→ Series Hygienic 4100

Hygienic 4100

Safety valve made of stainless steel, angle type, with stainless steel spring



CE 0035

MATERIAL

EDELSTAHL Rostfrei® FDA

SPECIFICATION

DN 40 – DN 100	–40°C to + 200°C	0,4 – 16 bar
DN40 and 80 available from 4th quarter 2024	depending on version	depending on size, valve pressure range and operating temperature

SUITABLE FOR

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

EXAMPLES OF USE

For the protection 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
- Dairy 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 after it has opened
- Suitable for CIP/SIP due to pneumatic lifting device
- Gap-free installation of seals in contact with the medium
- Surface roughness in the primary area Ra < 0.75µm
- Optional: electropolished and/or mechanically polished
- Moulded diaphragm for separating the product space from the springhousing
- Dead space ratio L/D ~ 2,0

For explanation see chapter 1.1 General information on the hygienic valves.
Definition of surface quality and options according to chapter 1.1 Table V-301.

APPROVALS

TÜV-Type test approval	**D/G, F**
EU type examination	**S/G, L**
Requirements	
DIN EN ISO 4126-1	AD 2000 Data sheet A2
PED 2014/68/EU	VdTÜV Guideline SV 100
TRD 421	

MATERIALS

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

m	Standard with diaphragm	for neutral and non-neutral media. Spring, moving parts and the environment are protected from being affected by the medium.

Parts which are difficult to clean in the guide, the spring housing and the spindle / disc combination are protected against soiling by elastomer diaphragm.

■ MEDIUM

GF	gaseous and liquid	Air, vapours, gases, liquids and - depending on safety valve version and seal - also for steam
f	liquid	The temperature of the medium under atmospheric pressure must not reach boiling point

■ TYPE OF LIFTING MECHANISM

P	Pneumatic lifting device
L	with lifting lever
0	without lifting device, standard for gastight version

■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

Nominal diameter DN		**40**	**50**	**65**	**80**	**100**
Inlet DN		40	50	65	80	100
Outlet DN	**40**	■				
	50		■			
	65			■		
	80				■	
	100					■

You can find more connection types **here**

■ TYPE OF CONNECTION INLET / OUTLET

KLSDIN / KLSDIN	**Standard**	Clamp connection / Clamp connection	DIN 32676-A / DIN 32676-A	Pipe Standard DIN 11850-2 / 11866-A
KS1/ KS1		Taper nipple / Taper nipple	DIN 11851 / DIN 11851	Pipe Standard DIN 11850-2 / 11866-A
GS1 / GS1		Threaded ferrule connection / Threaded ferrule connection	DIN 11851 / DIN 11851	Pipe Standard DIN 11850-2 / 11866-A

