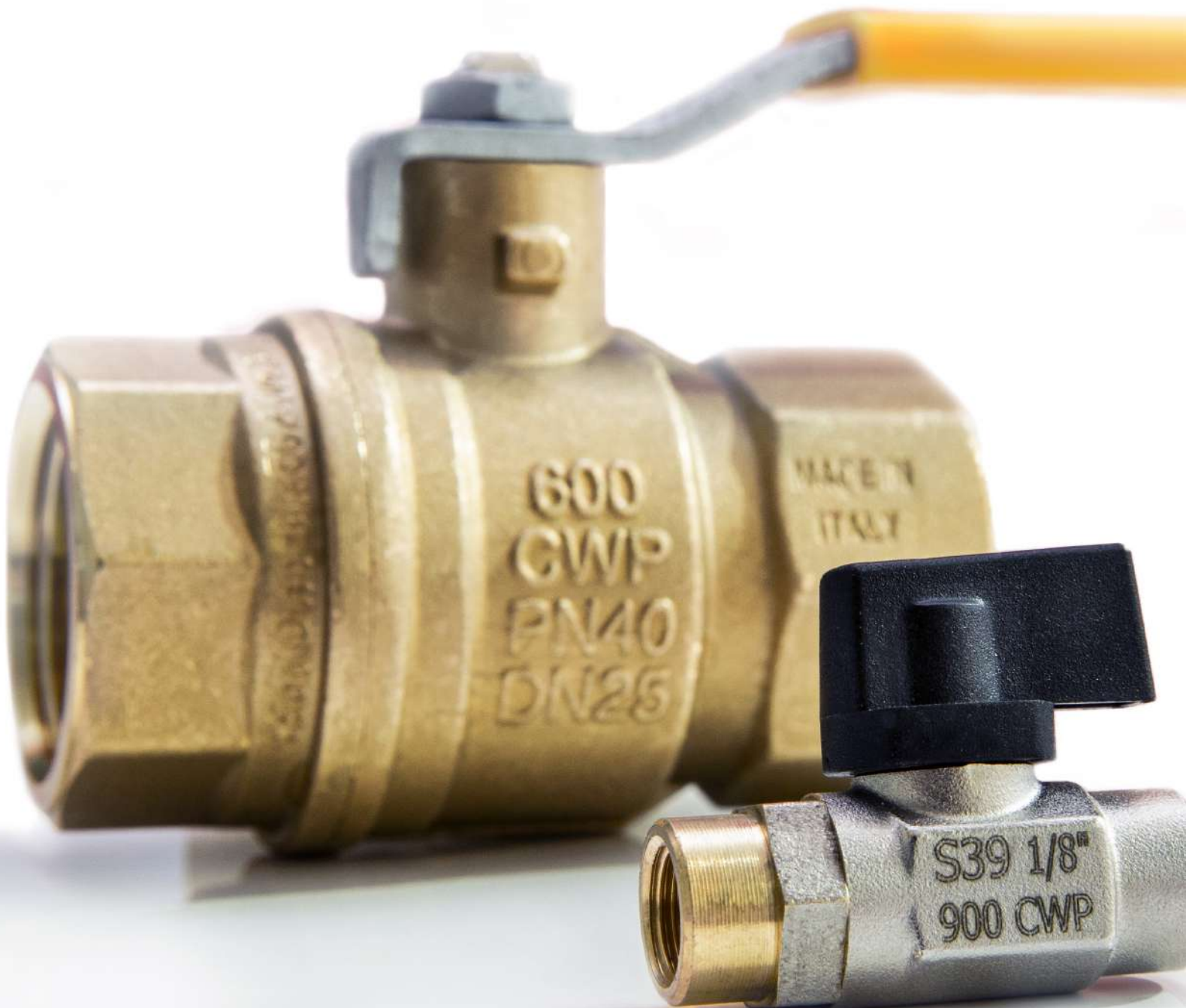




VALVES & ACTUATORS

RuB, Inc. PRODUCT CATALOG





VALVES & ACTUATORS



RuB, Inc. is the North American headquarter for **RuB** brass shut-off valves and actuators.

Our new facility, built in 2014 in **Shakopee**, MN, features a 50,000 sq. ft. warehouse with 5-tier racking and state of the art wireless inventory management system controlled by an **SAP ERP system**.

All brass ball valves are 100% manufactured in Italy at our plant in Brescia. We are a family owned company that has been expanding its global presence and high-quality reputation as a premier ball valve manufacturer for more than 65 years exceeding customer expectations in quality, service and reliability.

Our manufacturing operation is highly automated and every product is tested according to the most rigorous standards, such as our 100% 24-hour dual seal test, and then shipped to **RuB, Inc.** in Shakopee, MN, USA, to serve the **North American markets**.

We offer forged brass ball valves from **1/8" to 4"** in both **standard** and **custom** configurations for Oil, Water, Gas, and Industrial applications. We also stock stainless steel ball valves up to 8" and a complete electric and pneumatic actuation line for all of our actuatable brass and **stainless-steel products**.

All standard **RuB** branded Italian made brass ball valves have a limited lifetime warranty from defects in material and workmanship. For other products, we offer a 2-year limited warranty.

For more information about our complete product offering, certifications, warranties and technical documents, please visit our website at: www.rubinc.com.





VALVES & ACTUATORS





RuB, Inc. History

1993: **RuB** products enter full force into the North American market with a local warehouse in Massachusetts to support major nationwide distributors to the industrial and commercial plumbing markets.

1994: **RuB, Inc.** is incorporated as a wholly owned subsidiary in the State of Minnesota setting in place our long-term strategy for **RuB** valve business in North America.

1997: **RuB** shifts from using sales agents to hiring direct **RuB, Inc.** employees.

2000: **RuB, Inc.** begins sales into Canada.

2006: **RuB, Inc.** continues to expand its work force including Regional Managers and independent sales rep organizations to lead the sales efforts. The inventory in Massachusetts is transferred to a 17,000-ft² 5 tier racking warehouse in Shakopee, MN, and consigned stock warehouses are established in California and Toronto, Canada.

2008: Pneumatic actuation and stainless-steel ball valves are added to the product offering.

2014: **RuB, Inc.** builds a new 50,000-ft² office/warehouse in Shakopee, MN, USA, and continues expanding the stainless-steel ball valve offering.

2015: Official Grand Opening of **RuB, Inc.** North American Headquarters in Shakopee, MN, USA.

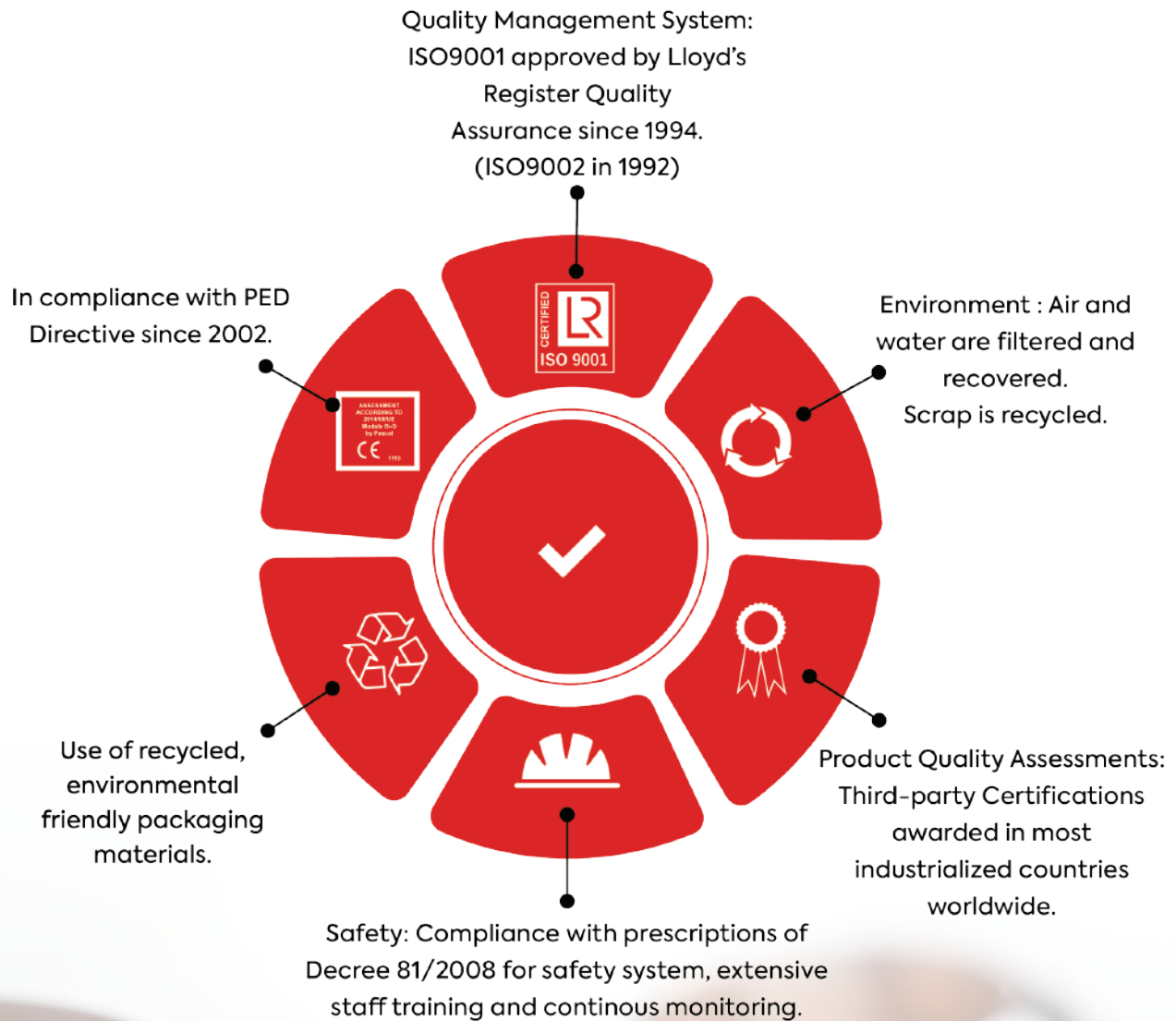
2019: **RuB, Inc.** Quality Management System is certified by LRQA to the standards ISO 9001:2015.





OUR QUALITY

"Quality you can **Trust**,
proven through generations of experience."



OUR CERTIFICATIONS

Approvals

	Deutsche Vereinigung des Gas und Wasserfaches e.V. Technisch-wissenschaftlicher Verein	
	Deutsche Vereinigung des Gas und Wasserfaches	
	ARGB-KVVBG	
	Schweizerischer Verein des Gas und Wasserfaches	
	Attestation de Conformité Sanitaire	
	Система сертификации ГОСТ Р Госстандарт России	
	Декларация соответствия	
	Water Regulations Advisory Scheme	
	British Standards Institution	
	Kiwa - Swedcert	
	The Australian Gas Association	
	OSHA Compliant	
	Factory Mutual Research Corporation	
	Underwriter Laboratories Inc.	
	CSA International for Drinking Water to NSF/ANSI 61- NSF/ANSI 372	
	CSA - Canadian Standards Association	
	CRN-TSSA	
	KSFD -Kuwait Fire Service Directorate	
	LIA - L.P Gas Instruments Inspections Association	
Compliances		
	ROHS	
	Reach declaration	Reach
	PED 2014/68/UE by ICIM (0425)	PED
	DCL021- Declaration of Conformity to 2012-19 - EU WEEE directive	
	DCL004 - Conflict Minerals	

We are very proud of our 100% made in Italy shut-off brass valves, actuation and OEM engineered product manufactured in our **ISO 9001:2015** certified Corporate Headquarters in Brescia, Italy.

We implemented this rigorous quality management and assurance system since 1995 monitored by Lloyd's Register, helping, helping us improve quality and reliability.

Besides Lloyd's and PED compliance, we offer a verified package of quality assurance based on testing services, state of art technology and approvals released by main laboratories and quality agencies from all over the world.

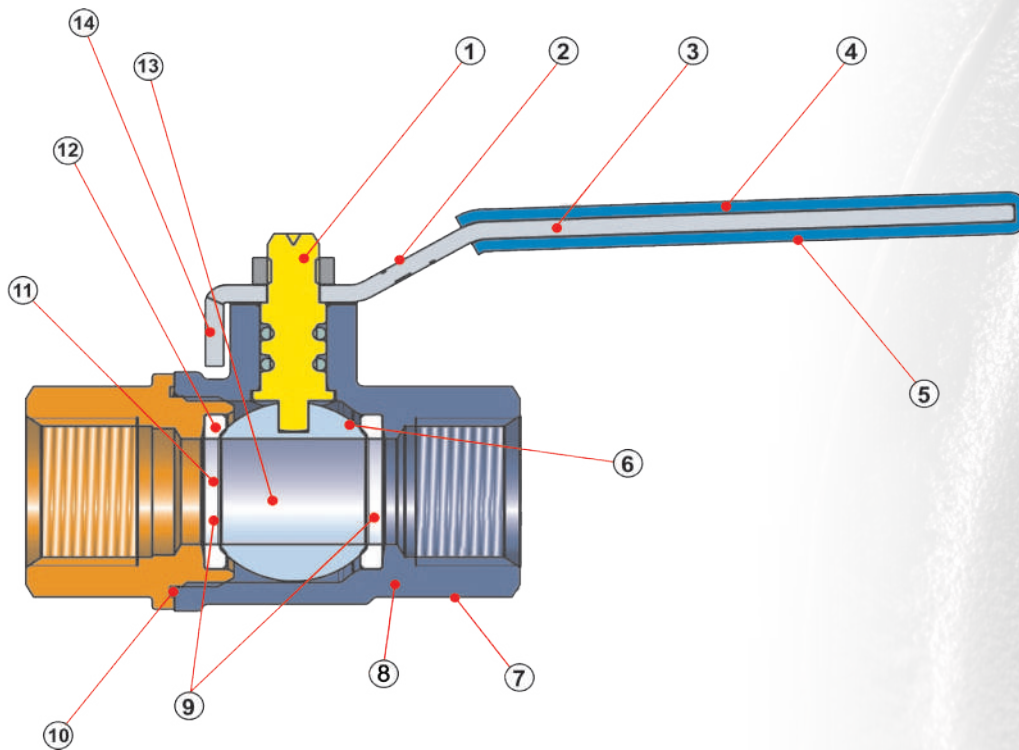


For more information, please visit our website at <https://www.rubinc.com/approvals/> to learn which approvals apply to specific valves and specific configurations.





RuB valve features



- 1. Blowout-proof stem on all sizes
- 2. Geomet® protective handle plating
- 3. Handle can be disassembled while valve is under pressure
- 4. Indelible laser marking
- 5. Longer and more robust handle with thicker PVC dip coating
- 6. Greater contact between ball and seats to ensure tightness at low pressure and longer life.
- 7. Date code to allow batch traceability indicating year and month of manufacturing
- 8. Most products rated at 40 bar / 600 PSI CWP
- 9. 24 hour 100% dual seal test.*
- 10. Patented metal-to-metal sealing at body/end-cap joint in addition to sealant
- 11. Ball seats with flexible lip design
- 12. Virgin self-lubricating PTFE seats for constant performance offering higher flexibility and greater sealing when system pressure varies through time or in the presence of temperature variations.
- 13. Full port on most configurations
- 14. Handle stops on body to avoid stress at stem

Valve in half open position is pressurized at 6 bar (87 psig), then closed, trapping compressed air in between ball seats and stem sealing. After adequate time, any leak is verified using extremely accurate electronic sensors and any defective valve is automatically rejected; all valves passing this initial seal test are filled with compressed air again and remain closed and under pressure for minimum 24 hours; after 24 hours, the valves go back again under the same accurate electronic pressure sensors and any leaking valve is automatically rejected.

* Certain products are not suitable for double seal test







Index



ACTUATION

Page 13



GAS

Page 55



INDUSTRY

Page 79



PNEUMATIC

Page 107



DRINKING WATER

Page 117



PLUMBING

Page 129



ACCESSORIES

Page 141



MASTER INDEX

Page 168



ACTUATION

EA pneumatic actuator	Page 14
CP electric actuator	Page 22
CP electric actuator + s.31 mini valve	Page 26
CP electric actuator + s.6400LT 2-way brass valve	Page 28
CP electric actuator + s.7600 3-way L-port diverting brass valve	Page 30
E-Tork heavy duty electric actuator	Page 32
C-Tork light weight electric actuator	Page 36
s.6439 NPT 1/2" - 2", SS trim, ISO 5211	Page 48
s.6439LT NPT 1" - 2", SS trim, ISO 5211, low torque	Page 50
s.6441 NPT 1/2" - 4", brass trim, ISO 5211	Page 52
s.7241 NPT 3-way 4 seats L-port (diverting) 1/2 - 1" ISO 5211	Page 54
s.7341 NPT 3-way 4 seats T-port 1/2 - 1" ISO 5211	Page 56
s.7641 NPT 3-way 2 seats L-port (diverting) 1/2 - 1" ISO 5211	Page 58
s.134 NPT stainless steel 1/2" - 2" ISO 5211	Page 60
s.135 NPT stainless steel 2" - 3" - 4" ANSI B16.5 flange, ISO 5211	Page 62
s.136 NPT stainless steel 6" - 8" ANSI B16.5 flange, ISO 5211	Page 64



pneumatic actuator for 1/2" - 4" quarter turn valve



Technical features

- ISO 5211 direct mount on valve
- NAMUR pads for direct mount of solenoid and limit switch
- Pilot ring for perfect alignment of shaft and stem
- Extruded aluminum body hard anodized cylinder bore rock hard and glass smooth
- Nickel plated steel shaft
- Stainless steel fasteners
- High tensile long life return springs
- Visual position indicator
- Indoor or outdoor installation
- Single massive travel stop on one end eliminates need of balancing stop on both ends (EA sizes 2~7)
- Fast field conversion between double acting and spring return, fail open or fail closed
- Minimum ambient temperature while actuator is at rest: -35°C (-31°F)

Service limits

Imperial system			Metric system		
	Min	Max		Min	Max
Pressure (PSI)	40	150	Pressure (bar)	3	10
Temperature (°F)	0	175	Temperature (°C)	-20	80

Accessories

- Limit switch box
- Solenoid valves
- Visual position indicator
- Link kit
- Springs



Limit switch box



Solenoid valve



Visual position indicator

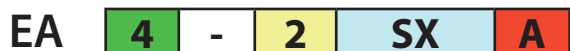


Link kit



Springs

How to order



Springs to Close/Open
 Blank = Spring to close
 A = Spring to open

N° of Springs
 Blank = Double acting actuators (size 1 not available with springs)
 From S2 to S12 = Spring return for actuator sizes from 2 to 4
 From S4 to S8 = Spring return for actuator sizes from 5 to 7*
***NOTE: for sizes from 5 to 7, springs in excess of 4 are internal springs (see example EA4-6S8).**

Actuators Sizes - Square:
 1 = F03 - SQUARE 9
 2 = F03/F05 - SQUARE 9
 2A= F03/F05 - SQUARE 11 (only metric version)
 2B = F04 - SQUARE 11 (only metric version)
 3 = F05/F07 - SQUARE 14
 4 = F05/F07 - SQUARE 14
 5 = F05/F07 - SQUARE 17
 6 = F07 - SQUARE 17
 7 = F07/F10 - SQUARE 22

Type of Threads:
 2 = Metric Threads
 4 = Imperial Threads (except top of stem - K dimension - is M6)

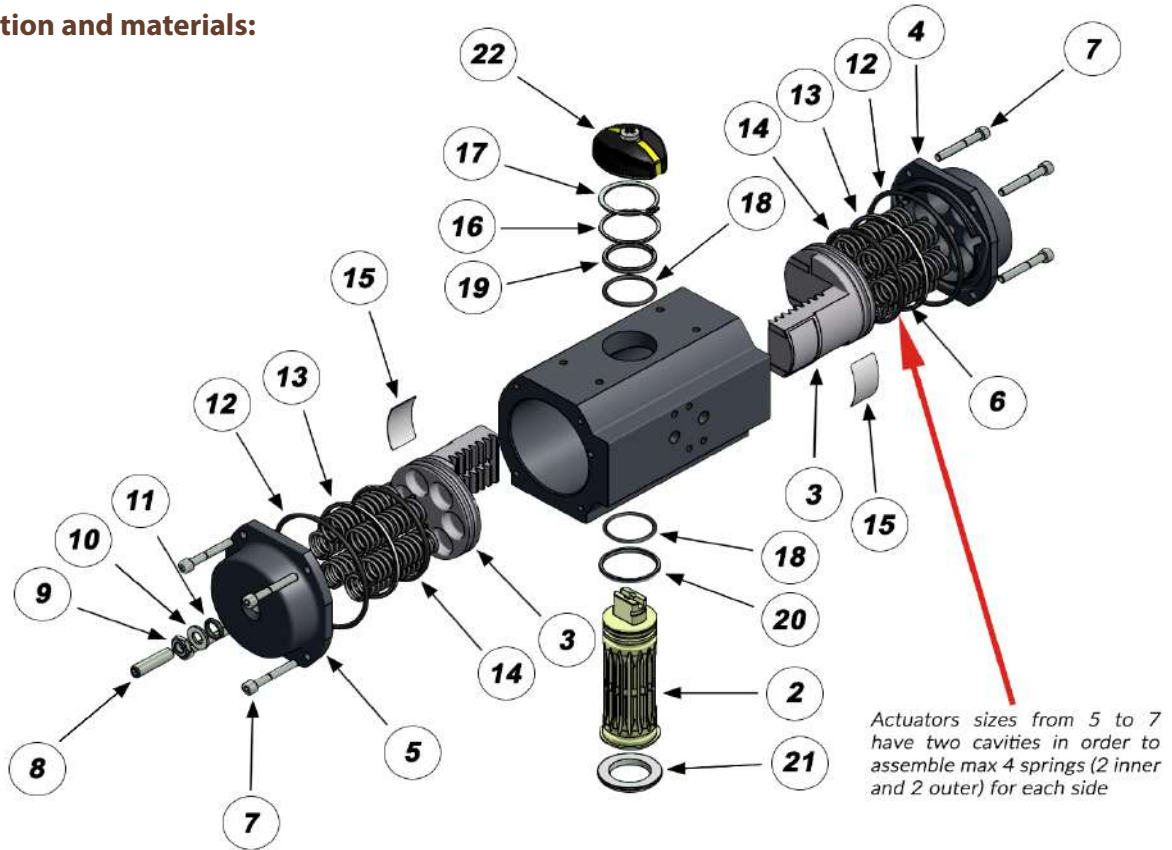
Example

EA4-6S8 is an EA actuator with Imperial threads, size 6 with 8 springs to close (4 external springs and 4 internal springs)

EA2-4 is an EA actuator with metric threads, size 4, with no springs



Construction and materials:



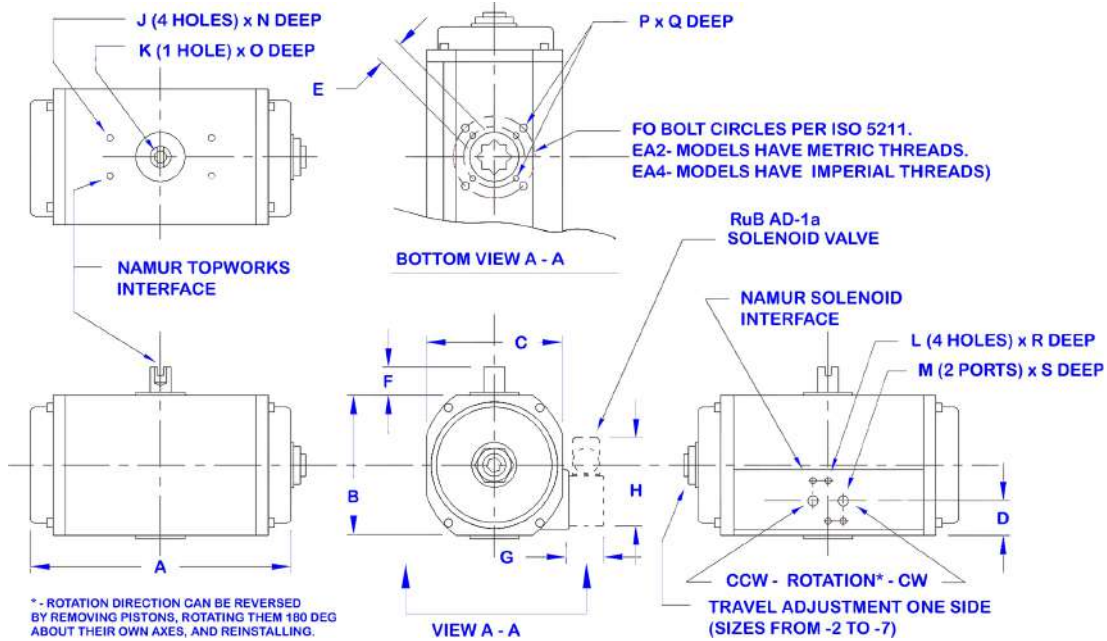
Bill of materials

EA-4 is shown. Smaller sizes have similar construction except EA-1 that has Nylon endcaps and pistons

Item	Description	Q.ty	Material
1	Body	1	Anod, aluminum
2	Shaft	1	Steel - zinc plated
3	Piston	2	Aluminum
4	End-cap	1	Anod, aluminum
5	End-cap (stop bolt)	1	Anod, aluminum
6	Spring	12 Max	Cr-Si steel
7	Cap bolt	8	St steel
8	Stop bolt	1	Hi tensile steel
9	Stop bolt nut	1	Hi tensile steel
10	Washer	1	Polyethylene
11	O-Ring (end stop)	1	NBR
12	O-Ring (end cover)	2	NBR
13	Piston ring	2	POM**
14	Piston ring	2	NBR
15	Wear pad	2	POM**
16	Shaft washer	1	Polyethylene
17	Snap ring	1	Steel
18	O-Ring (drive shaft)	2	NBR
19	Shaft bearing upper	1	POM**
20	Shaft bearing lower	1	POM**
21	Alignment ring	1	POM**
22	Indicator	1	Nylon

** Polyoxymethylene commonly "Delrin"

Dimensions:



Size	Metric system - mm																		
	F0	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S
1	F03	103	45	51	22,5	9	20	26	67	M5	M6	M5	G1/8	5	12	M5	8	8	7
2	F03/05	150	70	70	23	9	20	26	67	M5	M6	M5	G1/8	8	12	M5 / M6	8 / 10	8	10
2A	F03/05	150	70	70	23	11	20	26	67	M5	M6	M5	G1/8	8	12	M5 / M6	8 / 10	8	10
2B	F04	150	70	70	23	11	20	26	67	M5	M6	M5	G1/8	8	12	M5 / M6	8 / 10	8	10
3	F05/07	187	87	91	34,5	14	20	26	67	M5	M6	M5	G1/8	8	12	M6 / M8	10 / 13	8	10
4	F05/07	206	118	113	29,5	14	20	26	67	M5	M6	M5	G1/8	8	12	M6 / M8	10 / 13	8	10
5	F05/07	194	118,5	121	29,5	17	20	26	67	M5	M6	M5	G1/4	5	12	M6 / M8	10 / 10	8	12
6	F07/10	218	140,5	136,5	29,5	17	20	26	67	M5	M6	M5	G1/4	5	12	M8 / M10	10 / 16	8	12
7	F07/10	266	166,5	156	30	22	20	26	67	M5	M6	M5	G1/4	5	12	M8 / M10	13 / 16	8	12

Size	Imperial system - inch																		
	F0	A	B	C	D	E	F	G	H	J	K	L	M	N	O	P	Q	R	S
1	F03	4.06	1.77	2.01	0.89	0.35	0.79	1.02	2.64	10-32	M6	10-32	1/8 NPT	0.20	0.47	10-32	0.31	0.31	0.28
2	F03/05	5.91	2.76	2.76	0.91	0.35	0.79	1.02	2.64	10-32	M6	10-32	1/8 NPT	0.31	0.47	10-32 / 1/4"-20	0.31 / 0.39	0.31	0.39
3	F05/07	7.36	3.43	3.58	1.36	0.55	0.79	1.02	2.64	10-32	M6	10-32	1/8 NPT	0.31	0.47	1/4"-20 / 5/16"-18	0.39 / 0.51	0.31	0.39
4	F05/07	8.11	4.65	4.45	1.16	0.55	0.79	1.02	2.64	10-32	M6	10-32	1/8 NPT	0.31	0.47	1/4"-20 / 5/16"-18	0.39 / 0.51	0.31	0.39
5	F05/07	7.64	4.67	4.76	1.16	0.67	0.79	1.02	2.64	10-32	M6	10-32	1/4 NPT	0.20	0.47	1/4"-20 / 5/16"-18	0.47 / 0.47	0.31	0.50
6	F07/10	8.58	5.53	5.37	1.16	0.67	0.79	1.02	2.64	10-32	M6	10-32	1/4 NPT	0.20	0.47	5/16"-18 / 3/8"-16	0.51 / 0.63	0.31	0.50
7	F07/10	10.47	6.56	6.14	1.18	0.87	0.79	1.02	2.64	10-32	M6	10-32	1/4 NPT	0.20	0.47	5/16"-18 / 3/8"-16	0.51 / 0.63	0.31	0.50



Quick pick chart for EA2 (Metric) pneumatic actuators assembled on s64, s76, s72 and s73 RuB ball valves

For service with pipeline ΔP lower than the maximum limits shown below, and for media having friction characteristics similar to clean water or moist/lubricated gases the following actuator selections can be used.

For higher pipeline pressures or more difficult media the selection must be made using the valve torque charts found on each valve data sheet, and the actuator torque rating chart found on the following page.

For assistance in actuator selection please contact **RuB** at the following email address: sales@rubvalves.com or your **RuB** distributor.

Linkage kit selection table

Valve size	s64 LT					
	Actuator size			Actuator size		
1" ~ 1-1/4"	EA2	-1	-2	-2A	-3	-4
1-1/2" ~ 2"	LK-	1	1	-	3	3
	LK-			4	6	6

VALVE	ΔP* Media (bar)	Air pressure supply (bar)																				
		3	4	5	6	7	8	9	10	10	10											
s64 LT		Double Acting Actuators EA2-					Spring-to-Close Actuators EA2-					Spring-to-Open Actuators EA2-										
1"	6	1	1	1	1	1	1	1	1	1	252	252	252	252	252	252	252	252	252	252	252	252
1-1/4"	6	1	1	1	1	1	1	1	1	1	253	253	253	253	253	253	253	253	253	253	253	253
1-1/2"	6	2A	2A	2A	2A	2A	2A	2A	2A	2A	2A56	2A56	2A56	2A56	2A56	2A56	2A56	2A56	2A56	2A56	2A56	2A56
2"	6	2A	2A	2A	2A	2A	2A	2A	2A	2A	354	2A58	2A58	2A58	2A58	2A58	2A58	2A58	2A58	2A58	2A58	2A58
16 Max		1	1	1	1	1	1	1	1	1	254	254	254	254	254	254	254	254	254	254	254	254
1-1/4"	16 Max	1	1	1	1	1	1	1	1	1	254	254	254	254	254	254	254	254	254	254	254	254
1-1/2"	16 Max	2A	2A	2A	2A	2A	2A	2A	2A	2A	354	2A59	2A59	2A59	2A59	2A59	2A59	2A59	2A59	2A59	2A59	2A59
2"	16 Max	3	2A	2A	2A	2A	2A	2A	2A	2A	356	356	356	356	356	356	356	356	356	356	356	356

Valve size	s64					
	Actuator size			Actuator size		
1/2" ~ 1"	EA2	-1	-2	-2A	-3	-4
1-1/4" ~ 1-1/2"	LK-	1	1	-	3	3
2"	LK-			4	6	6
2-1/2" ~ 4"	LK-			4	4	4
	LK-			15	15	15

VALVE	ΔP* Media (bar)	Air pressure supply (bar)																			
		3	4	5	6	7	8	9	10	10	10										
s64		Double Acting Actuators EA2-					Spring-to-Close Actuators EA2-					Spring-to-Open Actuators EA2-									
1/2"	15	1	1	1	1	1	1	1	1	1	252	252	252	252	252	252	252	252	252	252	252
3/4"	15	1	1	1	1	1	1	1	1	1	253	253	253	253	253	253	253	253	253	253	253
1"	15	2	2	2	2	2	2	2	2	2	254	254	254	254	254	254	254	254	254	254	254
1-1/4"	15	2A	2A	2A	2A	2A	2A	2A	2A	2A	356	356	356	356	356	356	356	356	356	356	356
1-1/2"	15	3	3	3	3	3	3	3	3	3	454	454	454	454	454	454	454	454	454	454	454
2"	15	4	3	3	3	3	3	3	3	3	455	455	455	455	455	455	455	455	455	455	455
2-1/2"	15	5	5	5	5	5	5	5	5	5	754	554	554	554	554	554	554	554	554	554	554
3"	15	7	6	5	5	5	5	5	5	5	754	754	657	657	657	657	657	657	657	657	657
4"	15	7	7	7	6	6	6	6	6	6	757	757	757	757	757	757	757	757	757	757	757

* Selections apply for valves used with ΔP up to 15 bar Max. For ΔP over 15 bar and up to 40 bar (30 bar for sizes over 2"), please consult **BONOMI INDUSTRIES** for sizing recommendations.

Valve size	s72, s73, s76					
	Actuator size			Actuator size		
1/2" ~ 1"	EA2	-1	-2	-2A	-3	-4
	LK-	1	1	-	3	3
	LK-			4	6	6
	LK-			4	4	4
	LK-			15	15	15

VALVE	ΔP* Media (bar)	Air pressure supply (bar)																			
		3	4	5	6	7	8	9	10	10	10										
s72, s73		Double Acting Actuators EA2-					Spring-to-Close Actuators EA2-					Spring-to-Open Actuators EA2-									
1/2"	15	2	2	2	2	2	2	2	2	2	454	357	357	357	357	357	357	357	357	357	357
3/4"	15	3	2	2	2	2	2	2	2	2	454	454	359	359	359	359	359	359	359	359	359
1"	15	4	3	3	3	3	3	3	3	3	459	459	459	459	459	459	459	459	459	459	459

* Selections apply for valves used with ΔP up to 16 bar Max. For ΔP over 16 bar and up to 20 bar, please consult **BONOMI INDUSTRIES** for sizing recommendations.

VALVE	ΔP Media (bar)	Air pressure supply (bar)																			
		3	4	5	6	7	8	9	10	10	10										
s76		Double Acting Actuators EA2-					Spring-to-Close Actuators EA2-					Spring-to-Open Actuators EA2-									
1/2"	15	1	1	1	1	1	1	1	1	1	256	256	256	256	256	256	256	256	256	256	256
3/4"	15	1	1	1	1	1	1	1	1	1	256	256	256	256	256	256	256	256	256	256	256
1"	15	2	1	1	1	1	1	1	1	1	257	257	257	257	257	257	257	257	257	257	257

Red font = selection driven by valve stem size

Quick pick chart for EA4 (Imperial) pneumatic actuators assembled on s64,s76, s134, s72 and s73 RuB ball valves

For service with pipeline ΔP lower than the maximum limits shown below, and for media having friction characteristics similar to clean water or moist/lubricated gases the following actuator selections can be used.

For higher pipeline pressures or more difficult media the selection must be made using the valve torque charts found on each valve data sheet, and the actuator torque rating chart found on the following page.

VALVE	ΔP Media (PSI)	Air pressure supply (PSI)																	
		40	50	60	70	80	90	100	110	120	40	50	60	70	80	90	100	110	120
s64 LT		Spring-to-Close Actuators EA4																	
1"	90	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1-1/4"	90	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1-1/2"	90	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2"	90	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
1"	230 Max	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1-1/4"	230 Max	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1-1/2"	230 Max	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2"	230 Max	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

Linkage kit selection table

Valve size	Actuator size
1" ~ 1-1/4"	EA4 -1 -2 -2A -3
1-1/2" ~ 2"	LK- 8 8 9 9
	LK- 8 8 9 9
	LK- 4 4 6 6

VALVE	ΔP Media (PSI)	Air pressure supply (PSI)																	
		40	50	60	70	80	90	100	110	120	40	50	60	70	80	90	100	110	120
s64		Spring-to-Close Actuators EA4																	
1/2"	200	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3/4"	200	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1"	200	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1-1/4"	200	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
1-1/2"	200	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2"	200	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2-1/2"	200	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
3"	200	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
4"	200	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6

* Selections apply for valves used with ΔP up to 200 PSI Max. For ΔP over 200 PSI and up to 600 PSI (450 PSI for sizes over 2"), please consult BONOMI INDUSTRIES for sizing recommendations.
Note: s74 available up to 1" size.

VALVE	ΔP Media (PSI)	Air pressure supply (PSI)																	
		40	50	60	70	80	90	100	110	120	40	50	60	70	80	90	100	110	120
s134		Spring-to-Close Actuators EA4																	
1/2"	200	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3/4"	200	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1"	200	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
1-1/4"	200	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
1-1/2"	200	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
2"	200	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

* Selections apply for valves used with ΔP up to 200 PSI Max. For ΔP over 200 PSI and up to 1000 PSI, please consult BONOMI INDUSTRIES for sizing recommendations.

VALVE	ΔP Media (PSI)	Air pressure supply (PSI)																	
		40	50	60	70	80	90	100	110	120	40	50	60	70	80	90	100	110	120
s72, s73, s76		Spring-to-Close Actuators EA4																	
1/2"	230	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
3/4"	230	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
1"	230	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3

* Selections apply for valves used with ΔP up to 230 PSI Max. For ΔP over 230 PSI and up to 300 PSI, please consult BONOMI INDUSTRIES for sizing recommendations.

VALVE	ΔP Media (PSI)	Air pressure supply (PSI)																	
		40	50	60	70	80	90	100	110	120	40	50	60	70	80	90	100	110	120
s76		Spring-to-Close Actuators EA4																	
1/2"	200	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
3/4"	200	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1"	200	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Red font = selection driven by valve stem size

Valve options:



1



s.31

- Flow: mini
- 2-way
- Direct mount

2



s.6439 LT

- Full flow
- 2-way
- ISO 5211 F03 flange

3



s.7641 3-Way

- Diverting full flow
- 3-way L-port
- ISO 5211 F03 flange

Mini up to 3/4"

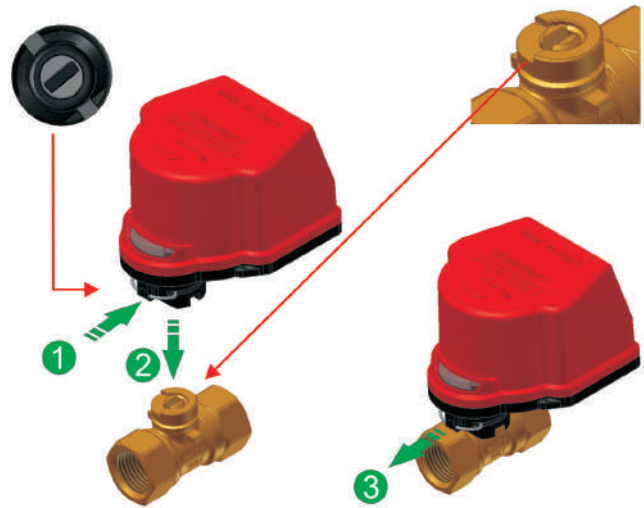
Full port up to 1 1/4"

Diverting up to 1"

Assembly instructions:

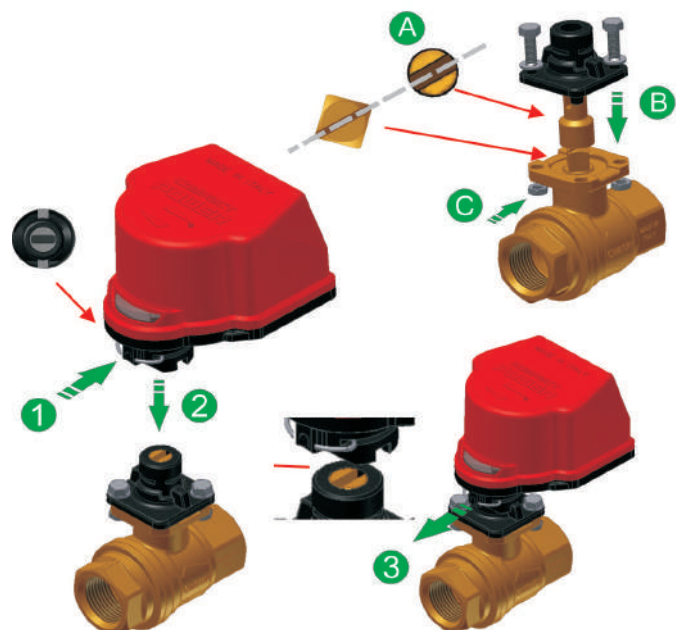
Quick direct assembly on *RuB s.31* mini valve:

1. Push the spring clip in order to set the actuator in open position
2. Assemble the actuator on top of valve
3. Pull spring clip to lock actuator on valve



Assembly on *RuB s.64* and *s.76* valves:

1. Position the ball of the valve to match the position (open / closed) of the actuator
2. Mount stem adaptor (B) and F03 adaptor (A) on top of valve flange and fix it with two screws and nuts (C)
3. Push the spring clip in order to set the actuator in open position
4. Assemble the actuator on top of adaptor
5. Pull spring clip to lock actuator on valve





COMPACT POWER

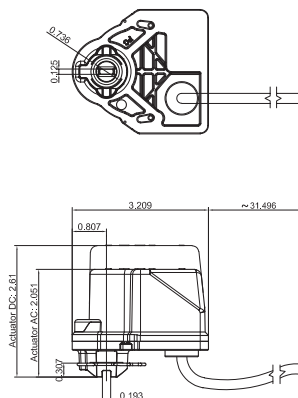
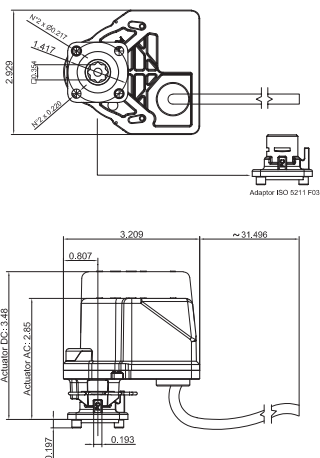
electric actuator



Technical features:

- Suitable for **RuB** actuatable valves up to 1 ¼" size (only for s.64 LT)
- Compact package to fit in restricted spaces
- Power supply variants:
 - 24V DC;
 - 24V AC 50-60Hz;
 - 110-120V AC 50/60Hz;
 - 230V AC 50/60Hz;
- Motor power consumption:
 - 4W for 24V DC, 6W for 230V AC, 8W for 24V AC and 110-120V AC
- Torque output up to 5 Nm (44 in-lb)
- Operation time:
 - 5 sec for 24V DC;
 - 15 sec for 24V AC, 110-120V AC and 230V AC at 60 Hz;
- Working temperature -20°C (-4°F) +80°C (+180°F)
- Protection class IP65 comparable to NEMA 4X
- Micro-switches for open-close signals
- Micro-switches can pass up to 1A
- Reversing motor
- Direct mount on valve for perfect shaft alignment
- Positive orientation between ball valve and actuator
- Actuator easily removable for manual operating
- Visual position indicator
- Corrosion resistant plastic housing
- Actuator has successfully passed 100,000 cycle life tests
- Duty cycle 60%

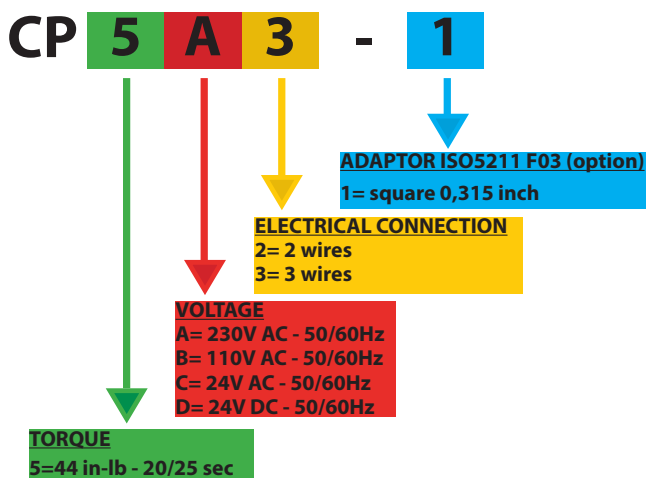
Dimension inch:



Options:

- Adaptor F03 square 0,315 inch

How to order:



Example

- **CP5B3** is a CP actuator, 44 in-lb, 110V AC, 3-WIRES with connection screw driver male and adaptor ISO 5211 F03 square 0,354 inch
- **CP5B3-1** is a CP actuator, 44 in-lb, 110V AC, 3-WIRES with connection screw driver male and adaptor ISO 5211 F03 square 0,315 inch

DIAGRAM FOR 2-WIRE CONTROL - VDC model

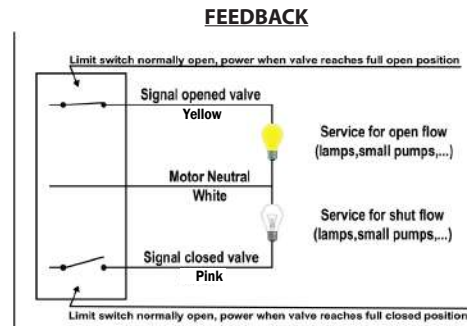
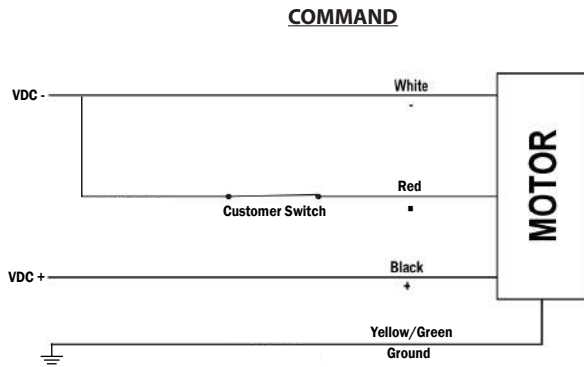
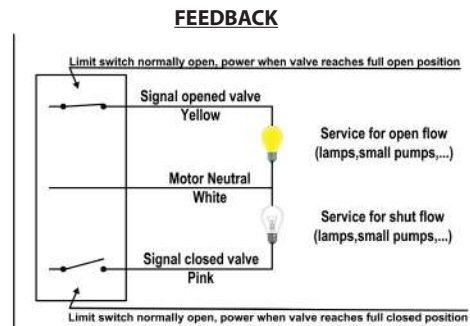
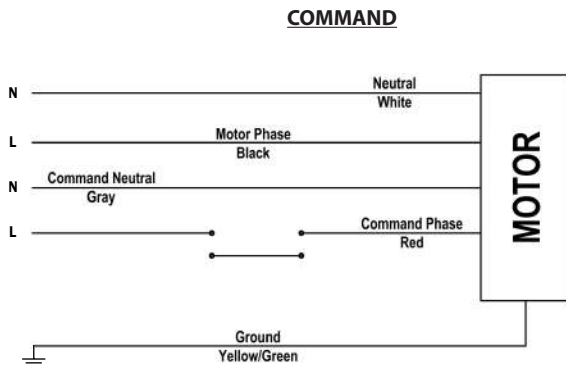
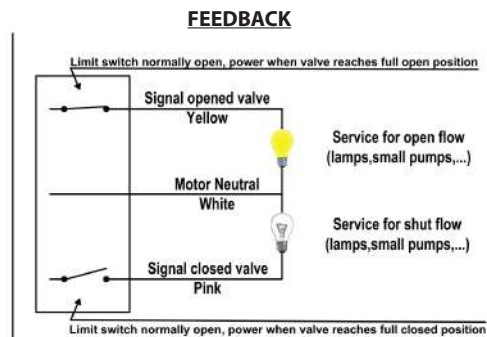
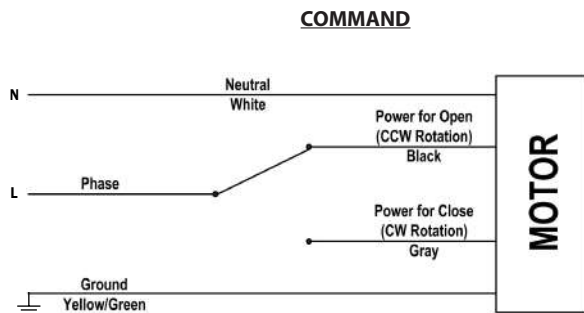


DIAGRAM FOR 2-WIRES CONTROL - VAC model



2 wires command : the command is made by a simple switch or button (manually or automatically operated e.g. traditional thermostat). Closing the control switch will cause the actuator to travel to the full CCW position. Opening the control switch will cause the actuator to travel to the full CW position. If the actuator is mounted on a ball valve, closing the control switch will open the ball valve, and vice versa. Upon request, the command voltage may differ from the motor power voltage.

DIAGRAM FOR 3-WIRE CONTROL - VAC model



Note: if the limit switch signals are not to be used the yellow and pink wires must be capped to prevent accidental short circuits

3 wire command: the command is made by a switch (manually or automatically operated e.g. 3 wire thermostat), which diverts the voltage to the opening wire or to the closing wire reaching the actuator; the switch may be on open or on closed position; using a specific control, engine can stop in any intermediate position.



COMPACT POWER

+ s.31 mini valve

This newly engineered valve features all the good characteristics of the s.31 **RuB** mini valve, in particular:



Quality:

- 100% seal test guaranteed in according to EN12266-1 RATE A in either direction
- Compatible with most industrial fluids including those too viscous for pilot operated valves
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Silicone-free lubricant
- Chrome plated ball for longer life
- Can operate also in vacuum line

Body:

- Finest brass according to EN 12165 and EN 12164 specifications
- Strong one piece body construction

Stem:

- Blowout-proof brass stem
- Double FPM O-rings at the stem for maximum safety

Sealing:

- Pure PTFE self-lubricating seats

Threads:

- NPT Taper ANSI B.1.20.1 threads

Working pressure and temperature:

- Shell rating: 600 PSI non-shock cold working pressure
- Seat rating: Delta P max permissible 230 PSI
- -4°F to +250°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options:

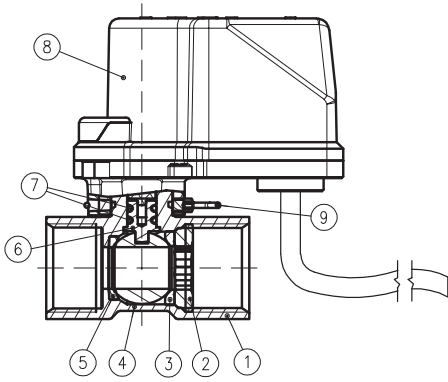
- EN 10226-1, ISO 228 parallel female by female threads
- ISO7/1, BS 21 BSPT taper threads

Approved by or in compliance with:

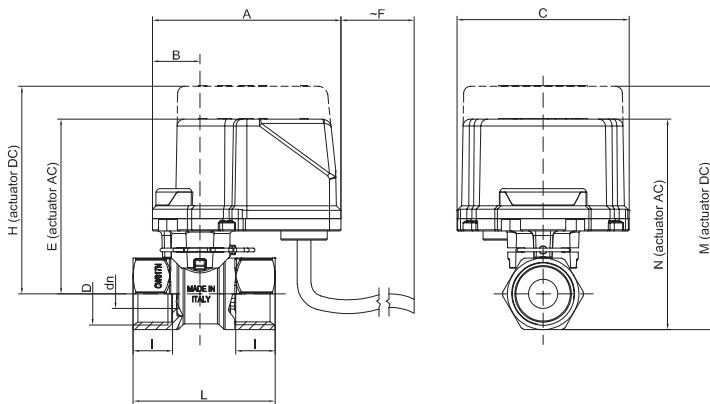
- RoHS Compliant (EU)

NOTE: approvals apply to specific configurations/sizes only.





Part description	Qty	Material	
1	Unplated body	1	CW617N
2	Unplated retainer nut	1	CW617N
3	Retainer seat	1	PTFE
4	Chrome plated ball	1	CW617N
5	Body seat	1	PTFE
6	Unplated stem O-Ring design	1	CW617N
7	O-Ring	2	FPM
8	Compact power electric actuator (VDC or VAC models)	1	---
9	Spring clip	1	1.4301 / AISI304



D (valve size)	1/4"	3/8"	1/2"	3/4"
dn (inch)	0.315	0.394	0.394	0.500
l (inch)	0.472	0.472	0.610	0.669
L (inch)	1.799	1.799	2.106	2.417
E (inch)	2.854	2.854	2.854	2.972
H (inch)	3.484	3.484	3.484	3.602
B (inch)	0.807	0.807	0.807	0.807
A (inch)	3.209	3.209	3.209	3.209
C (inch)	2.929	2.929	2.929	2.929
N (inch)	3.346	3.346	3.346	3.583
M (inch)	3.917	3.917	3.937	4.154
F (inch)	31.496	31.496	31.496	31.496
Threads standard	ANSI B1.20.1			
Cv (GPM)	6.7	11.0	11.0	29.4

Torque for actuator sizing in-lb

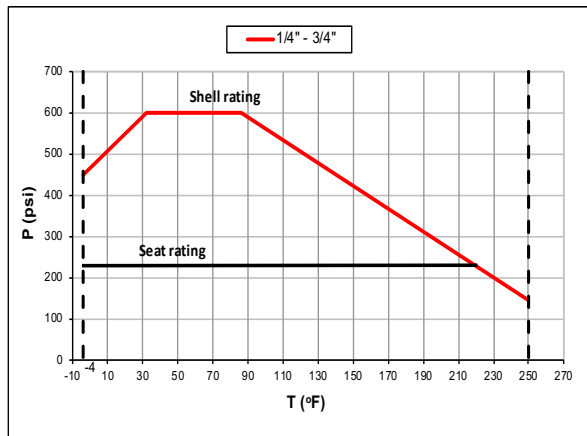
Delta P -->	0-230 PSI
Valve size	in-lb
1/4"-1/2"	16
3/4"	22

Torque correction factors

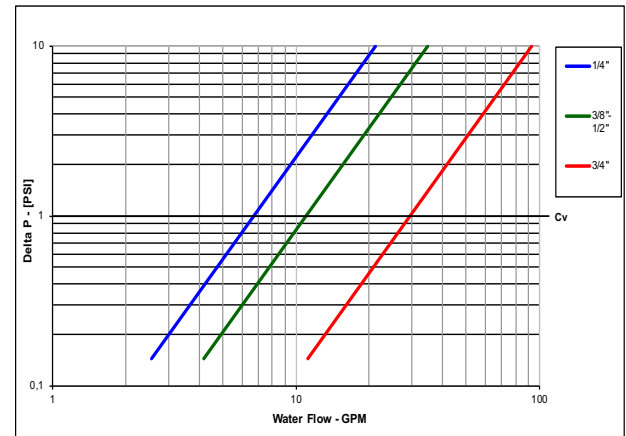
Valve torque can vary according to operating frequency, temperature and friction characteristics of the media. If media has more or less friction than water, multiply torque by the following factors:

Lubricating oils or liquids	0.8
Dry gases, natural gas	1.5
Slurries or liquids bearing abrasive particles	1.5-2.5

Pressure-temperature chart



Pressure drop chart





COMPACT POWER

+ s.6400LT 2-way brass valve

This **RuB** ball valve is specifically designed for heavy duty actuation and offers upmost reliability and performance, in particular:



Quality:

- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Silicone-free lubricant on all seals
- Stainless steel ball for longer life
- 100% seal test guaranteed in according to EN 12266-1 RATE A

Body:

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Integrated ISO5211 / DIN3337 mounting flange for universal connection to actuator
- Finest brass according to EN 12165 and EN 12164 specifications

Stem:

- Double FPM O-rings at the stem for maximum safety
- Blowout-proof stainless steel stem

Sealing:

- Reinforced PTFE self-lubricating seats with flexible-lip and wear compensation design

Threads:

- NPT taper ANSI B.1.20.1 female by female threads

Flow:

- 100% full port for maximum flow

Handle:

- Integrated sturdy ISO 5211 flange allows direct mounting of actuators. See **RuB** line of electric and pneumatic actuators

Working pressure & temperature:

- Shell rating: 600 PSI
- Seat rating: Delta P max permissible 230 PSI non-shock cold working pressure
- -4°F to +350°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options:

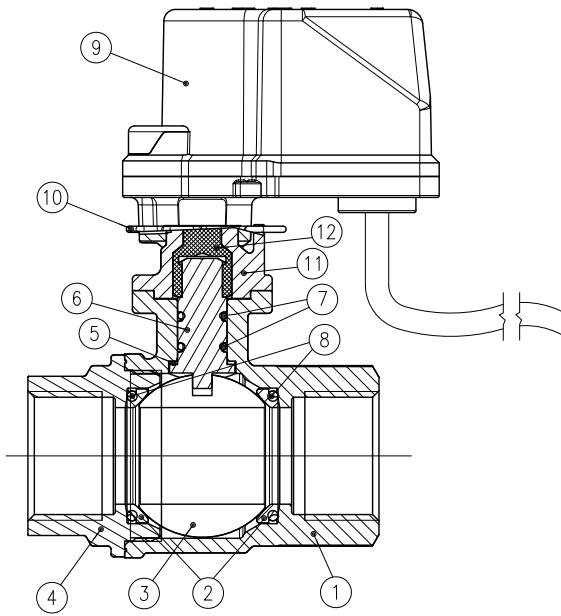
- Brass trim
- s6400LT configuration featuring EN 10226-1, ISO 228 parallel female by female threads, plated body
- Rack and pinion pneumatic actuator (spring return or double acting)
- Compact Power electric actuator for some sizes

Approved by or in compliance with:

- RoHS Compliant (EU)

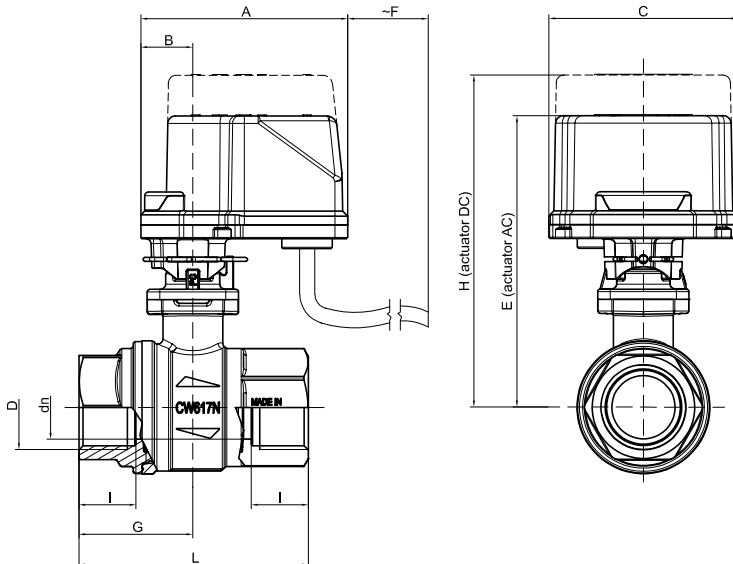
NOTE: approvals apply to specific configurations/sizes only.





