



FEATURES

- GST® is a DIN 30652-1 certified device that blocks the gas flow automatically when the flow rate exceeds the minimum trip threshold of the device (in the event of tampering, accidental system disconnection, e.g. in a fire or if the pipes burst).
- The GST® is equipped with an automatic reset system.
- Available as a single fitting or, thanks to its compactness, as a device built into the shut-off valves
- No maintenance required.
- Produced by TECO since 2002.

APPLICATIONS

- For all types of gas as specified in EN 437 and DVGW G260:2013 (Methane, Butane, Propane)



Material		
Body	Internal device	Sphere seats
Steel	Galvanised	Aluminium and polymer

TECHNICAL SPECIFICATIONS

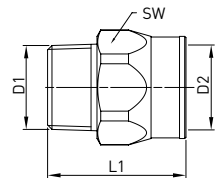
Reference standards	Working pressure	Temperature	Threaded versions Connections	Pressure drop	Value overflow VL	fs min.	fs.max.	Thermal resistance
DIN 30652-1:2021 DVGW TRGI 2018 DVGW TRF 2021	15÷100 hPa	-20 °C +60 °C	EN 10226-1	$\Delta p < 0.5$ hPa	10-30 l/h at 100 hPa (air)	1.30	1.45	external: 650 °C

VERSIONS AND CODES

GST® coupling male / female threaded versions



HORIZONTAL AND VERTICAL UPWARD

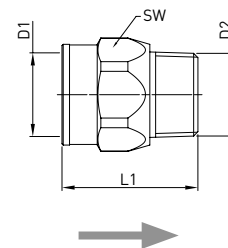


Code	DN	GST® GS m³/h		D1 EN 10226-1	D2 ISO 228-1	L1	SW	Layout	Pack
GS01110100	15	V _{GAS} =1.6		R 1/2"	Rp 1/2"	52	27	M/F	20
GS01210100	15	V _{GAS} =2.5		R 1/2"	Rp 1/2"	52	27	M/F	20
GS02210200	20	V _{GAS} =2.5		R 3/4"	Rp 3/4"	52	32	M/F	15
GS02310200	20	V _{GAS} =4.0		R 3/4"	Rp 3/4"	52	32	M/F	15
GS03210300	25	V _{GAS} =2.5		R 1"	Rp 1"	54	41	M/F	10
GS03310300	25	V _{GAS} =4.0		R 1"	Rp 1"	54	41	M/F	10
GS03410300	25	V _{GAS} =6.0		R 1"	Rp 1"	54	41	M/F	10
GS04510400	32	V _{GAS} =10.0		R 1" 1/4	Rp 1" 1/4	67	50	M/F	6
GS05610500	40	V _{GAS} =16.0		R 1" 1/2	Rp 1" 1/2	75	60	M/F	6
GS06610600	50	V _{GAS} =16.0		R 2"	Rp 2"	80	70	M/F	6

GST® fitting female / male threaded versions



HORIZONTAL AND VERTICAL UPWARD

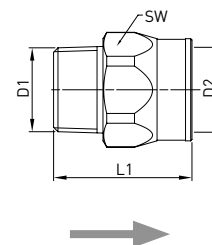


Code	DN	GST® GS m³/h	D1 EN 10226-1	D2 ISO 228-1	L1	SW	Layout	Pack
GS01120100	15	V _{GAS} =1.6	Rp 1/2"	R 1/2"	52	27	F/M	20
GS01220100	15	V _{GAS} =2.5	Rp 1/2"	R 1/2"	52	27	F/M	20
GS02220200	20	V _{GAS} =2.5	Rp 3/4"	R 3/4"	46	32	F/M	15
GS02320200	20	V _{GAS} =4.0	Rp 3/4"	R 3/4"	46	32	F/M	15
GS03220300	25	V _{GAS} =2.5	Rp 1"	R 1"	54	41	F/M	10
GS03320300	25	V _{GAS} =4.0	Rp 1"	R 1"	54	41	F/M	10
GS03420300	25	V _{GAS} =6.0	Rp 1"	R 1"	54	41	F/M	10
GS04520400	32	V _{GAS} =10.0	Rp 1" 1/4	R 1" 1/4	61	50	F/M	6
GS05620500	40	V _{GAS} =16.0	Rp 1" 1/2	R 1" 1/2	68	60	F/M	6
GS06620600	50	V _{GAS} =16.0	Rp 2"	R 2"	75	70	F/M	6

