

# Body Pressure Relief Valve

## UGS

p approx. 750 bar  
DN 15

## Type Series Booklet



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Type Series Booklet UGS

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## Body Pressure Relief Valve

### Body Pressure Relief Valve with or without Bursting Disc

## UGS



- Blow-off pressure is set via screw-type body
- Stellite seat
- Lead-sealed screw prevents unauthorised manipulation of set blow-off pressure
- The valves satisfy the safety requirements of Annex I of the European Pressure Equipment Directive 2014/68/EU (PED) for fluids in Groups 1 and 2.
- The valves do not have a potential internal source of ignition and can be used in potentially explosive atmospheres, Group II, category 2 (zones 1+21) and category 3 (zones 2+22) to ATEX 2014/34/EU.

#### Variants

- Bursting disc (UGSV and UGSVA)
- Blocking device
- With lockable shut-off valve

#### Product benefits

- Protects the valve body against excessive loads and damage, particularly on valves in pressure seal design.
- Unlike other solutions, e.g. balancing hole in the seat, UGS enables the gate valve to be used for both flow directions.
- Long service life and high functional reliability ensured by
  - Robust design made of forged steel.
  - Hard-faced seat made of wear-resistant and corrosion-proof Stellite.
  - Spring made of corrosion-proof nickel-base alloys.

#### Main applications

- Protection of gate valve bodies against excessive loads, particularly those of gate valves in pressure seal design.

#### Fluids handled

- Water
- Steam
- Other non-aggressive fluids such as gas or oil on request.

#### Operating data

##### Operating properties

Characteristic	Value
Nominal pressure	≥ PN 40
Nominal size	DN 15
Max. permissible pressure	25 - 750 bar

#### Pipe union materials

##### Overview of available materials

Material	Material number	Temperature limit
P 250 GH	1.0460	≤ 450 °C
13 CrMo 4-5	1.7335	≤ 550 °C
10 CrMo 9-10/ 11 CrMo 9-10	1.7380/ 1.7383	≤ 570 °C
X 10 CrMoVNb 9-1	1.4903	≤ 650 °C

#### Design details

##### Design

- Body made of forged steel
- Stainless steel valve disc (UGS and UGSV)
- Adjustable, needle bearing supported spring assembly (UGS and UGSV)

#### Related documents

##### Information/documents

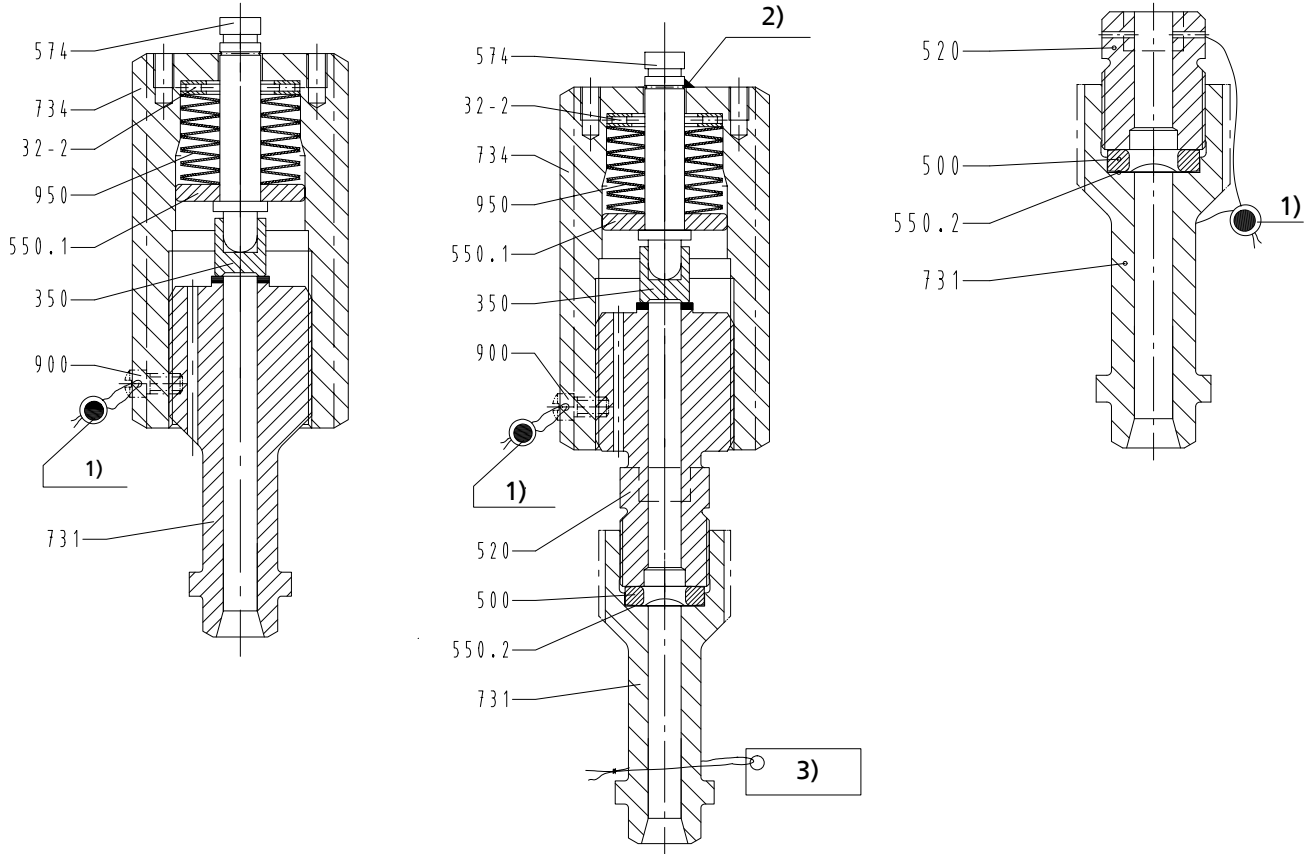
Document	Reference number
STAAL 40 AKD/AKDS type series booklet (gate valves with bolted bonnet)	7364.1
STAAL 100 AKD/AKDS type series booklet (gate valves with bolted bonnet)	7331.1
AKG-A/AKGS-A type series booklet (gate valves in pressure seal design)	7338.1
ZTS type series booklet (gate valves in pressure seal design)	7451.1
Operating manual UGS	7300.8
Operating manual for gate valves	0570.81

