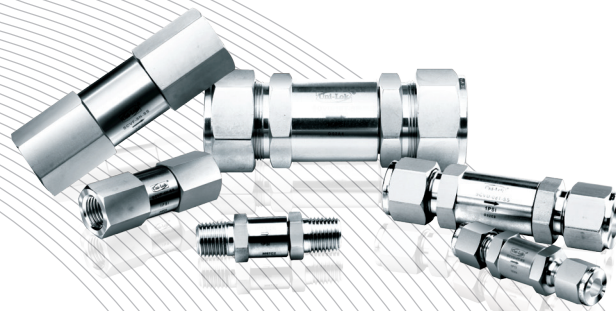




GENERAL & HIGH PRESSURE CHECK VALVES

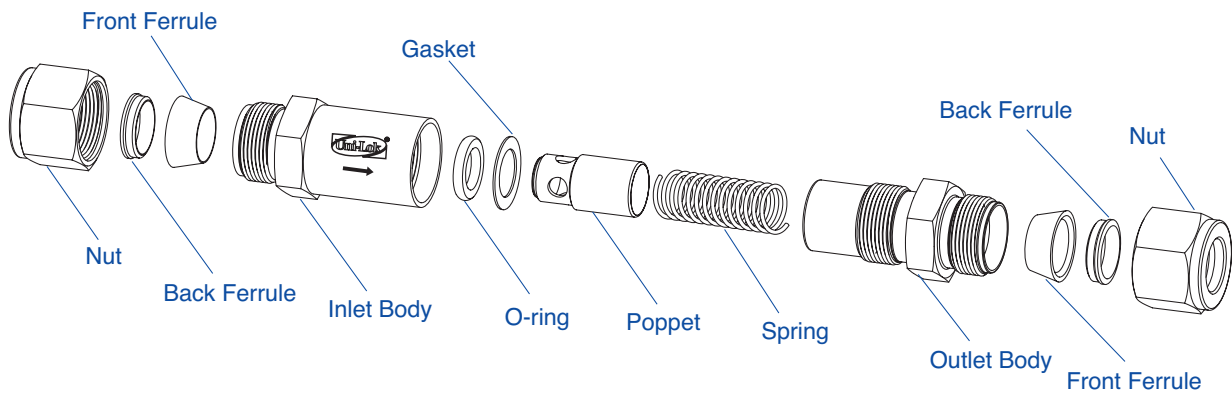
VC Series

www.unilok.com



Features

Valve Series		Cracking Pressure	Maximum Working Pressure
VC3	General Purpose	Fixed	3000 psig 207 bar
VC6	High Pressure	Fixed	6000 psig 413 bar
VC3C	Compact One Piece	Fixed	3000 psig 207 bar
VC3CA	Compact Adjustable Cracking Pressure	Adjustable	3000 psig 207 bar



Cleaning

UNILOK valves are free from machine oils, loose particles and grease throughout the close cleaning process.

Testing

Every check valve is 100% factory tested with nitrogen for cracking and reseal performance.

The special cleaning for high purity application is available upon request.

Important Notification

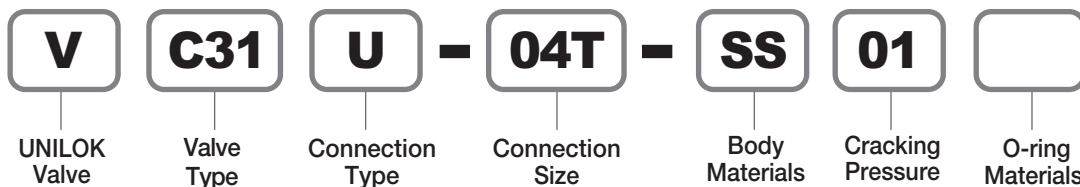
Proper installation, materials compatibility, operation and maintenance of these valves are the responsibility of the user. The total system design must be taken into consideration to ensure optimal performance and safety.

UNILOK check valves are designed for directional flow control only.

How To Order

UNILOK VC series check valves are ordered by part number as shown below.

Example : The following part number, **VC31U-04T-SS-01** is designated for VC3 series check valve with both 1/4", UNILOK tube fitting, 1psig cracking pressure, 316SS.



