SENTRY GT TCO & SENTRY GS EFV

FOR NEW AND LEGACY INSTALLATIONS IN THE UK

MAXITROL®

www.maxitrol.com

CONTENT

DEFINITIONS

LEGACY INSTALLATIONS:
Existing equipment or installations to be upgraded with Maxitrol SENTRY products to comply with the new IGEM / G / 5 Ed. 3, 2022 for gas in multi-occupancy buildings (UK)

TCO: Thermal Cut-Off

EFV: Excess Flow Valve

ECV: Emergency Control Valve

SENTRY LEGACY GT™ TCO

The SENTRY Legacy GT™ is the first thermal cut-off device (TCO) that can be screwed directly onto the outlet of a gas meter emergency control valve (ECV with BS 746 connection). This product is specifically designed for legacy installations in the UK and can be installed without disrupting the gas supply to neighbouring properties. It provides additional protection to a meter installation with < 0.35 mbar (35 Pa) pressure drop.

The Legacy GT™ TCOs automatically shut off the gas flow at temperatures between 92 °C and 100 °C and help prevent gas from flowing to downstream components that may not be resistant to high temperatures.

At the release temperature, the release mechanism (temperature sensor) unblocks the closing unit, which then moves into the valve seat resulting in a gas-tight seal. Legacy GTs™ remain closed for a period of at least 30 minutes at temperatures up to 650 °C and after they cool.

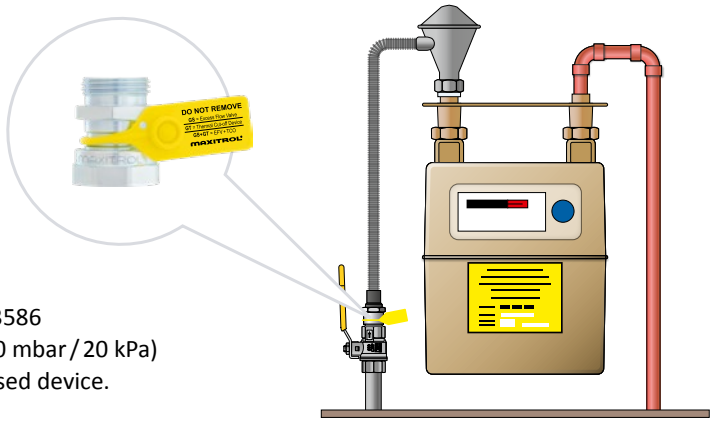
CERTIFICATIONS

- Complies with the new IGEM / G / 5 Ed. 3, 2022 for gas in multi-occupancy buildings (UK)
- Pressure Equipment Directive (2014 / 68 / EU)
- Following DIN 3586:2003 (SENTRY GT)
- Following German DVGW-TRGI 2018 and DVFG-TRF 2021

Figure 1
Thermal Cut-off Device TCO

SPECIFICATIONS

- **Product Code:** GT20B**LC**0
- **Thread Connections:**
  L – Internal thread in accordance with BS 746
  C – External thread in accordance with BS 746
- **Fuel Gases:** Suitable for gases according to EN 437
- **Ambient Temperature Range:** -20 °C to 80 °C
- **Release Temperature Range:** 100 °C – 8 K
- **Thermal Rating:** 30 min up to 650 °C in compliance with DIN 3586
- **Nominal Pressure:** MOP 0.2 (with BS 746 inlet thread max 200 mbar / 20 kPa)
- **Allowable Internal Leakage:** < 30 l/h (Air) to pass through closed device.
- **Housing Material:** Steel

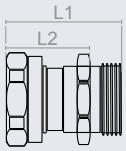


MODEL

Type (order code)	Product	Mounting Position	Operating Pressure Range	Pressure Drop	Overflow Volume	Installation	Max Test Pressure
GT20BLC0	TCO	multi-positional	max 200 mbar (max 20 kPa)	≤ 0.35 mbar (35 Pa) at 6.0 m³/h NG with d = 0.64	–	btw. AECV * and ECV or btw. ECV and service regulator; downstream of service regulator	5 bar (500 kPa)

