GST®

EXCESS FLOW DEVICE



- GST® is a VP305-1 DVGW safety device. It blocks the gas flow automatically when the flow rate through the device exceeds its minimum trip threshold (in the event of tampering, accidentally disconnecting the system, e.g. in a fire or if the pipes burst).
- When in the closed position, the mechanism allows a small leak through the reset hole. When the break has been repaired, the hole balances the pressure in the two chambers upstream and downstream, resetting it automatically.
- Available as a single fitting or, thanks to its compactness, as a device built into the valves.
- Does not require maintenance.
- Take care when choosing the GST and its nominal flow rate to ensure that it works correctly and does not close accidentally.

Material	
Body	Internal cartridge
Zink plated Body	Aluminium and Polymer

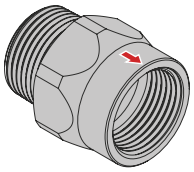
TECHNICAL SPECIFICATIONS

Reference standards	Pressure	Temperature	Pressure drop	fs min.	fs.max.	Overflow value VL	Heat resistance	Application
DVGW VP305-1:12/2007 DVGW TRGI 2008 DVGW TRF 2012	15-100 mbar	-20 °C +60 °C	≤ 0.5 mbar (50 Pa)	1.30	1.45	37.5 l/h at 100 mbar (gas)	External: 925 °C for 60' / Internal: trip at 120 °C / 200 °C for 10'	For all types of gas as specified in EN 437 and DVGW G260/1 (Methane, Butane, Propane)

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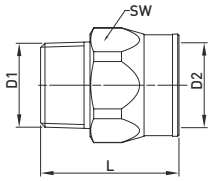
VERSIONS AND CODES

GST® fitting – male/female threaded version



fs 1.30-1.45



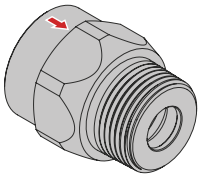


Code	DN	GST® GS m³/h		D1	D2	L1	SW	Pack
GS01110100	15	V_{GAS}=1.6		R1/2"	Rp1/2"	52	27	20
GS01210100	15	V_{GAS}=2.5		R1/2"	Rp1/2"	52	27	20
GS02210200	20	V_{GAS}=2.5		R3/4"	Rp3/4"	52	32	15
GS02310200	20	V_{GAS}=4.0		R3/4"	Rp3/4"	54	41	15
GS03210300	25	V_{GAS}=2.5		R1"	Rp1"	54	41	10
GS03310300	25	V_{GAS}=4.0		R1"	Rp1"	54	41	10
GS03410300	25	V_{GAS}=6.0		R1"	Rp1"	54	41	10
GS04510400	32	V_{GAS}=10.0		R1"1/4	Rp1"1/4	67	50	6
GS05610500	40	V_{GAS}=16.0		R1"1/2	Rp1"1/2	76	60	6
GS06610600	50	V_{GAS}=16.0		R2"	Rp2"	80	70	6

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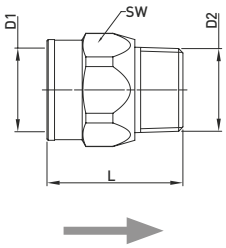
TECO® INNOVATING SAFETY

GST® fitting – female/male threaded version



fs 1.30-1.45





Code	DN	GST® GS m³/h		D1	D2	L1	SW	Pack
GS01120100	15	V_{GAS}=1.6		Rp1/2"	R1/2"	52	27	20
GS01220100	15	V_{GAS}=2.5		Rp1/2"	R1/2"	52	27	20
GS02220200	20	V_{GAS}=2.5		Rp3/4"	R3/4"	52	32	15
GS02320200	20	V_{GAS}=4.0		Rp3/4"	R3/4"	54	41	15
GS03220300	25	V_{GAS}=2.5		Rp1"	R1"	54	41	10
GS03320300	25	V_{GAS}=4.0		Rp1"	R1"	54	41	10
GS03420300	25	V_{GAS}=6.0		Rp1"	R1"	54	41	10
GS04520400	32	V_{GAS}=10.0		Rp1"1/4	R1"1/4	67	50	6
GS05620500	40	V_{GAS}=16.0		Rp1"1/2	R1"1/2	76	60	6
GS06620600	50	V_{GAS}=16.0		Rp2"	R2"	80	70	6

OPERATION AND TECHNOLOGIES

When inserted in the system, the GST® remains inactive (FIG.1) until the closure flow rate is reached (Vs).
As soon as the flow rate reaches the closure valve (Vs) for any accidental reason, the GST® closes instantly (FIG.2).
It is reset automatically by the bypass orifice on the cut-off, and the overflow VL that this creates balances the pressure upstream and downstream from the device when the conditions that caused the GST® to close have been removed (FIG.3).



