

# SAFELOK<sup>®</sup>

## Instrumentation Ball Valves



316 Stainless Steel

Pressures up to 10,000 PSI



One of the most comprehensive component design and manufacture packages available today to the Oil and Petrochemical Industry is offered by Safelok Components.

Harnessing the demands of the industry for Total Quality Management (TQM), the Safelok indigenous quality philosophy provides a range of Valves and Instrumentation Fittings finished to the highest standards.



Also ideal for other industrial applications, where significant opportunities exist for component replacement and enhancement. Construction material specification includes Stainless Steel, Aluminium Bronze & Carbon Steel. A variety of alternative exotic material specifications are available eg. Monel, Hasteloy, Incoloy and Titanium.

Maintaining their TQM practices throughout the manufacturing process, Safelok ensure all materials utilised in the completion of major components are traceable. Copies of the original mill certificates are retained for future reference.



All products are manufactured in compliance with ISO 9001:2008 / ISO 14001:2004  
Safeloks capabilities also extend to Instrumentation Procurement Packages for major Oil Companies and the Construction Industry, both in the United Kingdom and throughout the World.

**SAFELOK®**

SAFELOK is a registered trade mark of Safelok Components Limited



BRITISH DESIGN AND MANUFACTURE







SAFELOK LIMITED is housed in a modern factory in Wigan, Lancashire, England. An area renowned for its manufacturing skills. It is also ideally situated to all major motorway networks and Manchester International Airport.

One of the most comprehensive component design and manufacture packages available today to the Oil and Petrochemical Industry is offered by Safelok Components.

Harnessing the demands of the industry for Total Quality Management (TQM), the Safelok indigenous quality philosophy provides a large range of Valves and Instrumentation Fittings to the highest standards to meet the ever increasing demand of the industry.

Safelok is aware of its environmental commitments and all manufacturing procedures conform to ISO 14001 - 2004.



Quality Assurance Certificate  
ISO 9001:2008



Environmental Certificate  
ISO 14001:2004



Firesafe Certificate

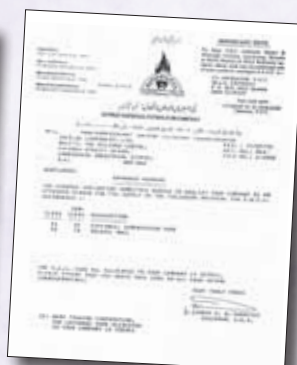


Design Certificate

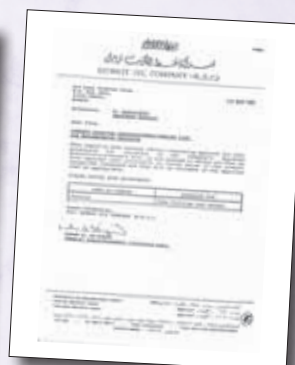
## APPROVALS



ARAMCO



Kuwait NPC



Kuwait Oil Company



Abu Dhabi Company for  
Onshore Oil Operations  
(ADCO)

Safelok products have serviced the industry for over 25 years and we are proud of our achievements in acquiring many accreditations.

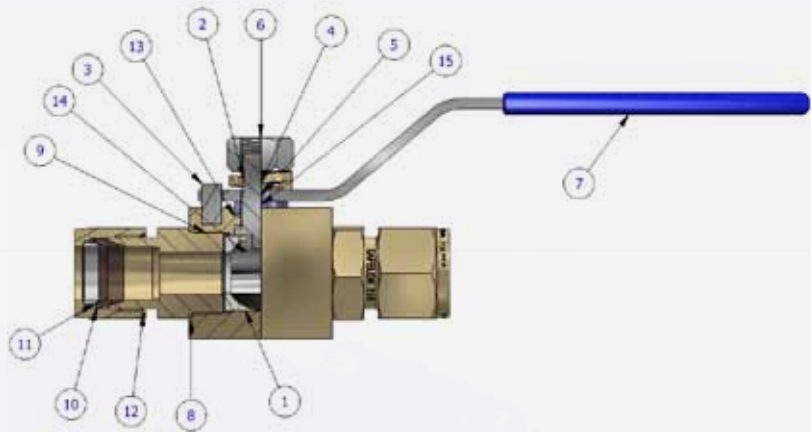
# SAFELOK INSTRUMENTATION BALL VALVES

Safelok offers a wide range of ball valves manufactured to the highest standards to meet the most demanding application requirements.

These valves are available in a wide range of materials, designs, sizes and pressure class.

For fluids under the same service condition, Safelok ball valves employ the floating ball design to provide positive shut-off of fluids.

Because Safelok ball valves can be made from a variety of materials, these valves have found versatility in a range of service conditions and used effectively with various fluids and gases.



- 1/ **Valve Body:** Safelok Ball valve bodies are carefully designed to pressure ratings between 1,000psi and 10,000 psi.
- 2/ **Valve Stem:** Safelok Ball valves boasts of a blow-out proof stem design to ensure that the valves are fatigue resistant and well suited for even the most rugged service conditions.
- 3/ **Dowel Pin:** A stainless steel dowel pin provides a “dead stop” for the valve handles.
- 4/ **Spring Washer:** A spring washer firmly sits between the nut and handle to keep the nut locked in place while reducing the torque required to operate the valve.
- 5/ **Ball Valve Handle:** Safelok Ball valves are fitted with a choice of either laser cut stainless steel handles or pointer handles and are durable over diverse service conditions.
- 6/ **Ball Valve Handle Nut:** Safelok Ball valves are equally fitted with a stainless steel Hex nut to secure the handle in place.
- 7/ **Ball Valve Handle Sleeve:** Vinyl dip moulded plastic are used on Safelok ball valve handles and are durable yet stretch just enough to provide a secure fit while offering a comfortable grip to the user.
- 8/ **End Connector Seal:** The end connector seals used on Safelok ball valves are designed to precision and from either PTFE or PEEK which is required to provide effective sealing at the design pressure.
- 9/ **End Connector:** Safelok Ball Valves come with a variety of end connectors from single or twin ferrule compression ends, Butt weld connectors, Socket weld connectors to BSPP, BSPT or NPT threaded end connectors.
- 10/ **End Stem Seal:** Safelok Ball valves are equipped with two stem seals designed to provide effective sealing around the stem without suffering from wear in regular service.
- 11/ **Ball:** The Balls that are used in Safelok Ball valves are polished in order to reduce the resistance between the ball and the fluid it will convey. This also ensures a longer life of the ball.
- 12/ **Stem Spacer:** Stainless steel Stem Spacer ensures that the stem seals receive the correct pressure for effective sealing of the valve stem as well as providing adequate clearance between valve handle and body.



