

TVD

Thermal Safety Valve

The **TVD** is a **thermal safety shut-off device** that stops the gas flow in case of excessive ambient temperature, e.g., due to fire. The valve is rated to shut the gas flow for **90 minutes with temperature up to 1472 °F | 800 °C**. There are two sizes depending on the flow rate and required pressure drop: TVD1 and TVD2.



Residential users



Commercial users

Features	Values
Maximum Allowable Operating Pressure (MAOP)	1 MPa 145 psig
Operating temperature	from -40 to +65°C from -40 to +149°F
Activation temperature	100 ± 10°C 212 ± 14°F 160 ± 10°C 320 ± 14°F
Maximum flow rate	42.8 m ³ /h 1500 scfh for TVD1 100 m ³ /h 3500 scfh for TVD2
Size ¹	<ul style="list-style-type: none"> TVD1: 1/2" NPT x 1/2" ISO 228/1; 3/4" NPT x 1/2" ISO 228/1; 1" NPT x 1/2" ISO 228/1 TVD2: 1" NPT x 1" ISO 228/1; 1-1/4" NPT x 1" ISO 228/1; 1-1/2" NPT x 1" ISO 228/1

(¹) to be replaced on FE regulators. Different functional features and/or extended ranges may be available on request. Stated gas temperature range is the maximum for which the equipment's full performance is guaranteed.

Table 1 Features

Materials

Part	Material
Body	Steel
Melting cartridge	Thermoplastic
Shutter	Steel
Seat (machined directly in the body)	Steel

Table 2 Materials

Approvals

The **TVD** is designed according to DIN 3586 and the performances has been third party verified by a North American Notified Body.



DIN 3586



Notified
Body letter of
attestation

Thermal Safety Valve TVD1 pressure drop

Inlet pressure		Flow rate											
		1 m³/h 35 scfh		5 m³/h 175 scfh		9.9 m³/h 350 scfh		14.9 m³/h 525 scfh		24.8 m³/h 875 scfh		42.8 m³/h 1500 scfh	
kPa	psig	kPa	" w.c.	kPa	" w.c.	kPa	" w.c.	kPa	" w.c.	kPa	" w.c.	kPa	" w.c.
6.9	1	0	0	0.3	1.2	1	4	3.73	15	5.5	22	-	-
13.8	2	0	0	0.25	1	0.87	3.5	3.48	14	5	20	-	-
34.5	5	0	0	0.2	0.8	0.75	3	3.23	13	4.5	18	12	50
69	10	0	0	0.15	0.6	0.62	2.5	2.49	10	3.5	14	8	32
≥ 276	≥ 40	0	0	0.1	0.4	0.5	2	1.49	6	2	8	4	16

Thermal Safety Valve TVD2 pressure drop

Inlet pressure		Flow rate											
		5 m³/h 175 scfh		9.9 m³/h 350 scfh		20 m³/h 700 scfh		50 m³/h 1750 scfh		75 m³/h 2600 scfh		100 m³/h 3500 scfh	
kPa	psig	kPa	" w.c.	kPa	" w.c.	kPa	" w.c.	kPa	" w.c.	kPa	" w.c.	kPa	" w.c.
6.9	1	0.2	0.8	0.3	1.2	0.5	2	1.74	7	3.5	14	-	-
13.8	2	0.1	0.4	0.15	0.6	0.45	1.8	1.49	6	3	12	-	26
34.5	5	0.05	0.2	0.25	1	0.37	1.5	1.24	5	2.5	10	5	20
69	10	0	0	0.15	0.6	0.2	0.8	1	4	1.2	4.8	4	17
≥ 276	≥ 40	0	0	0.1	0.4	0.15	0.6	0.5	2	0.9	3.6	1	6

TVD competitive advantages



Can be integrated in the regulator



Compact dimensions



Fire protection



Low pressure drop



No maintenance



Biomethane (RNG) compatible and 20% Hydrogen blending compatible. Higher blending available on request.