BURCON

THE RIGHT PRODUCT FOR YOUR APPLICATION

Vice 40 years

DURBLOCK GLOBE BLOCK VALVE

BENEFITS

- Increase production by eliminating losses and wastes;
- Reduce maintenance costs;
- Reduce occupational accidents;
- Reduce time and costs of stops for maintenance.

FEATURES

- Designed for Severe Service
- For High Pressure applications
- Bonnet-less one piece body piece
- Metal-to-Metal sealing (Stellite®)
- Zero leakage
- ASME 16.34 "Y" and "T" construction
- Connections (welded) according to:
  - SW - ANSI B16.11
  - BW - ANSI B16.25
- ASME pressure classes: 900 # to 4500 #
- Sizes: 1/2" to 3" (DN 15mm to 80mm)

ISO 9001 BUREAU VERITAS Certification

FUNDAÇÃO ABRINQ RECONHECE EMPRESA AMIGA DA CRIANÇA

CE

A history of growth and excellence

DURCON-VICE 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 employs 200 workers in 4 (four) manufacturing plants in Brazil and the EUA. The total plant area is 20 thousand square meters.

The company produces a wide range of high technology valves, with over 2 hundred thousand valves sold, with sizes ranging from 1/4" to 104" and pressure class up to 4500#. We are present in Latin America, North America, Europe and Asia.

Our QMS is ISO 9001:2008 certified for design, development, manufacture and service. We are also PED 97/23/EC (Pressure Equipament Directive) certified, (CE Mark).

Manufacturing Plants

Factory 1 -
Cajamar - São Paulo - Brazil

Factory 2 -
Cajamar - São Paulo - Brazil

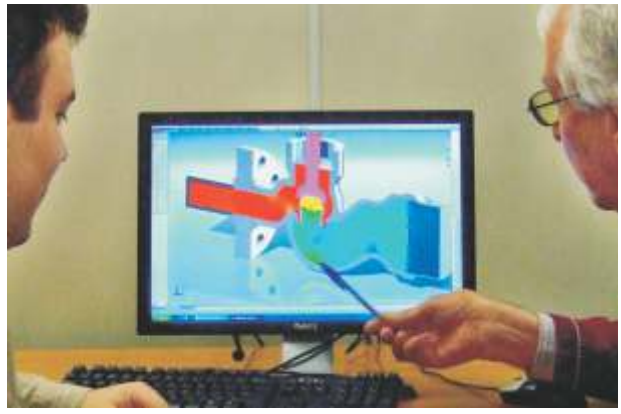
Factory 3 -
Three River - Michigan - EUA

Factory 4 -
Caieiras - São Paulo - Brazil

Factory 5 -
Franco da Rocha - São Paulo - Brazil
(Under Construction)

