

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
- 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)

Specification

Type	Design/Application
MK 45-1 MK 35/31 ¹⁾	With tandem seat (double sealing) For low condensate flowrates, steam-tracing, steam-line drainage, air-venting
MK 45-2 MK 35/32 ¹⁾	With single seat For medium condensate flowrates, steam-tracing, drainage of heat exchangers, air-venting
MK 25/2 ¹⁾ MK 25/2 S ¹⁾ MK 35/2 S ¹⁾ MK 35/2 S3 ¹⁾	With single seat For large condensate flowrates, drainage of heat exchangers
MK 36/51 ¹⁾ MK 36/52 ¹⁾	With tandem seat (double sealing) – with flat gasket 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

¹⁾ 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 might be required.

Pressure/Temperature Ratings ^{*)}

Type	PN	Δ PMX [bar]	Material		Max. Pressure/Temp. Rating	
			EN	ASTM	PMA / TMA	PMA / TMA
MK 35/31	PN 25	21	P 250 GH ¹⁾	A 105 ¹⁾	18.6 bar / 225 °C	14.4 bar / 400 °C
MK 35/32	PN 25	21	P 250 GH ¹⁾	A 105 ¹⁾	18.6 bar / 225 °C	14.4 bar / 400 °C
MK 45-1	PN 40	22	P 250 GH ¹⁾	A 105 ¹⁾	28.4 bar / 250 °C	23.1 bar / 400 °C
MK 45-2	PN 40	22	P 250 GH ¹⁾	A 105 ¹⁾	28.4 bar / 250 °C	23.1 bar / 400 °C
MK 35/2 S DN 25	PN 40	22	P 250 GH	A 105 ³⁾	28.4 bar / 250 °C	23.1 bar / 400 °C
MK 35/2 S3 DN 25	PN 40	22	P 250 GH	A 105 ³⁾	28.4 bar / 250 °C	23.1 bar / 400 °C
MK 25/2 DN 40/50	PN 40	22	P 250 GH	A 105 ³⁾	28.4 bar / 250 °C	23.1 bar / 400 °C
MK 25/2 S DN 40/50	PN 40	22	P 250 GH ²⁾	A 105 ²⁾³⁾	28.4 bar / 250 °C	23.1 bar / 400 °C
MK 36/51, MK 36/52	—	32	1.4301 ⁴⁾	A 182 F304	32 bar / 240 °C	32 bar / 240 °C
MK 45 A-1	PN 40	22	1.4404 ¹⁾	A 182 F316 L ¹⁾	29.3 bar / 200 °C	24 bar / 400 °C
MK 45 A-2	PN 40	22	1.4404 ¹⁾	A 182 F316 L ¹⁾	29.3 bar / 200 °C	24 bar / 400 °C

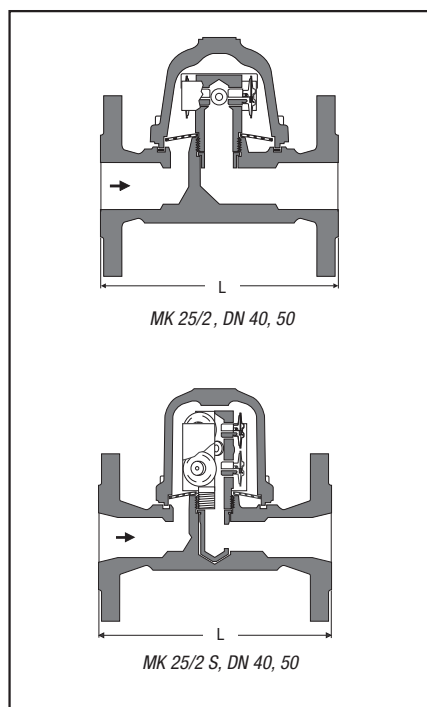
¹⁾ Material complies with EN and ASTM requirements.

²⁾ MK 25/2 S DN 40/50: cover made of cast steel GS-C 25 (ASTM nearest equivalent: A 216 Gr. WCB)

³⁾ Physical and chemical properties comply with EN grade. ASTM nearest equivalent grade is stated for guidance only.

⁴⁾ EN nearest equivalent grade is stated for guidance only.

^{*)} For more information see data sheet.



Available End Connections and Overall Length

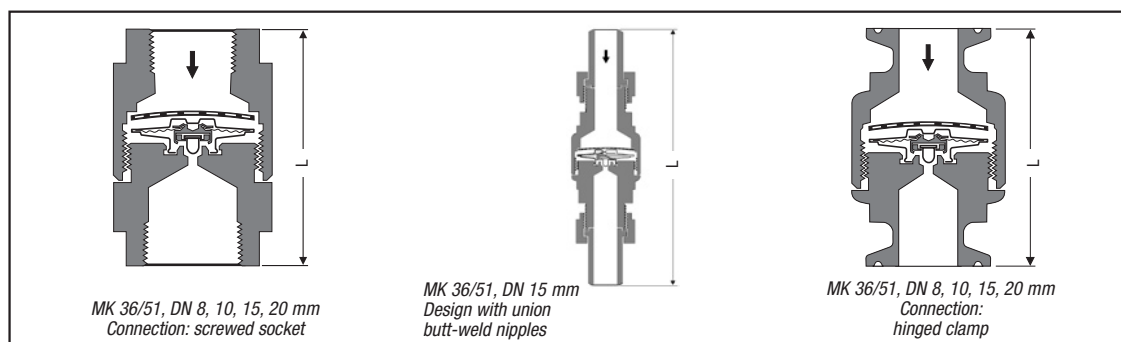
Type	Connection	Overall length (L) in mm						
		DN 8 1/4"	DN 10 3/8"	DN 15 1/2"	DN 20 3/4"	DN 25 1"	DN 40 1 1/2"	DN 50 2"
MK 45-1	Flanged DIN PN 40	–	–	150	150	160	–	–
MK 45-2	Flanged ASME 150 ¹⁾	–	–	150	150	160	–	–
MK 45 A-1	Flanged ASME 300 ¹⁾	–	–	150	150	160	–	–
MK 45 A-2	Screwed sockets	–	–	95	95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

STAINLESS
STEEL

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 (Curve 1) **MK 35/31** (Curve 1)
MK 45-2 (Curve 2) **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)

