

GEMÜ CV

Check valve



Features

- Long life seal characteristics
- O-ring free seal system
- Compact design
- Low opening pressure
- Special versions available for direct integration into a block valve

Description

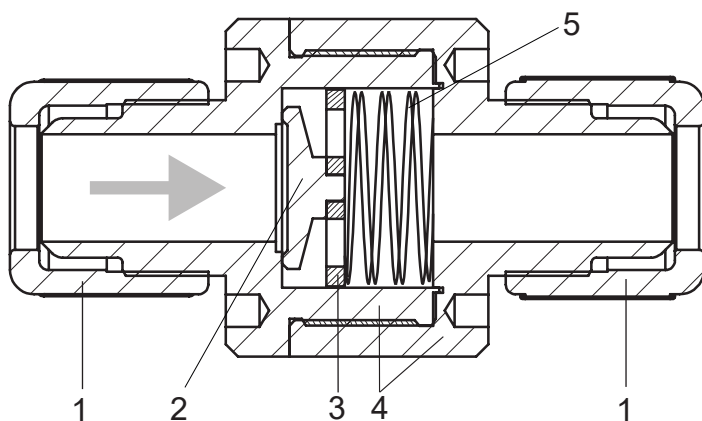
The GEMÜ CV metal-free check valve comprises a PTFE body. All functional parts are also made of PTFE. PFA, PVDF and CPFA materials are available for the union nuts in the flare connections. Sealing is O-ring-free.

Technical specifications

- Media temperature *: 0 to 130 °C
 - Operating pressure*: 0 to 6 bar
 - Nominal sizes: DN 4 to 20
 - Conformities: EAC
- * depending on version and/or operating parameters



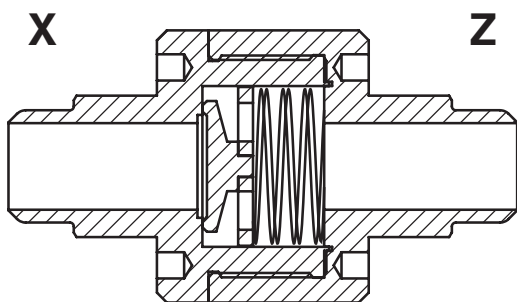
Product description



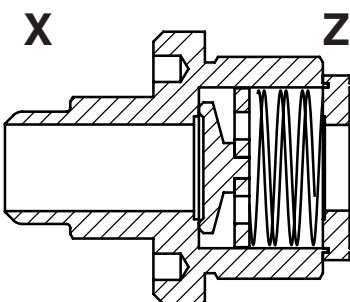
Item	Name	Materials
1	Flare union nut	PFA, CPFA or PVDF
2	Sealing plate	PTFE
3	Perforated disc	PTFE
4	Basic body	PTFE
5	Return spring	PTFE

Designs

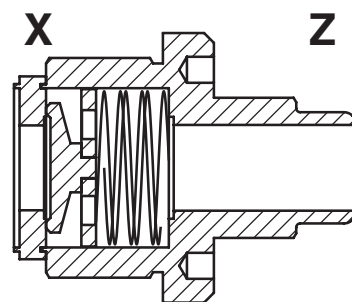
For PC50 block solutions



Check valve,
connection Flare + Flare
type code CVFF






Check valve,
connection Flare + UN thread
flow direction Z to X
type code CVFU



Check valve,
connection UN thread + Flare
flow direction X to Z
type code CVUF

Availability

Size	DN	Code	Type code ¹⁾		
			CVFF	CVFU	CVUF
					
F1	4	4	1/4" - 1/4"	On request	On request
	6	6	3/8" - 3/8"	On request	On request
2	DN 10	DN 8	1/2" - 1/2"	On request	On request
3	DN 15	DN 12	3/4" - 3/4"	On request	On request
4	DN 20	16	1" - 1"	On request	On request

BV = GEMÜ block valve with UN thread and groove-spring seal system. Please note our specification sheet.

1) Type

Code CVFF: Check valve, connection Flare + Flare

Code CVFU: Check valve, connection Flare + UN thread flow direction Z to X

Code CVUF: Check valve, connection UN thread + Flare flow direction X to Z

Order data

The order data provide an overview of standard configurations.

Please check the availability before ordering. Other configurations available on request.