■ SEALS / DIAPHRAGM

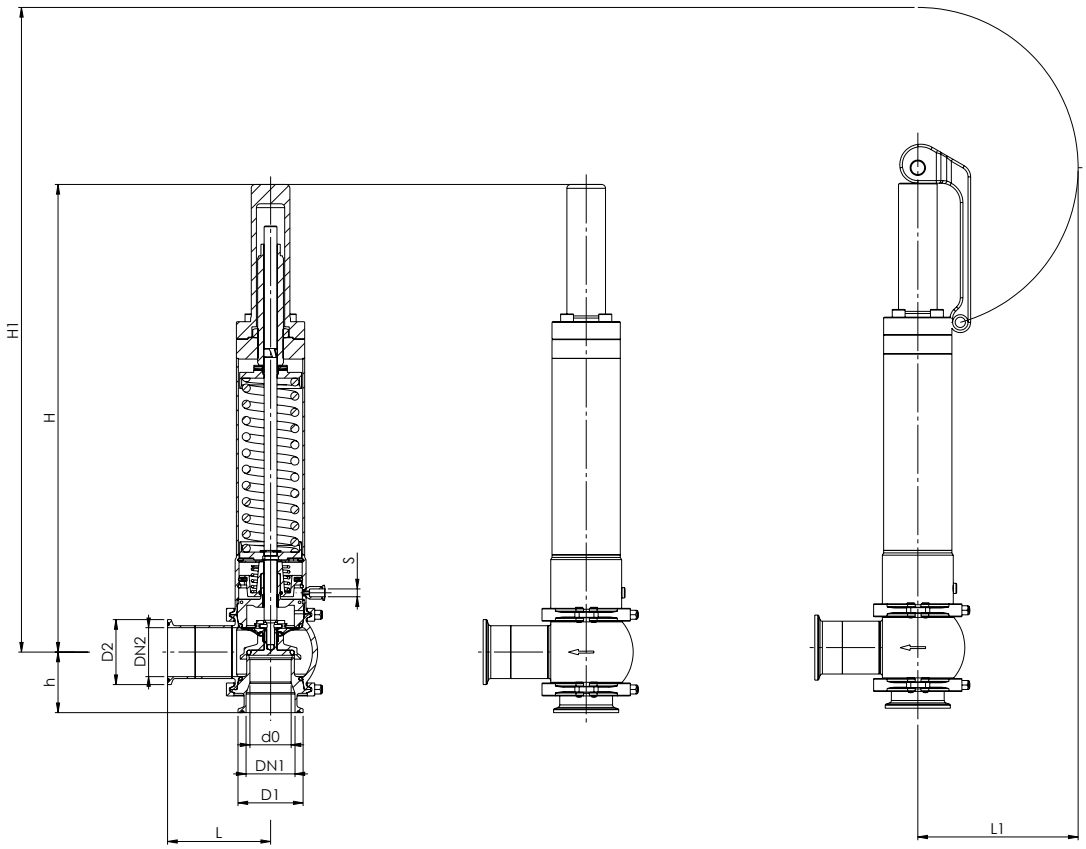
FKM	Fluorcarbon	Seals / diaphragms	FDA, USP	–20°C to +200°C
EPDM	Ethylene propylene diene	Seals / diaphragms	FDA, USP	–40°C to +170°C

NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

Series Hygienic 4100: Connection, installation dimensions, ranges of adjustment						
Nominal diameter	**DN**	**40**	**50**	**65**	**80**	**100**
Connection		**Clamp connection according to DIN 32676**				
Connection Inlet	**DN1**	40	50	65	80	100
Connection Outlet	**DN2**	40	50	65	80	100
Installation dimensions in mm	**L**	80	110	120	140	153
	L1[3)]	100	125	125	140	140
	h	47	61	69	80	92
	D1	50,5	64	91	106	119
	D2	50,5	64	91	106	119
	H[2)]	354	502	510	570	586
	H1[3)]	503	714	722	781	840
Compressed air connection in mm	**S**	6	6	6	6	6
Performance values	**αw /Kdr (F)**	0,4	[4)]	[4)]	0,33	[4)]
	αw /Kdr (D/G) [1)]	0,52	[4)]	[4)]	0,47	[4)]
	do	32	38	50	66	81
Weight	**kg**[2)]	3,1	9,3	9,9	14,8	27,1
	kg[3)]	3,3	9,6	10,2	15,1	27,4
Range of adjustment	**bar**	0,4 - 16	[4)]	[4)]	0,4 - 8	[4)]

[1)]Coefficient of flow for D/G valid for 3 bar or more, for smaller set pressures see values in capacity table.
[2)]Values for version without lifting or with pneumatic lifting device
[3)]Values for version with lifting lever
[4)]in development

MAIN DIMENSIONS, INSTALLATION DIMENSIONS



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Series 4100 ■ INDIVIDUAL SELECTION / VALVE CONFIGURATION

