



Dynamic

Rotary Union

Manufacturing in India

Dynamic Industries

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Dear Customer,

We thank you for having chosen our products, and assure you that we have spared no pains to ensure that you will be fully satisfied with the same.

Our products incorporate the latest in design, and several unique features that increase the reliability of their performance while at the same time make them user friendly.

All of our products are guaranteed for a period of one year (from Delivery) against any manufacturing defect.

While we do not anticipate a huge and continuous demand for them we maintain a full inventory of all the spare parts that you may require. This ensures that not only are the spares received without any delay but also ensure that the spares are available at a reasonable cost.

We have prepared this manual to guide you in the correct procedure of installation and operation of our products.

In the unlikely event of your having any major problem in the functioning of our equipment, please do not hesitate to get in touch with us, and we will ensure that our service department will promptly attend to your difficulty.

We would also welcome receiving from you feedback on the performance of the equipment as well as suggestions on changes that we could incorporate to improve the performance of the same.

Please be assured that you will, at all times, receive our best services and prompt attention.

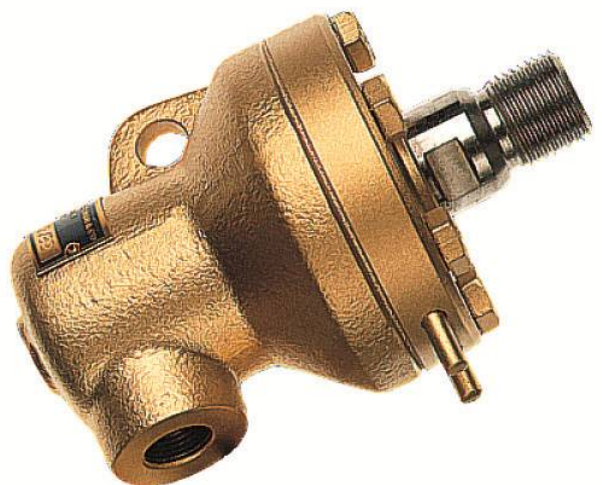
DYNAMIC INDUSTRIES

Rotary Joints & Unions

A rotary joint, also referred to as a rotary union or rotating union, provides a mechanical seal between a stationary supply pipe and a rotating drum or cylinder to permit the flow of heat transfer media into and/or out of the rotating roll. Heat transfer media typically used with rotary joints and rotating unions include steam, water, thermal oil, hydraulic oil, and coolant.



Dynamic Rotary Unions are used to provide Heating or Cooling media like Steam, Hot Oil, Water or Coolant to control the surface temperature of a drum or roll, To transfer air, Water, Cooling oil, Hydraulic fluid to moving components or to add fluids to mixers while in motion.



A **rotary union** is a **union** that allows for rotation of the united parts. It is thus a device that provides a seal between a stationary supply passage (such as pipe or tubing) and a rotating part (such as a drum, cylinder, or spindle) to permit the flow of a fluid into and/or out of the rotating part.

Dynamic Rotary Union

Rotary Joint / Rotary Union use for Transfers media Of Water, Steam, Air, Oil, Chemical, Hydraulic Fluid, Cutting Fluid and Thermal Fluid from a Stationary Source to Rotating Machinery such as Rotating Parts / Rotating Shaft / Rotating Drums. They are application in process Industries such as; Packaging Industries, Woven sack Industries, Non – Woven Sack Industries, Paper Industries, Printing Industries, Textile Industries, Chemical Industries, Rubber Industries and Plastic Industries. Rotary Joint are also used on Cooling Machine, Grindinding Machine, Cutting Machine, Machine tool, cranes and lots of other application.



A Rotary Union is a device which can be connected to a rotating Drum / shaft and allow the leak proof transfer of fluids to and from the stationary services.

The vital components of Rotary unions are the rotary seals and the bearing support systems. For the majority of applications the Carbon SEAL is the most efficient.

Rotary Joints for Steam Service

DNS Rotary Joints



The DNS rotary joint is a self-supported joint that has been specifically designed to solve accelerated wear problems that occur with conventional self-supported rotary joints – particularly those in high vibration applications. The double-guide design provides internal support for the joint and maintains alignment even when the roll or cylinder is not concentric. The DNS is available in single-flow or with stationary syphon dual-flow configurations for steam service. Sizes range from 1.25" up to 6" and the joint is rated up to 650° F (343° C), 310 psig (20 bar) and 200 RPM.

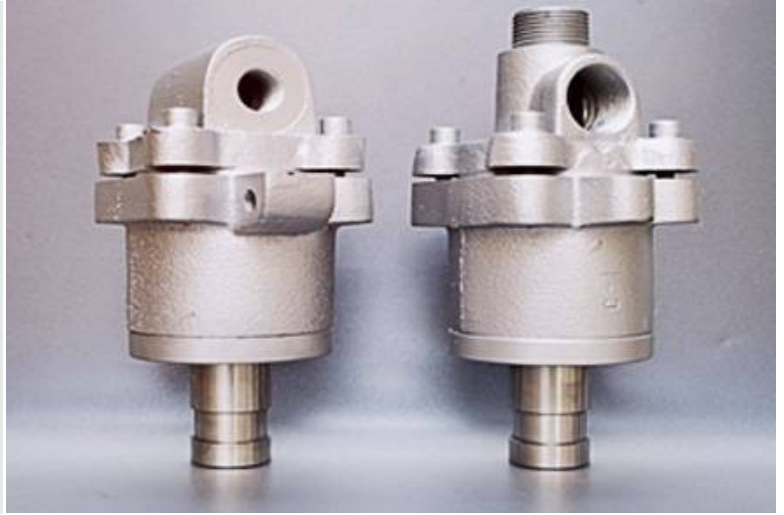


Rotary Joints for Steam Service



Features

- Designed for steam service
- Two internal support guides
- Renewable seal plate
- Maximum carbon guide separation
- Increased life and reliability
- Lower maintenance and repair cost
- Improved joint and syphon support



Rotary unions typically function by connecting to an input and securing onto another mechanism while allowing a moving connection to be preserved.



Rotary Joints for Steam and Thermal Oil Service

DNOR Rotary Joint

The self-supported DNOR rotary joint provides a positive seal between stationary piping and a rotating cylinder and is applied to steam, water, and hot oil service. The DNOR incorporates two internal carbon-graphite bearings that permit self-alignment and long operating life – even on cylinders that are not concentric. Using new sealing technologies, the DNOR rotary joint has extended seal life and increased reliability along with application flexibility.