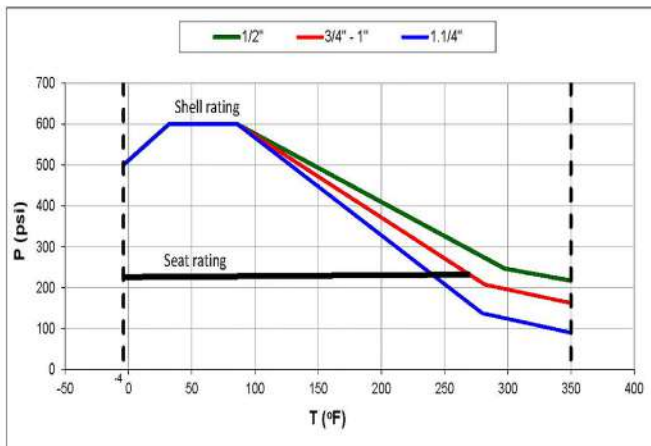
Part description	Qty	Material
1	1	CW617N
2	2	Ptfe graphite* filled 15%
3	1	1.4401 / AISI 316
4	1	CW617N
5	1	Ptfe carbon filled 25%
6	1	1.4401 / AISI 316
7	2	FPM
8	2	FPM
9	1	-
10	1	1.4301 / AISI 304
11	1	Polycarbonate
12	1	CW617N

*For 1" and 1 1/4" sizes material seats is carbographtie



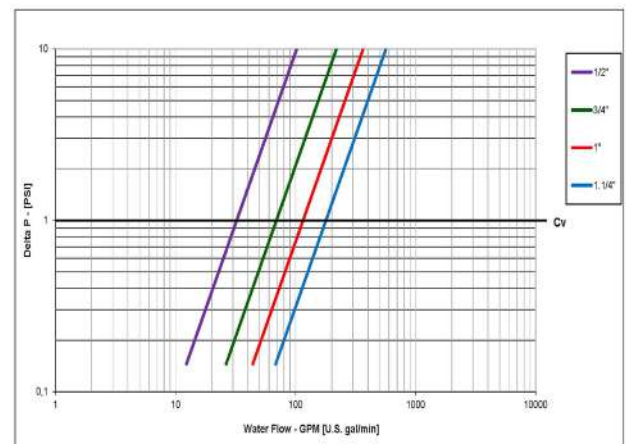
D (valve size)	1/2"	3/4"	1"	1 1/4"
dn (inch)	0.590	0.787	0.984	1.259
I (inch)	0.610	0.708	0.826	0.905
L (inch)	2.598	2.933	3.562	4.094
E (inch)	4.055	4.370	4.527	4.803
H (inch)	4.700	4.996	5.153	5.665
B (inch)	0.807	0.807	0.807	0.807
A (inch)	3.209	3.209	3.209	3.209
C (inch)	2.914	2.914	2.914	2.914
F (inch)	31.496	31.496	31.496	31.496
Cv (GPM)	32.3	69.3	115.5	179.1

Pressure-temperature chart



Seat rating: Delta P max permissible 230 PSI only for 1" and 1 1/4" sizes

Pressure drop chart





COMPACT POWER

+ s.7600 3-way L-port diverting brass valve

The **RuB** s.7641 is the right choice for fluid diversion and is designed with robust maintenance-free components ensuring ease of operation and safety. With a simple 90° turn, you can divert flow from one downstream outlet to the other. It combines traditional manual operation with modern automation. It is also very easy to convert from its sturdy lever handle to ISO 5211 actuator flange assembly. It features low operating torque and a special wear reducing self-compensating valve seat design that meets our 100,000 cycle life test requirement. The valve can be purchased separately, with handle or with a **RuB** actuator already mounted.



Quality:

- Electronic 100% seal test guaranteed
- No metal-to-metal moving parts
- No maintenance ever required
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Each valve is seal tested for maximum safety
- Performs well in any orientation
- Strong configuration

Body:

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Integrated ISO5211 / DIN3337 mounting flange for universal connection to actuator
- Finest brass according to EN 12165 and EN 12164 specifications
- 3-way L- port design for flow diversion

Stem:

- Blowout-proof nickel plated brass stem
- Maintenance-free, double FPM O-rings at the stem for maximum safety
- Stem slot shows ball position

Sealing:

- Reinforced PTFE self- lubricating seats with flexible-lip and wear compensation design

Threads:

- NPT taper ANSI B.1.20.1 female threads

Flow:

- 100% full port for maximum flow

Handle:

- Integrated sturdy ISO 5211 flange allows direct mounting of actuators. See **RuB** line of electric and pneumatic actuators.

Working pressure & temperature:

- 450 PSI non-shock cold working pressure
- -4°F to +350°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options:

- Rack and pinion pneumatic actuator (spring return or double acting)
- Compact Power electric actuator
- EN10226-1/ISO228 parallel female threads
- Lockable handle as accessory or already mounted (s.7641L)
- Various actuator linkage kit

Upon request:

- Custom design
- Stainless steel stem
- Configurations with 4 seats, L-port (s.7241) or T-port (s.7341)

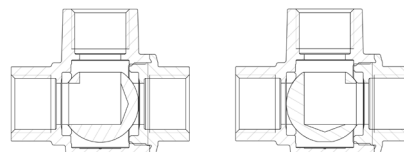
Approved by or in compliance with:

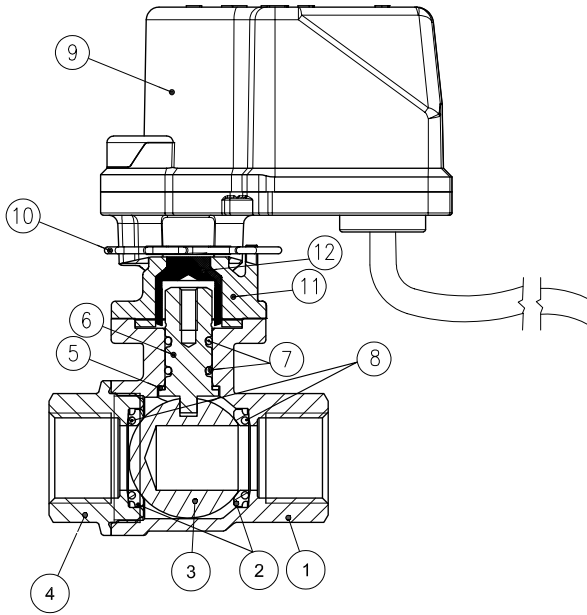
- RoHS Compliant (EU)

NOTE: approvals apply to specific configurations/sizes only.

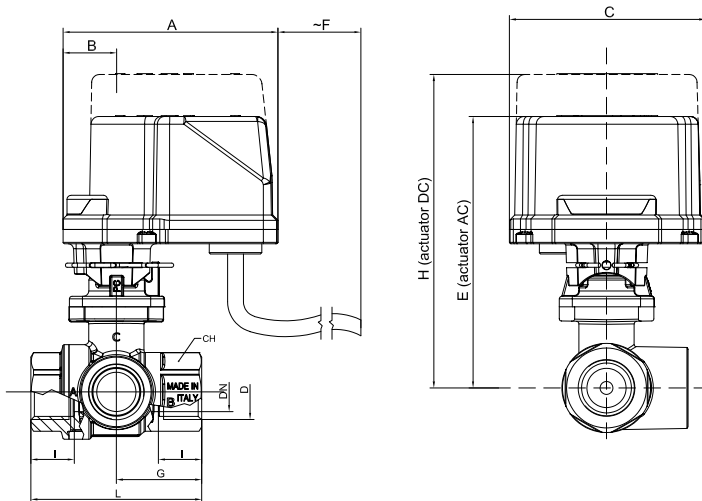


S.76 3-way "L" port operating positions





Part description	Qty	Material
1	1	CW617N
2	2	PTFE graphite filled 15%
3	1	CW617N
4	1	CW617N
5	1	PTFE carbon filled 25%
6	1	CW617N
7	2	FPM
8	2	FPM
9	1	-
10	1	1.4301 / AISI 304
11	1	Polycarbonate
12	1	CW617N



D (valve size)	1/2"	3/4"	1"
dn (inch)	0.591	0.787	0.984
I (inch)	0.610	0.709	0.827
G (inch)	1.280	1.555	1.831
L (inch)	2.559	3.110	3.642
E (inch)	4.075	4.409	4.528
H (inch)	4.705	5.039	5.157
B (inch)	0.807	0.807	0.807
A (inch)	3.209	3.209	3.209
C (inch)	2.914	2.914	2.914
CH (inch)	1.063	1.260	1.614
F (inch)	31.496	31.496	31.496

Torque for actuator sizing in-lb

Delta P -->	0 - 230 PSI	
	To open	To close
1/2"	31	31
3/4"	36	36
1"	40	40

Torque correction factors

Valve torque can vary according to operating frequency, temperature and friction characteristics of the media.

If media has more or less friction than water, multiply torque by the following factors:

Lubricating oils or liquids	0.8
Dry gases, natural gas	1.5
Slurries or liquids bearing abrasive particles	1.5-2.5



E-Tork

150 to 8850 in-lb Heavy Duty Electric Actuators

The ET Series Electric Actuators are available in AC and DC voltages. With output torques from 150 to 8850 inch-pound they are some of the most compact, high-output design in the market.



Technical Features:

- Direct mount on RUB ball valves, for a compact package and perfect shaft alignment
- 50% rated duty cycle reversing motor with thermal overload protection
- Rugged corrosion resistant construction with aluminum housing, durable epoxy/polyurethane
- Coating, 316 stainless shaft and fasteners
- Manual override shaft - stainless steel type 316
- Can be wired in parallel with other
- Working temperature -40° to +150°F
- E-Torks – separate circuits not required
- ISO 5211 mounting
- Fast, simple travel adjustments
- 2 limit switches for travel indication
- Heat treated steel gearing, lubricated for life • 180° travel capability
- NEMA 4 and 4X enclosure

Options:

- Up to 2 additional limit switches



ET Actuator with s.134 SS Ball Valve

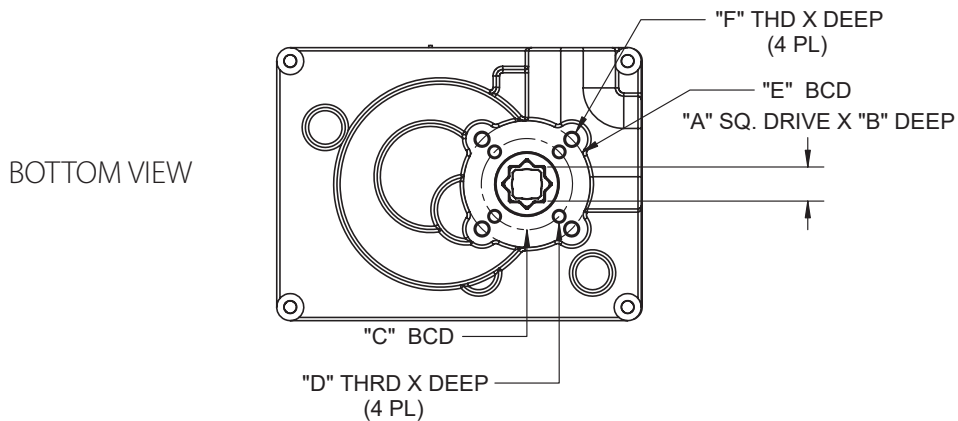
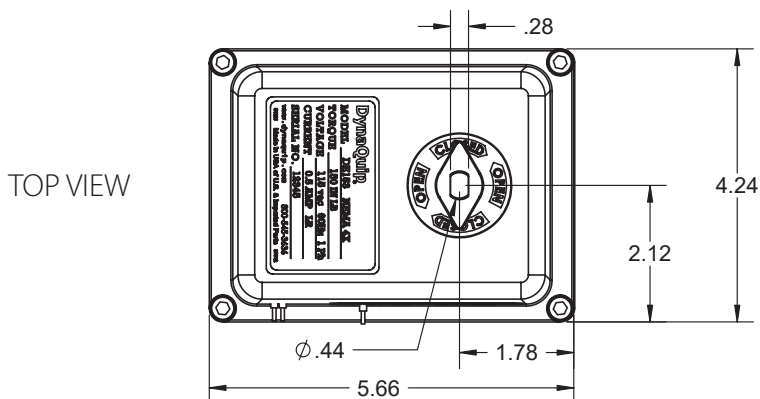
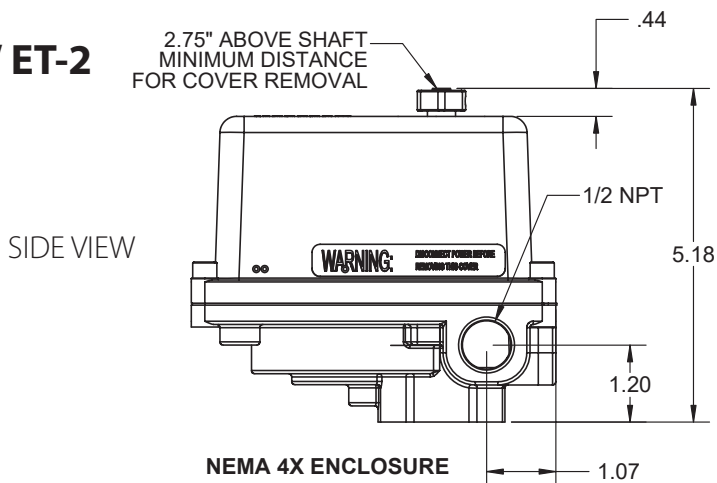
Model	Code	Torque in-lb	Seconds 90°	Power
ET-1	BAA1019N	150	2.5s	110VAC
	BAA1019C	150	2.5s	24 VAC/VDC
	BAA1019A	150	2.5s	220VAC
ET-2	BAA1020N	300	6s	110VAC
	BAA1020C	300	6s	24 VAC/VDC
	BAA1020A	300	6s	220VAC
ET-3	BAA1021N	443	20s	110VAC
	BAA1021C	443	20s	24 VAC
	BAA1021D	443	20s	24 VDC
	BAA1021A	443	20s	220VAC
ET-4	BAA1022N	795	15s	110VAC
	BAA1022C	795	15s	24 VAC
	BAA1022D	795	15s	24 VDC
	BAA1022A	795	15s	220VAC
ET-5	BAA1023N	1.325	22s	110VAC
	BAA1023C	1.325	22s	24 VAC
	BAA1023D	1.325	22s	24 VDC
	BAA1023A	1.325	22s	220VAC
ET-6	BAA1024N	2.000	26s	110VAC
	BAA1024C	2.000	26s	24 VAC
	BAA1024D	2.000	26s	24 VDC
	BAA1024A	2.000	26s	220VAC
ET-7	BAA1025N	3.540	16s	110VAC
	BAA1025C	3.540	16s	24 VAC
	BAA1025D	3.540	16s	24 VDC
	BAA1025A	3.540	16s	220VAC
ET-8	BAA1026N	4.425	28s	110VAC
	BAA1026C	4.425	28s	24 VAC
	BAA1026D	4.425	28s	24 VDC
	BAA1026A	4.425	28s	220VAC
ET-9	BAA1027N	5.750	35s	110VAC
	BAA1027C	5.750	35s	24 VAC
	BAA1027D	5.750	35s	24 VDC
	BAA1027A	5.750	35s	220VAC
ET-10	BAA1028N	8.850	46s	110VAC
	BAA1028C	8.850	46s	24 VAC
	BAA1028D	8.850	46s	24 VDC
	BAA1028A	8.850	46s	220VAC



Dimensions:

Dimensions are in inches

ET-1 / ET-2

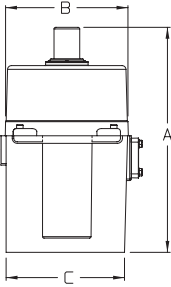
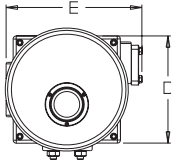


Model	Torque In-lb	Speed sec/90°	A	B	C	D	E	F	AMPS LOCKED ROTOR		WT. LBS
									AC	12-24 DC/AC	
ET-1	150	2.5	0.354 (9 mm)	0.53	1417 (F03)	M5 0.44 DP	1969 (F05)	M6 0.46 DP	0.5	3.0	4.0
ET-2	3006	6	0.551 (14 mm)	0.68	1417 (F03)	M5 0.46 DP	1969 (F05)	M6 0.46 DP	0.5	3.0	4.0

Dimensions:

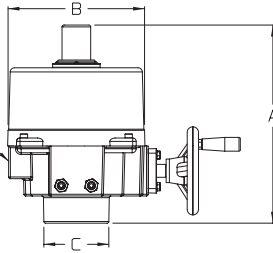
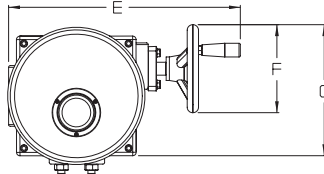
Dimensions are in inches

ET-3



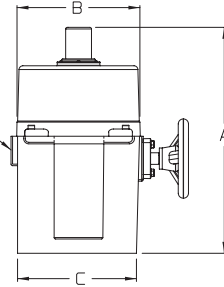
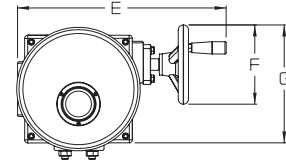
1/2 NPT
2 PLACES

**ET-4 / ET-5 / ET-6
ET-7 / ET-8 / ET-9**



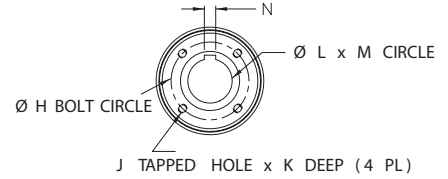
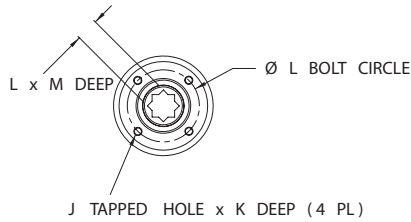
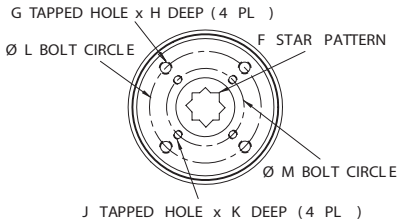
1/2 NPT
2 PLACES

ET-10



1/2 NPT
2 PLACES

ET-10



Model	Torque In-lb	Cycle Time	A	B	C	D	E	F	G	H	J	K	L	M	N
ET-3	443	20 sec	7.730 (196)	4.490 (114)	3.839 (98)	4.185 (106)	5.101 (130)	0.664 (17)	M6	0.590 (15)	M8	0.750 (19)	2.750 (70)	1.969 (50)	--
ET-4	795	15 sec													
ET-5	1325	22 sec	10.04 (255)	7.87 (200)	3.55 (90.1)	--	13 (330)	4.92 (125)	7.87 (200)	2.76 (70)	M8	0.75 (19)	.866 (22)	1.18 (30)	--
ET-6	2000	26 sec													
ET-7	3540	16 sec													
ET-8	4425	28 sec	12.40 (315)	9.21 (234)	4.92 (125)	--	14.96 (380)	7.68 (195)	11.81 (300)	4.02 (102)	M10	0.63 (16)	1.417 (36)	1.57 (40)	--
ET-9	5750	35 sec													
ET-10	8850	46 sec	23.23 (590)	10.24 (260)	7.09 (180)	--	17.72 (450)	11.61 (295)	13.39 (340)	5.51 (140)	M16	1.14 (29)	1.378 (35)	2.36 (60)	0.39 (10)

XCESETU - 4237



C-Tork Actuator

Compact lightweight electric actuator

The CT electric actuators are designed to drive ball and butterfly valves with ISO5211 mounting pad, providing a quarter turn motion. In combination with **RUB** valves are used in wastewater treatment plants, power plants, refineries, mining processes, food factories and in the fluid automated control in HVAC.



The CT family provides the following output torques:

Model	Nominal Torque
CT1	70.8 lb-in (8 Nm)
CT2	97.3 lb-in (11 Nm)
CT3	194.7 lb-in (22 Nm)
CT4	354 lb-in (40 Nm)



Technical features & benefits:

- **Direct ISO 5211 mount on valves.**
Requires no separate linkage because the CT Series Actuators are ready for direct attachment to ISO5211 mounting pad.
- **Compact package with perfect shaft alignment.**
Smaller actuator footprint enables installation in confined spaces; direct mount on ball valves reduces the mounting space requirement.
- **Several voltage ratings available.**
Available with the most common power supplies around the globe.
- **Fire retardant plastic with high IP ratings enclosure.**
Provides a high degree of protection from dust, splashing water, rough handling and tough environments.
- **Auxiliary Switches.**
Provides line voltage capable switch up to 1 A Resistive.
- **Special models available.**
The CT family fits the customer needs extending the application coverage on request.

Key Codes:

CT	X	X	X	X	X	X	
							Option: R = Anti-condensation Resistance FO = Failsafe Valve Open FC = Failsafe Valve Close
							Auxiliary Switches: 0 = No Micro 1 = 1 Aux. Switch 2 = 2 Aux. Switches
							Manual Override: M = Manual Override N = No Manual
							Control Type: A = 2 Wires B = 3 Wires C = 2 & 3 Wires D = Prop. 0 - 10 Vdc E = Prop. 2 - 10 Vdc F = Prop. 0 - 20 mA G = Prop. 4 - 20 mA
							Power Supply: A = 230Vac 50/60 Hz * B = 110Vac 50/60 Hz * C = 24Vac 50/60 Hz * D = 24Vdc E = 12Vdc F = 24Vac/dc G = 48 - 240Vac H = 230Vac 60 Hz ** I = 110Vac 60Hz ** L = 24Vac 60Hz **
							Model: CT1 = 70.8 lb-in (8Nm) CT2 = 97.3 lb-in (11Nm) CT3 = 194.7 lb-in (22Nm) CT4 = 354 lb-in (40Nm)

Note: * Not valid for CT4 (50 Hz only), ** Valid for CT4 only

Ask for additional information on the whole range of **RuB, Inc.** products and consult with your supplier for special applications.



CT1 - 70.8 lb-in (8 Nm)



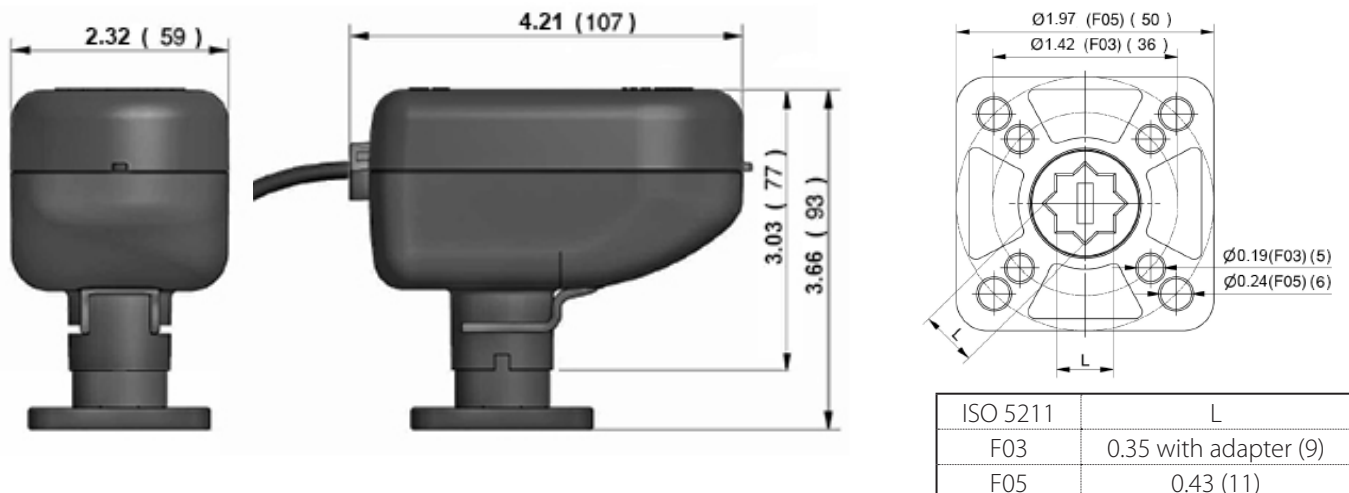
Ordering Codes

Code	Power supply	Control Type	Running time (0°-90°)	Feedback type
CT1AAN1	230 Vac 50/60 Hz	2 wires	45 sec @ 50Hz 38 sec @ 60Hz	1 microswitch & 1 output phase
CT1BAN1	110 Vac 50/60 Hz	2 wires	45 sec @ 50Hz 38 sec @ 60Hz	
CT1CAN1	24 Vac 50/60 Hz	2 wires	45 sec @ 50Hz 38 sec @ 60Hz	
CT1ABN1	230 Vac 50/60 Hz	3 wires	35 sec @ 50Hz 30 sec @ 60Hz	
CT1BBN1	110 Vac 50/60 Hz	3 wires	35 sec @ 50Hz 30 sec @ 60Hz	
CT1CBN1	24 Vac 50/60 Hz	3 wires	35 sec @ 50Hz 30 sec @ 60Hz	
CT1DCN0	24V DC	2 & 3 wires	60 sec.	2 output phases
CT1FDN0	24V DC / AC ± 20% 50/60 Hz	Modulating 0-10Vdc	60 sec.	2 - 10 Vdc

Optional models on request:

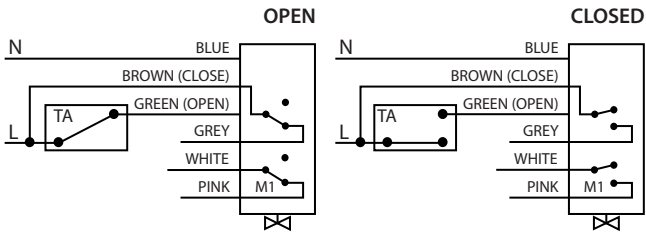
- 44.2 lb-in with 15 sec running time, Vac only
- Vdc 2 & 3 wires 30 sec running time
- 12 Vdc power supply, 2/3 wires 60 secs running time
- Different Input signal on modulating: 0(2)-10 Vdc, 0(4)-20 mA
- Modbus Communication
- On/Off 3 positions (0°, 45° and 90°)

Dimensions inches (mm)

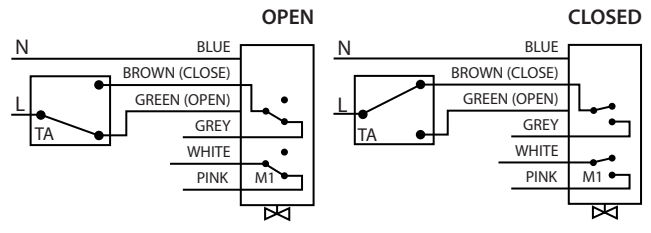


Wiring diagrams

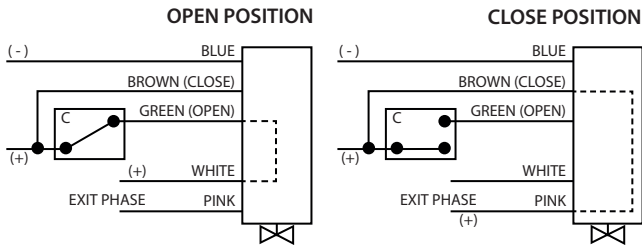
Vac models 2 wires control



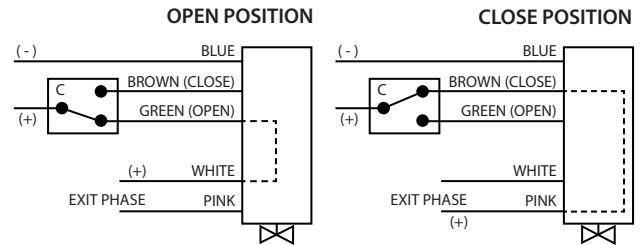
Vac models 3 wires control



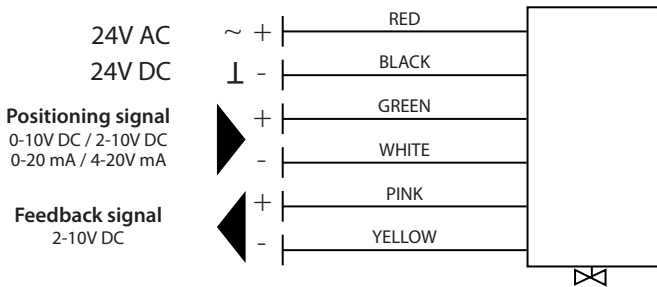
Vdc models 2 wires control



Vdc models 3 wires control



Proportional models



Technical specification

	2 wires Vac	3 wires Vac	2 & 3 wires Vdc	Modulating
Position indicator	Rotating arrow, indicating the position of the sphere			
Power supply	230 V - 50/60 Hz		24Vdc	24V DC / AC ± 20% 50/60 Hz
	24 V - 50/60 Hz		12Vdc	
	110 V - 50/60 Hz			
Power cable length	31.5 inches (80 cm) (other sizes on request)			
Operating time (90°) and related starting torque	45 sec @ 50Hz	35 sec @ 50Hz	60 sec	60 sec
	38 sec @ 60Hz	30 sec @ 60Hz		
Absorbed power	3.9 VA		2 VA	3.5 W
Electrical capacity of the additional microswitch	1 A resistive - 250V		Not available	
Maximum noise (1 meter away)	40 dB (A)			
Operating ambient temperature	41°F to 122°F (+5 °C to +50°C)			
Degree of protection	IP 54 (Equivalent to NEMA3)			
Insulation class	II - double insulation □			
Outer shell material	Polyamide PA 6 - 30% glass fibers			
Certification	CE			



CT2 - 97.3 lb-in (11 Nm)



Ordering Codes

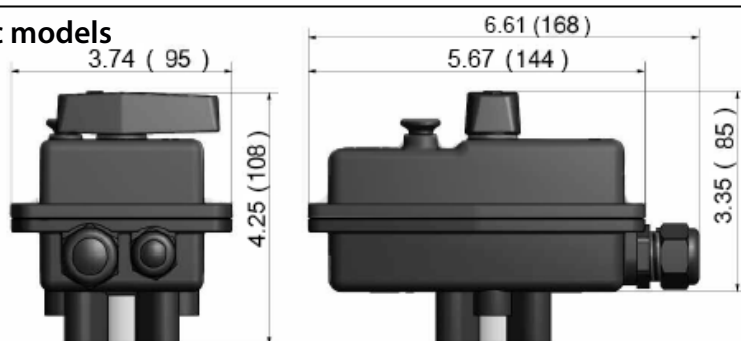
Code	Power supply	Control Type	Running time (0°-90°)	Feedback type
CT2ACM2	230 Vac - 50/60 Hz	2 & 3 wires	35 sec @ 50Hz 30 sec @ 60Hz	2 x Free auxiliary switches
CT2BCM2	110 Vac - 50/60 Hz	2 & 3 wires	35 sec @ 50Hz 30 sec @ 60Hz	
CT2CCM2	24 Vac - 50/60 Hz	2 & 3 wires	35 sec @ 50Hz 30 sec @ 60Hz	
CT2DCN2	24V DC	2 & 3 wires	12 sec.	

Optional models on request:

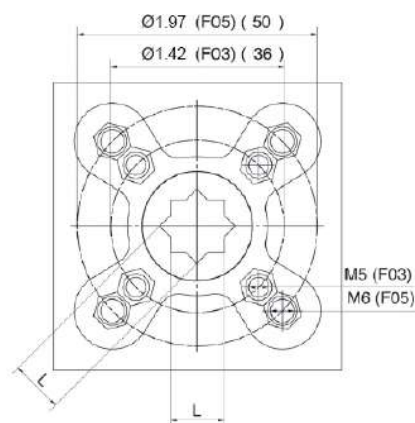
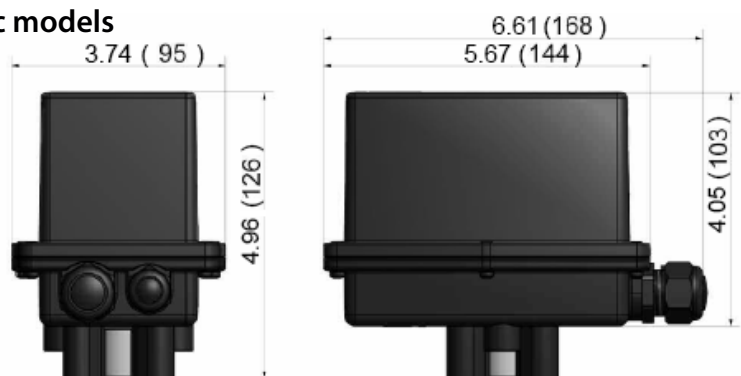
- 12 Vdc power supply
- Optional speed:
 - Vac only : 12 sec or 4 sec (44.2 lb-in)
 - Vdc only : 8 sec and 5 sec (97.3 lb-in); 3 sec (70.8 lb-in); 1 sec (44.2 lb-in)
- Proportional models: 0(2)-10 Vdc, 0(4)-20 mA, Modbus
- Electronic fail safe (see page 46)

Dimensions inches (mm)

Vac models



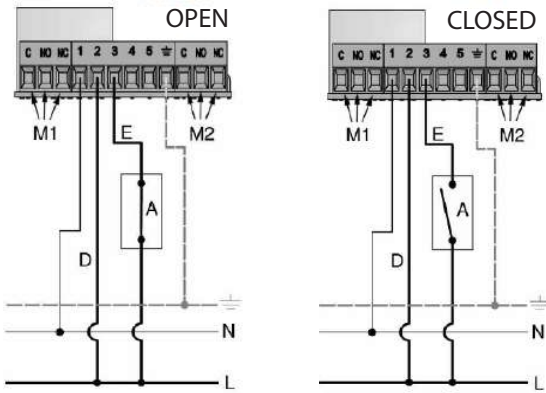
Vdc models



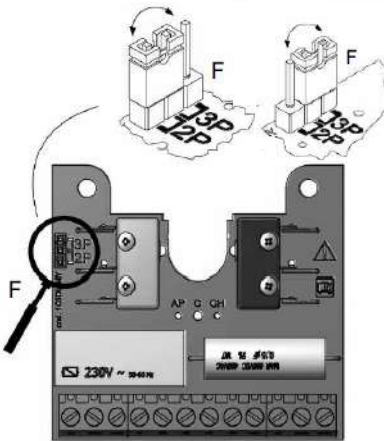
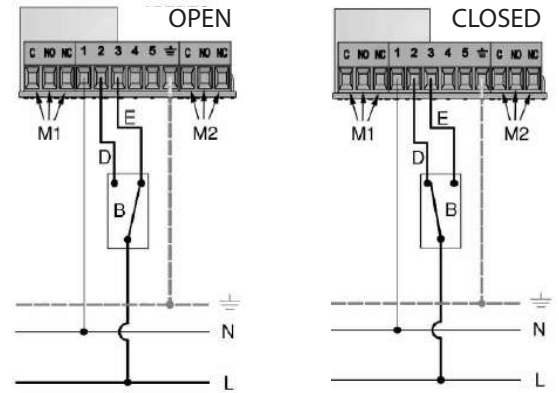
ISO 5211	L
F03	0.35 with adapter (9)
F05	0.43 (11)

Wiring diagrams

2 wires control



3 wires control

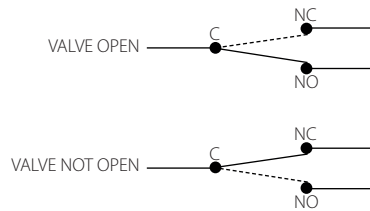


Vac models: Move the jumper to have the desired electrical connection.

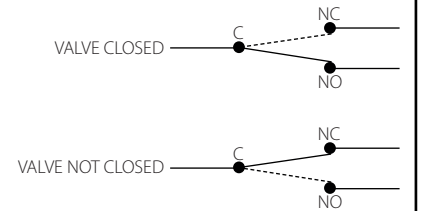
Vdc models: No jumper change is needed

Auxiliary switches

M1 (additional opening microswitch)



M2 (additional closing microswitch)



Technical specification

	ALL IN ONE - 2 & 3 wires Vac	ALL IN ONE - 2 & 3 wires Vdc
Position indicator and manual override	Manual lever with arrow indicating the position of the sphere	Not available
Power supply	230 V - 50/60 Hz	24Vdc
	110 V - 50/60 Hz	12Vdc
	24 V - 50/60 Hz	
Electric connections	Via terminal board inside the actuator	
Operating time (90°)	35 sec @ 50Hz 30 sec @ 60Hz	12 sec
Absorbed power	6 VA (230 V)	0.3A (24Vdc)
	6 VA (110 V)	
	7.5 VA (24 V)	0.5A (12 Vdc)
Maximum current supported by the additional microswitches	1 A resistive	Not available
Maximum noise (1 meter away)	35 dB (A) standard version	47 dB (A) standard version
Operating ambient temperature	14°F to 122°F (-10 °C to +50°C)	
Degree of protection	IP 67 (Equivalent to NEMA6)	
Outer casing	Characterized by a ribbed shape made of glass-filled "polyarylamide" technopolymer, particularly robust and impermeable to humidity	
Certification	CE	



CT3 - 194.7 lb-in (22 Nm)



Ordering Codes

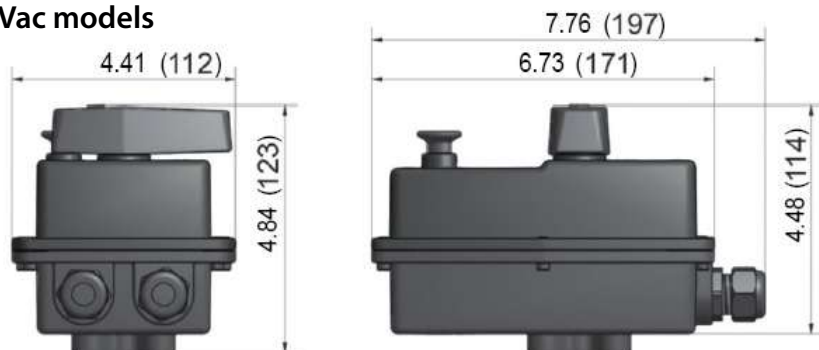
Code	Power supply	Control Type	Running time (0°-90°)	Feedback type
CT3ACM2	230 Vac - 50/60 Hz	2 & 3 wires	45 sec @ 50Hz 38 sec @ 60Hz	2 x Free auxiliary switches
CT3BCM2	110 Vac - 50/60 Hz	2 & 3 wires	45 sec @ 50Hz 38 sec @ 60Hz	
CT3CCM2	24 Vac - 50/60 Hz	2 & 3 wires	45 sec @ 50Hz 38 sec @ 60Hz	
CT3DCN2	24V DC	2 & 3 wires	30 sec.	

Optional models on request:

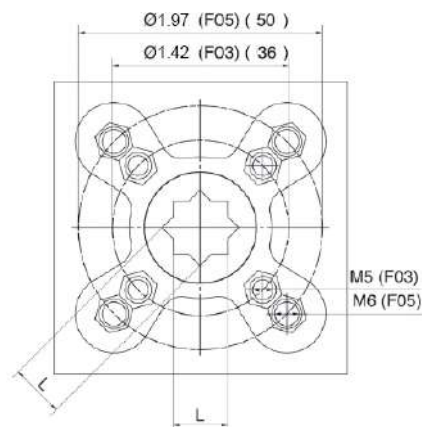
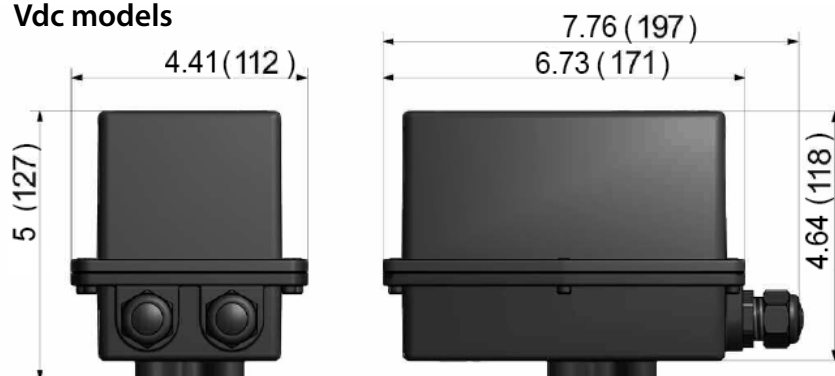
- 12 Vdc power supply
- Optional speed: - Vac only : 9 sec
- Vdc only: 10 sec
- Proportional models: 0(2)-10 Vdc, 0(4)-20 mA, Modbus
- Electronic fail safe (see page 46)

Dimensions inches (mm)

Vac models



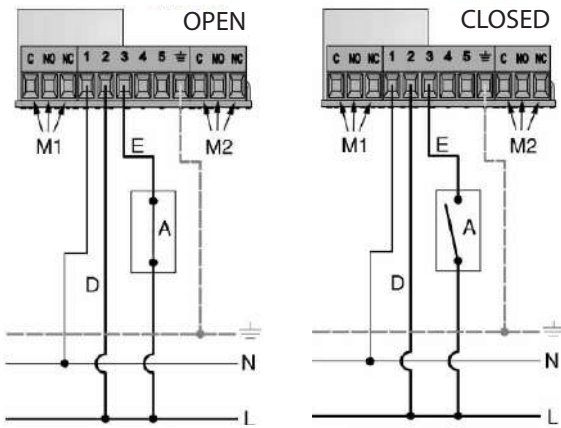
Vdc models



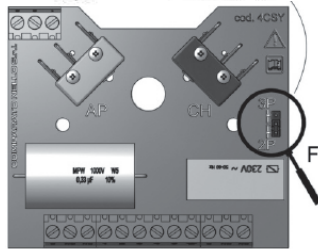
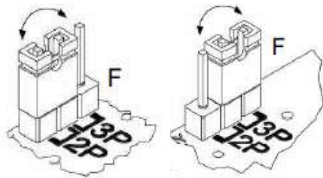
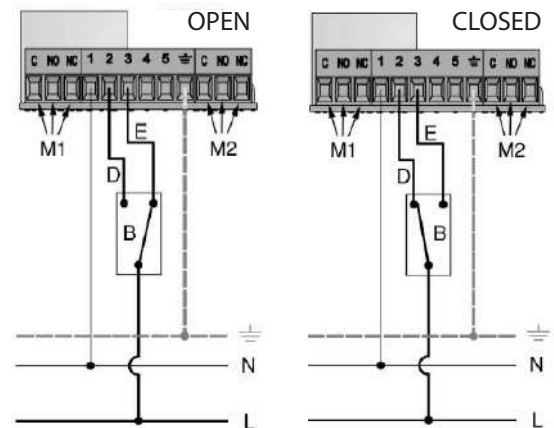
ISO 5211	L
F03	0.35 with adapter (9)
F05	0.43 (11)

Wiring diagrams

2 wires control



3 wires control

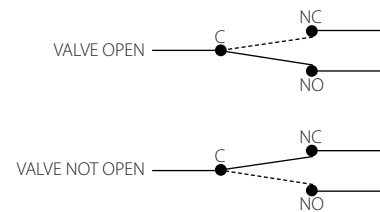


Vac models: Move the jumper to have the desired electrical connection.

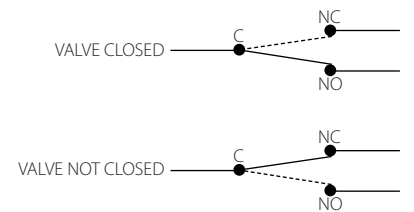
Vdc models: No jumper change is needed

Auxiliary switches

M1 (additional opening microswitch)



M2 (additional closing microswitch)



Technical specification

	ALL IN ONE - 2 & 3 wires Vac	ALL IN ONE - 2 & 3 wires Vdc
Position indicator and manual override	Manual lever with arrow indicating the position of the sphere	Not available
Power supply	230 V - 50/60 Hz	24Vdc
	110 V - 50/60 Hz	12Vdc
	24 V - 50/60 Hz	
Electric connections	Via terminal board inside the actuator	
Operating time (90°)	45 sec	30 sec
Absorbed power	5 VA (230 V)	0.25 A (24Vdc)
	5 VA (110 V)	
	6 VA (24 V)	0.4 A (12 Vdc)
Maximum current supported by the additional microswitches	1 A resistive	
Maximum noise (1 meter away)	42 dB (A) standard version	52 dB (A) standard version
Operating ambient temperature	14°F to 122°F (-10 °C to +50°C)	
Degree of protection	IP 67 (Equivalent to NEMA6)	
Outer casing	Characterized by a ribbed shape made of glass-filled "polyarylamide" technopolymer, particularly robust and impermeable to humidity	
Certification	CE	



CT4 - 354 lb-in (40 Nm)



Ordering Codes

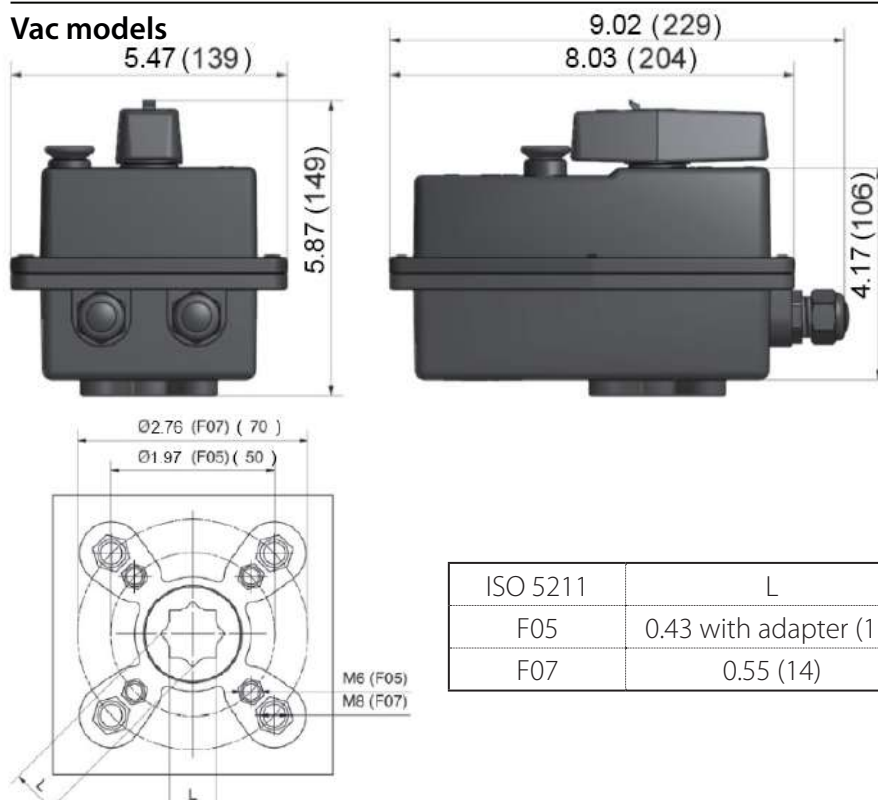
Code	Power supply	Control Type	Running time (0°-90°)	Feedback type
CT4ACM2	230 Vac 50 Hz	2 & 3 wires	55 sec.	2 x Free auxiliary switches
CT4BCM2	110 Vac 50 Hz	2 & 3 wires	55 sec.	
CT4CCM2	24 Vac 50 Hz	2 & 3 wires	55 sec.	
CT4HCM2	230 Vac 60Hz	2 & 3 wires	45 sec.	
CT4ICM2	110 Vac 60Hz	2 & 3 wires	45 sec.	
CT4LCM2	24 Vac 60Hz	2 & 3 wires	45 sec.	

Optional models on request:

- 24Vdc and 12 Vdc power supply
- Optional speed: - Vac only : 14 sec and 32 sec
- Proportional models: 0(2)-10 Vdc, 0(4)-20 mA, Modbus
- Electronic fail safe (see page 46)

Dimensions inches (mm)

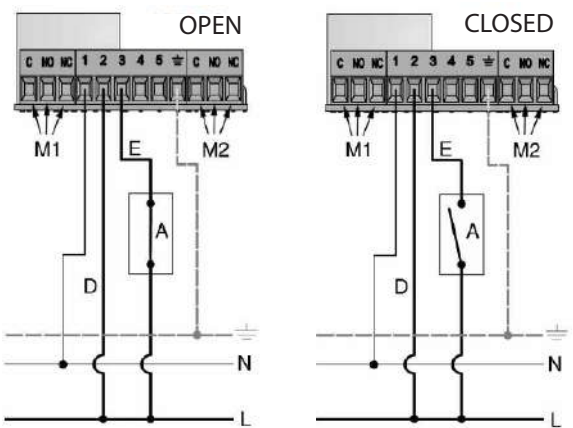
Vac models



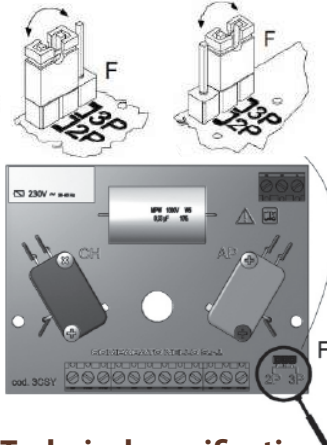
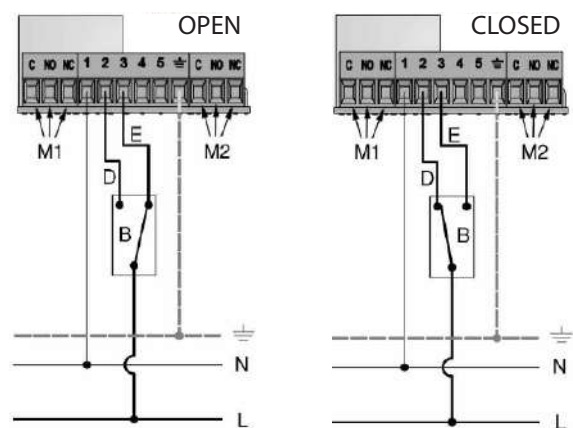
ISO 5211	L
F05	0.43 with adapter (11)
F07	0.55 (14)

Wiring diagrams

2 wires control



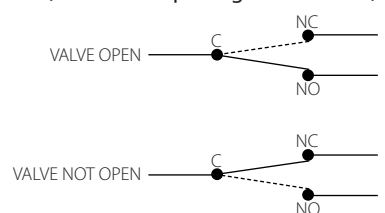
3 wires control



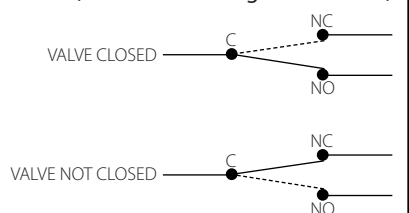
Vac models: Move the jumper to have the desired electrical connection.

Auxiliary switches

M1 (additional opening microswitch)



M2 (additional closing microswitch)



Technical specification

	ALL IN ONE - 2 & 3 wires
Position indicator and manual override	Manual lever with arrow indicating the position of the sphere
Power supply	230 V - 50 Hz
	110 V - 50 Hz
	24 V - 50 Hz
Electric connections	Via terminal board inside the actuator
Operating time (90°)	55 sec @ 50Hz 45 sec @ 60 Hz
Maximum absorbed power (standard version 55sec)	13 VA (230 V)
	11 VA (110 V)
	12 VA (24 V)
Maximum current on the output phase at terminals 4 and 5	1 A resistive
Maximum current supported by the additional microswitches	1 A resistive
Maximum noise (1 meter away)	50 dB (A) standard version
Operating ambient temperature	14°F to 122°F (-10 °C to +50°C)
Degree of protection	IP 67 (Equivalent to NEMA6)
Outer casing	Characterized by a ribbed shape made of glass-filled "polyarylamide" technopolymer, particularly robust and impermeable to humidity
Certification	CE



Super capacitors electronic Fail Safe actuators

Using the SuperCaps technology the CT2, CT3 and CT4 actuators can store the necessary energy to drive open or close the valve in a safety position during an electrical power supply interruption. Fail safe open or close position in valves is crucial to prevent serious damages in critical applications such as coils freezing or steam exchangers overpressure. By default they are all provided with a 2-10 Vdc feedback, two auxiliary switches and 1m cable length.

Ordering Codes

Code	Torque (in/lb)	Power supply
CT2FCM2Fx	97.4	24Vdc - 24V 50/60 Hz
CT2GCM2Fx	97.4	100...240V 50/60 Hz
CT3FCM2Fx	194.7	24Vdc - 24V 50/60 Hz
CT3GCM2Fx	194.7	100...240V 50/60 Hz
CT4FCM2Fx	354	24Vdc - 24V 50/60 Hz
CT4GCM2Fx	354	100...240V 50/60 Hz

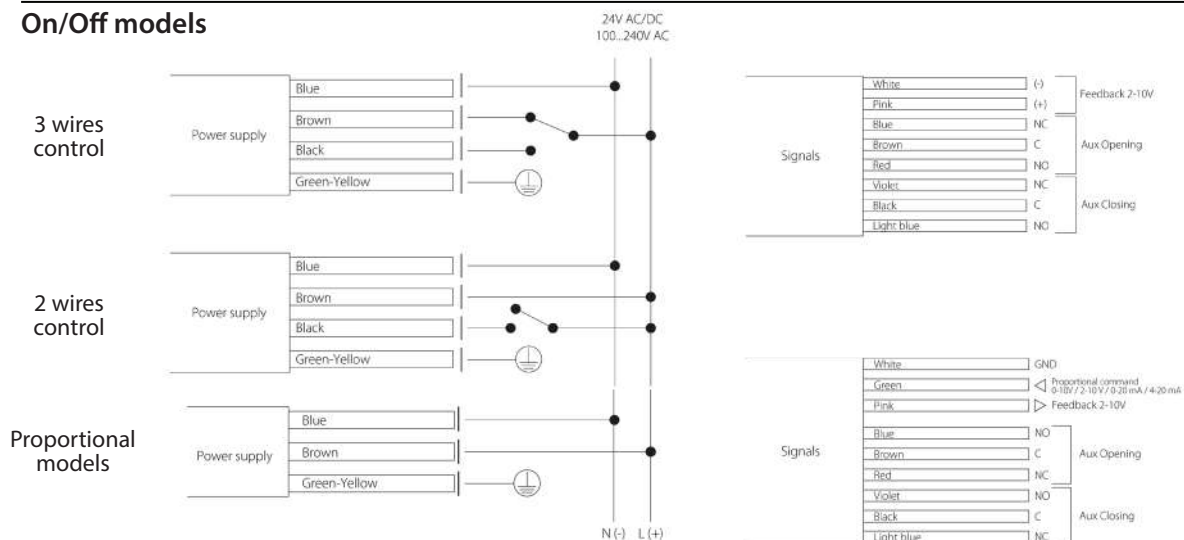
Note: X=O for Fail safe valve open; C for Fail Safe valve close X

Technical specification - Fail safe Models

	CT2	CT3	CT4
Available power supply	24Vdc - 24V 50/60 Hz - 100...240V 50/60Hz		
Max. Running power consumption	10W	25W	25W
Power supply cable	40 in. (1 m) length AWG20		
Signal cable	40 in. (1 m) length AWG24		
Auxiliary switches rating	max 30V DC - 0.1 A	max 30V DC - 0.1 A	max 30V DC - 0.1 A
Nominal Torque	97.3 lb-in	194.7 lb-in	354 lb-in
Available control type	On/off 2 & 3 wires - proportional		
Valve position feedback	2 -10V DC		
Manual Override	Manual lever with arrow indicating the position of the sphere		
Running Speed (90°)	30s		
Fail safe speed(90°)	20 s	26 s	30 s
Max Noise	45 dB (A)	60 dB (A)	65 dB (A)
Degree of protection	IP67		
SuperCaps recharging time	15 min (90°)	15 min (90°)	50 min (90°)
Operating ambient temperature	14°F to 122°F (-10°C to 50°C)		
Certification	CE		


Wiring diagrams


On/Off models





Valves combination



s.64 Low Torque	code	size	ΔP	CT1 - 70.8 lb-in	CT2 - 97.3 lb-in	CT3 - 194.2 lb-in	CT4 - 354 lb-in
	S64FxxA	1"	0 - 87 PSI (0 - 6 Bar)	•	•		
	S64GxxA	1 1/4"		•	•		
	S64HxxA	1 1/2"		•	•		
	S64lxxA	2"		•	•		
	code	size	ΔP	CT1 - 70.8 lb-in	CT2 - 97.3 lb-in	CT3 - 194.2 lb-in	CT4 - 354 lb-in
	S64FxxA	1"	87 - 232 PSI (6 - 16 Bar)	•	•		
	S64GxxA	1 1/4"		•	•		
	S64HxxA	1 1/2"		•	•		
S64lxxA	2"			•			

s.64	code	size	ΔP	CT1 - 70.8 lb-in	CT2 - 97.3 lb-in	CT3 - 194.2 lb-in	CT4 - 354 lb-in
	S64Dxx	1/2"	0 - 217 PSI (0 - 15 Bar)	•	•		
	S64Exx	3/4"		•	•		
	S64Fxx	1"		•	•		
	S64Gxx	1 1/4"			•		
	S64Hxx	1 1/2"					•
	S64lxx	2"					•
	code	size	ΔP	CT1 - 70.8 lb-in	CT2 - 97.3 lb-in	CT3 - 194.2 lb-in	CT4 - 354 lb-in
	S64Dxx	1/2"	217 - 580 PSI (15 - 40 Bar)	•	•		
	S64Exx	3/4"		•	•		
	S64Fxx	1"		•	•		
	S64Gxx	1 1/4"				•	
S64Hxx	1 1/2"					•	
S64lxx	2"					•	

s.134	code	size	ΔP	CT1 - 70.8 lb-in	CT2 - 97.3 lb-in	CT3 - 194.2 lb-in	CT4 - 354 lb-in
	134Dxx	1/2"	0 - 203 PSI (0 - 14 Bar)	•	•		
	134Exx	3/4"		•	•		
	134Fxx	1"				•	
	134Gxx	1 1/4"				•	
	134Hxx	1 1/2"					•
	134lxx	2"					•

s.73 & s.76	code	size	ΔP	CT1 - 70.8 lb-in	CT2 - 97.3 lb-in	CT3 - 194.2 lb-in	CT4 - 354 lb-in
	S73Dxx	1/2"	0 - 232 PSI (0 - 16 Bar)		•		
	S73Exx	3/4"				•	
	S73Fxx	1"					•
	code	size	ΔP	CT1 - 70.8 lb-in	CT2 - 97.3 lb-in	CT3 - 194.2 lb-in	CT4 - 354 lb-in
	S76Dxx	1/2"	0 - 232 PSI (0 - 16 Bar)	•	•		
	S76Exx	3/4"		•	•		
	S76Dxx	1"		•	•		

XCESCTU - Rev: 0



s.6439 NPT

1/2" – 2", SS trim, ISO 5211

More and more automation is required at all levels in our society and the s.64 **RuB** range is the answer to all needs for reliable actuated ball valve.

It features special seat design to automatically compensate for wear and it has successfully passed 100,000 cycle life tests.

You can purchase the valve alone or with **RuB** actuator already mounted.



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Silicone-free lubricant on all seals
- Stainless steel ball for longer life

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Integrated ISO 5211 and DIN 3337 mounting flange for universal connection to actuator
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Maintenance-free, double FPM O-rings at the stem for maximum safety
- Blowout-proof stainless steel stem

Sealing

- Reinforced PTFE self-lubricating seats with flexible-lip and wear compensation design

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Flow

- 100% full port for maximum flow

Handle

- Integrated sturdy ISO 5211 flange allows direct mounting of electric and pneumatic actuators, with no bracket or coupling required. See **RuB** line of electric and pneumatic actuators.

Working pressure & temperature

- 600 PSI non-shock cold working pressure
- -4°F to +350°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- k.64 configuration featuring EN 10226-1, ISO 228 parallel female by female threads, plated body, valve length according to DIN 3357 specification, pure PTFE seats
- Rack and pinion pneumatic actuator (spring return or double acting)
- Compact power electric actuator for some sizes
- Manual lockable handle
- Brass trim (s.6441)

Upon request

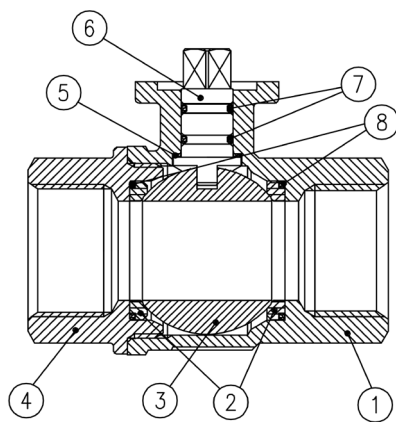
- Custom design

Approved by or in compliance with

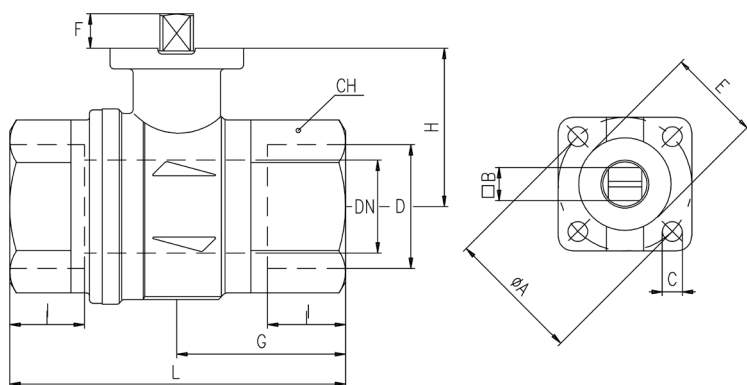
- Water Regulations Advisory Scheme (United Kingdom)
- GOST-R (Russia)
- RoHS Compliant (EU)

NOTE: approvals apply to specific configurations/sizes only.





