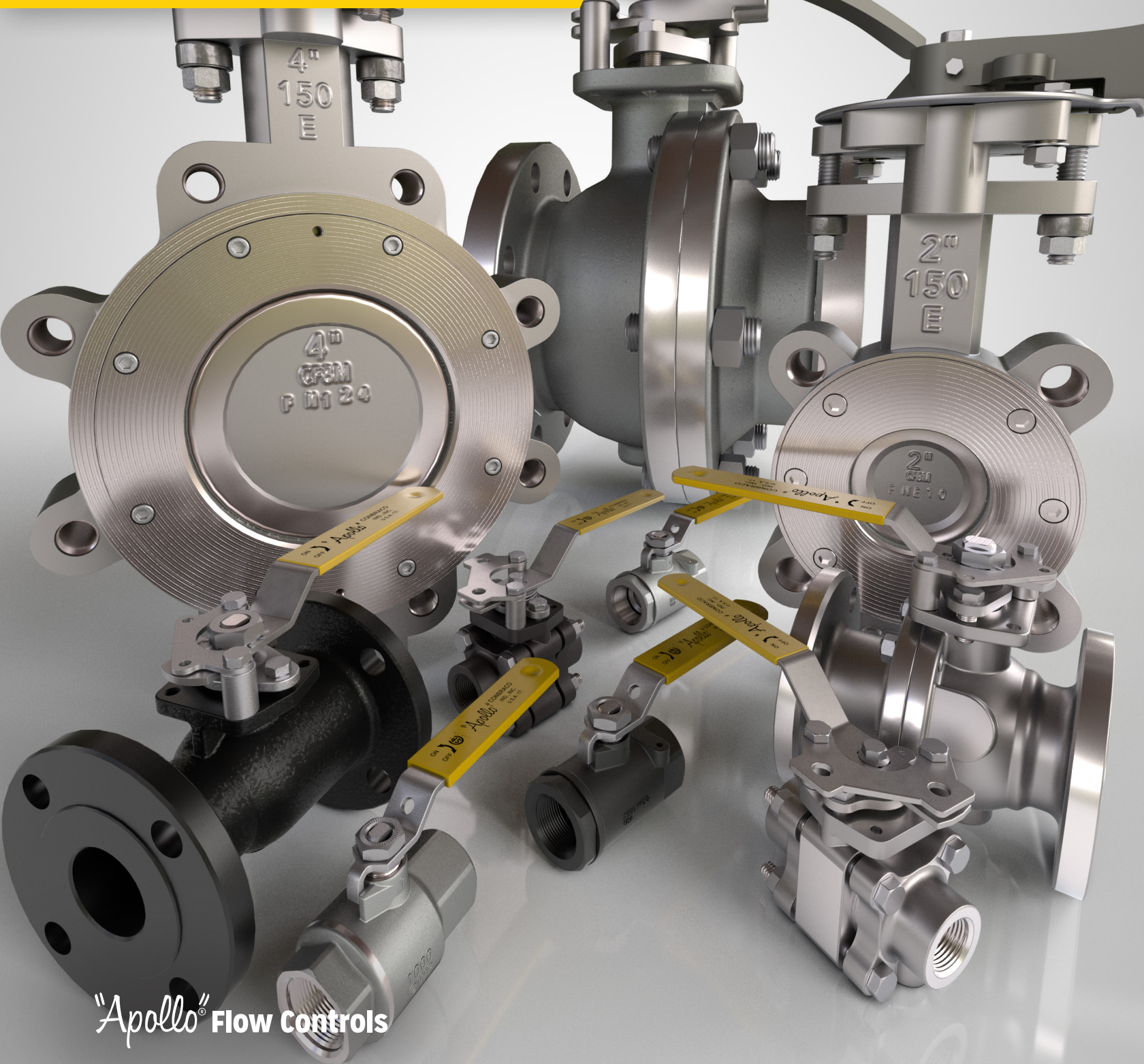


APPROVAL GUIDE

 CSA 3.16
C US

"Apollo"®

INDUSTRIAL
PRODUCTS



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CSA 3.16-15

LEVER OPERATED NON-LUBRICATED GAS SHUT-OFF VALVES

This Standard applies to manual lever operated gas shut-off valves, sizes NPS 1/4 inch to 8 inch, of metallic construction with welded, or flanged, or threaded ends other than pressure lubricated designs for use with natural gas, manufactured gas, and liquefied petroleum gases (distributed as vapour with or without the admixture of air), or mixtures thereof that are suitable for use between service temperatures of -60°C to 180°C (-76°F to 356°F) over a pressure range of 0 to 860 kPa (125 psig) and that withstand field pressure testing to a maximum permissible pressure of 1290 kPa (187 Psig).