Valve Type	
C3	3000psig Fixed CP
C6	6000psig Fixed CP
C3C	3000psig Compact Fixed CP
C3CA	3000psig Compact Adjustable CP

CP-Cracking Pressure

Connection Type	
U	UNILOK Tube Fitting
F	Female NPT or ISO7/1(PT)
M	Male NPT or ISO7/1(PT)
C	UCR

UCR-Metal Face Seal End

Body Materials	
SS	316SS
BS	Brass
MO	Alloy 400

Connection Size							
Fractional(Inch) Tube O.D. Designation							
Tube O.D.	inch	1/8	1/4	3/8	1/2	3/4	1
	mm	3.17	6.35	9.52	12.70	19.05	25.40
Designator		02T	04T	06T	08T	12T	16T

Metric Tube O.D. Designation							
Tube O.D.	mm	3	6	8	10	12	25
Designator		M03T	M06T	M08T	M10T	M12T	M25T

Pipe Size Designation (NPT or ISO7/1-PT)							
Pipe Size	1/8	1/4	3/8	1/2	3/4	1	
Designator	02N/R	04N/R	06N/R	08N/R	12N/R	16N/R	

UCR Size Designation		
Tube Size	1/4	1/2
Designator	04C	08C

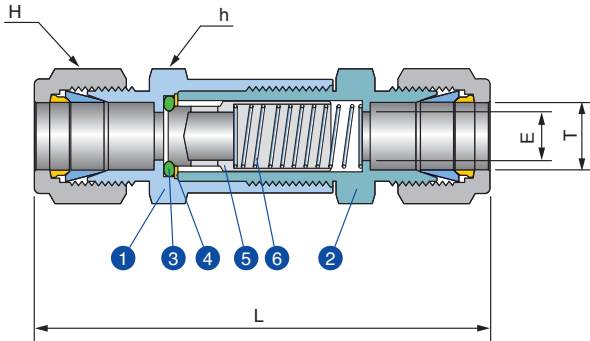
Cracking Pressure	
1/3	1/3 psig
01	1 psig
03	3 psig
10	10 psig
25	25 psig
100	100 psig

O-ring Materials	
None	Viton
E	Ethylene Propylene
N	Buna N
P	Neoprene
K	Kalrez

Seal kits and spring kits are available for retrofit or maintenance. Contact UNILOK local distributors.

VC3 series

(3000 psig, Fixed Cracking Pressure)



Materials of Construction

No.	Description	Materials	
	Body Material	316SS	Brass
1	Inlet Body	316SS	Brass
2	Outlet Body	316SS	Brass
3	O-ring	Viton	NBR
4	Gasket	304SS	
5	Poppet	316SS	Brass
6	Spring	302SS	

Poppet - Silicone based lubricant
 Inlet Body - Molybdenum dry film lubricant

Ordering Information & Dimensions

Part Number	End Connection		Cv	Dimensions (mm)	
	Inlet	Outlet		L	h
VC31	U-02T-	1/8" UNILOK	0.16	54.5	15.87
	U-04T-	1/4" UNILOK		59.0	
	U-M06T-	6mm UNILOK		59.0	
	F-02N-	1/8" Female NPT		46.5	
	M-02N-	1/8" Male NPT		47.3	
	M-04N-	1/4" Male NPT		52.6	
	MU-04N04T-	1/4" Male NPT 1/4" UNILOK		56.0	
VC32	U-06T-	3/8" UNILOK	1.48	80.4	19.05
	U-M10T-	10mm UNILOK		81.7	
	F-04N-	1/4" Female NPT		54.5	
	M-06N-	3/8" Male NPT		70.6	
VC33	U-08T-	1/2" UNILOK	1.70	85.6	22.22
	U-M12T-	12mm UNILOK		86.0	
	F-06N-	3/8" Female NPT		76.2	
	M-08N-	1/2" Male NPT		83.0	
VC34	U-10T-	5/8" UNILOK	2.60	88.0	28.58
	F-08N-	1/2" Female NPT		91.2	
VC35	U-12T-	3/4" UNILOK	5.20	91.8	31.75
	F-12N-	3/4" Female NPT		87.5	
	M-12N-	3/4" Male NPT		86.0	
VC36	U-16T-	1" UNILOK	8.00	106.3	34.93
	F-16N-	1" Female NPT		123.0	
	M-16N-	1" Male NPT		115.0	

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VC series valves. Add "R" as a suffix instead of "N".

