

Primary Isolation Valves

Integrally forged, one piece double block and bleed Keyblok assemblies for primary isolation of pressure take-offs, where the valve is mounted directly to the vessel or process pipe

General Application

Suitable for double block and bleed applications including pressure, level and flow measurement, sampling and chemical injection service. Instruments may be mounted directly to the valve outlet or remotely with gauge lines/impulse pipe work.

TECHNICAL DATA

Materials

CS, 316 SS, Duplex and other exotic materials

Seats:

Metal and soft

Connections inlet:

ANSI flanged 1/2" to 2"
API flanged to 2^{1/16}"

Outlet:

1/2" NPT

Pressure (max):

10000 psig (690 barg)

Temperature (max):

400°F (204°C)



Features

- One-piece forged body combines a compact design with strength and reduced potential leak paths compared to conventional designs.
- Flanged inlet connections available in a choice of sizes and ratings to suit each application.
- Camlock safety feature on threaded outlet connections prevents accidental loosening in service.
- Primary isolation and venting ball valves are precision machined and super finished for high performance pressure and temperature ratings. Designed to be fire safe and anti-static.
- Heavy duty needle type globe valve, graphite packed as standard, ensuring bubble-tight shut-off on venting port.
- Bolt-on outlet option allows choice of connections for dual instrument mounting, welded connections and chemical injection.
- Firesafe design to meet API 607, BS6755 Part 2 (optional).

F63/F64 SERIES

Primary Isolation Valves

Product Overview

Keyblok F63

The F63 features two independently operable 3/8" (10 mm) bore ball valves for isolation service with an intermediate 0.2 inch (5 mm) bore 'HD' globe style needle valve for venting service.

Keyblok F64

The F64 features two independently operable 3/8" (10 mm) bore ball valves for isolation service with an intermediate 3/8" (10 mm) bore ball valve for venting service.

General notes

Standard pressure testing to BS EN 12266-1.

Standard material traceability to EN 10204 3.1 (body only).

Material thickness to ANSI B16.34.

Valve Body - Material Codes

Description	C	L	S	D
Valve body	A105N	A350 LF2	A182 F316	A182 F51

NOTE:

