MODENTIC

ATEX II 2GD

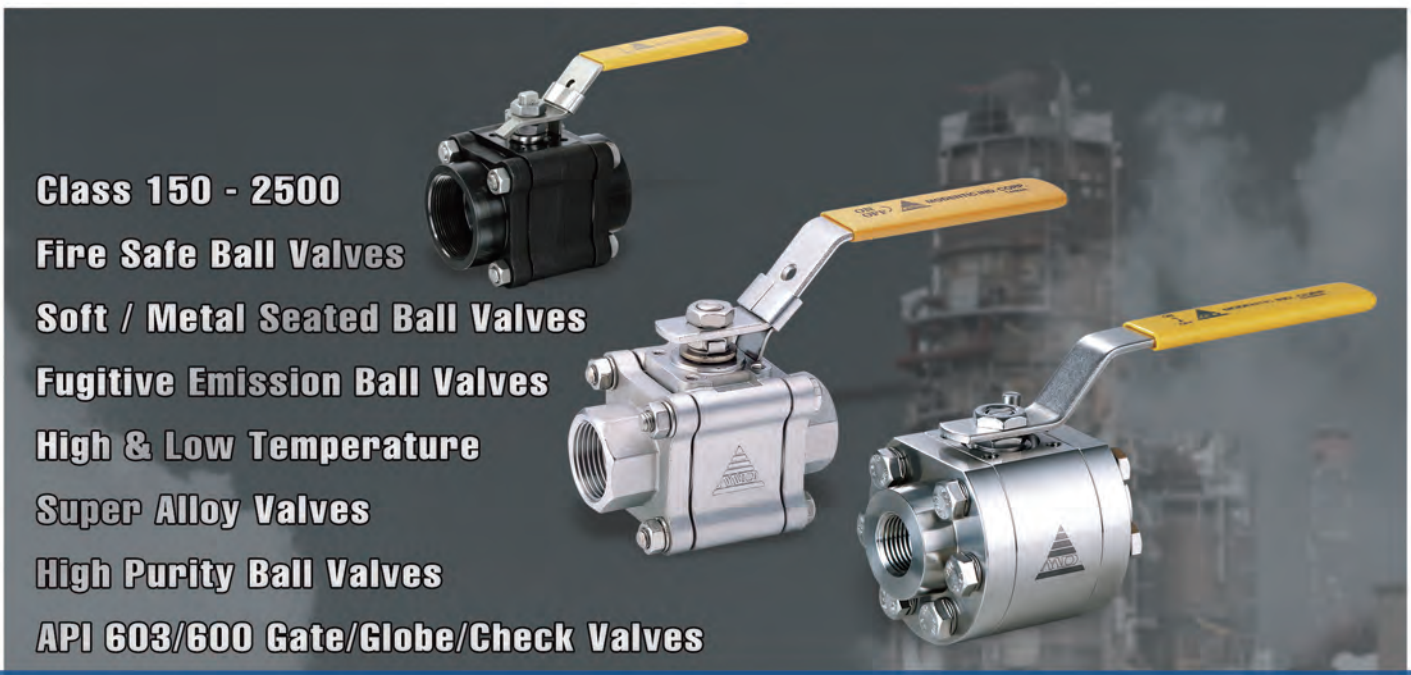
0038

PED MODULE H
Certificate:0038/PED/SHA/6013557/A

ISO 9001
N EN ISO 900
Certificate:TWN6013557

BUREAU VERITAS

CRN
CERTIFICATED



VALVES

Modentic Industrial Corp.

Partner with Modentic, you have chosen the reliable company of the valve design and engineering, we guarantee the durability and consistent quality of our products, The manufacturing documentation are always provided very detailed to ensure the traceability and easy maintenance, you never have to worry about the products do not perform as expected. We want you to be a lifelong partner of our dedicated work team, and we welcome your feedback about our performance all the time, which is an important extra value for our company.

CONTENTS

Products support the needs of local & overseas users in more than 50 countries of the world.
Based on the management philosophy of “Best Delivery, Service & Quality”.
Modentic sets the pace to ensure customer’s satisfaction.

Range of Service:

- Super Alloy Valves 1/2” - 12”
- API 607 Fire Safe Approved Ball Valves 1/2” - 32”
- Fugitive Emission Ball Valves 1/2” - 12”
- Metal Seated Ball Valves 1/2” - 16”
- High Pressure Ball Valves 1/2” - 2”
- V-Flow Ball Valves 1/4” - 6”
- High Purity Ball Valves / Sanitary Ball Valves 1/2” - 4”
- Electric Automation Valves
- Pneumatic Automation Valves
- Floating Flanged Ball Valves 1/2” - 12”
- Trunnion Mounted Ball Valves 2” - 36”
- Screwed Ball Valves 1/4” - 4”
- S.S. Screwed Gate, Globe, and Check Valves 1/4” - 3”
- S.S. Flanged Gate, Globe, and Check Valves 1/2” - 24”
- C.S. Flanged Gate, Globe, and Check Valves 2” - 48”
- Strainers 1/2” - 16”
- Needle Valves 1/8” - 1”

ALL PRODUCTS SUPPLIED BY MODENTIC ARE UNDER PRODUCTS LIABILITY INSURANCE.

Index


Lloyd's Register LRQA

CERTIFICATE OF APPROVAL

This is to certify that the Quality Management System of:

Modentic Industrial Corporation
Rm. 3, 14F., No.89, Sec. 1, Zhongqing Rd., North Dist., Taichung City 404, Taiwan, R.O.C.

has been approved by Lloyd's Register Quality Assurance to the following Quality Management System Standards:

ISO 9001:2008

The Quality Management System is applicable to:

Design and Manufacture of Valves and Stockist of valves, pipe fittings and Hardware parts.

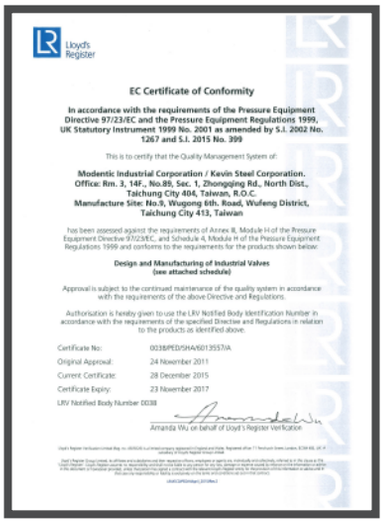
This certificate is valid only in association with the certificate schedule bearing the same number on which the locations applicable to this approval are listed.

Approval Certificate No: TW960013557

Original Approval: 18 October 2011
Current Certificate: 04 October 2014
Certificate Expiry: 03 October 2017

Issued by: Lloyd's Register Inspection Limited Taiwan Branch for and on behalf of Lloyd's Register Quality Assurance Limited

ISO 9001


Lloyd's Register

EC Certificate of Conformity

In accordance with the requirements of the Pressure Equipment Directive 97/23/EC and the Pressure Equipment Regulations 1999, UK Statutory Instrument 1999 No. 2001 as amended by S.I. 2002 No. 1267 and S.I. 2015 No. 399

This is to certify that the Quality Management System of:

Modentic Industrial Corporation / Kevin Steel Corporation.
Office: Rm. 3, 14F., No.89, Sec. 1, Zhongqing Rd., North Dist., Taichung City 404, Taiwan, R.O.C.
Manufacture Site: No.9, Wugong 6th. Road, Wufeng District, Taichung City 413, Taiwan

has been assessed against the requirements of Annex II, Module H of the Pressure Equipment Directive 97/23/EC, and Schedule 4, Module H of the Pressure Equipment Regulations 1999 and conforms to the requirements for the products shown below:

Design and Manufacturing of Industrial Valves
(see attached schedule)

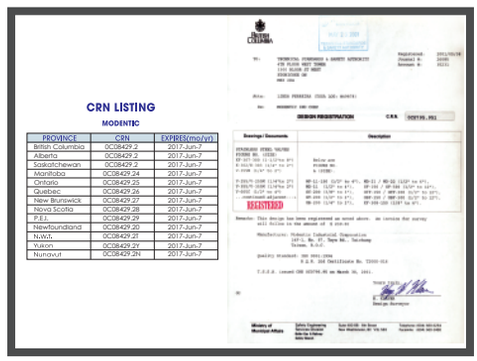
Approval is subject to the continued maintenance of the quality system in accordance with the requirements of the above Directive and Regulations.

Authorisation is hereby given to use the LRV Notified Body Identification Number in accordance with the requirements of the specified Directive and Regulations in relation to the products as identified above.

Certificate No: 0038/PED/SHA/6013557/A
Original Approval: 24 November 2011
Current Certificate: 28 December 2015
Certificate Expiry: 23 November 2017
LRV Notified Body Number 0038

Amanda Wu on behalf of Lloyd's Register Verification

PED


CRN LISTING

MODENTIC

PROVINCE	CRN	EXPIRES(mo/yr)
British Columbia	OC08429.2	2017-Jun-7
Alberta	OC08429.2	2017-Jun-7
Saskatchewan	OC08429.2	2017-Jun-7
Manitoba	OC08429.24	2017-Jun-7
Ontario	OC08429.25	2017-Jun-7
Quebec	OC08429.26	2017-Jun-7
New Brunswick	OC08429.27	2017-Jun-7
Nova Scotia	OC08429.28	2017-Jun-7
P.E.I.	OC08429.29	2017-Jun-7
Newfoundland	OC08429.20	2017-Jun-7
N.W.T.	OC08429.21	2017-Jun-7
Yukon	OC08429.22	2017-Jun-7
Nunavut	OC08429.24	2017-Jun-7

CRN


CERTIFICATE

ANSI / API STD 607 – 1993

API 607 Fire Safe Approved

CERTIFICATION

MODENTIC www.modentic.com.tw

Products Liability Insurance | ISO 9001 | CRN | TA-LUFT | PED | ABS | ATEX | ISO 15848-1

API 607 4th, 5th, 6th / ISO 10497 / BS 6755 Part II Fire Safe Approved


ABS

Certificate of MANUFACTURING ASSESSMENT

Kevin Steel Corporation Taichung, Taiwan

Valve, Ball, Valve, Stainless Steel Ball; Valve, Stainless Steel Check

ABS


Stellungnahme zur Anwendbarkeit der RL 94/9/EG (ATEX)

Für Geräte und Komponenten zur Verwendung in explosionsgefährdeten Bereichen

Statement for application of directive 94/9/EC

For Equipment and Components Intended for Use in Potentially Explosive Atmospheres

ATEX


CERTIFICATE

ISO 10497 : 2010

ISO 10497
(Screwed Ball Valves)


CERTIFICATE

ISO 10497 : 2010

ISO 10497
(Flanged Ball Valves)


CERTIFICATE

TA-Luft VDI 2440, Sec. 3.3.1.3, Nov. 2000

TA-LUFT
(Screwed Ball Valves)


ZERTIFIKAT

TA-Luft 2002, Sec. 5.2.6.4
VDI 2440 Nov. 2000, Sec. 3.3.1.3

TA-LUFT
(Flanged Ball Valves)


CERTIFICATE

ISO 15848-1 :2006

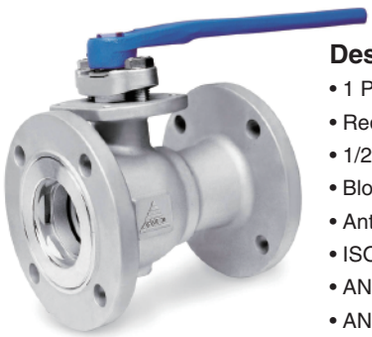

CERTIFICATE

ISO 15848-1 :2006

ISO 15848-1

TWO WAY BALL VALVES

MD-51



Design Feature

- 1 Piece Body Design
- Reduced Bore
- 1/2" - 6" (DN15 - DN150)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- ANSI B16.10 Class 150/300
- ANSI B16.5 Class 150/300 RF

Body	ASTM A351 Gr.CF8M
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MD-81

Design Feature

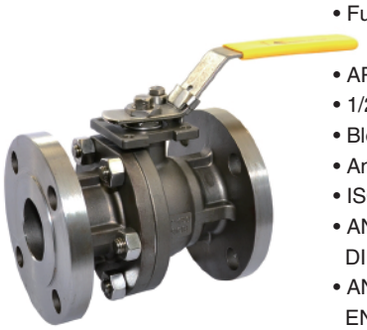
- 1 Piece Body Design
- Reduced Bore
- 1" - 12" (DN25 - DN300)
- ABS Type Approval
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- ANSI B16.10 Class 150/300
- ANSI B16.5 Class 150/300 RF

Body	ASTM A351 Gr.CF8M
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MD-32

Design Feature

- 2 Pieces Body Design
- Full Bore



- API 608 Design
- 1/2" - 8" (DN15 - DN200)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- ANSI B16.10 Class 150/300, DIN 3202 F4/F5
- ANSI B16.5 Class 150/300 RF, EN1092-1 PN10/16/25/40 RF

