

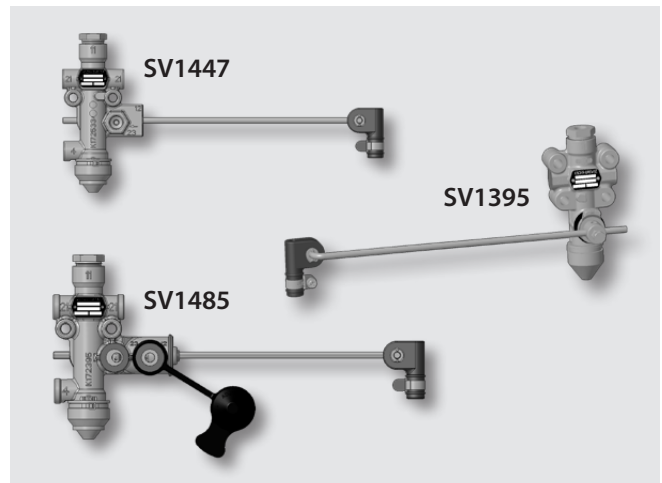
### Function

On vehicles fitted with air suspension, the **Levelling Valve** ensures that the axle suspension air bags maintain a constant chassis height irrespective of the vehicle load.

Levelling Valves with the "Height Limitation" feature prevent the chassis height being manually raised above a set limit.

Levelling Valves with the "Second Ride Height" feature allow the driver to pneumatically signal the valve and raise the chassis to an alternative ride height.

Cross Throttling prevents the rapid flow of air between the two outlet ports 21 (left and right side of the vehicle).



### Technical Features

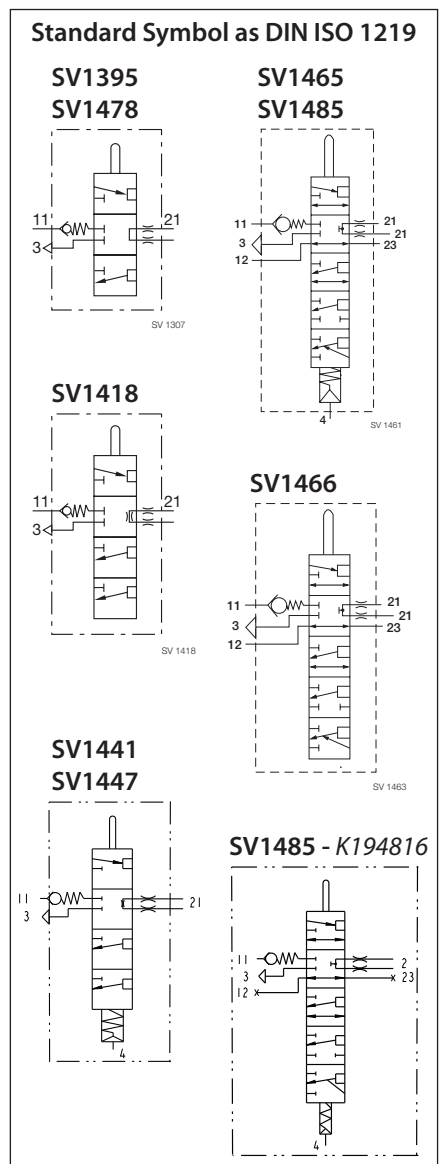
Maximum Operating Pressure:	12 bar
Operating Temperature Range:	-40 °C bis +80 °C
Weight:	0.7 kg approx.
Lever length:	300 mm
Lever design:	Round, with rubber joint

### Range Overview

Part No.	Part No. old	Type No.	Replaces	Second Ride Height (preset)	Height Limitation (adjustable)
K194770 <sup>3)</sup>	II19425 <sup>1)</sup>	SV1395	SV1307	-	-
K194803 <sup>3)</sup>	I99633 <sup>2)</sup>	SV1418	-	-	-
K194764 <sup>3)</sup>	II30531	SV1441	-	12°	-
K194811 <sup>3)</sup>	II34910	SV1447	-	17.5°	-
K194769 <sup>3)</sup>	II36114	SV1465	SV1440, 61	12°	20°- 50° <sup>4)</sup>
K194773 <sup>3)</sup>	II36115	SV1466	SV1410, 63	-	20°- 50° <sup>4)</sup>
K194771 <sup>3)</sup>	K135385 <sup>3)</sup>	SV1478	SV1460	-	-
K194765 <sup>3)</sup>	K000367	SV1485	-	10°	20°- 50° <sup>4)</sup>
K194816 <sup>3)5)</sup>	K002647 <sup>5)</sup>	SV1485	-	10°	20°- 50° <sup>4)</sup>

