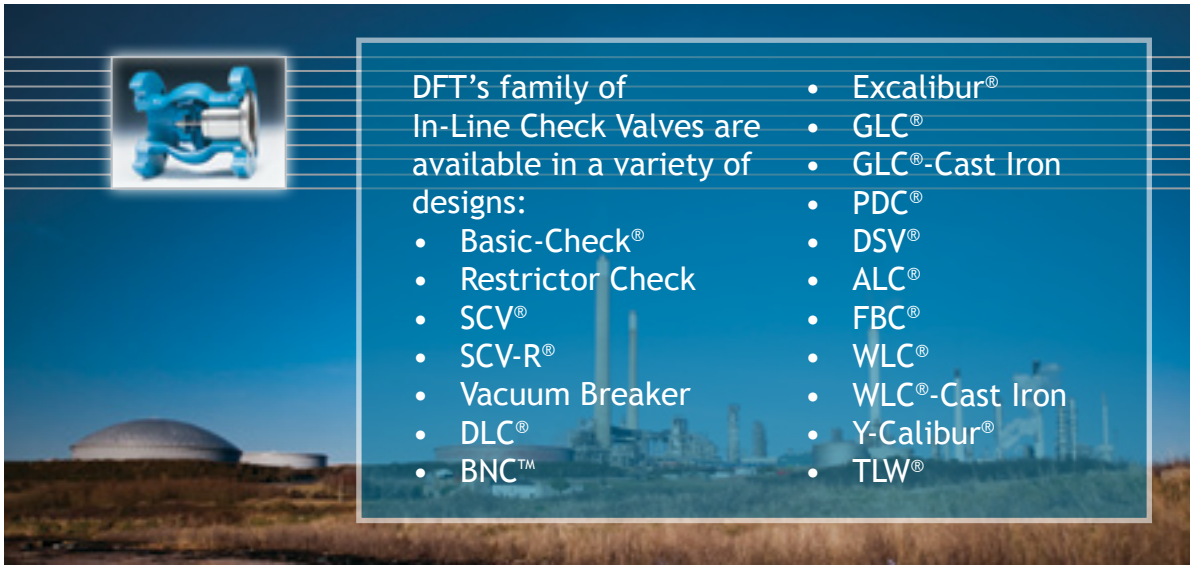
DFT®



DFT's family of In-Line Check Valves are available in a variety of designs:

- Basic-Check®
- Restrictor Check
- SCV®
- SCV-R®
- Vacuum Breaker
- DLC®
- BNC™
- Excalibur®
- GLC®
- GLC®-Cast Iron
- PDC®
- DSV®
- ALC®
- FBC®
- WLC®
- WLC®-Cast Iron
- Y-Calibur®
- TLW®

CE 6D-0885

Spring-assisted, Non-slam, Axial Flow, Silent Check Valves

DSV® Sanitary Check Valve

- 1/2" to 4" line size
- 150 CWP, 108 ASME pressure class
- Meets 3A Standard 58-01
- CIP (Clean In Place)
- Clamped ends
- 316L body and seat
- 316 disc, spring & guide assembly
- 32 Ra internal surface finish (#4 Ground Finish)
- Electropolished spring
  - .16 to .66 psig cracking pressure
- EPDM body seal (300°F max temp.)
- Edge-guided disc (1/2" thru 2")
- Edge/Center-guided disc (2-1/2", 3", 4")
- Spring assisted silent closing, non-slam
- Tight shutoff – lapped disc & seat
- Horizontal or vertical installation
- Straight thru inline or offset inlet/outlet

- Options:
  - 15 Ra internal finish
  - Tuf-Flex® or Viton® body seal

SCV® Check Valve

- 1/2" to 3" line size
- 750 & 3600 CWP
- FNPT or Socket Weld ends
- Stainless steel construction
- Inconel® X-750 spring
- Zelon® "O" ring body seal
- Edge-guided disc
- Spring assisted silent closing, non-slam
- Tight shutoff – lapped disc & seat
- Horizontal or vertical installation
- Simplified 5-part construction
- Easy maintenance
- Versatile
- Options:
  - Alloy 20 or Hastelloy® C body
  - Seal weld body
  - 316 SS spring
  - Soft seat