Notes:

1. Valves covered by this Standard may be used on "digester gas" (methane produced during sewage treatment), but because of entrained contaminants their use is to be subject to agreement between the manufacturer and the purchaser.
2. Valves covered by this Standard may not be used on "sour gas" (gas with entrained hydrogen sulphide) without modification(s). Manufacturers should be consulted for their recommendation(s).

2-PIECE BALL VALVES

76, 76F, 89 Series

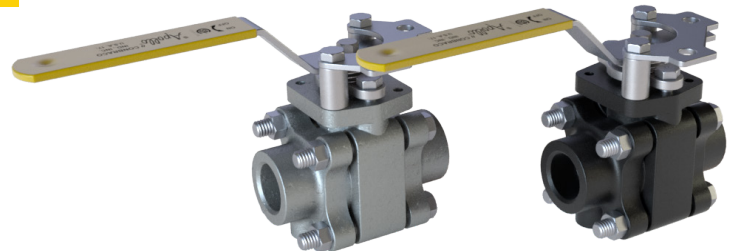
- Investment cast components
- Reinforced seats
- Blowout-proof stem design
- Adjustable packing gland
- Stainless steel lever and nut
- Fire safe to API 607 (requires -24 suffix)
- Meets NACE MR0175 (2000) & MR0103 (2012)



3-PIECE BALL VALVES

83B & 86B Series

- ASME B16.34, Class 600
- 3-piece construction w/enclosed fasteners
- Two-position locking lever handle
- Full port
- Adjustable multi-piece PTFE "V" style packing
- Swing-out center section
- Compression controlled spiral wound gaskets
- Vacuum service to 29 in of Hg
- Blowout-proof one piece bottom entry stem
- Statically grounded ball, stem & body



FLANGED VALVES

87A & 88A Series

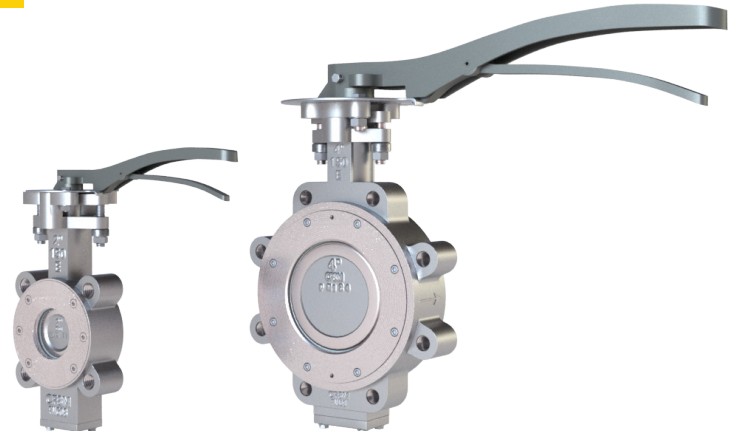
- ASME B16.34, Class 150
- Two position locking device (valves 6" full port, 8" standard port and smaller)
- Chevron style adjustable stem seals
- Slot vented ball for thermal expansion
- Anti-static grounded ball and stem
- Blowout-proof stem design
- Vacuum service to 29 inches of Hg
- NACE MR0175 (2000) compliance on all 87A/87B/88A/88B/88L valves with SS ball & stem
- NACE MR0103 (2003) compliance on all 87A/87B/88A/88B/88L valves with SS ball & stem



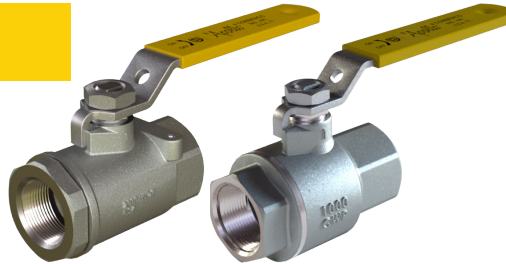
HIGH PERFORMANCE BUTTERFLY VALVES

215L/W Series

- Rocker style packing gland
- Chevron style adjustable stem seals
- Anti-extrusion ring prevents extrusion of stem seal
- Full length stem bearing
- Blowout-proof stem design
- Vacuum service to 29 inches of Hg
- Taper pins are tangential putting them in compression, rather than sheer stress
- Seat retainer ensures full pressure, bi-directional dead end service



76 & 76F SERIES



Certificate of Compliance

Certificate: 2646937 (112384_0_000)

Master Contract: 187265

Project: 70051388

Date Issued: 2016-01-11

Issued to: Apollo Valves (Conbraco Industries, Inc.)
1418 S Pearl St
Pageland, South Carolina 29728
USA
Attention: Stephen Vollentine

The products listed below are eligible to bear the CSA Mark shown



Issued by: James Sekerak
James Sekerak

PRODUCTS

CLASS - C337110 - VALVES (GAS)-Lever Operated Non-Lubricated Shutoff

For details related to rating, size, configuration, etc. reference should be made to the CSA Certification Record or the descriptive report.