The rubber joint at the lower end of the vertical linkage is available separately.  
Part Number: K193628

- 1) Standard valve without additional features
- 2) Without additional features, higher volumetric flow
- 3) Standard valve without additional features, carries N00 suffix
- 4) Height Limitation adjustable, see adjustment instructions
- 5) Ports 12 and 23 are fitted with blanking plugs



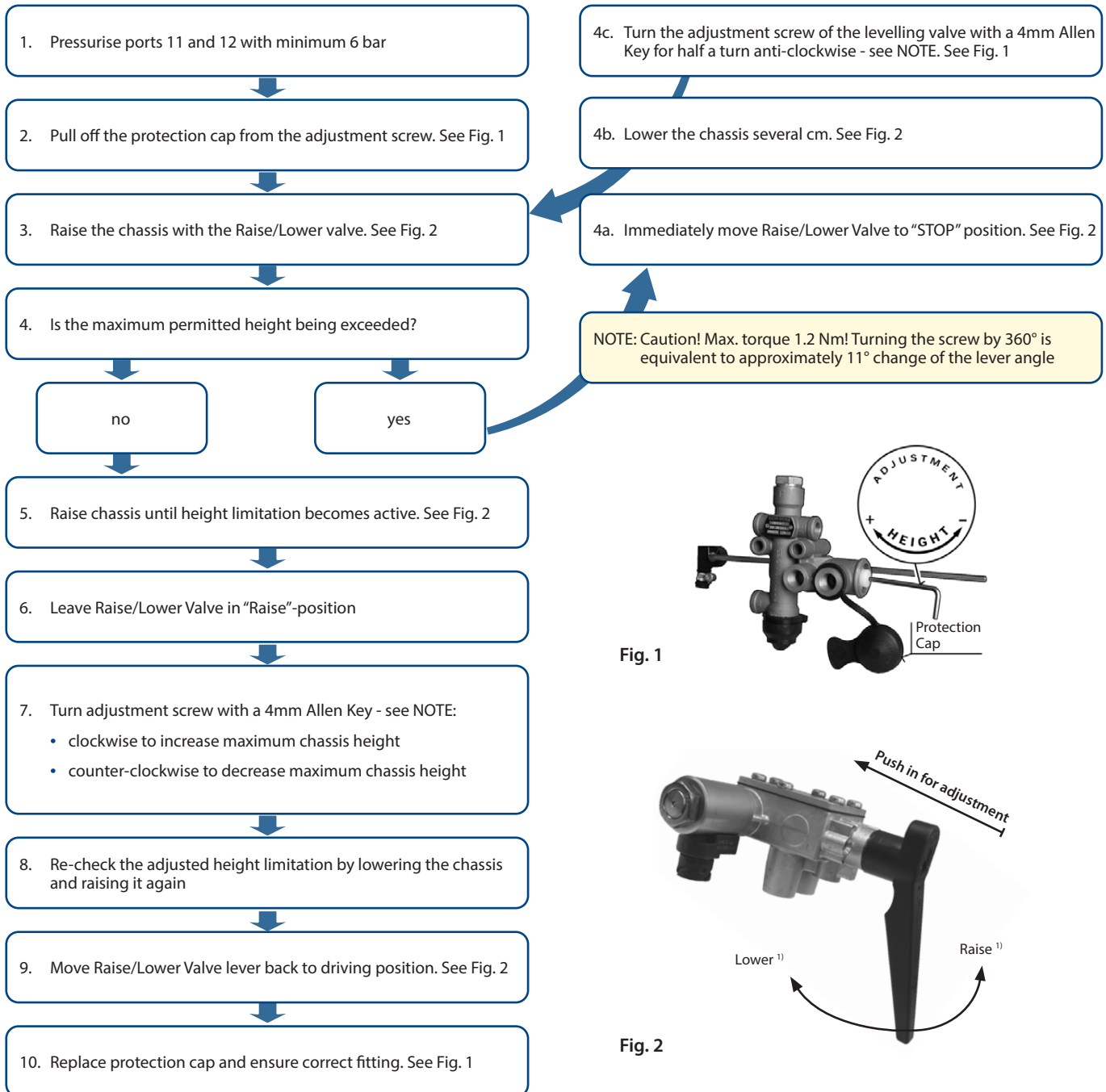
**Instructions for adjusting the height limitation**

**(applies to the following levelling valves: SV1461, SV1462, SV1463, SV1465, SV1466 and SV1485)**

Levelling valves with Height Limitation shut off the air supply to the Raise/Lower valve at a certain angle of the lever and thereby limit the maximum chassis height. This angle is supplied pre-set to 25° but can be adjusted within the range 20° to 50°.

