

CV Check Valve

Construction

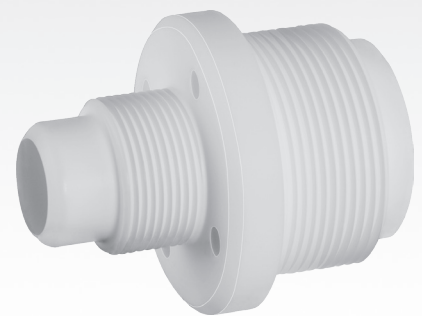
The metal-free GEMÜ CV check valve comprises a PTFE body (1), various PTFE functional parts (2), and two flare union nuts (3) which are made of either high purity PVDF, PFA or CPFA. All medium wetted parts are made from PTFE. The machined PTFE spring ensures low opening and closing pressures. The seal system used does not require an additional O-ring so there are no compatibility and cleaning problems. The flow direction is indicated by an arrow on the product label.

Features

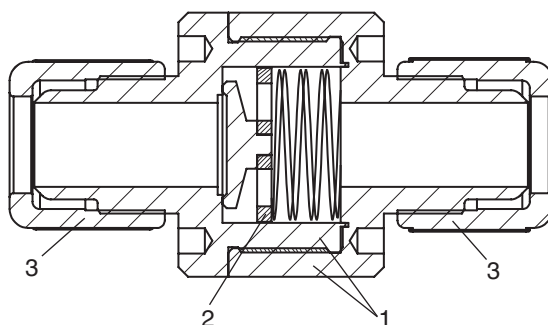
- Polished sealing surface
- Spring and groove provide external sealing
- Machined spring and body parts in PTFE
- Metal-free

Advantages

- Long life, sophisticated seal characteristics
- Seal system without O-rings
- Compact design
- Low opening pressure
- Special versions available for direct integration into a block valve



Sectional view



Technical data

Working medium

Corrosive, inert, gaseous and liquid media which have no negative impact on the physical and chemical properties of the valve material.

Materials

Media wetted parts PTFE
Choice of flare union nut PFA, CPFA, PVDF

Operating pressure

0 - 6 bar relative

Operating conditions

Opening pressure 0.017 - 0.052 bar
Back pressure/sealing pressure 0.35 bar

Ambient temperature

Size 1 0 - 100 °C
Sizes 2 + 3 10 - 100 °C
Size 4 15 - 100 °C

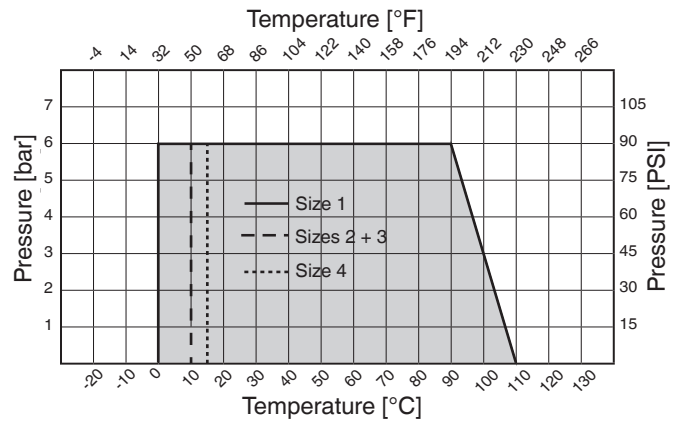
Flow direction

Connection X to connection Z (see arrow on product label)

Operating temperature

See temperature/pressure diagram

Pressure / temperature diagram



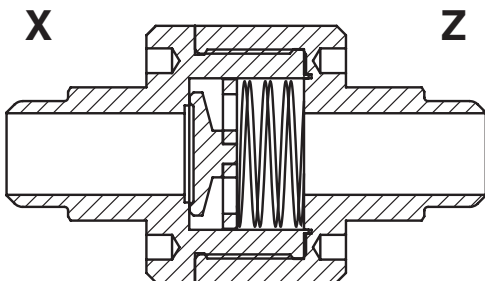
Information on the use of the diagram

The temperature / pressure diagram is only an aid. The data refers to water as a working medium. A change of operating conditions or other media may result in deviations. In case of doubt it is advisable to test the behavior of the material under the definitive operating conditions by means of a test installation.

