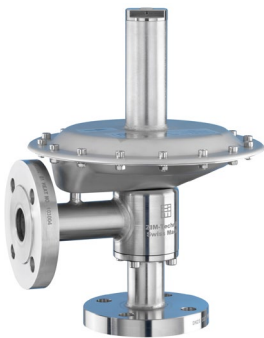




Operating manual
For low pressure relief valve and reflux blocking valve
Type LPS... ZM-B... and ZM-B/R...

LPS25



LPSK25



**ZM-B15
ZM-B25
ZM-B/R**



**ZM-B50
ZM-B/R50**

Contents

1	General information	2
2	Warranty provisions	2
3	Purpose	2
3.1	Intended use	2
3.2	Assembly work on the pressure regulator	2
4	Safety provisions	3
5	Material resistance	3
6	Startup	3
6.1	Before installation	3
6.2	Installation	3
6.3	Assembly position and installation	3
6.4	Configuring the setpoint	5
7	Impulse line (C-connection)	5
8	Maintenance and repairs	5
8.1	Inspection intervals	5
9	Model selection	6
10	Code: ZM-B15, relief valve	7
11	Code: ZM-B25, relief valve	8
12	Code: ZM-B/R15, non return valve	10
13	Code: ZM-B/R25, non return valve	11
14	Code: LPSK25, relief valve	13
15	Code: LPS25, relief valve	14

1 General information

This operating manual is for handling pressure regulators. Operating errors can be prevented only with knowledge of this operating manual.

Operating personnel must be informed about the contents of this operating manual.

Improper use may result in hazard to life for the user or other third parties and/or damage to other material assets.

We reserve the right to make technical modifications for improvement purposes to the comparisons and information in this operating manual.

2 Warranty provisions

There shall be no liability, or the warranty shall be void under the following conditions:

- The information and instructions of the operating manual are not followed.
- The devices are improperly used.
- The devices are used for purposes other than their intended one.
- Any type of functional changes conducted without the written permission of ZIMMERLI MESSTECHNIK AG.
- Disregard of the applicable safety regulations when operating the device.
- Guards were not used or functionality was disabled.

Only approved, original spare parts must be used when replacing parts and/or for procuring spare parts.

3 Purpose

These type of pressure regulators are suitable for various tasks (e.g. inerting containers with inactive gases or pressure regulation of pure liquids).

The valves mentioned in this instruction manual are not classified as safety valves.

The exact design is customized and must therefore be taken from the device's technical information.

3.1 Intended use

Ambient pressure:	0.8 to 1.1 bar
Max inlet pressure / counter pressure:	ZM-B ≤ 2.5 bar LPS ≤ 2.5 bar LPSK ≤ 1.5 bar
Ambient temperature:	Within the temperature limits specified in the data sheet With option /Ex: -20 °C to +40 °C
Medium temperature:	According to sealing material, see data sheet PTFE with option /Ex: -20 bis 180 °C (T6...T4) Viton with option /Ex: -20 bis 130 °C (T6...T5)
Degree of protection:	Standard version IP40, with weather protection IP54, ZM-B/R IP68 other versions according to the data sheet

Limitations of the medium: No combustible gases in an explosive concentration. Exception, ATEX-certified devices according to:

- II 2 G Ex h IIB T6 Gb
- II 3 G Ex h IIC T6 Gc
- II 2 D Ex h IIIC T6 Db
- II 3 D Ex h IIIC T6 Dc

Environmental influences (e.g. direct sunlight) that cause the housing temperature to rise to unacceptable levels must be avoided.

Other external radiation (electromagnetic, ionizing radiation, ultrasound): none (if such radiation is present in the area used, the hazard must be taken into account and assessed by the user.) Keep the devices free of dust (dust thickness less than 1 mm).

3.2 Assembly work on the pressure regulator

The user and operator must take measures for mounting, disassembly, and maintenance work of and on the pressure regulator in areas with explosive atmospheres to prevent these operations from creating sources of ignition.

4 Safety provisions

Any work on or with the device may be performed only by qualified personnel who are familiar with the applicable regulations on operating pressure regulators and/or pressure containers.

If disassembling safety equipment is required for installation, it must be assembled and inspected immediately once the work has concluded.

Do not exceed the operating pressure. It is specified on the nameplate of each device.

When using the device, the provisions regarding the filling material must be followed.

Natural regulations regarding usage and test intervals must be followed.

5 Material resistance

Since the operator chose the material, the supplier cannot provide any guarantees regarding material resistance. It is the operator's responsibility to ensure that the material of the devices, including seals and add-on components (e.g., pressure gauges, pilot regulator, etc.) are adequately resistant against the medium.

6 Startup

6.1 Before installation

Before installation, perform a visual inspection on the device to determine any transport damage. The device's performance data must be reviewed (max. inlet pressure, secondary pressure, etc.).

The values noted on the nameplate are the values measured in our functional test.

The resistance of the materials has to be checked (see the corresponding chapter of this operating manual).

Newly installed pipelines must be fully rinsed clean to eliminate mechanical residues. It must be ensured that the pressure regulator is connected at the local equipotential bonding, either through an adequate and permanent connection to metallic pipes or via a direct connection to local equipotential bonding.

6.2 Installation

Always install the low pressure regulator as close as possible to the process tank or consumer within non-turbulent flow.

Be mindful of the flow direction! (Marked on the housing with an arrow). Otherwise, there is the risk of damaging the pressure regulator.

6.3 Assembly position and installation

Take note of the diaphragm installation position! (Horizontal diaphragm or vertical diaphragm). Sealed devices are set to the desired pressure according to the ordered position. If the devices are configured by the user, then this also must take place in the subsequent installation position.

The preferred mounting position and/or position of the diaphragm is as follows according to device type:

- ZM-B: Horizontal diaphragm housing (vertical: alternatively permissible).
 Assembly with the spring dome facing down is permissible only upon consultation.
- ZM-B/R: Horizontal diaphragm housing, spring dome on top
- LPS: Vertical diaphragm housing (horizontal: alternatively permissible).
 Assembly with the spring dome facing down is permissible only upon consultation.

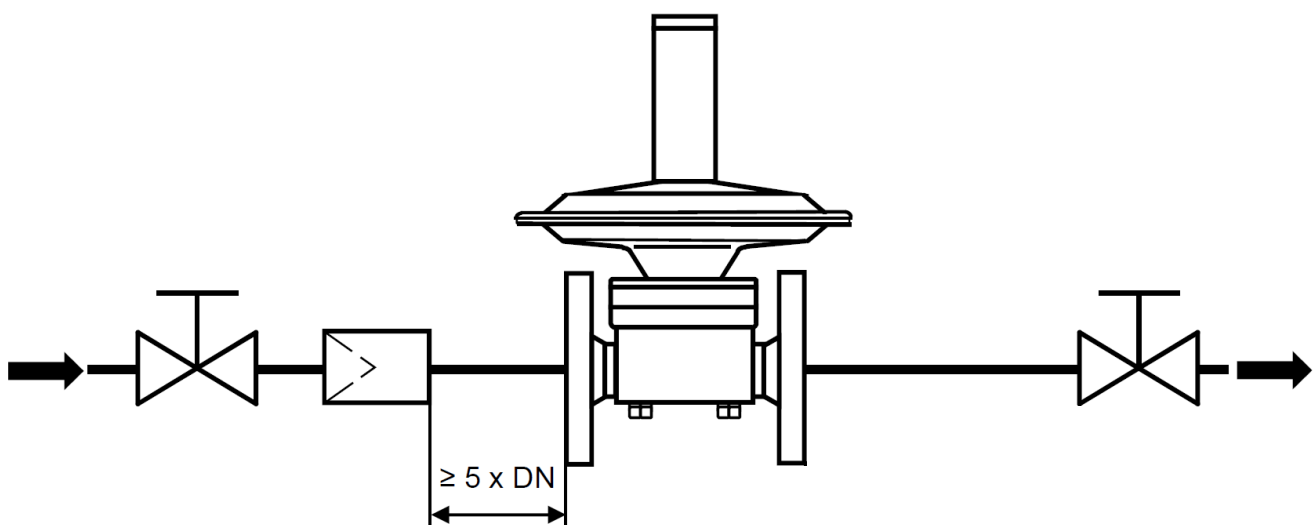
Horizontal		Mounting position (diaphragm)		Vertical	
	Recommended mounting position		Recommended mounting position (ZM-B only with option /E, depending on the medium)		
	Spring dome on bottom side, only on request / dry gases		Only dry gases		

Important: The setpoint depends on the diaphragm position and must be adjusted according to the assembly position.