Rotary Joints for Steam and Thermal Oil Service

DNOR Rotary Joint



The convex seal ring and optimized seal diameter provide extended seal life and reduced maintenance for the DNOR rotary joint. The concept of applying different seal geometries to different media (steam, water, and oil) gives the DNOR rotary joint a strong point of differentiation as well as a marked improvement in performance.



The DNOR rotary joint line is available in sizes from $\frac{3}{4}$ " to 3" and can be used in single- or dual-flow applications. The joint is rated up to 650° F (343° C), 300 psig (20 bar), and 550 RPM.

Design and Features

- *Designed for oil, water, and steam*
- *Two internal support guides*
- *Optimized seal diameter*
- *Convex seal ring in compression*
- *Maximum carbon guide separation*
- *Increased life and reliability*
- *Extended seal life, reduced maintenance*
- *Self-aligning seal, longer life*
- *Improved joint and syphon support*

Rotary Unions for Cold Water Service

Model - DN Rotary Unions

The DN rotary union uses a balanced seal with special ball bearing or optional tapered roller bearings to support the rotor. This rotary union incorporates the latest technology in mechanical seal design for water and thermal oil service. The high thrust load capability and carbon-to-silicon (or Tungsten) carbide seal package makes the DN run longer and with less maintenance requirements than other ball bearing designs. Available in single- and dual-flow configurations and sizes from 3/8" to 3", the RX rotary union is capable of operating up to 260° C, 10 bar, and 750 RPM.



Design and Features

- *Balanced seal*
- *Deep-groove ball bearings*
- *Full flow area*
- *External loaded springs*
- *Matched seal faces*
- *Long running life, dry running capability*
- *Low Pressure Drop*
- *Uniform seal loading*
- *Materials selected for specified service*
- *Rigid mounting and accurate alignment*
- *Reduced maintenance*

Rotary Unions for Cold Water Service



Dynamic is manufacturing Rotary Joint in S.S.304 Material. Rotary housing material is I.C (Investment Casting) S.S.304 . Rotary Shaft / Nipple is also manufacturing from S.S.304.

We are manufacturing single flow rotary union size in between from ½" to 3" .

Rotary union Seal is manufacturing from Carbon Filled Teflon (CFT Bush) for Water up to 90°C.

And Seal for Hot Oil is manufacturing from Imported Carbon / Antimony for temperature up to 300°C

Rotary union heart is O – Ring, It is made from different material as per application as per Temperature.

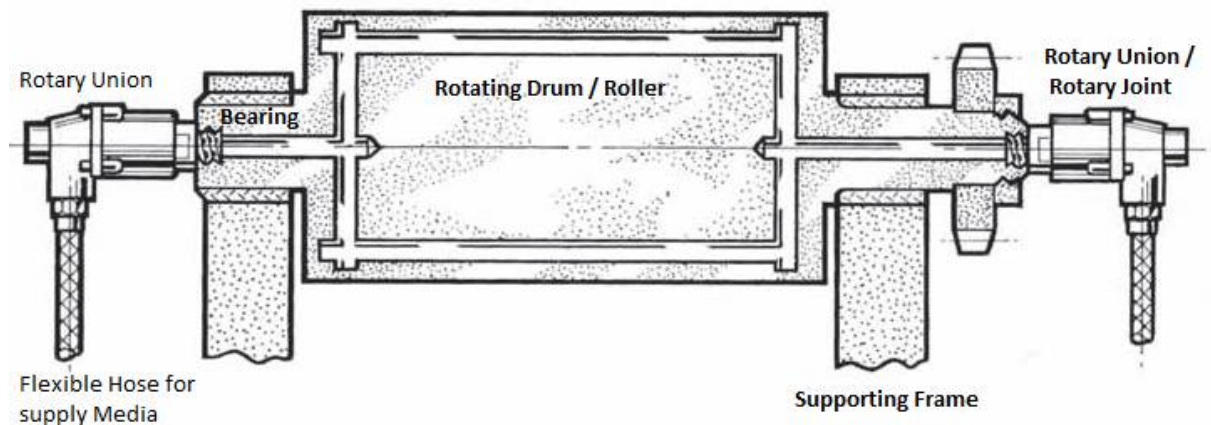
Rotary Union internal parts like spring and Washer are manufacturing from S.S.304.

Rotary union assembly in two bearing is use for supporting shaft. Bearing is use standard Brand for long time durability.

Rotary Union Selection Guide

1. Flow passage – Single Flow or Dual Flow
(Dual Flow – Stationary Siphon pipe or Rotating Siphon pipe and Size of siphon pipe)
2. Type of Fluid or Gas to be Conveyed (Media)
3. Pressure of Media (in kg/cm²)
4. Temperature of Media (in 'C)
5. Speed of Rotary Shaft (in RPM)
6. End type of Connection (Threaded type or Flanged end Type)
7. Flow rate of Media (LPH / Litter per Hours)

Setup Of Rotary Union



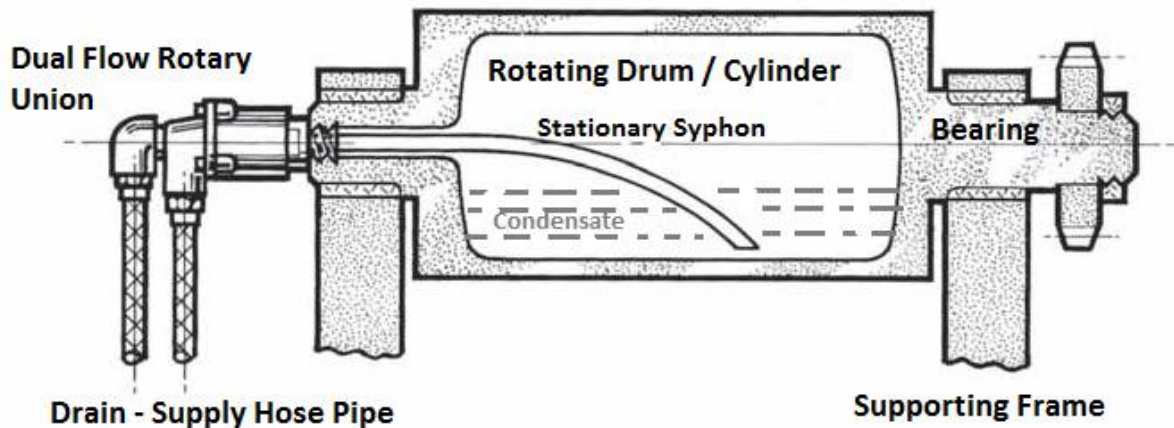
Single Flow / Mono Flow Rotary Union Setup

Single flow rotary union setup for cooling or heating or Drum

Both ends Rotary Joint is Installed one Rotary is supply of media & The Other rotary for return of media.

