

Hygienic 4020

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

→ Series Hygienic 4020



■ MATERIAL



■ SPECIFICATION



DN 25 – DN 50



–40°C to + 200°C
depending on version



0,4 – 16 bar
depending on valve
pressure range and service
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 standard Ra<0,8 µm (Internal product wetted parts), Ra<1,6 µm (outside, not product wetted parts)
- Moulded diaphragm to divide the product chamber from the spring housing
- Dead space ratio L/D < 1,5

■ APPROVALS

TÜV-Type test approval 2111	D/G, F
EU type examination	S/G, L
TR ZU 032/2013 - TR ZU 010/2011	D/G (S/G), F (L)
Requirements	
DIN EN ISO 4126-1	AD 2000 Data sheet A2
DGR 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

t	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
----	--------------------	---

■ TYPE OF LIFTING MECHANISM

P	Pneumatic lifting device
L	with lifting lever
O	without lifting device, with additional gas-tight cap

■ AVAILABLE NOMINAL DIAMETERS AND CONNECTION SIZES

Connection type		KLS DIN		KLS ISO		KLS ASME	
Nominal diameter DN		25		25		1 1/2"	
Inlet DN	Standard	25		25		1 1/2"	
	optional	40		-		-	
Outlet DN	25 (1")	■		■			
	40 (1½)	■		■		■	
	50 (2")					■	

■ TYPE OF CONNECTION INLET / OUTLET

KLS DIN / KLS DIN	Standard	Clamp connection / Clamp connection	DIN 32676-A / DIN 32676-A	Pipe standard DIN 11850 / 11866-A
KLS ISO / KLS ISO		Clamp connection / Clamp connection	DIN 32676-B / DIN 32676-B	Pipe standard DIN EN ISO 1127 / DIN 11866-B
KLS ASME / KLS ASME		Clamp connection / Clamp connection	DIN 32676-C / DIN 32676-C	Pipe standard BS 4825-1 / DIN 11866-C

other connections on request

■ 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
HNBR	Hydrogenated acrylonitrile butadiene rubber	Seals / diaphragms	FDA	-20°C to +150°C

■ NOMINAL DIAMETERS, CONNECTIONS, INSTALLATION DIMENSIONS

Series Hygienic 4020: Connection, installation dimensions, ranges of adjustment

Nominal diameter	DN	25		
Connection typ ¹⁾		Clamp connection		
Connection inlet	DN1	25	40	40
	D1	50,5	50,5	50,5
Connection outlet	DN2	25	40	50
	D2	50,5	50,5	64
Installation dimensions in mm	L	52	52	60
	L1 ⁴⁾	132	132	132
	h	29	29	29
	H	177	177	177
	H1 ³⁾	212	212	212
Compressed air connection in mm	H2 ⁴⁾	350	350	350
	S	6	6	6
	$\alpha_w / K_{dr} (F)$	0,37	0,37	0,37
	$\alpha_w / K_{dr} (D/G)^{2)}$	0,50	0,50	0,50
	d0	24,5	24,5	24,5
Weight	kg	1,8	1,8	1,8
	kg ³⁾	2,2	2,2	2,2
	kg ⁴⁾	2,3	2,3	2,3
Range of adjustment	bar	0,4 - 16	0,4 - 16	0,4 - 16