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## BALL VALVES - L & LR SERIES

### ONE PIECE BALL VALVE



Part No.  
L15NSPH



Part No.  
L15NSLH

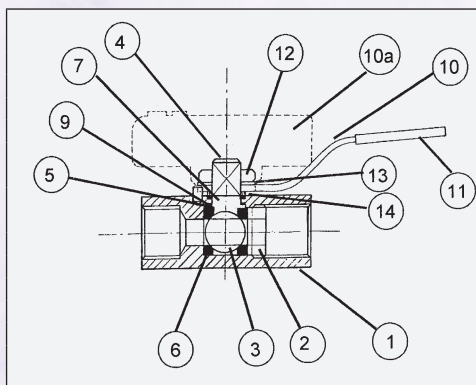
An economically designed valve with the internals being assembled through the threads, offering a safe and inexpensive style of valve suitable for a wide range of applications.

#### How to Order

**Eg. Code: L-15-N-S-PH =**  
1,000 psi rated,  
1/2" NPT 316 S/Steel,  
Ball Valve,  
Pointer Handle.

#### Features

- Pressure rating 1,000 psi or 2,000 psi
- Robust one piece design
- Internally loaded blow-out proof stem
- Floating ball for positive shut-off
- Low operating torque
- Smooth 1/4 turn action
- Maintenance free
- Choice of lever or pointer handles
- Locking kit available
- Different end connections available
- 100% Factory tested
- Fully traceable material
- Standard materials 316 Stainless Steel
- Alternative materials available on request



ITEM	COMPONENT	MATERIAL
1	Body	316 S 11 *
2	Insert	316 S 11 *
3	Ball	316 S 11 *
4	Stem	316 S 11 *
5	Stem Seal	RTFE
6	Seats	PTFE / RTFE
7	Top Seal	RTFE
8	N/A	Stainless Steel
9	Pin	Stainless Steel
10	Lever Handle	Stainless Steel
10a	Pointer Handle	MAZAK 3-Coated
11	Handle Sleeve	PVC
12	Nut	A2 SS
13	Washer	A2 SS
14	Spacer	316 SS

#### Product Coding (Dimensions for reference only)

VALVE SERIES	SIZE	THREADS	MATERIAL	HANDLE	OPTIONS
L - 1,000 psi	08 - 1/4"	N - NPT	S - 316 SS	PH - Pointer	LK - Locking
LR - 2,000 psi	10 - 3/8"	P - BSPP	SL - 316L SS	LH - Lever	
	15 - 1/2"	T - BSPT	C - C/Steel		
	20 - 3/4"		D - Duplex F51		
	25 - 1"		SD - S.Duplex F55/F53		
	40 - 1 1/2"		U - 6MO F44		
	50 - 2"		M - Monel		
			A - Ali Bronze		
			I625 - Alloy 625		
			I825 - Alloy 825		
			TI - Titanium GR 2		
			HC - Hastelloy C276		

## BALL VALVES - H & HP SERIES

### THREE PIECE BALL VALVE


Part No.  
H15NSPH

Part No.  
HP15NSLH

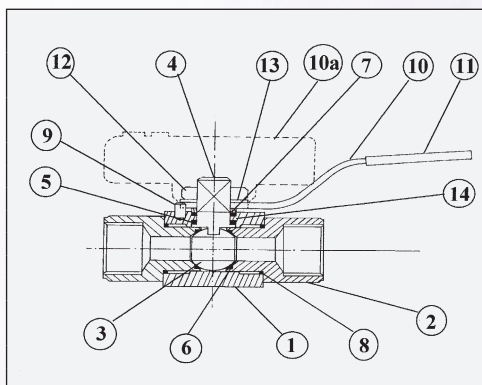
The original versatile ball valve, constructed as three piece, enabling a wide range of ends to be fitted to the standard centre section eg. female/ female, male/ female, also easy to actuate with any actuator.

#### How to Order

**Eg. Code: HP-15-N-S-LH =**  
6,000 psi rated,  
1/2" NPT 316 S/Steel,  
Ball Valve,  
Lever Handle.

#### Features

- Pressure rating 1,000 psi or 6,000 psi.
- Flexible three piece design.
- Internally loaded blow-out proof stem.
- Floating ball for positive shut-off.
- Low operating torque.
- Smooth 1/4 turn action.
- Replaceable seats and seals.
- Choice of lever or pointer handles.
- Locking kit available.
- Wide range of end connections.
- Panel mounting option.
- 100% Factory tested.
- Can be easily actuated.
- Fully traceable material.
- Standard materials 316 Stainless Steel.
- Alternative materials available on request.



