

# Pressure regulator E51+53-VCR



E51-2-VCR



E51-3-VCR



E53-2-VCR

## Product features

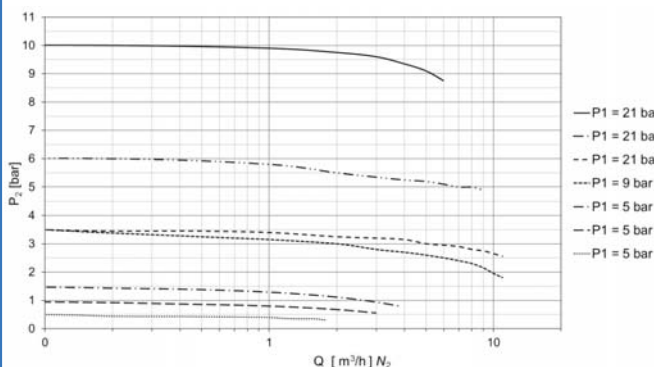
- Pressure regulator for hazardous gases and ultra high purity gases from grade 6.0
- 1-stage or 2-stage version available
- Pressure regulator can be evacuated
- High control accuracy
- High control accuracy
- Metal-to-metal seal to atmosphere
- High surface quality
- Tied diaphragm
- Minimized internal volume for short purge times
- Electro-polished surfaces (gas wetted)
- Simple outlet pressure limitation by handwheel
- 100 % Helium leak tested
- Assembly in clean room class ISO 5.0

## Technical data

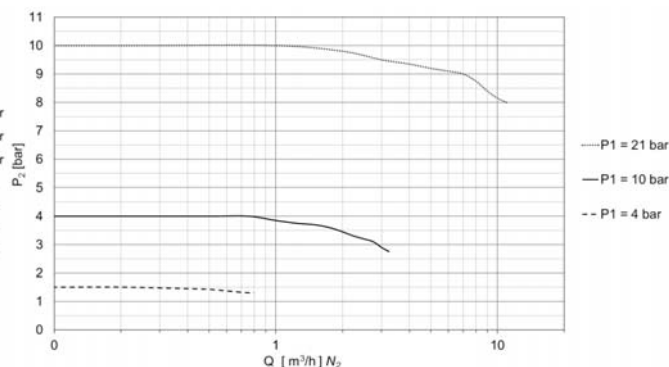
<b>Operating pressure</b>	max. 300 bar
<b>Materials</b>	
Body:	Stainless steel 1.4404
Diaphragms:	Hastelloy C276
Other gas wetted parts:	Stainless steel 1.4404
Sealings	
E51 ( $P_1 \leq 50$ bar) or 2. stage E53:	PTFE
E51 ( $P_1 > 50$ bar) or 1. stage E53:	PCTFE or PVDF
<b>Surface roughness</b> (gas wetted areas)	$R_{a,max} \leq 0,25 \mu\text{m}$ $R_{a,Avg} \leq 0,18 \mu\text{m}$
<b>Temperature range</b>	-20°C to +60°C
<b>Leak rates</b> to atmosphere: via valve seat:	$\leq 10^{-9}$ mbar l/s He $\leq 10^{-6}$ mbar l/s He
<b><math>c_v</math>-value</b>	$c_v = 0,24$ ( $k_v = 0,2$ )
<b>Weight</b>	1.2 / 1.7 kg
<b>In- / outlet connectors</b>	1/4"-VCR male or 1/4"-VCR female

