

GEMÜ®

CleanStar®

Diaphragm valve, plastic

Construction

The **CleanStar®** C60 HPW pneumatically operated ultra pure 2/2 way diaphragm valve has a complete PFA-HP body. All medium wetted parts are made of PFA-HP or PTFE (diaphragm).

The exterior actuator parts of the piston actuator are made of PVDF. Standard features are (1) a stroke limiter and optical position indicator. (2) Integral solid mounting lugs. (3) Leakage sensor connection. (4) Union nuts connections in PVDF or PFA. (5) Union nuts actuator in PVDF or ECTFE.

Features

- Specifically designed for high purity media
- Metal free (control function 3)
- High flow capability
- Union nuts / flare connections compatible with all current designs
- Manufactured under cleanroom conditions

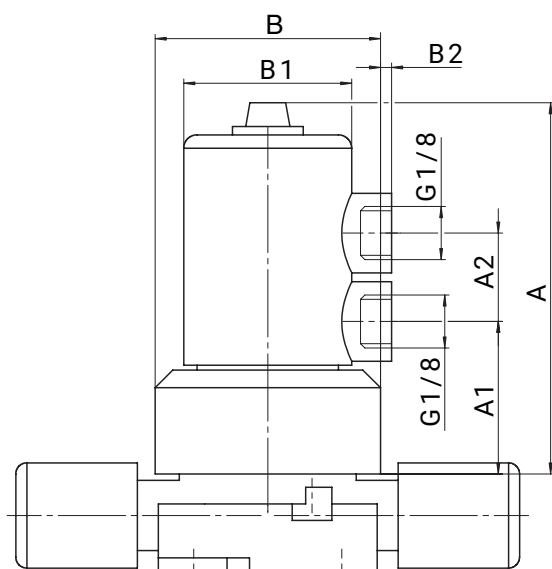
Advantages

- Minimal contamination
- High C_v/K_v value
- Minimal deadleg
- Optional flow direction
- Also available as T valve. i.e. saves using a T piece and requires less space
- Optional available valve with ECTFE union nut (5)

Thus you achieve:

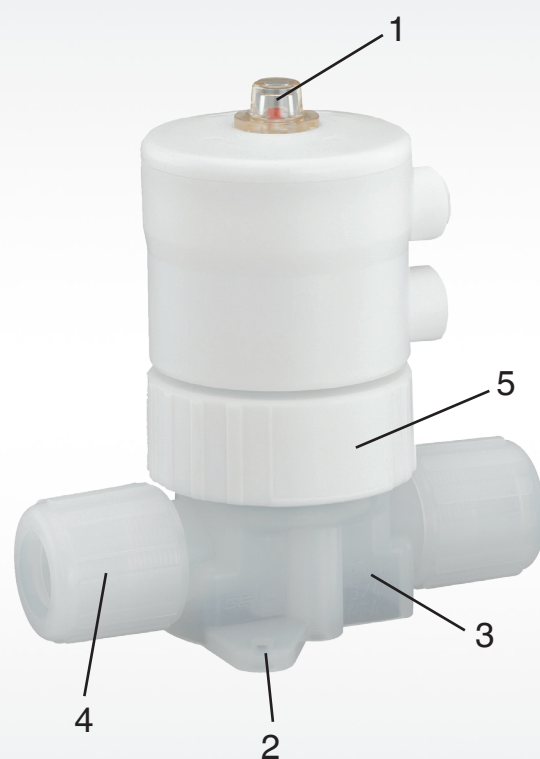
- Brief equipment rinsing times
- Clearly improved K_v values (High Flow)
- High "MTBF"
- Reduced costs

Actuator dimensions GEMÜ C60 HPW [mm/inch]



Actuator size	A	A1	A2	B	B1	B2
1	84/3.30"	35.5/1.39"	20.0/0.78"	51.0/2.01"	38.0/1.49"	2.5/0.09"
2	93/3.66"	35.4/1.39"	24.1/0.94"	63.0/2.48"	64.7/2.54"	9.5/0.37"
3	122.5/4.82"	35.0/1.37"	39.0/1.53"	79.0/3.11"	86.0/3.38"	12.5/0.49"

Connection dimensions from page 8



GEMÜ® C60 HPW

Range overview CleanStar® C60 2/2-way valves

Type of connection / availability				Size			Dimensions see page
Flare-connection	PrimeLock	Butt weld spigots		Connection		Actuator size	
		on both sides	on one side Pos. Z	Code intern.	DN		
							
1/4" - 1/4"	1/4" - 1/4"	1/4" - 1/4"		4	4/10	1	10
3/8" - 3/8"	3/8" - 3/8"			6	6		10
1/2" - 1/2"	1/2" - 1/2"			8	10	2	11
		1/2" - 1/2" **	1/2" - 1/2"	8	10/15		11
3/4" - 3/4" **	3/4" - 3/4" *			12	15		11
			3/4" - 3/4"	12	15/20		11
		3/4" - 3/4" **		12	20		11
1" - 1" *	1" - 1" *			16	20		11
3/4" - 3/4"				12	15	3	12
			3/4" - 3/4"	12	15/20		12
		3/4" - 3/4"		12	20		12
1" - 1" **	1" - 1" *			16	20		12
		1" - 1" **		16	25		12
			1" - 1"	16	20/25		12
1 ¼" - 1 ¼" **	1 ¼" - 1 ¼" *			20	25		12

Type of connection / availability				Size			Dimensions see page
Flare-connection / Space saver			TubeStub	Connection		Actuator size	
Pos. X	Pos. Z	on both sides Pos. X + Z		Code intern.	DN		
							
	1/4" - 1/4"			4	4/10	1	10
	3/8" - 3/8"		3/8" - 3/8"	6	6		10
	1/2" - 1/2"	1/2" - 1/2"	1/2" - 1/2"	8	10	2	11
				8	10/15		11
	3/4" - 3/4"	3/4" - 3/4"	3/4" - 3/4"	12	15		11
				12	15/20		11
				12	20		11
on request				16	20		11
				12	15	3	12
				12	15/20		12
				12	20		12
1" - 1"	1" - 1"	1" - 1"	16	20	12		
			16	25	12		
				16	20/25		12
	1 ¼" - 1 ¼" **	1 ¼" - 1 ¼" **	1 ¼" - 1 ¼" *	20	25		12

* only High Flow version

** High Flow version with increased Kv value

Range overview CleanStar® C60 T valves

Type of connection / availability					Size				Actuator size	Dimensions see page
Flare-connection	Flare-connection / Space saver				Connection					
	Main pipe				Main pipe X + Z		Branch Y			
	Pos. X	Pos. Z	Pos. X + Z	Pos. Y						
					Code intern.	DN	Code intern.	DN	1	13
3/8" 1/4" 3/8"					6	6	4	4		13
3/8" 3/8" 3/8"					6	6	6	6		13
1/2" 3/8" 1/2"		1/2" 3/8" 1/2"			8	10	6	6		13
3/4" 3/8" 3/4"	3/4" 3/8" 3/4"	3/4" 3/8" 3/4"			12	15	6	6	2	14/15
1/2" 1/2" 1/2"	1/2" 1/2" 1/2"	1/2" 1/2" 1/2"	1/2" 1/2" 1/2"	1/2" 1/2" 1/2"	8	10	8	10		14/15
					8	15	8	15		14/15
					8	15	8	10		14/15
3/4" 1/2" 3/4"	3/4" 1/2" 3/4"	3/4" 1/2" 3/4"	3/4" 1/2" 3/4"	3/4" 1/2" 3/4"	12	15	8	10		14/15
					12	20	4	8		14/15
3/4" 3/4" 3/4"	3/4" 3/4" 3/4"	3/4" 3/4" 3/4"		3/4" 3/4" 3/4"	12	15	12	15		14/15
1" 1/2" 1"	1" 1/2" 1"	1" 1/2" 1"	1" 1/2" 1"		16	20	8	10		14/15
1" 3/4" 1"	1" 3/4" 1"	1" 3/4" 1"		1" 3/4" 1"	16	20	12	15	14/15	
					16	25	8	15	3	16
					16	25	12	20		16
					16	25	16	25		16
1" 1" 1"	1" 1" 1"	1" 1" 1"			16	20	16	20		16
1 1/4" 1/2" 1 1/4"		1 1/4" 1/2" 1 1/4"			20	25	8	10		16
1 1/4" 3/4" 1 1/4"		1 1/4" 3/4" 1 1/4"			20	25	12	15		16
1 1/4" 1" 1 1/4"		1 1/4" 1" 1 1/4"			20	25	16	20		16
1 1/4" 1 1/4" 1 1/4"		1 1/4" 1 1/4" 1 1/4"			20	25	20	25		16
Type of connection / availability					Size				Actuator size	Dimensions see page
Butt weld spigots	Butt weld spigot/ Flare connection	Butt weld spigot/ Space saver	Butt weld spigot/ Flare connection		Connection					
					Main pipe X + Z		Branch Y			
					Code intern.	DN	Code intern.	DN	1	13
1/4" 1/4" 1/4"					4	10	4	10		13
1/2" 1/4" 1/2"					8	15	4	8	2	14/15
1/2" 1/2" 1/2"					8	15	8	15		14/15
		1/2" 1/2" 1/2"	1/2" 1/2" 1/2"		8	15	8	10		14/15
	3/4" 1/2" 3/4"				12	20	8	10		14/15
	3/4" 3/4" 3/4"				12	20	12	15		14/15
3/4" 1/4" 3/4"					12	20	4	8		14/15
3/4" 1/2" 3/4"					12	20	8	15	14/15	
1" 1/2" 1"									3	16
1" 3/4" 1"										16
1" 1" 1"										16
	1" 1/2" 1"	1" 1/2" 1"			16	25	8	10		16
	1" 1" 1"	1" 1" 1"			16	25	10	20		16

Technical data

Flow medium

Suitable for any inert or corrosive gases or liquids,
- particularly high purity media - which do not corrode the
body and diaphragm materials.
High Flow version with improved Kv values.