Processes

Sales



Research & Development

Manufacturing

Field Service

Durblock Stop Globe Valve for Severe Service

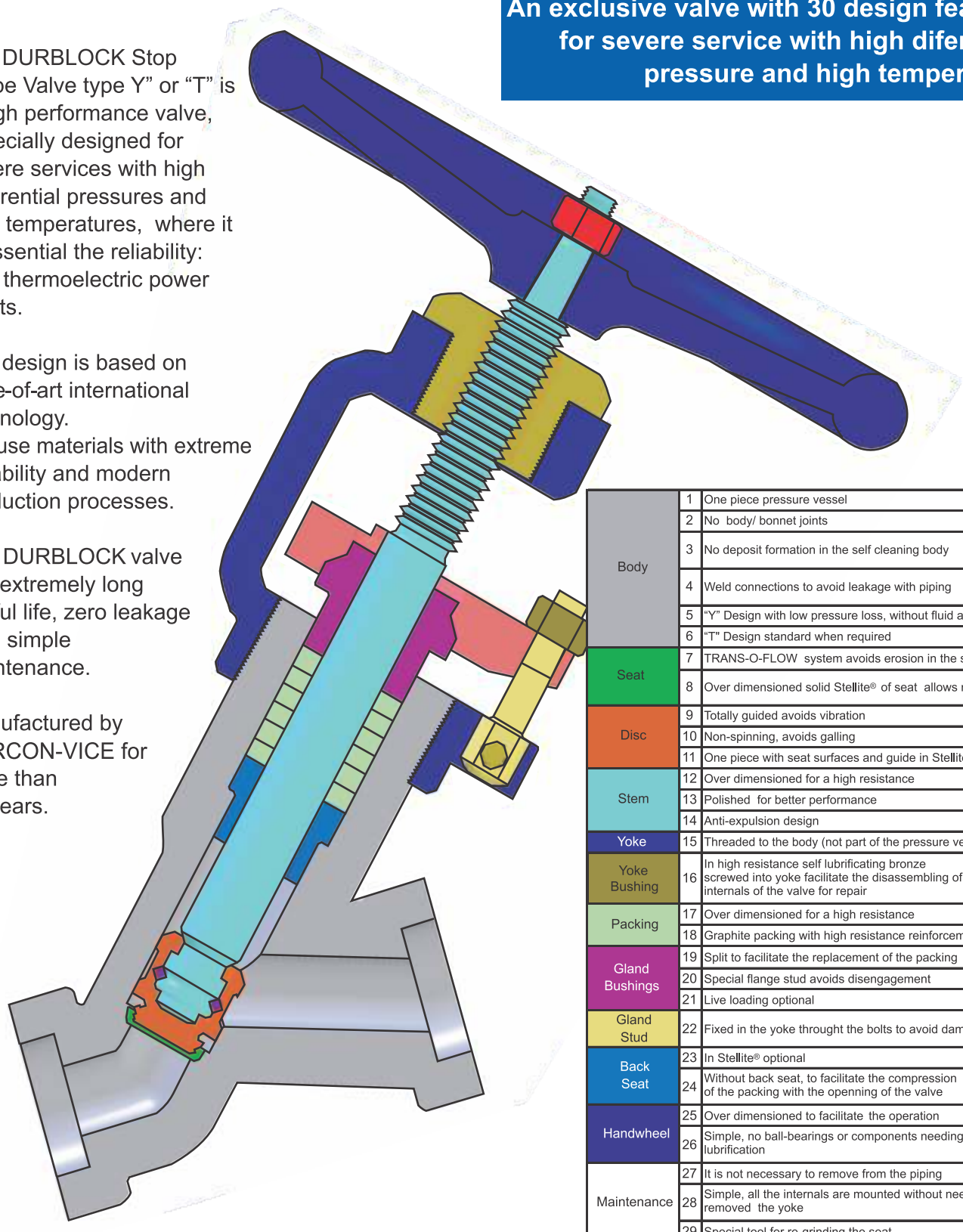
An exclusive valve with 30 design features for severe service with high diferential pressure and high temperature.

The DURBLOCK Stop Globe Valve type Y" or "T" is a high performance valve, especially designed for severe services with high differential pressures and high temperatures, where it is essential the reliability: Ex - thermoelectric power plants.

The design is based on state-of-art international technology.
We use materials with extreme durability and modern production processes.

The DURBLOCK valve has extremely long useful life, zero leakage and simple maintenance.