GST® coupling male / female threaded versions



VERTICAL DOWNWARD



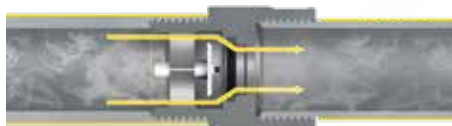
Code	DN	GST® GS m³/h	D1 EN 10226-1	D2 ISO 228-1	L1	SW	Layout	Pack
GSW2210200	20	V _{GAS} =2.5	R 3/4"	Rp 3/4"	52	32	M/F	15
GSW2310200	20	V _{GAS} =4.0	R 3/4"	Rp 3/4"	52	32	M/F	15
GSW3210300	25	V _{GAS} =2.5	Rp 1"	R 1"	54	41	M/F	10
GSW3310300	25	V _{GAS} =4.0	Rp 1"	R 1"	54	41	M/F	10
GSW3410300	25	V _{GAS} =6.0	Rp 1"	R 1"	54	41	M/F	10
GSW4510400	32	V _{GAS} =10.0	R 1" 1/4	Rp 1" 1/4	67	50	M/F	6

OPERATION AND TECHNOLOGIES

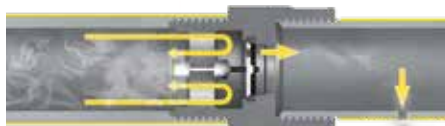
The GST® inserted in the system remains inactive (fig.1) until the closing flow rate (Vs) is reached.

As soon as the flow value, for any accidental reason, reaches the closing value (Vs), the GST® closes instantly (fig.2).

Its reset occurs automatically through the bypass hole located on the shutter, which creates a pressure balance upstream and downstream of the device through the overflow VL, when the causes that led to the closure of the GST® have been removed (fig.3).



GST® open (fig.1)



GST® closed (fig.2)



Automatic reset (fig.3)

Legend	V _{GAS}	Nominal flow rate of the GST® in gas (d=0.64)
	f _s	Closing factor (f _s =V _s / V _{GAS}) f _s min. = 1.30 f _s max. = 1.45
	V _s	Closing flow rate in gas (d=0.64) V _s = V _{GAS} x f _s
	VL	Flow value through the bypass hole ≤37.5 l/h at 100 hPa (gas)

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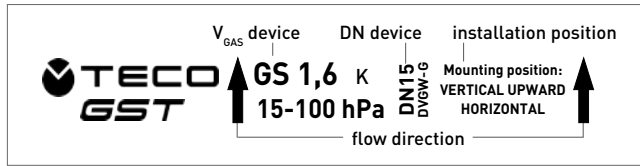


IDENTIFICATION MARKING OF THE GST®

The GST® is supplied with a label that describes its technical features according to the standard (DIN 30652-1).

- Nominal flow rate of the device (colour-coded identification)
- Pressure range "15 hPa - 100 hPa"
- Direction of gas flow (arrow)
- Nominal diameter
- Type of GST® (M/K)
- Marking "DVGW"
- Mounting position

i The colour of the labels identifies the flow rates of the device



GST® GS m³/h	
V _{GAS} = 1.6	
V _{GAS} = 2.5	Yellow
V _{GAS} = 4.0	Brown
V _{GAS} = 6.0	Green
V _{GAS} = 10.0	Red
V _{GAS} = 16.0	Orange

CHOICE OF GST®

GST® CHOICE FOR METAL TUBES (TYPE M) ACCORDING TRGI-2018

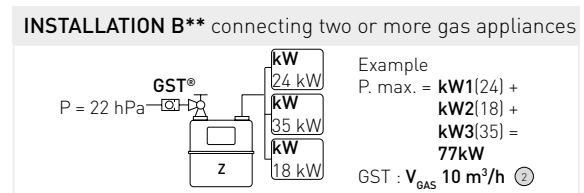
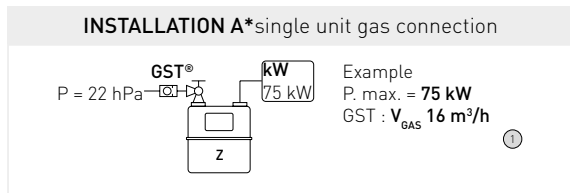
type GST®	Power in kW	
	A*	B**
V _{GAS} 2.5 m³/h	≤17	≤21
V _{GAS} 4.0 m³/h	18 ÷ 27	22 ÷ 34
V _{GAS} 6.0 m³/h	28 ÷ 41	35 ÷ 51
V _{GAS} 10 m³/h	42 ÷ 68	52 ÷ 86 ②
V _{GAS} 16 m³/h	69 ÷ 110 ①	87 ÷ 138