Operating pressure

Max. 6 bar when applied upstream only

Vacuum 400 mbar/abs*

* The life expectancy of the valve may be affected if exposed to a
greater vacuum.

Flow direction

Optional

Operating temperature

See temperature/pressure diagram

Ambient temperature

Max. 60°C (130°F)

Materials

Medium wetted parts (body)	PFA
Diaphragm	PTFE
Exterior actuator parts	PVDF
Union nuts (actuator/body), optional	ECTFE

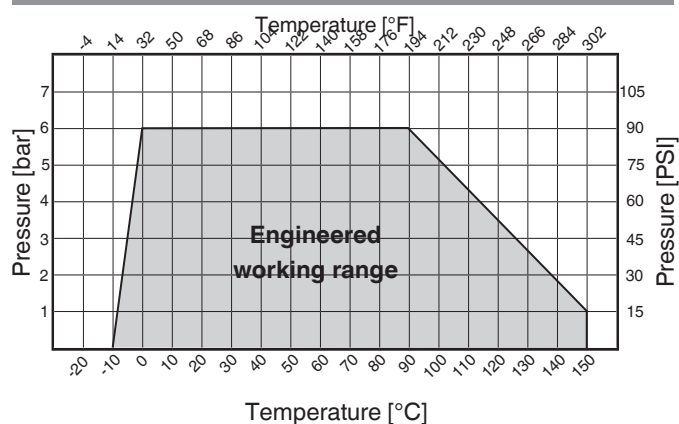
Control air connection

Size G 1/8

Control pressure

"Normally closed" (actuator size 1)	5.5 - 7 bar
"Normally closed" (actuator sizes 2)	4 - 7 bar
"Normally closed" (actuator sizes 3)	5 - 7 bar
"Normally open" and "Double acting"	max. 4 bar
For coordination connection size/actuator size see table page 4	

Temperature / pressure - diagram



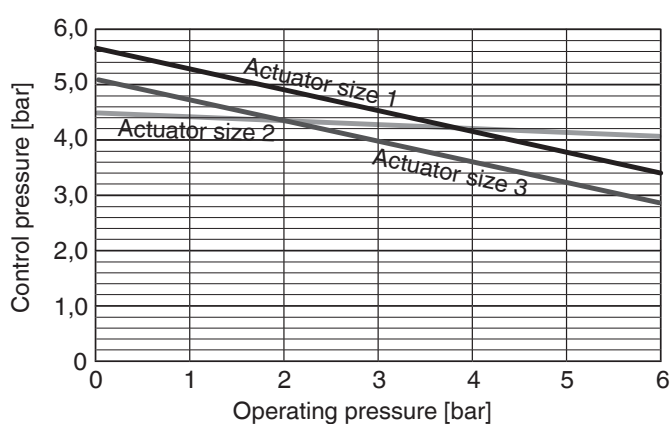
Information on the use of diagram

The temperature / pressure diagram is only an orientation aid. The data refer 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.

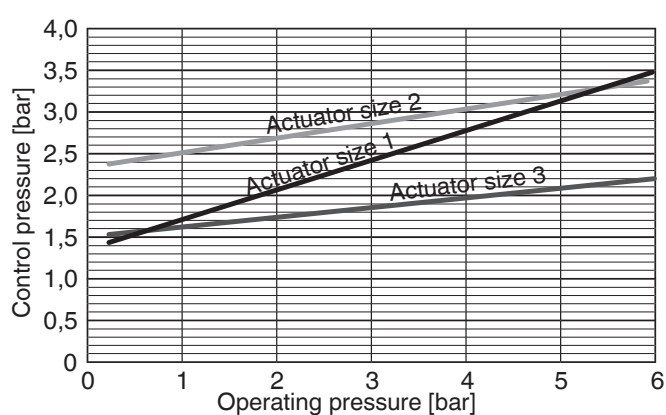
Temperatures under 0 °C can affect the operating speed negatively.

Operating pressure / Control pressure characteristics

Control function 1 - Normally closed (NC)



Control function 2 - Normally open (NO)



Control air volume actuatorA C60 [cm³]

Control function		Actuator size		
		1	2	3
1	Normally closed (NC)	7,4	24,0	56,0
2	Normally open NO)	9,2	39,0	88,0
3	Double acting (closed) (DA)	9,2	39,0	88,0
3	Double acting (open) (DA)	7,4	24,0	56,0

Kv / Cv values

2/2-way valves - standard								
Connection						Kv value	Cv value	Actuator size
Size		Connection	Code	Code intern.	DN	l/min	US gal/min	
1/4"	Tube	Flare connection	73, 75, 77	4	4	4	0.29	1
	Tube	Flare / Space Saver	73, 75, 77	4	4	4	0.29	1
	Tube	PrimeLock connection	PL	4	4	4	0.29	1
	Pipe	Imp. butt weld spigots	30	4	10	15	1.05	1
3/8"	Tube	Flare connection	73, 75, 77	6	6	15	1.05	1
	Tube	Flare / Space Saver	73, 75, 77	6	6	15	1.05	1
	Tube	PrimeLock connection	PL	6	6	15	1.05	1
	Tube	TubeStub	T3	6	6	15	1.05	1
1/2"	Tube	Flare connection	73, 75, 77	8	10	35	2.45	2
	Tube	Flare / Space Saver	73, 75, 77	8	10	35	2.45	2
	Tube	Space Saver / Space Saver	73, 75, 77	8	10	35	2.45	2
	Tube	PrimeLock connection	PL	8	10	35	2.45	2
	Tube/Pipe	Flare / Imp. butt weld spigots	30, 73, 75, 77	8	10/15	35	2.45	2
	Pipe	Imp. butt weld spigots	30	8	15	68	4.76	2
	Tube	TubeStub	T3	8	10	35	2.45	2
3/4"	Tube	Flare connection	73, 75, 77	12	15	68	4.76	2
	Tube	Flare / Space Saver	73, 75, 77	12	15	68	4.76	2
	Tube	Space Saver / Space Saver	73, 75, 77	12	15	68	4.76	2
	Tube/Pipe	Flare / Imp. butt weld spigots	30, 73, 75, 77	12	15/20	68	4.76	2
	Pipe	Imp. butt weld spigots	30	12	20	68	4.76	2
	Tube	Flare connection	73, 75, 77	12	15	68	4.76	3
	Tube/Pipe	Flare / Imp. butt weld spigots	30, 73, 75, 77	12	15/20	68	4.76	3
	Pipe	Imp. butt weld spigots	30	12	20	126	8.82	3
	Tube	TubeStub	T3	12	15	68	4.76	3
1"	Tube	Flare connection	73, 75, 77	16	20	158	11.06	3
	Tube	Flare / Space Saver	73, 75, 77	16	20	158	11.06	3
	Tube	Space Saver / Space Saver	73, 75, 77	16	20	158	11.06	3
	Tube/Pipe	Flare / Imp. butt weld spigots	30, 73, 75, 77	16	20/25	160	11.20	3
	Pipe	Imp. butt weld spigots	30	16	25	175	12.25	3
	Tube	TubeStub	T3	16	20	158	11.06	3
1 1/4"	Tube	Flare connection*	73, 75, 77	20	25	170	11.90	3
2/2-way valves - High Flow								
1/2"	Pipe	Imp. butt weld spigots	30	8	15	115	7.99	2
3/4"	Tube	PrimeLock connection	PL	12	15	115	7.99	2
	Tube	Flare / Space Saver	73, 75, 77	12	15	115	7.99	2
	Tube	Space Saver / Space Saver	73, 75, 77	12	15	115	7.99	2
	Tube	Flare	73, 75, 77	12	15	115	7.99	2
	Pipe	Imp. butt weld spigots	30	12	20	115	7.99	2
	Tube	TubeStub	T3	12	15	115	7.99	2
1"	Tube	PrimeLock connection	PL	16	20	123	8.57	2
	Tube	Flare	73, 75, 77	16	20	123	8.57	2
	Pipe	Imp. butt weld spigots	30	16	25	123	8.57	2
	Tube	TubeStub	T3	16	20	123	8.57	2
	Tube	PrimeLock connection	PL	16	20	316	21.99	3
	Tube	Flare	73, 75, 77	16	20	316	21.99	3
	Pipe	Imp. butt weld spigots	30	16	25	316	21.99	3
	Tube	TubeStub	T3	16	20	316	21.99	3
1 1/4"	Tube	PrimeLock connection	PL	20	25	325	22.57	3
	Tube	Flare connection	73, 75, 77	20	25	325	22.57	3
	Tube	TubeStub	T3	20	25	325	22.57	3

