



# EASYFLEX

**KANWAL INDUSTRIAL CORPORATION**









**KIC is a family owned business started in the year 1973 by the founder Mr. Kanwal Jeet Singh.**

Today, our expertise lies in the manufacturing of Rubber and Metallic Expansion joints, Vibration isolation technology and Design Engineering for Shock isolation, piping technology and Seismic applications.





**Easyflex**<sup>TM</sup>

- FLEXIBLE CONNECTIONS
- VIBRATION, SEISMIC & ACOUSTIC ISOLATION
- MODULAR PIPING SUPPORT SYSTEMS
- DESIGN ENGINEERING



We are committed to business process improvements in the engineering sector with a focus on automating Selection and Design technology. Our global strategic partnerships, enable us to create and deliver world class products for our customers.



PUMPS

CHILLERS

ELECTRICAL APPLICATIONS

DRAINAGE APPLICATIONS

BLOWERS

## RUBBER EXPANSION JOINTS & BELLOWS

- Arch Type
- Floating Flanges
- Bus Duct Bellow
- Rubber Sleeve Joints
- Rubber Bellows for Drain systems

## DUTY CONDITIONS

- Temperature : 20°C 100°C
- Pressure : PN 10 | PN 16 | PN 20
- Sizes : 25mm to 2000mm ID



**FLUIDSEALING**  
ASSOCIATION™



# FLEXIBLE CONNECTIONS

## RUBBER



HYDRO TESTING



PNEUMATIC TESTING



# FLEXIBLE CONNECTIONS

## RUBBER



COMPOUND TESTING



SHORE HARDNESS TESTING



# FLEXIBLE CONNECTIONS

## RUBBER



RECTANGULAR BELLOWS



CUSTOM DESIGN EXPANSION JOINTS



# FLEXIBLE CONNECTIONS

## DRAINAGE & PLUMBING APPLICATIONS

## RUBBER





# BUS DUCT BELLOWS

RUBBER | ALUMINIUM



Bellows are used in the Electrical Bus Duct system which prevents the transmission of vibration to Electrical components.

Since pressure requirements in ducts are very low compared to piping systems, they are manufactured in lighter construction to be more responsive to the reduced stiffness of sheet metal ducting.

Aluminium / Copper can also be the material of construction for these applications.

**Easyflex is OEM Supplier of bellows to NTPC & BHEL**



**They can be round, square, rectangular, even "T" or "L" shaped. These can also be constructed with Multiple Arches.**



PUMPS

CHILLERS

GENSETS

FIRE PIPING

BOILERS & TURBINES

## METALLIC EXPANSION JOINTS & BELLOWS

- Single Axial Joints
- Exhaust Gas Bellows
- Gimbal Expansion Joints
- Universal Expansion Joints
- Pressure Balanced Expansion Joints
- Stainless Steel Braided Hose Connectors
- Flexible Fire Sprinkler Hoses

## DUTY CONDITIONS

- Temperature : -70°C - 1500°C
- Pressure : PN 2 | PN 10 | PN 16 | PN 20 | PN25 | PN40
- Sizes : 25mm to 4000mm ID





# CHILLER WITH METALLIC BELLOW



Applications

PUMPS

CHILLERS

GENERATORS

BOILERS

TURBINES

ENGINES

EXHAUST DUCTS

FLUE GAS PIPES

Easyflex Metallic Expansion joints fitted at suction and discharge of Water Cooled Chiller at an International Airport facility.



# FLEXIBLE CONNECTIONS

## METALLIC



**Thermal Expansion** in Piping & Ducting systems connected to **Mechanical Equipments** cause **Stress and Vibration** in the associated pipe work.

Expansion Joints are designed to withstand **Pressure of the System** with enough **Flexibility to compensate for movements** required by the piping.

### Types of Movements

- Axial Elongation
- Axial Compression
- Lateral
- Angular
- Universal

A Metallic Expansion Joint is composed of a **Flexible Bellow Element** made up of a series of **Convolutions** with suitable end fittings.