SCV-R® Check Valve

- Higher cracking pressures (.8 to 40.8 psig)
- 1/2" to 2" line size
- 750 CWP
- FNPT or Socket Weld ends
- Stainless steel construction
- Inconel® X-750 spring
- Zelon® "O" ring body seal
- Edge-guided disc
- Spring assisted silent closing, non-slam
- Tight shutoff – lapped disc & seat
- Horizontal or vertical installation
- Easy maintenance
- Versatile
- Options:
  - Alloy 20 or Hastelloy® C body
  - Seal weld body
  - 316 SS spring
  - Soft seat

Basic-Check® Valve

- 1/4" to 2-1/2" line size (MNPT)
- 450 to 6000 CWP
- NPT Threaded ends
- Stainless steel construction
- Edge-guided disc
- Spring assisted silent closing, non-slam
- Tight shutoff – lapped disc & seat
- Horizontal or vertical installation
- Easy maintenance
- Versatile
- Options: • Inconel® X-750 spring • Soft seat

Restrictor Check Valve

- Higher cracking pressures (2 to 40 psi, depending on size)
- 1/4" to 2-1/2" line size (MNPT)
- 450 to 2500 CWP
- NPT Threaded ends
- Stainless steel construction
- Edge-guided disc
- Spring assisted silent closing, non-slam
- Tight shutoff – lapped disc & seat
- Horizontal or vertical installation
- Easy maintenance
- Versatile
- Options: • Soft seat

Vacuum Breakers

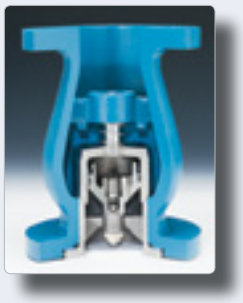
- 1" to 4" line size (MNPT)
- 450 to 6000 CWP
- Threaded O.D. (MNPT)
- Unthreaded inlet bore
- Stainless steel construction
- Edge-guided disc
- Spring assisted silent closing, non-slam
- Tight shutoff – lapped disc & seat
- Horizontal or vertical installation
- Easy maintenance
- Versatile
- Options: • Inconel® X-750 spring • Soft seat

DLC® Check Valve

- 1/2" to 3" line size
- ASME class 150 and 300
- RF flanged ends
- ASME B16.10 face-to-face dimensions
- Stainless steel construction
- Inconel® X-750 spring
- Electron beam welded body
- Edge-guided disc
- Spring assisted silent closing, non-slam
- Tight shutoff – lapped disc & seat
- Horizontal or vertical installation
- Simplified 4-part construction
- Versatile
- Options:
  - Alloy 20 or Hastelloy® C body
  - 316 SS spring
  - Soft seat (TFE-Viton® only)

PDC® Check Valve

- Pulse-damped design for modulating "air" or "gas" applications
  - Discharge of reciprocating air/gas compressors
  - Self-sizing
- 2" to 26" line size*
- ASME class 150 to 1500
- RF & RTJ flanged ends
- ASME B16.10 face-to-face dimensions
- API 6D
- Standard Body Materials:**
  - A216 WCB carbon steel
  - A351 CF8M stainless steel
  - A352 LCC low-carbon steel
- Stainless steel trim
- Center-guided/dual-guided stem
- Spring assisted silent closing, non-slam
- Tight shutoff – lapped disc & seat
- Horizontal or vertical installation
- Protected spring
- Axial Flow



- Nozzle style
- Easy maintenance
- Options:
  - Inconel® X-750 spring
  - Soft seat

Excalibur® Check Valve

- 2" to 24" line size*
- ASME class 150 to 1500
- RF & RTJ flanged ends, butt weld ends
- ASME B16.10 face-to-face dimensions
- Standard Body Materials:**
  - A216 WCB carbon steel
  - A351 CF8M stainless steel
- Stainless steel trim
- Center-guided/dual-guided stem
- Spring assisted silent closing, non-slam
- Tight shutoff – lapped disc & seat
- Two-piece body
- Horizontal or vertical installation
- Protected spring
- Axial Flow
- Nozzle style
- Easy maintenance
- Versatile

- Options:
  - Inconel® X-750 spring
  - Soft seat
  - Custom sizing for low flow applications
  - Stellite® trim