* with welded spigots on request

Kv / Cv values

T-valve														
Main pipe X and Z						Branch Y						Actual.	Kv	Cv
Connection					Size	Connection				Size				
Size		Connection	Code	Code intern,	DN	Size	Connection	Code	Code intern,	DN		l/min	US gal/min	
1/4"	Pipe	Imp. butt weld spigots	30	4	10	1/4" Pipe	Imp. butt weld spigots	30	4	10	1	17	1.19	
3/8"	Tube	Flare connection	73, 75, 77	6	6	1/4" Tube	Flare connection	73, 75, 77	4	4	1	4	0.29	
	Tube	Flare connection	73, 75, 77	6	6	3/8" Tube	Flare connection	73, 75, 77	6	6	1	13	0.91	
1/2"	Tube	Flare connection	73, 75, 77	8	10	3/8" Tube	Flare connection	73, 75, 77	6	6	1	17	1.19	
	Tube	Flare / Space Saver	73, 75, 77	8	10	3/8" Tube	Flare connection	73, 75, 77	6	6	1	17	1.19	
	Tube	Flare connection	73, 75, 77	8	10	1/2" Tube	Flare connection	73, 75, 77	8	10	2	28	1.96	
	Tube	Flare / Space Saver	73, 75, 77	8	10	1/2" Tube	Flare connection	73, 75, 77	8	10	2	28	1.96	
	Tube	Space Saver / Flare	73, 75, 77	8	10	1/2" Tube	Flare connection	73, 75, 77	8	10	2	28	1.96	
	Pipe	Imp. butt weld spigots	30	8	15	1/4" Pipe	Imp. butt weld spigots	30	4	10	1	18	1.26	
	Pipe	Imp. butt weld spigots	30	8	15	1/2" Pipe	Imp. butt weld spigots	30	8	15	2	62	4.34	
	Pipe	Imp. butt weld spigots	30	8	15	1/2" Tube	Space Saver	73, 75, 77	8	10	2	36	2.52	
3/4"	Tube	Flare connection	73, 75, 77	12	15	3/8" Tube	Flare connection	73, 75, 77	6	6	1	18	1.26	
	Tube	Space Saver / Flare	73, 75, 77	12	15	3/8" Tube	Flare connection	73, 75, 77	6	6	1	18	1.26	
	Tube	Flare / Space Saver	73, 75, 77	12	15	3/8" Tube	Flare connection	73, 75, 77	6	6	1	18	1.26	
	Tube	Flare connection	73, 75, 77	12	15	1/2" Tube	Flare connection	73, 75, 77	8	10	2	35	2.45	
	Tube	Flare / Space Saver	73, 75, 77	12	15	1/2" Tube	Flare connection	73, 75, 77	8	10	2	35	2.45	
	Tube	Space Saver / Flare	73, 75, 77	12	15	1/2" Tube	Flare connection	73, 75, 77	8	10	2	35	2.45	
	Tube	Space Saver	73, 75, 77	12	15	1/2" Tube	Flare connection	73, 75, 77	8	10	2	35	2.45	
	Tube	Flare connection	73, 75, 77	12	15	1/2" Tube	Space Saver	73, 75, 77	8	10	2	35	2.45	
3/4"	Tube	Flare connection	73, 75, 77	12	15	3/4" Tube	Flare connection	73, 75, 77	12	15	2	62	4.34	
	Tube	Space Saver / Flare	73, 75, 77	12	15	3/4" Tube	Flare connection	73, 75, 77	12	15	2	62	4.34	
	Tube	Flare / Space Saver	73, 75, 77	12	15	3/4" Tube	Flare connection	73, 75, 77	12	15	2	62	4.34	
	Tube	Flare connection	73, 75, 77	12	15	3/4" Tube	Space Saver	73, 75, 77	12	15	2	62	4.34	
	Pipe	Imp. butt weld spigots	30	12	20	1/4" Pipe	Imp. butt weld spigots	30	4	10	2	35	2.45	
	Pipe	Imp. butt weld spigots	30	12	20	1/2" Pipe	Imp. butt weld spigots	30	8	15	2	38	2.66	
	Pipe	Imp. butt weld spigots	30	12	20	1/2" Tube	Flare connection	73, 75, 77	8	10	2	38	2.66	
	Pipe	Imp. butt weld spigots	30	12	20	3/4" Tube	Flare connection	73, 75, 77	12	15	2	71	4.97	
1"	Tube	Flare connection	73, 75, 77	16	20	1/2" Tube	Flare connection	73, 75, 77	8	10	2	38	2.66	
	Tube	Space Saver / Flare	73, 75, 77	16	20	1/2" Tube	Flare connection	73, 75, 77	8	10	2	38	2.66	
	Tube	Flare / Space Saver	73, 75, 77	16	20	1/2" Tube	Flare connection	73, 75, 77	8	10	2	38	2.66	
	Tube	Space Saver	73, 75, 77	16	20	1/2" Tube	Flare connection	73, 75, 77	8	10	2	38	2.66	
	Tube	Flare connection	73, 75, 77	16	20	3/4" Tube	Flare connection	73, 75, 77	12	15	2	71	4.97	
	Tube	Space Saver / Flare	73, 75, 77	16	20	3/4" Tube	Flare connection	73, 75, 77	12	15	2	71	4.97	
	Tube	Flare / Space Saver	73, 75, 77	16	20	3/4" Tube	Flare connection	73, 75, 77	12	15	2	71	4.97	
	Tube	Flare connection	73, 75, 77	16	20	3/4" Tube	Space Saver	73, 75, 77	12	15	2	71	4.97	
	Tube	Flare connection	73, 75, 77	16	20	1" Tube	Flare connection	73, 75, 77	16	20	3	137	9.59	
	Tube	Space Saver / Flare	73, 75, 77	16	20	1" Tube	Flare connection	73, 75, 77	16	20	3	137	9.59	
	Tube	Flare / Space Saver	73, 75, 77	16	20	1" Tube	Flare connection	73, 75, 77	16	20	3	137	9.59	
	Pipe	Imp. butt weld spigots	30	16	25	1/2" Pipe	Imp. butt weld spigots	30	8	15	3	101	7.07	
	Pipe	Imp. butt weld spigots	30	16	25	1/2" Pipe	Flare connection	73, 75, 77	8	10	3	42	2.94	
	Pipe	Imp. butt weld spigots	30	16	25	3/4"-Pipe	Imp. butt weld spigots	30	12	20	3	130	9.10	
	Pipe	Imp. butt weld spigots	30	16	25	1" Pipe	Imp. butt weld spigots	30	16	25	3	135	9.45	
	Pipe	Imp. butt weld spigots	30	16	25	1" Tube	Flare connection	73, 75, 77	16	20	3	145	10.15	
1¼"	Tube	Flare connection	73, 75, 77	20	25	1/2" Tube	Flare connection	73, 75, 77	8	10	3	53	3.71	
	Tube	Flare connection	73, 75, 77	20	25	3/4" Tube	Flare connection	73, 75, 77	12	15	3	117	8.19	
	Tube	Flare connection	73, 75, 77	20	25	1" Tube	Flare connection	73, 75, 77	16	20	3	150	10.5	
	Tube	Flare connection	73, 75, 77	20	25	1¼" Tube	Flare connection	73, 75, 77	20	25	3	170	11.9	

Kv/Cv-Wert Flare connection Δ Kv/Cv-Wert Space saver

Order data - 2/2-way valve

Position space saver		Code
Space saver in z-position		Z
Space saver in x+z-position		S

Position butt weld spigot		Code
Flare in x butt weld spigot in z		K

Nominal size*		Code
1/4" tube	DN 4	4
3/8" tube	DN 6	6
1/2" tube	DN 10	8
1/2" pipe	DN 15	8
3/4" tube	DN 15	12
3/4" pipe	DN 20	12
1" tube	DN 20	16
1" pipe	DN 25	16
1 1/4" tube	DN 25	20
* 2/2 way body and branch T body (Y-pos.)		

Valve body configuration	Code
2/2-way body	D

Valve body connection	Code
Imperial butt weld spigots	30
Flare connection with CPFA union nut	73*
Flare connection with PVDF union nut	75*
Flare connection with PFA union nut	77*
PrimeLock connection	PL
TubeStub	T3
*also for space saver	

Valve body material	Code
PFA, perfluoralkoxy	30

Diaphragm material	Code
PTFE / EPDM, one-piece	54
PTFE / EPDM	5A

Control function	Code
Normally closed	1
Normally open	2
Double acting	3

Bonnet version	Code
Standard version	
Bonnet size 1	1
Bonnet size 2	2
Bonnet size 3	3
Standard version with ECTFE union nut*	
Bonnet size 1	1E
Bonnet size 2	2E
Bonnet size 3	3E
High Flow version	
Bonnet size 2	2F
Bonnet size 3	3F
Bonnet size 2 with ECTFE union nut*	2EF
Bonnet size 3 with ECTFE union nut*	3EF
For defining the bonnet size, please refer to the tables on pp. 2 and 3.	
* see designation (5) on title page	

K-No.	Code
without	-
Spring PFA coated	7030

Order example	C60	Z	8	D	75	30	5A	1	2	-	HPW
Type	C60										
Position Space saver (optional)		Z									
Nominal size (code)			8								
Valve body configuration (code)				D							
Valve body connection (code)					75						
WV valve body material (code)						30					
Seal material (code)							5A				
Control function (code)								1			
Actuator size (code)									2		
K-No.										-	
High Purity, white											HPW

