm deflection colour coded springs with 50% overload capacity.
- Can be bolted to supporting structure or free standing on 6mm thick ribbed rubber pad.
- Fully height adjustable.
- Powder Coated Springs & Body.
- No snubbing gives maximum efficiency.

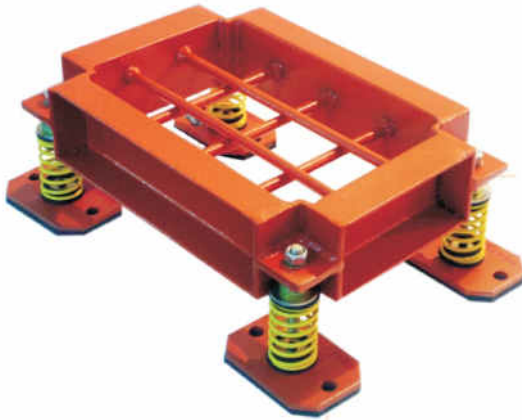
Product code	Colour code	Rated Load (kg)	Deflection at rated load	Dimensions (mm)							
				A	B	C	D	E	F	G	H
SECS12 25/400	RED	400 kg	25 mm	145	250	150	10	M16	210	137	110
SECS12 25/600	PURPLE	600 kg	25 mm	145	250	150	10	M16	210	137	110
SECS12 25/800	GREY	800 kg	25 mm	145	250	150	10	M16	210	137	110
SECS12 25/1000	ORANGE	1000 kg	25 mm	145	250	150	10	M16	210	137	110
SECS12 25/1200	BROWN	1200 kg	25 mm	145	250	150	10	M16	210	137	110
SECS12 25/1400	BLACK	1400 kg	25 mm	155	250	150	15	M16	210	137	110
SECS12 25/1600	BLUE	1600 kg	25 mm	155	250	150	15	M16	210	137	110
SECS12 25/1700	GREEN	1700 kg	25 mm	175	250	150	15	M16	210	137	110
SECS12 25/2100	BLUE	2100 kg	25 mm	180	250	150	15	M16	210	137	110
SECS12 25/2500	WHITE	2500 kg	25 mm	180	250	150	15	M16	210	137	110

### Application:-

- Heavy Blowers
- Generating sets
- Heavy Presses
- Centrifuges
- Cooling Towers
- Drop Hammers
- Large Machinery
- Building Foundations

- 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)

## INERTIA BASE



### 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 be 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.

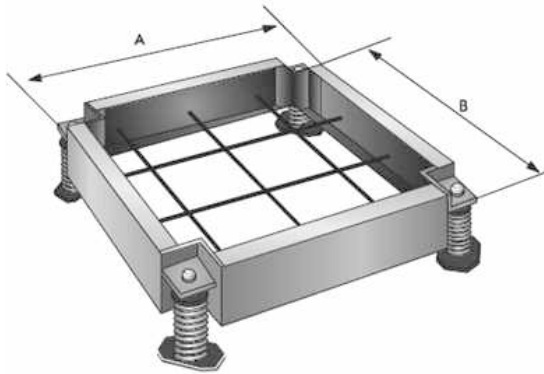
### Examples of equipment requiring Inertia Base are as follows:-

- 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 Saketh's type SIOS 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.

# TECHNICAL SPECIFICATIONS



## 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  $2400 \text{ kg/m}^3$  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 bolts must not be at a distance less than 100 mm from the outer edge of the base.

All the connections to the equipment should incorporate flexible sections and pipe work etc. must be independently supported.

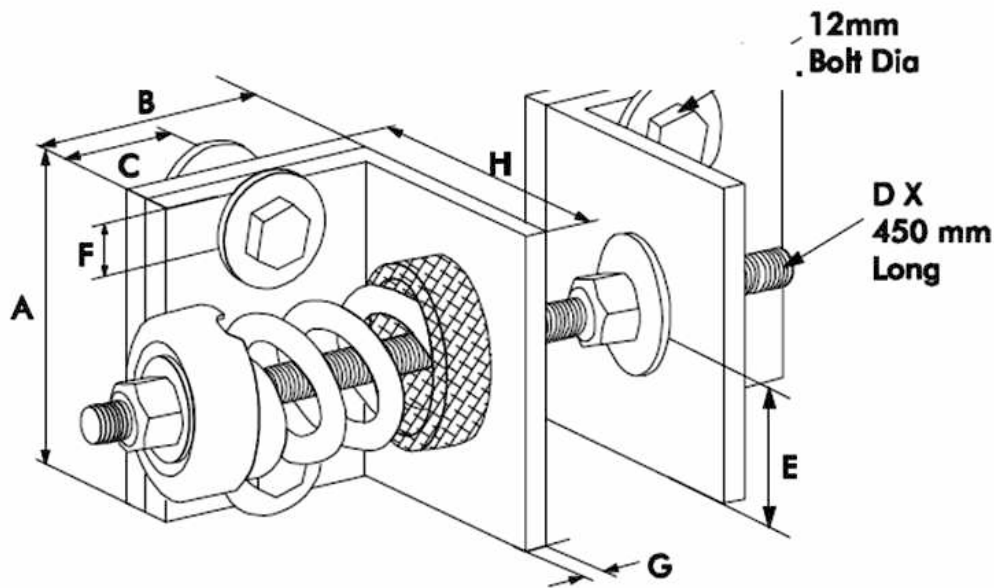
Concrete plinth if any should be at least 200 mm more than the size of base in all directions. In case of installation of snubbers it should be increased to 300 mm.

Frame size	150mm Thick	200mm Thick	300mm Thick
600 X 600	147	SIOS25/60 GREEN	
600 X 750	180	SIOS25/100 BLUE	
600 X 900	211	SIOS25/100 BLUE	
600 X 1200	277	SIOS25/160 WHITE	
600 X 1500	341	SIOS25/160 BLUE	
750 X 750	219	SIOS25/100 BLUE	288
750 X 900	259	SIOS25/100 BLUE	342
750 X 1200	339	SIOS25/160 WHITE	448
750 X 1500	420	SIOS25/160 WHITE	554
750 X 1800	500	SIOS25/250 RED	660
900 X 900	307	SIOS25/160 WHITE	404
900 X 1200	402	SIOS25/160 WHITE	531
900 X 1500	498	SIOS25/250 RED	658
900 X 1800	594	SIOS25/250 RED	785
900 X 2100			911
1050 X 1050	465	SIOS25/250 RED	542
1500 X 1500	575	SIOS25/250 RED	761
1050 X 1800	687	SIOS25/300 PURPLE	908
1050 X 2100			1055
1050 X 2400			1201
1200 X 1200			699
1200 X 1500			865
1200 X 1800			1032
1200 X 2100			1199
1200 X 2400			1369
1400 X 1400			
1400 X 1800			
1400 X 2100			

## RESTRAINT MODEL

### Specification:

Thrust Restraints shall consist of high deflection, large diameter, laterally stable steel coil springs assembled into rod and angle bracket assembly. Coil springs shall have lateral spring stiffness greater than 1.0 times the rated vertical stiffness to assure coil stability. Coil springs shall provide a minimum of 50% overload deflection capability to solid capacity. Coil springs shall be epoxy powder coated. Thrust Restraints shall include threaded bracket angels, bracket back-up plated, and shall include primer painted fan and ductwork mounting Thrust Restraints shall be Model SITR as manufactured by Saketh Industries.



Insulator Type	Spring colour	Rated capacity	Rated Capacity	Spring OD	Coil free Height	A	B	C	D	E	F	G	H
		kg	lbs										
SETR 30	YELLOW	30	66	50	70	100	75	40	12	50	13	6	100
SETR 60	BLUE	60	132	50	70	100	75	40	12	50	13	6	100
SETR 100	GREEN	100	220	50	70	100	75	40	12	50	13	6	100
SETR 160	ORANGE	160	352	50	70	100	75	40	12	50	13	6	100
SETR 200	RED	200	440	50	70	100	75	40	12	50	13	6	100
SETR 250	PURPLE	250	551	50	70	100	75	40	12	50	13	6	100
SETR 300	GREEN	300	661	63	92	125	75	50	16	62	13	6	125
SETR 400	ORANGE	400	881	63	92	125	75	50	16	62	13	6	125
SETR 500	BROWN	500	1102	63	92	125	75	50	16	62	13	6	125
SETR 600	BLACK	600	1322	63	92	125	75	50	16	62	13	6	125
SETR 800	RED	800	1763	63	92	125	75	50	16	62	13	8	125
SETR 1050	WHITE	1050	2314	63	92	125	75	50	16	62	13	8	125
SETR 1250	GREEN	1250	2755	63	92	125	75	50	16	62	13	8	125



## DOUBLE ARCH EXPANSION JOINTS

- Greater Movement (Almost Double of Single Arch)
- Higher Pressure
- No gaskets required
- Absorbs & Isolates Vibrations/Noise/Shock
- Reduces Systems Noise
- Absorbs Pipe Movement/Stress
- Compensates for Misalignment/Offset

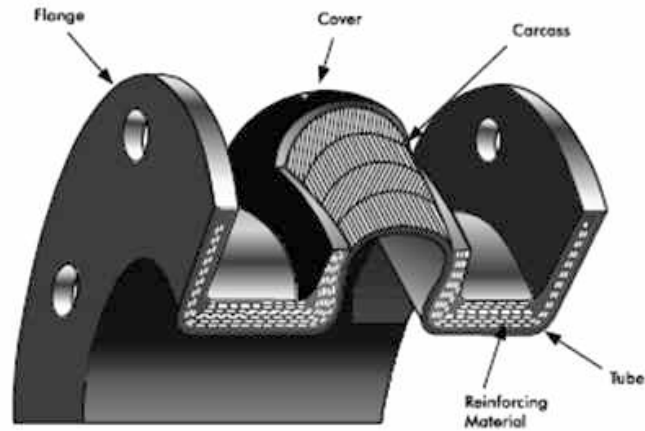


Expansion joint size Nom. ID		Neutral length		Expansion joint style
Inch	(mm)	Inch	(mm)	
1.5"	40	10	250	SI300
2"	50	10	250	SI300
2.5"	65	10	250	SI300
3"	80	10	250	SI300
4"	100	10	250	SI300
5"	125	10	250	SI300
6"	150	10	250	SI300
8"	200	10	250	SI300
10"	250	12	300	SI300
12"	300	12	300	SI300
14"	350	12	300	SI300

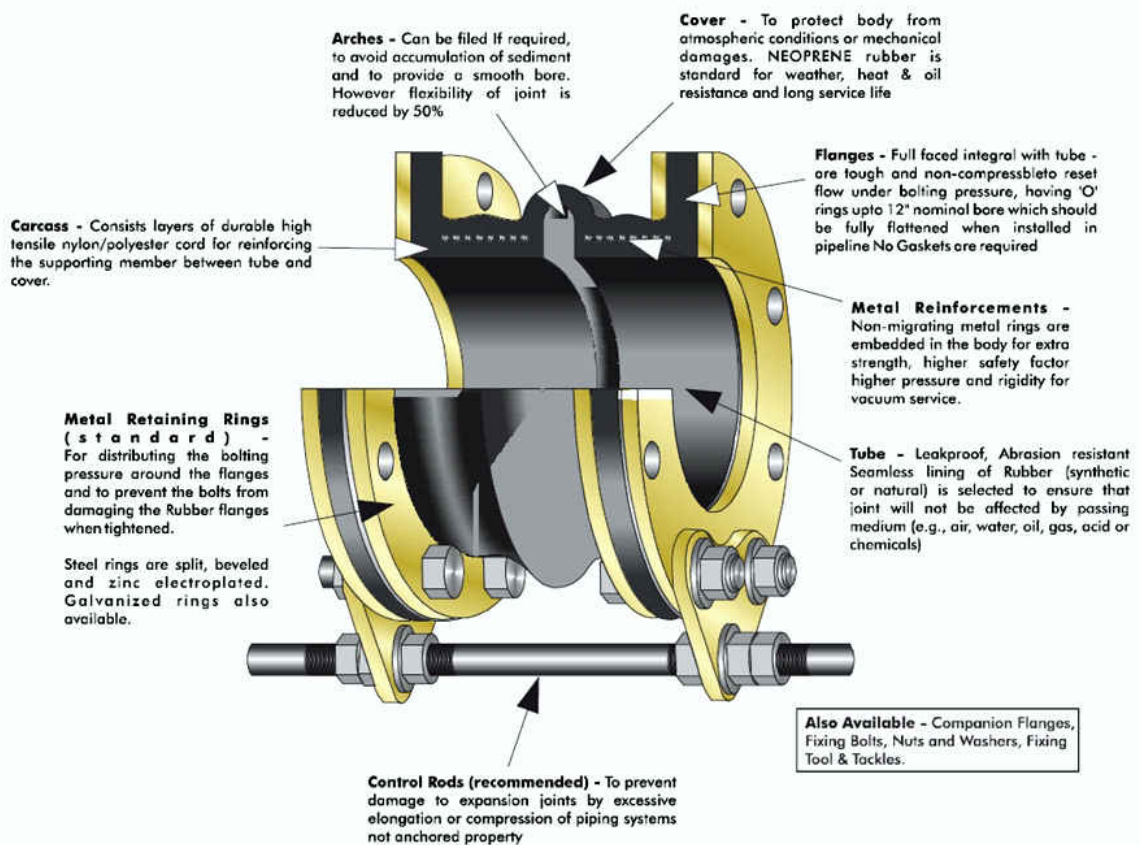
\*Available pressure rating PN10 and PN16

- Flange Drilling to: BS 10 Table D/E/F, ANSI B16.5 125 / 150 or as per customer requirement
- Due to policy of continual improvement, the specifications are subject to change without prior notice.
- Measurements are subject to 5% tolerance.
- To achieve good results do not over load fitting more than designed parameters as per drawing / catalogue.
- Compliance – As per FSA Standards USA.

# CONSTRUCTION FEATURES



\* Other Polymers available on request.



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## HOW A RUBBER EXPANSION JOINTS WORKS

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.

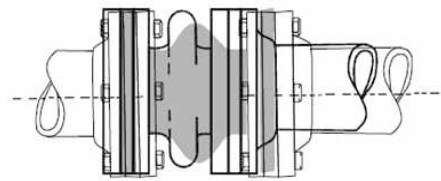
Consisting of flanged ends and a flexible section, much the same as a flanged metal bellows, the rubber expansion joints can absorb within its free length more movements, particularly lateral, than any other joint of similar overall size and pressure rating.

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.

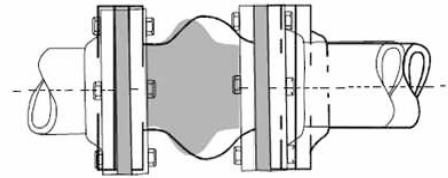
The manner in which the pressure loads are resisted in a Rubber Expansion joints is the major difference between Rubber and Metal Bellows. Circumferential (hoop) loads due to pressure are carried by the convolution itself in metallic bellows. In a Rubber Expansion joint, the convolution is basically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

All Saketh'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

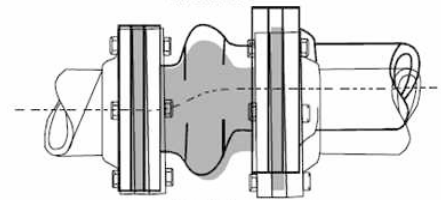
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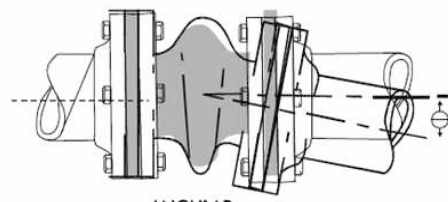
AXIAL  
compression



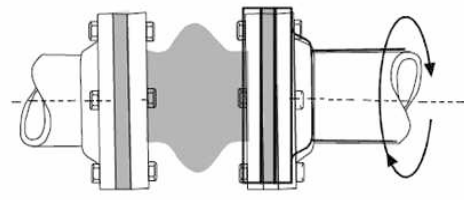
AXIAL  
extension



LATERAL  
shear or perpendicular to centerline



ANGULAR  
bending of the centerline



TORSIONAL  
rotation about the centerline, twist

## METALLIC EXPANSION JOINTS

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 to 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 bellows.



