

M2R 50/75/100

Two Stage Regulator
maximum inlet pressure 5 bar

Applications

Pressure reduction for:

- Commercial uses
- Industrial uses

Brief information

The two stage pressure regulator M2R is available in various capacity stages, extending from 50 and 75 m³/h on the version with integrated low pressure cut-off up to 100 m³/h without this feature.

It means that the unit is suitable for a broad range of commercial and industrial applications, such as supplying large apartment blocks and public buildings or for applications in process gas distribution.

The modular concept of the M2R allows a wide range of different connection and equipment variants to match the particular customer requirements. The inline variant is available besides the angled variant. A broad selection of connectors for both inlet and outlet allows the M2R to be adapted with outstanding flexibility to the particular installation requirements.

The resetting and the adjustment of the SSV have a very user-friendly design. This also makes it resistant against manipulations.

The units are approved by DVGW according to the pressure equipment directive 97/23/EC (PED) and accordance with EN 334 / EN 14382.

Registration Number: CE-0085BS0343.

Technical data

- Inlet pressure range p_U : 0.1 bar to 5 (6) bar
- Outlet pressure range p_{ds} : 18 mbar to 100 mbar
- Maximum capacity Q 50 m³/h, 75 m³/h, 100 m³/h

Pressure ranges & accuracy classes for outlet pressure and safety devices

Regulator			Slam shut valve		Relief valve	
Set range	Accuracy class	Lock up pressure class	Set range	Accuracy group	Set range	Accuracy group
[mbar]	[%]	[%]	[mbar]	[%]	[mbar]	[%]
p_{ds} 18 – 100	AC 10 (AC 5)	SG 20 (SG 10)	p_{dso} 50 – 450	AG _o 10	12 - 50 above outlet pressure p_{ds}	10

Materials

Body, cover	Precision die cast aluminium
Springs	Steel, zinc plated
Orifices	Brass
Valve disks, diaphragms	Nitrile rubber
Internal parts	Acetal resin, zinc alloy
Connecting pieces	Brass, cast iron or steel



