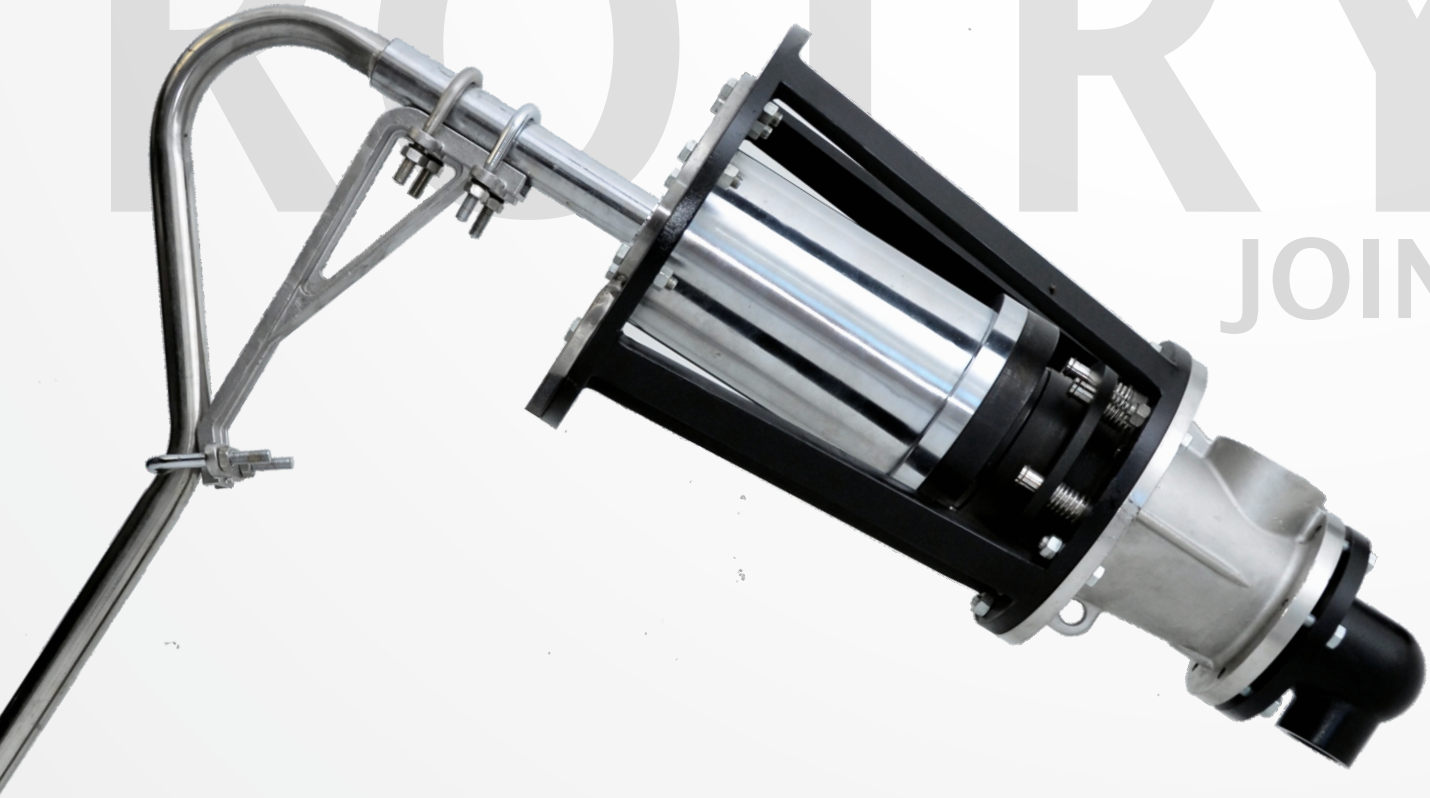
maruti

VALVES

STEAM & CONDENSATE

STEAM ROTRY JOINT



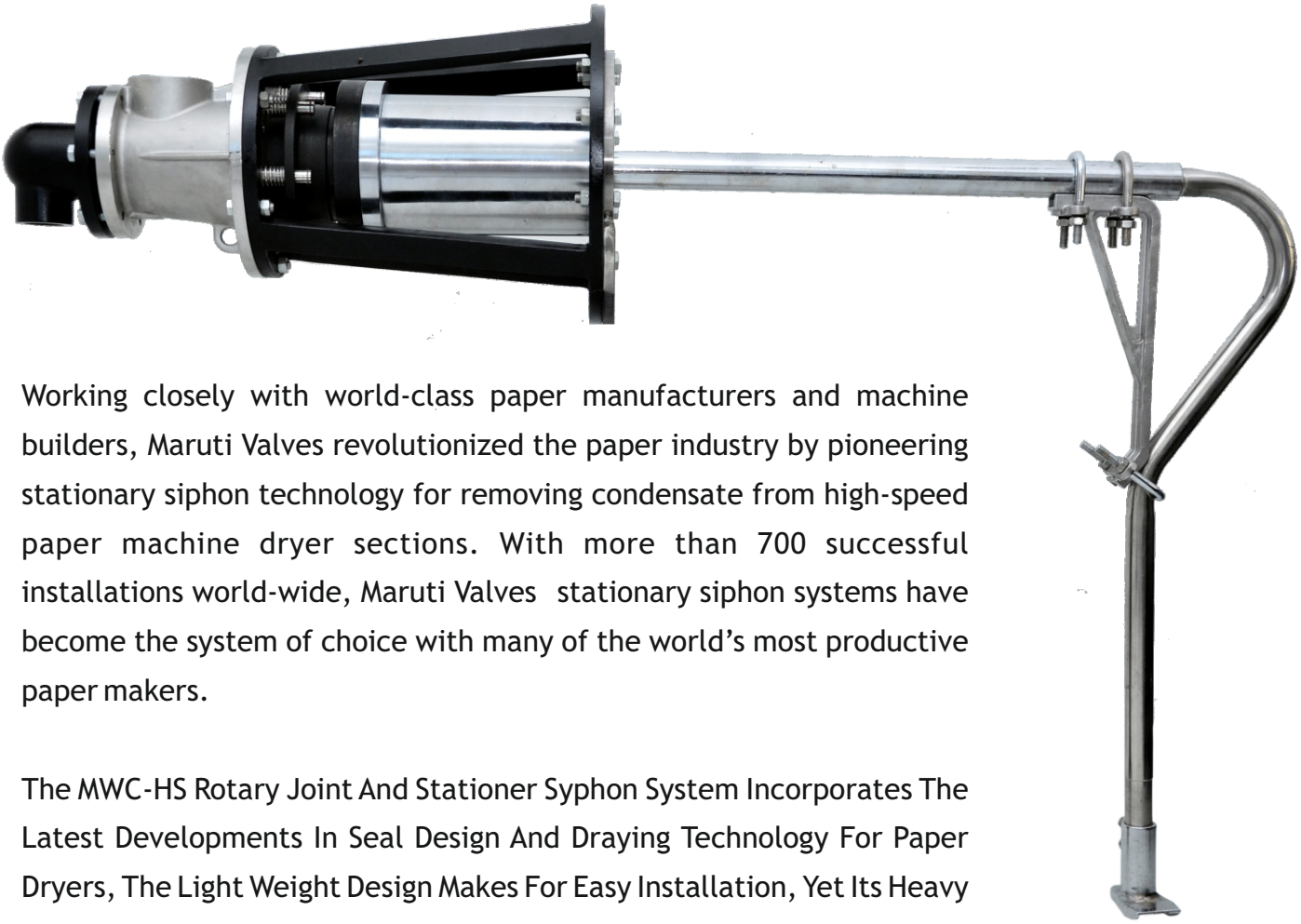
Quality For Sure

www.marutivalves.com

MWELL® CONTROLS

A Unit of Maruti Group

ROTARY JOINT



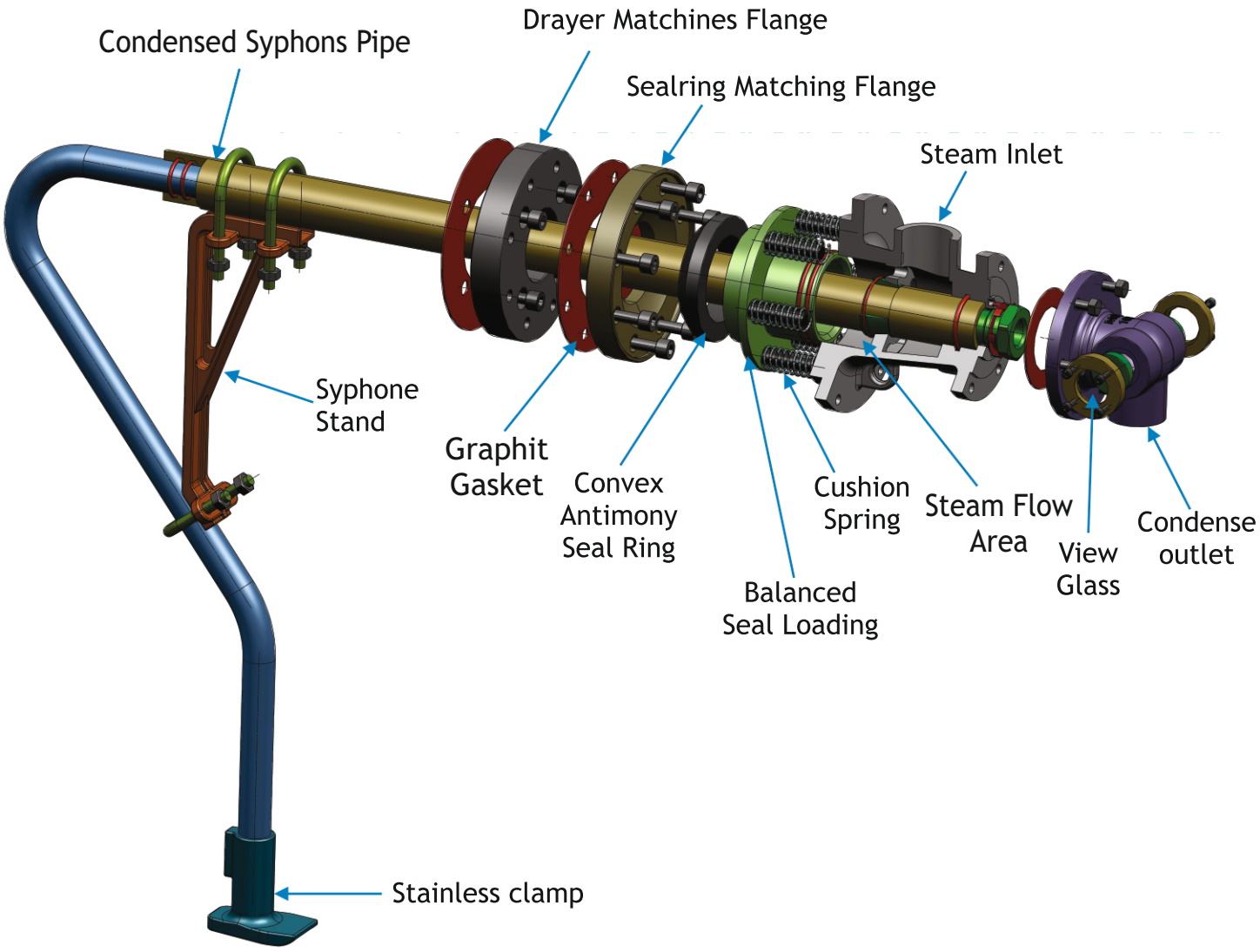
Working closely with world-class paper manufacturers and machine builders, Maruti Valves revolutionized the paper industry by pioneering stationary siphon technology for removing condensate from high-speed paper machine dryer sections. With more than 700 successful installations world-wide, Maruti Valves stationary siphon systems have become the system of choice with many of the world's most productive paper makers.

The MWC-HS Rotary Joint And Stationer Syphon System Incorporates The Latest Developments In Seal Design And Draying Technology For Paper Dryers, The Light Weight Design Makes For Easy Installation, Yet Its Heavy -Duty Construction Handles High Pressure & High Speed, And Angular Misalignment, The MWC Can Also Accommodate Thermal Expansion Of The Fryer Journal-Even When Used On The Front Side Paper Machine.

The Patented MWC Steam Joint Design Uses A Spring Loaded Piston That Applies Balanced Pressure On The Seal Ring To Keep It Securely Seated Against The Wear Plate The Wear Plate Is Attached To The Journal Of A Filler Flange, The Wear Plate Rotates While The Piston Remains Stationary. The Seal Ring Is Free Floating To Accommodate Angular And Offset Misalignment.