Note: If the adjustment range is not sufficient, the lever length can be changed (see pages 3 and 4).

**The adjustment is carried out as follows:**



1) For some part numbers the control logic is vice versa

**Second Ride Height and Height Limitation features:**

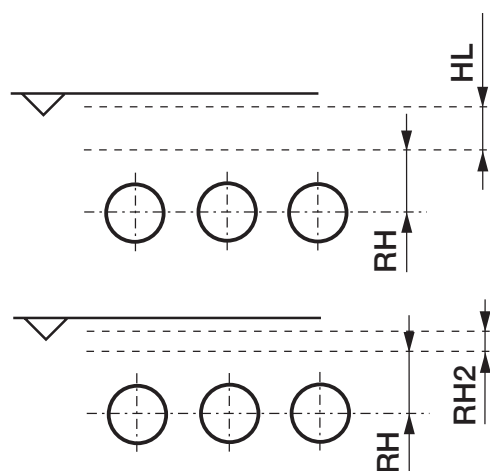
**Calculation of the correct lever length**

When the Second Ride Height feature is activated, further angular travel of the lever is permitted and the chassis rises to a higher position; the increase in angle is a fixed value for each valve. If the lever length is changed, the second ride height can be further adjusted.

The Height Limitation feature is adjusted using the integrated hexagon socket (see instructions on page 2). For cases where the adjustment range is not sufficient, additional height can be achieved by increasing the lever length. The quotient of Lever Length and Height Limitation must be in the range 1.3 to 2.9.

The following formulae for calculating the lever length will give an approximate value for the static condition.

Type No.	Second Ride Height (RH2)	Height Limitation (HL)
SV1465	$L = 4.8 \times RH2$	$1.3 \leq \frac{L}{HL} \leq 2.9$
SV1466	-	$1.3 \leq \frac{L}{HL} \leq 2.9$
SV1485	$L = 5.8 \times RH2$	$1.3 \leq \frac{L}{HL} \leq 2.9$
SV1441	$L = 4.8 \times RH2$	—
SV1447	$L = 3.3 \times RH2$	—



Example:

Second Ride Height for SV1485:

RH2 (requested) = 40 mm

HL (requested) = 100 mm

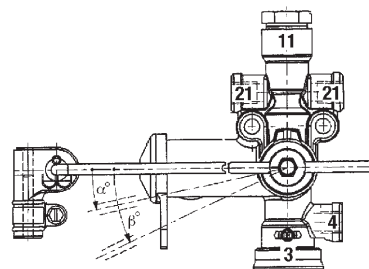
$L = 5.8 \times 40\text{mm} = 232 \text{ mm}$

$$\frac{L}{HL} = \frac{232 \text{ mm}}{100 \text{ mm}} = 2.32$$

$$1.3 \leq 2.32 \leq 2.9$$

When the angle of the height limitation is reached, the valve is in the following condition:

- connection 11 – 21 closed
- connection 12 – 23 closed
- secondary exhaust for 23 open

