

KF Threaded & Grooved-End Floating Ball Valves



KF Industries



Superior Fluid Control Products

KF Threaded & Grooved-End Floating Ball Valves

KF Floating ball valves utilize a durable yet economical design constructed of the highest quality materials available.

Offered in 1/4"RP thru 4"FP and pressures from 400 psi thru 5000 psi.

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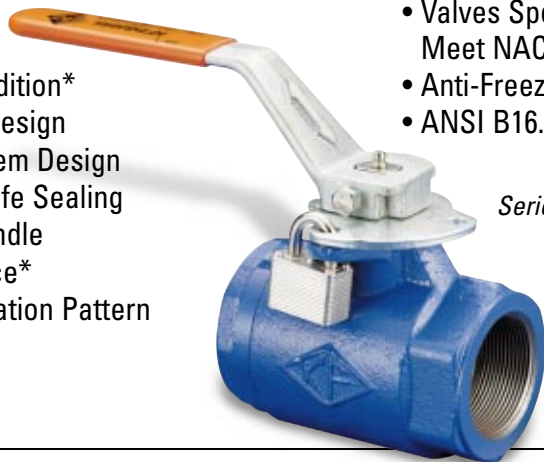
General Design Features

- Full & Reduced Port
- Threaded, Grooved & Socketweld End Connections
- External Grease Fitting for Stem Journal Lubrication*
- Weather Seal (Stem)
- Firesafe API 607 4th Edition*
- Blowout Proof Stem Design
- Heavy Duty Flatted Stem Design
- Metal-To-Metal Firesafe Sealing
- Manual Operation Handle
- Integral Locking Device*
- Direct Mounting Actuation Pattern (Series B Only)

*Not Applicable to Series B

Optional Features

- Antistatic Device
- Actuation & Square Nut Assemblies
- Enduro-Bond™ Coating For Corrosion Resistance
- Valves Specified with Stainless Steel Trim Meet NACE MR0175
- Anti-Freeze Design Available Upon Request
- ANSI B16.34 (Bolted Only)



Series A

Series A & AH

Ductile Iron Body

Series A - 1"FP - 4"RP, 1500 psi

Series AH - 1"FP - 3"RP, 1500-2000 psi

Series C, CH & CXH

Carbon Steel or Stainless Steel Body

Series C - 1"FP - 4"FP, 1000-2500 psi

Series CH - 1"FP - 4"FP, 2000-3000 psi

Series CXH - 1"FP - 2"RP, 5000 psi

Series CB & CBH

Nickel Aluminum Bronze Body, 1"FP-2"FP

Series CB - 1000-2500 psi

Series CBH - 3000 psi

Series CA & CAH

Carbon Steel Body,

2 3/8 EUE X 2 1/16 Bore &

2 7/8 EUE X 2 9/16 Bore

Series CA - 1000-2000 psi

Series CAH - 3000 psi



Series C



Series E

Series E, EC & EH

Series E-Ductile Iron Body, 2"RP-4"RP, 750 CWP

Series EC-Stainless Steel Body, 2"RP-4"RP, 750 PSI

Series EH-Ductile Iron Body, 2"RP-4"RP, 1000 CWP



KF Threaded Bolted Body Floating Ball Valves

Series AF & AFH

Ductile Iron Body

Series AF - 2"RP - 4"RP, 1000-1500 psi

Series AFH - 2"RP - 3"RP, 2000 psi



Series AF

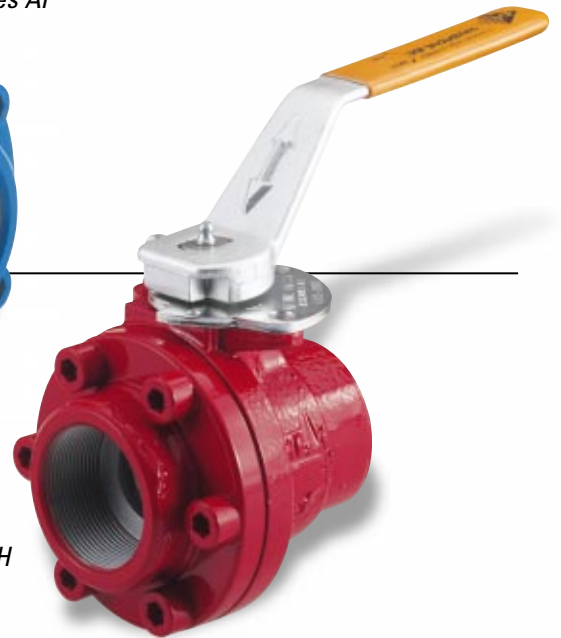
Series CF, CFH & CFXH

Carbon Steel Body

Series CF - 2"RP - 4"FP, 1500-2500 psi

Series CFH - 2"RP - 4"FP, 3000 psi

Series CFXH - 2"RP & 2"FP, 5000 psi



Series CFXH

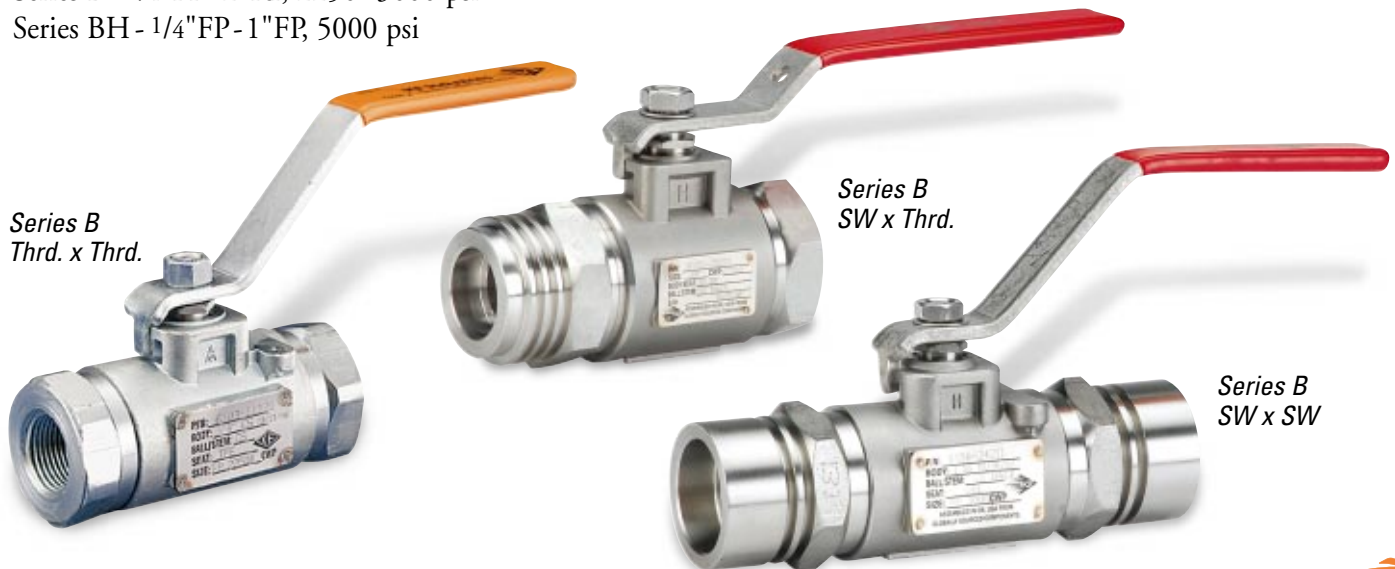
KF Threaded End Floating Ball Valves

Series B & BH • 3-Piece Design

Carbon Steel, Stainless Steel or Low Temp Carbon Steel Body

Series B - 1/4"FP - 2"RP, 2250 - 3000 psi

Series BH - 1/4"FP - 1"FP, 5000 psi



*Series B
Thrd. x Thrd.*

*Series B
SW x Thrd.*

*Series B
SW x SW*



KF Commodity

Designed for Hydraulic Hook-Ups, Offshore, Well Heads, Production Lines, Petroleum & Chemical Plants and Compressor Skids to name a few applications.

General Design Features

- 2-Piece & Unibody
- Reinforced PTFE Seats
- Carbon & Stainless Steel Balls*
- Blowout Proof Stem
- Locking Device*
- NACE MR10175*
- Firesafe API 607*

* See Page 7 for Std./Opt. Features.

Series HB-600

Bronze 2-Piece, 1/4" - 4", 400-600 CWP

Series HC-710

Carbon Steel Unibody, 1/4" - 2", 2000 CWP

Series HC-730

Carbon Steel Unibody, 1/2" - 2", 1500-2000 CWP

Series HC-740

Carbon Steel 2-Piece, 1/4" - 2", 1500-2000 CWP

Series HS-810

Stainless Steel Unibody, 1/4" - 2", 2000 CWP

Series HS-820

Stainless Steel Seal Welded 2-Piece, 1/4" - 2", 2000 CWP



Series HS-820



Series HB-600



Series HC-710



Series HC-730



Series HC-740
With Optional Locking Device



Series HS-810



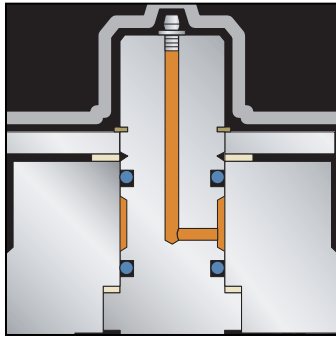
Series W

Series W

Carbon Steel or Stainless Steel Body 1/4"FP - 2"RP,
1500-2000 CWP, NACE MR0175

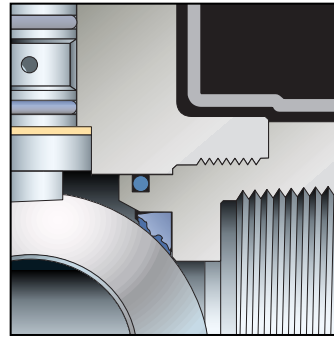


KF Threaded & Grooved-End Floating Ball Valves General Design Features



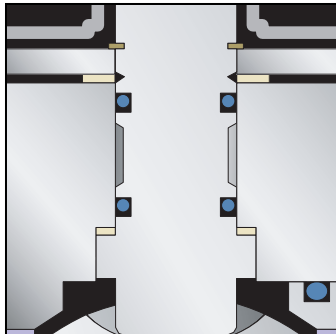
Stem Journal Lubrication

Valves that utilize an external stem lubrication fitting also incorporate a vented weather seal which allows safe pressure relief in the event of excessive grease gun pressure.



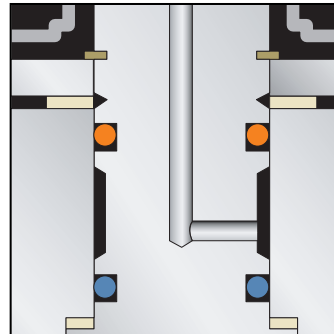
Firesafe Design / Certified

Upon destruction of the seat (in the event of a fire) the ball floats downstream to provide metal-to-metal contact behind the seat area. Pressure assisted shut-off prevents fire feeding leakage.



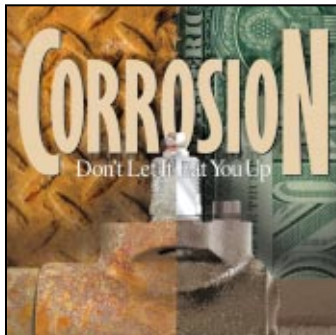
Blowout Proof Stem

Internally inserted "back-seated" stem assures fire safety and blowout prevention by retaining stem in the valve at all pressures.



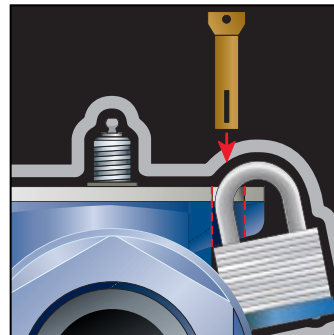
Weather Seal

Weather seals are utilized in most KF Ball Valves to effectively eliminate stem journal corrosion, abrasion and galling. The Series W and B/BH feature stem packing instead of the weather seal.



Fight the Cost of Corrosion

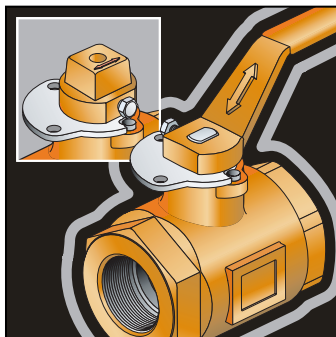
Prolong the life of your valves by reducing corrosion with Enduro-Bond™ Coating. Internal and external protection is now available for many KF Valves. Consult factory for more information.



Secure Your Investment

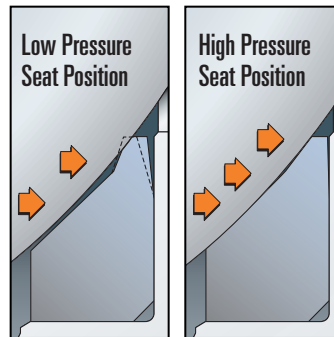
A majority of the Threaded/Grooved Ball Valves come standard with an integral locking ear to prevent unauthorized operation.

