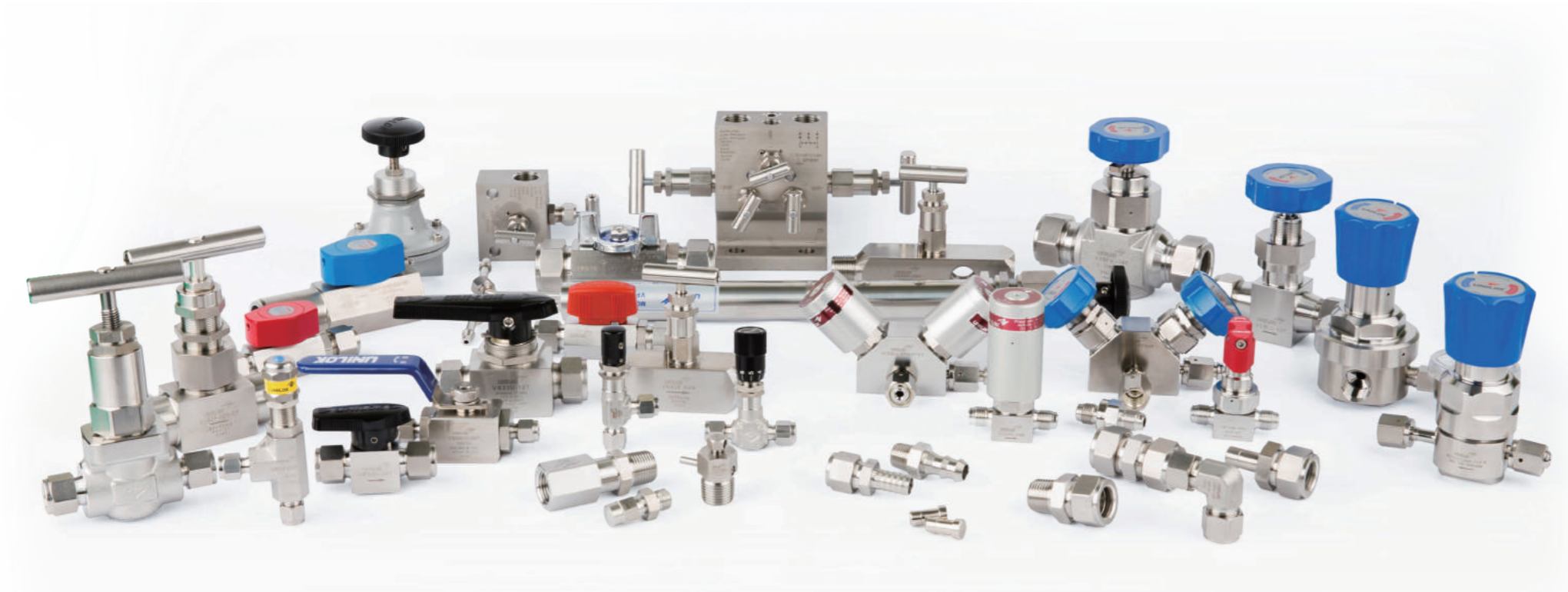


PRODUCTS CATALOG

Catalog Aug. 2016



UNILOK Corporation

UNILOK was established in 1984.

We have distinguished ourselves in the design and manufacturing of a high performance "Twin Ferrule Compression Tube Fittings" and "Instrumentation Valves" range.

UNILOK has been able to capitalize on our expert knowledge, oriented towards the new expectations of customers worldwide in the industrial, petrochemical, offshore, ship building, power plant and environmental industries.

Due to our outstanding capacity for innovation and our policy of investment in Research and Development as well as Quality Control.

Our well-trained staff are dedicated to providing our customers with the very best service possible, and this service is backed up by our Performance Guarantee.

Systematic Control is fully committed to utilizing the latest technology and information advancements to provide our customers with maximum support.