Kv / Cv values - check valve (standard)

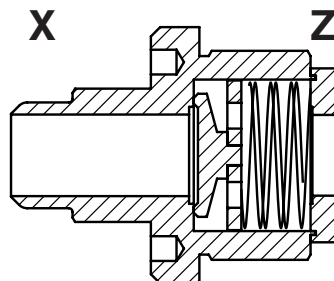
Connection				Size			Kv value	Cv value
Size		Connection	Code	Size	DN	Code	l/min	US gal/min
1/4"	Tube	Flare connection	73, 75, 77	1	4	4	3.74	0.26
3/8"	Tube	Flare connection	73, 75, 77	1	4	6	15.84	1.11
1/2"	Tube	Flare connection	73, 75, 77	2	10	8	29.23	2.03
3/4"	Tube	Flare connection	73, 75, 77	3	15	12	59.47	4.13
1"	Tube	Flare connection	73, 75, 77	4	20	16	170.60	11.85

Versions



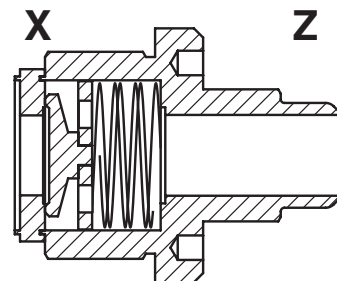
Standard (Code CVFF)

Connection X = Flare
Connection Z = Flare



Version A (Code CVFU)

for integration into a GEMÜ block valve
Connection X = Flare
Connection Z = Block valve






Version B (Code CVUF)

for integration into a GEMÜ block valve
Connection X = Block valve
Connection Z = Flare

Please observe our specification sheet on page 5

RANGE OVERVIEW GEMÜ CV CHECK VALVE

Connection / range overview					
Standard version	Special version A	Special version B	Connection		Size
 Flare X — Flare Z	 Flare X — BV Z	 BV X — Flare Z	Code international	DN	
1/4" - 1/4"	On request	On request	4	10	1
3/8" - 3/8"			6	15	1
1/2" - 1/2"			8	15	2
3/4" - 3/4"			12	20	3
1" - 1"			16	20	4

BV = GEMÜ block valve with UN thread and groove-spring seal system. Please observe our specification sheet on page 5.

Order data

Type	Code
Standard check valve	CVFF
Special version A (for integration in a block valve)	CVFU
Special version B (for integration in a block valve)	CVUF

Valve body connection	Code
Flare connection with CPFA-HP union nut	73
Flare connection with PVDF-HP union nut	75
Flare connection with PFA-HP union nut	77

Nominal size - connection X	Code
Tube (1/4"), DN 4	4
Tube (3/8"), DN 6	6
Tube (1/2"), DN 10	8
Tube (3/4"), DN 15	12
Tube (1"), DN 20	16

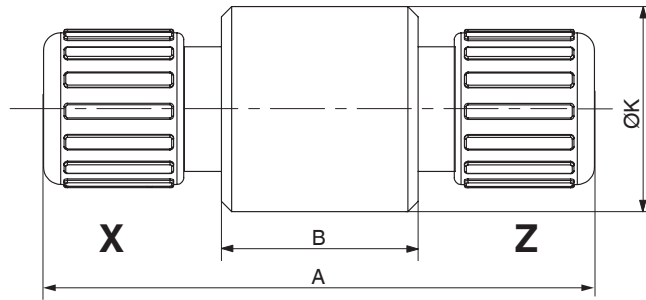
Nominal size - connection Z	Code
Tube (1/4"), DN 4	4
Tube (3/8"), DN 4	6
Tube (1/2"), DN 10	8
Tube (3/4"), DN 15	12
Tube (1"), DN 20	16