ITEM	COMPONENT	MATERIAL
1	Body	316 S 11 *
2	End Connectors	316 S 11 *
3	Ball	316 S 11 *
4	Stem	316 S 11 *
5	Stem Seal	RTFE
6	Seats	PTFE / PVDF
7	Top Seal	RTFE
8	Body Seal	PTFE
9	Pin	Stainless Steel
10	Lever Handle	Stainless Steel
10a	Pointer Handle	MAZAK 3
11	Handle Sleeve	PVC
12	Nut	A2 SS
13	Washer	A2 SS
14	Spacer	316 SS

#### Product Coding (Dimensions for reference only)

VALVE SERIES	SIZE	THREADS	MATERIAL	HANDLE	OPTIONS
H - 1,000 psi	08 - 1/4"	N - NPT	S - 316 SS	PH - Pointer	LK - Locking
HP - 6,000 psi	10 - 3/8"	P - BSPP	SL - 316L SS	LH - Lever	
	15 - 1/2"	T - BSPT	C - C/Steel		
	20 - 3/4"		D - Duplex F51		
	25 - 1"		SD - S.Duplex F55/F53		
	40 - 1 1/2"		U - 6MO F44		
	50 - 2"		M - Monel		
			A - Ali Bronze		
			I625 - Alloy 625		
			I825 - Alloy 825		
			TI - Titanium GR 2		
			HC - Hastelloy C276		

BALL VALVES - H/C & HP/C SERIES  
THREE PIECE COMPRESSION ENDED BALL VALVE



Part No.  
H15C2SPHLK



Part No.  
HP15C2SLH

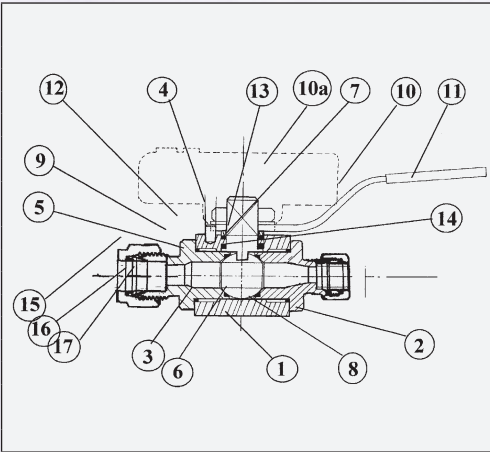
A versatile ball valve, constructed as three piece, enabling a wide range of compression ends to be fitted to the standard centre section.

How to Order

**Eg. Code: H-15-C2-S-PH-LK =**  
1,000 psi rated,  
316 S/Steel,  
Ball Valve with twin ferrules for 1/2" O.D. Tube,  
Lockable Pointer Handle.

Features

- Pressure rating 1,000 psi or 6,000 psi.
- Flexible three piece design.
- Internally loaded blow-out proof stem.
- Floating ball for positive shut-off.
- Low operating torque.
- Smooth 1/4 turn action.
- Replaceable seats and seals.
- Choice of lever or pointer handles.
- Locking kit available.
- Twin or single ferrule end connections.
- Metric or fractional tube sizes.
- Panel mounting option.
- 100% Factory tested.
- Can be easily actuated.
- Fully traceable material.
- Standard materials 316 Stainless Steel.
- Alternative materials available on request.



ITEM	COMPONENT	MATERIAL
1	Body	316 S 11 *
2	End Connectors	316 S 11 *
3	Ball	316 S 11 *
4	Stem	316 S 11 *
5	Stem Seal	RTFE
6	Seats	PTFE / PVDF
7	Top Seal	RTFE
8	Body Seal	PTFE
9	Pin	Stainless Steel
10	Lever Handle	Stainless Steel
10a	Pointer Handle	MAZAK 3
11	Handle Sleeve	PVC
12	Nut	A2 SS
13	Washer	A2 SS
14	Spacer	316 SS
15	Nut	316 SS
16	Ferrule Back	316 SS
17	Ferrule Front	316 SS

Product Coding (Dimensions for reference only)

VALVE SERIES	SIZE	THREADS	MATERIAL	HANDLE	OPTIONS
H - 1,000 psi	06	Fractional	A - Ali/Bronze	PH - Pointer	ACT - Actuator use
HP - 6,000 psi	08 - 1/4"	C1 - Single ferrule	C - C/Steel	LH - Lever Handle	AE - Actuated electric
	10 - 3/8"	C2 - Twin ferrule	D - Duplex SS		DA - Double acting
	15 - 1/2"	Metric	H - Hasteloy		EP - Ends pinned
	20 - 3/4"	MC1 - Single ferrule	I - Incoloy		LK - Locking
	25 - 1"	MC2 - Twin ferrule	M - Monel		PM - Panel mount
	50 - 2"		S - 316 SS		SR - Spring return
			T - Titanium		
			X - Special		
			Z - Zirconium		



## BALL VALVES - HX SERIES

### THREE PIECE HIGH PRESSURE BALL VALVE



Part No.  
HX15NSLH

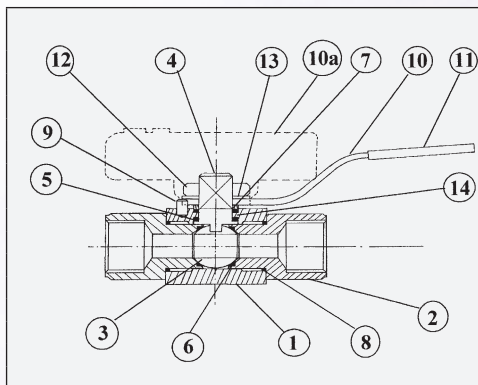
A robust high pressure valve, constructed as three piece, with high performance seats and seals, enabling a wide range of ends to be fitted to the standard centre section eg. female/ female, male/ female, also easy to actuate with any actuator.

#### How to Order

**Eg. Code: HX-15-N-S-LH =**  
10,000 psi rated,  
1/2" NPT 316 S/Steel,  
Ball Valve,  
Lever Handle.

#### Features

- Pressure rating 10,000 psi.
- Flexible three piece design.
- Internally loaded blow-out proof stem.
- Floating ball for positive shut-off.
- Low operating torque.
- Smooth 1/4 turn action.
- Replaceable seats and seals.
- Choice of lever or pointer handles.
- Locking kit available.
- Wide range of end connections.
- Panel mounting option.
- 100% Factory tested.
- Can be easily actuated.
- Fully traceable material.
- Standard materials 316 Stainless Steel.
- Alternative materials available on request.