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MD-82

Design Feature

- 2 Pieces Body Design , Full Bore
- API 608 Design
- ABS Type Approval

- 1/2" - 12" (DN15 - DN300)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- ANSI B16.10 Class 150/300, DIN 3202 F4/F5
- ANSI B16.5 Class 150/300 RF, EN1092-1 PN10/16/25/40 RF

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MD-27

Design Feature

- 2 Pieces Body Design , Full Bore
- 1/2" - 8" (DN15 - DN200)
- ABS Type Approval
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- ANSI B16.10 Class 150/300/600, DIN 3202 F1/F4/F5, JIS B2002
- ANSI B16.5 Class 150/300/600 RF, EN1092-1 PN10/16/25/40 RF, JIS 2010 10K/20K

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MD-22J

Design Feature

- Jacket Design
- Full Bore
- 1/2" - 6" (DN15 - DN150)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- ANSI B16.5 Class 150 RF, EN1092-1 PN10/16, JIS 2010 10K

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	50%PTFE. + 50%S.S.
Temperature Range	-4 to 356 °F (-20 to 180 °C)

TWO WAY BALL VALVES

MD-55

Design Feature

- 2 Pieces Body Design
- Full Bore
- 1/2” - 6” (DN15 - DN150)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Direct Mounting Flange
- ANSI B16.10 Class 150, DIN 3202 F4/F5
- ANSI B16.5 Class 150 RF, EN1092-1 PN16 RF

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MD-28

Design Feature

- 2 Pieces Body Design
- Full Bore
- API 608 Design
- 1/2” - 6” (DN15 - DN150)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Direct Mounting Flange
- ANSI B16.10 Class 150/300, DIN 3202 F1/F4/F5, JIS B2002
- ANSI B16.5 Class 150/300 RF, EN1092-1 PN10/16/25/40 RF, JIS 2010 10K/20K

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

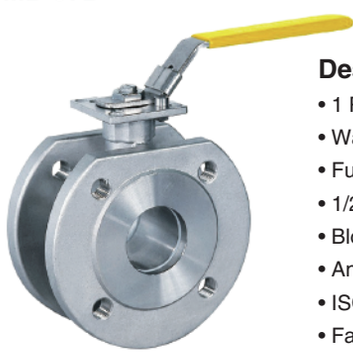
MD-57

Design Feature

- 1 Piece Body Design
- Wafer Type
- Full Bore
- 1/2” - 6” (DN15 - DN150)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- Face to Face : MFG. Standard
- ANSI B16.5 Class 150 RF, EN1092-1 PN16 RF

Body	ASTM A351 Gr. CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MD-57D



Design Feature

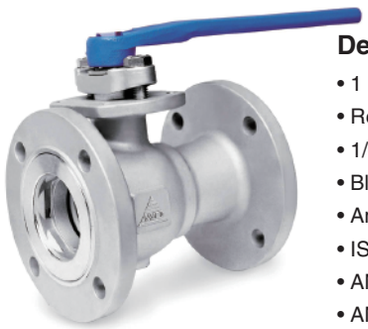
- 1 Piece Body Design
- Wafer Type
- Full Bore
- 1/2” - 4” (DN15 - DN100)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Direct Mounting Flange
- Face to Face : MFG. Standard
- EN1092-1 PN16 RF

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

FIRE SAFE APPROVED BALL VALVES

MD-51FS-150/300

API 607 4th



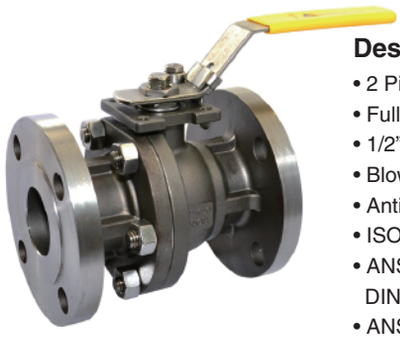
Design Feature

- 1 Piece Body Design
- Reduced Bore
- 1/2" - 6" (DN15 - DN150)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- ANSI B16.10 Class 150/300
- ANSI B16.5 Class 150/300 RF

Body	ASTM A351 Gr.CF8M
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MD-32

API 607 6th / ISO 10497 / BS 6755 Part II



Design Feature

- 2 Pieces Body Design
- Full Bore , API 608 Design
- 1/2" - 8" (DN15 - DN200)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- ANSI B16.10 Class 150/300, DIN 3202 F4/F5
- ANSI B16.5 Class 150/300 RF, EN1092-1 PN10/16/25/40

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MD-82-150/300

API 607 6th / ISO 10497 / BS 6755 Part II

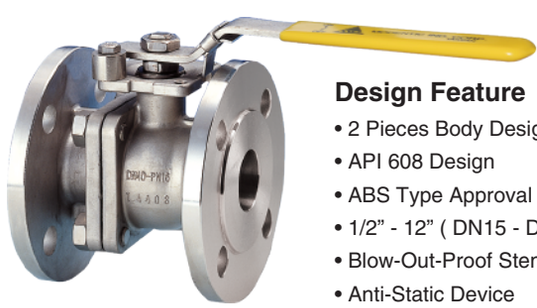
Design Feature

- 2 Pieces Body Design , Full Bore
- API 608 Design
- ABS Type Approval
- 1/2" - 12" (DN15 - DN300)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- ANSI B16.10 Class 150/300
- ANSI B16.5 Class 150/300 RF

Body	ASTM A351 Gr.CF8M
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MD-82 PN 16/40

API 607 6th / ISO 10497 / BS 6755 Part II



Design Feature

- 2 Pieces Body Design , Full Bore
- API 608 Design
- ABS Type Approval
- 1/2" - 12" (DN15 - DN300)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- DIN 3202 F1/F4/F5
- EN1092-1 PN10/16/25/40 RF

Body	1.4408
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MD-28FS-150/300-PN16/40

API 607 6th / ISO 10497 / BS 6755 Part II

Design Feature

- 2 Pieces Body Design
- Full Bore
- API 608 Design
- 1/2" - 6" (DN15 - DN150)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Direct Mounting Flange
- ANSI B16.10 Class 150/300, DIN 3202 F1/F4
- ANSI B16.5 Class 150/300 RF EN1092-1 PN10/16/25/40 RF

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

FIRE SAFE APPROVED BALL VALVES

V-755FS

API 607 6th / ISO 10497 / BS 6755 Part II

Design Feature

- ANSI B16.34 Class 600 Design
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- Forged Steel Components
- Handle with Locking Device
- End Connection : Threaded, Socket Weld, Butt Weld End

V-755FS • Full Bore • 1/2" - 2" (DN15 - DN50)
V-755FSA • Reduced Bore • 1/2" - 2 " (DN15 - DN50)

Body	ASTM A105 / F316
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Working Pressure	1500PSI (PN100)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

V-255FS

API 607 6th / ISO 10497 / BS 6755 Part II

Design Feature

- API 608 Design
- ABS Type Approval
- ANSI B16.34 Class 600 Design
- Blow-Out-Proof Stem Design
- Anti-Static Device
- Handle with Locking Device
- ISO 5211 Mounting Flange
- End Connection : Threaded,
- Socket Weld, Butt Weld End

V-255FS • Full Bore • 1/4" - 2" (DN8 - DN50)
V-255FSA • Reduced Bore • 1/2" - 21/2" (DN15 - DN65)

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Working Pressure	1/4" - 1" 2000PSI (PN140)
	11/4" - 2" 1500PSI (PN100)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

HPV-40FS

API 607 5th / ISO 10497-5 / BS 6755 Part II

Design Feature

- ANSI B16.34 Class 1500 Design
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- End Connection : Threaded, Socket Weld, Butt Weld End

HPV-40FS • Full Bore • 1/4" - 2" (DN8 - DN50)
HPV-40FSA • Reduced Bore • 1/4" - 2" (DN8 - DN50)

Body	AISI 1045 / AISI 316 (bar material)
Ball / Stem	CF8M / 17-4 PH
Seat	Delrin / Peek
Working Pressure	3000PSI (PN210)
Temperature Range	-4 to 176°F (-20 to 80 °C) for Delrin
	-4 to 500°F (-20 to 260 °C) for Peek

HPV-41FS

API 607 5th / ISO 10497-5 / BS 6755 Part II

Design Feature

- ANSI B16.34 Class 2500 Design
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- End Connection : Threaded, Socket Weld, Butt Weld End

HPV-41FS • Full Bore • 1/4" - 2" (DN8 - DN50)
HPV-41FSA • Reduced Bore • 1/4" - 2" (DN8 - DN50)

Body	AISI 1045 / AISI 316 (bar material)
Ball / Stem	CF8M / 17-4 PH
Seat	Delrin / Peek
Working Pressure	6000PSI (PN420)
Temperature Range	-4 to 176°F (-20 to 80 °C) for Delrin
	-4 to 500°F (-20 to 260 °C) for Peek

HPV-43FS

API 607 5th / ISO 10497-5 / BS 6755 Part II

Design Feature

- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- ANSI B16.10 Class 1500/2500
- ANSI B16.5 Class 1500/2500 RTJ

HPV-43FS-1500 • Full Bore • 1/2" - 2" (DN15 - DN50)
HPV-43FS-2500 • Full Bore • 1/2" - 2" (DN15 - DN50)

Body	AISI 1045 / AISI 316 (bar Material)
Ball / Stem	CF8M / 17-4 PH
Seat	Delrin / Peek
Temperature Range	-4 to 176 °F (-20 to 80 °C) for Delrin
	-4 to 500 °F (-20 to 260 °C) for Peek

FIRE SAFE APPROVED BALL VALVES

V-908

API 607 6th / ISO 10497 / BS 6755 Part II

Design Feature

- ANSI B16.34 Class 900 Design
- 2 Pieces Body Design
- Full Bore
- 1/2” - 3” (DN15 - DN80)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- Handle with Locking Device
- ISO 5211 Direct Mounting Flange
- End Connection : Threaded End
- Seal Welding Body Design

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Working Pressure	2000PSI (PN140)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

V-166FS

API 607 6th / ISO 10497 / BS 6755 Part II

Design Feature

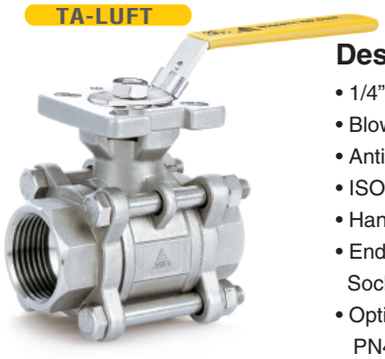
- ANSI B16.34 Class 600 Design
- 2 Pieces Body Design
- Full Bore
- 1/4” - 2” (DN8 - DN50)
- Blow-Out-Proof Stem Design
- Face to Face : DIN 3202 M3
- Handle with Locking Device
- End Connection : Threaded End
- Seal Welding Body Design

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Working Pressure	1/4” - 1” 2000PSI (PN140)
	11/4” - 2” 1500PSI (PN100)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

FUGITIVE EMISSION APPROVED BALL VALVES

V-158

TA-LUFT



Design Feature

- 1/4" - 4" (DN8 - DN100)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Direct Mounting Flange
- Handle with Locking Device
- End Connection : Threaded, Socket Weld, Butt Weld End
- Option :
  PN40 Flanged End for 1/2" - 2"
  PN16 Flanged End for 21/2" - 4"

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	PTFE.
Working Pressure	1/2" - 2" 1000PSI (PN63)
	21/2 - 4" 800PSI (PN40)

V-355

TA-LUFT

Design Feature

- 1/4" - 4" (DN8 - DN100)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Direct Mounting Flange
- Handle with Locking Device
- End Connection : Threaded, Socket Weld, Butt Weld End

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	PTFE.
Working Pressure	1/4" - 1" 2000PSI (PN140)
	11/4" - 2" 1500PSI (PN100)
	21/2" - 4" 1000PSI (PN63)

MD-28

TA-LUFT / ISO 15848-1

Design Feature

- Full Bore, API 608 Design
- 1/2" - 6" (DN15 - DN150)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Direct Mounting Flange
- ANSI B16.10 Class 150/300, DIN 3202 F1/F4/F5, JIS B2002
- ANSI B16.5 Class 150/300 RF, EN1092-1 PN10/16/25/40 RF, JIS 2010 10K/20K

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. / PTFE.
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MD-82

TA-LUFT / ISO 15848-1

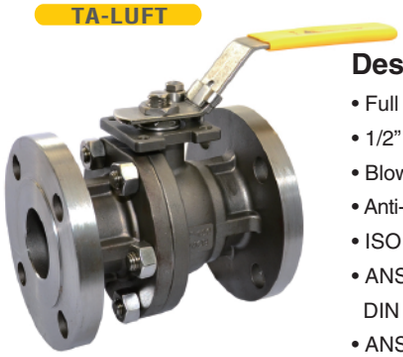
Design Feature

- Full Bore, API 608 Design
- ABS Type Approval
- 1/2" - 12" (DN15 - DN300)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- ANSI B16.10 Class 150/300, DIN 3202 F1/F4/F5
- ANSI B16.5 Class 150/300 RF, EN1092-1 PN10/16/25/40 RF

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. / PTFE.
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MD-32