Part description	Qty	Material
1 Unplated body	1	CW617N
2 Ball seat	2	PTFE carbographite filled 15%
3 Stainless steel ball	1	1.4401 / AISI 316
4 Unplated end-cap	1	CW617N
5 Washer	1	PTFE carbon filled 25%
6 Stainless steel stem O-ring design	1	1.4401 / AISI 316
7 O-Ring	2	FPM
8 O-Ring	2	FPM



Code	S64D39	S64E39	S64F39	S64G39	S64H39	S64I39
D (inch)	1/2	3/4	1	1 1/4	1 1/2	2
DN(inch)	0.590	0.787	0.984	1.259	1.575	1.968
I (inch)	0.610	0.708	0.826	0.905	0.964	1.043
L (inch)	2.598	2.933	3.562	4.094	4.606	5.314
G (inch)	1.201	1.456	1.791	2.047	2.322	2.657
H (inch)	1.220	1.515	1.673	2.185	2.441	2.716
CH(inch)	1.063	1.259	1.614	1.968	2.165	2.756
ØA(inch)	1.417	1.417	1.417	1.968	1.968	1.968
□B(inch)	0.354	0.354	0.354	0.551	0.551	0.551
C (inch)	0.220	0.220	0.220	0.259	0.259	0.259
E(inch)	0.984	0.984	0.984	1.378	1.378	1.378
F(inch)	0.295	0.334	0.334	0.570	0.570	0.570
Flange connection DIN ISO 5211 DIN 3337	F03	F03	F03	F05	F05	F05
Cv (GPM)	32.3	69.3	115.5	179.1	283.1	335.0

Torque for actuator sizing in-lb

Delta P -->	0-200 PSI		600 PSI	
	to open	to close	to open	to close
Valve size				
1/2"	25	15	25	15
3/4"	33	20	33	20
1"	62	37	62	37
1 1/4"	104	111	121	111
1 1/2"	220	180	273	180
2"	262	222	327	222

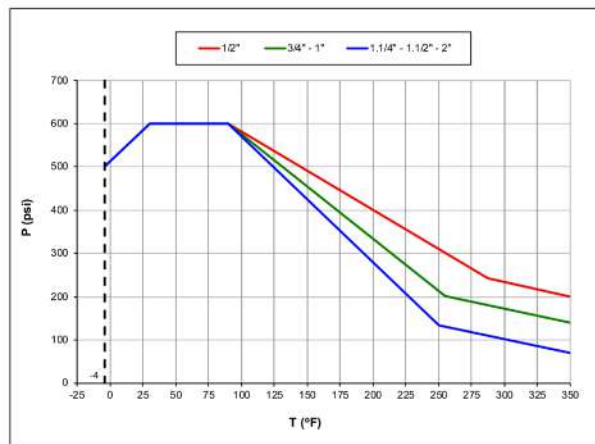
Torque correction factors

Valve torque can vary according to operating frequency, temperature and friction characteristics of the media.

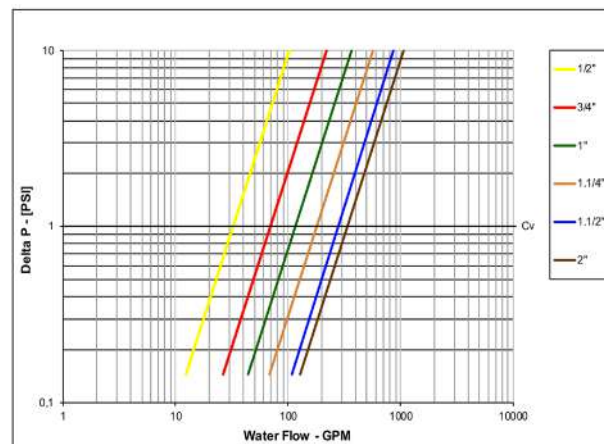
If media has more or less friction than water, multiply torque by the following factors.

- Lubricating oils or liquids 0.8
- Dry gases, natural gas 1.5
- Slurries or liquids bearing abrasive particles 1.5-2.5

Pressure-temperature chart



Pressure drop chart



XCES6439 - 4266



s.6439 LT NPT

1" – 2", SS trim, ISO 5211, low torque

More and more automation is required at all levels in our society and the s.64 **RuB** range is the answer to all needs for reliable actuated ball valve.

It features special seat design to automatically compensate for wear and it has successfully passed 100,000 cycle life tests.

You can purchase the valve alone or with **RuB** actuator already mounted.



Quality

- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Silicone-free lubricant on all seals
- Stainless steel ball for longer life
- 100% seal test guaranteed in according to EN 12266-1 RATE A

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Integrated ISO 5211 and DIN 3337 mounting flange for universal connection to actuator
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Maintenance-free, double FPM O-rings at the stem for maximum safety
- Blowout-proof stainless steel stem

Sealing

- Reinforced PTFE self-lubricating seats with flexible-lip and wear compensation design

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Flow

- 100% full port for maximum flow

Handle

- Integrated sturdy ISO 5211 flange allows direct mounting of electric and pneumatic actuators, with no bracket or coupling required. See **RuB** line of electric and pneumatic actuators.

Working pressure & temperature

- Shell rating: 600 PSI
- Seat rating: Delta P max permissible 230 PSI non-shock cold working pressure
- -4°F to +350°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Brass trim
- k.64 configuration featuring EN 10226-1, ISO 228 parallel female by female threads, plated body, valve length according to DIN 3357 specification, pure PTFE seats
- Rack and pinion pneumatic actuator (spring return or double acting)
- Compact power electric actuator for some sizes

Upon request

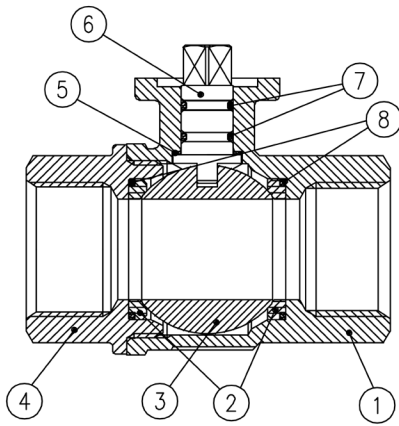
- Custom design

Approved by or in compliance with

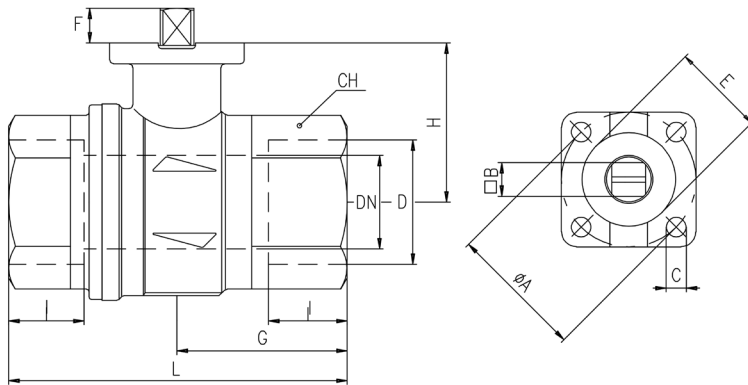
- GOST-R (Russia)
- RoHS Compliant (EU)

NOTE: approvals apply to specific configurations/sizes only.





Part description	Qty	Material
1 Unplated body	1	CW617N
2 Ball seat	2	PTFE carbographite filled
3 Stainless steel ball	1	1.4401 / AISI 316
4 Unplated end-cap	1	CW617N
5 Washer	1	PTFE carbon filled 25%
6 Stainless steel stem O-ring design	1	1.4401 / AISI 316
7 O-Ring	2	FPM
8 O-Ring	2	FPM



Code	S64F39A	S64G39A	S64H39A	S64I39A
D (inch)	1	1 1/4	1 1/2	2
DN(inch)	0.984	1.259	1.575	1.968
I (inch)	0.826	0.905	0.964	1.043
L (inch)	3.562	4.094	4.606	5.314
G (inch)	1.791	2.047	2.322	2.657
H (inch)	1.673	1.949	2.441	2.716
CH(inch)	1.614	1.968	2.165	2.756
ØA(inch)	1.417	1.417	1.968	1.968
□B(inch)	0.354	0.354	0.551	0.551
C (inch)	0.220	0.220	0.259	0.259
E(inch)	0.984	0.984	1.378	1.378
F (inch)	0.334	0.334	0.570	0.570
Flange connection DIN ISO 5211 DIN 3337	F03	F03	F05	F05
Cv (GPM)	115.5	179.1	283.1	335.0

Torque for actuator sizing in-lb

Delta P -->	0-90 PSI		>90-230 PSI	
	to open	to close	to open	to close
Valve size				
1"	19	19	31	31
1 1/4"	22	22	35	35
1 1/2"	51	51	84	84
2"	70	70	115	115

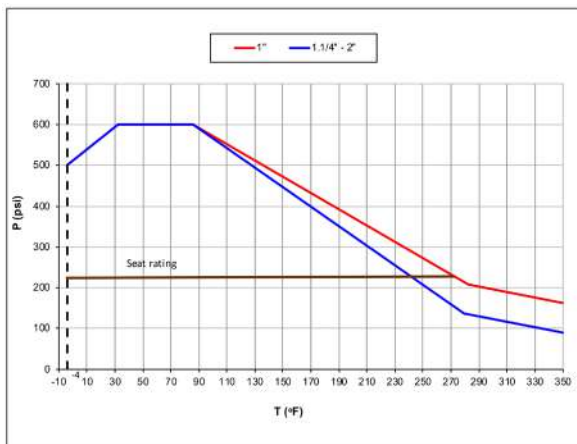
Torque correction factors

Valve torque can vary according to operating frequency, temperature and friction characteristics of the media.

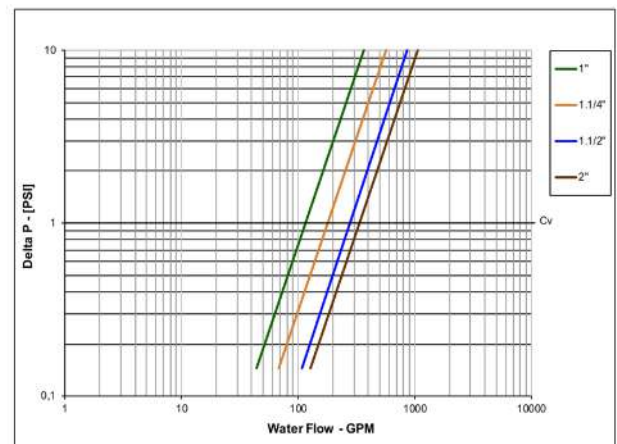
If media has more or less friction than water, multiply torque by the following factors.

- Lubricating oils or liquids 0.8
- Dry gases, natural gas 1.5
- Slurries or liquids bearing abrasive particles 1.5-2.5

Pressure-temperature chart



Pressure drop chart



XCES6439LT - 4266



s.6441 NPT

1/2" – 4" brass trim, ISO 5211

More and more automation is required at all levels in our society and the s.64 **RuB** range is the answer to all needs for reliable actuated ball valve.

It features special seat design to automatically compensate for wear and it has successfully passed 100,000 cycle* life tests.

You can purchase the valve alone or with the **RuB** actuator already mounted.

*All sizes up to 2" included



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Integrated ISO 5211 and DIN 3337 mounting flange for universal connection to actuator
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel plated brass stem
- Maintenance - free, double FPM O-rings at the stem for maximum safety

Sealing

- Reinforced PTFE self-lubricating seats with flexible-lip and wear compensation design

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Flow

- 100% full port for maximum flow

Handle

- Integrated sturdy ISO 5211 flange allows direct mounting of electric and pneumatic actuators, with no bracket or coupling required. See **RuB** line of electric and pneumatic actuators.

Working pressure & temperature

- 600 PSI up to 2", 450 PSI over 2" non-shock cold working pressure
- -4°F to +350°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- S.64 configuration featuring EN 10226-1, ISO 228 parallel female by female threads, plated body and brass trim
- Stainless steel trim (s.6439)
- Configuration for use with slurries or liquid bearing abrasive particles
- Rack and pinion pneumatic actuator (spring return or double acting)
- Compact power electric actuator for some sizes
- Manual lockable handle

Upon request

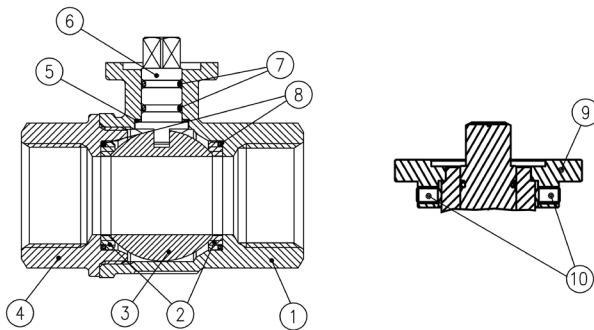
- Custom design

Approved by or in compliance with

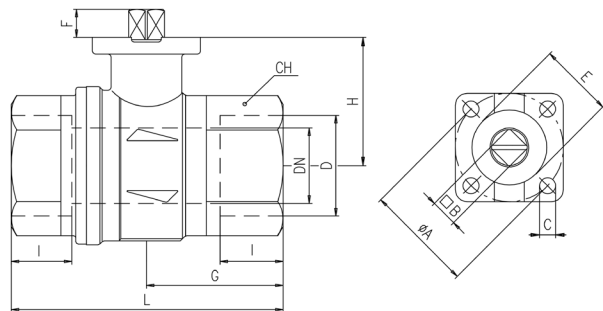
- Water Regulations Advisory Scheme (United Kingdom)
- GOST-R (Russia)
- RoHS Compliant (EU)

NOTE: approvals apply to specific configurations/sizes only.





Valves configuration up to 2"



Valve ball seats and stem configuration of valves over 2" is different.

Part description	Qty	Material	
1	Unplated body	1	CW617N
2	Ball seat	2	PTFE graphite filled 15%
3	Chrome plated ball	1	CW617N
4	Unplated end-cap	1	CW617N
5	Washer	1	PTFE carbon filled 25%
6	Nickel plated stem O-ring design	1	CW617N
7	O-Ring	2	FPM
8	O-Ring	2	FPM
9	Black anodized flange (only from 2 1/2" to 4")	1	Aluminum
10	Grub screw (only from 2 1/2" to 4")	2	CB4FF (EN10263-2)

Code	S64D41	S64E41	S64F41	S64G41	S64H41	S64I41	S95L41AM	S95M41AM	S95N41AM
D (inch)	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
DN(inch)	0.590	0.787	0.984	1.259	1.575	1.968	2.559	3.150	3.937
I (inch)	0.610	0.708	0.826	0.905	0.964	1.043	1.260	1.378	1.634
L (inch)	2.598	2.933	3.562	4.094	4.606	5.314	6.142	6.969	8.504
G (inch)	1.201	1.456	1.791	2.047	2.322	2.657	3.071	3.484	4.252
H (inch)	1.220	1.515	1.673	2.185	2.441	2.716	3.502	3.779	4.366
CH(inch)	1.063	1.259	1.614	1.968	2.165	2.756	3.346	3.898	4.921
ØA(inch)	1.417	1.417	1.417	1.968	1.968	1.968	2.756	2.756	2.756
□B(inch)	0.354	0.354	0.354	0.551	0.551	0.551	0.669	0.669	0.669
C (inch)	0.220	0.220	0.220	0.259	0.259	0.259	0.335	0.335	0.335
E(inch)	0.984	0.984	0.984	1.378	1.378	1.378	2.165	2.165	2.165
F(inch)	0.295	0.334	0.334	0.570	0.570	0.570	0.709	0.709	0.709
Flange connection DIN ISO 5211 DIN 3337	F03	F03	F03	F05	F05	F05	F07	F07	F07
Cv(GPM)	32.3	69.3	115.5	179.1	283.1	335.0	596.2	896.5	1305.5

Torque for actuator sizing in-lb

Delta P -->	0-200 PSI		600 PSI (450 PSI over 2")	
	to open	to close	to open	to close
Valve size				
1/2"	25	15	25	15
3/4"	33	20	33	20
1"	62	37	62	37
1 1/4"	104	111	121	111
1 1/2"	220	180	273	180
2"	262	222	327	222
2 1/2"	372	372	929	929
3"	902	902	1062	1062
4"	1646	1646	1991	1991

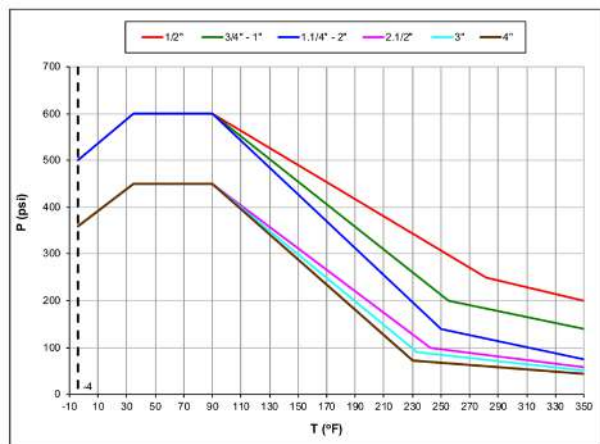
Torque correction factors

Valve torque can vary according to operating frequency, temperature and friction characteristics of the media.

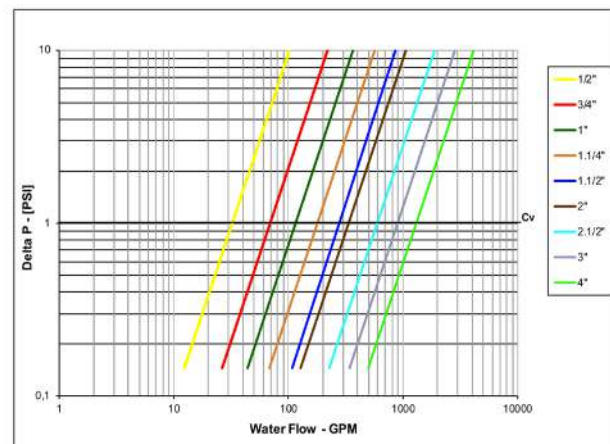
If media has more or less friction than water, multiply torque by the following factors.

- Lubricating oils or liquids 0.8
- Dry gases, natural gas 1.5
- Slurries or liquids bearing abrasive particles 1.5-2.5

Pressure-temperature chart



Pressure drop chart



XCES6441 - 4266



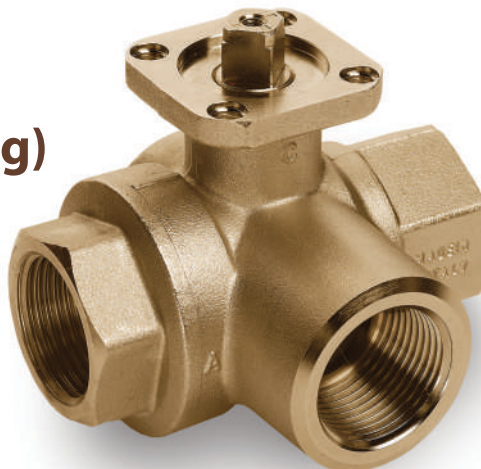
s.7241 NPT

3-way 4 seats L-port (diverting)

1/2" – 1" ISO 5211

The **RuB** S.7241 is the right choice for fluid diversion and is designed with robust maintenance-free components ensuring ease of operation and safety. With a simple 90° turn, you can divert flow from one downstream outlet to the other. It combines traditional manual operation with modern automation.

Our s.72 multi-port valves can reduce the number of valves required in piping systems and can significantly lower overall costs by allowing the replacement of two or three conventional straight-line valves, eliminating excess fittings and simplifying automation.



Quality

- Electronic 100% seal test guaranteed
- No metal-to-metal moving parts
- No maintenance ever required
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Each valve is seal tested for maximum safety
- Performs well in any orientation
- Strong configuration

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Integrated ISO 5211 and DIN 3337 mounting flange for universal connection to actuator
- Finest brass according to EN 12165 and EN 12164 specifications
- 3-way L- port design for flow diversion

Stem

- Blowout-proof nickel plated brass stem
- Maintenance- free, double FPM O-rings at the stem for maximum safety

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design
- Four seats design for mixing of various fluids in the system

Threads

- NPT taper ANSI B.1.20.1 female threads

Flow

- 100% full port for maximum flow

Handle

- Integrated sturdy ISO 5211 flange allows direct mounting of actuators. See **RuB** line of electric and pneumatic actuators.

Working pressure & temperature

- 300 PSI non-shock cold working pressure
- -4°F to +302°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Rack and pinion pneumatic actuator (spring return or double acting)
- EN10226-1/ISO228 parallel female threads
- Lockable handle as accessory or already mounted (s.7600L)
- Various actuator linkage kit

Upon request

- Custom design
- Stainless steel stem
- Configurations with 4 seats & T-port (s.7341) or 2 seats & L-port (s.7641)

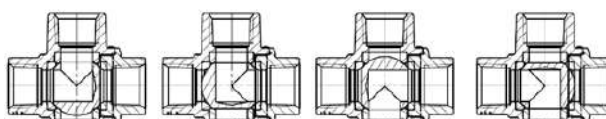
Approved by or in compliance with

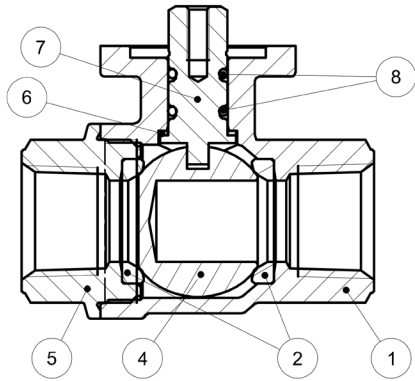
- RoHS Compliant (EU)

NOTE: approvals apply to specific configurations/sizes only.

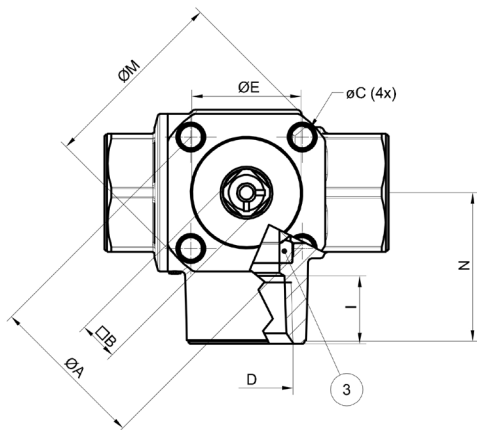
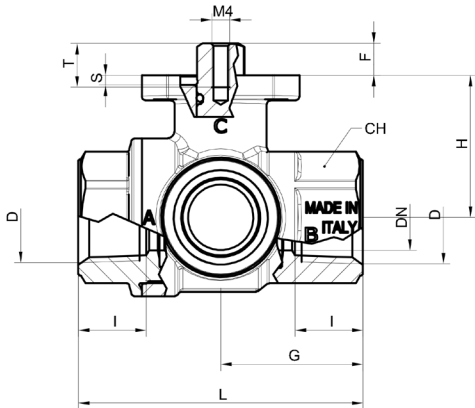


s72 3-way "L" port operating positions





Part description	Qty	Material
1 Sand blasted unplated body	1	CW617N
2 Seat	2	PTFE
3 Seat	2	PTFE
4 Chrome plated ball	1	CW617N
5 Sand blasted unplated end-cap	1	CW617N
6 Washer	1	PTFE carbon filled 25%
7 Nickel plated stem O-ring design	1	CW617N
8 O-Ring	2	FPM



Code	S72D41	S72E41	S72F41
Size (inch)	1/2 NPT	3/4 NPT	1" NPT
DN(inch)	0.591	0.787	0.984
I (inch)	0.610	0.709	0.827
L (inch)	2.559	3.110	3.642
G (inch)	1.280	1.555	1.831
H (inch)	1.820	1.555	1.673
N (inch)	1.358	1.654	1.949
øA (inch)	1.417	1.417	1.417
øC (inch)	ø0.205 (M6)	ø0.205 (M6)	ø0.205 (M6)
øE (inch)	0.984	0.984	0.984
Square B (inch)	0.354	0.354	0.354
øM (inch)	1.709	1.709	1.709
S (inch)	0.087	0.087	0.087
T (inch)	0.394	0.394	0.394
F (inch)	0.287	0.327	0.327
CH (inch)	1.063	1.260	1.614
Flange connection DIN ISO 5211 DIN 3337	F03	F03	F03

Torque for actuator sizing in-lb

Delta P -->	0-230 PSI	
	to open	to close
Valve size		
1/2"	93	93
3/4"	115	115
1"	261	261

Torque correction factors

Valve torque can vary according to operating frequency, temperature and friction characteristics of the media.

If media has more or less friction than water, multiply torque by the following factors.

Lubricating oils or liquids	0.8
Dry gases, natural gas	1.5
Slurries or liquids bearing abrasive particles	1.5-2.5



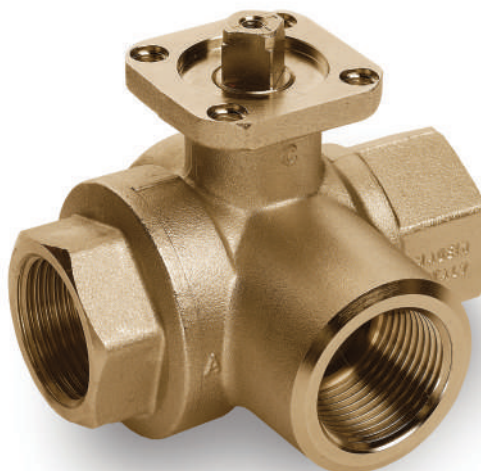
s.7341 NPT 3-way 4 seats T-port

1/2" – 1" ISO 5211

The s.7341 series has a ball seal at every port, and offers a wide variety of possible flow configurations. Positive shutoff can be achieved at any of the exiting ports.

By specifying the appropriate ball port configuration, the T-port design allows flow direction to be adjusted for virtually any situation and is ideal for mixing applications.

Our s.73 multi-port valves can reduce the number of valves required in piping systems and can significantly lower overall costs by replacing two or three conventional 2-way valves, eliminating excess fittings, saving space and simplifying automation.



Quality

- Electronic 100% seal test guaranteed
- No metal-to-metal moving parts
- No maintenance ever required
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Each valve is seal tested for maximum safety
- Performs well in any orientation
- Strong configuration

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Integrated ISO 5211 and DIN 3337 mounting flange for universal connection to actuator
- Finest brass according to EN 12165 and EN 12164 specifications
- 3-way T- port design for flow mixing

Stem

- Blowout-proof nickel plated brass stem
- Maintenance- free, double FPM O-rings at the stem for maximum safety
- Stem slot shows ball position

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design
- Four seats design for mixing of various fluids in the system

Threads

- NPT taper ANSI B.1.20.1 female threads

Flow

- 100% full port for maximum flow



Handle

- Integrated sturdy ISO 5211 flange allows direct mounting of actuators. See **RuB** line of electric and pneumatic actuators.

Working pressure & temperature

- 300 PSI non-shock cold working pressure
- -4°F to +302°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Rack and pinion pneumatic actuator (spring return or double acting)
- EN10226-1/ISO228 parallel female threads
- Lockable handle as accessory or already mouned (s.7341L)
- Various actuator linkage kit

Upon request

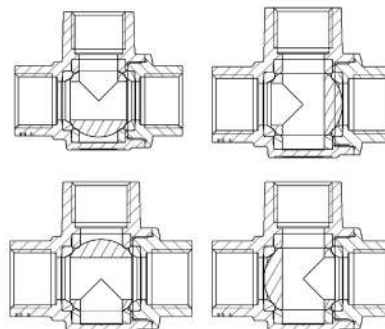
- Custom design
- Stainless steel stem
- Configurations with 4 seats & L-port (s.7241) or 2 seats & L-port (s.7641)

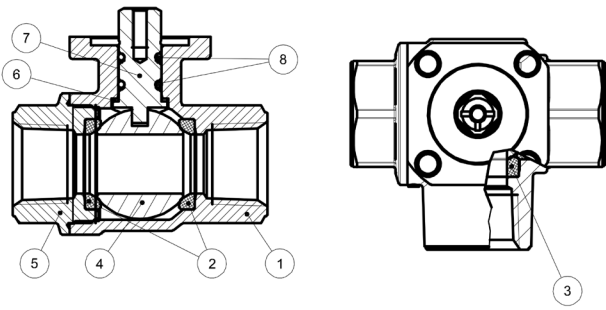
Approved by or in compliance with

- RoHS Compliant (EU)

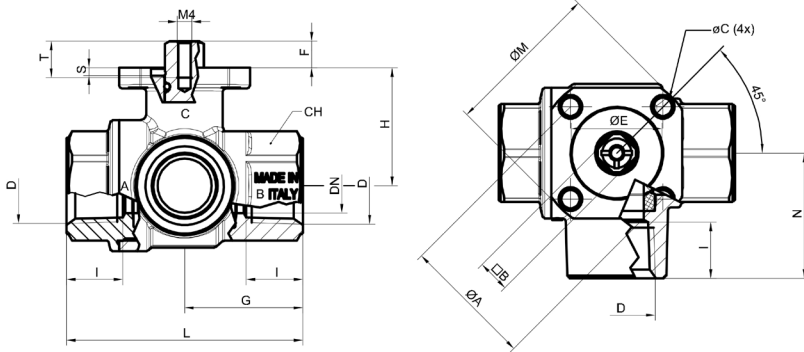
NOTE: approvals apply to specific configurations/sizes only.

s73 3-way "T" port operating positions





Part description	Qty	Material
1 Sand blasted unplated body	1	CW617N
2 Seat	2	PTFE
3 Seat	2	PTFE
4 Chrome plated ball	1	CW617N
5 Sand blasted unplated end-cap	1	CW617N
6 Washer	1	PTFE carbon filled 25%
7 Nickel plated stem O-ring design	1	CW617N
8 O-Ring	2	FPM



Code	S73D41	S73E41	S73F41
Size (inch)	1/2	3/4	1
DN (inch)	0.591	0.787	0.984
I (inch)	0.610	0.709	0.827
L (inch)	2.559	3.110	3.642
G (inch)	1.280	1.555	1.831
H (inch)	1.280	1.555	1.673
N (inch)	1.358	1.654	1.949
ØA (inch)	1.417	1.417	1.417
ØC (inch)	Ø0.205 (M6)	Ø0.205 (M6)	Ø0.205 (M6)
ØE (inch)	0.984	0.984	0.984
Square B (inch)	0.354	0.354	0.354
ØM (inch)	1.709	1.709	1.709
S (inch)	0.087	0.087	0.087
T (inch)	0.394	0.394	0.394
F (inch)	0.287	0.327	0.327
CH (inch)	1.063	1.260	1.614
Flange connection DIN ISO 5211 DIN 3337	F03	F03	F03

Torque for actuator sizing in-lb

Delta P -->	0-230 PSI	
	to open	to close
Valve size		
1/2"	93	93
3/4"	115	115
1"	261	261

With the configuration of T-port a stop pin can be fixed in any position of the 4 provided in the flange (1, 2, 3 or 4) and the lever can be rotated freely through 90°, the flow assumes the directions indicated in the diagram; in case of need the lever can be pulled upwards and you can reach any of the four possible positions. An alternative is to mount 2 pins in 2 near holes (e.g. 1 and 2). In this case, the valve does not assume a predetermined position but can be actuated just by pulling the lever towards the top.

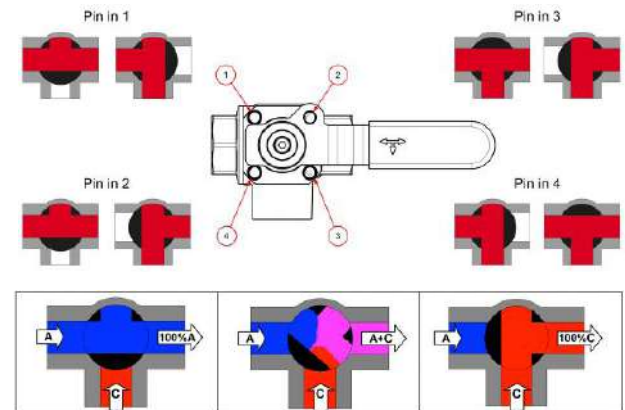
The valve allows also to block the lever thanks to the addition of a lock on the lever's protrusion (in the drawing you can see position 2). The mixing configuration is achieved by placing the pin in position 2. The flows to be mixed enter through A and C and exit through A+C.

Torque correction factors

Valve torque can vary according to operating frequency, temperature and friction characteristics of the media.

If media has more or less friction than water, multiply torque by the following factors.

Lubricating oils or liquids	0.8
Dry gases, natural gas	1.5
Slurries or liquids bearing abrasive particles	1.5-2.5



XCES7341 - 4266

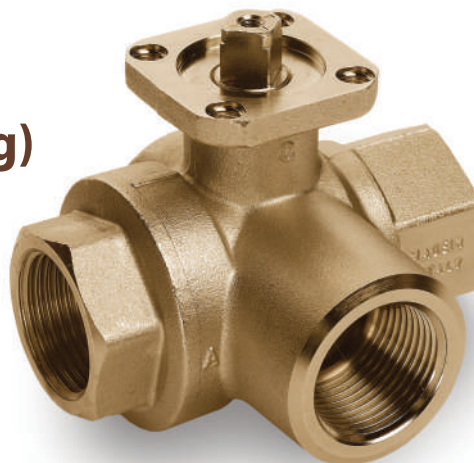


s.7641 NPT

3-way 2 seats L-port (diverting)

1/2" – 1" ISO 5211

The **RuB** s.7641 is the right choice for fluid diversion and is designed with robust maintenance-free components ensuring ease of operation and safety. With a simple 90° turn, you can divert flow from one downstream outlet to the other. It combines traditional manual operation with modern automation. It is also very easy to convert from its sturdy lever handle to ISO 5211 actuator flange assembly. It features low operating torque and a special wear reducing self-compensating valve seat design that meets our 100,000 cycle life test requirement. The valve can be purchased separately, with handle or with a **RuB** actuator already mounted.



Quality

- Electronic 100% seal test guaranteed
- No metal-to-metal moving parts
- No maintenance ever required
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Each valve is seal tested for maximum safety
- Performs well in any orientation
- Strong configuration

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Integrated ISO5211 / DIN3337 mounting flange for universal connection to actuator
- Finest brass according to EN 12165 and EN 12164 specifications
- 3-way L- port design for flow diversion

Stem

- Blowout-proof nickel plated brass stem
- Maintenance-free, double FPM O-rings at the stem for maximum safety
- Stem slot shows ball position

Sealing

- Reinforced PTFE self- lubricating seats with flexible-lip and wear compensation design

Threads

- NPT taper ANSI B.1.20.1 female threads

Flow

- 100% full port for maximum flow

Handle

- Integrated sturdy ISO 5211 flange allows direct mounting of actuators. See **RuB** line of electric and pneumatic actuators.

Working pressure & temperature

- 450 PSI non-shock cold working pressure
- -4°F to +302°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Rack and pinion pneumatic actuator (spring return or double acting)
- Compact Power electric actuator
- EN10226-1/ISO228 parallel female threads
- Lockable handle as accessory or already mounted (s.7600L)
- Various actuator linkage kit

Upon request

- Custom design
- Stainless steel stem
- Configurations with 4 seats, L-port (s.7241) or T-port (s.7341)

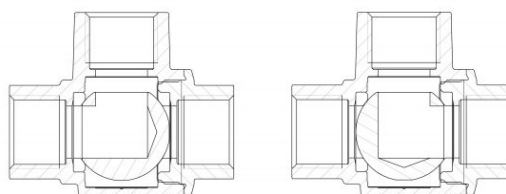
Approved by or in compliance with

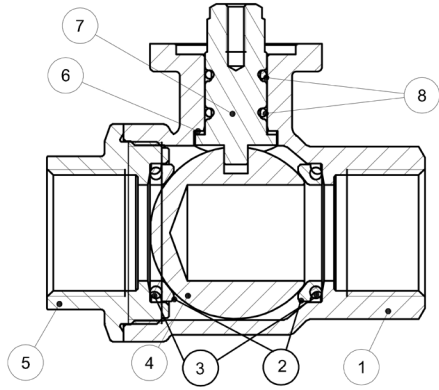
- RoHS Compliant (EU)

NOTE: approvals apply to specific configurations/sizes only.

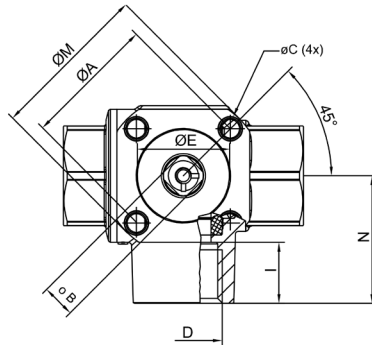
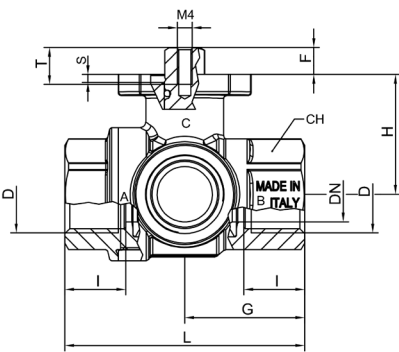


S.76 3-way "L" port operating positions





Part description	Qty	Material
1 Sand blasted unplated body	1	CW617N
2 Seat	2	PTFE graphite filled 15%
3 O-Ring	2	FPM
4 Chrome plated ball	1	CW617N
5 Sand blasted unplated end-cap	1	CW617N
6 Washer	1	PTFE carbon filled 25%
7 Nickel plated stem O-ring design	1	CW617N
8 O-Ring	2	FPM



Code	S76D41	S76E41	S76F41
Size (inch)	1/2 NPT	3/4 NPT	1" NPT
DN(inch)	0.591	0.787	0.984
I (inch)	0.610	0.709	0.827
L (inch)	2.559	3.110	3.642
G (inch)	1.280	1.555	1.831
H (inch)	1.820	1.555	1.673
N (inch)	1.358	1.654	1.949
øA (inch)	1.417	1.417	1.417
øC (inch)	ø0.205 (M6)	ø0.205 (M6)	ø0.205 (M6)
øE (inch)	0.984	0.984	0.984
Square B (inch)	0.354	0.354	0.354
øM (inch)	1.709	1.709	1.709
S (inch)	0.087	0.087	0.087
T (inch)	0.394	0.394	0.394
F (inch)	0.287	0.327	0.327
CH (inch)	1.063	1.260	1.614
Flange connection ISO 5211 DIN3337	F03	F03	F03

Torque for actuator sizing in-lb

Delta P -->	0-450 PSI	
	to open	to close
Valve size		
1/2"	31	31
3/4"	36	36
1"	40	40

Torque correction factors

Valve torque can vary according to operating frequency, temperature and friction characteristics of the media.

If media has more or less friction than water, multiply torque by the following factors.

Lubricating oils or liquids	0.8
Dry gases, natural gas	1.5
Slurries or liquids bearing abrasive particles	1.5-2.5



s.134 NPT stainless steel

1/2" – 2" ISO 5211

*150 WSP STEAM RATED



Quality

- Dual sealing system allows valve to be operated in either direction making installation easier
- Silicone-free lubricant on all seals
- NACE compliance MR-01-75

Body

- Designed and tested for ANSI B16.34
- CF8M stainless steel housing

Stem

- Blowout-proof stem

Sealing

- Reinforced PTFE seats

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Flow

- 100% full port for maximum flow



Handle

- AISI 316 stainless trim
- Convertible for manual or actuated operation
- ISO 5211 actuator mounting pad allows direct mounting of **RuB** electric and pneumatic actuators, with no bracket or coupling required.

Working pressure & temperature

- 1000 PSI cold working pressure
- 150 PSI WSP steam rating
- 2×10^{-2} torr vacuum rating
- *150 psig non-shock working steam pressure. Not suitable for throttling steam.
- +50°F to +450°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

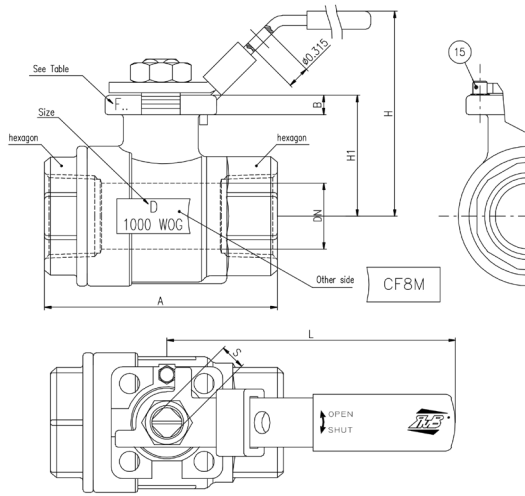
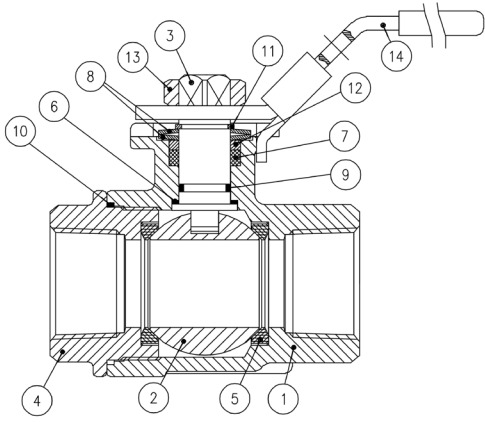
Options

- Stainless steel lockable handle

Approved by or in compliance with

- GOST-R (Russia)

NOTE: approvals apply to specific configurations/sizes only.



Part description	Qty	Material
1	Body	A351-CF8M
2	Ball	A351-CF8M
3	Stem	1.4401 / AISI 316
4	Cap	A351-CF8M
5	Seat	RTFE
6	Seat	RTFE
7	Packing	TFE
8	Bellville	SKS
9	O-Ring	FPM
10	Gasket	RTFE
11	Snapping	1.4301 / AISI 304
12	Follower	1.4401 / AISI 316
13	Nut	1.4301 / AISI 304
14	Lockable handle	A240 SS304
15	Stop pin	1.4301 / AISI 304

Code	134D41	134E41	134F41	134G41	134H41	134I41
D (Size)	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
DN (inch)	0.56	0.81	1	1.25	1.5	1.97
H1 (inch)	1.40	1.56	1.84	2	2.3	2.8
A (inch)	2.60	2.99	3.54	3.94	4.41	5
B (inch)	0.185	0.185	0.185	0.197	0.197	0.276
S (inch)	0.35	0.35	0.43	0.43	0.43	0.55
F.. (ISO 5211)	F03	F03	F04/F05	F04/F05	F04/F05	F07
Cv (GPM)	20.0	42.0	65.0	101.0	145.0	250.0

Code	134D41L*	134E41L*	134F41L*	134G41L*	134H41L*	134I41L*
L (inch)	4.40	4.40	5.87	5.87	5.87	7.5
H (inch)	2.50	2.66	3.14	3.3	3.6	4.5

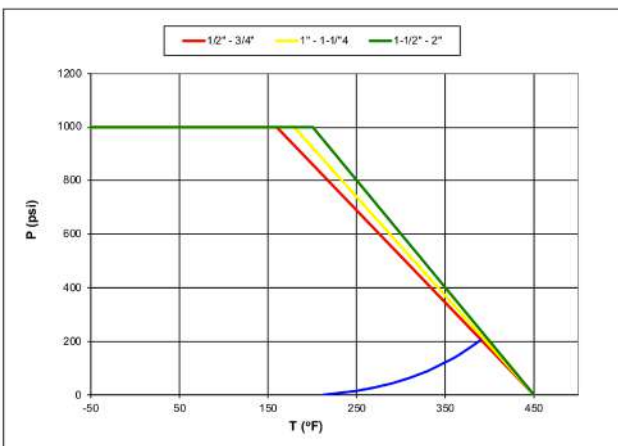
*Ball valves fitted with stainless steel lock lever handle

S134 Torques for sizing actuators - in-lb

Delta P -->	0-200 PSI	
	to open	to close
Valve size		
1/2"	49	41
3/4"	78	59
1"	123	66
1 1/4"	156	109
1 1/2"	250	144
2"	317	211

Media lubricity clean water or similar fluids

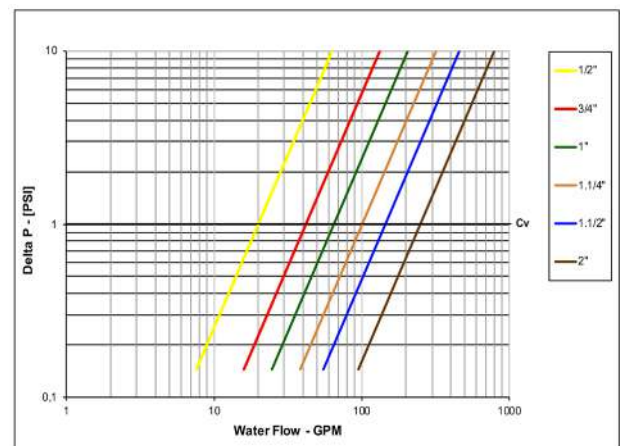
Pressure-temperature chart



Water flow ratings

Size	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"
CV	20	42	65	101	145	250

Pressure drop chart



XCE134 - 4266



s.135 NPT stainless steel

2" – 3" – 4" ANSI B16.5 flange, ISO 5211



Quality

- Anti-static device
- Locking device
- Long cycle life
- Test standard: API 598
- API 607 4th edition fire safe approval
- Vacuum service to 29" Hg

Body

- Body: ASTM A351 Gr. CF8M

Stem

- Blow-out proof stem design
- Adjustable stem packing



Sealing

- ME-PTFE seal kits:
 - replaces PTFE, RPTFE and FPA
 - low deformation under load
 - low permeation

Connections

- ANSI B16.5, B16.10 and B16.34 full compliance

Handle

- Handle in ASTM A536 Gr. 65-45-12
- **WARNING:** do not exceed reasonable temperature and/or electrical load

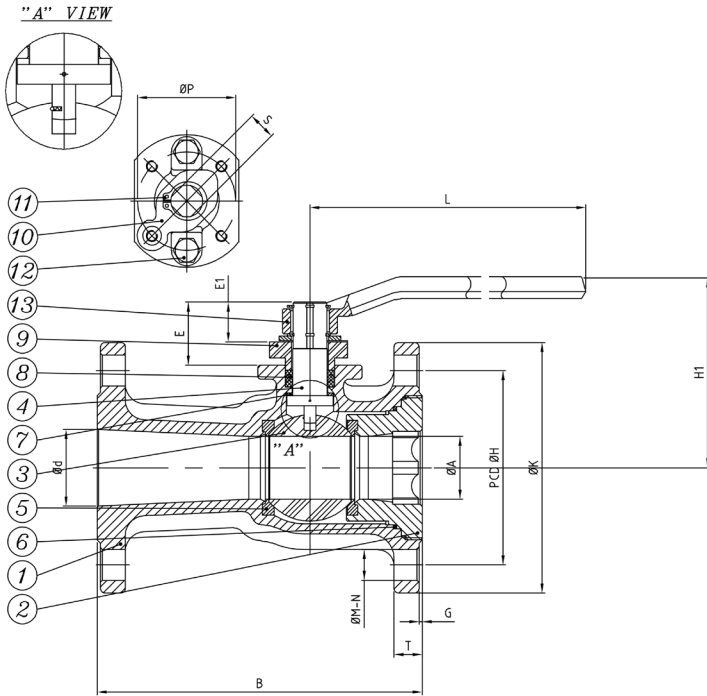
Working pressure & temperature

- General use: 750 PSI (see chart on reverse)
- 275 PSI for ASME 150 CF8M (see chart on reverse)
- Steam rating: 150 PSI WSP
- -50°F/+475°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Approved by or in compliance with

- GOST-R (Russia)

NOTE: approvals apply to specific configurations/sizes only.



Part description	Qty	Material
1 Body	1	ASTM A351-CF8M
2 Cap	1	ASTM A351-CF8M
3 Ball	1	ASTM A351-CF8M
4 Stem	1	ASTM A276 Gr.316
5 Seat	2	ME-PTFE*
6 Gasket	1	ME-PTFE*
7 Thrust washer	1	ME-PTFE*
8 Packing	1	ME-PTFE*
9 Gland	1	ASTM A351-CF8
10 Stopper	1	SS304
11 Snap ring	2	SS304
12 Gland bolt	2	ASTM A193 Gr.B8
13 Handle	1	ASTM A536 Gr.65-45-12

Torque for actuator sizing in-lb

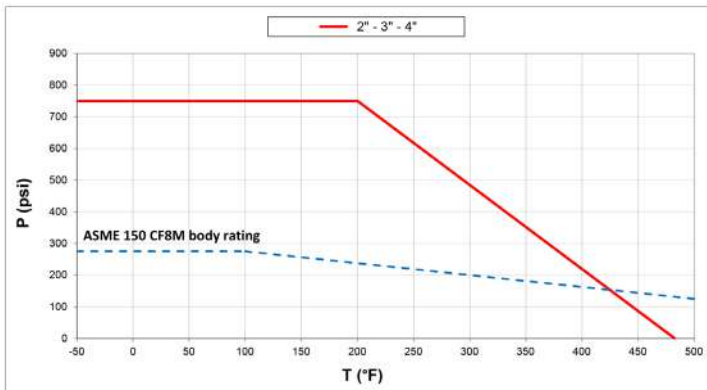
Delta P -->	Valve torque	
	to open	to close
Valve size		
2"	376.15	376.15
3"	678.90	678.90
4"	909	909

Torque correction factors

Valve torque can vary according to operating frequency, temperature and friction characteristics of the media. If media has more or less friction than water, multiply torque by the following factors.

- Lubricating oils or liquids 0.8
- Dry gases, natural gas 1.5
- Slurries or liquids bearing abrasive particles 1.5-2.5

Pressure-temperature chart



Code	135IF0	135MF0	135NF0
Size (inch)	2"	3"	4"
A (inch)	1.50	2.56	3.15
B (inch)	7.0	8.0	9.0
E (inch)	1.65	2.20	2.20
E1 (inch)	1.02	1.44	1.44
d (inch)	1.97	3.15	3.94
G (inch)	0.06	0.06	0.06
H (inch)	4.75	6.00	7.50
K (inch)	6.00	7.50	9.00
T (inch)	0.62	0.75	0.94
M (inch)	0.75	0.75	0.75
N	4	4	8
P (inch)	2.76	4.02	4.02
S (inch)	0.67	0.87	0.87
L (inch)	9.13	12.87	12.87
H1 (inch)	4.96	5.98	6.30
h	M8*P1.25	M10*P1.5	M10*P1.5

SIZE	2"	3"	4"
CV Factor	170	430	565

*ME-PTFE is Molecular Enhanced PTFE



s.136 NPT stainless steel

6" – 8" ANSI B16.5 flange, ISO 5211



Quality

- Anti-static device
- Locking device
- Long cycle life
- Test standard: API 598
- API 607 4th edition fire safe approval
- Vacuum service to 29" Hg

Body

- ISO 5211 actuator mounting pad
- Body: ASTM A351 Gr. CF8M

Stem

- Blow-out proof stem design
- Adjustable stem packing

Connections

- ANSI B16.5, B16.10 and B16.34 full compliance

Handle

- Handle in ASTM A536 Gr. 65-45-12 / SS304
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- General use: 50 bar / 750 PSI (see chart on reverse)
- 19 bar / 275 PSI for ASME 150 CF8M (see chart on reverse)
- Steam rating: 10 bar / 150 PSI WSP
- -45.5°C / +246°C // -50°F / +475°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

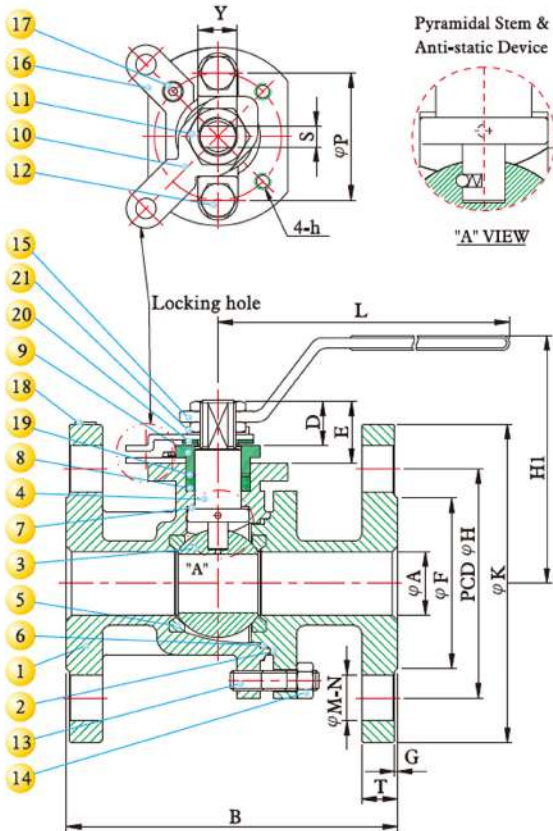
Sealing

- ME-PTFE seal kits:
 - replaces PTFE, RPTFE and FPA
 - low deformation under load
 - low permeation

Approved by or in compliance with

- GOST-R (Russia)

NOTE: approvals apply to specific configurations/sizes only.



Part description	Qty	Material	
1	Body	1	ASTM A351-CF8M
2	Cap	1	ASTM A351-CF8M
3	Ball	1	ASTM A351-CF8M
4	Stem	1	ASTM A276 Gr. 316
5	Seat	2	ME-PTFE*
6	Gasket	1	GRAFOIL
7	Thrust washer	1	ME-PTFE*
8	Packing	1	GRAFOIL
9	Gland	1	ASTM A351- Gr.CF8
10	Stopper	1	SS304
11	Handle nut	1	SS304
12	Gland bolt	1	ASTM A193 Gr. B8
13	Stud bolt - Qty 4-10		ASTM A193 Gr. B8
14	Set nut - Qty 4-10		ASTM A194 Gr. 8
15	Handle	1	SS304
16	Locking plate	1	SS304
17	Set bolt	2	SS304
18	Name plate	1	SS304
19	Ring	1	SS304
20	Bearing	1	NYLON
21	Lock washer	1	SS304

Torque for actuator sizing in-lb

Delta P -->	Valve torque	
	to open	to close
Valve size		
6"	2531.4	2531.4
8"	5753	5753

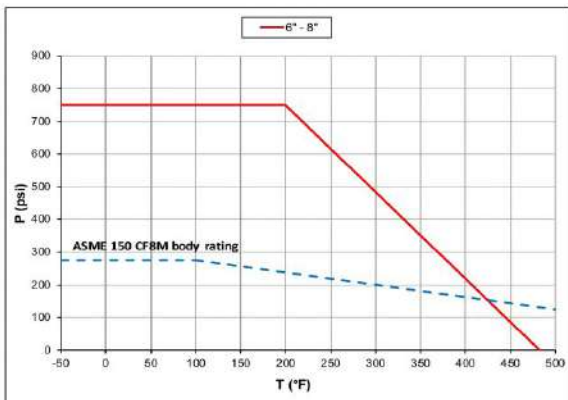
Torque correction factors

Valve torque can vary according to operating frequency, temperature and friction characteristics of the media.

If media has more or less friction than water, multiply torque by the following factors.

- Lubricating oils or liquids 0.8
- Dry gases, natural gas 1.5
- Slurries or liquids bearing abrasive particles 1.5-2.5

Pressure-temperature chart



*ME-PTFE is Molecular Enhanced PTFE

Code	136PF0	136QF0	Code	136PF0	136QF0
Size (inch)	6"	8"	Size (inch)	6"	8"
A (mm)	150	200	A (inch)	5.91	7.87
B (mm)	393.7	457.2	B (inch)	15.50	18.00
E (mm)	67.3	72.7	E (inch)	2.65	2.86
F (mm)	215.9	269.7	F (inch)	8.50	10.62
D (mm)	37.7	47.8	D (inch)	1.48	1.88
G (mm)	1.6	1.6	G (inch)	0.06	0.06
H (mm)	241.3	298.4	H (inch)	9.50	11.75
K (mm)	279.4	342.9	K (inch)	11.00	13.50
T (mm)	25.4	28.4	T (inch)	1.00	1.12
M (mm)	22.3	22.3	M (inch)	0.88	0.88
N	8	8	N	8	8
P (mm)	125	140	P (inch)	4.92	5.51
S (mm)	20	33	S (inch)	0.79	1.30
L (mm)	1032	1080	L (inch)	40.63	45.52
H1 (mm)	263.5	305	H1 (inch)	10.37	12.00
h	M12x1.75	M16x2.0	h	M12x1.75	M16x2.0
Kv (m ³ /h)	1158	2134	CV (GPM)	5100	9400

GAS



s.92 NPT 1/4" - 4" packing gland	Page 68
s.92 NPT M/F 1/2" - 2" packing gland	Page 70
s.95 NPT 1/4" - 4"	Page 72
s.95 NPT nickel plated 1/4" - 4"	Page 74
s.80 NPT 3/4" - 2" gas cock with tamper proof lockwing	Page 76
s.8042 NPT 3/4" - 2" MIP x FIP with tamper proof lockwing	Page 78
s.8043 NPT dielectric 3/4" - 1 1/4" with tamper proof lockwing	Page 80
s.80 NPT surepass 3/4" - 1" 175 PSI bypassing gas meter valve	Page 82
s.82 NPT 1/2" - 2" side drain	Page 84
s.195 NPT & flare 3/8" - 1" standard port gas cock	Page 86
s.195 flare 37° by solder end 1/2" - 3/4", standard port	Page 88



s.92 NPT

1/4" – 4" packing gland



rated sizes 1/4" through 1"



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Handle stops on body to avoid stress at stem

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel plated brass stem
- Pure PTFE adjustable packing gland and reinforced washer for lower torque and easy maintenance
- Triple stem seals in sizes over 2"

Sealing

- Glass filled pure PTFE self-lubricating seats with flexible-lip design

Threads

- NPT taper ANSI B. 1.20.1 female by female threads

Flow

- Full port to DIN 3357 for maximum flow

Handle

- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both thermal and electrical protection
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 600 PSI (40 bar) up to 2", 450 PSI (30 bar) over 2", (150 WSP -10 bar all sizes) non-shock cold working pressure
- 250 PSI (17 bar) non-shock working pressure for LP-Gas
- *150 psig (10 bar) non-shock steam working pressure. Not suitable for throttling steam
- -40°F/+366°F (-40°C / +170°C)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options up to 2" size

- Stem extension
- Lead free for safe drinking water (0.25% or less Pb)
- T-handle
- Stainless steel handle (1.4016 / AISI 430)
- Oval lockable handle up to 2", round over 2"
- Patented locking device for valves up to 4"
- Male by female NPT threads up to 4"
- Stubby handle

Upon request

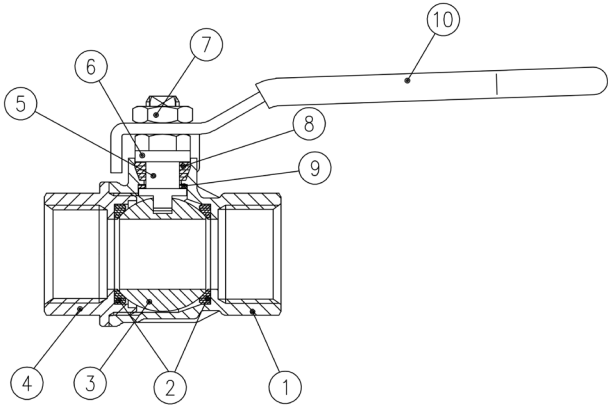
- Stainless steel ball and/or stem (1.4401 / AISI 316)
- Custom design
- Pure PTFE seals

Approved by or in compliance with

- Canadian standards Association (United States, Canada)
- Factory Mutual (United States)
- RoHS Compliant (EU)
- GOST-R (Russia)
- Underwriters Laboratories (United States, Canada):
 - Guide YSDT: LP-Gas Shut-Off Valve
 - Guide YRBX: Flammable liquid shutoff valve
 - Guide YRPV: Gas Shut-Off Valve for use with natural and manufactured gases
 - Guide MHKZ: No. 6 oil at 250°F
- CRN-TSSA acc. to MSS SP110 (Canada)
- Kuwait Fire Service Directorate (Kuwait)
- Meeting WW-V-35C Federal U.S. Specification (United States)

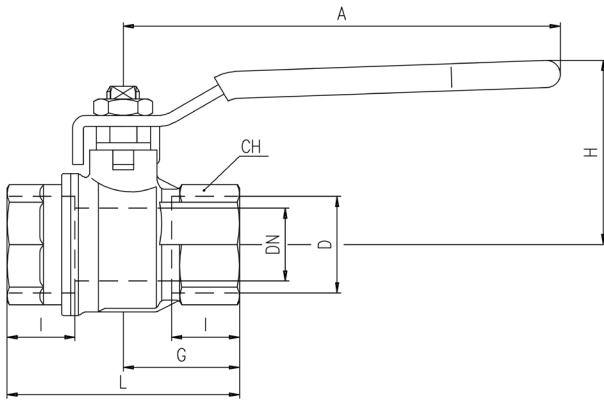
NOTE: approvals apply to specific configurations/sizes only.