For Use with Natural, Mfd., Mixed, Liquefied Petroleum or Propane Gases and LP Gas-Air Mixtures

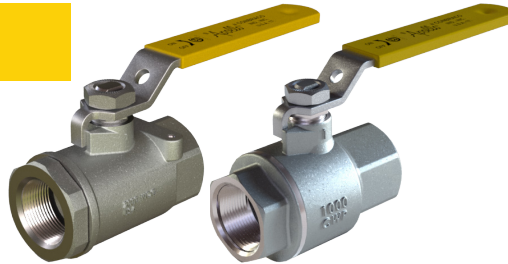
Straight Through

Model Number

76-100 Series

- 76-10101A, Rated Pressure: 125 psi, Inlet Size: 1/4"
- 76-102-01A, Rated Pressure: 125 psi, Inlet Size: 3/8"
- 76-103-01A, Rated Pressure: 125 psi, Inlet Size: 1/2"
- 76-104-01A, Rated Pressure: 125 psi, Inlet Size: 3/4"
- 76-105-01A, Rated Pressure: 125 psi, Inlet Size: 1"
- 76-106-01, Rated Pressure: 125 psi, Inlet Size: 1-1/4"
- 76-107-01, Rated Pressure: 125 psi, Inlet Size: 1-1/2"
- 76-108-01, Rated Pressure: 125 psi, Inlet Size: 2"
- 76-109-01, Rated Pressure: 125 psi, Inlet Size: 2-1/2"
- 76-100-01, Rated Pressure: 125 psi, Inlet Size: 3"

76 & 76F SERIES



Certificate: 2646937
Project: 70051388

Master Contract: 187265
Date Issued: 2016-01-11

76F-100 Series

- 76F-101-(01,27), Rated Pressure: 125 psi, Inlet Size: 1/4"
- 76F-102-(01,27), Rated Pressure: 125 psi, Inlet Size: 3/8"
- 76F-103-(01,27)A, Rated Pressure: 125 psi, Inlet Size: 1/2"
- 76F-104-(01,27)A, Rated Pressure: 125 psi, Inlet Size: 3/4"
- 76F-105-(01,27)A, Rated Pressure: 125 psi, Inlet Size: 1"
- 76F-106-(01,27)A, Rated Pressure: 125 psi, Inlet Size: 1-1/4"
- 76F-107-(01,27)A, Rated Pressure: 125 psi, Inlet Size: 1-1/2"
- 76F-108-(01,27)A, Rated Pressure: 125 psi, Inlet Size: 2"
- 76F-100-(01,27)A, Rated Pressure: 125 psi, Inlet Size: 3"

APPLICABLE REQUIREMENTS

CSA/CAN 3.16-M88 (R-2014) – Lever Operated Non-Lubricated Gas Shut-Off Valves

89 SERIES



Certificate of Compliance

Certificate: 2652246 (112384_0_000)

Master Contract: 187265

Project: 70051389

Date Issued: 2016-01-11

Issued to: Apollo Valves (Conbraco Industries, Inc.)
1418 S Pearl St
Pageland, South Carolina 29728
USA
Attention: Stephen Vollentine

The products listed below are eligible to bear the CSA Mark shown



Issued by: James Sekerak
James Sekerak

PRODUCTS

CLASS - C337110 - VALVES (GAS)-Lever Operated Non-Lubricated Shutoff

For details related to rating, size, configuration, etc. reference should be made to the CSA Certification Record or the descriptive report.