TA-LUFT



Design Feature

- Full Bore, API 608 Design
- 1/2" - 8" (DN15 - DN200)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- ANSI B16.10 Class 150/300, DIN 3202 F4/F5
- ANSI B16.5 Class 150/300 RF, EN1092-1 PN10/16/25/40 RF

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	PTFE.
Temperature Range	-4 to 356 °F (-20 to 180 °C)

TRUNNION MOUNTED CASTING

MD-53 • 3 PIECES

Design Feature

- Reduced Bore
- 18” - 36” (DN450 - DN900)
- API 6FA Fire Safe Design
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ANSI B16.10 Class 150/300/600
- ANSI B16.5 Class 150/300/600 RF, ASME B16.47 for 26” & up

Body	ASTM A216 Gr.WCB / CF8M
Ball / Stem	CF8M / SS316
Seat	PTFE. / NYLON
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MD-54 • 3 PIECES

Design Feature

- Full Bore
- 16” - 36” (DN400 - DN900)
- API 6FA Fire Safe Design
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ANSI B16.10 Class 150/300/600
- ANSI B16.5 Class 150/300/600 RF, ASME B16.47 for 26” & up

Body	ASTM A216 Gr.WCB / CF8M
Ball / Stem	CF8M / SS316
Seat	PTFE. / NYLON
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MD-67 • 2 PIECES

Design Feature

- Reduced Bore
- 3” - 20” (DN80 - DN500)
- API 6FA Fire Safe Design
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ANSI B16.10 Class 150/300/600
- ANSI B16.5 Class 150/300/600 RF

Body	ASTM A216 Gr.WCB / CF8M
Ball / Stem	CF8M / SS316
Seat	PTFE / NYLON
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MD-68 • 2 PIECES

Design Feature

- Full Bore
- 2” - 16” (DN50 - DN400)
- API 6FA Fire Safe Design
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ANSI B16.10 Class 150/300/600
- ANSI B16.5 Class 150/300/600 RF

Body	ASTM A216 Gr.WCB / CF8M
Ball / Stem	CF8M / SS316
Seat	PTFE / NYLON
Temperature Range	-4 to 356 °F (-20 to 180 °C)

TRUNNION MOUNTED FORGEING

MD-63

Design Feature

- Reduced Bore
- 3” - 36” (DN80 - DN900)
- 3 Pieces Body Design
- API 6FA Fire Safe Design
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ANSI B16.10 Class 150-2500
- ANSI B16.5 Class 150-2500, ASME B16.47 for 26” & up

Body	ASTM A105 / F316
Ball / Stem	F316 / F316
Seat	PTFE / NYLON
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MD-64

Design Feature

- Full Bore
- 2” - 16” (DN50 - DN400)
- 3 Pieces Body Design
- API 6FA Fire Safe Design
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ANSI B16.10 Class 150-2500
- ANSI B16.5 Class 150-2500, ASME B16.47 for 26” & up

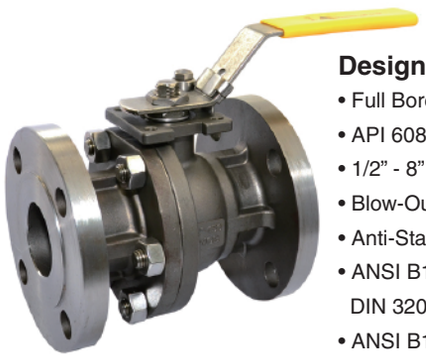
Body	ASTM A105 / F316
Ball / Stem	F316 / F316
Seat	PTFE / NYLON
Temperature Range	-4 to 356 °F (-20 to 180 °C)

METAL SEATED BALL VALVES

MD-32Q

Floating Type

Metal Seated, API 607 6th Fire Safe Approved



Design Feature

- Full Bore
- API 608 Design
- 1/2" - 8" (DN15 - DN200)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ANSI B16.10 Class 150/300, DIN 3202 F4/F5
- ANSI B16.5 Class 150/300 RF, EN1092-1 PN10/16/25/40 RF

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M + Hard Cr. / SS316
Seat	SS316 + Stellite #6
Tightness Rates	∆ P : ASME / FCI 70-2 Class IV

MD-52QT-150/300

Trunnion Mounted Type

Metal Seated

Design Feature

- Full Bore
- 4" - 8" (DN100 - DN200)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- Trunnion Mounted Type
- ANSI B16.10 Class 150/300
- ANSI B16.5 Class 150/300 RF

Body	ASTM A351 Gr.CF8M
Ball / Stem	CF8M + Hard Cr. / SS316
Seat	SS316 + Stellite #6
Tightness Rates	∆ P : ASME / FCI 70-2 Class IV

MD-54Q-150/300

Trunnion Mounted Type

Metal Seated, API 6FA Fire Safe Design

Design Feature

- Full Bore
- 2" - 16" (DN50 - DN400)
- 3 Pieces Body Design
- Trunnion Mounted Type
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ANSI B16.10 Class 150/300/600
- ANSI B16.5 Class 150/300/600 RF

Body	ASTM A351 Gr.CF8M
Ball / Stem	CF8M + Hard Cr. / SS316
Seat	SS316 + Stellite #6
Tightness Rates	∆ P : ASME / FCI 70-2 Class IV

V-255Q

Metal Seated, API 607 6th Fire Safe Approved

Design Feature

- Full Bore
- 1/2" - 2" (DN15 - DN50)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- Handle with Locking Device
- ISO 5211 Mounting Flange
- End Connection : Threaded, Socket Weld, Butt Weld End

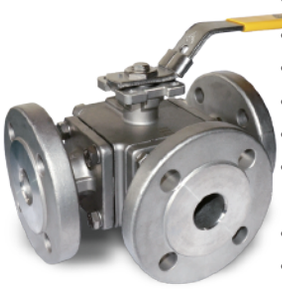
- **Design Specification : ANSI B16.34 Class 600**
- Working Pressure (CWP) :
  1/2" - 1" 2000PSI (DN15 - DN25 PN140)
  11/4" - 2" 1500PSI (DN32 - DN50 PN100)

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M + Hard Cr. / SS316
Seat	SS316 + Stellite #6
Tightness Rates	∆ P : ASME / FCI 70-2 Class IV

MULTI WAY FLANGED BALL VALVES SIDE ENTRY

KF-314 • 3 WAYS • L / T PORT

Design Feature



- Full Bore
- 1/2” - 6” (DN15 - DN150)
- Split Body, Floating Type
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Direct Mounting for 1/2” - 3”
  ISO 5211 Mounting Flange for 4” - 6”
- Face to Face : MFG. Standard
- ANSI B16.5 Class 150 RF,
  EN1092-1 PN10/16/25/40 RF,
  JIS 2010 10K

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

KF-315 • 4 WAYS • L / T / DOUBLE L PORT

Design Feature

- Full Bore, Solid Ball
- 1/2” - 6” (DN15 - DN150)
- Split Body, Floating Type
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Direct Mounting for 1/2” - 3”
  ISO 5211 Mounting Flange for 4” - 6”
- Face to Face : MFG. Standard
- ANSI B16.5 Class 150 RF,
  EN1092-1 PN10/16/25/40 RF,
  JIS 2010 10K

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MULTI WAY FLANGED BALL VALVES TOP ENTRY

KF-307 • 3 WAYS • L / T PORT

Design Feature

- Full Bore
- 3/4” - 12” (DN20 - DN300)
- Split Body, Trunnion Mounted Type
- Anti-Static Device
- ISO 5211 Mounting Fange
- Face to Face : MFG. Standard
- ANSI B16.5 Class 150/300 RF,
  EN1092-1 PN10/16/25/40 RF

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M
Seat	PTFE.
Temperature Range	-4 to 356 °F (-20 to 180 °C)

KF-308 • 4 WAYS • L / T / DOUBLE L PORT

Design Feature

- Full Bore
- 11/2” - 8” (DN40 - DN200)
- Split Body, Trunnion Mounted Type
- Anti-Static Device
- ISO 5211 Mounting Flange
- Face to Face : MFG. Standard
- ANSI B16.5 Class 150/300 RF,
  EN1092-1 PN10/16/25/40 RF

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M
Seat	PTFE.
Temperature Range	-4 to 356°F (-20 to 180 °C)

GENERAL SCREWED END BALL VALVES

ONE PIECE REDUCED PORT

ONE PIECE BALL VALVE

01 **Threaded End**
02 **Blow-Out-Proof Stem Design**
03 Temperature Range：-4 to 356 °F (-20 to 180 °C)
04 BODY：ASTM A351 Gr.CF8M (1.4408)
05 BALL：SS316 / CF8M
06 STEM：SS316
07 SEAT：PTFE. / RTFE.

V-83
800PSI (PN40) • 1/4" - 2"

V-103H
800PSI (PN40) • 1/4" - 2"

V-010H
800PSI (PN40) • 1/4" - 1"

V-103P
800PSI (PN40) • 1/4" - 2"
Option : Locking Device

V-104H
2000PSI (PN140) • 1/4" - 1"
1500PSI (PN100) • 11/4" - 2"

TWO PIECES FULL PORT

TWO PIECES BALL VALVE

01 **Threaded End**
02 **Blow-Out-Proof Stem Design**
03 Temperature Range：-4 to 356 °F (-20 to 180 °C)
04 BODY：ASTM A351 Gr.CF8M (1.4408)
05 BALL：CF8M
06 STEM：SS316
07 SEAT：PTFE. / RTFE.

V-168
1000PSI (PN63) • 1/4" - 2"

V-109 • M3 LENGTH
1000PSI (PN63) • 1/4" - 2"
800PSI (PN40) • 21/2" - 3"

V-166 • M3 LENGTH
2000PSI (PN140) • 1/4" - 1"
1500PSI (PN100) • 11/4" - 2"

V-204
1000PSI (PN63) • 1/4" - 2"
Option : Locking Device

V-106
1000PSI (PN63) • 1/4" - 2"
800PSI (PN40) • 21/2" - 3"
Option : Locking Device

TWO PIECES REDUCED PORT

TWO PIECES BALL VALVE

01 **Threaded End**
02 **Blow-Out-Proof Stem Design**
03 Temperature Range：-4 to 356 °F (-20 to 180 °C)
04 BODY：ASTM A351 Gr.CF8M (1.4408)
05 BALL：CF8M
06 STEM：SS316
07 SEAT：PTFE. / RTFE.

V-108
2000PSI (PN140) • 1/4" - 1"
1500PSI (PN100) • 11/4" - 2"

V-111
1000PSI (PN63) • 1/4" - 2"

THREE PIECES BALL VALVES

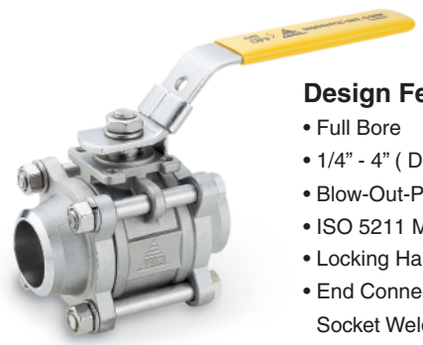
V-105

Design Feature

- Full Bore
- 1/4" - 4" (DN8 - DN100)
- Blow-Out-Proof Stem Design
- End Connection : Threaded, Socket Weld, Butt Weld, 3A Tube / Tri-Clamp End
- Option :
  1. Locking Device
  2. Face to Face : DIN 3202 M3/S13

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	PTFE.
Temperature Range	-4 to 356 °F (-20 to 180 °C)
Working Pressure	1/4" - 2" 1000PSI (PN63)
	21/2" - 4" 800PSI (PN40)

V-105M



Design Feature

- Full Bore
- 1/4" - 4" (DN8 - DN100)
- Blow-Out-Proof Stem Design
- ISO 5211 Mounting Flange
- Locking Handle
- End Connection : Threaded, Socket Weld, Butt Weld End

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)
Working Pressure	1/4" - 2" 1000PSI (PN63)
	21/2" - 4" 800PSI (PN40)

V-105F

Design Feature

- Full Bore
- 1/2" - 4" (DN15 - DN100)
- Blow-Out-Proof Stem Design
- End Connection : Flanged End
- Face to Face : EN558-1 F1
- Flange Dim. : EN1092-1 PN16/40 RF

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	PTFE.
Temperature Range	-4 to 356 °F (-20 to 180 °C)

V-105W

Design Feature

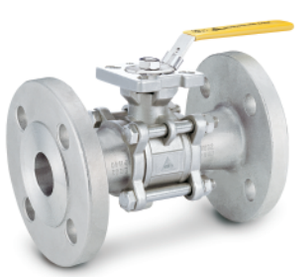
- Full Bore
- 1/2" - 4" (DN15 - DN100)
- Blow-Out-Proof Stem Design
- End Connection : Ext. Butt Weld

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	PTFE.
Temperature Range	-4 to 356 °F (-20 to 180 °C)
Working Pressure	1/2" - 2" 1000PSI (PN63)
	21/2" - 4" 800PSI (PN40)