1 1/4"-2" hollow ball

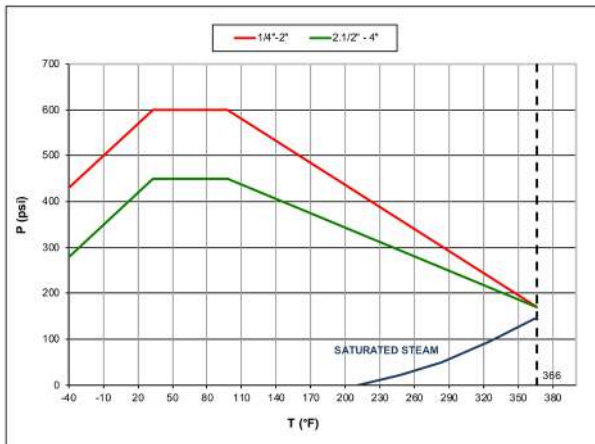
Part description	Qty	Material
1	1	CW617N
2	2	PTFE glass filled 5-15%
3	1	CW617N
4	1	CW617N
5	1	CW617N
6	1	CW617N
7	1	CB4FF (EN10263-2)
8	1	PTFE
9	1	PTFE carbon filled 25%
10	1	DD11 (EN10111)



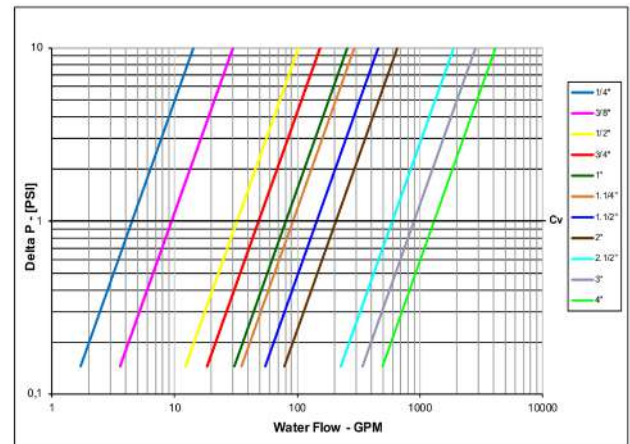
Code	S92B41	S92C41	S92D41	S92E41	S92F41	S92G41	S92H41	S92I41	S92L41	S92M41	S92N41
D (inch)	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
DN (inch)	0.314	0.393	0.590	0.787	0.984	1.259	1.574	1.968	2.559	3.149	3.937
I (inch)	0.472	0.472	0.610	0.669	0.826	0.905	1.043	1.260	1.377	1.633	1.633
L (inch)	1.771	1.771	2.322	2.519	3.188	3.661	4.015	4.763	6.141	6.968	8.504
G (inch)	0.885	0.885	1.161	1.259	1.594	1.830	2.007	2.381	3.070	3.484	4.252
A (inch)	3.228	3.228	3.937	4.724	4.724	6.220	6.220	6.220	10.039	10.039	10.039
H (inch)	1.563	1.563	1.695	1.988	2.153	2.988	3.236	3.500	5.196	5.511	6.062
CH (inch)	0.787	0.787	0.984	1.220	1.574	1.929	2.125	2.696	3.346	3.897	4.921
Cv (GPM)	4.5	9.5	32.3	48.5	80.9	92.4	144.4	206.8	596.2	896.5	1305.5

DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4. Stem configuration od valves over 2" is slightly different.

Pressure-temperature chart



Pressure drop chart



XCES92 - 4314



s.92 NPT M/F

1/2" – 2", packing gland



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Handle stops on body to avoid stress at stem

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel plated brass stem
- Pure PTFE adjustable packing gland and reinforced washer for lower torque and easy maintenance
- Triple stem seals in sizes over 2"

Sealing

- Glass filled pure PTFE self-lubricating seats with flexible-lip design

Threads

- NPT taper ANSI B.1.20.1 male by female threads

Flow

- Full port to DIN 3357 for maximum flow

Handle

- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both thermal and electrical protection
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 600 PSI (40 bar) up to 2", 450 PSI (30 bar) over 2", (150 WSP -10 bar all sizes) non-shock cold working pressure
- 250 PSI (17 bar) non-shock working pressure for LP-Gas
- *150 psig (10 bar) non-shock steam working pressure. Not suitable for throttling steam
- -40°F/+366°F (-40°C / +170°C)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options up to 2" size

- Stem extension
- T-handle
- Stainless steel handle (1.4016 / AISI 430)
- Oval lockable handle up to 2", round over 2"
- Patented locking device for valves up to 4"
- Female by female NPT threads up to 4"
- Stubby handle

Upon request

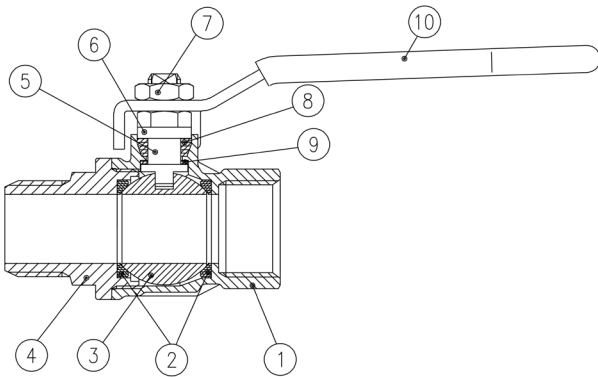
- Stainless steel ball and/or stem (1.4401 / AISI 316)
- Custom design
- Pure PTFE seals

Approved by or in compliance with

- Canadian standards Association (United States, Canada)
- Factory Mutual (United States)
- GOST-R (Russia)
- RoHS Compliant (EU)
- Meeting WW-V-35C Federal U.S. Specification (United States)
- Underwriters Laboratories (United States, Canada):
 - Guide YSDT: LP-Gas Shut-Off Valve
 - Guide YRBX: Flammable liquid shutoff valve
 - Guide YRPV: Gas Shut-Off Valve for use with natural and manufactured gases
 - Guide MHKZ: No. 6 oil at 250°F

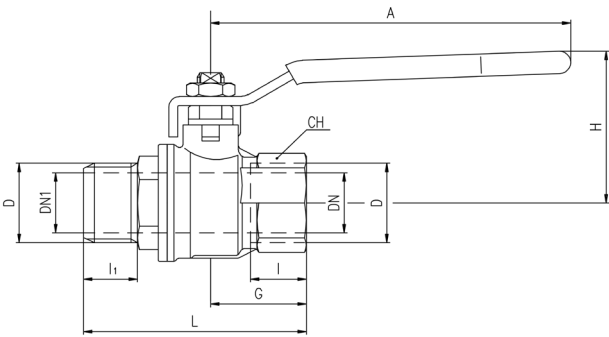
NOTE: approvals apply to specific configurations/sizes only.





1 1/4"-2" hollow ball

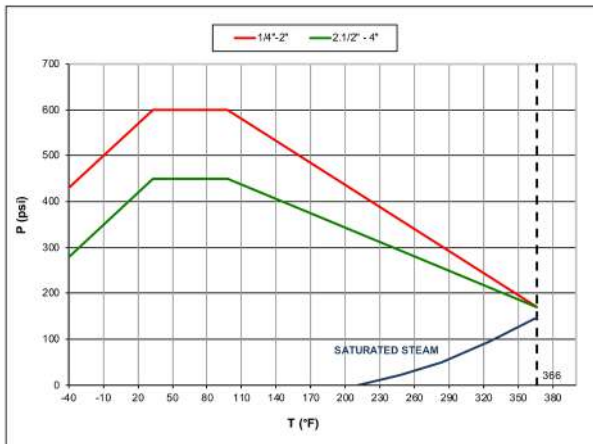
Part description	Qty	Material
1 Unplated body	1	CW617N
2 Seat	2	PTFE glass filled 5-15%
3 Chrome plated ball	1	CW617N
4 Unplated NPT end-cap	1	CW617N
5 Nickel plated stem packing gland design	1	CW617N
6 Nickel plated gland nut	1	CW617N
7 Geomet® nut	1	CB4FF (EN10263-2)
8 Packing gland seal	1	PTFE
9 Washer	1	PTFE carbon filled 25%
10 Yellow PVC coated Geomet® steel handle	1	DD11 (EN10111)



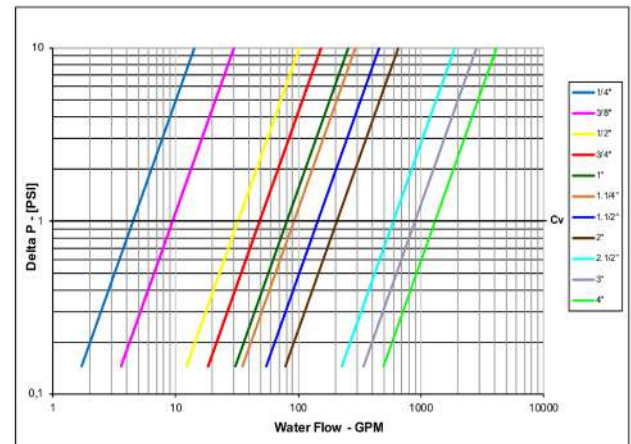
Code	S92B42	S92C42	S92D42	S92E42	S92F42	S92G42	S92H42	S92I42	S92L42	S92M42	S92N42
D (inch)	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
DN (inch)	0.314	0.393	0.590	0.787	0.984	1.259	1.574	1.968	2.559	3.149	3.937
DN1 (inch)	0.314	0.393	0.590	0.787	0.984	1.259	1.574	1.968	2.205	2.756	3.701
I (inch)	0.472	0.472	0.610	0.669	0.826	0.905	1.043	1.260	1.377	1.633	1.633
I 1 (inch)	0.531	0.531	0.650	0.709	0.866	0.945	1.083	1.457	1.555	1.732	1.732
L (inch)	2.224	2.224	2.756	2.992	3.642	4.173	4.449	5.236	7.106	8.051	9.370
G (inch)	0.885	0.885	1.161	1.259	1.594	1.830	2.007	2.381	3.070	3.484	4.252
A (inch)	3.228	3.228	3.937	4.724	4.724	6.220	6.220	6.220	10.039	10.039	10.039
H (inch)	1.563	1.563	1.695	1.988	2.153	2.988	3.236	3.500	5.196	5.511	6.062
CH (inch)	0.787	0.787	0.984	1.220	1.574	1.929	2.125	2.696	3.346	3.897	4.921
Cv (GPM)	4.5	9.5	32.3	48.5	80.9	92.4	144.4	206.8	596.2	896.5	1305.5

DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part4. Stem configuration of valves over 2" is slightly different.

Pressure-temperature chart



Pressure drop chart

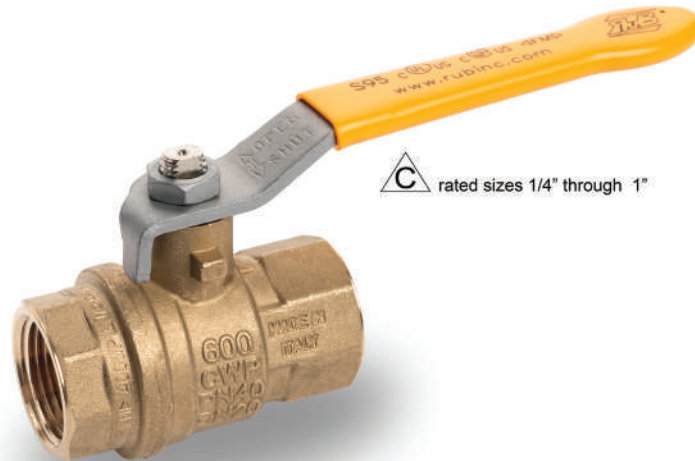


XCES92M - 4314



s.95 NPT

1/4" - 4"



C rated sizes 1/4" through 1"



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Handle stops on body to avoid stress at stem

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel plated brass stem
- Maintenance-free, double FPM O-rings at the stem for maximum safety

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Flow

- Full port to DIN 3357 for maximum flow

Handle

- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both thermal and electrical protection
- **WARNING:** do not exceed reasonable temperature and/or electrical load
- Handle removable with valve in service

Working pressure & temperature

- 600 PSI (40 bar) up to 2", 450 PSI (30 bar) over 2" non-shock cold working pressure
- 250 PSI (17 bar) non-shock working pressure for LP-Gas
- -40°F/+350°F (-40°C / +170°C)

• **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options up to 2" size

- Stem extension
- T-handle
- Stainless steel handle (1.4016 / AISI 430)
- Oval lockable handle up to 2", round over 2"
- Patented locking device for valves up to 4"
- Stubby handle

• **RuB** memory stop designed to be installed with our stubby handle

Upon request

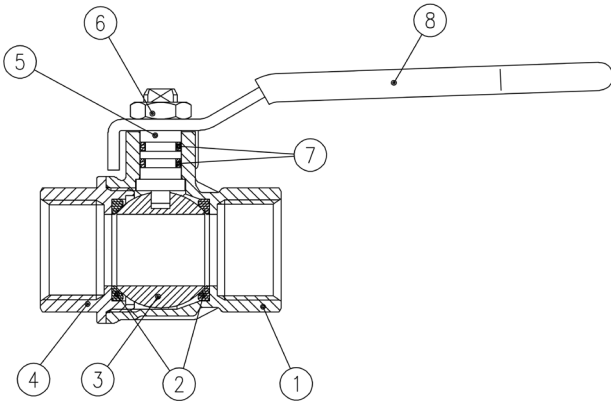
- Stainless steel ball (1.4401 / AISI 316)
- Glass filled PTFE seals
- Custom design
- Special configuration for industrial oxygen application

Approved by or in compliance with

- Canadian standards Association (United States, Canada)
- Factory Mutual (United States)
- RoHS Compliant (EU)
- GOST-R (Russia)
- Underwriters Laboratories (United States, Canada):
 - Guide YSDT: LP-Gas Shut-Off Valve
 - Guide YRBX: Flammable liquid shutoff valve
 - Guide YRPV: Gas Shut-Off Valve for use with natural and manufactured gases
 - Guide MHKZ: No. 6 oil at 250°F
- CRN-TSSA acc. to MSS SP110 (Canada)
- Meeting WW-V-35C Federal U.S. Specification (United States)

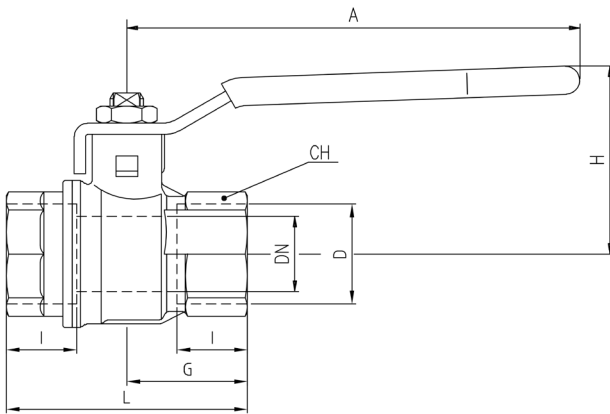
NOTE: approvals apply to specific configurations/sizes only.





Part description	Qty	Material
1	1	CW617N
2	2	PTFE
3	1	CW617N
4	1	CW617N
5	1	CW617N
6	1	CB4FF (EN10263-2)
7	2	FPM
8	1	DD11 (EN10111)

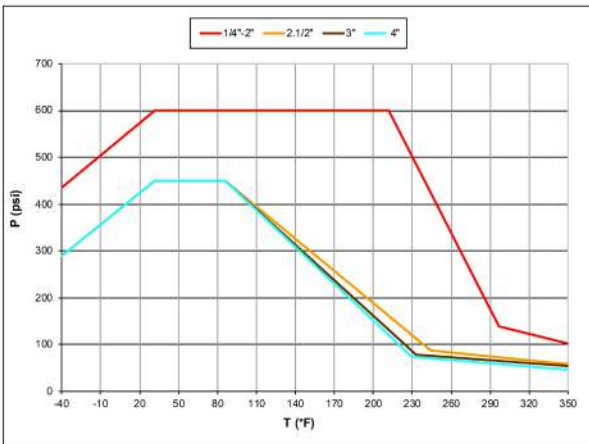
1 ¼"-2" hollow ball



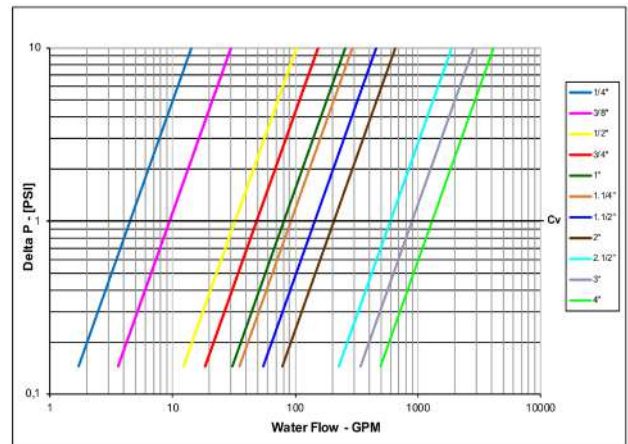
Code	S95B41	S95C41	S95D41	S95E41	S95F41	S95G41	S95H41	S95I41	S95L41	S95M41	S95N41
D (inch)	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
DN (inch)	0.314	0.393	0.590	0.787	0.984	1.259	1.574	1.968	2.559	3.149	3.937
I (inch)	0.472	0.472	0.610	0.669	0.826	0.905	0.905	1.043	1.260	1.377	1.633
L (inch)	1.771	1.771	2.322	2.519	3.188	3.661	4.015	4.763	6.141	6.968	8.504
G (inch)	0.885	0.885	1.161	1.259	1.594	1.830	2.007	2.381	3.070	3.484	4.252
A (inch)	3.228	3.228	3.937	4.724	4.724	6.220	6.220	6.220	10.039	10.039	10.039
H (inch)	1.563	1.563	1.695	1.988	2.153	2.988	3.236	3.500	5.196	5.511	6.062
CH (inch)	0.787	0.787	0.984	1.220	1.574	1.929	2.125	2.696	3.346	3.897	4.921
Cv (GPM)	4.5	9.5	32.3	48.5	80.9	92.4	144.4	206.8	596.2	896.5	1305.5

DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4. Stem configuration of valves over 2" is slightly different.

Pressure-temperature chart



Pressure drop chart

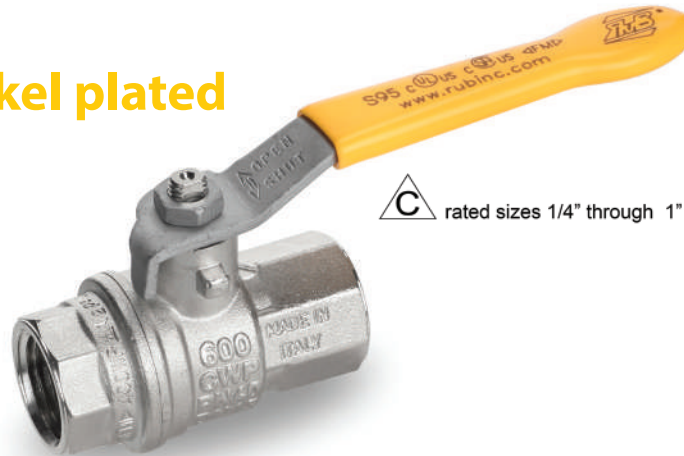


XCES95 - 4314



s.95 NPT nickel plated

1/4" - 4"



C rated sizes 1/4" through 1"



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Handle stops on body to avoid stress at stem

Body

- Hot forged sand blasted, nickel plated brass body and cap sealed with Loctite® or equivalent thread sealant
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel plated brass stem
- Maintenance-free, double FPM O-rings at the stem for maximum safety

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Flow

- Full port to DIN 3357 for maximum flow

Handle

- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both thermal and electrical protection
- Handle removable with valve in service
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 600 PSI (40 bar) up to 2", 450 PSI (30 bar) over 2" non-shock cold working pressure
- 250 PSI (17 bar) non-shock working pressure for LP-Gas
- -40°F/+350°F (-40°C / +170°C)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options up to 2" size

- Stem extension
- T-handle
- Stainless steel handle (1.4016 / AISI 430)
- Oval lockable handle up to 2", round over 2"
- Patented locking device for valves up to 4"
- Stubby handle
- **RuB** memory stop designed to be installed with our stubby handle

Upon request

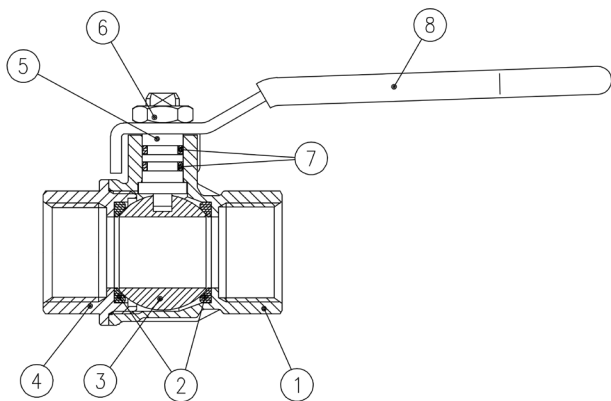
- Stainless steel ball (1.4401 / AISI 316)
- Glass filled PTFE seals
- Custom design
- Special configuration for industrial oxygen application

Approved by or in compliance with

- Canadian standards Association (United States, Canada)
- Factory Mutual (United States)
- RoHS Compliant (EU)
- GOST-R (Russia)
- Underwriters Laboratories (United States, Canada):
 - Guide YSDT: LP-Gas Shut-Off Valve
 - Guide YRBX: Flammable liquid shutoff valve
 - Guide YRPV: Gas Shut-Off Valve for use with natural and manufactured gases
 - Guide MHKZ: No. 6 oil at 250°F

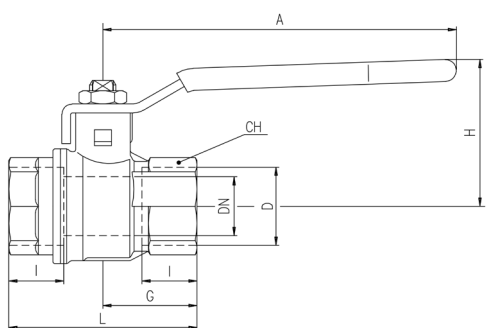
NOTE: approvals apply to specific configurations/sizes only.





Part description	Qty	Material
1	1	CW617N
2	2	PTFE
3	1	CW617N
4	1	CW617N
5	1	CW617N
6	1	CB4FF (EN10263-2)
7	2	FPM
8	1	DD11 (EN10111)

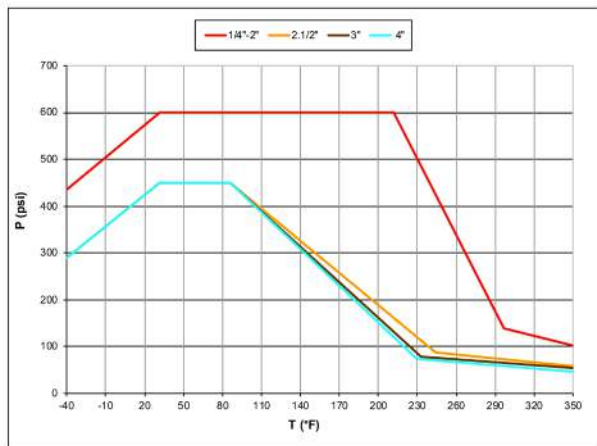
1 ¼"-2" hollow ball



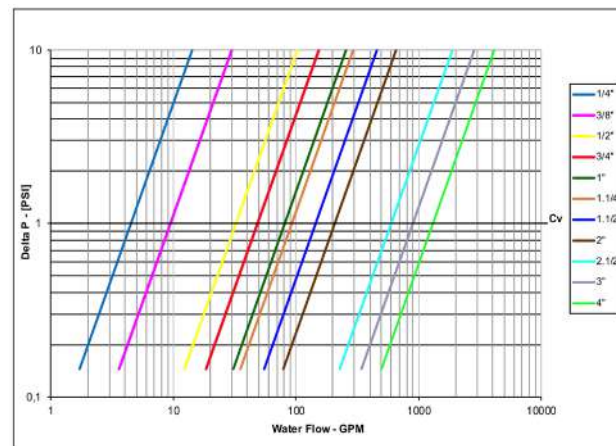
Code	S95B41N	S95C41N	S95D41N	S95E41N	S95F41N	S95G41N	S95H41N	S95I41N	S95L41N	S95M41N	S95N41N
D (inch)	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
DN (inch)	0.315	0.394	0.590	0.787	0.984	1.260	1.575	1.968	2.559	3.150	3.937
I (inch)	0.472	0.472	0.610	0.669	0.826	0.905	0.905	1.043	1.260	1.377	1.633
L (inch)	1.771	1.771	2.322	2.519	3.188	3.661	4.015	4.763	6.141	6.968	8.504
G (inch)	0.885	0.885	1.161	1.259	1.594	1.830	2.007	2.381	3.070	3.484	4.252
A (inch)	3.228	3.228	3.937	4.724	4.724	6.220	6.220	6.220	10.039	10.039	10.039
H (inch)	1.496	1.496	1.693	1.968	2.126	2.874	3.110	3.386	5.197	5.512	6.063
CH (inch)	0.787	0.787	0.984	1.220	1.574	1.929	2.125	2.696	3.346	3.897	4.921
Cv (GPM)	4.5	9.5	32.3	48.5	80.9	92.4	144.4	206.8	596.2	896.5	1305.5

DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4. Stem configuration of valves over 2" is slightly different.

Pressure-temperature chart



Pressure drop chart



XCES95N - 4314



s.80 NPT

3/4" - 2"
gas cock with tamper, proof lockwing



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Cover clearly shows ball position
- Silicone-free lubricant on all seals
- Handle stops on body to avoid stress at stem
- Chrome plated brass ball for longer life

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Special design to combine newest technologies in valve and traditional gascock requirements
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel unplated brass stem
- Maintenance-free, double FPM O-rings at the stem for maximum safety

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design

Threads

- NPT taper ANSI B.1.20.1 female by female threads



Flow

- Full port to DIN 3357 for maximum flow

Handle

- Hot forged brass tamper proof lockwing

Working pressure & temperature

- 600 PSI (40 bar) non-shock cold working pressure
- 250 PSI (17 bar) non-shock working pressure for LP-Gas
- -40°F/ +350°F (-40°C / +170°C)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Male by female NPT threads

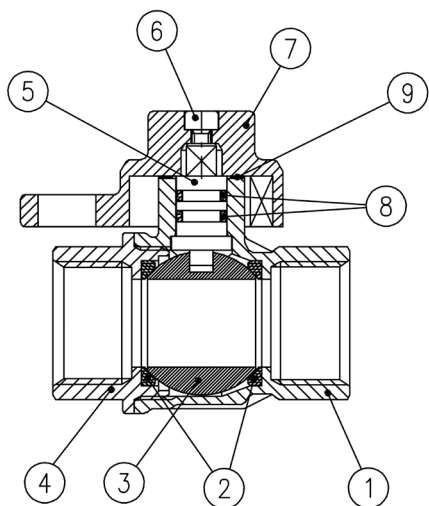
Upon request

- Painted gray

Approved by or in compliance with

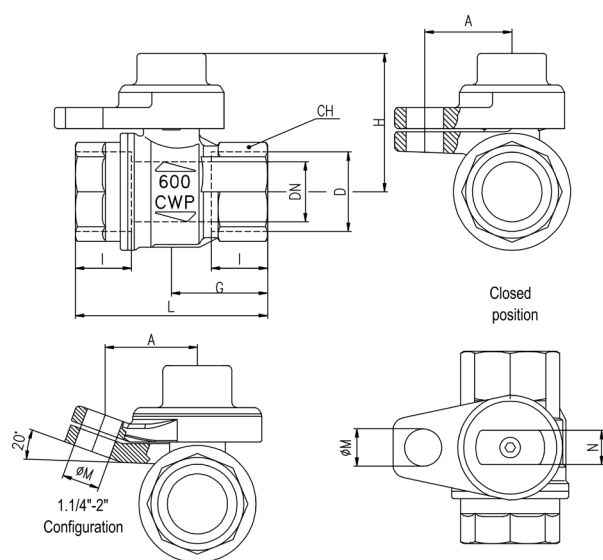
- Underwriters Laboratories (United States, Canada)
 - Guide YSDT: LP-Gas Shut-Off Valve
 - Guide YRBX: Flammable liquid shutoff valve
 - Guide YRPV: Gas Shut-Off Valve for use with natural and manufactured gases
 - Guide MHKZ: No. 6 oil at 250°F
- GOST-R (Russia)
- Canadian standards Association (United States, Canada)
- RoHS Compliant (EU)
- Kuwait Fire Service Directorate (Kuwait)

NOTE: approvals apply to specific configurations/sizes only.



Part description	Qty	Material	
1	Unplated NPT body	1	CW617N
2	Seat	2	PTFE
3	Chrome plated ball	1	CW617N
4	Unplated NPT end-cap	1	CW617N
5	Unplated stem O-ring design	1	CW617N
6	Stainless steel screw	1	1.4301 / AISI304
7	Unplated lockwing	1	CW617N
8	O-Ring	2	FPM
9	Washer (from 3/4" to 2")	1	PTFE glass filled 25%

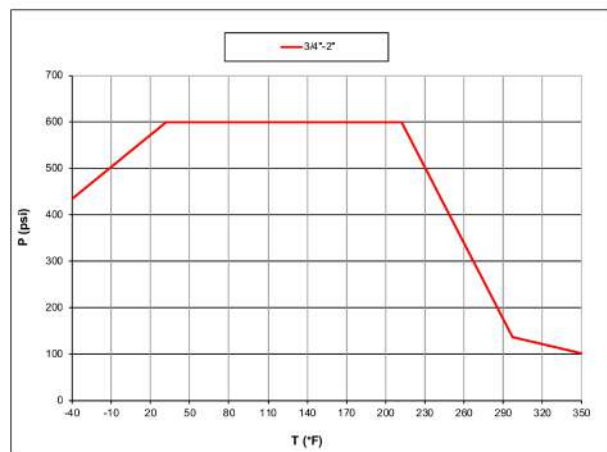
1 1/4"-2" hollow ball



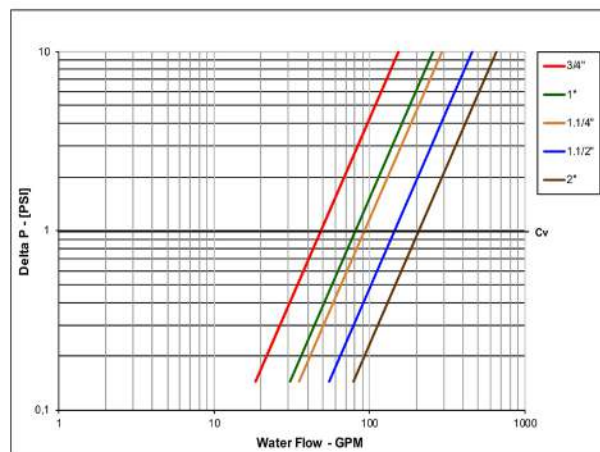
Code	S80E41	S80F41	S80G41	S80H41	S80I41
D (inch)	3/4	1	1 1/4	1 1/2	2
DN (inch)	0.787	0.984	1.259	1.574	1.968
I (inch)	0.669	0.826	0.905	0.905	1.043
L (inch)	2.519	3.188	3.661	4.015	4.763
G (inch)	1.259	1.594	1.830	2.007	2.381
A (inch)	1.142	1.142	1.208	1.208	1.208
H (inch)	1.801	1.958	2.519	2.756	3.031
M (inch)	0.492	0.492	0.472	0.472	0.472
N (inch)	0.449	0.449	0.563	0.563	0.563
CH (inch)	1.220	1.574	1.929	2.125	2.696
Cv (GPM)	48.5	80.9	92.4	144.4	206.8

DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4.

Pressure-temperature chart



Pressure drop chart

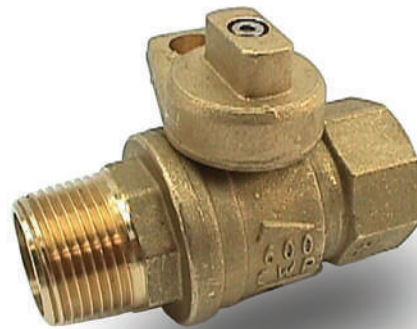


XCES80 - 4314



s.8042 NPT

3/4" - 2" MIP x FIP
with tamper proof lockwing



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Cover clearly shows ball position
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Handle stops on body to avoid stress at stem

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Special design to combine newest technologies in valve and traditional gascock requirements
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel unplated brass stem
- Maintenance-free, double FPM O-rings at the stem for maximum safety

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design

Threads

- NPT taper ANSI B.1.20.1 male by female threads

Flow

- Full port to DIN 3357 for maximum flow

Handle

- Hot forged brass tamper proof lockwing

Working pressure & temperature

- 600 PSI (40 bar) non-shock cold working pressure
- 250 PSI (17 bar) non-shock working pressure for LP-Gas
- -40°F to +350°F (-40°C / +170°C)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

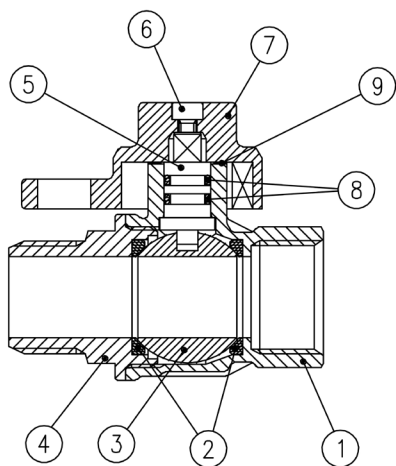
Options

- Female by female NPT threads

Approved by or in compliance with

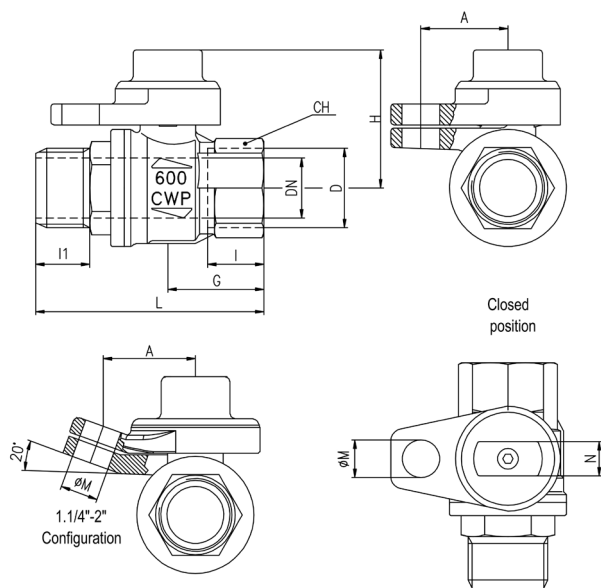
- Canadian standards Association (United States, Canada)
- GOST-R (Russia)
- RoHS Compliant (EU)
- Underwriters Laboratories (United States, Canada):
 - Guide YSDT: LP-Gas Shut-Off Valve
 - Guide YRBX: Flammable liquid shutoff valve
 - Guide YRPV: Gas Shut-Off Valve for use with natural and manufactured gases
 - Guide MHKZ: No. 6 oil at 250°F

NOTE: approvals apply to specific configurations/sizes only.



Part description	Qty	Material	
1	Unplated NPT body	1	CW617N
2	Seat	2	PTFE
3	Chrome plated ball	1	CW617N
4	Unplated NPT male end-cap	1	CW617N
5	Unplated stem O-ring design	1	CW617N
6	Stainless steel screw	1	1.4301 / AISI 304
7	Unplated lockwing	1	CW617N
8	O-Ring	2	FPM
9	Washer (from 3/4" to 2")	1	PTFE glass filled 25%

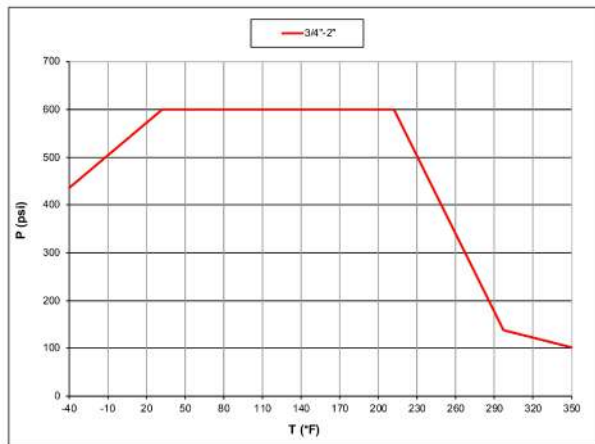
1 1/4"-2" hollow ball



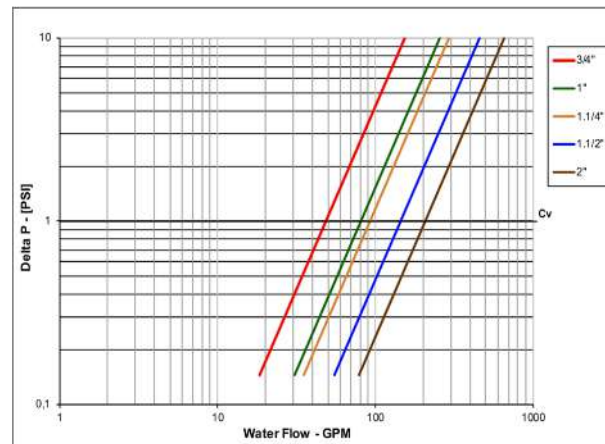
Code	S80E42	S80F42	S80G42	S80H42	S80I42
D (inch)	3/4	1	1 1/4	1 1/2	2
DN (inch)	0.787	0.984	1.259	1.574	1.968
I (inch)	0.669	0.826	0.905	0.905	1.043
I1 (inch)	0.709	0.866	0.945	0.945	1.083
L (inch)	2.992	3.642	4.173	4.449	5.236
G (inch)	1.259	1.594	1.830	2.007	2.381
A (inch)	1.142	1.142	1.208	1.208	1.208
H (inch)	1.801	1.958	2.519	2.756	3.031
M (inch)	0.492	0.492	0.472	0.472	0.472
N (inch)	0.449	0.449	0.563	0.563	0.563
CH (inch)	1.220	1.574	1.929	2.125	2.696
Cv (GPM)	48.5	80.9	92.4	144.4	206.8

DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4.

Pressure-temperature chart



Pressure drop chart



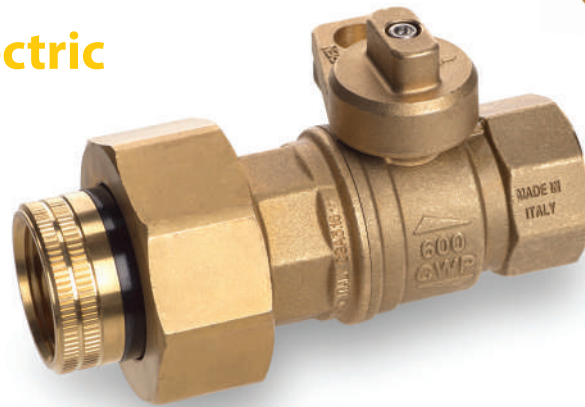
XCES8042 - 4314



s.8043 NPT dielectric

3/4" - 1 1/4"

with tamper proof lockwing



Quality

- 24h 100% seal test guaranteed
- No metal-to-metal moving parts
- No maintenance ever required
- Cover clearly shows ball position
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Handle stops on body to avoid stress at stem

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Special design to combine newest technologies in valve and traditional gascock requirements
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel unplated brass stem
- Maintenance-free, double FPM O-rings at the stem for maximum safety

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design

Threads

- NPT taper ANSI B.1.20.1 female by dielectric union female threads

Flow

- Full port to DIN 3357 for maximum flow

Handle

- Hot forged brass tamper proof lockwing

Working pressure & temperature

- 600 PSI (40 bar) non-shock cold working pressure
- 250 PSI (17 bar) non-shock working pressure for LP-Gas
- -40°F to +350°F (-40°C / +170°C)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Painted gray
- Dielectric union end long or short pattern

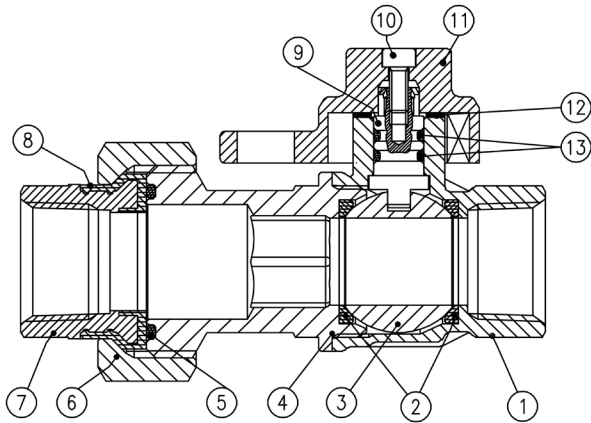
Upon request

See s.80

Approved by or in compliance with

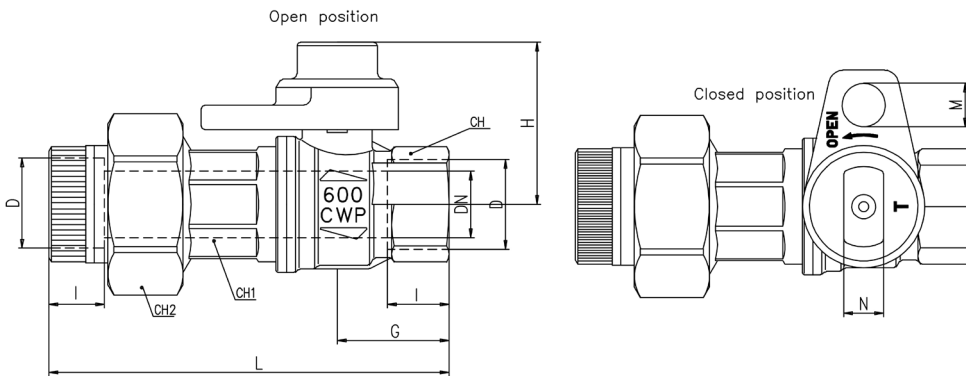
- Underwriters Laboratories (United States, Canada):
 - Guide YSDT: LP-Gas Shut-Off Valve
 - Guide YRBX: Flammable liquid shutoff valve
 - Guide YRPV: Gas Shut-Off Valve for use with natural and manufactured gases
- Canadian standards Association (United States, Canada)
- GOST-R (Russia)
- RoHS Compliant (EU)
- Canadian standards Association (United States, Canada)

NOTE: approvals apply to specific configurations/sizes only.



1 1/4" hollow ball

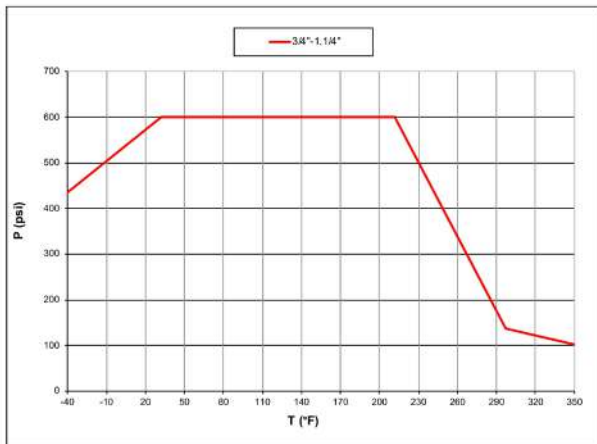
Part description	Qty	Material
1 Unplated body	1	CW617N
2 Seat	2	PTFE
3 Chrome plated ball	1	CW617N
4 Unplated spacer	1	CW617N
5 Tail piece O-Ring	1	FPM
6 Unplated nut	1	CW617N
7 Dielectric tail piece	1	CW617N
8 Insulation	1	Polyamide
9 Unplated stem O-ring design	1	CW617N
10 Stainless steel screw	1	1.4301 / AISI 304
11 Unplated lockwing	1	CW617N
12 Washer	1	PTFE glass filed 25%
13 Stem O-ring	2	FPM



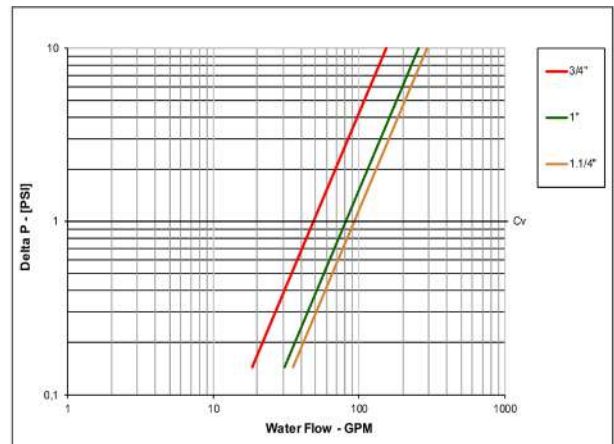
DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4.

Code	S80E43	S80F43	S80G43
D (inch)	3/4	1	1.1/4
DN (inch)	0.748	0.945	1.181
I (inch)	0.669	0.826	0.905
L (inch)	4.507	5.157	5.236
G (inch)	1.260	1.594	1.831
A (inch)	1.141	1.141	1.209
H (inch)	1.831	1.988	2.559
M (inch)	0.492	0.492	0.472
N (inch)	0.449	0.449	0.563
CH (inch)	1.220	1.575	1.929
CH1 (inch)	1.220	1.575	1.929
CH2 (inch)	2.047	2.401	2.441
Cv (GPM)	48.5	80.9	92.4

Pressure-temperature chart



Pressure drop chart



XCES8043 - 4314

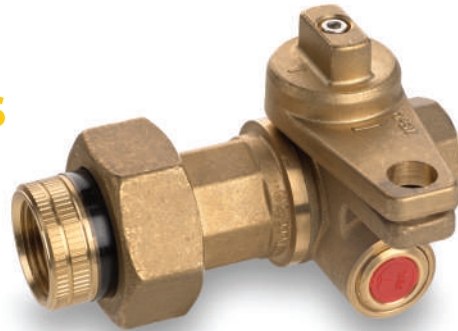


s.80 NPT surepass

3/4" - 1"

175 PSI

bypassing gas meter valve



One quick turn switches valve from normal metered flow to bypass mode for rapid on-line servicing of meter or regulator.



Quality

- No metal-to-metal moving parts
- No maintenance or lubrication ever required
- Every valve production tested twice for internal or external leakage
- Meets all applicable parts to DoT 192
- Customer service never interrupted
- Chrome plated brass ball
- Gas theft discouraged by plastic security plug in bypass port and port inaccessible when barrel lock in use

Body

- Rust-proof forged brass body, ball, stem and lockwing

Stem

- Maintenance-free, double FPM O-rings at the stem for maximum safety, eliminate gas emissions

Sealing

- Pure PTFE seats with flexible-lip design

Threads

- NPT taper ANSI B1.20.1 female by dielectric union female threads

Flow

- Full port to DIN 3357 for maximum flow
- Full 100 SCFH gas flow during bypassing

Handle

- Tamper proof lockwing
- Single lever operation for positive switch from metering to bypassing



Tamper proof seal

Working pressure & temperature

- 175 PSI non-shock cold working pressure
- -40°F/ +350°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

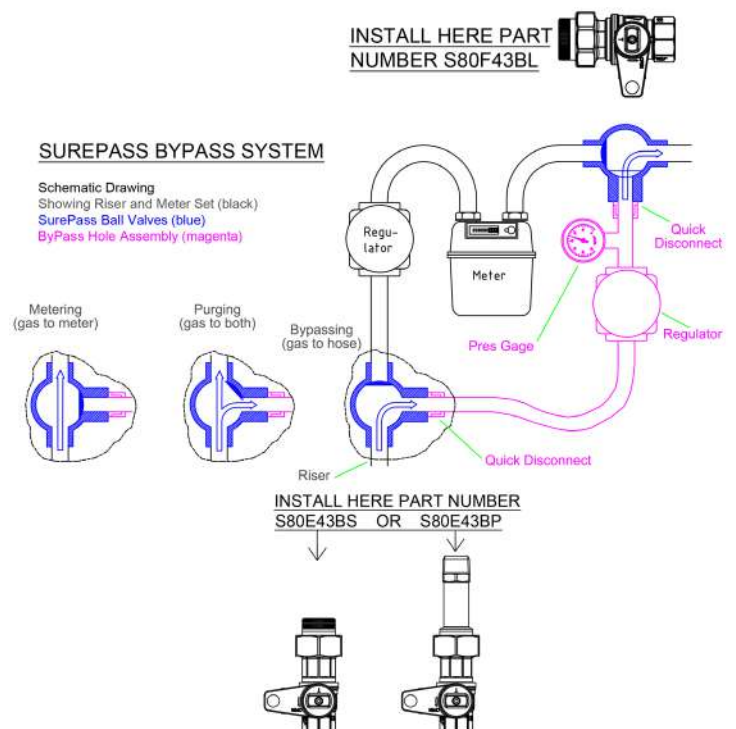
Options

- Painted gray
- By-pass hose assembly
- Dielectric union end long or short pattern

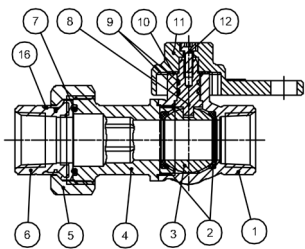
Approved by or in compliance with

- Canadian standards Association (United States, Canada)
- GOST-R (Russia)
- RoHS Compliant (EU)

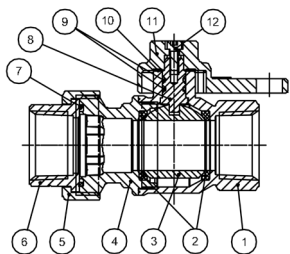
NOTE: approvals apply to specific configurations/sizes only.



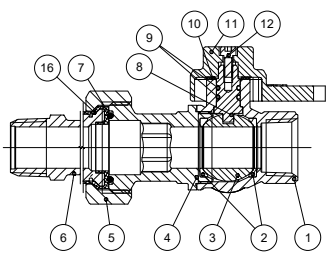
S80E43BS



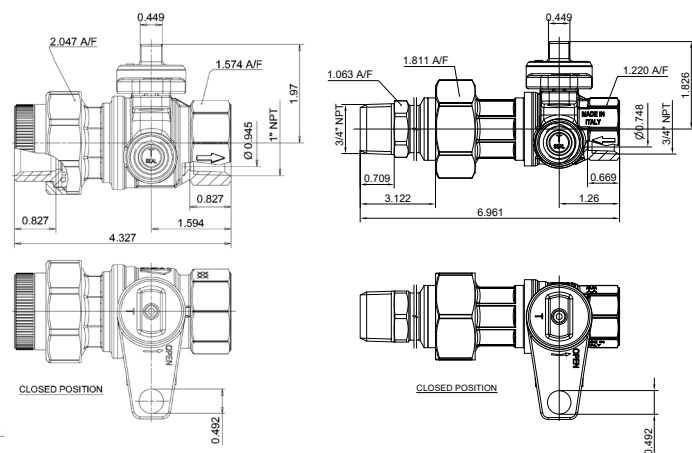
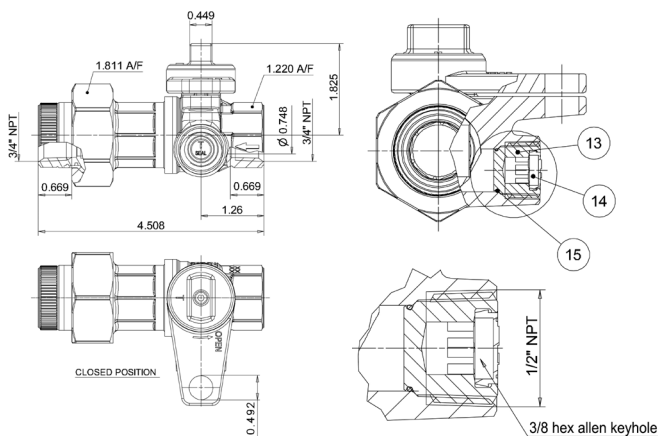
S80F43BL



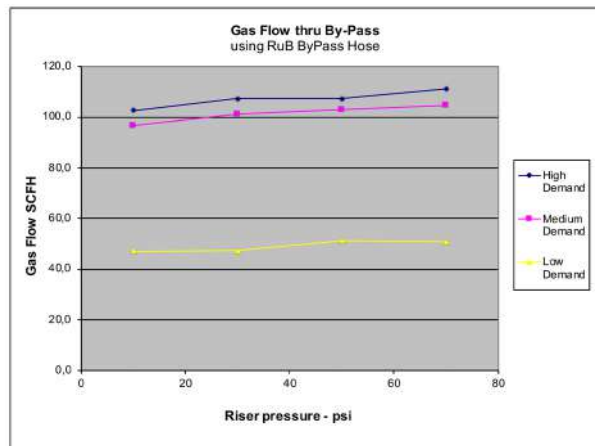
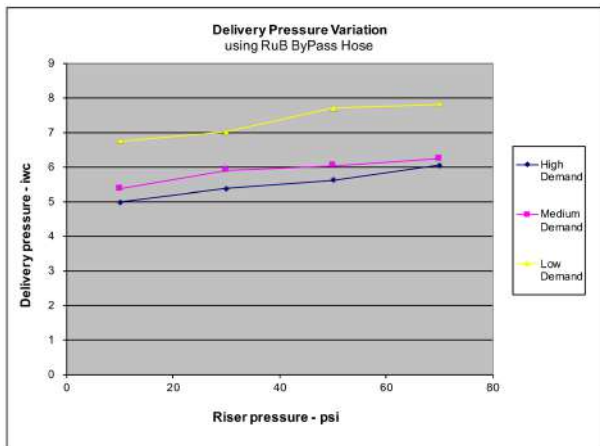
S80E43BP



Part description	Qty	Material
1 Sand blasted body	1	CW617N
2 Seat	2	PTFE glass filled 5-15%
3 Chrome plated ball	1	CW617N
4 Sand blasted end-cap	1	CW617N
5 Nut	1	CW617N
6 NPT female tail piece	1	CW617N
7 O-Ring	1	FPM
8 Stem O-Ring design	1	CW617N
9 O-Ring	2	FPM
10 Washer	1	PTFE glass filled 25%
11 Sand blasted lockwing	1	CW617N
12 Stainless steel screw	1	1.4301 / AISI304
13 Plug	1	CW617N
14 Security plug	1	Polystyrene
15 O-Ring	1	FPM
16 Insulation (for 3/4")	1	Polyamide



DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4.





s.82 NPT

1/2" - 2"
side drain



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Handle stops on body to avoid stress at stem
- Chrome plated brass ball for longer life

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Side drain allows easy and safe downstream line venting
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel plated brass stem
- Maintenance-free, double FPM O-rings at the stem for maximum safety

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design

Threads

- NPT taper ANSI B.1.20.1 female by female threads
- 1/4" NPT side tap

Flow

- Full port to DIN 3357 for maximum flow

Handle

- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both thermal and electrical protection
- Handle removable with valve in service
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 600 PSI (40 bar) non-shock cold working pressure
- 250 PSI (17 bar) non-shock working pressure for LP-Gas
- -40°F/+350°F (-40°C / +170°C)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Stem extension
- T-handle
- Oval lockable handle
- Stainless steel handle (1.4016 / AISI 430)
- Patented locking device
- Stubby handle
- **RuB** memory stop designed to be installed with our stubby handle

Upon request

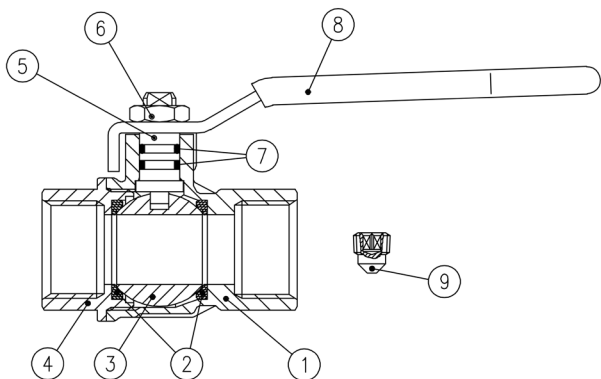
- Stainless steel ball and/or stem (1.4401 / AISI 316)
- Glass filled PTFE seals
- Custom design
- Dual side drain port

Approved by or in compliance with

- Canadian standards Association (United States, Canada)
- GOST-R (Russia)
- RoHS Compliant (EU)
- Underwriters Laboratories (United States, Canada):
 - Guide YSDT: LP-Gas Shut-Off Valve
 - Guide YRBX: Flammable liquid shutoff valve
 - Guide YRPV: Gas Shut-Off Valve for use with natural and manufactured gases
 - Guide MHKZ: No. 6 oil at 250°F

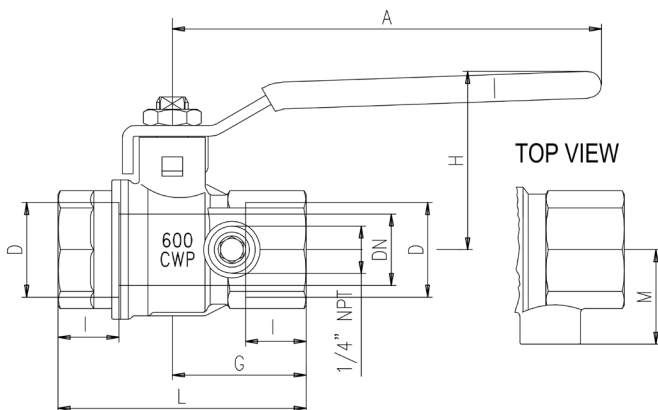
NOTE: approvals apply to specific configurations/sizes only.





1 1/4"-2" hollow ball

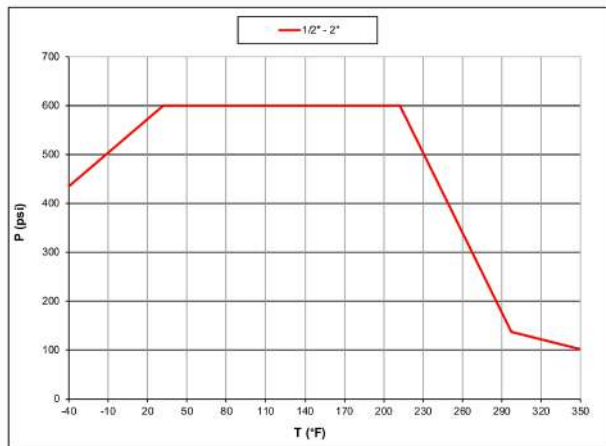
Part description	Qty	Material	
1	Unplated body	1	CW617N
2	Seat	2	PTFE
3	Chrome plated ball	1	CW617N
4	Unplated NPT end-cap	1	CW617N
5	Nickel plated stem O-ring design	1	CW617N
6	Geomet® nut	1	CB4FF (EN10263-2)
7	O-Ring	2	FPM
8	Yellow PVC coated Geomet® steel handle	1	DD11 (EN10111)
9	Unplated plug	1	CW617N



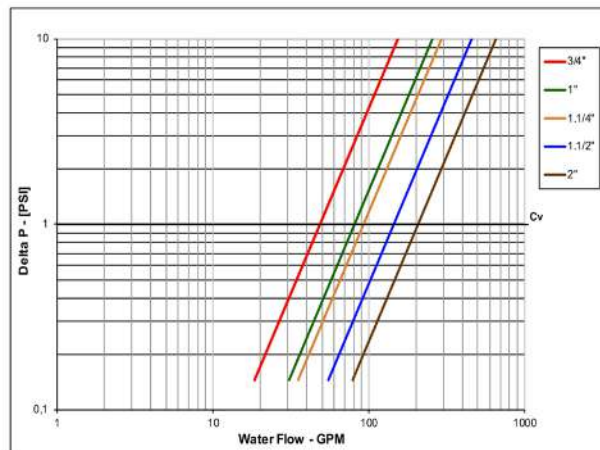
DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4.

