

10K Iron Ball Valves 3-way (Full or Reduced Bore)

Page 99 for Pressure-Temperature Ratings.

10FCTB2L

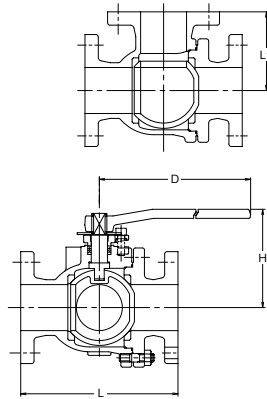
• Full Bore: NPS 1 1/2 to 4

10FCTR2L

• Reduced Bore: NPS 5 to 8



Blowout-proof stem



Materials

Parts	Material	JIS Spec.
Body	Cast iron	FC200
Body cap	Cast iron	FC200
Stem	Stainless steel	SUS403
Ball	Stainless steel	SCS13
Grand packing	PTFE	
Gasket	PTFE	
Ball seat	PTFE	
Cap bolt/nut	Carbon steel	SS400

• Page 106 for Allowable Port Orientation.

Design Specifications

Items	
Shell wall thickness	JIS B2031
Face to face dimensions	KITZ standard
End flange dimensions Gasket contact facing	JIS B2239 10K (FF)

Dimensions of 10FCTB2L, 10FCTR2L

Unit: mm

Nominal Size	NPS	1 1/2	2	2 1/2	3	4	5	6	8
	DN	40	50	65	80	100	125	150	200
L		210	220	250	260	330	370	430	540
L ₁		105	110	125	130	165	185	215	270
H		115	120	155	165	200	205	225	295
D		230	230	400	400	460	460	460	1000

※Please contact KITZ or KITZ distributors for details about gear operated products.

Bronze Ball Valves

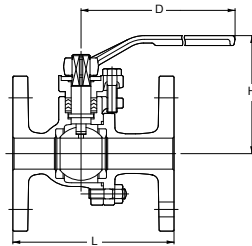
W.O.G. non-shock 1.4 MPa

W.O.G. 150°C 0.7 MPa

Bolted body cap, Full bore
Flanged ends to JIS B2240 10K

TB

• Flanged ends to JIS 10K



Materials

Parts	Material
Body	Bronze
Body cap	Bronze
Stem	Dezincification resistant brass
Ball	Brass ^{*1} /SCS13A ^{*2} /SUS304 ^{*3}
Ball seat	PTFE
Grand packing	PTFE

^{*1}Chrome or Nickel-chrome plated

^{*2}NPS 2-3

^{*3}NPS 4

Dimensions of TB

Unit: mm

Nominal Size	NPS	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
	DN	15	20	25	32	40	50	65	80	100
L		110	120	130	140	165	180	190	200	230
H		85	88	95	100	115	122	153	162	190
D		130	130	160	160	230	230	400	400	460

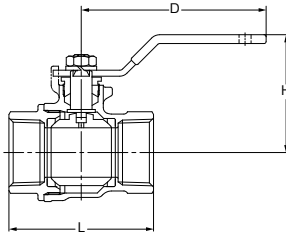
Type 600 Brass Ball Valves (Full Bore)

W.O.G. non-shock 4.12 MPa (600 psi), Saturated steam pressure 1.03 MPa (150 psi)

Screwed body cap, Blowout-proof stem,
Threaded ends to ASME B1.20.1

AKTAF

- Threaded end to ASME B1.20.1



Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Dezincification resistant brass
Ball	Brass: SnNi plated (NPS 1/4 to 1) TEA plated (NPS 1 1/4 to 2)
Ball seat	PTFE
Gland packing	PTFE

Dimensions of AKTAF

Nominal Size	NPS DN	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
		8	10	15	20	25	32	40	50
L		41	42	53	60	72	82	92	105
H		39	39	42	51	59	64	73	80
D		82	82	82	100	130	130	150	150

Unit: mm



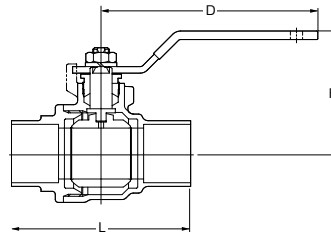
Type 600 Brass Ball Valves (Full Bore)

W.O.G. non-shock 4.12 MPa (600 psi), Saturated steam pressure 1.03 MPa (150 psi)

Screwed body cap, Blowout-proof stem,
Solder joint ends to ASME B16.18

CTAF

- Solder joint end to ASME B16.18



Materials

Parts	Material
Body	Forged Brass/Cast Bronze*
Body cap	Forged Brass/Cast Bronze*
Stem	Dezincification resistant brass
Ball	Forged Brass: SnNi plated (NPS 3/8 to 1) Forged Brass: TEA® plated (NPS 1 1/4 to 3)
Ball seat	PTFE
Gland packing	PTFE

*NPS 2 1/2 & 3

⚠ Solder joint end valves should not be used in service where the temperature of the line fluid is higher than the softening point of the solder.