* AECV = Additional Emergency Control Valve

CONNECTIONS AND DIMENSIONS

Illustration	Type (order code)	Connections		Surface	Dimensions [mm]			Weight [kg]	Cert. No.
		Inlet	Outlet		L1	L2	SW Wrench size		
	GT20BLC0	Internal thread 3/4 BS 746	External thread 3/4 BS 746	blue galvanized	45.0	33.0	36	0.136	CE-0085BN0394

SENTRY LEGACY GT™ TCO + GS EFV

The Legacy GT™ thermal cut-off device (TCO) in combination with a SENTRY GS excess flow valve (EFV) is the first TCO that can be screwed directly onto the outlet of a gas meter emergency control valve (ECV with BS 746 connection). This product is specifically designed for legacy installations in the UK and can be installed without disrupting the gas supply to neighbouring properties. It provides additional protection to a meter installation with < 1.0 mbar (100 Pa) pressure drop.

The Legacy GT™ TCOs automatically shut off the gas flow at temperatures between 92 °C and 100 °C and help prevent gas from flowing to downstream components that may not be resistant to high temperatures. At the release temperature, the release mechanism (temperature sensor) unblocks the closing unit, which then moves into the valve seat resulting in a gas-tight seal. Legacy GTs™ remain closed for a period of at least 30 minutes at temperatures up to 650 °C and after they cool.

SENTRY GS excess flow valves are designed to close, shutting off the gas flow, when a predefined flow rate is reached

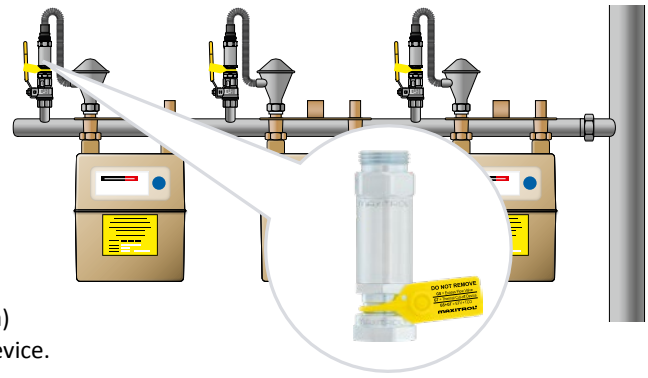
CERTIFICATIONS

- Complies with the new IGEM / G / 5 Ed. 3, 2022 for gas in multi-occupancy buildings (UK)
- Pressure Equipment Directive (2014 / 68 / EU)
- Following DIN 3586:2003 (SENTRY GT)
- Following DIN 30652-1 (SENTRY GS) Closing factor fs: fs ≤ 1.45 (Type K)
- Following German DVGW-TRGI 2018 and DVFG-TRF 2021

Figure 2
SENTRY Legacy GT™ TCO with GS EFV for UK legacy installations

SPECIFICATIONS

- **Product Code:** GS20HT6LCZ (Legacy TCO + EFV)
- **Thread Connections:**
  - L – Internal thread in accordance with BS 746
  - C – External thread in accordance with BS 746
- **Fuel Gases:** Suitable for gases according to EN 437
- **Ambient Temperature Range:** - 20 °C to 60 °C
- **Release Temperature Range:** 100 °C – 8 K
- **Thermal Rating:** 30 min up to 650 °C in compliance with DIN 3586
- **Nominal Pressure:** MOP 0.1 (SENTRY GS EFV max 100 mbar / 10 kPa)
- **Allowable Internal Leakage:** < 30 l/h (Air) to pass through closed device.
- **Housing Material:** Steel

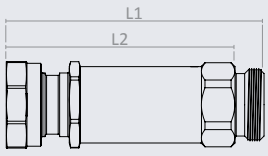


MODEL

Type (order code)	Product	Mounting Position	Operating Pressure Range	Pressure Drop	Overflow Volume (EFV with bypass)	Installation	Max Test Pressure (EFV open position)
GS20HT6LCZ	TCO with EFV	horizontal or vertical upward (type K)	15 mbar – 100 mbar (1.5 kPa – 10 kPa)	≤ 1.0 mbar (100 Pa)	max 30 l/h at 100 mbar (10 kPa)	btw. AECV * and ECV or btw. ECV and service regulator; downstream of service regulator	1.5 bar (150 kPa)