UNILOK Corporation

Catalog Aug. 2016

본사 및 제 1공장

인천광역시 남동구 남동동로 64번길 37
남동공단 152블럭 12롯데
Tel 032-822-6600 / Fax 032-822-6604

Headquarters&1st Factory

152 Block-12 Lot, Namdong Indus-Park, 37, Namdongdong-ro
64beon-gil, Namdong-Gu, Incheon, Korea
Tel +82-32-821-6673 / Fax +82-32-822-6604

제 2공장

인천광역시 남동구 남동서로 83번길 87
남동공단 114블럭 8롯데
Tel 032-433-6601 / Fax 032-441-7600

2nd Factory

114 Block-8 Lot, Namdong Indus-Park, 87, Namdongseo-ro
83beon-gil, Namdong-Gu, Incheon, Korea
Tel +82-32-433-6601 / Fax +82-32-441-7600



Check Valve VC

Check Valves

VC Check Valve	175
VLC Lift Check Valve	181
VE Excess Flow Valve	185



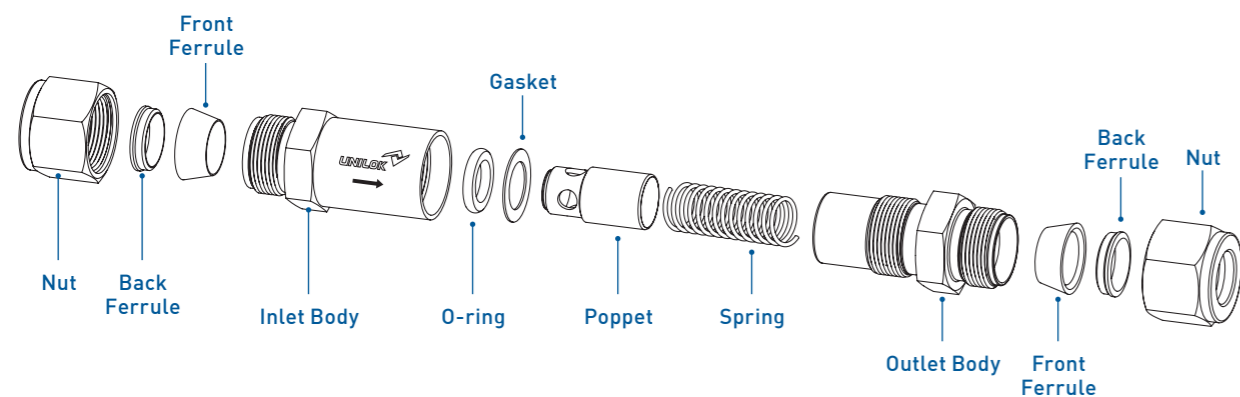
Check Valve VC

CONTENTS

Features	176	Cracking & Reseal Pressure	178
Cleaning	177	VC6 series	179
Testing	177	O-ring Seal Temperature Rating	179
Important Notification	177	VC3C series	180
How To Order	177	VC3CA series	180
VC3 series	178	Adjustment of Cracking Pressure	180

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)

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

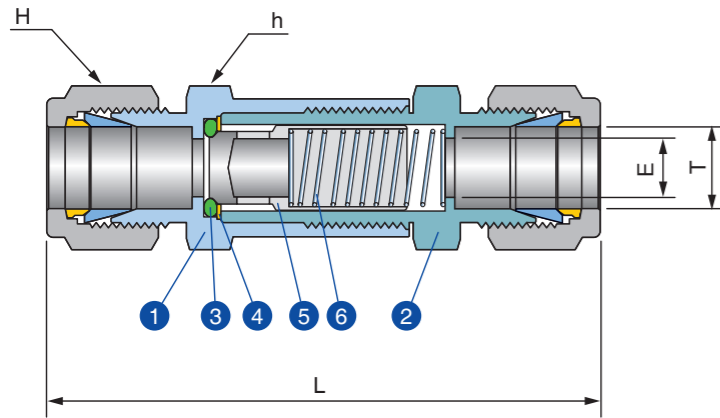
Body Materials	
SS	316SS
BS	Brass
MO	Alloy 400