Order data - T valve

Position space saver	Code
Space saver in y-position 	Y

Nominal size - Branch	Code
1/4" tube DN 4	4
3/8" tube DN 6	6
1/2" tube DN 10	8
1/2" pipe DN 15	8
3/4" tube DN 15	12
3/4" pipe DN 20	12
1" tube DN 20	16
1" pipe DN 25	16
1 1/4" tube DN 25	20

Valve body configuration	Code
T body	T

Valve body connection	Code
Imperial butt weld spigots	30
Flare connection with CPFA union nut	73*
Flare connection with PVDF union nut	75*
Flare connection with PFA union nut	77*
*also for space saver	

Valve body material	Code
PFA, perfluoralkoxy	30

Diaphragm material	Code
PTFE / EPDM, one-piece	54
PTFE/EPDM	5A

Control function	Code
Normally closed	1
Normally open	2
Double acting	3

Bonnet version	Code
Standard version	
Bonnet size 1	1
Bonnet size 2	2
Bonnet size 3	3
Standard version with ECTFE union nut*	
Bonnet size 1	1E
Bonnet size 2	2E
Bonnet size 3	3E
For defining the bonnet size, please refer to the tables on pp. 2 and 3.	
* see designation (5) on title page	

Position of Space saver	Code
Space saver in x position 	X
Space saver in z position 	Z
Space saver in x+z position 	S

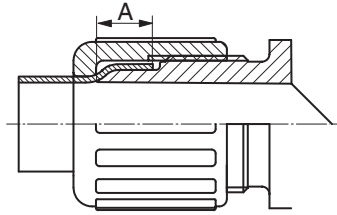
Nominal size of main pipe	Code
3/8" tube DN 6	6
1/2" tube DN 10	8
3/4" tube DN 15	12
1" tube DN 20	16
1" pipe DN 25	16
1 1/4" tube DN 25	20

Connection of main pipe	Code
Imperial butt weld spigots	30
Flare connection with CPFA union nut	73*
Flare connection with PVDF union nut	75*
Flare connection with PFA union nut	77*
*also for space saver	

K-No.	Code
without	-
Spring PFA coated	7030

Order example	C60	Y	8	T	75	30	5A	1	2	Z	8	75	K-No.	HPW
Type	C60													
Position space saver (optional)		Y												
Nominal size - Branch (code)			8											
Valve body configuration (code)				T										
Valve body connection (code)					75									
Valve body material (code)						30								
Seal material (code)							5A							
Steuerfunktion (Code)								1						
Control function (code)									2					
T body: Position of space saver (optional)										Z				
T body: Nominal size of main pipe (code)											8			
T body: Connection of main pipe (code)												75		
K-No.													-	
High Purity, white														HPW

Dimensions / Tolerances



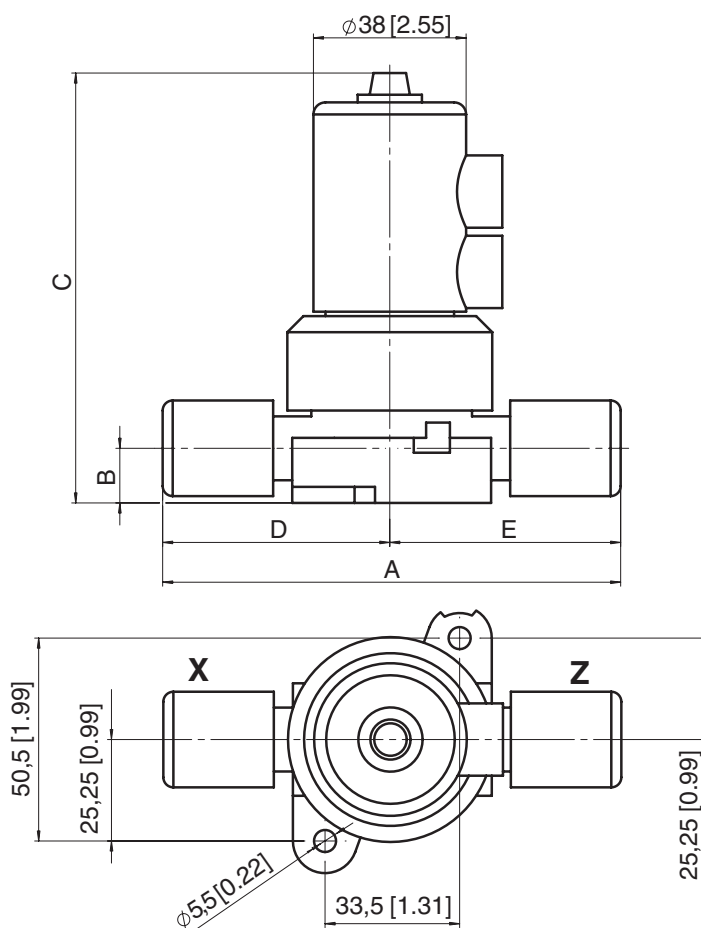
Overlap dimensions and thread sizes of flare connections

Tube size	Thread designation	Standard	A mm [inch]
1/4"	1/2"-20-UNF	ANSI B 1.1	7.0 [0.27"]
3/8"	5/8"-20-UN	ANSI B 1.1	10.0 [0.39"]
1/2"	3/4"-20-UNEF	ANSI B 1.1	12.0 [0.47"]
3/4"	1"-20-UNEF	ANSI B 1.1	14.0 [0.55"]
1"	1 7/16"-12-UN	ANSI B 1.1	14.0 [0.55"]
1 1/4"	1 3/4"-8-UN	ANSI B 1.1	18.0 [0.71"]

Tolerances

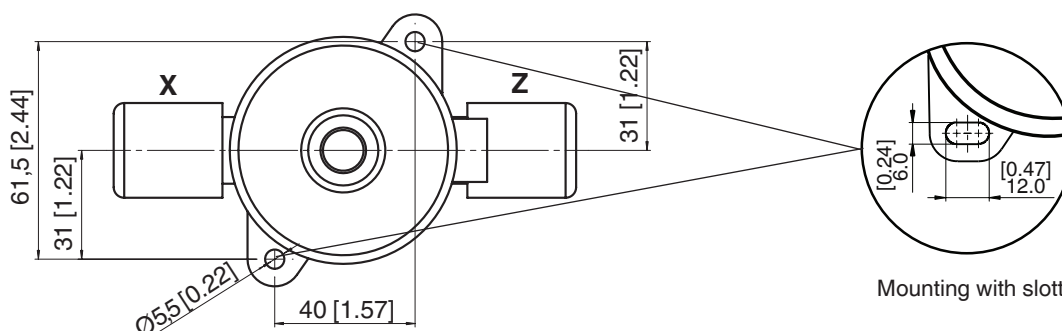
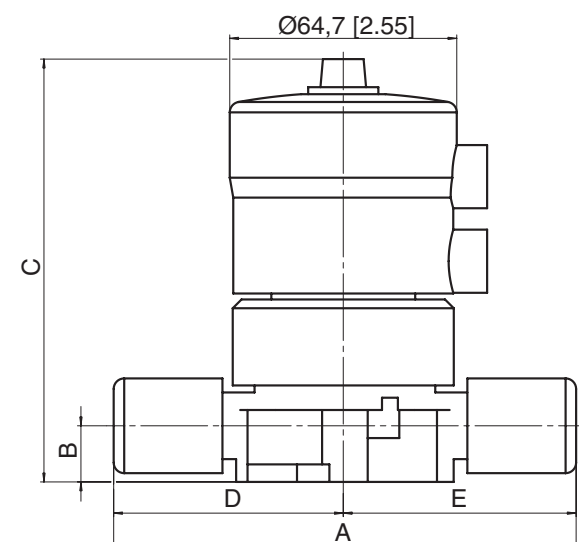
- The **CleanStar®** plastic parts are manufactured to DIN 16901-140.
- In Space Saver - Flare connections tolerances of $\pm 2.5\text{mm}$ are possible.
- Tolerance data for butt weld connections will vary depending on the design of the welding machine used.