*Padlocks not included.



Standard Handle, Stem Wrench Area

KF Ball Valves are equipped with durable handles as a standard feature. Valves can also be provided with square nut assemblies. The heavy-duty flatted stem design allows usage of standard wrenches when necessary to conserve space and prevent accidental operation.



Low Pressure Seat Position

An integral seat lip provides positive low pressure "bubble-tight" sealing of ball and seat. The assembly preload insures constant surface load of ball to seat with minimal operating torque.

High Pressure Seat Position

The KF seat lip deflects slightly at higher pressures to ensure full seat-to-ball contact. The seat's "memory-action" provides bubble-tight sealing at low and high pressures. This "self compensation for swell" feature results in low torque and long life operation.



Valve Size & Range Selection

MOP (psi)	Valve Series	Valve Size (in.), Full & Reduced Port																				
		1/4 FP	3/8 FP	1/2 RP	1/2 FP	3/4 RP	3/4 FP	1 RP	1 FP	1 1/4 RP	1 1/2 RP	1 1/2 FP	2 RP	2 FP	2 1/16 FP	2 1/2 RP	2 1/2 FP	2 9/16 FP	3 RP	3 FP	4 RP	4 FP
400	HB-600													●		●			●		●	
600	HB-600	●	●		●	●		●		●	●		●			●						
	HB-610	●	●		●	●		●			●		●									
	HB-600M												●									
750	E												●						●	●	●	
	EC												●						●		●	
1000	EH												●						●		●	
1500	A							●			●		●	●		●			●	●	●	
	AF												●	●		●			●	●	●	
	C																●			●	●	●
	CF																			●	●	●
	W										●		●									
	HC-730										●		●									
	HC-740									●	●		●									
	HS-810									●	●		●									
	HXS-810									●	●											
2000	AFH												●	●					●			
	AH							●			●		●	●					●			
	CA													●				●				
	CH																					●
	W	●			●	●		●														
	WA	●			●	●		●														
	HC-710	●	●	●		●		●		●	●		●									
	HC-730			●		●		●														
	HC-740	●	●		●		●	●														
	HS-810	●	●	●		●		●														
	HS-820	●	●		●	●		●		●	●		●									
	HXC-730										●		●									
	HXC-740									●	●		●									
2160	C															●			●			
	CB												●									
	CF												●						●			
2500	C							●			●		●	●								
	CB							●				●										
	CF											●										
3000	B	●			●		●	●	●	●		●										
	CBH							●				●	●									
	CFH											●	●					●	●	●		
	CH							●			●	●	●			●			●	●	●	
	CXH							●			●											
	HXC-740				●	●		●														
5000	BH	●			●		●	●					●	●								
	CFXH											●	●									
	CXH											●										

Note: Blank boxes are not applicable.



Valve Options

Features & Options		Valve Series																
		A	AF	AFH	AH	B	BH	C	CA	CAH	CB	CBH	CF	CFH	CFXH	CH	CXH	
Ends	Thrd.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Grvd.	●			●			●	●	●	●	●				●	●	
	Socket Weld					●	●											
Body Style	Thrd.	●			●	●	●	●	●	●	●	●				●	●	
	Bolt		●	●								●	●	●				
Materials	Body	Ductile Iron				CS, SS or LTCS		CS or SS		CS		Ni. Alum. Bronze		Carbon Steel			CS or SS	
	Trim	Carbon Steel or Stainless Steel										SS or Monel®		Carbon Steel or Stainless Steel				
	Seats	Nylon, Teflon® & PEEK™				Delrin®, Peek™ HT4 & Teflon®		Nylon, Delrin®, Teflon® & PEEK™ Teflon® seats not available for Series BH, CAH, CBH, CF, CFXH, CH & CXH .										
	Seals	HNBR, Viton®, EPDM Aflas® & PC Buna N				Buna N, Viton® EPDM, Aflas® PC Buna N		HNBR, Viton®, EPDM, Aflas® & PC Buna N										
Firesafe		Firesafe to API 607 4th Edition						Firesafe to API 607 4th Edition					Firesafe to API 607 4th Edition					
Coatings		●	●	●	●	●	●	●	●	●			●	●	●	●	●	
Actuation		Handle, Square Nut & Bare Stem				Handle, Oval & Locking Device		Handle, Square Nut & Bare Stem Available with ribbon seal pin for Series CB & CBH.										
NACE*		Valves specified with Stainless Steel trim meet NACE MR0175																
Grease Fitting		●	●	●	●			●	●	●	●	●	●	●	●	●	●	
Integral Locking Device		●	●	●	●			●	●	●	●	●	●	●	●	●	●	
Heavy Duty Flatted Stem		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Blowout Proof Stem		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Weather Seal (Stem)		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
Repair Kits										●								
Valve Data & Part Nos.		Pg. 8	Pg. 9		Pg. 8	Pg. 10		Pg. 11	Pg. 12		Pg. 13		Pg. 14			Pg. 11		

Features & Options		Valve Series															
		E	EC	EH	W	WA	HB-600	HB-610	HB-600M	HC-710	HC-730	HC-740	HS-810	HS-820	HXC-730	HXC-740	HXS-810
Ends	Thrd.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Grvd.	●	●	●													
Body Style	Thrd.	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Bolt																
Materials	Body	DI	SS	DI	CS or SS		Bronze			Carbon Steel			Stainless Steel		Carbon Steel		SS
	Trim	CS or SS			SS		Brass or Stainless Steel			SS	CS or SS		Stainless Steel		CS or SS		SS
	Seats	Nylon, Teflon® & PEEK™			Uniseal™		Durafil or PTFE			Reinforced PTFE							
	Seals	HNBR, Viton®, EPDM Aflas® & PC Buna N			Teflon®		Reinforced PTFE										
Firesafe		Firesafe to API 607 4th Edition								●			●				●
Coatings		●	●	●													
Actuation		Handle, Square Nut & Bare Stem			Handle, Oval & Locking Device		Handle & Locking Handle Available with oval locking handle for Series HC-710 & HS-810										
NACE*		Valves specified with SS trim meet NACE MR0175.											●	●			●
Grease Fitting		●	●	●													
Integral Locking Device		●	●	●	●												
Heavy Duty Flatted Stem		●	●	●	●	●											
Blowout Proof Stem		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Weather Seal (Stem)		●	●	●	●	●											
Repair Kits																	
Valve Data & Part Nos.		Pg. 15			Pg. 16		Pg. 19			Pg. 18	Pg. 17		Pg. 18		Pg. 17		Pg. 18*

Note: Blank boxes are not applicable.

* Stainless Steel trim or all Stainless Steel required.

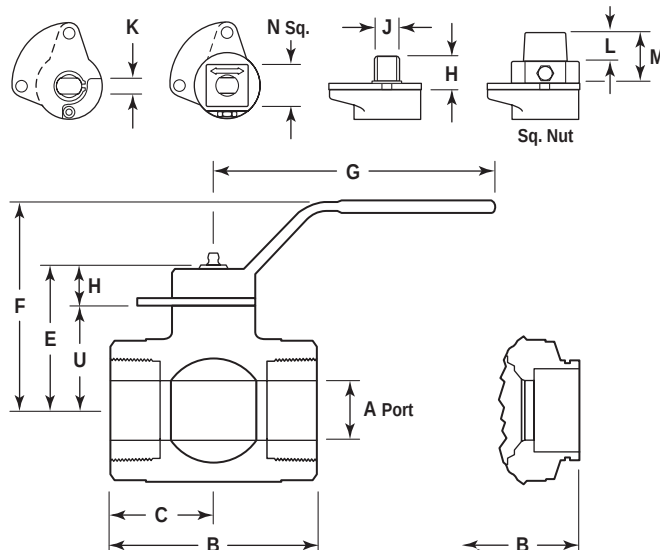


KF Series A & AH Ball Valves

Trim (Ball & Stem)	1 • Carbon Steel 2 • Stainless Steel	A • Carbon Steel w/Freeze B • Stainless Steel w/Freeze
Seat & Seals	1 • Nylon/HNBR 2 • Teflon®/Viton® 3 • Nylon/Viton® 4 • Teflon®/HNBR 5 • PEEK™/Viton® 6 • PEEK™/EPDM	7 • PEEK™/Aflas® 8 • Nylon/PC Buna N 9 • Teflon®/PC Buna N D • PEEK™/PC Buna N E • PEEK™/HNBR
Coating	3 • Enduro-Bond™ Body/Adapter 9 • None	
Actuation	1 • Handle 2 • Square Nut 9 • Bare Stem	
Options	1 • Standard 2 • With Antistatic Device	

Assem. Base No. XXXX-XXXXX

Teflon® is a registered trademark of DuPont.
Viton® is a registered trademark of DuPont Dow Elastomers.
Aflas® is a registered trademark of Asahi Glass.
PEEK™ is a trademark of Victrex Plc.
Enduro-Bond™ is a trademark of Energy & Environmental Services.



Assembly Base Numbers

Valve Size (in.)	1FP	1 1/2FP	2RP	2FP	2 1/2RP	3RP	3FP	4RP	
Rating (psi)	1500								
Series	Thrd.	2339-	2340-	2341-	2342-	2343-	2344-	2345-	2346-
A	Grvd.	2354-	2347-	2348-	2349-	2350-	2351-	2352-	2353-
Rating (psi)	2000 (1500 for PTFE Seats)								
Series	Thrd.	2979-	2980-	2981-	2982-	—	2984-	—	—
AH	Grvd.	2987-	2988-	2989-	—	—	—	—	—

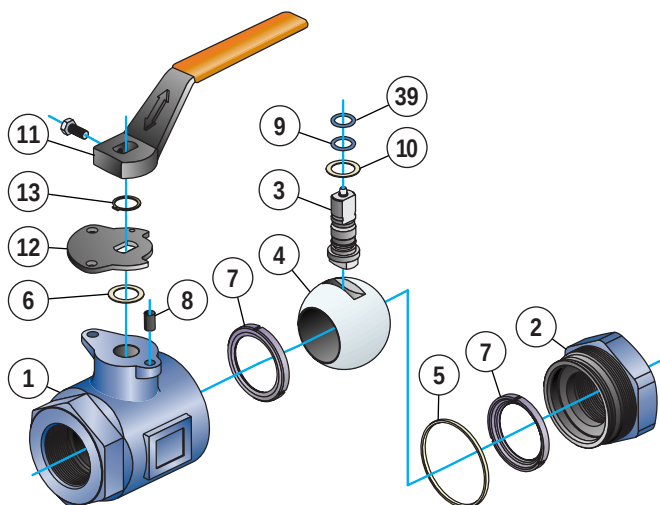
Dimensional Data (in.)

Valve Size (in.)	1FP	1 1/2FP	2RP	2FP	2 1/2RP	3RP	3FP	4RP
Dimension	1x1	1 1/2x1 1/2	2x1 1/2	2x2	2 1/2x2	3x2	3x3	4x3
Weight (lbs.)*	4.5	13	12.5	18	16.25	22	52	46
A	1	1 1/2	2				3	
B	Thrd.	4	5 1/2	6		7 1/2	8 3/4	
	Grvd.	4 7/8	6	6 5/16		7 5/16	8 3/4	
C	2	2 3/4	3		3 5/16		4 3/8	
E	2 3/4	3 21/32	4 3/32				5 11/32	
F	3 1/16	5 13/32	5 27/32				6 11/16	
G	6 1/4	8 1/2					15	
H	1 1/32	1 1/32					1 11/32	
J	.615/.610	.860/.855					1.235/1.230	
K	.372/.370	.560/.556					.621/.618	
L	—	1					1 1/8	
M	—	1 3/4					2	
N	—	17/16					1 13/16	
U	1 23/32	2 5/8	3 1/16				4	

*Handle weight included.

Valve Identification Colors

Valve Series	Series A	Series AH
Valve Paint Color	Blue	Green



Parts List & Materials

Index	Description	Material
1	Body	ASTM A395 Ductile Iron/A216 WCB CS
2	Adapter	ASTM A395 Ductile Iron/A216 WCB CS
3	Stem	Carbon Steel/Zinc Plated or 316 Stainless Steel
4	Ball	1215 CS w/Chrome Over Ni. Plating or 316 SS
5	Body Seal	HNBR, Viton®, PC Buna N, EPDM or Aflas®
6	Stem Bearing	Nylon
7	Seat	Nylon, Reinforced Teflon® or PEEK™

Square nut not illustrated. See dimensional data information above.