ITEM	COMPONENT	MATERIAL
1	Body	316 S 11 *
2	End Connectors	316 S 11 *
3	Ball	316 S 11 *
4	Stem	316 S 11 *
5	Stem Seal	RTFE
6	Seats	PVDF
7	Top Seal	RTFE
8	Body Seal	PTFE
9	Pin	Stainless Steel
10	Lever Handle	Stainless Steel
10a	Pointer Handle	MAZAK 3
11	Handle Sleeve	PVC
12	Nut	A2 SS
13	Washer	A2 SS
14	Spacer	316 SS

#### Product Coding (Dimensions for reference only)

VALVE SERIES	SIZE	THREADS	MATERIAL	HANDLE	OPTIONS
HX - 10,000 psi	08 - 1/4"	N - NPT	S - 316 SS	PH - Pointer	ACT - Actuator use
	10 - 3/8"	P - BSPP	SL - 316L SS	LH - Lever	AE - Actuated electric
	15 - 1/2"	T - BSPT	C - C/Steel		DA - Double acting
	20 - 3/4"		D - Duplex F51		LK - Locking
	25 - 1"		SD - S.Duplex F55/F53		PM - Panel mount
			U - 6MO F44		SR - Spring return
			M - Monel		
			A - Ali Bronze		
			I625 - Alloy 625		
			I825 - Alloy 825		
			TI - Titanium GR 2		
			HC - Hastelloy C276		

## BALL VALVES 3H & 3HP SERIES

### THREE WAY BALL VALVE



Part No.  
3H10C2SPHLK



Part No.  
3HP08NSLH

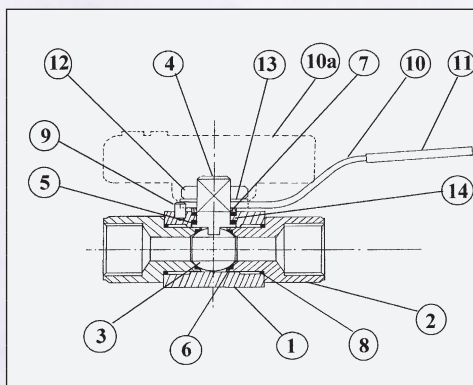
This range of three way diverter valves has been developed with flexibility of end connections to suit your requirements. Available with either side or bottom entry inlet.

#### How to Order

**Eg. Code: 3H-10-N-S-PH-LK =**  
1,000 psi rated,  
3/8" NPT 316 S/Steel,  
Ball Valve,  
Lockable Pointer Handle.

#### Features

- Pressure rating 1,000 psi or 6,000 psi.
- Flexible three piece design.
- Side or bottom entry.
- Internally loaded blow-out proof stem.
- Floating ball for positive shut-off.
- Smooth 1/4 turn action.
- Low operating torque.
- Replaceable seats and seals.
- Alternative materials available on request.
- Choice of lever or pointer handles.
- Locking kit available.
- Wide range of end connections.
- 100% Factory tested.
- Panel mounting option.
- Can be easily actuated.
- Fully traceable material.
- Standard materials 316 Stainless Steel.



ITEM	COMPONENT	MATERIAL
1	Body	316 S 11 *
2	End Connectors	316 S 11 *
3	Ball	316 S 11 *
4	Stem	316 S 11 *
5	Stem Seal	RTFE
6	Seats	PTFE / PVDF
7	Top Seal	RTFE
8	Body Seal	PTFE
9	Pin	Stainless Steel
10	Lever Handle	Stainless Steel
10a	Pointer Handle	MAZAK 3
11	Handle Sleeve	PVC
12	Nut	A2 SS
13	Washer	A2 SS
14	Spacer	316 SS

#### Product Coding (Dimensions for reference only)

VALVE SERIES	SIZE	THREADS	MATERIAL	HANDLE	OPTIONS
3H - 1,000 psi	08 - 1/4"	N - NTP	S - 316 SS	PH - Pointer	ACT - Actuator use
3HP - 6,000 psi	10 - 3/8"	P - BSPP	SL - 316L SS	LH - Lever	AE - Actuated electric
	15 - 1/2"	T - BSPT	C - C/Steel		DA - Double acting
	20 - 3/4"	C1 - Single ferrule	D - Duplex F51		EP - Ends pinned
	25 - 1"	C2 - Twin ferrule	SD - S-Duplex F55/F53		LK - Locking
			U - 6MO F44		PM - Panel mount
			M - Monel		SR - Spring return
			A - Ali Bronze		
			I625 - Alloy 625		
			I825 - Alloy 825		
			TI - Titanium GR 2		
			HC - Hastelloy C276		

## BALL VALVES - W & WP SERIES

### THREE PIECE BOLTED BALL VALVE



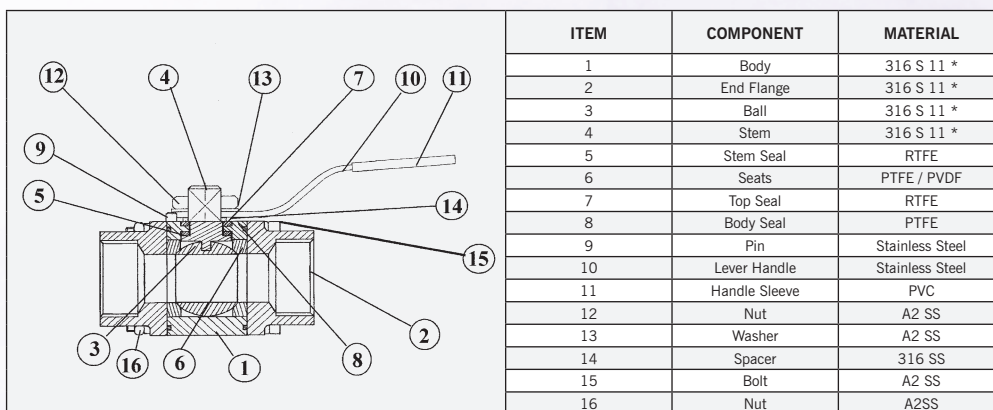
The bolted ball valve offers flexibility and interchangeability. It is manufactured with a choice of threaded, socket, or butt weld ends for installing the valve into the pipeline. Once installed it is easily maintained by removal of the centre section for renewal of the seats and seals prolonging the valve life.

