



EST. 1985



LEADING MANUFACTURERS OF AEROSPACE, RAILWAY AND SATELLITE COMPONENTS



- Hydraulic Fittings
- SS Hose Assemblies
- Aerospace Quality
- Ermento Type
- Precision Parts
- SS Bellows

About Our Company

Shine Aero, founded in 1985, is a renowned producer, exporter, and local provider of a full line of Corrugated Hoses and Hydraulic Fittings. We also provide Stainless Steel Hose Assemblies, Metal Expansion Bellows, Precision components, and Aerospace grade. Our entire range is made from high-quality raw materials, ensuring great durability, minimum maintenance, optimal performance, and high tensile strength. These are widely used in the railway, chemicals, automobiles, cement, marine, aviation, defense, and SPM industries.

We are an ISO 9001 certified organization having membership with IDA Cherlapally Association and an EN 15085-2 certified in the welding process from TÜV NORD. Our company is supported by cutting-edge infrastructure, including a CAD facility that allows us to construct the most recent variety of products. Fitting our large clientele. The modern facilities and help of experienced professionals enable us to efficiently satisfy the expanding demands of our global clients.



Our organization is backed by state-of-art infrastructure with the CAD facility that enables us to fabricate the latest range of Fasteners and Fitting for our huge client base. The sophisticated facilities and assistance from experienced professionals enable us to meet the growing demands of our global clients effectively. Our mentor Mr. Chindam Raghu has profound knowledge and rich experience in the domain. His in-depth experience in the domain and ethical business practices has been the important factor behind our immense success in the industry.

OUR HAPPY CLIENTS



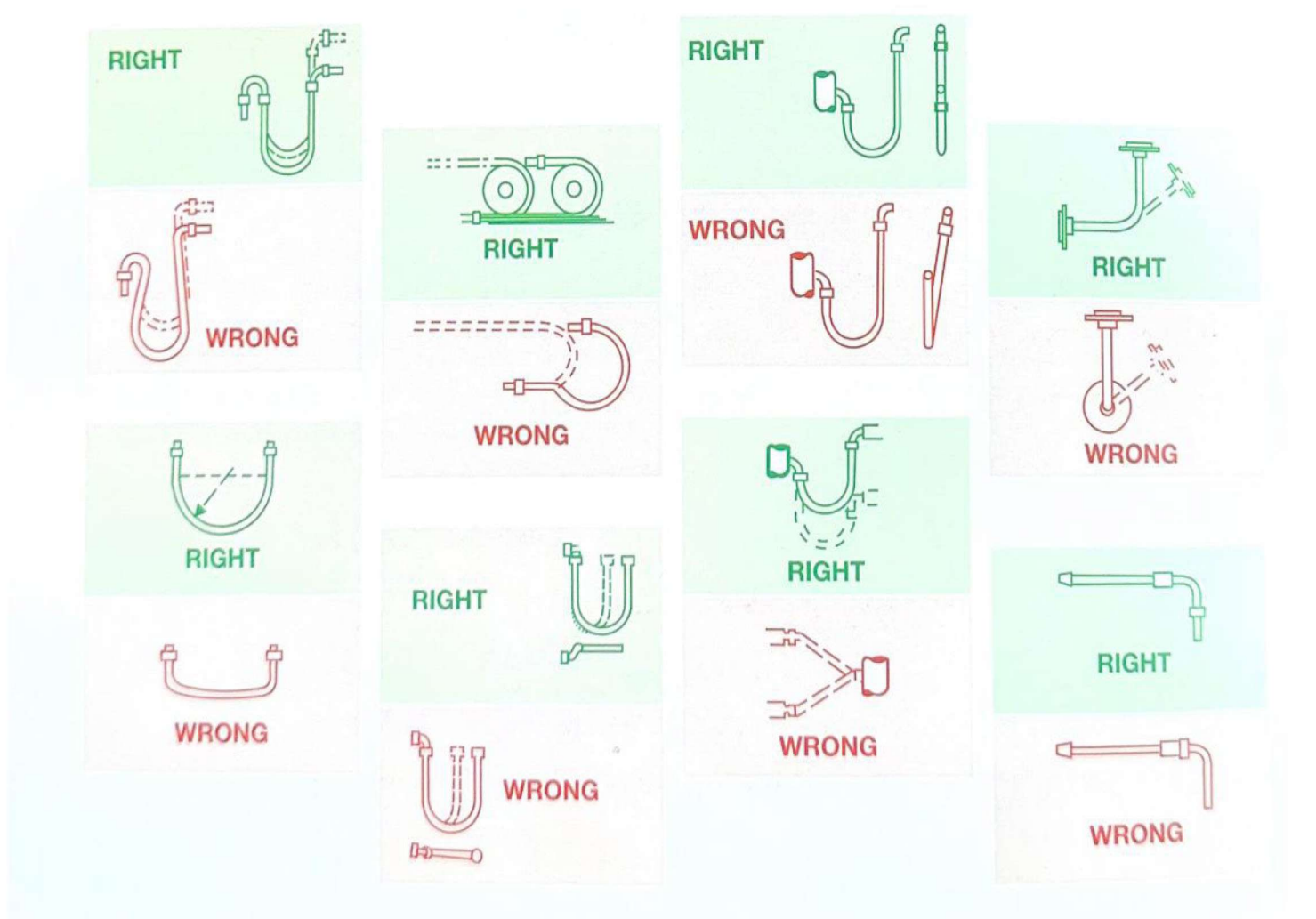
Our Clients Page celebrates the strong partnerships with distinguished organizations like Medha, Indian Railway, ISRO, ECIL, BHEL, BDL, Hindware, DRDL, Asthra Microwave, and Toshiba.