V-158 SERIES

- Full Bore • Blow-Out-Proof Stem Design • Anti-Static Device • ISO 5211 Direct Mounting Flange • Locking Device Handle
- Temperature Range : -4 to 356 °F (-20 to 180 °C)
- BODY **CF8M (1.4408)** • BALL **CF8M** • STEM **SS316** • SEAT **RTFE.**
- Working Pressure : 1/4" - 2" 1000PSI (PN63) • 21/2" - 4" 800PSI (PN40)

V-158
Threaded • Socket Weld • Butt Weld End
3A Tube • Tri-Clamp End
Option - Face to Face : DIN3202 M3/S13



V-158F
Face to Face : EN558-1 F1
Flanged End PN16/40 RF
Size : 1/2" - 4"

V-158W
Extended Butt Weld End
Size : 1/2" - 4"

THREE PIECES BALL VALVES

V-155

Design Feature

- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- Handle with Locking Device
- End Connection : Threaded, Socket Weld, Butt Weld End

V-155 • Full Bore • 1/4" - 21/2" (DN8 - DN65)
V-155A • Reduced Bore • 1/2" - 3" (DN15 - DN80)

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Working Pressure	1/4"- 1" 2000PSI (PN140)
	11/4" - 2" 1500PSI (PN100)
	21/2" 1000PSI (PN63)

V-255

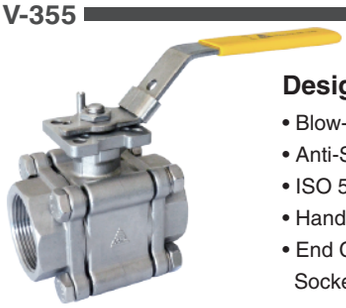
Design Feature

- API 608 Design
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- Handle with Locking Device
- End Connection : Threaded, Socket Weld, Butt Weld End

V-255 • Full Bore • 1/4" - 2" (DN8 - DN50)
V-255A • Reduced Bore • 1/2" - 2-1/2" (DN15 - DN65)

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Working Pressure	1/4"- 1" 2000PSI (PN140)
	11/4"- 2" 1500PSI (PN100)

V-355



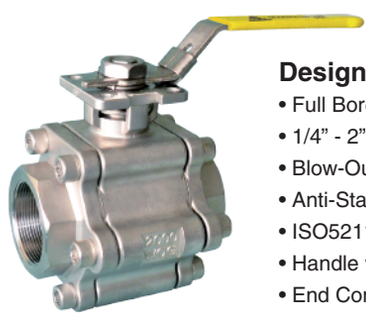
Design Feature

- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Direct Mounting Flange
- Handle with Locking Device
- End Connection : Threaded, Socket Weld, Butt Weld End

V-355 • Full Bore • 1/4" - 4" (DN8 - DN100)
V-355A • Reduced Bore • 1/2" - 4" (DN15 - DN100)

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Working Pressure	1/4" - 1" 2000PSI (PN140)
	11/4" - 2" 1500PSI (PN100)
	21/2" - 4" 1000PSI (PN63)

V-356



Design Feature

- Full Bore
- 1/4" - 2" (DN8 - DN50)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO5211 Direct Mounting Flange
- Handle with Locking Device
- End Connection : Threaded, Socket Weld End

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Working Pressure	1/4"- 2" 2000PSI (PN140)

FORGED BALL VALVES

V-114H

Design Feature

- Reduced Bore
- 1 Piece Body Design
- 1/4" - 2" (DN8 - DN50)
- Blow-Out-Proof Stem Design
- Forged Steel Components
- Design as per ANSI B16.34
- End Connection : Threaded End

Body	ASTM A105N
Ball / Stem	CF8M / SS316
Seat	PTFE.
Temperature Range	-4 to 356 °F (-20 to 180 °C)
Working Pressure (CWP)	1/4" - 1" 2000PSI (PN140)
	11/4" - 2" 1500PSI (PN100)

V-755

Design Feature

- 3 Pieces Body Design
- Blow-Out-Proof Stem Design
- Forged Steel Components
- Four Point ISO 5211 Mounting Pad Bolt Circle
- End Connection : Threaded, Socket Weld, Butt Weld End

V-755 • Full Bore • 1/4" - 2" (DN8 - DN50)
V-755A • Reduced Bore • 1/2" - 2" (DN15 - DN50)

Body	ASTM A105 / F316
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Working pressure	1500PSI (PN100)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

V-FLOW BALL VALVES

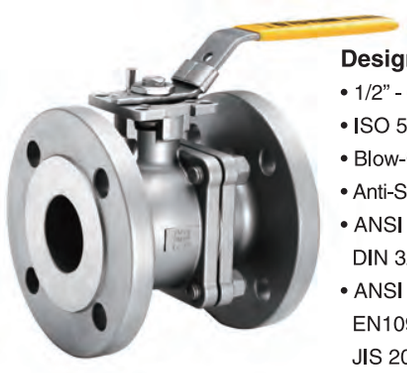
VF-27

Design Feature

- 1/2" - 6" (DN15 - DN150)
- ISO 5211 Mounting Flange
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ANSI B16.10 Class 150/300/600, DIN 3202 F1/F4/F5, JIS B2002
- ANSI B16.5 Class 150/300/600 RF, EN1092-1 PN10/16/25/40 RF, JIS 2010 10K/20K

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	50%PTFE. + 50%S.S.

VF-28

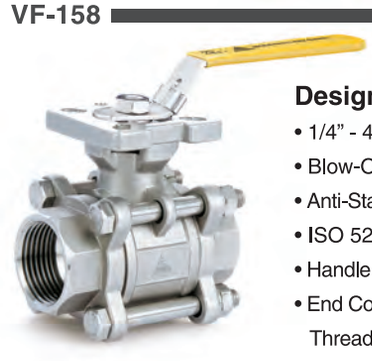


Design Feature

- 1/2" - 6" (DN15 - DN150)
- ISO 5211 Direct Mounting Flange
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ANSI B16.10 Class 150/300, DIN 3202 F1/F4/F5, JIS 2002
- ANSI B16.5 Class 150/300 RF, EN1092-1 PN10/16/25/40 RF, JIS 2010 10K/20K

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	50%PTFE. + 50%S.S.

VF-158

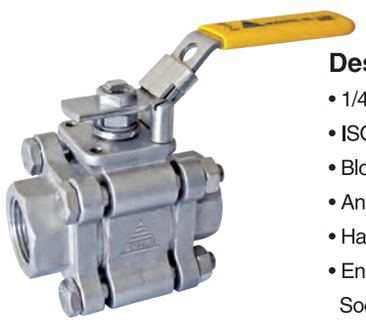


Design Feature

- 1/4" - 4" (DN8 - DN100)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Direct Mounting Flange
- Handle with Locking Device
- End Connection : Threaded, Socket Weld Butt Weld, Flanged PN16/40 RF

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	50%PTFE. + 50%S.S.
Working Pressure	1/2" - 2" 1000PSI (PN63)
	21/2" - 4" 800PSI (PN40)

VF-155



Design Feature

- 1/4" - 21/2" (DN8 - DN65)
- ISO 5211 Mounting Flange
- Blow-Out-Proof Stem Design
- Anti-Static Device
- Handle with Locking Device
- End Connection : Threaded, Socket Weld, Butt Weld End

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	50%PTFE. + 50%S.S.
Working Pressure	1/4" - 1" 2000PSI (PN140)
	11/4" - 2" 1500PSI (PN100)
	21/2" 1000PSI (PN 63)

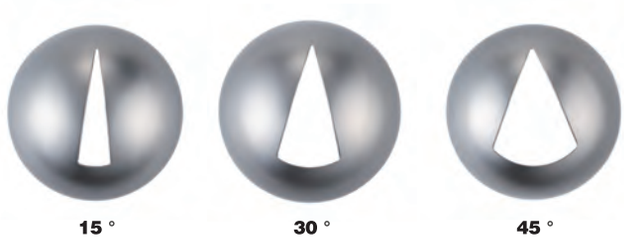
VF-355

Design Feature

- 1/4" - 4" (DN8 - DN100)
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Direct Mounting Flange
- Handle with Locking Device
- End Connection : Threaded, Socket Weld, Butt Weld End

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	50%PTFE. + 50%S.S.
Working Pressure	1/4" - 1" 2000PSI (PN140)
	11/4" - 2" 1500PSI (PN100)
	21/2" - 4" 1000PSI (PN 63)

BALL PORT



15 ° **30 °** **45 °**

60 ° **90 °** **SLOTTED**

HIGH PRESSURE BALL VALVES

Other Materials are available upon request

HPV-30 • HPV-60

Design Feature

- 2 Pieces Body Design
- Blow-Out-Proof Stem Design
- ISO 5211 Mounting Flange
- Handle with Locking Device
- End Connection : Threaded End
- Seal Welding Body Design for 6000 PSI

HPV-30 3000PSI • Full Bore • 1/4" - 11/2" (DN8 - DN40)
• Reduced Bore • 2" (DN50)

HPV-60 6000PSI • Full Bore • 1/4" - 1" (DN8 - DN25)

Body	ASTM A351 Gr.CF8M
Ball / Stem	CF8M / SS316
Seat	Derlin / Peek
Temperature Range	-4 to 176 °F (-20 to 80 °C) for Derlin
	-4 to 500 °F (-20 to 260 °C) for Peek
Working Pressure	3000/6000PSI (PN210/420)

HPV-40 • HPV-41

Design Feature

- 3 Pieces Body Design
- ISO 5211 Mounting Flange
- Blow-Out-Proof Stem Design
- Anti-Static Device
- Bar Material Body
- End Connection : Threaded, Socket Weld, Butt Weld End

HPV-40 3000PSI • Full Bore • 1/4" - 2" (DN8 - DN50)
HPV-41 6000PSI • Full Bore • 1/4" - 2" (DN8 - DN50)
HPV-40A 3000PSI • Reduced Bore • 1/4" - 2" (DN8 - DN50)
HPV-41A 6000PSI • Reduced Bore • 1/4" - 2" (DN8 - DN50)

Body	AISI 1045 / AISI 316 (bar material)
Ball / Stem	CF8M / 17-4 PH
Seat	Derlin / Peek
Temperature Range	-4 to 176 °F (-20 to 80 °C) for Derlin
	-4 to 500 °F (-20 to 260 °C) for Peek
Working Pressure	HPV-40 3000PSI (PN210)
	HPV-41 6000PSI (PN420)

HPV-84

Design Feature

- 1/2" - 11/2" Full Bore
  2" Reduced Bore
- 2 Pieces Body Design
- Blow-Out-Proof Stem Design
- ISO 5211 Direct Mounting Flange
- End Connection : Threaded End

Body	ASTM A351 Gr.CF8M
Ball / Stem	CF8M / SS316
Seat	Derlin / Peek
Temperature Range	-4 to 176 °F (-20 to 80 °C) for Derlin
	-4 to 500 °F (-20 to 260 °C) for Peek
Working Pressure	3000PSI (PN210)

HPV-43

Design Feature

- 1/2" - 2"
- Design as per ANSI B16.34 Class 1500/2500
- ISO 5211 Mounting Flange
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ANSI B16.10 Class 1500/2500
- ANSI B16.5 Class 1500/2500 RTJ

Body	AISI 1045 / AISI 316 (bar material)
Ball / Stem	CF8M / 17-4 PH
Seat	Delrin / Peek
Temperature Range	-4 to 176°F (-20 to 180 °C) for Delrin
	-4 to 500°F (-20 to 260 °C) for Peek

V-256

V-256 • Full Bore • 1/2" - 2" (DN15 - DN50)
V-256 • Reduced Bore • 1/2" - 2" (DN15 - DN50)

Design Feature

- ANSI B16.34 Class 900 Design
- Blow-Out-Proof Stem Design
- Anti-Static Device
- ISO 5211 Mounting Flange
- End Connection : Threaded, Socket Weld, Butt Weld End

Body	ASTM A216 Gr.WCB / ASTM A351 Gr.CF8M
Ball / Stem	CF8M / 17-4 PH
Seat	RTFE. (15% glass fiber filled)
Working Pressure	2220PSI (PN150)
Temperature Range	-4 to 356 °F (-20 to 180 °C)

MULTI WAY BALL VALVES

K-301 3 WAYS L / T Port

Design Feature

- Standard Bore
- 1/4" - 2" (DN8 - DN50)
- Blow-Out-Proof Stem
- 2 Seats Design for L port
- 3 Seats Design for T port
- End Connection : Threaded End

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	PTFE.
Temperature Range	-4 to 356 °F (-20 to 180 °C)
Working Pressure	1/4" - 2" 1000PSI (PN63)

K-302 3 WAYS L / T Port

Design Feature

- Standard Bore
- 1/4" - 2" (DN8 - DN50)
- Blow-Out-Proof Stem
- 3 Seats Design
- End Connection : Threaded End

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	PTFE.
Temperature Range	-4 to 356 °F (-20 to 180 °C)
Working Pressure	1/4" - 2" 1000PSI (PN63)

K-303 3 WAYS L / T Port

Design Feature

- Standard Bore
- 1/4" - 3" (DN8 - DN80)
- Blow-Out-Proof Stem Design
- 3 Seats Design
- ISO 5211 Mounting Flange
- End Connection : Threaded End