Pressure Rating at 70°F(21°C)

Series	316SS		Brass	
	psig	bar	psig	bar
VC31	3000	207	3000	207
VC32	3000	207	3000	207
VC33				
VC34	2000	138	1500	103
VC35				
VC36				

Cracking - Reseal Pressure

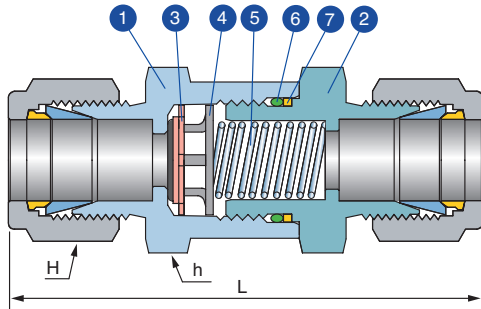
(psig)

Nominal Cracking Pressure	Cracking Pressure Range		Reseal Pressure
	Min.	Max.	
1/3	0	3	up to 6
1	0	4	up to 5
3	2	7	up to 4
10	7	15	3
25	20	30	17
50	40	60	35
75	60	90	53
100	80	120	70

Dimensions are for reference only and are subject to change without prior notice.

VC6 series

(6000 psig, Fixed Cracking Pressure)



Materials of Construction

No.	Description	Materials
1	Inlet Body	316SS
2	Outlet Body	316SS
3	Poppet	Viton bonded 316SS
4	Poppet Stop	316SS
5	Spring	302SS
6	O-ring	Viton
7	Backup Ring	PTFE

Ordering Information & Dimensions

Part Number	End Connection		Cv	Dimensions (mm)		
	Inlet	Outlet		L	h	
VC61	U-02T-	1/8" UNILOK	0.67	57.7	17.46	
	U-04T-	1/4" UNILOK		61.7		
	U-M06T-	6mm UNILOK		61.7		
	M-02N-	1/8" Male NPT		44.8		
	M-04N-	1/4" Male NPT		54.8		
VC62	U-06T-	3/8" UNILOK	1.80	69.9	25.40	
	U-08T-	1/2" UNILOK		75.2		
	U-M08T-	8mm UNILOK		68.6		
	U-M10T-	10mm UNILOK		71.1		
	U-M12T-	12mm UNILOK		75.2		
	F-06N-	3/8" Female NPT		64.8		26.98
	F-08N-	1/2" Female NPT		77.0		
	M-12N-	3/4" Male NPT		59.2		
	M-16N-	1" Male NPT		69.2		
	VC63	U-12T-		3/4" UNILOK		4.70
U-16T-		1" UNILOK	120.0			
U-M25T-		25mm UNILOK	120.0			
F-12N-		3/4" Female NPT	104.0	31.75		
F-16N-		1" Female NPT	123.0	34.92		

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VC series valves. Add "R" as a suffix instead of "N".

Pressure Rating at 70°F(21°C)

Series	316SS	
	psig	bar
VC61 VC62	6000	413
VC63	5000	344

O-ring Seal Temperature Rating

O-ring Materials	Temperature Rating	
	°C	°F
Viton	-28 ~ 204	-18 ~ 400
Ethylene Propylene	-45 ~ 135	-49 ~ 275
Buna N	-20 ~ 105	-4 ~ 221
Neoprene	-40 ~ 121	-40 ~ 250
Kalrez	-20 ~ 315	-22 ~ 599

CNG Application

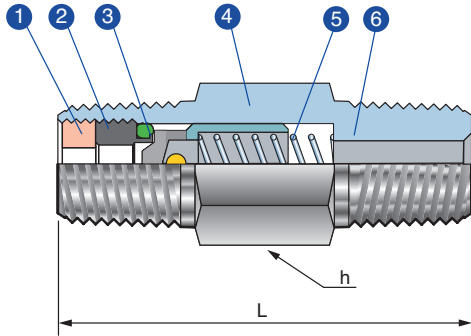
UNILOK VC6 series, high pressure check valves are available for CNG application with CNG compatible HNBR O-ring.

To order, add -H to the end of part number.

Dimensions are for reference only and are subject to change without prior notice.

