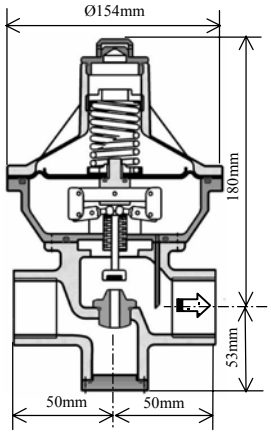
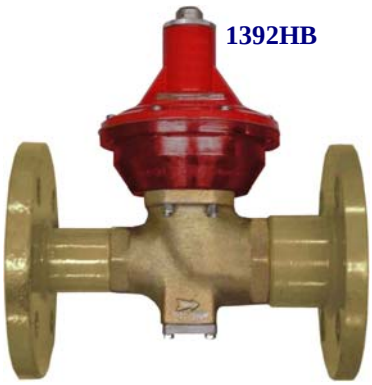
COMAP **1391-1392** CLESSE

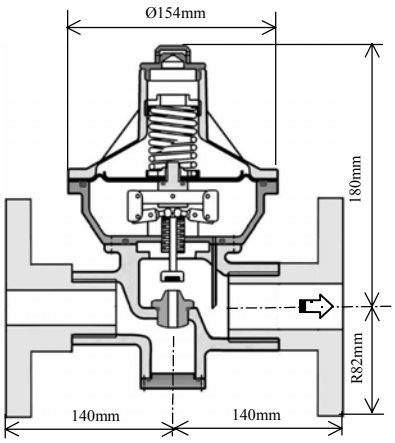
High pressure regulators 300-400 kg/h LPG

1391HF

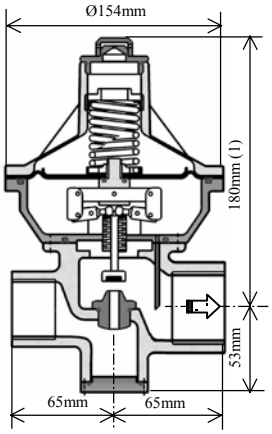


1392HB



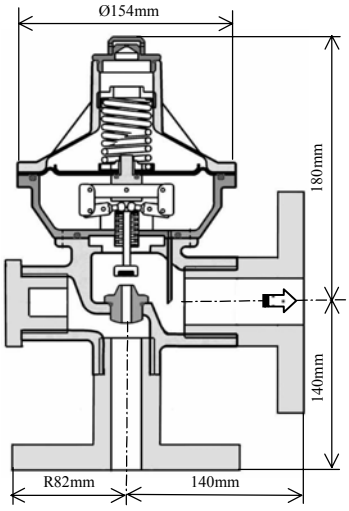


1392HF



(1) 051002AC : 185mm

1392HE



Application

- These high pressure regulators are mainly used as first stage regulation device in high capacity LPG installations like:
  - gas supply for industrial process
  - canalised distribution for domestic gas supply
- They are also used as limiters (also called monitor). They are then mounted in series with the regulator, and they are set to a pressure which is slightly above that of the latter.
- They can also be used with other non-aggressive gases : Natural Gas, Nitrogen, Air,….
- Most of them (see table) can be equipped with a safety against overpressure (OPSO) and against underpressure (UPSO).
- Working temperature: -20 / +60°C (-4 / +140°F).

Compliance with directive

All regulators are manufactured in compliance with the Pressure Equipment Directive (PED 97/23/CE). In accordance with this directive only those regulators having at least one connection larger than DN25 (1") may be CE marked.