Dimensions 2/2-way valves - Actuator size 1



Connection		Dimensions [mm/inch]				
X	Z	A	B	C	D	E
1/4" Butt weld	1/4" Butt weld	102.0/4.02"	13.6/0.54"	91.5/3.6"	51.0/2.01"	51.0/2.01"
1/4" Flare	1/4" Flare	112.8/4.44"	13.6/0.54"	91.5/3.6"	56.4/2.22"	56.4/2.23"
1/4" Flare	1/4" Space Saver	120.1/4.73"	13.6/0.54"	91.5/3.6"	56.4/2.22"	63.7/2.50"
1/4" PrimeLock	1/4" PrimeLock	113.0/4.45"	15.0/0.59"	91.5/3.6"	57.0/2.24"	57.0/2.24"
3/8" Flare	3/8" Flare	114.0/4.49"	13.6/0.54"	91.5/3.6"	57.0/2.24"	57.0/2.24"
3/8" Flare	3/8" Space Saver	119.4/4.70"	13.6/0.54"	91.5/3.6"	57.0/2.24"	62.4/2.45"
3/8" PrimeLock	3/8" PrimeLock	117.0/4.61"	15.0/0.59"	91.5/3.6"	59.0/2.32"	59.0/2.32"
3/8" TubeStub	3/8" TubeStub	106.0/4.18"	13.6/0.54"	91.5/3.6"	53.0/2.09"	53.0/2.09"

Dimensions 2/2-way valves - Actuator size 2

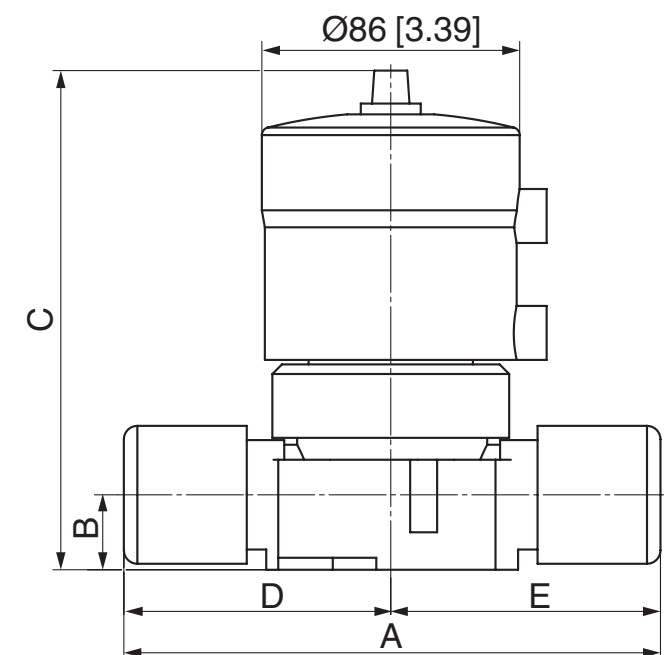


Dear customers,
we change the mounting holes over with all valve sizes for the simpler assembly to long holes. Due to the gradual conversion in the manufacturing it can occur in this phase that you receive both valve bodies with new slotted holes and with old round drillings.

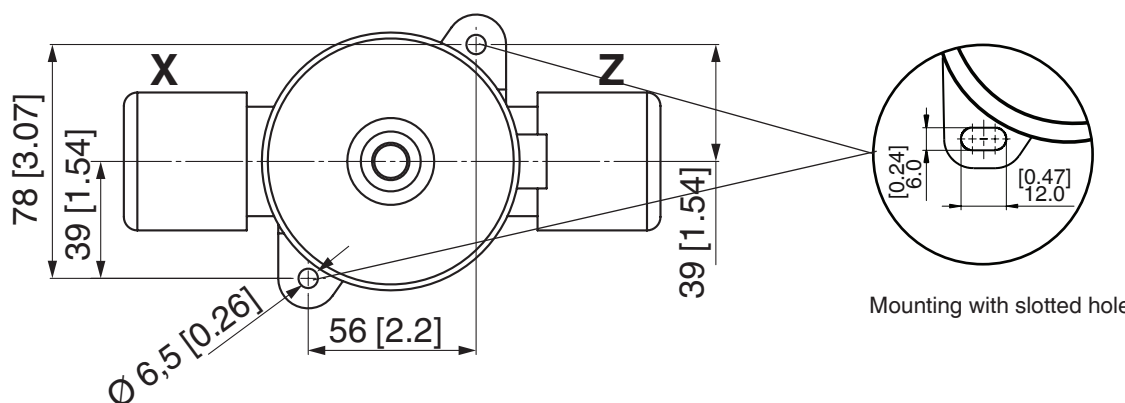
Mounting with slotted hole

Connection		Dimensions [mm/inch]				
X	Z	A	B	C	D	E
1/2" Butt weld	1/2" Butt weld	135.0/5.31"	19/0.75"	126.5/4.98"	67.5/2.65"	67.5/2.65"
1/2" Flare	1/2" Butt weld	133.4/5.25"	19/0.75"	126.5/4.98"	65.9/2.59"	67.5/2.65"
1/2" Flare	1/2" Flare	131.8/5.19"	16/0.62"	120.5/4.74"	65.9/2.59"	65.9/2.59"
1/2" Flare	1/2" Space Saver	136.9/5.39"	16/0.62"	120.5/4.74"	65.9/2.59"	71.0/2.79"
1/2" Space Saver	1/2" Space Saver	142.0/5.59"	16/0.62"	120.5/4.74"	71.0/2.79"	71.0/2.79"
1/2" TubeStub	1/2" TubeStub	122.0/4.80"	16/0.62"	120.5/4.74"	61.0/2.40"	61.0/2.40"
1/2" PrimeLock	1/2" PrimeLock	141.0/5.55"	16/0.62"	126.5/4.98"	71.0/2.79"	71.0/2.79"
3/4" Butt weld	3/4" Butt weld	135.0/5.31"	19/0.75"	126.5/4.98"	67.5/2.65"	67.5/2.65"
3/4" Flare	3/4" Butt weld	134.4/5.29"	19/0.75"	126.5/4.98"	66.9/2.63"	67.5/2.65"
3/4" Flare	3/4" Flare	133.8/5.26"	19/0.75"	126.5/4.98"	66.9/2.63"	66.9/2.63"
3/4" Flare	3/4" Space Saver	145.3/5.72"	19/0.75"	126.5/4.98"	66.9/2.63"	78.4/3.08"
3/4" Space Saver	3/4" Space Saver	156.8/6.17"	19/0.75"	126.5/4.98"	78.4/3.08"	78.4/3.08"
3/4" TubeStub	3/4" TubeStub	135.0/5.31"	19/0.75"	126.5/4.98"	67.5/2.65"	67.5/2.65"
High Flow version						
1/2" Butt weld	1/2" Butt weld	135.0/5.31"	19/0.75"	126.5/4.98"	67.5/2.65"	67.5/2.65"
3/4" Butt weld	3/4" Butt weld	135.0/5.31"	19/0.75"	126.5/4.98"	67.5/2.65"	67.5/2.65"
3/4" Flare	3/4" Flare	133.8/5.26"	19/0.75"	126.5/4.98"	66.9/2.63"	66.9/2.63"
3/4" Flare	3/4" Space Saver	145.3/5.72"	19/0.75"	126.5/4.98"	66.9/2.63"	78.4/3.08"
3/4" Space Saver	3/4" Space Saver	156.8/6.17"	19/0.75"	126.5/4.98"	78.4/3.08"	78.4/3.08"
3/4" PrimeLock	3/4" PrimeLock	156.0/6.14"	19/0.75"	126.5/4.98"	79.0/3.11"	79.0/3.11"
3/4" TubeStub	3/4" TubeStub	135.0/5.31"	19/0.75"	126.5/4.98"	67.5/2.65"	67.5/2.65"
1" Flare	1" Flare	160.0/6.30"	19/0.75"	126.5/4.98"	74.0/2.91"	74.0/2.91"
1" Butt weld	1" Butt weld	148.0/5.83"	19/0.75"	126.5/4.98"	74.0/2.91"	74.0/2.91"
1" PrimeLock	1" PrimeLock	169.0/6.65"	19/0.75"	126.5/4.98"	85.0/3.35"	85.0/3.35"
1" TubeStub	1" Butt weld	148.0/5.83"	19/0.75"	126.5/4.98"	74.0/2.91"	74.0/2.91"

Dimensions 2/2-way valves - Actuator size 3



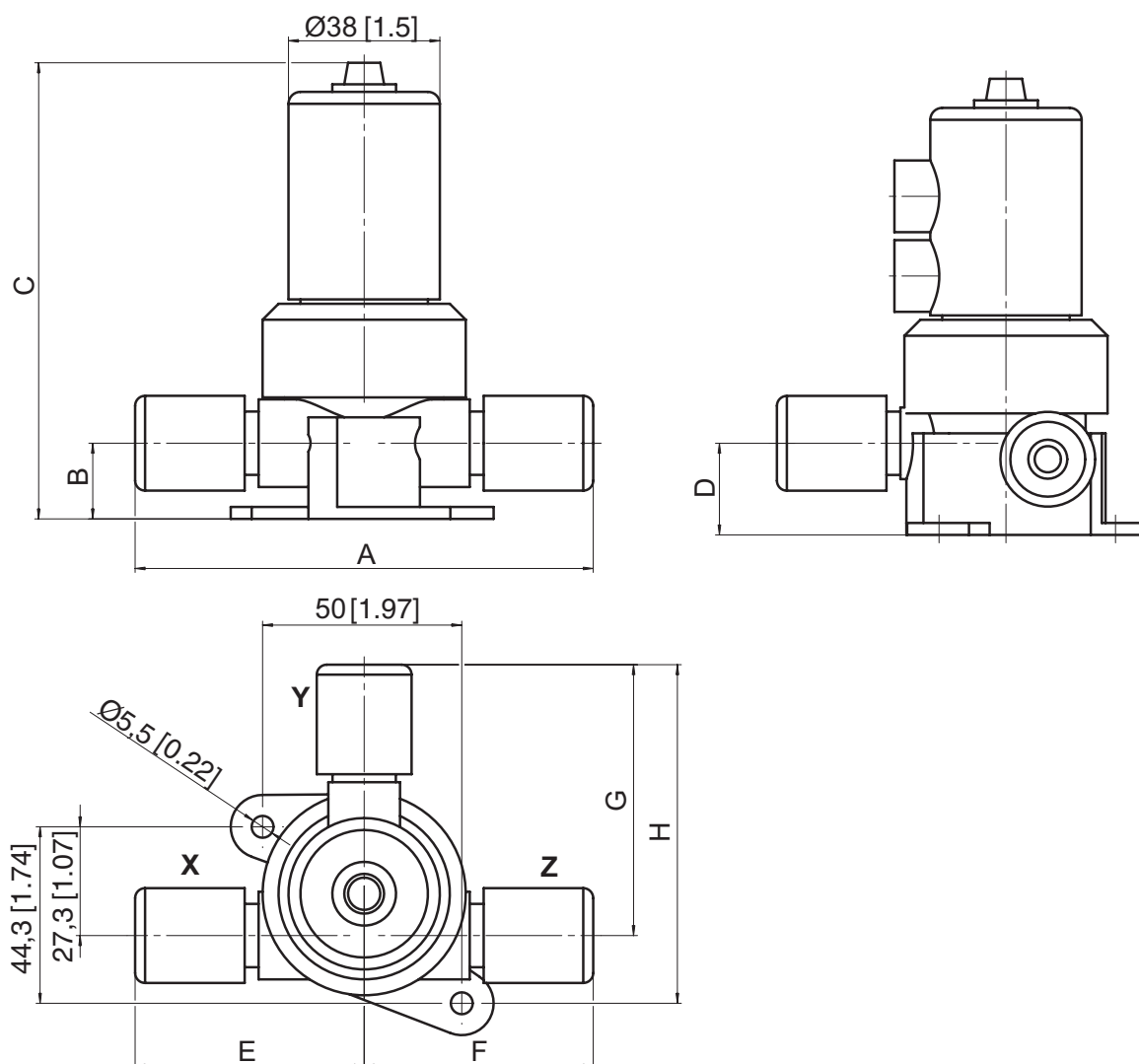
Dear customers,
we change the mounting holes over with all valve sizes for the simpler assembly to long holes. Due to the gradual conversion in the manufacturing it can occur in this phase that you receive both valve bodies with new long holes and with old round drillings.