The configuration can be sealed using the lateral hole in the setting screw. Factory-sealed devices are set to the specified pressure.

Assembly must be performed on p_1 , primary side, without turbulent flow. To that end a straight inlet piping of $5 \times DN$ is recommended.

Furthermore, it is recommended that you install one shut-off valve each before and after the pressure regulator to simplify any maintenance work. Furthermore, a suitable filter must be installed before the pressure regulator in case of dirty gases or if there is a hazard of solid particles.



Avoid pressure shocks after assembly and always open shut-off valves slowly!

6.4 Configuring the setpoint

Always open the valves in lines before or after the pressure regulator slowly and avoid pressure shocks!

Spring-loaded model ZM-B und LPS:

Slowly open the valve or ball valve before or after the pressure regulator and set it to a small flow of approx. 1 to 2 Nm³/h.

Set the desired pressure by turning the setting screw (6 mm hexagon socket).

Warning! Observe the maximum values on the nameplate.

Clockwise rotation = Decreasing primary pressure p_1

Counterclockwise rotation = Increasing primary pressure p_1

Dome-loaded model ZM-B and LPS with option /De /Ds:

With an additional pilot controller, the dome pressure can be set to the desired value. Up to 1000 mbar and/or 2000 mbar of dome pressure is permissible depending on the device type. Precise adjustments can also be made via the setting screw on the spring dome.

Reflux blocking valve ZM-B/R:

By turning the setting screw (6 mm hexagon socket), the differential pressure can be adjusted.

Warning! Observe the maximum values on the nameplate.

Clockwise rotation = Decreasing primary pressure p_1

Counterclockwise rotation = Increasing primary pressure p_1

7 Impulse line (C-connection)

An impulse line must be able to communicate with the p_1 side of the valve under any circumstances. Accordingly, no valves or other flow resistances may be present in the primary, non turbulent flow area between the device and impulse line pickup. Otherwise, the device is not functional and may even be destroyed.

8 Maintenance and repairs

The previously mentioned pressure regulators work without auxiliary energy and are maintenance-free. Additional queries may be processed only by specifying the serial number.

The serial number must be specified for spare part orders.

Device returns for repair or modification can be accepted only if they have been cleaned and have a completed RMA according to the applicable regulations. In the case of hazardous media, we recommend returning the device disassembled and cleaned.

8.1 Inspection intervals

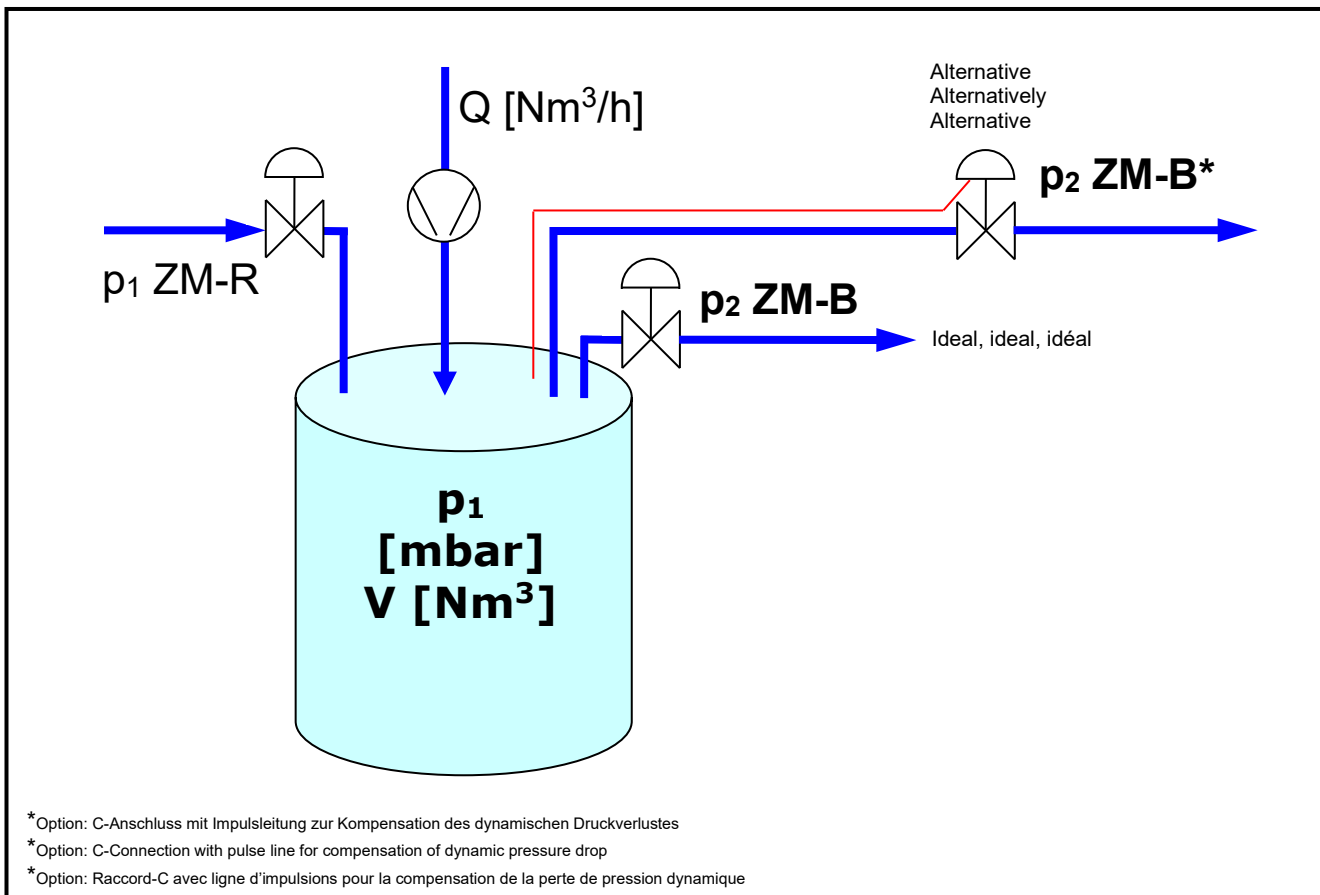
An annual review of the function or maintenance is recommended depending on the characteristics of the medium and the respective operating states. Depending on these results, the testing/maintenance interval can be shortened or extended by the operator/user.

9 Model selection

Geräteauslegung

Model selection

Sélection de l'appareil



Anwendungsdaten

Zur optimalen Auslegung eines Überström- oder Druckhalteventil ZM-B15 sind mindestens folgende Angaben wichtig:

Behälter Befüllungsgradient

Befüllungsgradient bzw. Pumpenleistung wie folgt:

$$Q = \quad \quad \quad \text{Nm}^3/\text{h}$$

$$V = \quad \quad \quad \text{Nm}^3$$

Inertgas

Sekundär- oder Gegendruck p_2 ist üblicherweise der atmosphärische Druck.

$$p_1 = \quad \quad \quad \text{mbar g primär}$$

$$p_2 = \quad \quad \quad \text{mbar g sekundär}$$

Werkstoff

Welcher Werkstoff ist ausreichend chemisch beständig?