Index	Description	Material
8	Stop	Steel
9	Stem Seal	HNBR, Viton®, PC Buna N, EPDM or Aflas®
10	Thrust Bearing	Teflon® (HT4 when using Hi-Temp Seats & Seals)
11	Handle/Sq. Nut	1018 Carbon Steel (1"FP), A47 Malleable Iron
12	Stop Plate	Steel Plated
13	Retainer	Spring Steel
39	Weather Seal	Buna N Only

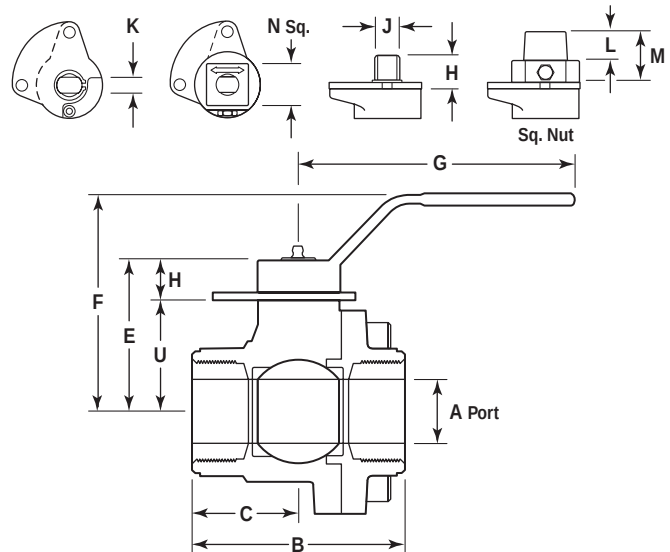


KF Series AF & AFH Ball Valves

Trim (Ball & Stem) & Bolting	1 • CS (Non-NACE)	B • SS (Non-NACE)
	2 • SS (NACE III)	C • CS w/Freeze (Non-NACE)
Seat & Seals	A • SS (NACE II)	D • SS w/Freeze (NACE II)
	1 • Nylon/HNBR	7 • PEEK™/Aflas®
Coating	2 • Teflon®/Viton®*	8 • Nylon/PC Buna N
	3 • Nylon/Viton®	9 • Teflon®/PC Buna N*
Actuation	4 • Teflon®/HNBR*	D • PEEK™/PC Buna N
	5 • PEEK™/Viton®	E • PEEK™/HNBR
Options	6 • PEEK™/EPDM	
	3 • Enduro-Bond™ Body/Adapter	
	9 • None	
	1 • Handle	
	2 • Square Nut	
	9 • Bare Stem	
	1 • Standard	
	2 • With Antistatic Device	

*Teflon® seats not available in Series AFH.
Teflon® is a registered trademark of DuPont.
Viton® is a registered trademark of DuPont Dow Elastomers.
Aflas® is a registered trademark of Asahi Glass.
PEEK™ is a trademark of Victrex Plc.
Enduro-Bond™ is a trademark of Energy & Environmental Services.

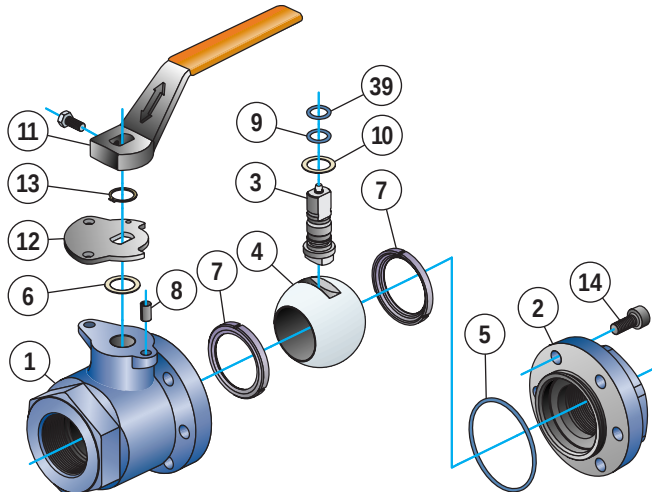
Assem. Base No. XXXX-XXXXX



Assembly Base Numbers

Valve Size (in.)	2RP	2FP	3RP	3FP	4RP
Rating (psi)*	1500			1000	
Series AF	6377-	6378-	6379-	6380	6381
Rating (psi)*	2000			—	—
Series AFH	6383-	6384-	6385	—	—

*PTFE seats rated to 1500 psi for Series AFH.



Dimensional Data (in.)

Valve Size (in.)	2 RP	2 FP	3 RP	3 FP	4 RP
Dimension	2 x 1 1/2	2 x 2	3 x 2	3 x 3	4 x 3
Weight (lbs.)*	12.5	21	25	60	53
A	1 1/2	2		3	
B	5 3/32	5 3/4	7 1/4	8 1/8	
C	2 35/64	2 7/8	3 5/8	4	
E	3 21/32	4 3/32		5 11/32	
F	5 3/8	5 27/32		6 11/16	
G	8 1/2			15	
H	1 1/32			1 11/32	
J	.860/.855			1.235/1.230	
K	.560/.556			.621/.618	
L	1			1 1/8	
M	1 3/4			2	
N	1 7/16			1 13/16	
U	2 5/8	3 1/16		4	

* Handle weight included.

Valve Identification Colors

Valve Series	Series AF	Series AFH
Valve Paint Color	Blue	Green

Parts List & Materials

Index	Description	Material
1	Body	ASTM A395 Ductile Iron/A216 WCB CS
2	Adapter	ASTM A395 Ductile Iron/A216 WCB CS
3	Stem	Carbon Steel/Zinc Plated or 316 Stainless Steel
4	Ball	1215 CS w/Chrome Over Ni. Plating or 316 SS
5	Body Seal	HNBR, Viton®, PC Buna N, EPDM or Aflas®
6	Stem Bearing	Nylon
7	Seat	Nylon, Reinforced Teflon® or PEEK™
8	Stop	Steel

Index	Description	Material
9	Stem Seal	HNBR, Viton®, PC Buna N, EPDM or Aflas®
10	Thrust Bearing	Teflon® (HT4 when using HT4 Seats)
11	Handle/Sq. Nut	A47 Malleable Iron
12	Stop Plate	Steel Plated
13	Retainer	Spring Steel
14	Cap Screw	Carbon Steel B7 (NACE III) or B7M (NACE II)
39	Weather Seal	Buna N Only



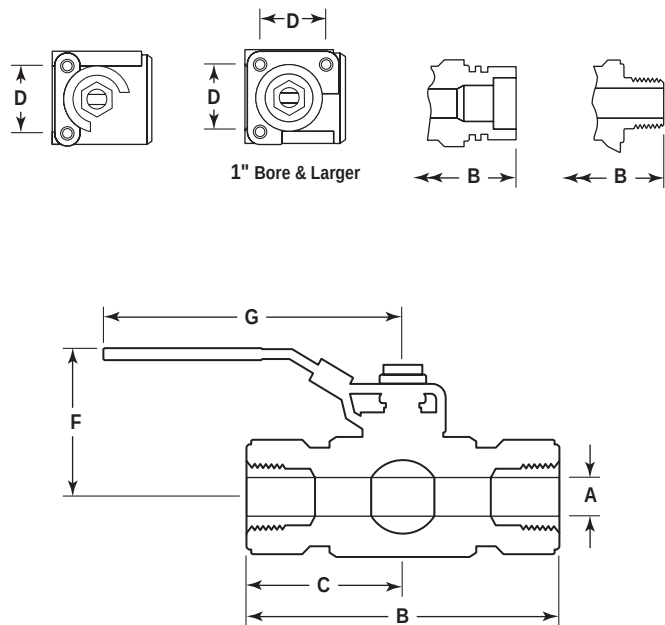
KF Series B & BH Ball Valves

Body & Adapter (& External Parts)	1 • Carbon Steel	
	2 • Stainless Steel	
	3 • Enduro-Bond™ Carbon Steel Body/Adapter	
	5 • SS Body w/LT Carbon Steel Adapters (LF2)	
	8 • Low Temp Carbon Steel	
End Connections	1 • Female x Female	4 • Socket Weld x Socket Weld
	2 • Male x Female	5 • Socket Weld x Female
	3 • Male x Male	6 • Socket Weld x Male
Trim (Ball & Stem)	1 • Carbon Steel	A • Carbon Steel w/Antistatic
	2 • Stainless Steel	B • Stainless Steel w/Antistatic
Seat & Seat Seals	1 • Delrin®/Buna N	6 • PEEK™/EPDM
	2 • Teflon®/None*	7 • PEEK™/Aflas®
	3 • Delrin®/Viton®	8 • PEEK™/PC Buna N
	4 • HT4/LT Buna N	9 • Delrin®/PC Buna N
	5 • HT4/Viton®	
Actuation	1 • Handle	
	3 • Handle w/Locking Device	
	7 • Oval Handle	
	A • For Actuation (Consult Factory For Topworks Data)	

*Not available in Series BH.
Teflon® and Delrin® are registered trademarks of DuPont.
Viton® is a registered trademark of DuPont Dow Elastomers.
Aflas® is a registered trademark of Asahi Glass.
PEEK™ is a trademark of Victrex Plc.
Enduro-Bond™ is a trademark of Energy & Environmental Services.

Assem. Base No. XXXX-XXXXX

Optional Actuation Mounting Pattern



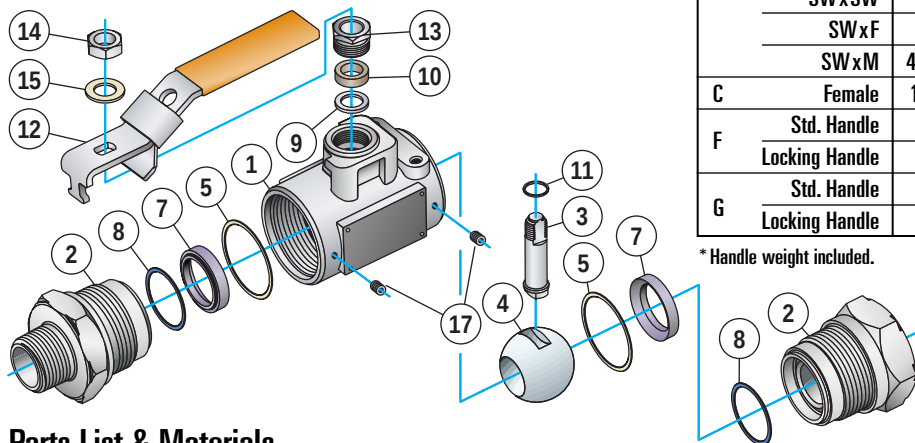
Assembly Base Numbers

Valve Size (in.)	1/4 FP	1/2 FP	3/4 FP	1 RP	1 FP	1 1/2 FP	2 RP
Rating (psi)	3000 (2220 for PTFE Seats)						
Series Std.	6100-	6102-	6103-	6104-	6105-	6107-	6108-
B Secured Adapt.	8020-	8022-	8023-	8024-	8025-	8027-	8028-
Rating (psi)	5000						
Series Std.	6112-	6114-	6115-	6116-	6117-	—	—
BH Secured Adapt.	8030-	8032-	8033-	8034-	8035-	—	—

Dimensional Data (in.)

Valve Size (in.)	1/4 FP	1/2 FP	3/4 FP	1 RP	1 FP	1 1/2 FP	2 RP
Dimension	1/4 x 1/2	1/2 x 1/2	3/4 x 3/4	1 x 3/4	1 x 1	1 1/2 x 1 1/2	2 x 1 1/2
Weight (lbs.)*	2	2	2.5	2.5	5	10.75	10.75
A	1/2	1/2	3/4	1	1 1/2		
B	F x F	3	4	4 1/4	4 1/2	5 1/4	6 1/4
	M x M	3 13/16	4 7/16	5 1/8	—	—	7 3/8
	F x M	3 3/8	4 1/4	4 11/16	—	—	6 13/16
	SW x SW	5	5	6 1/4	6 1/2	7 1/2	—
	SW x F	4	4 1/2	5 1/4	5 1/2	6 3/8	7 3/8
C	Female	1 1/2	2	2 1/8	2 1/4	2 5/8	3 1/8
	Std. Handle	—	—	—	—	—	4
F	Locking Handle	1 7/8	2 3/8	3 1/16	3 15/16	—	—
	Std. Handle	—	—	—	—	—	11
G	Locking Handle	3 13/16	4 5/16	8	12	—	—

* Handle weight included.



Parts List & Materials

Index	Description	Material
1	Body	A 216 WCB CS, A 351 Gr. CF8M SS or A 352 LCC
2	Adapter	AISI 1018 CS, AISI 316 SS or A 350 Gr. LF2 Low Temp.
3	Stem	Plated 12L14 Carbon Steel or 316 Stainless Steel
4	Ball***	Plated 12L14 Carbon Steel or 316 Stainless Steel
5	Adapter Gasket	Virgin PTFE
7	Seat	Delrin®, PEEK™ or PTFE*
8	Seat Seal**	Buna N, Viton®, PC Buna N, EPDM or Aflas®

* Not available in Series BH ball valves. ** Not required when using PTFE seats.