Mounting with slotted hole

Connection		Dimensions [mm/inch]				
X	Z	A	B	C	D	E
3/4" Butt weld	3/4" Butt weld	166.0/6.54"	25/0.98"	166.5/6.56"	83.0/3.26"	83.0/3.26"
3/4" Flare	3/4" Butt weld	165.9/6.53"	25/0.98"	166.5/6.56"	82.9/3.26"	83.0/3.26"
3/4" Flare	3/4" Flare	165.8/6.53"	25/0.98"	166.5/6.56"	82.9/3.26"	82.9/3.26"
1" Butt weld	1" Butt weld	166.0/6.54"	25/0.98"	166.5/6.56"	83.0/3.26"	83.0/3.26"
1" Flare	1" Butt weld	172.5/6.79"	25/0.98"	166.5/6.56"	89.5/3.52"	83.0/3.26"
1" Flare	1" Flare	179.0/7.05"	25/0.98"	166.5/6.56"	89.5/3.52"	89.5/3.52"
1" Flare	1" Space Saver	188.9/7.44"	25/0.98"	166.5/6.56"	89.5/3.52"	99.4/3.91"
1" Space Saver	1" Space Saver	198.8/7.83"	25/0.98"	166.5/6.56"	99.4/3.91"	99.4/3.91"
1" TubeStub	1" TubeStub	165.8/6.53"	25/0.98"	166.5/6.56"	82.5/3.24"	82.5/3.24"
1 1/4" Flare	1 1/4" Flare	238.4/9.39"	25/0.98"	166.5/6.56"	119.2/4.69"	119.2/4.69"
High Flow version						
1" Flare	1" Flare	179.0/7.05"	25/0.98"	166.5/6.56"	89.5/3.52"	89.5/3.52"
1" PrimeLock	1" PrimeLock	185.0/7.28"	25/0.98"	166.5/6.56"	94.0/3.70"	94.0/3.70"
1" Flare	1" Space Saver	188.9/7.44"	25/0.98"	166.5/6.56"	89.5/3.52"	99.4/3.91"
1" Space Saver	1" Space Saver	198.8/7.83"	25/0.98"	166.5/6.56"	99.4/3.91"	99.4/3.91"
1" TubeStub	1" TubeStub	165.0/6.49"	25/0.98"	166.5/6.56"	82.5/3.24"	82.5/3.24"
1 1/4" PrimeLock	1 1/4" PrimeLock	209.0/8.23"	25/0.98"	166.5/6.56"	105.0/4.14"	105.0/4.14"
1 1/4" Flare	1 1/4" Flare	197.4/7.77"	25/0.98"	166.5/6.56"	119.2/4.69"	119.2/4.69"
1 1/4" TubeStub	1 1/4" TubeStub	176.0/6.92"	25/0.98"	166.5/6.56"	88.0/3.46"	88.0/3.46"