1. Carbon steel valve bodies are zinc plated and passivated as standard.

F63 and F64 Series Flanged x Threaded

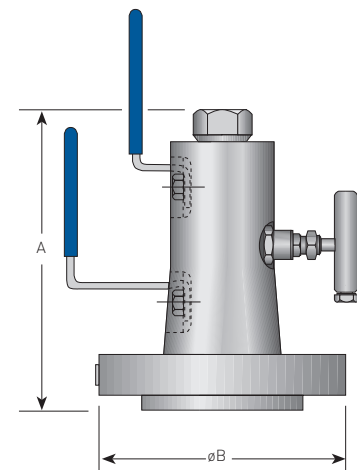
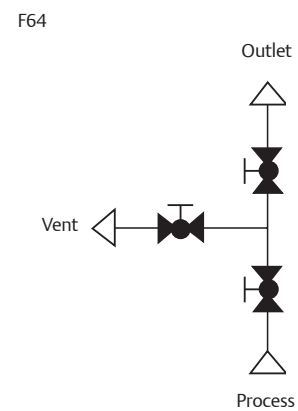
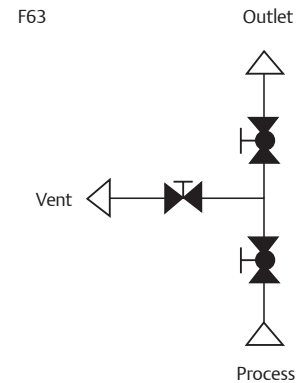
Size in	Rating lb	Dimensions, inches (mm)					Weight	
		A - RF	A - RTJ	B		lb	(kg)	
½	150	7.4 (188)	-	-	3.5 (89)	7.9	(3.6)	
½	300	7.4 (188)	7.6 (193)	3.8 (96)		8.6	(3.9)	
½	600	7.4 (188)	7.7 (196)	3.8 (96)		8.8	(4.0)	
½	900/1500	8.1 (206)	8.4 (213)	4.8 (121)		11.9	(5.4)	
½	2500	8.1 (206)	8.4 (213)	5.3 (134)		15.2	(6.9)	
¾	150	7.4 (188)	-	3.9 (99)		8.6	(3.9)	
¾	300	7.4 (188)	7.7 (196)	4.6 (118)		10.1	(4.6)	
¾	600	7.4 (188)	7.7 (196)	4.6 (118)		10.4	(4.7)	
¾	900/1500	8.1 (206)	8.4 (213)	5.1 (130)		13.9	(6.3)	
¾	2500	8.1 (206)	8.4 (213)	5.5 (140)		16.5	(7.5)	
1	150	7.0 (178)	7.2 (183)	4.3 (108)		8.8	(4.0)	
1	300	7.1 (180)	7.3 (185)	4.9 (124)		10.1	(4.6)	
1	600	7.1 (180)	7.4 (188)	4.9 (124)		10.4	(4.7)	
1	900/1500	7.5 (191)	7.8 (198)	5.9 (150)		15.4	(7.0)	
1	2500	8.1 (206)	8.1 (206)	6.3 (159)		19.0	(8.6)	
1½	150	7.1 (180)	7.3 (185)	5.0 (127)		10.1	(4.6)	
1½	300	7.2 (183)	7.4 (188)	6.1 (156)		13.2	(6.0)	
1½	600	7.6 (193)	7.6 (193)	6.1 (156)		14.3	(6.5)	
1½	900/1500	8.0 (203)	8.0 (203)	7.0 (178)		20.7	(9.4)	
1½	2500	8.5 (216)	8.5 (216)	8.0 (203)		35.1	(15.9)	
2	150	7.2 (183)	7.4 (188)	6.0 (153)		14.6	(6.6)	
2	300	7.3 (185)	7.6 (192)	6.5 (165)		17.6	(8.0)	
2	600	7.7 (196)	7.8 (197)	6.5 (165)		18.3	(8.3)	
2	900/1500	8.2 (226)	8.3 (210)	8.5 (216)		32.8	(15.0)	
2	2500	8.7 (221)	8.8 (223)	9.3 (235)		48.5	(22.0)	

NOTE

1. Metric calculations:

mm = in x 25.4

kg = lb x 0.4536

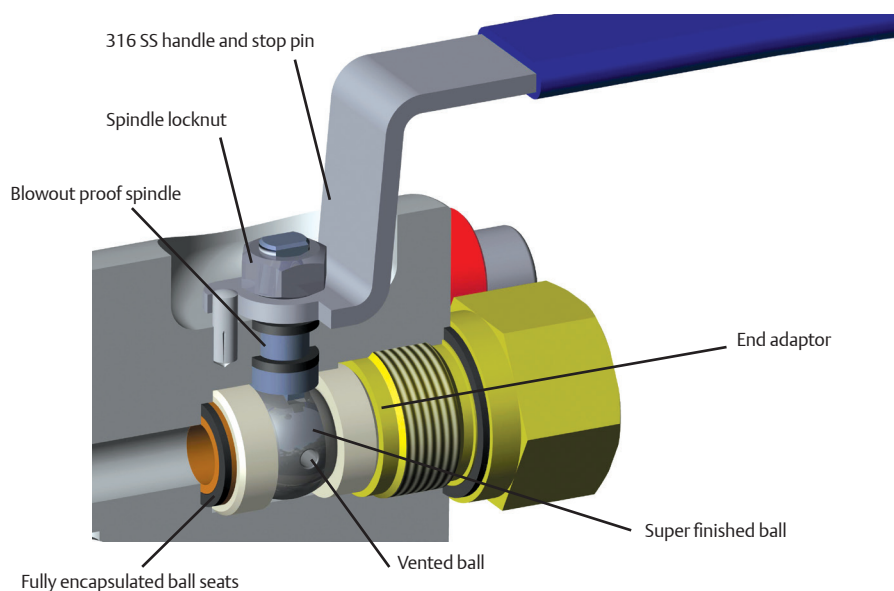


Primary Isolation Valves

Quarter Turn Ball Valves

Unidirectional quarter-turn ball valves have a straight through, roddable 3/8" (10 mm) bore. Their super-finished ball provides low operating torque and long life and is vented to provide upstream cavity relief. They offer a choice of filled PTFE, Devlon V® or PEEK ball seats which are fully-supported to minimize seal extrusion and allow high working pressures, with end adaptor threads being fully isolated from the process by primary and secondary static seals. Each valve features a blowout-proof one piece stem with a vibration-resistant locking nut and a strong, corrosion-resistant stainless steel handle and stop pin as standard.

