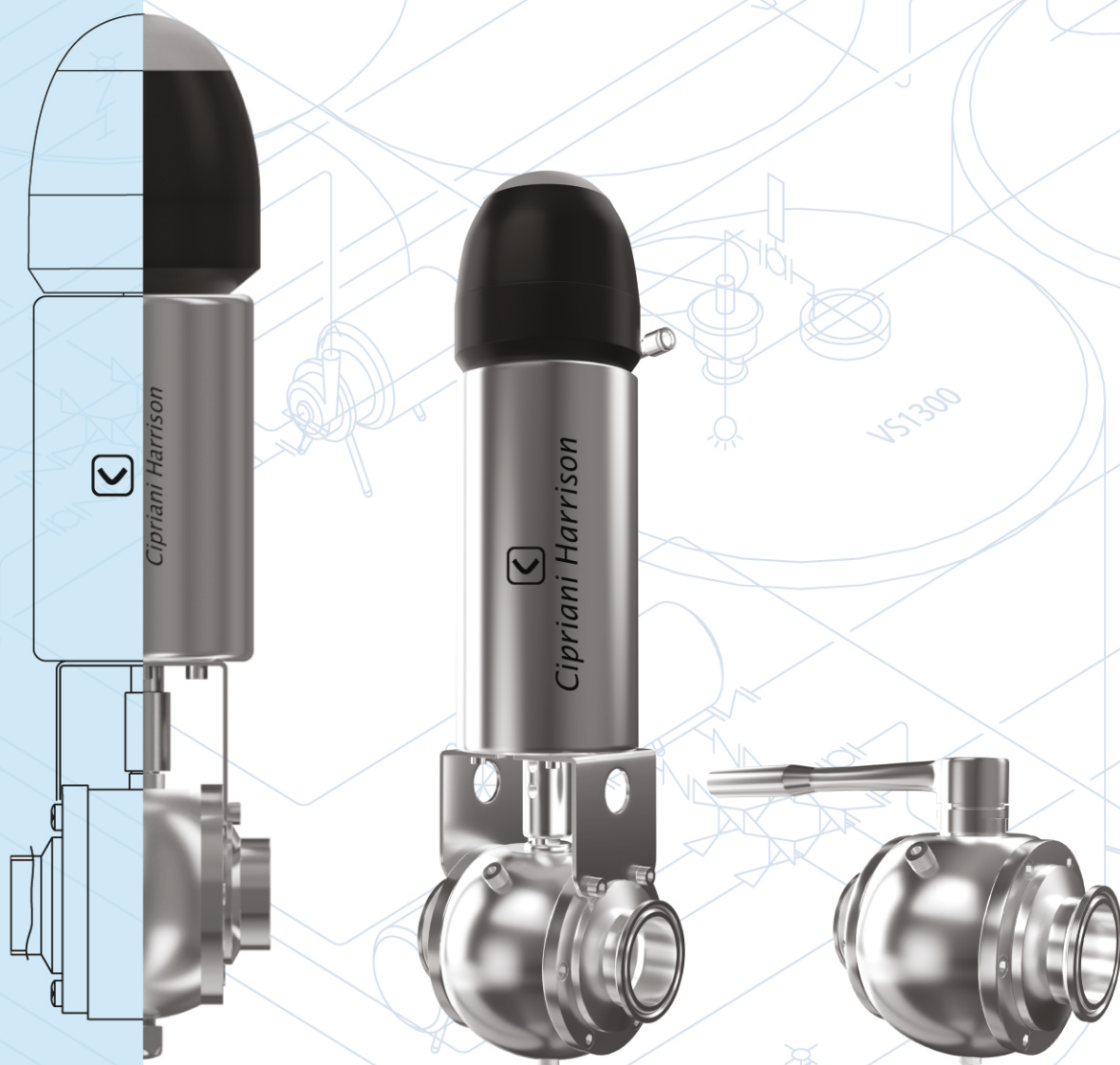




Cipriani Harrison Valves
Hygienic Stainless Steel Valves

Ball Valve

An Array Of Hygienic Stainless Steel
Valves & Flow Components.



BALL VALVE

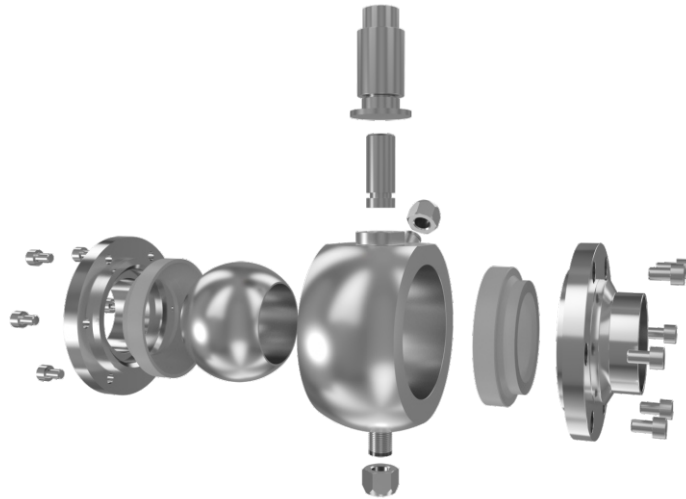
Sanitary Ball valve is used process piping system for either isolation or diversion of the fluid, manually or automatically operated. A ball valve is constructed with a full bore or full port design with zero flow restriction making it an viscous or particulate liquid.

Cipriani Harrison Ball valves are available with different version to suite its respective application. The full bore design compliments effective cleaning and can also make it suitable to be used for product recovery system handling wide range of product viscosity.