*** 1/2" ball is 316SS standard.

Index	Description	Material
9	Stem Washer	316 Stainless Steel (1/2" Body Only)
10	Packing	RTFE (Std.) or Grafoil® (Optional)
11	Thrust Bearing	Coated 316 Stainless Steel, 1"FP-2"RP, PTFE or PEEK™
12	Handle Assem.	304 Stainless Steel
13	Packing Nut	316 Stainless Steel
14	Handle Nut	316 Stainless Steel
15	Lock washer	316 Stainless Steel
17	Set Screw	Carbon Steel or 316 Stainless Steel

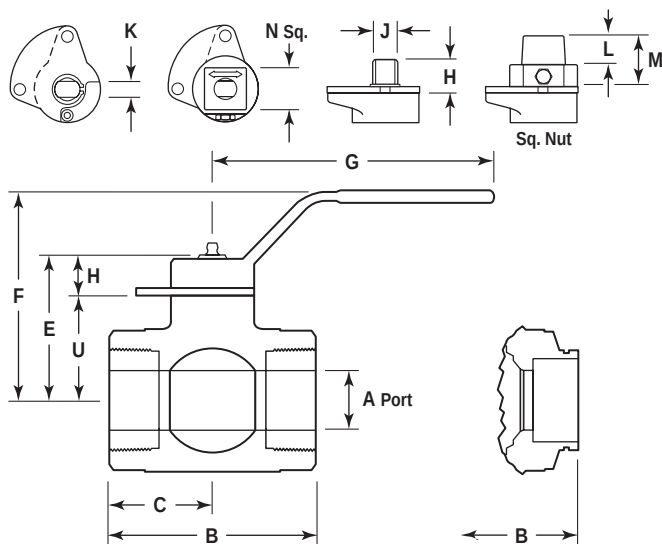


KF Series C, CH & CXH Ball Valves

Body/Ball & Stem	1 • CS/CS	A • Carbon Steel w/Freeze
	2 • CS/SS	B • Stainless Steel w/Freeze
Seat & Seals	1 • Nylon/HNBR**	7 • PEEK™/Aflas®
	2 • Teflon®/Viton®*	8 • Nylon/PC Buna N
Coating	3 • Enduro-Bond™ Body/Adapter	9 • Teflon®/PC Buna N*
	9 • None	D • PEEK™/PC Buna N
Actuation	1 • Handle	E • PEEK™/HNBR
	2 • Square Nut	
Options	1 • Standard (w/o Antistatic Device)	
	2 • With Antistatic Device	

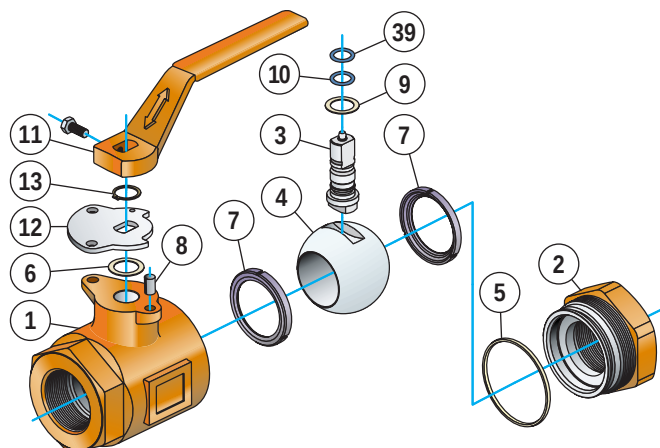
*Teflon® seats not available in Series CH or CXH.
 **SS body not available in Series CXH or 4"FP Series CH.
 Teflon® is a registered trademark of DuPont.
 Viton® is a registered trademark of DuPont Dow Elastomers.
 Aflas® is a registered trademark of Asahi Glass.
 PEEK™ is a trademark of Victrex Plc.
 Enduro-Bond™ is a trademark of Energy & Environmental Services.

Assem. Base No. XXXX-XXXXX



Assembly Base Numbers

Valve Size (in.)	1 FP	1 1/2 FP	2 RP	2 FP	2 1/2 RP	3 RP	2 1/2 FP	3 FP	4 RP	4 FP
Rating Nylon HT4 (psi)	2500				2160		1500			
	1500				1000					750
Series Thrd.	1477-	1500-	1501-	1502-	1503-	1504-	3798-	1505-	1506-	3604-
C Grvd.	1478-	1507-	1508-	1509-	1510-	NA	3799-	1512-	1513-	3605-
Rating (psi)	3000									2000
Series CH	3001-	3002-	3003-	3004-	3005-	3006-	—	3007-	3008-	3363-
Rating (psi)	5000									
Series CXH	5050-	5051-	5052-							



Parts List & Materials

Index	Description	Material
1	Body	A216 WCB/A105 CS or A351 Gr. CF8M
2	Adapter	A216 WCB/A105 CS or A351 Gr. CF8M
3	Stem	CS/Zinc Plated or 316 SS, 17-4 SS
4	Ball	1215 CS w/Chrome Over Nickel Plating or 316 SS
5	Body Seal	HNBR, Viton®, EPDM, Aflas® or PC Buna N
6	Stem Bearing	Nylon
7	Seat	Nylon (Delrin® in Ser. CH, CXH), RTFE (Ser. C only) or PEEK™

**See parts list and materials index #7.

Dimensional Data (in.)

Valve Size (in.)	1 FP	1 1/2 FP	2 RP	2 FP	2 1/2 RP	2 1/2 FP	3 RP	3 FP	4 RP	4 FP
Dimension	1 x 1	1 1/2 x 1 1/2	2 x 1 1/2	2 x 2	2 1/2 x 2	2 1/2 x 2 1/2	3 x 2	3 x 3	4 x 3	4 x 4
Weight (lbs.)*	4.5	13	12.5	18	16.25	20	22	52	46	58
A	1	1 1/2	2	2 1/2	2	3	4			
B Thrd.	4	5 1/2	6	7	7 1/2	8 3/4	9 3/8			
B Grvd.**	4 7/8	6	6 5/16	7	NA	8 3/4	9 3/8			
C	2	2 3/4	3	3 3/8	3 5/16	4 3/8	4 11/16			
E	2 3/4	3 21/32	4 3/32	5 1/32	4 3/32	5 11/32	6 11/32			
F	3 1/16	5 13/32	5 27/32	6 15/32	5 27/32	6 11/16	8 1/16			
G C	6 1/4	8 1/2	15	8 1/2	15	18				
G CH	6 1/4	8 1/2	15	8 1/2	15	48				
H	1 1/32	1 1/32	1 3/8	1 1/32	1 11/32					
J	.615/.610	.860/.855	1.235/.1.230	.860/.855	1.235/1.230	1.360/1.355				
K	.372/.370	.560/.556	.621/.618	.560/.556	.621/.618	.747/.743				
L	—	1	1 1/8	1	1 1/8					
M	—	1 3/4	2	1 3/4	2					
N	—	1 7/16	1 13/16	1 7/16	1 13/16					
U	123/32	2 5/8	3 1/16	3 21/32	3 1/16	4	5			

*Handle weight included. ** Series C only.

Valve Identification Colors

Valve Series	Series C	Series CH	Series CXH
Valve Paint Color	Orange	Brown	Red

Index	Description	Material
8	Stop	Steel
9	Stem Seal	HNBR, Viton®, EPDM, Aflas® or PC Buna N
10	Thrust Bearing	Teflon® (HT4 when using Hi-Temp Seats & Seals)
11	Handle/Sq. Nut	1018 Carbon Steel (1" FP), A47 Malleable Iron (1 1/2" FP-4" RP) & A216 Gr. WCB (4" FP)
12	Stop Plate	Steel Plated
13	Retainer	Spring Steel
39	Weather Seal	Buna N Only

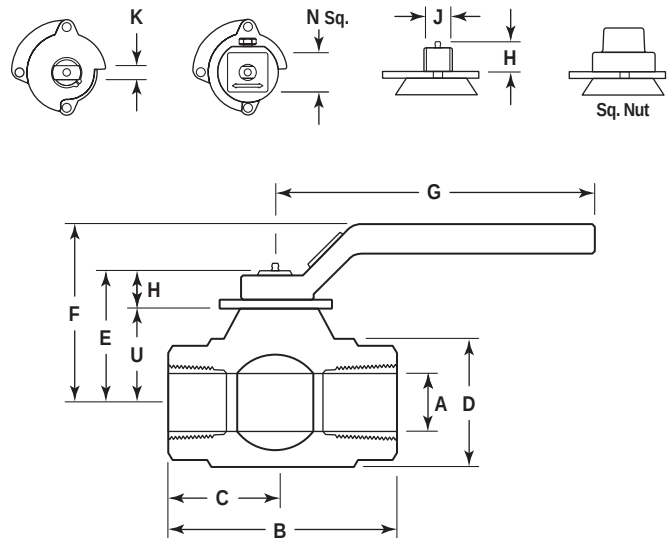


KF Series CA & CAH Ball Valves

Trim (Ball & Stem)	1 • Carbon Steel 2 • Stainless Steel	A • Carbon Steel w/Freeze B • Stainless Steel w/Freeze
Seat & Seals	1 • Nylon/HNBR 2 • Teflon®/Viton®* 3 • Nylon/Viton® 4 • Teflon®/HNBR* 5 • PEEK™/Viton® 6 • PEEK™/EPDM	7 • PEEK™/Aflas® 8 • Nylon/PC Buna N 9 • Teflon®/PC Buna N* D • PEEK™/PC Buna N E • PEEK™/HNBR
Coating	3 • Enduro-Bond™ Body/Adapter 9 • None	
Actuation	1 • Handle 2 • Square Nut 9 • Bare Stem	
Options	1 • Standard (w/o Antistatic Device) 2 • With Antistatic Device	

*Teflon® seats not available in Series CAH.
Teflon® is a registered trademark of DuPont.
Viton® is a registered trademark of DuPont Dow Elastomers.
Aflas® is a registered trademark of Asahi Glass.
PEEK™ is a trademark of Victrex Plc.
Enduro-Bond™ is a trademark of Energy & Environmental Services.

Assem. Base No. XXXX-XXXXX



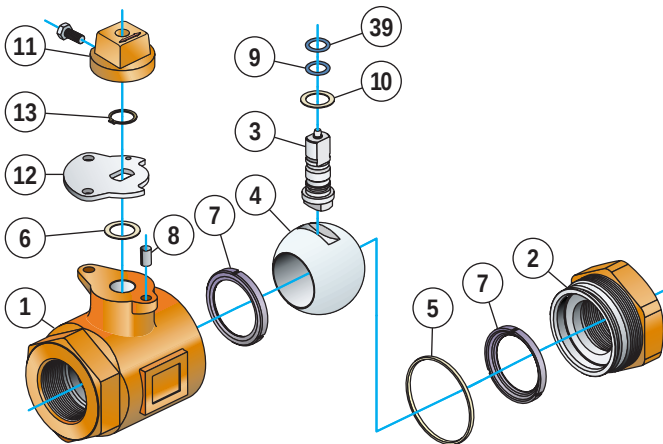
Assembly Base Numbers

Valve Size (in.)	2 1/16 FP - 2 3/8 EUE	2 9/16 FP - 2 7/8 EUE
Rating (psi)	2000 (1000 for PTFE Seats)	
Series CA	1590-	1591-
Rating (psi)	3000	
Series CAH	2005-	2006-

Dimensional Data (in.)

Valve Size (in.)	2 3/8 EUE X 2 1/16 Bore	2 7/8 EUE X 2 9/16 Bore
Dimension		
Weights (lbs.)*	28	36
A	2 1/16	2 9/16
B	8 1/2	9 1/2
C	4 1/4	4 3/4
D	4 1/2	5 3/8
E	4 3/4	5 1/32
F	6 3/32	6 3/8
G	15	
H	1 11/32	1 3/8
J	1.235/1.230	
K	.622/.618	
N	1 13/16	
U	3 13/32	3 21/32

* Handle weight not included



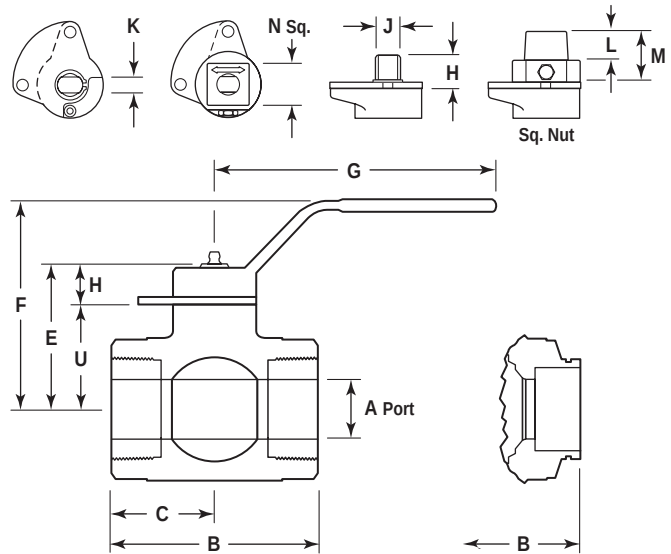
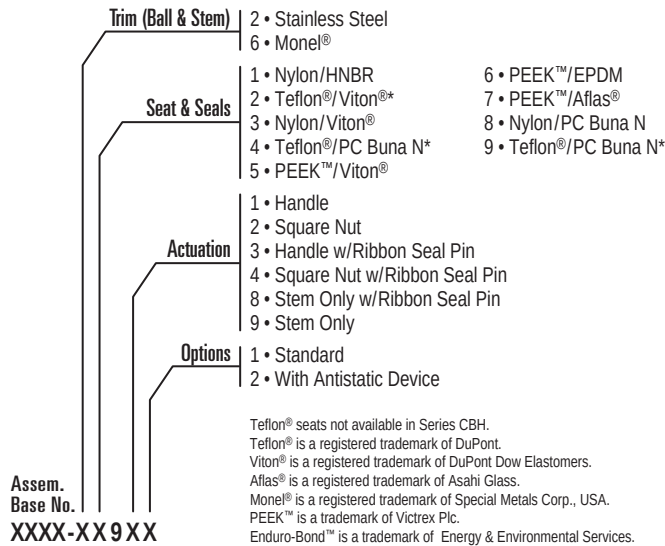
Parts List & Materials