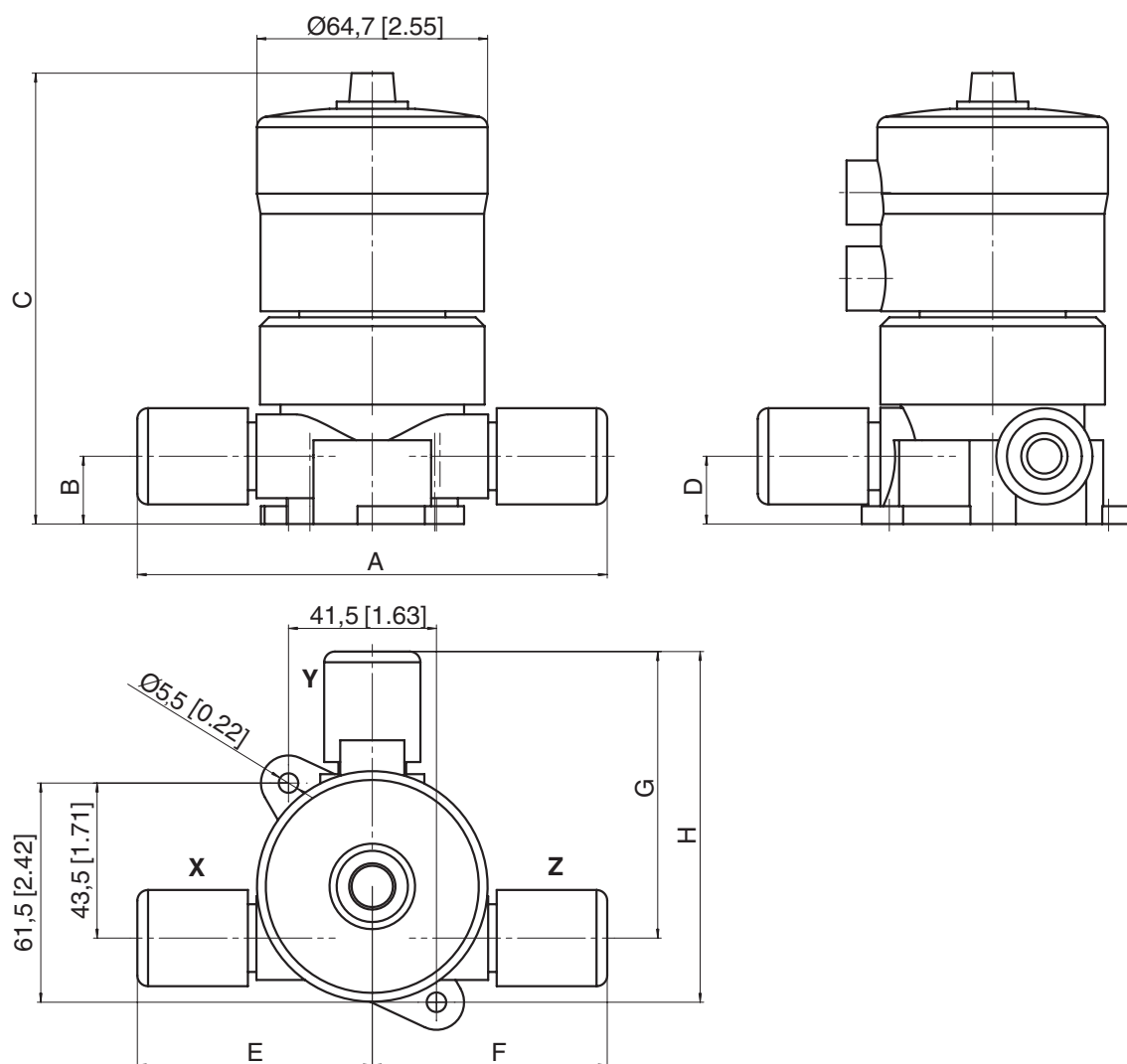
Dimensions T valves - Actuator size 1



Connection			Dimensions [mm/inch]							
X	Y	Z	A	B	C	D	E	F	G	H
1/4" Butt weld	1/4" Butt weld	1/4" Butt weld	106.0/4.17"	19.0/0.75"	114.50/4.51"	23.0/0.91"	53.0/2.08"	53.0/2.08"	63.5/2.50"	80.5/3.16"
1/2" Butt weld	1/4" Butt weld	1/2" Butt weld	106.0/4.17"	19.0/0.75"	114.50/4.51"	23.0/0.91"	53.0/2.08"	53.0/2.08"	63.5/2.50"	80.5/3.16"
3/8" Flare	1/4" Flare	3/8" Flare	115.0/4.53"	19.0/0.75"	114.50/4.51"	23.0/0.91"	57.5/2.26"	57.5/2.26"	67.4/2.65"	84.4/3.32"
3/8" Flare	3/8" Flare	3/8" Flare	115.0/4.53"	19.0/0.75"	114.50/4.51"	23.0/0.91"	57.5/2.26"	57.5/2.26"	68.0/2.68"	85.0/3.34"
1/2" Flare	3/8" Flare	1/2" Flare	120.8/4.76"	19.0/0.75"	114.50/4.51"	23.0/0.91"	60.4/2.37"	60.4/2.37"	68.0/2.68"	85.0/3.34"
1/2" Flare	3/8" Flare	1/2" SS*	131.9/5.19"	19.0/0.75"	114.50/4.51"	23.0/0.91"	60.4/2.37"	71.5/2.81"	68.0/2.68"	85.0/3.34"
3/4" Flare	3/8" Flare	3/4" Flare	125.8/4.95"	19.0/0.75"	114.50/4.51"	23.0/0.91"	62.9/2.47"	62.9/2.47"	68.0/2.68"	85.0/3.34"
3/4" SS*	3/8" Flare	3/4" Flare	135.3/5.33"	19.0/0.75"	114.50/4.51"	23.0/0.91"	72.4/2.85"	62.9/2.47"	68.0/2.68"	85.0/3.34"
3/4" Flare	3/8" Flare	3/4" SS*	135.3/5.33"	19.0/0.75"	114.50/4.51"	23.0/0.91"	62.9/2.47"	72.4/2.85"	68.0/2.68"	85.0/3.34"

*Space Saver

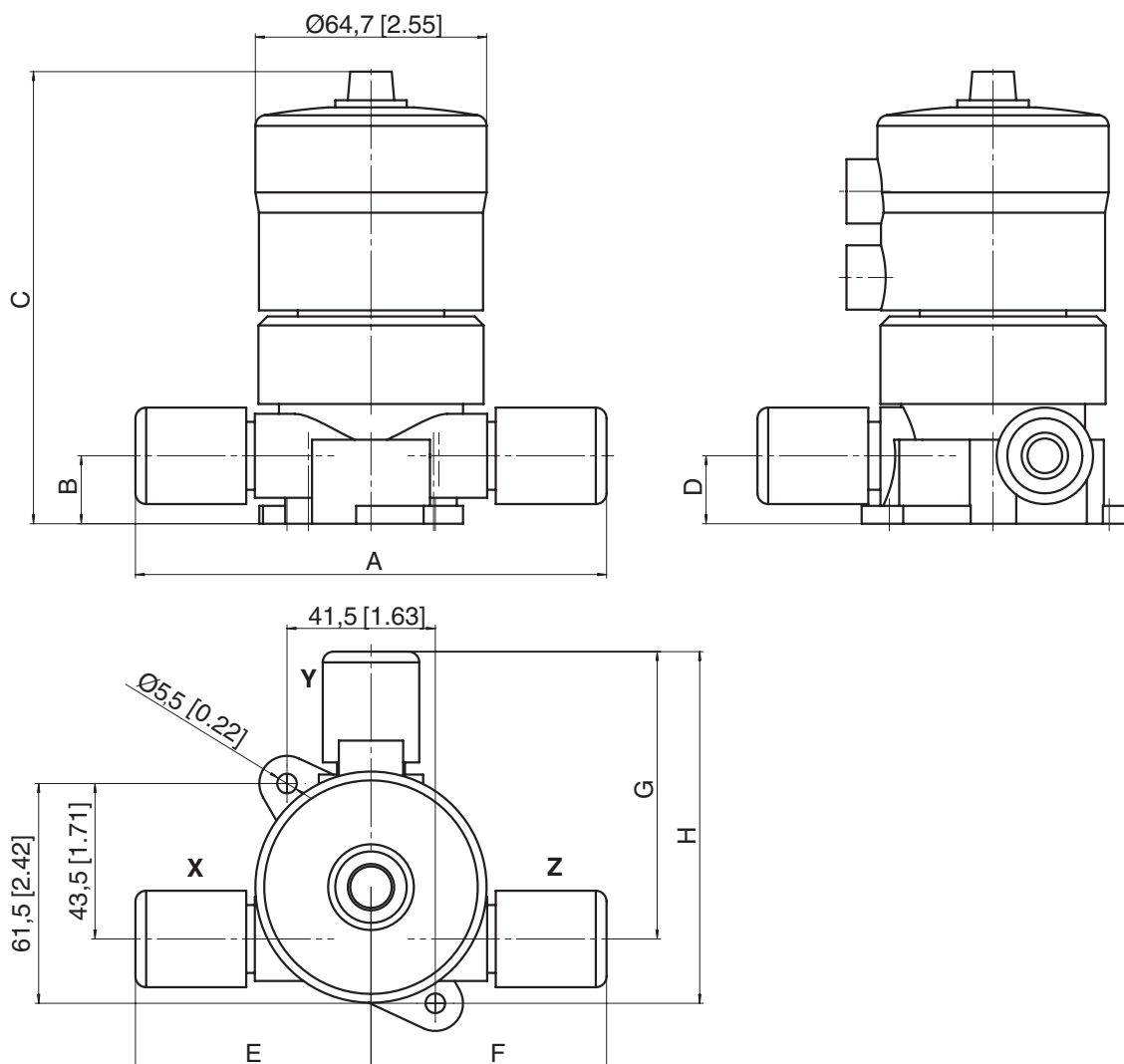
Dimensions T-valves - Bonnet size 2



Connection			Dimensions [mm/inch]							
X	Y	Z	A	B	C	D	E	F	G	H
1/2" Butt weld	1/2" Butt weld	1/2" Butt weld	122.0/4.80"	19.0/0.75"	126.5/4.98"	19.0/0.75"	61.0/2.40"	61.0/2.40"	75.5/2.97"	93.5/3.68"
1/2" Flare	1/2" Flare	1/2" Flare	131.8/5.19"	19.0/0.75"	126.5/4.98"	19.0/0.75"	65.9/2.59"	65.9/2.59"	80.4/3.17"	98.4/3.87"
1/2" Flare	1/2" Flare	1/2" SS*	136.0/5.39"	19.0/0.75"	126.5/4.98"	19.0/0.75"	65.9/2.59"	70.1/2.76"	80.4/3.17"	98.4/3.87"
1/2" Flare	1/2" SS*	1/2" Flare	131.8/5.19"	19.0/0.75"	126.5/4.98"	19.0/0.75"	65.9/2.59"	65.9/2.59"	85.5/3.37"	103.5/4.07"
3/4" Butt weld	1/4" Butt weld	3/4" Butt weld	140.0/5.51"	25.0/0.98"	135.9/5.35"	28.5/1.12"	70.0/2.75"	70.0/2.75"	76.5/3.01"	96.0/3.76"
3/4" Flare	1/2" Flare	3/4" Flare	133.8/5.27"	19.0/0.75"	126.5/4.98"	19.0/0.75"	66.9/2.63"	66.9/2.63"	80.4/3.17"	98.4/3.87"
3/4" SS*	1/2" Flare	3/4" Flare	145.3/5.72"	19.0/0.75"	126.5/4.98"	19.0/0.75"	78.4/3.08"	66.9/2.63"	80.4/3.17"	98.4/3.87"
3/4" Flare	1/2" Flare	3/4" SS*	145.3/5.72"	19.0/0.75"	126.5/4.98"	19.0/0.75"	66.9/2.63"	78.4/3.08"	80.4/3.17"	98.4/3.87"
3/4" SS*	1/2" Flare	3/4" SS*	156.8/6.17"	19.0/0.75"	126.5/4.98"	19.0/0.75"	78.4/3.08"	78.4/3.08"	80.4/3.17"	98.4/3.87"
3/4" Flare	1/2" SS*	3/4" Flare	133.8/5.27"	19.0/0.75"	126.5/4.98"	19.0/0.75"	66.9/2.63"	66.9/2.63"	85.5/3.37"	103.5/4.07"
3/4" Flare	3/4" Flare	3/4" Flare	133.8/5.27"	19.0/0.75"	126.5/4.98"	19.0/0.75"	66.9/2.63"	66.9/2.63"	81.4/3.20"	99.4/3.91"
3/4" SS*	3/4" Flare	3/4" Flare	145.3/5.72"	19.0/0.75"	126.5/4.98"	19.0/0.75"	78.4/3.08"	66.9/2.63"	81.4/3.20"	99.4/3.91"
3/4" Flare	3/4" Flare	3/4" SS*	145.3/5.72"	19.0/0.75"	126.5/4.98"	19.0/0.75"	66.9/2.63"	78.4/3.08"	81.4/3.20"	99.4/3.91"
3/4" Flare	3/4" SS*	3/4" Flare	133.8/5.27"	19.0/0.75"	126.5/4.98"	19.0/0.75"	66.9/2.63"	66.9/2.63"	92.4/3.63"	110.4/4.34"