- Pressure rating: up to 10000 psig (680 barg).
- Temperature rating: -70.6°F to 400°F (-57°C to 204°C).



NOTE

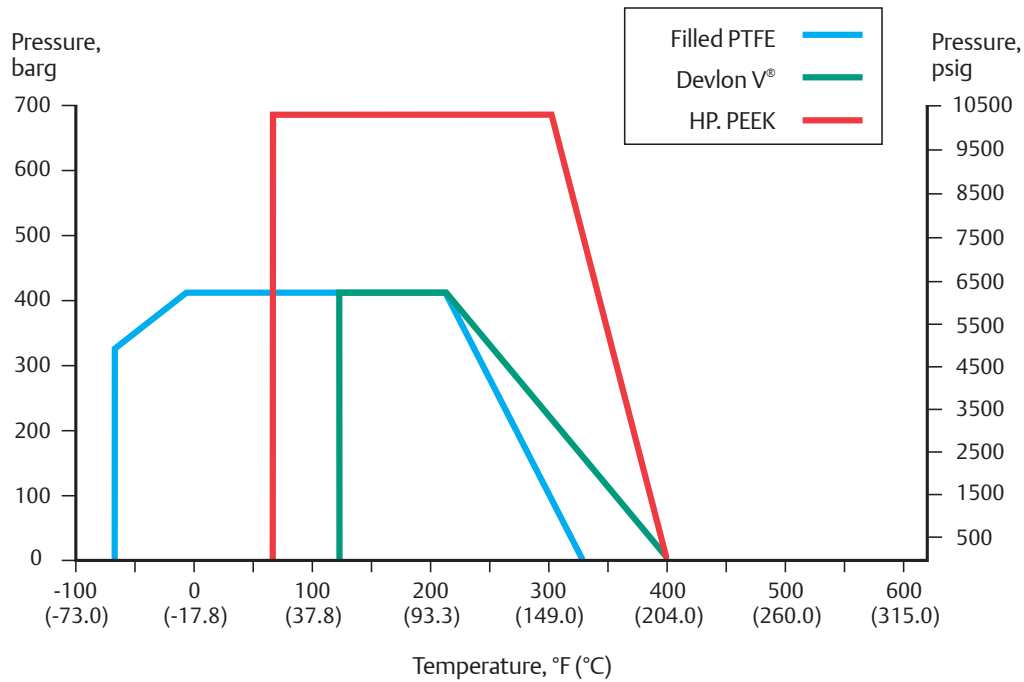
1. Devlon V® is a registered trademark of DevoI Engineering Ltd.

F63/F64 SERIES

Primary Isolation Valves

Pressure and Temperature Ratings

Keyblok Valve



NOTE

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Ball Valve Components - Trim Codes

Item	Description	S	D
1	Handle/stop pin	316 SS	316 SS
2	Stem seal (2 off)	Graphite	Graphite
3	Ball seat	PTFE, Devlon® or PEEK	PTFE, Devlon® or PEEK
4	Housing static seal	Graphite	Graphite
5	Seat housing	A276-316	A276-31803
6	Ball	A479-316	A479-31803
7	Primary static seal	Graphite	Graphite
8	Secondary static seal	Graphite	Graphite
9	Locknut	316 SS	316 SS
10	Spindle	A479-316	A479-31803