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)
Working Pressure	1/4" - 3" 1000PSI (PN63)

K-310 3 WAYS L / T Port

Design Feature

- Full Bore
- 1/4" - 11/2" (DN8 - DN40)
- Blow-Out-Proof Stem Design
- 3 Seats Design
- ISO 5211 Mounting Flange
- End Connection : Threaded End

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)
Working Pressure	1/4" - 11/2" 1000PSI (PN63)

K-318 3 WAYS L / T Port

Design Feature

- Standard Bore
- 1/4" - 2" (DN8 - DN50)
- Blow-Out-Proof Stem Design
- 3 Seats Design
- ISO 5211 Direct Mounting Flange
- End Connection : Threaded End

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)
Working Pressure	1/4" - 2" 1000PSI (PN63)

K-338 3 WAYS L / T Port

Design Feature

- Full Bore
- 1/4" - 2" (DN8 - DN50)
- Blow-Out-Proof Stem Design
- 3 Seats Design
- ISO 5211 Direct Mounting Flange
- End Connection : Threaded End

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	PTFE.
Temperature Range	-4 to 356 °F (-20 to 180 °C)
Working Pressure	1/4" - 2" 1000PSI (PN63)

MULTI WAY BALL VALVES

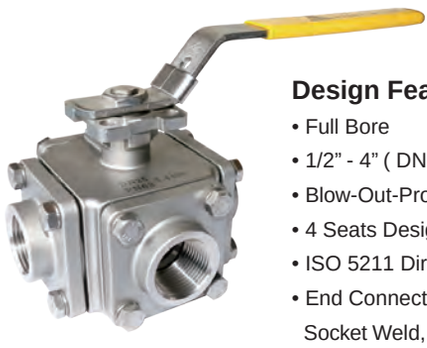
K-306 3 WAYS L / T Port

Design Feature

- Standard Bore
- 1/4" - 3" (DN8 - DN80)
- Blow-Out-Proof Stem Design
- 2 Seats Design
- ISO 5211 Mounting Flange
- End Connection : Threaded End

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	PTFE.
Temperature Range	-4 to 356 °F (-20 to 180 °C)
Working Pressure	1/4" - 3" 1000PSI (PN63)

K-314 3 WAYS L / T Port

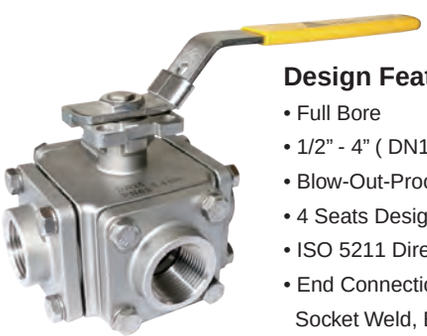


Design Feature

- Full Bore
- 1/2" - 4" (DN8 - DN100)
- Blow-Out-Proof Stem Design
- 4 Seats Design
- ISO 5211 Direct Mounting Flange
- End Connection : Threaded, Socket Weld, Butt Weld End

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)
Working Pressure	1/2" - 4" 1000PSI (PN63)

K-315 4 WAYS L / T / X Port

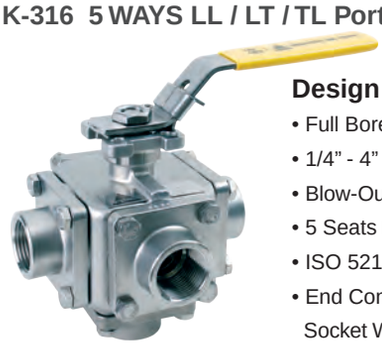


Design Feature

- Full Bore
- 1/2" - 4" (DN15 - DN100)
- Blow-Out-Proof Stem Design
- 4 Seats Design
- ISO 5211 Direct Mounting Flange
- End Connection : Threaded, Socket Weld, Butt Weld End

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)
Working Pressure	1/2" - 4" 1000PSI (PN63)

K-316 5 WAYS LL / LT / TL Port

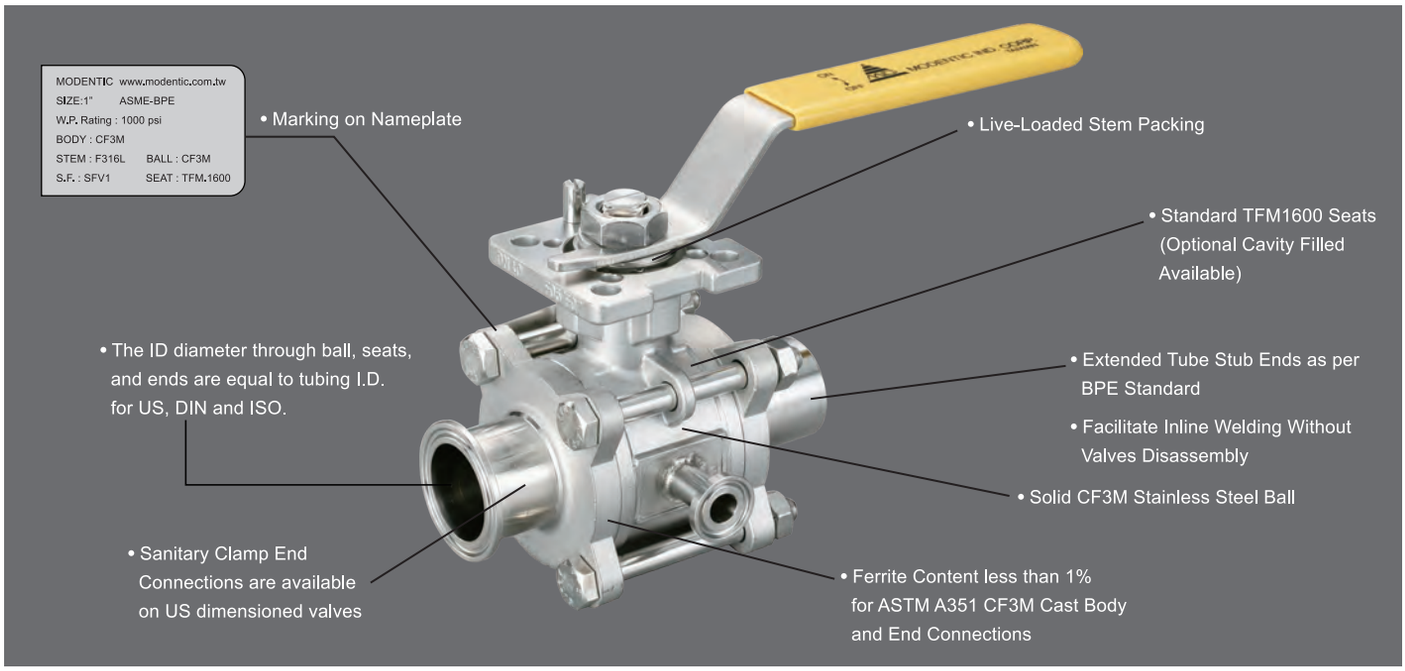


Design Feature

- Full Bore
- 1/4" - 4" (DN8 - DN100)
- Blow-Out-Proof Stem Design
- 5 Seats Design
- ISO 5211 Direct Mounting Flange
- End Connection : Threaded, Socket Weld, Butt Weld End

Body	ASTM A351 Gr.CF8M (1.4408)
Ball / Stem	CF8M / SS316
Seat	RTFE. (15% glass fiber filled)
Temperature Range	-4 to 356 °F (-20 to 180 °C)
Working Pressure	1/4" - 2" 800PSI (PN40)
	21/2" - 3" 600PSI (PN40)
	4" 400PSI (PN25)

We Offer Both Cast Ball Valves & Forged Ball Valves.



Metallic Materials of Construction

Available in both forged and cast pieces of stainless steel, all wetted metallic surfaces of clean ball valves are constructed from stainless steel, which are capable of withstanding the temperature, pressure, and chemical corrosiveness assuring the purity and integrity of the products, In addition to SS316L and CF3M; higher grade materials are available upon request, such as AL-6XN, Nickel Alloys, Stainless Steel Duplex.

• Low Ferrite Content

Because ferrite in process piping promotes roughing, especially in the weld, so users should always choose the equipment with low ferrite, Modentic controls ferrite <1% for SS316L forged valves; and ferrite <3% for CF3M cast valves.

• Tube Connection Feature to Facilitate Automatic Orbital Welding

♦ASME BPE compliant extended tube so that welding can be performed without valve disassembled, tangent lengths furnished to standard ASME/BPE table DT-4.

♦Sulfur content on tube ends 0.005%~.0.017% to ensure consistent weldability. Chemical composition for automatic weld end furnished to ASME BPE-Part DT-3.

• Hygienic Clamp End In Accordance With US Dimensions

• Tube Bore Design

To minimize the pressure drops and to facilitate the drainability, the concept of unterrupted flow tube bore feature is designed throughout the flow path tube bore feature is designed throughout the flow path including ball, seats and end connections.

• Seat & Seals

All nonmetallic material chosen are FDA 21 CFR 177/USP23 Class VI compliant-ASME/BPE SD-3.4.2; Design according to SD-3.6.1, SG-4.1.1.6, SG-4.1.1.8

＊Cavity filler seats are available upon request (not recommended for steam service)

• Surface Finish

This is one of the major characteristic addressed to high purity equipment. ASME/BPE provide criteria of product contact surface finished for bioprocessing equipment the standard internal surface finish for Modentic high purity ball valves are mechanical polished to Ra20(0.5um), ASME/BPE SFV1; finer grade of surface treatment can be accomplished by electro-polished to achieve SF4 Ra15(0.38μm).

The reading of the surface finish will be always a major report in our MTR.

• Temperature Rating : -40°C~180°C (-40°F~356°F)

• Pressure Rating:

- ♦1/2" - 2" 1000PSI (PN63)
- ♦21/2" - 4" 720PSI (PN40)
- ♦Steam Puressure of 150 Psig at 350°F

• Purge Port (upon the users' request)

For C.I.P. or S.I.P. application, valves have body and end piece bosses for ports.

Purge Port Type and Size are provided as per following

- ♦Valve size 11/2" and less 1/4" female compression fitting
- ♦Valve size 2" and upper 1/2" female compression fitting

• ISO 5211 Intergral Actuator Mounting Pad Design

• Packing

Modentic high purity ball valves are finally tested and packed in a clean environment. Each valves is protected with end caps, and sealed in a transparent plastic bag.

Benefits of Forged Valves

- ♦Lower Porosity and smoother Surfaces that can reduce surface contamination
- ♦Stronger Corrosion Resistance

Benefits of Cast Valves

- ♦Lower Cost
- ♦Small batches of production acceptable

Automation Ball Valves

Modentic helps you to mount automation devices for your ball valves, include actuators, limit switch box; positioner……for the need specific to the application.

•) Table Sf-5 Acceptance Criteria For Interior Surface Finishes of Valve Bodies

Anomaly of Indication	Acceptance Criteria
Cluster of pits	No more than 4 pits per each 1/2 in.x 1/2in. Inspection window. The cumulative total of all relevant pits shall not exceed 0.040in.
Demarcation	If <5% of the total area when visually inspected and Ra max. is met.
Dents	None accepted.
Grit lines	If Ra max. is met.
Nicks	If depth <0.010 in.
Pits	If diameter <0.020 in. and bottom is shiny. Pits <0.003 in. diameter are irrelevant and acceptable.
Porosity	If diameter <0.010 in. and bottom is shiny.
Scratched	If lengh <0.25in., depth<0.003in., and Ra max. is met.
Surface cracks	None accepted.
Surface inclusions	If Ra max. is met and there is no liquid penetrant indication.
Surface residuals	None accepted, visual inspection.
Surface roughness (Ra)	See Table SF-6.
Weld slag	None accepted.

Adupted from ASME/BPE-2005

•) Table Sf-6 RA Reading for Valves

Mechanically Polished [Note (1)]		
Surface Designation ASME BPE	Ra, Max. µ-in.	µm
SF1	20	0.51
SF2	25	0.64
SF3	30	0.76
Mechanically Polished and Electropolished		
Surface Designation ASME BPE	Ra, Max. µ-in.	µm
SF4	15	0.38
SF5	20	0.51
SF6	25	0.64

GENERAL NOTES:

(a) All Ra reading are taken across the lay, wherever possible.

(b) No Single Ra reading shall exceed the Ra max. value in this table.

(c) Other Ra reading are avaiable if agreed upon between owner/suer and manufacturer, not to exceed values in this table.

NOTE:

(1) Or any other finishing methos that meets the Ra max.

•) Surface Roughness for Grit Finishes(Ra.)

Abrasive grit No.	µ-in.	µm
500	4 to 10	0.10 to 0.25
320	6 to 15	0.15 to 0.38
240	8 to 20	0.20 to 0.51
180	25 max	0.64 max
120	45 max	1.14 max
60	140 max	3.56 max

GRIT:

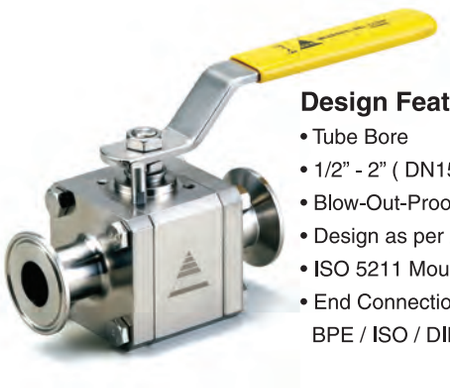
Measure the number of scarches per liner inch of abrasive pad. Higher numbers indicate a smoother finish.