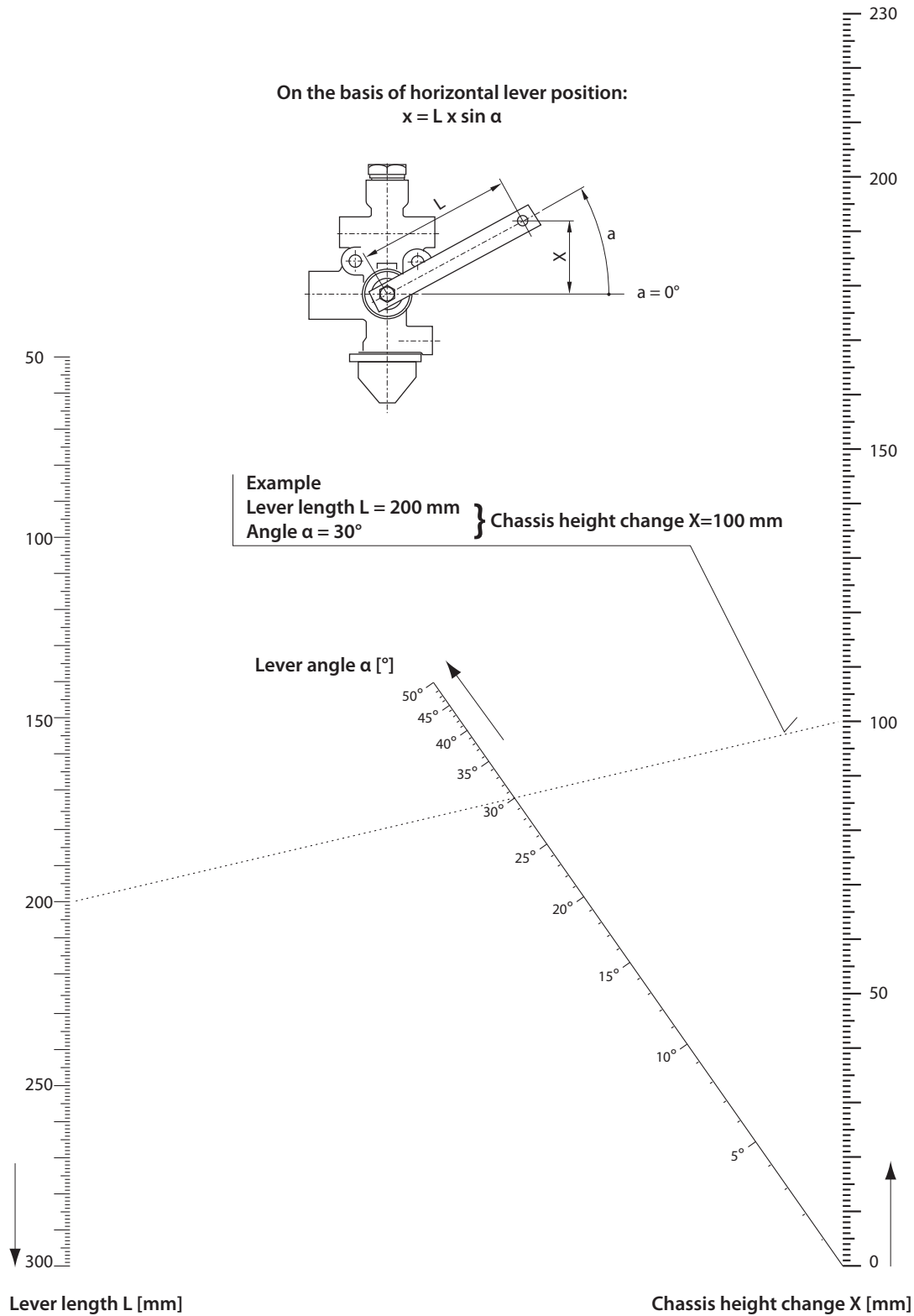


Type No.	Second Ride Height [α]	Height Limitation [β]
SV1441	12°	-
SV1447	17.5°	-
SV1465	12°	20° - 50°
SV1466	-	20° - 50°
SV1485	10°	20° - 50°