Exhaust Expansion Joint





HALOGEN LEAK TESTING



LIQUID & FLUORESCENT PENETRANT EXAMINATION



# FLEXIBLE CONNECTIONS

## UNIVERSAL TIED BELLOW FOR PIPE RISERS





# FLEXIBLE CONNECTIONS

## GIMBAL BELLOW FOR 300MM MOVEMENT



PRESSURE TESTING

PNEUMATIC TESTING

SPRING RATE TEST



# SS Braided Hose Connections

Corrugated Metallic Hoses and SS braids combined with custom end fittings make up for Flexible Connections for

- Air Handling Units
- Fan coil units
- Steam generation
- Oil & Gas application



Available in SS304, SS316, SS321 - with end fittings like Fixed / Rotating Flanges, Couplings, Pipe ends and more.

MAJOR SUPPLY TO DATA CENTERS





# AHU / FCU FLEXIBLE CONNECTIONS

## EPDM HOSE WITH SS BRAIDING

With EPDM Lining and Brass End Fittings, these flexible connectors are the perfect cost-effective solution.



Also available in Corrugated Type Hose without Braiding



# FIRE SPRINKLER HOSE PIPES

Braided  
Unbraided

Including all Accessories and End fittings.





AIR HANDLING UNITS

AXIAL FANS

BLOWERS

AIR POLLUTION SYSTEMS

INDUSTRIAL DUCTING

## FLEXIBLE DUCT CONNECTORS

- Fabric Rolls
- Fire Rated Fabric
- Fabrics with GI Strip
- Fibreglass Insulated Fabric
- 2 Ply Fabrics | Double Canvas
- Factory Fabricated Flanged Connectors

## DUTY CONDITIONS

- Materials : **PVC | NEOPRENE | SILICONE**
- **Fabric only | GI Strip Connector | Flanged Connector**
- Sizes : **150.200.300.350.1000.1500mm width**
- **45x60|100|150 . 70x100|150**





# FLEXIBLE CONNECTIONS

## FABRIC





# FLEXIBLE CONNECTIONS

## FLANGED FABRIC DUCT CONNECTOR





# FLEXIBLE DUCT CONNECTORS

Air Duct installation connected with **Fans, Blowers** and **Air Handling Units** transmit noise and vibration throughout the entire ducting

Flexible Connections in the form of **Fabric Rolls** or **Flanged Connectors** help isolate noise and vibrations from Air Handling Units



- **UL Listed Fabrics**
- **NFPA Approved**
- **Fire Rated & Retardant**
- **Available in Rox, Neoprene, Silicone and Insulated Fibre glass**
- **For temperature ranges upto 260°C**
- **Customised to Round, Rectangular and Square connectors**
- **Also available for Double Duct applications**





## Round to Rectangular

FABRIC



FLEXIBLE CONNECTIONS

ROUND TO RECTANGULAR DUCT CONNECTORS | SIZE 1400 to 1350 DIA X 300mm OAL



# VIBRATION ISOLATION

## RUBBER & SPRING BASED

Vibration isolation is the process of eliminating unwanted vibrations in machines by isolating the equipment from the source of vibration.

The Easyflex Vibration isolation range is designed for Ceiling suspended and Floor mounted equipment taking into consideration various installation parameters.



EASY FOOT

SPRING BASED ISOLATORS

SPECIAL APPLICATIONS

INTERIA BASE FRAMES

RUBBER BASED ISOLATORS



EasyFoot by Easyflex has been designed to carry large **Air Handling Units, Chiller Systems** and other heavy plant loads especially for Roof top applications.

### Rooftop Supports for Equipment

- Modular System
- Easy & Quick Installation
- Drilling or penetration of Waterproof Roof membrane is not required.
- Made from Recycled Rubber and adds to Carbon Credits for Green Buildings.









# THE EASYFOOT

## H FRAME KIT



Easyflex H-Frame Kit for PAC Unit



# OUTDOOR UNITS / SOLAR



**EASYFLEX STRUTFOOT**

RECYCLED RUBBER | PIPEWORK / CABLE TRAYS / OUTDOOR UNITS / SOLAR PANELS



# AXIAL FANS

## FLOOR MOUNTED



VIBRATION ISOLATION  
FLOOR MOUNTED EQUIPMENT | RESTRAINED / OPEN SPRING MOUNT



# AXIAL FLOW FANS



Hangers are available in Spring , Rubber and a combination of both.