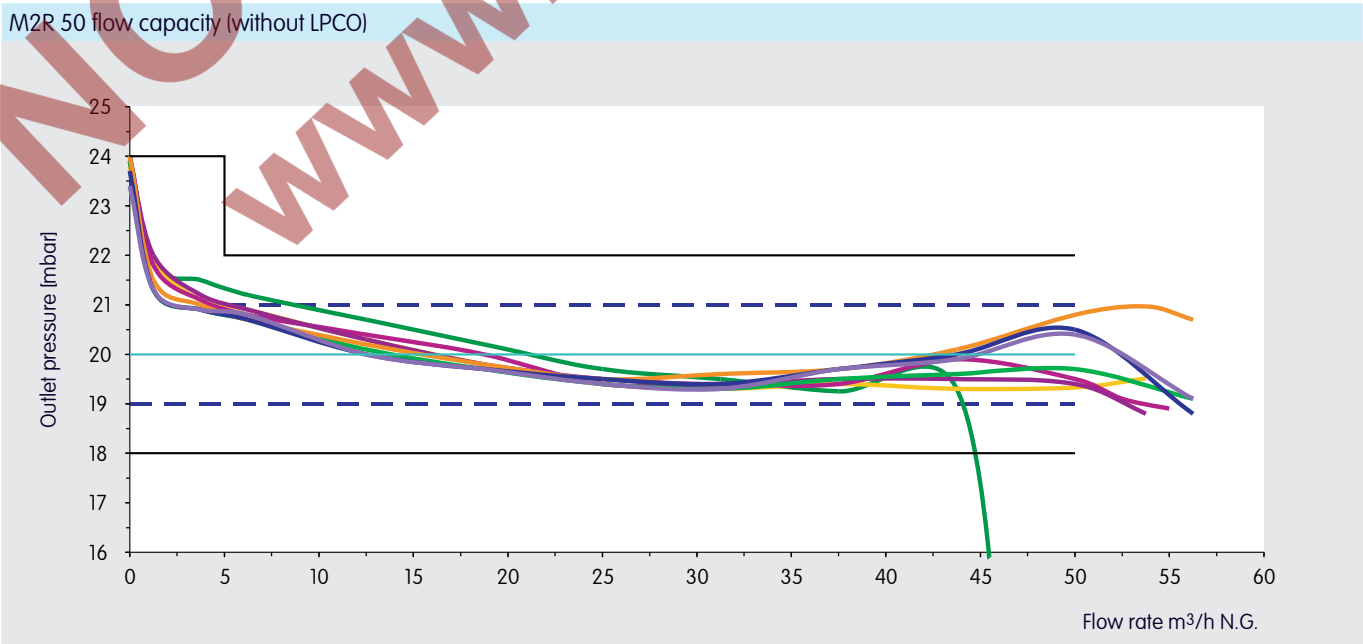
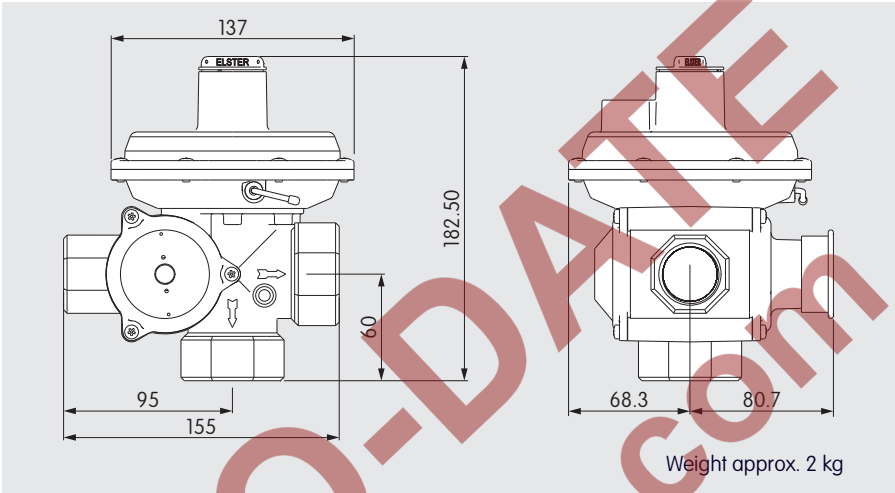
Main features

- Modular concept
- Integrated safety shut-off valve (SSV) for over pressure
- High accuracy, good lock up
- Integrated filter
- Temperature range -20 °C to +60 °C
- Inlet pressure resistant up to 16 bar
- A large variety of connection types:
 - angled
 - in line