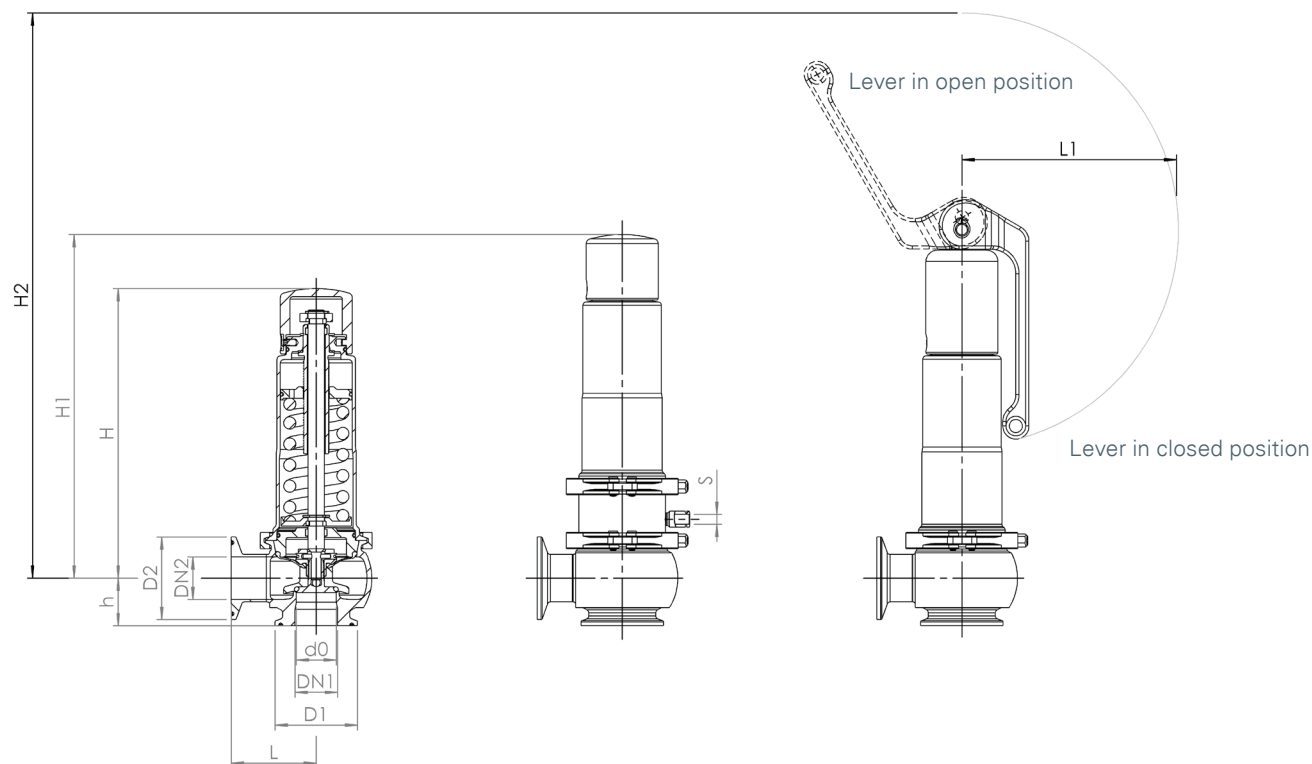
¹⁾ Further connection size possible, dimensions according to separate main dimension.

²⁾ Coefficient of flow for D/G valid for 6 bar or more, for smaller set pressures see values in capacity table.

³⁾ Values for version with pneumatic lifting device.

⁴⁾ Values for version with lifting lever.

■ MAIN DIMENSIONS, INSTALLATION DIMENSIONS



Series 4020 ■ INDIVIDUAL SELECTION / VALVE CONFIGURATION

Series	Valve version	Medium	Lifting device	Nominal diameter DN	Connection type		Connection type		Seal	Options	Set pressure	Quantity
					Inlet	Outlet	Inlet	Outlet				
4020	t	GF	P	25	KLSDIN	KLSDIN	25	25	EPDM	P07	3,2	1
4020	t	GF										
4020	t	GF										
4020	t	GF										
4020	t	GF										

■ TECHNICAL FINISHES, VARIANTS, ACCESSORIES

S62	Inductive proximity sensor, fitted, for indication of valve position, including connection cable 5m ¹	☐
		☐
		☐

¹not available for version tGFL (with lifting lever)

■ PROPERTIES

P01	Oil- and grease-free production	☐	☐
P05	Quality of surfaces in contact with media in inlet Ra <= 0.4	☐	☐
P07	Electropolished surfaces	☐	☐

■ 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	☐			☐
AA4	EAC - certificate/declaration with passport for the valve and laser marking of the valve	☐			☐
					☐

■ ENQUIRY

Copy and send to: order@goetze-armaturen.de.