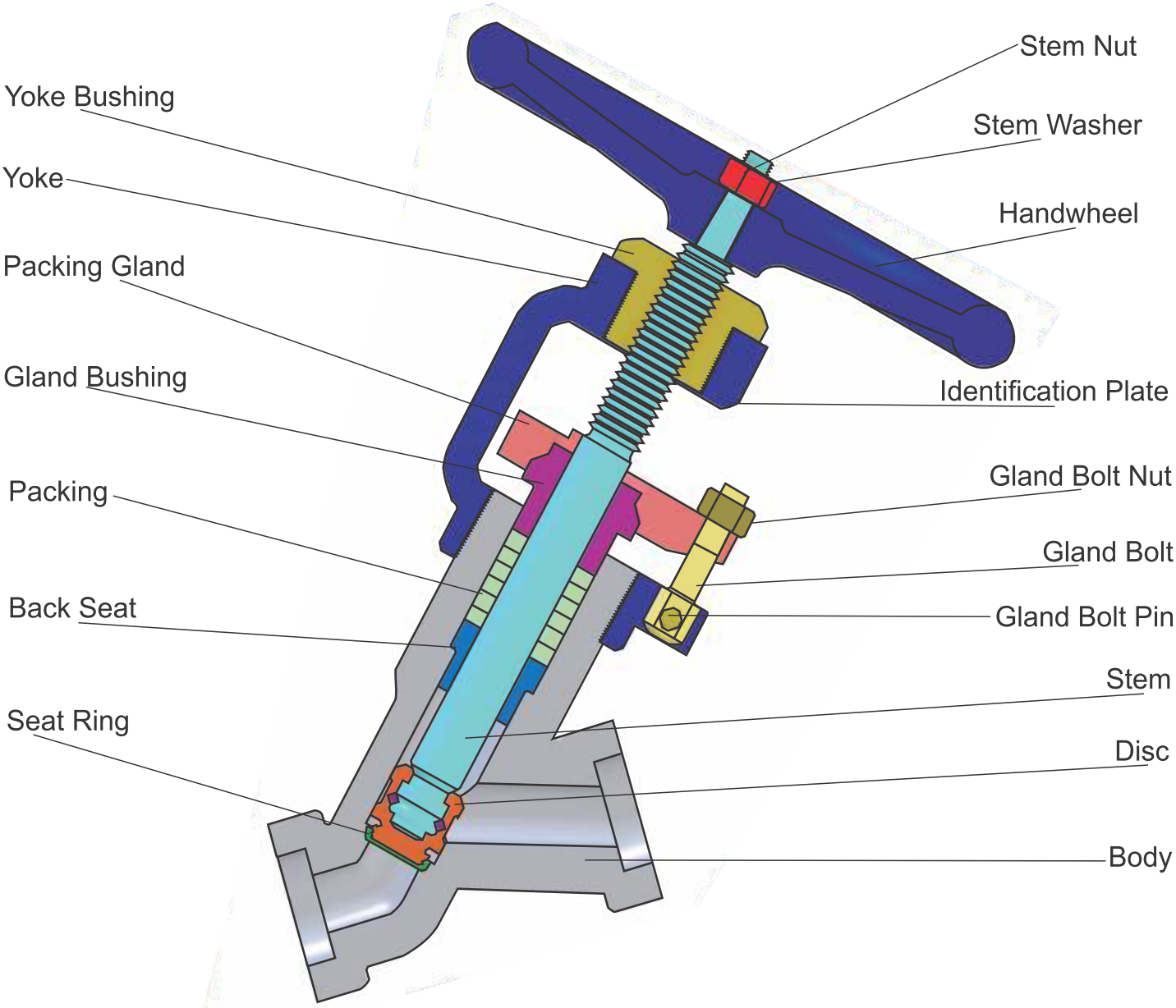
Manufactured by DURCON-VICE for more than 20 years.