**Fans, FCU's, AHU's and Chilled water pipes** are common applications for these Spring Hangers.

**VIBRATION ISOLATION**  
CEILING SUSPENDED | POINT LOAD 1250 Kg

Easyflex



Axial Fans installed with Spring Hangers and Flexible Duct Connectors





## Restrained Spring Isolators



- Models with upto 9 Springs and more
- Point Load Capacity upto 16 TON
- Seismically Restrained Isolators



Enclosed Spring Isolator



Cased Spring Mount



Closed Spring Isolator

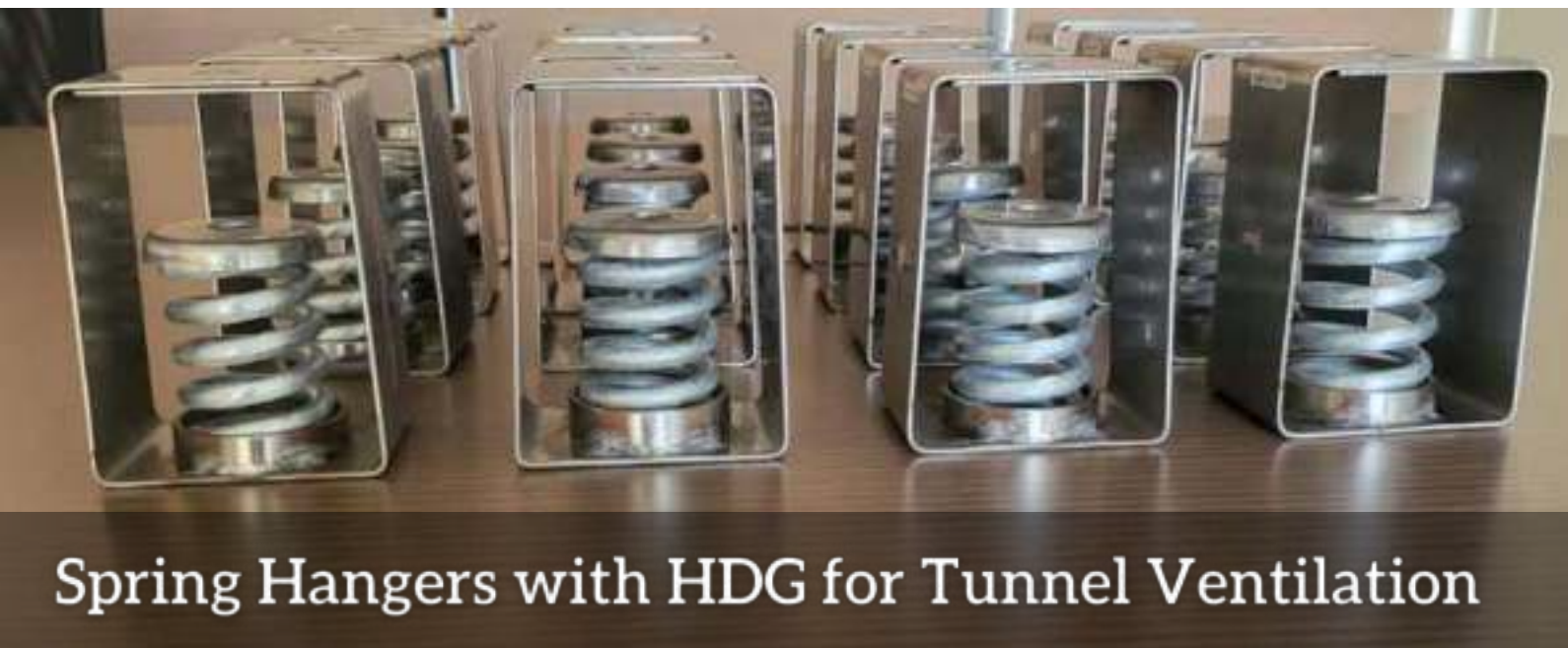