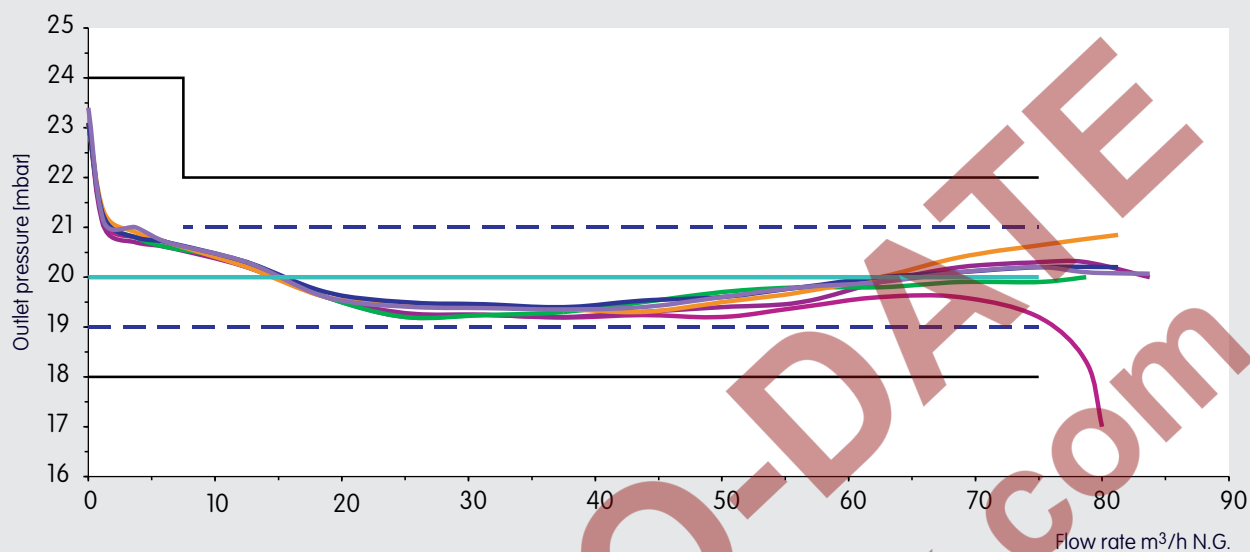
Options

- Integrated Low Pressure Cut Off (LPCO) / Excess Flow Cut Off, automatic reset
- Test plug available (outlet)
- Limited capacity Relief Valve
- UV stabilised plastic parts for open installation

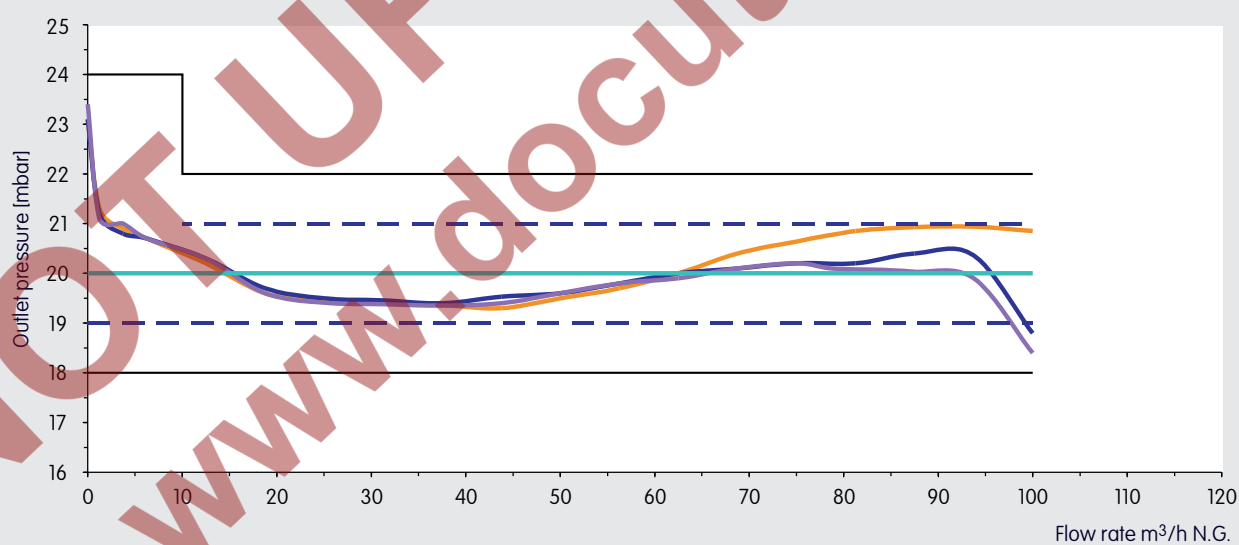
Dimensions and weights



M2R 75 flow capacity (without LPCO)