DESIGN

Cipriani Harrison Ball valve is made up of forged precision machined ball with a full port, assembled inside a valve body with two flanges.



52 SERIES BALL VALVE

Cipriani Harrison 52-Series Ball valve is made from forged raw material. This ball valve has a three piece construction consisting of a body and the two flanges. The ball is precisely located inside the body, which can be either cavity filled or give with purge ports.



53 SERIES BALL VALVE

Cipriani Harrison 53-Series Ball valve are made from high quality forged raw material. The 53-Series is compact well engineered design consisting of two piece construction i.e. two flanges and the ball is precisely located between the two flanges. This design gives advantages of both the world i.e. it is compact and a hygienic design for sanitary process industry.



54 SERIES BALL VALVE

Cipriani Harrison 54-Series Ball valve are made from high quality forged raw material. The 54-Series is Cipriani Harrison 540Series ball valves are used where design and economics are to be balanced. This valve is manufactured from high quality Stainless Steel bar or forging, and has a unique feature of quick cleaning during the cleaning cycle. The 54-Series Ball Valve is offered in various configurations like 2-Way, 3-Way T-Port, 3-Way-L-Port and many more. This valve is also available with a jacket, which ensures that the product flowing through it remains either cooled or heated.



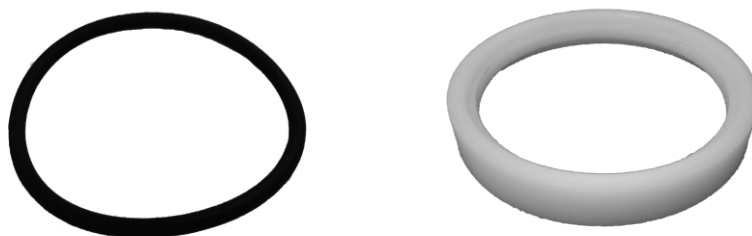
55 SERIES BALL VALVE

Cipriani Harrison 55-Series ball valve is a hygienic sanitary ball valve design for its function and manufactured with precision keeping it an more economically viable version. The 55-Series Ball Valve are made from high Quality stainless steel. This valve body and The flanges are manufactured through a lost Wax casting manufacturing method and the ball is manufactured from high grade stainless steel. The valve can be available in different standards, End connection & actuation mode i.e. either manual Or pneumatically actuated.



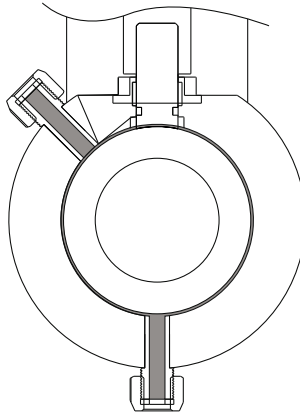
SEAL

Cipriani Harrison's Ball Valve are available with comprehensive range of seal option, to fit in the required environment. Different options of seals are available to suite different thermal environment and chemical resistance, intern increasing the seal life. Cipriani Harrison has a special designed PTFE seal, to suite more aggressive media.



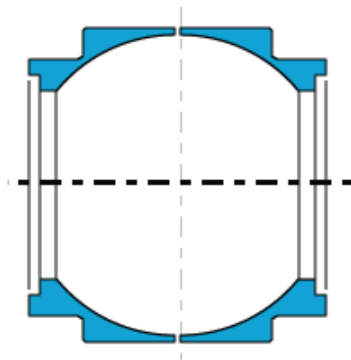
PURGE PORT

Cipriani Harrison Ball valves are available with purge port for cleaning the cavity formed between the ball and the body in the ball Valve. During the cleaning cycle the cleaning fluid is passed through the purge port which would clean the cavity.



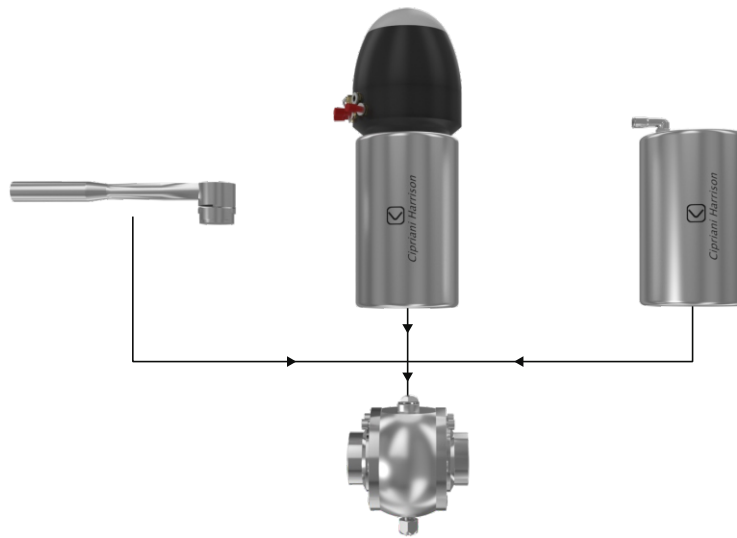
CAVITY FILLER

If the user does not intend to have the separate cleaning of cavity with the Purge ports, in such cases the cavity can be partially or fully filled with a cavity filler. This cavity filler is manufactured out of food grade PTFE which ensures no residual products get trapped inside the ball valve.



ACTUATION & OPERATION

Cipriani Harrison Ball Valve are Available with different manual handle & pneumatic actuators. Suitable handle can be selected based on the end application, for either just opening and closing the valve or can be equipped with multi position handles. Different type of Pneumatic actuators are available for different media and pressure.