Select of L.H Thread Rotary when the drum shaft rotates in clockwise direction and R.H. Thread Rotary when it rotates in anti Clockwise Direction.

Plant Setup of Dual Flow Rotary Union

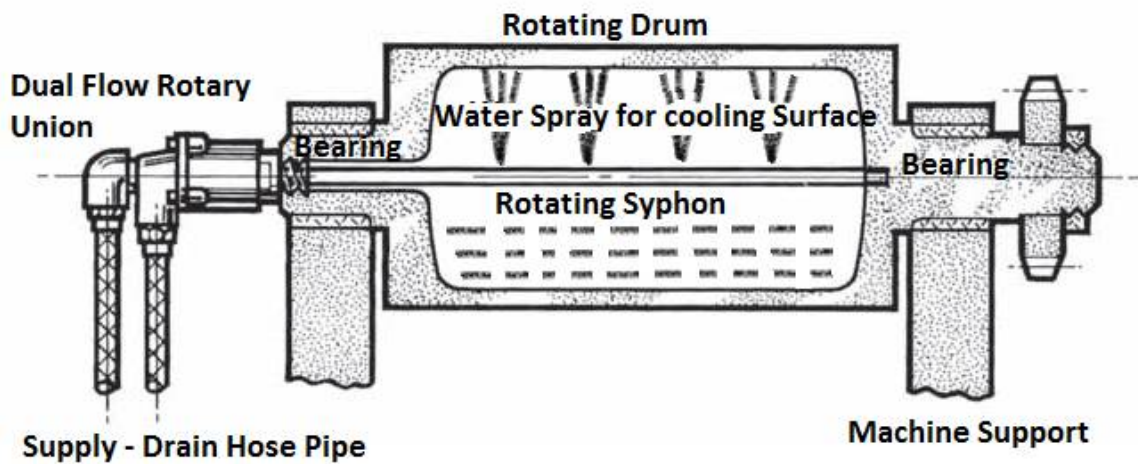


Dual Flow Rotary Union Setup for Stationary Syphon System.

Dual Flow Rotary Union setup for Fixed End Syphon System

The Syphon pipe is threaded on to elbow of union & media is fed through it.

The media is return through the orifice.