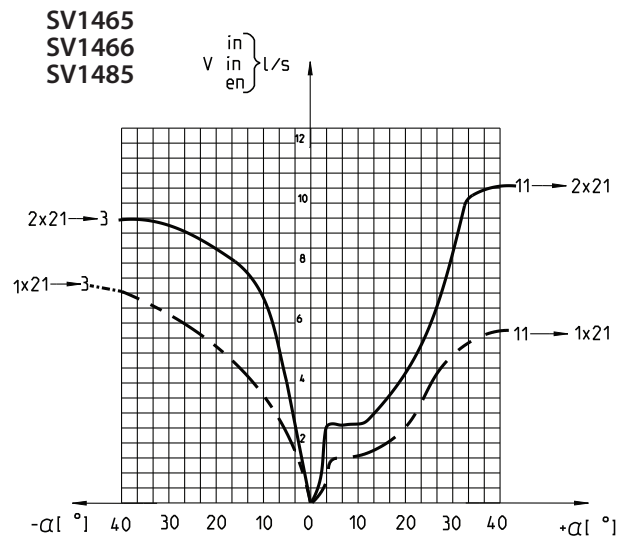
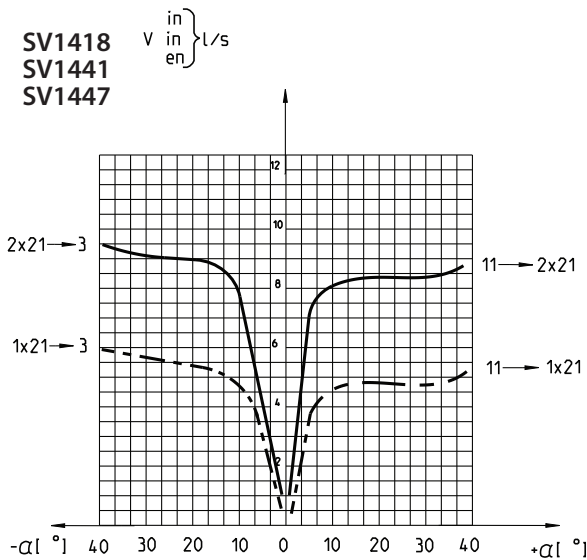
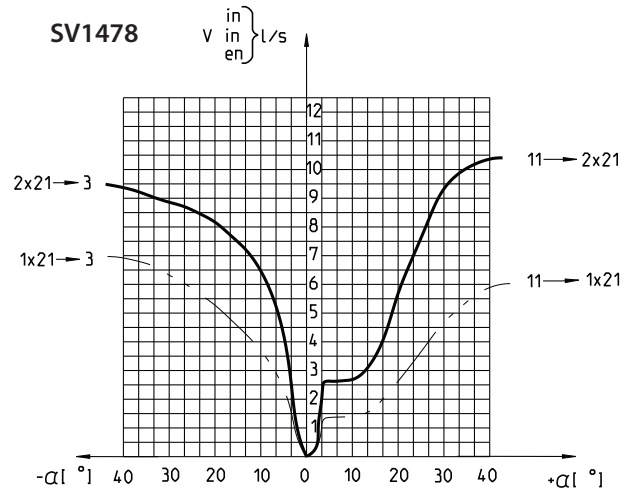
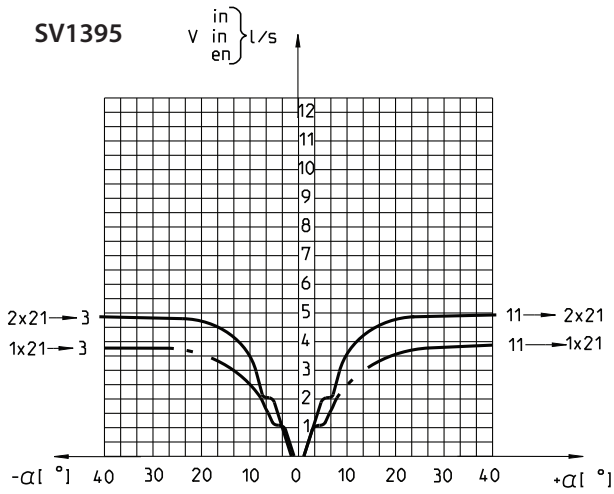
**Legend:**

- L = Lever length of Levelling Valve
- RH = Ride Height (height of the chassis while driving with the Levelling Valve lever in the horizontal position)
- RH2 = Second Ride Height (increased chassis height above RH when pressurising port 4, e.g. when driving with a lift axle raised)
- HL = Height Limitation (maximum possible chassis height above RH when operating the Raise/Lower Valve)