Body	1	One piece pressure vessel
	2	No body/ bonnet joints
	3	No deposit formation in the self cleaning body
	4	Weld connections to avoid leakage with piping
	5	"Y" Design with low pressure loss, without fluid accumulations
	6	"T" Design standard when required
Seat	7	TRANS-O-FLOW system avoids erosion in the seat
	8	Over dimensioned solid Stellite® of seat allows regrinding
Disc	9	Totally guided avoids vibration
	10	Non-spinning, avoids galling
	11	One piece with seat surfaces and guide in Stellite®
Stem	12	Over dimensioned for a high resistance
	13	Polished for better performance
	14	Anti-expulsion design
Yoke	15	Threaded to the body (not part of the pressure vessel)
Yoke Bushing	16	In high resistance self lubrificating bronze screwed into yoke facilitate the disassembling of the internals of the valve for repair
Packing	17	Over dimensioned for a high resistance
	18	Graphite packing with high resistance reinforcement
Gland Bushings	19	Split to facilitate the replacement of the packing
	20	Special flange stud avoids disengagement
	21	Live loading optional
Gland Stud	22	Fixed in the yoke throught the bolts to avoid damage
Back Seat	23	In Stellite® optional
	24	Without back seat, to facilitate the compression of the packing with the openning of the valve
Handwheel	25	Over dimensioned to facilitate the operation
	26	Simple, no ball-bearings or components needing lubrification
Maintenance	27	It is not necessary to remove from the piping
	28	Simple, all the internals are mounted without need to removed the yoke
	29	Special tool for re-grinding the seat
Automation	30	Pneumatic, hydraulic or electric actuators adaptation is extremelly simple, can be made with the valve in the line

Developped for Severe Service

Parts and Materials



Description	Qty	A105	F11	F22	F91
Body	1	ASTM A105	ASTM A182 GR F11	ASTM A182 GR F22	ASTM A182 GR F91
Yoke	1	ASTM A105	ASTM A105	ASTM A105	ASTM A182 GR F22
Disc	1	STELLITE®	STELLITE®	STELLITE®	STELLITE®
Stem	1	AISI 410 H.T.	AISI 410 H.T.	AISI 410 H.T.	AISI 410 H.T.
Back Seat	1	AISI 410 H.T.	AISI 410 H.T.	AISI 410 H.T.	AISI 410 H.T.
Seat Ring	1	STELLITE®	STELLITE®	STELLITE®	STELLITE®
Packing	1	GRAPHITE	GRAPHITE	GRAPHITE	GRAPHITE
Packing Gland	1	ASTM A105	ASTM A105	ASTM A105	ASTM A105
Gland Bushing	1	SAE 1020	SAE 1020	SAE 1020	SAE 1020
Yoke Bushing	1	ASTM B16	ASTM B16	ASTM B16	ASTM B16
Stem Washer	1	SAE 1010/1020	SAE 1010/1020	SAE 1010/1020	SAE 1010/1020
Stem Nut	1	SAE 1010/1020	SAE 1010/1020	SAE 1010/1020	SAE 1010/1020
Identification Plate	1	AISI 304	AISI 304	AISI 304	AISI 304
Gland Bolt	2	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7
Gland Nut	2	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H	ASTM A194 2H
Gland Bolt Pin	2	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7	ASTM A193 B7
Handwheel	1	ASTM A395	ASTM A395	ASTM A395	ASTM A395

Special Characteristics

Body Construction

One piece body has extra long neck that accommodates the packing chamber: There are no bonnet and joints to cause leakage, the yoke is located outside the pressure vessel, there are no pressure retaining welds.

"Y" Design

It facilitates the discharge of viscous fluids, minimizes the pressure loss and prevents the formation of liquid trapping, which may cause errors in the measurement and/or measuring equipment, such as differential pressure transmitters, controllers and level gages.

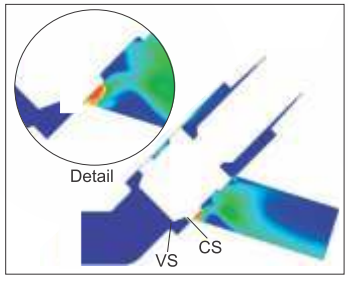
Removable Back Seat

Minimize leakage through the packing. When the valve is fully opened the Disc will push the backing ring thus re-tightening the packing.

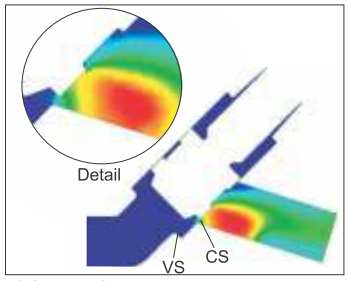
TRANS-O-FLOW System (Patent Required)

Two stages in the opening and closing of the valve protects the sealing surface (SS) against the erosion caused by high velocity of the fluid. The high velocity of the fluid is transferred to the control surface (CS), avoiding the erosion in the valve seat (VS).