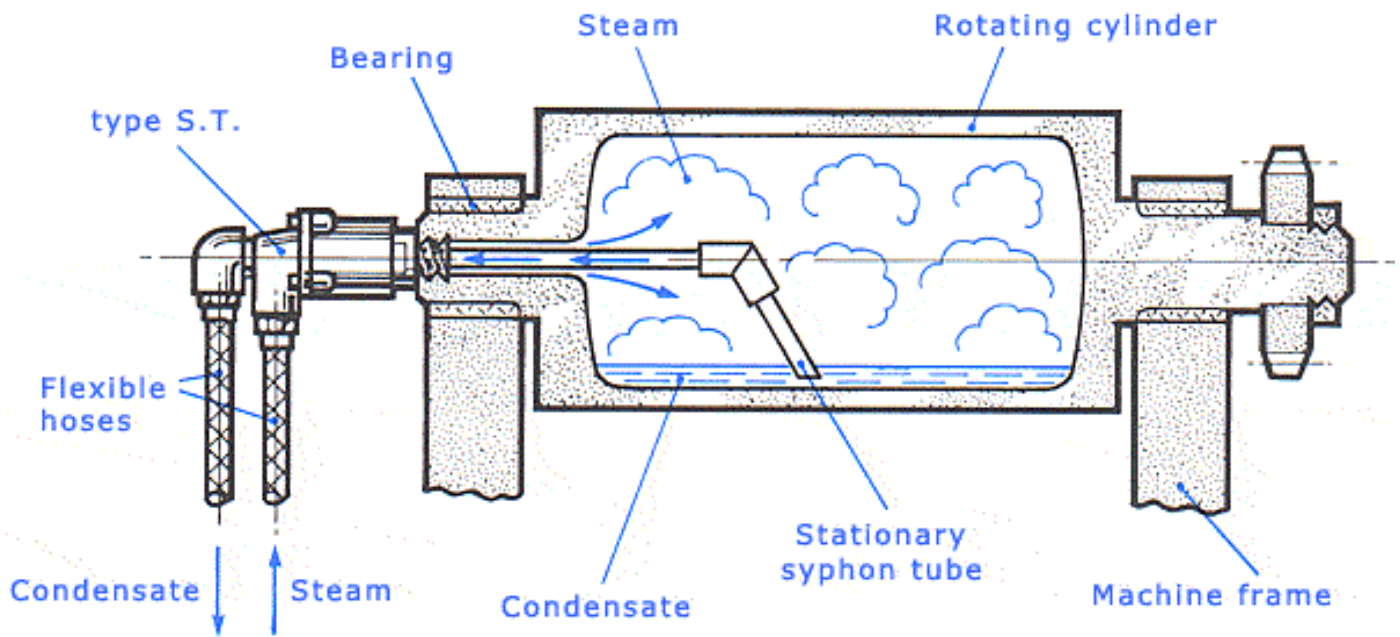


Dual Flow Rotary - Rotating Syphon System

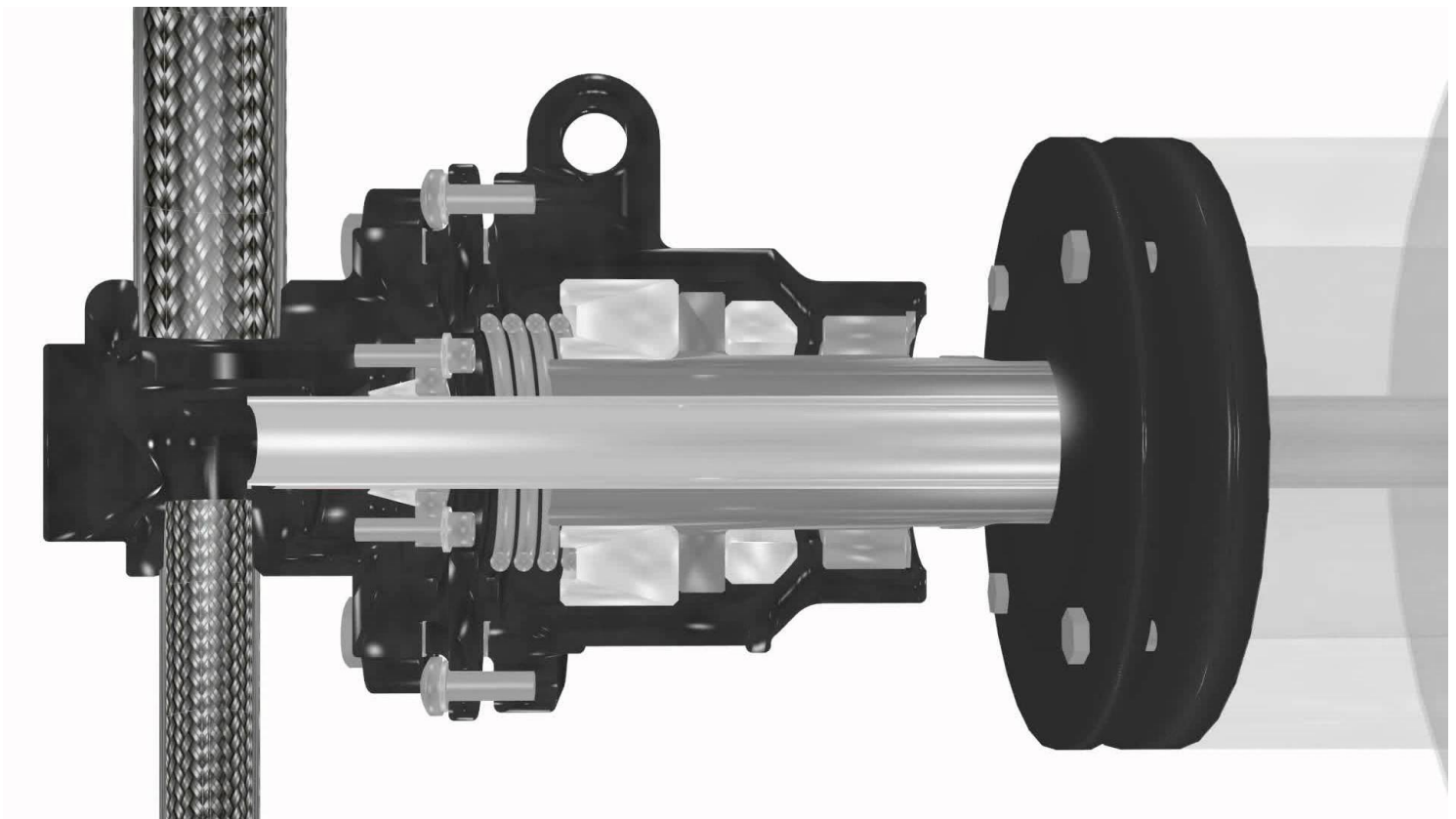
Dual Flow Rotary union setup for Rotating Syphon Application.

The Syphon pipe is fixed to other end of journal & rotates along with journal media is fed through Rotary union end & Return line is through the orifice since the Syphon pipe rotates along with drum.

