NIDCON 40 UUIUN Years





THE RIGHT PRODUCT FOR YOUR APPLICATION

- Triple Eccentric Butterfly Valves
- Pressure Seal Valves Gate, Globe and Check
- Automatic Recirculation Valves for Pump Protection
- Turbine Bypass and Conditioning Valve
- Vent Valves and Boiler Start-up Valves
- Stop Globe and Drain Valves
- Extraction Check Valve for Turbine Protection
- Two Color Boiler Level Gauge and Alarms
- Knife Valves

A history of growth and excellence

DURCON–VICE Group is a premium manufacturer of industrial valves in Brazil. It combines high standards in technology, quality and productivity, with tradition, experience and reliability.

Founded in 1974, **DURCON-VICE** Group employs 200 workers in 4 manufacturing plants in Brazil and the USA. The total plant area is 20 thousand square meters.

Our Markets are: Power, Oil & Gas, Chemical & Petrochemical, Water & Waste, Food, Steel mills, Pulp and Paper, Mining and Others. We are present in Latin America, North America, Europe and Asia.

The company produces a wide range of high technology valves, like Pressure Seal; Gate, Globe and Check Valves; Triple Eccentric Metal seated zero leakage butterfly valves; Stop and Drain globe valves one piece forged body for Severe service; Two Color Water Level Gauges for high pressure boilers; Automatic Recirculation Valves for Centrifugal Pump protection; Turbine by-pass valves; Extraction Check valves for Turbine protection. With over two hundred thousand valves sold, with size ranging from 1/2" to 120" and pressure class up to 4500#.

Our QMS is ISO 9001:2008 certified by BVQI since 1994; for design, development, manufacture and service. We are also certified in PED 97/23/EC (CE Mark).

Since its foundation, the company has strived to build relationships, believing in growth built in partnership with the whole society. **DURCON-VICE** has characterized itself as a company customer oriented and focused, committed to the satisfaction of the users of its products and services. The result of this work has been a significant growth rate, supported by reinvestment in people, equipment, technologies and processes which ensure continuous improvement of products and services.

Complete solution for your applications and requirements

DURCON-VICE supplies Contractors, OEM's, Distribuitors and End Users with high quality solutions. Our understanding of customer's process, enables us to select the right product for your application.

- Experienced specialists who understand your process
- Fast delivery
- Full technical support
- Wide range of valves
- Competitive prices

- Long service valve life
- Flexible products to suit your needs
- Quick respose to your request for quotations
- All actuators and acessories avaliable
- Taylor-made solutions



Sales Department



Sizing Program



Experienced Specialists

Engineering Efficiency

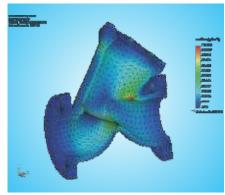
DURCON-VICE engineers are ready to help our customers to meet the most demanding design challenges and applications. We have the skill, the experience and most modern tools to assist our customers to whatever extent

- Project Engineers
- Design/Drafting
- CAD/CAM 3D
- Finite Element Analysis (FEA)
- Computer Flow Analysis (CFA)

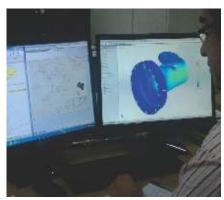
- Testing (Destructive and Non Destructive)
- Performance Test Capability
- Research & Development
- Computer Casting Process Simulation



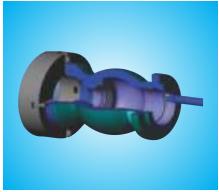
Flow Analysis - CFD - 3D



Finite Element Analysis - FEA - 3D



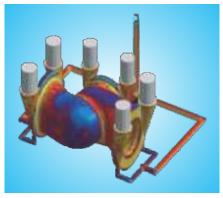
Design CAD / CAE / CFD / 3D



Machining Analysis - CAM - 3D



Performance Test - LAB



Computer Casting Process Analysis - 3D



Cryogenic Test



Fire Safe Test



Performance Test

High-Quality Manufacturing

DURCON-VICE manufacturing facilities are supported by the latest generation software, validated processes, state-of-art measurement tools and instrumentation, trained personnel and best technology equipments.

- ERP Enterprise Resource Planning SAP
- MRP Manufacturing Resource Planning
- ISO 9001-2008 quality standard
- CE mark
- International quality assurance standards
- International purchasing agreements
- Quick response capability
- Latest CNC equipments
- Latest generation CNC Machining Centers
- Automatic welding machines

- Three dimensional measuring machine
- CAD/CAM-3D
- Quality assurance equipment and certified non-destructive examination level 1 and 2 personnel.
- Weld processes and welders qualified by ASME.
- Pressure and seat thightness equipment to 15.000 psi.