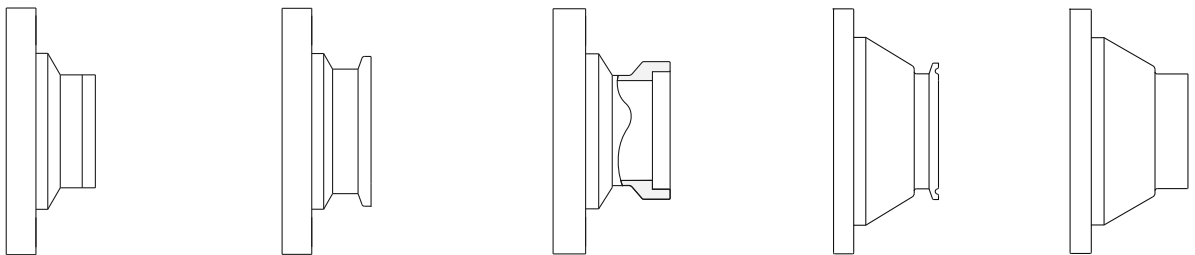
SIZE

Cipriani Harrison manufactures Butterfly Valve to meet a wide size spectrum. For smaller needs the size ranges from fractional size of ½" to larger size up to 4". All options available for all sizes.



END CONNECTION & STANDARDS

Cipriani Harrison Ball valves are available with a wide array of end connection like Weld End, Sanitary Clamp End, Union or Threaded End, I-Line or Flanged end connection. The valves are available in different international standards like ISO, DIN, RJT, IDF, etc to meet different regional needs.



FEEDBACK OPTION

Cipriani Harrison Ball Valves are available with different feedback options. From a simple open & close sensor feedback or 24V DC Direct I/O to more sophisticated AS-i protocol.



Application

Sanitary ball valves are used in stainless steel piping systems for isolation, either manually or automatically operated. The full port design with zero flow restriction makes it an optimum choice for viscous or particulate liquids.

Working Principle

A precision ball with a full port is positioned inside the valve body between two flanges and two PTFE valve seats. The 90° rotation of the valve stem, through the handle or a pneumatic actuator, is transferred to the ball thereby opening or closing the valve.

Standard Design

The valve consists of a valve body, two flanges, PTFE valve seats, EPDM O'Rings, ball, stem and a handle or actuator. All Seats and Seals are made from FDA approved materials. The valve body, flanges and ball are made of forged 316L and 304L stainless steel which ensures non porous, smooth and dimensionally stable construction.

The valve is designed to maintain a full flow rate, with a minimum pressure drop and it is fully drainable. A Bottom entry, precision machined stem with a live loaded PTFE thrust washer ensures a smooth rotation at various temperatures and pressure conditions. Purge ports are provided on the valve body for SIP / CIP applications.

Available Sizes

1", 1½", 2", 2½", 3", 4"

DN25, DN40, DN50, DN65, DN80, DN100

Options

Automatic operation by vertical/horizontal pneumatic actuator.

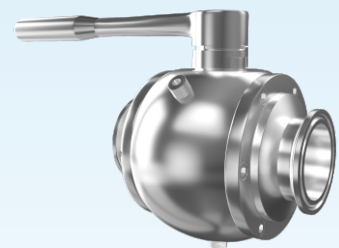
Electrical control unit with micro switches or proximity switches and solenoid valve for remote operation.

End connections: Sanitary Clamp, Butt-Weld, I-Line or others on request.

Material: AISI 316L or AISI 304L

Handle Options: 90° Open/Close
Universal (360°) Snapping

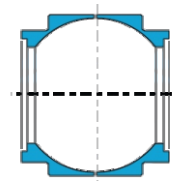
*3A Approved.



Technical Specification :
Material :

Product wetted steel parts.....AISI 316L/AISI 304L

Other steel parts.....AISI 304



Cavity fillers on request

FDA Seals :

Valve Seat.....TFM PTFE

O'ring.....EPDM

Cavity filler (optional).....PTFE / TFM PTFE available upon request

*Other Material available upon request

Vacuum Data :
Nominal Pressure :

Maximum product pressure..... 200 PSI maximum (14 Bars)

Test pressure 235 PSI (16 Bars)

(Leakage test according to BS EN 12266-1)

Supply Pressure for

Air Actuator (Min. - Max. Range)..... 70-115 PSI (Dry & Filtered Compressed Air)

Temperature Range :..... -60° Degrees Fahrenheit to +300° Degrees Fahrenheit

*Other seal material available for higher temperatures

Surface Finish :

Surface in contact with product.....Ra <= 25 µ in (Grit 220g)

Optional.....Ra <= 15 µ in (Grit 320g)

*Electropolishing available upon request.