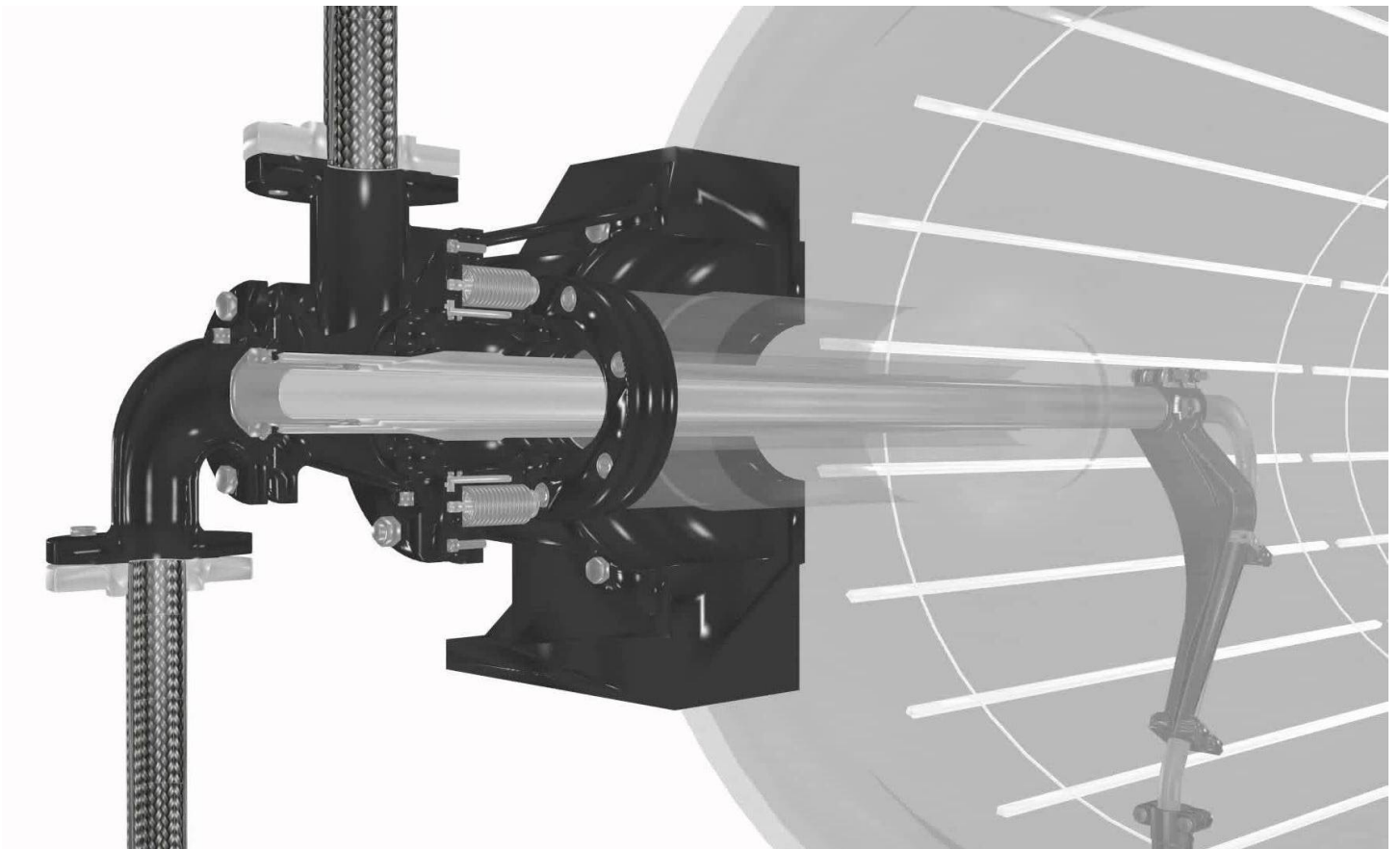
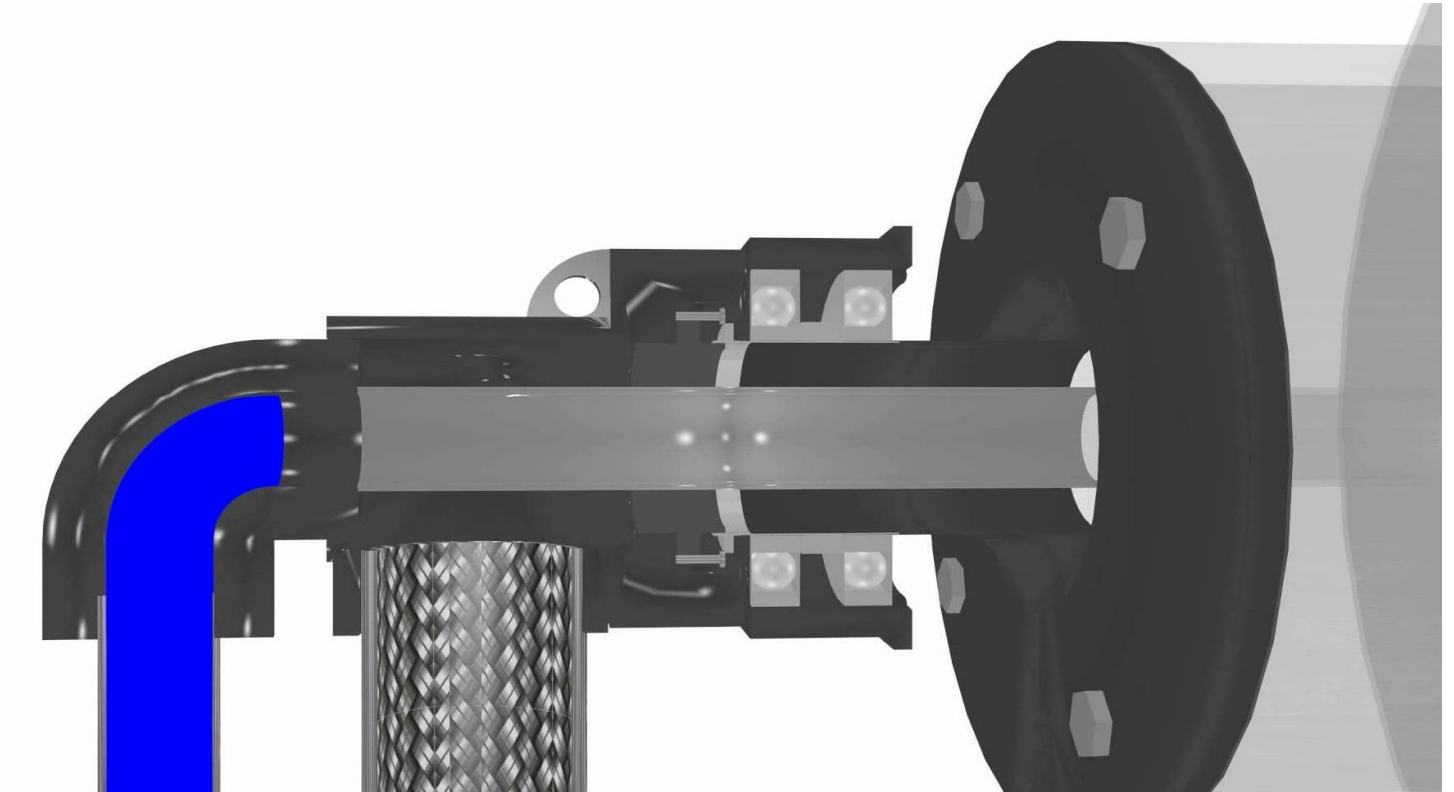
Plant Setup of Rotary Union



Rotary Joint Setup in Drier



Rotary Joint setup with Stationary Siphon System



Spare of Rotary Joint

The Guide Ring and Seal Ring Of Rotary Joint

We are also manufacturing Guide Ring and Seal Ring Of any Make Rotary Joint. As per drawing or As per Sample.

Material :- Pure Carbon, CFT Ring (Carbon filled Teflon for Antiwearing and long Durable life) and also available Imported Material German Shrunkh, It's for more durable life and for Hi – speed Rotary.



MATERIAL: PURE CARBON OR
CFT (CARBON FILLED TEFLON)
OR GERMAN SHRUNKH /
ANTIMONY

SIZE: STANDARD (1" TO 6")

OR

AS PER SAMPLE AND DRAWING.

S.S.Corrugated Hose Pipe

Recommendation Hose Installation

Flexible hose must be used to connect each Rotary union to its supply or drain piping. Use braided metal hose for all applications involving hot fluids, such as , Hot Water, Hot Oil or Steam. Use rubber hose for cooling water.



MATERIAL: S.S. CORRUGATED HOSE PIPE

SIZE: 1/2: TO 8" WITH ANY LENGTH.

TYPE: WITH SINGLE WIRE BRAIDED OR DOUBLE WIRE BRAIDED

We are also manufacturing S.S.304 Corrugated Hose pipe with Wire Braided hose.

