

## WINMAN RELIEF VALVES

### WVR0.M28 Valve Series



#### METRIC Cartridge - 420 bar Pilot Operated - Poppet Type

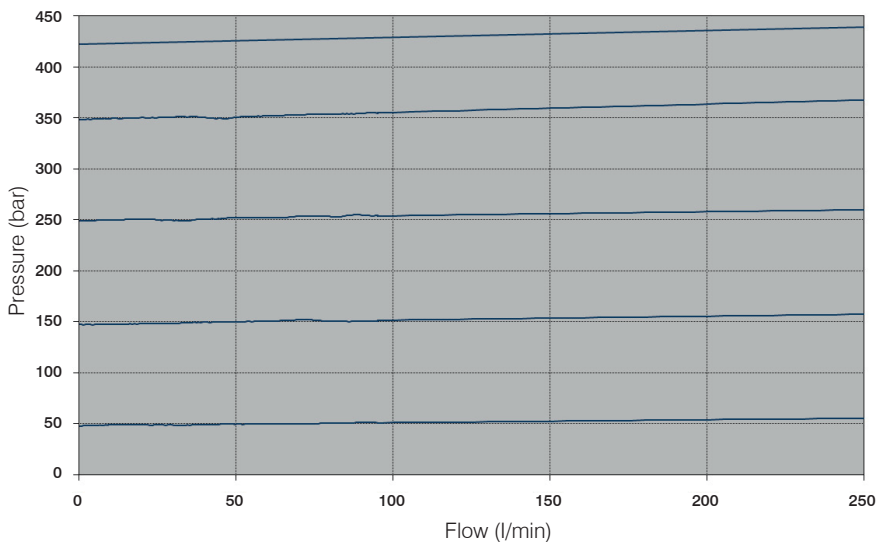
##### Description

A screw-in, cartridge style, pilot operated (2-stage), poppet type, normally closed, hydraulic relief valve. When the pressure at the Inlet (1) reaches the valve setting, the pilot poppet starts to open from its seat and determines the shifting of the main stage poppet that throttles oil flow to tank (2). The cartridge offers smooth transition in response to load changes in demanding hydraulic circuits. Smooth response, reduced pressure rise and limited hysteresis.

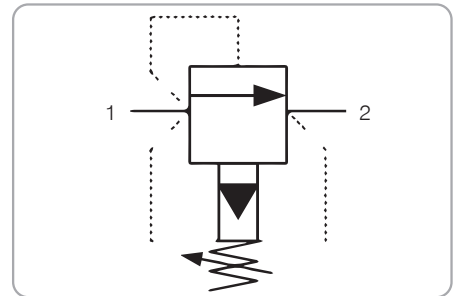
##### Technical Features

All external surfaces are zinc plated and corrosion-proof. All valve parts are made of high strength steel. Poppets are hardened and micron finished in order to guarantee minimal wear and to extend service life. Adjustment screw cannot be backed out of the valve. Spring ranges up to 420 bar (6100 psi) Back pressure on the tank port (port 2) is directly additive to the valve setting at a 1:1 ratio. Metric cavity.

#### Performance Details



#### Symbol

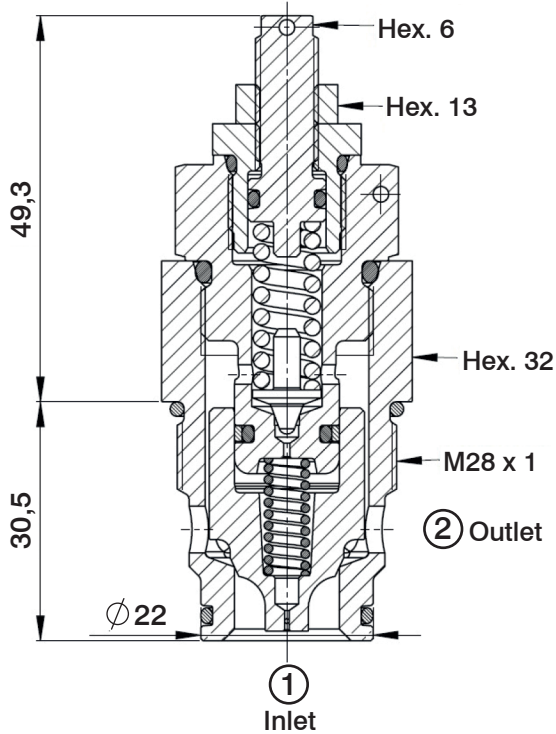


#### Technical Data

Maximum operating pressure: 420 bar  
 Maximum flow: 250 l/min  
 Maximum internal leakage: 1.0 cc/min @ 100 bar  
 Factory pressure settings established @ 10 l/min  
 Reseat pressure: nominal 90% of crack pressure  
 Temperature: -30°C to 110°C  
 Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt  
 Orientation: no restrictions  
 Installation torque: 90-100 Nm  
 Seal kit code: SK.050  
 Weight: 0.265 kg  
 NOTE: The performance chart illustrates flow handling capacity at Various setting.  
 P/Q curves are recorded at TOil = 40°C and 46 cSt

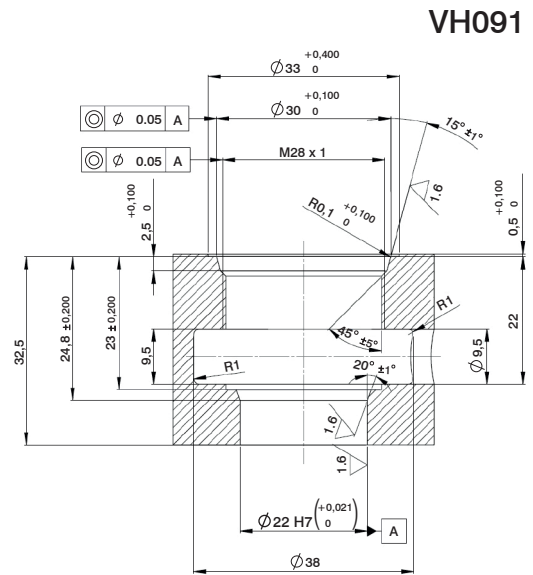
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**Cross Section**



To secure the setting, torque the Hex13 nut with 15-20 Nm

**Cavity Details**



**Ordering Code**

W V R 0 • M 2 8 • 0 N • \* \* \*

Valve basic code

**Cavity**  
M28=METRIC  
M28 x 1 with Ø 22 nose size

**Spring range**  
50-420 bar

**Marking**  
0=Standard factory marking  
Customized markings can be done upon request

**Pressure settings in (bar)**  
000=No specific setting required