CNC Machining Centers



Horizontal CNC Machining Centers



CNC Lathe



CNC Machining Centers



Assembly area



Assembly BPTV



Test machines up to 120" (3000mm)



Test Machines



Test Machines up 4500# (PN 640)



Focus on Customer's Satisfaction

DURCON-VICE has an efficient instruments to meet targets defined in our Strategic Plan. The company and its products meet all the legislation requirements, as well as international codes and standards.

- SA 8000
- ISO 9001:2008
- CE 0045







CE 0045







Ultrasonic Control



Final Inspection

A World of Service

DURCON-VICE understands the critical role our flow control products serve. To meet these needs, we have established a network of Quick Response and Service Centers.

- 24/7 Support
- Spares inventory
- Assembly capability
- · Quick manufacturing
- Commissioning

- Skilled technicians
- Repair/Return/Remanufacturing/ Up-grading
- Around-the-clock on-site service
- In/Out house trainig



Field Service



Shipment



Inventory



Around the World

In practically every type of service and every type of application, you will find a **DURCON** flow control solution.

Market Segments

Power

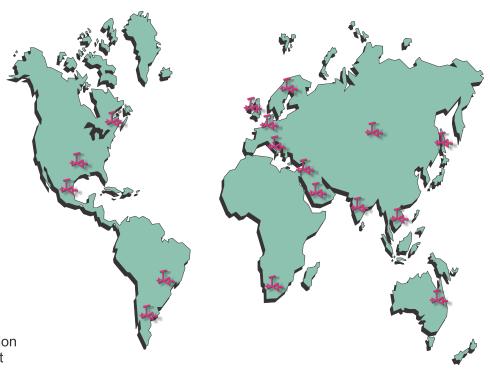
Thermoelectric Hydroelectric

Industry

Oil and Gas
Chemical and Petrochemical
Pulp & Paper
Sugar and Alcohol
Steel Mill
Mining
Many others...

Water / Sewage

Water treatment and distribution Waste and Sewage treatment



Market and Application x Products

PRODUCTS		THEF	RMOE	LECT	RIC P	OWE	R GEN	NERA	TION	П	OIL UP STREAN & DOWN STREAN									G			UGAF LCOH						
	COOLING WATER SYSTEMS	CONDENSATE SYSTEMS	HIGH PRESSURE DRAIN	BLOW DOWN	GAS INLET	GAS EXAUST	AIR INJECTION	STEAM & CONDENSATE LINES	FEED WATER	SUPERHEATED AND STEAM MAIN	CRUDE WELLS INJECTION	PIPELINES	DISTILLATION SYSTEMS	DESALINIZATION SYSTEMS	OTHER PROCESSES	DISTRIBUITION	STORAGE	COOLING WATER SYSTEMS	STEAM & CONDENSATE LINES	STEAM GENERATION SYSTEMS	RECOVERY	REJECTION	SEPARATION	COOLING WATER SYSTEMS	STEAM & CONDENSATE LINES	STEAM GENERATION SYSTEMS	COOLING WATER SYSTEMS	STEAM AND CONDENSATE LINES	STEAM GENERATION SYSTEMS
AUTOMATIC RECIRCULATION VALVE	•	•						•	•		•	•	•	•	•	•	•	•	•	•	Г			•	•	•	•	•	•
TWO COLOR BOILER LEVEL GAGE	•	•						•							•			•	•	•				•	•	•	•	•	•
PREHEATER BY-PASS VALVE								•	•						•				•						•			•	
GATE, GLOBE & CHECK VALVES - BOLTED BONNET	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
GATE, GLOBE & CHECK VALVES - PRESSURE SEAL BONNET			•	•				•	•	•	•	•	•	•	•				•	•	•	•	•		•	•		•	•
TURBINE BY-PASS VALVE (STEAM CONDITIONING)								•		•									•	•					•	•		•	•
EXTRACTION CHECK VALVE		•						•		•									•	•			П		•	•		•	•
SPECIAL VALVES	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
STOP GLOBE AND DRAIN VALVE			•	•	•	•	•	•	•	•	•		•	•	•	•	•		•	•	•		•		•	•		•	•
TRIPLE ECCENTRIC BUTTERFLY VALVE	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

Main Customers by Market



Contract/ Engeneering
Voest Alpine
Snamprogetti
Techint
Fluor
Bechtel
Fels Setal
Oderbrecht
Camargo Correa

Stone and Webster



Power Generation
Birchwood Co-Generation
Sierra Pacific Power Co.
Atlantic Thermal Systems
Tampa Electric
Eletronuclear
AES
Itaipu
EDF
Tractebel