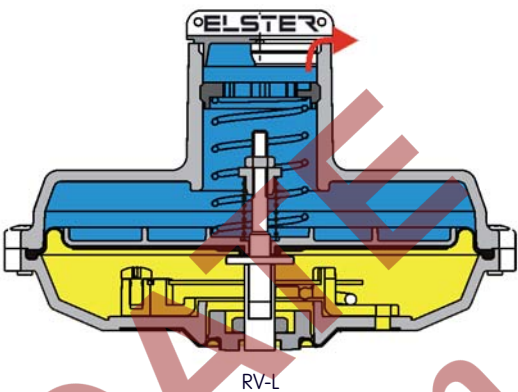
M2R 100 flow capacity (without LPCO)



Pressure ranges

Type	Nominal flow rate Q_n natural gas [stm ³ /h]	Minimum inlet pressure [bar] with LPCO	Minimum inlet pressure [bar] without LPCO
M2R 40	40	0.5	0.5
M2R 50	50	0.5	0.5
M2R 75	75	1	0.5
M2R 100	100	-	1

Configuration



Main configuration	
A	Angled
L	in Line

Inlet connection*)
G 1" F ISO 228/1
G 3/4" CF ISO 228/1
G 3/4" SC ISO 228/1
G 1" CF ISO 228/1
G 1 1/4" CF ISO 228/1
Other connections on request

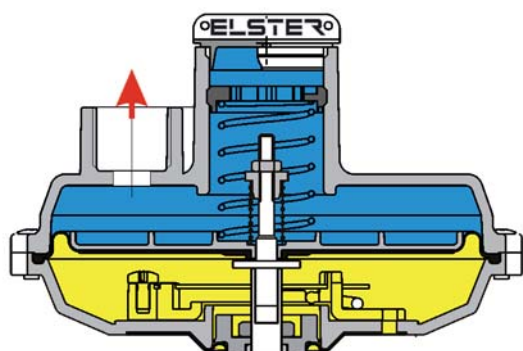
Type	Q	Main configuration	Dimensions*)	Inlet connection*)	Outlet connection*)
M2R					
M2R	75	A	95/60	G 1" F ISO 228/1	G 1 1/2" F ISO 228/1

Q
[m³]
40
50
75
100

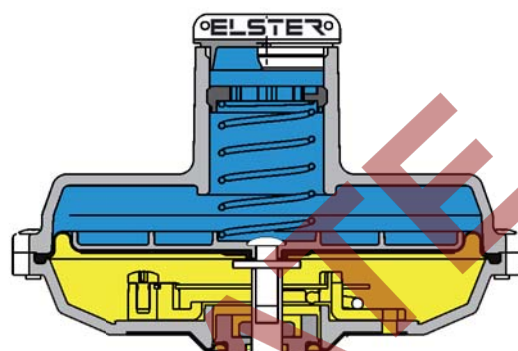
Dimensions *)	
A : Angled	B / A
L : In Line	B + C

Outlet connection *)
G 1 1/2" F ISO 228/1
G 1 1/4" CF ISO 228/1
G 1 1/2" CF ISO 228/1
G 2" CF ISO 228/1
Other connections on request

*) Dimensions A, B, C and connection configurations please see page 6 and 7



RV-F



oSD

2 nd stage	
RV-L	Relief Valve - Limited Capacity
RV-F	Relief Valve - Lim. Cap. Full width 1/2"
oSD	Without SD and RV