Dimensions of CTAF

Nominal Size	NPS DN	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
		10	15	20	25	32	40	50	65	80
L		46	54	73	88	100	115	140	163	187
H		39	42	51	59	64	73	80	108	122
D		82	82	100	130	130	150	150	200	300

Unit: mm



Refer to "Product Range" on Page 8.

Type 600 Brass Ball Valves (Full Bore)

W.O.G. non-shock 4.12 MPa (600 psi), Saturated steam pressure 1.03 MPa (150 psi)
Maximum pressure temperature limitation: 150 psi at 300°F

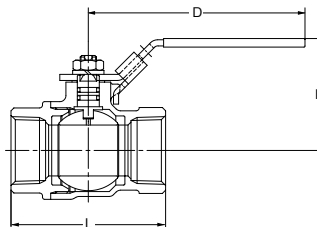
Screwed body cap, Blowout-proof stem,
Double O-ring stem seals,
Threaded ends to NPT or solder joint ends

AKTFLL

- Threaded end to ASME B1.20.1

CTFLL

- Solder joint end to ASME B16.18



Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Dezincification resistant brass
Ball	Forged Brass: Cr plating
Ball seat	PTFE
O-ring	NBR, FKM

⚠ Solder joint end valves should not be used in service where the temperature of the line fluid is higher than the softening point of the solder.

Dimensions of AKTFLL, CTFLL

Nominal Size	NPS DN	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
		8	10	15	20	25	32	40	50
L		41	42	53	60	72	82	92	105
L1 (Solder)				54	73	88	100	115	140
H		35	35	39	47	55	59	67	75
D		82	82	82	100	130	130	150	150

Unit: mm



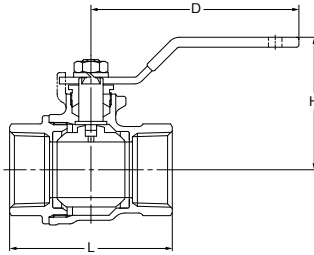
Type 600 Brass Ball Valves (Full Bore)

W.O.G. non-shock 4.12 MPa (600 psi), Saturated steam pressure 1.03 MPa (150 psi)

Stainless steel trim,
Screwed body cap, Blowout-proof stem,
Threaded ends to NPT or solder joint ends

AKTAFM

• Threaded end to ASME B1.20.1



Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Stainless steel (A276 Type 316)
Ball	Stainless steel (A276 Type 316 or A351 Gr. CF8M)
Ball seat	PTFE
Gland packing	PTFE

⚠ Solder joint end valves should not be used in service where the temperature of the line fluid is higher than the softening point of the solder.

Dimensions of AKTAFM

Nominal Size	NPS DN	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
		8	10	15	20	25	32	40	50
L		41	42	53	60	72	82	92	105
L1 (Solder)			46	54	73	88	100	115	140
H		39	39	42	51	59	64	73	80
D		82	82	82	100	130	130	150	150

Unit: mm

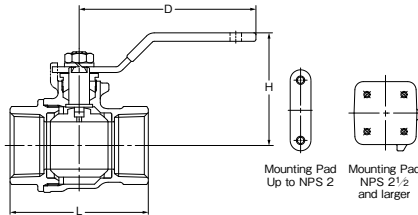
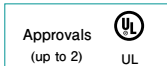
Type 600 Brass Ball Valves (Full Bore)

W.O.G. non-shock 4.12 MPa (600 psi), Saturated steam pressure 0.98 MPa (150 psi)

Mounting pad,
Screwed body cap, Blowout-proof stem,
Threaded ends to ASME B1.20.1

AKTAFP

• Threaded end to ASME B1.20.1



Materials

Parts	Material
Body	Forged Brass/Cast Bronze*
Body cap	Forged Brass/Cast Bronze*
Stem	Dezincification resistant brass
Ball	Forged Brass: Cr plating
Ball seat	PTFE
Gland packing	PTFE

*NPS 2 1/2 and larger

Dimensions of AKTAFP

Nominal Size	NPS DN	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
		8	10	15	20	25	32	40	50	65	80	100
L		41	42	53	60	72	82	92	105	135	156	192
H		39	39	42	51	59	64	73	80	108	122	140
D		82	82	82	100	130	130	150	150	200	300	300

Unit: mm

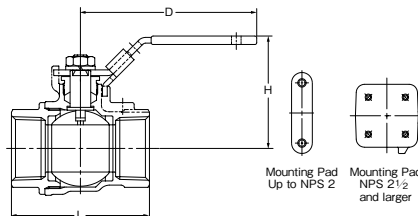
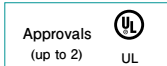
Type 600 Brass Ball Valves (Full Bore)

W.O.G. non-shock 4.12 MPa (600 psi), Saturated steam pressure 1.72 MPa (250 psi)

250 WSP steam trim, Mounting pad,
Screwed body cap, Blowout-proof stem,
Threaded ends to ASME B1.20.1

AKTAFPM

• Threaded end to ASME B1.20.1



Materials

Parts	Material
Body	Forged Brass/Cast Bronze*
Body cap	Forged Brass/Cast Bronze*
Stem	Stainless steel (A276 Type 316)
Ball	Stainless steel (A276 Type 316 or A351 Gr. CF8M)
Ball seat	Reinforced PTFE
Gland packing	Reinforced PTFE