Material	Code
PTFE	26

Level of purity	Code
High Purity	HP

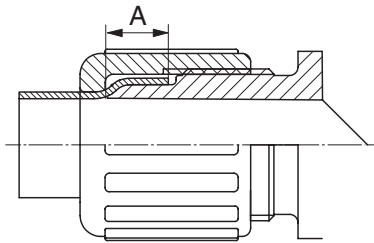
Order example	CVFF	75	16	16	26	HP
Type	CVFF					
Valve body connection (code)		75				
Nominal size X (code)			16			
Nominal size Z (code)				16		
Material (code)					26	
Level of purity (code)						HP

Dimensions - GEMÜ CV



Size	Connection		Dimensions [mm/inch]		
	X	Z	A	B	ØK
1	1/4" (3/8") Flare	1/4" (3/8") Flare	97.0 / [3.82]	38.6 / [1.52]	31.2 / [1.23]
2	1/2" Flare	1/2" Flare	104.9 / [4.13]	36.3 / [1.43]	37.6 / [1.48]
3	3/4" Flare	3/4" Flare	105.4 / [4.15]	31.2 / [1.23]	47.2 / [1.86]
4	1" Flare	1" Flare	146.3 / [5.76]	54.9 / [2.16]	69.9 / [2.75]

Dimensions / Tolerances



Overlap dimensions and thread sizes of flare connections

Size	Tube size	Thread designation	Standard	A mm [inch]
1	1/4"	1/2"-20-UNF	ANSI B 1.1	7.0 [0.27"]
1	3/8"	5/8"-20-UN	ANSI B 1.1	10.0 [0.39"]
2	1/2"	3/4"-20-UNEF	ANSI B 1.1	12.0 [0.47"]
3	3/4"	1"-20-UNEF	ANSI B 1.1	14.0 [0.55"]
4	1"	1 7/16"-12-UN	ANSI B 1.1	14.0 [0.55"]

Specifications

Blockvalve PC 50 Specification

Blockname: _____

Version: _____





Date: _____

Please complete this form and return it to your nearest GEMÜ office or to the address listed below!

Spigots Spigot no.	Pipe connection				Kv m ³ /h	Actuator		Other Comments
	DN	Flare	Thread	Other		Actuator type	Control function	
S1								
S2								
S3								
S4								
S5								
S6								
S7								
S8								
S9								
S10								

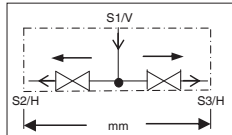
Media pressure: _____ bar
Media: _____
Media temperature: _____ °C
Concentration: _____ %
 possible cleaning media: _____

Valveblock material:
 PTFE (TFM)
 PVDF
 PP-H
 Other




Diaphragm material:
 PTFE (TFM)
 Single block 
 Double block 
 Distributor 
 Multiport 

Assembly of block: Bracket
 Passing screws
 Threads
 Others _____

of pcs.: _____

Example: 

Please draw functional diagram.
Note: Please observe correspondence of table and functional diagram.

Spigots: S1, S2, ...
 Preferred orientation: Horizontal/Vertical
 Flow direction (Media): 
 Block extent: _____
 Valve seat: 
 Connection point: 

The technical details of each enquiry will be checked by GEMÜ.

Contact (GEMÜ):	_____		
Customer:	_____		
Department:	_____		
Address:	_____		
Phone:	_____	Fax: _____	E-Mail: _____

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Other High Purity products



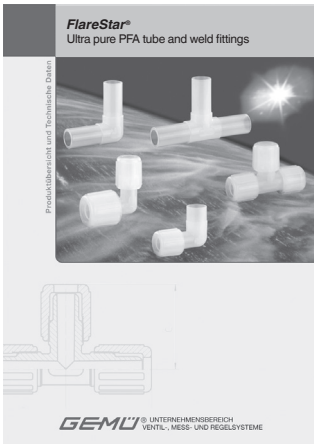
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FlareStar®
Ultra pure PFA tube
and weld fittings



TubeStar®
High Purity
PFA Tubing



CleanStar®
Ultra pure PFA valves
(Metal-free)

For further valves, high purity products, accessories and other products,
please see our Product Range catalogue and Price List. Contact GEMÜ.

GEMÜ® VALVES, MEASUREMENT
AND CONTROL SYSTEMS