#### How to Order

**Eg. Code: W-15-N-S-LH =**  
1,500 psi rated,  
1/2" NPT 316 S/Steel,  
Ball Valve,  
Lever Handle.

#### Features

- Pressure rating 1,500 psi or 3,500 psi.
- Flexible three piece design.
- Internally loaded blow-out proof stem.
- Floating ball for positive shut-off.
- Low operating torque.
- Smooth 1/4 turn action.
- Replaceable seats and seals.
- Ease of maintenance.
- Locking kit available.
- Wide range of end connections.
- Can be easily actuated.
- 100% Factory tested.
- Fully traceable material.
- Standard materials 316 Stainless Steel.
- Alternative materials available on request.



#### Product Coding (Dimensions for reference only)

VALVE SERIES	SIZE	THREADS	MATERIAL	HANDLE	OPTIONS
W - 1,500 psi	08 - 1/4"	N - NTP	S - 316 SS	PH - Pointer	ACT - Actuator use
WP - 3,500 psi	10 - 3/8"	P - BSPP	SL - 316L SS	LH - Lever	AE - Actuated electric
	15 - 1/2"	T - BSPT	C - C/Steel		DA - Double acting
	20 - 3/4"	BW - Butt weld	D - Duplex F51		LK - Locking
	25 - 1"	SW - Socket weld	SD - S.Duplex F55/F53		SR - Spring return
	32 - 1 1/4"	F - Flanged	U - 6MO F44		
	40 - 1 1/2"		M - Monel		
	50 - 2"		A - Ali Bronze		
			I625 - Alloy 625		
			I825 - Alloy 825		
			TI - Titanium GR 2		
			HC - Hastelloy C276		



## BALL VALVES - FS SERIES

### THREE PIECE FIRESAFE BALL VALVE



Part No.  
FS15NSLHLK

The firesafe ball valve series offer a sturdy but compact design of a firesafe ball valve with antistatic facility. It is manufactured with a choice of threaded, socket, weld or compression ends for installation into the pipeline.

#### How to Order

**Eg. Code: FS-15-N-S-LH-LK =**  
6,000 psi rated,  
1/2" NPT 316 S/Steel,  
Ball Valve,  
Lockable Lever Handle.

#### Features

- Pressure rating to 6,000 psi
- Flexible three piece design
- Patented 2-piece blowout proof stem
- Antistatic facility
- Encapsulated PEEK seats
- Floating ball type for positive shut-off
- Smooth 1/4 turn action
- Wide range of end connections
- Fully traceable materials
- Firesafe to BS-EN10497 / API 6FA
- Lockable handle
- Bolted stem cap design
- Grafoil stem and body firesafe seals
- Low operating torque
- 100% factory tested

ITEM	COMPONENT	MATERIAL
1	Body	316 S 11 *
2	End Connectors	316 S 11 *
3	Ball	316 S 11 *
4	Stem	316 S 11 *
5	Stem Seal	RTFE
6	Seats	PTFE / PVDF
7	Top Seal	RTFE
8	Body Seal	PTFE
9	Pin	Stainless Steel
10	Lever Handle	Stainless Steel
10a	Pointer Handle	MAZAK 3
11	Handle Sleeve	PVC
12	Nut	A2 SS
13	Washer	A2 SS
14	Spacer	316 SS

#### Product Coding (Dimensions for reference only)

VALVE SERIES	SIZE	THREADS	MATERIAL	HANDLE	OPTIONS
FS - 6,000 psi	08 - 1/4"	N - NTP	S - 316 SS	PH - Pointer	ACT - Actuator use
	10 - 3/8"	P - BSPP	SL - 316L SS	LH - Lever	AE - Actuated electric
	15 - 1/2"	T - BSPT	C - C/Steel		DA - Double acting
	20 - 3/4"	C1 - Single ferrule	D - Duplex F51		EP - Ends pinned
	25 - 1"	C2 - Twin ferrule	SD - S.Duplex F55/F53		LK - Locking
			U - 6MO F44		PM - Panel mount
			M - Monel		SR - Spring return
			A - Ali Bronze		
			I625 - Alloy 625		
			I825 - Alloy 825		
			TI - Titanium GR 2		
			HC - Hastelloy C276		

## BALL VALVES - CS SERIES

### THREE PIECE CARBON STEEL BALL VALVE



Part No.  
CS15NCPH

The Safelok three piece carbon steel ball valve offers a low cost but durable design and zinc plated to withstand the elements. It is manufactured with a choice of threaded, socket, weld or compression ends for installing the valve into the pipeline.