Oil and Gas
Petrobras
Shell
Mobil
Repsol
Chevron-Texaco
Agip
Comgas
YPF
Pemex



Chemical and
Petrochemical
Lyondell Petrochemical
E.l. Dupont
Hyundai Petrochemical
Dow Chemical
Braskem
Bunge
Bayer
Rhodia



Sugar and Alcohol Shree Renuka (Equipav) Usina da Barra Usina Sta. Elisa LDC (Usina Cresciumal) Copersucar Grupo Raízen (Cosan) Usina Caeté Usina São Martinho Usina Barra Grande



OEM (Boilers, Turbines, Pumps, etc.) Mitsubishi Babcock Foster Wheeler Kvaerner KSB Flowserve Siemens Alstom-ABB Rolls Royce



Pulp & Paper
Wausau Paper
Federal Paper
Eurocan Pulp & Paper
Temple-Inland Paper
Celulosa Arauco
Fibria (Aracruz)
Klabin
Fibria (VCP)
International Paper
Suzano



Mining
Cia. Panamericana
Getchell Gold
Samarco
Vale
Alunorte
Alcoa
Alcan
MBR
Kobrasco
V&M



Steel Mill CSN-Nippon Steel Usiminas Arcelor Mittal-CST Gerdau Usinor Sidenor



Water and Sewage
Sabesp
Cedae
Sanepar
Sanasa
Corsan
Copasa
Embasa
Caesb
Cosanpa

Market and Application x Products

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Automatic Recirculation Valves For Pump Protection



Application and Series

Centrifugal pump protection. Avoids low and reverse flow in centrifugal pump operation, eliminating maintenance problems due to NPSH, superheating and premature wear of housing, disks and bearings. Three basic models:

Series 2500

Model VRM-HPM for high pressure pumps.

Series 1700

Model NVM for low to medium pressure pumps.

Series 0700

Model NVM for low pressure pumps

Sizes Pressure Class Connections
25 to 750mm PN 10 to 420 BW or Flanged
1" to 30" 150# to 2500#

Features and Benefits

Complete system, self-actuated, with flow-measuring function, recirculation control and main flow check valve.

Utilizes the principle of operation of measurement of flow from pump to process and controls the recirculation in stages avoiding flashing and cavitation.

Operation is silent and reliable. Easy maintenance and sealed to environment.

The investment will pay off within a few months, since it reduces the operational and maintenance cost of the centrifugal pump.

Two color Boiler Level Gauge



Application and Series

Series 6000

Read-out of water level of Boiler or Pressure vessel.

Utilized with various model of Illuminator types

Wide Angle direct reading, Closed circuit TV, Explosion Proof.

Visibility: 190 mm to 1000 mm.

Features and Benefits

Unmistakeable read-out in two colors, green for water and red for steam.

Long operational life with minimum maintenance required.

Maximum safety due to the Port type transparent elements.

Pressure Seal Valves Gate, Globe and Check Valves



Application and Series Series 7600- 7999

Tight shut-off, control and throttle valve of process lines for liquids, steam and gases.

Pressure Seal and Lip Seal construction for superior sealing of the body-bonnet connection.

For saturated and superheated steam applications.

Various options of cast or forged materials available: Carbon steel- WCB, A105, etc. Alloy steel - WC6, WC9, C12A, F11, F22, F91, etc. According to special requirements, or specifications.

Sizes	Pressure Class	Connections
10 to 900mm	Up to PN 420	SW, BW or Flanged
½" to 36"	Up to 2500#	

Features and Benefits

Gate valves with various alternatives, solid wedge, flexible wedge or double disc wedge.

Globe, "Y" Globe, Angular or Non-Return type valves.

Check valves: Swing, Piston, Ball, Titting Disk and others.

Actuators: Handwheel, Impact Handwheel, Handwheel with gear reducer, Electric, Pneumatic or Hydraulic Actuators

Stop Globe and Drain Valves ("Y" and "T" configurations)



Application and Series Series 5500

Tight shut-off, control and throttle valve for water and steam lines at high pressure and temperature.

A high performance valve with long life. Recommended specially for severe service applications of Saturated or Superheated steam and liquids.

Many options of cast or forged materials available: Carbon steel- WCB, A105, etc. Alloy steel - WC6, WC9, C12A, F11, F22, F91, etc. According to special requirements, or specifications.

Sizes	Pressure Class	Connections
10 to 80mm	Up to PN 420	SW, BW or Flanged
1/3" to 3"	Un to 4500#	

Features and Benefits

Packing stuffing box included in one piece body. No leaking points. Yoke externally screwed is not part of the pressure vessel.

TRANS-O-FLOW device that protects the sealing surface against premature wear, increasing the valve's life dramatically.

Valve reseating may be made without removing the valve from the line. Handwheel, Impact Handwheel, Pneumatic or Electric Actuators.