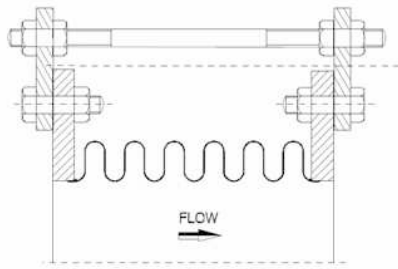
Saketh Industries bellows are fabricated from cylindrical tubes made of high ductility material. The cylindrical body is formed onto parallel corrugation which accommodates all basic movements without encountering wear and tear as associated with conventional mechanical devices. Bellows are designed 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. Saketh's Industries Bellows have been their outstanding performance in a wide variety of application



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# STAINLESS STEEL METALLIC EXHAUST BELLOW



Model No.	Design Temperature Upto	Maximum Working Pressure (kg/cm <sup>2</sup> )	Lateral movement Pressure (mm)	Axial movement Pressure (mm)	Cycle Life(Cycles)
Nominal Bore X Overall Length					
SSEB 6" X 200	600°C	2	2	±10	12000
SSEB 6" X 250	600°C	2	4	±15	12000
SSEB 6" X 300	600°C	2	6	±20	12000
SSEB 8" X 200	600°C	2	2	±10	12000
SSEB 8" X 250	600°C	2	4	±15	12000
SSEB 8" X 300	600°C	2	6	±20	12000
SSEB 10" X 200	600°C	2	2	±10	12000
SSEB 10" X 250	600°C	2	4	±15	12000
SSEB 10" X 300	600°C	2	6	±20	12000
SSEB 12" X 200	600°C	2	2	±10	12000
SSEB 12" X 250	600°C	2	4	±15	12000
SSEB 12" X 300	600°C	2	6	±20	12000
SSEB 14" X 200	600°C	2	2	±10	12000
SSEB 14" X 250	600°C	2	4	±15	12000
SSEB 14" X 300	600°C	2	6	±20	12000
SSEB 16" X 200	600°C	2	2	±10	12000
SSEB 16" X 250	600°C	2	4	±15	12000
SSEB 16" X 300	600°C	2	6	±20	12000
SSEB 18" X 200	600°C	2	2	±10	12000
SSEB 18" X 250	600°C	2	4	±15	12000
SSEB 18" X 300	600°C	2	6	±20	12000
SSEB 20" X 200	600°C	2	2	±10	12000
SSEB 20" X 250	600°C	2	4	±15	12000
SSEB 20" X 300	600°C	2	6	±20	12000
SSEB 22" X 200	600°C	2	2	±10	12000
SSEB 22" X 250	600°C	2	4	±15	12000
SSEB 22" X 300	600°C	2	6	±20	12000
SSEB 24" X 200	600°C	2	2	±10	12000
SSEB 24" X 250	600°C	2	4	±15	12000
SSEB 24" X 300	600°C	2	6	±20	12000

- 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)

## FLEXIBLE METALLIC HOSE CONNECTIONS

Saketh Industries 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:** -2000°C to 7000°C

**Material:** Hose S.S. 3016/321/304, Braiding S.S.304.

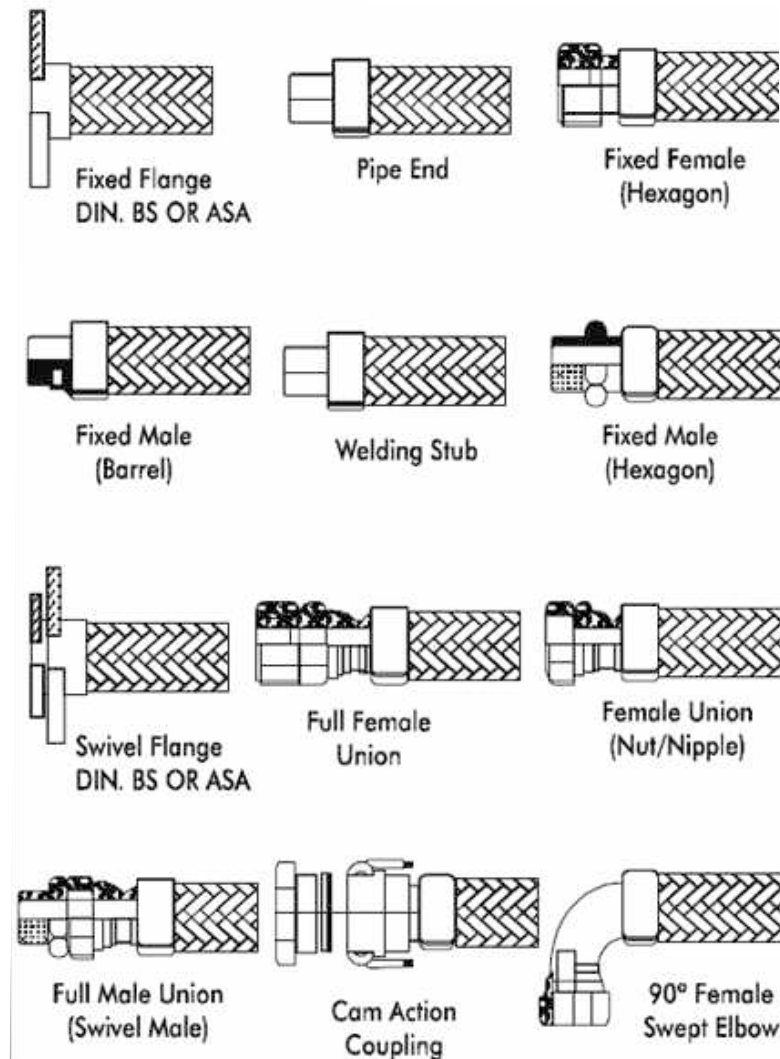
End Connections

**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 form a complete hose assembly



SIZE		SINGLE BRAID					DOUBLE BRAID		
Nominal size DN		Max. Working Pressure (kg/cm <sup>2</sup> )	Test Pressure (kg/cm <sup>2</sup> )	Burst Bend (kg/cm <sup>2</sup> )	Static Bend Radius (mm)	Dynamic Bend Radius (mm)	Max. Working Pressure (kg/cm <sup>2</sup> )	Test Pressure (kg/cm <sup>2</sup> )	Burst Bend (kg/cm <sup>2</sup> )
Inch	mm								
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

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- Measurements are subject to 5% tolerance.
- To achieve good results do not over load fitting more than designed parameters as per drawing catalogue

# FLEXIBLE METALLIC PUMP CONNECTOR



**Application:**

Saketh'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 6501 pt.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.

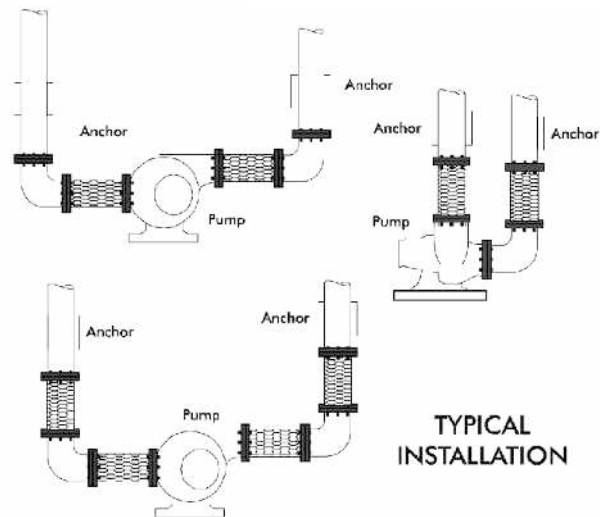
**End Fittings:**

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.(PSI)
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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- Measurements are subject to 5% tolerance.
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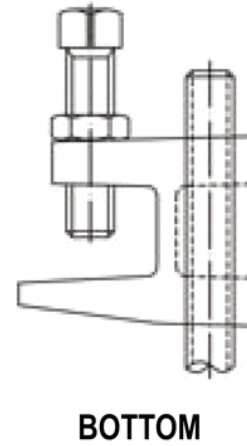
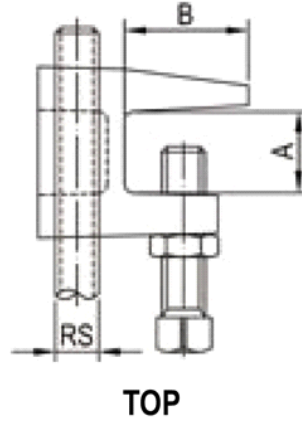
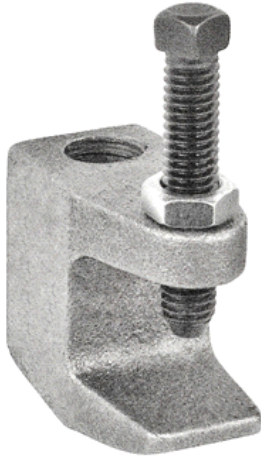
# Threaded Bar & Accessory



Threaded Bar  
& Accessory



**BEAM CLAMP**



**Size Range:**

3/8" and 1/2" or M10 and M12

**Material:**

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

**Finish:**

Black or Galvanized.

**Service:**

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

**Approval:**

- Complies with Federal Specification A-A-1192A (Type 19 & 23) WW-H-171-E (Type 23) and MSS-SP-69 (Type 19 & 23).
- FM Approved & UL/ULC Listed.

Product Code	RS (inch)	A (inch)	B (inch)
SE-BC 3/8	3/8	3/4	1 1/8
SE-BC 1/2	1/2	3/4	1 1/4

Product Code	RS (mm)	A (mm)	B (mm)
SE-BC M10	M10	19	29
SE-BC M12	M12	19	31

## THREADED RODS

### Full Threaded Bars

#### Standards:-

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

#### Material:-

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

#### 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:-

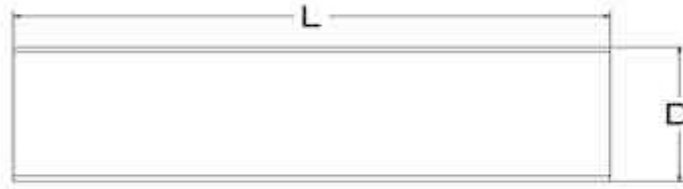
- ASTM A193 Grade B7, B7M, B8, B8M & B16
- ASTM A320 Grade L7 & L7M
- Stainless Steel 304, 304L, 316, 316L, A2-70/80, A4-70/80
- BS 3692 / BS 4190 grade 4.6, 4.8, 5.6, 5.8, 8.8

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

#### Ordering Information:-

- Dimensions - Dia and Length.
- Standard and Grade
- Finish (Black, GI, Yellow, HDG, Cadmium, Nickel, PTFE etc)





**Alloy Steel Threaded Rod**  
**ANSI B.1.1/BS4882**  
**Material to ASMT**  
**A193-B7/B7M/B16/B8 & B8M**

DIA(D)	Thread per inch	Weight kg/Ft.
1/4" UNC	20	0.130
5/16" UNC	18	0.163
3/8" UNC	16	0.195
7/16" UNC	14	0.228
1/2" UNC	13	0.250
9/16" UNC	12	0.293
5/8" UNC	11	0.372
3/4" UNC	10	0.560
7/8" UNC	9	0.771
1" UNC	8	1.018
1.1/8" UNC	7	1.298
1.1/8" UNS	8	1.298
1.1/4" UNC	7	1.639
1.1/4" UNS	8	1.639
1.3/8" UNC	6	2.032
1.3/8" UNS	8	2.032
1.1/2" UNC	6	2.425
1.1/2" UNS	8	2.425
1.5/8" UNS	8	2.934
1.3/4" UNS	8	3.403
1.7/8" UNS	8	3.911
2" UNS	8	4.458
2.1/4" UNS	8	5.648
2.1/2" UNS	8	7.115
2.3/4" UNS	8	8.865
3" UNS	8	10.636
3.1/4" UNS	8	12.200
3.1/2" UNS	8	15.510

**Alloy Steel Threaded Rod to DIN 975**  
**Material to ASMT**  
**A193M-B7/B7M/B16/B8 & B8M**

DIA(D)	Thread Pitch	Weight kg/Meter.
M6	1	0.18
M8	1.25	0.31
M10	1.5	0.49
M12	1.75	0.73
M14	2	0.99
M16	2	1.33
M18	2.5	1.64
M20	2.5	2.06
M22	2.5	2.55
M24	3	2.98
M27	3	3.85
M30	3.5	4.70
M33	3.5	5.78
M36	4	6.85
M39	4	8.15
M42	4.5	9.4
M45	4.5	10.9
M48	5	12.4
M52	5	14.65
M56	5.5	16.9
M64	6	22.20
M72	6	28.51
M76	6	31.96

## STUD BOLTS

Full Threaded Studs and Engineering Studs

**Standards:-**

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

**Material:-**

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

**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:-**

- Dimension - Dia and Length.
- Standards and Grade
- Finish (Black, GI, Yellow, HDG, Cadmium, Nickel, PTFE etc)
- Nut and washer quantity.



## ANCHOR BOLTS

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.

### Size Range:-

- M6 to M100 in metric series
- ¼" to 4" in imperial

### Threads:-

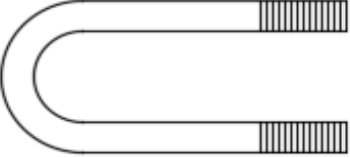
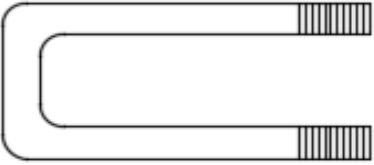
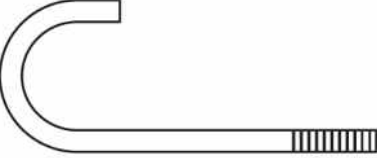
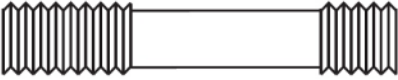


- UNC, 8UN, UNF, Metric Coarse and Metric Fine
- Typical Grades & Standards:-
- BS 3692 / BS 4190 grade 4.6, 4.8, 5.6, 5.8, 8.8, 10.9 and 12.9
- ASTM A307, A325, A193, B7 & B16, ASTM A320 L7
- Stainless Steel 304, 304L, 316, 316L, A2-70/80, A4-70/80, ASTM A193 Grade B8 & B8M
- ASTM A675 Grade 90, ASTM 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.
- Finish (Black, GI, Yellow, HDG, Cadmium, Nickel, PTFE etc.)
- Nut and washer quantity
- Plate and sleeve dimensions (if required).

**Specially Manufactured Items:-**

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

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



## HEX BOLTS

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.

### 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.

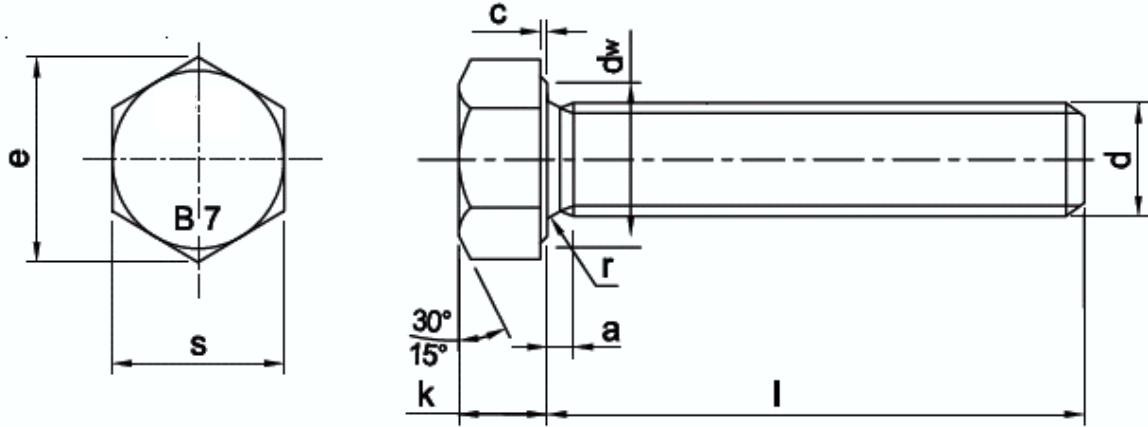
### Ordering Information:-

- Dimensions – Size Dia and Length.
- Standards and Grade
- Finish (Black, GI, Yellow, HDG, Cadmium, Nickel, PTFE etc)
- Nut and washer quantity