For Use with Natural and Propane Gas

For Use with Natural, Mfd., Mixed, Liquefied Petroleum or Propane Gases and LP Gas-Air Mixtures

Straight Through

Model Number

- 89-101-01A, Rated Pressure: 125 psi, Inlet Size: ¼"
- 89-102-01A, Rated Pressure: 125 psi, Inlet Size: 3/8"
- 89-103-01A, Rated Pressure: 125 psi, Inlet Size: ½"
- 89-104-01A, Rated Pressure: 125 psi, Inlet Size: ¾"
- 89-105-01A, Rated Pressure: 125 psi, Inlet Size: 1"
- 89-106-01, Rated Pressure: 125 psi, Inlet Size: 1-1/4"
- 89-107-01, Rated Pressure: 125 psi, Inlet Size: 1-1/2"
- 89-108-01, Rated Pressure: 125 psi, Inlet Size: 2"
- 89-109-01, Rated Pressure: 125 psi, Inlet Size: 2-1/2"
- 89-100-01, Rated Pressure: 125 psi, Inlet Size: 3"

489 SERIES



Certificate: 2652246
Project: 70051389

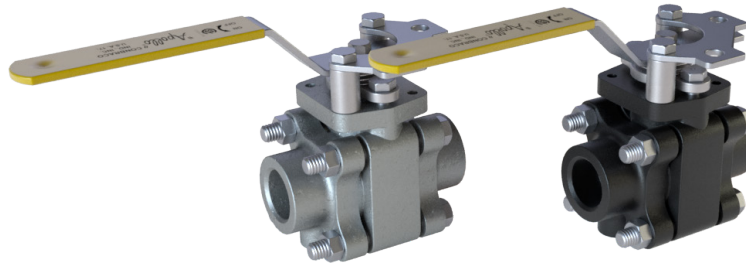
Master Contract: 187265
Date Issued: 2016-01-11

- 489-101-01A, Rated Pressure: 125 psi, Inlet Size: ¼"
- 489-102-01A, Rated Pressure: 125 psi, Inlet Size: 3/8"
- 489-103-01A, Rated Pressure: 125 psi, Inlet Size: ½"
- 489-104-01A, Rated Pressure: 125 psi, Inlet Size: ¾"
- 489-105-01A, Rated Pressure: 125 psi, Inlet Size: 1"
- 489-106-01, Rated Pressure: 125 psi, Inlet Size: 1-1/4"
- 489-107-01, Rated Pressure: 125 psi, Inlet Size: 1-1/2"
- 489-108-01, Rated Pressure: 125 psi, Inlet Size: 2"
- 489-109-01, Rated Pressure: 125 psi, Inlet Size: 2-1/2"
- 489-100-01, Rated Pressure: 125 psi, Inlet Size: 3"

APPLICABLE REQUIREMENTS

CSA/CAN3.16-M88 (R-2014) – Lever Operated Non-Lubricated Gas Shut-Off Valves

83B & 86B SERIES



Certificate of Compliance

Certificate: 70034925 (112384) **Master Contract:** 187265
Project: 70075463 **Date Issued:** 2016-06-17
Issued to: Apollo Valves (Conbraco Industries, Inc.)
 1418 S Pearl St
 Pageland, South Carolina 29728
 USA
 Attention: Stephen Vollentine

The products listed below are eligible to bear the CSA Mark shown



Issued by: Vajira Sarathchandra
 Vajira Sarathchandra

PRODUCTS

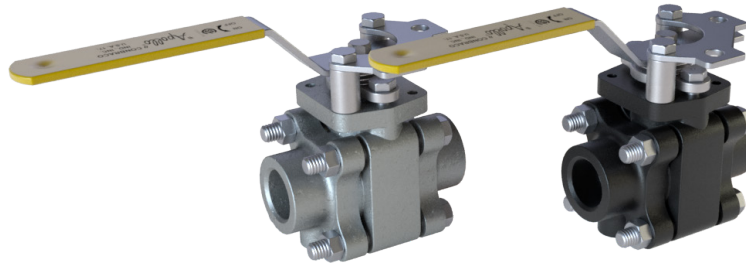
CLASS - C337110 - VALVES (GAS)-Lever Operated Non-Lubricated Shutoff

For details related to rating, size, configuration, etc. reference should be made to the CSA Certification Record or the descriptive report.