With Its Loaded Piston And Reverse Seal, The MWC Seal Technology Is A Different Design Than Conventional Seal Packages, These Advanced Design Difference Make The MWC A More Reliable, Easier To Maintain Joint- Even Under The Most Difficult Operating Conditions, The MWC Is Rated Up To 400o F (205oc), 160 Psig (11 Bar), And 900 MPM (8000 FPM).

ROTARY 3D MODEL



Stationary Siphon System Features and Benefits:-

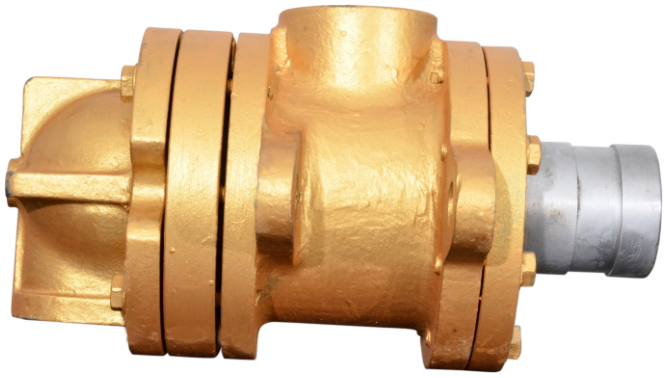
FEATURES	BENEFITS
Unitized, flat-faced balanced mechanical seal	• Quickly and easily installed or replaced, reducing downtime and labor. • Reduced contact pressure on the carbon face, resulting in longer seal life (2 year plus). • Seal ring indicator provide visual inspection for preventative maintenance
60o stationary siphon position outside sheet edge	• Eliminates wet edges • Allows use of full-length turbulence bars for improved sheet moisture at the reel.
Two widely-spaced cylindrical and conical supports	• Increased siphon rigidity, minimize vertical deflection of stationary siphon
Hydroplaning pick-up shoe	• Rimming condensate creates upward lift resulting in third supporting point. • Increases stiffness, minimizes siphon vibration, and prevents pick-up shoe-to shell contact.

MANYFOLD ROTARY JOINT

SELF ALIGNING STEAM ROTARY JOINT

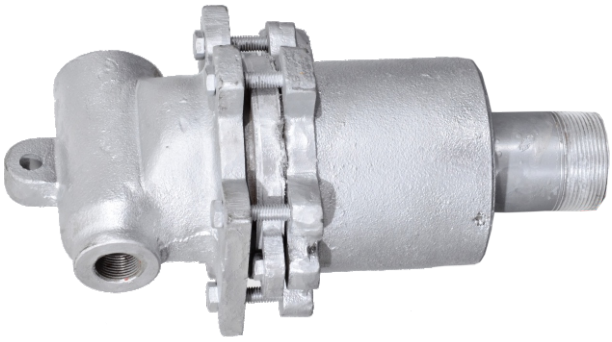
MODEL : MLS-1		
SPEED	:	Upto 350mpm
MEDIA	:	Steam
SIZE	:	1" to 2.5"
MOC	:	Cast Iron
TYPE	:	Treaded & Quick Release System

DOUBLE SCOOP TYPE BUCKET SYSTEM ROTARY



MODEL : MLNAR		
SPEED	:	Upto 300mpm
MEDIA	:	Steam / Thermal Oil
SIZE	:	2" to 6"
MOC	:	Cast Iron
TYPE	:	Treaded & Quick Release System

PRESSURE BALANCE EXARSION ROTARY JOINT



MODEL : MSBP		
SPEED	:	Upto 250mpm
MEDIA	:	Steam
SIZE	:	1" to 2"
MOC	:	Cast Iron
TYPE	:	Treaded

CONDENSATE BEHAVIOUR AT VARIOUS SPEEDS

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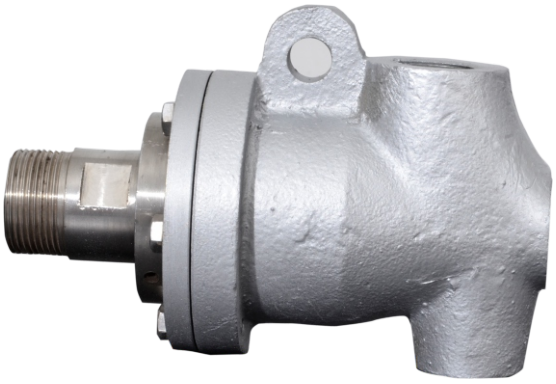
PLANE AND SALF ALIGNING ROTARY JOINT