We take immense pride in delivering excellence, innovation, and customer satisfaction. Collaborating with these prestigious clients has enriched our experience and allowed us to push the boundaries of innovation. Together, we have contributed to vital projects, solving complex challenges, and making a positive impact on society. We are grateful for the trust placed in us, and we look forward to forging new relationships and serving more clients with the same dedication and passion. Let's embrace new opportunities and create a brighter future together.



INSTALLATION

Proper mounting of stainless steel flexible hose assemblies is crucial for optimal performance and extended lifespan. Early assembly failures can be attributed to severe bending at the end connection, strained and twisted mounting, and high fatigue in dynamic applications. The table provides a clear comparison between correct and erroneous mounting methods, emphasizing the importance of following manufacturer guidelines, ensuring proper alignment, and selecting suitable hoses to ensure reliable operation and longevity in diverse industrial environments. Regular maintenance and inspection further contribute to identifying potential issues early on and preserving the assemblies' effectiveness over time.





Our Values

Trust, Team, and Action: The Pillars of Success

At our organization, we firmly believe in the core values of Trust, Team, and Action. These pillars form the foundation of our success and guide us in the proper conduct of our business and the efficient management of our projects.



Vision & Mission

VISION:To be the Company of choice for our clients in our global markets, for all our business.

MISSION:We will deliver reliable, high-quality solutions for global infrastructure, always ensuring integrity.

Some of the quality parameters on which our range of **Hoses and Fittings** is tested:



Tensile
Strength



Durability



Corrosion
Strength



Dimensional
Accuracy

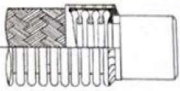
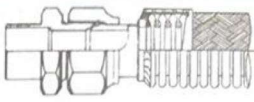
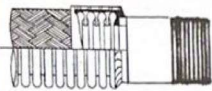
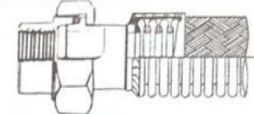
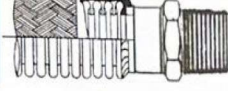
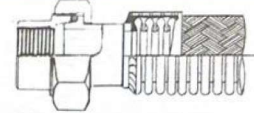
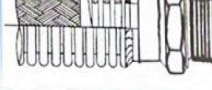
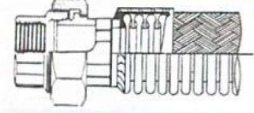
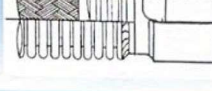
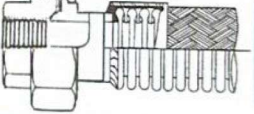