Code	S82D41	S82E41	S82F41	S82G41	S82H41	S82I41
D (inch)	1/2	3/4	1	1 1/4	1 1/2	2
DN (inch)	0.590	0.787	0.984	1.259	1.574	1.968
I (inch)	0.610	0.669	0.826	0.905	0.905	1.043
L (inch)	2.559	2.736	3.405	3.878	4.232	4.960
G (inch)	1.397	1.476	1.811	2.047	2.224	2.578
A (inch)	3.937	4.724	4.724	6.220	6.220	6.220
H (inch)	1.679	1.956	2.114	2.858	3.094	3.370
M (inch)	0.964	1.063	1.200	1.338	1.516	1.752
CH (inch)	0.984	1.220	1.574	1.929	2.125	2.696
Cv (GPM)	32.3	48.5	80.9	92.4	144.4	206.8

Pressure-temperature chart



Pressure drop chart



XCES82 - 4314



s.195 NPT & flare

3/8" - 1"

standard port gas cock



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Handle stops on body to avoid stress at stem
- Chrome plated brass ball for longer life

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel plated brass stem
- Maintenance-free, double FPM O-rings at the stem for maximum safety

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design
- Threads
- NPT taper ANSI B.1.20.1 female by female threads

Flow

- Standard port for compact design

Handle

- Aluminum wedge handle enameled red
- Handle removable with valve in service
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 450 PSI (30 bar) non-shock cold working pressure
- 250 psi (17 bar) non-shock working pressure for LP-Gas
- -40°F to +350°F (-40°C / +170°C)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

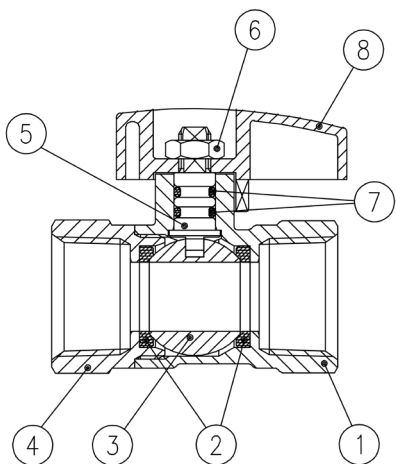
- Stem extension
- T-handle
- Stainless steel handle (1.4016 / AISI 430)
- 3/8" through 1" NPT female by NPT female (suffix 41)
- 3/8", 1/2" and 5/8" flare by flare (suffix 30)
- 1/2" NPT female by 1/2" flare (suffix 31)
- 1/2" NPT male by 1/2" flare (suffix 34)
- 1/2" NPT male by 3/8" flare (suffix 34)
- 1/2" NPT female by 3/8" flare (suffix 33)
- 1/2" flare by 3/8" flare (suffix 32)
- 1/8" NPT side tap for some versions/ sizes

Approved by or in compliance with

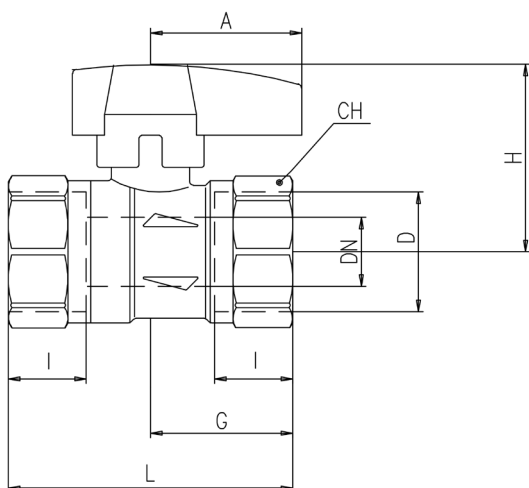
- Underwriters Laboratories (United States, Canada):
 - Guide YSDT: LP-Gas Shut-Off Valve
 - Guide YRBX: Flammable liquid shutoff valve
 - Guide YRPV: Gas Shut-Off Valve for use with natural and manufactured gases
 - Guide MHKZ: No. 6 oil at 250°F
- GOST-R (Russia)
- Canadian standards Association (United States, Canada)
- RoHS Complaint (Russia)
- Meeting WW-V-35C Federal U.S. Specification (United States)

NOTE: approvals apply to specific configurations/sizes only.





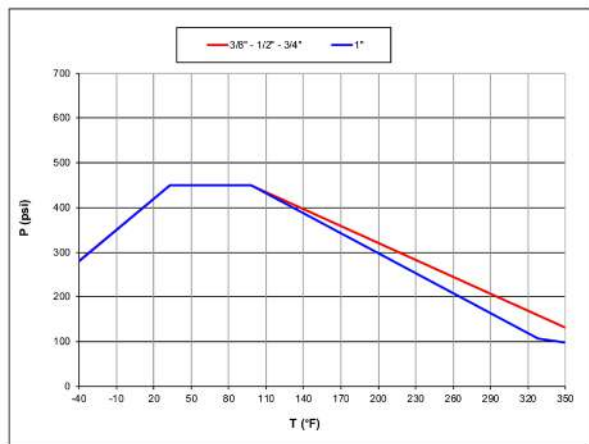
Part description	Qty	Material
1 Sand blasted unplated body	1	CW617N
2 Seat	2	PTFE
3 Chrome plated ball	1	CW617N
4 Sand blasted unplated end-cap	1	CW617N
5 Nickel plated stem O-ring design	1	CW617N
6 Geomet® nut	1	CB4FF (EN10263-2)
7 O-Ring	2	FPM
8 Red T-handle	1	EN AC- 46100



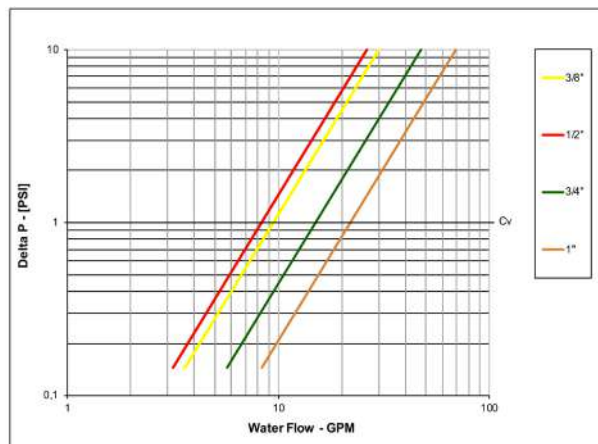
Code	195C41	195D41	195E41	195F41
D (inch)	3/8	1/2	3/4	1
DN (inch)	0.393	0.453	0.590	0.787
I (inch)	0.472	0.610	0.669	0.827
L (inch)	1.772	2.126	2.441	2.835
G (inch)	0.886	1.043	1.220	1.417
A (inch)	1.299	1.299	1.299	1.299
H (inch)	1.437	1.535	1.614	1.752
CH (inch)	0.787	0.984	1.220	1.496
Cv (GPM)	9.5	8.3	15.0	22.0

DN shows the nominal flow diameter.

Pressure-temperature chart



Pressure drop chart



XCE195 - 4314



s.195

flare 37°
by solder end 1/2" – 3/4"
standard port



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Handle stops on body to avoid stress at stem
- Chrome plated brass ball for longer life

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel plated brass stem
- Pure PTFE adjustable packing gland and reinforced washer for lower torque and easy maintenance

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design

Threads

- 1/2" flare 37° by 1/2" solder end
- 3/4" flare 37° by 3/4" solder end

Flow

- Standard port for compact design

Handle

- Aluminum T-handle enameled red
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 600 PSI (for solder joints rating see table 1) non-shock cold working pressure
- -4°F to +350°F (for solder joints rating see table 1)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Stainless steel handle (1.4016 / AISI 430)
- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both thermal and electrical protection
- Stubby handle

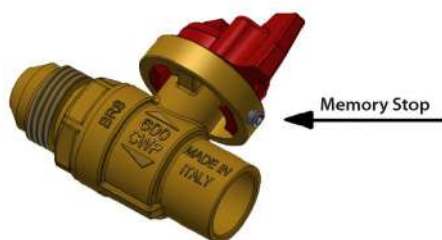
Upon request

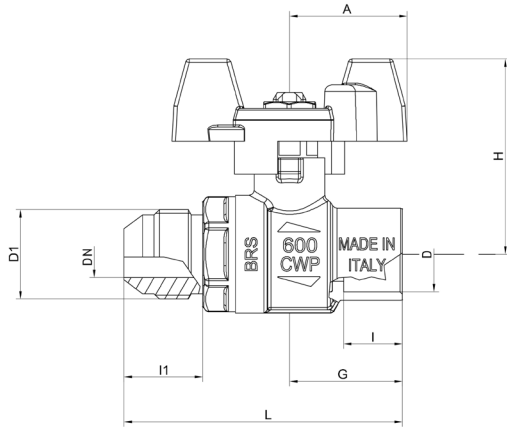
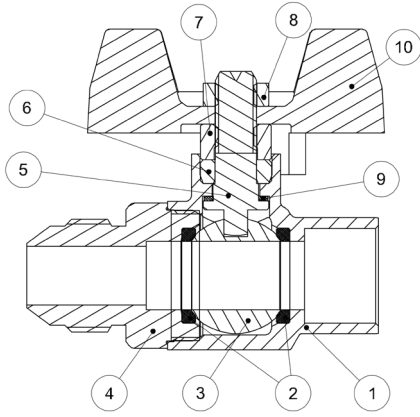
- Memory stop

Approved by or in compliance with

- GOST-R (Russia)
- Canadian standards Association (United States, Canada)
- RoHS Compliant (EU)

NOTE: approvals apply to specific configurations/sizes only.





DN shows the nominal flow diameter.

Part description	Qty	Material
1 Sand blasted unplated body	1	CW617N
2 Seat	2	PTFE
3 Chrome plated ball	1	CW617N
4 Sand blasted unplated end-cap	1	CW617N
5 Nickel plated stem packing gland design	1	CW617N
6 Packing gland seal	1	PTFE
7 Nickel plated gland nut	1	CW617N
8 Geomet® nut	1	CB4FF (EN10263-2)
9 Washer	1	PTFE carbon filled 25%
10 Red T-handle	1	EN AC- 46100

Code	195D40	195E40
D (inch)	0.63	0.877
D1 (inch)	3/4-16 UNF 2A	1.1/16-12 UN 2A
DN(inch)	0.39	0.61
I (inch)	0.49	0.748
I1 (inch)	0.66	0.862
L (inch)	2.33	3.031
G (inch)	0.94	1.319
A (inch)	0.98	0.98
H (inch)	1.63	1.705
Cv (GPM)	5.8	14.5

Joining material	Melting range degrees		Working temperature degrees		Maximum working gauge pressure					
	°F	°C	°F	°C	Size 1/8" - 1"		Size 1 1/4" - 2"		Size 2 1/2" - 4"	
					psi	kPa	psi	kPa	psi	kPa
50-50 tin-lead solder* ASTM B32 alloy grade 50 A	361/421	185/215	0/+100	-18/+38	200	1400	176	1200	150	1050
			0/+150	-18/+66	150	1050	125	850	100	700
			0/+200	-18/+93	100	700	90	600	75	500
			0/+250	-18/+121	85	600	75	500	50	350
95-5 tin-antimony solder* ASTM B32 alloy grade 95TA	450/464	230/240	0/+100	-18/+38	500**	3500**	400**	2800**	300**	2100**
			0/+150	-18/+66	400**	2800**	350**	2400**	275**	2000**
			0/+200	-18/+93	300**	2100**	250**	1700**	200	1400
			0/+250	-18/+121	200	1400	175	1200	150	1050

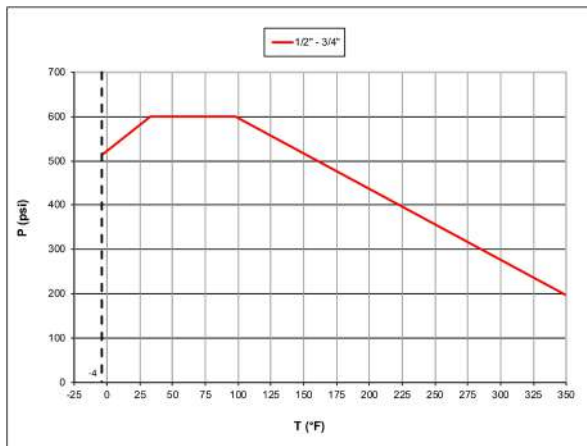
Note:

Above stated limits are not imposed by the valve, but by the strength of the soldering joint according to ASME B16.22.

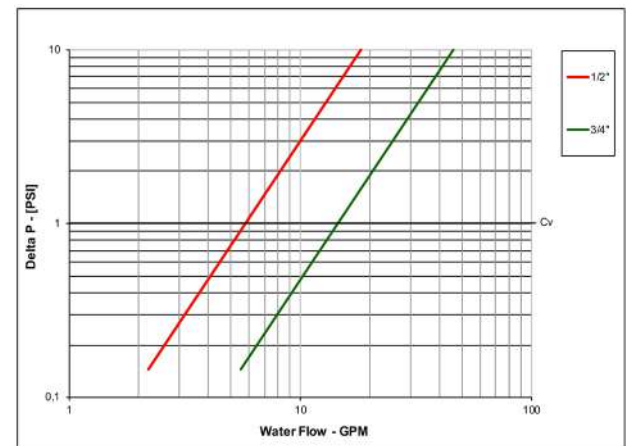
* This alloy contains more than 0,2% lead and, according to certain specifications, cannot be used for potable water or other foods.

** Soldered copper tube joints have been tested at 230 psi (1600 kPa) in accordance with ISO 2016

Pressure-temperature chart



Pressure drop chart



XCE19540 - 4266

INDUSTRY



s.95 NPT spring return 1/4" - 2"	Page 92
s.92S NPT solid ball 1/4" - 4"	Page 94
k.84 BSPP 1/4" - 2"	Page 96
s.84 BSPT 1/4" - 4"	Page 98
s.7241L NPT 3-way, lever, 4 seats, L-port (diverting) 1/2" - 1"	Page 100
s.7341L NPT 3-way, lever, 4 seats, T-port 1/2" - 1"	Page 102
s.7641L NPT 3-way, lever, 2 seats, L-port (diverting) 1/2" - 1"	Page 104
SNI7352 1/4" NPT needle valve	Page 106
s.130 NPT stainless steel 1/4" - 4" 1000 PSI	Page 108
s.131 NPT stainless steel 1/4" - 2" 1000 PSI - reduced port	Page 110
s.132 NPT stainless steel 1/4" - 2" 2000 PSI	Page 112
s.135 NPT stainless steel 2" - 3" - 4" ANSI B16.5 flange	Page 114
s.136 NPT stainless steel full port 6" - 8" flanged ball valve	Page 116
s.92 barrel drain 3/4" - 1"	Page 118



s.95 NPT spring return

1/4" – 2"

Access to fluid systems in public places could potentially convert into costs and safety problems.

In order to avoid unattended valves being left open with negative economic or environmental consequences, **RuB** developed the automatic self-closing valve.

The valve can be opened normally by rotating the handle 90° and when the user releases the handle, the valve shuts off automatically.

Best solution for service stations, trucks, public areas, gardens. The same feature is also useful in industrial applications, where a valve must not be left open unattended.



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Handle stops on body to avoid stress at stem
- Chrome plated brass ball for longer life

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel plated brass stem
- Maintenance-free, double FPM O-rings at the stem for maximum safety

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Flow

- Full port to DIN 3357 for maximum flow

Handle

- Robust spring ensures auto shutt-off with max pressure in valve
- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both thermal and electrical protection
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 600 PSI (40 bar) non-shock cold working pressure
- 250 PSI (17 bar) non-shock working pressure for LP-Gas
- -40°F / +350°F (-40°C / +170°C)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Stainless steel handle (1.4016 / AISI 430)

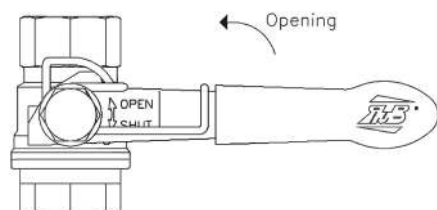
Upon request

- Stainless steel ball (1.4401 / AISI 316)c
- Custom design

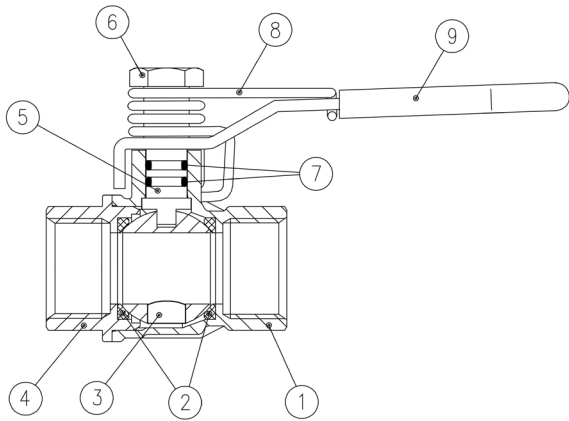
Approved by or in compliance with

- GOST-R (Russia)
- Underwriters Laboratories (United States, Canada):
 - Guide YSDT: LP-Gas Shut-Off Valve
 - Guide YRBX: Flammable liquid shutoff valve
 - Guide YRPV: Gas Shut-Off Valve for use with natural and manufactured gases
 - Guide MHKZ: No. 6 oil at 250°F
- Canadian standards Association (United States, Canada)
- Factory Mutual (United States)
- RoHS Compliant (EU)
- Meeting WW-V-35C Federal U.S. Specification (United States)

NOTE: approvals apply to specific configurations/sizes only.

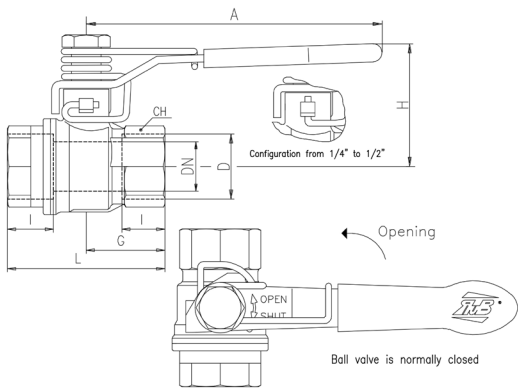


Ball valve is normally closed



	Part description	Qty	Material
1	Unplated NPT body	1	CW617N
2	Seat	2	PTFE
3	Chrome plated ball	1	CW617N
4	Unplated NPT end-cap	1	CW617N
5	Nickel plated stem O-ring design	1	CW617N
6	Unplated spring nut	1	CW617N
7	O-Ring	2	FPM
8	Spring return	1	1.4310 (AISI 302)
9	Yellow PVC coated Geomet® steel handle	1	DD11 (EN10111)

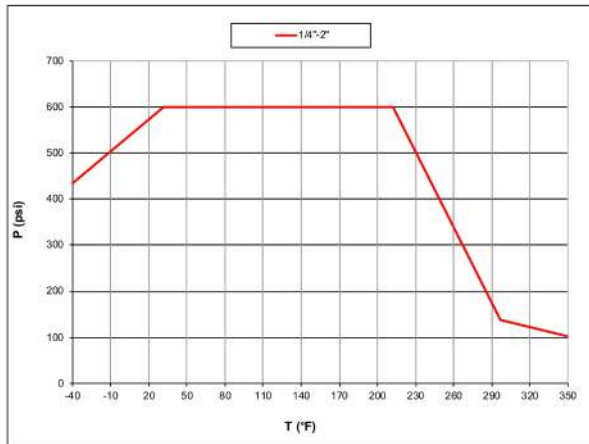
1 ¼"-2" hollow ball



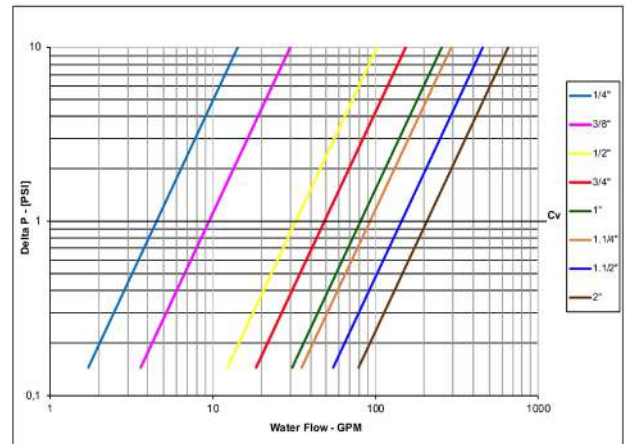
Code	S95B41MR	S95C41MR	S95D41MR	S95E41MR	S95F41MR	S95G41MR	S95H41MR	S95I41MR
D (inch)	1/4	3/8	1/2	3/4	1	1 ¼	1 ½	2
DN (inch)	0.314	0.393	0.590	0.787	0.984	1.259	1.574	1.968
I (inch)	0.472	0.472	0.610	0.669	0.826	0.905	0.905	1.043
L (inch)	1.771	1.771	2.322	2.519	3.188	3.661	4.015	4.763
G (inch)	0.885	0.885	1.161	1.259	1.594	1.830	2.007	2.381
A (inch)	3.937	3.937	3.937	4.724	4.724	6.220	6.220	6.220
H (inch)	1.504	1.504	1.679	1.956	2.114	2.858	3.094	3.370
CH (inch)	0.787	0.787	0.984	1.220	1.574	1.929	2.125	2.696
CV (GPM)	4.5	9.5	32.3	48.5	80.9	92.4	144.4	206.8

DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4.

Pressure-temperature chart



Pressure drop chart



XCES95MR - 4314



s.92s NPT solid ball

1/4" - 4"



rated sizes 1/4" through 1"



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Chrome plated brass solid ball for longer life
- Handle stops on body to avoid stress at stem

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel plated brass stem
- Pure PTFE adjustable packing gland and reinforced washer for lower torque and easy maintenance
- Triple stem seals in sizes over 2"

Sealing

- Glass filled pure PTFE self-lubricating seats with flexible-lip design

Threads

- NPT taper ANSI B. 1.20.1 female by female threads

Flow

- Full port to DIN 3357 for maximum flow
- Solid ball for optimum CV

Handle

- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both thermal and electrical protection
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 600 PSI (40 bar) up to 2", 450 PSI (30 bar) over 2", (150 WSP / -10 bar all sizes) non-shock cold working pressure
- 250 PSI (17 bar) non-shock working pressure for LP-Gas
- *150 psig (10 bar) non-shock steam working pressure. Not suitable for throttling steam
- -40°F to +366°F (-40°C to +170°C)

Options up to 2" size

- Stem extension
- T-handle
- Stainless steel handle (1.4016 / AISI 430)
- Oval lockable handle up to 2", round over 2"
- Patented locking device for valves up to 4"
- Male by female NPT threads up to 4"

Stubby handle

Upon request

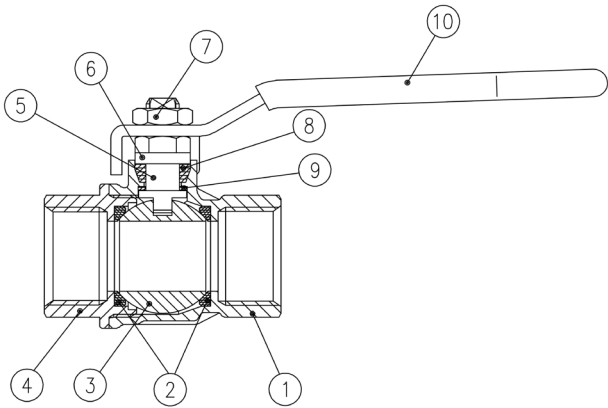
- Stainless steel ball and/or stem (1.4401 / AISI 316)
- Custom design
- Pure PTFE seals

Approved by or in compliance with

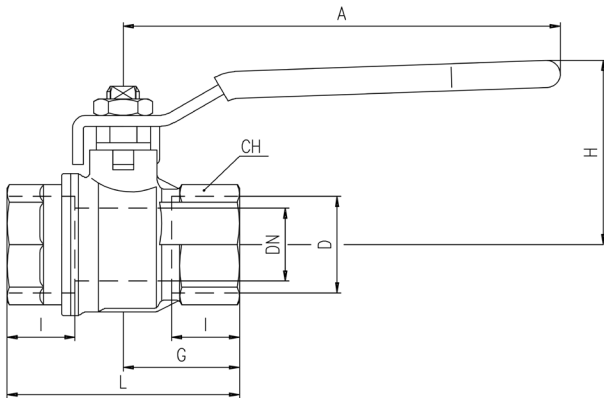
- Canadian standards Association (United States, Canada)
- Factory Mutual (United States)
- RoHS Compliant (EU)
- GOST-R (Russia)
- Underwriters Laboratories (United States, Canada):
 - Guide YSDT: LP-Gas Shut-Off Valve
 - Guide YRBX: Flammable liquid shutoff valve
 - Guide YRPV: Gas Shut-Off Valve for use with natural and manufactured gases
 - Guide MHKZ: No. 6 oil at 250°F
- CRN-TSSA acc. to MSS SP110 (Canada)
- Kuwait Fire Service Directorate (Kuwait)
- Meeting WW-V-35C Federal U.S. Specification (United States)

NOTE: approvals apply to specific configurations/sizes only.





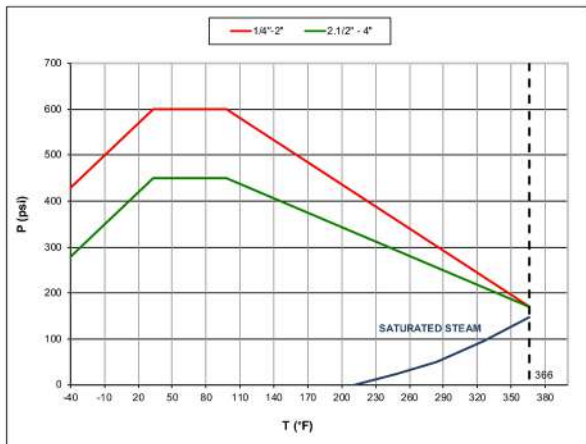
Part description	Qty	Material
1 Unplated NPT body	1	CW617N
2 Seat	2	PTFE glass filled 5-15%
3 Chrome plated solid ball	1	CW617N
4 Unplated NPT end-cap	1	CW617N
5 Nickel plated stem packing gland design	1	CW617N
6 Nickel plated gland nut	1	CW617N
7 Geomet® nut	1	CB4FF (EN10263-2)
8 Packing gland seal	1	PTFE
9 Washer	1	PTFE carbon filled 25%
10 Yellow PVC coated Geomet® steel handle	1	DD11 (EN10111)



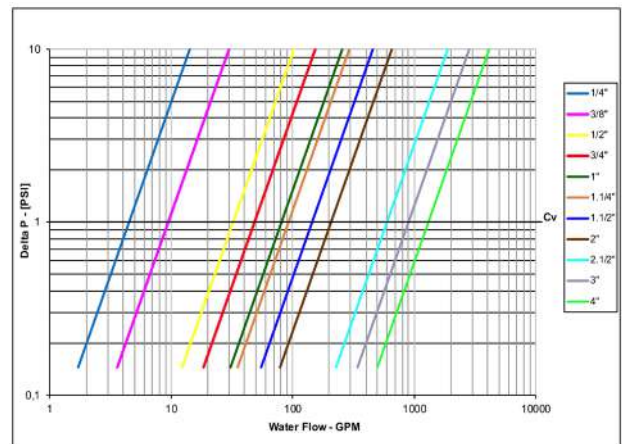
Code	S92B41	S92C41	S92D41	S92E41	S92F41	S92G41	S92H41	S92I41	S92L41	S92M41	S92N41
D (inch)	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
DN (inch)	0.314	0.393	0.590	0.787	0.984	1.259	1.574	1.968	2.559	3.149	3.937
I (inch)	0.472	0.472	0.610	0.669	0.826	0.905	1.043	1.260	1.377	1.633	1.633
L (inch)	1.771	1.771	2.322	2.519	3.188	3.661	4.015	4.763	6.141	6.968	8.504
G (inch)	0.885	0.885	1.161	1.259	1.594	1.830	2.007	2.381	3.070	3.484	4.252
A (inch)	3.228	3.228	3.937	4.724	4.724	6.220	6.220	6.220	10.039	10.039	10.039
H (inch)	1.563	1.563	1.695	1.988	2.153	2.988	3.236	3.500	5.196	5.511	6.062
CH (inch)	0.787	0.787	0.984	1.220	1.574	1.929	2.125	2.696	3.346	3.897	4.921
Cv (GPM)	4.5	9.5	32.3	48.5	80.9	127.1	214.9	295.8	596.2	896.5	1305.5

DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4. Stem configuration of valves over 2" is slightly different.

Pressure-temperature chart



Pressure drop chart

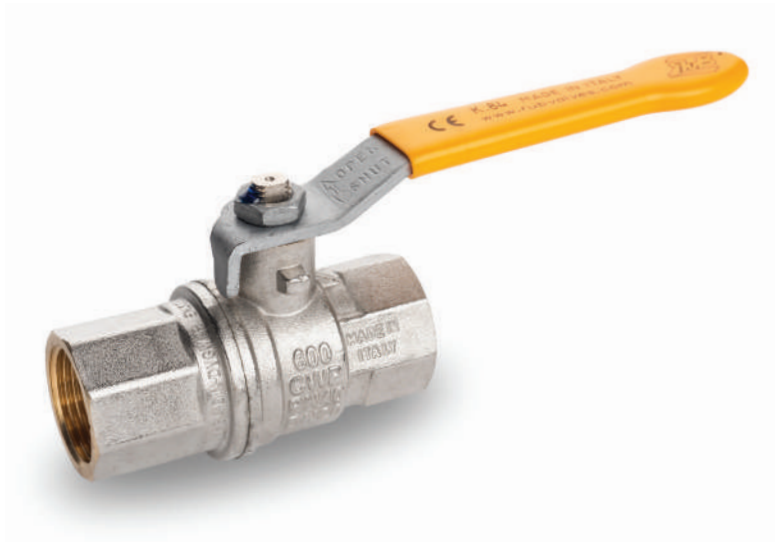


XCES92S - 4314



k.84 BSPP

1/4" – 2"



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Handle stops on body to avoid stress at stem
- Chrome plated brass ball for longer life with rinse hole

Body

- Valve length according to DIN 3202 M3 specification
- Finest brass according to EN 12165 and EN 12164 (formerly DIN 17660 and UNI 5705-65) specifications
- Hot forged sand blasted external nickel plated brass body and cap sealed with Loctite® or equivalent threads sealant

Stem

- Blowout-proof nickel plated brass stem
- Maintenance-free, double FPM O-rings at the stem for maximum safety

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design

Threads

- EN 10226-1, ISO 228 parallel female by female threads

Flow

- Full port to DIN 3357 for maximum flow

Handle

- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both thermal and electrical protection
- Handle removable with valve in service
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 40 bar (600 PSI) non-shock cold working pressure
- -40°F to +350°F (-40°C to +170°C)
- For use with dangerous fluids temperature rating is -4°F +140°F (-20°C +60°C) and pressure rating is 72psi (5 bar)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Stem extension
- T-handle
- Oval lockable handle
- Stainless steel handle (1.4016 / AISI 430)
- Patented locking device
- Stubby handle
- **RuB** memory stop designed to be installed with our stubby handle

Upon request

- Stainless steel ball (1.4401 / AISI 316)
- Glass filled PTFE seals
- Custom design

PED directive

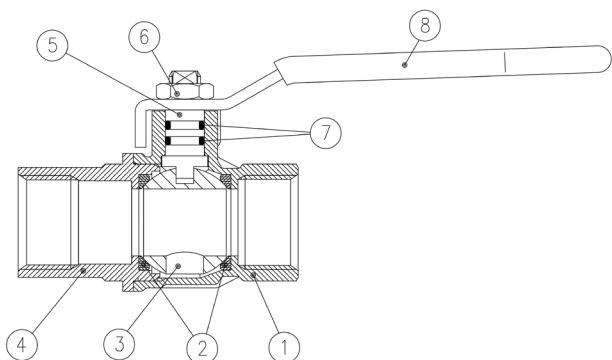
- Assessment according to Pressure Equipment Directive 2014/68/UE module B+D by ICIM (0425)

Approved by or in compliance with

- DIN-DVGW (Germany)
- BSI Group (United Kingdom)
- GOST-R (Russia)
- RoHS Compliant (EU)

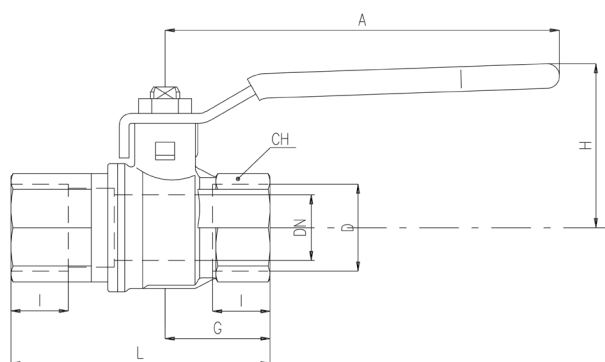
NOTE: approvals apply to specific configurations/sizes only.





1 1/4"-2" hollow ball

Part description	Qty	Material
1 Nickel plated body (external treatment)	1	CW617N
2 Ball seat	2	PTFE
3 Chrome plated ball with rinse hole (read rinse hole on sizes from 3/4" up to 2")	1	CW617N
4 Nickel plated end-cap (external treatment)	1	CW617N
5 Nickel plated stem O-ring design	1	CW617N
6 Geomet® nut	1	CB4FF (EN10263-2)
7 O-Ring	2	FPM
8 Yellow PVC coated Geomet® steel handle	1	DD11 (EN10111)

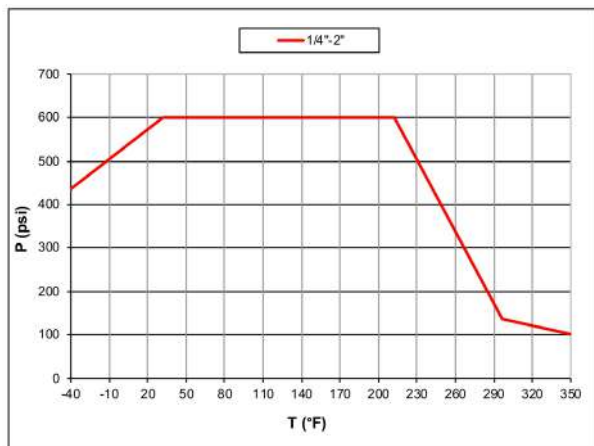


DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4. Ball valves are marked CE on handle from 1 1/4" to 2" as follow:
 CE 0425 cat IIIB+D PS: 5 GAS TS1:-20°C TS2:+60°C

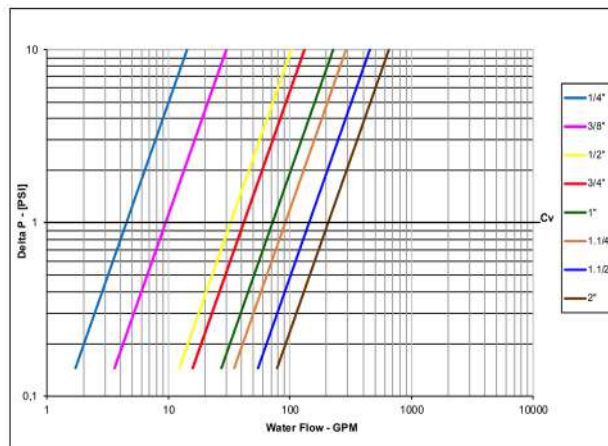
Compliant to
 CE 2014/68/UE product
 Equipment category III Module B+D

Code	S84B05	S84C05	S84D05	S84E05	S84F05	S84G05	S84H05	S84I05
D (inch)	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
DN (inch)	0.314	0.393	0.590	0.787	0.984	1.259	1.574	1.968
I (inch)	0.472	0.472	0.610	0.669	0.826	0.905	0.905	1.043
L (inch)	1.968	2.362	2.952	3.149	3.543	4.330	4.724	5.511
G (inch)	0.885	0.885	1.161	1.259	1.594	1.830	2.007	2.381
A (inch)	3.328	3.328	3.937	4.724	4.724	6.220	6.220	6.220
H (inch)	1.496	1.496	1.692	1.968	2.125	2.874	3.110	3.385
CH (inch)	0.787	0.787	0.984	1.220	1.574	1.929	2.125	2.696
Cv(GPM)	4.5	9.5	32.3	41.6	71.6	91.3	143.3	205.7

Pressure-temperature chart



Pressure drop chart



XCEK84U - 4266



s.84 BSPT

1/4" – 4"



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Handle stops on body to avoid stress at stem
- Chrome plated brass ball for longer life

Body

- Hot forged sand blasted, external nickel plated brass body and cap sealed with Loctite® or equivalent thread sealant
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel plated brass stem
- Maintenance-free, double FPM O-rings at the stem for maximum safety

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design

Threads

- ISO 7/1, BS 21 BSPT taper female by female threads

Flow

- Full port to DIN 3357 for maximum flow

Handle

- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both thermal and electrical protection
- Handle removable with valve in service
- **WARNING:** do not exceed reasonable temperature and/or electrical load



Working pressure & temperature

- 40 bar (600 PSI) up to 2", 30 bar (450 PSI) over 2" non-shock cold working pressure
- -40°F to +350°F (-40°C to +170°C)
- For use with dangerous fluids temperature rating is -4°F /+140°F (-20°C /+60°C) and pressure rating is 72psi (5 bar)
- AS4617 Limitation for GAS: 304psi (2100 Kpa) up to 2" and 217 psi (1500 Kpa) from 2 1/2" to 4" rated working pressure and +32°F/+140°F (0°C/ +60°C) temperature
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options up to 2" size

- Stem extension
- T-handle
- Oval lockable handle up to 2", round over 2"
- Stainless steel handle (1.4016 / AISI 430)
- Patented locking device for valves up to 4"
- Male by female threads
- Stubby handle
- **RuB** memory stop designed to be installed with our stubby handle

Upon request

- Stainless steel ball (1.4401 / AISI 316)
- Glass filled PTFE seals
- Custom design

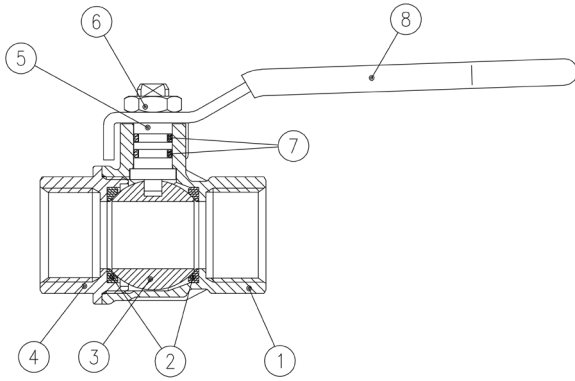
PED directive

- Assessment according to Pressure Equipment Directive 2014/68/UE module B+D by ICIM (0425)

Approved by or in compliance with

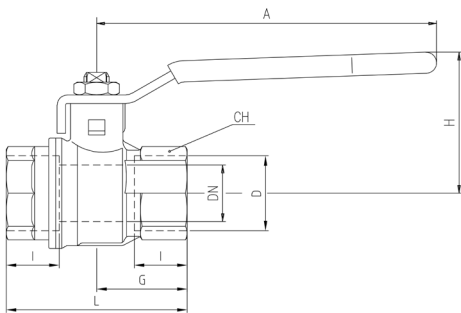
- The Australian Gas Association (Australia)
- Factory Mutual (United States)
- GOST-R (Russia)
- RoHS Compliant (EU)
- BSI Group (United Kingdom)

NOTE: approvals apply to specific configurations/sizes only.



1 ¼"-2" hollow ball

Part description	Qty	Material
1 Nickel plated body (external nickel plated, unplated inside up to 2")	1	CW617N
2 Seat	2	PTFE
3 Chrome plated ball	1	CW617N
4 Nickel plated end-cap (external nickel plated, unplated inside up to 2")	1	CW617N
5 Nickel plated stem O-ring design	1	CW617N
6 Geomet® nut	1	CB4FF (EN10263-2)
7 O-Ring	2	FPM
8 Yellow PVC coated Geomet® steel handle	1	DD11 (EN10111)

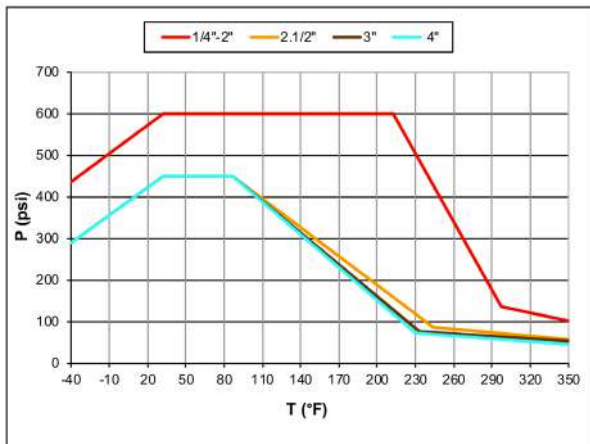


Code	Compliant to CE 2014/68/UE product Equipment category III Module B+D										
	S84B50	S84C50	S84D50	S84E50	S84F50	S84G50	S84H50	S84I50	S84L50	S84M50	S84N50
D (inch)	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
DN (inch)	0.314	0.393	0.590	0.787	0.984	1.259	1.574	1.968	2.559	3.149	3.937
I (inch)	0.472	0.472	0.610	0.669	0.826	0.905	0.905	1.043	1.260	1.377	1.633
L (inch)	1.771	1.771	2.322	2.519	3.188	3.661	4.015	4.763	6.141	6.968	8.504
G (inch)	0.885	0.885	1.161	1.259	1.594	1.830	2.007	2.381	3.070	3.484	4.252
A (inch)	3.228	3.228	3.937	4.724	4.724	6.220	6.220	6.220	10.039	10.039	10.039
H (inch)	1.563	1.563	1.695	1.988	2.153	2.988	3.236	3.500	5.196	5.511	6.062
CH (inch)	0.787	0.787	0.984	1.220	1.574	1.929	2.125	2.696	3.346	3.897	4.921
Cv (GPM)	4.5	9.5	32.3	48.5	80.9	92.4	144.4	206.8	596.2	896.5	1305.5

DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4.

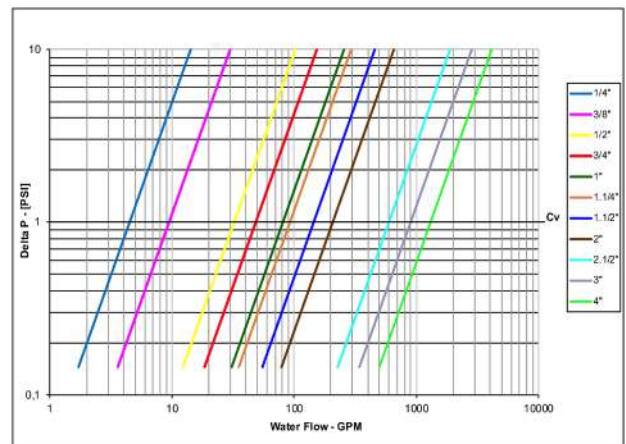
Stem configuration of valves over 2" is slightly different. Ball valves are marked CE on handle from 1 ¼" to 2", on body over 2" as follow : CE 0425 cat IIIB+D PS: 5 GAS TS1: -20°C TS2: +60°C

Pressure-temperature chart



AS4617 Limitation for GAS: 304psi (2100 Kpa) up to 2" and 217 psi (1500 Kpa) from 2 ½" to 4" rated working pressure and +32°F/+140°F (0°C/ +60°C) temperature

Pressure drop chart



XCES84U - 4266



s.7241L NPT

3-way lever 4 seats L-port (diverting)

1/2" – 1"

The **RuB** S.7241L is the right choice for fluid diversion and is designed with robust maintenance-free components ensuring ease of operation and safety. With a simple 90° turn of the handle, you can divert flow from one downstream outlet to the other. It combines traditional manual operation with modern automation.

It is also very easy to convert from its sturdy lever handle to ISO 5211 actuator flange assembly.

The valve can be purchased separately, with handle or with a **RuB** actuator already mounted.



Quality

- Electronic 100% seal test guaranteed
- No metal-to-metal moving parts
- No maintenance ever required
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Each valve is seal tested for maximum safety
- Performs well in any orientation
- Strong configuration

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Integrated ISO 5211 and DIN 3337 mounting flange for universal connection to actuator
- Finest brass according to EN 12165 and EN 12164 specifications
- 3-way L-port design for flow diversion

Stem

- Blowout-proof nickel plated brass stem
- Maintenance-free, double FPM O-rings at the stem for maximum safety

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design
- Four seats design for mixing of various fluids in the system

Threads

- NPT taper ANSI B.1.20.1 female threads

Flow

- 100% full port for maximum flow

Handle

- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both thermal and electrical protection
- Handle removable with valve in service
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 300 PSI non-shock cold working pressure
- -4°F to +302°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Rack and pinion pneumatic actuator (spring return or double acting)
- EN10226-1/ISO228 parallel female threads
- S.7241 without handle actuator ready
- Various actuator linkage kit

Upon request

- Custom design
- Stainless steel stem
- Configurations with 4 seats & T-port (s.7341L) or 2 seats & L-port (s.7641L)

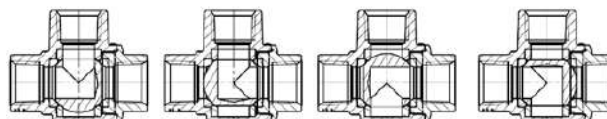
Approved by or in compliance with

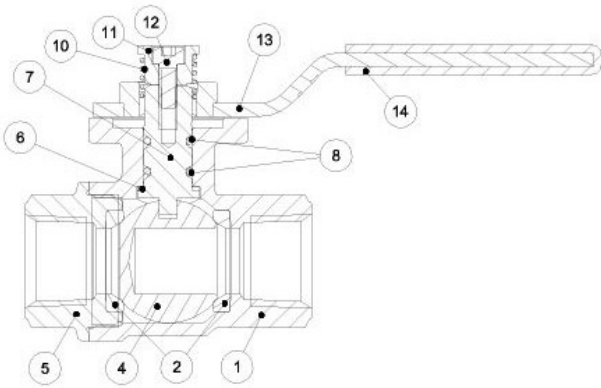
- RoHS Compliant (EU)

NOTE: approvals apply to specific configurations/sizes only.

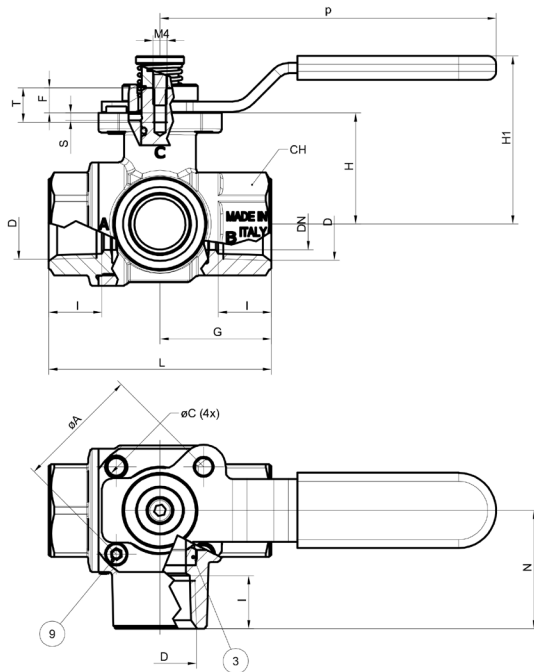


s72 3-way "L" port operating positions





Part description	Qty	Material
1 Sand blasted unplated body	1	CW617N
2 Seat	2	PTFE
3 Seat	2	PTFE
4 Chrome plated ball	1	CW617N
5 Sand blasted unplated end-cap	1	CW617N
6 Washer	1	PTFE carbon filled 25%
7 Nickel plated stem O-ring design	1	CW617N
8 O-Ring	2	FPM
9 Screw handle stop	1	CW617N
10 Spring	1	1.4310 / AISI 302
11 Unplated spring bushing	1	CW617N
12 Stainless steel screw	1	1.4301 / AISI 304
13 Geomet® plated steel handle	1	DD11 (EN10111)
14 Black dipped coating	1	PVC



Code	S72D41L	S72E41L	S72F41L
Size (inch)	1/2 NPT	3/4 NPT	1" NPT
DN(inch)	0.591	0.787	0.984
I (inch)	0.610	0.709	0.827
L (inch)	2.559	3.110	3.642
G (inch)	1.280	1.555	1.831
H (inch)	1.820	1.555	1.673
N (inch)	1.358	1.654	1.949
øA (inch)	1.417	1.417	1.417
øC (inch)	ø0.205 (M6)	ø0.205 (M6)	ø0.205 (M6)
P (inch)	3.937	3.937	3.937
H1 (inch)	1.929	2.210	2.328
S (inch)	0.087	0.087	0.087
T (inch)	0.394	0.394	0.394
F (inch)	0.287	0.327	0.327
CH (inch)	1.063	1.260	1.614
Flange connection DIN ISO 5211 DIN 3337	F03	F03	F03

Torque for actuator sizing in-lb

Delta P -->	0-230 PSI	
Valve size	to open	to close
1/2"	93	93
3/4"	115	115
1"	261	261

Torque correction factors

Valve torque can vary according to operating frequency, temperature and friction characteristics of the media.

If media has more or less friction than water, multiply torque by the following factors.

Lubricating oils or liquids	0.8
Dry gases, natural gas	1.5
Slurries or liquids bearing abrasive particles	1.5-2.5



s.7341L NPT

3-way 4 seats T-port

1/2" – 1"

The s.7341L series has a ball seal at every port, and offers a wide variety of possible flow configurations. Positive shut-off can be achieved at any of the exiting ports.

By specifying the appropriate ball port configuration, the T-port design allows flow direction to be adjusted for virtually any situation and is ideal for mixing applications.

Our s.73 multi-port valves can reduce the number of valves required in piping systems and can significantly lower overall costs by replacing two or three conventional 2-way valves, eliminating excess fittings, saving space and simplifying automation.



Quality

- Electronic 100% seal test guaranteed
- No metal-to-metal moving parts
- No maintenance ever required
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Each valve is seal tested for maximum safety
- Performs well in any orientation
- Strong configuration

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Integrated ISO 5211 and DIN 3337 mounting flange for universal connection to actuator
- Finest brass according to EN 12165 and EN 12164 specifications
- 3-way T-port design for flow mixing

Stem

- Blowout-proof nickel plated brass stem
- Maintenance-free, double FPM O-rings at the stem for maximum safety

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design
- Four seats design for mixing of various fluids in the system

Threads

- NPT taper ANSI B.1.20.1 female threads

Flow

- 100% full port for maximum flow

Handle

- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both thermal and electrical protection
- Handle removable with valve in service
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 300 PSI non-shock cold working pressure
- -4°F to +302°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Rack and pinion pneumatic actuator (spring return or double acting)
- EN10226-1/ISO228 parallel female threads
- s.7341 without handle actuator ready
- Various actuator linkage kit

Upon request

- Custom design
- Stainless steel stem
- Configurations with 4 seats & L-port (s.7241L) or 2 seats & L-port (s.7641L)

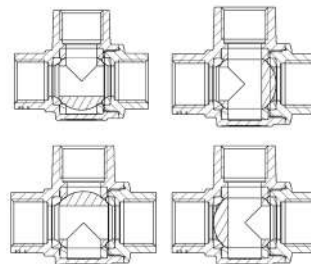
Approved by or in compliance with

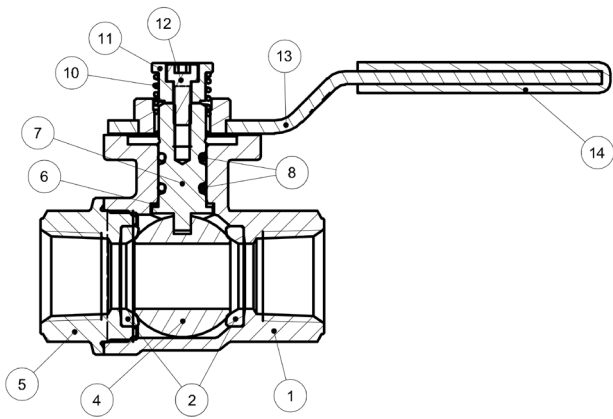
- RoHS Compliant (EU)

NOTE: approvals apply to specific configurations/sizes only.

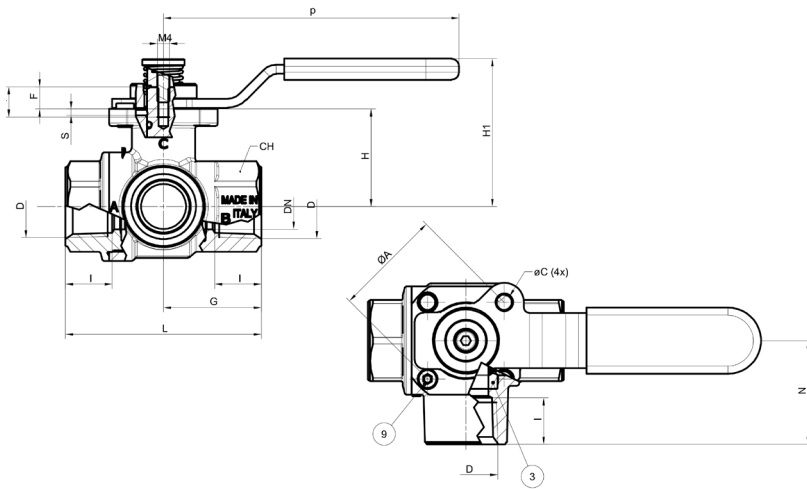


s73 3-way "T" port operating positions





Part description	Qty	Material
1 Sand blasted unplated body	1	CW617N
2 Seat	2	PTFE
3 Seat	2	PTFE
4 Chrome plated ball	1	CW617N
5 Sand blasted unplated end-cap	1	CW617N
6 Washer	1	PTFE carbon filled 25%
7 Nickel plated stem O-ring design	1	CW617N
8 O-Ring	2	FPM
9 Screw handle stop	1	CW617N
10 Spring	1	1.4310 / AISI 302
11 Unplated spring bushing	1	CW617N
12 Stainless steel screw	1	1.4301 / AISI 304
13 Geomet® plated steel handle	1	DD11 (EN10111)
14 Black dipped coating	1	PVC



Code	S73D41L	S73E41L	S73F41L
D (inch)	1/2 NPT	3/4 NPT	1" NPT
DN(inch)	0.591	0.787	0.984
I (inch)	0.610	0.709	0.827
L (inch)	2.559	3.110	3.642
G (inch)	1.280	1.555	1.831
H (inch)	1.820	1.555	1.673
N (inch)	1.358	1.654	1.949
øA (inch)	1.417	1.417	1.417
øC (inch)	ø0.205 (M6)	ø0.205 (M6)	ø0.205 (M6)
S (inch)	0.087	0.087	0.087
p (inch)	3.937	3.937	3.937
H1 (inch)	1.929	2.210	2.328
T (inch)	0.394	0.394	0.394
F (inch)	0.287	0.327	0.327
CH (inch)	1.063	1.260	1.614
Flange connection DIN ISO 5211 DIN 3337	F03	F03	F03

Torque for actuator sizing in-lb

Delta P -->	0-230 PSI	
	to open	to close
1/2"	93	93
3/4"	115	115
1"	261	261

With the configuration of T-port a stop pin can be fixed in any position of the 4 provided in the flange (1, 2, 3 or 4) and the lever can be rotated freely through 90°, the flow assumes the directions indicated in the diagram; in case of need the lever can be pulled upwards and you can reach any of the four possible positions.

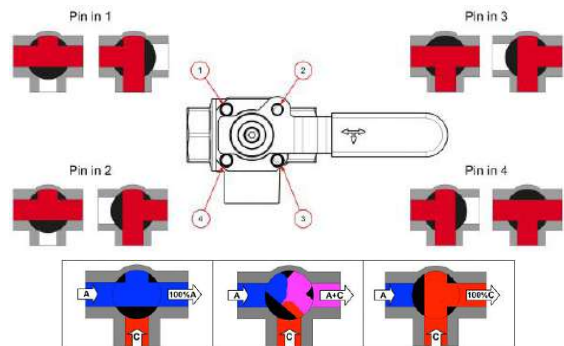
An alternative is to mount 2 pins in 2 near holes (e.g. 1 and 2). In this case, the valve does not assume a predetermined position but can be actuated just by pulling the lever towards the top. The valve allows also to block the lever thanks to the addition of a lock on the lever's protrusion (in the drawing you can see position 2). The mixing configuration is achieved by placing the pin in position 2. The flows to be mixed enter through A and C and exit through A+C.

Torque correction factors

Valve torque can vary according to operating frequency, temperature and friction characteristics of the media.

If media has more or less friction than water, multiply torque by the following factors.

Lubricating oils or liquids	0.8
Dry gases, natural gas	1.5
Slurries or liquids bearing abrasive particles	1.5-2.5



XCES7341L - 4266



s.7641L NPT

3-way, lever, 2 seats, L-port (diverting)

1/2" – 1"

The **RuB** s.7641 is the right choice for fluid diversion and is designed with robust maintenance-free components ensuring ease of operation and safety. With a simple 90° turn, you can divert flow from one downstream outlet to the other. It combines traditional manual operation with modern automation. It is also very easy to convert from its sturdy lever handle to ISO 5211 actuator flange assembly.

It features low operating torque and a special wear reducing self-compensating valve seat design that meets our 100,000 cycle life test requirement. The valve can be purchased separately, with handle or with a **RuB** actuator already mounted.



Quality

- Electronic 100% seal test guaranteed for maximum safety
- No metal-to-metal moving parts
- No maintenance ever required
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Performs well in any orientation
- Strong configuration

Body

- Hot forged sand blasted, nickel plated brass body and cap sealed with Loctite® or equivalent thread sealant
- Integrated ISO5211 / DIN3337 mounting flange for universal connection to actuator
- Finest brass according to EN 12165 and EN 12164 specifications
- 3-way L-port design for flow diversion

Stem

- Blowout-proof nickel plated brass stem
- Maintenance-free, double FPM O-rings at the stem for maximum safety

Sealing

- Reinforced PTFE self-lubricating seats with flexible-lip and wear compensation design

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Flow

- 100% full port for maximum flow

Handle

- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both thermal and electrical protection
- Handle removable with valve in service
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 450 PSI (30 bar) non-shock cold working pressure
- -4°F to +350°F (-20°C to 170°C)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Rack and pinion pneumatic actuator (spring return or double acting)
- Compact Power electric actuator
- EN10226-1/ISO228 parallel female threads
- S.7641 without handle, actuator ready
- Various actuator linkage kit

Upon request

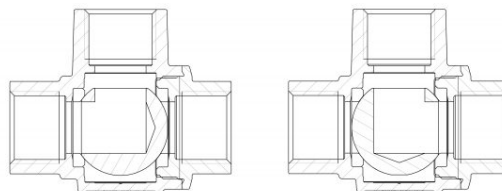
- Custom design
- Stainless steel stem (1.4401 / AISI 316)
- Configurations with 4 seats, L-port (s.7241L) or T-port (s.7341L)

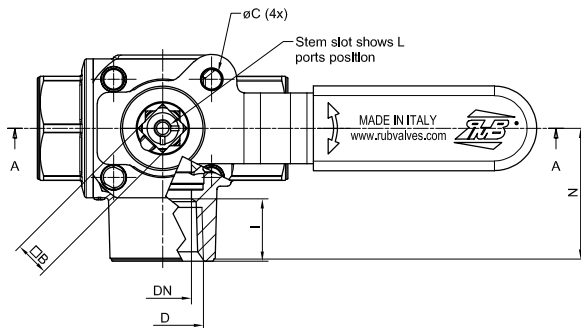
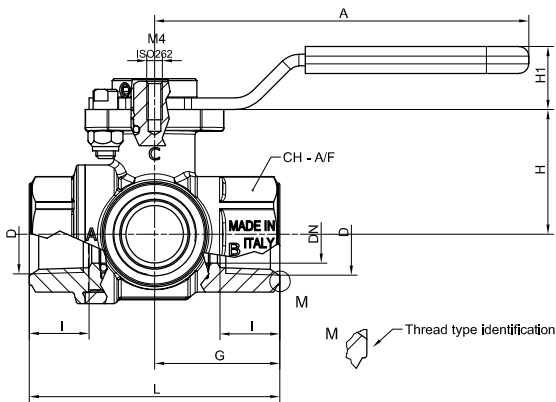
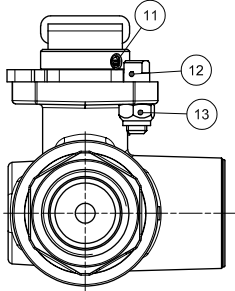
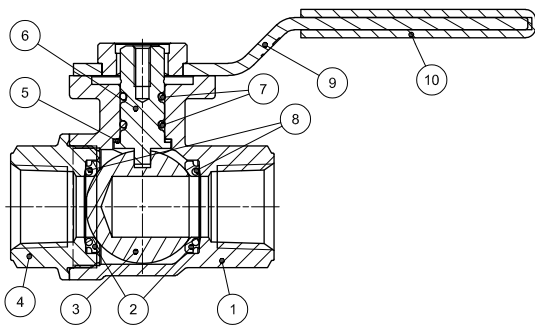
Approved by or in compliance with

- RoHS Compliant (EU)

NOTE: approvals apply to specific configurations/sizes only.