* AECV = Additional Emergency Control Valve

CONNECTIONS AND DIMENSIONS

Illustration	Type (order code)	Connections		Surface	Dimensions [mm]			Weight [kg]	Cert. No.
		Inlet	Outlet		L1	L2	SW Wrench size		
	GS20HT6LCZ	Internal thread 3/4 BS 746	External thread 3/4 BS 746	blue galvanized	106.5	94.5	HEX 32 OKT 32	0.31	EFV: CE-0085BO0402 TCO: CE-0085BN0394

SENTRY GT TCO + GS EFV

Maxitrol's SENTRY GT TCO + SENTRY GS EFV is a thermal cut-off device (TCO) combined with an excess flow valve (EFV) as a single unit. This product is designed for new installations in the UK.

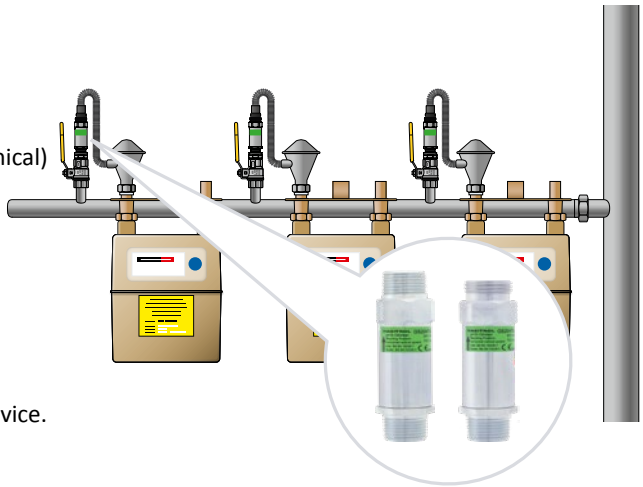
CERTIFICATIONS

- Complies with the new IGEM / G / 5 Ed. 3, 2022 for gas in multi-occupancy buildings (UK)
- Pressure Equipment Directive (2014 / 68 / EU)
- Following DIN 3586:2003 (SENTRY GT)
- Following DIN 30652-1 (SENTRY GS) Closing factor fs: fs ≤ 1.45 (Type K)
- Following German DVGW-TRGI 2018 and DVFG-TRF 2021

Figure 3
SENTRY GT TCO with GS EFV

SPECIFICATIONS

- **Product Codes:** GS20HT6**AC**Z, GS20HT6**AA**Z
- **Thread Connections:**
  A – External thread in accordance with DIN EN 10226-1/ISO 7-1 (conical)
  C – External thread in accordance with BS 746
- **Fuel Gases:** Suitable for gases according to EN 437
- **Ambient Temperature Range:** - 20 °C to 60 °C
- **Release Temperature Range:** 100 °C – 8 K
- **Thermal Rating:** 30 min up to 650 °C in compliance with DIN 3586
- **Nominal Pressure:** MOP 0.1 (SENTRY GS EFV)
- **Nominal Flow Rate:** 6 m³/h (Natural Gas), 4.8 m³/h (Air)
- **Allowable Internal Leakage:** < 30 l/h (Air) to pass through closed device.
- **Housing Material:** Steel

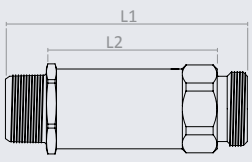
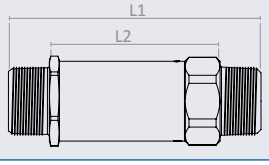


MODELS

Type (order code)	Product	Mounting Position	Operating Pressure Range	Pressure Drop	Overflow Volume (EFV with bypass)	Installation	Max Test Pressure (EFV open position)
GS20HT6ACZ	TCO with EFV	horizontal or vertical upward (type K)	15 mbar – 100 mbar (1.5 kPa – 10 kPa)	≤ 1 mbar (100 Pa)	max 30 l/h at 100 mbar (10 kPa)	btw. AECV * and ECV or btw. ECV and service regulator; downstream of service regulator	1.5 bar (150 kPa)
GS20HT6AAZ	TCO with EFV	horizontal or vertical upward (type K)	15 mbar – 100 mbar (1.5 kPa – 10 kPa)	≤ 1 mbar (100 Pa)	max 30 l/h at 100 mbar (10 kPa)	upstream of ECV	1.5 bar (150 kPa)