# DIN 93 HEXAGON HEAD BOLT

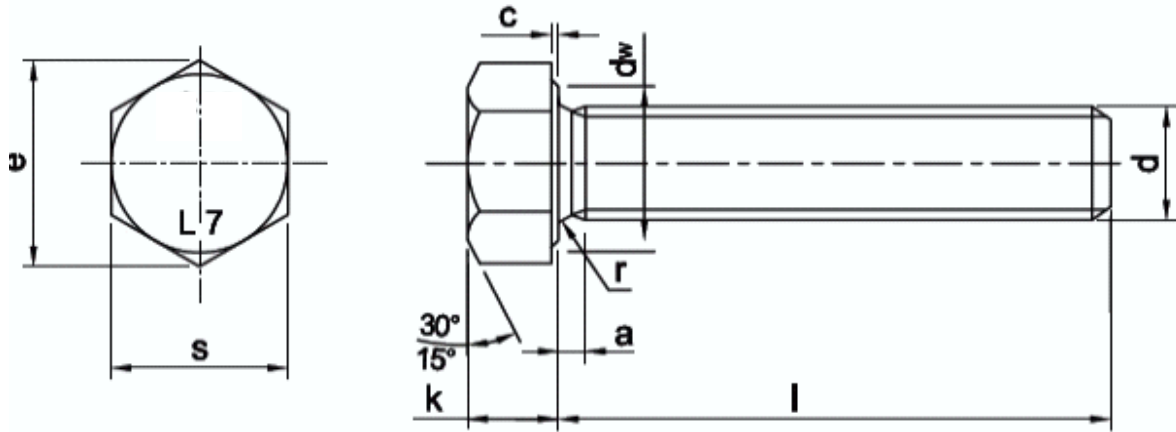
## Material ASTM A193 Grade B7



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

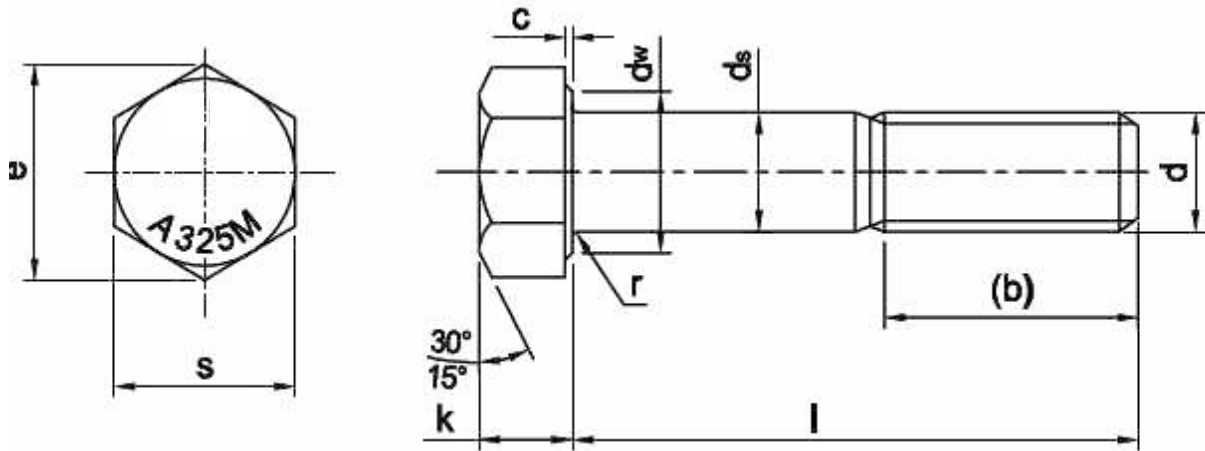
# DIN 933 HEXAGON HEAD BOLT

## 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	18.7	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

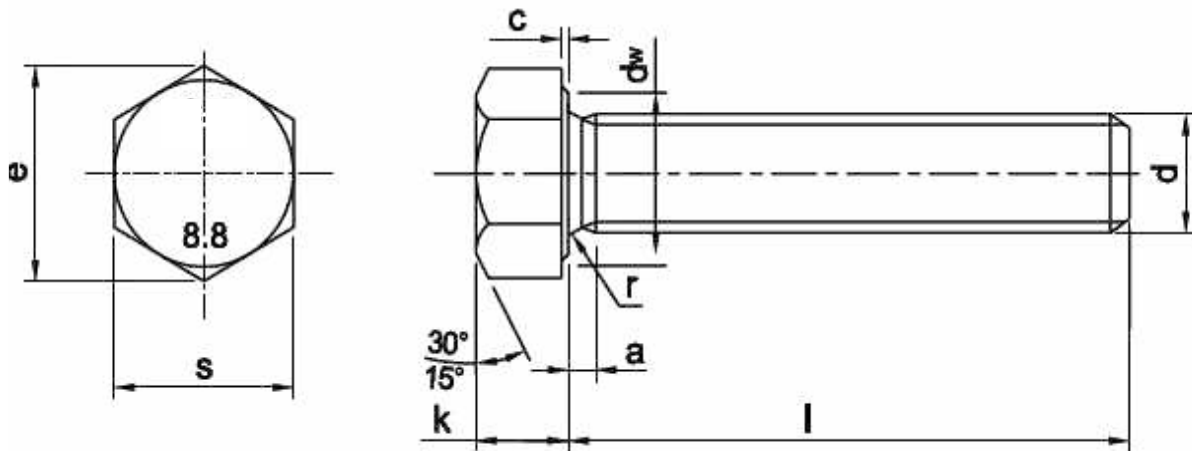
## ASTM A325M HEX BOLTS



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

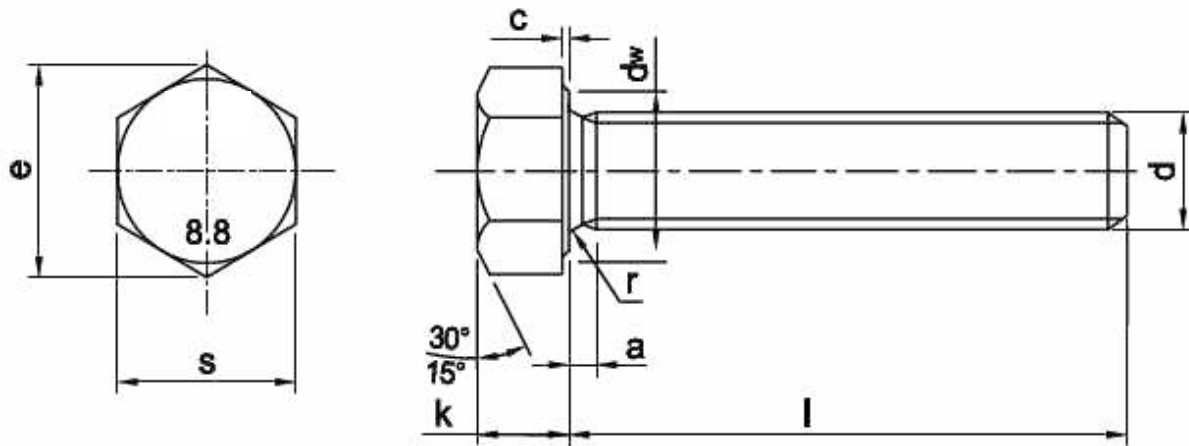
l = Overall length of the Bolt

## 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

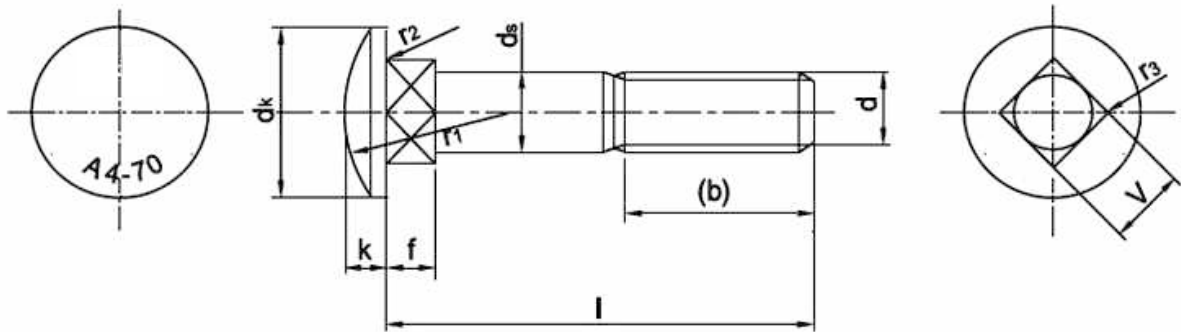
## DIN 931 HEX BOLTS (HALF THREAD) Grades - 4.6, 8.8, A2 70, A2 80, A4 70 and A4 80



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)	1<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
	1>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

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)

**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.

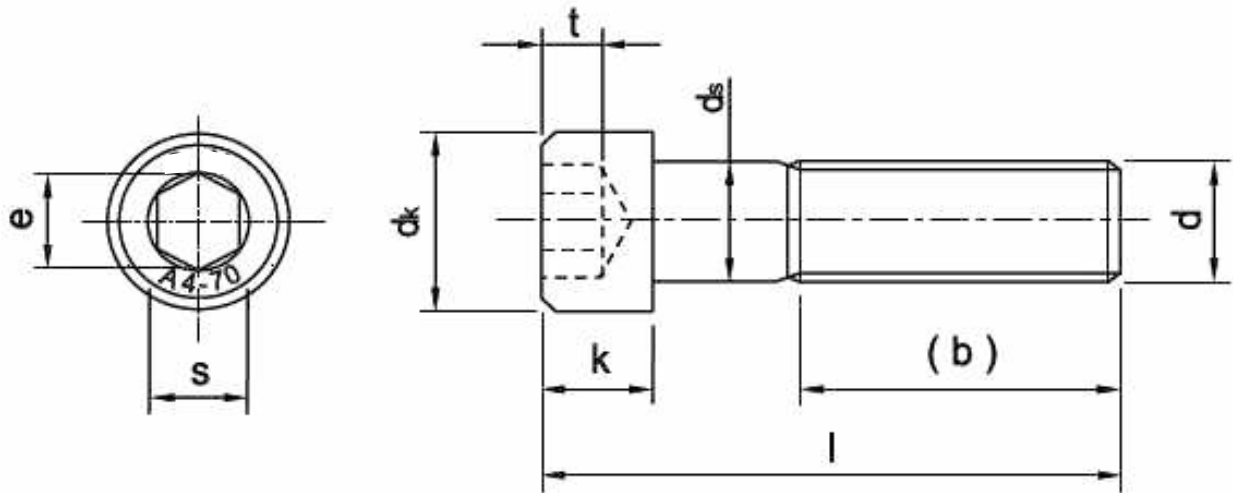
**Ordering information:-**

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





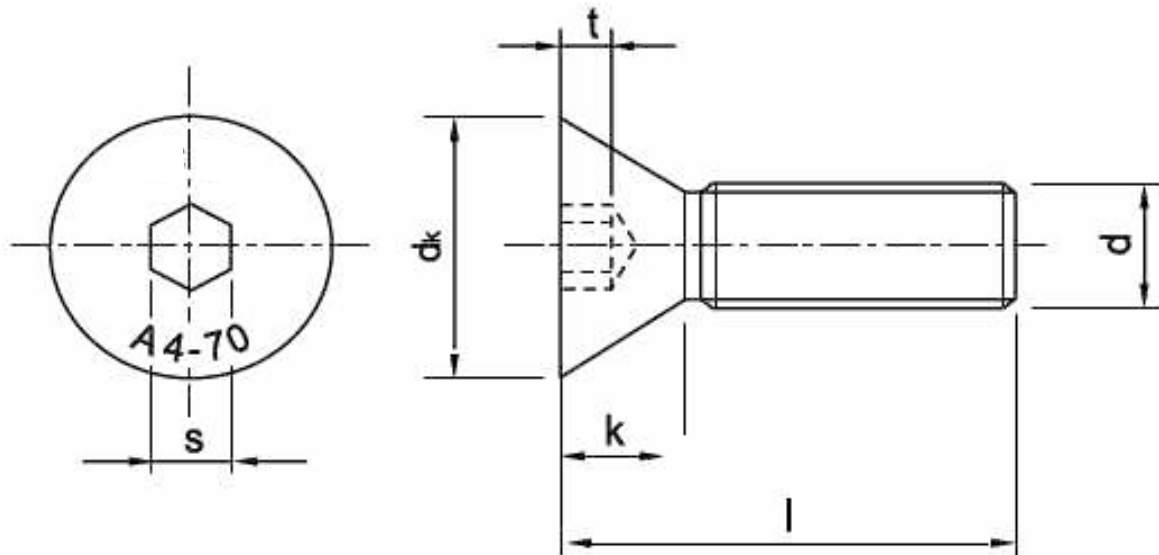
## DIN 912 STAINLESS STEEL HEXAGON SOCKET HEAD CAPSCREW



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.

**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

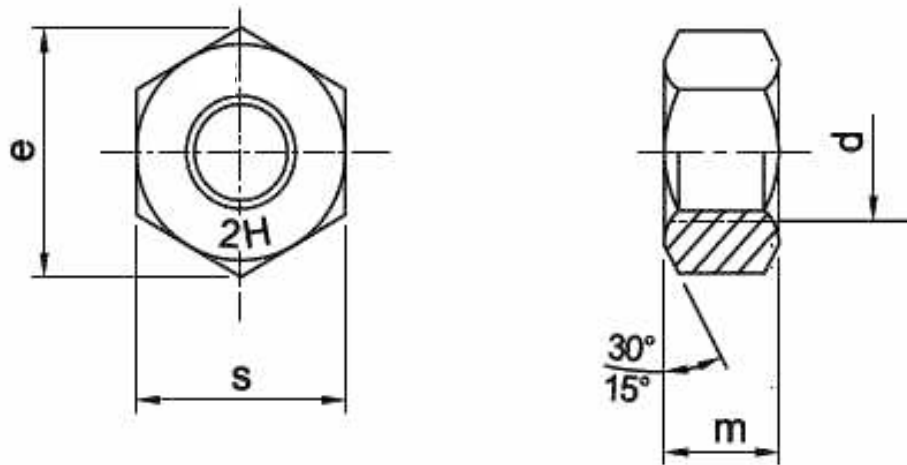
**Ordering Information:-**

- Dimensions - Size.
- Standard and Grade
- Finish (Black, GI, Yellow, HDG, Cadmium, Nickel, PTFE etc)



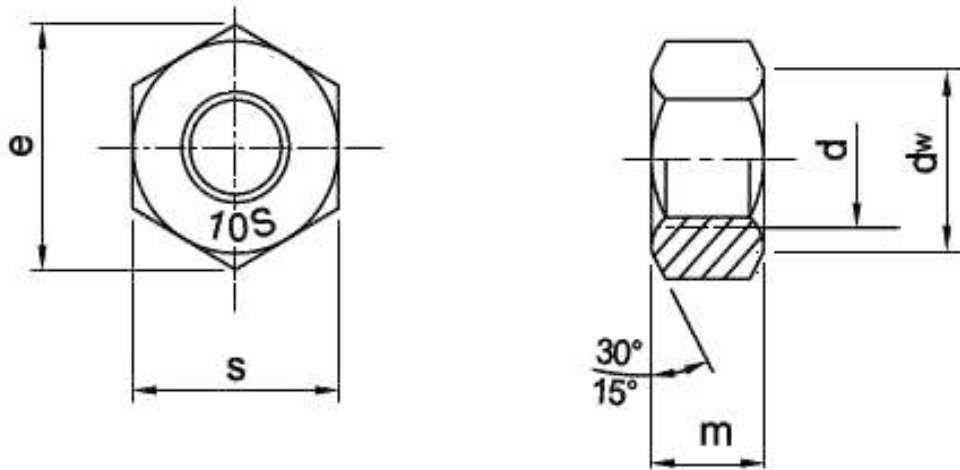
## HEAVY HEX NUTS TO DIN 934 (H=D)

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

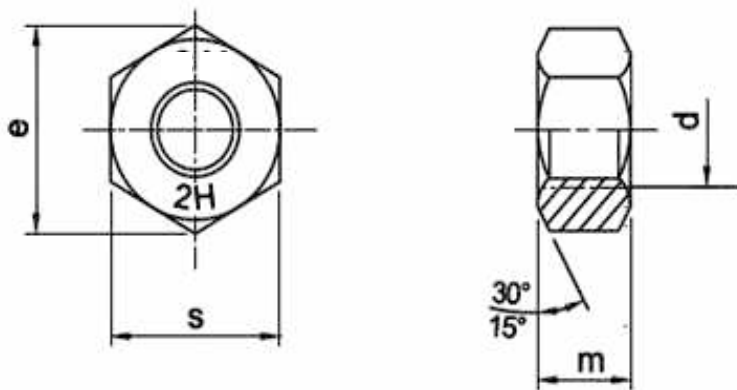
## A563M - 10S HEAVY HEX NUTS



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" UNS	8	1.13/16"	1.1/8"	26.9
1.1/4" UNS	8	2"	1.1/4"	35.7
1.3/8" UNS	8	2.3/16"	1.3/8"	46.3
1.1/2" UNS	8	2.3/8"	1.1/2"	59.5
1.5/8" UNS	8	2.9/16"	1.5/8"	73.6
1.3/4" UNS	8	2.3/4"	1.3/4"	92.7
1.7/8" UNS	8	2.15/16"	1.7/8"	109.5
2" UNS	8	3.1/8"	2"	135.8
2.1/4" UNS	8	3.1/2"	2.1/4"	190.3
2.1/2" UNS	8	3.7/8"	2.1/4"	256
2.3/4" UNS	8	4.1/4"	2.3/4"	335
3" UNS	8	4.5/8"	3"	432
3.1/4" UNS	8	5"	3.1/4"	543
3.1/2" UNS	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.

**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

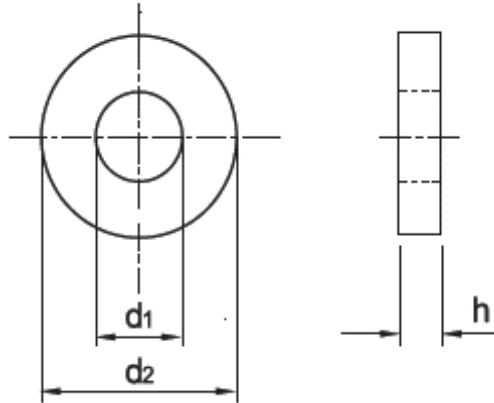
**Ordering information:-**

- Dimensions – Size.
- Standard and Grade
- Finish (Black, GI, Yellow, HDG, Cadmium, Nickel, PTFE etc.)