#### How to Order

**Eg. Code: CS-15-N-C-PH =**  
3,000 psi rated,  
Carbon Steel,  
1/2" NPT,  
Ball Valve,  
Pointer Handle.

#### Features

- Pressure rating to 3,000 psi
- Patented 2-piece blowout proof stem
- Firesafe to BS-EN10497 / API 6FA
- Fully traceable materials
- Lockable handle option
- 100% factory tested
- Replaceable seats and seals
- Maintenance free
- Floating ball type for positive shut-off
- Internally loaded blow-out proof stem
- Smooth 1/4 turn action
- Low operating torque
- Wide range of end connections
- Zinc Plated

ITEM	COMPONENT	MATERIAL
1	Body	316 S 11 *
2	End Flange	316 S 11 *
3	Ball	316 S 11 *
4	Stem	316 S 11 *
5	Stem Seal	RTFE
6	Seats	PTFE / PVDF
7	Top Seal	RTFE
8	Body Seal	PTFE
9	Pin	Stainless Steel
10	Lever Handle	Stainless Steel
11	Handle Sleeve	PVC
12	Nut	A2 SS
13	Washer	A2 SS
14	Spacer	316 SS
15	Bolt	A2 SS
16	Nut	A2SS

#### Product Coding (Dimensions for reference only)

VALVE SERIES	SIZE	THREADS	MATERIAL	HANDLE	OPTIONS
CS - 3,000 psi	08 - 1/4"	N - NTP	C - C/Steel	PH - Pointer	ACT - Actuator use
	10 - 3/8"	P - BSPP		LH - Lever	AE - Actuated electric
	15 - 1/2"	T - BSPT			DA - Double acting
	20 - 3/4"	C1 - Single ferrule			LK - Locking
	25 - 1"	C2 - Twin ferrule			SR - Spring return

## BALL VALVES CV SERIES

### POPPET CHECK VALVE



Part No.  
CV08FNS



Part No.  
CV15C2S

**A very compact and robust non-return valve, designed for high flow and low pressure drop in service, suitable for many arduous duties with most aggressive mediums.**

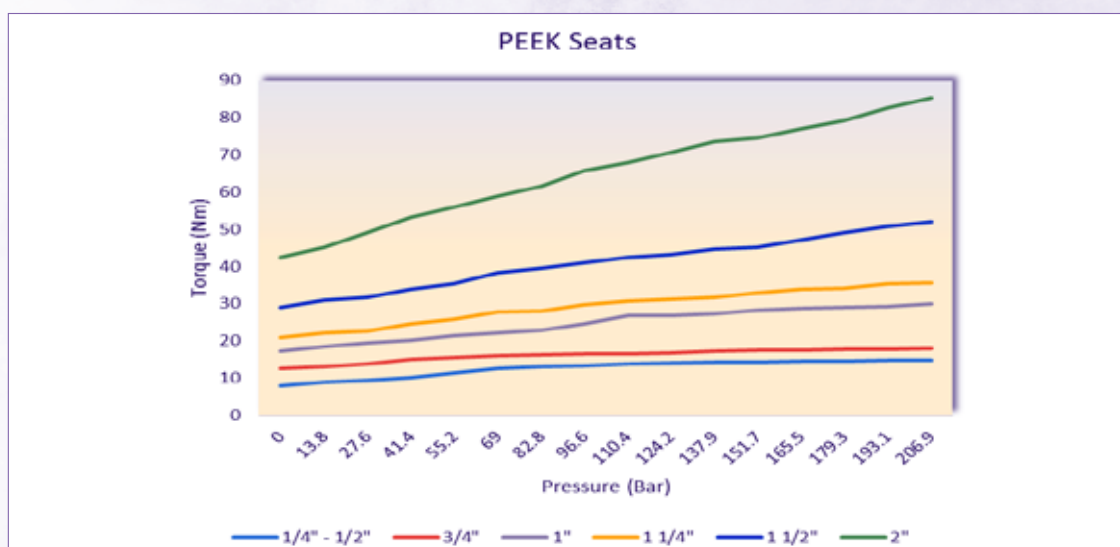
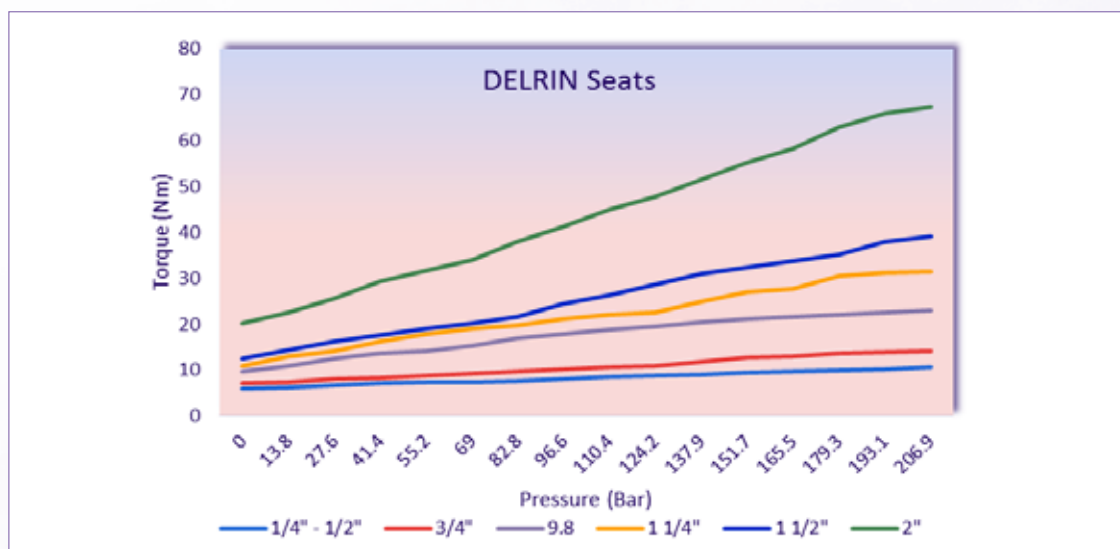
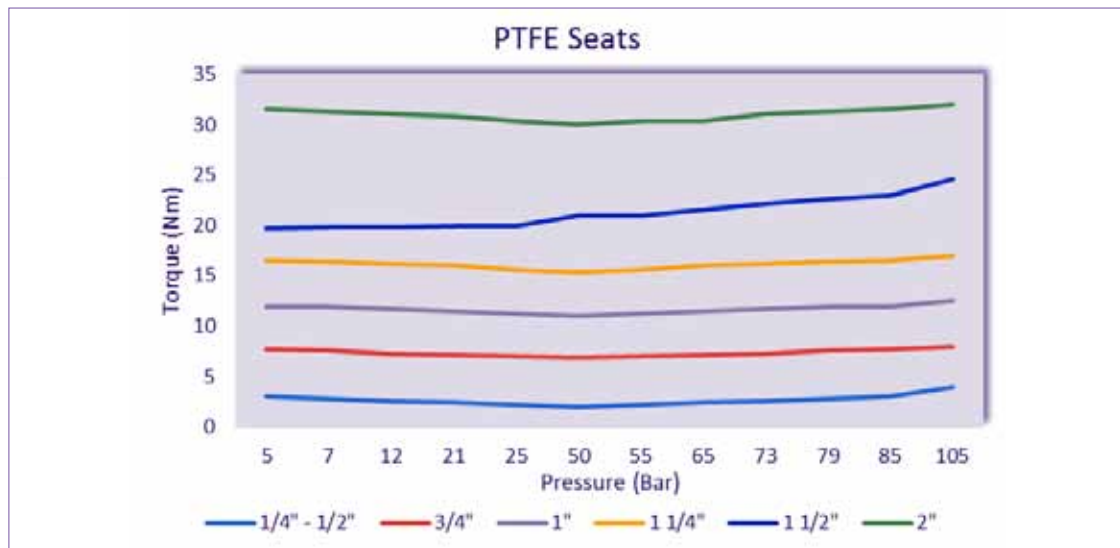
#### Features