- Edelstahl
- Hastelloy C
- Kunststoff (auf Anfrage)

Betriebsart

- Standard / Überdruck
- Negativdruck / Unterdruck
- Domgesteuert

Montage*

- Direkt auf Tank, vertikal
- Direkt an Tank, horizontal
- Innerhalb von Gebäuden
- Im Freien mit Schutzhaube
- In Abluftleitung mit C-Anschluss* und separater Impulsleitung vom Prozess

Application data

For correct model selection of ZM-B15 back pressure relief valve, the following specifications are essential:

Tank filling rate

Tank filling rate or Pump capacity as follows:

$$Q = \quad \quad \quad \text{Nm}^3/\text{h}$$

$$V = \quad \quad \quad \text{Nm}^3$$

Inert gas

Secondary pressure or counter pressure p_2 is normally atmospheric pressure.

$$p_1 = \quad \quad \quad \text{mbar g primary}$$

$$p_2 = \quad \quad \quad \text{mbar g secondary}$$

Material of construction

What material of construction is durable enough?

- SST
- Hastelloy C
- plastic (on request)

Mode

- Gauge Pressure Blanketing, Standard
- Negative pressure service
- Dome loaded service

Installation*

- Top mounted on tank, vertical
- Side mounted at tank, horizontal
- In door
- Out door with weather protection
- In exhaust pipe with C-Connection* and pulse line from process

Données de l'application

Les renseignements suivants représentent un minimum nécessaire pour effectuer le dimensionnement optimal d'un ZM-B15.

Gradient de remplissage du réservoir

Gradient de remplissage, resp. rendement de la pompe comme suit:

$$Q = \quad \quad \quad \text{Nm}^3/\text{h}$$

$$V = \quad \quad \quad \text{Nm}^3$$

Gaz inerte

La pression secondaire ou contre-pression p_2 est normalement atmosphérique.

$$p_1 = \quad \quad \quad \text{mbar g primaire}$$

$$p_2 = \quad \quad \quad \text{mbar g secondaire}$$

Matériaux de construction

Quel matériaux est suffisamment chimico-résistant ?

- Acier inoxydable
- Hastelloy C
- Matière plastique (nous consulter)

Mode de fonctionnement

- Pression relative, Standard
- Conditions en dépression
- Piloté par le dôme

Montage*

- Direct sur cuve, en vertical
- Direct sur cuve, en horizontal
- Locaux dans un bâtiment
- En extérieur avec protection
- Conduite avec raccord-C* et prise d'impulsion au niveau du procédé

10 Code: ZM-B15, relief valve

ZM-B	P40 / IP54 (Option /Ws)	Funktion	Überdruck	Gauge pressure	Pression relative	520 mbar
ZM-B/D	P68	Function	Domgesteuert	Dome loaded	Dôme	2000 mbar (2500 mbar)
ZM-B/Ds	P40	Fonction	Fremd/Pilot	Remote /Pilot	Pilotage/ indirect	2000 mbar (2500 mbar)
ZM-B/N	P40 / IP54 (Option /Ws)		Negativdruck	Negative pressure	Pression negative	-220 mbar
ZM-B/NDs	P40		Fremd/Pilot	Remote/Pilot	Pilotage/indirect	-1000 mbar
	15 DN15, PN40, B1	Grösse	Einbaulänge	Lay length	Encombrement	150 mm / ~6.7 kg
	15 DN15, PN40, D	Size	Einbaulänge	Lay length	Encombrement	150 mm / ~6.7 kg
	15 ½", 150 lbs	Dimension	Einbaulänge	Lay length	Encombrement	180 mm / ~6.4 kg
	15 ½", 300 lbs		Einbaulänge	Lay length	Encombrement	189 mm / ~7.7 kg
	15 G½ (½" BSP)		Einbaulänge	Lay length	Encombrement	152 mm / ~5.5 kg
	15 ½" NPT		Einbaulänge	Lay length	Encombrement	152 mm / ~5.5 kg
	15 TriClamp		Einbaulänge	Lay length	Encombrement	141 mm / ~5.6 kg
	S	Material	Edelstahl	SST	INOX	1.4404
	H	Material	Hastelloy C	Hastelloy C	Hastelloy C	C276
	X	Matériaux	Sonder auf Anfrage	Special on request	Nous consulter	(PP, PVDF) ¹⁾
	-FD	DN15, PN40	Flansch	Flange	Brides	DIN / EN 1092-1, B1
	-FDN	DN15, PN40	Flansch / Nut	Flange / Groove	Brides / à gorge	DIN / EN 1092-1, D
	-FA1	½", 150 lbs	Flansch	Flange	Brides	ANSI
	-FA3	½", 300 lbs	Flansch	Flange	Brides	ANSI
	-GD1	G½ (½" BSP)	Gewinde	Thread	Fileté	DIN / EN
	-GN1	½" NPT	Gewinde	Thread	Fileté	ANSI
	-TCB	TriClamp	TriClamp	Ø 50.5 mm	DIN32676, B	DIN / EN
	-XX		Sonder auf Anfrage	Special on request	Spécial nous consulter	
	-P	Membrane	PTFE	-20/+180 °C		Ø 200 mm
	-V	Diaphragm	Viton®	-20/+130 °C		Ø 200 mm
		Membrane				
		Federbereich	Horizontal ²⁾	Vertical ³⁾	Typ, Type, Type	Dom, Dome, Dôme
		p ₁ , primär	6 – 10 mbar	3 – 8 mbar	ZM-B, ZM-B/D/Ds	(max 2013 mbar)
			10 – 20 mbar	5 – 20 mbar	ZM-B, ZM-B/D/Ds	(max 2025 mbar)
		Spring range	13– 50 mbar	8 – 50 mbar	ZM-B, ZM-B/D/Ds	(max 2055 mbar)
		p ₁ , primary	15 – 100 mbar	10 – 100 mbar	ZM-B, ZM-B/D/Ds	(max 2100 mbar)
			20 – 200 mbar	15 – 200 mbar	ZM-B, ZM-B/D/Ds	(max 2200 mbar)
			25 – 500 mbar ²⁾	20 – 500 mbar ²⁾	ZM-B, ZM-B/D/Ds	(max 2500 mbar)
		Plage de réglage	N/A*	-5 – 0 mbar	ZM-B/N, ZM-B/NDs	(min -1000 mbar)
		p ₁ , primaire	-10 – -2 mbar	-15 – -3 mbar	ZM-B/N, ZM-B/NDs	(min -1000 mbar)
			-55 – -5 mbar	-60 – -10 mbar	ZM-B/N, ZM-B/NDs	(min -1000 mbar)
			-115 – -15 mbar	-120 – -20 mbar	ZM-B/N, ZM-B/NDs	(min -1000 mbar)
			-215 – -45 mbar	-220 – -50 mbar	ZM-B/N, ZM-B/NDs	(min -1000 mbar)
		Sitz				
		Seat	180			Kv = 6.5 / 18 mm
		Siège				
		Optionen,	Options,	Options		
		/C	C (Impulsleitung)	C (pulse line)	C (ligne d'impulsion)	G¼ (¼" BSP)
		/E	E (Drainage)	E (Drain)	E (Vidage)	G¼ (¼" BSP)
		/S1 ⁴⁾	Manometerstutzen	Gauge nozzle	Raccord manomètre	G¼ (¼" BSP, p ₁)
		/S2 ⁴⁾	Manometerstutzen	Gauge nozzle	Raccord manomètre	G¼ (¼" BSP, p ₂)
		/Sp	Eingestellt/plombiert	Adjusted and sealed	Ajusté et plombé	
		/Ws	Wetterschutz	Weather protection	Avec protection	IP54 PP / Polypropylen
		/C2.2	EN 10204-2.2	EN 10204-2.2	EN 10204-2.2	
		/C3.1	EN 10204-3.1	EN 10204-3.1	EN 10204-3.1	
		/Cp	Einstellprotokoll	Test protocol	Protocole de réglage	II 2 G Ex h IIB T6 Gb II 3 G Ex h IIC T6 Gc II 2 D Ex h IIIC T6 Db II 3 D Ex h IIC T6 Dc
		/Ex	ATEX Zulassung	ATEX approval	Certificat ATEX	
		/Ff	Öl- Fettfrei	Certificate degreasing	Sans Huile ni Graisse	
		/FDA	FDA-Bescheinigung	FDA approval	Certificat FDA	
		/LT	Lecktest	Leakage test	Essai de fuite	
		/XPZ	Poliert mit Zertifikat	Polished w/certified	Poli, avec Certificat	