Series	Valve version	Medium	Lifting device	Nominal diameter DN	Connection type Inlet	Connection type Outlet	Connection type Inlet	Connection type Outlet	Seal	Options	Set pressure	Quantity
4100	m	*GF*	*P*	*40*	*KLSDIN*	*KLSDIN*	*40*	*40*	*EPDM*	*P07*	*3,2*	*1*
4100	m	*F*										
4100	m	*GF*										
4100	m	*F*										
4100	m	*GF*										

■ TECHNICAL FINISHES, VARIANTS, ACCESSORIES

S62	Inductive proximity sensor, fitted, for indication of valve position, including connection cable 5m[1]	☐
A05	Sealing wire / sealing on the fastening elements	☐
		☐

[1]not available for version mGFL (with lifting lever)

■ PROPERTIES
DEFINITION OF SURFACE QUALITY AND OPTIONS ACCORDING TO CHAPTER 1.1 TABLE V-301

P01	Oil- and grease-free production	☐		☐
P05	Quality of surfaces in contact with media in inlet Ra <=0,375	☐		☐
P07	Electropolished surfaces	☐		☐
P09	Surfaces mechanically and electropolished	☐		☐

■ CERTIFICATES / APPROVALS

C01	Factory certificate acc. DIN EN 10204 2.2 (WKZ 2.2)	☐	**C06**	ATEX evaluation acc. to 2014/34/EU	☐
C02	Test certificate acc. DIN EN 10204 3.1 (WPZ 3.1)	☐	**C07**	SIL evaluation relating to IEC 61508-2	☐
C03	Material test certificate acc. DIN EN 10204 3.1 (MPZ 3.1) (pressure retaining part)	☐	**C09**	Seat tightness test with helium, leak detection method under vacuum incl. Factory Inspection Certificate 3.1 acc. to DIN EN 10204	☐
C04	TÜV/DEKRA individual inspection acc. EN 10204 3.2 (TÜV/DEKRA-APZ)	☐	**C10**	Certificate of oil- and grease free production	☐
C05-1	Sealing material Manufacturer certification (FDA, USP,...), Please indicate description of certificate:	☐			☐

■ ADMISSIONS / ACCREDITATIONS

AA1	EC Type examination acc. to Directive 2014/68/EU	☐	**AL**	Individual inspection by notified body inspector – (body to be indicated):	☐
AA2	TÜV component test acc. to VdTÜV specification sheet SV 100	☐			☐
		☐			☐

■ ENQUIRY

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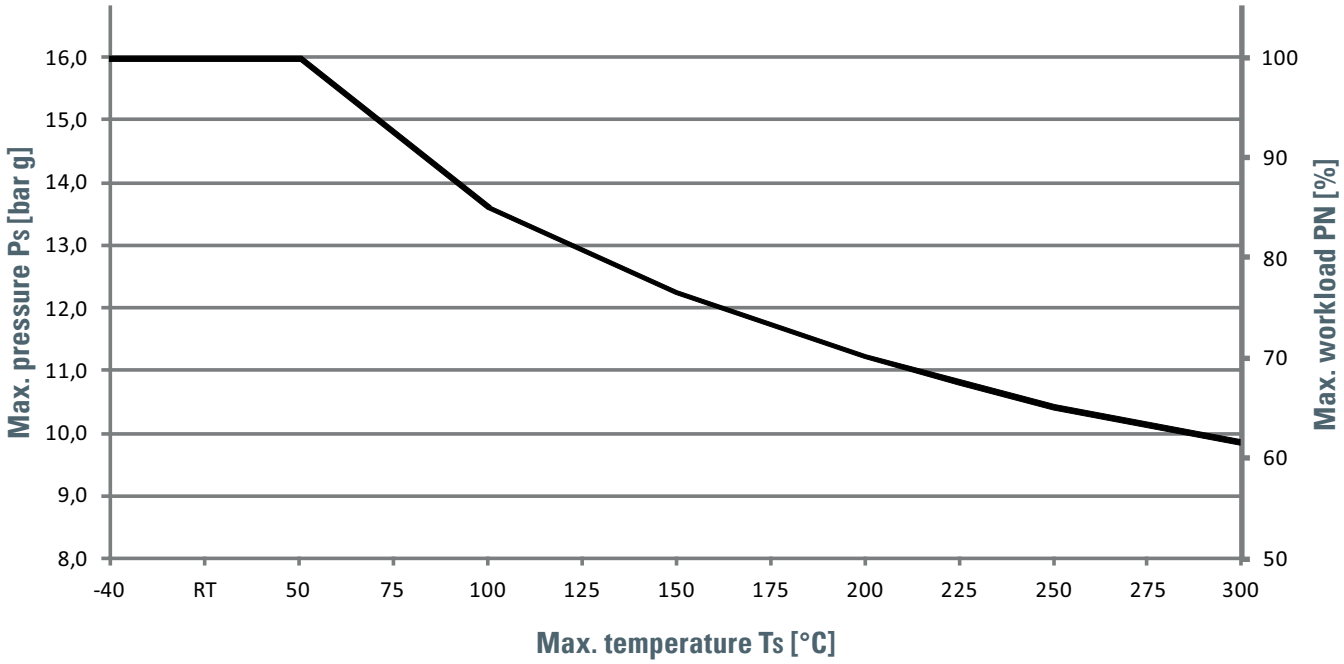
CAPACITY TABLE ACC. TO ISO 4126-1 / AD2000 A2