Order codes

1 Type	Code
Check valve	CVFF

2 Connection size 1	Code
1/4", international code: 4	4
3/8", international code: 6	6
1/2", international code: 8	8
3/4", international code: 12	12
1", international code: 16	16

3 Connection type spigot 1	Code
Flare connection with CPFA union nut	73
Flare connection with PVDF union nut	75
Flare connection with PFA union nut	77

4 Valve body material	Code
PTFE, polytetrafluoroethylene	26

5 Seal material	Code
PTFE	5

6 Connection size 2	Code
1/4", international code: 4	4
3/8", international code: 6	6
1/2", international code: 8	8
3/4", international code: 12	12
1", international code: 16	16

7 Connection type spigot 2	Code
Flare connection with CPFA union nut	73
Flare connection with PVDF union nut	75
Flare connection with PFA union nut	77

8 High Purity version	Code
High Purity	HP

Order example

Order option	Code	Description
1 Type	CVFF	Check valve
2 Connection size 1	16	1", international code: 16
3 Connection type spigot 1	75	Flare connection with PVDF union nut
4 Valve body material	26	PTFE, polytetrafluoroethylene
5 Seal material	5	PTFE
6 Connection size 2	16	1", international code: 16
7 Connection type spigot 2	75	Flare connection with PVDF union nut
8 High Purity version	HP	High Purity

Technical data

Medium

Working medium: Corrosive, inert, gaseous and liquid media which have no negative impact on the physical and chemical properties of the body and seal material.

Temperature

Media temperature: 0 – 130 °C
Observe pressure/temperature diagram

Ambient temperature: 0 – 100 °C

Storage temperature: 0 – 40 °C

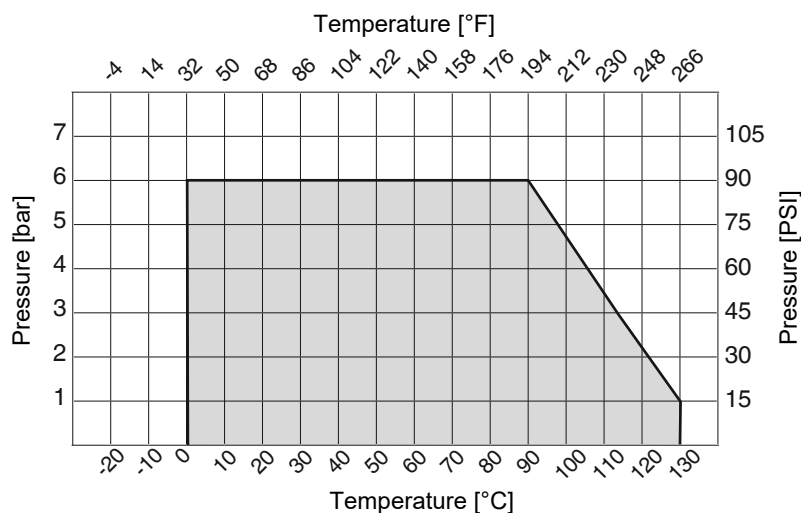
Pressure

Operating pressure: 0 to 6 bar

Open pressure: 0.017 to 0.052 bar

Back pressure/sealing pressure: 0.35 bar

Pressure/temperature diagram:



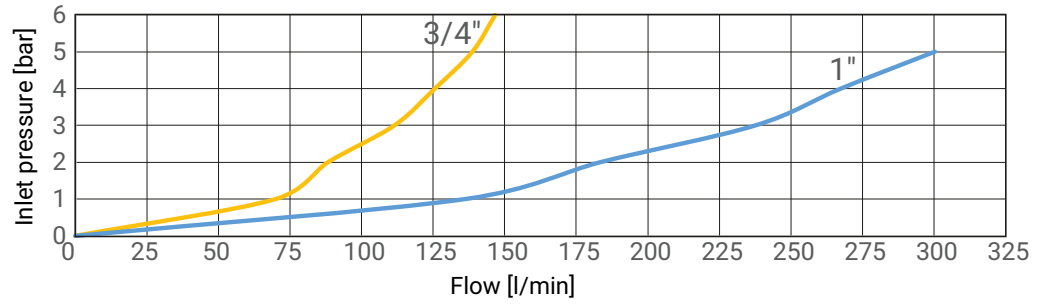
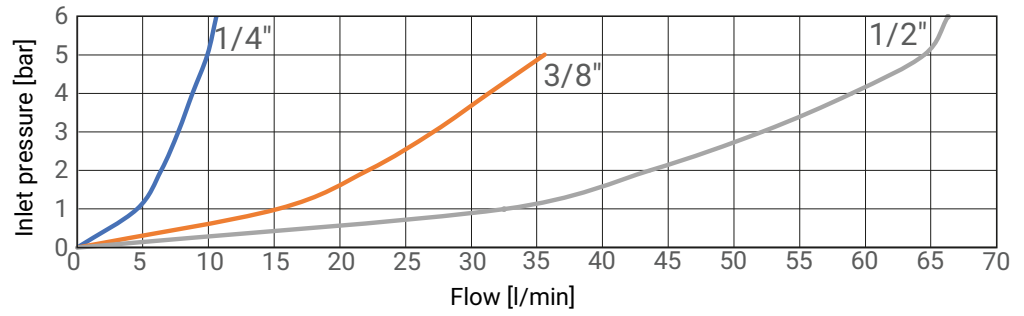
Note: The temperature / pressure diagram is only an aid. The data refers to water as a working medium. A change of operating conditions or other media may result in deviations. In case of doubt it is advisable to test the behaviour of the material under the definitive operating conditions by means of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