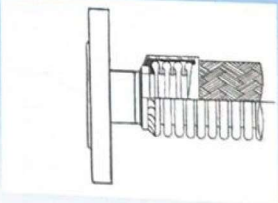
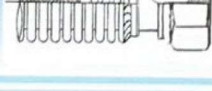

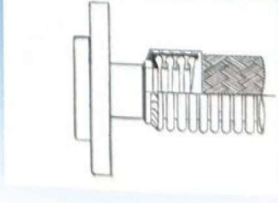

Shine Aero (Flexible Hose Division)

A business unit has been established under the Shine Aero brand to assist our forward integration push to produce a comprehensive range of Stainless Steel Corrugated Flexible Hoses & Hose Assemblies (1/4" to 1") in AISI 304 conforming to international quality standards.



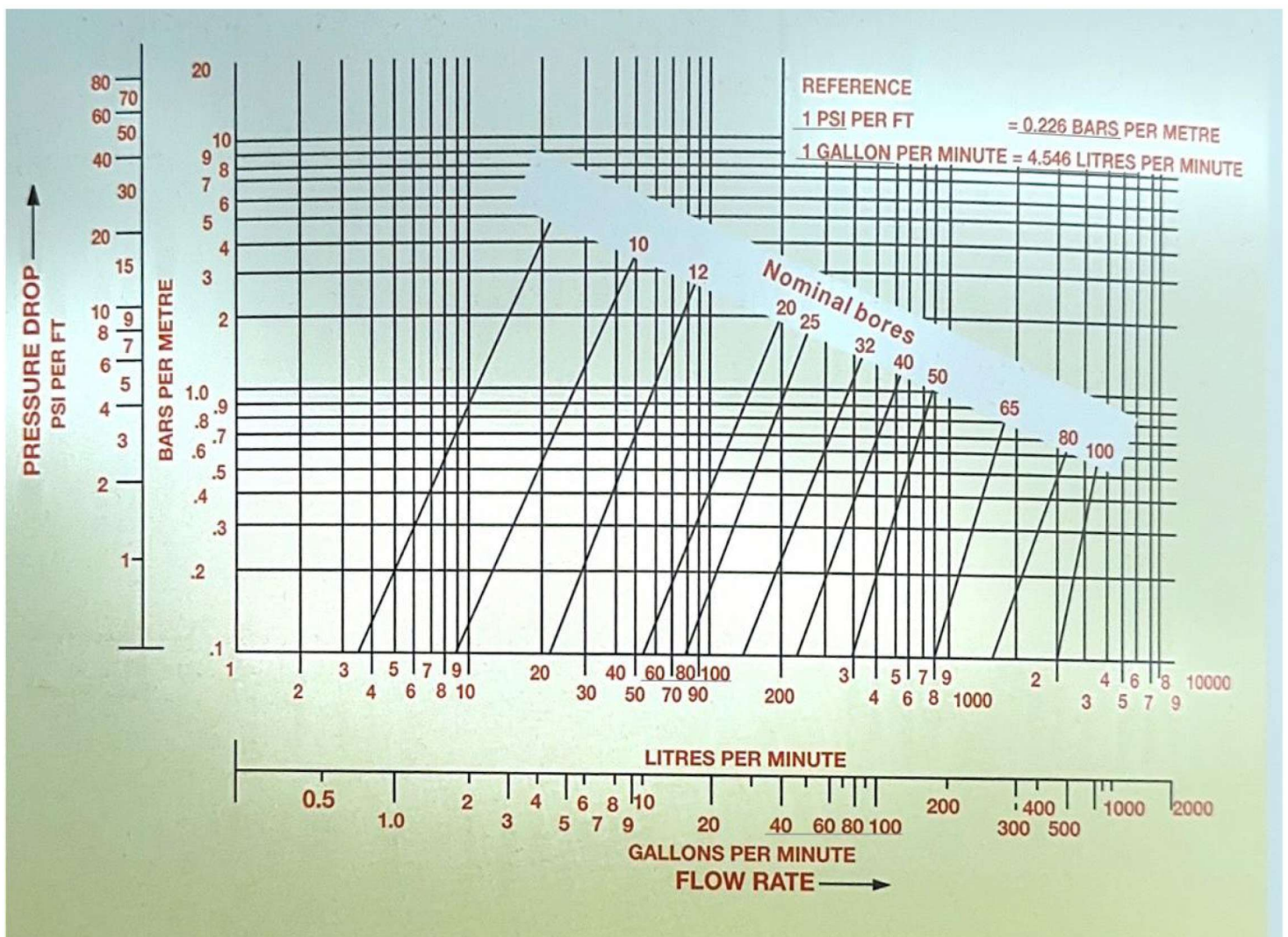
END FITTINGS

The mating fittings to which the hose assembly will be joined are a big factor in choosing the right fittings for an application. Once the matching fittings have been located, the hose fittings should be similar in kind, size, and alloy to the mating fittings. Make that the fittings are chemically compatible with the medium and can handle the pressure and temperatures in the environment.

	<p>AF - 001 welding end</p>	<p>AF - 010 hexagon union welding end</p> 
	<p>AF - 002 pipe</p>	<p>AF - 011 hexagon union straight female</p> 
	<p>AF - 003 hexagon nipple tapered male</p>	<p>AF - 012 stainless steel hexagon union straight female</p> 
	<p>AF - 004 hexagon nipple straight male</p>	<p>AF - 013 hexagon union GF 304 type straight female</p> 
	<p>AF - 005 plain socket straight female</p>	<p>AF - 014 3000 lbs heavy duty type straight female</p> 
	<p>AF - 006 hexagon socket female</p>	<p>AF - 015 fixed flange</p> 
	<p>AF - 007 female swivel</p>	