Graphic Diagram for determining the Chassis height change "X" and the lever length "L"



Performance Charts



Legende:

V = Flow rate of atmospheric air from connection 11 to connections 21 or from connections 21 to exhaust 3; at inlet pressure of 6 bar.

+ α = Rotation angle of carrier in direction pressurization (lifting).

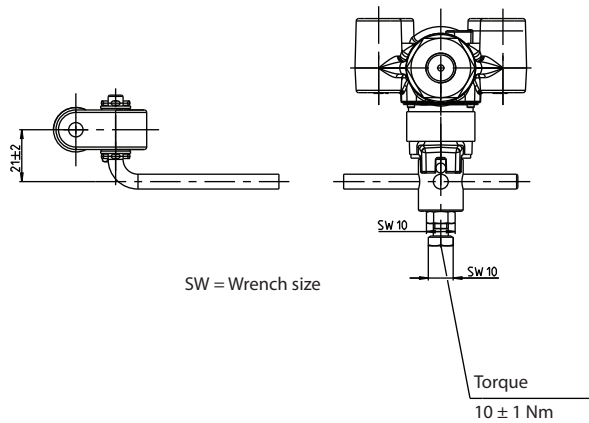
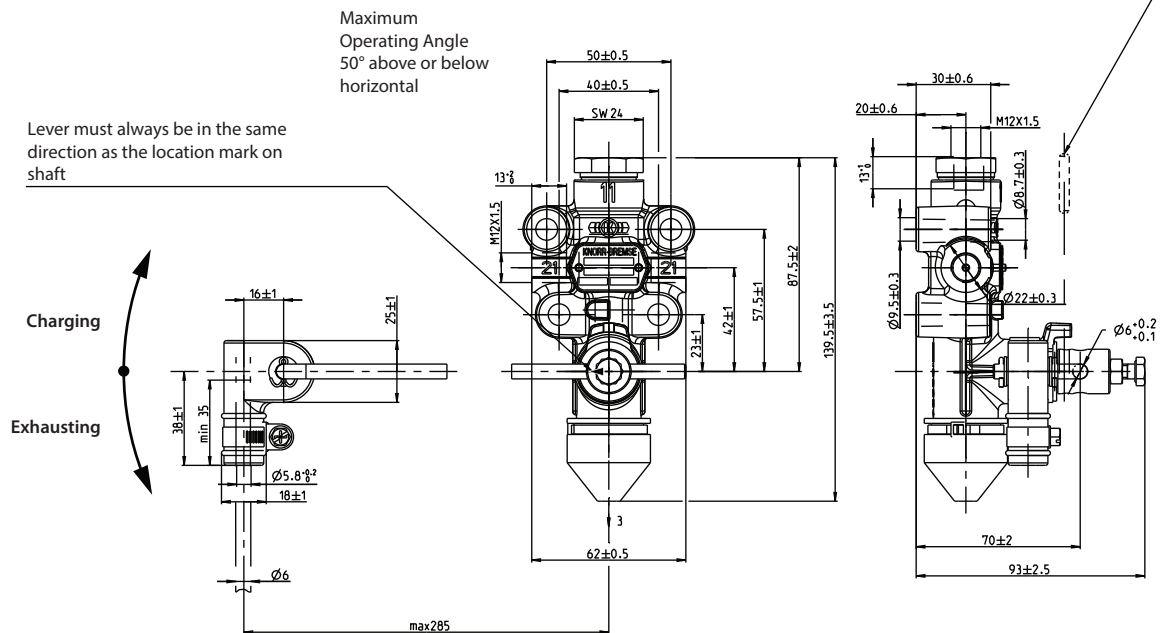
- α = Rotation angle of carrier in direction venting (lowering).