Öffnungsdruck [mbar]
Opening pressure
Pression de ouvre
≤ 4
≤ 8
~ 3...9
~ 5...15
~ 8...32
~ 10...80
≤ 2
≤ 4
~ 3...9
~ 5...15
~ 8...32

Beispiel, Example, Exemple

ZM-B 15 S -FD -P 100 180 /Sp/C3.1/Cp/Ex

Hinweise,

N/A* nicht anwendbar
¹⁾ Siehe Typ: **LPSK...**
²⁾ Für Flüssigkeiten & Gase
³⁾ Nur für Gasanwendungen
⁴⁾ Manometer optional verfügbar

Hints,

not applicable
 See Type: **LPSK...**
 For liquids and gas
 Gas applications only
 Pressure gauge optionally available

Remarque

non applicable
 S.V.P. remarque aussi Type: **LPSK...**
 Pour liquides et gaz
 Pour les applications de gaz
 Manomètre disponible en option

11 Code: ZM-B25, relief valve

ZM-B	IP40 / IP54 (Option /Ws)	Funktion	Überdruck	Gauge pressure	Pression relative	520 mbar																												
ZM-B/D	IP68	Function	Domgesteuert	Dome loaded	Dôme	2000 mbar (2500 mbar)																												
ZM-B/Ds	IP40	Fonction	Fremd/Pilot	Remote/Pilot	Pilotage/indirect	2000 mbar (2500 mbar)																												
ZM-B/N	IP40 / IP54 (Option /Ws)		Negativdruck	Negative pressure	Pression negative	-220 mbar																												
ZM-B/NDs	IP40		Fremd/Pilot	Remote/Pilot	Pilotage/indirect	-1000 mbar																												
	25 DN25, PN40, B1	Größe	Einbaulänge	Lay length	Encombrement	160 mm / ~7.7 kg																												
	25 DN25, PN40, D	Size	Einbaulänge	Lay length	Encombrement	160 mm / ~7.7 kg																												
	25 1", 150 lbs	Dimension	Einbaulänge	Lay length	Encombrement	195 mm / ~7.3 kg																												
	25 1", 300 lbs		Einbaulänge	Lay length	Encombrement	208 mm / ~8.2 kg																												
	25 G¾ (¾" BSP)		Einbaulänge	Lay length	Encombrement	156 mm / ~5.7 kg																												
	25 G1 (1" BSP)		Einbaulänge	Lay length	Encombrement	170 mm / ~5.9 kg																												
	25 G1.5 (1½" BSP)		Einbaulänge	Lay length	Encombrement	156 mm / ~5.7 kg																												
	25 ¾" NPT		Einbaulänge	Lay length	Encombrement	156 mm / ~5.4 kg																												
	25 1" NPT		Einbaulänge	Lay length	Encombrement	170 mm / ~5.7 kg																												
	25 1.5" NPT		Einbaulänge	Lay length	Encombrement	180 mm / ~5.9 kg																												
	25 TriClamp		Einbaulänge	Lay length	Encombrement	141 mm / ~5.9 kg																												
	S	Material	Edelstahl	SST	INOX	1.4404																												
	H	Material	Hastelloy C	Hastelloy C	Hastelloy C	C276																												
	X	Matériaux	Sonder auf Anfrage	Special on request	Spécial nous consulter	(PP, PVDF) ¹⁾																												
	-FD	DN25, PN40	Anschluss/Typ	Flansch	Flange	Brides	DIN / EN 1092-1, B1																											
	-FDN	DN25, PN40	Connection/Type	Flansch / Nut	Flange / Groove	Brides / à gorge	DIN / EN 1092-1, D																											
	-FA1	1", 150 lbs	Raccord/Type	Flansch	Flange	Brides	ANSI																											
	-FA3	1", 300 lbs		Flansch	Flange	Brides	ANSI																											
	-GD2	G¾ (¾" BSP)		Gewinde	Thread	Fileté	DIN / EN																											
	-GD3	G1 (1" BSP)		Gewinde	Thread	Fileté	DIN / EN																											
	-GD4	G1.5 (1½" BSP)		Gewinde	Thread	Fileté	DIN / EN																											
	-GN2	¾" NPT		Gewinde	Thread	Fileté	ANSI																											
	-GN3	1" NPT		Gewinde	Thread	Fileté	ANSI																											
	-GN4	1.5" NPT		Gewinde	Thread	Fileté	ANSI																											
	-TCB	TriClamp		TriClamp	Ø 50.5 mm	DIN32676, B	DIN / EN																											
	-XX			Sonder auf Anfrage	Special on request	Spécial nous consulter																												
	-P	Membrane	Diaphragm	PTFE	-20/+180 °C	Ø 200 mm																												
	-V	Membrane		Viton®	-20/+130 °C	Ø 200 mm																												
<table border="1"> <tr> <td>Öffnungsdruck [mbar]</td> <td></td> </tr> <tr> <td>Opening pressure</td> <td></td> </tr> <tr> <td>Pression de ouvre</td> <td></td> </tr> <tr> <td>≤ 4</td> <td></td> </tr> <tr> <td>≤ 8</td> <td></td> </tr> <tr> <td>~ 3...9</td> <td></td> </tr> <tr> <td>~ 5...15</td> <td></td> </tr> <tr> <td>~ 8...32</td> <td></td> </tr> <tr> <td>~ 10...80</td> <td></td> </tr> <tr> <td>≤ 2</td> <td></td> </tr> <tr> <td>≤ 4</td> <td></td> </tr> <tr> <td>~ 3...9</td> <td></td> </tr> <tr> <td>~ 5...15</td> <td></td> </tr> <tr> <td>~ 8...32</td> <td></td> </tr> </table>	Öffnungsdruck [mbar]		Opening pressure		Pression de ouvre		≤ 4		≤ 8		~ 3...9		~ 5...15		~ 8...32		~ 10...80		≤ 2		≤ 4		~ 3...9		~ 5...15		~ 8...32			Federbereich	Horizontal ²⁾	Vertical ³⁾	Typ, Type, Type	Dom, Dome, Dôme
	Öffnungsdruck [mbar]																																	
	Opening pressure																																	
	Pression de ouvre																																	
	≤ 4																																	
	≤ 8																																	
	~ 3...9																																	
	~ 5...15																																	
	~ 8...32																																	
	~ 10...80																																	
≤ 2																																		
≤ 4																																		
~ 3...9																																		
~ 5...15																																		
~ 8...32																																		
	10	p ₁ , primär	8 – 13 mbar	3 – 8 mbar	ZM-B, ZM-B/D/Ds	(max 2013 mbar)																												
	20		10 – 25 mbar	5 – 20 mbar	ZM-B, ZM-B/D/Ds	(max 2025 mbar)																												
	50		13 – 55 mbar	8 – 50 mbar	ZM-B, ZM-B/D/Ds	(max 2055 mbar)																												
	100	Spring range	15 – 100 mbar	10 – 100 mbar	ZM-B, ZM-B/D/Ds	(max 2100 mbar)																												
	200	p ₁ , primary	20 – 200 mbar	15 – 200 mbar	ZM-B, ZM-B/D/Ds	(max 2200 mbar)																												
	500		25 – 500 mbar	20 – 500 mbar	ZM-B, ZM-B/D/Ds	(max 2500 mbar)																												
	0		N/A*	-5 – 0 mbar	ZM-B/N, ZM-B/NDs	(min -1000 mbar)																												
	10	Plage de réglage	-10 – -2 mbar	-15 – -3 mbar	ZM-B/N, ZM-B/NDs	(min -1000 mbar)																												
	50	p ₁ , primaire	-55 – -5 mbar	-60 – -10 mbar	ZM-B/N, ZM-B/NDs	(min -1000 mbar)																												
	100		-115 – -15 mbar	-120 – -20 mbar	ZM-B/N, ZM-B/NDs	(min -1000 mbar)																												
	200		-215 – -45 mbar	-220 – -50 mbar	ZM-B/N, ZM-B/NDs	(min -1000 mbar)																												
		180	Sitz																															
			Seat	Kv = 6.5 / 18 mm																														
			Siège																															
			Optionen, Options, Options																															
			/C	C (Impulsleitung)	C (pulse line)	C (ligne d'Impulsion)	G¾ (¾" BSP)																											
			/E	E (Drainage)	E (Drain)	E (Vidage)	G¾ (¾" BSP)																											
			/S1 ⁴⁾	Manometerstutzen	Gauge nozzle	Raccord manomètre	G¾ (¾" BSP, p ₁)																											
			/S2 ⁴⁾	Manometerstutzen	Gauge nozzle	Raccord manomètre	G¾ (¾" BSP, p ₂)																											
			/Sp	Eingestellt/plombiert	Adjusted and sealed	Ajusté et plombé																												
			/Ws	Wetterschutz	Weather protection	Avec protection	IP54 PP/Polypropylen																											
			/C2.2	EN 10204-2.2	EN 10204-2.2	EN 10204-2.2	II 2 G Ex h IIB T6 Gb II 3 G Ex h IIC T6 Gc II 2 D Ex h IIIC T6 Db II 3 D Ex h IIIC T6 Dc																											
			/C3.1	EN 10204-3.1	EN 10204-3.1	EN 10204-3.1																												
			/Cp	Einstellprotokoll	Test protocol	Protocole de réglage																												
			/Ex	ATEX Zulassung	ATEX approval	Certificat ATEX																												
			/FDA	FDA-Bescheinigung	FDA approval	Certificat FDA																												
			/Ff	Öl- Fettfrei	Certificate degreasing	Sans Huile ni Graisse																												
			/LT	Lecktest	Leakage test	Essai de fuite																												
			/XPZ	Poliert mit Zertifikat	Polished w/certified	Poli, avec Certificat																												
Beispiel, Example, Exemple																																		
ZM-B	25	S	-FD	-P	100	180	/Sp/C3.1/Cp/Ex																											