Index	Description	Material
1	Body	ASTM A487 Gr. 4C Carbon Steel
2	Adapter	ASTM A487 Gr. 4C Carbon Steel
3	Stem	Carbon Steel/Zinc Plated or 316 Stainless Steel
4	Ball	1215 CS w/Chrome Over Nickel Plating or 316 SS
5	Body Seal	HNBR, Viton®, PC Buna N, EPDM or Aflas®
6	Stem Bearing	Nylon
7	Seat	Nylon (Delrin® in Ser. CAH), Reinforced Teflon® or PEEK™

Index	Description	Material
8	Stop	Steel
9	Stem Seal	HNBR, Viton®, PC Buna N, EPDM or Aflas®
10	Thrust Bearing	Teflon® (HT4 when using Hi-Temp Seats & Seals)
11	Handle/Sq. Nut	1018 Carbon Steel or A47 Malleable Iron
12	Stop Plate	Steel Plated
13	Retainer	Spring Steel
39	Weather Seal	Buna N Only



KF Series CB & CBH Ball Valves



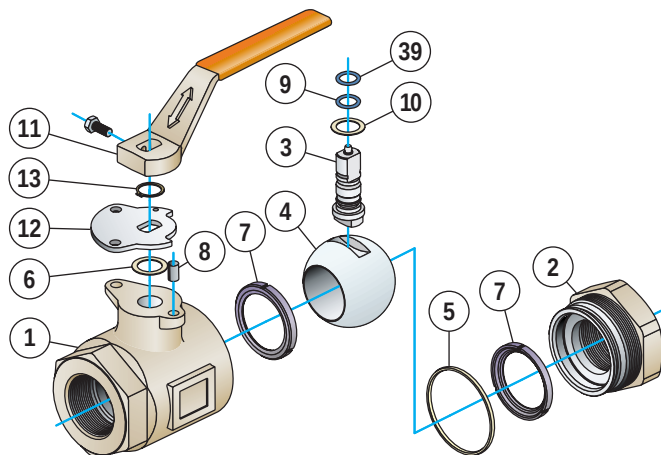
Assembly Base Numbers

Valve Size (in.)		1 FP	2 RP	2 FP
Rating (psi)	Nylon HT4	2500		2160
	PTFE	1500		1500
Series	Thrd.	3351-	3353-	3354-
CB	Grvd.	3371-	3373-	3374-
Rating (psi)		3000		
Series CBH		6070-	6072-	6073-

Dimensional Data (in.)

Valve Size (in.)	1 FP	2 RP	2 FP
Dimension	1 x 1	2 x 1 1/2	2 x 2
Weight (lbs.)*	4.5	12.5	18
A	1	1 1/2	2
B	Thrd.	4	5 1/2
	Grvd.	4 7/8	6
C	2	2 3/4	3
E	2 3/4	3 21/32	4 3/32
F	3 1/16	5 13/32	5 27/32
G	6 1/4	8 1/2	
H	1 1/32	1 1/32	
J	.615/.610	.860/.855	
K	.372/.370	.560/.556	
L	—	1	
M	—	1 3/4	
N	—	1 7/16	
U	1 23/32	2 5/8	3 1/16

*Handle weight included.



Parts List & Materials

Index	Description	Material
1	Body	Ni-Aluminum Bronze, B-148-955
2	Adapter	Ni-Aluminum Bronze, B-148-955
3	Stem	316 Stainless Steel or Monel®
4	Ball	316 Stainless Steel or Monel® Alloy 400
5	Body Seal	HNBR, Viton®, EPDM, Aflas® or PC Buna N
6	Stem Bearing	Nylon
7	Seat	Nylon (Delrin® in Ser. CBH), RTFE (Ser. CB only) or PEEK™

Index	Description	Material
8	Stop	Steel
9	Stem Seal	HNBR, Viton®, EPDM, Aflas® or PC Buna N
10	Thrust Bearing	Teflon® (HT4 when using Hi-Temp Seats & Seals)
11	Handle/Sq. Nut	1018 CS (1 FP) or A47 Malleable Iron (1 1/2 FP - 2 FP)
12	Stop Plate	Steel Plated
13	Retainer	Spring Steel
39	Weather Seal	Buna N Only

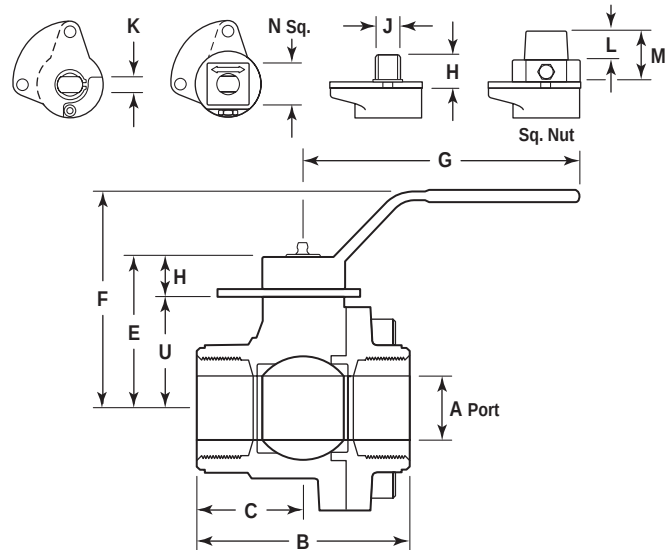


KF Series CF, CFH & CFXH Ball Valves

Trim (Ball & Stem) & Bolting	1 • CS (Non-NACE)	A • SS (NACE II)
	2 • SS (NACE III)	B • SS (Non-NACE)
Seat & Seals	1 • Delrin®/HNBR	7 • PEEK™/Aflas®
	2 • Teflon®/Viton®*	8 • Delrin®/PC Buna N
	3 • Delrin®/Viton®	9 • Teflon®/PC Buna N*
	4 • Teflon®/HNBR*	D • PEEK™/PC Buna N
	5 • PEEK™/Viton®	E • PEEK™/HNBR
	6 • PEEK™/EPDM	
Coating	3 • Enduro-Bond™ Body/Adapter	
	9 • None	
Actuation	1 • Handle	
	2 • Square Nut	
	9 • Bare Stem	
Options	1 • Standard	
	2 • With Antistatic Device	

*Teflon® seats not available in Series CF or CFXH.
 Delrin and Teflon® are registered trademarks of DuPont.
 Viton® is a registered trademark of DuPont Dow Elastomers.
 Aflas® is a registered trademark of Asahi Glass.
 PEEK™ is a trademark of Victrex Plc.
 Enduro-Bond™ is a trademark of Energy & Environmental Services.

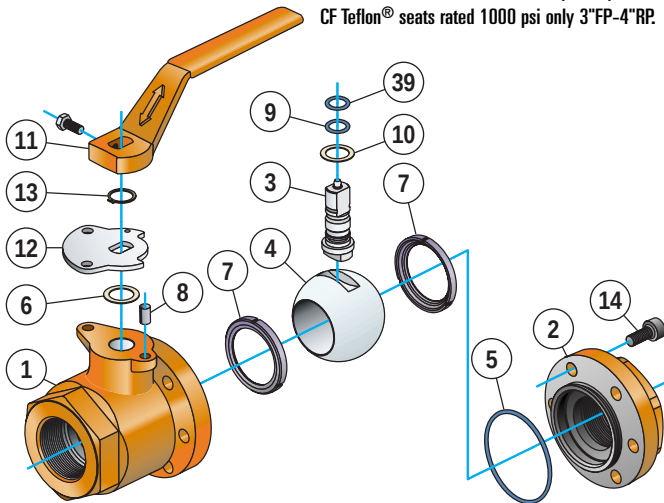
Assem. Base No. XXXX-XXXXX



Assembly Base Numbers

Valve Size (in.)	2 RP	2 FP	3 RP	3 FP	4 RP
Rating (psi)*	2500	2160		1500	
Series CF	6389-	6390-	6391-	6392-	6393-
Rating (psi)	3000				
Series CFH	6395-	6396-	6397-	6398-	6399-
Rating (psi)	5000				
Series CFXH	6375-	6376-			

*CF Teflon® seats rated 1500 psi only 2"RP.
 CF Teflon® seats rated 1000 psi only 3"FP-4"RP.



Dimensional Data (in.)

Valve Size (in.)	2 RP	2 FP	3 RP	3 FP	4 RP
Dimension	2 x 1 1/2	2 x 2	3 x 2	3 x 3	4 x 3
Weight (lbs.)*	12.5	21	25	60	53
A	1 1/2	2		3	
B	CF/CFH	5 3/32	5 3/4	7 1/4	8 1/8
	CFXH	5 3/32	6 1/8	—	—
C	CF/CFH	2 35/64	2 7/8	3 5/8	4
	CFXH	2 35/64	2 13/16	—	—
E	3 21/32	4 3/32		5 11/32	
F	5 3/8	5 27/32		6 11/16	
G	8 1/2			15	
H	1 1/32			1 11/32	
J	.860/.855			1.235/1.230	
K	.560/.556			.621/.618	
L	1			1 1/8	
M	1 3/4			2	
N	1 7/16			1 13/16	
U	2 5/8	3 1/16		4	

* Handle weight included.

Valve Identification Colors

Valve Series	Series CF	Series CFH	Series CFXH
Valve Paint Color	Orange	Brown	Red

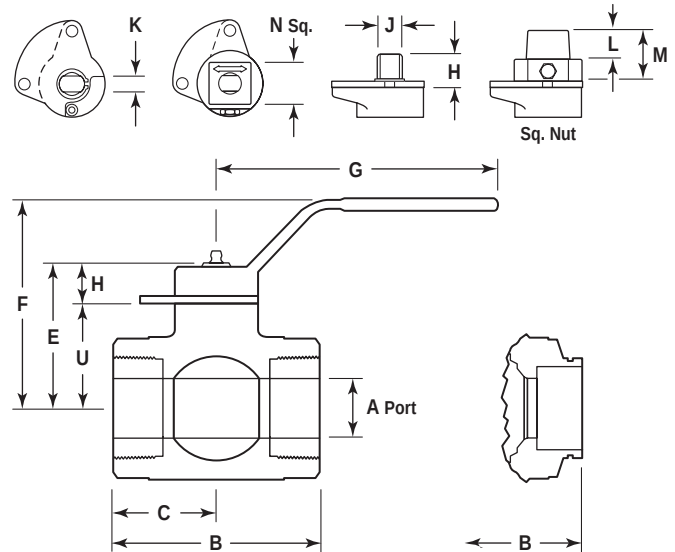
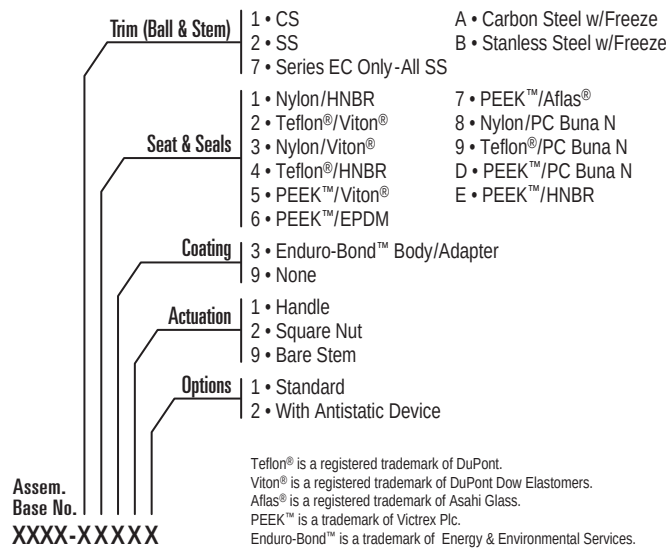
Parts List & Materials

Index	Description	Material
1	Body	A216 WCB
2	Adapter	A216 WCB
3	Stem	Carbon Steel/Zinc Plated or 316 Stainless Steel
4	Ball	1215 CS w/Chrome Over Ni. Plating or 316 SS
5	Body Seal	HNBR, Viton®, PC Buna N, EPDM or Aflas®
6	Stem Bearing	Nylon
7	Seat	Delrin® Reinforced Teflon® or PEEK™

Index	Description	Material
8	Stop	Steel
9	Stem Seal	HNBR, Viton®, PC Buna N, EPDM or Aflas®
10	Thrust Bearing	Teflon® (HT4 when using HT4 Seats)
11	Handle/Sq. Nut	A47 Malleable Iron
12	Stop Plate	Steel Plated
13	Retainer	Spring Steel
14	Cap Screw	Carbon Steel B7 (NACE III) or B7M (NACE II)
39	Weather Seal	Buna N Only

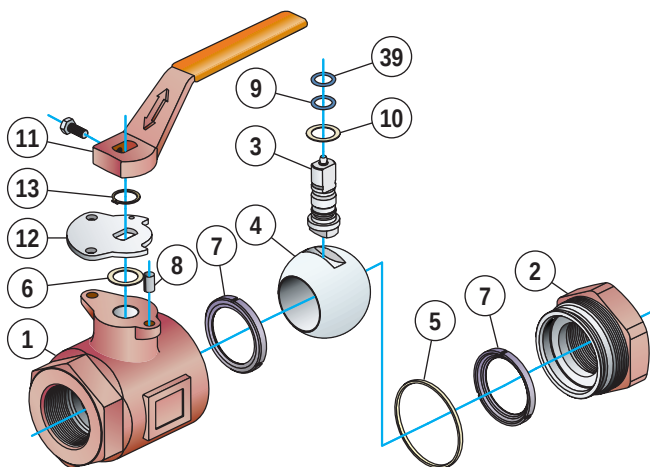


KF Series E, EC & EH Ball Valves



Assembly Base Numbers

Valve Size (in.)	2 x 1 1/2	3 x 2	3 x 3	4 x 3
Rating (psi)	750 CWP			
Series Thrd.	3140-	3141-	3081-	3142-
E Grvd.	3150-	3151-	3084-	3152-
Rating (psi)	750 CWP			
Ser. EC Grvd.	3413-	3414-	—	3415-
Rating (psi)	1000 CWP			
Ser. EH Thrd.	6514-	6515-	—	6516-



Dimensional Data (in.)