Description: 3-Piece Full Port Ball Valve
 Trade Name: Apollo
 Rated Pressure: 125 psi

Model Numbers	Connection	Sizes
83B-(141 to 148)	NPT Female	1/4", 3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
83B-(241 to 248)	Socket-Weld	1/4", 3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
83B-(343 to 348)	Butt-Weld, Schedule 5	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
83B-(443 to 448)	Butt-Weld, Schedule 10	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
83B-(543 to 548)	Butt-Weld, Schedule 40	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
83B-(643 to 648)	Butt-Weld, Schedule 80	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
86B-(101 to 108)	NPT Female	1/4", 3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
86B-(201 to 208)	Socket-Weld	1/4", 3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
86B-(303 to 308)	Butt-Weld, Schedule 5	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
86B-(403 to 408)	Butt-Weld, Schedule 10	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
86B-(503 to 508)	Butt-Weld, Schedule 40	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
86B-(603 to 608)	Butt-Weld, Schedule 80	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"

83B & 86B SERIES



Certificate: 70034925
Project: 70034925

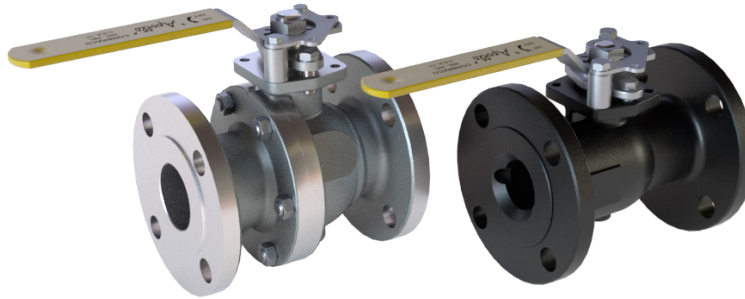
Master Contract: 187265
Date Issued: 2015-10-22

Model Numbers	Connection	Sizes
83L-(141 to 148)	NPT Female	1/4", 3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
83L-(241 to 248)	Socket-Weld	1/4", 3/8", 1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
83L-(343 to 348)	Butt-Weld, Schedule 5	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
83L-(443 to 448)	Butt-Weld, Schedule 10	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
83L-(543 to 548)	Butt-Weld, Schedule 40	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"
83L-(643 to 648)	Butt-Weld, Schedule 80	1/2", 3/4", 1", 1-1/4", 1-1/2", 2"

APPLICABLE REQUIREMENTS

CGA 3.16-2015 - Lever Operated Non-Lubricated Gas Shut-Off Valves

87A & 88A SERIES



Certificate of Compliance

Certificate: 1160163 Master Contract: 187265 (112384_0_000)
Project: 70121023 Date Issued: 2017-03-03
Issued to: Apollo Valves (Conbraco Industries, Inc.)
1418 S Pearl St
Pageland, South Carolina 29728
USA
Attention: John F. Hidgon, PE

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



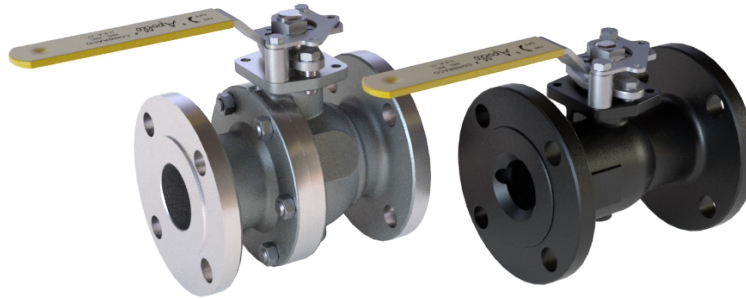
Issued by: Vajira Sarathchandra
Vajira Sarathchandra

PRODUCTS

Class 3371-(09, 89) VALVES (GAS) Large Metallic for Distribution 2 1/2 to 12, 125 psi)

Table with 3 columns: Model Number, Rated Pressure, Size. Lists various Apollo valve models (87A-109 to 88L-90E) and their specifications.

87A & 88A SERIES



Certificate: 1160163
Project: 70121023

Master Contract: 187265
Date Issued: 2017-03-03

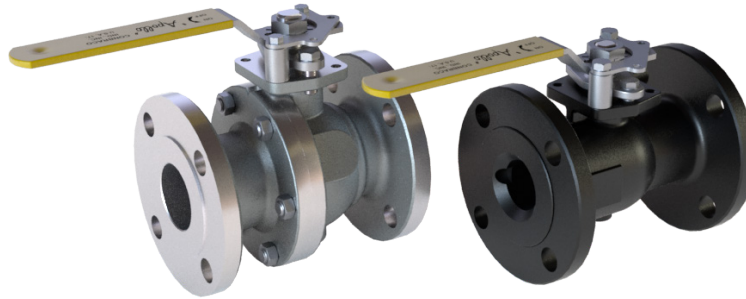
Class 3371-10 VALVES (GAS) Lever Operated Non-Lubricated Shutoff