*NPS 2 1/2 and larger

Dimensions of AKTAFPM

Nominal Size	NPS DN	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
		8	10	15	20	25	32	40	50	65	80	100
L		41	42	53	60	72	82	92	105	135	156	192
H		39	39	42	51	59	64	73	80	108	122	140
D		82	82	82	100	130	130	150	150	200	300	300

Unit: mm

Type 600 Brass Ball Valves (Full Bore)

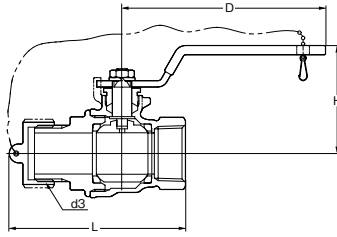
W.O.G. non-shock 4.12 MPa (600 psi), Saturated steam pressure 1.03 MPa (150 psi)

AKTAFB

- Threaded end to ASME B1.20.1

CTAFB

- Solder joint end to ASME B16.18



Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Dezincification resistant brass
Ball	Forged Brass: Cr plated
Ball seat	PTFE
Gland packing	PTFE



Solder joint end valves should not be used in service where the temperature of the line fluid is higher than the softening point of the solder. Unit: mm

Dimensions of AKTAFB, CTAFB

Nominal Size	NPS	1/2	3/4
	DN	15	20
L		74	84
L1 (Solder)		75	90
H		42	51
D		82	100
d3		3/4-11.5 NHR	3/4-11.5 NHR

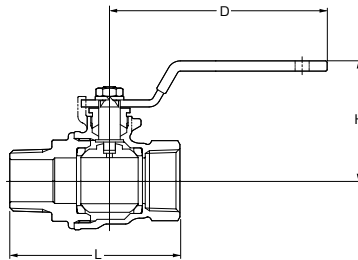
Threaded end 3/4" Hose connection, with cap & chain, Blowout-proof stem, Threaded/Hose connection (ASME B1.20.1/ASME B1.20.7 3/4" 11.5NHR)

Type 600 Brass Ball Valves (Full Bore)

W.O.G. non-shock 4.12 MPa (600 psi), Saturated steam pressure 1.03 MPa (150 psi)

AKTAFO

- Threaded end to ASME B1.20.1



Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Dezincification resistant brass
Ball	Forged Brass: Cr plated
Ball seat	PTFE
Gland packing	PTFE

Screwed body cap, Blowout-proof stem, Male & Female, Threaded ends to ASME B1.20.1

Dimensions of AKTAFO

Nominal Size	NPS	1/4	3/8	1/2	3/4	1
	DN	8	10	15	20	25
L		52	53	66	73	88
H		39	39	42	51	59
D		82	82	82	100	130

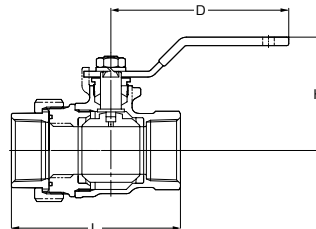
Unit: mm

Type 600 Brass Ball Valves (Full Bore)

W.O.G. non-shock 4.12 MPa (600 psi), Saturated steam pressure 1.03 MPa (150 psi)

AKTAFU

- Threaded end to ASME B1.20.1



Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Dezincification resistant brass
Ball	Forged Brass: Cr plated
Ball seat	PTFE
Gland packing	PTFE

Single union, Screwed body cap, Blowout-proof stem, Threaded ends to ASME B1.20.1

Dimensions of AKTAFU

Nominal Size	NPS	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
	DN	8	10	15	20	25	32	40	50
L		52	52	63	75	88	98	113	126
H		39	39	42	51	59	64	73	80
D		82	82	82	100	130	130	150	150

Unit: mm

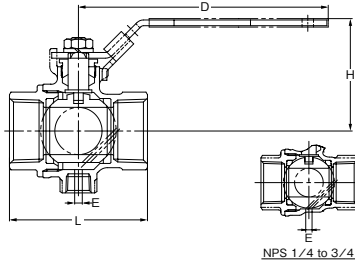
Type 200 Brass Ball Valves (Full Bore)

W.O.G. non-shock 1.37 MPa (200 psi), -18°C to + 93°C (Avoid freezing the valve)

Safety exhaust, Screwed body cap, Blowout-proof stem, Latch lock handle, Threaded ends to ASME B1.20.1

AKTAFS

- Threaded end to ASME B1.20.1



Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Dezincification resistant brass
Ball	Forged Brass: Cr plated
Ball seat	PTFE
Gland packing	PTFE

Dimensions of AKTAFS

Unit: mm

Nominal Size	NPS DN	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
		8	10	15	20	25	32	40	50
L		41	42	53	60	72	82	92	105
H		39	39	42	51	59	64	73	80
E		4	4	4	4	4	4	4	4
D		82	82	82	100	130	130	150	150

- Exhaust hole diameter: 4 mm (all nominal size)

Type 400 Brass Ball Valves (Standard Bore)

W.O.G. non-shock 2.75 MPa (400 psi), W.O.G. 150°C 0.69 MPa (100 psi)

Screwed body cap, Blowout-proof stem, Double O-ring stem seals, Threaded ends to JIS B0203 (BS21) or NPT

T*

- Threaded end to JIS B0203 (BS21)

TT*

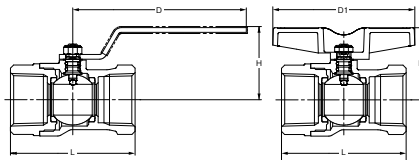
- Threaded end to JIS B0203 (BS21)

AKT

- Threaded end to ASME B1.20.1



*The length of useful threads and the positions of gauge planes are built on KITZ standard. Taper pipe threads for connection shall refer to JIS B0203 standards.