GST® CHOICE FOR PLASTIC TUBES (TYPE K) ACCORDING TRGI-2018

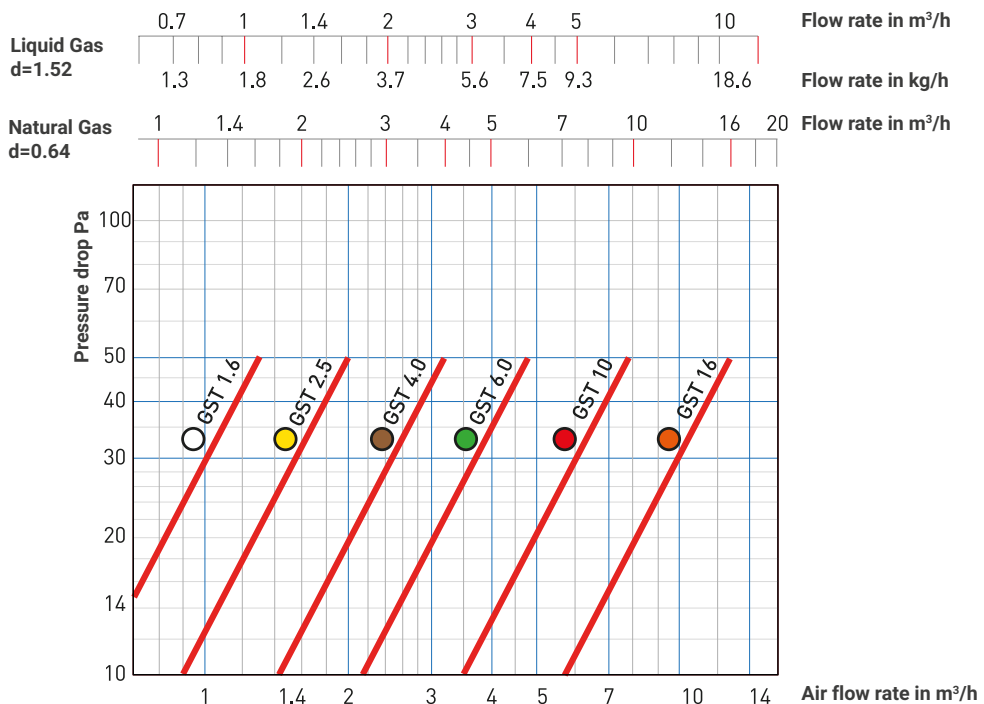
type GST®	Power in kW	
	A*	B**
V _{GAS} 1.6 m³/h	≤13	<13
V _{GAS} 2.5 m³/h	12 ÷ 17	14 ÷ 21
V _{GAS} 4.0 m³/h	18 ÷ 27	22 ÷ 34
V _{GAS} 6.0 m³/h	28 ÷ 41	35 ÷ 51
V _{GAS} 10 m³/h	42 ÷ 68	52 ÷ 86 ②
V _{GAS} 16 m³/h	69 ÷ 110 ①	87 ÷ 138

SELECTION PARAMETERS OF GST® TRF-2012 LIQUID GAS

GST® marking identification	Power in kW	
	Branch pipe	Main pipe
V _{GAS} = 1.6 m³/h	≤ 18	≤ 25
V _{GAS} = 2.5 m³/h	19 ÷ 28	26 ÷ 40
V _{GAS} = 4.0 m³/h	29 ÷ 45	41 ÷ 64
V _{GAS} = 6.0 m³/h	46 ÷ 67	65 ÷ 96
V _{GAS} = 10 m³/h	68 ÷ 112	97 ÷ 160



PRESSURE LOSS CHART



SPECIFICATION TEXT

GST®: Excess flow valve

Safety device VP305-1 DVGW, automatically blocks the gas flow, with an intervention range fs min. 1.30 - fs. max 1.45. Pressure drop < 0.5 hPa; automatic reset flow 37.5 l/h at 100 hPa (gas).

Threaded versions Connections. Available as a single fitting or as a device integrated into the valves does not require maintenance.

For all types of gas according to EN437 and DVGW G260:2013 (Methane, Propane and Butane).

Working pressure 15 ÷ 100 hPa.

Temperature of operation -20°C + 60°C.