WLC® Wafer Style Check Valve

- 1" to 10" line size
- ASME class 150 to 2500
- RF & RTJ wafer ends
- Face-to-face dimensions:
  - MSS SP-126 (class 150 and 300)
  - API 594 (class 600 and above)
- Standard Body Materials:
  - A216 WCB carbon steel
  - A351 CF8M stainless steel
- Optional body materials
  - Alloy 20 • Inconel® 625 • Titanium
  - Hastelloy® • Duplex SS
- Stainless steel trim
- Center-guided/dual-guided stem
- Spring assisted silent closing, non-slam
- Tight shutoff – lapped disc & seat
- Horizontal or vertical installation
- Protected spring
- Wafer design

- Axial Flow
- Nozzle style
- Easy Maintenance
- Versatile
- Options:
  - Inconel® X-750 spring
  - Soft seat
  - Custom sizing for low flow applications
  - Stellite® trim

GLC® Check Valve

- 2" to 42" line size*
- ASME class 150 to 2500
- RF & RTJ flanged ends
- "Short" face-to-face dimensions
- API 6D
- API 6FD Fire Test
  - ASME class 150 and 300, 2" to 24"
- Standard Body Materials:**
  - A216 WCB carbon steel
  - A351 CF8M stainless steel
- Stainless steel trim
- Center-guided/dual-guided stem
- Spring assisted silent closing, non-slam
- Tight shutoff – lapped disc & seat
- Horizontal or vertical installation
- Protected spring
- Axial Flow
- Nozzle style
- Easy maintenance

- Versatile
- Options:
  - Inconel® X-750 spring
  - Soft seat
  - Custom sizing for low flow applications
  - Stellite® trim
  - Cryogenic Service

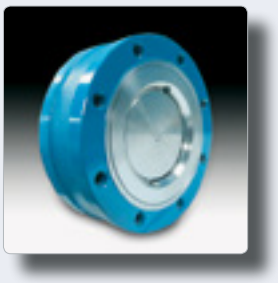
ALC® Wafer Style Check Valve

- 2" to 24" line size
- ASME class 150 and 300
- RF wafer ends
- API 594 face-to-face dimensions
- Standard Body Materials:
  - A216 WCB carbon steel
  - A351 CF8M stainless steel
- Stainless steel seat, disc & bushing
- Nitronic® 60 stem
- Inconel® X-750 spring
- Center-guided stem
- Spring assisted silent closing, non-slam
- Tight shutoff – lapped disc & seat
- Horizontal or vertical installation
- Protected spring
- Wafer designs
- Axial Flow
- Nozzle style

- Easy maintenance
- Versatile
- Options:
  - 316 SS spring
  - Soft seat
  - Custom sizing for low flow applications

TLW® Tapped Lug Wafer Check Valve

- Sizes 2" thru 24" line size
- ASME Class 150 and 300
- Threaded Lug Design
- ASME B16.5
- RF flanged ends
- API 594 face-to-face dimensions
- Standard body materials:
  - A216 Grade WCB carbon steel
  - A351 CF8M stainless steel
- Stainless steel seat, disc & bushing
- Nitronic® 60 stem
- Inconel® X-750 Spring
- Seat Leakage per MSS SP-61
- Tapped holes in body for lifting lugs (10" size and larger)
- Horizontal or vertical installation
- Center-guided stem
- Spring-assisted silent closing



- Axial flow
- Nozzle style
- Options:
  - 316 SS spring
  - Custom sizing - low flow
  - Soft seat
  - NACE (See DFT Catalog, page 41)

* Consult DFT for larger sizes. ** Consult DFT for additional alloys.

Tel: 610-363-8903 **Toll-Free: 800-206-4013** **Email: dft@dft-valves.com**

Nickel-Aluminum Bronze Check Valves

- **Excalibur®-NAB**
- **GLC® - NAB**

These silent check valves are spring-assisted, nozzle style, non-slam check valves that are designed to withstand the harsh environments of salt and brackish water applications where corrosion resistance and marine life deterrents are a must. DFT's center guided check valves provide reliable, low-maintenance service and solve the problems associated with water hammer and severe applications and environments. See DFT® Model Excalibur® Silent Check Valve & DFT® Model GLC® Silent Check Valve (left) for a complete lists of features.