ConnectionsSanitary Clamp (ISO 2852 / BS 4825-3 / DIN 32676)

Optional

Butt Weld (ISO 2037 / BS 4825-01 / DIN 11850)

I-Line, Threaded Union End

Other connections on request

Purge Port Connections..... 1/4" Male BSP

*Please see page 14 for purge port adapters

Std. Ball Valve

Torque values

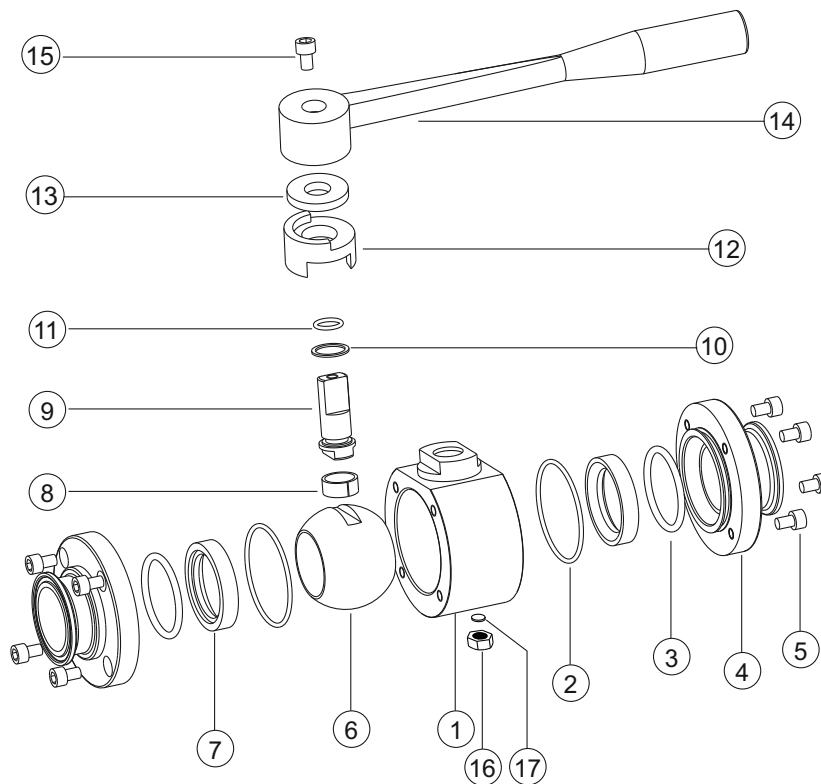
(for rotating the valve stem)

Ball Valve with cavity fillers

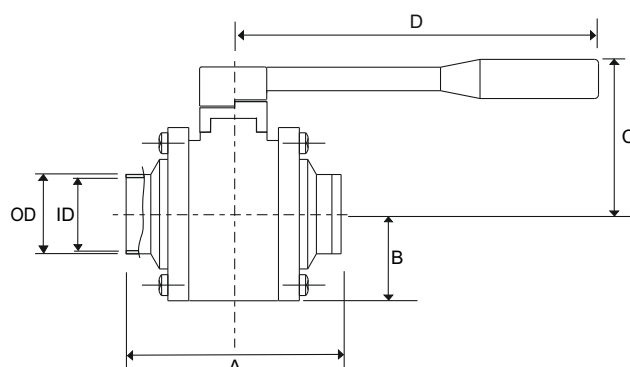
Torque values

(for rotating the valve stem)

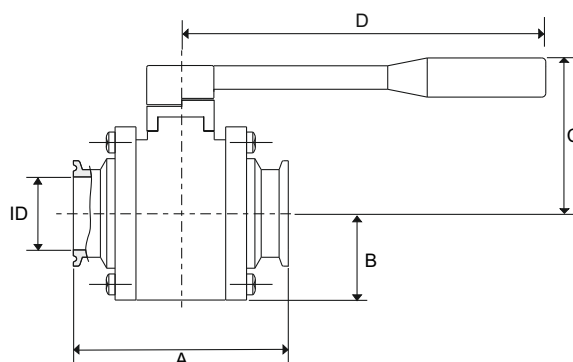
Size	lbf.ft	Nm	Size	lbf.ft	Nm	Cv GPM	Kv m³/hr
1"	6	8	1"			66	56.4
1.5"	15	20	1.5"			192	164
2"	20	27	2"			434	370
2.5"	28	38	2.5"			723	618
3"	38	52	3"			1124	960
4"	54	84	4"			2100	1795



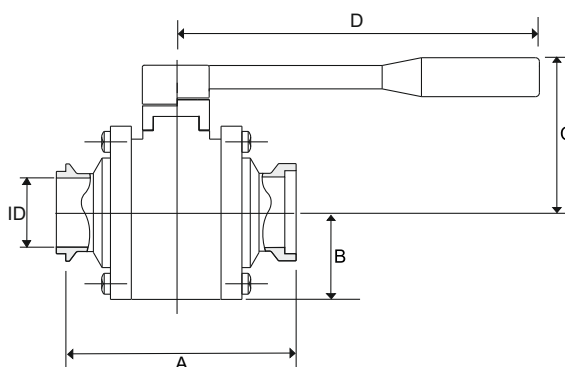
NO.	PART NO.	DESCRIPTION	MATERIAL
1	5201	BODY	AISI 316L / AISI 304L
2	5202	O'RING	EPDM
3	5203	O'RING	EPDM
4	5204	FLANGE	AISI 316L / AISI 304L
5	5205	CAP SCREW	AISI 304
6	5206	BALL	AISI 316L / AISI 304L
7	5207	SEAT	TFM PTFE
8	5208	BUSHING	PTFE
9	5209	STEM	AISI 316L / AISI 304L
10	5210	THRUST RING	PTFE
11	5211	O'RING	EPDM
12	5212	INDEX BASE	AISI 304
13	5213	THRUST WASHER	PTFE
14	5214	HANDLE	AISI 304
15	5215	CAP SCREW	AISI 304
16	5216	DRAIN CAP	AISI 316L / AISI 304L
17	5217	WASHER	PTFE

Dimensions :
Dimension ISO (mm)

Butt Weld

Dimensions	1"	1 ½"	2"	2 ½"	3"	4"
A	94	107	117	136	158	170
B	34	41	50	60	66	87
C	72	82	89	98	107	127
D	184	184	184	184	254	304
OD	25.4	38.1	50.8	63.5	76.2	101.6
ID	22.2	34.9	47.6	60.3	72.6	97.6