Kv values:

DN	Size	Code	Size	Kv value	Cv value
4	1/4"	4	1	4.56	0.32
4	3/8"	6	1	16.80	1.17
10	1/2"	8	2	33.47	2.33
15	3/4"	12	3	72.50	5.04
20	1"	16	4	144.67	11.85

Kv values in l/min, Cv values in gpm

Kv values:



Mechanical data

Flow direction:

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

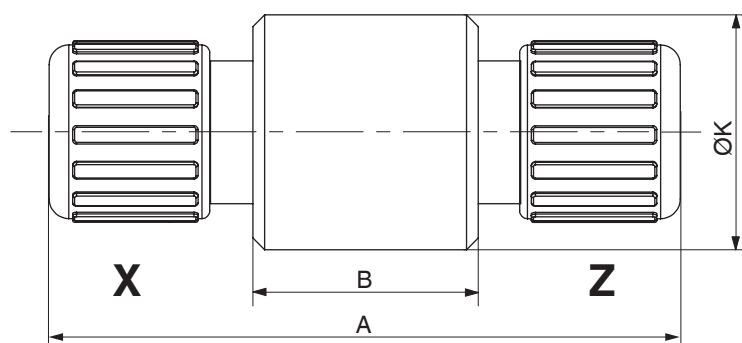
Weight:

DN	Size	Code	Size	Weight
4	1/4"	4	1	83
4	3/8"	6	1	94
10	1/2"	8	2	126
15	3/4"	12	3	201
20	1"	16	4	560

Weight in g

Dimensions

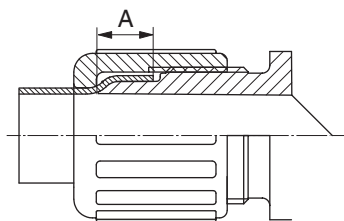
GEMÜ CV



Size	Connection	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 in mm/inch

Overlap dimensions of flare connection



Size	Tube size	Thread designation	Standard	A
1	1/4"	1/2"-20-UNF	ANSI B 1.1	7 / 0.28
1	3/8"	5/8"-20-UN	ANSI B 1.1	10 / 0.39
2	1/2"	3/4"-20-UNEF	ANSI B 1.1	12 / 0.47
3	3/4"	1"-20-UNEF	ANSI B 1.1	14 / 0.55
4	1"	1 7/16"-12-UN	ANSI B 1.1	14 / 0.55

Dimensions in mm/inch

Specification | GEMÜ PC50 iComLine Plastic M-block diaphragm globe valve

Customer/Project _____ Contact person _____

Date _____ Phone _____

Contact person (GEMÜ) _____ E-mail _____

Medium: _____

Application: _____

Operating pressure: _____

Media temp.: _____

Concentration: _____

Cleaning medium, if applicable: _____

Valve block material:

PTFE (TFM™)

PVDF


PP-H

Other _____

Diaphragm material:

PTFE (TFM™)

Block type:

Single block 

Double block 

Manifold 

Multi-port 

Fixing:

Tab

Through bolt

Thread

Other _____

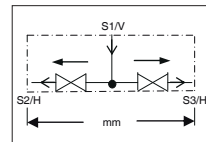
Quantity: _____

Block designation: _____

Version: _____

bar
°C
%

Example:



Please draw functional diagram.

Important: Please ensure that the table and functional diagram correspond to one another.

Spigots:

S1, S2, ...

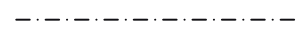
Preferred installation position:

Horizontal/Vertical

Flow direction (medium):



Max. installation space:



Valve seat:



Intersection:



Spigot	Connection				Kv m³/h	Actuator				Other Remarks
	Spigot no.	DN	Flare	Thread		Other	No.	Actuator type ¹⁾	Control function ²⁾	
S1										
S2										
S3										
S4										
S5										
S6										
S7										
S8										
S9										
S10										

¹⁾ GEMÜ C50, C51 or C57 iComLine, ²⁾ NC, NO, DA, ³⁾ A seats, B seats



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