Valve Size (in.)	2 RP	3 RP	3 FP	4 RP
Dimension	2 x 1 1/2	3 x 2	3 x 3	4 x 3
Weight (lbs.)*	12.5	22	52	46
A	1 1/2	2	3	
B Thrd.	5 1/4	7 5/16	7 1/2	8 3/4
B Grvd.	5 1/8	7 5/16		8 3/4
Ser. EC	5 1/16	6 1/8	—	
C Thrd.	2 3/4	3 5/16	3 3/4	4 3/8
C Grvd.	2 9/32	3 5/16	3 1/2	4 3/8
E	3 21/32	4 3/32	5 11/32	
F	5 13/32	5 27/32	6 11/16	
G	8 1/2		15	
H	1 1/32		1 11/32	
J	.860/.855		1.235/1.230	
K	.560/.556		.622/.618	
L	1		1 1/8	
M	1 3/4		2	
N	1 7/16		1 13/16	
U	2 5/8	3 1/16	4	

*Handle weight included.

Parts List & Materials

Index	Description	Material
1	Body	E&EH-ASTM 395 Ductile Iron, EC-A351 Gr. CF8M
2	Adapter	E&EH-ASTM 395 Ductile Iron, EC-A351 Gr. CF8M
3	Stem	Carbon Steel/ Zinc Plated or 316 Stainless Steel
4	Ball	1215 CS w/Chrome Over Nickel Plating or 316 SS
5	Body Seal	HNBR, Viton®, PC Buna N, EPDM or Aflas®
6	Stem Bearing	Nylon
7	Seat	Nylon, Reinforced Teflon® or PEEK™
8	Stop	Steel

Index	Description	Material
9	Stem Seal	HNBR, Viton®, PC Buna N, EPDM or Aflas®
10	Thrust Bearing	Teflon® (HT4 when using Hi-Temp Seats & Seals)
11	Handle	A47 Malleable Iron
12	Stop Plate	Steel Plated
13	Retainer	Spring Steel
20	Ribbon Seal Pin	Copper Pin/ Steel Chain
39	Weather Seal	Buna N Only

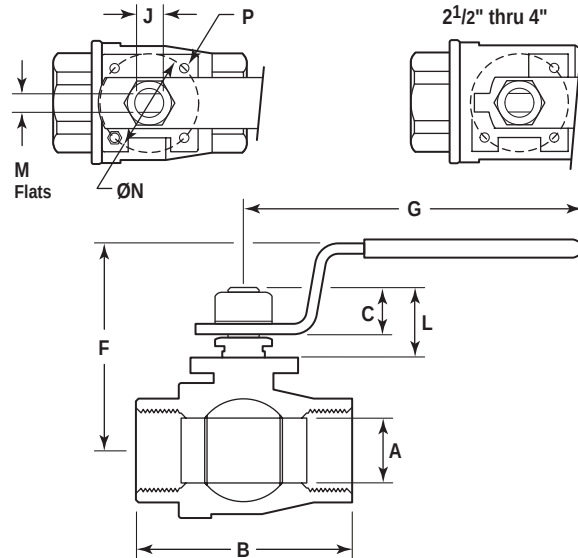


KF Series W Ball Valves

Size	0 • 1/4"	4 • 1"
	1 • 3/8"	6 • 1 1/2"
	2 • 1/2"	7 • 2"
	3 • 3/4"	
Body/Adapter Packing Nut	1 • Carbon Steel w/ Zinc Plating 2 • Stainless Steel (S8000) B • Carbon Steel w/ Black Oxide	
Trim (Ball & Stem)	1 • Stainless Steel	
Actuation	1 • Handle w/ Locking Device 3 • Oval Handle	

Assem. Base No. 0500 X - XXX

All Stainless Steel Series W Valves Conform to NACE MR0175.



Assembly Base Numbers

Valve Size (in.)	1/4	3/8	1/2	3/4
Rating (psi)	2000 CWP			
Series W	5000-	5001-	5002-	5003-
Valve Size (in.)	1	1 1/2	2	
Series W	5004-	5006-	5007-	



Dimensional Data (in.)

Valve Sz (in.)	1/4	3/8	1/2	3/4	1	1 1/2	2
Dim.							
Wt. (lbs.)*	.55	.66	1.13	2.00	4.25	6.88	
A	.43	.49	.59	.79	1.00	1.50	1.97
B	2.32	2.44	2.87	3.35	4.53	5.28	
C	.37	.47	.53	.71			
F	2.13	2.24	2.46	2.70	3.56	3.92	
G	5.31	6.50	6.89				
J	.31	.39	.47	.55			
L	.59	.69	.79	.93	1.06		
M	.20	.31					
N	1.42	1.65	1.97				
P	M5	M6					

* Handle weight included.

Parts List & Materials

Index	Description	Material
1	Body	ASTM A216 Gr. WCB or A351 CF8M
2	Adapter	C12L14 Carbon Steel or 316 Stainless Steel
3	Stem	316 Stainless Steel
4	Ball	316 Stainless Steel
5	Body Seal	Teflon®
7	Seat	Uniseal™

Index	Description	Material
8	Thrust Washer	PTFE
9	Packing	Glass Reinforced Teflon®
11	Handle	304 Stainless Steel
13	Handle Nut	304 Stainless Steel
20	Packing Nut	316 Stainless Steel



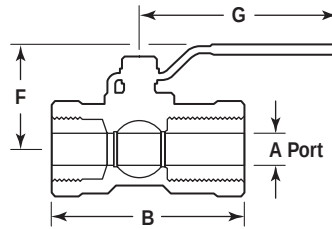
KF Series HC-730 • Carbon Steel Unibody

Assem. Base No. U500 X - XXX	Size	2 • 1/2"	4 • 1"	7 • 2"
	Series	Q • HC-730	T • HXC-730 (1 1/2"-2")	
	Trim (Ball & Stem)	1 • Carbon Steel	2 • Stainless Steel	
	Actuation	1 • Handle	2 • Locking Handle	

Assembly Base Numbers

Valve Size (in.)	1/2	3/4	1	1 1/2	2
Rating (psi)	2000 CWP			1500 CWP*	
Part Number	U5002-XXX	U5003-XXX	U5004-XXX	U5006-XXX	U5007-XXX

*HC 730 = 1500 CWP, HXC 730 = 2000 CWP



Dimensional data

Valve Size (in.)	1/2	3/4	1	1 1/2	2
Dimension					
Weight (lbs.)	.5	.8	1.4	3.1	5.0
A	.40	.54	.68	1.00	1.25
B	2.19	2.62	3.12	4.00	4.50
F	1.63	1.73	2.08	2.58	2.98
G	3.78		5.10	6.10	

Parts List & Materials

Index	Description	Material
1	Body*	CS 12L14 (1/2"-1" HC-730 & 1 1/2"-2" HXC-730) or A216 WCB (1 1/2"-2" HC-730)
2	Retainer	Carbon Steel 12L14
3	Ball	Carbon Steel 12L14 Chrome Plated or 316 Stainless Steel
4	Stem	Carbon Steel 12L14 or 316 Stainless Steel
5	Thrust Washer	Reinforced PTFE

*1 1/2"-2" HXC 730 = 2000 CWP with CS 12L14 body

Index	Description	Material
6	Stem Packing	Reinforced PTFE
7	Packing Nut	304 Stainless Steel
8	Spring Washer	Carbon Steel, Zinc Plated
9	Nuts	Carbon Steel, Zinc Plated
10	Handle	Carbon Steel, Zinc Plated & Vinyl Dipped
11	Seats	Reinforced PTFE

KF Series HC-740 • Carbon Steel 2-Piece

Assem. Base No. O500 X - XXX	Size	0 • 1/4"	2 • 1/2"	4 • 1"	6 • 1 1/2"
	Series	1 • 3/8"	3 • 3/4"	5 • 1 1/4"	7 • 2"
	Trim (Ball & Stem)	P • HC-740	V • HXC-740 (1 1/4"-2")		
	Actuation	1 • CS Plated	2 • 316 SS		
		1 • Handle	2 • Locking Handle		

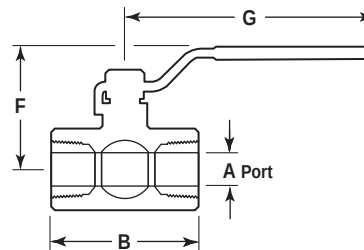
Assembly Base Numbers

Valve Size (in.)	1/4	3/8	1/2	3/4
Rating (psi)	2000 CWP			
Part Number	5000-PXX	5001-PXX	5002-PXX	5003-PXX
Valve Size (in.)	1	1 1/4	1 1/2	2
Rating (psi)	2000 CWP		1500 CWP	
Part Number	5004-P1X	5005-XXX	5006-XXX	5007-XXX

Parts List & Materials

Index	Description	Material
1	Body*	Steel C12L14 (1/4"-1") or A216 WCB (1 1/4"-2"), Zinc Phosphate Coating
2	Stem	Steel C12L14, Nickel Plate or 316 Stainless Steel
3	Thrust Washer	Reinforced PTFE
4	Stem Packing	Reinforced PTFE
5	Packing Nut	304 Stainless Steel
6	Spring Washer	Steel, Zinc Plate

*1 1/4"-2" HXC 740 = 2000 CWP with CS C12L14 body



Dimensional Data (in.)

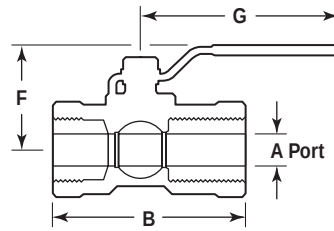
Valve Size (in.)	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Dimension								
Weight (lbs.)	.6	.6	.8	1.4	2.4	2.7	4.5	6.1
A	.40	.54	.68	.88	1.00	1.25	1.50	
B	2.00	2.37	2.90	3.41	3.94	4.65	4.98	
F	1.63	1.73	2.08	2.30	2.76	2.98	3.54	
G	3.78		5.10		6.10		8.60	

Index	Description	Material
7	Nut	Steel, Zinc Plate
8	Handle	Steel, Zinc Plate
8	Handle Cover	Vinyl
9	Ball Seat	Reinforced PTFE
10	Ball	Steel C12L14, Chrome Plate or 316 Stainless Steel
11	End Cap Seal	Reinforced PTFE
12	End Cap	Steel C12L14, Zinc Phosphate Coating



KF Series HC-710 & HS-810 • Carbon & Stainless Steel Unibody

Assem. Base No.	Size	0 • 1/4"	2 • 1/2"	4 • 1"	6 • 1 1/2"
	Series	1 • 3/8"	3 • 3/4"	5 • 1 1/4"	7 • 2"
	Trim (Ball & Stem)	C • HC-710 (CS) D • HS-810 (SS)			
	Actuation	1 • 316 Stainless Steel			
U500 X - XXX		1 • Locking Handle			
		3 • Oval Locking Handle			



Assembly Base Numbers

Valve Size (in.)	1/4	3/8	1/2	3/4
Rating (psi)	2000 CWP			
Series HC-710	U5000-C11	U5001-C11	U5002-C11	U5003-C11
Series HS-810	U5000-D21	U5001-D21	U5002-D21	U5003-D21
Valve Size (in.)	1	1 1/4	1 1/2	2
Series HC-710	U5004-C11	U5005-C11	U5006-C11	U5007-C11
Series HS-810	U5004-D21	U5005-D21	U5006-D21	U5007-D21

Dimensional Data (in.)

