

→ **Series Hygienic 4020**



■ MATERIAL



■ SPECIFICATION



■ 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 ~ 1,5

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 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 / 1.4435 ¹	316 L
Inner parts, wetted	Stainless steel	1.4404 / 1.4435 ¹	316 L
Upper section, other inner parts	Stainless steel	1.4404	316 L
Spring	Stainless steel	1.4310	302

¹ Special version body and wetted internal parts made of 1.4435 on request.

t	Standard with diaphragm	for neutral and non-neutral media. 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 elastomer diaphragm.

■ 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

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		KLSDIN	KLSISO	KLSASME
Nominal diameter DN			25	
Inlet DN	Standard	25	25	1 1/2"
	optional	40	-	-
Outlet DN	25 (1")	■	■	
	40 (1½)	■	■	■
	50 (2")	■		■

■ TYPE OF CONNECTION INLET / OUTLET

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

Other connection types possible 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
	H2 ⁴⁾	350	350	350
	S	6	6	6
Compressed air connection in mm	$\alpha_w / K_{dr} (F)$	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
	kg	1,8	1,8	1,8
Weight	kg ³⁾	2,2	2,2	2,2
	kg ⁴⁾	2,3	2,3	2,3
	bar	0,4 - 16	0,4 - 16	0,4 - 16

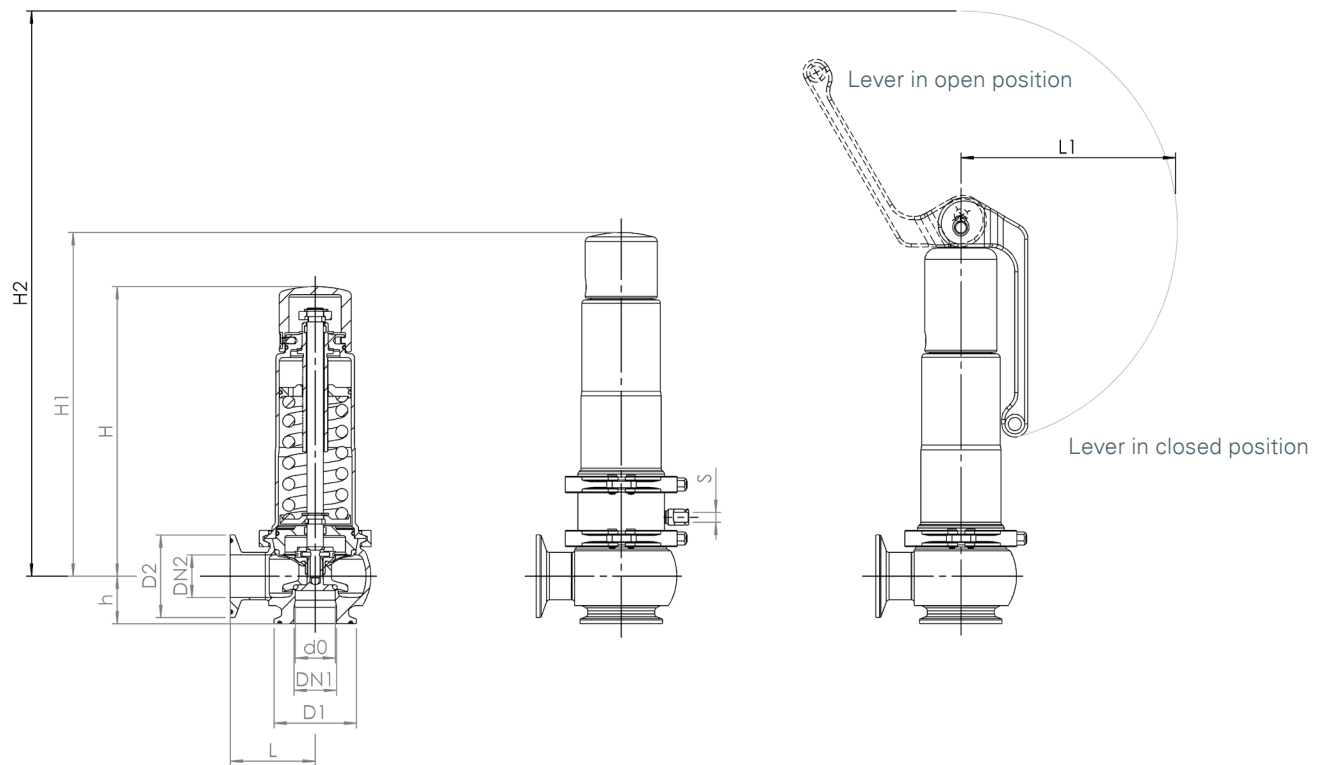
¹⁾ Further connection size possible, dimensions according to separate main dimension.