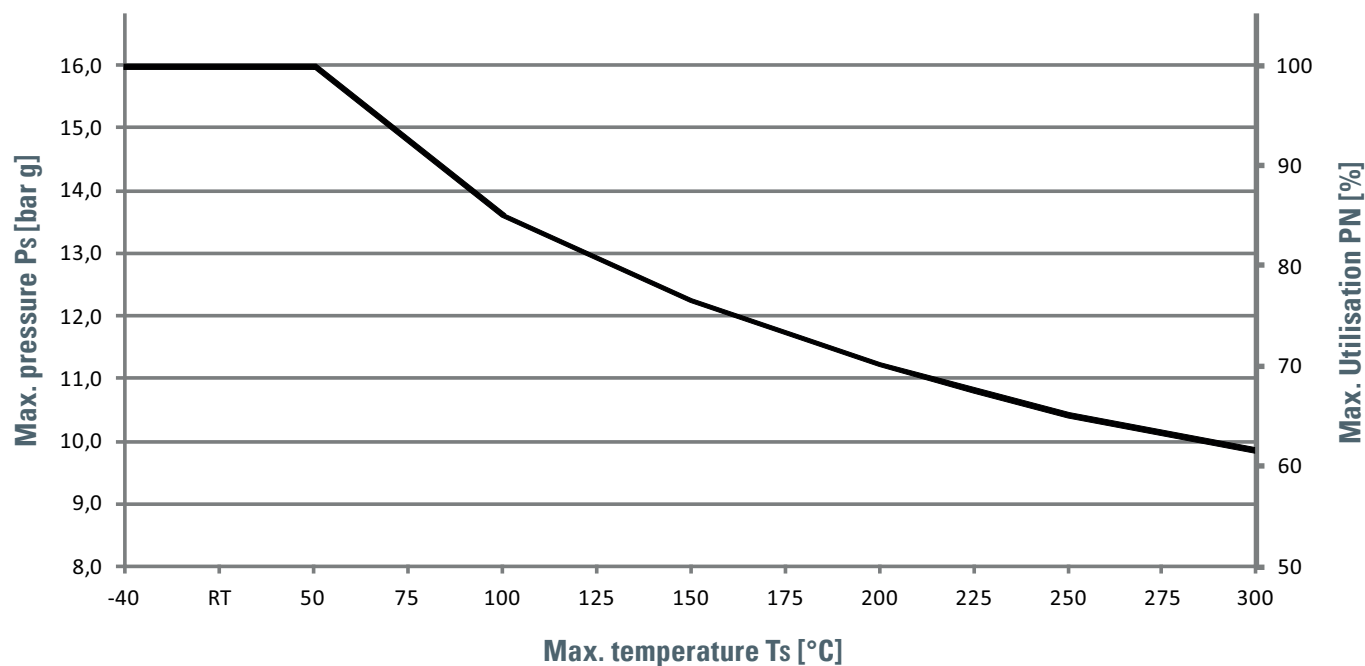
Order form easily to be found online under the section for each series.

Series Hygienic 4020: Blowing-off rates at 10% above set pressure

Nominal diameter DN		25		
		d ₀ = 24,5 mm		
Set pressure bar (g)		I	II	III
Air I Nm ³ /h	0,4	193,7	159,8	6,2
	0,7	258,2	207,3	7,9
	1,0	317,3	252,6	9,3
	1,5	421,7	333,3	11,4
	2,0	514,4	404,1	13,1
	2,5	602,8	471,3	14,7
	3,0	691,2	538,2	16,1
	3,5	779,6	604,9	17,4
	4,0	868,0	671,5	18,6
	4,5	956,5	737,8	19,7
Steam II kg/h	5,0	1044,9	804,1	20,8
	5,5	1133,3	870,2	21,8
	6,0	1221,7	936,1	22,8
	6,5	1310,1	1002,2	23,7
	7,0	1398,5	1068,2	24,6
	7,5	1486,9	1134,0	25,5
	8,0	1575,3	1199,8	26,3
	8,5	1663,7	1265,5	27,2
	9,0	1752,2	1331,2	27,9
	9,5	1840,6	1396,9	28,7
Water III m ³ /h	10,0	1929,0	1462,6	29,5
	11,0	2105,8	1594,1	30,9
	12,0	2282,6	1725,2	32,3
	13,0	2459,5	1856,2	33,6
	14,0	2636,3	1987,8	34,9
	15,0	2813,1	2119,3	36,1
	16,0	2989,9	2250,2	37,3

Pressure-/ temperature rating

PN 16 | Material: 1.4404 / 1.4435



Control air pneumatic lifting device (max. 6 bar)