GST® open (fig.1)



GST® closed (fig.2)



Automatic reset (fig.3)

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Legend		
	V_{GAS}	Nominal gas flow rate of GST® **(d=0,64)**
	fs	Closure factor (*fs=Vs / V_{GAS}*) *fs* min. = 1.30 *fs* max. = 1.45
	Vs	Gas closure flow rate (d=0,64) **Vs = V_{GAS} x *fs***
	VL	Flow rate through the bypass orifice **≤ 37.5 l/h at 100 mbar (gas)**

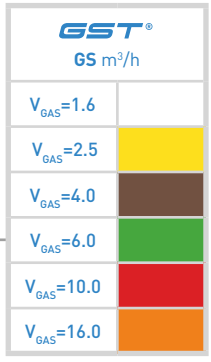
GST IDENTIFICATION MARKING

In accordance with the standards, the GST® is supplied with a label that describes its technical specifications (DVGW VP 305-1).

- Device nominal flow rate (coloured identification)
- Pressure range "15 mbar - 100 mbar"
- Gas flow direction (arrow)
- Nominal diameter
- Type of GST® (M/K)
- "DVGW" marking
- Installation position

The colour of the label identifies the device flow rate

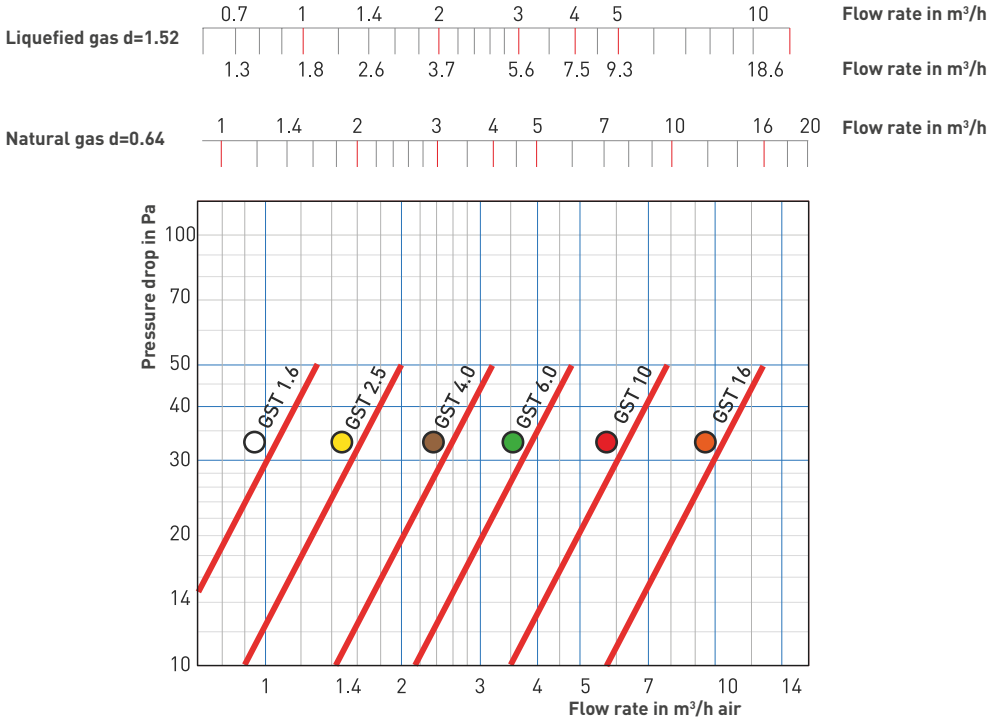




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PRESSURE DROP GRAPH



ITEM SPECIFICATIONS

GST: Excess flow device

VP305-1 DVGW safety device.

It blocks the gas flow automatically, with a trip range from fs min. 1.30 to fs. max 1.45. Pressure drop < 0.5mbar; automatic reset with a flow of 37.5 l/h at 100 mbar (gas).

Threaded connections. Available as a single fitting or, thanks to its compactness, as a device built into the valves does not require maintenance.

For all types of gas in accordance with EN 437 and DWG G260/1 (Methane, Propane and Butane).

Pressure range 15 - 100 mbar.

Working temperature -20°C + 60°C.

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