

# Unloading valves

## Type DAM

NG 4 Bieri  
up to 40 l/min, up to **700 bar**

### Features

- Adjustable over the entire pressure range
- Good corrosion resistance
- High operational safety and reliable switching
- Poppet tight



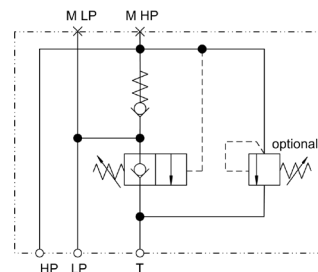
### Applications

The unloading valve is used with a low pressure (LP) and a high pressure pump (HP) in a dual-pressure-system. They both supply the same working port. The valve unloads the low pressure pump flow at a set pressure to the tank.

Before the switchover both pumps supply the working port. After the switch over the low pressure pump flow is connected loss-free to the tank. The working port is supplied by the high pressure pump only.

### Design

- Poppet valve
- Directly operated
- The unloading valve DAM is integrated together with a check valve into a valve block



### Technical data

Hydraulic fluid	mineral oil according to DIN 51524 (other fluids on request)
Fluid temperature range	-20 to 120 °C
Ambient temperature range	-20 to 120 °C
Viscosity range	10 to 400 mm <sup>2</sup> /s
Porting	NG 4 according to Bieri standard
Max. operating pressure connection HP	700 bar
Max. operating pressure connection LP	150 bar
Pressure setting range connection LP	25 to 150 bar
Max. flow rate	40 l/min
Filtration (recommendation)	according to NAS 1638 class 6 resp. ISO/ DIN 4406 17/15/12
Pressure drop (LP->T)	3 bar (at 25l/min and 32 mm <sup>2</sup> /s)
Weight	see overview "Product information"
Material	cartridge body: free-cutting steel cone: hardened steel valve body: stainless steel

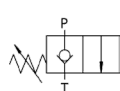
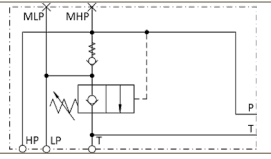
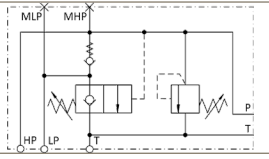
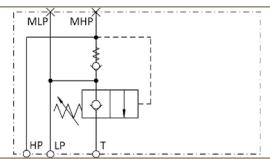
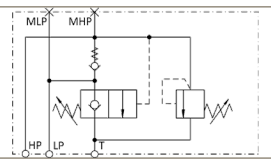
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## Type code

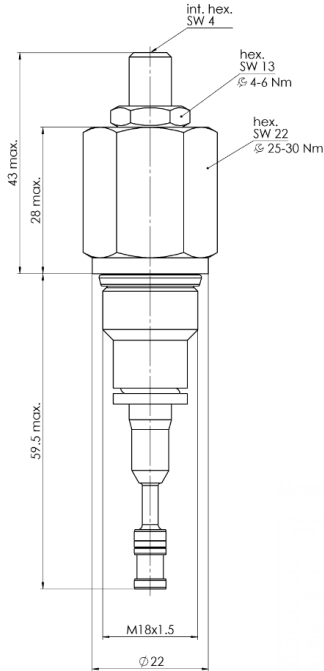
<b>Example</b>	<b>DA</b>	<b>M</b>	<b>4B</b>	<b>VR</b>	<b>150</b>	<b>V</b>	<b>A</b>	<b>00</b>
<b>Unloading valves</b>								<b>Design</b> 00 ... 99 For internal purposes
<b>Size</b>	700 bar							<b>Index</b> Please leave blank For internal purposes
<b>Nominal size</b>	4 ...							
<b>Cartridge</b>	... E							<b>Design revision</b> For internal purposes
<b>Connection Bieri</b>	... B							
<b>Connection in-line body</b>	... R							
<b>Design</b>	Cartridge							
<b>X</b>								
<b>In manifold for valve bank</b>								
<b>VR</b>	Without pressure relief valve							
<b>VRDV</b>	With pressure relief valve							
<b>In-line mounting</b>								
<b>X</b>	Without pressure relief valve							
<b>DV</b>	With pressure relief valve							
<b>Max. pressure setting port LP</b>	150 bar							
<b>Seal material</b>	V FKM other seal materials on request							