Hinweise,

N/A* nicht anwendbar
¹⁾ Siehe Typ: LPSK...
²⁾ Für Flüssigkeiten & Gase
³⁾ Nur für Gasanwendungen
⁴⁾ Manometer optional verfügbar

Hints,
 not applicable
 See Type: LPSK...
 For liquids and gas
 Gas applications only
 Pressure gauge optionally available

Remarque
 non applicable
 S.V.P. remarque aussi Type: LPSK...
 Pour liquides et gaz
 Pour les applications de gaz
 Manomètre disponible en option

12 Code: ZM-B50, Überströmventil

ZM-B	IP40 / IP54 (Option /Ws)	Funktion	Überdruck	Gauge pressure	Pression relative	520 mbar											
ZM-B/D	IP68	Function	Domgesteuert	Dome loaded	Dôme	2000 mbar (2500 mbar)											
ZM-B/Ds	IP40	Fonction	Fremd/Pilot	Remote/Pilot	Pilotage/indirect	2000 mbar (2500 mbar)											
ZM-B/N	IP40 / IP54 (Option /Ws)		Negativdruck	Negative pressure	Pression negative	-220 mbar											
ZM-B/NDs	IP40		Fremd/Pilot	Remote/Pilot	Pilotage/indirect	-1000 mbar											
	50 50	DN50, PN16, B1/D 2", 150 lbs	Grösse Size Dimension	Einbaulänge Lay length	Encombrement Encombrement	150 mm / ~13 kg 150 mm / ~13 kg											
	S X		Material Material Matériaux	Edelstahl Sonder auf Anfrage	SST Special on request	INOX 1.4404 Spécial nous consulter (PP, PVDF) ¹⁾											
	-FD -FDN -FA1 -XX	DN50, PN16 DN50, PN16 2", 150 lbs	Anschluss/Typ Connection/Type Raccord/Type	Flansch / Nut Flansch / Groove Flansch Sonder auf Anfrage	Flange Flange / Groove Flange Special on request	Brides Brides / à gorge Brides Spécial nous consulter											
	-P -V		Membrane Diaphragm Membrane	PTFE Viton®	-20 / +180 °C -20 / +130 °C	Ø 200 mm Ø 200 mm											
<table border="1"> <tr> <td>Öffnungsdruck [mbar] Opening pressure Pression de ouvre</td> </tr> <tr> <td>~ 11</td> </tr> <tr> <td>~ 22</td> </tr> <tr> <td>~ 15...45</td> </tr> <tr> <td>~ 25...90</td> </tr> <tr> <td>~ 30...225</td> </tr> <tr> <td>~ 30...225</td> </tr> <tr> <td>~ 11</td> </tr> <tr> <td>~ 22</td> </tr> <tr> <td>~ 15...45</td> </tr> <tr> <td>~ 25...90</td> </tr> </table>	Öffnungsdruck [mbar] Opening pressure Pression de ouvre	~ 11	~ 22	~ 15...45	~ 25...90	~ 30...225	~ 30...225	~ 11	~ 22	~ 15...45	~ 25...90	20 50 100 200 500 1000	Federbereich p ₁ , primär Spring range p ₁ , primary	Horizontal ²⁾ 10 – 25 mbar 13 – 55 mbar 15 – 100 mbar 20 – 200 mbar 25 – 500 mbar 24 – 1024 mbar	Vertical ³⁾ 5 – 20 mbar 8 – 50 mbar 10 – 100 mbar 15 – 200 mbar 20 – 500 mbar 20 – 1020 mbar	Typ, Type, Type ZM-B, ZM-B/D/Ds ZM-B, ZM-B/D/Ds ZM-B, ZM-B/D/Ds ZM-B, ZM-B/D/Ds ZM-B, ZM-B/D/Ds ZM-B, ZM-B/D/Ds	Dom, Dome, Dôme (max 2025 mbar) (max 2055 mbar) (max 2100 mbar) (max 2200 mbar) (max 2500 mbar) (max 1500 mbar)
	Öffnungsdruck [mbar] Opening pressure Pression de ouvre																
	~ 11																
	~ 22																
~ 15...45																	
~ 25...90																	
~ 30...225																	
~ 30...225																	
~ 11																	
~ 22																	
~ 15...45																	
~ 25...90																	
	10 50 100 200	Plage de réglage p ₁ , primaire	-10 – -5 mbar -55 – -5 mbar -115 – -15 mbar -215 – -45 mbar	-15 – -5 mbar -60 – -10 mbar -120 – -20 mbar -220 – -50 mbar	ZM-B/N, ZM-B/NDs ZM-B/N, ZM-B/NDs ZM-B/N, ZM-B/NDs ZM-B/N, ZM-B/NDs	(min -1000 mbar) (min -1000 mbar) (min -1000 mbar) (min -1000 mbar)											
	260	Sitz Seat Siège	Kv = 13.1 / 26 mm														
	Optionen, Options, Options																
	/C	C (Impulsleitung)	C (pulse line)	C (ligne d'Impulsion)	G ¹ / ₄ (1/4" BSP)												
	/E	E (Drainage)	E (Drain)	E (Vidage)	G ¹ / ₄ (1/4" BSP)												
	/S1 ⁴⁾	Manometerstutzen	Gauge nozzle	Raccord manomètre	G ¹ / ₄ (1/4" BSP, p ₁)												
	/S2 ⁴⁾	Manometerstutzen	Gauge nozzle	Raccord manomètre	G ¹ / ₄ (1/4" BSP, p ₂)												
	/Sp	Eingestellt/plombiert	Adjusted and sealed	Ajusté et plombé													
	/Ws	Wetterschutz	Weather protection	Avec protection	IP54 PP / Polypropylen												
	/C2.2	EN 10204-2.2	EN 10204-2.2	EN 10204-2.2													
	/C3.1	EN 10204-3.1	EN 10204-3.1	EN 10204-3.1													
	/Cp	Einstellprotokoll	Test protocol	Protocole de réglage	II 2 G Ex h IIB T6 Gb II 3 G Ex h IIC T6 Gc II 2 D Ex h IIIC T6 Db II 3 D Ex h IIIC T6 Dc												
	/Ex	ATEX Zulassung	ATEX approval	Certificat ATEX													
	/FDA	FDA-Bescheinigung	FDA approval	Certificat FDA													
	/Ff	Öl- Fettfrei	Certificate degreasing	Sans Huile ni Graisse													
	/LT	Lecktest	Leakage test	Essai de fuite													
	/XPZ	Poliert mit Zertifikat	Polished w/certified	Poli, avec Certificat													
Beispiel, Example, Exemple																	
ZM-B	50	S	-FD	-P	100	260											
						/Sp/C3.1/Cp/Ex											