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	<input type="checkbox"/>
		<input type="checkbox"/>
		<input type="checkbox"/>

¹not available for version tGFL (with lifting lever)

■ PROPERTIES

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

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

■ CERTIFICATES / APPROVALS

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

■ ADMISSIONS / ACCREDITATIONS

AA1	EC Type examination acc. to Directive 2014/68/EU	<input type="checkbox"/>	AL	Individual inspection by notified body inspector – (body to be indicated):	<input type="checkbox"/>
AA2	TÜV component test acc. to VdTÜV specification sheet SV 100	<input type="checkbox"/>			<input type="checkbox"/>
AA4	EAC - certificate/declaration with passport for the valve and laser marking of the valve	<input type="checkbox"/>			<input type="checkbox"/>
					<input type="checkbox"/>

■ ENQUIRY

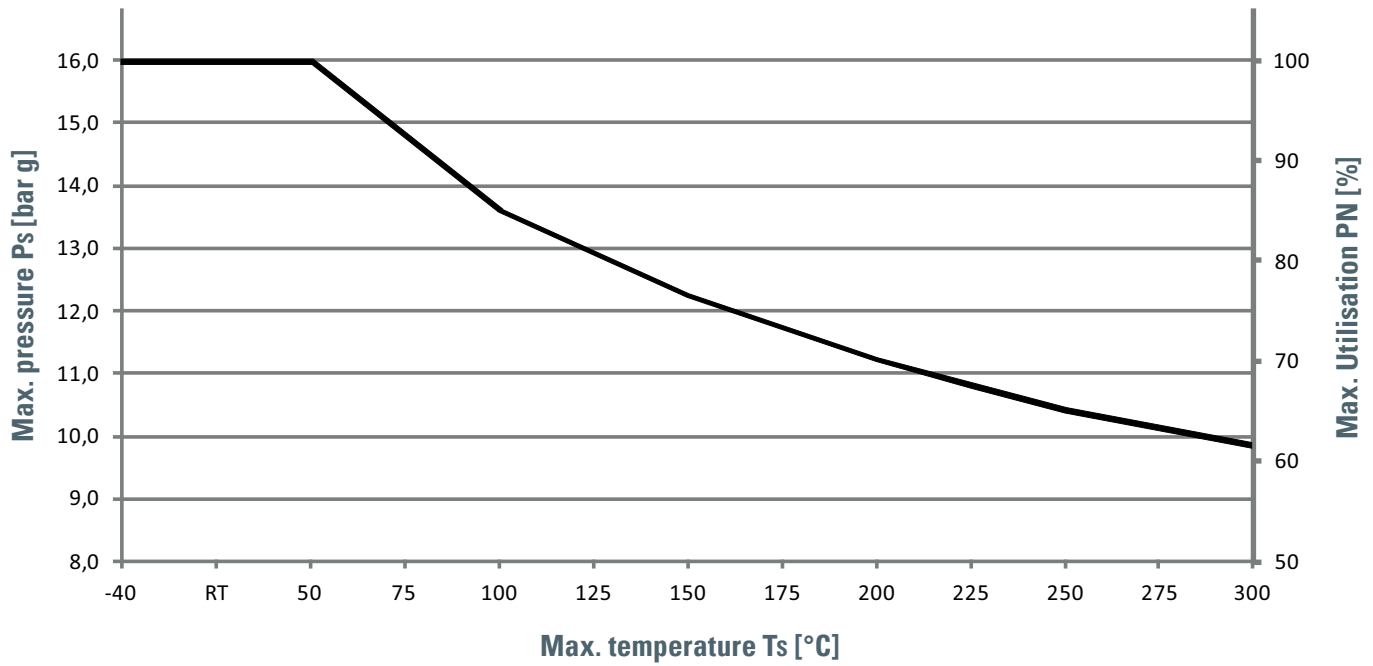
Copy and send to: order@goetze-armaturen.de.

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
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
Air I	2,5	471,3	14,7
Nm³/h	3,0	538,2	16,1
	3,5	604,9	17,4
Steam II	4,0	671,5	18,6
kg/h	4,5	737,8	19,7
	5,0	804,1	20,8
Water III	5,5	870,2	21,8
m³/h	6,0	936,1	22,8
	6,5	1002,2	23,7
	7,0	1068,2	24,6
	7,5	1134,0	25,5
	8,0	1199,8	26,3
	8,5	1265,5	27,2
	9,0	1331,2	27,9
	9,5	1396,9	28,7
	10,0	1462,6	29,5
	11,0	1594,1	30,9
	12,0	1725,2	32,3
	13,0	1856,2	33,6
	14,0	1987,8	34,9
	15,0	2119,3	36,1
	16,0	2250,2	37,3

Pressure-/ temperature rating

PN 16 | Material: 1.4404 / 1.4435



Control air pneumatic lifting device (max. 6 bar)