# VIBRATION ISOLATORS

## SPECIAL APPLICATIONS



SS Spring Hangers for Tunnel Ventilation



Spring Hangers with HDG for Tunnel Ventilation



SS Enclosed Spring Isolator



Open Spring Mounts for Marine Applications

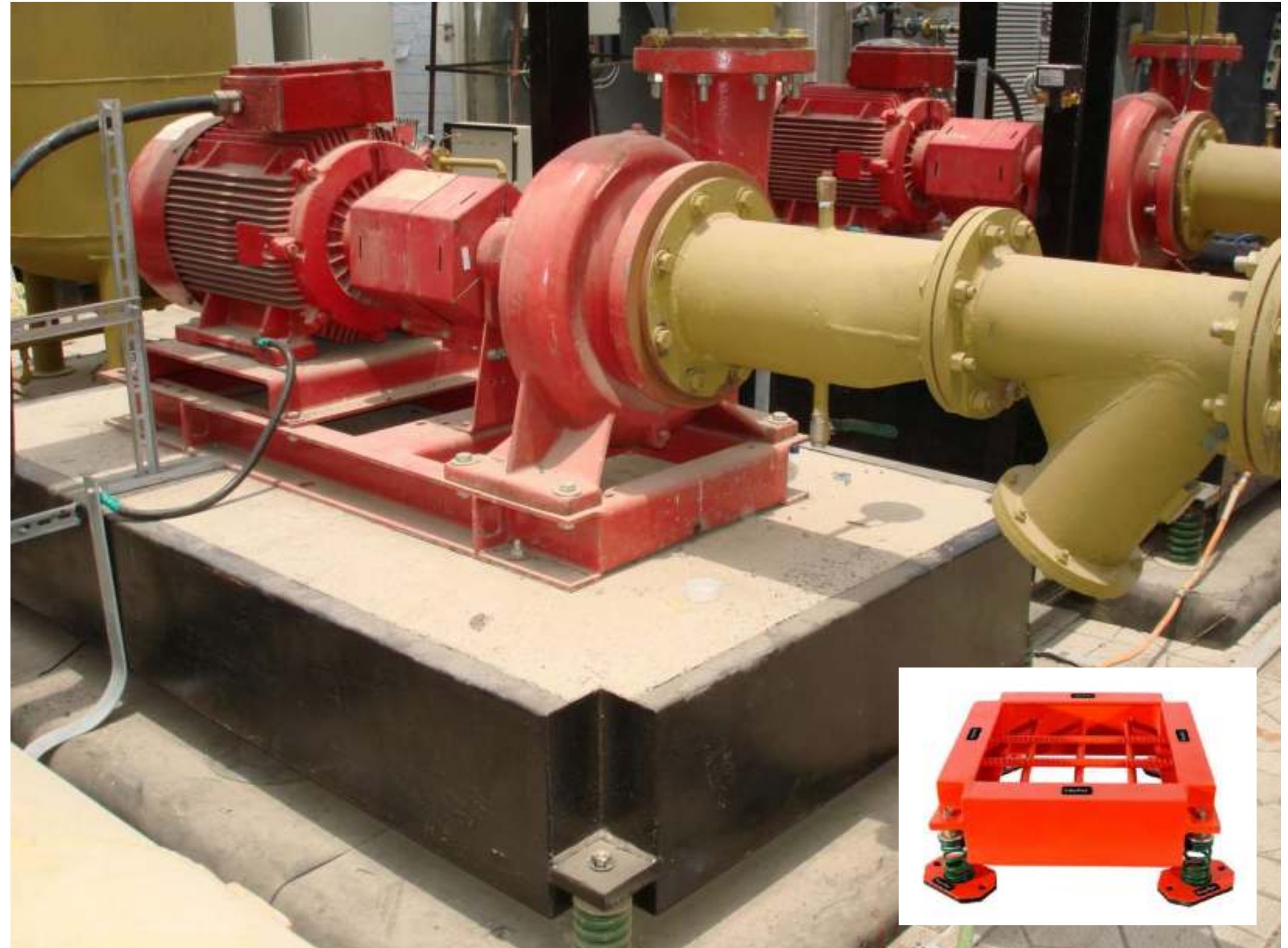


# INERTIA BASE FRAME FOR PUMPS

Poured with **Concrete** and supported by **Noise & Vibration Isolators**, Inertia Base Frames are floating foundations for **Pumps** and are totally isolated from the structure due to Air Gap.