Valve with TRANS-O-FLOW

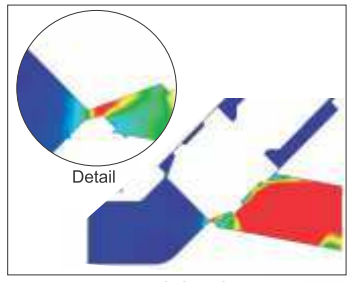


1º Opening Stage



2º Opening Stage

Valve without TRANS-O-FLOW



Valve without TRANS-O-FLOW

EROSION= f (V)³

Effects of Erosion

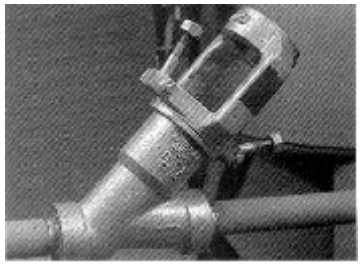
Solid Stellite® Disc and Seat

Ensure extremely long service life. The seat is a ring made of solid Stellite® and not a weld deposit, as in other brands of valves, ensuring an extremely long service life. The thickness of the seat ring eliminates the risk of seat cracking.

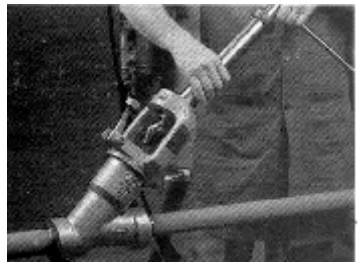
Maintenance and Reconditioning in the Piping

The valve makes possible the maintenance and the reconditioning without being required to remove the valve body from the line. The seat ring of solid Stellite® allows repeated re-grinding, with the use a of special tool manufactured by Durcon.

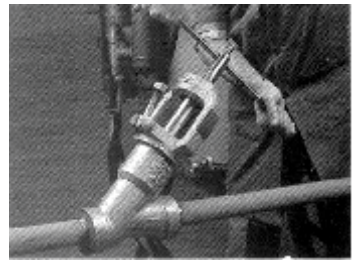
Unscrew the nuts of the Gland Bolts, lift up the packing gland and pull the (split) gland bushing.



Unscrew the yoke bushing and pull out, as a single set, the stem, packing and disc. The valve is fully disassembled.



Introduce the re-seating tool in the yoke thread (Durcon supplies this tool/service)



Re-grind the seat surface, mount the components and promptly! The valve is new.