End Connection of pipe in Flange end Connection, Female Connection, Male Connection.

Size – ½ " to 8" as per any Length order

We have manufacturing unit of stainless steel annular corrugated metallic flexible hose, braiding & hose assemblies.

We have manufacturing unit of stainless steel annular corrugated metallic flexible hose, braiding & hose assemblies.

A large variety of stainless steel annular corrugated metallic flexible hose & hose assemblies are manufactured in austenitic AISI 321, 316, 316L & 304 grades conform to international quality standards.

We are maintain Quality of Pipe

Life Cycle Test

Flex Fatigue test

Yield Test

Bend Radius Test

Flame Test



Every Single Hose pipe assembly is tested hydraulically at 1 ½ times of working pressure before dispatching. Pneumatic testing is also carried out whenever necessary. All raw material used in the manufacture of hoses, braiding and end connections undergo rigid inspection by trained & experienced man power to maintain highest quality standards.



Jacketed Flexible Hose



We are manufacturing jacketed flexible hose assemblies. The inner annular corrugated stainless steel flexible metallic hose conveys the fluid and jackets annular corrugated

stainless steel flexible metallic hose for heating or coolant fluid or protective the hose and both inner and jacketed hoses are highly flexible.

We are using our annular corrugated stainless steel flexible metallic hoses ANSI 321/316L with ANSI 304 single wire braiding, We will provide both the end flange fittings swivel or fixed type flange. And for inlet & Outlet heating or cooling fluid end connection.



Advantages of Flexible Metal Hose pipe

- High physical strength combined with light weight.
- Suitable for wide temperature range (-200'C to 550'C)
- Compensates for intermittenet or constant movement.
- Corrects problems of misalignment.
- Compansate for thermal expansion of contraction of piping.
- Absorbs vibration and noise from pumps,compressor,engines etc
- Good Corrosion resistance. Resist to fire,moisture,abrasion and penetration.