* AECV = Additional Emergency Control Valve

CONNECTIONS AND DIMENSIONS

Illustration	Type (order code)	Connections		Surface	Dimensions [mm]			Weight [kg]	Cert. No.
		Inlet	Outlet		L1	L2	SW Wrench size		
	GS20HT6ACZ	External thread R 3/4 ISO 7-1	External thread 3/4 BS 746	blue galvanized	96.3	68.0	32	0.24	EFV: CE-0085BO0402 TCO: DVGW Reg.-Nr. DG - 4340AQ1236
	GS20HT6AAZ	External thread R 3/4 EN10226	External thread R 3/4 EN10226	blue galvanized	101.0	68.4	32	0.26	EFV: CE-0085BO0402 TCO: DVGW Reg.-Nr. DG - 4340AQ1236

SENTRY GS EFV

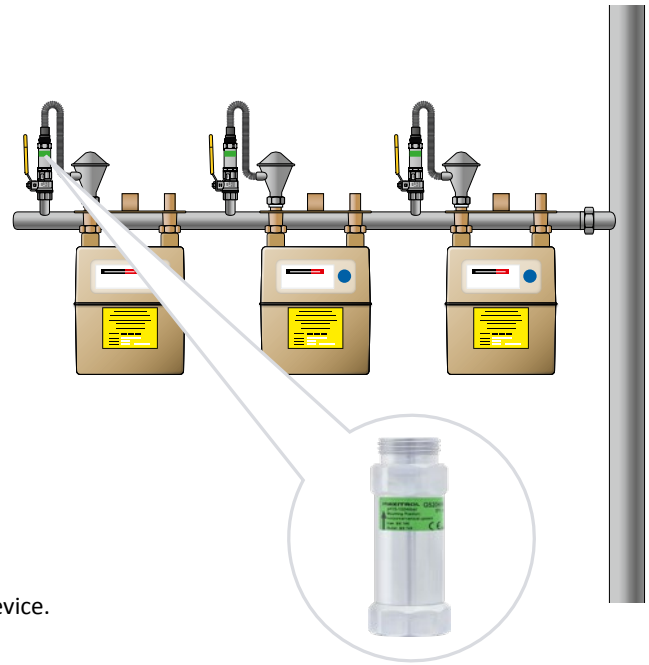
SENTRY GS excess flow valves (EFV) for residential installation, shut off the gas flow when a pre-defined closing flow rate is reached. Maxitrol's factory adjustment (100%) provides a precise and reliable closing flow rate. In the nominal flow range, the EFV remains in a stable, open position.

The EFV is installed downstream of the emergency control valve (ECV). With a by-pass orifice, SENTRY GS EFVs reopen after the downstream line has been repaired and re-pressurized. This product is designed for new installations in the UK.

Figure 4
Excess flow valve EFV (GS20HH6LCZ)

CERTIFICATIONS

- Complies with the new IGEM / G / 5 Ed. 3, 2022 for gas in multi-occupancy buildings (UK)
- Pressure Equipment Directive (2014 / 68 / EU)
- Following DIN 30652-1 (SENTRY GS)
  Closing factor fs: fs ≤ 1.45 (Type K)
- Following German DVGW-TRGI 2018 and DVFG-TRF 2021



SPECIFICATIONS

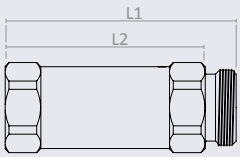
- **Product Codes:** GS20HH6**LC**Z
- **Thread Connections:**
  C – External thread in accordance with BS 746
  L – Internal thread according to BS 746 3/4" (with washer)
- **Fuel Gases:** Suitable for gases according to EN 437
- **Ambient Temperature Range:** - 20 °C to 60 °C
- **Nominal Pressure:** MOP 0.1
- **Nominal Flow Rate:** 6 m^3/h (Natural Gas), 4.8 m^3/h (Air)
- **Allowable Internal Leakage:** < 30 l/h (Air) to pass through closed device.
- **Housing Material:** Steel