Design, Dimensions and Weight

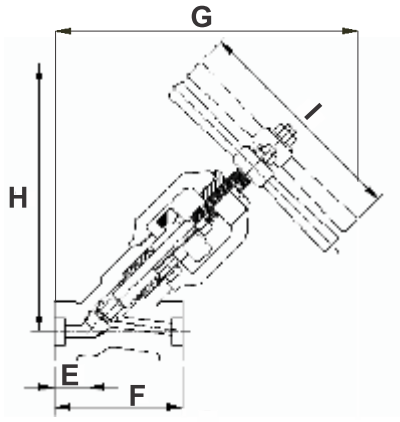
Design: ASME B16.34

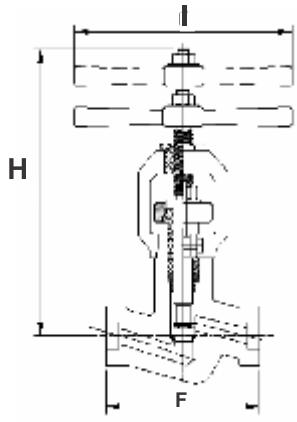
Testing: ASME B16.34 & MSS-SP 61

Marking: MSS - SP 25

Socket Weld Ends: ASME B16.11

Butt Weld Ends: ASME B16.25





Pressure Class 900# and 2700# - Forged Body

Nominal Diameter		Dimensions (mm)							Kv		Weight (kg)
		E	F		G (Open)	I	H (Open)				
(Inch)	(mm)		Y	T			Body "Y"	Body "T"	Body "Y"	Body "T"	
1/2	15	34	127	155	303	220	264	320	4,2	3,0	7,5
3/4	20	34	127	155	303	220	264	320	8,2	4,5	7,5
1	25	34	127	155	303	220	264	320	13,5	5,7	7,5
1.1/4	32	50	202	250	525	350	463	546	35,8	16,7	33,1
1.1/2	40	50	202	250	525	350	463	546	35,5	17,1	33,1
2	50	50	202	250	525	350	463	546	42,2	17,9	33,1
2.1/2	65	Consult Durcon-Vice									
3	80										

Pressure Class 4500# - Forged Body

Nominal Diameter		Dimensions (mm)						KV		Weight (kg)
		E	F	G (Open)	I	H (Open)				
(Inch)	(mm)					Body "Y"	Body "T"	Body "Y"	Body "T"	
1/2	15	50	185	520	350	440	460	6	4	23
3/4	20	50	185	520	350	440	460	7	5	23
1	25	50	185	520	350	440	460	11	8	23
1.1/4	32	60	250	550	420	515	535	24	17	48
1.1/2	40	60	250	550	420	515	535	25	18	48
2	50	Consult Durcon Vice								
2.1/2	65									
3	80									

Pressure and Temperature (According to ASME B16.34 - Year 2009)

Temp °C	CLASS 1700 LTD			CLASS 2700 LTD			CLASS 4500		
	A105 (1) WCB	F22 (2) WC9	F91 C12A	A105 (1) WCB	F22 (2) WC9	F91 C12A	A105 (1) WCB	F22 (2) WC9	F91 C12A
[°C]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]	[bar]
-29 a 38	293,1	293,1	293,1	465,4	465,4	465,4	765,9	775,7	775,7
50	293,1	293,1	293,1	465,4	465,4	465,4	751,9	775,7	775,7
100	292,6	292,5	293,1	464,7	464,6	465,4	699,0	773,0	773,0
150	289,2	288,8	293,1	459,3	458,6	465,4	676,1	752,8	752,8
200	286,6	284,6	293,1	455,1	452,0	465,4	657,0	729,8	729,8
250	286,3	283,2	293,1	454,8	449,8	465,4	629,1	694,8	694,8
300	286,3	282,1	293,1	454,8	448,0	465,4	597,3	642,6	642,6
325	284,0	281,1	293,1	451,0	446,4	465,4	580,7	619,6	619,6
350	277,2	278,8	291,4	440,2	442,8	462,9	563,5	603,3	603,3
375	266,9	276,3	286,2	423,9	438,8	454,6	545,5	581,8	581,8
400	245,9	276,3	284,6	390,6	438,8	451,8	520,8	548,5	548,5
425	203,8	276,3	281,3	323,6	438,8	446,8	431,5	524,7	524,7
450	163,0	273,9	273,9	269,2	435,1	435,1	345,1	507,0	507,0
475	123,5	261,3	261,3	221,8	415,0	415,0	261,5	474,8	474,8
500	83,3	218,3	218,3	149,5	346,5	346,5	176,3	423,0	423,0
538	41,8	140,8	177,3	75,2	223,8	281,6	88,6	276,6	375,8
550	-	119,4	177,3	-	189,6	281,6	-	234,5	374,2
575	-	80,4	174,8	-	127,8	277,6	-	157,9	359,1
600	-	52,6	149,0	-	83,5	236,6	-	103,3	292,5
625	-	34,1	111,6	-	54,2	177,2	-	66,9	219,1
650	-	21,6	75,9	-	34,4	120,5	-	42,6	148,9