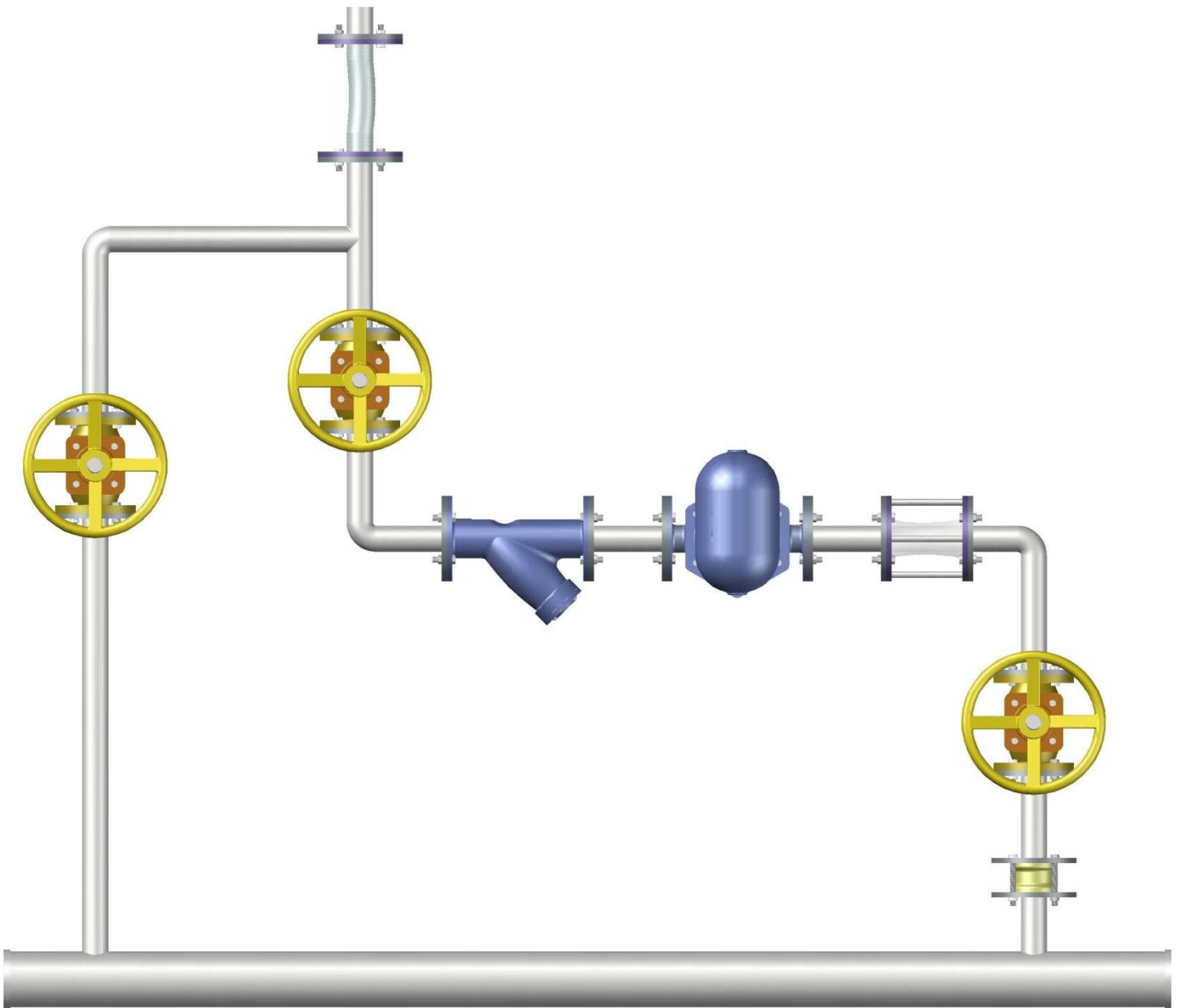


Flange Connection

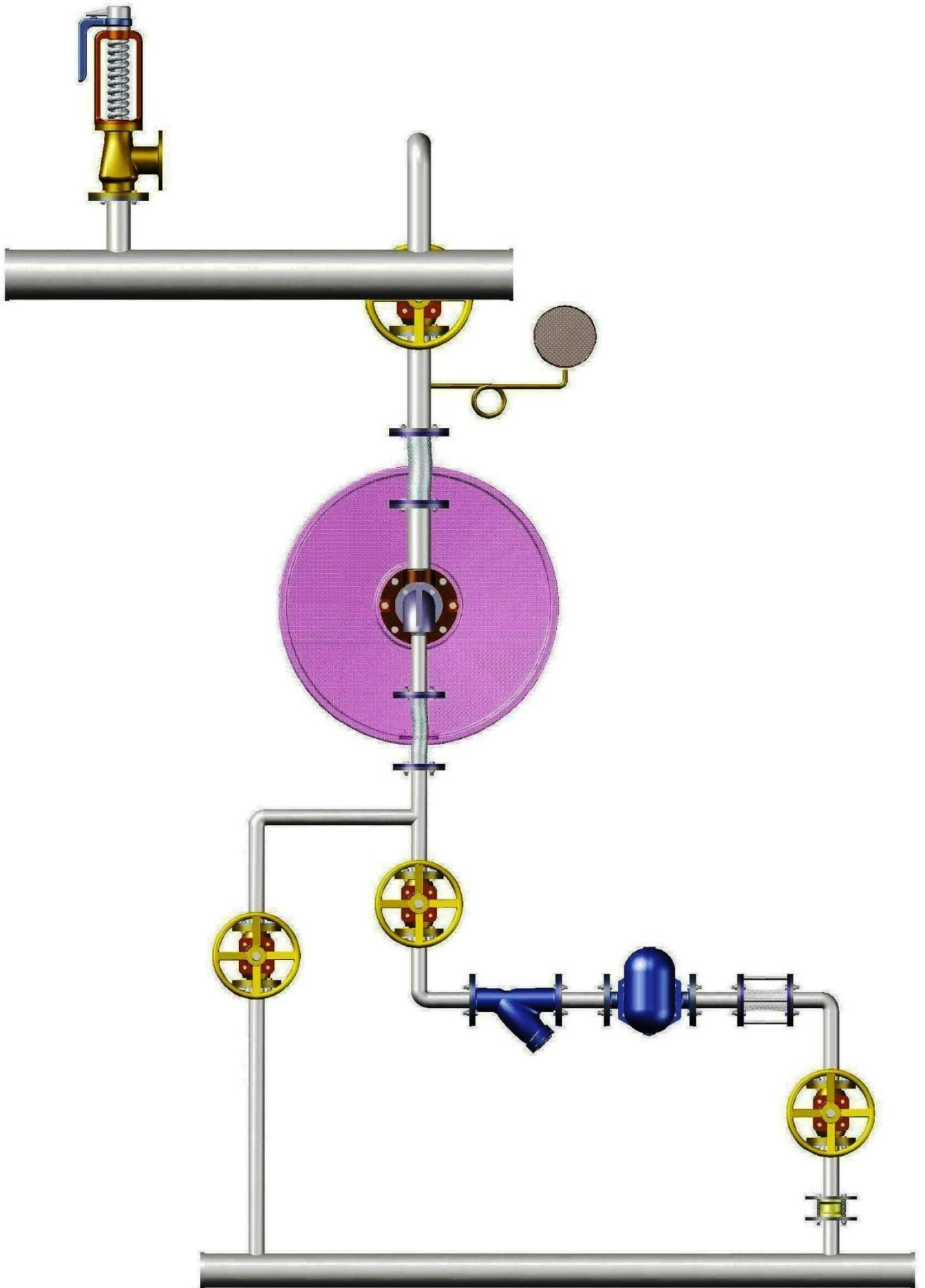


Female Connection

Condensate line Setup



We are provide Condensing line Spare like, S.S./ RUBBER Hose pipe, Globe Valve, Stainer, Steam Trap, Td3 (Themo Dynamic Steam Trap), Sight Glass / Tube Glsaa, DCV (Disc Check Valve)



Steam Trap



A **steam trap** is a device used to discharge condensate and non-condensable gases with a negligible consumption or loss of live **steam**. Most **steam traps** are nothing more than automatic valves. They open, close or modulate automatically.

TD3 - Thermo Dynamic Steam Trap



TD3 – Work After hot condensate flows into the **trap**, **steam** enters it. As the velocity of the fluid increases, the pressure under the seat exerted by the **steam** decreases. At the same time the pressure in the pressure chamber above the disc increases. The disc is pressed down and closes.

Syphon Elbow



*Syphon Elbow application
to connect the two siphon
tube in 45 degree angle in
Drier for remove
condensate water.*

Material – S.S.304 or
Gunmetal

Sight Glass / Tube Glass



*Sight Glass application
to show the Steam and
Condensate Water in
Steam Line*

*Material - M.S
Glass -Hi-Toughen
borosilicate glass*

GLOBE VALVE



GLOBE VALVE

SIZE: ½" TO 14"

MATERIAL OF CONSTRUCTION :

CI , WCB, GUN METAL AND S.S

END CONNECTION TYPE:

THREADED AND FLANGE END.

Body: CI, WCB / CS, SS

Internal Part : Stainless Steel (BAR STOCK)

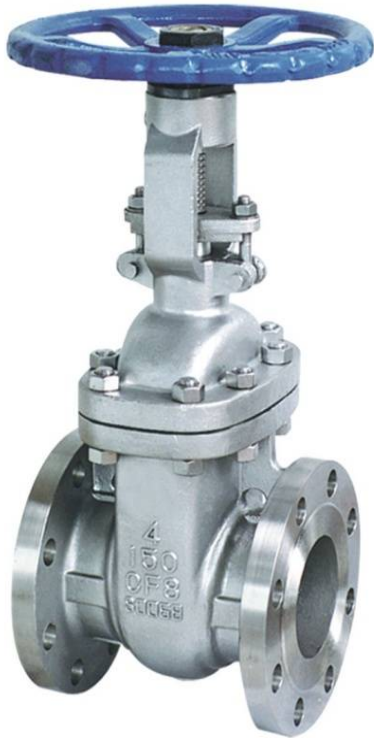
RATING CLASS: 150, 300, 800.

Material: GUN METAL

END TYPE : THREAD END

SIZE: 15 MM , 20 MM , 25 MM , 45 MM

GATE VALVE



GATE VALVE

Body: CI, WCB / CS, SS

Internal Part : Stainless Steel
(BAR STOCK)

RATING CLASS: 150, 300,
800.