<u>Model Number</u>	<u>Rated Pressure</u>	<u>Size</u>
87A-203, 87A-903, 88A-203, 88A-903, 88L-203, 88L-903	125	½
87A-204, 87A-904, 878A-204, 88A-904, 88L-204, 88L-904	125	¾
87A-205, 87A-905, 88A-205, 88A-905, 88L-205, 88L-905	125	1
87A-107, 87A-207, 87A-707, 87A-907, 88A-107, 88A-207, 88A-707, 88A-907 88L-107, 88L-207, 88L-707, 88L-907	125	1½
87A-108, 87A-208, 87A-708, 87A-908, 88A-108, 88A-208, 88A-708, 88A-908 88L-108, 88L-208, 88L-708, 88L-908	125	2
87A-109, 87A-209, 87A-709, 87A-909, 88A-109, 88A-209, 88A-709, 88A-909 88L-109, 88L-209, 88L-709, 88L-909	125	2½
87A-100, 87A-200, 87A-700, 87A-900, 88A-100, 88A-200, 88A-700, 88A-900, 88L-100, 88L-200, 88L-700, 88L-900	125	3
87A-10A, 87A-20A, 87A-70A, 87A-90A, 88A-10A, 88A-20A, 88A-70A, 88A-90A 88L-10A, 88L-20A, 88L-70A, 88L-90A	125	4
87A-10C, 87A-20C, 87A-70C, 87A-90C, 88A-10C, 88A-20C, 88A-70C, 88A-90C, 88L-10C, 88L-20C, 88L-70C, 88L-90C	125	6
87A-10E, 87A-70E, 88A-10E, 88A-70E, 88L-10E, 88L-70E	125	8

Class 3371- (14, 94) VALVES (GAS), Manually Operated Metallic for Use in Piping

<u>Model Number</u>	<u>Rated Pressure</u>	<u>Size</u>
87A-203, 87A-903	125	½
87A-204, 87A-904	125	¾
87A-205, 87A-905, 88A-205, 88A-905, 88L-205, 88L-905	125	1
87A-107, 87A-207, 87A-707, 87A-907, 88A-107, 88A-207, 88A-707, 88A-907 88A-107, 88A-207, 88A-707, 88A-907	125	1½
87A-108, 87A-208, 87A-708, 87A-908, 88A-108, 88A-208, 88A-708, 88A-908 88L-108, 88L-208, 88L-708, 88L-908	125	2

87A & 88A SERIES



Certificate: 1160163
Project: 70121023

Master Contract: 187265
Date Issued: 2017-03-03

Class 3371-(17, 97) VALVES (GAS) For Anhydrous Ammonia and LP GAS (Other than Safety Relief)

<u>Model Number</u>	<u>Size</u>
87A-203, 87A-903	½
87A-204, 87A-904	¾
87A-205, 87A-905, 88A-205, 88A-905, 88A-205, 88A-905	1
87A-107, 87A-207, 87A-707, 87A-907, 88A-107, 88A-207, 88A-707, 88A-907, 88A-107, 88A-207, 88A-707, 88A-907	1½
87A-108, 87A-208, 87A-708, 87A-908, 88A-108, 88A-208, 88A-708, 88A-908, 88A-108, 88A-208, 88A-708, 88A-908	2
87A-109, 87A-209, 87A-709, 87A-909, 88A-109, 88A-209, 88A-709, 88A-909, 88A-109, 88A-209, 88A-709, 88A-909	2½
87A-100, 87A-200, 87A-700, 87A-900, 88A-100, 88A-200, 88A-700, 88A-900, 88L-100, 88L-200, 88L-700, 88L-900	3
87A-10A, 87A-20A, 87A-70A, 87A-90A, 88A-10A, 88A-20A, 88A-70A, 88A-90A, 88L-10A, 88L-20A, 88L-70A, 88L-90A	4
87A-10C, 87A-20C, 87A-70C, 87A-90C, 88A-10C, 88A-20C, 88A-70C, 88A-90C, 88L-10C, 88L-20C, 88L-70C, 88L-90C	6
87A-10E, 87A-70E, 88A-10E, 88A-70E, 88L-10E, 88L-70E	8

APPLICABLE REQUIREMENTS

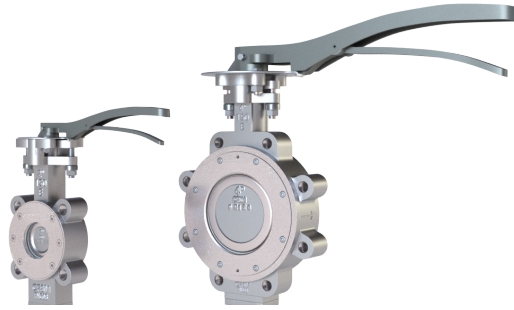
ASME B16.33-2012 for Manually Operated Metallic Gas Valves for Use in Gas Piping Systems up to 125 psig (Sizes ½ through 2)