Materials

Parts	Material
Body	Brass/Bronze*
Body cap	Brass/Bronze*
Stem	Dezincification resistant brass
Ball	Brass**
Ball seat	PTFE
O-ring	FKM

*NPS 4 only

**Nickel-chrome plated

Dimensions of T, TT, AKT

Unit: mm

Nominal Size	NPS. DN	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4
		8	10	15	20	25	32	40	50	65	80	100
L		50	50	65	68	79	86	96	109	127	153	179
L1		50	50	65	68	79	86	96	109	-	-	-
H		39	39	39	42	46	51	56	65	82	105	124
H1		34	34	37	40	46	52	57	71	-	-	-
D		60	60	80	80	110	110	110	140	200	300	400
D1		65	65	80	80	90	105	105	120	-	-	-

*TT: 1/4 to 2

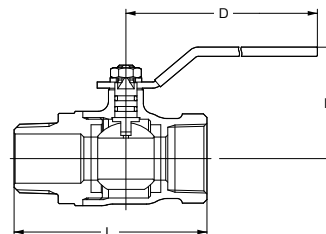
Type 400 Brass Ball Valves (Standard Bore)

W.O.G. non-shock 2.8 MPa (400 psi), W.O.G. 150°C 0.7 MPa (100 psi)

Screwed body cap, Blowout-proof stem, Double O-ring stem seals, Male & Female Threaded ends to JIS B0203 (BS21)

TO

- Threaded end to JIS B0203 (BS21)



Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Dezincification resistant brass
Ball	Forged Brass*
Ball seat	PTFE
O-ring	FKM

*Nickel-chrome plated

Dimensions of TO

Unit: mm

Nominal Size	NPS DN	1/4	3/8	1/2	3/4	1
		8	10	15	20	25
L		59	60	74	80	94
H		39	39	39	42	46
D		60	60	80	80	110

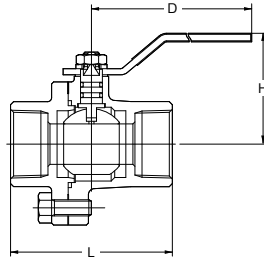
Type 400 Brass Ball Valves (Standard Bore)

W.O.G. non-shock 2.75 MPa (400 psi), W.O.G. 150°C 0.69 MPa (100 psi)

Bolted body and cap, Blowout-proof stem, Double O-ring stem seals, Threaded ends to JIS B0203 (BS21)

TM*

- Threaded end to JIS B0203 (BS21)



Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Dezincification resistant brass
Ball	Forged Brass*/SCS13A**
Ball seat	PTFE
O-ring	FKM

*Cr plated **NPS 2 1/2 only

Dimensions of TM

Unit: mm

Nominal Size	NPS	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
	DN	10	15	20	25	32	40	50	65	80
L		56	60	68	80	86	101	117	136	160
H		45	45	49	55	60	65	75	91	105
D		60	80	80	110	110	110	140	200	300

*The length of useful threads and the positions of gauge planes are built on KITZ standard. Taper pipe threads for connection shall refer to JIS B0203 standards.

Type 600 Brass Ball Valves (Reduced bore)

W.O.G. non-shock 4.12 MPa (600 psi), W.O.G. 150°C 0.98 MPa (142 psi)

One-piece body, Blowout-proof stem, Threaded ends to JIS B0203 (BS21) or NPT

TK

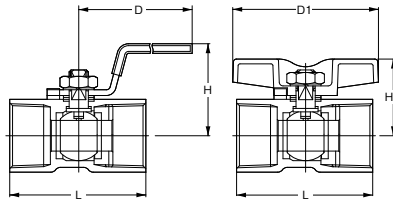
- Threaded end to JIS B0203 (BS21)

TKT

- Threaded end to JIS B0203 (BS21)

AKTK

- Threaded end to ASME B1.20.1
- AKTK NPS 1/4 to 2



Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Dezincification resistant brass
Ball	Forged Brass*
Ball seat	G/F PTFE
Grand packing	G/F PTFE

*Cr plated

Dimensions of TK, TKT, AKTK

Unit: mm

Nominal Size	NPS	1/8	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
	DN	6	8	10	15	20	25	32	40	50
L		32	39	44	56.5	59	71	78	83	100
H		31	31	36	41	44	48	54	65	72
H1		23	23	27	31	34	42	48	53	60
D		60	60	70	85	85	100	100	125	125
D1		35	35	40	60	60	76	76	100	100