Series Hygienic 4100: Blowing-off rates at 10% above set pressure

Nominal diameter DN		40			50			65			80			100		
		d_0 = 32 mm			d_0 = 38 mm			d_0 = 50 mm			d_0 = 66 mm			d_0 = 81 mm		
Set pressure bar (g)		I	II	III	I	II	III	I	II	III	I	II	III	I	II	III
	0,4	322,6	266,0	11,4							1104,6	910,9	40,1			
	0,7	433,7	348,0	14,5							1498,8	1202,9	51,0			
	1,0	541,3	431,0	17,1							1861,8	1482,2	60,0			
	1,5	726,7	574,3	21,0							2534,9	2003,4	73,6			
	2,0	912,6	717,0	24,2							3210,3	2522,3	85,1			
Air I Nm³/h	2,5	1069,5	836,2	27,1							3937,1	3078,3	95,2			
	3,0	1226,4	954,9	29,7							4715,2	3671,6	104,3			
Steam II kg/h	3,5	1383,2	1073,2	32,1							5318,3	4126,5	112,7			
	4,0	1540,1	1191,3	34,3							5921,4	4580,4	120,5			
	4,5	1696,9	1309,0	36,4							6524,5	5033,0	127,8			
Water III m³/h	5,0	1853,8	1426,6	38,4							7127,6	5485,0	134,8			
	5,5	2010,7	1543,9	40,3							7730,7	5936,0	141,4			
	6,0	2167,5	1660,9	42,1							8333,8	6386,0	147,7			
	6,5	2324,4	1778,1	43,8							8936,9	6836,5	153,7			
	7,0	2481,2	1895,1	45,4							9540,0	7286,6	159,5			
	7,5	2638,1	2012,0	47,0							10143,1	7736,0	165,1			
	8,0	2795,0	2128,7	48,6							10746,2	8184,5	170,5			
	8,5	2951,8	2245,3	50,1												
	9,0	3108,7	2361,8	51,5												
	9,5	3265,5	2478,5	53,0												
	10,0	3422,4	2594,9	54,3												
	11,0	3736,1	2828,2	57,0												
	12,0	4049,8	3060,9	59,5												
	13,0	4363,5	3293,3	62,0												
	14,0	4677,3	3526,7	64,3												
	15,0	4991,0	3760,0	66,6												
	16,0	5304,7	3992,4	68,7												

Pressure-/ temperature rating

PN 16 | Material: 1.4404 / 1.4435



Control air pneumatic lifting device (max. 6 bar)