Valve Size (in.)	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Dimension								
Weight (lbs.)		0.66		0.93	1.59	2.12	3.22	4.65
A		0.31		0.47	0.62	0.81	1.00	1.25
B		2.60		2.83	3.23	3.54	3.86	4.33
F		1.97		2.20	2.56	2.76	3.29	3.49
G		4.29			5.75		7.40	

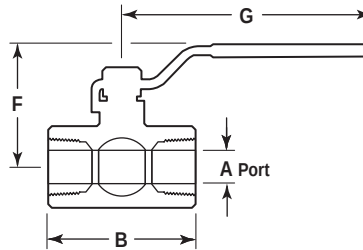
Parts List & Materials

Index	Description	Material
1	Body	A216 WCB/A105
2	Retainer	Carbon Steel 12L14 or 316 Stainless Steel
3	Seat	Reinforced PTFE
4	Ball	316 SS
5	Stem	316 SS

Index	Description	Material
6	Thrust Washer	PTFE
7	Stem Packing	Graphite
8	Packing Nut	Carbon Steel 12L14 or 316 Stainless Steel
9	Handle	Carbon Steel, Zinc Plated & Vinyl Dipped
10	Handle Nut	Carbon Steel, Zinc Plated

KF Series HS-820 • Stainless Steel Seal Welded 2-Piece

Assem. Base No.	Size	0 • 1/4"	2 • 1/2"	4 • 1"	6 • 1 1/2"
	Series	1 • 3/8"	3 • 3/4"	5 • 1 1/4"	7 • 2"
	Trim (Ball & Stem)	S • HS-820 FxF			
	Actuation	2 • 316 Stainless Steel			
0500 X - X22		2 • Locking Handle			



Assembly Base Numbers

Valve Size (in.)	1/4	3/8	1/2	3/4
Rating (psi)	2000 CWP			
Part Number	5000-S22	5001-S22	5002-S22	5003-S22
Valve Size (in.)	1	1 1/4	1 1/2	2
Part Number	5004-S22	5005-S22	5006-S22	5007-S22

Dimensional Data (in.)

Valve Size (in.)	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2
Dimension								
Weight (lbs.)	0.57	0.53	0.73	1.41	1.98	2.77	4.00	5.03
A	.37	.50	.69	.87	1.0	1.25	1.50	
B	2.07	2.34	2.80	3.23	3.57	4.04	4.63	
F	1.76	1.92	2.40	2.56	2.74	2.98	3.17	
G	4.33		5.83		7.76			

Parts List & Materials

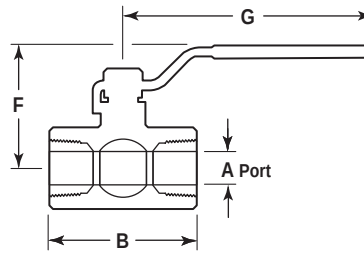
Index	Description	Material
1	Body	A351, CF8M, Seal Welded
2	Ball	A351, CF8M
3	Stem	316 Stainless Steel
4	Body Cap	A351, CF8M Stainless Steel
5	Seat	Reinforced PTFE
6	Stem Seal	Reinforced PTFE

Index	Description	Material
7	Stem Packing	PTFE
8	Packing Nut	316 Stainless Steel
9	Handle (Locking)	304 Stainless Steel, Vinyl Dipped
10	Spring Washer	304 Stainless Steel
11	Lock Nut	304 Stainless Steel



KF Series HB-600 • Bronze 2-Piece

Assem. Base No.	Size	0 • 1/4"	3 • 3/4"	6 • 1 1/2"	9 • 3"
		1 • 3/8"	4 • 1"	7 • 2"	10 • 4"
		2 • 1/2"	5 • 1 1/4"	8 • 2 1/2"	
Series	3 • HB600, Replaces WBZ				
	F • HB600F, FP, 2" Only				
	M • HB600M, RP, 2" Lightweight Design				
Trim (Ball & Stem)	2 • Stainless Steel				
	3 • Hard Chrome Plated Brass Ball/ Unplated Brass Stem				
	2 • Locking Handle				
0500 X - XXX					



Assembly Base Numbers

Valve Size (in.)	1/4		3/8	1/2	3/4	1	1 1/4
Rating (psi)	600 CWP						
Series HB-600	5000-3XX	5001-3XX		5002-3XX	5003-3XX	5004-3XX	5005-3XX
Valve Size (in.)	1 1/2	2	2M*	2F	2 1/2	3	4
Rating (psi)	600 CWP			400 CWP			
Series HB-600	5006-3XX	5007-3XX	5007-MXX	5007-FXX	5008-3XX	5009-3XX	5010-3XX

*2" Lightweight pattern design

Parts List & Materials

Index	Description	Material
1	Body	Brass (B584 C84400)
2	Ball	Hard Chrome Plated Brass or 316 Stainless Steel
3	Seats	Durafil (1/4"-3"), Virgin PTFE (4")
4	Adapter	Brass
5	Body Seal	PTFE (1 1/4"-4" Only)
6	Stem	Brass or 316 Stainless Steel

Dimensional Data (in.)

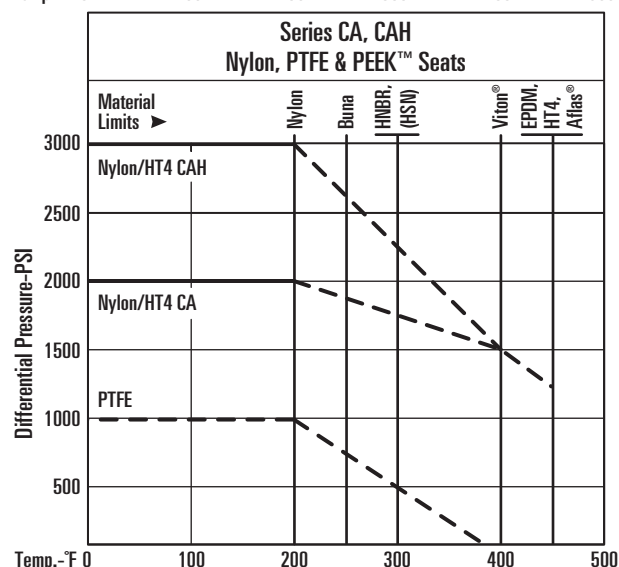
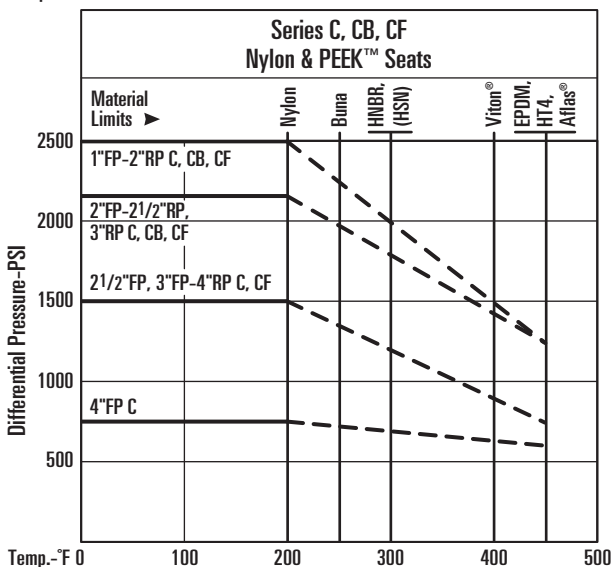
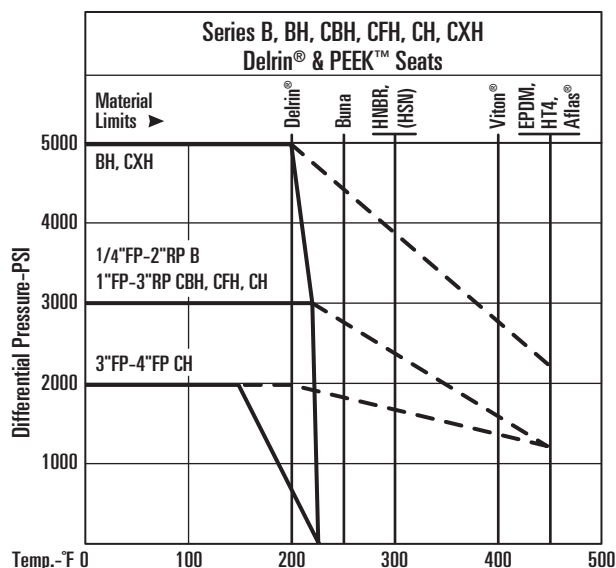
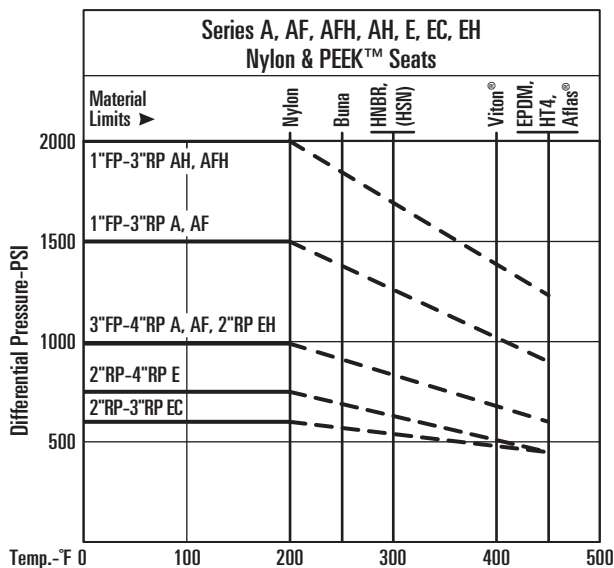
Valve Sz (in.)	1/4	3/8	1/2	3/4	1	1 1/4	1 1/2	2*	2F	2 1/2	3	4
Dimension												
Wt. (lbs.)	0.58	0.60	0.63	1.19	1.70	3.25	4.13	6.38	6.0	12.75	17.75	25.00
A		3/8	1/2	11/16	7/8	1	1 1/4	1 1/2		2	2 1/2	3
B		2 1/16	2 1/4	2 13/16	3 7/16	3 7/8	4 1/4	4 13/16	4 3/4	6 1/2	6 13/16	7 11/16
F		1 7/8	1 15/16	2 1/4	2 3/4	2 7/8	3 1/4	3 5/8		4 3/32	4 3/8	5
G		4 1/16	4 1/16	4 3/16		5 3/4		8 1/8				11

*Also dimensions for 2" 2M lightweight pattern design

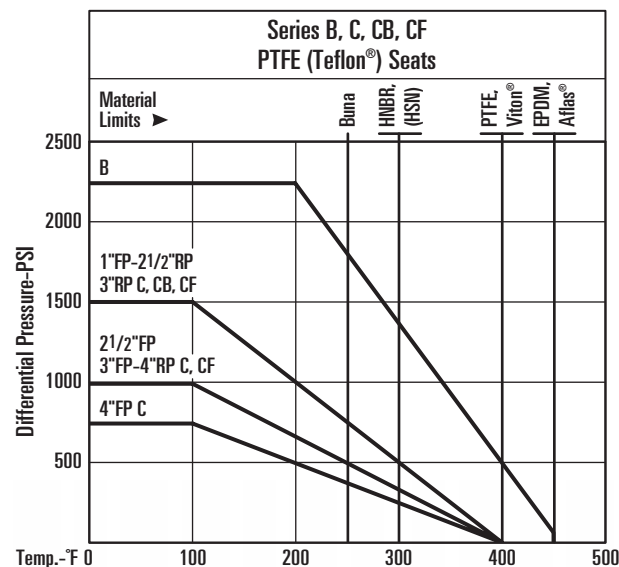
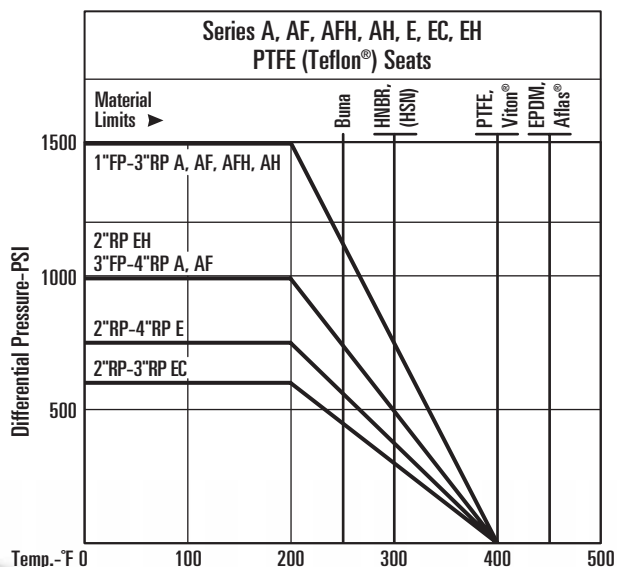
Index	Description	Material
7	Stem Packing	Glass reinforced PTFE
8	Packing Nut	Brass
9	Thrust Washer	Glass reinforced PTFE
10	Handle	Carbon Steel, Plated & Vinyl Dipped
11	Handle Nut	Carbon Steel Plated