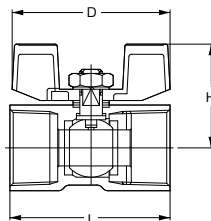
Type 600 Brass Ball Valves (Reduced Bore)

W.O.G. non-shock 4.12 MPa (600 psi), W.O.G. 150°C 0.98 MPa (142 psi)

One-piece body, Blowout-proof stem, with Wing handle, Threaded ends to JIS B0203 (BS21)

TKW

- Threaded end to JIS B0203 (BS21)



Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Dezincification resistant brass
Ball	Forged Brass*
Ball seat	G/F PTFE
Grand packing	G/F PTFE

*Cr plated

Dimensions of TKW

Unit: mm

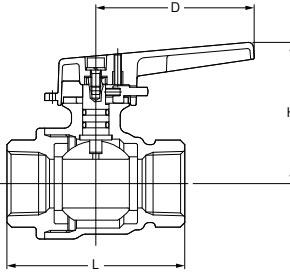
Nominal Size	NPS	1/8	1/4	3/8	1/2	3/4	1
	DN	6	8	10	15	20	25
L		32	39	44	56.5	59	71
H		25	25	29	35	39	41
D		35	35	40	55	55	69

Type 150 Brass Ball Valves (Full Bore)

W.O.G. non-shock 0.98 MPa (142 psi), W.O.G. 150°C 0.69 MPa (100 psi)

TFJ

- Threaded end to JIS B0203 (BS21)



Materials

Parts	Material
Body	Forged Brass/Cast Bronze*
Body cap	Forged Brass/Cast Bronze*
Stem	Dezincification resistant brass
Ball	Forged Brass**
Ball seat	PTFE
O-ring	FKM

*NPS 2 only
**NiCr plated

Locking device, Screwed body cap, Blowout-proof stem, Double O-ring stem seals, Threaded ends to JIS B0203 (BS21)

Dimensions of TFJ

Nominal Size	NPS DN	1/2	3/4	1	1 1/4	1 1/2	2
		15	20	25	32	40	50
L		62	73	85	98	108	124
H		53	58	67	72	90	98.5
D		65	65	90	90	110	110

Unit: mm

Type 400 Brass Ball Valves (Standard Bore)

TL, CTL W.O.G. non-shock 2.75 MPa (400 psi), W.O.G. 150°C 0.69 MPa (100 psi),
TLT W.O.G. non-shock 2.75 MPa (400 psi), W.O.G. 80°C 1.96 MPa (286 psi)

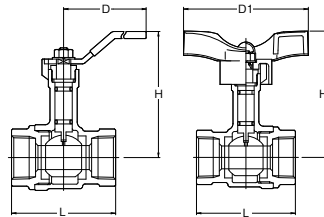
TL

- Threaded end to JIS B0203 (BS21)



TLT

- Threaded end to JIS B0203 (BS21)



Materials

Parts	Material
Body	Cast Bronze
Body cap	Cast Bronze
Stem	Dezincification resistant brass
Ball	SCS13A
Ball seat	PTFE
O-ring	FKM

⚠ Solder joint end valves should not be used in service where the temperature of the line fluid is higher than the softening point of the solder. Unit: mm

Screwed body cap, Blowout-proof stem, Double O-ring stem seals, Threaded ends to JIS B0203 (BS21) or solder joint ends

Dimensions of TL, TLT

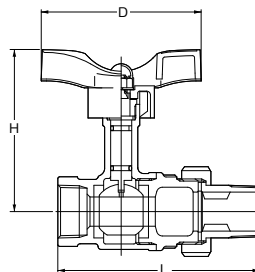
Nominal Size	NPS DN	1/2	3/4	1	1 1/4	1 1/2	2
		15	20	25	32	40	50
L		56	65	78	86	96	109
L (Solder)		58	73	88	99	114	135
H		75	79	83	98	102	109
H1		79	83	90	105	109	124
D		80	80	110	110	110	140
D1		82	82	94	94	94	120

Type 400 Brass Ball Valves (Standard Bore)

W.O.G. non-shock 2.75 MPa (400 psi), W.O.G. 80°C 1.96 MPa (286 psi)

CTLTU

- Solder joint end to ASME B16.18



Materials

Parts	Material
Body	Cast Bronze
Body cap	Cast Bronze
Stem	Dezincification resistant brass
Ball	SCS13A
Ball seat	PTFE
O-ring	FKM

⚠ Solder joint end valves should not be used in service where the temperature of the line fluid is higher than the softening point of the solder. Unit: mm

Single union, Screwed body and cap, Blowout-proof stem, Double O-ring stem seals, Threaded ends to JIS B0203 (BS21) or solder joint ends

Dimensions of CTLTU

Nominal Size	in. mm	1/2	3/4	1
		15	20	25
L		90.5	103.5	119
L (Solder)		89.5	107.5	124
H		79	83	90
D		82	82	94

Type 600 Brass Ball Valves (Full Bore)