RMS: Defined as Root Mean Square roughness, this method measure a smple for peaks and valleys. Lower number indicate a smoother finish.

Ra:Know as the Arithmetic Mean, this measurement represents the average value of all peaks and valleys. Lower numbers indicate a smooth finish.

BAR / FORGED SS316L

MD-955EB / TC

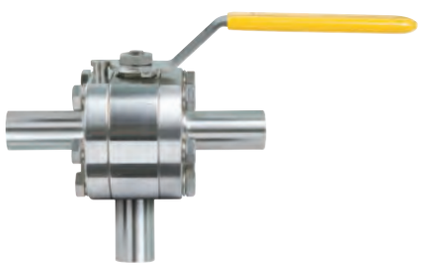


Design Feature

- Tube Bore
- 1/2" - 2" (DN15 - DN50)
- Blow-Out-Proof Stem Design
- Design as per ANSI B16.34 / BPE
- ISO 5211 Mounting Flange
- End Connection : Tri-Clamp, BPE / ISO / DIN Ext. Tube End

Body	ANSI 316L (bar material)
Ball / Stem	CF3M / SS 316L
Seat	TFM1600
Temperature Range	-40 to 356 °F (-40 to 180 °C)
Working Pressure	1/2" - 2" 1500PSI (PN100)

MD-938 • MD-968

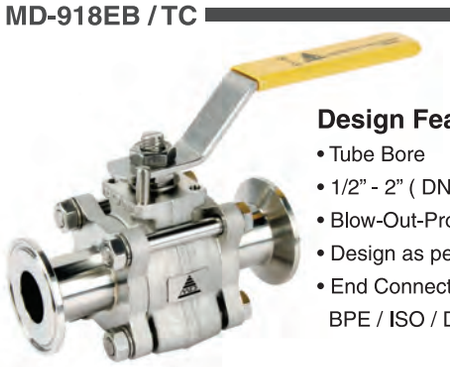


Design Feature

- Tube Bore
- 1/2" - 2" (DN15 - DN50)
- Blow-Out-Proof Stem Design
- Design as per ANSI B16.34 / BPE
- ISO 5211 Mounting Flange
- End Connection : BPE / ISO / DIN Ext. Tube End

Body	ANSI 316L (bar material)
Ball / Stem	CF3M / SS316L
Seat	TFM1600
Temperature Range	-40 to 356 °F (-40 to 180 °C)
Working Pressure	1/2" - 2" 1500PSI (PN100)

MD-918EB / TC



Design Feature

- Tube Bore
- 1/2" - 2" (DN15 - DN50)
- Blow-Out-Proof Stem Design
- Design as per ANSI B16.34 / BPE
- End Connection : Tri-Clamp, BPE / ISO / DIN Ext. Tube End

Body	ASTM A182 Gr. F316L (forged)
Ball / Stem	CF3M / SS316L
Seat	TFM1600
Temperature Range	-40 to 356 °F (-40 to 180 °C)
Working Pressure	1/2" - 2" 1000PSI (PN 63)

CAST CF3M

Ferrite Content less than 3%
Sulfur Content 0.005 - 0.017%

MD-928EB / TC

Design Feature

- Tube Bore
- 1/2" - 4" (DN15 - DN100)
- Design as per ANSI B16.34 / BPE
- Blow-Out-Proof Stem Design
- ISO 5211 Direct Mounting Flange
- End Connection : Tri-Clamp, BPE / ISO / DIN Ext. Tube End
- Option : Cavity Filled Seat, Extended Stem, Purge Port, Anti-Static Device

Body	ASTM A351 Gr.CF3M
Ball / Stem	ASTM A351 Gr.CF3M / SS316L
Seat	TFM1600
Temperature Range	-40 to 356 °F (-40 to 180 °C)
Working Pressure	1/2" - 2" 1000PSI (PN63)
	21/2" - 4" 720PSI (PN40)

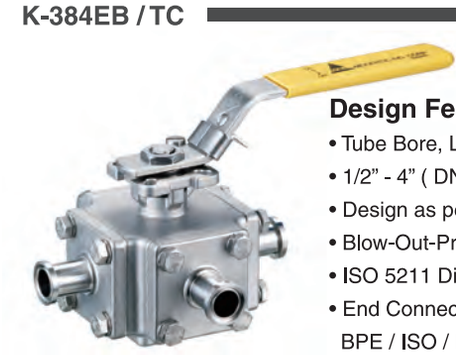
V-255EB / TC

Design Feature

- Tube Bore
- 1/2" - 2" (DN15 - DN50)
- Design as per ANSI B16.34 / BPE
- Blow-Out-Proof Stem Design
- ISO 5211 Mounting Flange
- End Connection : Tri-Clamp, BPE / ISO / DIN Ext. Tube End
- Option : Cavity Filled Seat, Extended Stem, Purge Port, Anti-Static Device

Body	ASTM A351 Gr.CF3M
Ball / Stem	ASTM A351 Gr.CF3M / SS316L
Seat	TFM1600
Temperature Range	-40 to 356 °F (-40 to 180 °C)
Working Pressure	1/2" - 2" 1000PSI (PN63)

K-384EB / TC



Design Feature

- Tube Bore, L / T Port
- 1/2" - 4" (DN15 - DN80)
- Design as per ANSI B16.34 / BPE
- Blow-Out-Proof Stem Design
- ISO 5211 Direct Mounting Flange
- End Connection : Tri-Clamp, BPE / ISO / DIN Ext. Tube End

Body	ASTM A351 Gr.CF3M
Ball / Stem	ASTM A351 Gr.CF3M / SS316L
Seat	TFM1600
Temperature Range	-40 to 356 °F (-40 to 180 °C)
Working Pressure	1/2" - 2" 1000PSI (PN63)
	21/2" - 4" 800PSI (PN40)

SANITARY BALL VALVES

V-Z05EB / TC

Option : Locking device, Cavity filler seat

V-Z58EB / TC

ISO 5211 direct mounting

Option : Cavity filler seat

V-Z05MEB / TC

ISO 5211 mounting flange

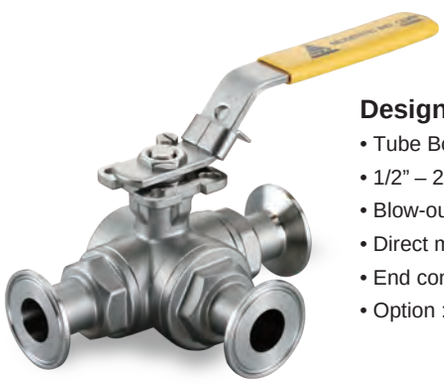
Option :Cavity filler seat

Design Feature

- Tube Bore
- 1/2” – 4” (DN15 - DN100)
- Blow-out proof stem
- End connection : Clamp end, 3A Tube end DIN 11850 Tube end

Body	ASTM A351 Gr.CF8M
Ball / Stem	CF8M / SS 316
Seat	TFM1600
Temperature Range	-4 to 356 °F (-20 to 180 °C)
Working pressure	1000 psi (PN 63) 1/2” – 2”
	800 psi (PN 40) 2”-1/2“ – 4”

K-338TC



Design Feature

- Tube Bore, 3 way L / T port
- 1/2” – 2” (DN15 - DN50)
- Blow-out proof stem
- Direct mounting type
- End connection : Clamp end
- Option : Cavity filler seat

Body	ASTM A351 Gr.CF8M
Ball / Stem	CF8M / SS316
Seat	PTFE
Temperature Range	-4 to 356 °F (-20 to 180 °C)
Working pressure	720 psi (PN 40)

K-Z04EB / TC

Design Feature

- Tube Bore, 3/4 way L / T port
- 1/2” – 4” (DN15 - DN100)
- Direct mounting type
- ISO 5211 mounting flange type
- End connection : Clamp end, 3A Tube end
- Option : Cavity filler seat

Body	ASTM A351 Gr.CF8M
Ball / Stem	CF8M / SS316
Seat	PTFE
Temperature Range	-4 to 356 °F (-20 to 180 °C)
Working pressure	720 psi (PN 40)

API 602 FORGED GATE • GLOBE • CHECK VALVES

Other materials are available upon request

FGT-800 / 1500 • BOLTED BONNET
PGT-1500 / 2500 • PRESSURE SEAL

Design Feature

- Forged Gate Valve
- 1/2" - 2" (DN15 - DN50)
- Rising Stem, Non Rising Handwheel
- O.S. & Yoke, Solid Wedge
- Reduced Port
- ASME B16.34 Class 800/1500/2500
- Option :
  1. Welded Bonnet Type for Class 800/1500
  2. Full Port

Body	ASTM A105N
Wedge / Stem	ASTM A182 Gr.F6 / ASTM A276 Gr.410
End Connections	Socket Weld, NPT Thread, Butt Weld End

FGTF-150 / 300 / 600 • BOLTED BONNET
PGTF-1500 / 2500 • PRESSURE SEAL

Design Feature

- Forged Gate Valve
- 1/2" - 2" (DN15 - DN50)
- Rising Stem, Non Rising Handwheel
- O.S. & Yoke, Solid Wedge
- Integral Flange Design
- Reduced Port
- Option : 1. Welded Bonnet Type for Class 150/300/600
  2. Full Port

Body	ASTM A105N
Wedge / Stem	ASTM A182 Gr.F6 / ASTM A276 Gr.410
Face to Face	ASME B16.10 Class 150/300/600
Flange Dim.	ASME B16.5 Class 150/300/600 RF

FGB-800 / 1500 • BOLTED BONNET
PGB-1500 / 2500 • PRESSURE SEAL

Design Feature

- Forged Globe Valve
- 1/2" - 2" (DN15 - DN50)
- Rising Stem, Rising Handwheel
- O.S. & Yoke, Plug Disc
- Reduced Port
- ASME B16.34 Class 800/1500/2500
- Option :
  1. Welded Bonnet Type for Class 800/1500
  2. Full Port

Body	ASTM A105N
Disc / Stem	ASTM A182 Gr.F6 / ASTM A276 Gr.410
End Connections	Socket Weld, NPT Thread, Butt Weld End

FGBF-150 / 300 / 600 • BOLTED BONNET
PGBF-1500 / 2500 • PRESSURE SEAL

Design Feature

- Forged Globe Valve
- 1/2" - 2" (DN15 - DN50)
- Rising Stem, Rising Handwheel
- O.S. & Yoke, Plug Disc
- Integral Flange Design
- Reduced Port
- Option : 1. Welded Bonnet Type for Class 150/300/600
  2. Full Port

Body	ASTM A105N
Disc / Stem	ASTM A182 Gr.F6 / ASTM A276 Gr.410
Face to Face	ASME B16.10 Class 150/300/600
Flange Dim.	ASME B16.5 Class 150/300/600 RF

FPC-800 / 1500 • BOLTED BONNET
PPC-1500 / 2500 • PRESSURE SEAL

Design Feature

- Forged Check Valve
- 1/2" - 2" (DN15 - DN50)
- Piston Type
- Reduced Port
- ASME B16.34 Class 800/1500/2500
- Option :
  1. Welded Bonnet Type for Class 800/1500
  2. Swing Type (FSC-800/1500)
  3. Full Port

Body	ASTM A105N
Disc	ASTM A182 Gr.F6
End connections	Socket Weld, NPT Thread, Butt Weld End

FPCF-150 / 300 / 600 • BOLTED BONNET
PPCF-1500 / 2500 • PRESSURE SEAL

Design Feature

- Forged Check Valve
- 1/2" - 2" (DN15 - DN50)
- Piston Type
- Integral Flange Design
- Reduced Port
- Option :
  1. Welded Bonnet Type
  2. Swing Type (FSF-800/1500)
  3. Full Port

Body	ASTM A105N
Disc	ASTM A182 Gr.F6
Face to Face	ASME B16.10 Class 150/300/600
Flange Dim.	ASME B16.5 Class 150/300/600 RF

API 600 / API 603 FLANGED GATE • GLOBE • CHECK VALVES

Other materials are available upon request

GTF-150 / 300 / 600 / 900 / 1500 / 2500

Design Feature

- Design as per API 600
- 2" - 48" (DN50 - DN1200)
- Rising Stem
- Non Rising Handwheel
- O.S. & Yoke, Flexible Wedge
- Bolted Bonnet Design
- Option : Welded Bonnet Type

Body / Stem	ASTM A216 Gr.WCB / A182 Gr.F6
Wedge	ASTM A216 Gr.WCB + 13% Cr. Coated
Face to Face	ASME B16.10 Class 150/300/600/900/1500/2500
Flange Dim.	ASME B16.5 Class 150/300/600/900/1500/2500