MODEL

Type (order code)	Product	Mounting Position	Operating Pressure Range	Pressure Drop	Overflow Volume (EFV with bypass)	Installation	Max Test Pressure (open position)
GS20HH6LCZ	EFV	horizontal or vertical upward (type K)	15 mbar – 100 mbar (1.5 kPa – 10 kPa)	≤ 0.5 mbar (50 Pa)	max 30 l/h at 100 mbar (10 kPa)	btw. AECV * and ECV or btw. ECV and service regulator; down-stream of service regulator	1.5 bar (150 kPa)

* AECV = Additional Emergency Control Valve

CONNECTIONS AND DIMENSIONS

Illustration	Type (order code)	Connections		Surface	Dimensions [mm]			Weight [kg]	Cert. No.
		Inlet	Outlet		L 1	L 2	SW Wrench size		
	GS20HH6LCZ	Internal thread 3/4 BS 746	External thread 3/4 BS 746	blue galvanized	106.5	94.5	HEX 32	0.26	CE-0085BO0402

SENTRY GT TCO

SENTRY GT thermal cut-off devices (TCO) help prevent gas from flowing to downstream components that may not be resistant to high temperatures. SENTRY GT TCOs automatically shut off the gas flow at temperatures between 92 °C and 100 °C.

At the release temperature, the release mechanism (temperature sensor) unblocks the closing unit, which then moves into the valve seat resulting in a gas-tight seal. The SENTRY GTs™ remain closed for a period of at least 30 minutes at temperatures up to 650 °C (Maxitrol tested up to 925 °C) and after it cools.

SENTRY GT can be installed upstream or downstream of the emergency control valve (ECV). This product is designed for new installations in the UK.

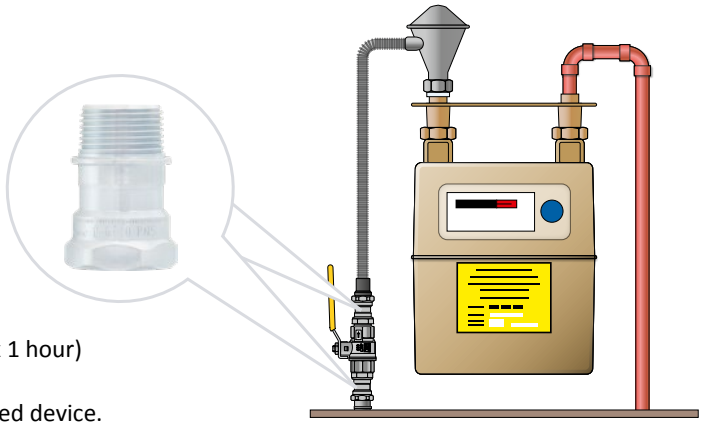
CERTIFICATIONS

- Complies with the new IGEM / G / 5 Ed. 3, 2022 for gas in multi-occupancy buildings (UK)
- Pressure Equipment Directive (2014 / 68 / EU)
- Following DIN 3586:2003 (SENTRY GT)
- Following German DVGW-TRGI 2018 and DVFG-TRF 2021

Figure 5
SENTRY GT TCO

SPECIFICATIONS

- **Product Code:** GT10... - GT 150...
- **Thread Connections:**
  DIN EN 10226-1 / ISO 7-1
- **Flange Connections:**
  DIN EN 1092-1:2018-12 (PN 16) / ISO 7005-1
- **Fuel Gases:** Suitable for gases according to EN 437
- **Ambient Temperature Range:** - 20 °C to 80 °C
- **Release Temperature Range:** 100 °C – 8 K
- **Thermal Rating:**
  - 30 min up to 650 °C in compliance with DIN 3586
  - Maxitrol tested up to 925 °C (in compliance with ISO 843 max 1 hour)
- **Nominal Pressure:** MOP 5 (following DIN 3586)
- **Allowable Internal Leakage:** < 30 l/h (Air) to pass through closed device.
- **Housing Material:** Steel



FLOW RESISTANCE FACTOR

Flow resistance factor ζ (zeta) for SENTRY GT											
DN 10	DN 15	DN 20	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100	DN 125	DN 150
1.5	4.5	3.0		1.5						1.8	