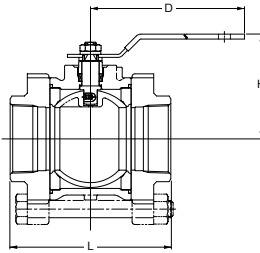
W.O.G. non-shock 2.75 MPa (600 psi), W.O.G. 150°C 1.03 MPa (150 psi)

AK3TM

- Threaded end to ASME B1.20.1

C3TM*

- Solder joint end to ASME B16.18
- *C3TM NPS 3/8 to 2 1/2



Three piece body with mounting pad,
Threaded end to ASME B1.20.1,
Solder jointed to ASME B16.18

Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Dezincification resistant brass
Ball	Forged Brass: SnNi plated (NPS 1/4 to 1) TEA [®] plated (NPS 1 1/4 to 2)
Ball seat	PTFE
Grand packing	PTFE

⚠ Solder joint end valves should not be used in service where the temperature of the line fluid is higher than the softening point of the solder.

Dimensions of AK3TM, C3TM

Nominal Size	NPS	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
	DN	8	10	15	20	25	32	40	50
L		49	49	61	70	83	99	117	139
L (Solder)		-	49	61	73	88	99	117	139
H		39	39	48	55	63	69	78	85
D		82	82	82	100	130	130	150	150

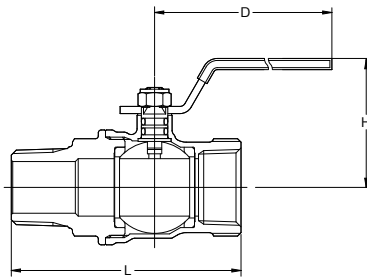
Refer to "Product Range" on Page 8.

Type 600 Brass Ball Valves (Full Bore)

W.O.G. non-shock 4.12 MPa (600 psi), W.O.G. 150°C 0.98 MPa (142 psi)

ZO

- Threaded end to JIS B0203 (BS21)



Screwed body cap, Blowout-proof stem,
Double O-ring stem seals,
Male & Female threaded ends to JIS B0203 (BS21)

Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Forged Brass: Ni plated
Ball	Forged Brass*
Ball seat	PTFE
O-ring	FKM

*NiCr plated

Dimensions of ZO

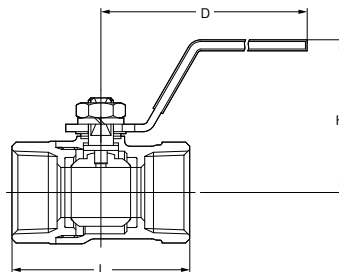
Nominal Size	NPS	1/4	3/8	1/2	3/4	1
	DN	8	10	15	20	25
L		59	60	74	80	94
H		37	37	40	44	50
D		70	70	80	80	110

Type 400 Brass Ball Valves (Standard Bore)

W.O.G. non-shock 2.75 MPa (400 psi), W.O.G. 150°C 0.69 MPa (100 psi), Saturated steam pressure 0.98 MPa (142 psi)

ZS*

- Threaded end to JIS B0203 (BS21)



Screwed body cap, Blowout-proof stem,
Threaded ends to JIS B0203 (BS21)

Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Dezincification resistant brass
Ball	Forged Brass*/SCS13A**
Ball seat	PTFE
Grand packing	G/F PTFE

*Cr plated **NPS 1 1/2 only

Dimensions of ZS

Nominal Size	NPS	1/4	3/8	1/2	1	1 1/4	1 1/2	2
	DN	8	10	15	25	32	40	50
L		42	43	51	71	78	88	99
H		44	44	45	63	67	71	76
D		72	72	87	116	116	117	117

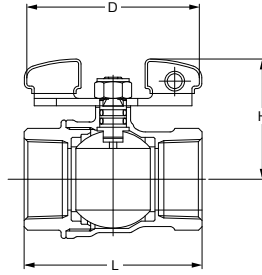
*The length of useful threads and the positions of gauge planes are built on KITZ standard.
Taper pipe threads for connection shall refer to JIS B0203 standards.

Type 600 Brass Ball Valves (Full Bore)

W.O.G. non-shock 4.12 MPa (600 psi), W.O.G. 150°C 0.98 MPa (142 psi)

ZET

- Threaded end to JIS B0203 (BS21)



Screwed body cap, Blowout-proof stem, Double O-ring stem seals, Threaded ends to JIS B0203 (BS21)

Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Brass: Ni plated
Ball	Forged Brass*/SCS13A**
Ball seat	PTFE
O-ring	FKM

*NiCr plated **NPS 1¼ or 2

Dimensions of ZET

Nominal Size	NPS DN	¼	⅜	½	¾	1	1¼	1½	2
		8	10	15	20	25	32	40	50
L		42	42	53	60	72	84	92	110
H		35	35	41	45	54	59	75	82
D		55	55	70	70	100	100	130	130

Unit: mm

Type 600 Brass Ball Valves (Full Bore)

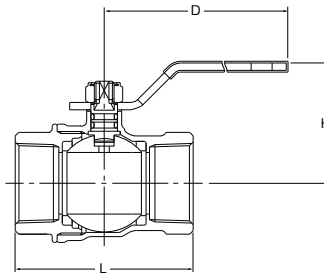
W.O.G. non-shock 4.12 MPa (600 psi)*, W.O.G. 150°C 1.03 MPa (150 psi)