GLC®-Cast Iron Silent Check Valve

- 2-1/2" to 24" line size
- ASME class 125 and 250
  - 2 ½" to 24" line size (Cl. 125)
  - 2 ½" to 8" line size (Cl. 250)
- FF Flanged ends
- Meets MSS SP-125
- A126 Class B Cast iron body
- Bronze or 316 SS trim
- Center-guided/dual-guided stem
- Spring assisted silent closing, non-slam
- AWWA seat leakage
- Horizontal or vertical installation
- Axial Flow
- Nozzle style
- Easy maintenance

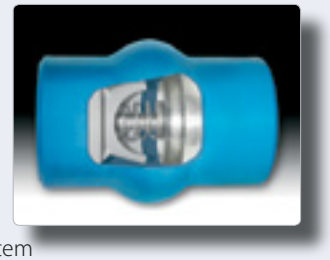
WLC®-Cast Iron Wafer Style Check Valve

- 2" to 10" line size
- ASME class 125 and 250
- FF wafer ends
- Meets MSS SP-125
- A126 Class B Cast iron body
- Bronze or 316 SS trim
- Center-guided/dual-guided stem
- Spring assisted silent closing, non-slam
- AWWA seat leakage
- Horizontal or vertical installation
- Protected spring
- Wafer design
- Axial Flow
- Nozzle style
- Easy maintenance

Y-Calibur® Silent Check Valve

- Fully repairable in-line
- 4" to 14" line size
- ASME class 600 to 2500
- Butt weld ends
- ASME B16.10 face-to-face dimensions
- Standard Body Materials:**
  - A216 WCB carbon steel
  - A351 CF8M stainless steel
- Stainless steel trim
- Center-guided/dual-guided stem
- Spring assisted silent closing
- Tight shutoff – lapped disc & seat
- Horizontal or vertical installation
- Protected spring
- Axial Flow
- Nozzle style
- Easy maintenance
- Versatile
- Options:
  - Inconel® X-750 spring
  - Soft Seat
  - Custom sizing for low flow applications
  - Stellite® trim

BNC™ In-Line Globe Style Check Valve



- 10" to 24" line size*
- ASME class 600, 900 and 1500
- Butt weld ends
- ASME B16.34
- Standard Body Materials:**
  - A216 WCB carbon steel
  - A351 CF8M stainless steel
- Stainless steel trim
- Hardfaced seat and disc
- Center-guided/dual-guided stem
- Spring assisted silent closing
- Tight shutoff – lapped disc & seat
- Horizontal or vertical installation
- One piece globe style body, not repairable in-line
- Protected spring
- Axial Flow
- Nozzle style
- Options:
  - Inconel® X-750 spring
  - Custom sizing for low flow applications

FBC® Compact Insert Check Valve

- 1" to 4" line size
- ASME class 150 and 300
- Meets ASME B16.34-2013 & MSS SP-126
- Use in Schedule 40 pipe, consult factory for Schedule 80
- Stainless steel construction
- Edge-guided disc
- Spring assisted silent closing, non-slam
- Tight shutoff – lapped disc & seat
- Horizontal or vertical installation
- Extended tag for easy identification of the installed valve
- Easy maintenance
- Versatile

*Consult DFT for larger sizes

** Consult DFT for additional alloys.

Need a detailed cut sheet of a DFT Check Valve?
Visit us online at www.dft-valves.com/literature