## 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

## MATERIAL FINISHES

### 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
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### ELECTRO-DEPOSITED Nickel Cadmium Plating:-

AMS 2416	Steel
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### ELECTRO-DEPOSITED Nickel & Nickel Plus Chromium:-





BS 3382 PART 3 & 4	Steel & Copper Alloy
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### 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

**TECHNICAL INFORMATION**

**Mechanical properties per ISO 898-1  
(Externally Threaded Fasteners)**

Metric Property Class	Material	Size Range	Min. Proof Strength MPA	Min. Tensile Strength MPA	Core Hardness Rockwell		Min. Yield Strength MPA	Grade Identification Marking'
					Min.	Max.		
4.6	Low or Medium Carbon Steel	M5-M39	225	400 (58,000 PSI)	B67	B99.5	240	
8.8	Medium Carbon Steel: quenched & tempered	M5-M16	580	800 (116,000 PSI)	C22	C32	640	
		M18-M39	600	830(120,000 PSI)	C23	C34	660	
10.9	Alloy Steel quenched & tempered	M5-M39	830	1040 (150,800 PSI)	C32	C39	940	
12.9	Alloy Steel quenched & tempered	M16-M39	970	1220 (177,000 PSI)	C39	C44	1100	

## Mechanical properties per DIN 267 PART 4 (Internally Threaded Fasteners)

Property Class	Typical Material	Proof Stress MPA	Core Hardness Rockwell (max.)	Grade Identifications Marking
Class 8	Low to Medium Carbon Steel	800	C30	
Class 10	Medium Carbon Steel; quenched & tempered	1000	C36	
Class 12	Medium Carbon Steel; quenched & tempered	1200	C36	

## DROP IN ANCHOR



Product Code	Size	Drill Bit (B)	Anchor Length (C)	Thread Length (D)
SE-DPA M6	M6	8	25	10
SE-DPA M8	M8	10	30	13
SE-DPA M10	M10	12	40	16
SE-DPA M12	M12	16	50	21
SE-DPA M16	M16	20	65	30
SE-DPA M20	M20	25	80	30

## DRAW IN ANCHOR



Product Code	Size	Shield Length	Hole Diameter	Length of Anchor
SE-DWA M6	M6	45	12	45
SE-DWA M8	M8	50	14	50
SE-DWA M10	M10	60	16	60
SE-DWA M12	M12	75	20	65
SE-DWA M16	M16	115	25	95
SE-DWA M20	M20	130	32	115

Duct Corner Piece



G - Clamp

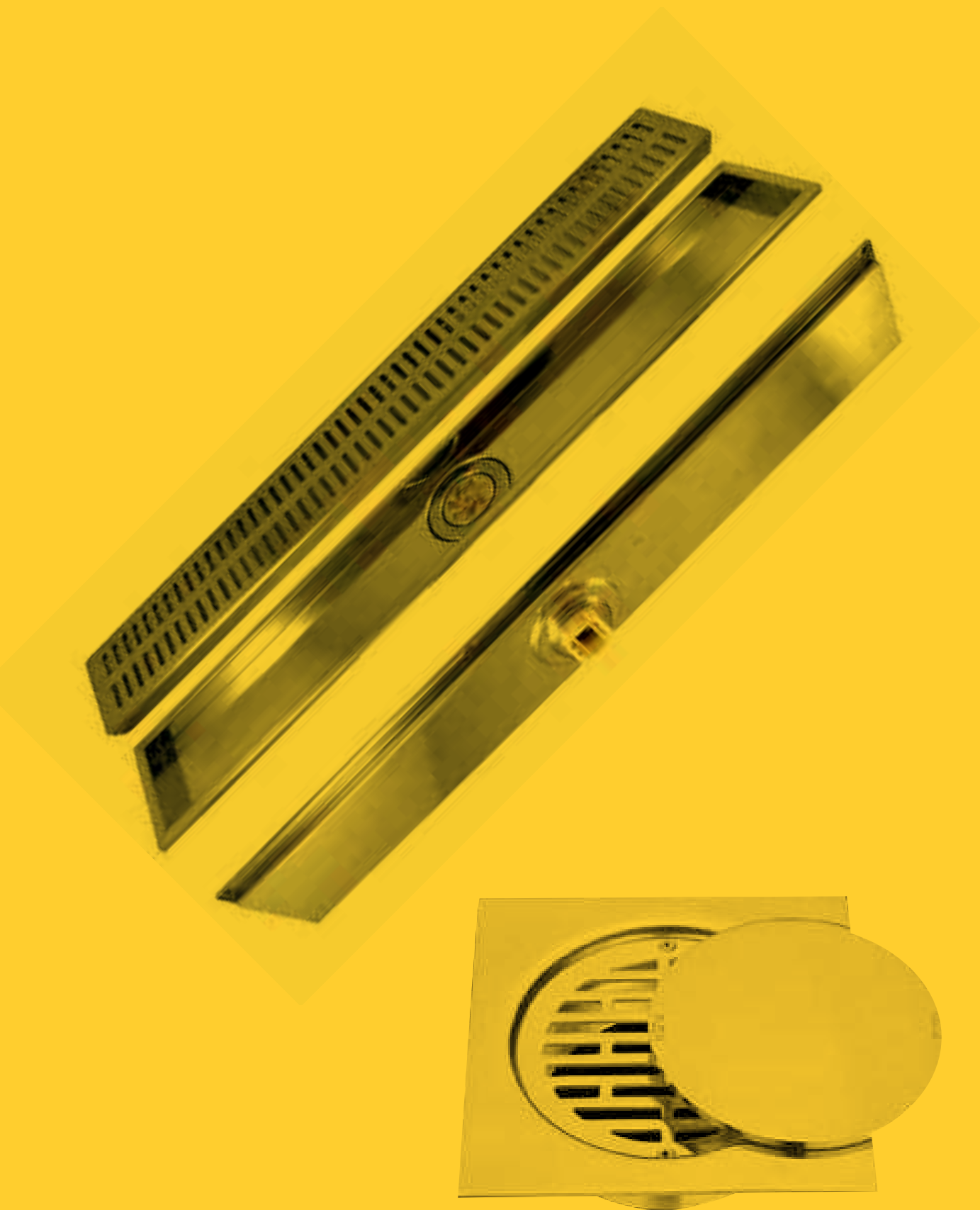


Threaded Bar  
& Accessory





# Floor Drain



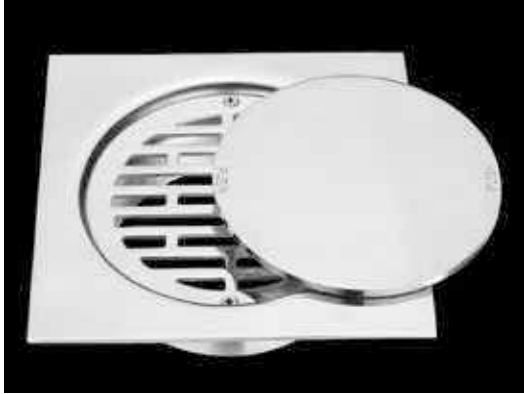
Floor Drain



## FLOOR DRAINS

### Stainless Steel Floor Drains – Non Magnetic

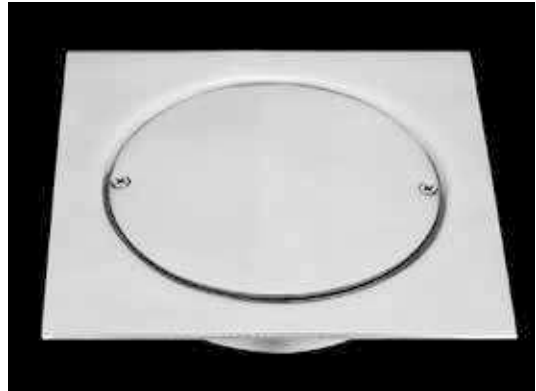
**SS FLOOR DRAINOUT 3PC GRADE  
NON MAGNETIC  
(BODY + SCREWED GRATING + LID)**



**Technical 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)**



**Technical 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)



**Technical 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



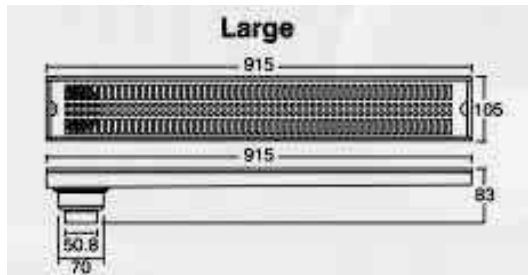
Thumb Type

# FLOOR DRAINS

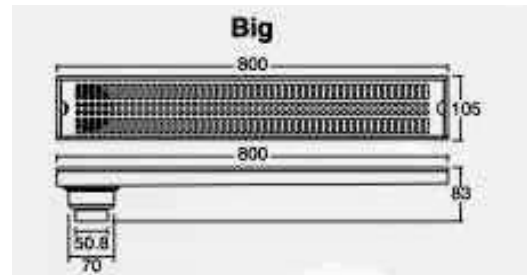
## Shower Channel Drains



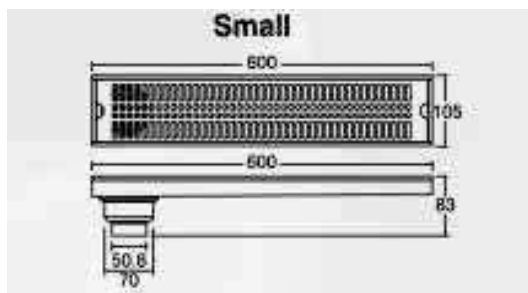
This channel drain is manufactured using the finest quality material in conformity with the international quality standards. The offered channel drain finds immense application in residential and commercial sectors. Available in multiple specifications, this is admired for the features like durable nature,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



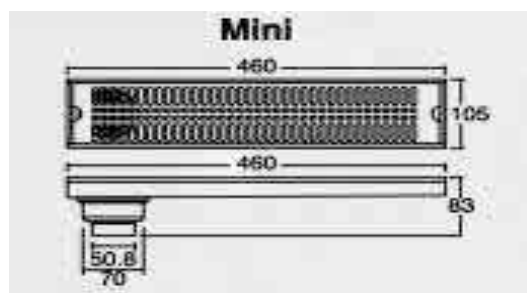
**Overall Size:**  
915 x 105 x 83mm (36 x 4 x 3.1/4 Inch)



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



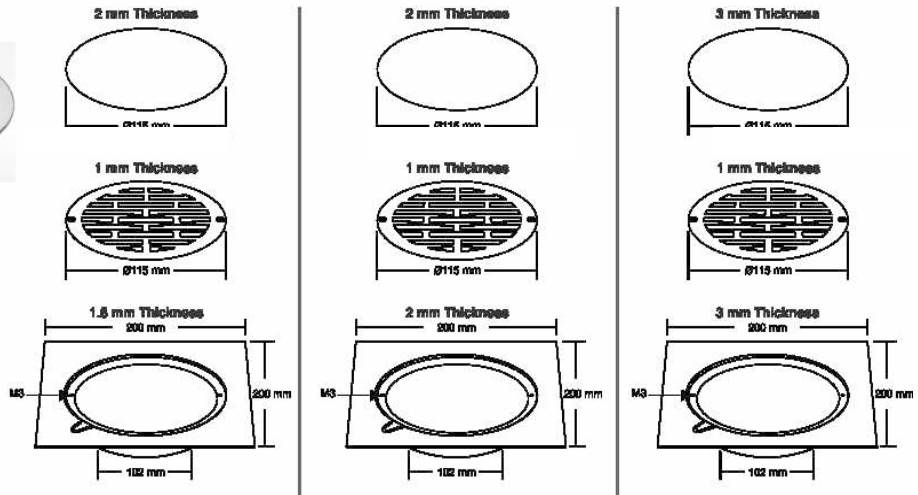
**Overall Size:**  
600 x 105 x 83mm (23.1/2 x 4 x 3.1/4 Inch)



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

# FLOOR DRAINS

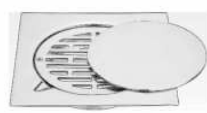
200 mm x 200 mm (3 PC.)



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.)



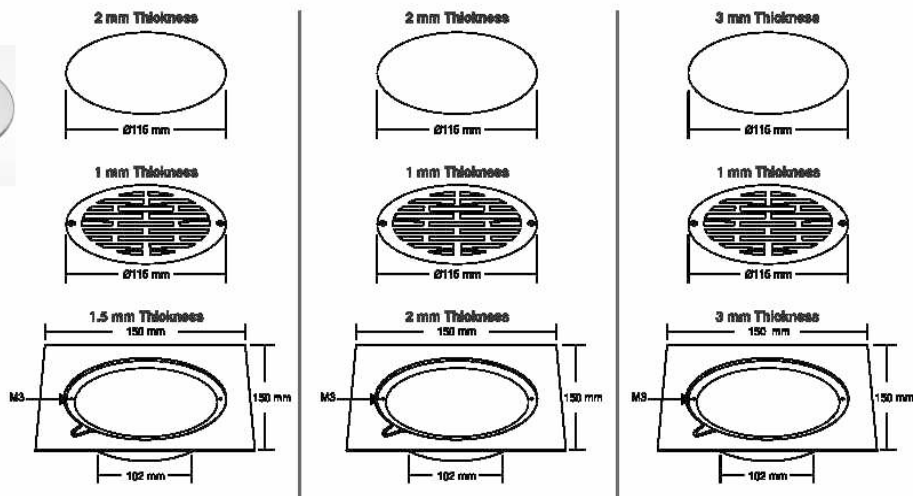
79 mm x 79 mm (2 PC.)

## Clean Out



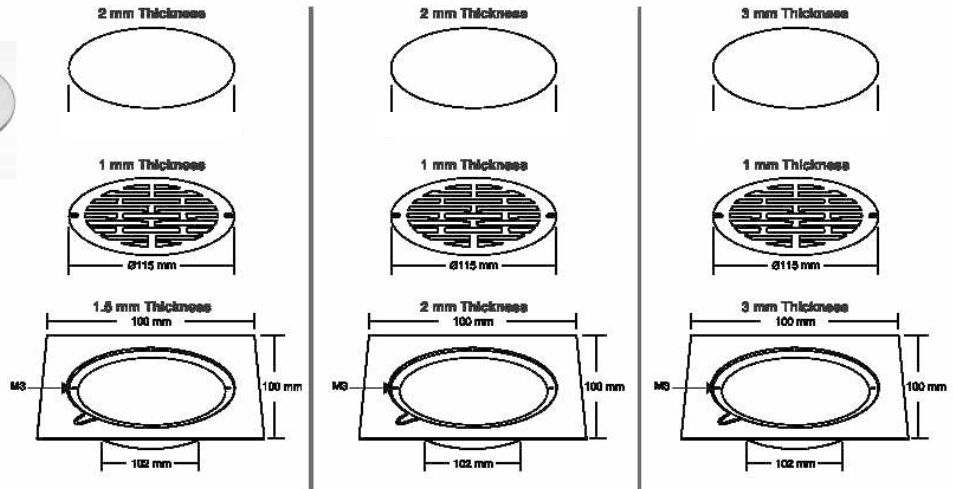
150 mm x 150 mm (2 PC.)

150 mm x 150 mm (3 PC.)

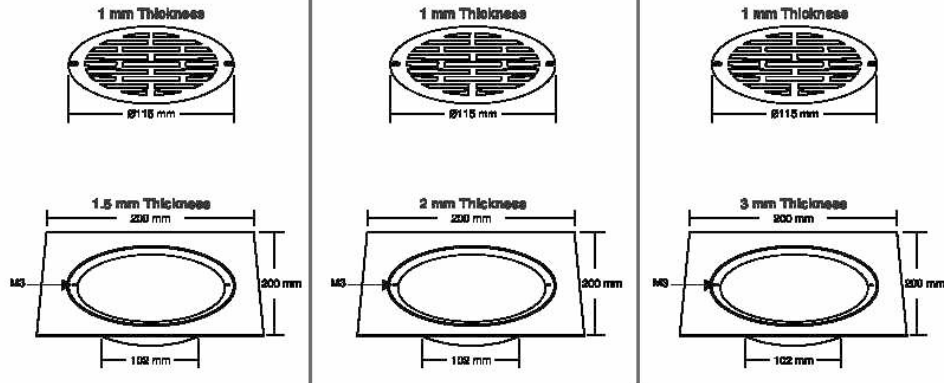


# FLOOR DRAINS

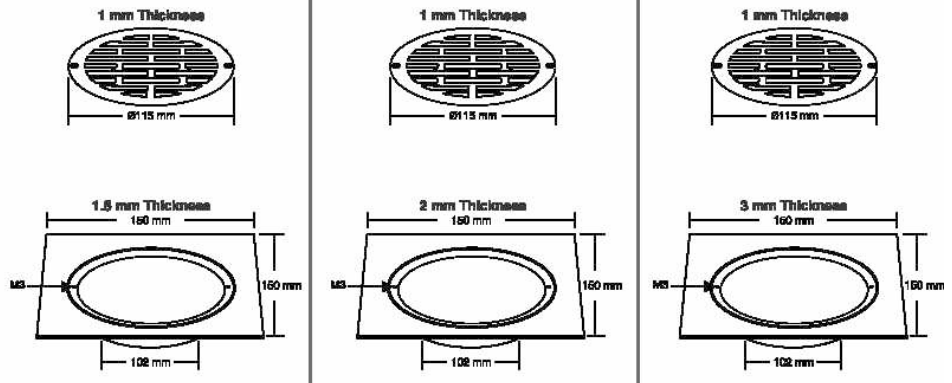
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200 mm x 200 mm (2 PC.)

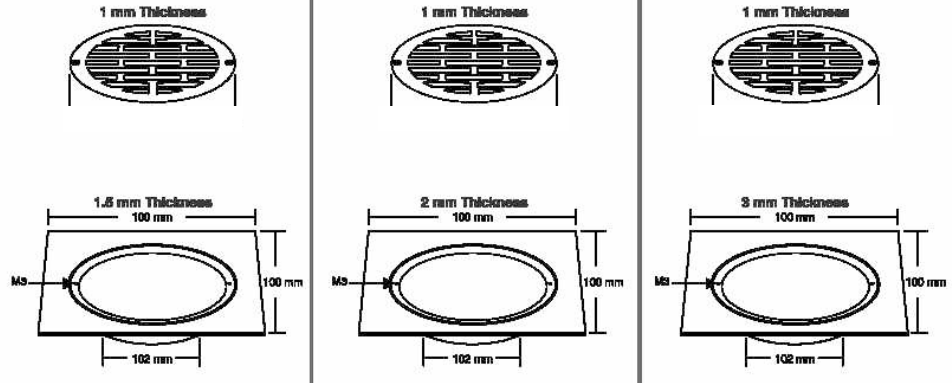


150 mm x 150 mm (2 PC.)