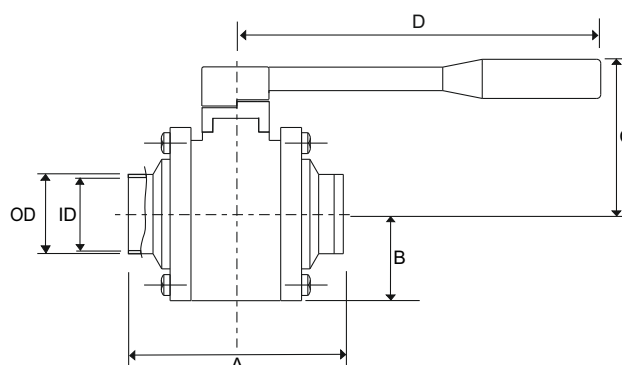

Sanitary Clamp

Dimensions	1"	1 ½"	2"	2 ½"	3"	4"
A	94	107	117	136	158	170
B	34	41	50	60	66	87
C	72	82	89	98	107	127
D	184	184	184	184	254	304
ID	22.2	34.9	47.6	60.3	72.6	97.4

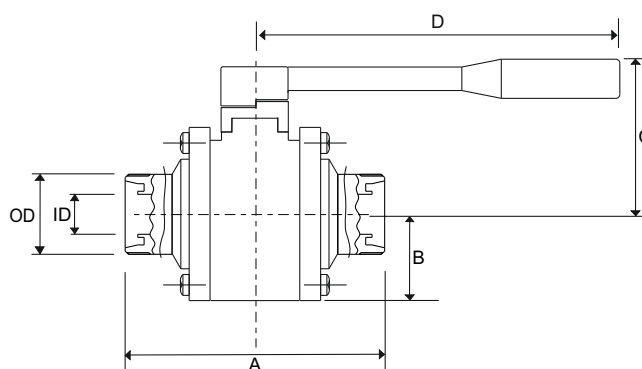
Dimension ISO (mm)

I-Line

Dimensions	1"	1 ½"	2"	2 ½"	3"	4"
A	102	110	140	142	170	202
B	34	41	50	60	66	87
C	72	82	89	98	107	127
D	184	184	184	184	254	304
ID	22.2	34.9	47.6	60.3	72.6	97.6

* Consult the factory for I-line Male x Male
or I-line Female x Female "A" Dimensions.

Dimensions DIN (mm)

Butt Weld

Dimensions	DN 25	DN 40	DN 50	DN 65	DN 80	DN 100
A	98	117	123	149	176	180
B	35	45	52	65	74	89
C	74	84	91	104	114	129
D	184	184	184	184	254	254
OD	29	41	53	70	85	104
ID	26	38	50	66	81	100


Male x Male

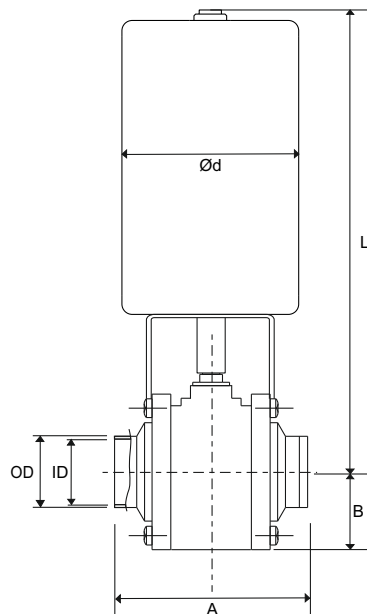
Dimensions	DN 25	DN 40	DN 50	DN 65	DN 80	DN 100
A	104	123	129	155	182	186
B	35	45	52	65	74	89
C	74	84	91	104	114	129
D	184	184	184	184	254	254
OD	52 x 1/6 Thd	65 x 1/6 Thd	78 x 1/6 Thd	95 x 1/6 Thd	110 x 1/6 Thd	130 x 1/6 Thd
ID	26	38	50	66	81	100

Vertical Actuator Specifications

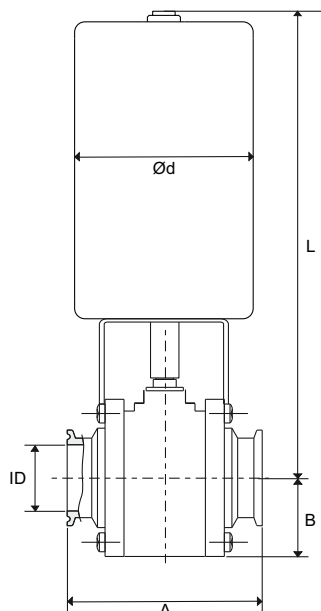
Pressure	:	Upto 120 PSI (8 bar)
Temperature	:	-4° F to 176° Fahrenheit (-20° to 80° C)
Media	:	Filtered dry air, preferably lubricated
Construction	:	Suitable for indoor or outdoor installation
Material	:	AISI 304 Stainless steel
Finish	:	Polished
Rotation (Standard)	:	Air to open, spring to close and air to open, Air to closes
Movement (Std.)	:	90
Lubrication	:	Factory lubricated for the normal life of Actuators
Life	:	100,000 operations minimum