--- = Volume of flow through one port } at 6 bar supply pressure  
 — = Volume of flow through two ports }

Dimensions

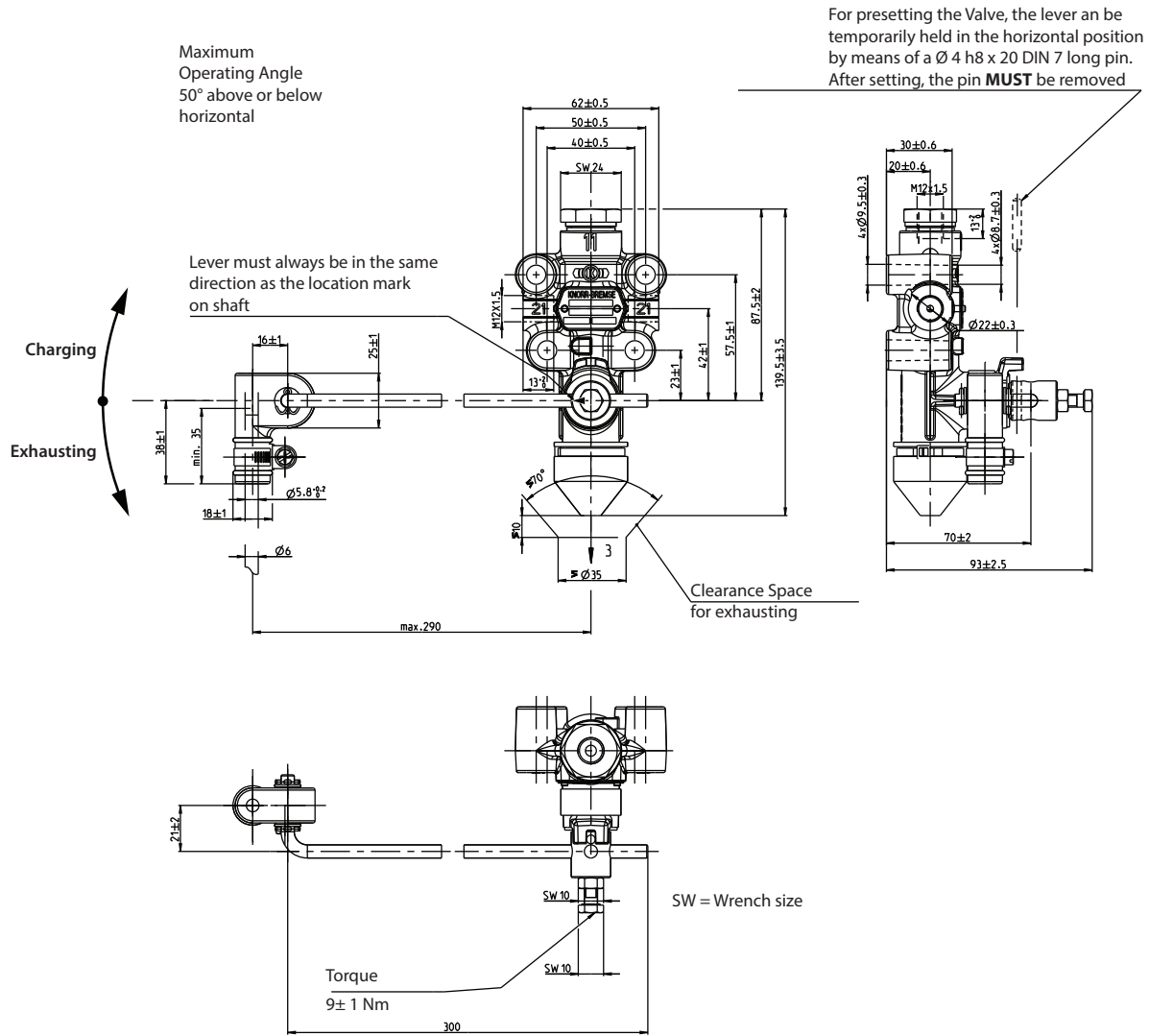
SV1395

For presetting the Valve, the lever an be temporarily held in the horizontal position by means of a  $\varnothing 4$  h8 x 20 DIN 7 long pin.  
After setting, the pin **MUST** be removed



Dimensions

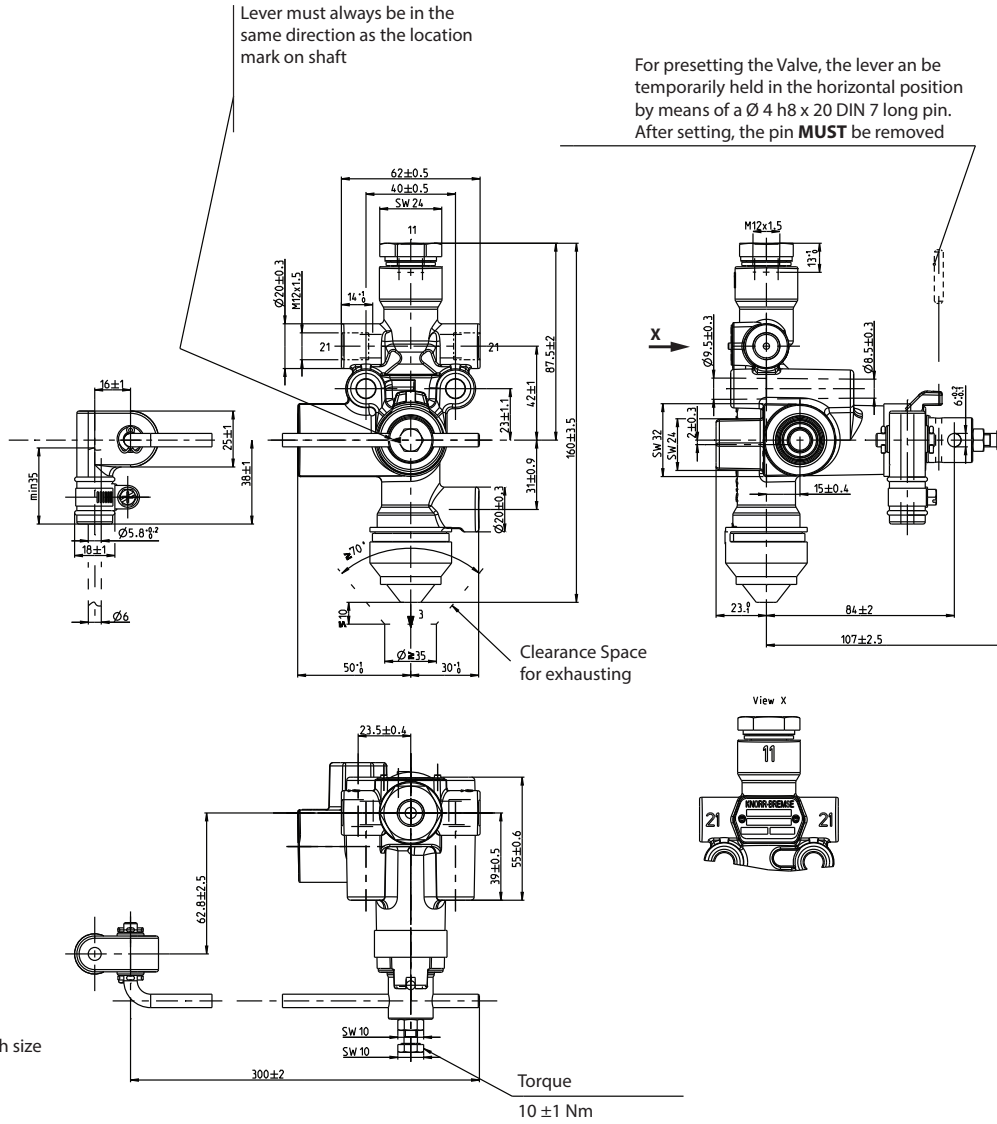
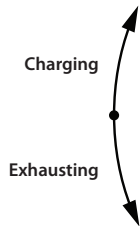
SV1478