GTF-150 / 300 / PN / JIS

Design Feature

- Design as per API 603
- 1/2" - 24" (DN15 - DN600)
- Rising Stem
- Non Rising Handwheel
- O.S. & Yoke, Flexible Wedge, Integral Seats
- Bolted Bonnet Design

Body	ASTM A351 Gr.CF8M
Wedge / Stem	ASTM A351 Gr.CF8M / A182 Gr.F316
Face to Face	ASME B16.10 Class 150/300, EN558-1 F1/F4/F5
Flange Dim.	ASME B16.5 Class 150/300 RF,
	EN1092-1 PN10/16/25/40, JIS 10K

GBF-150 / 300 / 600 / 900 / 1500 / 2500

Design Feature

- Design as per ANSI B16.34 / BS1873 / API600
- 2" - 24" (DN50 - DN600)
- Rising Stem, Rising Handwheel
- O.S. & Yoke, Flexible Disc
- Bolted Bonnet Design
- Option : Welded Bonnet Type

Body / Stem	ASTM A216 Gr.WCB / A182 Gr.F6
Disc	ASTM A216 Gr.WCB + 13% Cr. Coated
Face to Face	ASME B16.10 Class 150/300/600/900/1500/2500
Flange Dim.	ASME B16.5 Class 150/300/600/900/1500/2500

GBF-150 / 300 / PN / JIS

Design Feature

- Design as per ANSI B16.34 / BS1873 / API603
- 1/2" - 14" (DN15 - DN350)
- Rising Stem, Rising Handwheel
- O.S. & Yoke, Flexible Disc, Conical Seat Design
- Bolted Bonnet Design

Body	ASTM A351 Gr.CF8M
Disc / Stem	ASTM A351 Gr.CF8M / A182 Gr.F316
Face to Face	ASME B16.10 Class 150/300, EN558-1 F1/F4/F5
Flange Dim.	ASME B16.5 Class 150/300 RF,
	EN1092-1 PN10/16/25/40, JIS 10K

SF-150 / 300 / 600 / 900 / 1500 / 2500

Design Feature

- Design as per ANSI B16.34 / BS1868 / API 600
- 2" - 36" (DN50 - DN900)
- Swing Type
- Bolted Bonnet Design
- Option : Welded Bonnet Type

Body	ASTM A216 Gr.WCB
Disc	ASTM A216 Gr.WCB + 13% Cr. Coated
Face to Face	ASME B16.10 Class 150/300/600/900/1500/2500
Flange Dim.	ASME B16.5 Class 150/300/600/900/1500/2500

SF-150 / 300 / PN / JIS

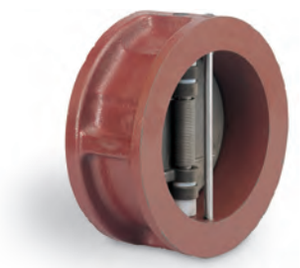
Design Feature

- Design as per ANSI B16.34 / BS1868 / API603
- 1/2" - 24" (DN15 - DN600)
- Swing Type
- Conical Seat Design
- Bolted Bonnet Design

Body	ASTM A351 Gr.CF8M
Disc	ASTM A351 Gr.CF8M
Face to Face	ASME B16.10 Class 150/300, EN558-1 F1/F4/F5
Flange Dim.	ASME B16.5 Class 150/300 RF,
	EN1092-1 PN10/16/25/40, JIS 10K

CHECK VALVES AND FLANGED STRAINER

MV-1220

Design Feature

- Design as per API 594
- 11/2" - 60" (DN40 - DN1500)
- Wafer Type Dual Plate
- Flange Dim. : ANSI B16.5, ISO 7005, BS10-Table A/D/E/F, JIS B2338, API 605

Body	Cast / Ductile Iron
	Stainless / Carbon Steel
Plate	SS316 / SS304 / WCB
Seat	NBR / EPDM / VITON / METAL
Flange Dim.	ANSI B16.5 Class 150/300/600/900/1500/2500,
	EN1092-1 PN10/16/25/40, JIS 5K/10K/20K

MV-1221


Design Feature

- Design as per API 594
- 11/2" - 24" (DN40 - DN600)
- Lug Type Dual Plate

Body	ASTM A351 Gr.CF8M / A216 Gr.WCB
Plate	ASTM A351 Gr.CF8M / A182 Gr.F316
Seat	NBR / EPDM / VITON / METAL
Flange Dim.	ANSI B16.5 Class 150/300/600 RF,
	EN1092-1 PN10/16/25/40,
	JIS 5K/10K/20K

MV-1222

Design Feature

- 2" - 24" (DN50 - DN600)
- Wafer Type
- Swing Check Valves

Body	Carbon / Stainless Steel
Plate	SS316 / SS304
Seat	NBR / EPDM / VITON / PTFE. / METAL
Flange Dim.	ANSI Class 150/300, PN10/16/25/40

WA-001

Design Feature

- 1/2" - 8" (DN15 - DN200)
- Wafer Type
- Spring Check Valves

Body	1.4408
Disc / Spring	1.4408 / SS316
Face to Face	DIN 3202 K4
Pressure Rating	PN40 for DN15 - DN100
	PN25 for DN125 - DN150

MV-1225

Design Feature

- 2" - 24" (DN50 - DN600)
- Wafer Type
- Spring Check Valves

Body	Carbon / Stainless Steel
Plate	SS316 / SS304
Seat	NBR / EPDM / VITON / PTFE. / METAL
Pressure Rating	ANSI Class 150/300/600/900,
	PN10/16/25/40,
	JIS 5K/10K/20K

FLANGED STRAINER YF-150 / 300 / PN / JIS

Design Feature

- 1/2" - 16" (DN15 - DN400)
- Y-Type Strainer

Body	ASTM A351 Gr.CF8M
Screen	SS304
Face to Face	MFG. Standard
Flange Dim.	ANSI B16.5 Class 150/300 RF,
	EN1092-1 PN10/16/25/40 RF,
	JIS 10K

SUPER ALLOY VALVES MATERIAL LIST

Other alloy materials can be offered upon request

Material Chart

Material Code	Elements Content (%)	Casting		
		ASTM	DIN	UNS
Austenitic Stainless Steel				
General				
SS304	19Cr-9Ni	CF8	1.4308	J92600
SS304L	19Cr-9Ni-C<0.03%	CF3	1.4306	J92500
SS347	19Cr-10Ni-Nb	CF8C	1.4552	J92710
Specific				
SS316	19Cr-10Ni-2.5Mo	CF8M	1.4408	J92900
SS316L	19Cr-10Ni-2.5Mo-C<0.03%	CF3M	1.4404	J92800
SS317	19Cr-11Ni-3.5Mo	CG8M	1.4437	J93000
SS317L	19Cr-11Ni-3.5Mo-C<0.03%	CG3M	1.4438	J92999
Super Austenitic Stainless Steel				
904L	21Cr-25Ni-4.5Mo-1.5Cu-N	-	1.4539	-
254 SMo	20Cr-18Ni-6.5Mo-Cu-N	A351 CK3MCuN	1.4547	J93254
Highly Corrosion-Resistant Alloy				
Austenitic Stainless Steel (Iron base)				
Alloy 20	29Ni-20Cr-3.5Cu-2.5Mo	A351 CN7M	2.4660	J95150
Ni-Mo Alloy				
Hastelloy B	28Mo-5Fe-V	A494 N-12MV	2.4882	N30012
Hastelloy B2	28Mo-1Fe	A494 N-7M	2.4617	N30007
Ni-Cr-Mo Alloy				
Hastelloy C276	16Cr-17Mo-6Fe-4W-V	A494 CW12MW	2.4686	N30002
Hastelloy C22	21Cr-13.5Mo-4Fe-3W	A494 CX2MW	2.4602	N26022
Ni-Cu Alloy				
Monel 400	65Ni-32Cu	A494 M-35-1	2.4365	N24135
Nickel				
Nickel CZ100	97Ni	A494 CZ-100	2.4066	N02100
Titanium				
Grade 2	99Ti	B367 C2		
Grade 5	6Al-4V	B367 C5		
High Temperature Alloy (Nickel base)				
Inconel 600	15Cr-8Fe	A494 CY-40	2.4816	N06040
Inconel 625	22Cr-9Mo-3.5Nb-2.5Fe	A494 CW6MC	2.4856	N26625
Duplex Stainless Steel				
1A	25Cr-5Ni-2Mo-3Cu	A890 Gr.1A CD4MCu	1.4517	J93370
1B	25Cr-5Nii-2Mo-3Cu-N	A890 Gr.1B CD4MCuN		J93372
2A	24Cr-10Ni-3.5Mo-N	A995 Gr.2A CE8MN		J93345
2205/4A	22Cr-5Ni-3Mo-N	A995 Gr.4A CD3MN	1.4470	J92205
Super Duplex Stainless Steel				
2507/5A	25Cr-7Ni-4Mo-N	A890 Gr.5A CE3MN	1.4469	J93404
Z100/6A	25Cr-7Ni-3.5Mo-Cu-N-W	A890 Gr.6A CD3MWCuN	1.4471	J93380
329	25Cr-4Ni-Mo		1.4460	

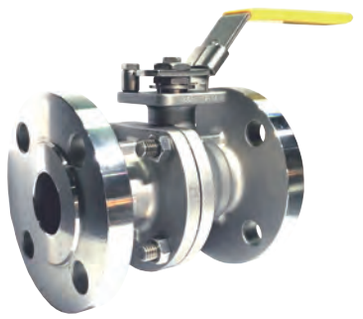
SUPER ALLOY BALL VALVES

Alloy 20 / Hastelloy® C / Duplex 4A / Super Duplex 5A / Monel® / SS904L / Titanium

2-WAY CASTING BALL VALVES

V-255
3-PIECE BODY DESIGN
2000 / 1500 PSI
8 Bolts Design
1/4" ~ 2" (DN8 ~ DN50)
Threaded End
Socket Weld End
Butt Weld End

V-655
3-PIECE BODY DESIGN
ISO 5211 Direct Mounting Flange
2000 / 1500 / 1000 PSI
8 Bolts Design
1/4" ~ 4" (DN8 ~ DN100)
Threaded End
Socket Weld End
Butt Weld End



MD-32
2-PIECE BODY DESIGN
ANSI Class 150/300/600
PN16/40
1/2" ~ 6" (DN15 ~ DN150)
Flanged End

2-WAY BAR MATERIAL BALL VALVES

V-C06
2-PIECE BODY DESIGN
1000 PSI
1/2" ~ 2" (DN15 ~ DN50)
Threaded End
Socket Weld End

V-C05
3-PIECE BODY DESIGN
1000 PSI
1/2" ~ 2" (DN15 ~ DN50)
Threaded End
Socket Weld End
Butt Weld End

HPV-40/41
3-PIECE BODY DESIGN
3000 PSI as HPV-40
6000 PSI as HPV-41
1/4" ~ 2" (DN8 ~ DN50)
Threaded End
Socket Weld End
Butt Weld End

MD-C2
2-PIECE BODY DESIGN
ANSI Class 150
1/2" ~ 2" (DN15 ~ DN50)
Flanged End

3-WAY BALL VALVES

MD-310
Bar Material

OTHERS

Needle Valve

NV-0070

NV-0060

NV-0061

SCREWED END GATE • GLOBE • CHECK • NEEDLE VALVES AND STRAINERS

GATE VALVES GT-200

Design Feature
- 1/2" - 2" (DN15 - DN50)
- Non-Rising Stem
- Solid Wedge

Body / Wedge	ASTM A351 Gr.CF8M (1.4408)
Packing	PTFE.
Working Pressure	200PSI (PN16)
End Connection	Threaded End

GLOBE VALVES GB-200

Design Feature
- 1/4" - 2" (DN8 - DN50)
- Rising Stem
- Solid Disc

Body / Disc	ASTM A351 Gr.CF8M (1.4408)
Packing	PTFE.
Working Pressure	200PSI (PN16)
End Connection	Threaded End

STRAINERS YS-800

Design Feature
- 1/4" - 3" (DN8 - DN80)
- Y-Type Strainer

Body	ASTM A351 Gr.CF8M (1.4408)
Screen / Packing	SS316 / PTFE.
Working Pressure	800PSI (PN40)
End Connection	Threaded End

GLOBE YGB-800

Design Feature
- 1/4" - 3" (DN8 - DN80)
- Y-Type
- Rising Stem
- Solid Disc

Body / Disc	ASTM A351 Gr.CF8M (1.4408)
Packing	PTFE.
Working Pressure	800PSI (PN40)
End Connection	Threaded End

CHECK VALVES SC-200

Design Feature
- 1/4" - 3" (DN8 - DN80)
- Swing Type

Body / Disc	ASTM A351 Gr.CF8M (1.4408)
Body Seal	PTFE.
Working Pressure	200PSI (PN16)
End Connection	Threaded End

CHECK VALVES YSP-800

Design Feature
- 1/4" - 2" (DN8 - DN50)
- Y-Type Spring Type

Body / Disc	ASTM A351 Gr.CF8M (1.4408)
Spring	SS316
Working Pressure	800PSI (PN40)
End Connection	Threaded End