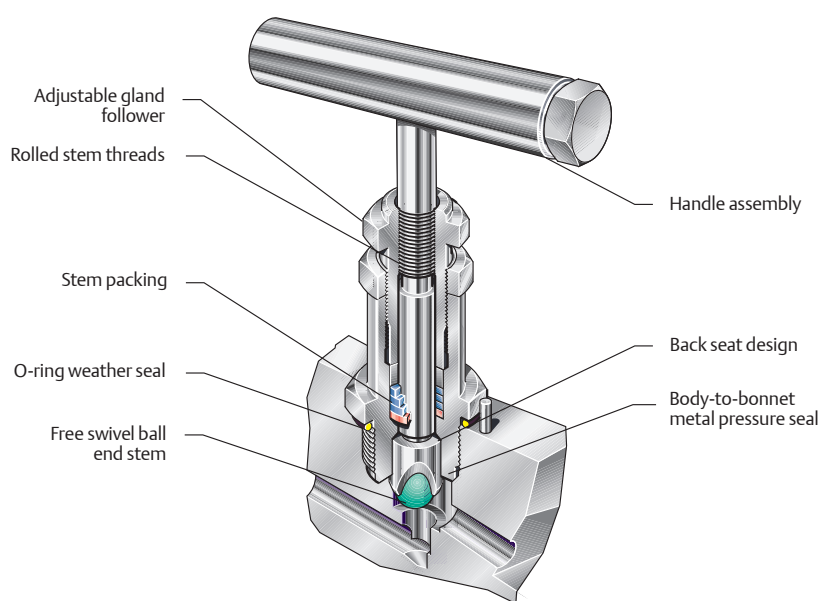
Standard Trim Combinations

Body	Trim
C	S
L	S
S	S
D	D

Primary Isolation Valves

‘HD’ Needle-Type Globe Valve

The HD needle-type globe valve has a rotating stem with a free-swivel ball-end seat for repetitive bubble-tight shut-off and rolled threads for low operating torque, located above the spindle packing and isolated from the process. The stem is sealed with either graphite or PTFE rings and a backseat design provides secondary stem sealing and prevents stem blowout. A body-to-bonnet metal pressure seal below the threads prevents corrosion and ensures the bonnet threads are in loaded compression for additional strength and an O-ring weather seal protects bonnet retention threads from harsh environments. An adjustable gland follower allows easy access to adjust the packing gland and the valve features a T-bar handle with locking bolt to secure it firmly on the stem.



‘HD’ Needle Type Globe Valve Components - Trim Codes

Item	Description	S	D
1	Gland follower	Austenitic SS	A276-31803
2	Stem	A479-316	A479-31803
3	Locknut	Austenitic SS	Austenitic SS
4	Stem packing	PTFE or graphite	PTFE or graphite
5	O-ring weather seal	Buna-N Nitrile	Buna-N Nitrile
6	Ball (stem tip)	316 SS	Ceramic
7	Bonnet locking pin	Austenitic SS	Austenitic SS
8	Handle assembly	Austenitic SS	Austenitic SS

F63/F64 SERIES

Primary Isolation Valves

Valve Options

A variety of options for Keyblok primary isolation valves that enable specific service conditions to be met.

Quill for chemical injection and sampling service

Designed to ensure high pressure media can be injected into the optimum position of the flow stream through the process pipework. It also enables clean product samples to be removed from the main flow. The quill features a length of heavy wall pipe with a screwed connection into the valve body. Quill lengths are customer specified. The quill outlet is available in straight or 45° options.

Sour gas (NACE) valves

Available in materials which comply with standard NACE MR0175 latest revision relating to metallic materials offering optimum resistance to sulfide stress cracking.

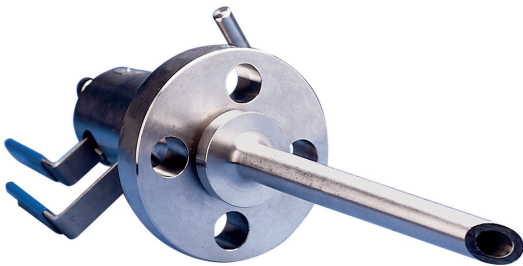
Integral check valve for chemical injection

Designed to ensure safe operation and prevent a back flow condition during the injection of liquids or gases to a process line. Incorporating a poppet check valve with ½" NPT female outlet connection, the check valve is integral to the valve body.