Valve Selection Chart

	THREADED VALVES					FLANGED VALVES					SANITARY VALVES	WAFER VALVES				BUTT WELD VALVES		
																IN-LINE REPAIRABLE VALVES		
	Basic-Check®	Restrictor Check	SCV®	SCV-R®	Vacuum Breaker	DLC®	Excalibur®	GLC®	GLC® - CAST IRON	PDC®	DSV®	ALC® / TLW®	FBC®	WLC®	WLC® - CAST IRON	Y-CALIBUR®	BNC™	Excalibur®
SIZE	1/4 to 2-1/2	1/4 to 2-1/2	1/2 to 3	1/2 to 2	1 to 4 (OD)	1/2 to 3	2 to 24	1 to 42	2 1/2 to 42	2 to 26	1/2 to 4	2 to 24	1 to 4	1 to 10	2 to 10	4 to 14	10 to 24	2 to 24
ENDS																		
NPT	X	X	X(1)	X(1)	X													
SW			X(1)	X(1)														
FLG						X	X	X	X	X								
RTJ							X	X		X				X				
BW																X	X	X
FLG/BW							X											
Victaulic®							X											
Wafer												X	X	X	X			
Clamped											X							
ASME CLASS																		
125									X						X			
150						X	X	X		X		X	X	X				X
250									X						X			
300						X	X	X		X		X	X	X				X
600							X	X		X				X		X	X	X
900							X	X		X				X		X	X	X
1500							X	X		X				X		X	X	X
2500								X						X		X		X
750 CWP			X	X														
3600 CWP			X															
OTHER	X(2)	X(2)			X(2)			X(3)			X(2)			X(3)				
MATERIALS								BODY/TRIM										
Cast Iron									X(4)						X(4)			
WCB/316 SS*							X	X		X		X		X		X	X	X
316 SS/316 SS*	X(5)	X(5)	X	X	X(5)	X	X	X		X	X(5)	X	X	X		X	X	X
Other Alloys			X	X		X	X	X		X	X			X		X		X
OPTIONS																		
Soft Seat	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X		X
X-750 Spring	X	X	X(6)	X(6)	X	X(6)	X	X		X		X(6)	X	X		X	X	X

Notes:
1. NPT x SW available.
2. CWP RATING BSS, BSA, BSE, BSSV, Restrictor Check: 450 to 2500 CWP depending on size; BSSH6, BSSV6: 450 to 6000 CWP depending on size. BSSH7: 800 to 6000 CWP depending on size. DSV: ASME/ANSI Class 108.
3. API 2000 and 5000 ARE AVAILABLE. Contact DFT for sizes.
4. TRIM MATERIAL: BRONZE OR 316 SS
5. BODY & SEAT: BSE, BSS, BSSV. Restrictor Check: 303 SS, BSA: 416 SS, BSSH6, BSSH7, BSSV6: 316 SS, DSV:316L SS
6. Inconel® X-750 spring is standard.

* CF8M is the cast grade of 316 SS.

Visit the literature page at dft-valves.com and use the DFT® VALVE DATA SHEET to make your selection based on your requirements.

Spring-assisted, Non-slam,
Axial Flow, Silent Check Valves

The Importance of Check Valve Selection and Sizing

Knowing which check valves can withstand different environmental factors, and how check valve sizing works is the key to a longer lifetime of use, proper flow and overall efficiency of your fluid, steam or gas flow system.

It is important that check valves be sized for their application and flow, not based just on their line size. Choosing the appropriate-sized check valve means it will be working at its highest level, providing efficient service with maximum protection. Proper check valve sizing will optimize a system's reliability, providing the longest and most trouble free service. An undersized valve will cause higher pressure losses and create excessive noise and vibration, and an oversized valve can lead to premature wear and failure of the valve's internal components. When the valve's disc is stable and in the fully open position against the internal stop or fully closed position against the seat, no disc fluttering will occur.

The correct valve selection not only allows the valves to last longer, but pumps and other related components on the same system will have increased longevity as well, resulting in reduced overall maintenance and costs. Well functioning check valves also enhance the safety of their applications.

For more information on Check Valve Sizing and Selection:

Download DFT's Valve Sizing eBook at www.dft-valves.com/literature

or

Consult with the experts at DFT to choose the optimal check valve for your applications.

DFT® valves serve broad process industries:

- Chemical
- Food & Beverage
- General Industry
- Mining
- Oil and Gas
- Petrochemical
- Pharmaceutical
- Power Generation
- Pulp and Paper
- Steel
- Textile
- Ultra-pure Water
- Desalination

DFT Inc. specializes in preventing check valve problems and failures caused by water hammer and reverse flow. The in-line, spring-assisted check valves are designed to meet customer requirements for horizontal and vertical installations in liquids, gas or steam.

Whatever your size, pressure or piping configurations, DFT has the valve that's right for you.

Consult DFT for engineered sizing solutions for your check valve related issues.

For more information

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