MODEL : MC		
SPEED	:	Upto 300mpm
MEDIA	:	Steam / Air
SIZE	:	1" to 1.5"
MOC	:	Cast Iron
TYPE	:	Treaded

PRESS ROLL & REWINDER COOLING ROTARY JOINT

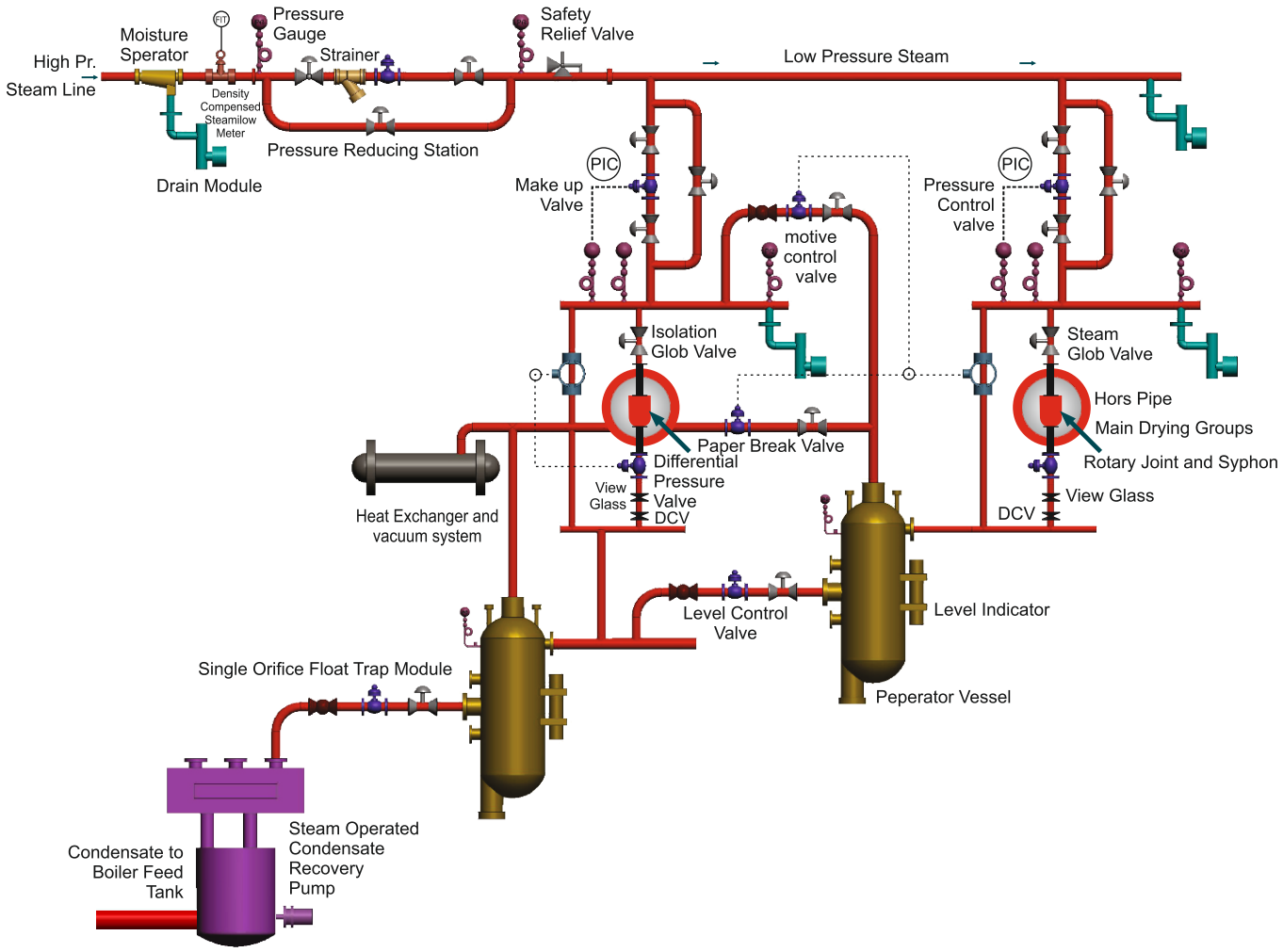
MODEL : MPR		
SPEED	:	Upto 900mpm
MEDIA	:	Water
SIZE	:	½" to 2"
MOC	:	SS IC304 / 316
TYPE	:	Treaded & Quick Release System