S.76 3-way "L" port operating positions





Part description	Qty	Material
1 Sand blasted unplated body	1	CW617N
2 Seat	2	PTFE graphite filled 15%
3 Chrome plated ball	1	CW617N
4 Sand blasted unplated end-cap	1	CW617N
5 Washer	1	PTFE carbon filled 25%
6 Nickel plated stem O-ring design	1	CW617N
7 O-Ring	2	FPM
8 O-Ring	2	FPM
9 Geomet® plated steel handle	1	DD11 (EN10111)
10 Black dipped coating	1	PVC
11 Stainless steel screw	1	1.4401 / AISI304
12 Unplated stop	1	CW617N
13 Zinc plated steel nut	1	Class 8 (UNI 7474)

Valve code	S76D41L	S76E41L	S76F41L
Size (inch)	1/2" NPT	3/4" NPT	1" NPT
DN(inch)	0.591	0.787	0.984
I (inch)	0.610	0.709	0.827
L (inch)	2.559	3.110	3.642
G (inch)	1.280	1.555	1.831
H (inch)	1.280	1.555	1.673
H1 (inch)	0,650	0,650	0,650
N (inch)	1.358	1.654	1.949
øC (inch)	ø0.205 (M6)	ø0.205 (M6)	ø0.205 (M6)
Square B (inch)	0.354	0.354	0.354
CH - A/F (inch)	1.063	1.260	1.614
Flange connection DIN ISO 5211 DIN 3337	F03	F03	F03

Torque for actuator sizing in-lb

Delta P -->	0-450 PSI	
Valve size	to open	to close
1/2"	31	31
3/4"	36	36
1"	40	40

Torque correction factors

Valve torque can vary according to operating frequency, temperature and friction characteristics of the media.

If media has more or less friction than water, multiply torque by the following factors.

Lubricating oils or liquids	0.8
Dry gases, natural gas	1.5
Slurries or liquids bearing abrasive particles	1.5-2.5



SNI7352

1/4" NPT needle valve

The new **RuB** needle valve proves the state of the art of **RuB** innovation capabilities.

This inexpensive valve is designed to ease flow regulation in all applications where drops are counted like gold!

The flow chart on reverse compares the **RuB** linear curve performance with competition and it is obvious how by counting the number of turns, the operator can easily adjust flow.

All details of the **RuB** needle valve have been optimized to provide utmost performance, reliability and no maintenance.

Another "install and forget" **RuB** product.



Quality

- Innovative design
- No maintenance ever required
- Performance guaranteed
- Tamper proof

Body

- Hot forged brass body
- One piece body construction

Stem

- FPM stem seal design
- Handle stop on stem prevents stem blow-out



Threads

- Fip x Fip NPT threads

Flow

- Easy flow regulation

Working pressure & temperature

- 2000 PSI non-shock cold working pressure
- -40°F to +350°F
- WARNING: freezing of the fluid in the installation may severely damage the valve

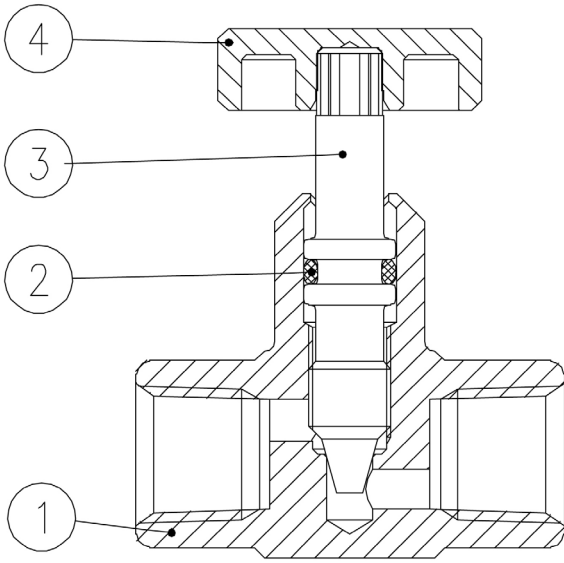
Options

- Mip x Fip NPT threads

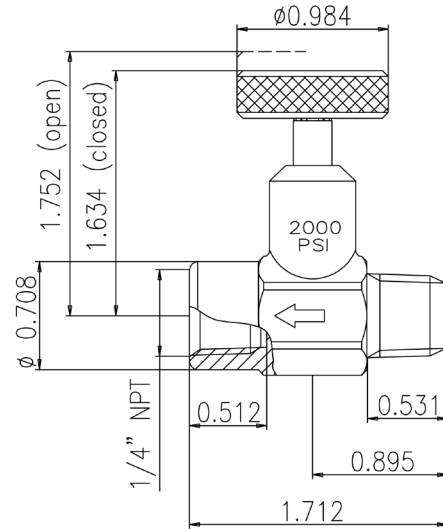
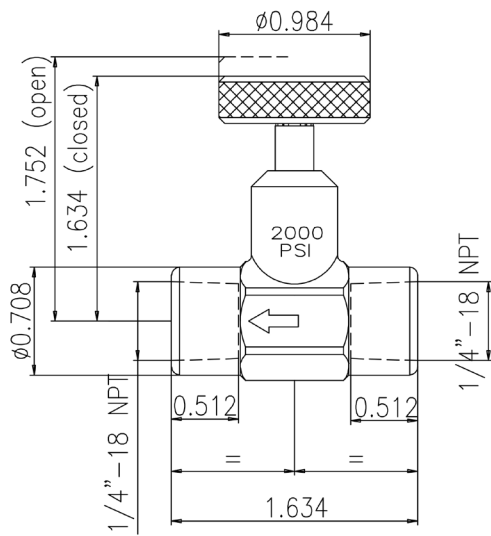
Upon request

- 1/8" NPT threads

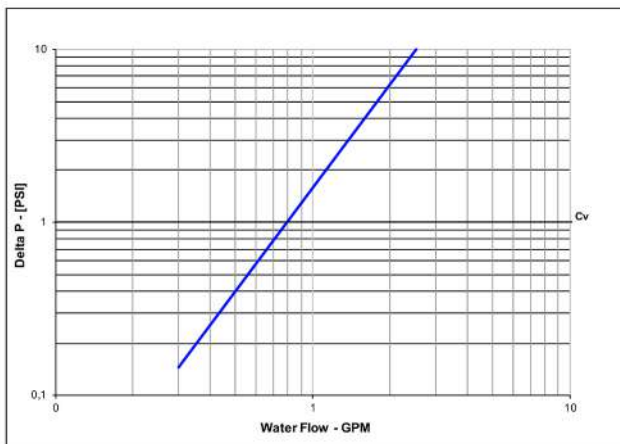
Applications include shut off and throttling for pressure gauges and instruments.



Part description	Qty	Material
1 Unplated valve body	1	CW617N
2 O-Ring	1	FPM
3 Retainer	1	CW617N
4 Handwheel	1	CW617N



Pressure drop chart



XCE7352 - 4266



s.130 NPT stainless steel

1/4" - 4"
1000 PSI



Quality

- Dual sealing system allows valve to be operated in either direction making installation easier
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Test standard API 598
- NACE compliance MR-01-75
- Handle stops on body to avoid stress at stem

Body

- CF8M stainless steel body and cap

Stem

- Blowout-proof stainless steel stem

Sealing

- Glass filled PTFE seats

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Flow

- 100% full port for maximum flow

Handle

- Plastic coated stainless steel lockable handle. Handle coating offers both thermal and electrical protection

- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 1000 PSI non-shock cold working pressure
- 150 PSI WSP steam rating
- 2x 10-2 torr vacuum rating
- *150 psig non-shock working steam pressure. Not suitable for throttling steam.
- -50°F to +450°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

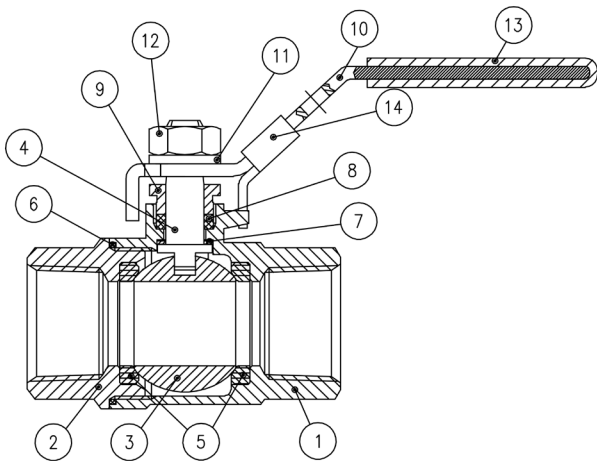
Upon request

- Oval lockable handle up to 2"

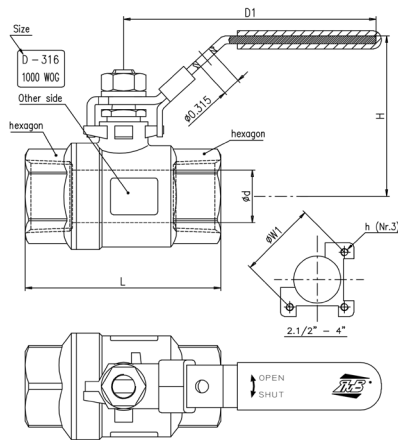
Approved by or in compliance with

- GOST-R (Russia)

NOTE: approvals apply to specific configurations/sizes only



	Part description	Qty	Material
1	Body	1	A351-CF8M
2	Cap	1	A351-CF8M
3	Ball	1	A351-CF8M
4	Stem	1	A276 Gr. 316
5	Seat	2	PTFE +15% G/F
6	Gasket	1	PTFE
7	Thrust washer	1	PTFE
8	Packing	1	PTFE
9	Gland	1	A194 Gr.8
10	Lockable handle	1	A240 SS304
11	Lock washer	1	A493 SS304
12	Handle nut	1	A194 Gr.8
13	Handle sleeve	1	Vinyl grip
14	Locking plate	1	A240 SS304

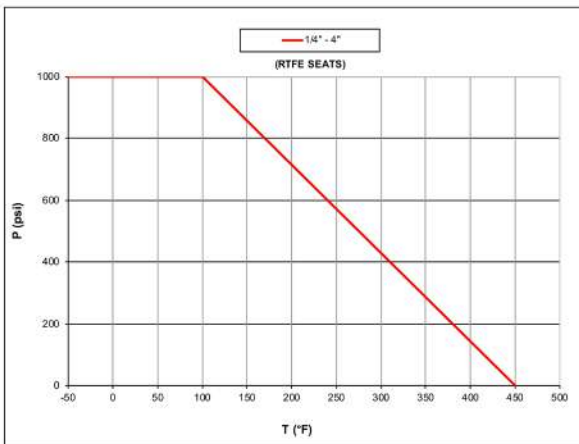


Code	130B41	130C41	130D41	130E41	130F41	130G41	130H41	130I41	130L41	130M41	130N41
D (Size)	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
d (inch)	0.433	0.492	0.591	0.787	0.984	1.26	1.496	1.969	2.559	3.15	3.937
L (inch)	2.276	2.276	2.429	2.76	3.201	3.78	4.429	4.961	6.634	7.535	8.524
H (inch)	2.252	2.252	2.327	2.463	2.783	3	3.508	3.864	4.354	4.882	6.732
D1 (inch)	4.055	4.055	4.055	4.055	5	5	6.024	7.598	7.598	10.985	13.189
W1 (inch)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.756	4.016	4.016
h	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	M8x1.25	M10x1.5	M10x1.5
Cv (GPM)	12	16	20	42	65	101	144	250	422	640	1000

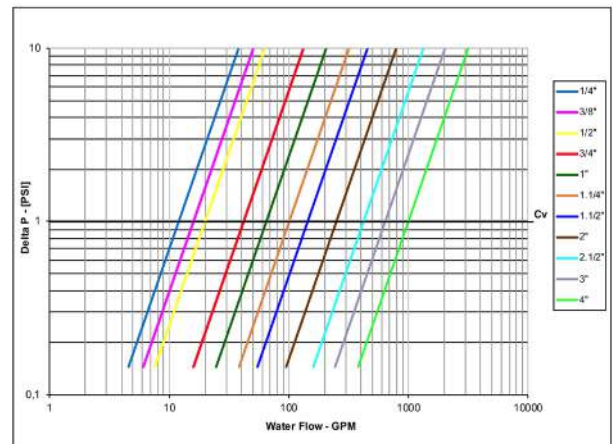
Water flow ratings

Size	1/4"	3/8"	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"	2.1/2"	3"	4"
CV	12	16	20	42	65	101	144	250	422	640	1000

Pressure-temperature chart



Pressure drop chart



XCE130 - 4266



s.131 NPT stainless steel

1/4" - 2"
1000 PSI
reduced port



Quality

- Dual sealing system allows valve to be operated in either direction making installation easier
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Test standard API 598
- NACE compliance MR-01-75
- Handle stops on body to avoid stress at stem

Body

- CF8M stainless steel body

Stem

- Blowout-proof stainless steel stem

Sealing

- PTFE seats

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Handle

- Plastic coated stainless steel lockable handle. Handle coating offers both thermal and electrical protection

- **WARNING:** do not exceed reasonable temperature and/or electrical load

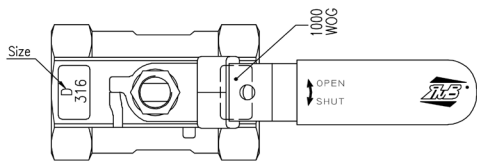
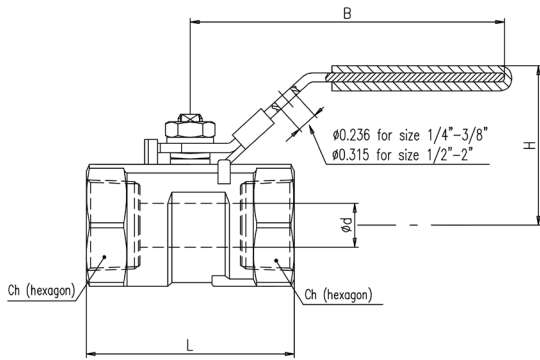
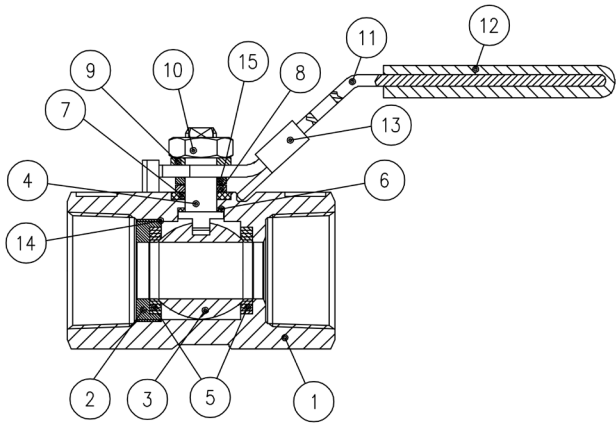
Working pressure & temperature

- 1000 PSI non-shock cold working pressure
- 150 PSI WSP steam rating
- 2×10^{-2} torr vacuum rating
- *150 psig non-shock working steam pressure. Not suitable for throttling steam.
- -50°F to +400°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Approved by or in compliance with

- GOST-R (Russia)

NOTE: approvals apply to specific configurations/sizes only.



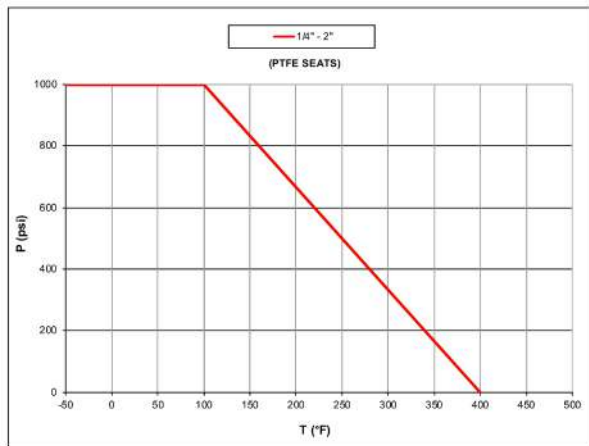
Part description	Qty	Material
1 Body	1	A351-CF8M
2 Insert	1	AISI316
3 Ball	1	AISI 316 or A351-CF8M
4 Stem	1	A276 Gr. 316
5 Seat	2	PTFE
6 Thrust washer	1	PTFE
7 Packing	1	PTFE
8 Washer	1	A240 SS304
9 Lock washer	1	A493 SS304
10 Stem nut	1	A194 Gr.8
11 Lockable handle	1	A240 SS304
12 Handle sleeve	1	Vinyl grip
13 Locking plate	1	A240 SS304
14 Gasket	1	PTFE - Only 1 1/4"-2"
15 Concave washer	1	SS301

Code	131B41	131C41	131D41	131E41	131F41	131G41	131H41	131I41
D (Size)	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
d (inch)	0.197	0.276	0.362	0.492	0.591	0.787	0.965	1.260
L (inch)	1.535	1.732	2.205	2.323	2.795	3.110	3.268	3.937
H (inch)	1.370	1.390	1.807	1.846	1.862	2.189	2.280	2.547
B (inch)	2.756	3.110	3.661	3.622	4.409	4.409	5.315	5.315
Ch (inch)	0.669	0.827	0.984	1.260	1.496	1.929	2.087	2.559
Cv (GPM)	2.0	6.0	7.0	14.0	23.0	36.0	56.0	92.0

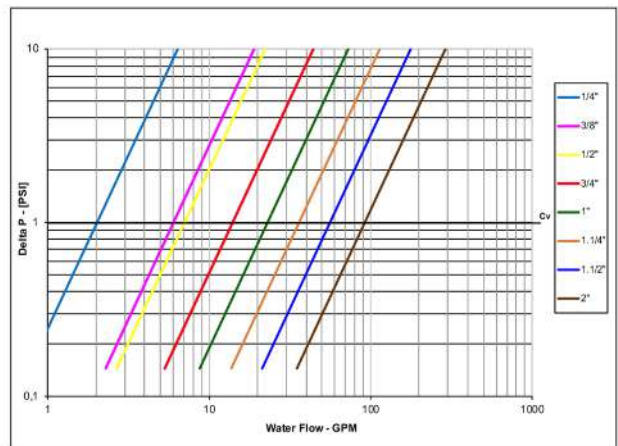
Water flow ratings

Size	1/4"	3/8"	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"
CV	2	6	7	14	23	36	56	92

Pressure-temperature chart



Pressure drop chart



XCE131 - 4266



s.132 NPT stainless steel

1/4" - 2"
2000 PSI



Quality

- Dual sealing system allows valve to be operated in either direction making installation easier
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Test standard API 598
- NACE compliance MR-01-75
- Handle stops on body to avoid stress at stem

Body

- CF8M stainless steel body and cap
- Design specification ANSI B16.34 CLASS 900

Stem

- Blowout-proof stainless steel stem

Sealing

- Molecular enhanced-PTFE (ME-PTFE) seats consist in virgin PTFE (no glass or carbon fillers are used) which, due to its improved molecular structure, surpass the mechanical properties of conventional filled PTFE materials. Used in fluid sealing applications it provides superior performance in terms of high temperature strength, reduced creep distortion, and resistance to chemical attack.

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Flow

- 100% full port for maximum flow

Handle

- Plastic coated stainless steel lockable handle. Handle coating offers both thermal and electrical protection
- **WARNING:** do not exceed reasonable temperature and/or electrical load

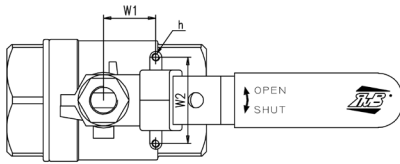
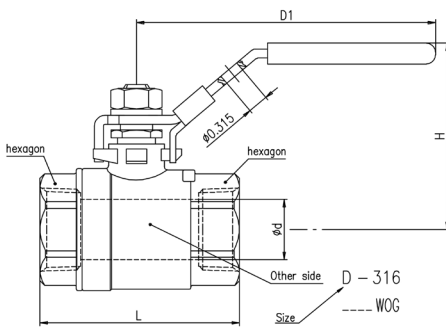
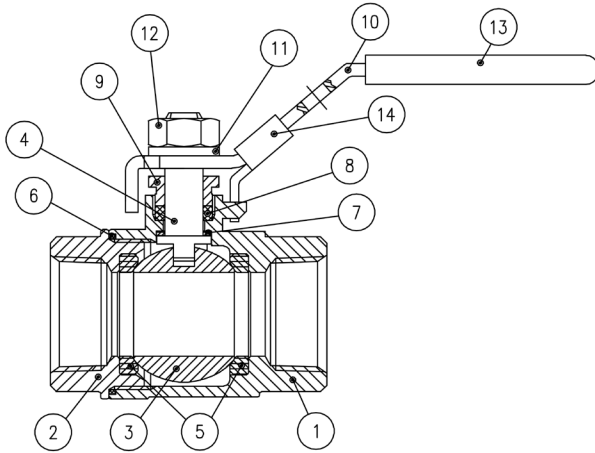
Working pressure & temperature

- 2000 PSI from 1/4" up to 1", 1500 PSI from 1 1/4" up to 2" non-shock cold working pressure
- 150 PSI WSP steam rating
- 2×10^{-2} torr vacuum rating
- *150 psig non-shock working steam pressure. Not suitable for throttling steam.
- -50°F to +475°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Approved by or in compliance with

- GOST-R (Russia)

NOTE: approvals apply to specific configurations/sizes only.



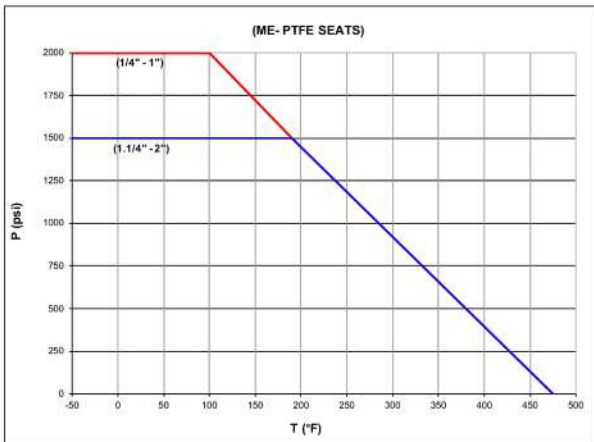
	Part description	Qty	Material
1	Body	1	A351-CF8M
2	Cap	1	A351-CF8M
3	Ball	1	A351-CF8M
4	Stem	1	A276 Gr.316
5	Seat	2	ME-PTFE*
6	Gasket	1	ME-PTFE*
7	Thrust washer	1	ME-PTFE*
8	Packing	1	ME-PTFE*
9	Gland	1	A194 Gr.8
10	Lockable handle	1	A240 SS304
11	Lock washer	1	A493 SS304
12	Handle nut	1	A194 Gr.8
13	Handle sleeve	1	Vinyl grip
14	Locking plate	1	A240 SS304

Code	132B41	132C41	132D41	132E41	132F41	132G41	132H41	132I41
D (Size)	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
d (inch)	0.433	0.492	0.591	0.787	0.984	1.26	1.575	2
L (inch)	2.343	2.343	2.539	3.031	3.563	3.917	4.646	5.374
H (inch)	2.244	2.244	2.268	2.697	2.862	3.453	3.661	4.106
D1 (inch)	4.055	4.055	4.055	5	5	6.124	6.124	7.598
W1 (inch)	0.5	0.5	0.5	0.882	0.882	1	1	1
W2 (inch)	1.122	1.122	1.122	1.378	1.378	1.5	1.5	1.5
h	M5x0.8	M5x0.8	M5x0.8	M6x1	M6x1	M6x1	M6x1	M6x1
----WOG	2000	2000	2000	2000	2000	1500	1500	1500
Cv (GPM)	12	16	23	40	62	101	160	258

Water flow ratings

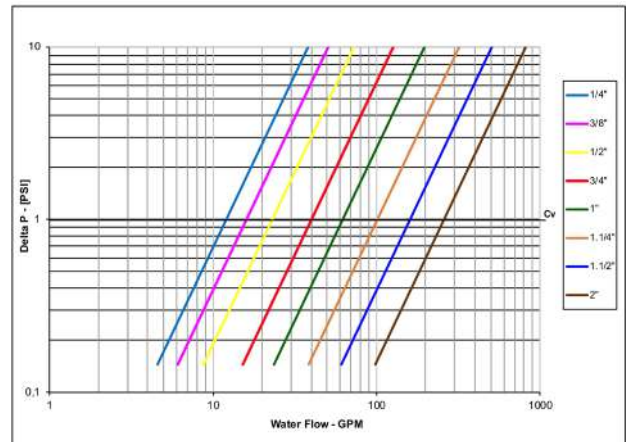
Size	1/4"	3/8"	1/2"	3/4"	1"	1.1/4"	1.1/2"	2"
CV	12	16	23	40	62	101	160	258

Pressure-temperature chart



*ME-PTFE is Molecular Enhanced PTFE

Pressure drop chart



XCE132 - 4266



s.135 NPT stainless steel

2" - 3" - 4"
ANSI B16.5 flange



Quality

- Anti-static device
- Locking device
- Long cycle life
- Test standard: API 598
- API 607 4th edition fire safe approval
- Vacuum service to 29" Hg

Body

- Body: ASTM A351 Gr. CF8M

Stem

- Blow-out proof stem design
- Adjustable stem packing



Sealing

- ME-PTFE seal kits:
 - replaces PTFE, RPTFE and FPA
 - low deformation under load
 - low permeation

Connections

- ANSI B16.5, B16.10 and B16.34 full compliance

Handle

- Handle in ASTM A536 Gr. 65-45-12
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

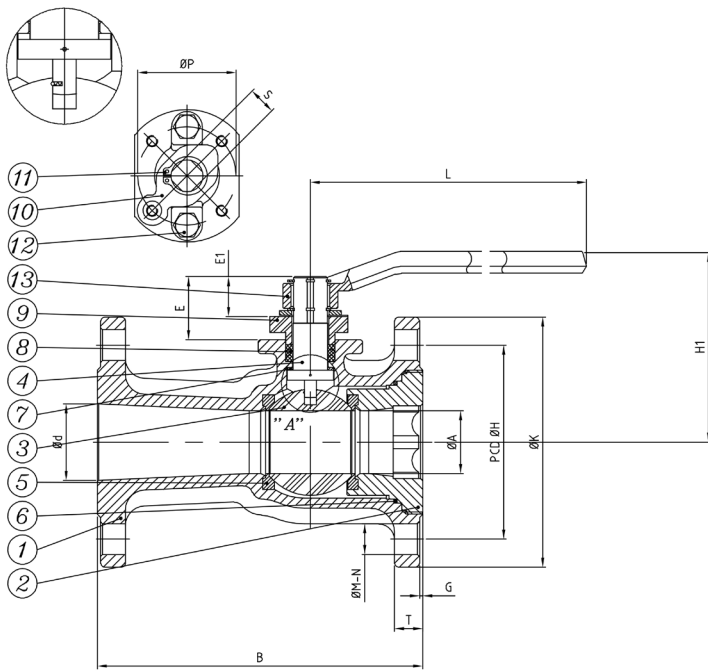
- General use: 750 PSI (see chart on reverse)
- 275 PSI for ASME 150 CF8M (see chart on reverse)
- Steam rating: 150 PSI WSP
- -50°F to +475°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Approved by or in compliance with

- GOST-R (Russia)

NOTE: approvals apply to specific configurations/sizes only.

"A" VIEW



Part description	Qty	Material
1 Body	1	ASTM A351-CF8M
2 Cap	1	ASTM A351-CF8M
3 Ball	1	ASTM A351-CF8M
4 Stem	1	ASTM A276 Gr.316
5 Seat	2	ME-PTFE*
6 Gasket	1	ME-PTFE*
7 Thrust washer	1	ME-PTFE*
8 Packing	1	ME-PTFE*
9 Gland	1	ASTM A351-CF8
10 Stopper	1	SS304
11 Snap ring	2	SS304
12 Gland bolt	2	ASTM A193 Gr.B8
13 Handle	1	ASTM A536 Gr.65-45-12

Torque for actuator sizing in-lb

Delta P -->	Valve torque	
	to open	to close
Valve size		
2"	376.15	376.15
3"	678.90	678.90
4"	909	909

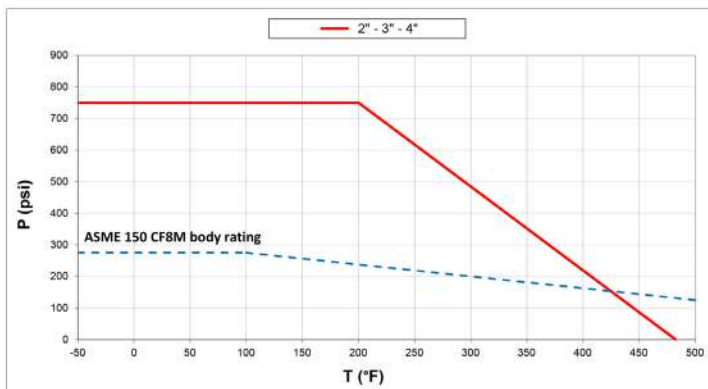
Torque correction factors

Valve torque can vary according to operating frequency, temperature and friction characteristics of the media.

If media has more or less friction than water, multiply torque by the following factors.

Lubricating oils or liquids	0.8
Dry gases, natural gas	1.5
Slurries or liquids bearing abrasive particles	1.5-2.5

Pressure-temperature chart



*ME-PTFE is Molecular Enhanced PTFE

Code	135IF0	135MF0	135NF0
Size (inch)	2"	3"	4"
A (inch)	1.50	2.56	3.15
B (inch)	7.0	8.0	9.0
E (inch)	1.65	2.20	2.20
E1 (inch)	1.02	1.44	1.44
d (inch)	1.97	3.15	3.94
G (inch)	0.06	0.06	0.06
H (inch)	4.75	6.00	7.50
K (inch)	6.00	7.50	9.00
T (inch)	0.62	0.75	0.94
M (inch)	0.75	0.75	0.75
N	4	4	8
P (inch)	2.76	4.02	4.02
S (inch)	0.67	0.87	0.87
L (inch)	9.13	12.87	12.87
H1 (inch)	4.96	5.98	6.30
h	M8*P1.25	M10*P1.5	M10*P1.5

SIZE	2"	3"	4"
CV Factor	170	430	565



s.136 NPT stainless steel

full port
6"- 8" flanged ball valve



Quality

- Anti-static device
- Locking device
- Long cycle life
- Test standard: API 598
- API 607 4th edition fire safe approval
- Vacuum service to 29" Hg

Body

- ISO 5211 actuator mounting pad
- Body: ASTM A351 Gr. CF8M

Stem

- Blow-out proof stem design
- Adjustable stem packing

Connections

- ANSI B16.5, B16.10 and B16.34 full compliance

Handle

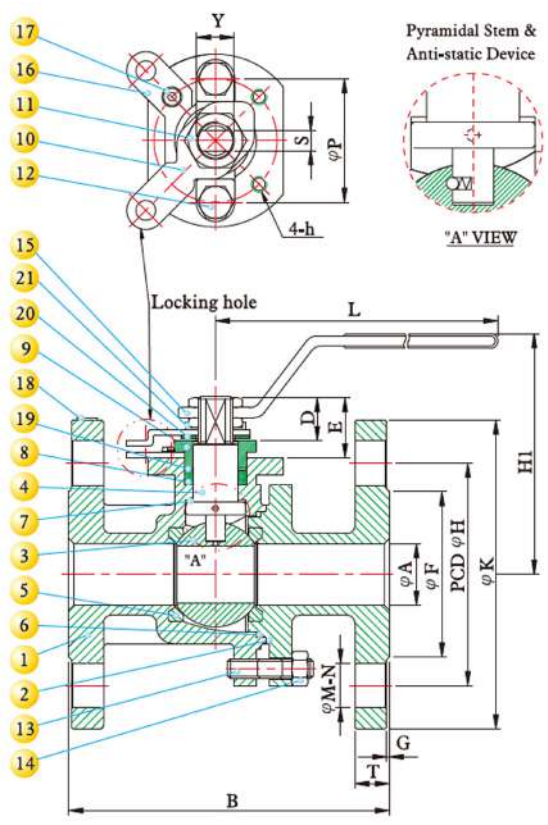
- Handle in ASTM A536 Gr. 65-45-12 / SS304
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- General use: 50 bar / 750 PSI (see chart on reverse)
- 19 bar / 275 PSI for ASME 150 CF8M (see chart on reverse)
- Steam rating: 10 bar / 150 PSI WSP
- -45,5°C to +246°C (-50°F to +475°F)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Sealing

- ME-PTFE seal kits:
 - replaces PTFE, RPTFE and FPA
 - low deformation under load
 - low permeation



Part description	Qty	Material	
1	Body	1	ASTM A351-CF8M
2	Cap	1	ASTM A351-CF8M
3	Ball	1	ASTM A351-CF8M
4	Stem	1	ASTM A276 Gr. 316
5	Seat	2	ME-PTFE*
6	Gasket	1	GRAFOIL
7	Thrust washer	1	ME-PTFE*
8	Packing	1	GRAFOIL
9	Gland	1	ASTM A351-Gr.CF8
10	Stopper	1	SS304
11	Handle nut	1	SS304
12	Gland bolt	1	ASTM A193 Gr. B8
13	Stud bolt - Qty 4-10		ASTM A193 Gr. B8
14	Set nut - Qty 4-10		ASTM A194 Gr. 8
15	Handle	1	SS304
16	Locking plate	1	SS304
17	Set bolt	2	SS304
18	Name plate	1	SS304
19	Ring	1	SS304
20	Bearing	1	NYLON
21	Lock washer	1	SS304

Torque for actuator sizing in-lb

Delta P -->	Valve torque	
	to open	to close
Valve size		
6"	2531.4	2531.4
8"	5753	5753

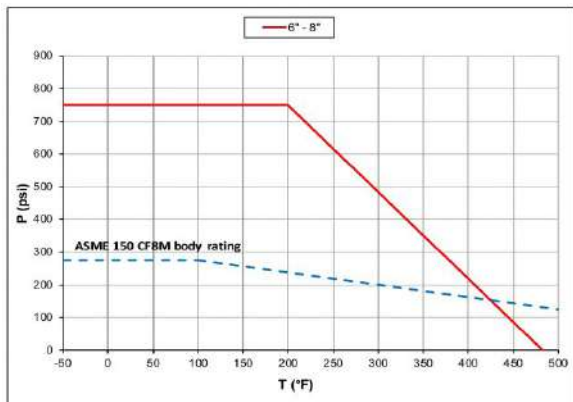
Torque correction factors

Valve torque can vary according to operating frequency, temperature and friction characteristics of the media.

If media has more or less friction than water, multiply torque by the following factors.

- Lubricating oils or liquids 0.8
- Dry gases, natural gas 1.5
- Slurries or liquids bearing abrasive particles 1.5-2.5

Pressure-temperature chart



*ME-PTFE is Molecular Enhanced PTFE

Code	136PF0	136QF0	Code	136PF0	136QF0
Size (inch)	6"	8"	Size (inch)	6"	8"
A (mm)	150	200	A (inch)	5.91	7.87
B (mm)	393.7	457.2	B (inch)	15.50	18.00
E (mm)	67.3	72.7	E (inch)	2.65	2.86
F (mm)	215.9	269.7	F (inch)	8.50	10.62
D (mm)	37.7	47.8	D (inch)	1.48	1.88
G (mm)	1.6	1.6	G (inch)	0.06	0.06
H (mm)	241.3	298.4	H (inch)	9.50	11.75
K (mm)	279.4	342.9	K (inch)	11.00	13.50
T (mm)	25.4	27	T (inch)	1.00	1.06
M (mm)	22.3	22.3	M (inch)	0.88	0.88
N	8	8	N	8	8
P (mm)	125	140	P (inch)	4.92	5.51
S (mm)	20	33	S (inch)	0.79	1.30
L (mm)	1032	1080	L (inch)	40.63	45.52
H1 (mm)	263.5	305	H1 (inch)	10.37	12.00
h	M12x1.75	M16x2.0	h	M12x1.75	M16x2.0
Kv (m ³ /h)	1158	2134	CV (GPM)	5100	9400



s.92 barrel drain

3/4" - 1"

The s.92 **RuB** brass ball valve is specifically designed to offer easy and effective drainage of storage tanks and can be installed at the bottom of your barrel or tank and operated with a simple 90° turn to allow full flow accessibility to quickly drain your water, oil, gasoline or other fluids.

Its 45° threaded elbow allows for additional pipe connection to conveniently install the drain valve in the best location and in addition the valve features a patented **RuB** tamper-proof locking handle to ensure there is no unauthorized access to the tank.

The s.92 can easily be installed on small tanks, utility tanks, overhead farm tanks, and drums as a gravity flow shut-off valve. Another good idea from **RuB**!



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Handle stops on body to avoid stress at stem

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel plated brass stem
- Pure PTFE adjustable packing gland and reinforced washer for lower torque and easy maintenance

Sealing

- Glass filled pure PTFE self-lubricating seats with flexible-lip design

Threads

- NPT taper ANSI B.1.20.1 male by female threads

Flow

- Full port to DIN 3357 for maximum flow

Handle

- Geomet® carbon steel lockable handle patent n. 7074-B/90 with thick PVC dip coating.
- Handle coating offers both thermal and electrical protection
- Handle removable with valve in service

Working pressure & temperature

- 600 PSI (40 bar), (150 WSP / -10 bar all sizes) non-shock cold working pressure
- *150 psig (10 bar) non-shock steam working pressure. Not suitable for throttling steam
- -40°F to +366°F (-40°C to + 170 °C)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- T-handle
- Oval lockable handle
- Stainless steel handle (1.4016 / AISI 430)
- Stubby handle
- Non-locking Geomet® carbon steel lever handle

Upon request

- Stainless steel ball and/or stem (1.4401 / AISI 316)
- Custom design
- Pure PTFE seals
- EN 10226-1, ISO 228 parallel female by female threads
- ISO 7/1, BS 21 BSPT taper female by female threads

PED Directive

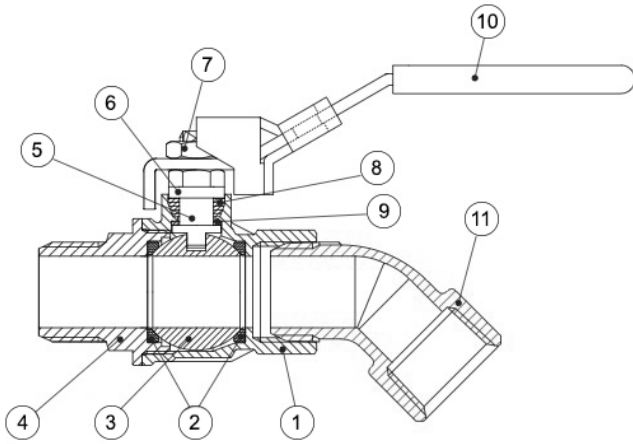
- The product meets the requirements of PED Directive 2014/68/UE and according to art.4 par.3, it does not require CE marking

Approved by or in compliance with

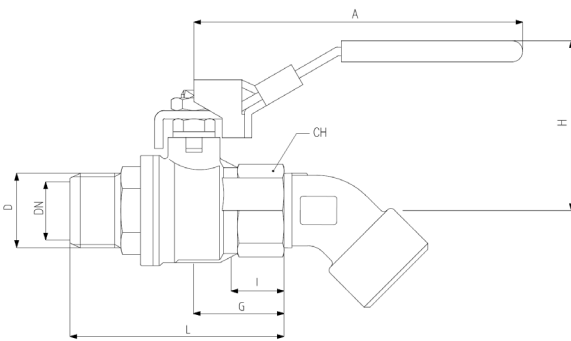
- RoHS Compliant (EU)



NOTE: approvals apply to specific configurations/sizes only.



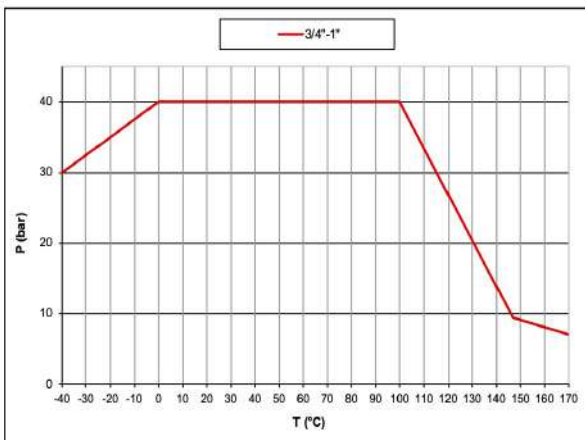
	Part description	Q.ty	Material
1	Unplated NPT body	1	CW617N
2	Seat	2	PTFE glass filled 5-15%
3	Chrome plated ball	1	CW617N
4	Unplated NPT end-cap	1	CW617N
5	Nickel plated stem packing gland design	1	CW617N
6	Nickel plated gland nut	1	CW617N
7	Geomet® nut	1	CB4FF (EN10263-2)
8	Packing gland seal	1	PTFE
9	Washer	1	PTFE carbon filled 25%
10	Light blue PVC coated Geomet® steel lockable handle	1	DD11 (EN10111)
11	Elbow	1	CW617N



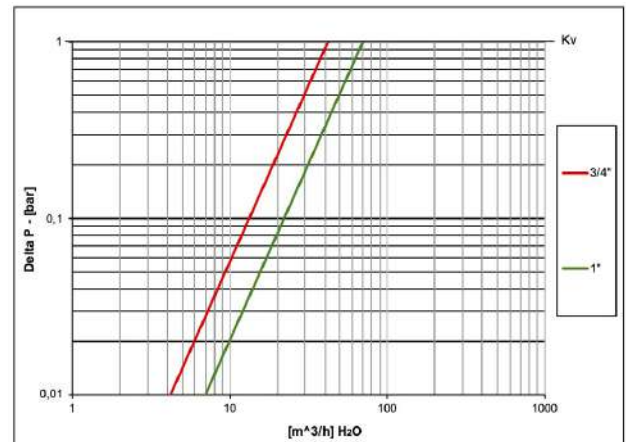
CODE	S92ES2MO	S92FS2MO
D (inch)	3/4"	1"
DN (inch)	0.79	0.98
I (inch)	0.67	0.83
L (inch)	3.01	3.64
G (inch)	1.26	1.59
A (inch)	4.61	4.61
H (inch)	2.36	2.52
CH (inch)	1.22	1.57
CV (GPM)	184	308

DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4.

Pressure-temperature chart

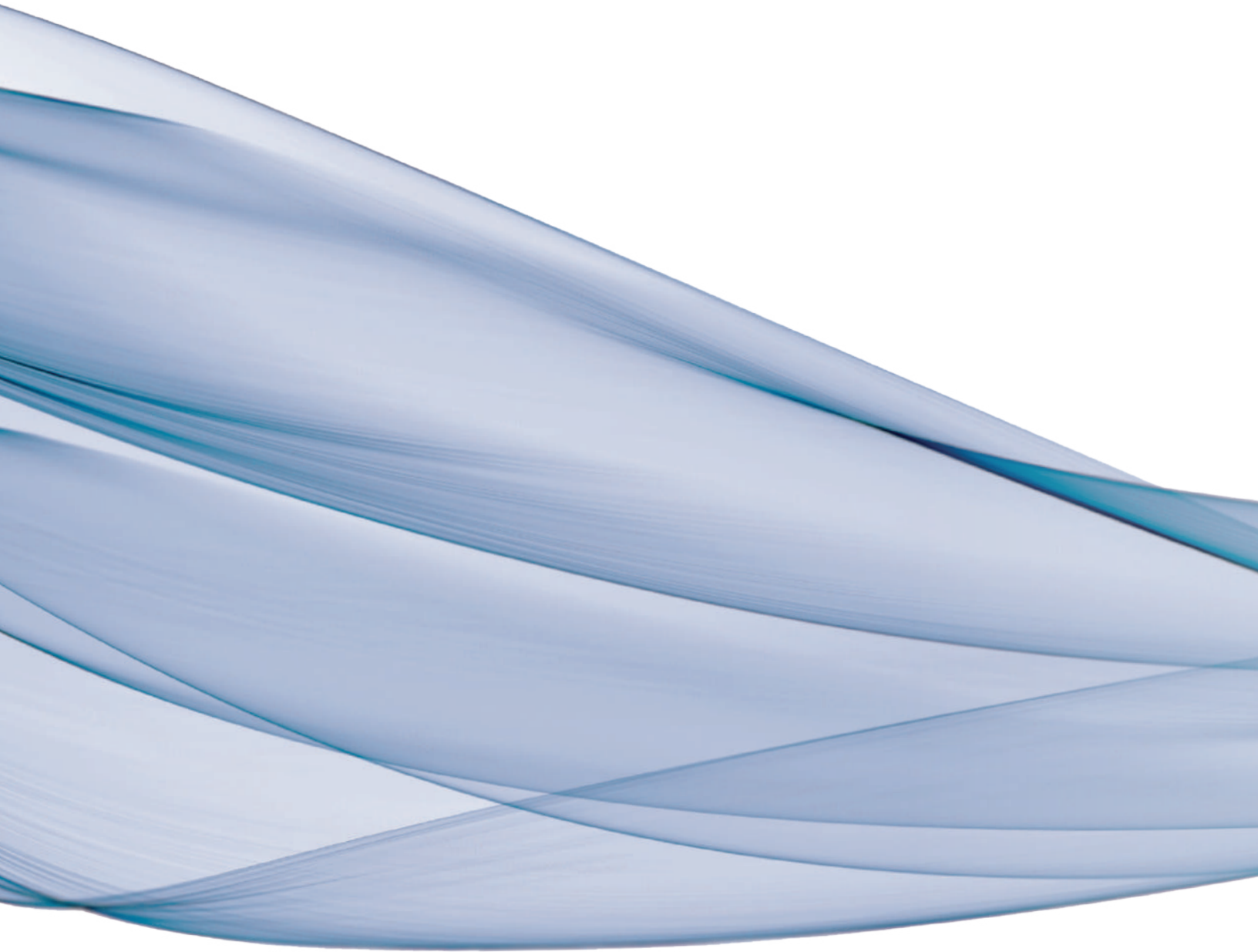


Pressure drop chart



XCES92S2

PNEUMATIC



s.34 NPT 1/8" - 1/2" mini ball valve, suitable for panel mounting	Page 122
s.34 1/8" - 1/2" ISO 228 mini ball valve, suitable for panel mounting	Page 124
s.35 NPT high pressure 1/8" - 1/2" mini ball valve	Page 126
s.39 NPT forged, micro 1/8" - 1/4" high pressure ball valve	Page 128
s.93 NPT downstream exhaust 1/4" - 2" with patented locking handle	Page 130



s.34 NPT

1/8" - 1/2"
mini ball valve
suitable for panel mounting



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life

Body

- One piece drawn sand blasted brass body incorporating stem neck which provides excellent guidance of the stem
- Finest brass according to EN 12164 specification

Stem

- Maintenance-free, double FPM O-rings at the stem for maximum safety

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Handle

- Lever and T-handle clearly show ball position
- Nylon back lever or T-handle removable with valve in service

Working pressure & temperature

- 200 PSI non-shock cold working pressure
- -4°F/ +200°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

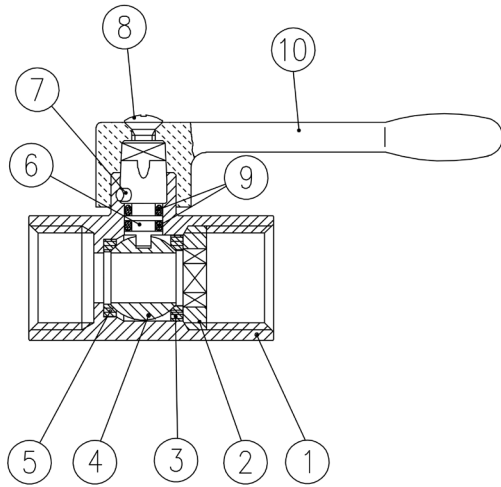
- Male by female threads
- Screw driver or wrench operated
- Yellow lever or T-handle
- ISO 228 parallel threads

Approved by or in compliance with

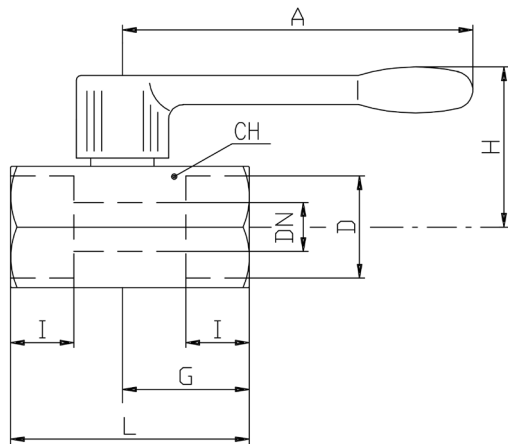
- GOST-R (Russia)
- RoHS Compliant (EU)

NOTE: approvals apply to specific configurations/sizes only.





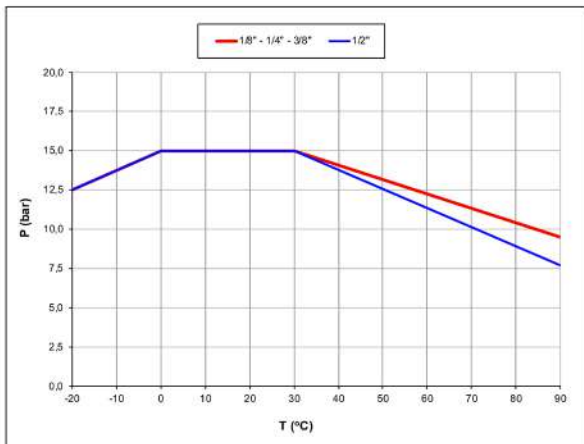
Part description	Qty	Material
1	1	Chrome plated body
2	1	Retainer nut
3	1	Retainer seat
4	1	Chrome plated ball
5	1	Body seat
6	1	Unplated stem
7	1	Pin
8	1	Zinc plated screw
9	2	O-Ring
10	1	Black handle



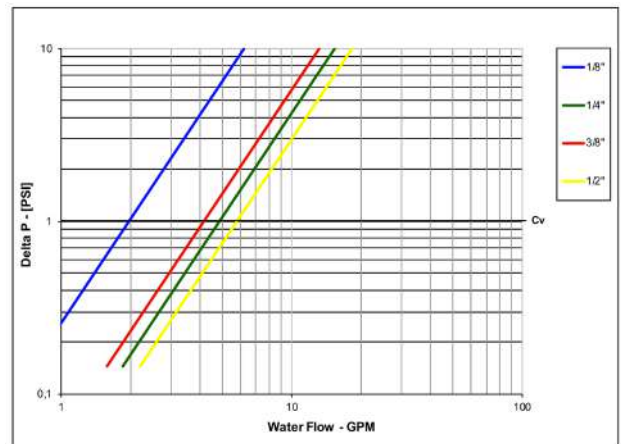
DN shows the nominal flow diameter.

Code	S34AX0	S34BX0	S34CX0	S34DX0
D (inch)	1/8	1/4	3/8	1/2
DN (inch)	0.236	0.314	0.314	0.393
I (inch)	0.354	0.472	0.472	0.610
L (inch)	1.712	1.712	1.712	2.106
G (inch)	0.905	0.905	0.905	1.102
A (inch)	2.834	2.834	2.834	2.834
H (inch)	1.200	1.200	1.200	1.279
CH (inch)	0.826	0.826	0.826	0.984
Cv (GPM)	2.0	4.9	4.2	5.8

Pressure-temperature chart



Pressure drop chart



XCES34N - 4266



s.34

1/8" - 1/2"

ISO 228 mini ball valve
suitable for panel mounting



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life

Body

- One piece drawn sand blasted brass body incorporating stem neck which provides excellent guidance of the stem
- Finest brass according to EN 12164 specification

Stem

- Maintenance-free, double FPM O-rings at the stem for maximum safety

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design

Threads

- ISO 228 parallel female by female threads

Handle

- Lever and T-handle clearly show ball position
- Nylon black lever or T-handle removable with valve in service

Working pressure & temperature

- 15 bar (200 PSI) non-shock cold working pressure
- -20°C to +90°C (-4°F to +200°F)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Male by female threads
- Screw driver or wrench operated
- Yellow lever or T-handle
- NPT taper ANSI B.1.20.1 female by female threads

PED directive

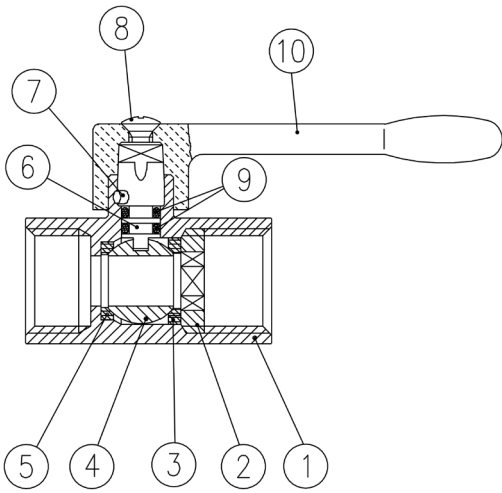
- The product meets the requirements of PED Directive 2014/68/UE and according to art.4 par.3, it does not require CE marking

Approved by or in compliance with

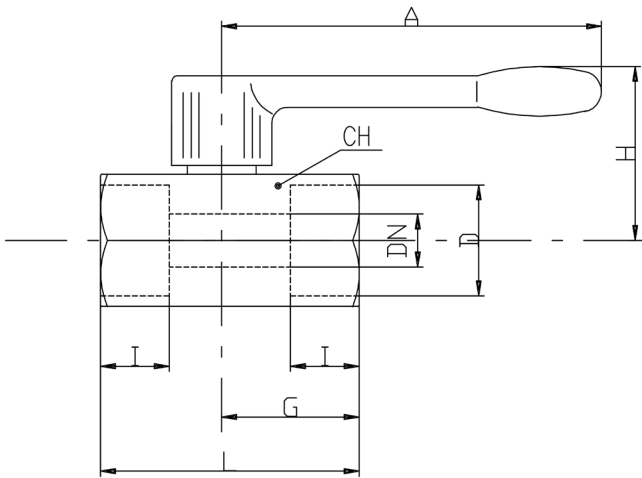
- GOST-R (Russia)
- RoHS Compliant (EU)
- EAC – Declaration of conformity (Russia, Kazakhstan, Belarus)

NOTE: approvals apply to specific configurations/sizes only.





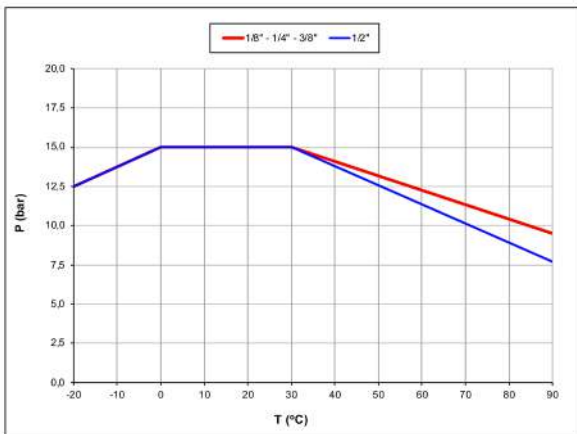
Part description	Q.ty	Material
1	1	CW617N
2	1	CW617N
3	1	PTFE
4	1	CW617N
5	1	PTFE
6	1	CW617N
7	1	1.4301 / AISI304
8	1	CB4FF (EN10263-2)
9	2	FPM
10	1	Nylon glass filled 30%



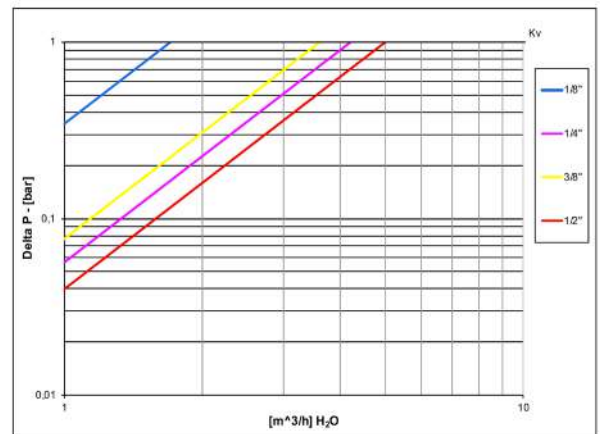
DN shows the nominal flow diameter.

Code	S34AF0	S34BF0	S34CF0	S34DF0
D (inch)	1/8	1/4	3/8	1/2
DN (inch)	0.24	0.31	0.31	0.39
I (inch)	0.39	0.43	0.43	0.51
L (inch)	1.64	1.64	1.64	1.93
G (inch)	0.87	0.87	0.87	1.02
A (inch)	2.83	2.83	2.83	2.83
H (inch)	1.20	1.20	1.20	1.28
CH (inch)	0.83	0.83	0.83	0.98
Cv (GPM)	7.48	18.49	15.85	22.01

Pressure-temperature chart



Pressure drop chart

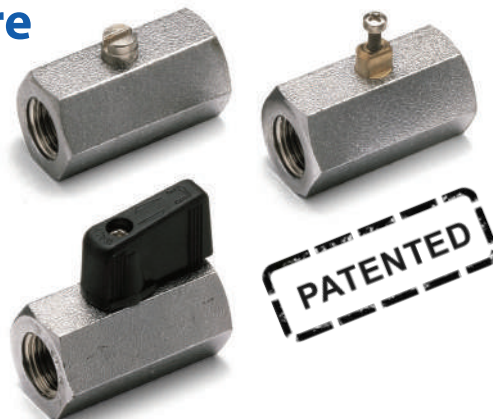


XCES34 - 4266



s.35 NPT high pressure

1/8" - 1/2"
mini ball valve



Quality

- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Handle/ stem clearly shows ball position
- Silicone-free lubricant on all seals
- Each valve is seal tested for maximum safety
- Chrome plated brass ball for longer life

Body

- One piece drawn sand blasted brass body with extremely compact design
- Finest brass according to EN 12164 specification
- Patent n. 7011-B/89

Stem

- Blowout-proof brass stem with FPM O-ring
- Maintenance-free, double FPM O-ring at the stem for maximum safety

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Handle

- Reinforced nylon black wedge handle
- Handle removable with valve in service
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 450 PSI non-shock cold working pressure
- -4°F/ +200°F
- +250°F screw driver version and metal wedge handle
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Male by female threads
- Screw driver or wrench operated
- Nylon wedge handle yellow, red or green
- Metal wedge handle available in colours red, black, yellow, green, light blue, chrome plated
- Grey wedge handle in Grivory® - high performing polymer
- ISO 228 parallel threads

Upon request

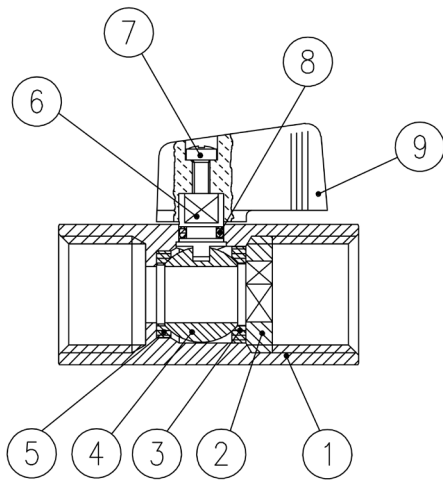
- Aluminum body
- Additional connection options
- ISO 7/1 BSPT taper threads
- Dezincification resistant brass CW602N

Approved by or in compliance with

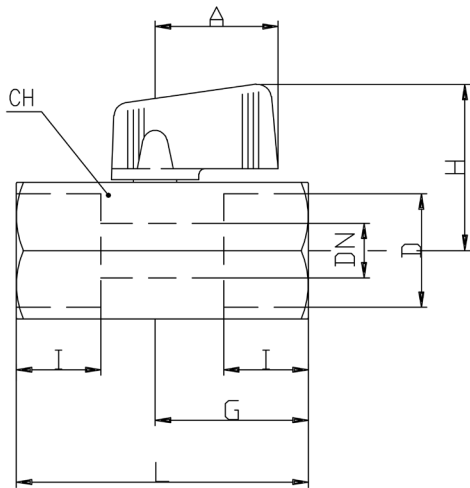
- GOST-R (Russia)
- RoHS Compliant (EU)

NOTE: approvals apply to specific configurations/sizes only.