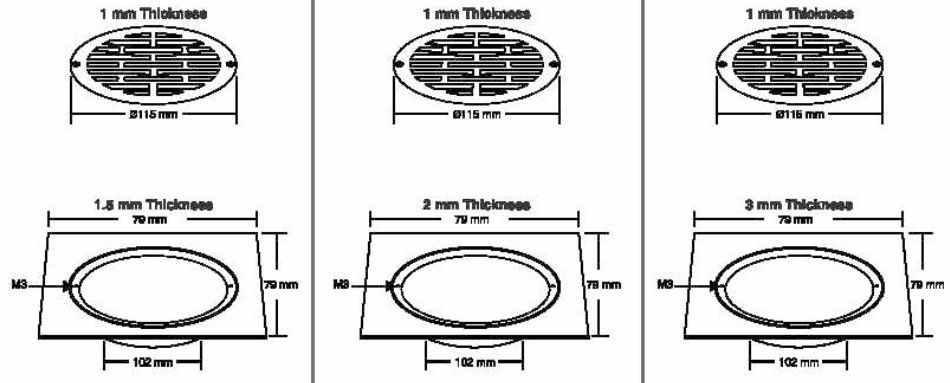


# FLOOR DRAINS

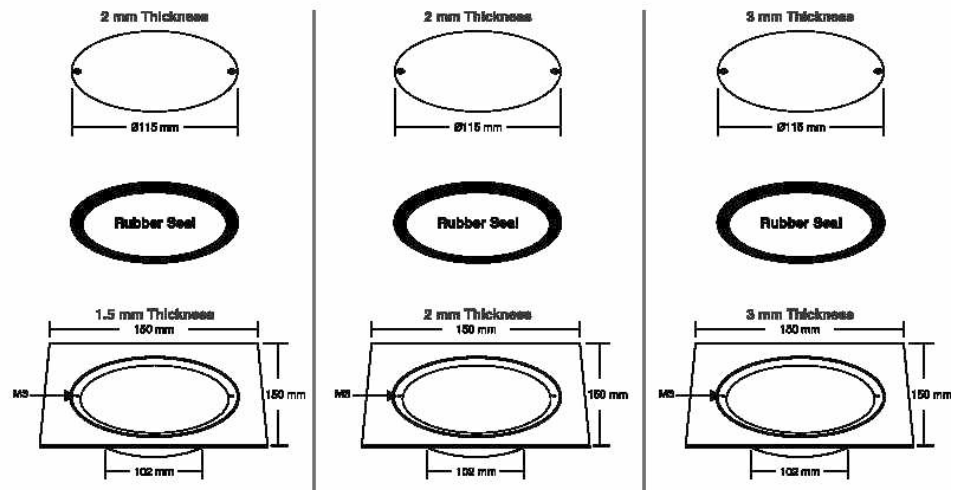
100 mm x 100 mm (2 PC.)



79 mm x 79 mm (2 PC.)



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







# Valves





# GATE VALVE



## 105Q - 300PSI AWWA C509 Grooved-End Gate Valve

- Bolted Bonnet • Non-Rising Stem • Resilient • Wedge Grooved-End
- 300 PS1/20.7 Bar Non-Shock Cold Working Pressure
- Conforms to AWWA C509
- FBE Coated Interior and Exterior
- Maximum Operating Temperature 185°F/85°C
- FM Approved & ULIULC Listed

### Material Specifications

**PART**

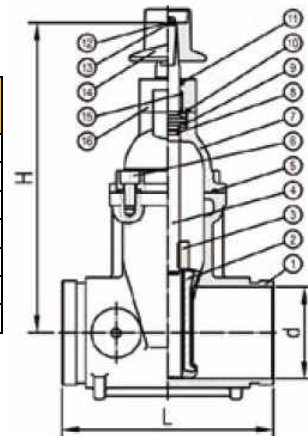
1. Valve Body
2. Resilient Wedge
3. Wedge Nut
4. Stem
5. Bonnet Gasket
6. Bonnet Screw
7. Bonnet
8. Stem Primary O-Ring
9. Stem Thrust Washer
10. Gland Seal O-Ring
11. Stem Ring Wiper
- 12., Operating Nut Washer
13. Operating Nut Screw
14. Square Operating Nut
- 14A. Handwheel (Optional)
15. Stem Primary O-Ring
16. Stem Seal Bushing

**SPECIFICATION**

- Ductile Iron ASTM A 536
- Ductile Iron ASTM A 536 with EPDM Encapsulation
- Bronze ASTM B 584 UNS C83600
- Stainless Steel ASTM A 276 UNS S41000
- EPDM
- Alloy Steel ASTM A 574M Zinc Plated
- Cast Iron ASTM A 126-B
- EPDM
- Stainless Steel ASTM A 276 UNS S41 000
- EPDM
- EPDM
- Carbon steel Zinc Plated
- Alloy Steel ASTM A 574M Zinc Plated
- Cast Iron ASTM A 126-B
- Ductile Iron ASTM A 536
- EPDM
- Brass ASTM B 16 UNS C36000



Product Code	Size		L		d		H		Tums To Open
	In.	mm	In.	mm	In.	mm	In.	mm	
SE-105Q-065	2.5	65	7.5	190	2.5	64	11.4	289	8.80
SE-105Q-080	3.0	80	8.0	203	3.0	76	12.7	322	10.50
SE-105Q-100	4.0	100	9.0	229	4.0	102	13.5	342	13.75
SE-105Q-150	6.0	150	10.5	267	6.0	152	17.0	432	16.00
SE-105Q-200	8.0	200	11.5	292	8.0	203	20.4	519	17.50
SE-105Q-250	10.0	250	13.0	330	10.0	254	21.2	539	21.50
SE-105Q-300	12.0	300	14.0	356	12.0	305	26.5	672	25.50



**Note:**

Freezing Weather Precaution-Subsequent to testing a piping system, valves should be in an open position to allow complete drainage.



## 108Q - 250PSI AWWA C509 Flanged X Grooved-End Gate

- Bolted Bonnet • Non-Rising Stem • Resilient Wedge • Flanged X Grooved-End
- 250 PSI/17.2Bar Non-Shock Cold Working Pressure
- Conforms to AWWA C509
- FBE Coated Interior and Exterior
- Maximum Operating Temperature 185°F /85°C
- FM Approved & UL/ULC Listed

### Material Specifications

#### PART

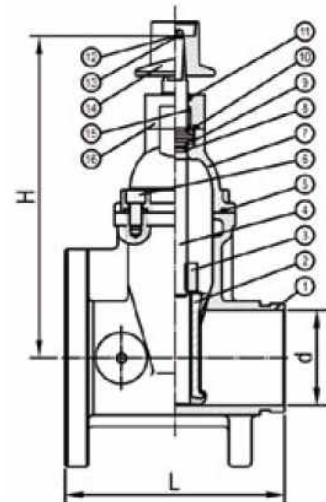
1. Valve Body
2. Resilient Wedge
3. Wedge Nut
4. Stem
5. Bonnet Gasket
6. Bonnet Screw
7. Bonnet
8. Stem Primary a-Ring
9. Stem Thrust Washer
10. Gland Seal O-Ring
11. Stem Ring Wiper
12. Operating Nut Washer
13. Operating Nut Screw
14. Square Operating Nut
- 14A. Handwheel (Optional)
15. Stem Primary a-Ring
16. Stem Seal Bushing

#### SPECIFICATION

- Ductile Iron ASTM A 536
- Ductile Iron ASTM A 536 with EPDM Encapsulation
- Bronze ASTM B 584 UNS C83600
- Stainless Steel ASTM A 276 UNS S41000
- EPDM
- Alloy Steel ASTM A 574M Zinc Plated
- Cast Iron ASTM A 126-B
- EPDM
- Stainless Steel ASTM A 276 UNS S41000
- EPDM
- EPDM
- Carbon steel Zinc Plated
- Alloy Steel ASTM A 574M Zinc Plated
- Cast Iron ASTM A 126-B
- Ductile Iron ASTM A 536
- EPDM
- Brass ASTM B 16 UNS C36000



Product Code	Size		L		d		H		Tums To Open
	In.	mm	In.	mm	In.	mm	In.	mm	
SE-108Q-065	2.5	65	7.5	190	2.5	64	11.4	289	8.80
SE-108Q-080	3.0	80	8.0	203	3.0	76	12.7	322	10.50
SE-108Q-100	4.0	100	9.0	229	4.0	102	13.5	342	13.75
SE-108Q-150	6.0	150	10.5	267	6.0	152	17.0	432	16.00
SE-108Q-200	8.0	200	11.5	292	8.0	203	20.4	519	17.50
SE-108Q-250	10.0	250	13.0	330	10.0	254	21.2	539	21.50
SE-108Q-300	12.0	300	14.0	356	12.0	305	26.5	672	25.50



#### Note:

<> Freezing Weather Precaution-Subsequent to testing a piping system, valves should be in an open position to allow complete drainage.

<> Flange: ANSI Class125f150. other flange dimensions are available.

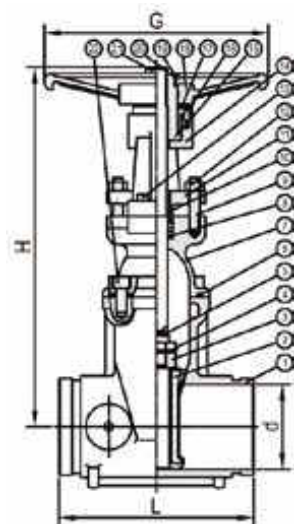


## 135 - AWWA C509 300PSI Grooved-End Gate Valve

- Bolted Bonnet • Outside Screw and Yoke • Resilient Wedge • Grooved-End
- 300 PS1/20.7 Bar Non-Shock Cold Working Pressure
- Conforms to AWWA C509
- FBE Coated Interior and Exterior
- Maximum Operating Temperature 185°F/85°C
- FM Approved & ULIULC Listed

### Material Specifications

PART	SPECIFICATION
1. Valve Body	Ductile Iron ASTM A 536
2. Resilient Wedge Encapsulation	Ductile Iron ASTM A 536 with EPDM
3. Wedge Nut	Bronze ASTM B 584 UNS C83600
4. Dowel Pin	Stainless Steel ASTM A 276 UNS S42000
5. Stem Back Seat O.Ring	EPDM
6. Bonnet Gasket	EPDM
7. Bonnet	Ductile Iron ASTM A 536
8. Stem Packing	EPDM
9. Threaded Rod	Carbon steel linc Plated
10. Gland Bushing	Brass ASTM B 584
11. Gland	Cast Iron ASTM A 126-B
12. Gland Nut	Stainless Steel 18-8
13. Yoke Screw	Alloy Steel ASTM A 574M Zinc Plated
14. Yoke	Cast Iron ASTM A 126-B
15. Yoke Bushing	Bronze ASTM B 584
16. Flat Point Set Screw	Alloy Steel ASTM F 912M Black Oxide
17. Yoke Bushing Retainer	Cast Iron ASTM A 126-B
18. Handwheel	Ductile Iron ASTM A 536
19. Handwheel Nut	Carbon steel line Plated
20. Hat Head Screw	Carbon steel linc Plated
21. Stem	Bronze ASTM B 150 UNS C61400
22. Bonnet Screw	Alloy Steel ASTM A 574M line Plated



Product Code	Size		L		d		G		H Open		H Close		Tums To Open
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	
SE-135-065	2.5	65	7.5	190	2.5	64	7.9	200	17.8	453	14.9	378	8.8
SE-135-080	3.0	80	8.0	203	3.0	76	10.0	254	20.1	510	15.9	405	10.5
SE-135-100	4.0	100	9.0	229	4.0	102	10.0	254	22.4	568	16.6	422	13.8
SE-135-150	6.0	150	10.5	267	6.0	152	12.4	315	30.3	769	22.9	581	16.0
SE-135-200	8.0	200	11.5	292	8.0	203	14.8	375	37.8	960	28.5	724	17.5
SE-135-250	10.0	250	13.0	330	10.0	254	16.4	416	44.8	1139	34.5	877	21.5
SE-135-300	12.0	300	14.0	358	12.0	305	17.5	445	52.2	1326	39.9	1014	25.5

**Note:**

Freezing Weather Precaution-Subsequent to testing a piping system, valves should be in an open position to allow complete drainage.

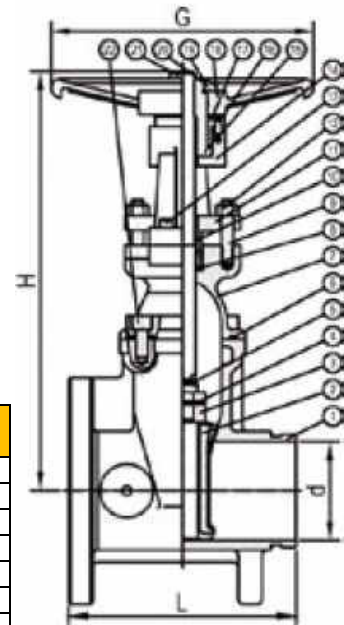


## 138 - 250PSI AWWVA C509 Flanged X Grooved-End Gate Valve

- Bolted Bonnet • Outside Screw and Yoke • Resilient Wedge • Flanged X Grooved-End
- 250 PSI/17.2Bar Non-Shock Cold Working Pressure
- Conforms to AWWA C509
- FBE Coated Interior and Exterior
- Maximum Operating Temperature 185°F/85°C
- FM Approved & UUULC Listed

### Material Specifications

PART	SPECIFICATION
1. Valve Body	Ductile Iron ASTM A 536
2. Resilient Wedge Encapsulation	Ductile Iron ASTM A 536 with EPDM
3. Wedge Nut	Bronze ASTM B 584 UNS C83600
4. Dowel Pin	Stainless Steel ASTM A 276 UNS S42000
5. Stem Back Seat a-Ring	EPDM
6. Bonnet Gasket	EPDM
7. Bonnet	Ductile Iron ASTM A 536
8. Stem Packing	EPDM
9. Threaded Rod	Carbon steel Zinc Plated
10. Gland Bushin9	Brass ASTM B 584
11. Gland	Cast Iron ASTM A 126-B
12. Gland Nut	Stainless Steel 18-8
13. Yoke Screw	Alloy Steel ASTM A 574M Zinc Plated
14. Yoke	Cast Iron ASTM A 126-B
15. Yoke Bushing	Bronze ASTM B 584
16. Flat Point Set Screw	Alloy Steel ASTM F 912M Black Oxide
17. Yoke Bushing Retainer	Cast Iron ASTM A 126-B
18. Handwheel	Ductile Iron ASTM A 536
19. Handwheel Nut	Carbon steel Zinc Plated
20. Flat Head Screw	Carbon steel Zinc Plated
21. Stem	Bronze ASTM B 150 UNS C61400
22. Bonnet Screw	Alloy Steel ASTM A 574M Zinc Plated



Product Code	Size		L		d		G		H Open		H Close		Tums To Open
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	
SE-138-065	2.5	65	7.5	190	2.5	64	7.9	200	17.8	453	14.9	378	8.8
SE-138-080	3.0	80	8.0	203	3.0	76	10.0	254	20.1	510	15.9	405	10.5
SE-138-100	4.0	100	9.0	229	4.0	102	10.0	254	22.4	568	16.6	422	13.8
SE-138-150	6.0	150	10.5	267	6.0	152	12.4	315	30.3	769	22.9	581	16.0
SE-138-200	8.0	200	11.5	292	8.0	203	14.8	375	37.8	960	28.5	724	17.5
SE-138-250	10.0	250	13.0	330	10.0	254	16.4	416	44.8	1139	34.5	877	21.5
SE-138-300	12.0	300	14.0	358	12.0	305	17.5	445	52.2	1326	39.9	1014	25.5

### Note:

- <> Freezing Weather Precaution-Subsequent to testing a piping system, valves should be in an open position to allow complete drainage.
- <> Flange: ANSI Class125/150, other flange dimensions are available.



