

### Features of the MK series

- Very sensitive response characteristic
- Function is not impaired by high back pressure
- Automatic air-venting (trap can be used for thermal air-venting in steam systems)
- Installation in any position (horizontal and vertical lines)
- High hot-water capacities even with low differential pressures

- With tandem seat (double sealing) for low condensate flowrates
- Built-in non-return valve (only MK 45)
- Stainless steel internals (corrugated membrane of Hastelloy)
- Design "U" with undercooling capsule: utilization of a certain amount of sensible heat by banking-up of condensate, decreasing the amount of flash steam
- Optional extra: Integrated condensate monitoring for MK 45 (temperature or steam loss)

### Application

Type	
MK 45-1 MK 35/31 <sup>1)</sup>	<b>With tandem seat (double sealing)</b> For low condensate flowrates, steam-tracing, steam-line drainage, air-venting
MK 45-2 MK 35/32 <sup>1)</sup>	<b>With single seat</b> For medium condensate flowrates, steam-tracing, drainage of heat exchangers, air-venting
MK 25/2 <sup>1)</sup> MK 25/2 S <sup>1)</sup> MK 35/2 S <sup>1)</sup> MK 35/2 S3 <sup>1)</sup>	<b>With single seat</b> For large condensate flowrates, drainage of heat exchangers
MK 36/51 <sup>1)</sup> MK 36/52 <sup>1)</sup>	<b>With tandem seat (double sealing) – with flat gasket</b> For small/large condensate flowrates, steam tracing, steam-line drainage, venting and vacuum-breaking. Also suitable for food, biological and pharmaceutical applications.
MK 45 A-1 MK 45 A-2	For small and large condensate flowrates; steam-tracing, steam-line drainage, air-venting

<sup>1)</sup> Can also be used for vacuum breaking (aerating).

### Air Venting

#### Steam Trap for Thermostatic Air-Venting with Membrane Regulator

The thermostatic steam traps with membrane regulators of the MK series can also be used for air-venting.

#### Application

Thermostatic steam trap for automatic air-venting and discharge of non-condensable gases and steam/air mixtures from steam lines and heat exchangers.

A special type of membrane regulator capsule might be required.

### Pressure/Temperature Ratings

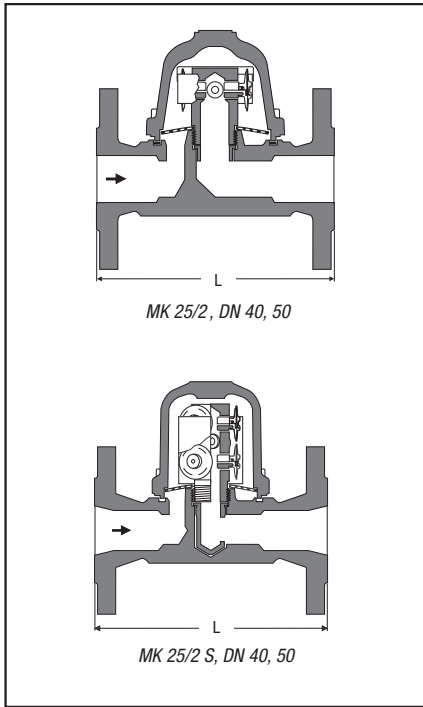
Type	PN / Class	$\Delta$ PMX [bar]	Material		Max. Pressure/Temp. Rating <sup>1)</sup>			
			EN	ASTM	PMA [bar]	TMA [°C]	p/T [bar/°C]	
MK 35/31, MK 35/32	PN 25	21	1.0460	A105	25.0	400	18.6 / 225	14.4 / 400
MK 45-1, MK 45-2	PN 40	32	1.0460	A105	40.0	450	27.6 / 300	13.1 / 450
MK 45-1, MK 45-2	Class 300	32	1.0460	A105	51.1	425	39.8 / 300	28.8 / 425
MK 35/2 S, DN 25 MK 35/2 S3, DN 25	PN 40	32	1.0460	A105	40.0	450	27.6 / 300	13.1 / 450
MK 25/2, MK 25/2 S, DN 40, 50	PN 40	32	1.0460/ 1.0619	A105/ A216-WCB	40.0	450	27.6 / 300	13.1 / 450
MK 36/51, MK 36/52	–	32	1.4301 <sup>2)</sup>	A479-F304	49.0	400	32.0 / 250	28.0 / 400
MK 45 A-1, MK 45 A-2	PN 40	32	1.4404	A182-F316L	40.0	400	27.6 / 300	25.7 / 400 <sup>3)</sup>
MK 45 A-1, MK 45 A-2	Class 300	32	1.4404	A182-F316L	41.4	400	26.1 / 300	24.3 / 400 <sup>3)</sup>

<sup>1)</sup> Limits for body/cover. Functional requirements may restrict the use to below the limits quoted.