## Flow curves

E51-3-VCR



E53-2-VCR

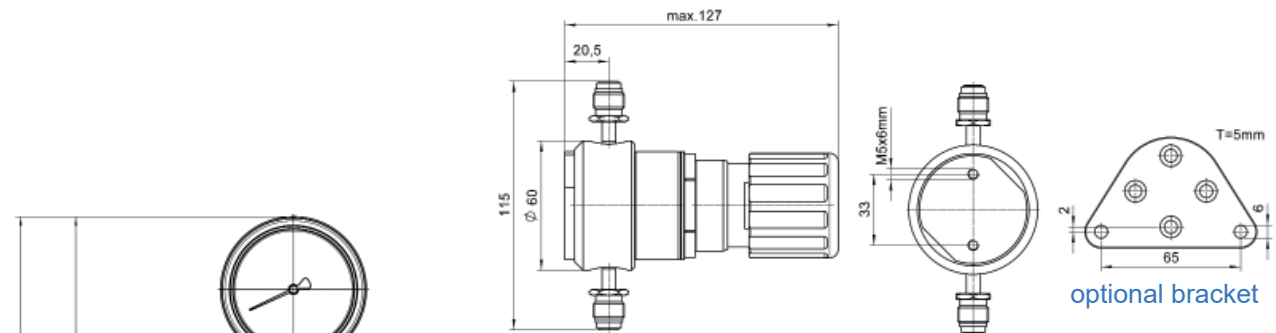


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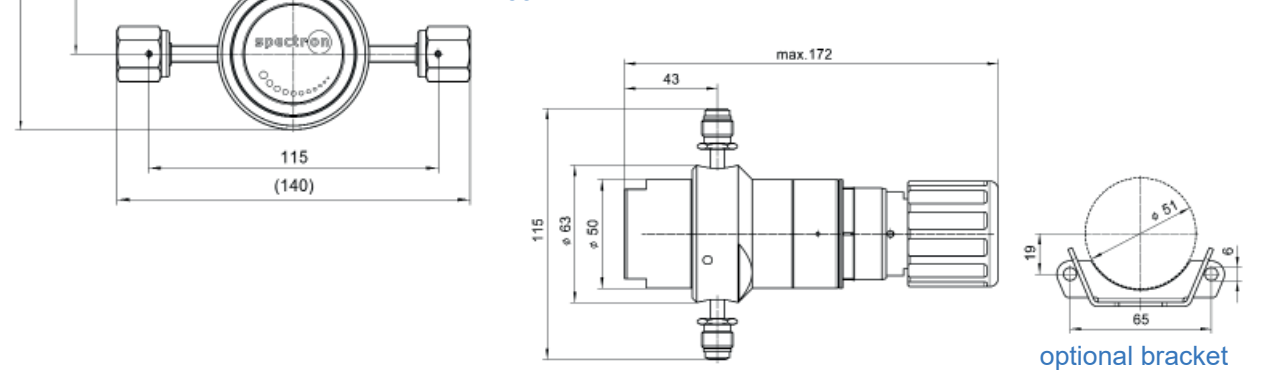


## Dimensions

### E51-VCR



### E53-VCR



## Ordering information: Pressure regulator E51-VCR / E53-VCR

**E51 - 3 - 200 - 10 - VCRm - VCRm - M - Gas**

### Pressure regulator\*

- 51** 1-stage regulator
- 53** 2-stage regulator

### In-/Outlets

- 2** 2 ports
- 3** 3 ports

### Inlet pressure $P_1^*$

- 10** max. 10 bar
- 20** max. 20 bar
- 50** max. 50 bar
- 100** max. 100 bar
- 200** max. 200 bar
- 300** max. 300 bar

### Outlet pressure $P_2^*$

- 1,5** max. 1,5 bar
- 4** max. 4 bar
- 10** max. 10 bar

### Outlet pressure indication

- M** pressure gauge
- K** contact pressure gauge
- PT** pressure transmitter

### Outlet

- VCRm** 1/4"-VCR male
- VCRf** 1/4"-VCR female

### Inlet

- VCRm** 1/4"-VCR male
- VCRf** 1/4"-VCR female

**\* 51**  $P_1 \leq 50 \text{ bar} \rightarrow P_2: 1,5 / 4 \text{ bar}$   
 $P_1 > 50 \text{ bar} \rightarrow P_2: 10 \text{ bar}$

**53**  $P_1 \geq 50 \text{ bar}$