ASME B16.38-2012 for Large Metallic Valves for Gas Distribution (Manually Operated, NPS 2½ to 12, 125psig Maximum)

ANSI/UL125 (Ninth Edition) for Flow Control Valves for Anhydrous Ammonia and LP-Gas

CAN/CGA – 3.16-M88 (R2009) Lever Operated Non-Lubricated Gas Shut-Off Valves

215L/W SERIES



Letter of Attestation

Document: 70130344	Master Contract: 159958
Project: 70130344	Date Issued: April 11, 2017
Issued to: Apollo Valves Conbraco Industries, Inc. 701 Matthews-Mint Hill Rd. Matthews, North Carolina, 28106 U.S.A	

CSA Group, Certification and Testing hereby confirms that it has completed an evaluation of:

*APOLLO HIGH PERFORMANCE BUTTERFLY VALVES
Manually Operated, Non-Lubricated, Rated for 125 PSIG, Gas Applications*

<u>Model Number</u>	<u>Rated Pressure (PSIG)</u>	<u>Diameter (inches)</u>
215 Series TFM1700 Sear & Fire Safe Seat	125	2, 2½, 3, 4, 5, 6, 8

CSA Group, Certification and Testing hereby attests that the products identified above and described in test report 70130344 dated April 11, 2017 complies with the following standards/tests, to the extent applicable:

CSA 3.16-2015 – Lever Operated Non-Lubricated Gas Shut-Off Valves
ASME B16.33-R2012 – Manually Operated Metallic Gas Valves for Use in Piping Systems upto 175 PSI*
ASME B16.38-R2012 – Large Metallic Valves for Gas Distribution, 125 PSIG*
***Note:** Observed 'Flow Capacity' was under minimum requirements*

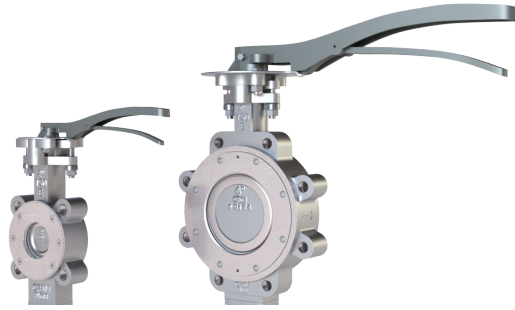
Issued by: Vajira Sarathchandra
Vajira Sarathchandra
Certifier - CSA

**THIS LETTER OF ATTESTATION DOES NOT AUTHORIZE THE USE OF THE CSA MARK ON THE SUBJECT PRODUCTS.
QUOTATIONS FROM THE TEST REPORT OR THE USE OF THE NAME OF THE CANADIAN STANDARDS ASSOCIATION AND CSA GROUP OR ITS REGISTERED TRADEMARK, IN ANY WAY, IS NOT PERMITTED WITHOUT PRIOR WRITTEN CONSENT OF THE CANADIAN STANDARDS ASSOCIATION OPERATING AS CSA GROUP, CERTIFICATION AND TESTING DIVISION**

This report shall not be reproduced, except in full, without the approval of CSA Group.

178 Rexdale Boulevard, Toronto, ON, Canada M9W 1R3
Telephone: 416.747.4000 1.800.463.6727 Fax: 416.747.4149 www.csagroup.org

215L/W SERIES



Certificate of Compliance

Certificate: 70108631 Master Contract: 159958
 Project: 70108631 Date Issued: 2017-03-30
 Issued to: Apollo Valves Conbraco Industries, Inc.
 701 Matthews-Mint Hill Rd
 Matthews, North Carolina 28106
 USA
 Attention: John Higdon

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US or with adjacent indicator 'US' for US only or without either indicator for Canada only.