Test Point configuration	
oTP	without Test Plug
TP	Test Plug
TN	Test Nipple

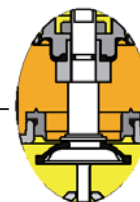


Gas
NG
LPG
others

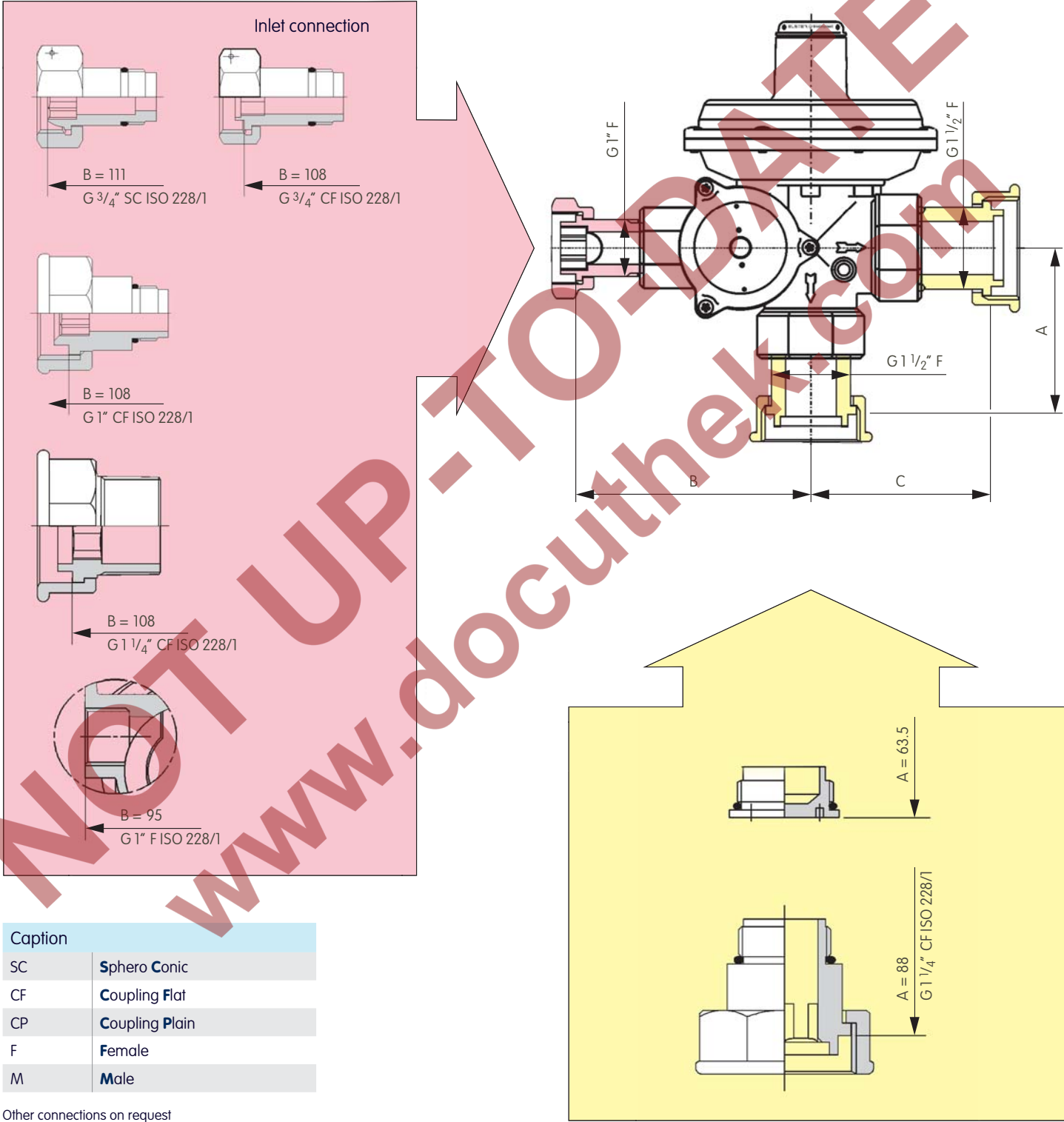
2 nd stage	LPCO/EF	Test point	p _{ds}	p _{RV}	p _{dso}	Gas	Remark
RV-L	oLPCO	oTP	20	75	90	NG	Example

Set pressures [mbar]	
p _{ds}	outlet pressure
p _{RV}	set point Relief Valve
p _{dso}	set point SSV

