



## Pressure regulator FRN Zero pressure regulator

4.11

**DUNGS®**  
Combustion Controls



### Technical description

The DUNGS pressure regulator, type FRN, has an adjustable setpoint spring. The pressure regulator complies with EN 88 and DIN 3380.

- Input pressures up to 50 mbar
- High flow rate
- Sturdy, precise and sensitive regulation of regulator input pressure (response pressure)
- Inlet pressure compensation diaphragms
- Internal pulse for regulator output pressure as standard
- Rp 1/2 to Rp 2 threaded connection
- DN 40 to DN 100 flange connection

### Application

The DUNGS pressure regulator, type FRN, does not contain any non-ferrous metals and is suitable for gases up to max. 0.1 vol.% H<sub>2</sub>S, dry. Suitable for gases of families 1, 2, 3 and other neutral gaseous media.

### Approvals

EC type test approval as per EC Gas Appliance Directive:  
FRN ... CE-0085 AQ7126  
Approvals in other important gas consuming countries.



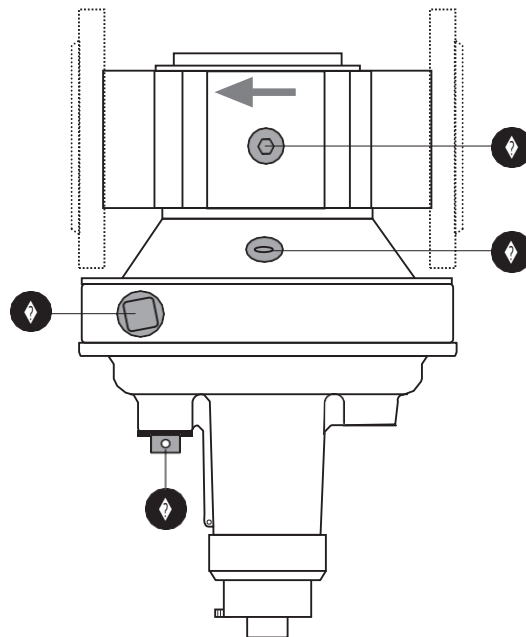
**FRN** Spring-loaded pressure regulator with adjustable setpoint spring. Internal tap of regulator output pressure; external pulse and blower pressure connections.

**Specifications**

Nominal diameters	DN 40 50 65 80 100
Pipe thread as per ISO 7/1	Rp 1 1/2 2
Flange	Connection flange as per DIN 2501 Part 1, to fit preweld flanges as per DIN 2633 (PN 16) DN 40 to DN 100, ISO 7005-2 (PN 16)
Max. operating pressure	up to 500 mbar (50 kPa)
Pressure regulator	Pressure regulator as per EN 88, Class A, Group 2
Input pressure range	2.5 mbar or $p_2 + 2.50$ mbar to 50 mbar
Output pressure range	-3 mbar to +5 mbar as a factor of adjustable setpoint spring and applied air pressure (pulse)
Materials of gas-conveying parts	Housing: aluminium, steel Seals and diaphragms: NBR
Ambient temperature	-15 °C to +70 °C
Measuring/ignition gas connections	G 1/4 ISO 228 on both sides in inlet section
Pulse connection	Existing internal in outlet section
Installation position	Regulator dome vertically downwards
Measurement opening	G 1/8 ISO 228 in the baseplate (option DN 40 to DN 100) Reclosable opening for setting system-specific values when the system is put into operation, e. g. gas motor