## F909 - 300PSI AWWA C509 Flanged

- Bolted Bonnet No
- 300 PS1/20.7 Bar N
- Conforms to AWW
- FBE Coated Interio
- Maximum Operatin
- FM Approved & UL

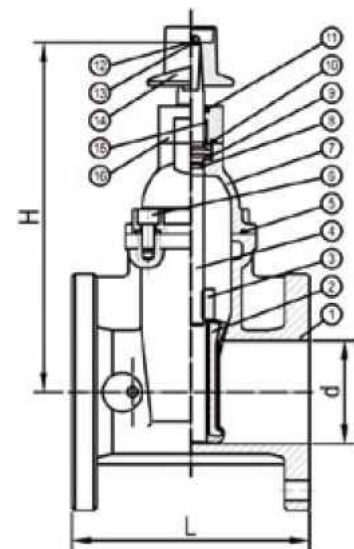
### Material Specification

#### PART

1. Valve Body
2. Resilient Wedge Encapsulation
3. Wedge Nut
4. Stem
5. Bonnet Gasket
6. Bonnet Screw
7. Bonnet
8. Stem Primary a-Ring
9. Stem Thrust Washer
10. Gland Seal O-Ring
11. Stem Ring Wiper
12. Operating Nut Washer
13. Operating Nut Screw
14. Square Operating Nut
- 14A. Handwheel (Optional)
15. Stem Primary O-Ring
16. Stem Seal Bushing

#### SPECIFICATION

- Ductile Iron ASTM A 536
- Ductile Iron ASTM A 536 with EPDM
- Bronze ASTM B 584 UNS C83600
- Stainless Steel ASTM A 276 UNS S41000
- EPDM
- Alloy Steel ASTM A 574M Zinc Plated
- Cast Iron ASTM A 126-B
- EPDM
- Stainless Steel ASTM A 276 UNS S41 000
- EPDM
- EPDM
- Carbon steel Zinc Plated
- Alloy Steel ASTM A 574M Zinc Plated
- Cast Iron ASTM A 126-B
- Ductile Iron ASTM A 536
- EPDM
- Brass ASTM B 16 UNS C36000



Product Code	Size		L		d		H		Tums To Open
	In.	mm	In.	mm	In.	mm	In.	mm	
SE-F909-065	2.5	65	7.5	190	2.5	64	11.4	289	8.80
SE-F909-080	3.0	80	8.0	203	3.0	76	12.7	322	10.50
SE-F909-100	4.0	100	9.0	229	4.0	102	13.5	342	13.75
SE-F909-150	6.0	150	10.5	267	6.0	152	17.0	432	16.00
SE-F909-200	8.0	200	11.5	292	8.0	203	20.4	519	17.50
SE-F909-250	10.0	250	13.0	330	10.0	254	21.2	539	21.50
SE-F909-300	12.0	300	14.0	356	12.0	305	26.5	672	25.50

#### Note:

- <> Freezing Weather Prec in an open position to allow
- <> Flange: ANSI Class12 FlowCom Mechanical

PSI AWWA C509 Flanged-End Gate Valve

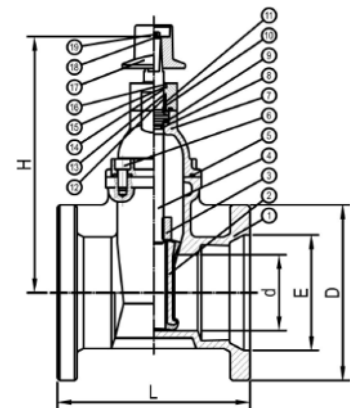


## AWWA C509 300PSI MJ909 Mechanical Joint Ends Gate Valve

- Bolted Bonnet Non-Rising Stem Resilient Wedge MJ End
- 250 PS1/300PS1/17.2Bar Non-Shock Cold Working Pressure
- CONFORMS TO AWWA C509
- Coating-Electrostatically Applied Fusion-Bonded Epoxy 0.2-0.5mm
- Inside and Outside Meet or Exceeds AWWA C550
- Maximum Operating Temperature 160°F 171°C
- FM Approved & UUULC Listed

### Material Specifications

PART	SPECIFICATION
1. Valve Body	Ductile Iron ASTM A 536
2. Resilient Wedge Encapsulation	Ductile Iron ASTM A 536 with EPDM
3. Wedge Nut	Bronze ASTM B 584 UNS C83600
4. Stem	Bronze ASTM B 150 UNS C61400
5. Bonnet Gasket	EPDM
6. Bonnet Screw	Alloy Steel ASTM A 574M Zinc Plated
7. Bonnet	Ductile Iron ASTM A 536
8. Stem Back Seat O-Ring	EPDM
9. Stem Thrust Washer(Lower)	Bronze ASTM B 584 UNS C83600
10. Stem Thrust Washer(Upper)	Stainless Steel ASTM A 276 UNS S41000
11. Gland Seal O-Ring	EPDM
12. Stem Seal Bushing	Bronze ASTM B 584 UNS C83600
13. Stem Secondary O-Ring(2)	EPDM
14. Gland Flange	Ductile Iron ASTM A 536
15. Gland Flange Screw	Alloy Steel ASTM A 574M Zinc Plated
16. Stem Ring Wiper	EPDM
17. Square Operating Nut	Cast Iron ASTM A 126-B
17A. Handweel (Optional)	Ductile Iron ASTM A 536
18. Flat Washer	Carbon Steel Zinc Plated
19. Screw	Alloy Steel ASTM A 574M Zinc Plated



Product Code	Size		L		D		H		d		E		Bolt Circle		Flange Holes	Tums To Open
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm		
SE-MJ909-080	3	80	8.0	203	7.7	196	12.7	322	3.1	80	4.9	126	6.19	157	4	10.8
SE-MJ909-100	4	100	10.0	254	9.1	232	13.5	344	3.9	100	6	153	7.5	191	4	13.0
SE-MJ909-150	6	150	11.5	292	11.1	283	17.4	441	5.9	150	8.1	206	9.5	241	6	15.7
SE-MJ909-200	8	200	11.5	292	13.4	340	20.8	529	7.9	200	10.3	261	11.75	298	6	17.3
SE-MJ909-250	10	250	13.0	330	15.7	400	24.2	614	9.8	250	12.3	313	14	356	8	21.4
SE-MJ909-300	12	300	14.0	356	18.0	456	27.6	700	11.8	300	14.4	367	16.25	413	8	25.3

**Note:**

<> Freezing Weather Precaution-Subsequent to testing a piping system, valves should be in an open position to allow complete drainage.



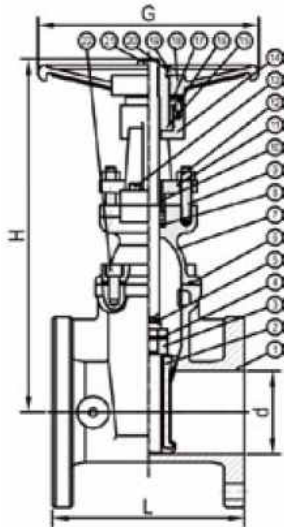


## F907 - 300PSI AWWA C509 Flanged-End Gate Valve

- Bolted Bonnet Outside Screw and Yoke Resilient Wedge Flanged-End
- 300 PS1/20.7 Bar Non-Shock Cold Working Pressure
- Conforms to AWWA C509
- FBE Coated Interior and Exterior
- Maximum Operating Temperature 185°F / 85°C
- FM Approved & UUULC Listed

### Material Specifications

PART	SPECIFICATION
1. Valve Body	Ductile Iron ASTM A 536
2. Resilient Wedge Encapsulation	Ductile Iron ASTM A 536 with EPDM
3. Wedge Nut	Bronze ASTM B 584 UNS C83600
4. Dowel Pin	Stainless Steel ASTM A 276 UNS S42000
5. Stem Back Seat O-Ring	EPDM
6. Bonnet Gasket	EPDM
7. Bonnet	Ductile Iron ASTM A 536
8. Stem Packing	EPDM
9. Threaded Rod	Carbon steel Zinc Plated
10. Gland Bushing	Brass ASTM B 584
11. Gland	Cast Iron ASTM A 126-B
12. Gland Nut	Stainless Steel 18-8
13. Yoke Screw	Alloy Steel ASTM A 574M Zinc Plated
14. Yoke	Cast Iron ASTM A 126-B
15. Yoke Bushing	Bronze ASTM B 584
16. Flat Point Set Screw	Alloy Steel ASTM F 912M Black Oxide
17. Yoke Bushing Retainer	Cast Iron ASTM A 126-B
18. Handwheel	Ductile Iron ASTM A 536
19. Handwheel Nut	Carbon steel Zinc Plated
20. Flat Head Screw	Carbon steel Zinc Plated
21. Stem	Bronze ASTM B 150 UNS C61400
22. Bonnet Screw	Alloy Steel ASTM A 574M Zinc Plated



Product Code	Size		L		d		G		H Open		H Close		Tums To Open
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	
SE-F907-065	2.5	65	7.5	190	2.5	64	7.9	200	17.8	453	14.9	378	8.8
SE-F907-080	3.0	80	8.0	203	3.0	76	10.0	254	20.1	510	15.9	405	10.5
SE-F907-100	4.0	100	9.0	229	4.0	102	10.0	254	22.4	568	16.6	422	13.8
SE-F907-150	6.0	150	10.5	267	6.0	152	12.4	315	30.3	769	22.9	581	16.0
SE-F907-200	8.0	200	11.5	292	8.0	203	14.8	375	37.8	960	28.5	724	17.5
SE-F907-250	10.0	250	13.0	330	10.0	254	16.4	416	44.8	1139	34.5	877	21.5
SE-F907-300	12.0	300	14.0	358	12.0	305	17.5	445	52.2	1326	39.9	1014	25.5

**Note:**

- <> Freezing Weather Precaution-Subsequent to testing a piping system, valves should be in an open position to allow complete drainage.
- <> Flange: ANSI Class125/150, other flange dimensions are available.

# CHECK VALVE

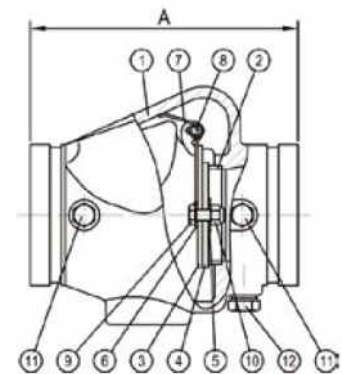


## VCG01 - 350PSI Grooved-End Swing Check Valve

- Installed in both Horizontal or Vertical Line with Upward Flow
- Easier and Faster to Maintain and Install
- Low Pressure Drop
- EPDM non-stick leak tight sealing
- All Stainless Steel Wetted Parts to Provide Superior Corrosion Resistance
- FM Approved & UUULC Listed

### Material Specifications

PART	SPECIFICATION
1. Body	Ductile Iron ASTM A 536
2. Seat	Bronze
3. Clapper	Stainless Steel 304
4. Facing Seal	EPDM Rubber
5. Clamping Ring	Stainless Steel 304
6. Gasket	EPDM Rubber
7. Spring	Stainless Steel 304
8. Hinge Pin	Stainless Steel 304
9. Bolt	Stainless Steel 304
10. Locknut	Stainless Steel 304
11. Plug 1/4" NPT	Carbon Steel
12. Plug 1/2" NPT	Carbon Steel



Product Code	Size		OD mm	A		Weight	
	In	mm		In	mm	lbs	kg
SE-VCG01-060	2	50	60.3	6.65	169	5.5	2.5
SE-VCG01-073	2 1/2	65	73	7.2	183	8.8	4
SE-VCG01-076	3 OD	65	76.1	7.2	183	8.8	4
SE-VCG01-089	3	80	88.9	7.8	198	13	6
SE-VCG01-114	4	100	114.3	8.85	218	20	9
SE-VCG01-140	5 1/2 OD	125	139.7	9.76	248	33	15
SE-VCG01-141	5	125	141.3	9.76	248	33	15
SE-VCG01-165	6 1/2 OD	150	165.1	10.63	270	42	19
SE-VCG01-168	6	150	168.3	10.63	270	42	19
SE-VCG01-219	8	200	219.1	12.8	325	77	35
SE-VCG01-273	10	250	273				
SE-VCG01-324	12	300	323.9				

**Note:**

<> Freezing Weather Precaution-Subsequent to testing a piping system, valves should be in an open position to allow complete drainage.



## Check Valve Performance Date

$$P = \frac{Q^2}{C_v^2} \Delta$$

$$v \sqrt{\Delta P} \times C = Q$$

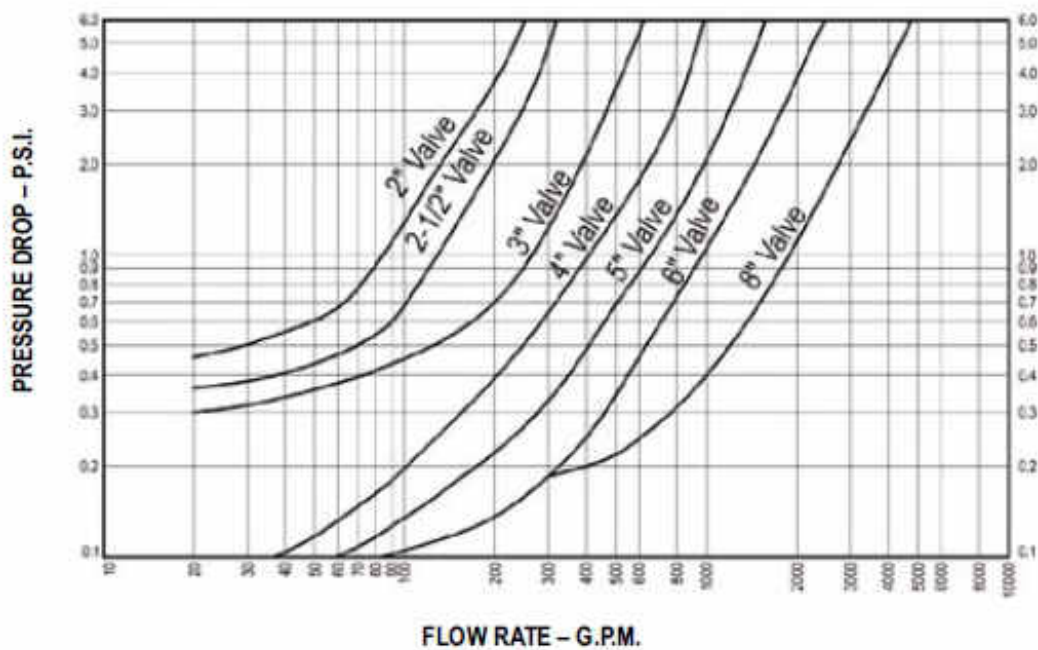
Where:

Q = Flow rate (gallons per minute: GPM)

$\Delta P$  = Pressure drop across valve (PSI)

$C_v$  = Flow coefficient

Nominal Size		Pipe OD	Cv (Full Open)	Nominal Size		Pipe OD	Cv (Full Open)	Nominal Size		Pipe OD	Cv (Full Open)
In	mm	mm		In	mm	mm		In	mm	mm	
2	50	60.3	100	4	100	114.3	390	6 1/2 OD	150	165.1	1000
2 1/2"	65	73.3	140	5 1/2 OD	125	139.7	700	6	150	168.3	1000
3 OD	65	76.1	140	5	125	141.3	700	8	200	219.1	1800
3	80	88.9	250								



**Note:**

<> Freezing Weather Precaution-Subsequent to testing a piping system, valves should be in an open position to allow complete drainage.

<> Flange: ANSI Class125/150, other flange dimensions are available.

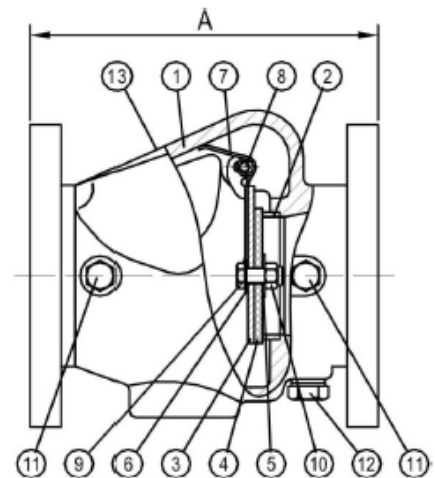


### 350PSI VCF01 Flanged-End Swing Check Valve

- Installed in both Horizontal or Vertical Line with Upward Flow
- Easier and Faster to Maintain and Install
- Low Pressure Drop
- EPDM non-stick leak tight sealing
- All Stainless Steel Wetted Parts to Provide Superior Corrosion Resistance

#### Material Specifications

PART	SPECIFICATION
1. Body	Ductile Iron ASTM A 536
2. Seat	Bronze
3. Clapper	Stainless Steel 304
4. Facing Seal	EPDM Rubber
5. Clamping Ring	Stainless Steel 304
6. Gasket	EPDM Rubber
7. Spring	Stainless Steel 304
8. Hinge Pin	Stainless Steel 304
9. Bolt	Stainless Steel 304
10. Locknut	Stainless Steel 304
11. Plug 1/4" NPT	Carbon Steel
12. Plug 1/2" NPT	Carbon Steel



Size		A		Weight	
In	mm	In	mm	Lbs	kg
2	DN50	6.65	169	5.5	2.5
2 1/2"	DN65	7.20	183	8.8	4
3"	DN80	7.80	198	13	6
4"	DN100	8.58	218	20	9
5"	DN125	9.78	248	33	15
6"	DN150	10.63	270	42	19
8"	DN200	12.80	325	77	35
10"	DN250				
12"	DN300				

Flange Standard:

ASME 16.5 Class 150

BS 4504 PN10 / Pn16

AS 2129 Table D / Table E

## Pn25 VBG01 H Grooved-End Butterfly Valve

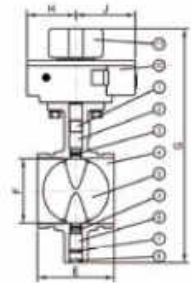
- FM Approved Gear Operator for both Indoor or Outdoor use
- NSF Certified Polymide Coated Ductile Iron body for Excellent Protection
- Elastomer Encapsulated Disc with Outstanding Flow Characteristics
- Extended Neck
- Low Torque Operation
- Options of Double Internal Supervisory Switches

### Material Specifications

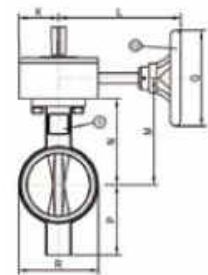
Part	Specification
1 Upper Stem	Stainless Steel ASTM A 276 Type 420
2 Upper Bearing	PTFE Bronze Sintered on Steel
3 O-Ring	EPDM
4 Body	Ductile Iron ASTM A 536, Polymide Coated
5 Disc	Ductile Iron ASTM A 536 with EPDM Encapsulation
6 Lower Bearing	PTFE Bronze Sintered on Steel
7 Lower Stem	Stainless Steel ASTM A 276 Type 420
8 Dust Plug	PVC
9 Name Plate	Stainless Steel
10 Gear Operator	Cast Iron and Steel
11 Indicator Flag	Cast Iron
12 Handwheel	Cast Iron