Features

- High performance, well stabilised outlet pressure.
- Compact and robust design.
- Pre-set outlet pressure, internally adjustable
- Connections adapted to the various applications: female or flanges, in line or 90° position.
- Reinforced diaphragm sealed with an independent O-ring.
- Vent protected from rain by a labyrinth design
- Easily dismountable for inspection and maintenance.
- Made in EC, joint project Coprim-Clesse

Construction

- Housing and cover in die-cast aluminium alloy protected by painting.
- Valve body in spheroidal graphite cast iron SF420, protected by zinc coating.
- Diaphragm in NBR complying with EN 549 reinforced with polyamide fibres.
- Valve pad and seals, in NBR complying with EN 549.
- Spring in zinc coated steel.
- Internal sensing device.
- Valve Ø 17mm

1391 - 1392

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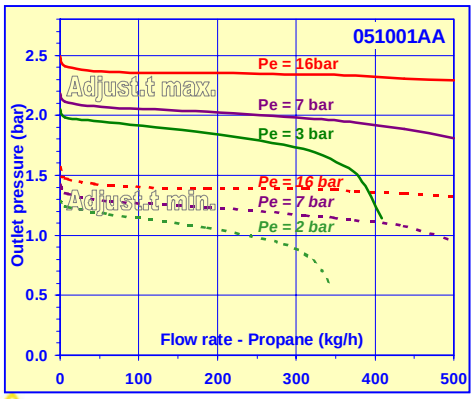
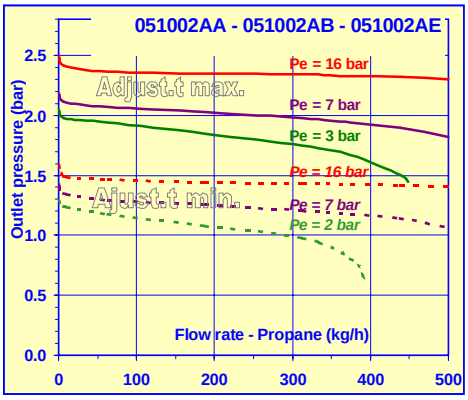
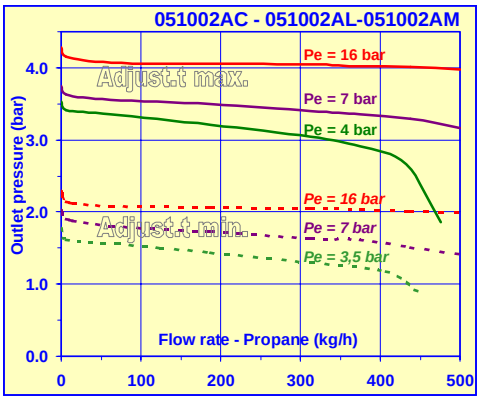
Performances







Product range

Product Code	Product Name	Inlet Connection	Outlet Connection	Inlet Pressure bpe (1)	Outlet Pressure Pas (Wa) (2-4)	Outlet Pressure Wh (3)	Guaranteed flow-rate Propane (5)	Cg (6)	Weight	Opso-Upso Connection
051001AA	1391HF	Rc 1" (BSP-ISO7)	Rc 1" (BSP-ISO7)	2,5-16 bar *36-230 psig*	1,5 (1,4-1,9) bar *22 (20-27) psig*	0,5-1,9 bar *7-27 psig*	300 kg/h *14 MBTU/hr*	170	3kg	Yes
051002AA	1392HF	Rc 1" (BSP-ISO7)	Rc 1 1/2" (BSP-ISO7)	2,5-16 bar *36-230 psig*	1,5 (1,4-1,9) bar *22 (20-27) psig*	0,5-1,9 bar *7-27 psig*	400 kg/h *19 MBTU/hr*	230	3kg	Yes
051002AC	1392HF	Rc 1" (BSP-ISO7)	Rc 1 1/2" (BSP-ISO7)	4-16 bar *58-230 psig*	3 (2,0-3,2) bar *43 (29-46) psig*	0,5-3,2bar *7-46 psig*	400 kg/h *19 MBTU/hr*	230	3kg	Yes
051002AB	1392HB	Flange DN50	Flange DN50	2,5-16 bar *36-230 psig*	1,5 (1,4-1,9) bar *22 (20-27) psig*	0,5-1,9 bar *7-27 psig*	400 kg/h *19 MBTU/hr*	230	11kg	Yes
051002AM	1392HB	Flange DN50	Flange DN50	4-16 bar *58-230 psig*	3 (2,0-3,2) bar *43 (29-46) psig*	0,5-3,2bar *7-46 psig*	400 kg/h *19 MBTU/hr*	230	11kg	Yes
051002AE	1392HE	Flange DN50 VERT.	Flange DN50	2,5-16 bar *36-230 psig*	1,5 (1,4-1,9) bar *22 (20-27) psig*	0,5-1,9 bar *7-27 psig*	400 kg/h *19 MBTU/hr*	230	12kg	No
051002AL	1392HE	Flange DN50 VERT.	Flange DN50	4-16 bar *58-230 psig*	3 (2,0-3,2) bar *43 (29-46) psig*	0,5-3,2bar *7-46 psig*	400 kg/h *19 MBTU/hr*	230	12kg	No