Easyflex Inertia Base Design Report contains Technical Parameters like :

- **Estimated Base Design Dimensions & Weights (including concrete)**
- **Estimated Deflections**
- **Vibration Isolation Efficiency Calculation**





# DESIGN CRITERIA

The correct inputs are critical to selection and design of the right Inertia base to match the on-site installation parameters. Our Design team adopts a methodological approach to make sure the base is designed to suit site conditions.

Inertia bases provide suitable attachment for vibration isolators and reduce motion of equipment during start-up and shut-down.

Help to reduce rocking by lowering the equipment centre of gravity.

Pump Make

Pump Type

Pump Dimensions

Pump Motor

Installation Location

Foundation Details

INERTIA BASE





Sumer Singh

● Active



Easyflex

Logout ▾

### General

⚙ Dashboard

⚙ Selection Tools

🍪 Equipment ▾

🍪 Customer ▾

🍪 Projects ▾

### Inertia Base selection Tool

#### Selection Tool

Inertia base Type	Pump Make	Pump Model
<input type="text" value="EFIB + EFOS"/>	<input type="text" value="Select"/>	<input type="text" value="Select"/>
Tag Number	Factor	Quantity
<input type="text"/>	<input type="text"/>	<input type="text" value="in Nos"/>
Deflection	<input type="button" value="Calculate"/>	
<input type="text" value="25 mm"/>		

#### Inertia Base 3D Model



## EASYFLEX INERTIA BASE SELECTION SOFTWARE

700+ PUMPS DATABASE | INSTANT SELECTION | INERTIA BASE & VIBRATION ISOLATION DESIGN REPORT







# ANTI VIBRATION MOUNTS & PADS

## RUBBER BASED



**Round Mount**



**Neoprene Grommet Mount**



**Cork Sandwich Pad**



**Easy Mount**



**Waffle Pad**



**Ribbed Mounting Pad**



**Metal Sandwich Pad**



**Turret Mount**

These are mostly used for machine tools, production equipments, heating and ventilation equipments, pumps, generators, compressors, air handling units, fans, under heavy equipment, electronics or sensitive laboratory apparatus, business machines, computers and data processors etc



# SEISMIC ISOLATION

## FOR PIPING & EQUIPMENT

The term **“Seismic”** refers to the forces related to the motions of an earthquake. These forces interact with a structure in a random fashion – predominantly horizontal, often with directional emphasis & sometimes with a considerable vertical component.

Seismic isolation helps protect equipment by not amplifying the seismic input.

Seismic restraint is designed to keep equipment attached to a building structure so that it does not become a projectile.

ISOLATORS & RESTRAINTS

U & V CONNECTORS

WIRE BRACING SYSTEMS





Negligence to secure non-structural elements of a building can lead to multiple negative effects

- **Primary hazard** : when the damage to the NSE can impair its own functionality and cause a threat to people's lives in the building.
- **Secondary hazard** : when the NSE can cause an action that may lead to loss of life, property and loss of building functionality.

For instance - damage to piping which leads to leakage of water, flooding the building and eventually shutting down the electricity, thus making the building unusable.





# PIPING , DUCTING & CABLE TRAYS

Seismic Bracing Systems are designed and engineered to **Brace and Secure Non-Structural Equipment** (Architectural elements, Mechanical and Electrical equipment and supplies and other building furniture and services) within a building or structure **to minimise Earthquake damage** to suspended services.

## EASYFLEX SEISMIC BRACING KIT

Seismic Rod Bracket

Seismic Bracket

Pre-determined length of wire





Building Codes in many areas require components to be capable of resisting forces created during a Seismic Event.

Resilient Snubbers used while installation can limit the motion experienced by equipment and ensure it remains in place.