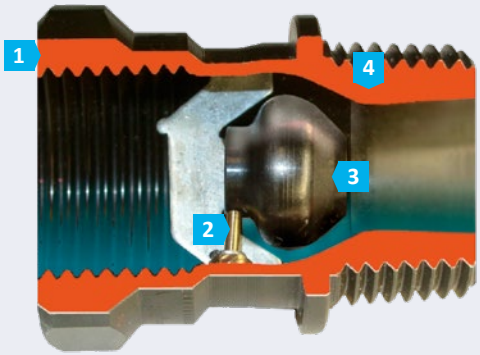
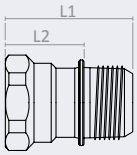
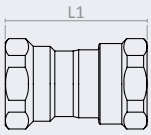
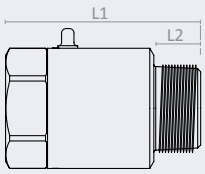
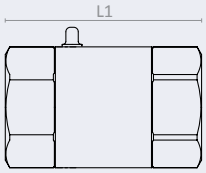
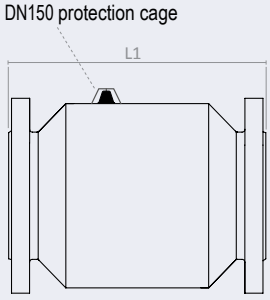


Figure 6
Cross-section of a SENTRY GT (GT25DIA0) thermally activated shut-off device