Temp °F	CLASS 1700 LTD			CLASS 2700 LTD			CLASS 4500		
	A105 (1) WCB	F22 (2) WC9	F91 C12A	A105 (1) WCB	F22 (2) WC9	F91 C12A	A105 (1) WCB	F22 (2) WC9	F91 C12A
[°F]	[psig]	[psig]	[psig]	[psig]	[psig]	[psig]	[psig]	[psig]	[psig]
-20 to 100	4198,0	4250,0	5575,0	6750,0	6750,0	6750,0	11110,0	11250,0	11250,0
200	3847,0	4250,0	5575,0	6750,0	6750,0	6750,0	10185,0	11250,0	11250,0
300	3706,0	4188,0	5413,9	6663,5	6653,0	6750,0	9815,0	10925,0	10925,0
400	3592,0	4125,0	5245,5	6594,0	6550,0	6750,0	9505,0	10585,0	10585,0
500	3417,0	4103,0	4942,0	6594,0	6518,0	6750,0	9040,0	9965,0	9965,0
600	3218,0	4086,0	4496,0	6594,0	6490,5	6750,0	8515,0	9070,0	9070,0
650	3111,0	4057,0	4374,5	6437,0	6442,0	6750,0	8240,0	8825,0	8825,0
700	3017,0	4007,0	4219,7	6220,5	6366,0	6598,5	7960,0	8515,0	8515,0
750	2874,0	4007,0	3952,1	5708,0	6366,0	6556,0	7610,0	7970,0	7970,0
800	2330,0	4007,0	3773,7	4628,0	6366,0	6480,0	6170,0	7610,0	7610,0
850	1807,0	3837,0	3621,3	3586,0	6096,5	6096,5	4785,0	7305,0	7305,0
900	1303,0	3400,0	3340,0	2586,0	5400,0	5400,0	3455,0	6740,0	6740,0
950	796,3	2740,6	2871,7	1605,9	4349,6	4349,6	2055,0	5795,0	5795,0
1000	525,3	2041,8	2703,3	1092,4	3244,4	4083,0	1285,0	4010,0	5450,0
1050	-	1337,4	2676,0	-	2120,5	4083,0	-	2625,0	5400,0
1100	-	838,1	2243,7	-	1333,1	3662,9	-	1645,0	4525,0
1150	-	525,3	1655,2	-	832,7	2702,9	-	1030,0	3345,0
1200	-	312,8	1070,4	-	500,5	1747,3	-	615,0	2160,0

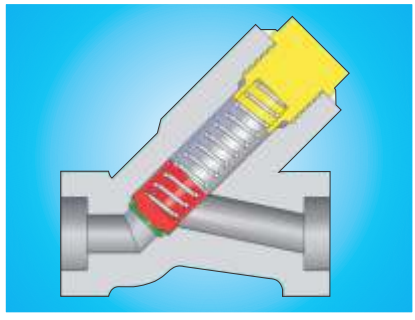
(1) Allowed but not recommended for prolonged usage above 425ºC (800ºF).
(2) Allowed but not recommended for prolonged usage above 595ºC (1100ºF).
(3) The 1500# standars and special pressure classes are covered by the 1700 LTD class, as well as the 2500# standard and special pressure classes are covered by 2700 LTD class

Main Applications in Power Generation

- Water Wall Drains
- Steam Superheater Drains
- Re-heaters Inlet Drains
- Economizers Drains
- Gauges Drains
- Columns Drains
- Instrument Isolation and Drains
- Drum Vents
- Steam Sampling