SIZE: ½" to 24"

Material: FORGED CARBON
STEEL

PISTON VALVE



PISTON VALVE

Body: CI, WCB / CS, SS

Internal Part : Stainless
Steel (BAR STOCK)

SIZE: 15 mm TO 150 mm

DCV – Disc Check Valve / Non Return Valve



DCV – NON RETURN VALVE

DCV: DISC CHECK VALVE

MATERIAL: BODY – CF8
AND DISC AND SPRING - S.S
304

SIZE: 1" TO 6" OR AS PER
REQUIREMENT

Wafer check Valve



WAFER CHECK VALVE

MATERIAL:

BODY – CF8

DISC: S.S 304

SIZE: 1" TO 6" OR
AS PER REQUIREMENT

Butterfly Valve



BUTTERFLY VALVE

MATERIAL OF CONSTRUCTION

Body: CAST IRON , WCB / CAST STEEL , SS

SEAT : NITRIL / EPDM

ENDS : Wafer Type

DISC : CI/CS/CF8/CF8M

SIZE: 40 mm TO 400 mm



MATERIAL OF CONSTRUCTION

Body: CAST IRON , WCB / CAST STEEL , SS

SEAT : NITRIL / EPDM

ENDS : Wafer Type

DISC : CI/CS/CF8/CF8M

SIZE: 40 mm TO 400 mm

Safety Valve (Non IBR)



SAFETY VALVE (NON IBR)

BODY : WCB, GUN METAL

SPRING : SPRING STEEL

MAX. SET PRESSURE : 14
kg/cm²

ENDS : FLANGED TO DIN 2545

HYD - TEST : Pressure BODY :
60 kg/cm²

SIZE : 25 MM TO 150 MM

Safety Valve (IBR)



SAFETY VALVE (IBR)

BODY : ASTM A 216 Gr WCB

SPRING : SPRING STEEL

MAX. SET PRESSURE : AS per
Required

ENDS : FLANGED TO DIN 2545

HYD - TEST : Pressure BODY :
AS per Required

Ball Valve



BALL VALVE

Body: CAST IRON (C.I) ,
WCB / CAST STEEL,
S.S. 304 / S.S. 316

Internal Part : Stainless Steel
S.S. BALL

DESIGN :

SINGLE PIECE

TWO PIECES

THREE PIECES.

SIZE: 15 MM TO 100 MM

END TYPE : SCREWED /
FLANGED

Strainer



STRAINER

SIZE : ½" To 4"

MATERIAL : C.I. , GUN METAL
OR S.S.304

INTERNAL PART : S.S. JALI

END TYPE : THREADED AND
FLANGED END

Angle type Valve



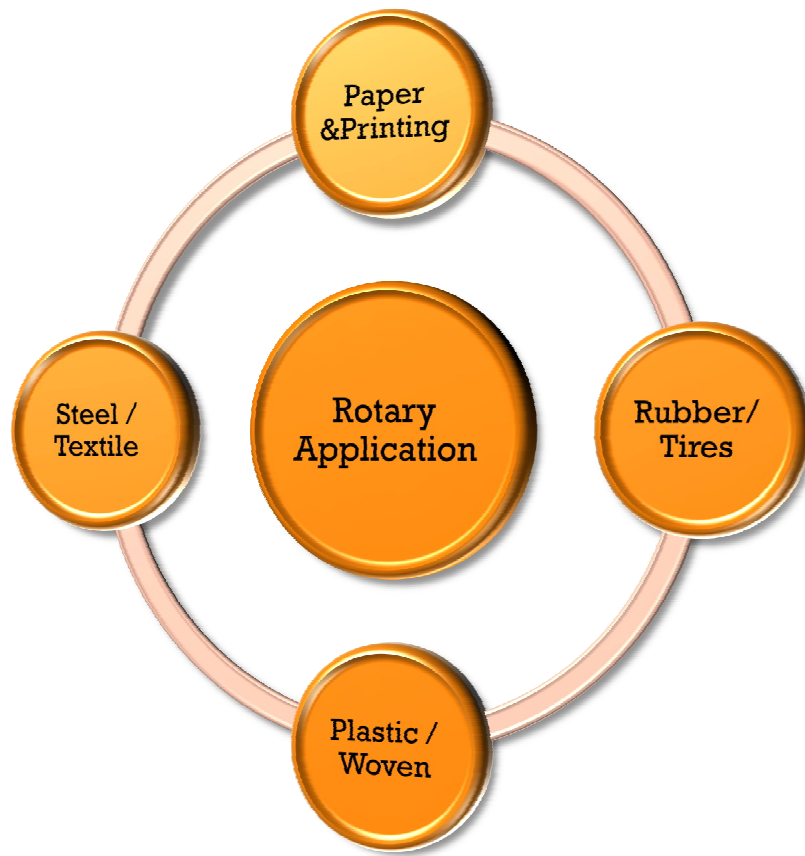
Angle type valve

It's one type of pneumatic valve

It's also cold Y-type pneumatic valve

It's automatic operated by set pressure ratio.

Applications:



Rotary Union Application

PRINTING

Ink – Feed Rolls, Ink – Vibrator Rolls, Chill Rolls, Unwind Stands

RUBBER

Banbury Mixers, Tubers, Tyre Manufacturer, Extrusion Machines, Calendars

STEEL

Run out of Tabel, Coolent oil Supply, Benders, Sections, Un – Coilers, Reduction Mills, Re – Coilers.

TEXTILES

Breaker Rolls, Slashers, Dry Can Ranges, Embossers, Singers

TIRES

Banbury Mixers, Warming Mills, Feed Mills, Sizing Mills, Custom tire Processing Machines

PLASTICS / WOVEN SCAK PLANTS

Extrusion Machines, Polishing Mills, Re-Winders, Dicers, Scrap Choppers, Scrap Recyclers.

FOOD

Cereal Processing Flaking Mills, Shredders, Puffers, Cookers, Sugar Crystallizers

Laminate Plant

Rolling process for cold water Supply or Oil Supplying System.

WARRANTY

Subject to the conditions stated herein, Dynamic will repair or Replace, without charge, any parts proven to Dynamic's satisfaction to be defective in materials or workmanship. Claims must be made within one year

Dynamic Industries will not repair or replace any parts that become unusable and show clear evidence or improper maintenance, Eccentric loading, Overloading, Excessive Heat, Chemical or abrasive wear, tampering or abuse. Equipment and accessories.



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