VC3C series

(3000 psig, Compact, Fixed Cracking Pressure)



Ordering Information & Dimensions

Part Number	End Connection		Cv	Dimensions (mm)	
	Inlet	Outlet		L	h
VC3C1	F-04N-	1/4" Female NPT	0.35	61.0	19.05
	M-04N-	1/4" Male NPT		41.0	14.28
	MF-04N-	1/4" Male NPT 1/4" Female NPT		44.0	19.05
	FM-04N-	1/4" Female NPT 1/4" Male NPT		58.0	
VC3C2	F-08N-	1/2" Female NPT	1.20	94.0	26.98
	M-08N-	1/2" Male NPT		58.0	22.22
	MF-08N-	1/2" Male NPT 1/2" Female NPT		72.0	26.98

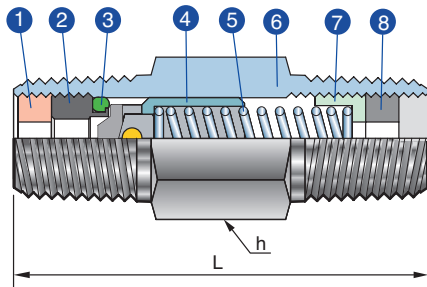
Materials of Construction

No.	Description	Materials
1	Insert Lock Screw	316SS
2	Insert	316SS
3	O-ring	Viton
4	Poppet	316SS
5	Spring	302SS
6	Body	316SS

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VC series valves. Add "R" as a suffix instead of "N".

VC3CA series

(3000 psig, Compact, Adjustable Cracking Pressure)



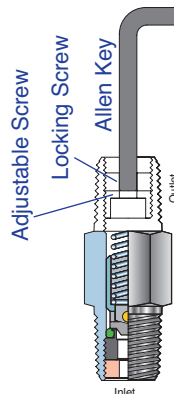
Ordering Information & Dimensions

Part Number	End Connection		Cv	Dimensions (mm)	
	Inlet	Outlet		L	h
VC3CA1	F-04N-	1/4" Female NPT	0.35	75.7	19.05
	M-04N-	1/4" Male NPT		41.1	14.28
VC3CA2	M-08N-	1/2" Male NPT	1.20	65.0	22.22

Materials of Construction

No.	Description	Materials
1	Insert Lock Screw	316SS
2	Insert	316SS
3	O-ring	Viton
4	Poppet	316SS
5	Spring	302SS
6	Body	316SS
7	Adjustable Screw	316SS
8	Locking Screw	316SS

Adjustment of Cracking Pressure



1. Unscrew "locking screw" counter-clockwise.
2. Slide "allen key" up to "adjustable screw" position.
3. Turn "adjustable screw";

To decrease cracking pressure To increase cracking pressure

4. Move out "allen key" up to "locking screw" position.
5. Turn "allen key" clockwise.

Dimensions are for reference only and are subject to change without prior notice.

UNILOK Line up

Instrumentation

Fittings



- Tube Fittings
- PTFE Fittings
- Hose & Push-On Connectors
- Precision Pipe Fittings
- Fusible Connectors
- Dielectric Fittings

Valves



- VB1 series
 - VB2 series
 - VB3 series
 - VB6B series
 - VB6F series
 - VB6T series
 - VP series
 - VN5 series
 - VN6 series
 - VU6 series
 - VMT series
 - VM series
 - VG series
 - VL series
 - VD series
 - VC series
 - VR series
 - VE series
 - VF series
 - VPR series
 - VBR series
- Precision & Clean Ball Valves
Swing-Out Ball Valves
Instrumentation Ball Valves
High Pressure Bar Stock Ball Valves
High Pressure Forged Ball Valves
Trunnion Ball Valves
Plug Valves
- Integral Bonnet Forged Needle Valves
High Pressure Bar Stock Needle Valves
Union Bonnet Valves
Metering Valves
- Instrumentation Manifolds Valves
Gauge & Gauge Root Valves
Bleed Valves
- Double Block and Bleed Valves
- General & High Pressure Relief Valves
Low & High Pressure Relief Valves
Industrial Excess Flow Valves
- T & In-Line Filters
Pressure Reducing Valves
Back Pressure Regulators

Others

- Seamless & Welded Tubing
- Condensate Pots

UHP(Ultra High Purity)

Fittings



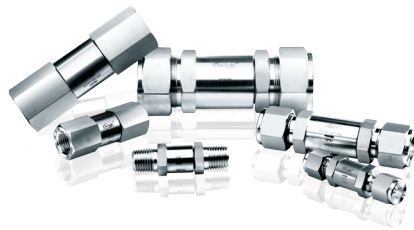
- Weld & Metal Face Seal Fittings
- Pipe & Tube Fittings
- Flanges
- Cylinder Connectors

Valves



- VCD series
- VCB series
- VCC series
- Diaphragm Valves
- Bellows Valves
- Welded Check Valves

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