1 Housing
2 Release Mechanism
3 Closing Unit
4 Seat

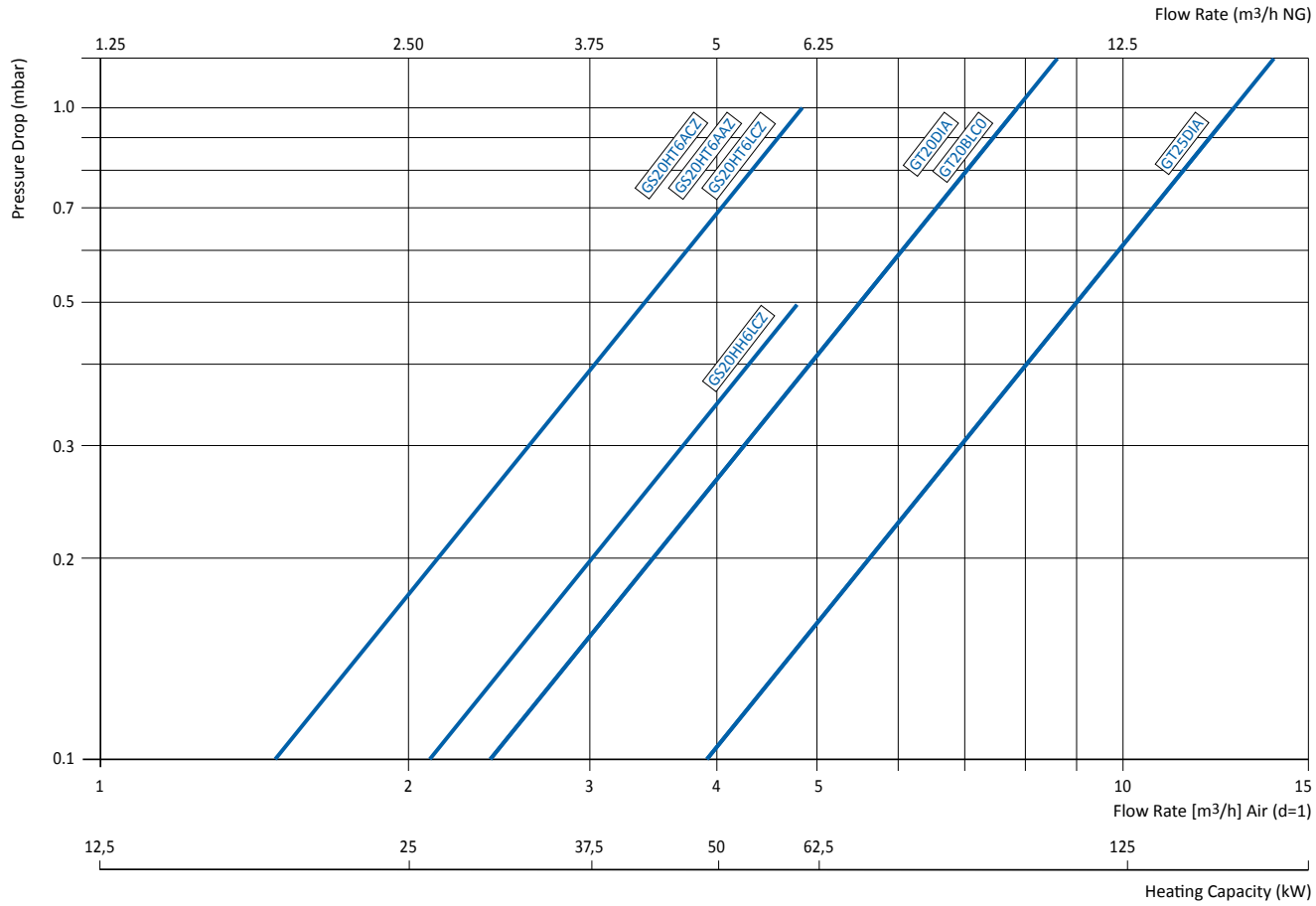
CONNECTIONS AND DIMENSIONS

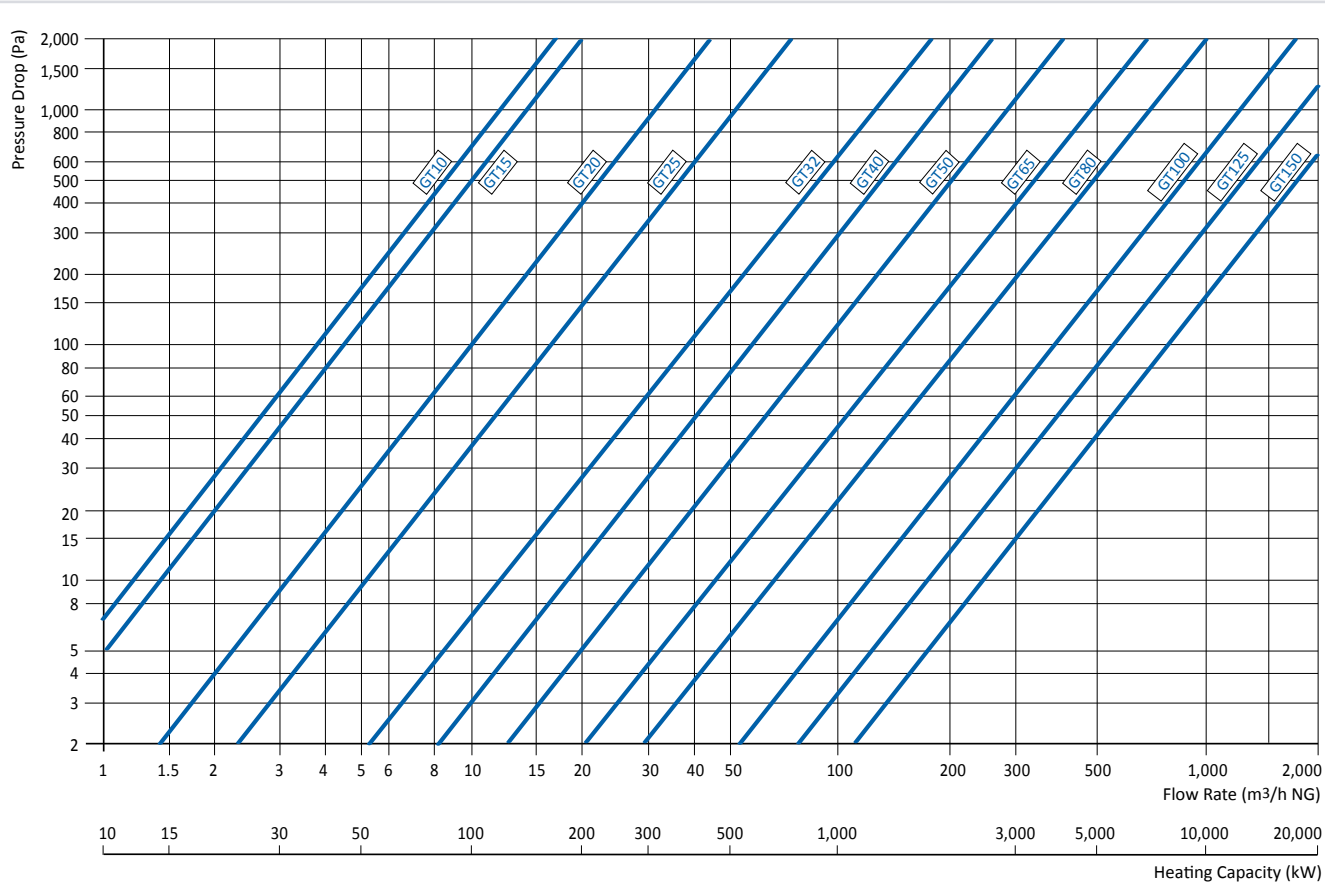
Illustration	Type (Order Code)	Connection		Surface	Dimensions [mm]			Weight [kg]	Cert. No.
		Inlet	Outlet		L1	L2	SW Wrench size		
		Internal thread	External thread						CE-0085BN0394
	GT10DIA0	Rp ⅜	R ⅜	blue galvanized	40.0	28.4	22	0.05	
	GT15DIA0	Rp ½	R ½		40.0	24.7	27	0.07	
	GT20DIA0	Rp ¾	R ¾		50.3	34.0	32	0.10	
	GT25DIA2	Rp 1	R 1	black galvanized	53.8	34.6	41	0.21	
		Internal thread	Internal thread						
	GT15DII0	Rp ½	Rp ½	blue galvanized	45.5	-	27	0.10	
	GT20DII0	Rp ¾	Rp ¾		54.5	-	32	0.15	
	GT25DII2	Rp 1	Rp 1	black galvanized	61.5	-	41	0.30	
		Internal thread	External thread	nickel plated					CE-0085BN0395
	GT32IA4	Rp 1 ¼	R 1 ¼		100.0	21.4	55	0.76	
	GT40IA4	Rp 1 ½	R 1 ½		112.0	21.4	65	1.46	
	GT50IA4	Rp 2	R 2		135.0	25.7	80	2.52	
			Internal thread						
	GT32II4	Rp 1 ¼	Rp 1 ¼		100.0	-	55	1.14	
	GT40II4	Rp 1 ½	Rp 1 ½		112.0	-	65	1.76	
	GT50II4	Rp 2	Rp 2		135.0	-	80	2.60	
DN150 protection cage 		Flange connection	Flange connection						
	GT32FF4	DN32	DN32	nickel plated	138.0	-	-	2.50	
	GT40FF4	DN40	DN40		155.0	-	-	3.70	