	<p>AF - 008 hexagon union straight female</p>	<p>AF - 016 floating flange</p> 
	<p>AF - 009 hexagon union straight male</p>	

PRESSURE LOSS

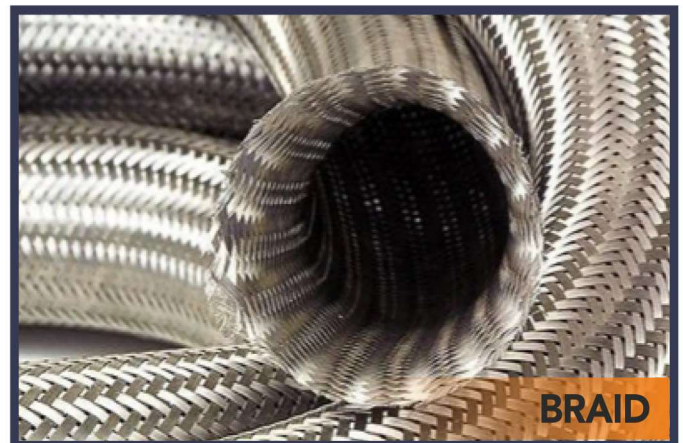
Corrugated Hoses, while offering flexibility and versatility, do exhibit a 100% greater pressure loss than that of freshly welded steel pipes. However, engineering solutions can be applied to address this discrepancy. Increasing the diameter of the corrugated hose by 15% effectively reduces the pressure loss, bringing it in line with steel pipes. The inherent nature of the corrugated hose's bore contributes to the pressure reduction, necessitating careful consideration of design parameters for different applications and flow requirements. Selecting the right materials and optimizing the hose's structure can further enhance its performance and efficiency in diverse industrial scenarios.



Our Product Range

HOSE

Flexible Metal Hoses are widely utilised in contemporary industrial pipelines because of their flexibility, corrosion resistance, fatigue resistance, high and low-temperature tolerance (-2000C to +6500C), high-pressure resistance and long service life. From 6mm (1/4") to 250 mm, we provide stainless steel corrugated flexible hoses and hose assemblies (10"). The flexible and pressure-tight core of the assembly is provided by the annular corrugated hose body. For Special Applications, we can make very flexible close-pitch hoses.