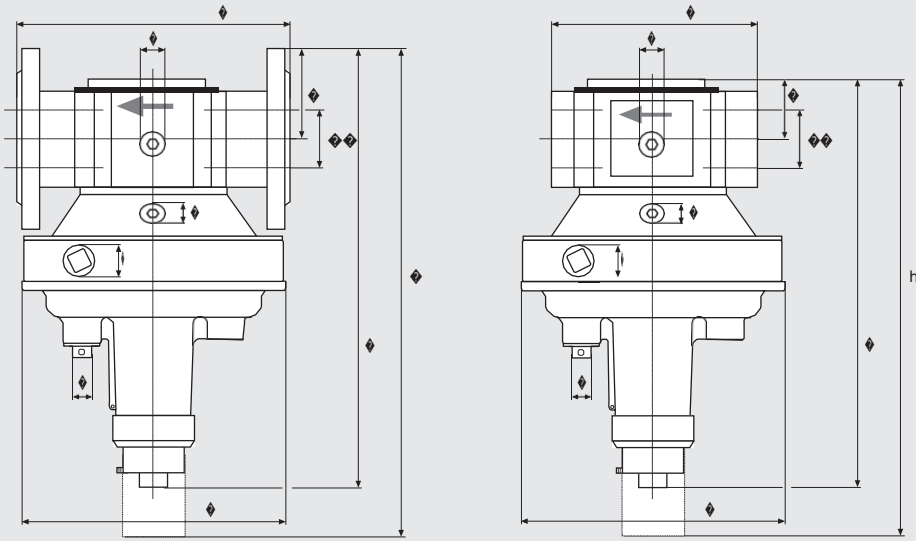
**Pressure taps  
Pulse and fan connection**

- 1 Breathing plug: connection for compensation line
- 2 Breathing plug: connection for blow-off line (min. DIN 15)
- 3 G 1/4 ISO 228 screw plug in input section on both sides
- 4 Right: G 1/4 screw plug  
Right:  $p_2$  instrument gland



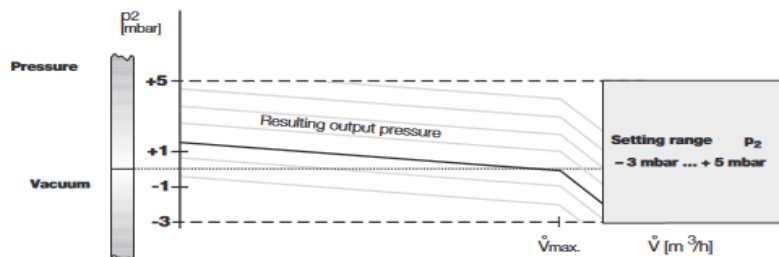
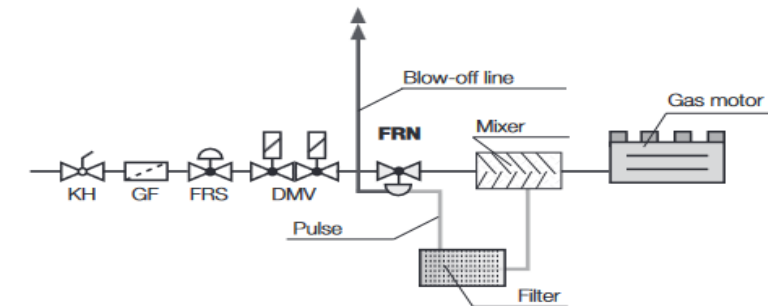


Dimensions



Type	Order No.	p <sub>max.</sub> [mbar]	Rp / DN	Dimensions [mm]									Weight [kg]
				a	b	c	d	e	f	g	h	i	
FRN 515	103 044	500	Rp 1 1/2	150	195	40	285	G 1/2	G 1/4	G 1/4	395	G 1/2	4.0
FRN 520	101 287	500	Rp 2	170	250	47	345	G 1/2	G 1/4	G 1/4	480	G 1/2	6.0
FRN 5040	172 560	500	DN 40	200	195	75	315	G 1/2	G 1/4	G 1/4	430	G 1/2	5.0
FRN 5050	172 570	500	DN 50	230	250	82.5	375	G 1/2	G 1/4	G 1/4	510	G 1/2	7.5
FRN 5065	172 580	500	DN 65	290	285	92.5	440	G 1/2	G 1/4	G 1/4	620	G 1/2	10.5
FRN 5080	172 590	500	DN 80	310	285	100	440	G 1/2	G 1/4	G 1/4	620	G 1/2	13.0
FRN 5100	172 600	500	DN 100	350	350	110	535	G 1/2	G 1/4	G 1/4	800	G 1/2	20.0

Application example  
Zero pressure regulator



The adjustment spring acts against the force due to weight of moving parts. The force due to weight is compensated as a factor of the pretension of

the adjustment spring. The chamber between the working diaphragms must be connected with atmosphere (blow-off line). A pressure