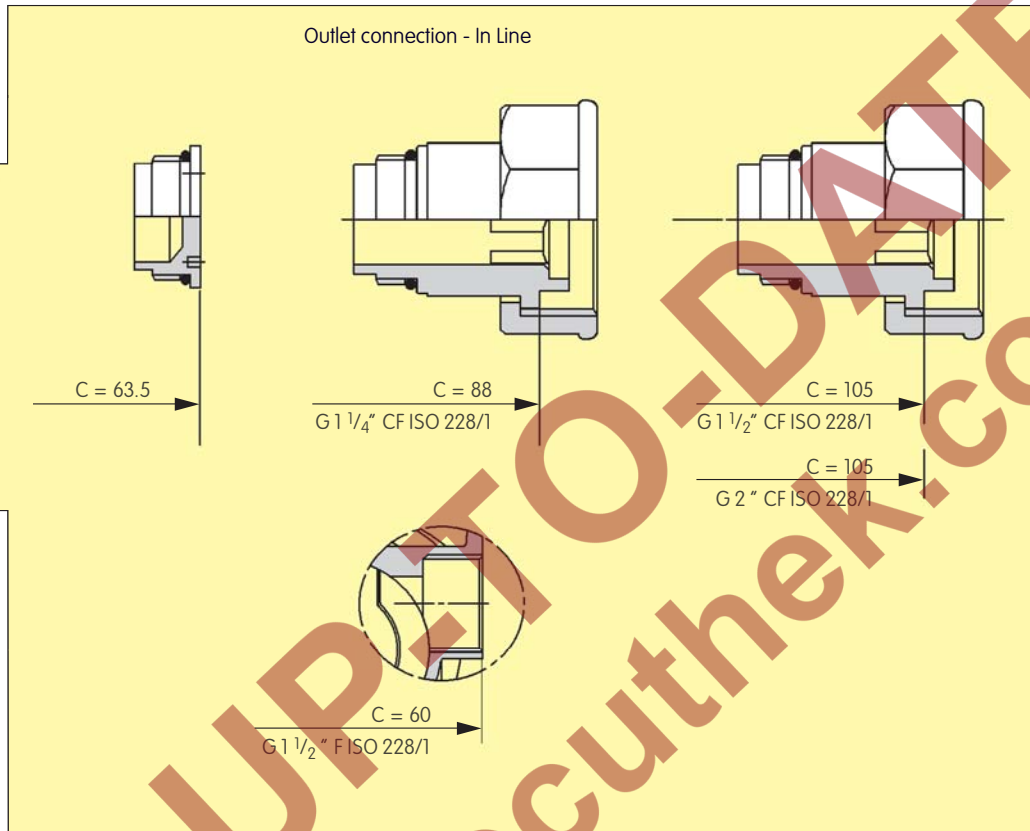
Low Pressure Cut-Off configuration	
aLPCO	automatic reset Low Pressure Cut Off
oLPCO	without Low Pressure Cut Off