Part Number	Size		OD	E		F		G		H		J		K	
	In	mm		In	mm	In	mm	In	mm	In	mm	In	mm	In	mm
SE-VBG01-073	2 1/2	65	73.0	3.85	98	2.40	61	11.22	285	2.91	74	3.54	90	2.13	54
SE-VBG01-076	3OD	65	76.1	3.85	98	2.40	61	11.22	285	2.91	74	3.54	90	2.13	54
SE-VBG01-089	3	80	88.9	3.85	98	2.87	73	12.20	310	2.91	74	3.54	90	2.13	54
SE-VBG01-114	4	100	114.3	4.56	116	3.86	98	14.17	360	2.91	74	3.54	90	2.13	54
SE-VBG01-140	5 1/2 OD	125	139.7	5.86	149	4.80	122	15.35	390	2.91	74	3.54	90	2.13	54
SE-VBG01-141	5	125	141.3	5.86	149	4.80	122	15.35	390	2.91	74	3.54	90	2.13	54
SE-VBG01-165	6 1/2 OD	150	165.1	5.86	149	5.75	146	16.73	425	2.91	74	3.54	90	2.13	54
SE-VBG01-168	6	150	168.3	5.86	149	5.75	146	16.73	425	2.91	74	3.54	90	2.13	54
SE-VBG01-219	8	200	219.1	5.27	134	7.72	196	19.41	493	2.91	74	3.54	90	2.13	54
SE-VBG01-273	10	250	273.0	6.30	160	9.57	243	22.91	582	3.90	99	3.98	101	3.03	77



Size	L		M		N		P		Q		R		Wt.	
	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	Lbs.	Kg.
2 1/2	5.87	149	5.27	134	3.78	96	2.95	75	5.90	150	3.35	85	20.9	9.5
3OD	5.87	149	5.27	134	3.78	96	2.95	75	5.90	150	3.35	85	21.4	9.7
3	5.87	149	5.63	143	4.13	105	3.54	90	5.90	150	3.82	97	22	10
4	7.68	195	6.81	173	5.31	135	4.33	110	5.90	150	4.88	124	24.7	11.2
5 1/2 OD	7.68	195	7.20	183	5.83	148	5.00	127	5.90	150	6.10	155	27.5	12.5
5	7.68	195	7.20	183	5.83	148	5.00	127	5.90	150	6.10	155	27.5	12.5
6 1/2 OD	7.68	195	8.00	203	6.50	165	5.71	145	5.90	150	7.20	183	37	16.8
6	7.68	195	8.00	203	6.50	165	5.71	145	5.90	150	7.20	183	41.4	18.8
8	7.68	195	9.53	242	8.03	204	6.89	175	9.84	250	9.29	236	48.7	22.1
10	9.49	241	11.42	290	9.65	245	8.27	210	11.8	300	11.38	289	83.7	38





**VBG01 - 300PSI  
Grooved-End Butterfly Valve**

**VBG01 C - 300PSI  
Grooved-End Butterfly Valve(CLOSE)**



- Approved Gear Operator for both Indoor or Outdoor use
- NSF Certified Polymide Coated Ductile Iron body for Excellent Protection
- Elastomer Encapsulated Disc with Outstanding Flow Characteristics
- Extended Neck
- Low Torque Operation
- Options of Double Internal Supervisory Switches
- FM Approved & ULIULC Listed



**VBG01**

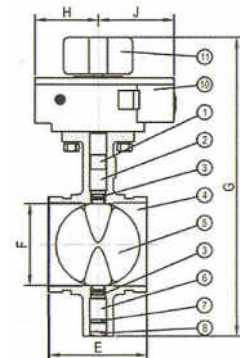


**VBG01C**

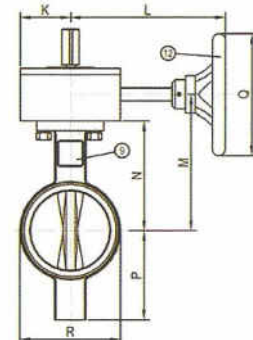
**Material Specifications**

Part	Specification
1 Upper Stem	Stainless Steel ASTM A 276 Gr. 420
2 Upper Bearing	PTFE Bronze Sintered on Steel
3 O-Ring	Nitrile
4 Body	Ductile Iron ASTM A 396, Polymide Coated
5 Disc	Ductile Iron ASTM A 395 with EPDM Encapsulation
6 Lower Bearing	PTFE Bronze Sintered on Steel
7 Lower Stem	Stainless Steel ASTM A 276 Gr. 420
8 Dust Plug	PVC
9 Name Plate	Stainless Steel
10 Gear Operator	Cast Iron and Steel
11 Indicator Flag	Cast Iron
12 Handwheel	Cast Iron

Part Number	Size	OD		E		F		G		H		J		K	
		In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm
SE-VBG01-073	2 1/2	65	73.0	3.85	98	2.40	61	11.22	285	2.91	74	3.54	90	2.13	54
SE-VBG01-076	3OD	65	76.1	3.85	98	2.40	61	11.22	285	2.91	74	3.54	90	2.13	54
SE-VBG01-089	3	80	88.9	3.85	98	2.87	73	12.2	310	2.91	74	3.54	90	2.13	54
SE-VBG01-114	4	100	114.3	4.56	116	3.86	98	14.17	360	2.91	74	3.54	90	2.13	54
SE-VBG01-140	5 1/2OD	125	139.7	5.86	149	4.80	122	15.35	390	2.91	74	3.54	90	2.13	54
SE-VBG01-141	5	125	141.3	5.86	149	4.80	122	15.35	390	2.91	74	3.54	90	2.13	54
SE-VBG01-165	6 1/2OD	150	165.1	5.86	149	5.75	146	16.73	425	2.91	74	3.54	90	2.13	54
SE-VBG01-168	6	150	168.3	5.86	149	5.75	146	16.73	425	2.91	74	3.54	90	2.13	54
SE-VBG01-219	8	200	219.1	5.27	134	7.72	196	19.41	493	2.91	74	3.54	90	2.13	54
SE-VBG01-273	10	250	273.0	6.30	9.57	9.57	243	22.76	578	3.90	99	3.98	101	3.03	77



Size	L		M		N		P		Q		R		Wt.	
	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	In.	mm	Lbs.	Kg.
2 1/2	7.68	195	5.27	134	3.78	96	2.95	75	5.90	150	3.35	85	17.4	7.9
3OD	7.68	195	5.27	134	3.78	96	2.95	75	5.90	150	3.35	85	17.6	8.0
3	7.68	195	5.63	143	4.13	105	3.54	90	5.90	150	3.82	97	18.9	8.6
4	7.68	195	6.81	173	5.31	135	4.33	110	5.90	150	4.88	124	23.4	10.6
5 1/2OD	7.68	195	7.32	186	5.83	148	5.00	127	5.90	150	6.10	155	31.3	14.2
5	7.68	195	7.32	186	5.83	148	5.00	127	5.90	150	6.10	155	31.3	14.2
6 1/2OD	7.68	195	8.00	203	6.50	165	5.71	145	5.90	150	7.20	183	34.8	15.8
6	7.68	195	8.00	203	6.50	165	5.71	145	5.90	150	7.20	183	35.5	16.1
8	8.03	204	9.53	242	8.03	204	6.89	175	9.84	250	9.29	236	50.5	22.9
10	9.49	241	11.42	290	9.65	245	8.27	210	11.80	300	11.38	289	86.9	39.4



## Butterfly Valve Performance Data

### Formulas for Cv Values

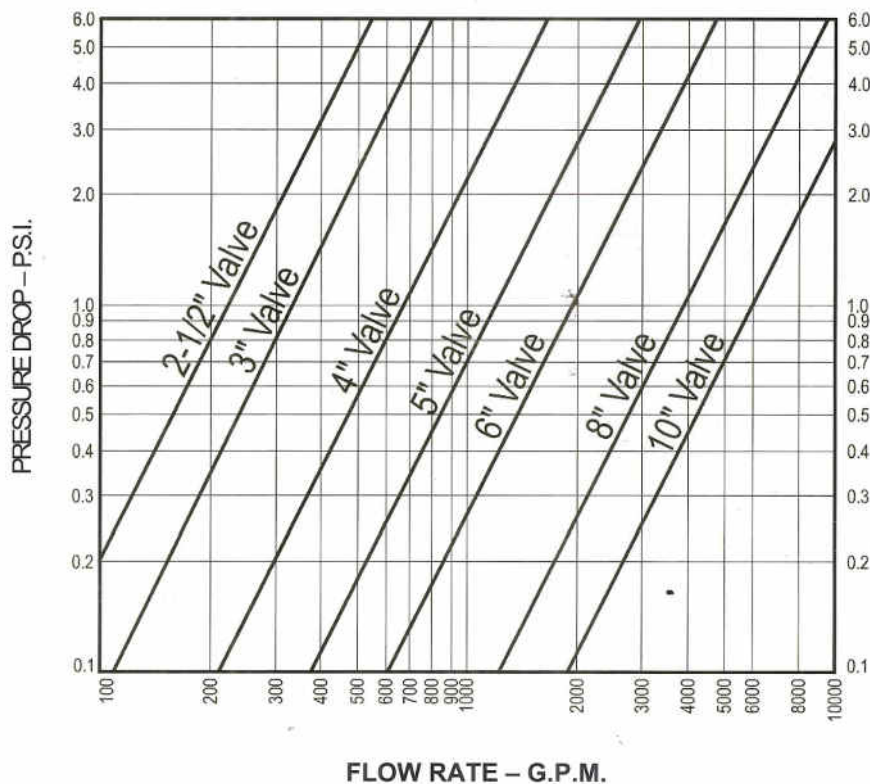
$$P = \frac{Q^2}{C_v^2} \Delta$$

Where:  $Q$  = Flow rate (gallons per minute: GPM)

$\Delta P$  = Pressure drop across valve (PSI)

$$C_v = \frac{Q}{\sqrt{\Delta P}} \times C = Q \quad C_v = \text{Flow coefficient}$$

Nominal Size		Pipe O.D.	Cv
In.	mm	mm	(Full Open)
2 1/2	65	73	221
3OD	65	76.1	221
3	80	88.9	324
4	100	114.3	670
5 1/2 OD	125	139.7	1200
5	125	141.3	1200
6 1/2 OD	150	165.1	1934
6	150	168.3	1934
8	200	219.1	3874
10	250	273	5995



## 300PSI VBG02 Grooved-End Butterfly Valve

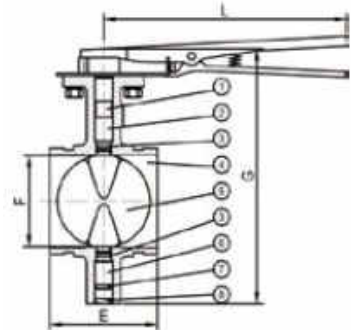
- Both Gear Operator or Lever Handle Available for Indoor or Outdoor use
- Epoxy Coated Ductile Iron body for Excellent Protection
- Elastomer Encapsulated Disc with Outstanding Flow Characteristics
- Low Torque Operation
- Options of Double Internal Supervisory Switches for Gear Operator

### Material Specifications

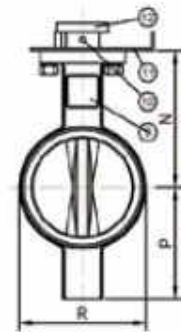
Part	Specification
1 Upper Stem	Stainless Steel ASTM A 276 Type 420
2 Upper Bearing	PTFE Bronze Sintered on Steel
3 O-Ring	Nitrile
4 Body	Ductile Iron ASTM A 536, Epoxy Coated
5 Disc	Ductile Iron ASTM A 536 with EPDM Encapsulation
6 Lower Bearing	PTFE Bronze Sintered on Steel
7 Lower Stem	Stainless Steel ASTM A 276 Type 420
8 Dust Plug	PVC
9 Name Plate	Stainless Steel
10 Pin	Steel
11 Plate	Steel
12 Handle	Steel



Part Number	Size		OD	E		F		G	
	In	mm		In	mm	In	mm	In	mm
SE-VBG02-073	2 1/2	65	73.0	3.85	98	2.40	61	7.32	186
SE-VBG02-076	3OD	65	76.1	3.85	98	2.40	61	7.32	186
SE-VBG02-089	3	80	88.9	3.85	98	2.87	73	8.27	210
SE-VBG02-114	4	100	114.3	4.56	116	3.86	98	10.2	260
SE-VBG02-140	5 1/2 OD	125	139.7	5.86	149	4.80	122	11.4	290
SE-VBG02-141	5	125	141.3	5.86	149	4.80	122	11.4	290
SE-VBG02-165	6 1/2 OD	150	165.1	5.86	149	5.75	146	12.8	325
SE-VBG02-168	6	150	168.3	5.86	149	5.75	146	12.8	325
SE-VBG02-219	8	200	219.1	5.27	134	7.72	196	15.9	404
SE-VBG02-273	10	250	273.0	6.30	160	9.57	243	18.9	480



Size	L		N		P		R		Wt.	
	In	mm	In	mm	In	mm	In	mm	Lbs.	Kg.
2 1/2	10.2	260	3.78	96	2.95	75	3.35	85	12.1	5.5
3OD	10.2	260	3.78	96	2.95	75	3.35	85	12.6	5.7
3	10.2	260	4.13	105	3.54	90	3.82	97	13.2	6
4	10.2	260	5.31	135	4.33	110	4.88	124	15.9	7.2
5 1/2 OD	10.2	260	5.83	148	5.00	127	6.10	155	18.7	8.5
5	10.2	260	5.83	148	5.00	127	6.10	155	18.7	8.5
6 1/2 OD	10.2	260	6.50	165	5.71	145	7.20	183	28.2	12.8
6	10.2	260	6.50	165	5.71	145	7.20	183	32.6	14.8
8	12.8	325	8.03	204	6.89	175	9.29	236	35.5	16.1
10	12.8	325	9.65	245	8.27	210	11.38	289	66	30







## 300PSI VSG01 Grooved-End Y Type Strainer

- Installed in both Horizontal or Vertical Line with Upward Flow
- Easier and Faster to Maintain and Install
- Low Pressure Drop

### Material Specifications

#### 1. Body: Ductile Iron ASTM A 536

Standard Surface Finish: FBE coated interior and exterior  
Standard Color: Red RAL3000 I Blue RAL5015  
Option: Hot dip galvanized

#### 2. Screen: Stainless Steel 304, Perforated metal

Standard: 2 - 3"(DN50 - 80): 0.062"(1.6mm) diameter perforations.  
4 - 12"(DN100 - 300): 0.125"(3.2mm) diameter perforations.  
Option: 2 - 12"(DN50 - 300): 0.315"(8mm) diameter perforations.  
Other perforation available upon request



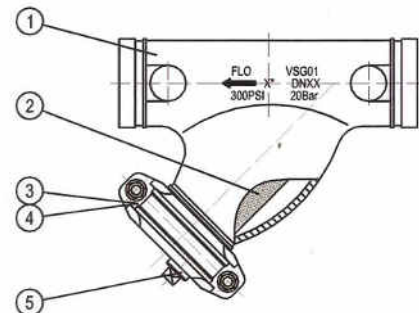
#### 3. Grooved Coupling:

Housing: Material: Ductile Iron ASTM A 536  
Standard Surface Finish: Hot dip galvanized  
Other material or finish available upon request

#### Rubber Gaskets:

Standard:  
Grade "E" EPDM (Color code: Green stripe)  
Temperature range -30°F to +230°F (-34°C to +110°C).

Recommended for cold and hot water service within the specified temperature range plus a variety of dilute acids, oil-free air and many chemical services. NOT



RECOMMENDED FOR PETROLEUM SERVICES.

Option:

Grade "T" Nitrile (Color code: Orange stripe)

Temperature range -20°F to +180°F (-29°C to +82°C). Recommended for petroleum products, air with oil vapors, vegetable and mineral oils within the specified temperature range. Not recommended for hot water services over +150°F (+66°C) or for hot dry air over +140°F (+60°C).

Other material available upon request

**Bolts/Nuts:** Heat treated carbon steel zinc electroplated to ASTM B-633, track head conforming to physical properties of ASTM A-183 minimum tensile 110,000 psi/758340 kPa.