Hinweise,

N/A nicht anwendbar
 Siehe Typ: **LPSK...**
¹⁾ Für Flüssigkeiten & Gase
²⁾ Nur für Gasanwendungen
³⁾ Manometer optional verfügbar

Hints,

not applicable
 See Type: **LPSK...**
¹⁾ For liquids and gas
²⁾ Gas applications only
³⁾ Pressure gauge optionally available

Remarque

non applicable
 S.V.P. remarque aussi Type: **LPSK...**
¹⁾ Pour liquides et gaz
²⁾ Pour les applications de gaz
³⁾ Manomètre disponible en option

13 Code: ZM-B/R15, non return valve

ZM-B/R	IP68	Funktion Function Fonction	Rückfluss-Sperrventil Reflux blocking valve Soupape anti-reflux	Druckverlust: Pressure drop: Perte de pression:	siehe Federbereich see spring range voir plage de réglage		
15	DN15, PN40, B1	Grösse Size Dimension	Einbaulänge	Lay length	Encombrement	150 mm / ~6.9 kg	
15	DN15, PN40, D		Einbaulänge	Lay length	Encombrement	150 mm / ~6.9 kg	
15	½", 150 lbs		Einbaulänge	Lay length	Encombrement	180 mm / ~6.6 kg	
15	½", 300 lbs		Einbaulänge	Lay length	Encombrement	189 mm / ~7.9 kg	
15	G½ (½" BSP)		Einbaulänge	Lay length	Encombrement	152 mm / ~5.7 kg	
15	½" NPT		Einbaulänge	Lay length	Encombrement	152 mm / ~5.7 kg	
15	TriClamp		Einbaulänge	Lay length	Encombrement	141 mm / ~5.8 kg	
S		Material Material Matériaux	Edelstahl	SST	INOX	1.4404	
X			Sonder auf Anfrage	Special on request	Spécial nous consulter		
-FD	DN15, PN40	Anschluss/Typ Connection/Typ Raccord/Type	Flansch	Flange	Brides	DIN / EN 1092-1, B1	
-FDN	DN15, PN40		Flansch / Nut	Flange / Groove	Brides / à gorge	DIN / EN 1092-1, D	
-FA1	½", 150 lbs		Flansch	Flange	Brides	ANSI	
-FA3	½", 300 lbs		Flansch	Flange	Brides	ANSI	
-GD1	G½ (½" BSP)		Gewinde	Thread	Fileté	DIN / EN	
-GN1	½" NPT		Gewinde	Thread	Fileté	ANSI	
-TCB	TriClamp		TriClamp	Ø 50.5 mm	DIN32676, B	DIN / EN	
-XX			Sonder auf Anfrage	Special on request	Spécial nous consulter		
-P		Membrane Diaphragm Membrane	PTFE	-20/+180 °C	Ø 200 mm		
-V			Viton®	-20/+130 °C	Ø 200 mm		
10		Federbereich p ₁ , primär Spring range p ₁ , primary Plage de réglage p ₁ , primaire	Horizontal ¹⁾		Vertical ¹⁾	Typ, Type, Type	p₁ (max), p₂ (max)
20			8 – 13 mbar	3 – 8 mbar	ZM-B/R25	max. 2013 mbar	
50			10 – 25 mbar	5 – 20 mbar	ZM-B/R25	max. 2025 mbar	
100			13 – 55 mbar	8 – 50 mbar	ZM-B/R25	max. 2055 mbar	
200			15 – 100 mbar	10 – 100 mbar	ZM-B/R25	max. 2100 mbar	
500			20 – 200 mbar	15 – 200 mbar	ZM-B/R25	max. 2200 mbar	
1000			25 – 500 mbar	20 – 500 mbar	ZM-B/R25	max. 2500 mbar	
1000		100 – 1050 mbar	96 – 1046 mbar	ZM-B/R25	max. 2500 mbar		
180		Sitz Seat Siège	Kv = 6.5 / 18 mm				
Optionen, /Options, /Options							
/S1 ²⁾	Manometerstutzen	Gauge nozzle	Raccord manomètre	G¼ (¼" BSP, p ₁)			
/S2 ²⁾	Manometerstutzen	Gauge nozzle	Raccord manomètre	G¼ (¼" BSP, p ₂)			
/Sp	Eingestellt/plombiert	Adjusted and sealed	Ajusté et plombé				
/C2.2	EN 10204-2.2	EN 10204-2.2	EN 10204-2.2				
/C3.1	EN 10204-3.1	EN 10204-3.1	EN 10204-3.1			II 2 G Ex h IIB T6 Gb II 3 G Ex h IIC T6 Gc II 2 D Ex h IIIC T6 Db II 3 D Ex h IIIC T6 Dc	
/Cp	Einstellprotokoll	Test protocol	Protocole de réglage				
/Ex	ATEX Zulassung	ATEX approval	Certificat ATEX				
/Ff	Öl- Fettfrei	Certificate degreasing	Sans Huile ni Graisse				
/FDA	FDA-Bescheinigung	FDA approval	Certificat FDA				
/LT	Lecktest	Leakage test	Essai de fuite				
/XPZ	Poliert mit Zertifikat	Polished w/certified	Poli, avec Certificat				
Beispiel, Example, Exemple							
ZM-B/R	15	S	-FD	-P	100	180	/Sp/C3.1/Cp/Ex