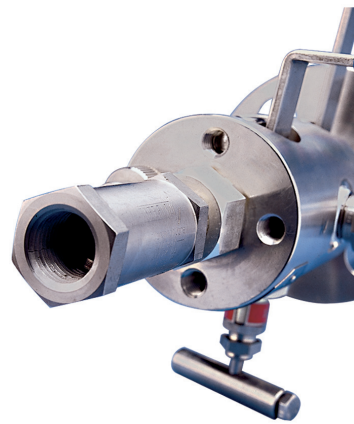
Low temperature service valves

Available assembled suitable for service to -71°F (-57°C).

Keyblok chemical injection quill (assembly)



Keyblok check valve (assembly)



Primary Isolation Valves

Bolted Outlet Options

A unique series of optional end connections which can be bolted on to the outlet of F63 and F64 valves. Each option can be bolted on to the valves in place of the standard ½" NPT female threaded connection.

Instrument kidney flange

Designed for remote or direct instrument mounting, the bolted instrument kidney flange also allows a breakaway joint in high integrity systems where no NPT threads are allowed.

Welded connection

NB male butt weld

NB female socket weld

NB male plain end, suitable for socket weld

Dual threaded connection

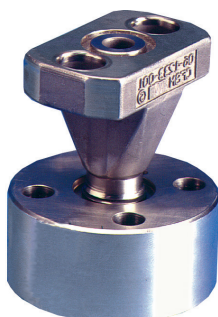
Enables more versatile positioning of gauges or pressure switches and reduces the number of components required for instrument installation, minimizing possible leak points. Available as ½" NPT female outlet or G ½" female.

The valve outlet allows horizontal or vertical mounting or may be used to mount two instruments - i.e. pressure switch and pressure gauge. Because the valve has two outlets, it eliminates the need for two separate valves and extra penetrations into the vessel.

Swivel gauge adaptor

Designed for use with any gauge to increase versatility, it allows positioning of pressure gauges in any direction through 360° via a union connection fitting. Available as ½" NPT female or G ½" female versions.

Instrument kidney flange



Keyblok bolted, dual threaded outlet and gauge adaptor



F63/F64 SERIES

Primary Isolation Valves

Selection Guide

F63		V	S	S	061L					
BASIC SERIES		BALL VALVE SEAT MATERIAL	BODY MATERIAL	TRIM MATERIAL	INLET CONNECTION					
Ball valve type										
F63	Flanged x threaded double block and bleed	V Filled PTFE	C A105N	S 316 SS	04	1/2"	1	RF	A	150 lb (ANSI B16.5)
F64	Flanged x threaded double block and bleed	N Devlon V®	L A350 LF2	D Duplex stainless steel UNS S31803	06	3/4"	3	RTJ	J	300 lb (ANSI B16.5)
		E PEEK	S A182 F316		08	1"	4	BX	K	600 lb (ANSI B16.5)
			D A182 F51		12	1 1/2"	5	RX	T	900 lb (ANSI B16.5)
					16	2"	6	R	L	1500 lb (ANSI B16.5)
					17	1 13/16"	8	Hub	M	2500 lb (ANSI B16.5)
					18	2 1/16"			N	5000 lb (API 6A)
					24	3"			P	10000 lb (API 6A)
									V	3000 lb (API 6A)

Standard trim combinations
C, L and S Body = S Trim,
D body = D Trim

047B

QV

OUTLET CONNECTION					OPTIONS				
04	1/2"	2	Male	B- NPT	MP04	Multiport outlet 1/2" NPT	PT	PTFE Packed needle valve	
06	3/4"	7	Female	C Butt weld (XXS)	ICV	Integral check valve (injection)	QV	1/4" NPT (f) vent	
08	1"			D Socket weld (XXS)	KFGTX	Kidney flange adaptor	PO	Plugged outlet	
				E G 1/2"	IQ(---)	Integral quill (required length)	SS	Full 316 SS trim	
					PV	Plugged vent	VO	Vent option (please specify compression fittings, if required)	
					BVL	Lockable ball valve handles (specify number required)	CB	Ceramic ball tip (vent valve F63)	
					AT	Anti-tamper vent (needle valve only)	ST	Stellite ball tip (vent valve F63)	
					SG	NACE MR0175 latest revision			