**Easyflex Seismic Snubber series is suitable for 250 Kg to 11500 Kg Point Load.**





# VENTILATION FANS



## SEISMIC ISOLATORS

PROJECT : SEAWOODS - NAVI MUMBAI | RESTRAINED SPRING MOUNTS





# AIR COOLED CHILLER



**SEISMIC ISOLATION**

FLOOR MOUNTED | RESTRAINED SPRING ISOLATOR | 2 SPRING MODEL



# PIPING



With the loops extreme flexibility and low force to move, the loop absorbs the seismic energy and imposes minimal loads on the adjacent pipe hangers, supports or nozzle loads on major equipment.



Unique to the loop is the incredibly low amount of force required to bend its legs, minimizing anchor loads, guiding and installation costs.

## FLEXIBLE CONNECTORS

SEISMIC ISOLATION | MOVEMENT IN 6 DIRECTIONS | FOR FIRE PIPING AT BUILDING EXPANSION JOINT



# PIPE SUPPORTS & CLAMPS



**Sprinkler Clamp**



**Plain Split Clamp**



**Clevis Hanger**



**EPDM Lined Sprinkler Clamp**



**EPDM Lined Plain Split Clamp**



**EPDM Lined Clevis Hanger**



**PE PIPE SUPPORT**







# ACOUSTIC ISOLATION

## RUBBER & SPRING BASED

Architectural or acoustic isolation helps to absorb and isolate sources of noise and vibration and eliminate the transfer of sound energy from one environment to another.

To achieve Sound Isolation, Floating Floors are the most effective way of reducing sound transmission and vibration from the floor above.

Isolated walls are also an effective way to reduce sound transmission between rooms.