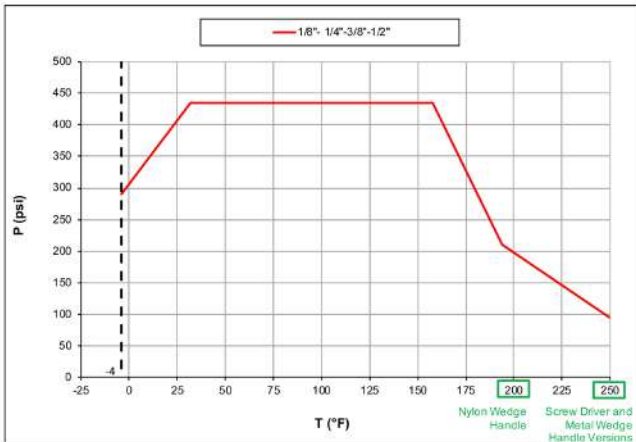
Part description	Qty	Material
1	1	Chrome plated body
2	1	Retainer nut
3	1	Retainer seat
4	1	Chrome plated ball
5	1	Body seat
6	1	Unplated stem
7	1	Zinc plated screw
8	1	O-Ring
9	1	Black handle Nylon glass filled 30%



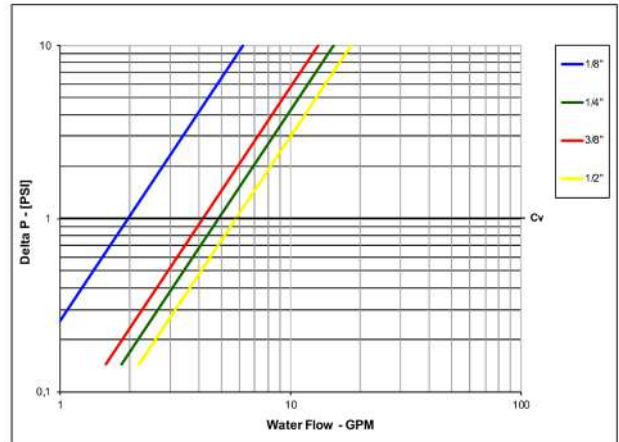
DN shows the nominal flow diameter.

Code	S35AX0	S35BX0	S35CX0	S35DX0
D (inch)	1/8	1/4	3/8	1/2
DN (inch)	0.236	0.314	0.314	0.393
I (inch)	0.354	0.472	0.472	0.610
L (inch)	1.712	1.712	1.712	2.106
G (inch)	0.905	0.905	0.905	1.102
A (inch)	0.885	0.885	0.885	0.885
H (inch)	1.220	1.220	1.220	1.299
CH (inch)	0.826	0.826	0.826	0.984
Cv (GPM)	2.0	4.9	4.2	5.8

Pressure-temperature chart



Pressure drop chart



XCES35N - 4266



s.39 NPT forged, micro

1/8" - 1/4"

high pressure ball valve



Quality

- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Each valve is seal tested for maximum safety
- Handle stops on body to avoid stress at stem
- Handle/ stem clearly shows ball position

Body

- Hot forged sand blasted brass body
- Finest brass according to EN 12165 specification

Stem

- Blowout-proof brass stem
- Maintenance-free, double FPM O-ring at the stem for maximum safety

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Handle

- Reinforced nylon black wedge handle
- Handle removable with valve in service
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 900 PSI (60 bar) non-shock cold working pressure
- -4°F to +200°F (-20°C to +90°C)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Male by female threads
- Nylon wedge handle yellow, red or blue
- ISO 228 parallel threads

Upon request

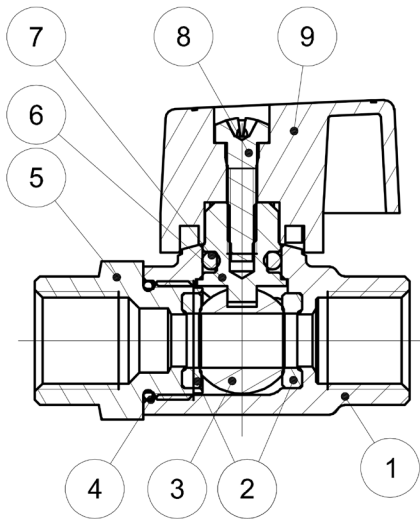
- ISO 7/1 BSPT taper threads
- Other brass alloys or aluminum
- Additional connection options

Approved by or in compliance with

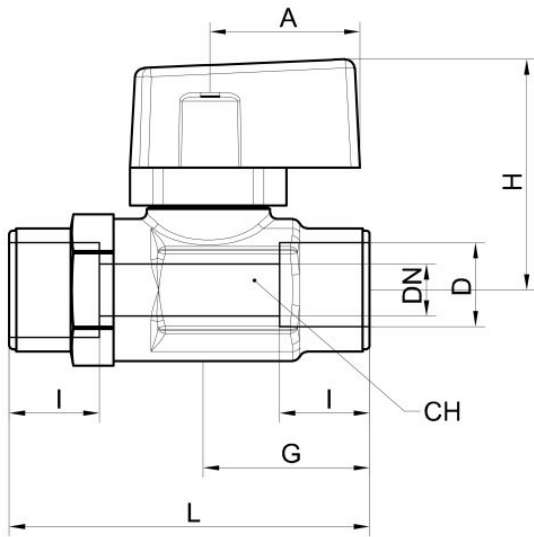
- RoHS Compliant (EU)

NOTE: approvals apply to specific configurations/sizes only.





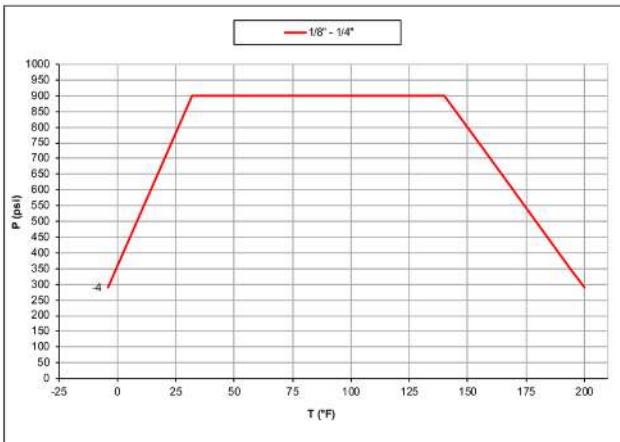
Part description	Qty	Material
1 Nickel plated body (external nickel plated, unplated inside)	1	CW617N
2 Ball seat	2	PTFE
3 Chrome plated ball	1	CW617N
4 O-Ring	1	HNBR
5 Nickel plated end cap (external nickel plated, unplated inside)	1	CW617
6 Unplated stem	1	CW617N
7 O-Ring	1	FPM
8 Zinc plated screw	1	C10C (EN10263-2)
9 Black handle	1	Nylon glass filled 30%



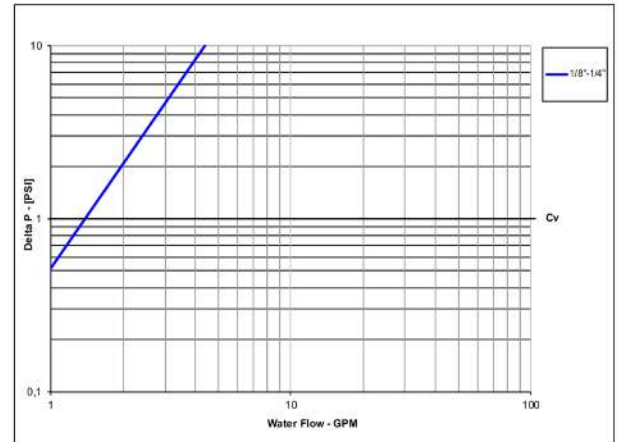
Code	S39AX0M	S39BX0M
D (inch)	1/8"	1/4"
DN (inch)	0.217	0.217
I (inch)	0.374	0.472
L (inch)	1.496	1.732
G (inch)	0.669	0.787
A (inch)	0.630	0.630
H (inch)	0.965	0.965
CH (inch)	0.591	0.591
Cv (GPM)	1.4	1.4

DN shows the nominal flow diameter.

Pressure-temperature chart



Pressure drop chart



XCES39N - 4266



s.93 NPT downstream exhaust

1/4" - 2" with patented locking handle

Featuring patented tamper-proof lockable handle that has no equal in the market.

RuB s.93 range exhausts automatically and continuously downstream air pressure as soon as turned in the closed position.

Valve is lockable in the closed position only, according to Part. 1910.147 safety OSHA (United States) requirements allowing safe maintenance of the air-supplied equipment; when valve is open, one simple 90° turn of the handle shuts flow immediately.

We care for those you care for.



Quality

- No metal-to-metal moving parts
- No maintenance ever required
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Handle stops on body to avoid stress at stem

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent threads sealant
- The valve body includes a tapped downstream depressurization venting outlet to direct exhaust air or assemble mufflers for noise control
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel plated brass stem
- Maintenance-free, double FPM O-rings at the stem for maximum safety

Sealing

- Molybdenum filled PTFE self-lubricating seats with flexible-lip design

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Flow

- Full port to DIN 3357 for maximum flow

Handle

- Geomet® carbon steel lockable handle patent n. 7074-B/90 with thick PVC dip coating. Handle coating offers both thermal and electrical protection
- Handle removable with valve in service
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 200 PSI non-shock cold working pressure
- +15°F/ +210°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Stainless steel handle (1.4016 / AISI 430)
- Non-locking Geomet® carbon steel lever handle
- ISO 7/1 BSPT taper threads
- EN 10226-1, ISO 228 parallel threads
- Safety pin
- Muffler, hose

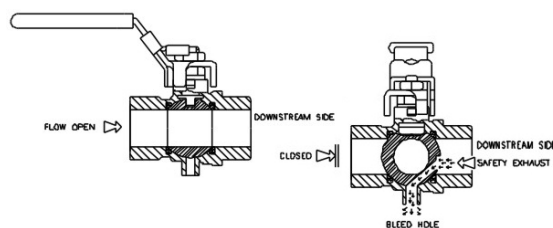
Upon request

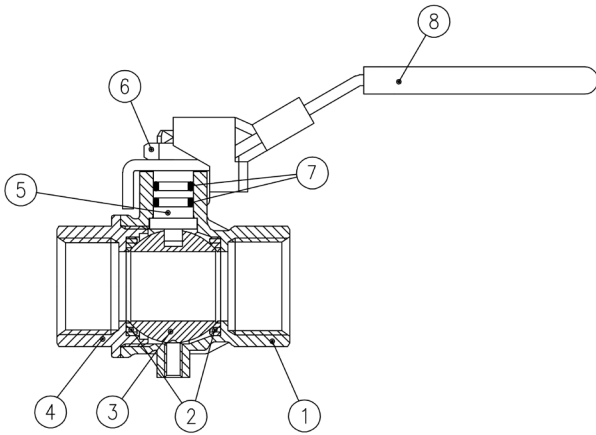
- Stainless steel ball (1.4401 / AISI 316)
- Custom design
- T-handle

Approved by or in compliance with

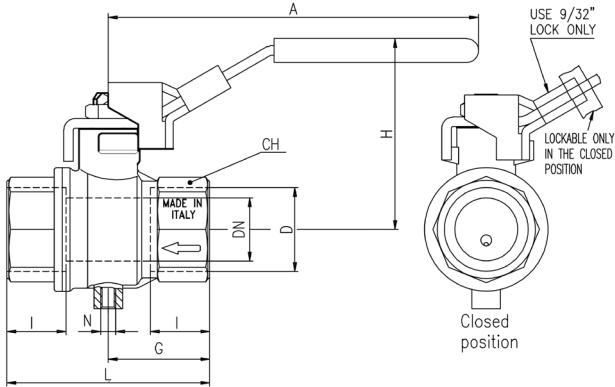
- GOST-R (Russia)
- RoHS Compliant (EU)
- OSHA Compliant (USA)

NOTE: approvals apply to specific configurations/sizes only.





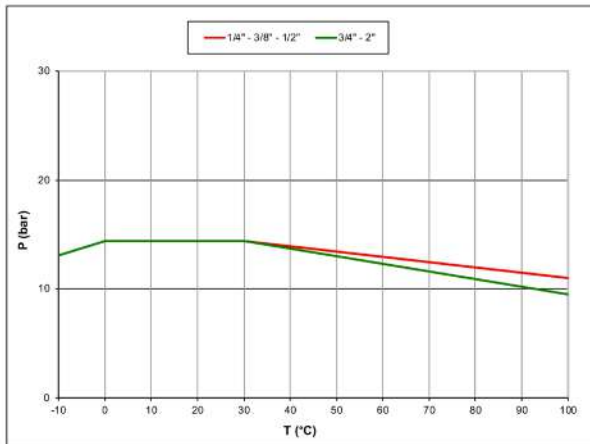
Part description	Qty	Material
1	1	CW617N
2	2	PTFE molybdenum filled
3	1	CW617N
4	1	CW617N
5	1	CW617N
6	1	CB4FF (EN10263-2)
7	2	FPM
8	1	DD11 (EN10111)



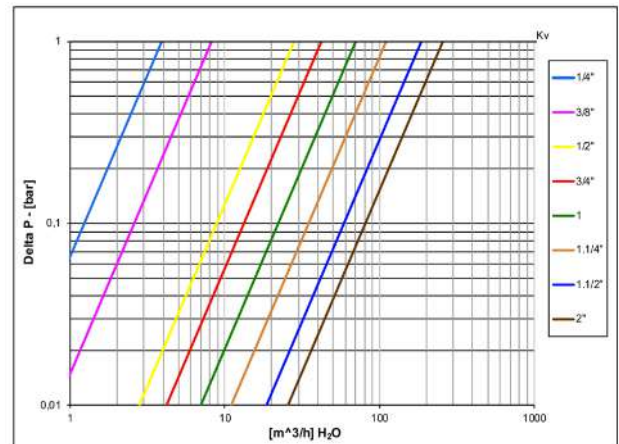
Code	S93B41	S93C41	S93D41	S93E41	S93F41	S93G41	S93H41	S93I41
D (inch)	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
DN (inch)	0.314	0.393	0.590	0.787	0.984	1.260	1.575	1.969
I (inch)	0.472	0.472	0.610	0.669	0.826	0.906	0.906	1.043
L (inch)	1.771	1.771	2.322	2.519	3.188	3.661	4.016	4.764
G (inch)	0.885	0.885	1.161	1.259	1.594	1.831	2.008	2.382
A (inch)	3.759	3.759	3.759	4.574	4.574	6.161	6.161	6.161
H (inch)	1.811	1.811	2.008	2.323	2.480	3.031	3.268	3.543
CH (inch)	0.787	0.787	0.984	1.220	1.574	1.929	2.126	2.697
N	10-32 UNF					1/4" NPT		
Cv (GPM)	4.5	9.5	32.3	48.5	80.9	127.1	214.9	295.8

DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4.

Pressure-temperature chart



Pressure drop chart



XCES93N - 4266

DRINKING WATER



Puri-T 242 1/2" - 2" Lead Free, solder ends

Page 134

Puri-T 292 NPT 1/4" - 2" Lead Free

Page 136

Puri-T 264 NPT 1/2" - 1 1/2" Lead Free, ISO 5211

Page 138

s.468LF DZR 22 mm compression ends, ISO 5211, Lead-Free, dezincification-resistant

Page 140



Puri-T 242

1/2" - 2"

Lead Free
solder ends



All surfaces of this product in contact with drinking water contain less than 0.25% of lead in compliance with U.S. law



Quality

- Certified by CSA International to comply with U.S. s3874, California AB1953, and similar laws of other states for the safe handling of drinking water
- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Chrome plated lead free brass ball for longer life
- Handle stops on body to avoid stress at stem

Body

- Hot forged sand blasted, unplated lead free brass body and cap sealed with Loctite® or equivalent thread sealant

Stem

- Pure PTFE adjustable packing gland and reinforced PTFE washer for lower torque and easy maintenance
- Blowout-proof unplated lead free brass stem

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design

Connections

- Solder-end ANSI B16.18 female by female connections

Flow

- Full port to DIN 3357 for maximum flow

Handle

- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both thermal and electrical protection
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 600 PSI (for solder joints rating see table 1) non-shock cold working pressure
- For general use: -4°F / +350°F (for solder joints rating see table 1)
- NSF 61 limits (CSA approval): tested for use in continuous exposure to water of ambient temperature
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Oval lockable handle
- Patented locking device
- Stem extension (assemble after soldering)
- T-handle
- Stubby handle

Upon request

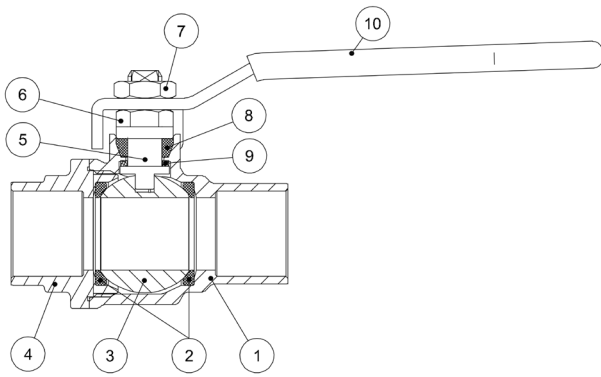
- Glass filled PTFE seals
- Stainless steel handle (1.4016 / AISI 430)
- Custom design

Approved by or in compliance with

- GOST-R (Russia)
- Certified by CSA International for Drinking Water to NSF/ANSI 61 – NSF/ANSI 372 (USA)
- RoHS Compliant (EU)

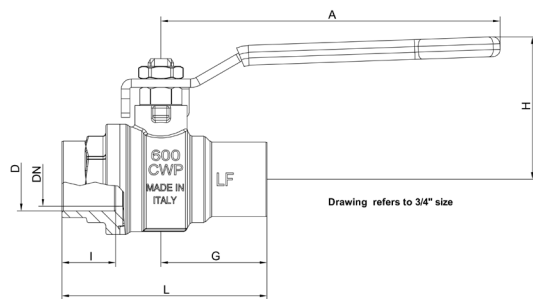
NOTE: approvals apply to specific configurations/sizes only.





1 1/2"-2" hollow ball

Part description	Qty	Material
1 Unplated solder end body	1	CW510L
2 Seat	2	PTFE
3 Chrome plated ball	1	CW510L
4 Unplated solder end-cap	1	CW510L
5 Unplated stem packing gland design	1	CW510L
6 Nickel plated gland nut	1	CW617N
7 Geomet® nut	1	CB4FF (EN10263-2)
8 Packing gland seal	1	PTFE
9 Thrust washer	1	PTFE carbon filled 25%
10 Green PVC coated Geomet® steel handle	1	DD11 (EN10111)



Drawing refers to 3/4" size

DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4.

Code	T242D00	T242E00	T242F00	T242G00	T242H00	T242I00	
D (inch)	Nominal	1/2	3/4	1	1 1/4	1 1/2	2
	actual	0.6271	0.8771	1.1279	1.3779	1.6279	2.1279
DN (inch)	0.590	0.787	0.984	1.259	1.574	1.968	
I (inch)	0.492	0.748	0.905	0.964	1.102	1.338	
L (inch)	2.244	2.854	3.346	3.819	4.488	5.433	
G (inch)	1.181	1.476	1.673	1.909	2.244	2.716	
A (inch)	3.937	4.724	4.724	6.220	6.220	6.220	
H (inch)	1.695	1.988	2.153	2.988	3.236	3.500	
Cv (GPM)	32.3	48.5	80.9	127.1	144.4	206.8	

Joining material	Melting range degrees		Working temperature degrees		Maximum working gauge pressure					
	°F	°C	°F	°C	Size 1/8" - 1"		Size 1 1/4" - 2"		Size 2 1/2" - 4"	
					psi	kPa	psi	kPa	psi	kPa
50-50 tin-lead solder* ASTM B32 alloy grade 50 A	361/421	185/215	0/+100	-18/+38	200	1400	176	1200	150	1050
			0/+150	-18/+66	150	1050	125	850	100	700
			0/+200	-18/+93	100	700	90	600	75	500
			0/+250	-18/+121	85	600	75	500	50	350
			0/+100	-18/+38	500**	3500**	400**	2800**	300**	2100**
95-5 tin-antimony solder ASTM B32 alloy grade 95TA	450/464	230/240	0/+100	-18/+38	400**	2800**	350**	2400**	275**	2000**
			0/+200	-18/+93	300**	2100**	250**	1700**	200	1400
			0/+250	-18/+121	200	1400	175	1200	150	1050

Note:

Above stated limits are not imposed by the valve, but by the strength of the soldering joint according to ASME B16.22.

* This alloy contains more than 0,2% lead and, according to certain specifications, cannot be used for potable water or other foods.

** Soldered copper tube joints have been tested at 230 psi (1600 kPa) in accordance with ISO 2016

Pressure-temperature chart

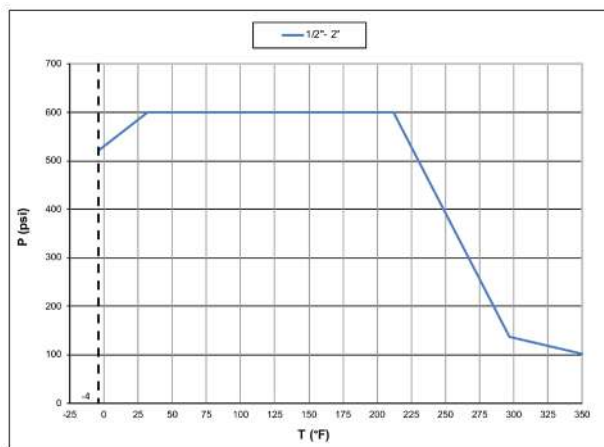
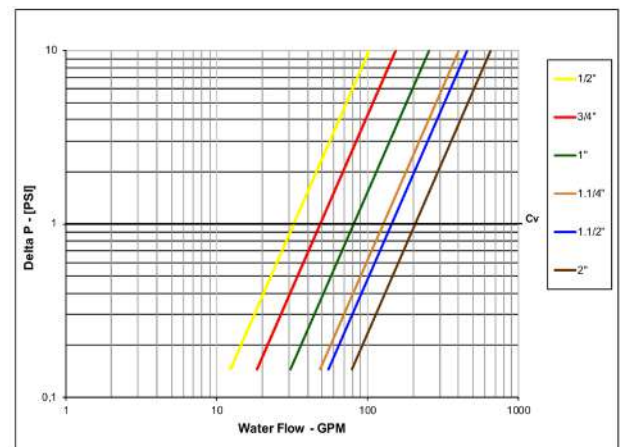


Chart applies to valve, not to solder joints for general use

Pressure drop chart



XCET242 - 4266



Puri-T 292 NPT

1/4" - 2"
Lead Free



All surfaces of this product in contact with drinking water contain less than 0.25% of lead in compliance with U.S. law



Quality

- Certified by CSA International to comply with U.S. s3874, California AB1953, and similar laws of other states for the safe handling of drinking water
- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Handle stops on body to avoid stress at stem

Body

- Hot forged sand blasted, unplated lead free brass body and cap sealed with Loctite® or equivalent thread sealant
- Chrome plated lead free brass ball for longer life

Stem

- Pure PTFE adjustable packing gland and reinforced washer for lower torque and easy maintenance
- Blowout-proof unplated lead free brass stem

Sealing

- Glass filled pure PTFE self-lubricating seats with flexible-lip design

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Flow

- Full port to DIN 3357 for maximum flow

Handle

- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both Thermal and electrical protection

- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 600 PSI non-shock cold working pressure
- For general use: -40°F / +350°F
- NSF 61 limits (CSA approval): tested for use in continuous exposure to water of ambient temperature
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Stem extension
- T-handle
- Oval lockable handle
- Stainless steel handle (1.4016 / AISI 430)
- Patented locking device
- Stubby handle

Upon request

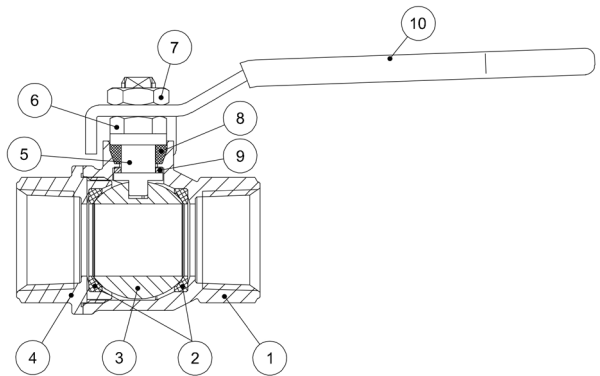
- Custom design
- Pure PTFE seals

Approved by or in compliance with

- GOST-R (Russia)
- Certified by CSA International for Drinking Water to NSF/ANSI 61 – NSF/ANSI 372 (USA)
- RoHS Compliant (EU)

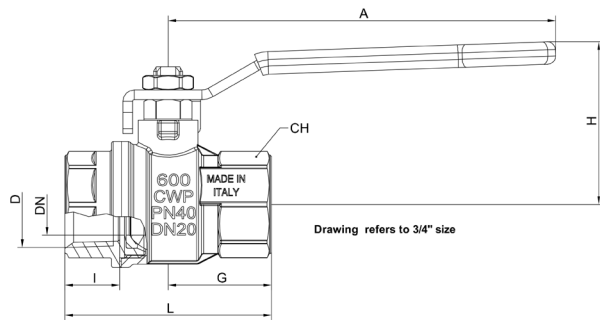
NOTE: approvals apply to specific configurations/sizes only.





1 1/2"-2" hollow ball

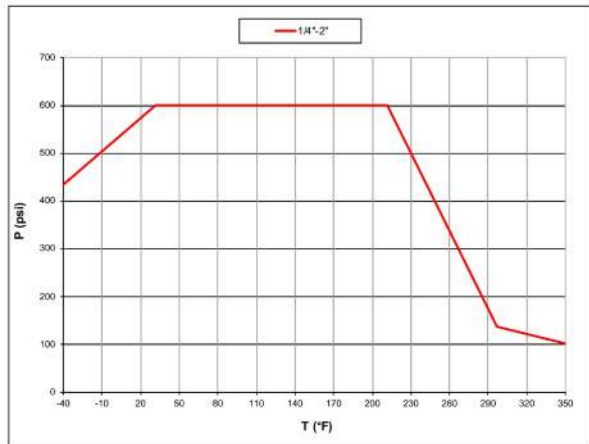
Part description	Qty	Material
1 Unplated NPT body	1	CW510L
2 Seat	2	PTFE glass filled 5-15%
3 Chrome plated ball	1	CW510L
4 Unplated NPT end-cap	1	CW510L
5 Unplated stem packing gland design	1	CW510L
6 Nickel plated gland nut	1	CW617N
7 Geomet® nut	1	CB4FF (EN10263-2)
8 Packing gland seal	1	PTFE
9 Thrust washer	1	PTFE carbon filled 25%
10 Green PVC coated Geomet® steel handle	1	DD11 (EN10111)



DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4.

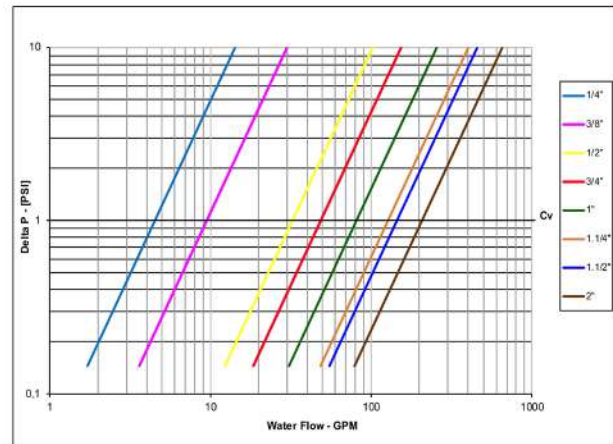
Code	T292B41	T292C41	T292D41	T292E41	T292F41	T292G41	T292H41	T292I41
D (inch)	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
DN (inch)	0.314	0.393	0.590	0.787	0.984	1.259	1.574	1.968
I (inch)	0.472	0.472	0.610	0.669	0.826	0.905	0.905	1.043
L (inch)	1.771	1.771	2.322	2.519	3.188	3.661	4.015	4.763
G (inch)	0.885	0.885	1.161	1.259	1.594	1.830	2.007	2.381
A (inch)	3.228	3.228	3.937	4.724	4.724	6.220	6.220	6.220
H (inch)	1.563	1.563	1.695	1.988	2.153	2.988	3.236	3.500
CH (inch)	0.787	0.787	0.984	1.220	1.574	1.929	2.125	2.696
Cv (GPM)	4.5	9.5	32.3	48.5	80.9	127.1	144.4	206.8

Pressure-temperature chart



for general use

Pressure drop chart



XCET292 - 4266



Puri-T 264 NPT

1/2" - 1 1/2"

Lead Free

ISO 5211



All surfaces of this product in contact with drinking water contain less than 0.25% of lead in compliance with U.S. law



Quality

- Certified by CSA International to comply with U.S. s3874, California AB1953, and similar laws of other states for the safe handling of drinking water
- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Silicone-free lubricant on all seals
- Chrome plated lead free brass ball for longer life

Body

- Hot forged sand blasted, unplated lead free brass body and cap sealed with Loctite® or equivalent thread sealant
- Integrated ISO 5211 and DIN 3337 mounting flange for universal connection to actuator
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel plated lead free brass stem
- Maintenance free, thanks to two FPM O-rings at the stem for maximum safety

Sealing

- Reinforced PTFE self-lubricating seats with flexible-lip and wear compensation design

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Flow

- 100% full port for maximum flow

Operating mechanism

- Integrated sturdy ISO 5211 flange allows direct mounting of electric and pneumatic actuators, with no bracket or coupling required. See **RuB** line of electric and pneumatic actuators.

Working pressure & temperature

- 600 PSI up to 3/4" size
- For 1" size up to 1 1/2" size:
 - Shell rating: 600 PSI
 - Seat rating: Delta P max permissible 230 PSI
- non-shock cold working pressure
- For general use: -4°F/+350°F
- NSF 61 limits (CSA approval): tested for use in continuous exposure to water of ambient temperature
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Rack and pinion pneumatic actuator (spring return or double acting)
- Compact power electric actuator for some sizes
- Manual lockable handle

Upon request

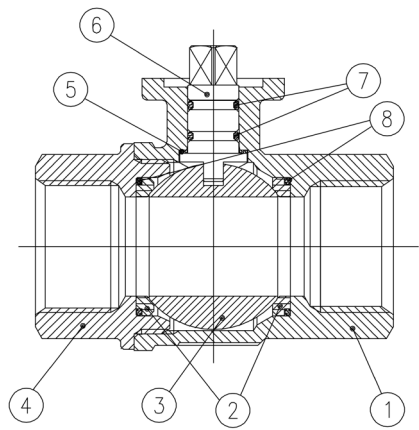
- Custom design

Approved by or in compliance with

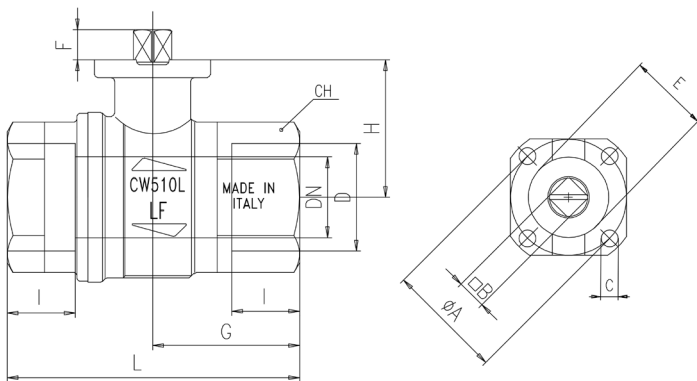
- GOST-R (Russia)
- Certified by CSA International for Drinking Water to NSF/ANSI 61 – NSF/ANSI 372 (USA)
- RoHS Compliant (EU)

NOTE: approvals apply to specific configurations/sizes only.





Part description	Qty	Material
1	1	CW510L
2	2	PTFE graphite filled 15% up to 3/4" size, PTFE carbographe filled over 3/4" size
3	1	CW510L
4	1	CW510L
5	1	PTFE carbon filled 25%
6	1	CW510L
7	2	FPM
8	2	FPM



Code	T264D41	T264E41	T264F41	T264G41	T264H41
D (inch)	1/2	3/4	1	1 1/4	1 1/2
DN(inch)	0.590	0.787	0.984	1.259	1.575
I (inch)	0.610	0.708	0.826	0.905	0.964
L (inch)	2.598	2.933	3.562	4.094	4.606
G (inch)	1.201	1.456	1.791	2.047	2.322
H (inch)	1.220	1.515	1.673	1.941	2.441
CH(inch)	1.063	1.259	1.614	1.968	2.165
ØA(inch)	1.417	1.417	1.417	1.417	1.968
□B(inch)	0.354	0.354	0.354	0.354	0.551
C (inch)	0.220	0.220	0.220	0.220	0.259
E(inch)	0.984	0.984	0.984	0.984	1.378
F(inch)	0.295	0.334	0.334	0.334	0.570
Flange connection DIN ISO 5211 DIN 3337	F03	F03	F03	F03	F05
Cv(GPM)	32.3	69.3	115.5	179.1	283.1

Torque for actuator sizing in-lb

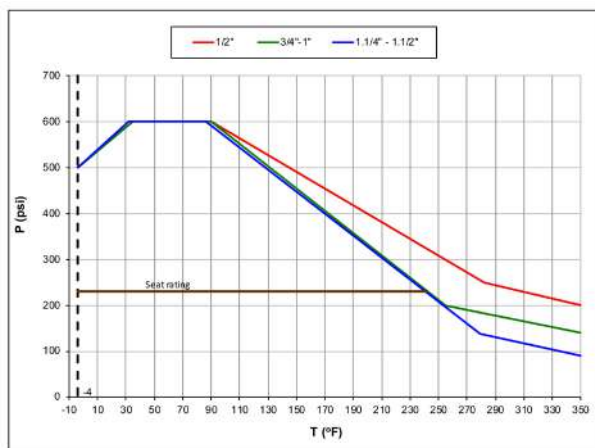
Delta P -->	0-200 PSI		600 PSI		Delta P -->	0-90 PSI		>90-230 PSI	
	to open	to close	to open	to close		to open	to close	to open	to close
1/2"	25	15	25	15	1"	19	19	31	31
3/4"	33	20	33	20	1 1/4"	22	22	35	35
					1 1/2"	51	51	84	84

Torque correction factors

Valve torque can vary according to operating frequency, temperature and friction characteristics of the media. If media has more or less friction than water, multiply torque by the following factors.

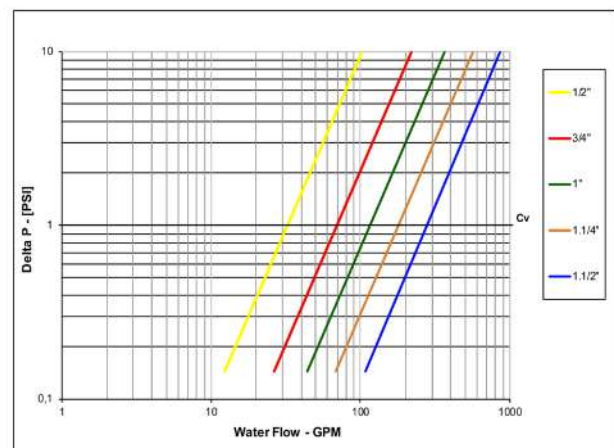
- Lubricating oils or liquids 0.8
- Dry gases, natural gas 1.5
- Slurries or liquids bearing abrasive particles 1.5-2.5

Pressure-temperature chart



for general use

Pressure drop chart

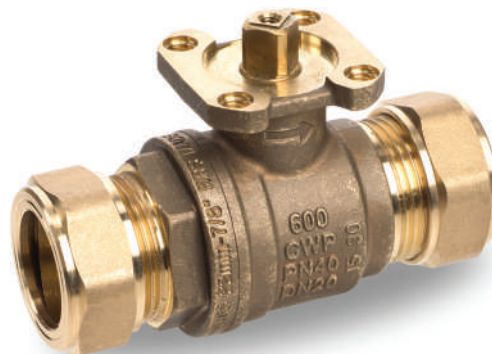


XCET264 - 4266



s.468LF DZR

7/8" compression ends
Lead-Free
dezincification-resistant



Quality

- 100% seal test guaranteed
- Arrow on the valve body clearly shows the flow direction
- No metal-to-metal moving parts
- No maintenance ever required
- Stem clearly shows ball position
- Silicone-free lubricant on all seals
- Chrome plated DZR and lead free brass ball for longer life and with anti-freeze function

Body

- Hot forged sand blasted DZR and lead free unplated body and cap sealed with Loctite® or equivalent thread sealant
- Dezincification-resistant and lead free brass in compliance with HCACL Hygienic copper alloy composition (UBA list)

Stem

- Maintenance-free, double EPDM O-rings at the stem for maximum safety
- Blowout-proof unplated DZR and lead free brass stem

Sealing

- EPDM seats for lower torque

Connections

- Compression ends to EN 1254-2

Flow

- Full port to DIN 3357 for maximum flow

Handle

- Integrated sturdy ISO 5211 flange allows direct mounting of electric and pneumatic actuators, with no bracket or coupling required. See **RuB** line of electric and pneumatic actuators.

Working pressure & temperature

- Shell rating: 600 PSI non-shock cold working pressure
- Seat rating/compression ends: 230 PSI max non-shock cold working pressure (see chart for pressure/temperature limits)
- -4°F to +250°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- S.468 DZR and lead free 22mm compression ends
- Rack and pinion pneumatic actuator (spring return or double acting)
- Compact power electric actuator
- Manual lockable handle

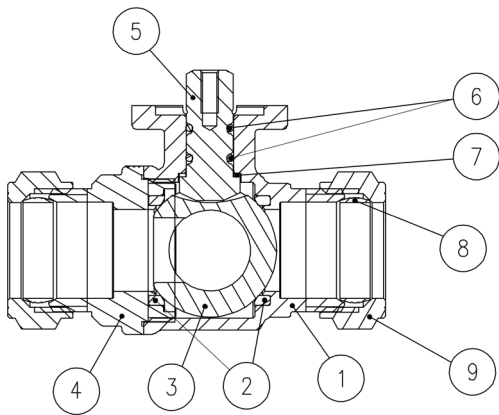
Upon request

- Custom design

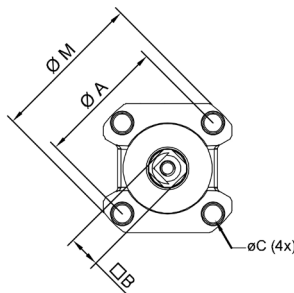
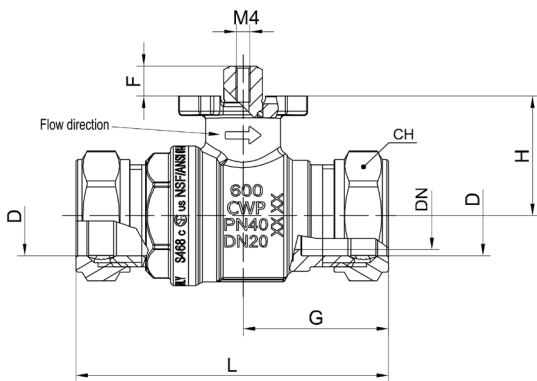
Approved by or in compliance with

- Water Regulations Advisory Scheme (United Kingdom)
- Certified by CSA International for Drinking Water to NSF/ANSI 372 (USA)

NOTE: approvals apply to specific configurations/sizes only.



Part description	Qty	Material	
1	Unplated body	1	CW511L
2	Seat	2	EPDM
3	Chrome plated ball	1	CW511L
4	Unplated end-cap	1	CW511L
5	Unplated stem	1	CW511L
6	O-Ring	2	EPDM
7	Washer	1	PTFE carbon filled 25%
8	Olive	2	CW508L
9	Unplated nut	2	CW617N



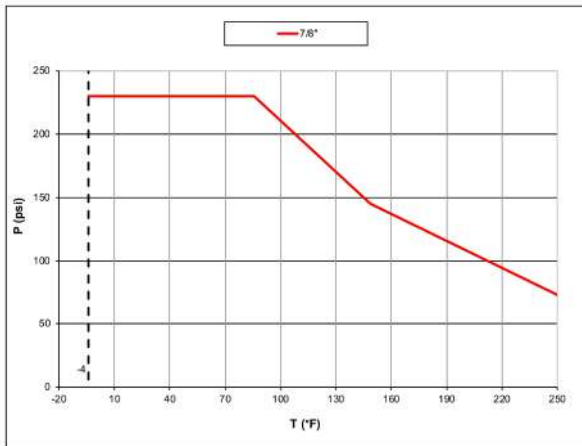
Code	S468E22U
D (inch)	7/8"
DN(mm)	0.748
L (mm)	3.643
G (mm)	1.702
H (mm)	1.319
ØA (mm)	1.417
ØC (mm)	Ø0.2 (M6)
Square B (mm)	0.354
ØM (mm)	1.709
F (mm)	0.327
CH (mm)	1.259
Cv (GPM)	41.6

DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4.

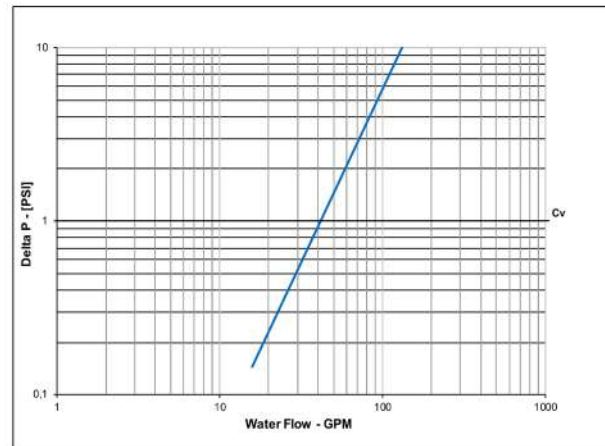
Torque for actuator sizing in-lb

Delta P -->	0-90 PSI	90-230 PSI
Valve size	to open/to close	to open/to close
7/8"	22.1	26.5

Pressure-temperature chart



Pressure drop chart



XCES468U - 4266

PLUMBING





s.42 1/2" - 3" solder-ends ball valve	Page 144
s.71 NPT 1/2" - 4" standard port	Page 146
s.90 NPT short 1/4" - 2"	Page 148
s.112 NPT 1/2" - 4" gate valve	Page 150
s.114 NPT 1/2" - 4" heavy pattern brass gate valve	Page 152
s.123 NPT 1/4" - 1 1/4" heavy pattern check valve	Page 154
s.126 NPT 1/2" - 4" swing check valve	Page 156



s.42

1/2" - 3"

solder-ends ball valve



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Handle stops on body to avoid stress at stem

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel plated brass stem
- Pure PTFE adjustable packing gland and reinforced washer for lower torque and easy maintenance

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design

Connections

- Solder end female by female connections

Flow

- Full port to DIN 3357 for maximum flow

Handle

- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both thermal and electrical protection
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 600 PSI (40 bar) up to 2", 450 PSI (30 bar) over 2", (150 WSP -10 bar all sizes) non-shock cold working pressure
- **NOTE:** for solder joints ratings see Table 1 on reverse
- 250 PSI (17 bar) non-shock working pressure for LP-Gas
- *150 psig (10 bar) non-shock working steam pressure. Not suitable for throttling steam.
- -4°F/+366°F (-20°C / +170°C) (for solder joints ratings see Table 1 on reverse)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options up to 2" size

- Stem extension (assemble after soldering)
- Lead free for safe drinking water (0.25% or less Pb)
- Oval lockable handle up to 2", round over 2"
- Patented locking device for valves up to 3"
- T-handle
- Stubby handle

Upon request

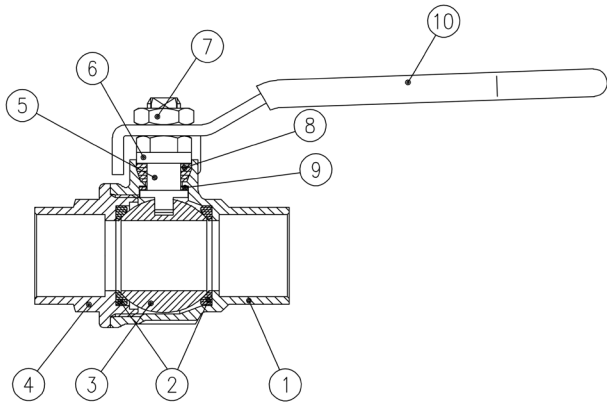
- Stainless steel ball and/or stem (1.4401 / AISI 316)
- Glass filled PTFE seals
- Stainless steel handle (1.4016 / AISI 430)
- Custom design

Approved by or in compliance with

- Underwriters Laboratories (United States, Canada):
 - Guide YSDT: LP-Gas Shut-Off Valve
 - Guide YRBX: Flammable liquid shutoff valve
 - Guide YRPV: Gas Shut-Off Valve for use with natural and manufactured gases
 - Guide MHKZ: No. 6 oil at 250°F
- GOST-R (Russia)
- RoHS Compliant (EU)
- CRN-TSSA acc. to MSS SP110 (Canada)
- Meeting WW-V-35C Federal U.S. Specification (United States)

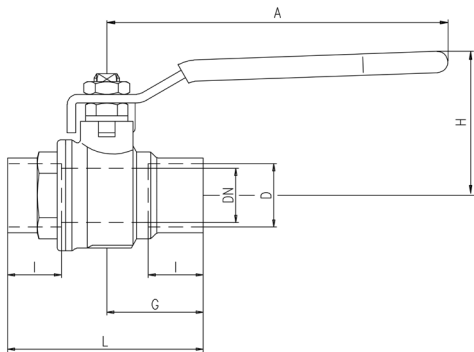
NOTE: approvals apply to specific configurations/sizes only.





1 1/4"-2" hollow ball

Part description	Qty	Material
1 Unplated solder end body	1	CW617N
2 Seat	2	PTFE
3 Chrome plated ball	1	CW617N
4 Unplated solder end-cap	1	CW617N
5 Nickel plated stem packing gland design	1	CW617N
6 Nickel plated gland nut	1	CW617N
7 Geomet® nut	1	CB4FF (EN10263-2)
8 Packing gland seal	1	PTFE
9 Washer	1	PTFE carbon filled 25%
10 Yellow PVC coated Geomet® steel handle	1	DD11 (EN10111)



Code	S42D00	S42E00	S42F00	S42G00	S42H00	S42I00	S42L00	S42M00	
D (inch)	Nominal	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
	actual	0.6271	0.8771	1.1279	1.3779	1.6279	2.1279	2.628	3.128
DN (inch)	0.590	0.787	0.984	1.259	1.574	1.968	2.559	3.149	
I (inch)	0.492	0.748	0.905	0.964	1.102	1.338	1.476	1.673	
L (inch)	2.244	2.854	3.346	3.819	4.488	5.433	6.614	7.598	
G (inch)	1.181	1.476	1.673	1.909	2.244	2.716	3.307	3.799	
A (inch)	3.937	4.724	4.724	6.220	6.220	6.220	10.039	10.039	
H (inch)	1.695	1.988	2.153	2.988	3.236	3.500	5.196	5.511	
Cv (GPM)	32.3	48.5	80.9	92.4	144.4	206.8	596.2	896.5	

Joining material	Melting range degrees		Working temperature degrees		Maximum working gauge pressure					
	°F	°C	°F	°C	Size 1/8" - 1"		Size 1 1/4" - 2"		Size 2 1/2" - 4"	
					psi	kPa	psi	kPa	psi	kPa
50-50 tin-lead solder* ASTM B32 alloy grade 50 A	361/421	185/215	0/+100	-18/+38	200	1400	176	1200	150	1050
			0/+150	-18/+66	150	1050	125	850	100	700
			0/+200	-18/+93	100	700	90	600	75	500
			0/+250	-18/+121	85	600	75	500	50	350
95-5 tin-antimony solder ASTM B32 alloy grade 95TA	450/464	230/240	0/+100	-18/+38	500**	3500**	400**	2800**	300**	2100**
			0/+150	-18/+66	400**	2800**	350**	2400**	275**	2000**
			0/+200	-18/+93	300**	2100**	250**	1700**	200	1400
			0/+250	-18/+121	200	1400	175	1200	150	1050

Note:

Above stated limits are not imposed by the valve, but by the strength of the soldering joint according to ASME B16.22.

* This alloy contains more than 0,2% lead and, according to certain specifications, cannot be used for potable water or other foods.

** Soldered copper tube joints have been tested at 230 psi (1600 kPa) in accordance with ISO 2016

DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4. Stem configuration of valves over 2" is slightly different.

Pressure-temperature chart

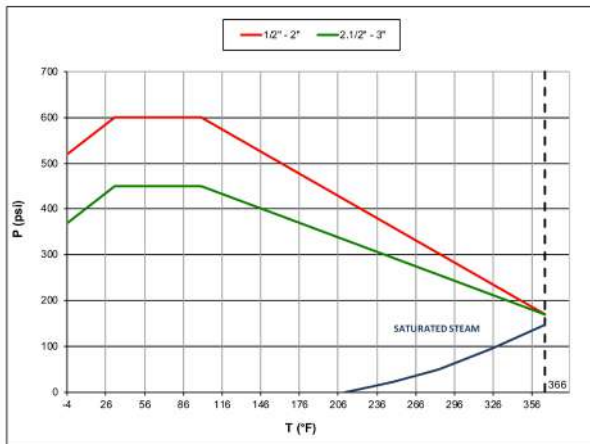
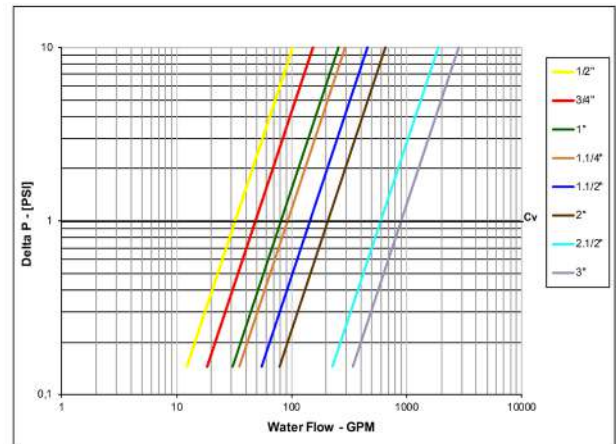


Chart applies to valve, not to solder joints

Pressure drop chart



XCES42 - 4314



s.71 NPT

1/2" - 4"
standard port



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- Handle clearly shows ball position
- Silicone-free lubricant on all seals
- Chrome plated brass ball for longer life
- Handle stops on body to avoid stress at stem

Body

- Hot forged sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant
- Finest brass according to EN 12165 and EN 12164 specifications

Stem

- Blowout-proof nickel plated brass stem
- Pure PTFE adjustable packing gland and reinforced washer for lower torque and easy maintenance
- Triple stem seals in sizes over 2 1/2"

Sealing

- Pure PTFE self-lubricating seats with flexible-lip design

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Flow

- Standard port for compact design

Handle

- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both thermal and electrical protection

Working pressure & temperature

- 600 PSI non-shock cold working pressure
- *150 psig non-shock steam working pressure. Not suitable for throttling steam.
- -40°F/+366°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- Oval lockable handle up to 2 1/2", round over 2 1/2"
- Stem extension up to 2 1/2"
- T-handle up to 2 1/2"
- Stainless steel handle (1.4016 / AISI 430) up to 2 1/2"
- Patented locking device
- Stubby handle up to 2"

Upon request

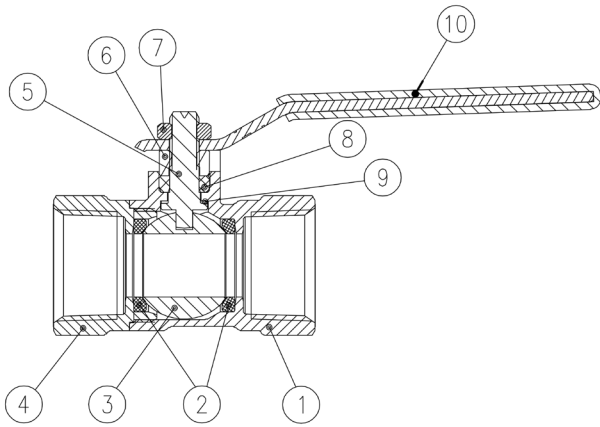
- Stainless steel ball and/or stem (1.4401 / AISI 316)
- Glass filled PTFE seals
- Custom design

Approved by or in compliance with

- Canadian standards Association (United States, Canada)
- RoHS Compliant (EU)

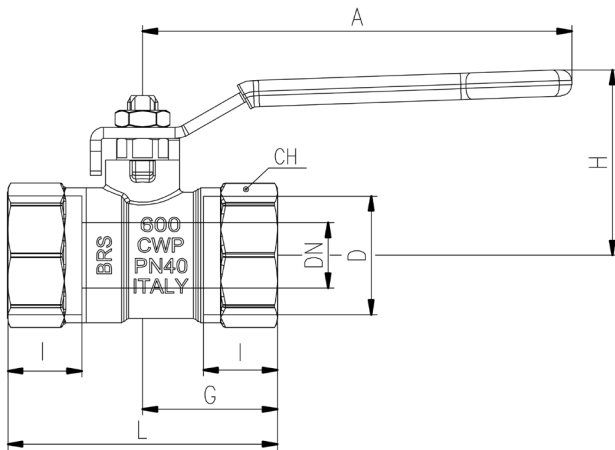
NOTE: approvals apply to specific configurations/sizes only.





1 1/2"-2 1/2" hollow ball

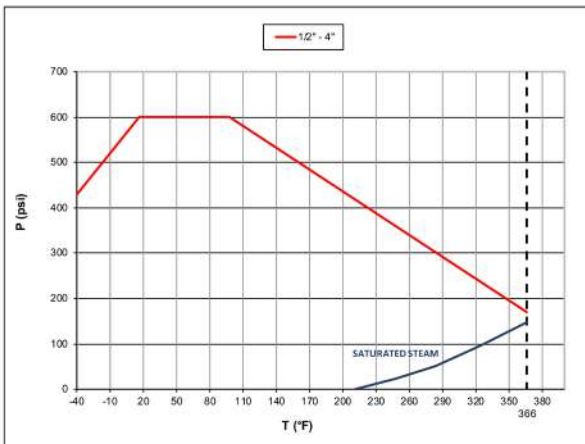
Part description	Qty	Material
1 Unplated body	1	CW617N
2 Seat	2	PTFE
3 Chrome plated ball	1	CW617N
4 Unplated end-cap	1	CW617N
5 Nickel plated stem packing gland design	1	CW617N
6 Nickel plated gland nut	1	CW617N
7 Geomet® nut	1	CB4FF (EN10263-2)
8 Packing gland seal	1	PTFE
9 Washer	1	PTFE carbon filled 25%
10 Black PVC coated Geomet® steel handle	1	DD11 (EN10111)



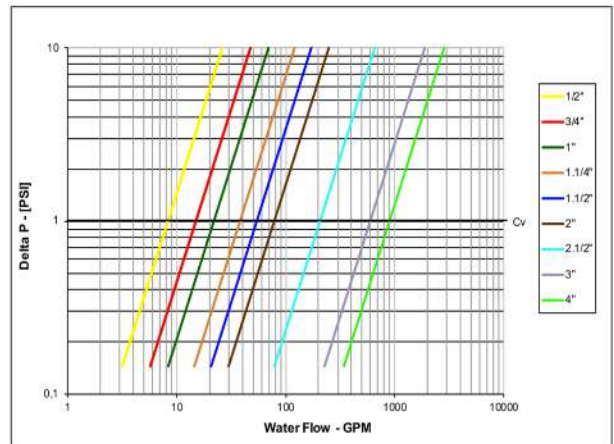
DN shows the nominal flow diameter. Stem configuration of valves over 2 1/2" is slightly different.

Code	S71D41	S71E41	S71F41	S71G41	S71H41	S71I41	S71L41	S71M41	S71N41
D (inch)	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
DN (inch)	0.453	0.591	0.787	0.984	1.260	1.575	1.968	2.559	3.150
I (inch)	0.610	0.669	0.827	0.905	0.905	1.043	1.260	1.378	1.634
L (inch)	2.126	2.441	2.835	3.464	3.779	4.409	5.276	6.378	7.480
G (inch)	1.043	1.220	1.417	1.732	1.890	2.205	2.638	3.189	3.740
A (inch)	3.937	3.937	4.724	4.724	6.220	6.220	6.220	10.039	10.039
H (inch)	1.693	1.695	1.984	2.153	2.988	3.236	3.500	5.197	5.512
CH (inch)	0.984	1.220	1.496	1.929	2.126	2.677	3.346	3.898	4.921
Cv(GPM)	8.3	15.0	22.0	38.1	54.3	78.6	206.8	596.2	896.5

Pressure-temperature chart



Pressure drop chart



XCES71 - 4266



s.90 NPT short

1/4" – 2"



Quality

- 24h 100% seal test guaranteed
- Dual sealing system allows valve to be operated in either direction making installation easier
- No metal-to-metal moving parts
- No maintenance ever required
- Handle clearly shows ball position
- Chrome plated brass ball for longer life
- Handle stops on body to avoid stress at stem

Body

- Hot forged full port sand blasted, unplated brass body and cap sealed with Loctite® or equivalent thread sealant

Sealing

- PTFE self-lubricating seats with flexible-lip design

Threads

- NPT short taper female by female threads

Handle

- Geomet® carbon steel handle with thick PVC dip coating. Handle coating offers both thermal and electrical protection
- Handle removable with valve in service
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Stem

- Blowout-proof nickel plated brass stem
- Maintenance-free, double FPM O-rings at the stem for maximum safety

Working pressure & temperature

- 600 PSI non-shock cold working pressure
- -40°F/+350°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

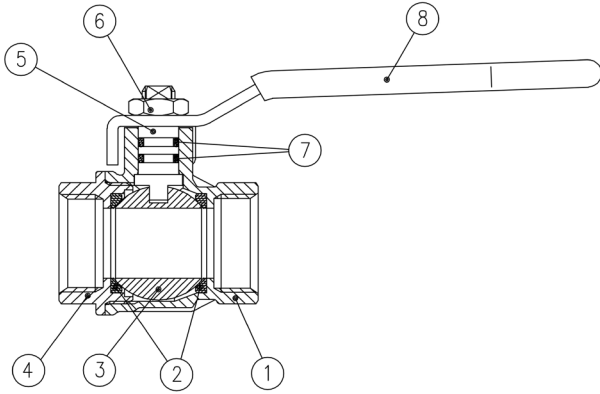
- Stem extension
- T-handle
- Oval lockable handle
- Stainless steel handle (1.4016 / AISI 430)
- Patented locking device
- Stubby handle
- **RuB** memory stop designed to be installed with our stubby handle

Approved by or in compliance with

- GOST-R (Russia)
- RoHS Compliant (EU)

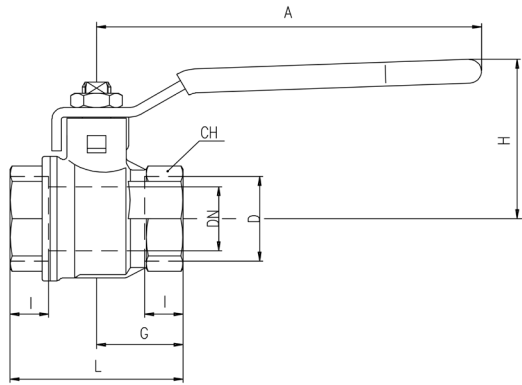
NOTE: approvals apply to specific configurations/sizes only.