COOLING ROTARY JOINT

MODEL : MPR-2		
SPEED	:	Upto 250mpm
MEDIA	:	Water
SIZE	:	1" to 2"
MOC	:	SS IC304 / 316
TYPE	:	Treaded

CASCADE SYSTEM

At this point it is best to describe the cascade system as a whole, before reviewing the different components. Figure illustrates the principle of a cascade system and the flows of steam, condensate and water.



Fresh, slightly superheated steam is supplied to the dryer groups. Steam pressure is controlled in each group. Steam then partially condenses inside the cylinders. The released energy is transferred through the cylinder shell into the paper. The blow through steam and condensate are removed from the dryer cylinders into condensate tanks. Blow through and flash steam is fed to lower pressure groups. Condensate is collected into the main condensate tank and pumped back to the boiler.

The pressure difference between the steam and the condensate side is controlled in two steps. Coarse control is done with orifice plates placed in every condensate pipe. After the orifice plates the condensate side pressure is 20 kPa lower than on the steam side. Fine control is done with differential pressure control valves at the condensate tanks.

The orifice plates are dimensioned to reduce pressure 20 kPa. They restrict blow through steam to 10-15% of supply volume while allowing free condensate flow.

STEAM & CONDENSATE SYSTEM OPTIMIZATION SERVICES

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Steam System Services Also Include:-

- System Design
- Installation & Integration
- Troubleshooting & Routine Service
- Diagnostics
- Steam Audit
- Equipment Supply
- Operator Training

SEPARATOR TANK

Highly Efficiency Separators Remove Condensate from the Blow-through steam bringing condensate carryover to an absolute minimum. This eliminates erosion of system components and increases heat transfer. Accurate and consistent blow-through steam floe measurements, critical foe system control, also require the high efficiency water removal provided by these separators.

VALVES, TRANSMITTER, CONTROL SYSTEM AND STATEGIES

All of the control system elements must be selected and specified based on paper grades produced, furnish, and steam supply constraints, operating parameters and controls strategies, consistent with quality production and energy efficiency. Components are selected and applied to provide durable, reliable performance consistent with the use of the most modern automation hardware and programming. This combination will allow the paper maker to truly optimize the performance of the dryer section.

PISTON VALVE

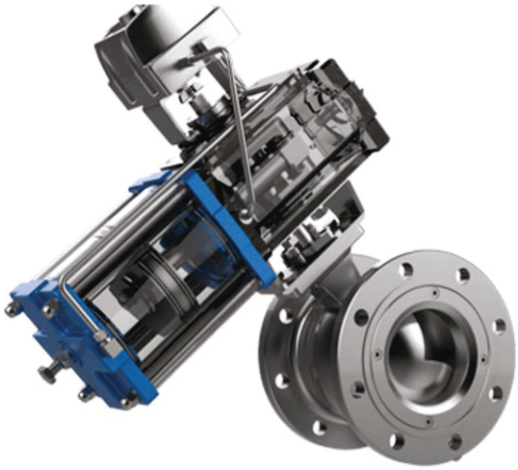
Piston Valve is basically Seat less and Gland less valve and by virtue of its design can replace both, the conventional type of Gate and Globe valves, with distinct advantages over them. The Piston valve works on the principle of Resilient rings in conjunction with a Metallic Stainless Steel Piston, that moves vertically between the rings, giving a Seal that is both effective as well as Durable. This sealing system gives a bubble tight shut off, equivalent if not superior to Class VI leak standards. The Sealing rings are the heart of the valves, are available in Non Asbestos, Tanged Graphite, and Graphite Asbestos varieties, to effectively handle more than 250 Industrial Media.

Operating Animation

Piston valves are ideally recommended for critical and hazardous media, including Steam, Heat Transfer Oils, Acids, Gases, VACUUM.

Manufactured in Forged Carbon Steel / Stainless Steels to 800# - Sizes 15mm to 40mm, in SW and Threaded Ends. Cast Carbon Steel / Stainless Steels with Flanges to 150#, #300 & DIN standards 50 to 200mm.