**Purchase order specifications**

Please specify the following information in all enquiries or purchase orders:

1. Type
2. Material
3. Blow-off pressure
4. Pipe connection

**Materials**



UGS:  
without bursting disc, spring-loaded

UGSV:  
with bursting disc, spring-loaded

UGSVA:  
with bursting disc, without spring loading

**i** To be used in combination with lockable globe valve only (⇒ Page 6) .

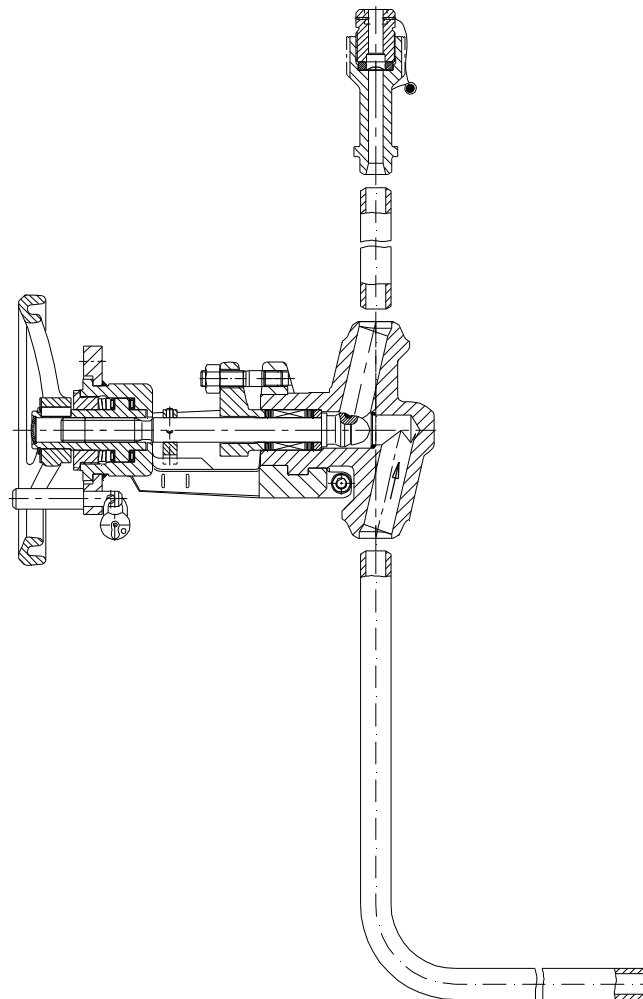
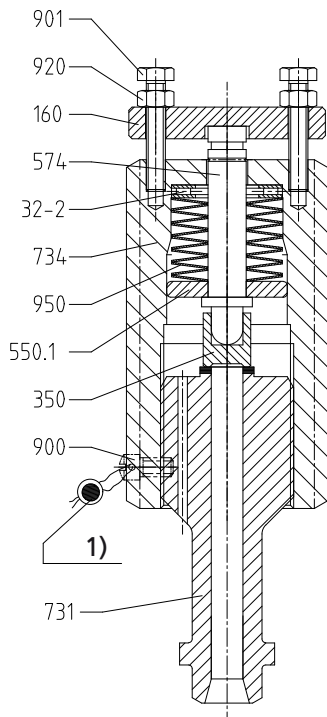
1)	Lead-sealed	2)	Paint dot
3)	Name plate for bursting disc		