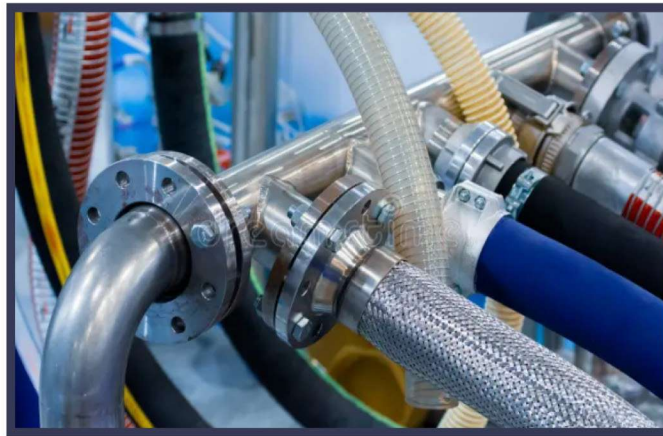
BRAID

When pressured over a certain level, unbraided corrugated hoses tend to lengthen. The hose has an exterior layer of stainless-steel wire braiding to prevent this. Braiding prevents the corrugated hose from expanding longitudinally, increasing the internal pressure, and thereby greatly reinforcing the hose. Braiding is highly flexible and exactly follows the movements of the hose. Two or even three layers of braiding are given to enhance the pressure ratings even further. Braiding is usually made of high-tensile stainless steel AISI 304 wire or stainless steel AISI 316 wires unless otherwise stated. In the event of large orders, we may additionally make Braids to the client's specifications.

Our Product Range

ASSEMBLIES AND END CONNECTION

A hose assembly is made up of a metal hose with or without braid and fittings that have been developed, produced, and tested, either from our standard programme or to your specifications, and are ready to use. SHINE AERO can design and produce almost any hose assembly, including those with or without customer-specific fittings.



FLEXIBLE EXHAUST CONNECTORS

Our flexible, thin-walled connectors provide exceptional vibration and durability properties. The multi-ply structure is available in a wide variety of materials, including special alloys for corrosion and temperature resistance. Flexibility vs. Stiffness can be customized as needed.



KINDS OF TESTS



Flex Fatigue (or)
Cycle Life Test



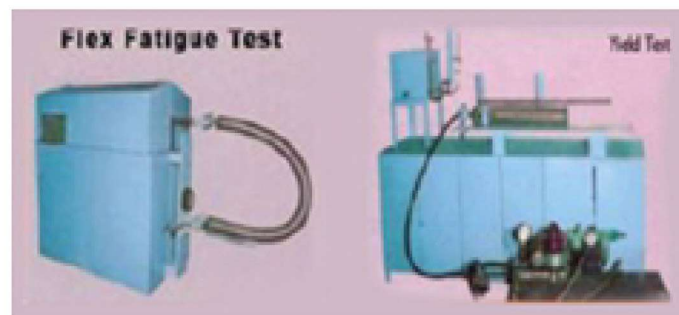
Burst Pressure
(or) Yield Test



Bend
Radius Test



Flame
Test



TEMPERATURE CORRECTION FACTOR

When working with hoses at higher temperatures, double the operating pressure specified in Table-1 by the adjustment factor. For higher temperatures, this will determine the hoses' pressure rating.