- Pressure rating 6,000 psi standard 10,000 psi on request.
- Soft seal for bubble tight close.
- Large orifice sizes for maximum flow and low pressure drop.
- Many threads available on request.
- Heavy duty corrosion resistant spring for long life.
- Fail safe metal to metal sealing after soft seat.
- Close tolerance guided spring and piston to prevent cranking or seizure.
- 100% Factory tested.
- Several spring and piston material options available.
- Fully traceable material.
- Standard materials 316 Stainless Steel, Carbon Steel, Monel.
- Alternative materials available on request.
- Size range 1/4" to 1".

	ITEM	COMPONENT	MATERIAL
	1	O - Ring	Viton 'A'
	2	Piston	BS970 316S11
	3	Spring	316 St.Steel
	4	Body	BS970 316S11
	5	Retainer	316 St.Steel



## TORQUE REQUIREMENTS



## FLOW DATA

VALVE SIZE	Cv/Kv *FACTOR		
	S.I.	U.S.A	Imperial
Standard Bore			
1/4 - 1/2	1.8	7.5	6.3
3/4	2.9	12.3	10.1
1	7.3	30.0	25.2
1 1/4	11.1	46.0	38.6
1 1/2	19.8	82.0	69.0
2	29.0	120.0	101.0

Nb. For gases, use Cv(USA) only

### Formulae S.I. Units

Flow Data  
Gases  
Fg =  
Liquids  
FL =

### Imperial Units

F =  
Fg = Liquids



## BALL VALVE CHARACTERISTICS

- Flow in either direction.
- Efficient shut off.
- Balls, seats, stem and stem seals are renewable - all valves - without removing connecting ends from pipework in the 'S' series.

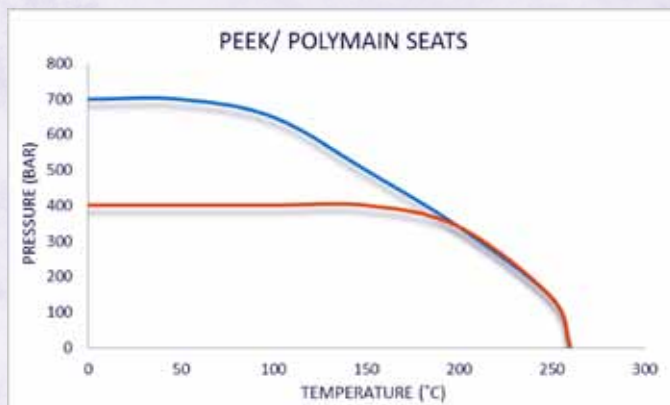
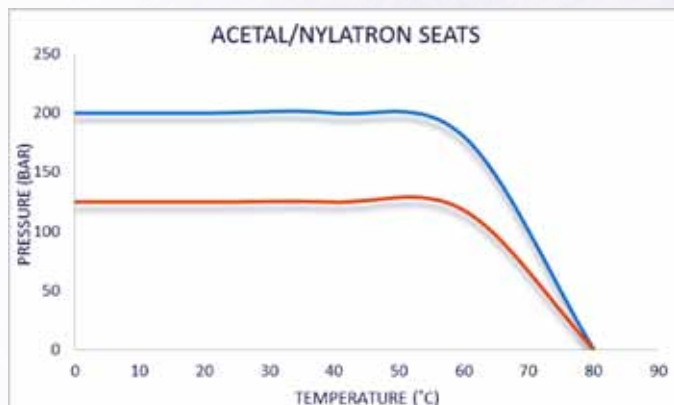
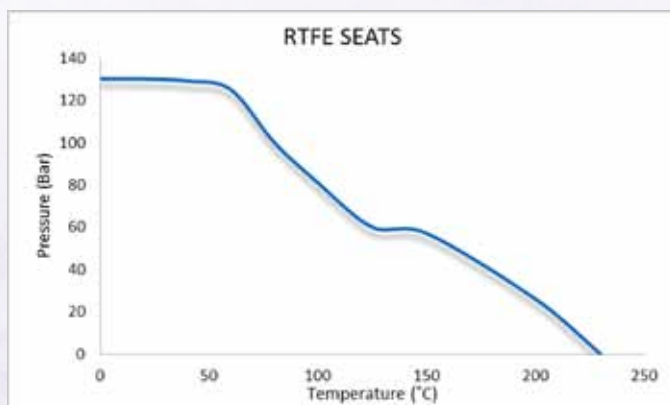
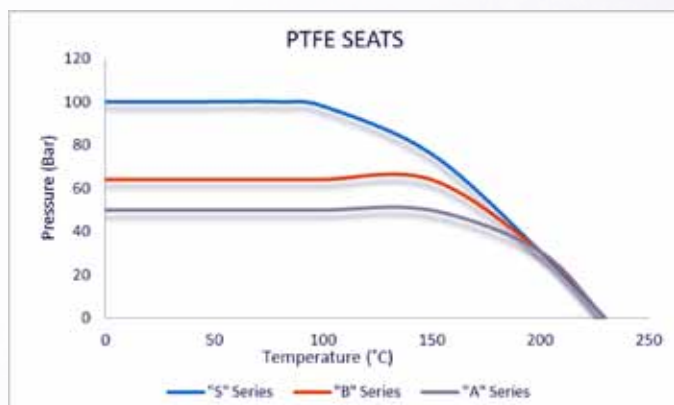
1. Determine from graph seat material which meets temperature/pressure requirements.
2. Check seat material selected is compatible with fluid handled.
3. The ratings shown for seat materials are a conservative guide for general service conditions – the working pressure is the maximum allowable differential when the valve is shut