The Easyflex Acoustic Range is designed for

- **Walls**
- **Floors**
- **Ceilings**

### Applications

**HOTELS**

**RECORDING STUDIOS**

**GYMS**

**AUDITORIUMS**

**NIGHT CLUBS**

**SWIMMING POOLS**



# ACOUSTIC ISOLATION

## FLOATING FLOORS

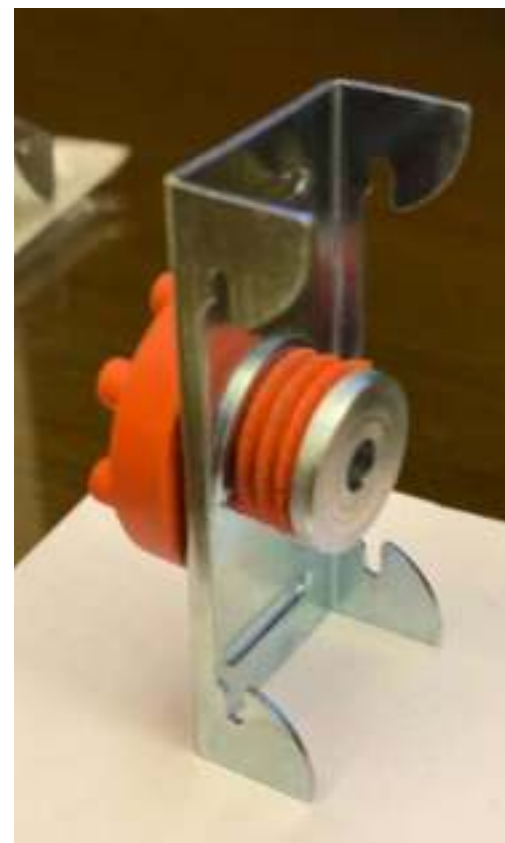


**Jack Up mounts help create a floating floor with an Air Gap of 4 Inches for a Music Recording Studio.**



# ACOUSTIC ISOLATION

## FOR DRYWALLS



**Wall Isolation Clips**

**Installation of Acosustical Furring Clip**



**DESIGN & ENGINEERING**

**EQUIPMENTS**

**SHOCK ISOLATION DESIGN**

**VIBRATION EFFICIENCY CALCULATIONS**

**VIBRATION TROUBLESHOOTING**

**VIBRATION RETROFITTING**

**SEISMIC DESIGNING**



EJMA DESIGN REPORTS

VERTICAL RISER PIPE ANALYSIS

PIPING STRESS ANALYSIS

FINITE ELEMENT ANALYSIS

RUBBER LINING



# Easyflex



**LANDMARK PROJECTS**

## AIRPORTS | METROS | BUILDINGS

DIAL	NEW DELHI
BIAL	BANGALORE
MIAL	MUMBAI
CIAL	CHENNAI
DMRC	NEW DELHI
PUNE AIRPORT	PUNE
TCS	NAGPUR
TCS	HYDERABAD
BOSCH	BANGALORE
IICC DWARKA	NEW DELHI
VODAFONE	MUMBAI
CTS	KOCHI
CTS	CHENNAI
CTS	KOLKATA
SHELL	BANGALORE
BRIGADE TECHNIPOLIS	KOCHI
MRO BOEING	NAGPUR
GIFT CITY	AHMEDABAD
AMAZON	MAHAPE
M3M	GURUGRAM
Hyderabad Metro TOD	HYDERABAD