	GT50FF4	DN50	DN50		175.0	-	-	6.10	
	GT65FF4	DN65	DN65		197.0	-	-	7.80	
	GT80FF4	DN80	DN80		229.0	-	-	11.00	
	GT100FF4 *	DN100	DN100		267.0	-	-	15.30	
	GT125FF *	DN125	DN125		224.0	-	-	26.00	
	GT150FF *	DN150	DN150		268.0	-	-	32.00	
	* Dispatch only by forwarder								

OPTIONS

To order a biogas resistant version of the DN 32 through DN 100, replace the "4" with a "9" at the end of the order code (e.g. GT32FF9). To order a biogas resistant version of the DN 125 and DN 150 add a "9" to the end of the order code (e.g. GT150FF9).In addition to the standard versions listed in the table above, Custom inlet and outlet connections are available.

PRESSURE DROP FLOW RATES





MAXITROL®

Maxitrol Company
23555 Telegraph Road
Southfield, MI 48033
USA

T: (+1) 248 356-1400
infoNA@maxitrol.com

Maxitrol GmbH & Co. KG
Warnstedter Str. 3
06502 Thale
Germany

T: (+49) 3947 400-0
infoEU@maxitrol.com

Maxitrol GmbH & Co. KG
Valleys Innovation Centre
Navigation Park
Abercynon CF45 4SN
United Kingdom

T: (+44) 1443 742-755
M: (+44) 7866 492-261
infoEU@maxitrol.com

Maxitrol GmbH & Co. KG
Industriestr. 1
48308 Senden
Germany

T: (+49) 2597 9632-0
senden@maxitrol.com

GSH.GT-LT-EN-02.2023-UK