TABLE – 2																				
TEMP (C)	-200	-150	-100	-5	0	20	50	100	150	200	250	300	350	400	450	500	550	600	650	700
CORR FAC	1.0	1.0	1.0	1.0	1.0	1.0	0.92	0.83	0.75	0.69	0.65	0.61	0.58	0.56	0.54	0.53	0.52	0.34	0.19	0.10



QUALITY AND R&D

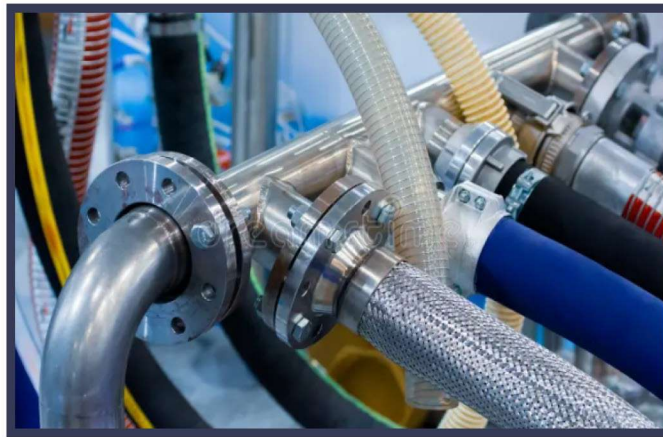
Qualified quality control engineers oversee every step of our manufacturing process. SHINE AERO has a fully equipped in-house laboratory for testing metallic flexible hoses by international standards. Before being sent, each hose assembly is hydraulically tested at 1.5 times its operating pressure. When required, pneumatic testing is also performed. To maintain the highest quality standards, all raw materials used in the fabrication of Hoses, Braiding, and End Connections are rigorously inspected.

TABLE – 1 TECHNICAL DATA								
NORMAL BORE	MINIMUM BEND RADIUS		WITHOUT BRAID		SINGLE BRAID		DOUBLE BRAID	
NB	STATIC	FLEXING	MAXIMUM WORKING PRESSURE	TEST PRESSURE	MAXIMUM WORKING PRESSURE	TEST PRESSURE	MAXIMUM WORKING PRESSURE	TEST PRESSURE
mm	mm	mm	Kg/cm ²	Kg/cm ²	Kg/cm ²	Kg/cm ²	Kg/cm ²	Kg/cm ²
6	25	85	4	6	120	180	192	288
8	32	125	4	6	95	142.5	152	228
10	38	140	4	6	90	135	144	216
12	45	140	3	4.5	75	112.5	120	180
16	70	160	3	4.5	70	105	112	168
20	85	170	3	4.5	64	96	102.5	153.5
25	105	190	2	3	50	75	80	120
32	130	260	2	3	40	60	64	96
40	160	300	1	1.5	35	52.5	56	84
50	160	320	1	1.5	30	45	48	72
65	180	410	0.3	0.5	24	36	38.5	57.5
80	200	450	0.3	0.5	18	27	29	43
100	290	560	0.3	0.5	16	24	22.5	38.5
125	325	710	0.2	0.3	14	21	22.5	33.5
150	380	815	0.2	0.3	10	15	16	24
200	500	1015	0.2	0.3	8	12	12.5	19
250	620	1270	0.1	0.15	7.5	11	12	18
300	725	1525	0.1	0.15	6	9	9.5	14.5

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ADVANTAGES OF FLEXIBLE METAL HOSES

- High physical strength combined with lightweight.
- Suitable for a wide temperature range (-200°C to + 550°C)
- Good corrosion resistance. Resistance to fire, moisture, abrasion, and penetration.
- Absorbs vibration and noise from pumps, compressors, engines etc.
- Compensates for intermittent or constant movement.
- Compensates for thermal expansion or contraction of piping.
- Corrects problems of misalignment.
- A flexible and quick alternative for rigid piping in difficult locations.



APPLICATIONS

- Refineries
- Steel Plants
- Power Plants
- Nuclear Installations
- Fertilizer Industry
- Cryogenic Service
- Pharmaceutical Industry
- Paper Plants
- Chemical Industry
- Lubrication Systems
- Automotive Industry
- Defence Industry
- Steam, Hot Water,
- Pneumatic Service
- Boilers
- Vacuum Systems
- Piping
- Air Conditioning &
- Refrigeration
- Ports and Shipyards
- Vibration Absorption
- Railways





Scan for more details

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PRECISION AND PASSION IN ENGINEERING

CONTACT US

MANUFACTURES OF: Hydraulic Fittings, SS Hose Assemblies, Aerospace Quality, Precision Parts

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