V-PORT SEGMENT VALVE



FEATURERS

- ONE PIECE COMPACT BODY
- V NOTCH BALL PROVIDES
- SHEARING FORCE AND AUTO-CLEANING
- STRAIGHT FLOW AND OPENED
- UP BODY CAVITY WITH LESS FLUID RESIDUE
- SIDE ENTRY SEAT PROVIDES
- EASY MAINTENANCE
- BEARING PROTECTED SHAFTS
- REDUCE PRESSURE LOSS
- REDUCE TEMPERATURE LOSS
- LESS MAINTENANCE

TECHNICAL SPECIFICATION :

DN: DN20 ~DN400
PN: Pn10 ~ Pn64, ANSI150LB, 300LB
Connection : Wafer/Flange
Templerature^{o}C : -29~120 / -29~230 / -40~560
Sealing : Metal Seat / Soft Seat
Flow Characteristic : /Equal percentage
Tightess Class : IV V/Class IV,V.
Rangeability : 300:1
Body Material : (1) WCB (2) Cf8 (3) CF8M (4) CF3M
Actuator : / Pneumatic, Electric Motor

APPLICATION

IT IS SUITABLE FOR CONTROL SYSTEM IN INDUSTRIES INCLUDING PLUP AND PAPER, CHEMICAL, PETROLEUM, BIOCHEMISTRY, CHEMICAL FIBER, PHARMACEUTICAL, ENVIRONMENTAL PROTECTION ETC., ESPECIALLY SUITABLE FOR CONTROL OF MEDIUM

Steam Control Valves

maruti VALVES

This Type Of Valve With Its Classic Globe Body Shape, Which Reflects Its Name, Uses The Variable Area Generated Between The Plug And Seat To Control Fluid Flow. It Is Very Versatile Offering Reduced Trim Options As Well As A Variety Of Special Trims For Severe High Pressure Drop Applications. This Style Of Valve Is Easily Adapted For Use On Cryogenic Tempetatures And For High Temperature Duties. This Valve Is Preferred For Tight Shut - Off, Positioning Accuracy, High Rangeability And Simplified Maintenance, Satisfy The Majority Of Control Valve Applications Throughout The Process And Power Industries In Control Of Air, Steam, Water, Gas, Chemicals Etc.

DESIGN	ASME B16-34
VALVE SIZE	15 mm to 450 mm (1/2" to 18")
RATING	ANSI 150 to 2500 or Equivalents to BS, DIN, etc.
BODY MATERIALS	Carbon Steel, Chrome-moly Steel, Stainless Steel, Monel, Alloy20, Hastelloy B/C, PP, Teflon etc. Teflon Lined / Teflon Metal Housed
ACTUATOR TYPE	Diaphragm, Cylinder or Electric.
ACTUATOR ACTION	Direct / Reverse Acting.
DIAPHRAGM	Nitrile / Neoprene
SPRING RANGES	3 - 15 PSIG (0.2 - 1.0 Kg/cm^2) 6 - 30 PSIG (0.4 - 2.0 Kg/cm^2)
AIR SUPPLY	20 - 35 PSIG (1.4 - 2.5 Kg/cm^2)
AIR CONNECTION	1/ 4" or 1/ 2" NPT
HANDWHEEL	Top or Side Mounted Handwheel
ACCESSORIES OPTIONAL	Valve Positioner - Pneumatic , Electro Pneumatic, Smart Positioner, Airset, Solenoid Valve, Air Lock, Volume Booster, I/P Converter, Position Transmitter, Limit - Proximity Switches etc. Removable Blind Head, Steam Jacketing, etc.

Basis Weight Control Valve

Features

The control unit's unique feature to run valve with various step sizes, depending on error between actual and desired flow rate, makes it a superior element for basis weight control. Any error can be eliminated quickly and accurately without overshooting. This helps to reduce settling time during grade change.