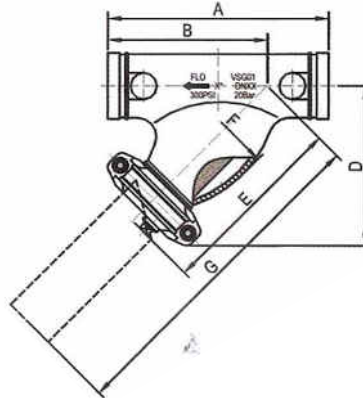
#### 4. Grooved Cap: Ductile Iron ASTM A 536

Standard Surface Finish: Hot dip galvanized, Other material or finish available upon request

#### 5. Plug: Malleable Iron ASTM A 197/ A 47

Standard Surface Finish: Hot dip galvanized  
Threaded: NPT pipe threaded, Other threaded available upon request

### 300PSI VSG01 Grooved-End Y Type Strainer



Part Number	Size		OD	A		B		D		E		F		G		Plug	Weight	
	In	mm	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	mm	In	lbs	kg
SE-VSG01-060	2	50	60.3	9.75	248	7.00	178	7.00	178	8.54	217	3.50	89	13.58	345	1/2	10.0	4.5
SE-VSG01-073	2 1/2	65	73.0	10.75	273	7.75	197	7.83	199	9.32	237	4.13	105	15.04	382	1/2	14.0	6.4
SE-VSG01-076	2 1/2	65	76.1	10.75	273	7.75	197	7.87	200	9.32	237	4.13	105	15.04	382	1/2	14.0	6.4
SE-VSG01-089	3	80	88.9	11.75	299	8.50	216	8.50	216	10.10	258	4.75	121	16.26	413	3/4	20.0	9.1
SE-VSG01-114	4	100	114.3	14.25	362	10.50	267	10.87	276	12.72	323	6.25	159	21.30	541	1	32.0	14.5
SE-VSG01-140	5	125	139.7	16.50	419	12.50	318	12.75	324	14.36	365	7.88	200	23.43	595	1	50.0	22.7
SE-VSG01-141	5	125	141.3	16.50	419	12.50	318	12.75	324	14.36	365	7.88	200	23.43	595	1	50.0	22.7
SE-VSG01-165	6	150	165.1	18.50	470	14.00	356	13.82	351	16.06	408	9.25	235	26.61	676	1 1/4	72.0	32.7
SE-VSG01-168	6	150	168.3	18.50	470	14.00	356	13.90	353	16.06	408	9.25	235	26.61	676	1 1/4	72.0	32.7
SE-VSG01-219	8	200	219.1	24.00	610	18.00	457	17.76	451	20.31	516	12.38	315	34.09	866	1 1/2	125.0	56.7
SE-VSG01-273	10	250	273.0															
SE-VSG01-324	12	300	323.9															

### Y Type Strainer Performance Date

Formulas for  $C_v$  Values

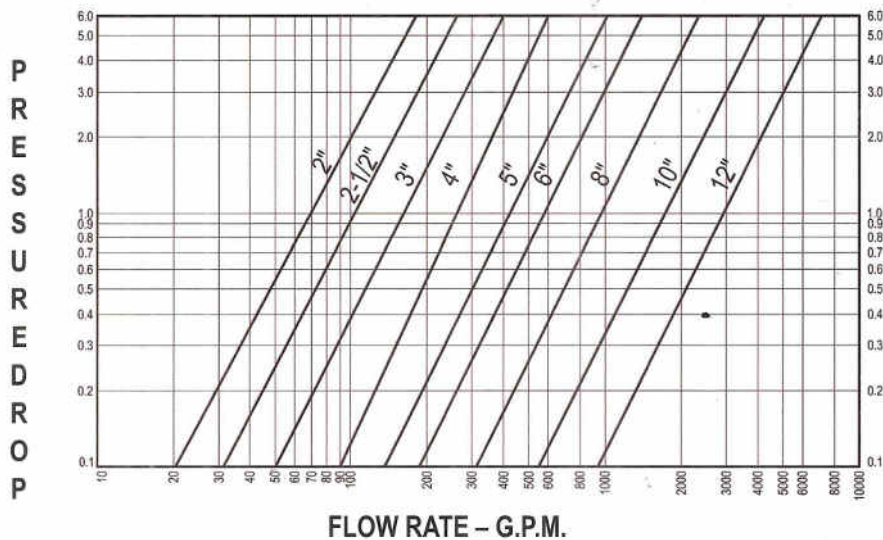
Where:  $Q$  = Flow rate (gallons per minute: GPM)

$$\Delta P = \frac{Q^2}{C_v^2}$$

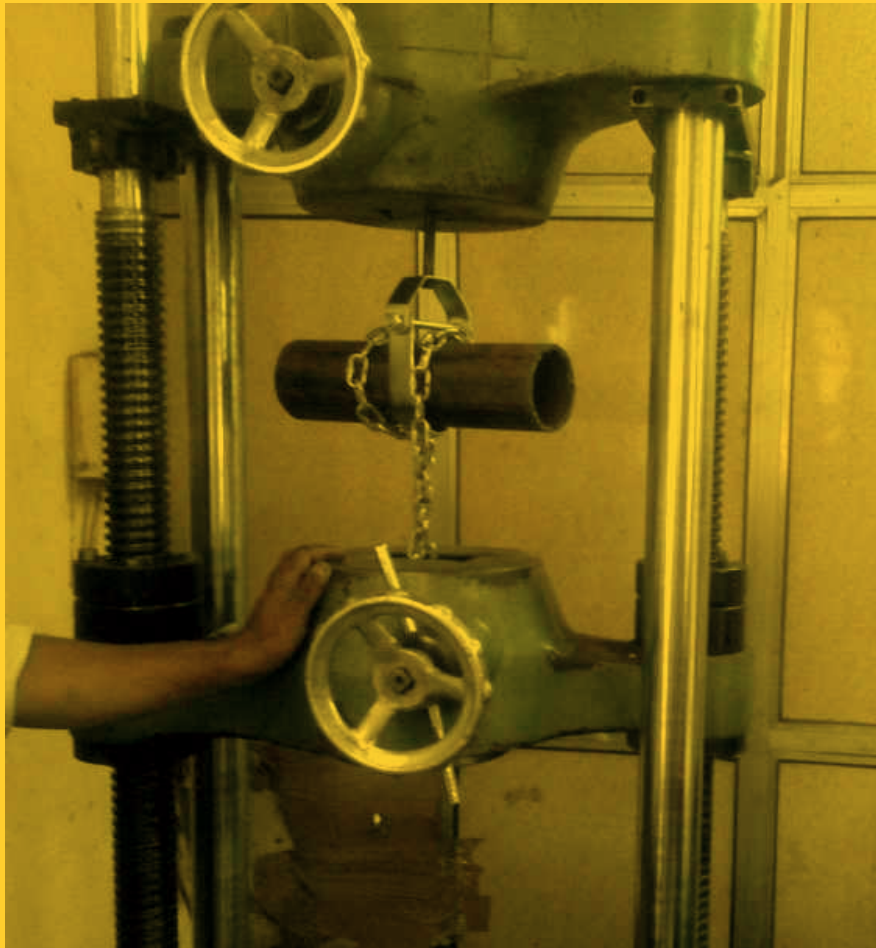
$\Delta P$  = Pressure drop across valve (PSI)

$$Q = C_v \times \sqrt{\Delta P}$$

$C_v$  = Flow coefficient



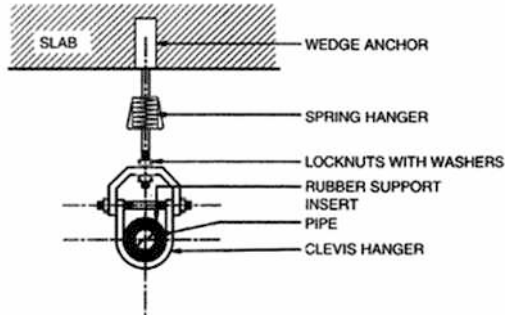
# Installation & Testing



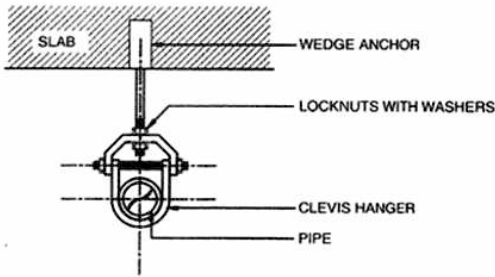


# INSTALLATION INSTRUCTION

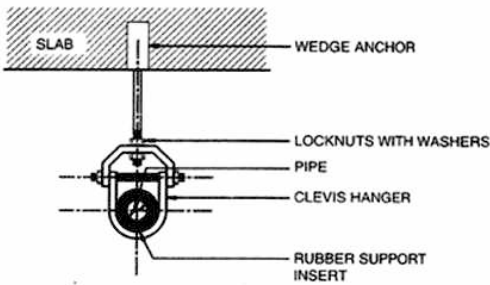
## CLEVIS HANGER



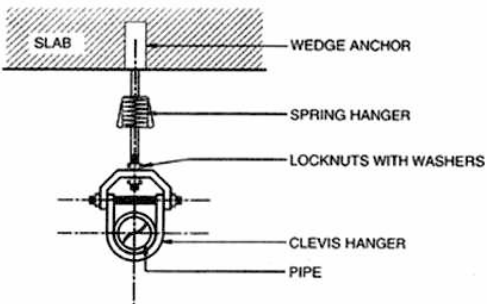
INSTALLATION OF STEEL PIPES USING CLEVIS HANGER AND SPRING HANGER FOR VIBRATION ISOLATION APPLICATIONS.



INSTALLATION OF STEEL PIPE USING CLEVIS HANGER

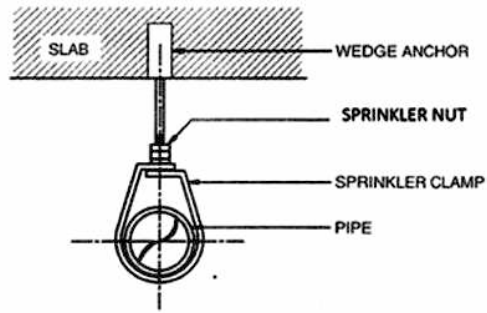


INSTALLATION OF INSULATED PIPES USING CLEVIS HANGER AND RUBBER SUPPORT INSERTS.



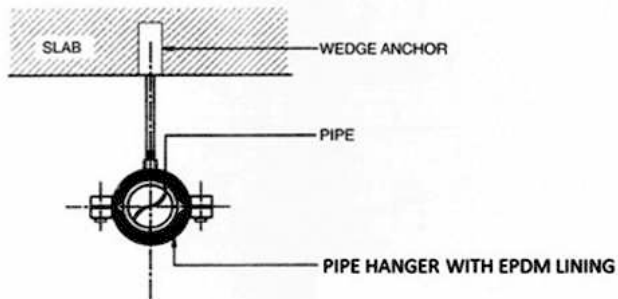
INSTALLATION OF STEEL PIPES USING CLEVIS HANGER AND SPRING HANGER

# SPRINKLER HANGER

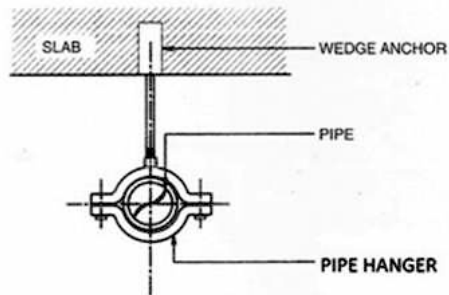


INSTALLATION OF FIRE FIGHTING PIPE USING SPRINKLER

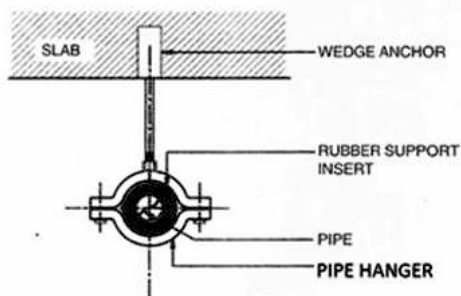
# PIPE HANGER WITH EPDM LINING



INSTALLATION OF PIPE USING PIPE HANGER WITH EPDM LINING

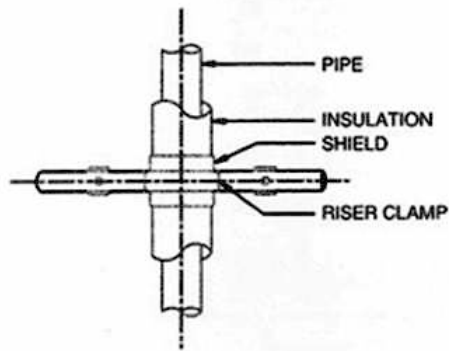


INSTALLATION OF PIPE USING PIPE HANGER



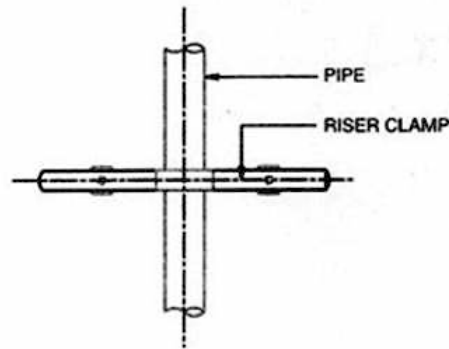
INSTALLATION OF INSULATED PIPES USING RUBBER SUPPORT INSE & PIPE HANGER

# RISER CLAMP



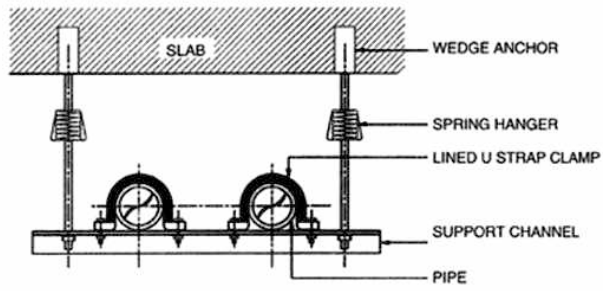
INSTALLATION OF INSULATED PIPES USING RISER CLAMP

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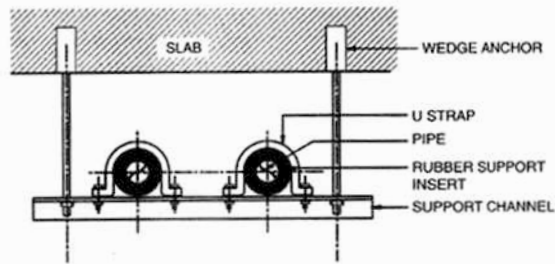


INSTALLATION OF PIPES USING RISER CLAMP

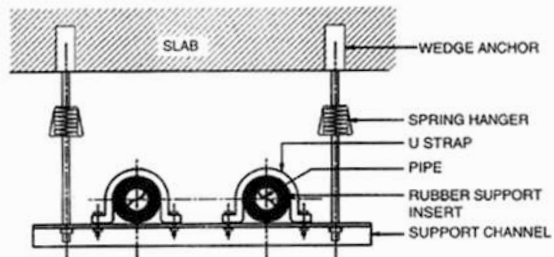
# U STRAP



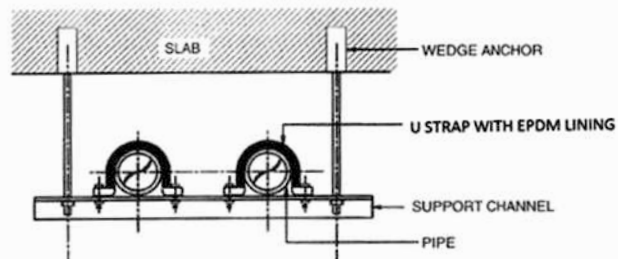
INSTALLATION OF TWO OR MORE PIPES IN PARALLEL USING U STRAP AND SPRING HANGERS FOR VIBRATION & NOISE ISOLATION



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



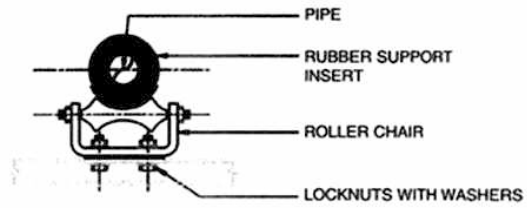
INSTALLATION OF TWO OR MORE PIPES IN PARALLEL USING RSI U STRAP AND SPRING HANGERS FOR VIBRATION CONTROL APPLICATION



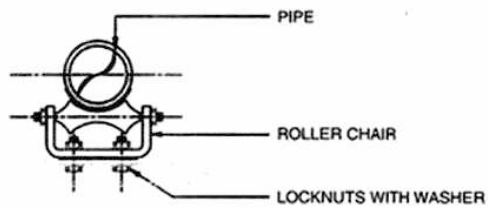
INSTALLATION OF TWO OR MORE PIPES IN PARALLEL USING U STRAP CLAMP FOR NOISE SUPPRESSION



## PIPE ROLLER CHAIR

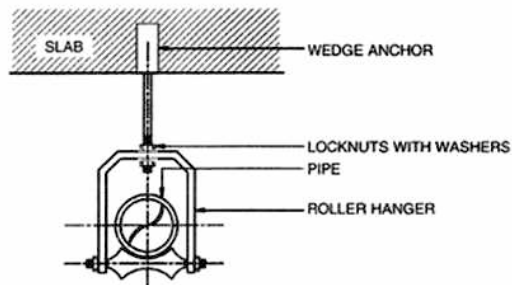


INSTALLATION OF INSULATED PIPES USING ROLLER CHAIR AND RUBBER SUPPORT INSERTS

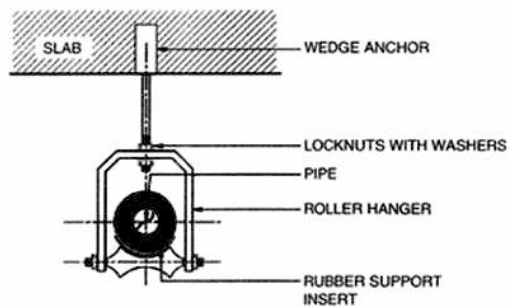


INSTALLATION OF PIPES USING ROLLER CHAIR

## ADJUSTABLE ROLLER CHAIR



INSTALLATION OF PIPE USING ROLLER HANGER



INSTALLATION OF INSULATED PIPES USING ROLLER HANGERS AND RUBBER SUPPORT INSERTS

## CLEVIS HANGER



## SPRINKLER HANGER



## PIPE HANGER WITH EPDM LINING



## RISER CLAMP

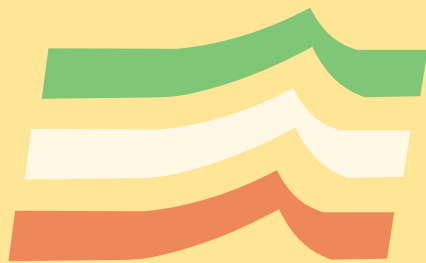




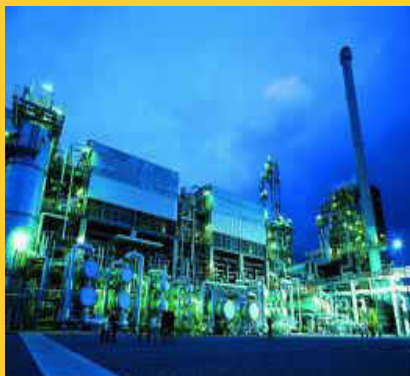
## U STRAP



**ETALIA**



# PROJECT DETAILS



## SAKETH EXIM PVT LTD

Plot No. - D 146/147 - M.I.D.C  
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## ETALIA