1 ¼"-2" hollow ball

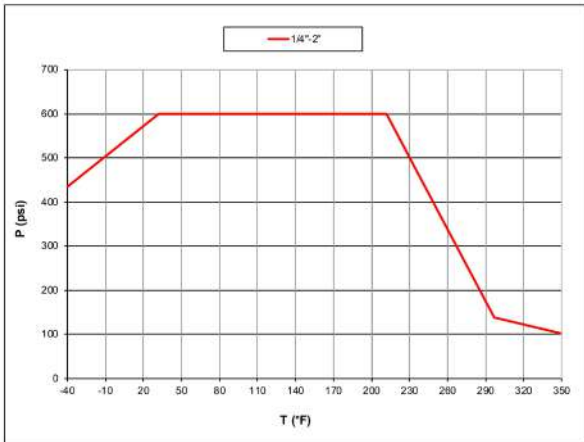
Part description	Qty	Material	
1	Unplated NPT body	1	CW617N
2	Seat	2	PTFE
3	Chrome plated ball	1	CW617N
4	Unplated NPT end-cap	1	CW617N
5	Nickel plated stem O-ring design	1	CW617N
6	Geomet® nut	1	CB4FF (EN10263-2)
7	O-Ring	2	FPM
8	Red PVC coated Geomet® steel handle	1	DD11 (EN10111)



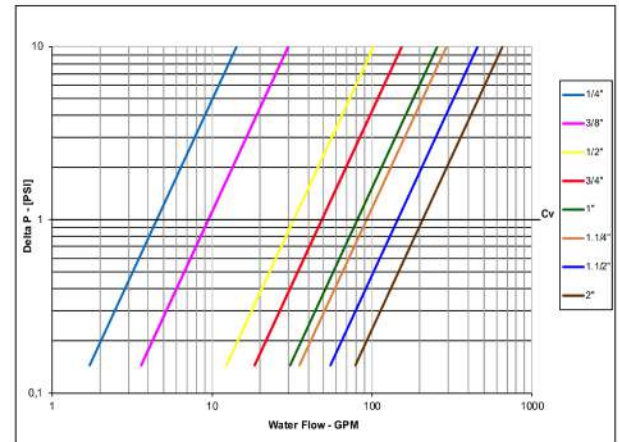
DN shows the nominal flow diameter. Actual flow diameter complies with full port DIN 3357 part 4.

Code	S90B41	S90C41	S90D41	S90E41	S90F41	S90G41	S90H41	S90I41
D (inch)	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
DN(inch)	0.314	0.393	0.590	0.787	0.984	1.259	1.574	1.968
I (inch)	0.354	0.354	0.433	0.472	0.551	0.590	0.669	0.748
L (inch)	1.535	1.535	1.968	2.125	2.637	3.031	3.543	4.173
G (inch)	0.767	0.767	0.984	1.062	1.318	1.515	1.771	2.086
A (inch)	3.228	3.228	3.937	4.724	4.724	6.220	6.220	6.220
H (inch)	1.480	1.480	1.679	1.956	2.114	2.858	3.094	3.370
CH (inch)	0.787	0.787	0.984	1.220	1.496	1.889	2.125	2.598
Cv (GPM)	4.5	9.5	32.3	48.5	80.9	92.4	144.4	206.8

Pressure-temperature chart



Pressure drop chart



XCES90N - 4266



S.112 NPT

1/2" - 4"
gate valve



Quality

- Suitable for water-works, domestic and agricultural installations
- Non rising stem suitable to most difficult applications

Body

- Hot forged sand blasted brass body
- Low pressure drop

Handle

- Red coated steel hand-wheel
- Zinc plated steel top nut
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Threads

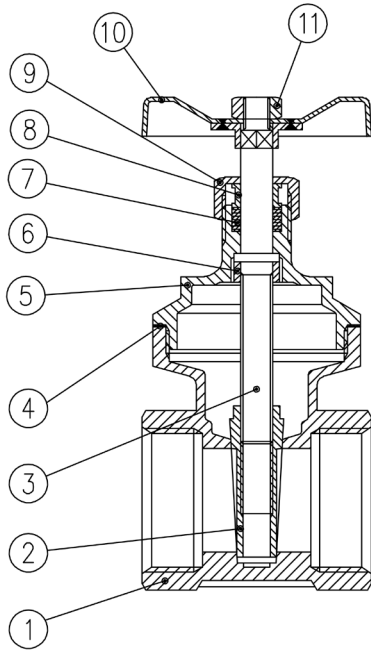
- NPT female by female taper threads

Stem

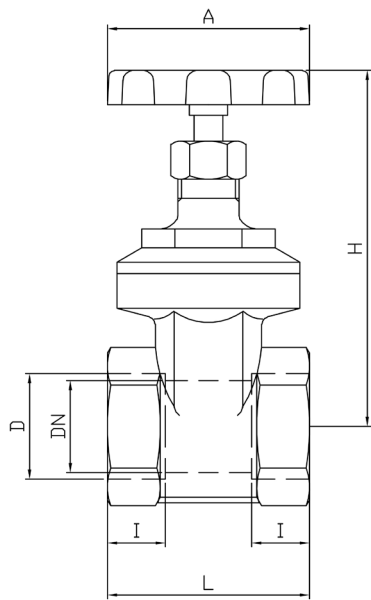
- High performance EPDM stem seal

Working pressure & temperature

- 150 PSI non-shock cold working pressure
- +40°F to +200°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve



	Part description	Qty	Material
1	Body	1	CW617N
2	Gate	1	CB 754S
3	Stem	1	CW614N
4	Body cap sealing	1	Guarnital Fibre
5	Cap	1	CW617N
6	Stem ring	1	CW614N
7	Packing gland seal	1	EPDM90
8	Packing gland	1	CW614N
9	Packing gland nut	1	CW614N
10	Red round handle	1	Steel
11	Handle nut	1	Steel



Code	112D00	112E00	112F00	112G00	112H00	112I00	112L00	112M00	112N00
D (inch)	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
DN (inch)	0.531	0.610	0.748	1.062	1.299	1.732	1.850	2.362	2.834
I (inch)	0.354	0.354	0.393	0.393	0.433	0.472	0.511	0.511	0.590
L (inch)	1.377	1.535	1.692	1.889	2.125	2.283	2.480	2.755	3.149
A (inch)	1.771	1.771	1.968	2.165	2.362	2.755	3.149	3.937	3.937
H (inch)	2.677	2.677	3.149	3.385	4.212	5.275	5.629	6.889	7.952



S.114 NPT

1/2" – 4"

heavy pattern brass gate valve



Quality

- Suitable for water-works, domestic and agricultural installations
- Non rising stem suitable to most difficult applications

Body

- Low pressure drop
- Finely cast sand blasted heavy brass body

Stem

- High performance PTFE stem seal

Threads

- NPT female by female taper threads

Handle

- Strong cast aluminum hand-wheel
- **WARNING:** do not exceed reasonable temperature and/or electrical load

Working pressure & temperature

- 200 PSI non-shock cold working pressure
- -4°F to +350°F
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

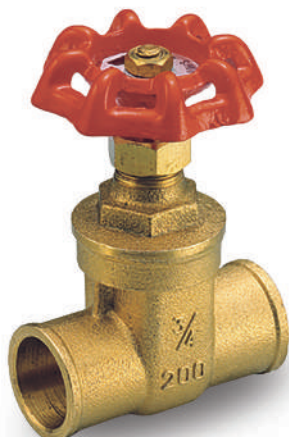
Options

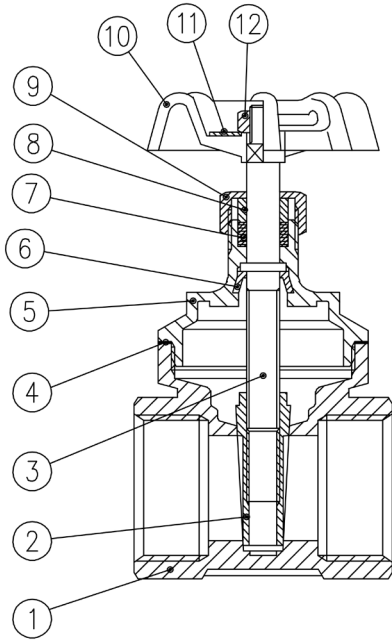
- S.115 solder end connections

Approved by or in compliance with

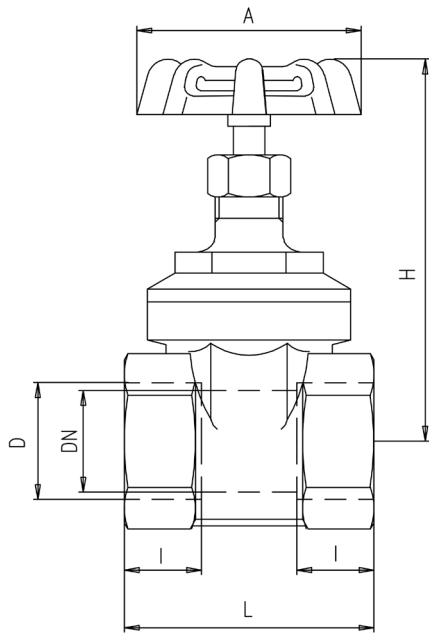
- GOST-R (Russia)

NOTE: approvals apply to specific configurations/sizes only.





	Part description	Qty	Material
1	Body	1	CW617N
2	Gate	1	CW617N
3	Stem	1	CW617N
4	Body cap sealing	1	PTFE
5	Cap	1	CW617N
6	Stem ring	1	CW617N
7	Packing gland seal	1	PTFE
8	Packing gland	1	CW617N
9	Packing gland nut	1	CW617N
10	Red round handle	1	Steel
11	Disc	1	Aluminum
12	Handle nut	1	CW617N



Code	114D41	114E41	114F41	114G41	114H41	114I41	114L41	114M41	114N41
D (inch)	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
DN (inch)	0.504	0.669	0.827	1.063	1.339	1.772	2.205	2.667	3.543
I (inch)	0.449	0.492	0.559	0.657	0.669	0.728	0.925	1.004	1.181
L (inch)	1.693	1.772	2.047	2.323	2.480	2.716	3.465	3.740	4.488
A (inch)	2.165	2.165	2.362	2.835	2.835	3.150	3.937	4.331	5.118
H (inch)	2.795	2.992	3.445	4.055	4.475	5.256	6.437	7.480	9.252
PSI	200	200	200	200	200	200	200	200	200



s.123 NPT

1/4" - 1 1/4"

heavy pattern check valve



Quality

- Suitable for domestic, industrial, pneumatic and hydraulic installations
- Performs well in any orientation
- Strong configuration suitable to most difficult applications
- Low noise
- Low water hammer
- Lowest pressure drop

Body

- Hot forged CW617N brass body
- Perfect seal at low and high pressure, within a wide temperature range

Sealing

- NBR sealing

Threads

- NPT taper ANSI B.1.20.1 female by female threads

Working pressure & temperature

- Cracking pressure: min 0.36 PSI (0.025 bar)
- Sealing pressure: min 0.72 PSI (0.05 bar)
- See non-shock cold working pressure on chart
- -4°F to +212°F (-20°C to +100°C)
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

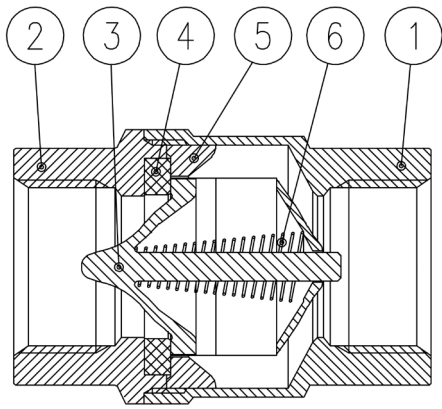
Options

- Stainless steel filter
- ISO 228 parallel female by female threads

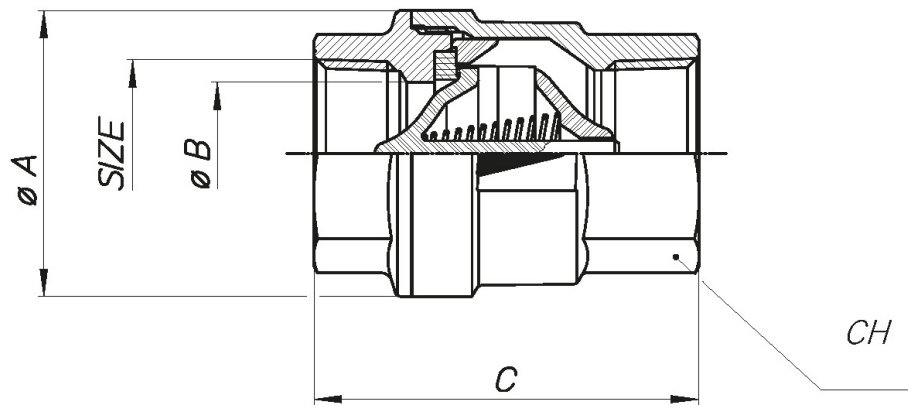
Approved by or in compliance with

- GOST-R (Russia)
- Attestation de Conformité Sanitaire (France)

NOTE: approvals apply to specific configurations/sizes only.



	Part description	Q.ty	Material
1	Body	1	CW617N
2	End-cap	1	CW617N
3	Disc	1	Hostaform
4	Seat	1	NBR
5	Disc guide	1	Hostaform
6	Stainless steel spring	1	1.4325 / AISI 302



Code	123B41	123C41	123D41	123E41	123F41	123G41
Size (inch)	1/4"	3/8"	1/2"	3/4"	1"	1 1/4"
$\varnothing A$ (inch)	1,10	1,10	1,34	1,63	1,97	2,38
B (inch)	0,39	0,39	0,59	0,79	0,98	1,26
C (inch)	1,83	1,83	2,07	2,32	2,64	2,99
CH (inch)	0,83	0,83	1,02	1,26	1,54	1,93
PN (psi)	580	580	580	435	435	363



s.126 NPT

1/2" - 4"
swing check valve



Quality

- Suitable for domestic, industrial, pneumatic and hydraulic installations
- Robust construction

Body

- Hot forged brass body
- Inspection cap

Sealing

- Metal to metal sealing

Threads

- NPT taper ANSI B.1.20.1 female by female threads

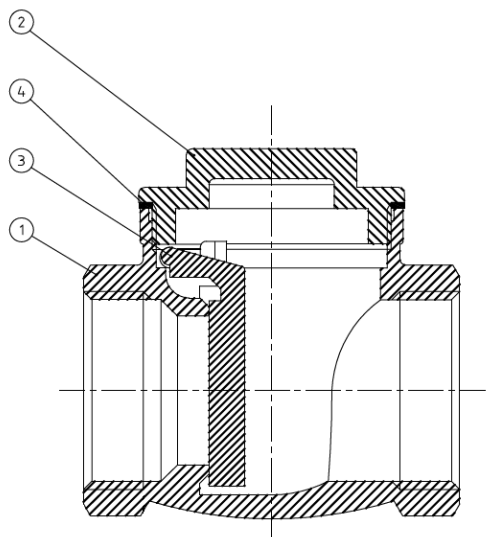
Working pressure & temperature

- 145 psi (10 bar) from 1/2" to 2", 85 psi (6 bar) over 2" non-shock cold working pressure
- +32°F to +194°F (0°C to +90°C)

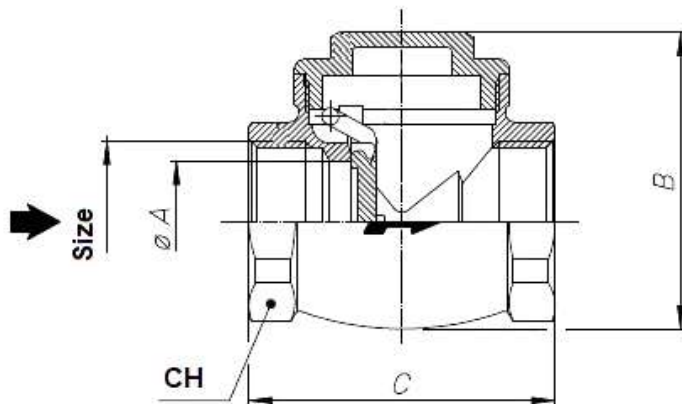
- **WARNING:** freezing of the fluid in the installation may severely damage the valve

Options

- ISO 228 female parallel thread



	Part description	Q.ty	Material
1	Unplated body	1	CW617N
2	Unplated bonnet	1	CW617N
3	Unplated sealing disc	1	CW617N
4	Gasket disc (only in 2 1/2", 3" and 4" sizes)	1	FIBER



Code	126D41	126E41	126F41	126G41	126H41	126I41	126L41	126M41	126N41
Size (inch)	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"
ØA (inch)	0,59	0,78	0,98	1,29	1,45	1,85	2,16	2,75	3,54
B (inch)	1,81	2,00	2,40	2,87	3,34	3,70	4,21	5,11	6,25
C (inch)	1,85	2,08	2,48	2,91	3,42	3,81	4,64	5,31	6,45
CH (inch)	0,98	1,22	1,49	1,85	2,12	2,63	3,22	3,81	4,80
PN (psi)	145	145	145	145	145	145	85	85	85

ACCESSORIES



Accessories to forged *RuB* ball valves

Geomet® carbon steel lever	Page 161
AISI 430 stainless steel lever	Page 161
Geomet® carbon steel left lever	Page 162
Geomet® carbon steel 90° reverse lever	Page 162
Aluminum - brass - Geomet® carbon steel T-handle	Page 163
Patented lockable handle for <i>RuB</i> manual ball valves	Page 164
Lockable handle for 3-way ball valves series s.76 (L-port) and s.64/T.264 with ISO5211 F03 mounting flange	Page 165
Lockable push & turn handle for 3-way ball valves series s.73 (T-port) with ISO5211 F03 mounting flange	Page 165
Oval lockable handle for <i>RuB</i> manual ball valves	Page 166
Memory stop (to be equipped with stubby handles with knurling)	Page 167
Geomet® carbon steel stubby handle	Page 167
Stem Extension for <i>RuB</i> ball valves with O-ring stem design	Page 168

Accessories to mini and micro ball valves

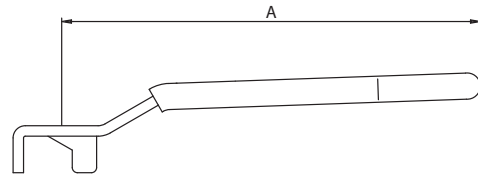
Nylon lever and T-handle for s.34	Page 170
Nylon wedge handle for s.35	Page 171
Metal wedge handle for s.35	Page 171
Nylon wedge handle for s.39 micro	Page 171



Accessories

to forged *RuB* ball valves

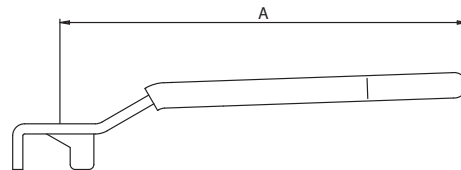
Geomet® carbon steel lever



Full port	1/4"-3/8"	1/2"	3/4-1"	1 1/4"- 2"	2 1/2 - 4"	
Standard port	1/4"-3/8"	1/2"-3/4"	1"-1 1/4"	1 1/2"-2 1/2"	3" - 4"	
A (inch)	3.23	3.94	4.72	6.22	10.03	
Red	Code	PLFR11	PLFR13	PLFR16	PLFR19	PMFR20
Yellow	Code	PLFG11	PLFG13	PLFG16	PLFG19	PMFG20
Black	Code	PLFN11	PLFN13	PLFN16	PLFN19	PMFN20
White	Code	PLFW11	PLFW13	PLFW16	PLFW19	PMFW20
Light Blue	Code	PLFA11	PLFA13	PLFA16	PLFA19	PMFA20
Green	Code	PLFV11	PLFV13	PLFV16	PLFV19	PMFV20

Description	Q.ty	Material
Geomet® plated steel handle	1	DD11 (EN10111)
Dipped coating	1	PVC

AISI 430 stainless steel lever

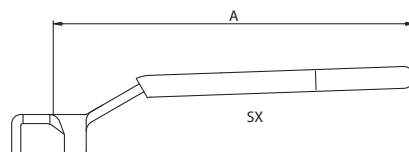


Full port	1/4"-3/8"	1/2"	3/4-1"	1 1/4"-2"	
Standard port	1/4"-3/8"	1/2"-3/4"	1"-1 1/4"	1 1/2"-2 1/2"	
A (inch)	3.23	3.94	4.72	6.22	
Red	Code	PLAR11	PLAR13	PLAR16	PLAR19
Yellow	Code	PLAG11	PLAG13	PLAG16	PLAG19

Description	Q.ty	Material
Stainless steel handle	1	AISI 430
Dipped coating	1	PVC



Geomet® carbon steel left lever

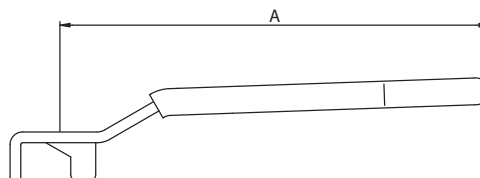


Description	Q.ty	Material
Geomet® plated steel handle	1	DD11 (EN10111)
Dipped coating	1	PVC

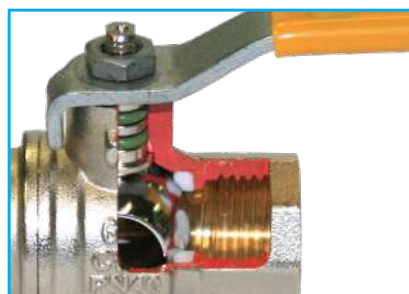
Full port	1/4"-3/8"	1/2"
Standard port	1/4"-3/8"	1/2"-3/4"
A (inch)	3.94	3.94
Black Code	PLFN10	PLFN10

The left handles are the solution where the valves are installed on a parallel piping system.

Geomet® carbon steel 90° reverse lever



Full port	1/2"
Standard port	1/2"-3/4"
A (inch)	3.94
Yellow Code	PLIG03
Light Blue Code	PLIA03
Light Blue SX Code	PLIA00



Description	Q.ty	Material
Geomet® plated steel handle	1	DD11 (EN10111)
Dipped coating	1	PVC

We have also reverse handle: in this version the handle is parallel to the pipe when the valve is closed and perpendicular when the valve is open. This option is available on demand only in the small size for valves up to 1/2" (or 3/4" for reduced bore)

Stem flats show actual ball position

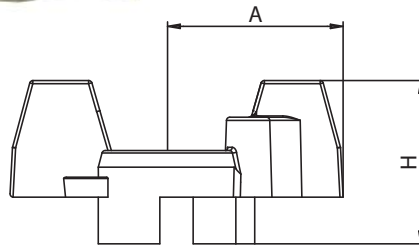
Aluminum - brass - Geomet® carbon steel T-handle



Corrosion is a big problem that many have to face when using valves in underground or outdoor installations, especially near sea, or when valves are used in swimming pools (chlorine), trucks or fire-fighting equipment.

Most people understand that brass components performance are quite high, while the problem with a ball valve may arise from a component you would have never thought about: the aluminum T-handle.

To benefit of brass resistance to corrosion, **RuB** has developed brass T-handles.



Full port	1/4"-3/8"	1/2"	3/4-1"
Standard port	1/4"-3/8"	1/2"-3/4"	1"-1 1/4"
A (inch)	0.98	0.98	1.18
H (inch)	0.98	0.98	1.10
Red	Code PFAR03	PFAR03	PFAR06
Yellow	Code PFAG03	PFAG03	PFAG06
Light Blue	Code PFAB03	PFAB03	PFAB06
Green	Code PFAV03	PFAV03	PFAV06

Description	Q.ty	Material
T-handle	1	EN AC- 46100

Full port	1 1/4"-2"
Standard port	1 1/2"-2 1/2"
A (inch)	2.24
H (inch)	2.01
Red	Code PFFR09
Yellow	Code PFFG09
Light Blue	Code PFFA09
Green	Code PFFV09
Brass unplated	Code --
Brass nickel plated	Code --

Description	Q.ty	Material
Geomet® plated steel T-handle	1	DD11 (EN10111)
Dipped coating	1	PVC

Full port	1/4"-3/8"	1/2"	3/4-1"
Standard port	1/4"-3/8"	1/2"-3/4"	1"-1 1/4"
A (inch)	0.98	0.98	1.18
H (inch)	0.98	0.98	1.10
Brass unplated	Code PFOG03	PFOG03	PFOG06
Brass nickel plated	Code PFON03	PFON03	PFON06

Description	Q.ty	Material
Unplated brass T-handle	1	CW617N
Nickel plated brass T-handle	1	CW617N

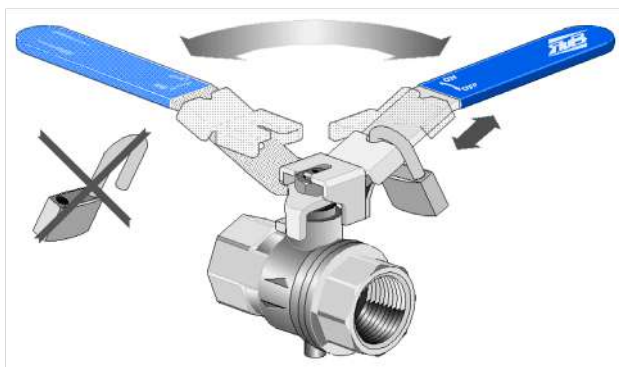


Patented lockable handle

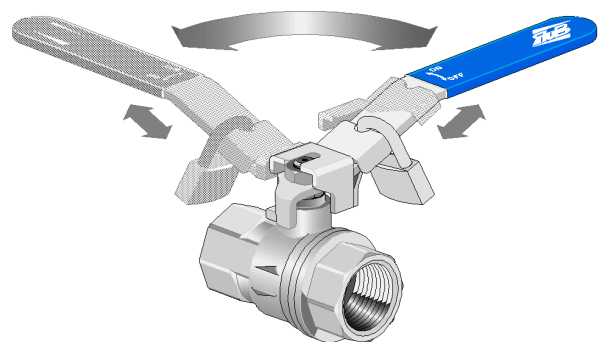
for **RuB** manual ball valves



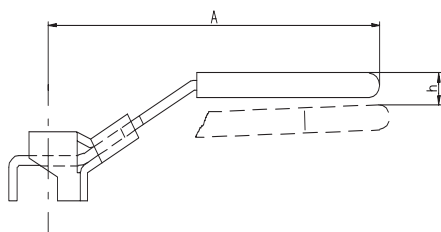
The **RuB** lockable handle is made of strong Geomet® carbon steel and designed to discourage tampering. The **RuB** locking device covers the top nut of the valve making padlock removal impossible without a key. Easy to install on valves in the field, the **RuB** lockable handle will lock s.93 **RuB** valves in closed position only in compliance with OSHA (USA) safety requirements, while other **RuB** valves can be locked in both the open and closed positions.



Lockable only in closed position when assembled on s.93 **RuB** range



Lockable in both open and closed positions when assemble on any other **RuB** range



Code	PBFA13	PBFA16	PBFA19	PBFA20
Full port	1/4"-3/8"-1/2"	3/4" - 1"	1 1/4"-1 1/2"-2"	2 1/2"-3"-4"
Reduced port	1/2"-3/4"	1"-1 1/4"	1 1/2"-2"-2 1/2"	3"-4"
A (inch)	3.78	4.61	6.16	9.84
h (inch)	0.33	0.37	0.16	0.31

Description	Q.ty	Material
Geomet® plated steel handle	1	DD11 (EN10111)
Dipped coating	1	PVC

Dimension A shows handle length from center of stem; dimension h shows height of handle compared to standard handle assembled on valves. Two bottom lines show size of valve to fit wish each size of lockable handle. Use 9/32" size shackle padlock up to 2", and 5/16" over.

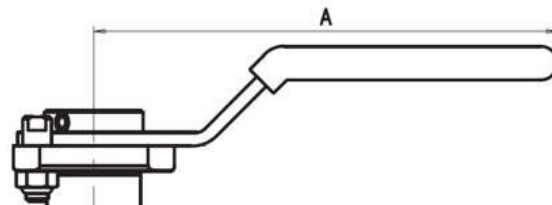
Lockable handle

for 3-way ball valves series s.76 (L-port) and s.64/T.264
with ISO5211 F03 flange



Flange Size		F03
A (inch)		4.05
Black	Code	SLFD03

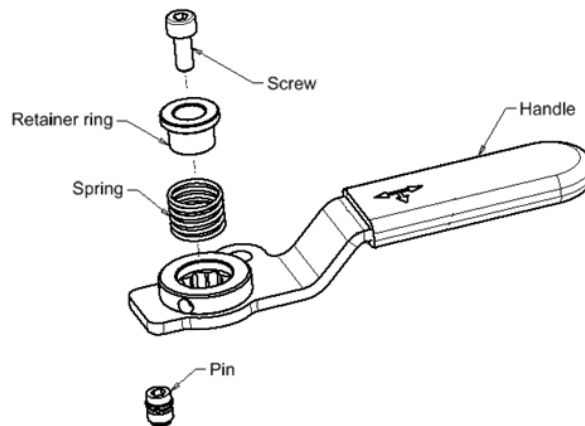
Description	Q.ty	Material
Geomet® plated steel handle	1	DD11 (EN10111)
Dipped coating	1	PVC
Stainless steel screw	1	AISI 304
Zinc plated steel nut	1	Class 8 (UNI7474)
Unplated stop	1	CW617N



This kit easily converts an actuated valve to a manual one.
To lock valve in any position, use 5/32" (4mm) shackle padlock.

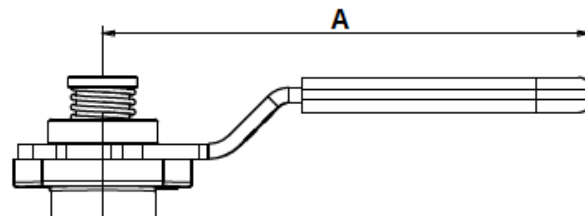
Lockable push & turn handle

for 3-way ball valves series s.73 (T-port)
with ISO5211 F03 flange



Flange Size		F03
A (inch)		4.05
Black	Code	K73N13

Description	Q.ty	Material
Geomet® plated steel handle	1	DD11 (EN10111)
Dipped coating	1	PVC
Screw	1	AISI 304
Retainer ring	1	CW617N
Spring	1	AISI 302
Pin	1	CW617N



To lock valve in any position, use 5/32" (4mm) shackle padlock.



Oval lockable handle

for **RuB** manual ball valves

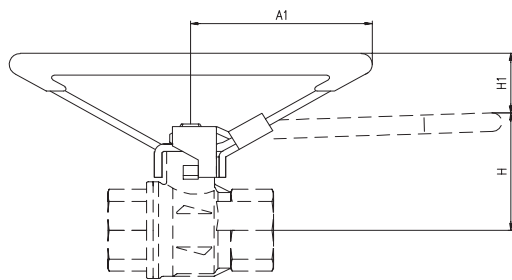


PATENTED

The **RuB** oval/round lockable handle is for service where there isn't enough space for levers or T-handles, or where lever handles might be moved unintentionally.

It is made of steady carbon steel and it features the patented **RuB** lockable device.

The **RuB** oval lockable handle is available for all sizes of forged **RuB** valves up to 2" and in round shape for sizes 2 1/2" thru 4"; it is easy to install on valves in the field or you can simply order your **RuB** valves with this option.



Code	PBOA03	PBOA06	PBOA09	PBOA10	
Size	1/4"-3/8"	1/2"	3/4"-1"	1 1/4"-1 1/2"-2"	2 1/2"-3"-4"
A1 (inch)	2.28	2.28	2.76	2.76	6.10
H1 (inch)	0.79	0.77	0.87	0.59	0.13

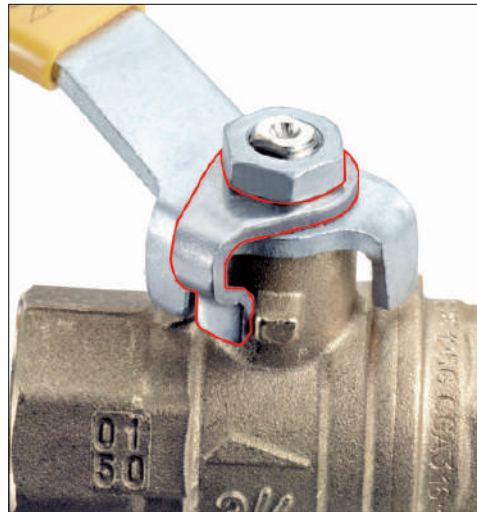
Size	1/4" - 2"	2 1/2" - 4"
Locker shackle	9/32"	5/16"

Description	Q.ty	Material
Geomet® plated steel handle	1	DD11 (EN10111)
Dipped coating	1	PVC

Dimension A1 shows handle dimension from centre of stem. Dimension H1 shows height of handle compared to standard handle assembled on valves.

Memory stop

Use together with **RuB** stubby handles with knurling

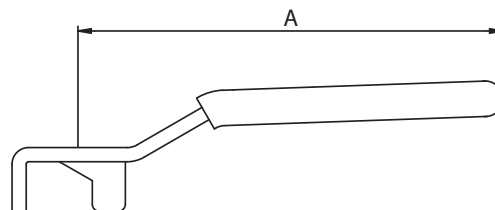


Full port valve	1/4"-3/8"	1/2"	3/4-1"	1 1/4"-2"
Standard port valve	1/4"-3/8"	1/2"-3/4"	1"-1 1/4"	1 1/2"-2 1/2"
Code	PPMA03	PPMA03	PPMA06	PPMA09

Description	Q.ty	Material
Geomet® plated steel memory stop	1	DD11 (EN10111)

Memory Stop allows to control flow passing through the valve by limiting ball movement from fully closed to a preset position. Installing a memory stop on a standard **RuB** valve is very easy and can be done even while valve is being used. Memory stops should be used only with **RuB** valves with O-Ring stem design.

Geomet® carbon steel stubby handle



Full port valve	1/4"-3/8"	1/2"	3/4-1"	1 1/4"-2"
Standard port valve	1/4"-3/8"	1/2"-3/4"	1"-1 1/4"	1 1/2"-2 1/2"
A (inch)	1.77	1.77	3.54	3.94
Yellow Code	PLTG13	PLTG13	PLTG16	PLTG19

Description	Q.ty	Material
Geomet® plated steel handle	1	DD11 (EN10111)
Dipped coating	1	PVC

RuB levers are not only strong, but also long for easy maneuver. To solve space constraints issues, install our stubbies.



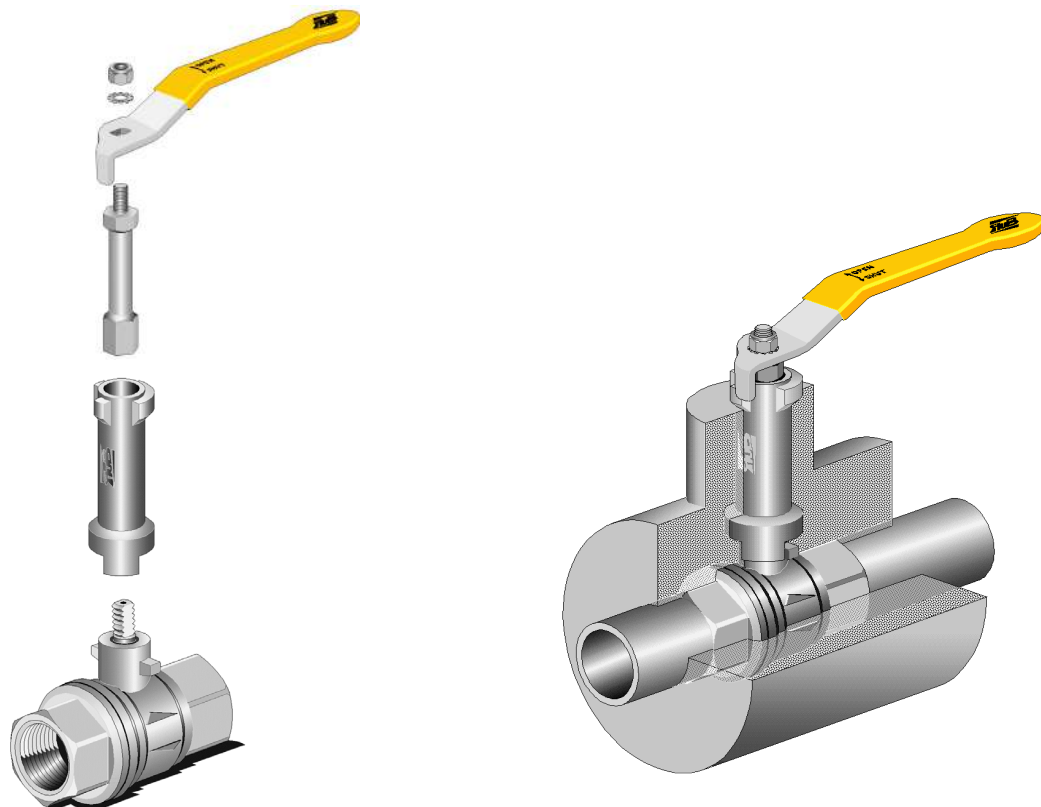
Stem Extension

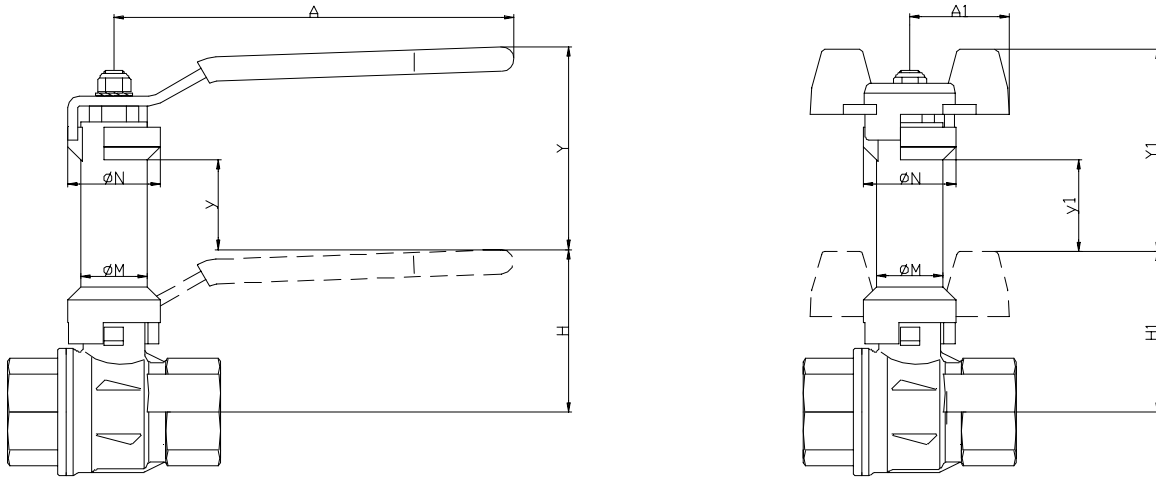
for *RuB* ball valves with O-ring stem design



Today's world is conscious of the energy savings required to maintain resources for the future. To avoid heat loss from insulated pipes, *RuB* offers stem extensions which provide easy operation over insulation.

RuB stem extensions are made of strong hot forged brass and are designed for low heat losses from the pipe to the ambient environment. They are easy to install on *RuB* valves even while valves are in service.

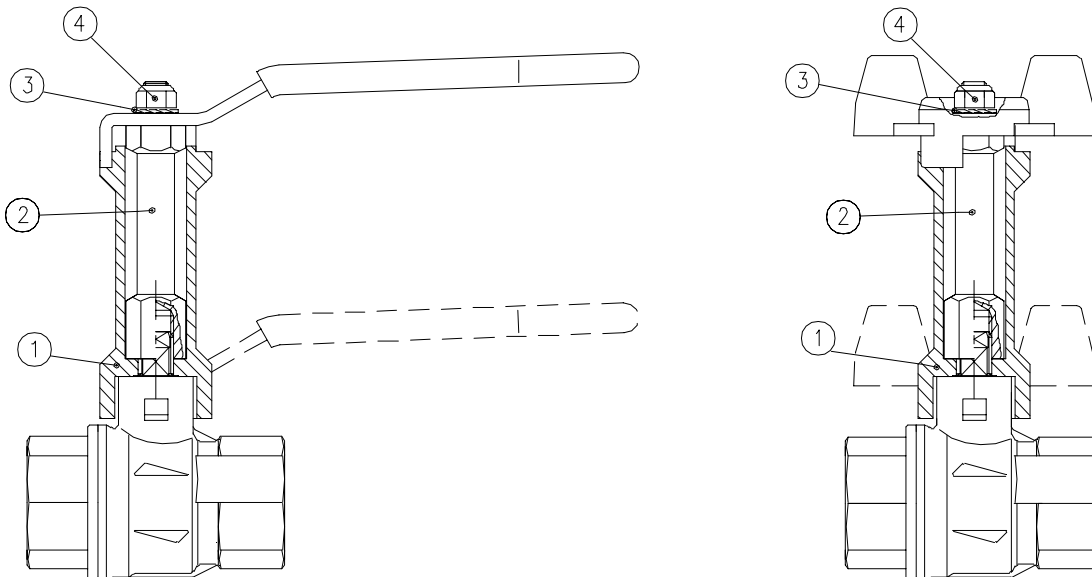




Dimensions Y, y, Y1 and y1 are additional to dimension H on the relevant valve drawing

Code	PPRO03	PPRO06	PPRO09
Full port valve	1/4"-3/8"	1/2"	3/4"-1"
Reduced port valve	1/2"-3/4"	1"-1 1/4"	1 1/2"-2"-2 1/2"
M (inch)	0.67	0.67	0.79
N (inch)	0.98	0.98	1.10
A (inch)	3.23	3.94	4.72
Y (inch)	2.22	2.22	2.46
y (inch)	1.04	1.04	1.08
A1 (inch)	0.98	0.98	1.18
Y1 (inch)	2.22	2.22	2.46
y1 (inch)	1.00	1.02	1.20

Note: Stem extensions should not be used on valves with packing gland designs due to regular required maintenance adjustments.



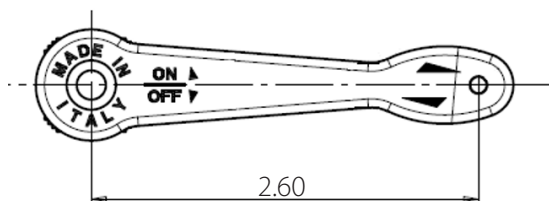
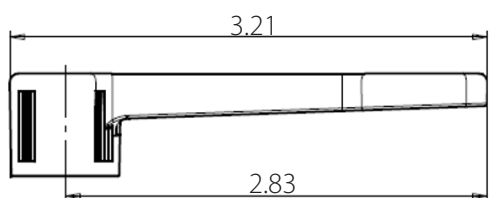
Item	Description	Q.ty	Material
1	Body	1	CW617N
2	Connection	1	CW617N
3	Tab washer	1	Steel
4	Self-locking nut	1	Steel

Accessories

to mini and micro ball valves

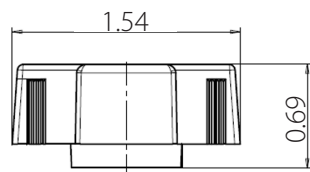
Nylon lever and T-handle

for s.34



Item No	Description	Colour
PLNB34	Blue nylon lever for s.34	RAL5017
PLNG34	Yellow nylon lever for s.34	RAL1028
PLNN34	Black nylon lever for s.34	RAL9005
PLNR34	Red nylon lever for s.34	RAL3000

Description	Q.ty	Material
Lever for s.34	1	Nylon glass filled 30%

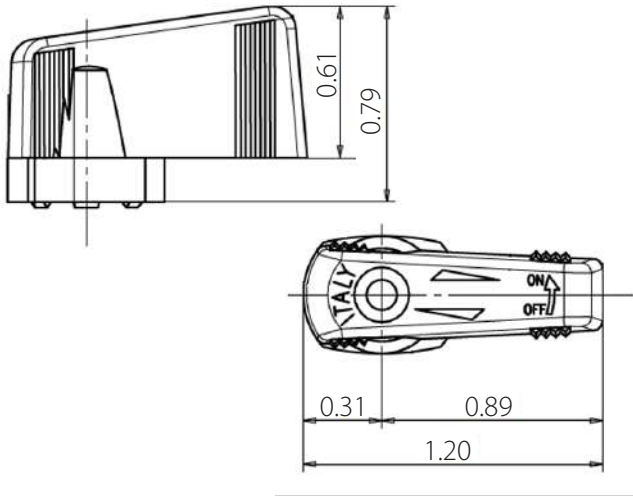


Item No	Description	Colour
PFNA34	Orange nylon T-handle for s.34	RAL2009
PFNB34	Blue nylon T-handle for s.34	RAL5017
PFNG34	Yellow nylon T-handle for s.34	RAL1028
PFNN34	Black nylon T-handle for s.34	RAL9005
PFNR34	Red nylon T-handle for s.34	RAL3000

Description	Q.ty	Material
T-handle for s.34	1	Nylon glass filled 30%

Nylon wedge handle

for s.35



Item No	Description	Colour
PLN35G	Yellow nylon wedge handle for s.35	RAL1028
PLN35N	Black nylon wedge handle for s.35	RAL9005
PLN35R	Red nylon wedge handle for s.35	RAL3000
PLN35V	Green nylon wedge handle for s.35	RAL6001
PLG35N (Upon request)	Grey Grivory® wedge handle for s.35	RAL7012

Description	Q.ty	Material
Wedge handle for s.35	1	Nylon glass filled 30%

Metal wedge handle

for s.35



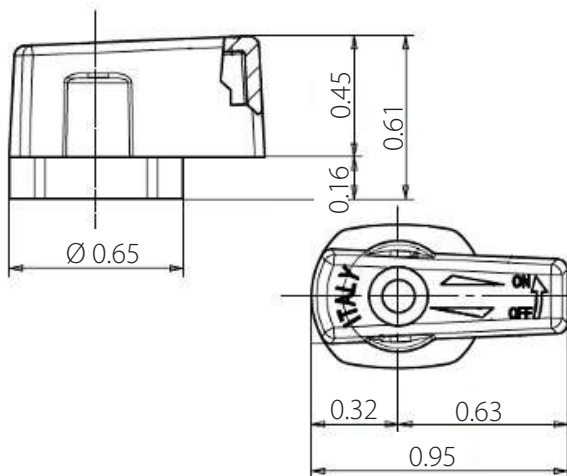
Colours	Yellow	Blue	Black	Red	Green	Chrome
Code	PLZ35G	PLZ35B	PLZ35N	PLZ35R	PLZ35V	PLZ35C

Description	Q.ty	Material
Metal wedge handle for s.35	1	ZAMA Z5

Thanks to the metal wedge handles mounted on s35 series, it's now possible to reach working temperatures up to 120°C (250°F). The metal wedge handles are available in red, black, yellow, green, light blue and chrome plated. Same dimensions as nylon wedge handle.

Nylon wedge handle

for s.39 micro



Item No	Description	Colour
PLN39N	Black nylon wedge handle for s.39	RAL9005

Description	Q.ty	Material
Wedge handle for s.39	1	Nylon glass filled 30%



ACTUATION

EA pneumatic actuator	Page 14
CP electric actuator	Page 22
CP electric actuator + s.31 mini valve	Page 26
CP electric actuator + s.6400LT 2-way brass valve	Page 28
CP electric actuator + s.7600 3-way L-port diverting brass valve	Page 30
E-Tork heavy duty electric actuator	Page 32
C-Tork light weight electric actuator	Page 36
s.6439 NPT 1/2" - 2", SS trim, ISO 5211	Page 48
s.6439LT NPT 1" - 2", SS trim, ISO 5211, low torque	Page 50
s.6441 NPT 1/2" - 4", brass trim, ISO 5211	Page 52
s.7241 NPT 3-way 4 seats L-port (diverting) 1/2 - 1" ISO 5211	Page 54
s.7341 NPT 3-way 4 seats T-port 1/2 - 1" ISO 5211	Page 56
s.7641 NPT 3-way 2 seats L-port (diverting) 1/2 - 1" ISO 5211	Page 58
s.134 NPT stainless steel 1/2" - 2" ISO 5211	Page 60
s.135 NPT stainless steel 2" - 3" - 4" ANSI B16.5 flange, ISO 5211	Page 62
s.136 NPT stainless steel 6" - 8" ANSI B16.5 flange, ISO 5211	Page 64

GAS

s.92 NPT 1/4" - 4" packing gland	Page 68
s.92 NPT M/F 1/2" - 2" packing gland	Page 70
s.95 NPT 1/4" - 4"	Page 72
s.95 NPT nickel plated 1/4" - 4"	Page 74
s.80 NPT 3/4" - 2" gas cock with tamper proof lockwing	Page 76
s.8042 NPT 3/4" - 2" MIP x FIP with tamper proof lockwing	Page 78
s.8043 NPT dielectric 3/4" - 1 1/4" with tamper proof lockwing	Page 80
s.80 NPT surepass 3/4" - 1" 175 PSI bypassing gas meter valve	Page 82
s.82 NPT 1/2" - 2" side drain	Page 84
s.195 NPT & flare 3/8" - 1" standard port gas cock	Page 86
s.195 flare 37° by solder end 1/2" - 3/4", standard port	Page 88

MASTER INDEX

INDUSTRY

s.95 NPT spring return 1/4" - 2"	Page 92
s.92S NPT solid ball 1/4" - 4"	Page 94
k.84 BSPP 1/4" - 2"	Page 96
s.84 BSPT 1/4" - 4"	Page 98
s.7241L NPT 3-way, lever, 4 seats, L-port (diverting) 1/2" - 1"	Page 100
s.7341L NPT 3-way, lever, 4 seats, T-port 1/2" - 1"	Page 102
s.7641L NPT 3-way, lever, 2 seats, L-port (diverting) 1/2" - 1"	Page 104
SNI7352 1/4" NPT needle valve	Page 106
s.130 NPT stainless steel 1/4" - 4" 1000 PSI	Page 108
s.131 NPT stainless steel 1/4" - 2" 1000 PSI - reduced port	Page 110
s.132 NPT stainless steel 1/4" - 2" 2000 PSI	Page 112
s.135 NPT stainless steel 2" - 3" - 4" ANSI B16.5 flange	Page 114
s.136 NPT stainless steel full port 6" - 8" flanged ball valve	Page 116
s.92 barrel drain 3/4" - 1"	Page 118

PNEUMATIC

s.34 NPT 1/8" - 1/2" mini ball valve, suitable for panel mounting	Page 122
s.34 1/8" - 1/2" ISO 228 mini ball valve, suitable for panel mounting	Page 124
s.35 NPT high pressure 1/8" - 1/2" mini ball valve	Page 126
s.39 NPT forged, micro 1/8" - 1/4" high pressure ball valve	Page 128
s.93 NPT downstream exhaust 1/4" - 2" with patented locking handle	Page 130

DRINKING WATER

Puri-T 242 1/2" - 2" Lead Free, solder ends	Page 134
Puri-T 292 NPT 1/4" - 2" Lead Free	Page 136
Puri-T 264 NPT 1/2" - 1 1/2" Lead Free, ISO 5211	Page 138
s.468LF DZR 22 mm compression ends, ISO 5211, Lead-Free, dezincification-resistant	Page 140



PLUMBING

s.42 1/2" - 3" solder-ends ball valve	Page 144
s.71 NPT 1/2" - 4" standard port	Page 146
s.90 NPT short 1/4" - 2"	Page 148
s.112 NPT 1/2" - 4" gate valve	Page 150
s.114 NPT 1/2" - 4" heavy pattern brass gate valve	Page 152
s.123 NPT 1/4" - 1 1/4" heavy pattern check valve	Page 154
s.126 NPT 1/2" - 4" swing check valve	Page 156

ACCESSORIES

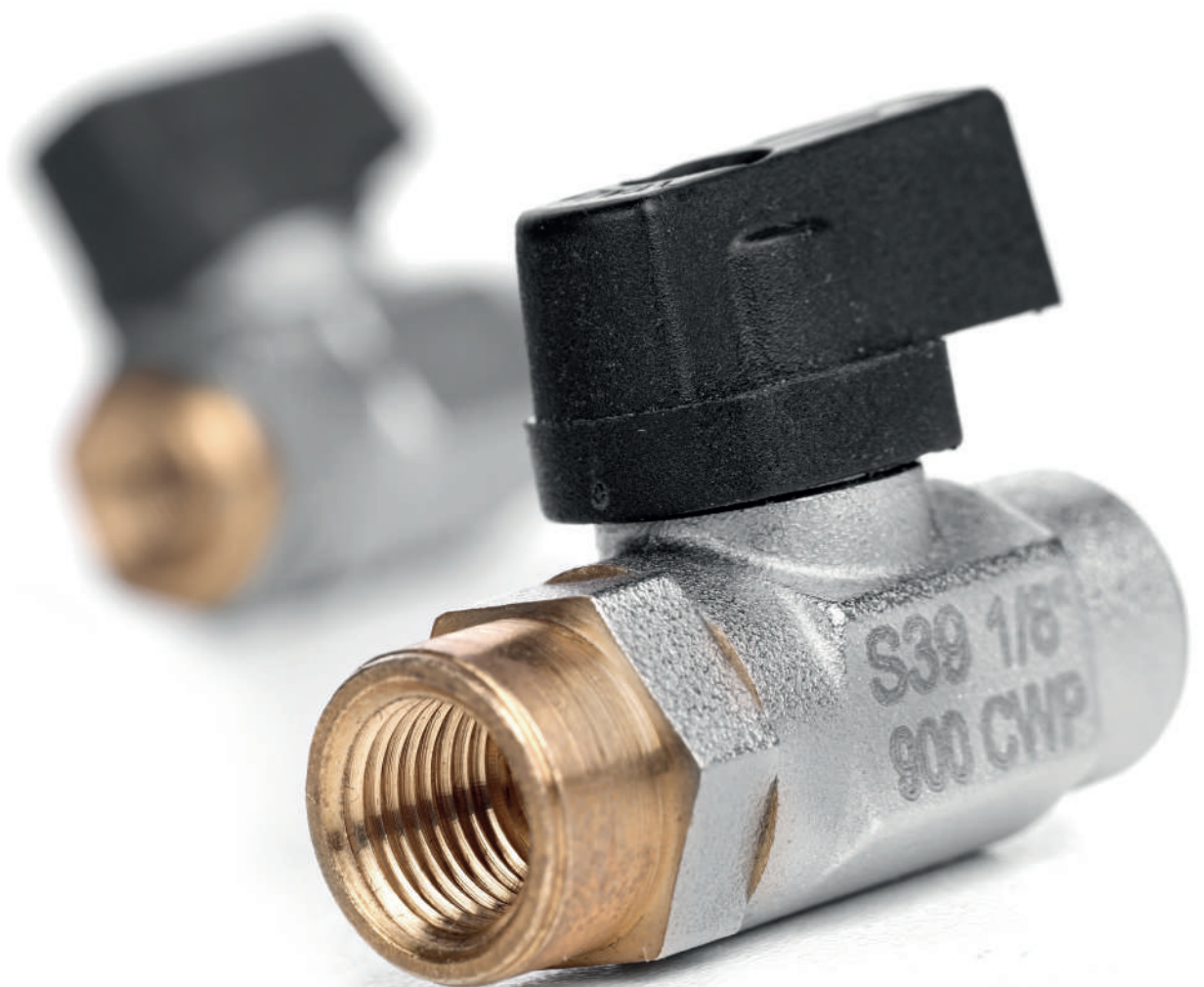
Accessories to forged *RuB* ball valves

Geomet® carbon steel lever	Page 161
AISI 430 stainless steel lever	Page 161
Geomet® carbon steel left lever	Page 162
Geomet® carbon steel 90° reverse lever	Page 162
Aluminum - brass - Geomet® carbon steel T-handle	Page 163
Patented lockable handle for <i>RuB</i> manual ball valves	Page 164
Lockable handle for 3-way ball valves series s.76 (L-port) and s.64/T.264 with ISO5211 F03 mounting flange	Page 165
Lockable push & turn handle for 3-way ball valves series s.73 (T-port) with ISO5211 F03 mounting flange	Page 165
Oval lockable handle for <i>RuB</i> manual ball valves	Page 166
Memory stop (to be equipped with stubby handles with knurling)	Page 167
Geomet® carbon steel stubby handle	Page 167
Stem Extension for <i>RuB</i> ball valves with O-ring stem design	Page 168

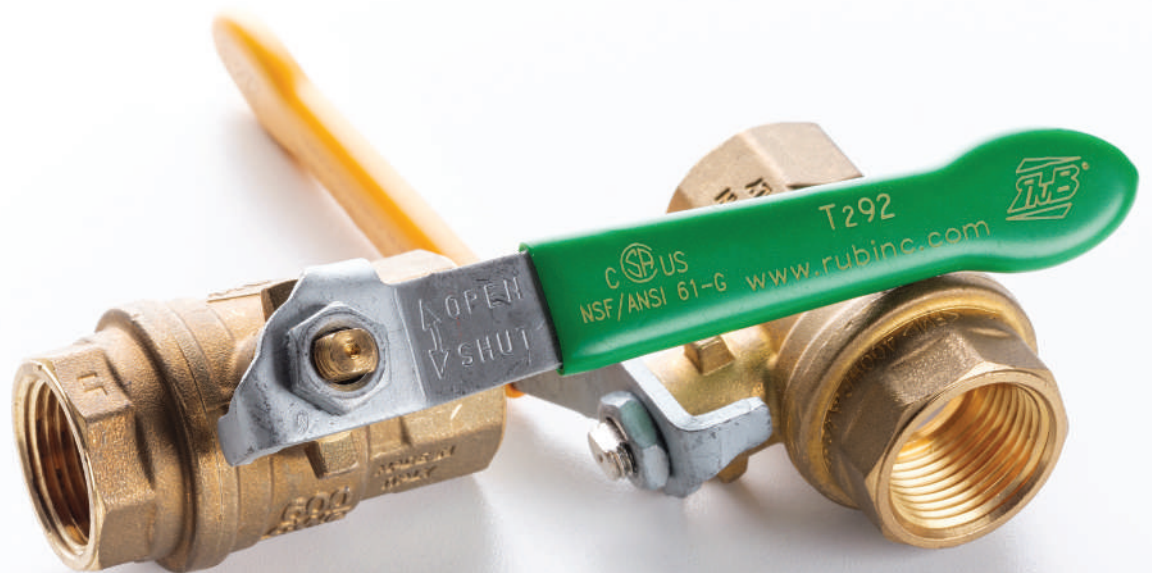
Accessories to mini and micro ball valves

Nylon lever and T-handle for s.34	Page 170
Nylon wedge handle for s.35	Page 171
Metal wedge handle for s.35	Page 171
Nylon wedge handle for s.39 micro	Page 171

MASTER INDEX



RUB, Inc.
PRODUCT CATALOG





VALVES & ACTUATORS

RUB, Inc.

4401 Dean Lakes Blvd. - Shakopee, MN 55379-2715 (USA)

Tel: +1 (952) 857 1114 - Fax: +1 (952) 857 1118

sales@rubinc.com - www.rubinc.com