**Parts list**

Part No.	Description	Material	Material number	Note
32-2	Axial needle bearing	Steel	-	-
160	Cover	P 250 GH	1.0460	-
350	Valve disc	X 39 CrMo 17-1	1.4122	-
500	Ring	X6CrNiTi18-10	1.4541	-
520	Sleeve	13 CrMo 4-5	1.7335	Stellited
550.1	Disc	X 20 Cr 13	1.4021	-
550.2	Bursting disc	316 SS	-	-
574	Rod	X 39 CrMo 17-1	1.4122	-
731	Pipe union	P 250 GH	1.0460	Stellited
		13 CrMo 4-5	1.7335	
		10 CrMo 9-10/ 11 CrMo 9-10	1.7380 1.7383	
		X 10 CrMoVNb 9-1	1.4903	
734	Screw-type body	9 SMn28 k	-	-
900	Screw	5.8	-	-

Part No.	Description	Material	Material number	Note
901	Hexagon head bolt	8.8	-	-
920	Hexagon nut	8	-	-
950	Disc spring	Inconel 718	-	-

**Variants**



Blocking device

**i** For pressure testing only; not permitted in regular valve duty.

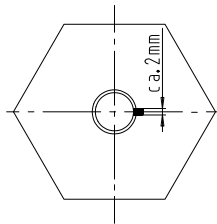
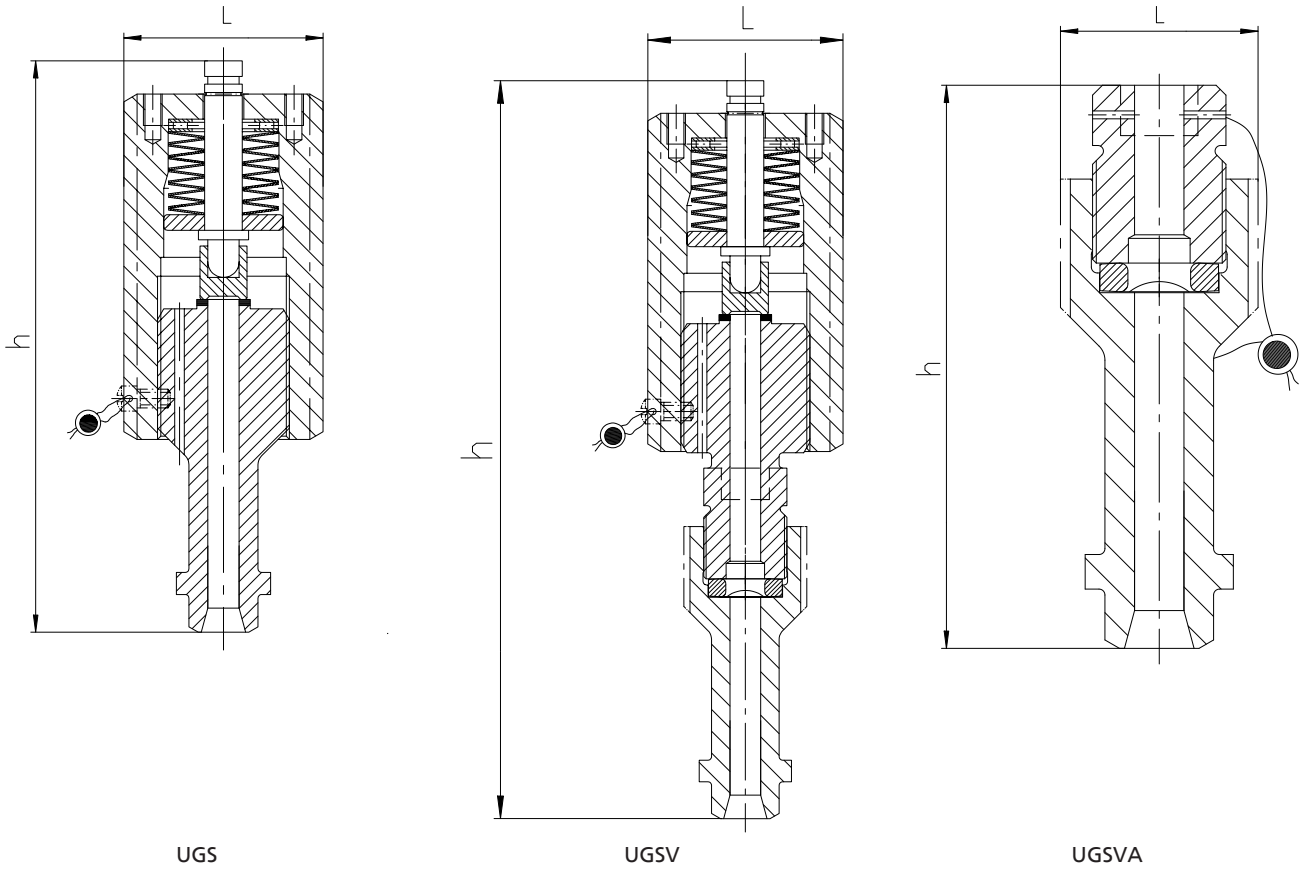
1) Lead-sealed