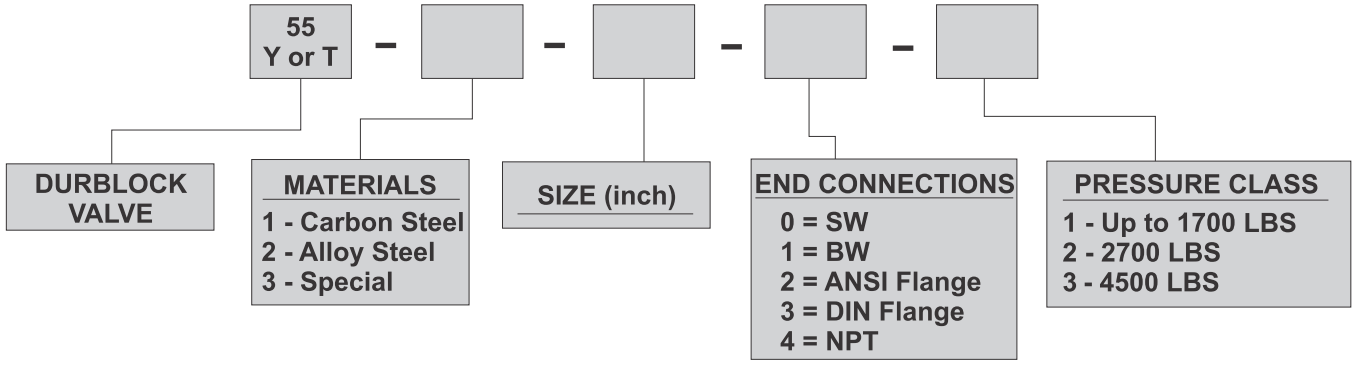
Optionals Available

- Automation - eletric actuators
- Impact Handwheel
- Locking Devices
- Disc for non return valve
- Check valve
- Special ADP Valve for Sampling and Continuos Blow Down

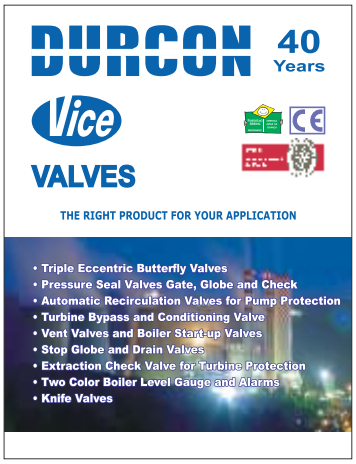


How to Specify and to Order

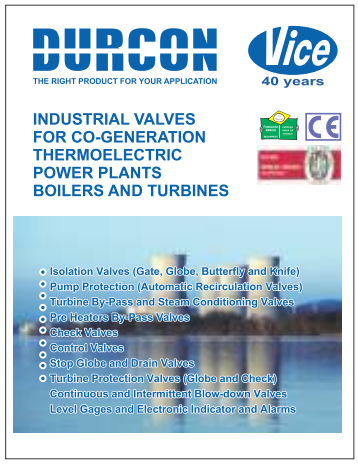
Globe-stop valve for High Pressure and Severe Service applications. One piece forged body pressure vessel to eliminate joints or welding between body and bonnet. Solid Stellite® Seat Ring brazed to the body. Fully guided Disc with Sealing and Guide surfaces in Stellite® With TRANS-O-FLOW device to ensure long useful life of the seating surfaces. Valve to be repairable in line.



Durcon Vice Products Line



Institutional Durcon Vice

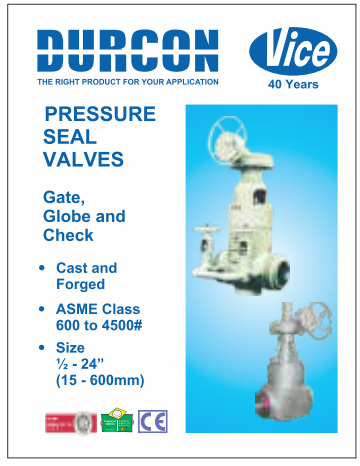


Thermoelectric Power Plants

Steam Turbine By-Pass Valve

Trieccentric Butterfly Valve

Dualcolor Boiler Drum Level Gauge



Globe, Gate and Check Valves Pressure Seal

Extraction Check Valve for Turbine Protection

Feedwather pre heaters By-Pass Valves

Automatic Recirculation Control Valves for Pump Protection

The right product for your application.

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Web-page: www.durcon-vice.com.br

DUBING - 02/15