AKSZA

- Threaded end to ASME B1. 20. 1

CSZA

- Solder joint to ASMB 16.18



Screwed body and cap, Blowout-proof stem, Double O-ring stem seals, Threaded ends to ASME B1.20.1 or solder joint ends

*NPS 4 : W.O.G. non-shock 2.8 MPa (400 psi), W.O.G. 150°C 0.7 MPa (100 psi)

Materials

Parts	Material
Body	Brass/Bronze*
Body cap	Brass/Bronze*
Stem	Brass: Nickel plated
Ball	Forged Brass: SnNi plated (NPS ¼ to 1) TEA® plated (NPS 1¼ to 2½) Brass: NiCr plated (NPS 4) SCS13A (NPS3)
Ball seat	PTFE
O-ring	FKM

*NPS 4 only

⚠ Solder joint end valves should not be used in service where the temperature of the line fluid is higher than the softening point of the solder.

Unit: mm

Dimensions of AKSZA, CSZA

Nominal Size	NPS DN	¼	⅜	½	¾	1	1¼	1½	2	2½	3	4
		8	10	15	20	25	32	40	50	65	80	100
L		42	42	53	60	72	84	92	110	138	167	193
L1 (Solder)			46	54	73	88	100	115	140	164	187	
H		37	37	40	44	50	55	65	72	101	113	131
D		70	70	80	80	110	110	150	150	200	300	300

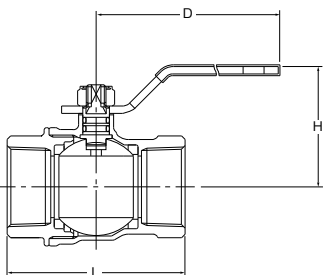
Refer to "Product Range" on Page 8.

Type 600 Brass Ball Valves (Full Bore)

W.O.G. non-shock 4.12 MPa (600 psi), W.O.G. 150°C 1.03 MPa (150 psi)

SZA

- Threaded end to JIS B0203 (BS21)



Screwed body and cap, Blowout-proof stem, Double O-ring stem seals, Threaded ends to JIS B0203 (BS21)

Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Brass: Ni plated
Ball	Forged Brass*
Ball seat	PTFE
O-ring	FKM

*NiCr plated

Dimensions of SZA

Nominal Size	NPS DN	¼	⅜	½	¾	1	1¼	1½	2	2½	3	4
		8	10	15	20	25	32	40	50	65	80	100
L		42	42	53	60	72	84	92	110	138	167	193
H		37	37	40	44	50	55	65	72	101	113	131
D		70	70	80	80	110	110	150	150	200	300	300

Unit: mm

Type 600 Brass Ball Valves (Full Bore)

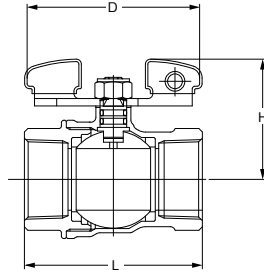
W.O.G. non-shock 4.12 MPa (600 psi), W.O.G. 150°C 1.03 MPa (150 psi)

AKSZAW

- Threaded end to ASME B1. 20. 1

CSZAW

- Solder joint to ASME B16.18



Dimensions of AKSZAW, CSZAW

Nominal Size	NPS DN	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
		8	10	15	20	25	32	40	50
L		42	42	53	60	72	84	92	110
L1 (Solder)			46	54	73	88	100	115	140
H		35	35	41	45	54	59	75	82
D		55	55	70	70	100	100	130	130

Unit: mm

Screwed body and cap, Blowout-proof stem, Double O-ring stem seals, Threaded ends to ASME B1.20.1 or solder joint ends to ASME B16.18.

Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Brass: Ni plated
Ball	Brass: SnNi plated (NPS 1/4 to 1) TEA® plated (NPS 1 1/4 to 2)
Ball seat	PTFE
O-ring	FKM

Type 400 3-Way Brass Ball Valves (Standard Bore)

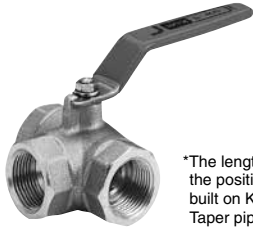
W.O.G. non-shock 2.75 MPa (400 psi), W.O.G. 150°C 0.69 MPa (100 psi)

TN*

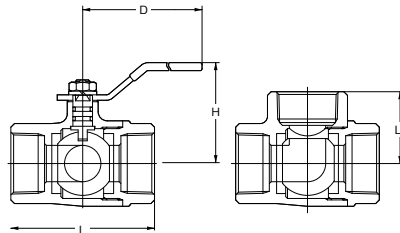
- Threaded end to JIS B0203 (BS21)

AKTN

- Threaded end to ASME B1.20.1



*The length of useful threads and the positions of gauge planes are built on KITZ standard. Taper pipe threads for connection shall refer to JIS B0203 standards.



