

Hygienic 400.5

Overflow / Pressure control valve made of stainless steel, angle type
- External adjustment -

→ **Series Hygienic 400.5**



■ SUITABLE FOR

Liquids	neutral and non-neutral	
Air, gases and vapours	neutral and non-neutral	
Steam		

■ EXAMPLES OF USE

For the protection of:

- Pumps against overloading in closed circuits for neutral / non-neutral liquids

For the control of:

- processes, plants and containers in the food and pharmaceutical industry for air, neutral and non-neutral vapours and gases, steam and liquids

- food industry
- breweries and beverage industry
- pharmaceutical industry
- cosmetic industry
- medical technology
- clean Service applications

■ FEATURES

- Smooth and faultless surface finish optimized for cleaning process
- Minimal dead space in inlet area and no gaps in the valve
- Exposed and rinsed o-ring seals
- Shape of valve body avoids forming of puddles in the valve
- Adjustable and settable during operation
- Possible to carry-out CIP/SIP by lifting the disc from the seat
- Gap-free installation of seals
- Surface roughness standard Ra<0,8 um
- Option: mechanically polished and/or electro-polished

■ APPROVALS

TR ZU 032/2013 - TR ZU 010/2011

DGUV Test

REQUIREMENTS

DGR 97/23/EG

Additional hygienic requirements

EG No. 852/2004
DIN EN 1672-2

9. GPSGV
GS-NG 2 and 5

Classification society

Russian Maritime Register of Shipping
Germanischer Lloyd

RS
GL



■ MATERIAL



■ SPECIFICATION



-40°C to + 200°C



0,4 – 16 bar

Special connections
DN 20 – DN 32

■ MATERIALS

Component	Material	DIN EN	ASME
Body	Stainless steel	1.4435	316 L
Inner parts, wetted	Stainless steel	1.4435	316 L
Upper section, other inner parts	Stainless steel	1.4404	316 L
Spring	Stainless steel	1.4310	302
Bellows	Stainless steel	1.4571	316 Ti

■ VALVE VERSION

b	Standard with bellows	for neutral and non-neutral media and/or counter pressure up to 4 bar. Spring, moving parts and the environment are protected from being affected by the medium.
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Parts which are difficult to clean in the guide, the spring housing and the spindle / disc combination are protected against soiling by stainless steel bellows

Valves can be delivered unset within a pressure range or set and sealed at the factory.
Can be adjusted by hand wheel under operating conditions without medium escaping into the environment.

■ MEDIUM

GF	gaseous and liquid	Air, vapours, gases, liquids and - depending on safety valve version and seal - also for steam
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■ TYPE OF LIFTING MECHANISM

K	Standard with twist-type lifting mechanism
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■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

Nominal diameter		20									
Connection type		Clamp connection						Threaded ferrule connection			
		DIN 11864-3 / DIN 11853-3			DIN 32676			DIN 11864-1 / DIN 11853-1		DIN 11851	
Inlet		DN 20	DN 25	DN 32	DN 20	DN 25	DN 32	DN 20	DN 25	DN 20	DN 25
Outlet	DN 25	■	■	■	■	■	■	■	■	■	■
	DN 32	■	■	■	■	■	■				

■ TYPE OF CONNECTION INLET / OUTLET Special connections

A / A	Standard	Aseptic collar clamp connection / Aseptic collar clamp connection	DIN 11864-3 / DIN 11864-3 DIN 11853-3 / DIN 11853-3	Pipe Standard DIN 11850
KLSDIN / KLSIDIN	On request	Clamp connection / Clamp connection	DIN 32676 / DIN 32676	Pipe Standard DIN 11850
Against surcharge				
N / N		Aseptic-Threaded ferrule connection A/ Aseptic-Threaded ferrule connection A	DIN 11864-1 / DIN 11864-1 DIN 11853-1 / DIN 11853-1	Pipe Standard DIN 11850
GSDIN / GSDIN		Threaded ferrule connection / Threaded ferrule connection	DIN 11851 / DIN 11851	Pipe Standard DIN 11850

Further connection types available on request

■ SEALS

FKM	Fluorcarbon	Elastomere moulded seal	FDA, USP, 3-A, ADI-free	-20°C to +200°C
EPDM	Ethylene propylene diene	Elastomere moulded seal	FDA	-40°C to +170°C

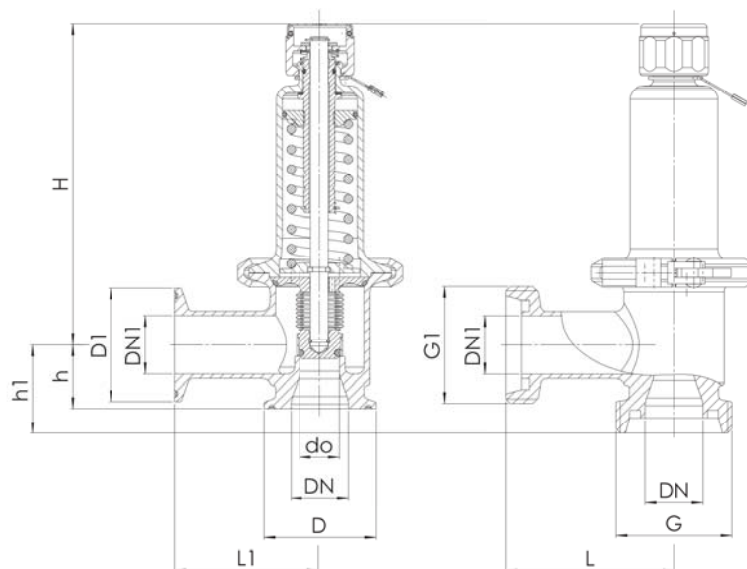
■ OPTIONS

Surface mechanically polished	MP
Surface mechanically polished and electro-polished	MEP
Special versions on request.	

■ NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

Series Hygienic 400.5: Connection, installation dimensions, ranges of adjustment							
Nominal diameter	DN	20					
Connection		Aseptic collar clamp connection DIN 11864-3 / DIN 11853-1 Clamp connection DIN 32676			Aseptic-Threaded ferrule connection A DIN 11864-1 / DIN 11853-1 Threaded ferrule connection DIN 11851		
Inlet	DN	20	25	32	20	25	
	G	-	-	-	20 (Rd 44 x 1/6")	25 (Rd 52 x 1/6")	
Outlet	DN1	25, 32	25, 32	32	25	25	
	G1	-	-	-	25 (Rd 52 x 1/6")	25 (Rd 52 x 1/6")	
Installation dimensions in mm	L	-	-	-	75	75	
	L1	65	65	65	-	-	
	H	145	145	145	145	145	
	h	29	29	29	-	-	
	h1	-	-	-	40	40	
	D	34	50,5	50,5	-	-	
	D1	50,5	50,5	50,5	-	-	
	do	18	18	18	18	18	
	Weight	kr	1,3	1,3	1,3	1,4	1,4
	Set pressure	bar	0,4-16	0,4-16	0,4-16	0,4-16	0,4-16
	Range of adjustment	bar	0,4 - 1,5	0,4 - 1,5	0,4 - 1,5	0,4 - 1,5	0,4 - 1,5
1,5 - 4,5			1,5 - 4,5	1,5 - 4,5	1,5 - 4,5	1,5 - 4,5	
4,5 - 7			4,5 - 7	4,5 - 7	4,5 - 7	4,5 - 7	
7 - 10			7 - 10	7 - 10	7 - 10	7 - 10	
10 - 14			10 - 14	10 - 14	10 - 14	10 - 14	
14 - 16			14 - 16	14 - 16	14 - 16	14 - 16	

■ MAIN DIMENSIONS, INSTALLATION DIMENSIONS



■ INDIVIDUAL SELECTION / VALVE CONFIGURATION

Series	Valve version	Medium	Lifting device	Nominal diameter DN	Connection type		Connection size		Seal	Options	Set pressure	Quantity
					Inlet	Outlet	Inlet	Outlet				
400.5	b	GF	K	20	A	A	25	25	FKM	MEP	1,5-4,5	2
400.5	b	GF	K	20	GSDIN	GSDIN	25	25	EPDM	-	3,5	1
400.5	b	GF	K	20								
400.5	b	GF	K	20								
400.5	b	GF	K	20								

In this table you can configure a valve according to your individual requirements (similar to the *example* shown, which should be deleted before you enter your own data). Please complete the table by hand using the abbreviations in this datasheet and then fax it to: +49(0)7141.4889488
Please do not forget to add your personal data so that our sales team can contact you.

Name _____

First Name _____

Company _____

Telephone _____

E-Mail _____

■ CAPACITY TABLE

Series Hygienic 400.5: Kv values at 1 bar overpressure

Nominal diameter DN		20					
		Air [Nm ³ /h]					
Pressure range bar	Set pressure bar	0,4 - 1,5	1,5 - 4,5	4,5 - 7	7 - 10	10 - 14	14 - 16
0,4	0,4	215					
1,0	1,0	278					
1,5	1,5	318	330				
3,0	3,0		455				
4,5	4,5		596	398			
5,7	5,7			428			
7,0	7,0			482	424		
8,5	8,5				435		
10,0	10,0				444	442	
12,0	12,0					531	
14,0	14,0					619	415
15,0	15,0						433
16,0	16,0						510

Kv values at 1 bar overpressure

Nominal diameter DN		20					
		Water [m ³ /h]					
Pressure range bar	Set pressure bar	0,4 - 1,5	1,5 - 4,5	4,5 - 7	7 - 10	10 - 14	14 - 16
0,4	0,4	7					
1,0	1,0	7,5					
1,5	1,5	8,1	6,7				
3,0	3,0		8,2				
4,5	4,5		9,9	7,0			
5,7	5,7			8,1			
7,0	7,0			9	7,5		
8,5	8,5				8,5		
10,0	10,0				9,1	6,9	
12,0	12,0					7,4	
14,0	14,0					8,8	4,9
15,0	15,0						6,0
16,0	16,0						6,3

Kv values at 1 bar overpressure

Nominal diameter DN		20					
		Steam [kg/h]					
Pressure range bar	Set pressure bar	0,4 - 1,5	1,5 - 4,5	4,5 - 7	7 - 10	10 - 14	14 - 16
0,4	0,4	163					
1,0	1,0	224					
1,5	1,5	250	195				
3,0	3,0		360				
4,5	4,5		466	306			
5,7	5,7			331			
7,0	7,0			374	325		
8,5	8,5				336		
10,0	10,0				340	336	
12,0	12,0					408	
14,0	14,0					466	317
15,0	15,0						337
16,0	16,0						380