With lockable globe valve, e.g. NORI 500<sup>12)</sup>

**i** The globe valve must be locked in OPEN position.

1) Can also be used with UGS and UGSV.  
2) For more information on NORI 500 globe valve refer to type series booklet 7640.1

**Dimensions**



Top view of UGS and UGSV

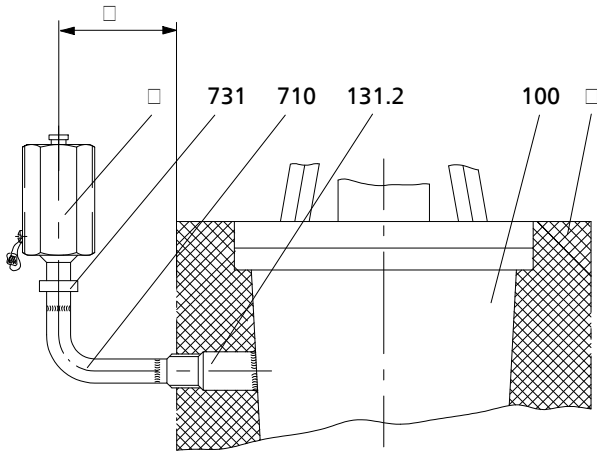
Dimensions [mm]

DN	Design	L	Pipe connections		h
15	UGS	SW 55	21,3 × 14,1	21,3 × 12,3 <sup>3)</sup>	182
	UGSV	SW 55	21,3 × 14,1	21,3 × 12,3 <sup>3)</sup>	240
	UGSVA	Ø 40	21,3 × 14,1	21,3 × 12,3 <sup>3)</sup>	115

3) On request

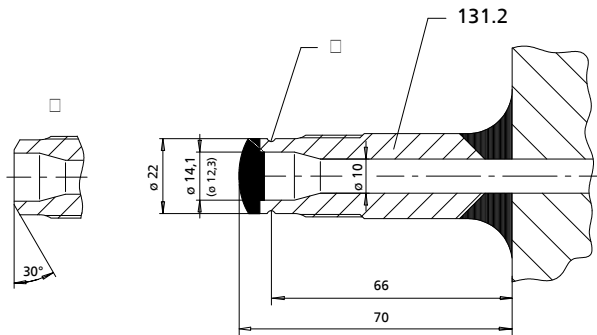
**Installation instructions**

**i** A body pressure relief valve is necessary if, with the gate valve closed, there is a danger of the liquid trapped inside the valve body heating up and causing an unacceptable pressure increase inside the valve. A warning sign to this effect is affixed to the yoke arm of the gate valve, near the name plate.



1)	UGS body pressure relief valve for both flow directions	2)	Pipe union (731)
3)	Pipe (710), not included in KSB's scope of supply	4)	Gate valve connection branch (131.2)
5)	Gate valve body (100)	6)	Insulation

**i** All KSB gate valves with pressure seal bonnet are factory-supplied with a closed connection branch (131.2).



7)	Welding groove	8)	When connecting to pipe (710), cut here and bevel the face to obtain a welding groove.
9)	Connection branch (131.2)		

**i** The body pressure relief valve must not be welded directly to the connection branch (131.2) of the gate valve but must be connected to it via a pipe (710) in a vertical, upright position outside the insulating material. The minimum distance to the insulation is 200 mm.

**i** The cover (160) of the blocking device must be fitted for pressure testing only. Immediately remove the cover after pressure testing; otherwise, the body pressure relief valve will not respond in an emergency.

**i** The blow-off pressure of the body pressure relief valve is set at the factory. The screw is lead-sealed against unauthorised manipulation.

**i** Observe all safety information given in operating manual 7300.8.











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