Dimensions of TN, AKTN

Nominal Size	NPS DN	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3
		8	10	15	20	25	32	40	50	65	80
L		40	46	67	68	79	89	100	115	138	166
L1		20	23	33.5	34	39.5	44.5	50	57.5	69	83
L1 (Solder)				28	37	44	50.5	59	71.5		
H		30	35	45	48	55	60	65	75	91	105
D		60	70	80	80	110	110	110	140	200	300

Unit: mm

Screwed body cap, 2-seat, L-port design, Blowout-proof stem, Double O-ring stem seals*, Threaded ends to JIS B0203 (BS21) or NPT, or solder joint ends *NPS 1/2 and larger

Materials

Parts	Material
Body	Forged Brass/Cast Bronze*
Body cap	Forged Brass
Stem	Dezincification resistant brass
Ball	Forged Brass**
Ball seat	PTFE
O-ring	FKM

*NPS 2 1/2 and 3
**Cr plated

⚠ Solder joint end valves should not be used in service where the temperature of the line fluid is higher than the softening point of the solder.

Type 400 3-Way Bronze Ball Valves (Standard Bore)

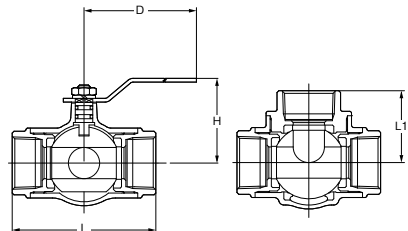
W.O.G. non-shock 2 MPa (290 psi), W.O.G. 150°C 0.62 MPa (90 psi)

T4T

- Threaded end to JIS B0203 (BS21)

T4L

- Threaded end to JIS B0203 (BS21)



Dimensions of T4T, T4L

Nominal Size	NPS DN	1/2	3/4	1	1 1/4	1 1/2	2
		15	20	25	32	40	50
L		70	85	100	115	130	150
L1		35	42.5	50	57.5	65	75
H		52	56	63	68	94.5	102
D		130	130	150	150	230	230

Unit: mm

Screwed body cap, 4-seat, L or T-port design, Blowout-proof stem, Double O-ring stem seals, Threaded ends to JIS B0203 (BS21) or NPT

Materials

Parts	Material
Body	Cast Bronze
Body cap	Forged Brass
Stem	Dezincification resistant brass
Ball	Brass*
Ball seat	PTFE
O-ring	FKM

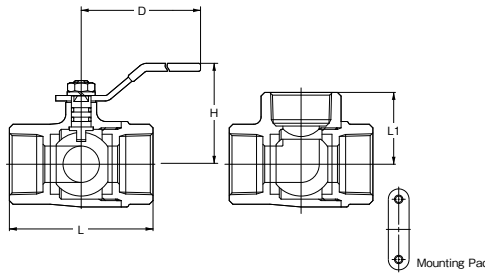
*Cr plated

Type 400 3-Way Bronze Ball Valves, with Mounting Pad (Standard Bore)

W.O.G. non-shock 2.75 MPa (400 psi), W.O.G. 150°C 0.69 MPa (100 psi)

AKTNP

- Threaded end to ASME B1.20.1



Screwed body cap, 2-seat, L-port design,
Blowout-proof stem, Double O-ring stem seals,
Threaded ends to NPT

Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Dezincification resistant brass
Ball	Forged Brass*
Ball seat	PTFE
O-ring	FKM

*Cr plated



Solder joint end valves should not be used in service where the temperature of the line fluid is higher than the softening point of the solder.

Unit: mm

Dimensions of AKTNP

Nominal Size	NPS	1/2	3/4	1	1 1/4	1 1/2	2
	DN	15	20	25	32	40	50
L		67	68	79	89	100	115
L1		33.5	34	40	44.5	50	57.5
H		45	48	55	60	65	75
D		80	80	110	110	130	140

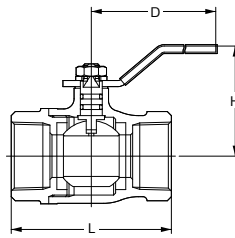
Page 106 for Allowable Port Orientation.

Brass Ball Valves, Designed for Gas Service (Standard Bore)

Gas service 40°C 0.98 MPa (142 psi)

TG*

- Threaded end to JIS B0203 (BS21)



Screwed body cap,
Blowout-proof stem, Double O-ring stem seals,
Threaded ends to JIS B0203 (BS21)

Materials

Parts	Material
Body	Forged Brass
Body cap	Forged Brass
Stem	Dezincification resistant brass
Ball	Forged Brass*/SCS13A**
Ball seat	PTFE
O-ring	NBR

*NiCr plated **NPS 1 1/2, 2

Dimensions of TG

Nominal Size	NPS	1/4	3/8	3/4	1	1 1/4	1 1/2	2	2 1/2	3
	DN	8	10	20	25	32	40	50	65	80
L		50	50	68	79	86	96	109	127	153
H		39	39	42	46	51	56	65	82	105
D		60	60	80	110	110	110	140	200	300

Unit: mm

*The length of useful threads and the positions of gauge planes are built on KITZ standard.
Taper pipe threads for connection shall refer to JIS B0203 standards.