Actuator Torque - AT 90 PSI

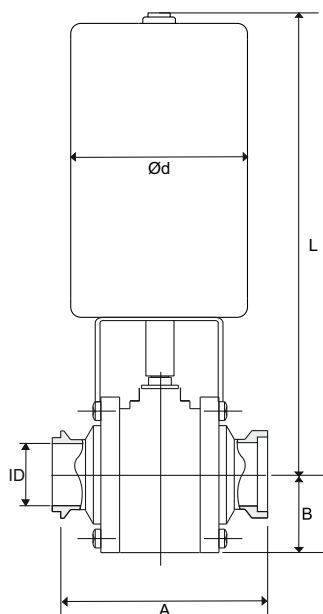
MODEL			8C435	8C440	8C450
AIR TO AIR TORQUE (lbf.ft)			4.93	5.76	14.39
AIR TO SPRING TORQUE (lbf.ft)	SPRING STROKE	END	2.40	2.74	8.22
		START	1.78	1.92	4.45
	AIR STROKE	END	3.15	5.07	17.13
		START	2.33	2.74	13.70

Dimensions ISO (mm)

Butt Weld

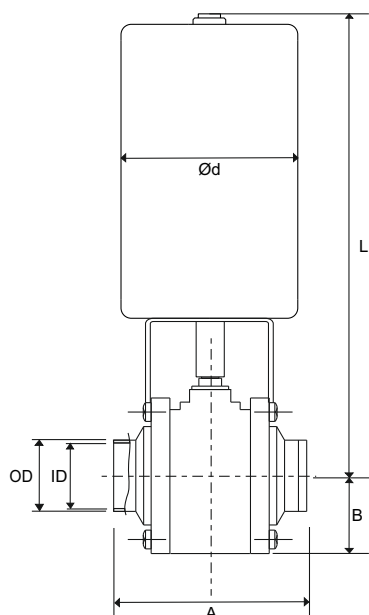
Dimensions	1"	1 ½"	2"	2 ½"	3"	4"
A	94	107	117	136	158	170
B	34	41	50	60	66	87
OD	25.4	38.1	50.8	63.5	76.2	101.6
ID	22.2	34.9	47.6	60.3	72.6	97.6
Ød	89	89	89	89	108	108
L	230	237	246	256	262	283


Sanitary Clamp

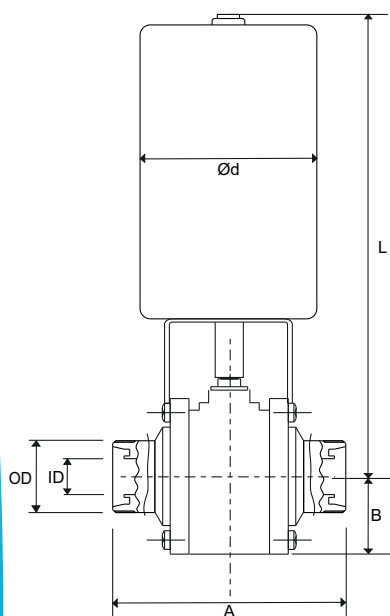
Dimensions	1"	1 ½"	2"	2 ½"	3"	4"
A	94	107	117	136	158	170
B	34	41	50	60	66	87
ID	22.2	34.9	47.6	60.3	72.6	97.6
Ød	89	89	89	89	108	108
L	230	237	246	256	262	283

Dimensions ISO (mm)

I-Line

Dimensions	1"	1 ½"	2"	2 ½"	3"	4"
A	102	110	140	142	170	202
B	34	41	50	60	66	87
ID	22.2	34.9	47.6	60.3	72.6	97.6
Ød	89	89	89	89	108	108
L	230	237	246	256	262	283

Dimensions DIN (mm)

Butt Weld

Dimensions	DN 25	DN 40	DN 50	DN 65	DN 80	DN 100
A	98	117	123	149	176	180
B	35	45	52	65	74	89
OD	29	41	53	70	85	104
ID	26	38	50	60	81	100
Ød	89	89	89	89	108	108
L	231	241	248	261	270	285


Male x Male

Dimensions	DN 25	DN 40	DN 50	DN 65	DN 80	DN 100
A	104	123	129	155	182	186
B	35	45	52	65	74	89
OD	52x1/6Thd	65x1/6Thd	78x1/6Thd	95x1/6Thd	110x1/6Thd	130x1/6Thd
ID	26	38	50	60	81	100
Ød	89	89	89	89	108	108
L	231	241	248	261	270	285

Horizontal Actuator Specifications

Pressure	:	Upto 120 PSI (8 bar)
Temperature	:	-4° F to 176° Fahrenheit (-20° to 80° C)
Media	:	Filtered dry air, preferably lubricated
Construction	:	Suitable for indoor or outdoor installation
Material	:	Housing-Aluminium Alloy
Finish	:	Two coat polyurethane paint
Rotation (Standard)	:	Counter clockwise to open with port 'A' pressurized Spring return Actuators air fail to close clockwise
Movement (Std.)	:	90
Lubrication	:	Factory lubricated for the normal life of Actuators
Life	:	500,000 operations minimum