- Non rising blow-out proof stem with adjustable stem seals in all valves
- Floating ball with slot for stem to ball drive
- Downstream seal
- Handle stops for positive 'ON' or positive 'OFF' indication.

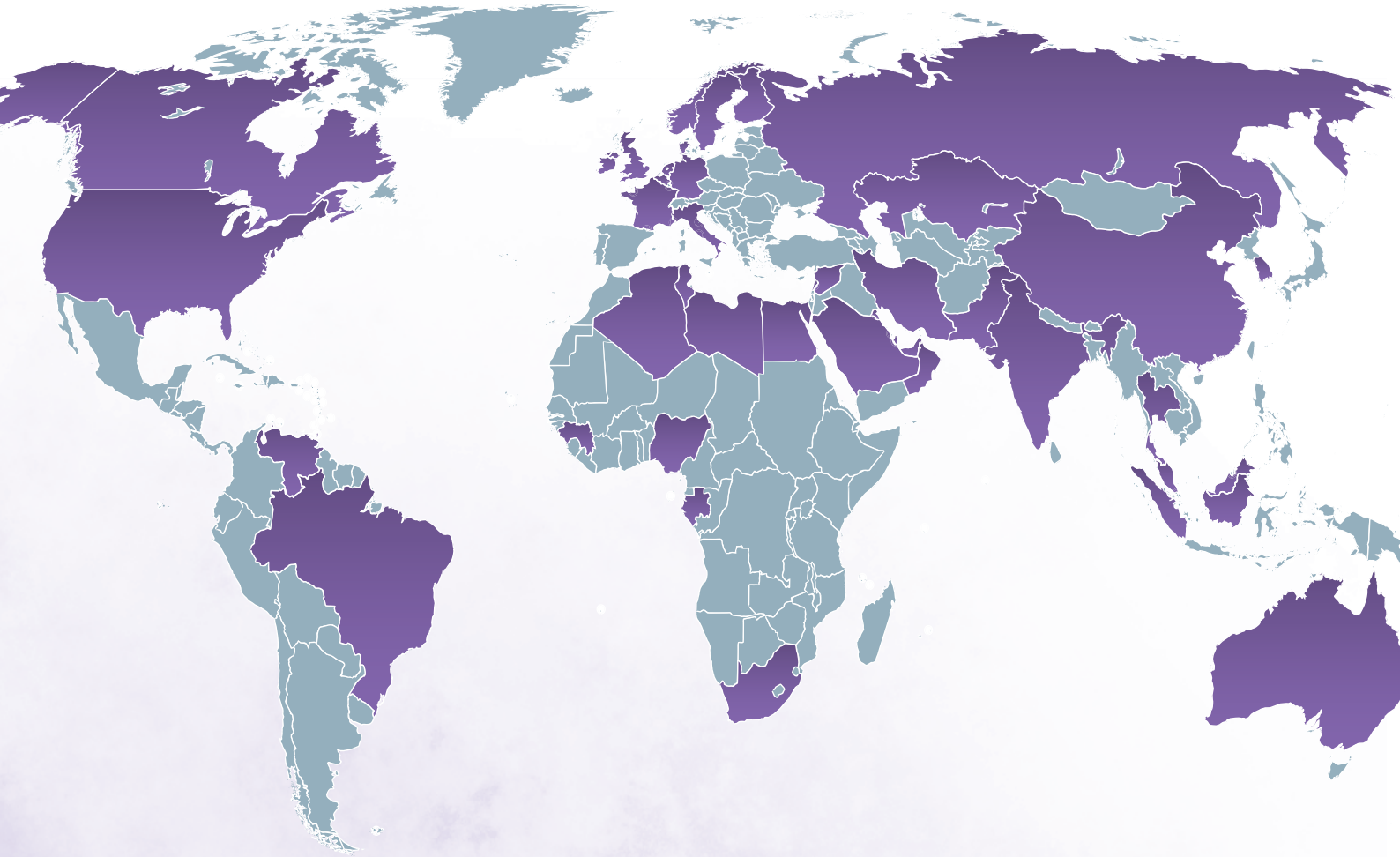
In order to select the correct valve, consideration must be given to the properties of the Soft Seats as well as to the limitations of the body and other materials, i.e. when the temperature rises seat loading (normally proportional line pressure) should be reduced to avoid excessive seat deformation.

Conversely seat embrittlement occurs at extremely low temperatures.

## PRESSURE / TEMPERATURE CURVES







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