

# Pressure booster/Pressure limiting valves

## Pressure boosters pneumatic

up to 20 bar

**Application:** The pressure booster increases the input pressure to the value set on the control valve. The output pressure can measure max. four or two times the input pressure, but can never exceed the max. output pressure. Should an individual consumer (clamping cylinder etc.) be operated with a pressure higher than the standard network pressure, the pressure booster can accordingly increase the supply pressure for this single consumer. An installed pressure regulator maintains a constant working pressure (with less pulsation).

✓ **Advantages:** High energy saving and no electrical energy necessary directly on consumer. For a further consumer, it is not necessary to pretension the entire compressed air network to a higher level.

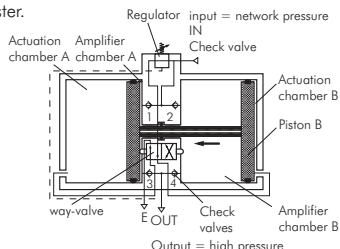
**Installation recommendation:** In order to reduce the pressure pulsation on the secondary side, we recommend creating an additional volume in the form of a container. If the volume of the downstream air line is not sufficient, then the following containers should be integrated behind the pressure booster.

Pressure booster	Container volume
DUE 60 A	1.3 to 3 litres
DUE 230 A	10 to 12 litres
DUE 1000 A	20 to 25 litres
DUE 1600-16 A	30 to 50 litres
DUE 1900 A	50 to 100 litres

**Media:** Filtered, unoled compressed air

**Installation position:** Horizontal

**Temperature range:** +5°C to max. +50°C



Type	Gear ration max.	Output pressure	Flow capacity*	Connection thread	Press. gauge connection	Pressure gauge order separately
DUE 60 A	4 : 1	2 - 20 bar	60 l/min	G 1/4"	R 1/8"	MW 2527
DUE 230 A	2 : 1	2 - 20 bar	230 l/min	G 1/4"	R 1/8"	MW 2527
DUE 1000 A	2 : 1	2 - 10 bar	1000 l/min	G 3/8"	R 1/8"	MW 1640
DUE 1600 A	2 : 1	2 - 16 bar	1600 l/min	G 1/2"	R 1/8"	MW 2540
DUE 1900 A	2 : 1	2 - 10 bar	1900 l/min	G 1/2"	R 1/8"	MW 1640

Completely plumbed with compressed air reservoir and pressure gauge (connection via quick coupling plug NW 7.2)

Type	Gear ration max.	Output pressure	Flow capacity*	Container contents
DUE 60 B5	4 : 1	2 - 20 bar	60 l/min	5 l
DUE 230 B5	2 : 1	2 - 20 bar	230 l/min	5 l
DUE 1000 B10	2 : 1	2 - 10 bar	1000 l/min	10 l
DUE 1000 B20	2 : 1	2 - 10 bar	1000 l/min	20 l
DUE 1600 B20	2 : 1	2 - 16 bar	1600 l/min	20 l
DUE 1600 B40	2 : 1	2 - 16 bar	1600 l/min	40 l
DUE 1900 B20	2 : 1	2 - 10 bar	1900 l/min	20 l
DUE 1900 B40	2 : 1	2 - 10 bar	1900 l/min	40 l

\* measured at 5 bar input and output pressure. Please note: The greater the pressure increase of P1 to secondary P2 set at the regulator, the lower the available volume flow rate, such as the DUE 230 A, which achieves a 100 litre per second supply amount at 8 bar output pressure if the input pressure is 5 bar. We would be happy to provide you with the flow-rate characteristics if needed.

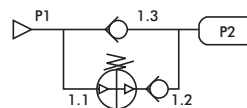
If your network pressure on P1 is partially higher than the pressure in accumulator P2 (while the pressure booster builds up the pressure), we recommend the system structure as shown in the circuit diagram on the right.

P1 = Network before the DUE ...

P2 = Accumulator behind the DUE ...

1.1 = DUE ...

1.2. and 1.3 = Check valve (see starting page 447)



**TIP** This will save you time during the increasing of the working pressure!

## Pressure limiting valves

**Application:** Manually adjustable relief valve to protect pneumatic devices from damage caused by overpressure.

**Version:** Spring-loaded diaphragm valve with adjustable opening pressure

**Materials:** Body: Zinc die-casting Z410, diaphragms and seals: NBR

**Temperature range:** -10°C to max. +60°C

**Media:** Oiled and unoled compressed air, non-toxic and non-flammable gases

**Pressure gauge connection:** G 1/4" (mini design: G 1/8")

**Switch panel thread:** Mini: M 30 x 1.5, standard: M 20 x 1.5



**Warning:** Although it is similar in function, this valve does not replace the safety valve and cannot be used as a pressure regulator!

Type	Thread	Reaction pressure	Overpressure at max. flow	Pressure gauge display	Mounting bracket
<b>Mini (flow up to 300 l/min), pressure gauge Ø 40*</b>					
DVU 01-2	G 1/4"	0.1 - 2 bar	1 - 1.3 bar	0 - 4 bar	WHM 30 + SM 1
DVU 01-3	G 1/4"	0.1 - 3 bar	1.9 - 2.1 bar	0 - 6 bar	WHM 30 + SM 1
DVU 01-7	G 1/4"	0.15 - 7 bar	2.3 - 3.1 bar	0 - 16 bar	WHM 30 + SM 1
DVU 01-10	G 1/4"	0.5 - 10 bar	1.8 - 2.0 bar	0 - 16 bar	WHM 30 + SM 1

**Standard (flow up to 2,000 l/min), pressure gauge Ø 50\***

DVU 33-3	G 1/2"	0.1 - 3 bar	Approx. 1 bar	0 - 6 bar	BW 30
DVU 33-5.5	G 1/2"	0.2 - 5.5 bar	Approx. 1 bar	0 - 10 bar	BW 30
DVU 33-10	G 1/2"	0.5 - 10 bar	Approx. 1 bar	0 - 16 bar	BW 30

### Wear part sets

DVU 01 REP	Repair set for mini design
DVU 33 REP	Repair set for standard design

\* pressure gauge is included and can be fitted if required.



When configuring the pressure limiter, please note that only the reaction pressure of the pressure limiting valve can be adjusted. Depending on the flow performance, the actual pressure at the pressure input side can be higher by the value specified for overpressure.



Sizes are found in the item details in our Online Shop

**Problem solver!**  
**Double your operating pressure.**



type DUE 230 A



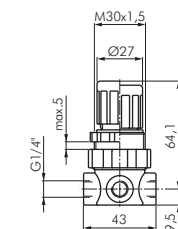
type DUE 1000 A



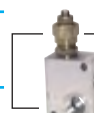
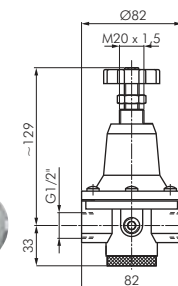
type DUE 60 B5



Mini



Standard



Pressure limiting valve for piping construction from page 455