Issued by: Vajira Sarathchandra
Vajira Sarathchandra

PRODUCTS

CLASS - C337110 - VALVES (GAS)-Lever Operated Non-Lubricated Shutoff
 CLASS - C337190 - VALVES (GAS)-Lever Operated Non-Lubricated-Shutoff-Certified to U.S. Standards

Manually Operated High Performance Butterfly Valves (HPBV) – 215L/215W Series 8” Diameter

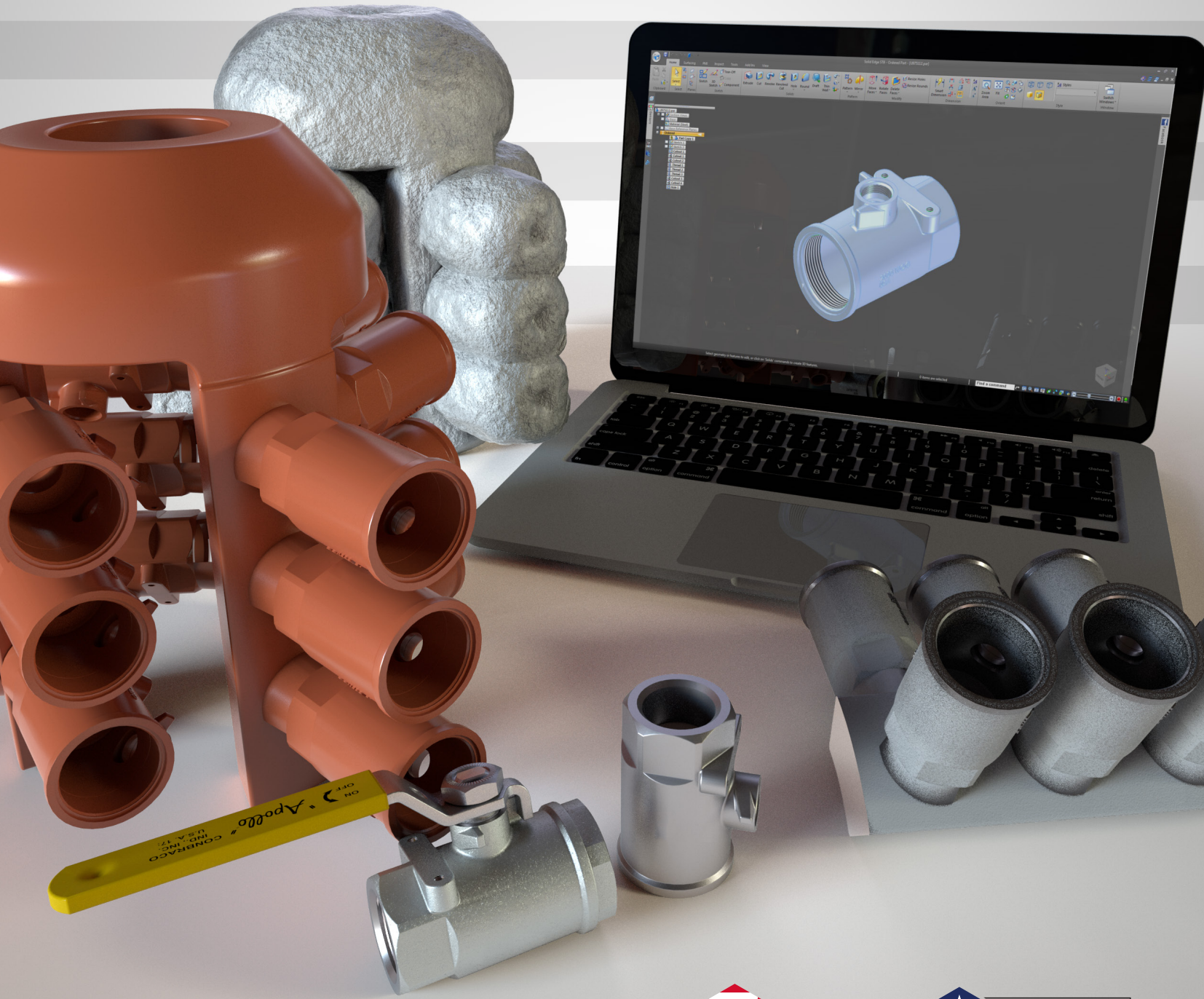
Maximum Operating Pressure: 125 PSI
 Temperature Range: -30°C to 65°C (-22°F to 149°F)

APPLICABLE REQUIREMENTS

CSA-3.16 (R2015)	Lever Operated Non-Lubricated Gas Shut-Off Valves
ANSI/ASME B16.38 (R2012)	Large Metallic Valves For Gas Distribution (Manually Operated, NPS 2-1/2 to NPS 12, 125 psig Maximum)

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& TESTED

...IN THE USA



Customer Service
Canada: 1-800-443-1603
US: 704-841-6000

Regional Management List
now available online at:
<http://conbra.co/rmlist>

Check our website for the most
up-to-date information on all our products.