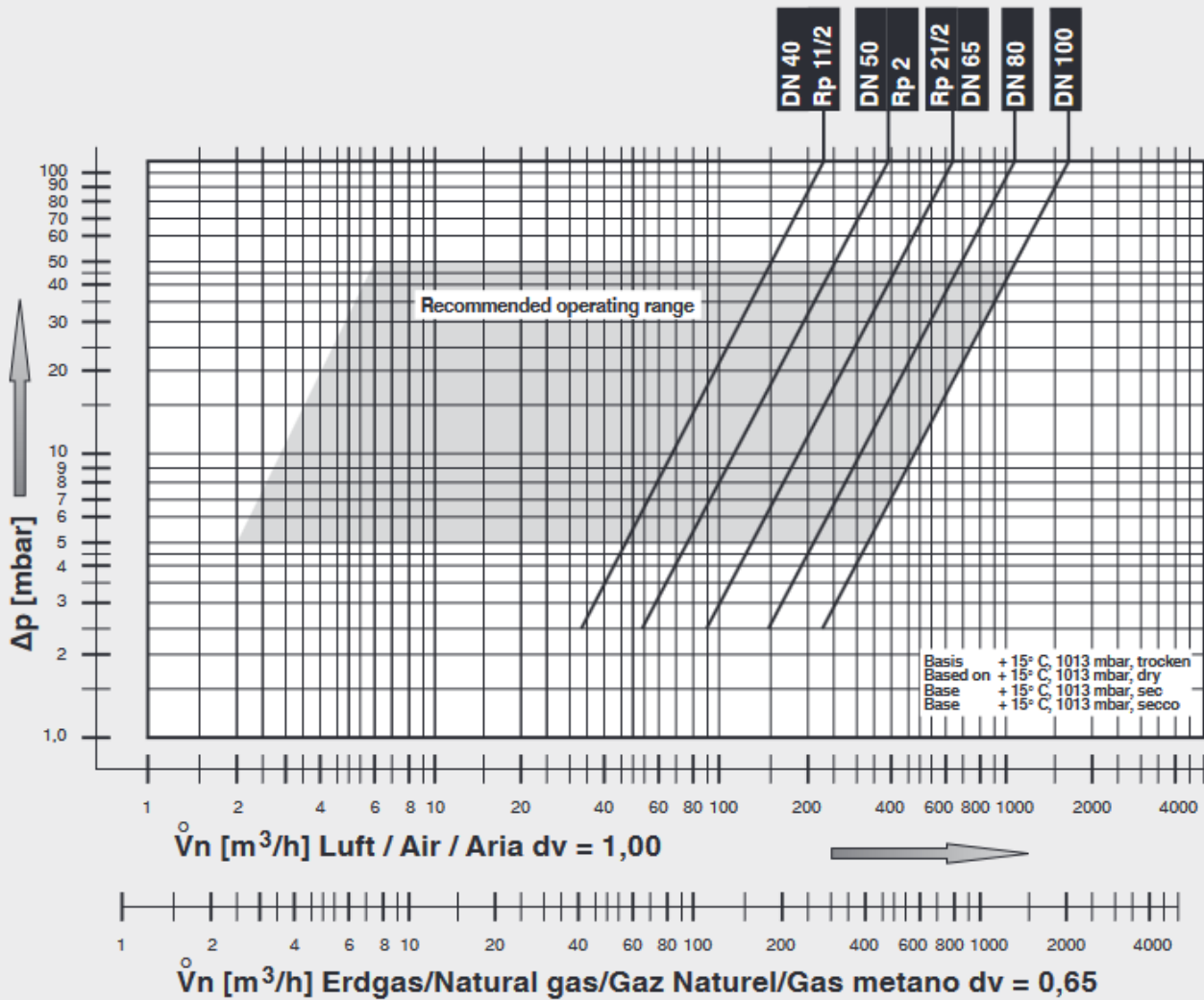
compensation line (pulse) may be connected to the regulator dome.



Pressure regulator  
FRN  
Zero pressure regulator



Flow diagram  
in regulated state



We reserve the right to make any changes in the interest of technical progress.