CHECK VALVES WA-002

Design Feature
- 1/4" - 4" (DN8 - DN100)
- 3 Pieces Body Design
- Spring Type

Body / Disc	ASTM A351 Gr.CF8M (1.4408)
Body Seal	PTFE.
Working Pressure	800PSI (PN40)
End Connection	Threaded, Socket Weld, Butt Weld End

NEEDLE VALVES

NV-0060 **NV-0061** **NV-0062** **NV-0063**

- NV-0060 NV-0062 Female x Female Screwed End
- NV-0061 NV-0063 Male x Female Screwed End
- 1/8" - 2" (DN6 - DN50)
- CWP : 6000/10000PSI
- Body : ASTM A351 Gr.CF8M (Investment Casting)

PNEUMATIC ACTUATED VALVES

Limit Switch Box

LSB 1000 Weather Proof
LSB 3000 Explosion Proof
LSB 7000 Special Material Housing

Air Filter

AFC 1500/1000 Series
BFC 2000/3000/4000 Series

Positioner

PPL / PPR Pneumatic-Pneumatic
EPL / EER Electro-Pneumatic

Solenoid Valve

4V-310 5/2 Way for Spring Return
3V-310 3/2 Way for Double Acting

Actuator

Double Acting
Spring Return

Available Range

Screwed Ball Valve 1/4" - 4"
Flanged Ball Valve 1/2" - 12"
Multi-Way Ball Valve 1/2" - 8"
Butterfly Valve 11/2" - 24"

■ **GUIDE TO SEND US YOUR INQUIRY** (Other Conditions / Operations are available upon request)

WORKING CONDITIONS		OPERATION	ACCESSORRIE AND THEIR SPEC	
Working Temperature__°C	Working Pressure__Psi	Double Acting	Limit Switch Box	Positioner
Air supply to the actuator__Psi	Medium Sticky or not	Spring Return	Solenoid Valves	Air Filter

Check Box

ACCESSORIES

Other Conditions / Operations are available upon request

LIMIT SWITCH BOX

LSB-1000 Series

LSB-3000 Series

LSB-7000 Series

▶ **LSB-1000 Series**
- Weatherproof to IP67 (Option : IP68)
- NAMUR Mounting Shaft
- Rugged Aluminum Die-Cast Housing

▶ **LSB-3000 Series**
- Flameproof ATEX / IECEx / KC Ex d IIC
- NAMUR Mounting Shaft
- Rugged Aluminum Die-Cast Housing
  (Option : Stainless Steel SS316 Housing)

▶ **LSB-7000 Series**
- Flameproof ATEX / IECEx / KC Ex d IIB+H2 T6 - IP67
- Compact Single Unit with Built-In Solenoid Valve
- NAMUR Mounting Shaft
- Rugged Aluminum Die-Cast Housing
  (Option : Stainless Steel SS316 Housing)

POSITIONER

PNEUMATIC - PNEUMATIC POSITIONER

PPL (Linear Type)

PPR (Rotary Type)

ELECTRO - PNEUMATIC POSITIONER

EPL (Linear Type)

EPR (Rotary Type)

▶ **PPL / PPR Series**
- Precise Calibration with Simple SPAN and ZERO Adjustments
- Simple Conversion to Direct Acting or Reverse Acting
- Rugged Aluminum Housing with Corrosion-Resistant Coating
- Option : High Temperature

▶ **EPL / EPR Series**
- Precise Calibration with Simple SPAN and ZERO Adjustments
- Simple Conversion to Direct Acting or Reverse Acting
- Rugged Aluminum Housing with Corrosion-Resistant Coating
- Option: Position Transmitter (4 ... 20mA Output Signal),
  High / Low Temperature

SOLENOID VALVE

4V-310 5/2 Way - for Spring Return Actuator
3V-310 3/2 Way - for Double Acting Actuator

▶ **4V-310**
- 5 Position 2 Way
- Inner Guide Type
- Port Size :
  1/4" or 3/8" (G / PT)

▶ **3V-310**
- 3 Position 2 Way
- Inner Guide Type
- Port Size :
  1/4" or 3/8" (G / PT)

AIR FILTER

▶ **AFC Series**
- Port Size : 1/8" or 1/4" (G / PT)
- Max. Flow Rate :
  650 or 750 (L / min.)
- Working Pressure Range :
  0.05 - 0.85 Mpa

▶ **BFC Series**
- Port Size : 1/8" or 1/4" or 1/2" (G / PT)
- Max. Flow Rate :
  1000 or 1300 or 3000 (L / min.)
- Working Pressure Range :
  0.05 - 0.85 Mpa

ELECTRIC ACTUATED VALVES

Actuator with CSA, UL 429 approval

Available Range

Screwed Ball Valve 1/4" - 4"
Flanged Ball Valve 1/2" - 12"
Multi-Way Ball Valve 1/2" - 8"
Butterfly Valve 11/2" - 24"

GUIDE TO SEND US YOUR INQUIRY (Other Conditions are available upon request)

WORKING CONDITIONS		OPTION		
110V AC	Working Pressure_Psi	Temperature Controller	Limit Switch (2 units)	Heater
220V AC				
24V AC	Working Temperature_°C	Replay	Modulating Controller	Modulating Control Box
24V DC				

Check Box

ORDER INSTRUCTION

As valve design and specification may differ according to the applications and working conditions, you are encouraged to provide the information listed below. We will design and manufacture valves fully in compliance with your requirements.

STEP 1. TYPES

▶ Type of Valve

○ Ball Valve ○ Gate Valve ○ Globe Valve ○ Check Valve ○ Butterfly Valve
○ Strainer ○ Others _____

▶ End Connection Type

○ Threaded ○ Socket Weld ○ Butt Weld ○ Flanged ○ Others _____

▶ Flange Dimensions (if choose Flanged End)

○ ANSI Class 150 ○ ANSI Class 300 ○ PN16 ○ PN40 ○ JIS 10K
○ JIS 20K ○ Others _____

▶ Ways

○ 2 Ways ○ 3 Ways ○ Multi- Ways (_____ Ways)

STEP 2. APPLICATIONS

▶ Medium / Liquid

◎ _____

▶ Working Pressure (Maximum)

◎ _____

▶ Working Temperature (Maximum)

◎ _____

▶ Working Environment

◎ _____

▶ Others

◎ _____

STEP 3. OPERATIONS

▶ Manual Operation

○ Lever ○ Handwheel ○ Gear Box ○ Others _____

▶ Automation

○ Pneumatic Actuator

◇ Spring Return (Failure Close / Failure Open) ◇ Double Acting
◇ Minimum Air Supply _____ (bar / psi)

○ Accessories for Pneumatic Actuator

◇ Limit Switch Box (Weather Proof / Explosion Proof to IP67 / Others _____)
◇ Solenoid Valve (3/2 Namur Type / 5/2 Namur Type / Others _____)
◇ Positioner (PPL / PPR / EPL / EPR / Others _____)
◇ Air Filter (AFC / BFC / Others _____)

○ Electric Actuator

◇ AC110V ◇ AC220V ◇ AC24V ◇ DC24V ◇ Others _____
◇ Extra Limit Switch Box

TECHNICAL FEATURES

P Virgin PTFE
Inert to most chemicals, lowcoeficient of friation recommended for water foodsult and corrosive chemicals.

R 15% glass filled PTFE
Withstands higher pressure than virgin PTFE. Good resistance to wear and deformation under load.

C Carbon filled PTFE
Specially for steam and thermal oil, low coefficient of friction inert to most media.

H Glass and Metal Oxide filled PTFE
Withstands higher temperature and pressure than filled PTFE. good resistance under load. not recommended for foodstuff.

K Carbon filled PEEK
Suitable for elevated temperatures. good resistance under high pressure loads, low coefficient of friction, suitable for many corrosive applications.

L Virgin PEEK
Similar to filled PEEK but higher coellicient of friction, suitable for nuclear. Tobacco FDA and clean applications.

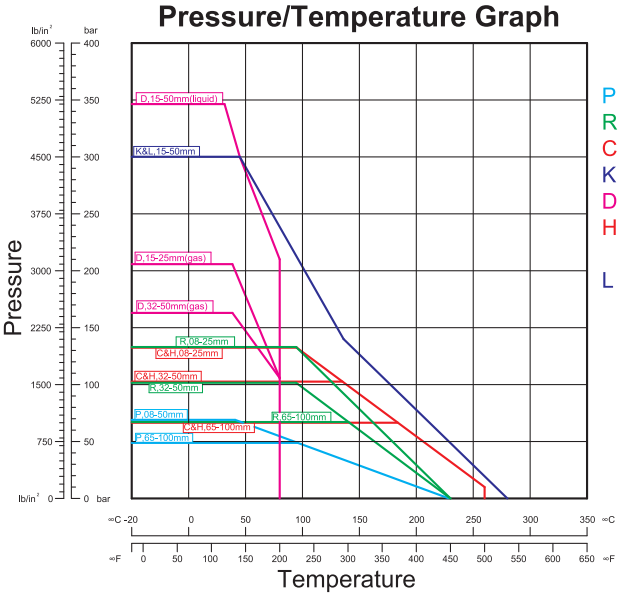
D Delrin
Suitable for high pressures dood resistance to wear and delormation under load. temprature limit 80˚C. Must not be used in presence of oxygen.

T PCTFE
Cryogenic applications such as oxygen hydrogen, nitrogen and move. suitable for temperature up to -260˚C.

SEAT METERIAL:
- soft seat pure-PTFE PTEE glass fiber reinforced
- PCTFE PEEK
- metal seat coated armour plating
- carbon seat

SEAT DESIGN:
- pressure relief
- pre loaded
- spring loaded
- fire-safe-design

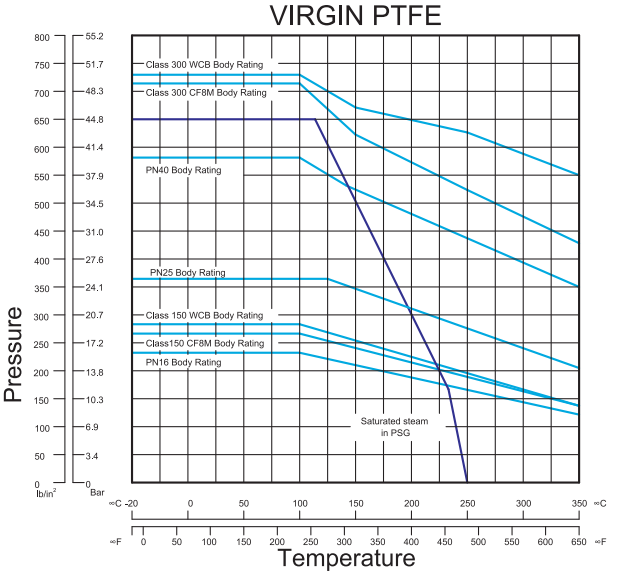
Screwed Ball Valves Pressure/Temperature Graph



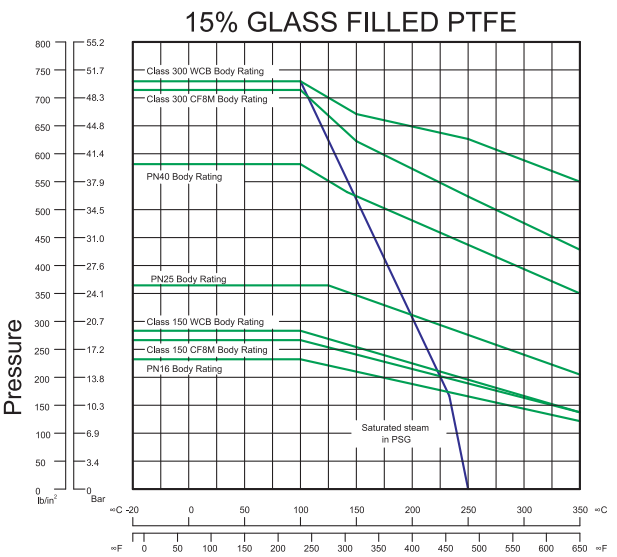
P Virgin PTFE
R 15% glass filled PTFE
C Carbon Filled PTFE.
K Carbon filled PEEK
D Delrin
H Glass and Metal Oxide filled PTFE
L Virgin PEEK

Flanged Ball Valves Pressure/Temperature Graph

VIRGIN PTFE



15% GLASS FILLED PTFE



MODENTIC.com.tw

VALVEBUS.com

Valve People

PRODUCTS RANGE :

Soft / Metal Seated Ball Vales ANSI Class 150 - 2500	1/4" - 36"
Fire Safe Ball Valves	1/2" - 32"
Fugitive Emission Ball Valves	1/2" - 12"
Super Alloy Valves	1/2" - 12"
Trunnion Mounted Ball Valves	2" - 36"
V-Flow Ball Valves	1/2" - 6"
High Purity Ball Valves	1/2" - 4"

Pressure Range : 1.DIN PN16 - PN420

2.ANSI Class 150 - 2500

Temperature Range : -196°C to 550°C (-321°F to 1022°F)

For more information on any articles in this catalogue, please contact:

MODENTIC

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http://www.modentic.com.tw

http://www.valvebus.com

CAT:GNM EJ-201605 500