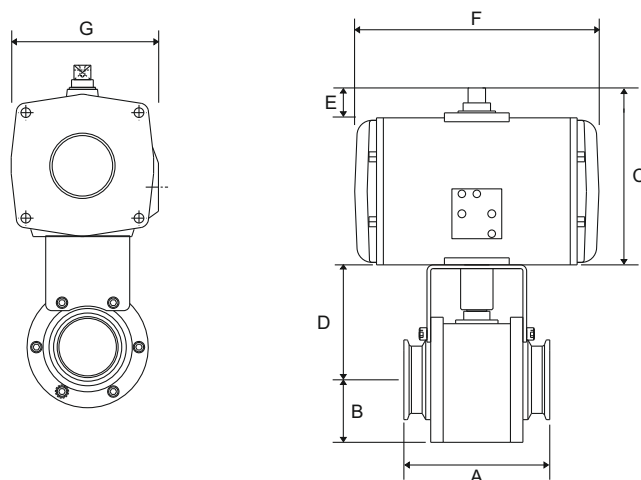
Actuator Torque - AT 90 PSI

MODEL			CH 52	CH 63	CH 75	CH 92	CH 105	CH 125	CH 140
SR TORQUE (Nm)									
SR TORQUE (Nm)	SPRING STROKE	END	9.3	10.9	21.1	51.4	56.9	206	251
		START	13.6	16.7	29.0	75.6	88.6	310	375
	AIR STROKE	END	10.4	32.8	31.2	59.9	109.8	203	423
		START	14.6	27.0	39.0	84.1	174.9	307	546

MODEL			CH 52	CH 63	CH 75	CH 92	CH 105	CH 125	CH 140
DA TORQUE (Nm)									
DA TORQUE (Nm)	AIR STROKE	END	-	-	-	-	-	-	-
		START	24	44	60	135	198	513	798

Recommended Horizontal Actuator Model (Double Acting / Spring Return)

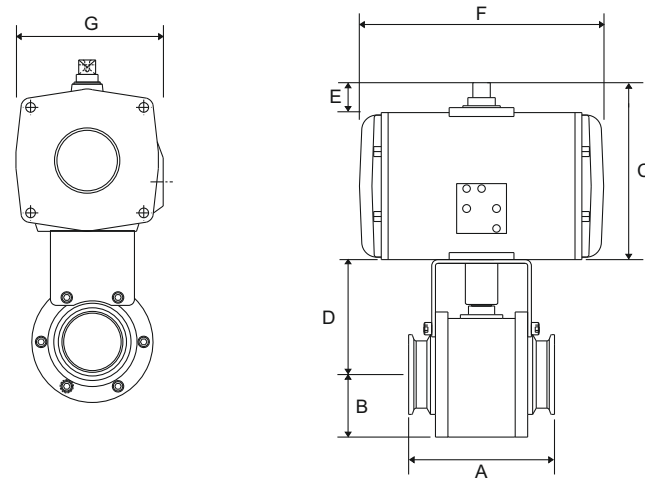
VALVE SIZE	1"/DN25	1.5"/DN40	2"/DN50	2.5"/DN65	3"/DN80	4"/DN100
Spring Return (Air to Spring)	CHS-52	CHS-75	CHS-92	CHS-105	CHS-125	CHS-140
Double Acting (Air to Air)	CHD-52	CHD-52	CHD-63	CHD-63	CHD-105	CHD-125

Dimensions ISO (mm)

Horizontal Actuators Spring Return (Air to Spring)

VALVE SIZE	1"	1 ½"	2"	2 ½"	3"	4"
ACTUATOR SIZE	CHS-52	CHS-75	CHS-92	CHS-105	CHS-125	CHS-140
A	94	107	117	136	158	170
B	34	41	50	60	66	87
C	92	119.5	136.5	153	202	227
D	88	93	103	107	119	135
E	12	12	12	12	12	12
F	147	184	262	268	390	458
G	71.5	95	108.5	121.5	152	174

Horizontal Actuators Double Acting (Air to Air)

VALVE SIZE	1"	1 ½"	2"	2 ½"	3"	4"
ACTUATOR SIZE	CHD-52	CHD-52	CHD-63	CHD-63	CHD-105	CHD-125
A	94	107	117	136	158	170
B	34	41	50	60	66	87
C	92	92	108	108	153	185
D	88	93	103	107	119	135
E	12	12	12	12	12	12
F	147	184	262	268	390	458
G	71.5	71.5	83	83	121.5	142

Dimensions DIN (mm)

Horizontal Actuators Spring Return (Air to Spring)

VALVE SIZE	DN 25	DN 40	DN 50	DN 65	DN 80	DN 100
ACTUATOR SIZE	CHS-52	CHS-75	CHS-92	CHS-105	CHS-125	CHS-140
A	94	107	117	136	158	170
B	34	41	50	60	66	87
C	92	119.5	136.5	153	202	227
D	88	93	103	107	119	135
E	12	12	12	12	12	12
F	147	184	262	268	390	458
G	71.5	95	108.5	121.5	152	174