Hinweise,

¹⁾Nur für Gasanwendungen
²⁾Manometer optional verfügbar

Hints,

Gas applications only
Pressure gauge optionally available

Remarque

Pour les applications de gaz
Manomètre disponible en option

15 Code: ZM-B/R50, Rückfluss-Sperrventil

ZM-B/R	IP68	Funktion Function Fonction	Rückfluss-Sperrventil Reflux blocking valve Soupape anti-reflux	Druckverlust: Pressure drop: Perte de pression:	siehe Federbereich see spring range voir plage de réglage	
50 50	DN50, PN16, B1 2" 150 lbs	Grösse Size Dimension	Einbaulänge Einbaulänge	Lay length Lay length	Encombrement Encombrement	150 mm / ~ 13 kg 150 mm / ~ 13 kg
S X		Material Material Matériaux	Edelstahl Sonder auf Anfrage	SST Special on request	INOX Spécial nous consulter	1.4404
-FD -FDN -FA1 -XX	DN50, PN16 DN50, PN16 2", 150 lbs	Anschluss/Typ Connection/Typ Raccord/Type	Flansch Flansch / Nut Flansch Sonder auf Anfrage	Flange Flange / Groove Flange Special on request	Brides Brides / à gorge Brides Spécial nous consulter	DIN / EN 1092-1, B1 DIN / EN 1092-1, D ANSI
-P -V		Membrane Diaphragm Membrane	PTFE Viton®	-20/+180 °C -20/+130 °C	Ø 200 mm Ø 200 mm	
20 50 100 200 500 1000		Federbereich p ₁ , primär Spring range p ₁ , primary Plage de réglage p ₁ , primaire	Horizontal ¹⁾ 10 – 25 mbar 13 – 55 mbar 15 – 100 mbar 20 – 200 mbar 25 – 500 mbar 24 – 1024 mbar	Vertical ¹⁾ 5 – 20 mbar 8 – 50 mbar 10 – 100 mbar 15 – 200 mbar 20 – 500 mbar 20 – 1020 mbar	Typ, Type, Type ZM-B/R50 ZM-B/R50 ZM-B/R50 ZM-B/R50 ZM-B/R50 ZM-B/R50	p₁ (max), p₂ (max) (max 2025 mbar) (max 2055 mbar) (max 2100 mbar) (max 2200 mbar) (max 2500 mbar) (max 2500 mbar)
260		Sitz Seat Siège	Kv = 13.1 / 26 mm			
Optionen, /Options, /Options						
/S1 ²⁾	Manometerstützen	Gauge nozzle	Raccord manomètre	G ¹ / ₄ " (1/4" BSP, p ₁)		
/S2 ²⁾	Manometerstützen	Gauge nozzle	Raccord manomètre	G ¹ / ₄ " (1/4" BSP, p ₂)		
/Sp	Eingestellt/plombiert	Adjusted and sealed	Ajusté et plombé			
/C2.2	EN 10204-2.2	EN 10204-2.2	EN 10204-2.2			
/C3.1	EN 10204-3.1	EN 10204-3.1	EN 10204-3.1			
/Cp	Einstellprotokoll	Test protocol	Protocole de réglage	{ II 2 G Ex h IIB T6 Gb II 3 G Ex h IIC T6 Gc II 2 D Ex h IIIC T6 Db II 3 D Ex h IIIC T6 Dc		
/Ex	ATEX Zulassung	ATEX approval	Certificat ATEX			
/FDA	FDA-Bescheinigung	FDA approval	Certificat FDA			
/Ff	Öl- Fettfrei	Certificate degreasing	Sans Huile ni Graisse			
/LT	Lecktest	Leakage test	Essai de fuite			
/XPZ	Poliert mit Zertifikat	Polished w/certified	Poli, avec Certificat			
Beispiel, Example, Exemple						
ZM-B/R	50	S	-FD	-P	100	280 /Sp/C3.1/Cp/Ex

16 Code: LPSK25, relief valve

LPSK	IP40 / IP54 ²⁾	Funktion	Überdruck	Gauge Pressure	Pression relative	500 mbar	
LPSK/D	IP68	Function	Domgesteuert	Dome loaded	Piloté par le dôme	1000 mbar (1500 mbar) ^{2,3)}	
LPSK/Ds	IP40 / IP68	Fonction	Fremd/Pilot	Remote/Pilot	Pilotage/indirect	1000 mbar (1500 mbar) ^{2,3)}	
LPSK/N	IP40 / IP54 ²⁾		Negativdruck	Negative pressure	Pression negative	-120 mbar	
LPSK/NDs	IP40		Neg. Fremd/Pilot	Neg. Integral/Pilot	Neg. Pilotage/indirect	1000 mbar ⁴⁾	
	25 DN 25, PN16 25 1", 150 lbs	Grösse Size Dimension	Einbaulänge Sonder auf Anfrage	Lay length Special on request	Encombrement Spécial nous consulter	140 x 100 mm	
	PP PV	Material⁶⁾ Material ⁶⁾ Matériaux ⁶⁾	PP PVDF	PP PVDF	PP PVDF	-20/ +80°C ~3.0 kg -20/+140°C ~4.5 kg	
	-FD -FA1	Anschluss / Typ Connection / Type Raccord / Type	Flansch Flansch Sonder auf Anfrage	Flange Flange Special on request	Brides Brides Spécial nous consulter	DIN / EN ANSI	
	-P	Membrane Diaphragm Membrane	PTFE PTFE PTFE	Ø 200 mm p ₁ : -120 ... max. + 200 mbar g Ø 200 mm p ₁ : -1000 ... max. + 500 mbar g ^{2,3)} Ø 200 mm p ₁ : -1000 ... max. +1.500 mbar g ^{2,3)}			
Öffnungsdruck [mbar] Opening pressure Pression de ouvre ≤ 8 ~ 3 ... 9 ~ 5 ... 15 ~ 8 ... 32 ~ 10 ... 80 ≤ 2 ≤ 4 ~ 3 ... 9	20	Federbereich¹⁾ p ₁ , primär	Horizontal⁴⁾ 5 – 20 mbar	Vertical⁵⁾ 5 – 20 mbar	Typ, Type, Type LPSK, LPSK/D/Ds	Dom, Dome, Dôme (max 1000 mbar)	
	50		8 – 50 mbar	8 – 50 mbar			LPSK, LPSK/D/Ds
		100	Spring range ¹⁾ p ₁ , primary	10 – 100 mbar	10 – 100 mbar	LPSK, LPSK/D/Ds	(max 1000 mbar)
		200		15 – 200 mbar	15 – 200 mbar	LPSK, LPSK/D/Ds	(max 1000 mbar)
	500		20 – 500 mbar ^{2,4)}	20 – 500 mbar ^{2,4)}	LPSK, LPSK/D/Ds	(max 1000 mbar)	
	10	Plage de réglage ¹⁾ p ₁ , primaire	-15 – -3 mbar	-15 – -3 mbar	LPSK/N/NDs	(min -1000 mbar)	
	50		-60 – -10 mbar	-60 – -10 mbar	LPSK/N/NDs	(min -1000 mbar)	
	100		-120 – -20 mbar	-120 – -20 mbar	LPSK/N/NDs	(min -1000 mbar)	
	180	Sitz Seat Siège	18 mm, Kv = 6.5				
		Optionen, Options, Options					
	/Sp	Eingestellt/plombiert	Adjusted and sealed	Ajusté et plombé			
	/VA	V4A-Federdom	SST spring dome	Avec dôme en INOX			
	/Ws	Wetterschutz	Weather protection	Avec protection contre les intempéries			
	/C2.2	EN 10204-2.2	EN 10204-2.2	EN 10204-2.2			
	/Cp	Einstellprotokoll	Test protocol	Protocole de réglage			
Beispiel, Example, Exemple							
LPSK	25	PV	-FD	-P	50	180 /Sp/C2.2	