## Product information

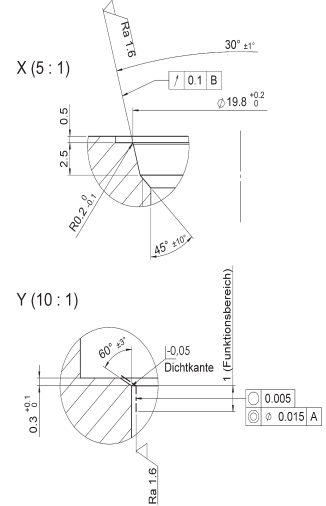
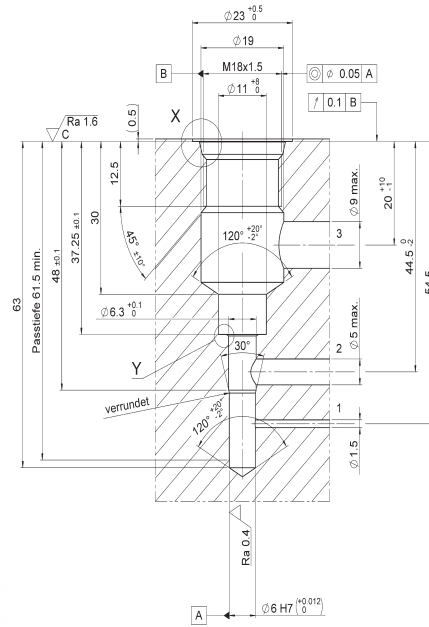
Connection	4E		4B	
<b>Design</b>	X		VR	VRDV
Type code	DAM-4E-X-150-V-A*00		DAM-4B-VR-150-V-A*00	DAM-4B-VRDV-150-V-A*00
Part No.	3958418		3830757	3830759
Symbol				
Weight	0.18 kg		2.11 kg	2.23 kg
<b>Connection</b>	4R			
<b>Design</b>	X	DV		
Type code	DAM-4R-X-150-V-A*00	DAM-4R-DV-150-V-A*00		
Part No.	3830758	3830762		
Symbol				
Weight	2.11 kg	2.21 kg		