*Space Saver

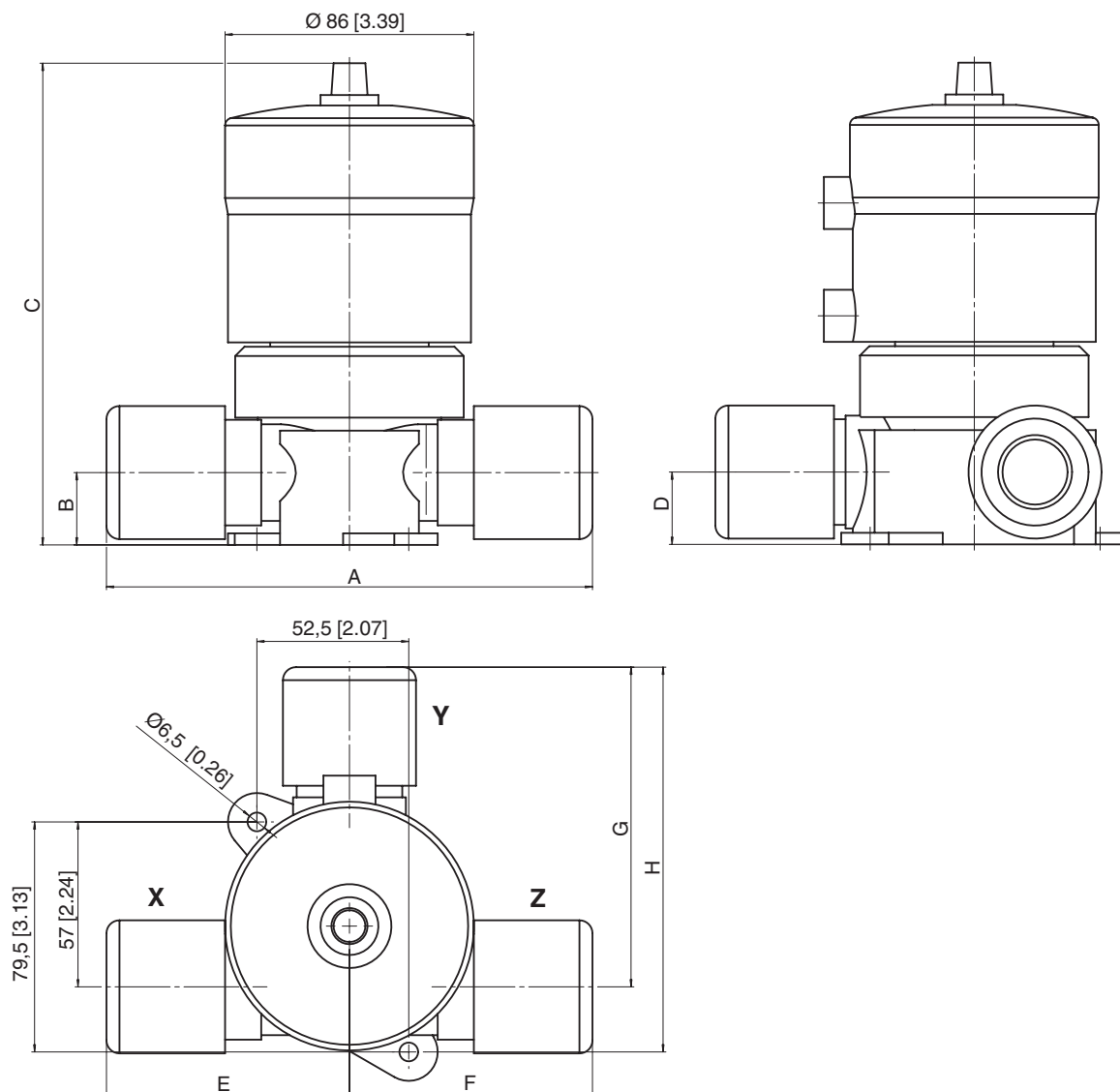
Dimensions T-valves - Actuator size 2



Connection			Dimensions [mm/inch]							
X	Y	Z	A	B	C	D	E	F	G	H
1/2" Butt weld	1/2" SS*	1/2" Butt weld	122.0/4.80"	19.0/0.75"	109.0/4.29"	19.0/0.75"	61.0/2.40"	61.0/2.40"	85.5/3.37"	103.5/4.07"
3/4" Butt weld	1/2" Butt weld	3/4" Butt weld	140.0/5.51"	25.0/0.98"	118.4/4.66"	28.5/1.12"	70.0/2.75"	70.0/2.75"	83.5/3.28"	103.0/4.05"
3/4" Butt weld	1/2" Flare	3/4" Butt weld	140.0/5.51"	25.0/0.98"	118.4/4.66"	28.5/1.12"	70.0/2.75"	70.0/2.75"	81.4/3.20"	100.9/3.97"
3/4" Butt weld	3/4" Flare	3/4" Butt weld	140.0/5.51"	25.0/0.98"	118.4/4.66"	28.5/1.12"	70.0/2.75"	70.0/2.75"	82.4/3.24"	101.9/4.01"
1" Flare	1/2" Flare	1" Flare	154.0/6.06"	25.0/0.98"	118.4/4.66"	28.5/1.12"	77.0/3.03"	77.0/3.03"	81.4/3.20"	100.9/3.97"
1" SS*	1/2" Flare	1" Flare	158.9/6.26"	25.0/0.98"	118.4/4.66"	28.5/1.12"	81.9/3.22"	77.0/3.03"	81.4/3.20"	100.9/3.97"
1" Flare	1/2" Flare	1" SS*	158.9/6.26"	25.0/0.98"	118.4/4.66"	28.5/1.12"	77.0/3.03"	81.9/3.22"	81.4/3.20"	100.9/3.97"
1" SS*	1/2" Flare	1" SS*	163.8/6.45"	25.0/0.98"	118.4/4.66"	28.5/1.12"	81.9/3.22"	81.9/3.22"	81.4/3.20"	100.9/3.97"
1" Flare	3/4" Flare	1" Flare	154.0/6.06"	25.0/0.98"	118.4/4.66"	28.5/1.12"	77.0/3.03"	77.0/3.03"	82.4/3.24"	101.9/4.01"
1" SS*	3/4" Flare	1" Flare	158.9/6.26"	25.0/0.98"	118.4/4.66"	28.5/1.12"	81.9/3.22"	77.0/3.03"	82.4/3.24"	101.9/4.01"
1" Flare	3/4" Flare	1" SS*	158.9/6.26"	25.0/0.98"	118.4/4.66"	28.5/1.12"	77.0/3.03"	81.9/3.22"	82.4/3.24"	101.9/4.01"
1" Flare	3/4" SS*	1" Flare	154.0/6.06"	25.0/0.98"	118.4/4.66"	28.5/1.12"	77.0/3.03"	77.0/3.03"	92.9/3.65"	112.4/4.42"

*Space Saver

Dimensions T valves - actuator size 3



Connection			Dimensions [mm/inch]							
X	Y	Z	A	B	C	D	E	F	G	H
1" Butt weld	1/2" Butt weld	1" Butt weld	163.0/6.42"	25/0.98"	166.5/6.56"	25/0.98"	81.5/3.20"	81.5/3.20"	102.0/4.02"	124.5/4.90"
1" Butt weld	1/2" Flare	1" Butt weld	163.0/6.42"	25/0.98"	166.5/6.56"	25/0.98"	81.5/3.20"	81.5/3.20"	99.9/3.93"	122.4/4.81"
1" Butt weld	3/4" Butt weld	1" Butt weld	163.0/6.42"	25/0.98"	166.5/6.56"	25/0.98"	81.5/3.20"	81.5/3.20"	102.0/4.02"	124.5/4.90"
1" Butt weld	1" Butt weld	1" Butt weld	163.0/6.42"	25/0.98"	166.5/6.56"	25/0.98"	81.5/3.20"	81.5/3.20"	103.5/4.07"	126.0/4.96"
1" Butt weld	1" Flare	1" Butt weld	163.0/6.42"	25/0.98"	166.5/6.56"	25/0.98"	81.5/3.20"	81.5/3.20"	110.5/4.35"	133.0/5.23"
1" Flare	1" Flare	1" Flare	168.0/6.61"	25/0.98"	166.5/6.56"	25/0.98"	84.0/3.30"	84.0/3.30"	110.5/4.35"	133.0/5.23"
1" SS*	1" Flare	1" Flare	177.9/7.00"	25/0.98"	166.5/6.56"	25/0.98"	93.9/3.69"	84.0/3.30"	110.5/4.35"	133.0/5.23"
1" Flare	1" Flare	1" SS*	177.9/7.00"	25/0.98"	166.5/6.56"	25/0.98"	84.0/3.30"	93.9/3.69"	110.5/4.35"	133.0/5.23"
1 1/4" Flare	1/2" Flare	1 1/4" Flare	238.4/9.39"	25/0.98"	166.5/6.56"	25/0.98"	119.2/4.69"	119.2/4.69"	99.9/3.93"	122.4/4.81"
1 1/4" Flare	1" Flare	1 1/4" Flare	238.4/9.39"	25/0.98"	166.5/6.56"	25/0.98"	119.2/4.69"	119.2/4.69"	110.5/4.35"	133.0/5.23"
1 1/4" Flare	1 1/4" Flare	1 1/4" Flare	238.4/9.39"	25/0.98"	166.5/6.56"	25/0.98"	119.2/4.69"	119.2/4.69"	143.2/5.63"	165.7/6.52"

*Space Saver

Accessories



GEMÜ C67 STA
Service tool for actuators



GEMÜ 1098
Flaring mandrel



GEMÜ CF STF
Service tool for
flare union nuts

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