Hinweise,

- 1) Vordruckabhängigkeit
- 2) Nur mit V4A-Federdom
- 3) Nur mit Feder 500
- 4) Für Flüssigkeiten und Gase
- 5) Für Gasanwendungen
- 6) Nur für benetzte Teile

Hints,

- 1) Primary pressure effect
- 2) With SST spring dome
- 3) With spring 500 only
- 4) For liquids and gas
- 5) For gas applications
- 6) Wetted parts only

Remarque

- 1) Dépendance de la pression primaire
- 2) Uniquement avec dome INOX
- 3) Uniquement avec ressort de 500
- 4) Pour liquides et gaz
- 5) Pour les applications de gaz
- 6) Uniquement pour pièces en contact

17 Code: LPS25, relief valve

LPS	IP40 / IP54 (Option /Ws)	Funktion	Überdruck	Gauge Pressure	Pression relative	520 mbar
LPS/D	IP68	Function	Domgesteuert	Dome loaded	Dôme	2000 mbar (2500 mbar)
LPS/Ds	IP40	Fonction	Eigen/Pilot	Integral/Pilot	Pilotage/direct	2000 mbar (2500 mbar)
LPS/N	IP40 / IP54 (Option /Ws)		Fremd/Pilot	Remote/Pilot	Pilotage/indirect	-220 mbar
LPS/NDs	IP40		Negativdruck	Negative pressure	Pression negative	-1000mbar
	25 DN25, PN40	Grösse	Einbaulänge	Lay length	Encombrement	100x120mm, ~6.0 kg
	25 1", 150 lbs	Size	Einbaulänge	Lay length	Encombrement	100x120mm, ~6.0 kg
	25 1", 300 lbs	Dimension	Einbaulänge	Lay length	Encombrement	~7.3 kg
	25 G¾ (¾" BSP)		Einbaulänge	Lay length	Encombrement	~4.7 kg
	25 G1 (1" BSP)		Einbaulänge	Lay length	Encombrement	78x120 mm, ~4.5 kg
	25 G1.5 (1½" BSP)		Einbaulänge	Lay length	Encombrement	~4.5 kg
	25 ¾" NPT		Einbaulänge	Lay length	Encombrement	~4.7 kg
	25 1" NPT		Einbaulänge	Lay length	Encombrement	78x120 mm, ~5.1 kg
	25 1.5" NPT		Einbaulänge	Lay length	Encombrement	~5.4 kg
	25 TriClamp		Einbaulänge	Lay length	Encombrement	62x120mm, ~4.9 kg
	S	Material	Edelstahl	SST	INOX	1.4404
	H	Material	Hastelloy C	Hastelloy C	Hastelloy C	C276
	X	Matériaux	Sonder auf Anfrage	Special on request	Spécial nous consulter	(PP, PVDF) ¹⁾
	-FD	DN25, PN40	Anschluss/Typ	Flansch	Flange	Brides
	-FA1	1", 150 lbs	Connection/Type	Flansch	Flange	Brides
	-FA3	1", 300 lbs	Raccord/Type	Flansch	Flange	Brides
	-GD2	G¾ (¾" BSP)		Gewinde	Thread	Fileté
	-GD3	G1 (1" BSP)		Gewinde	Thread	Fileté
	-GD4	G1.5 (1½" BSP)		Gewinde	Thread	Fileté
	-GN2	¾" NPT		Gewinde	Thread	Fileté
	-GN3	1" NPT		Gewinde	Thread	Fileté
	-GN4	1.5" NPT		Gewinde	Thread	Fileté
	-TCB	TriClamp		Gewinde	Thread	Fileté
	-XX		Sonder auf Anfrage	Ø 50.5 mm	Ø 50.5 mm	Ø 50.5 mm
			Sonder auf Anfrage	Special on request	Spécial nous consulter	
	-P	Membrane	PTFE	-20/+180 °C	Ø 200 mm	
	-V	Diaphragm	Viton®	-20/+130 °C	Ø 200 mm	
		Federbereich	Horizontal ²⁾	Vertical ³⁾	Typ, Type, Type	Dom, Dome, Dôme
		p ₁ , primär	8 – 13 mbar	3 – 8 mbar	LPS, LPS/D/Ds	(max 2013 mbar)
			10 – 25 mbar	5 – 20 mbar	LPS, LPS/D/Ds	(max 2025 mbar)
			13 – 55 mbar	8 – 50 mbar	LPS, LPS/D/Ds	(max 2055 mbar)
		Spring range	15 – 100 mbar	10 – 100 mbar	LPS, LPS/D/Ds	(max 2100 mbar)
		p ₁ , primary	20 – 200 mbar	15 – 200 mbar	LPS, LPS/D/Ds	(max 2200 mbar)
			25 – 500 mbar	20 – 500 mbar	LPS, LPS/D/Ds	(max 2500 mbar)
			N/A*	-5 – 0 mbar	LPS/N, LPS/NDs	(min -850 mbar)
		Plage de réglage	-10 – -2 mbar	-15 – -3 mbar	LPS/N, LPS/NDs	(min -850 mbar)
		p ₁ , primaire	-55 – -5 mbar	-60 – -10 mbar	LPS/N, LPS/NDs	(min -850 mbar)
			-115 – -15 mbar	-120 – -20 mbar	LPS/N, LPS/NDs	(min -850 mbar)
			-215 – -45 mbar	-220 – -50 mbar	LPS/N, LPS/NDs	(min -850 mbar)
		180	Sitz			
			Seat			
			Siège	Kv = 6.5 / 18 mm		
			Optionen, Options, Options			
		/C	C (Impulsleitung)	C (pulse line)	C (ligne d'impulsion)	G¾ (¾" BSP)
		/E	E (Drainage)	E (Drain)	E (Vidage)	G¾ (¾" BSP)
		/S1 ⁴⁾	Manometerstutzen	Gauge nozzle	Raccord manomètre	G¾ (¾" BSP, p ₁)
		/S2 ⁴⁾	Manometerstutzen	Gauge nozzle	Raccord manomètre	G¾ (¾" BSP, p ₂)
		/Sp	Eingestellt/plombiert	Adjusted and sealed	Ajusté et plombé	
		/Ws	Wetterschutz	Weather protection	Avec protection	IP54 PP / Polypropylen
		/C2.2	EN 10204-2.2	EN 10204-2.2	EN 10204-2.2	II 2 G Ex h IIB T6 Gb II 3 G Ex h IIC T6 Gc II 2 D Ex h IIIC T6 Db II 3 D Ex h IIIC T6 Dc
		/C3.1	EN 10204-3.1	EN 10204-3.1	EN 10204-3.1	
		/Cp	Einstellprotokoll	Test protocol	Protocole de réglage	
		/Ex ³⁾	ATEX Zulassung	ATEX approval	Certificat ATEX	
		/FDA	FDA-Bescheinigung	FDA approval	Certificat FDA	
		/Ff	Öl- Fettfrei	Certificate degreasing	Sans Huile ni Graisse	
		/LT	Lecktest	Leakage test	Essai de fuite	
		/XPZ	Poliert mit Zertifikat	Polished w/certified	Poli, avec Certificat	
Beispiel, Example, Exemple						
LPS	25	S	-FD	-P	100	180
						/Sp/C3.1/Cp/Ex

Hinweise,
N/A* nicht anwendbar
¹⁾ Siehe Typ: **LPSK...**
²⁾ Für Flüssigkeiten & Gase
³⁾ Nur für Gasanwendungen
⁴⁾ Manometer optional verfügbar

Hints,
 not applicable
 See Type: **LPSK...**
 For liquids and gas
 Gas applications only
 Pressure gauge optionally available

Remarque
 non applicable
 S.V.P. remarque aussi Type: **LPSK...**
 Pour liquides et gaz
 Pour les applications de gaz
 Manomètre disponible en option