Dimensions

SV1418

Maximum Operating Angle 50° above or below horizontal

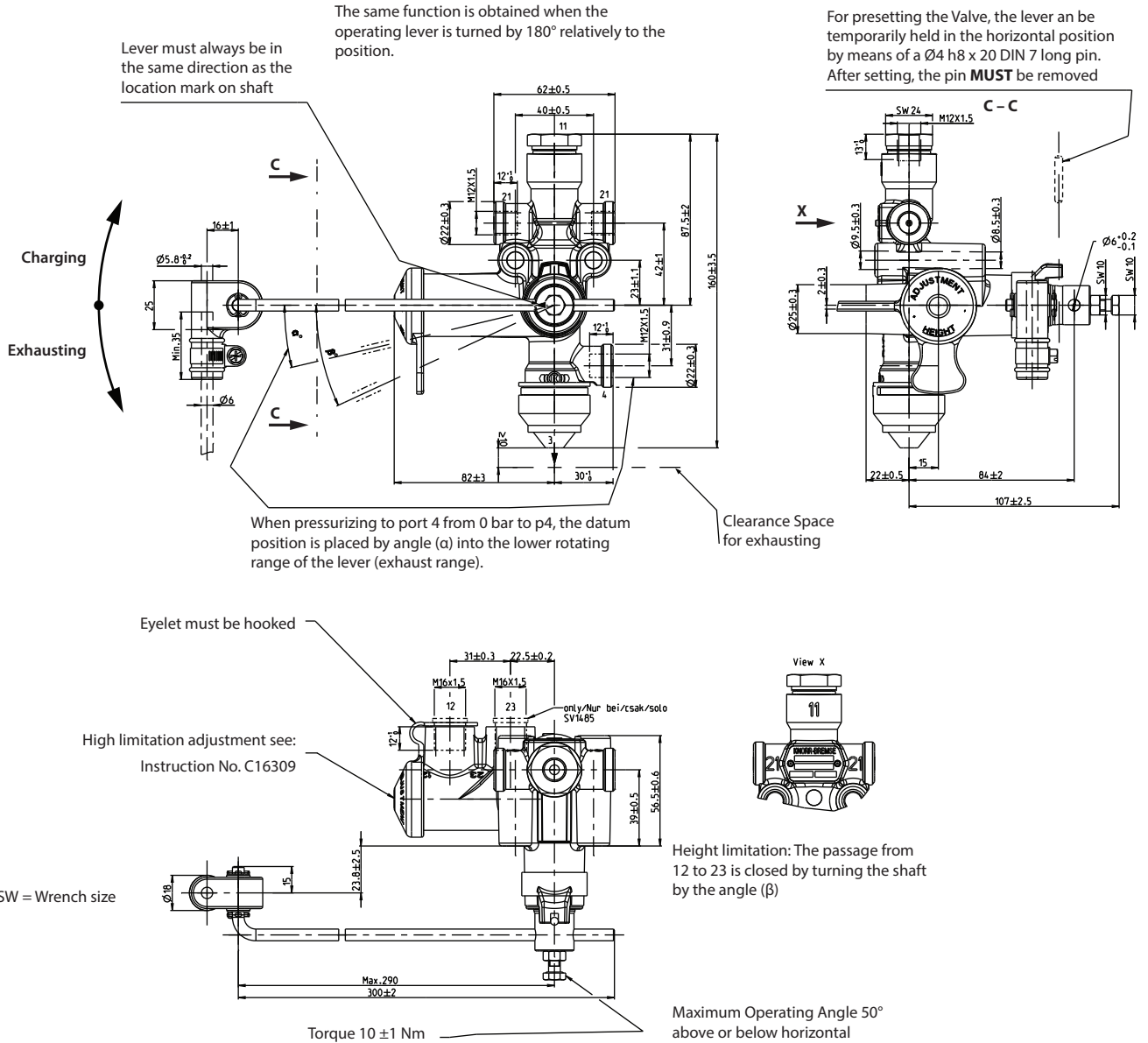






Dimensions

SV1465  
SV1485 <sup>2)</sup>



2) Only for part number K194816; ports 12 and 23 are blanked off



**Revision Details**

Rev. 006	February 2023	New layout, drawing adaptation, updating of the type overview table



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