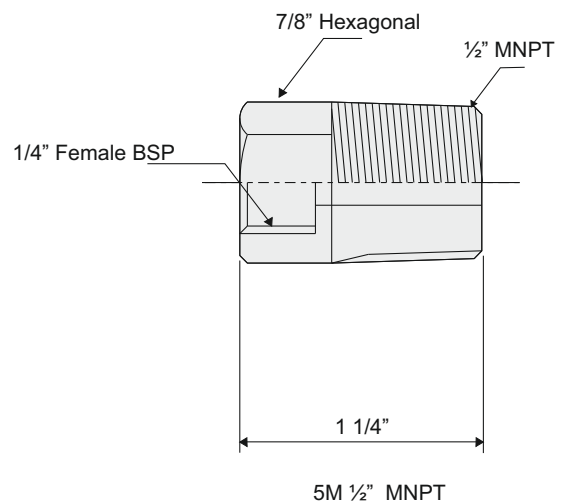
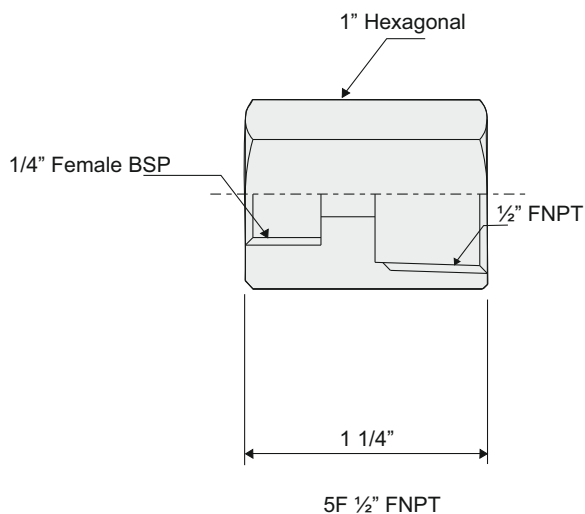
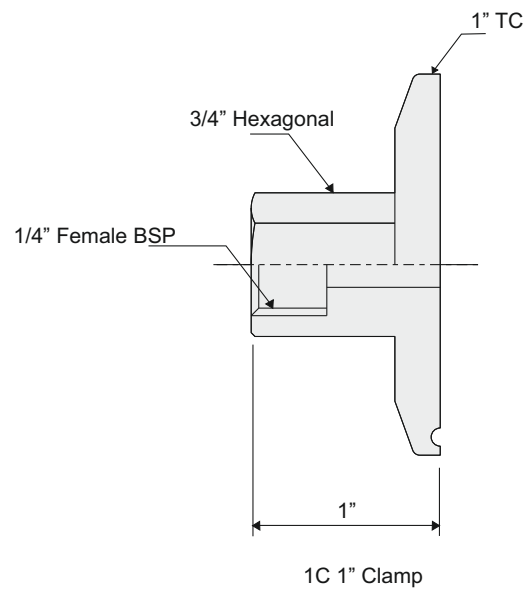
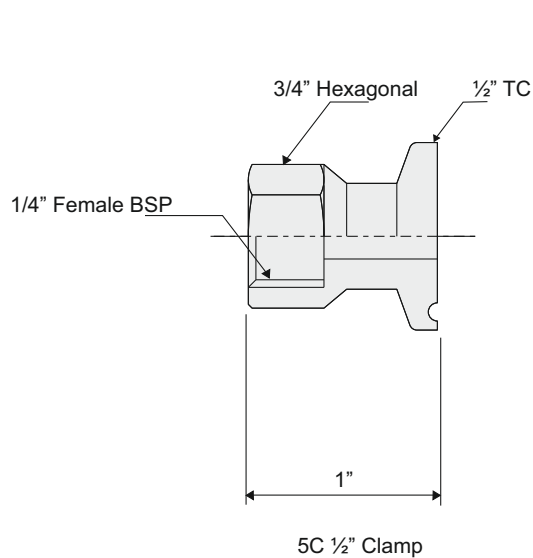
Horizontal Actuators Double Acting (Air to Air)

VALVE SIZE	DN 25	DN 40	DN 50	DN 65	DN 80	DN 100
ACTUATOR SIZE	CHD-52	CHD-52	CHD-63	CHD-63	CHD-105	CHD-125
A	94	107	117	136	158	170
B	34	41	50	60	66	87
C	92	92	108	108	153	185
D	88	93	103	107	119	135
E	12	12	12	12	12	12
F	147	184	262	268	390	458
G	71.5	71.5	83	83	121.5	142

Purge Port Adapters

Material : AISI 316L

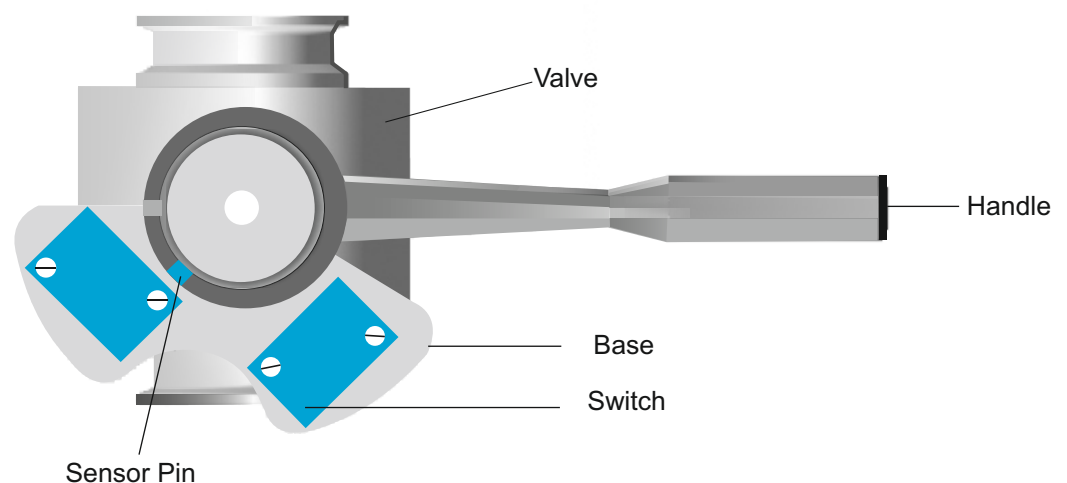
Surface Finish :Ra <= 25 μ in



Valve with Inductive proximity switch

Specifications :

Handle	: All stainless steel snapping handle (7M3)
Operating Voltage	: 10-30 VDC
Output	: DC PNP/NPN/NO/NC
Output LED	: Yes
Protection	: IP 67
Reverse Polarity Protection	: Yes
Cable	: 2 Wire, 6 Feet Long





52 Series Ball Valve Ordering System