Triple Eccentric Butterfly Valves



Application and Series

Series 3000

Isolation (shutt off) and control of liquids, steam and process lines. Various sealing alternatives:

Metal-to-Metal, Bi-directional, Zero-leakage sealing.

Sizes	Pressure Class	Connections
50 to 2500mm	PN 2 to 160	Wafer, Lug
2" to 100"	25# to 1500#	or Flanged

Features and Benefits

Triple-eccentric with Bi-directional Zero-leakage sealing.

Special projects for large sizes and high pressure, high temperature and high cycle applications.

Actuators: Manual, Pneumatic, Electric, Hydraulic with or without limit switches

Feedwater pre heaters By-pass valves



Application and Series Series 9800

Three way valve for feedwater pre heaters By-pass:

- To allow depressurization of the High Pressure Feed Water Heaters for inspection, repair or other operational needs,
- To continue the operation of the power plant while bypassing the High Pressure Feed Water Heaters,
- To Protect the High Pressure Feed Water Heaters from damage caused by overpressure, heavy vibration, water hammer, blasting water, or in case of a heater tube rupture or leak,
- To protect the turbine extraction from excessive backpressure,
- To avoid power plant shutdown caused by above circumstances.

Size	Pressure Class	Connections
150 to 600mm	PN 10 to 640	Butt Weld
6" to 24"	150 to 4500#	or Flanged

Features and Benefits

- Eliminates two Stop Valves, With electric actuators
- Eliminates one tee fitting,
- Eliminates side mounting of stop valves (increase wear and maintenance)
- Simplify piping layout,
- Eliminates one motor operation conection
- Make three field welds, not seven.

DURCON 3 way valve, cuts the tipical total instaled cost in 50%

Turbine Bypass and Steam Conditioning Valve



Application and Series Series 12.000

This valve reduces the pressure and temperature in one piece.

- Turbine By-pass
- Steam conditioning for continuos operation
- Rangeability from 1:10 to 1:100

 Sizes
 Pressure Class
 Connections

 Entry 3" - 20" (80-500mm)
 PN 16 to 630
 Butt Weld

 Exit 4" - 64" (100 to 1600mm)
 150 to 4500#
 or Flanged

Features and Benefits

- Multistage controllable reduction for the entire pressure range,
- All internal parts can be replaced on site (by the customer),
- Wear and tear is minimized due to downstream injection,
- Spherical body for tension reduction,
- · Customized characteristics,
- Centrally situated hot steam cooling unit enables fast, homogenous, temperature distribuition,

Extraction Check Valve For Turbine Protection



Aplication and Series Series 14.000

Extraction check valve Type B:

Free running check valve with pneumatic - swivelling closing device

Other Aplications:

- Extraction steam non return
- Bled steam non return
- Instalation horizontal or vertical

SizesPressure ClassConnections80 to 1100mmPN 10 to 160Butt Weld3" to 44"150 to 1500#or Flanged

Features and Benefits

- Free swinging disc,
- · Low friction stuffing,
- · Very low friction mechanical seals,
- · Inclined seat design,
- Positive closing (assisted by the spring on the cylinder, < 0,5s)
- Easy maintenance.

Applications



Steam Conditioning Valve USINA COLORADO



Pressure Seal Gate Valve ALUNORTE - CVRD - VALE



Triple-eccentric Butterfly Valve OXITENO



Severe Service Stop-Globe Valve (Durblock) FIBRIA



Automatic Recirculation Control Valve PETROBRAS



Bicolor Level Gage for Boiler Visibility 12 ½" - 1500# USINA SANTA ISABEL



Gate Valve Bolted Bonnet and Dual Plate Check Valve 20"- 300# RAIZEN - DEDINI



Knife Valve 4 to 24" - 150# VALE - BRUCUTU MINE



Globe Valve With Pneumatic Actuator for Turbine Protection TGM - CITROSUCO



Globe Valve, Y type, Non Return, Pressure Seal BRASKEM - LUMMUS SNAM PROGETTI

Large size Valves



Gate Valve, size 64" PROMON - MITSUI



Control Globe Valves, size 44" and 18" ARCELOR MITTAL - CST



Butterfly Valve for water application, size 100"



Butterfly Valve 40" with by-pass for Small Hydroeletric plant ENERG POWER



Forged body Pressure Seal Gate Valve 16" - 2500# BRASKEM-ALSTOM

Plants



Custom-made and Specialty Valves Cajamar - SP - Brazil



Serial-made Valves Cajamar - SP - Brazil



Specialty Valves Three Rivers - Michigam - USA



Steel Foundry Caieiras - SP - Brazil



Under construction Franco da Rocha - SP - Brazil

The right product for your application.

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FAMAT ENGINEERED VALVES

Famat SA

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