# Easyflex

TM

## LANDMARK INTERNATIONAL PROJECTS

### BAHRAIN

DALKIA DISTRICT COOLING

ACRAPITA

ISA SPORTS CITY

BAHRAIN CITY CENTER

BAHRAIN BAY PROJECT

DURRAT AL BAHRAIN

PLATINUM TOWER

### OMAN

THE WAVE

BAIT AL REEM

BLUE CITY - PHASE 1

KOM-4

### UNITED ARAB EMIRATES

HATTA SCHOOLS 1&2

XL TOWER

CAREFOUR, MUSAFFA

LIBERTY HOUSE

CENTRAL MARKET

FUJAIRAH BUSINESS CENTER

### SAUDI ARABIA

DHAHRAN SWT PLANT

### SRI LANKA

ITC ONE COLOMBO

### ISRAEL

ELTA ISRAEL

## BUILDINGS

PBCOM TOWER

PHILLIPINES

IHG HOTEL

MAURITIUS

LUSAIL PLAZA

QATAR

BANK OF MUSCAT - HQ

OMAN

NECCO

UNITED STATES OF AMERICA

CARRIG

UNITED STATES OF AMERICA

IDB BOSTON

UNITED STATES OF AMERICA

THE FORD

UNITED STATES OF AMERICA

PARCEL U

UNITED STATES OF AMERICA

TOLL BROTHERS MEDWAY

UNITED STATES OF AMERICA

DRAWDOWN BREWERY

UNITED STATES OF AMERICA

## AIRPORTS & METROS

RIYADH METRO

KINGDOM OF SAUDI ARABIA

MALE INTERNATIONAL AIRPORT

MALDIVES

KOLWEZI AIRPORT

REPUBLIC OF CONGO

## INDUSTRIAL PROJECTS

AL DUR POWER PLANT

BAHRAIN

DANGOTE REFINERY

NIGERIA



# PARTIAL CLIENT LIST




# PARTIAL PROJECT LIST

Commercial & Office Buildings	Hospital & Educational	Governments	Metro's & Airport's
<p>Net Magic IT Solution - Bangalore The Indian Film Combine - Maker Maxity - Mumbai Amazon - Hyderabad-Telangana RMZ Infinity Co works - Chennai Brigade Technopolis- World Trade Center - Kochi Wave One - Noida Wave City - Noida Esplanade - Bhubaneshwar NBCC - Kidwai Nagar J.P International Centre - Lucknow South City Mall - Kolkata Tata Brookfield Multiplex - Gurgaon Kalyani Tech Park P) Ltd. - Bangalore Netmagic IT Solutions - Mumbai DAICEC BKC Project - Mumbai Jodhpur Mega Mall - Jodhpur LUMAX CORPORATE OFFICE - Gurgaon</p>	<p>Agartala Govt Medical College -Cancer Hospital - Agartala SRM University - Amaravati- A.P. Benett University - Greater Noida Cancer Hospital - Lucknow National Cancer Institute AIIMS - Jhajjar AIIMS - New Delhi American Embassy School - New Delhi American International School - Chennai Apollo Lavasa Health Corp. Al Shifa Hospital Pvt. Ltd. - Kerala Columbia Asia Hospital (P) Ltd. - Mumbai Crescent Engineering College - Noida Columbia Asia Hospital Ltd. - Mysore Dr.N.G.P. Arts and Science College - Coimbatore Escorts Hospital - Faridabad Gautam Budh University - Greater Noida G K General Hospital - Bhuj</p>	<p>NBCC - Kidwai Nagar High Court - Lucknow Police Bhawan - Lucknow Marine Chemical Davison - Kutch Gujarat State Fertilizer &amp; Chemicals Ltd. - Gujarat Gift City - Ahmedabad Americian Embassy - New Delhi Asian Development Bank - Trivandrum BHEL - Haridwar Bulgarian Embassy - New Delhi CSEB - Korba Canadian High Commission - New Delhi DIAL - Delhi I G Stadium - New Delhi Indian Oil - Panipat ISRO - Shar Khalsa Heritage Project - Punjab National Institute of Biologicals - Noida</p>	<p>Delhi Metro Rail Corporation - Delhi DMRC Phase-I - Delhi DMRC Phase-II - Delhi Hyderabad Metro Rail Corporation - Hyderabad Jaipur Metro Rail Corporation - Jaipur L &amp; T Musarambagh - Hyderabad Mumbai Metro Rail Corporation - Mumbai Chennai Metro Rail Corporation - Chennai Noida Metro Rail Corporation - Noida Bangalore Metro Rail Corporation - Bangalore Rajiv Gandhi International Airport - New Delhi Chaudhary Charan Singh International Airport - Lucknow Kannur International Airport - Kannur Cochin International Airport - Kochi Ahmedabad Intl Airport - Ahmedabad Rajiv Gandhi International Airport - Hyderabad Chenani Nashri Tunnelway Limited - Tamil Nadu Bengaluru International Airport - Bangalore</p>
Industrial & Factories	Hotels	Real Estate Developers	Residentials
<p>Granules India Ltd. - Vishakhapatnam ACC Mokka - Japan Alkem Laboratories - Daman Global Automotive Research Centre (GARC) - Chennai BUILDINGS &amp; FACTORIES IC - Mattanur Swidhinath Commercial Industrial Complex - Bhiwandi MLCP - Gurugram IKG Industrial Building, - Gurgaon Abishek Industries - Gurgaon Aditya Birla Minacs - Aurangabad AFL Pvt. Ltd. - Chandigarh Asian Paints - Greater Noida Ajmer Vidyut Vitran Nigam Ltd. - Rajasthan Apollo Tyres - Bangalore A.G. Clothing Pvt. Ltd. - Chennai Bekaert Industries - Pune Bennet &amp; Coleman - Sahibabad Bharat Heavy Electricals - Gujrat</p>	<p>Accent Hotel Pvt. Ltd. - Chennai City Mart Hotel - Sohna Road Cushman &amp; Wekfield - Mumbai DLF Hotels &amp; Apartments Pvt. Ltd. - Gurgaon Dodla Hotel - Trivandrum Eros Shangri-La Hotel - New Delhi GBU Guest House International - Greater Noida GMR Hotel - Andhra Pradesh Goan Hotels &amp; Club Pvt. Ltd. Highland Hotels - Kochi Hotel West Inn Ltd. - Ahmedabad Hotel Holiday Inn - Delhi Indus Hotel - Dwarka Indus Hotel Pashim Vihar Inorbit Mall - Mumbai ITC Hotels - Bangalore ITC Hotels - Calcutta ITC Parel - Mumbai</p>	<p>HCL IT City - Lucknow Condor One Realty - Gurgaon Lodha Belmondo - Mumbai Lodha World One - Mumbai SuperNova - Noida DLF IT Park-1 - Kolkata Brigade Enterprises Limited - Kochi NBCC - New Delhi</p>	<p>My Home DIVIJA - Hyderabad- Telengana DLF Crest - Gurgaon DLF Cameliyas - Gurgaon HEARTSONG - Gurgaon Vijayashree Layout - Bangalore Jaypee Greens - Greater Noida Vipul Belmonte - Gurgaon Omaxe Forest Spa - Noida</p>





**EASYFLEX**

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GLOBAL VENTURES