(1) Inlet pressure, bpe:
bpe= range of inlet pressure (Pe.min-Pe.max), for which the regulator guarantees, at nominal setting, the given precision class AC.
For an adjustment different that the nominal setting, one must consider: Pe.min=Pa adjusted + 1bar

(2) Outlet pressure Pas(Wa):
Pas= pre-set outlet pressure Wa = possible adjustment range (Pa.min-Pa.max) with the original spring

(3) Outlet pressure Wh : maximum possible range, changing the spring

(3) Precision class : AC=20
The maximum fluctuation, in%, of the outlet pressure, for any inlet pressure in the bpe range and for any flow between 10% and 100% of the guaranteed flow rate.

(5) Guaranteed flow rate, Q(kg/h):
This refers to commercial propane at 15°C and 1013mbar atm. pressure. For other gases : Qbut (kg/h)=1.14xQ(kg/h) , Qnat gas ([n]m3/h)=0.82xQ(kg/h)

For inlet pressures higher than the minimum specified value (Pe.min), the flow rate can be higher than the guaranteed flow rate..

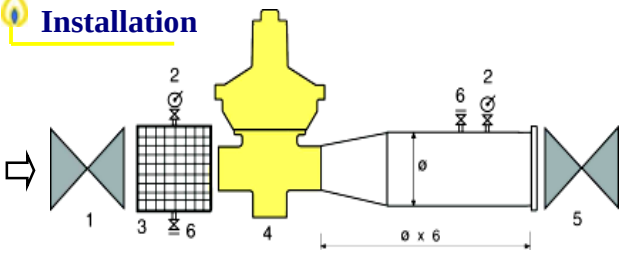
(6) Calculation of the volumic flow rate possible in all conditions:

- for (Pe-Pa)≤0,5(Pe+Pb) : $Qv = \frac{13,6}{\sqrt{d\,(t_e + 273)}} C_g \sqrt{(p_a + p_b)(p_e - p_a)}$

- for (Pe-Pa)>0,5(Pe+Pb) : $Qv = \frac{13,6}{\sqrt{d\,(t_e + 273)}} C_g \frac{(p_e + p_b)}{2}$

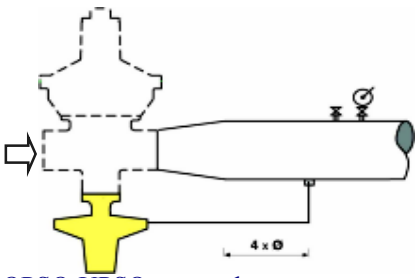
Qv = volumic flow rate - (n)m^3/h -
Pb = atmospheric pressure - bar -
Pe et *Pa* = inlet and outlet pressures - bar -
d = relative density of the gas, in relation to air
t_e = temperature of the gas on inlet - °C -
Cg = flow coefficient of the regulator

Installation



Advised installation

1 - Upstream valve
2 - Manometer with nail valve
3 - Filter
4 - Regulator
5 - Downstream valve
6 - Discharge valve



OPSO-UPSO on regulator

Accessories

OPSO-UPSO safety device, manometers, filters

For more information, contact COMAP,
16, avenue Paul Santy, 69008 LYON – FRANCE Tel : + 33 4 78 78 16 00 - Fax : + 33 4 78 78 15 25 - email : gaz@comap.fr

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