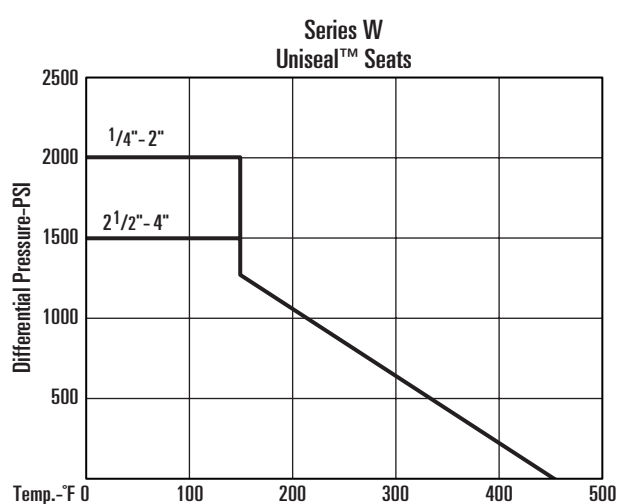
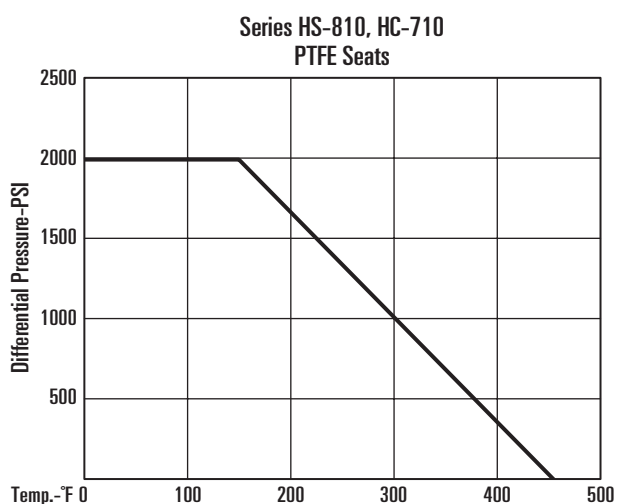
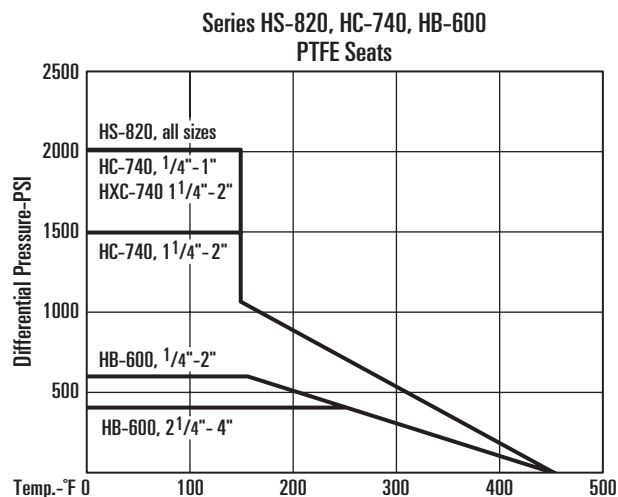
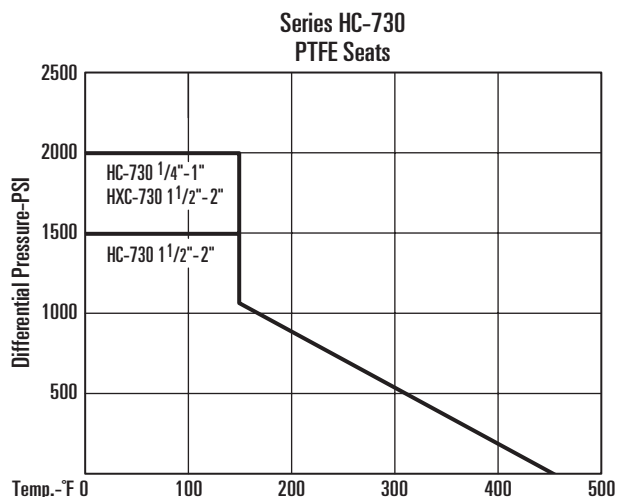
Engineering Data, Pressure Temperature Charts



Floating Ball Valves with Seats made of Teflon®



Engineering Data, Pressure Temperature Charts



Low Temperature Limits

Body Material	°F
WCB	-20°F
LCC	-50°F
CF8M	-50°F
Aluminum Bronze	-50°F
Carbon Steel	-20°F
Stainless Steel	-50°F

Seal Material	°F
Buna N	-30°F
Low Temp Buna N	-50°F
Viton®	-20°F
Aflas®	+32°F
EPDM	-50°F
HSN	-25°F

Seat Material	°F
Nylon/Delrin®	-50°F
Teflon®	-50°F
PEEK™	-50°F

Specification Conformance

The following list contains the most important applicable standards for ball valves. KF valves may be produced in accordance with other international standards on request.

ANSI	B 1.20.1	Pipe threads, general purpose
API	Spec. 6A	Wellhead equipment specifications
	Spec. Q1	Quality Program
	Spec. 5B EUE	External upset tubing threads
ISO	9001:2000	Quality systems model for quality assurance in design, development, production, installation and servicing.
	15156	Materials for use in H ₂ S containing environments in oil and gas production.
MSS	SP-25	Std. marking system for valves, fittings, flanges & unions.
	SP-55	Quality standard for steel castings
NACE	MR0175	Sulfide stress cracking resistant metallic materials for oilfield equipment



Engineering Data

Flow Coefficients (Cv)

Series	Valve Size (in.)																
	1/4	3/8	1/2	3/4	1 RP	1 FP	1 1/4	1 1/2 RP	1 1/2 FP	2 RP	2 FP	2 1/2 RP	2 1/2 FP	3 RP	3 FP	4 RP	4 FP
A	—	—	—	—	—	185	—	—	308	140	500	220	—	220	1390	630	—
AH	—	—	—	—	—	185	—	—	308	—	—	220	—	—	—	—	—
B	6	—	15	30	30	60	—	—	130	110	—	—	—	—	—	—	—
BH	6	—	15	30	30	—	—	—	—	—	—	—	—	—	—	—	—
C	—	—	—	—	—	185	—	—	308	140	500	220	890	220	1390	630	2160
CA	—	—	—	—	—	—	—	—	—	—	531	—	935	—	—	—	—
CB	—	—	—	—	—	185	—	—	—	140	500	—	—	—	—	—	—
CBH	—	—	—	—	—	185	—	—	—	140	500	—	—	—	—	—	—
CH	—	—	—	—	—	185	—	—	308	140	500	—	—	—	—	—	—
CXH	—	—	—	—	—	185	—	—	308	140	—	—	—	—	—	—	—
E	—	—	—	—	—	—	—	—	—	140	—	—	—	220	—	630	—
EC	—	—	—	—	—	—	—	—	—	140	—	—	—	—	—	—	—
EH	—	—	—	—	—	—	—	—	—	140	—	—	—	—	—	—	—
W	7	8	15	35	60	—	105	150	—	300	—	—	—	—	—	—	—
HB-600	6.3	6.3	15	25	40	—	50	75	—	110	450	260	—	400	—	800	—
HC-730	—	—	7	12	25	—	38	52	—	95	—	—	—	—	—	—	—
HC-740	6	12	15	23	36	—	44	64	—	114	—	—	—	—	—	—	—
HS-810	4	4	4	7.5	14	—	19.5	33	—	50	—	—	—	—	—	—	—
HS-820	4.8	4.8	8	12	29	—	50	60	—	110	—	—	—	—	—	—	—

Method of Calculating Flow

The Flow Coefficient “Cv” of a valve is the flow rate of water (gallons/minute) through a fully opened valve, with a pressure drop of 1 psi across the valve. To find the flow of liquid through valve from the Cv, use the following formulas:

Liquid Flow

QL = flow rate of liquid (gal./min.)

ΔP = differential pressure across the valve (psi)

G = specific gravity of liquid (for water, G=1)

$$Q_L = C_v \sqrt{\frac{\Delta P}{G}}$$

Gas Flow

Qg = flow rate of gas (CFH at STP)

P2 = outlet pressure (psia)

g = Specific gravity of gas (for air, g=1.000)

$$Q_g = 61 C_v \sqrt{\frac{P_2 \Delta P}{g}}$$

For non-critical flow

$$\left\{ \frac{\Delta P}{P_2} < 1.0 \right\}$$

Actuation

Pneumatic and electric actuators are optionally available for mounting on KF Ball Valves. Four tapped actuator mounting holes in the stem boss surface are standard with

all Series B, BH ball valves. Consult factory for specific information. For torque requirements of seats made of Teflon®, multiply chart torque by 0.7.

Series A, AH, C, CB & CH Maximum Operating Torque

Valve Size (in.)	Series A, AF		Series AH, AFH		Series C, CF		Series CB		Series CH, CFH	
	Maximum Pressure	Torque (in.-lbs.)	Maximum Pressure	Torque (in.-lbs.)	Maximum Pressure	Torque (in.-lbs.)	Maximum Pressure	Torque (in.-lbs.)	Maximum Pressure	Torque (in.-lbs.)
1	1500	600	2000	730	2500	860	2500	860	3000	1000
1 1/2 FP, 2 RP	1500	900	2000	1200	2500	1450	2500	1450	3000	1690
2 FP, 2 1/2 RP, 3 RP	1500	1200	2000	1625	2160	1750	2160	1750	3000	2310
2 1/2 FP	—	—	—	—	1500	1950	—	—	—	—
3 FP, 4 RP	1000	1200	—	—	1500	2700	—	—	2000	3660
4 FP	—	—	—	—	750	3600	—	—	2000	6000



Engineering Data

Series B, BH, CBH & CXH Maximum Operating Torque

Valve Size (in.)	Series B		Series BH		Series CBH		Series CXH	
	Maximum Pressure	Torque (in.-lbs.)	Maximum Pressure	Torque (in.-lbs.)	Maximum Pressure	Torque (in.-lbs.)	Maximum Pressure	Torque (in.-lbs.)
1/4 FP	3000	170	5000	210	—	—	—	—
3/8 FP	3000	170	5000	210	—	—	—	—
1/2 FP, 3/4 RP	3000	200	5000	210	—	—	—	—
3/4 FP, 1 RP	3000	200	5000	260	—	—	—	—
1 FP	3000	320	—	—	3000	1000	5000	1420
1 1/2 FP, 2 RP	3000	850	—	—	3000	1670	5000	2425
2 FP	—	—	—	—	3000	2310	—	—

Series CA Max. Operating Torq.

Valve Size (in.)	Series CA	
	Maximum Pressure	Torque (in.-lbs.)
2 1/16	2000	1625
2 9/16	2000	2650

Series E, EC & EH Maximum Operating Torque

Valve Size (in.)	Series E		Series EC		Series EH	
	Maximum Pressure	Torque (in.-lbs.)	Maximum Pressure	Torque (in.-lbs.)	Maximum Pressure	Torque (in.-lbs.)
1 1/2	750	720	600	665	1000	785
2	750	960	600	850	—	—
3	750	2160	—	—	—	—

Series W Max. Flow Coefficient (C_v) & Operating Torque

Valve Size (in.)	Series W	
	C _v Rating	Torque (in.-lbs.)
1/4	7	60
3/8	8	60
1/2	15	80
3/4	35	90
1	60	150
1 1/4	105	230
1 1/2	150	250
2	300	400
2 1/2	480	600
3	750	1050
4	900	1500

Series HB-600, HS810 & HS-820 Maximum Operating Torque

Valve Size (in.)	Series HB-600		Series HS-810		Series HS-820	
	Maximum Pressure	Torque (in.-lbs.)	Maximum Pressure	Torque (in.-lbs.)	Maximum Pressure	Torque (in.-lbs.)
1/4	600	60	2000	40	2000	30
3/8	600	60	2000	40	2000	30
1/2	600	60	2000	40	2000	45
3/4	600	90	2000	50	2000	90
1	600	150	2000	115	2000	170
1 1/4	600	200	2000	180	2000	200
1 1/2	600	250	2000	230	2000	230
2, 2M	600	320	2000	315	2000	320
2F	600	500	—	—	—	—
2 1/2	400	500	—	—	—	—
3	400	600	—	—	—	—
4	400	800	—	—	—	—

HC-730 & HC-740 Maximum Operating Torque

Valve Size (in.)	Series HC-730		Series HC-740	
	Maximum Pressure	Torque (in.-lbs.)	Maximum Pressure	Torque (in.-lbs.)
1/4	—	—	2000	42
3/8	—	—	2000	42
1/2	2000	42	2000	100
3/4	2000	100	2000	125
1	2000	125	2000	200
1 1/4	1500	164	1500	225
1 1/2	1500	210	1500	283
2	1500	270	1500	410



Worldwide Sales Offices



KF Industries, a Circor International Company, reaches into every corner of the globe serving the oil & gas and industrial marketplace. Supplying an extensive range of product offerings through a worldwide network of manufacturer representatives and distributors, KF Industries is the right choice for all your flow control needs.

World Headquarters

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