**Dimensional drawings**

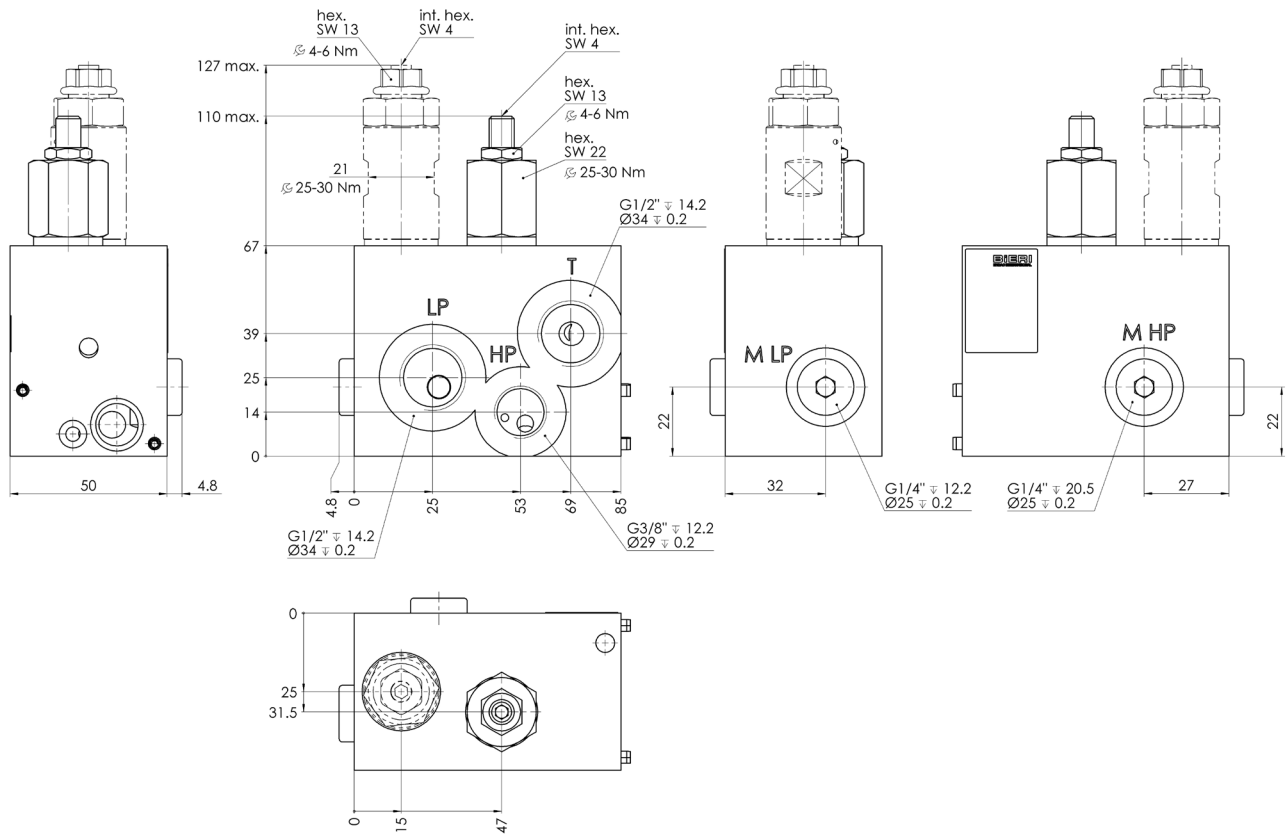
**Cartridge**



**Cavity**



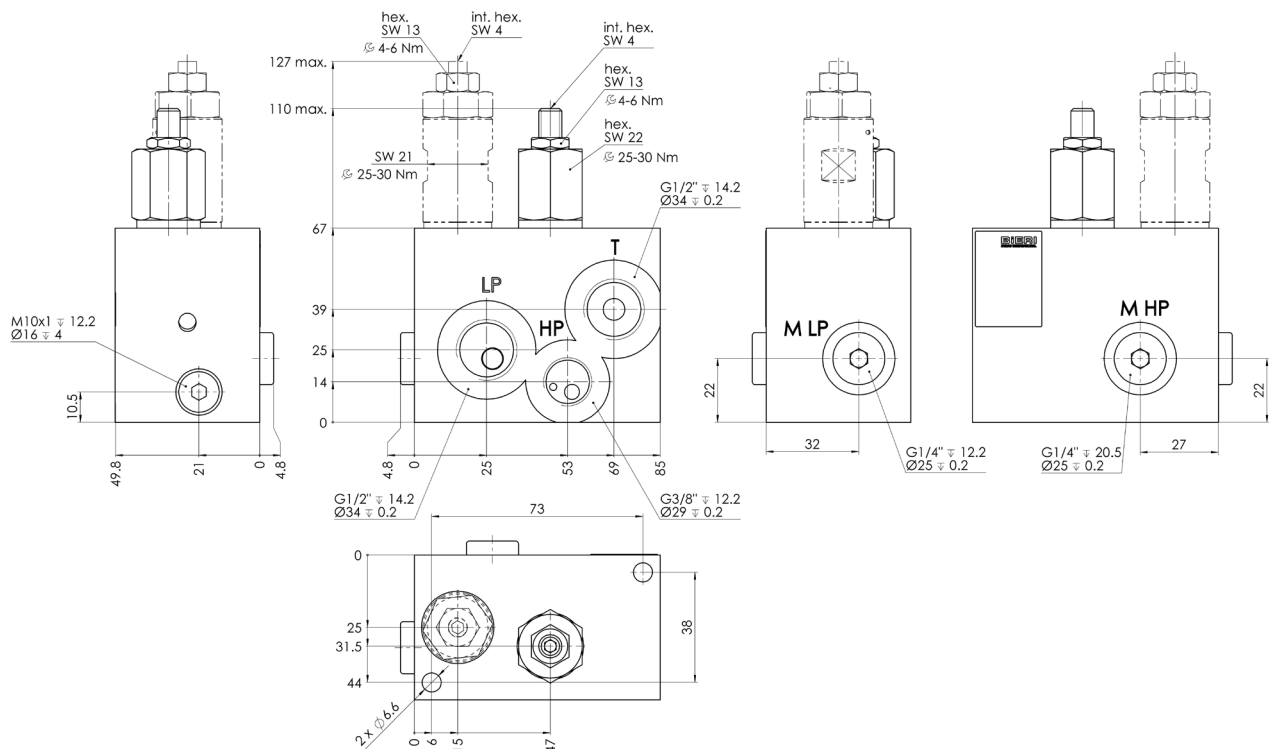
**In manifold for valve bank**



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### In-line mounting



**Note:** The consumer must be connected externally to the HP connection (e.g. via a T-piece) (see wiring example). If the optional pressure relief valve in the unloading valve block is not used, the HP pump must be protected by a separate pressure relief valve.

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The information in this brochure relates to the operating conditions and applications described.

For applications and operating conditions not described, please contact the relevant technical department.

Subject to technical modifications.