Benefits

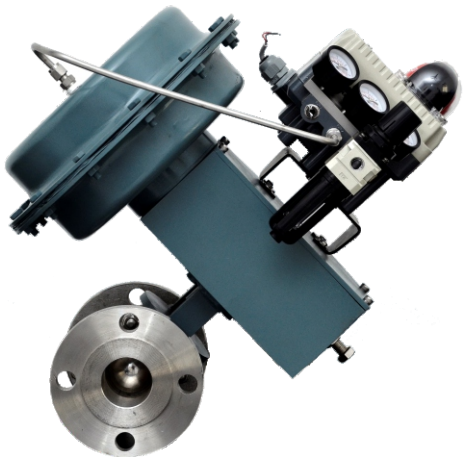
- The is compatible with virtually all leading quality control systems.
- High Rangebility
- High resolution conformance
- Assures consistent paper grade quality
- Flexibility to operate on a variety of inputs
- Fast grade change

Specifications

Design	:	Segment valve together with high resolution stepping motor
Size Range	:	DN 50-250, flangeless / DN 50 - 250, flanged
Pressure Classes	:	PN 25/40, ASME 150/300
Maximum Temp.	:	+50 °C

Ball Valve

Ball Valve with Electropneumatic Positioner



Ball Valve With Diaphragm Operated

- Pulp and Paper
- Power plants
- Mining
- Chemical plants
- Waste Water Treatment Plants
- Food and Beverage
- etc.

Sizes : DN 15/1/2” to DN200/8” (larger diameters on request)

Steam Instrument

Steam Globe Valve

Technical Data

- MANUFACTURING STD. : BS 1873
- INSPECTION & TESTING STD. : API 598 / BS 6755 (PARTi)
- END CONNECTION : FLANGED ENDS AS PER ASME B 16.5
- FACE TO FACE : AS PER ASME B16.10
- IBR APPROVED

PART NOMENCLATURE	MATERIAL
1-BODY	ASTM A 216 Gr. WCB - WCB / CAST IRON ASTM A 351 Gr. CFB / ASTM A351 Gr.CF8M
2-BONNET	ASTM A 216 Gr. WCB - WCB / CAST IRON ASTM A 351 Gr. CFB / ASTM A351 Gr.CF8M
3-PLUG	AISI 410 / AISI 304 / AISI 316
4-PLUG NUT	AISI 410 / AISI 304 / AISI 316
5-SEAT RING	AISI 410 / AISI 304 / AISI 316
6-STEM	AISI 410 / AISI 304 / AISI 316
7-BACK BEAT BUSHING	AISI 410 / AISI 304 / AISI 316
8-GLAD	AISI 410 / AISI 304 / AISI 316
9-GLAND FLANGE	ASTM A 216 Gr. WCB - WCB / CAST IRON ASTM A 351 Gr. CFB / ASTM A351 Gr.CF8M
10-YOKE NUT	S.G. IRON
11-GRUB SCREW	CARBON STEEL / STAINLESS STEEL
12-STEM PACKING	PTFE / GRAPHOIL
13-BONNET GASKET	SS 304 / SS 316 SPIRAL WOUND
14-BONNET STUDS & NUTS	ASTM A 193 Gr. B7 & ASTM A 194 Gr. 2H
15-GLAND EYE BOLTS & NUTS	ASTM A 193 Gr. B7 & ASTMA194 Gr. 2H
16-GLAND LUG BOLTS & NUTS	CARBON STEEL / STAINLESS STEEL
17-HAND WHEEL	DUCTILE IRON / MALLEABLE IRON
18-WHEEL NUT & WASHER	CARBON STEEL / STAINLESS STEEL
19-NAME PLATE	ALLUMINUM

Steam Hose Pipe

Float Type Steam Trap Screwed
Body : Cast Iron

Wafer Type Swing Check Valve
S. S. /M. S. /C. I.

View Glass Flange End
Body: M.S /SS 304

I.C. D.C.V. Valve
SS 304

maruti
VALVES

Quality
Meets
Excellence

AHMEDABAD

OFFICE & FACTORY :- (UNIT - 1)
MARUTI HOUSE 99 TO 102 & 119, Vikas Estate,
Nr. Municipal School, Anil Starch Mill Road,
Bapungar, Ahmedabad-380024 (Gujarat) India.

FACTORY :- (UNIT - 2)
Swastik Industrial Park, Plot No. B-10,
Kothiya Kunha Road, Patiya, Kunha,
Daskroi, Ahmedabad.

AHMEDABAD

OFFICE & FACTORY :-
MWELL CONTROLS
102, Vikas Estate, Near Municipal School,
Anil Starch Mill Road, Bapunagar, Ahmedabad - 380025

OFFICE :-
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