

Air Pressure Regulators with Gauges

DT Workshop Equipment Reference — D&T / STEM resource for school workshops | Pneumatics & Air Tools



Photo: U.S. Air Force AFCEM by Master Sgt. Luke Olson — Public domain — via Wikimedia Commons (Deployed_Airmen_devise_innovative_pressure_sensor_for_A-10_Thunderbolt_II's_(8763285).jpg)

Air pressure regulators reduce compressor line pressure to the working pressure of a tool or circuit, with a gauge showing the output and an adjustment knob for setting. They protect tools and keep pneumatic behaviour consistent.

Key Features

- Inlet ratings to 15 bar
- Output ranges 0-1 to 0-10 bar
- Built-in gauges
- Relieving and non-relieving types
- Port sizes 1/8 to 1/2 inch

Typical Uses in the Workshop

- Set tool working pressure
- Protect instruments from full line pressure
- Feed demonstration and automation rigs
- Balance pressure at multiple stations

Safe Operation

1. Mount the regulator in the line
2. Close the outlet and set the knob
3. Check the gauge reads the target
4. Lock the knob where needed
5. Re-check under flow

SAFETY NOTES

- Set the outlet below the tool rating
- Do not exceed the inlet rating
- Check the gauge for damage
- Depressurise before maintenance
- Use regulators with a safety relief

Maintenance & Consumables

- Check the gauge accuracy
- Clean the adjusting mechanism
- Check the seals and ports
- Drain the supply air first
- Re-test yearly

Specification & Buying Notes

A regulator with a pressure gauge in the port size used at each station suits the workshop. Quality regulators hold set pressure; cheap ones drift and creep.