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	FKM
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	FKM	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 No.	End Connections		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	
	F-04N-	1/4" Female NPT		54.5	
VC32	U-06T-	3/8" UNILOK	1.48	80.4	19.05
	U-M10T-	10mm UNILOK		81.7	
	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	
	F-08N-	1/2" Female 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		102.3	34.93

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VC3 series valves. Add "R" as a suffix instead of "N".

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

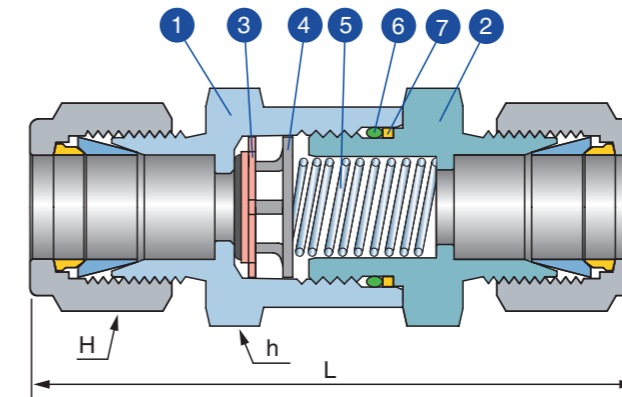
Pressure Rating at 70°F (21°C)

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

Cracking - Reseal Pressure

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

VC6 series (6000 psig, Fixed Cracking Pressure)



Materials of Construction

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

Ordering Information & Dimensions

Part No.	End Connections		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		
	F-08N-	1/2" Female NPT		77.0		26.98
	M-12N-	3/4" Male NPT		59.2		25.40
	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 VC6 series valves. Add "R" as a suffix instead of "N".

Pressure Rating at 70°F (21°C)

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

O-ring Seal Temperature Rating

O-ring Materials	Temperature Rating	
	°C	°F
FKM	-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

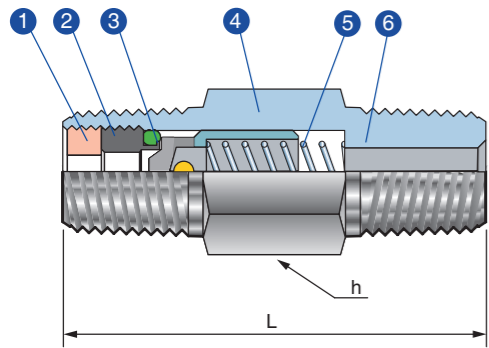
CNG Application

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, Fixed Cracking Pressure)



Materials of Construction

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

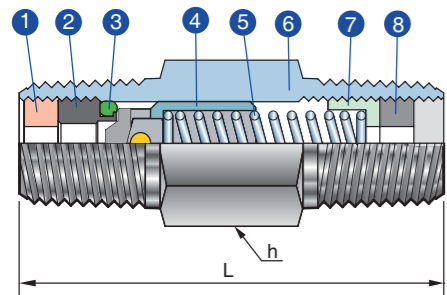
Ordering Information & Dimensions

Part No.	End Connections		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

ISO7/1 Tapered Threads (PT) are available for all fractional sizes of VC3C series valves. Add "R" as a suffix instead of "N".

VC3CA series

(3000 psig, Compact, Adjustable Cracking Pressure)



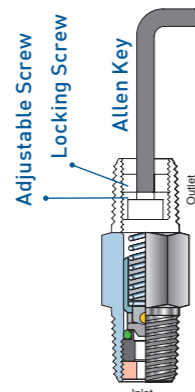
Materials of Construction

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

Ordering Information & Dimensions

Part No.	End Connections		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

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.