For full details on limiting conditions depending on end connection and type of regulator see data sheet.

<sup>2)</sup> EN material comparable to ASTM material.

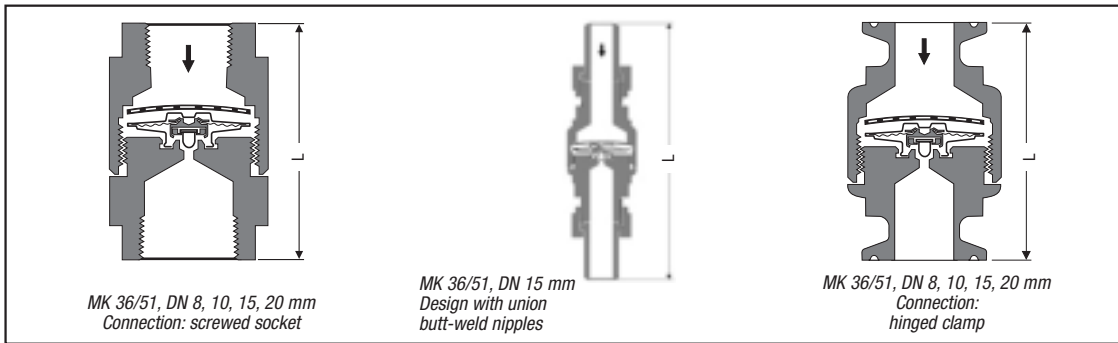
<sup>3)</sup> If the operating temperatures exceed 300 °C intercrystalline corrosion may occur. Do not subject the equipment to operating temperatures higher than 300 °C unless intercrystalline corrosion can be ruled out.



### Available End Connections and Overall Length

Type	Connection	Overall length (L) in mm						
		DN 8 1/4"	DN 10 3/8"	DN 15 1/2"	DN 20 3/4"	DN 25 1"	DN 40 1 1/2"	DN 50 2"
<b>MK 45-1</b>	Flanged EN PN 40	–	–	150	150	160	–	–
<b>MK 45-2</b>	Flanged ASME 150 <sup>1)</sup>	–	–	150	150	160	–	–
<b>MK 45 A-1</b>	Flanged ASME 300 <sup>1)</sup>	–	–	150	150	160	–	–
<b>MK 45 A-2</b>	Screwed sockets	–	–	95	95	95	–	–
<b>MK 35/2 S3</b> only DN 25	Socket-weld (SW)	–	–	95	95	95	–	–
<b>MK 35/2 S</b> only DN 25	Butt-weld (BW) <sup>2)</sup>	–	–	200	200	200	–	–
<b>MK 35/31</b>	Screwed sockets	–	70	70	–	–	–	–
<b>MK 35/32</b>	Socket-weld (SW)	–	–	95	–	–	–	–
<b>MK 25/2</b> DN 40 – 50	Flanged EN PN 40	–	–	–	–	–	230	230
<b>MK 25/2 S</b> DN 40 – 50	Flanged ASME 150	–	–	–	–	–	230	230
	Flanged ASME 300	–	–	–	–	–	230	230
	Screwed sockets	–	–	–	–	–	130	230
	Socket-weld (SW)	–	–	–	–	–	130	230
<b>MK 36/51</b>	Screwed sockets	65	65	65	65	–	–	–
<b>MK 36/52</b>	Union butt-weld nipples <sup>3)</sup>	–	–	150	–	–	–	–
	Hinged clamp	–	65	65	65	65	–	–

- 1) MK 45 with ASME flanges: overall length 172 mm available on request.
- 2) Only MK 45
- 3) Made of carbon steel or stainless steel



### Capacity Charts

The charts show the maximum hot condensate capacities.

- MK 45-1/MK 45A-1** (Curve 4)    **MK 35/31** (Curve 1)
- MK 45-2/MK 45A-2** (Curve 5)    **MK 35/32** (Curve 2)
- MK 36/51** (Curve 3)    **MK 36/52** (Curve 2)
- MK 25/2 S, DN 40, 50** (Curve 1)    **MK 35/2 S3, DN 25** (Curve 3)
- MK 25/2, DN 40, 50** (Curve 2)    **MK 35/2S, DN 25** (Curve 4)