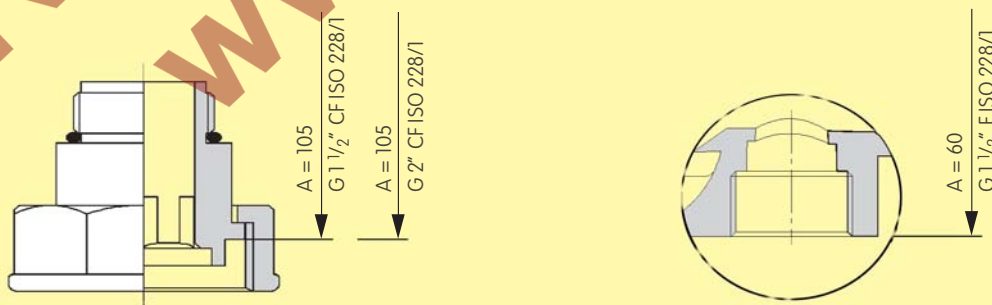
Connection configuration



Outlet connection - In Line

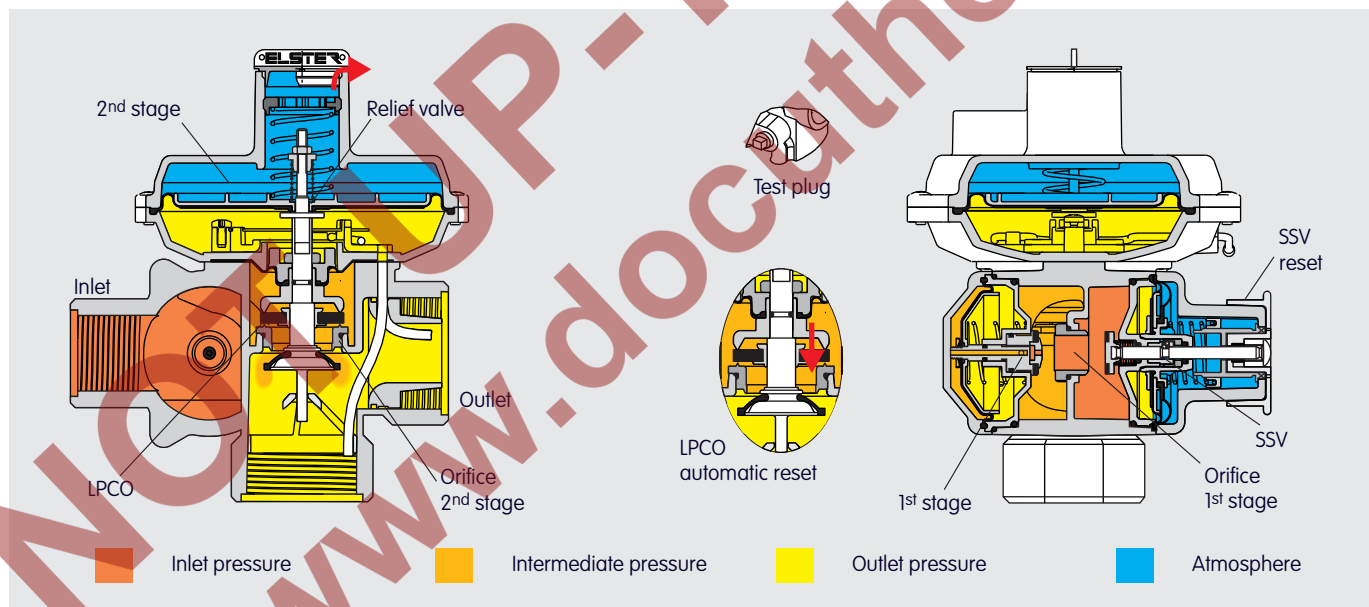


Outlet connection - Angled



Safety devices and accessories

- **Integrated filter**
placed in the inlet connection to retain solid impurities in the gas.
- **Safety Shut-off Valve SSV**
monitors the outlet pressure and closes the inlet when the outlet pressure exceeds the given set point. The set point of the SSV can be adjusted with a special adjusting tool. Reset is manual.
- **Low Pressure Cut Off LPCO**
stops the flow in case the downstream pressure falls below a value of about 40 % to 60 % of the outlet pressure.
- **Excess Flow Cut Off EF**
interrupts the flow in case of excessive flow rate.
- **Limited Capacity Relief Valve RV**
vents small gas flows in case of over-pressure downstream the regulator (e.g. because of temperature increase in the closed downstream pipework).
- **Reset of LPCO/EF**
operated automatically
A small bypass (30 dm³/h) in the LPCO/EF device enables outlet pressure to increase until lock up. If downstream pipe-
- work is closed, then the LPCO/EF device opens automatically.
- **Test plug/nipple**
for measuring the outlet pressure:
 - 1/8", plugged or
 - with special test nipple



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