

**SIMPLE PRESSURE VESSELS**  
**EC-DIRECTIVE 87/404/EC**

This directive is mandatory and abolishes all related previous national regulations in the EU and applies only for the fabrication of 'simple pressure vessels'. However, for operation the national regulations are still applicable. Excluded from the scope of this directive are: fire extinguishers, vessels for nuclear use and vessels used for the propulsion of ships or aircraft.

The following overview gives an answer to the most frequently asked questions:

**What is a "Simple Pressure Vessel"?**

Pressure vessels fulfilling all the below listed requirements, are within the scope of the above directive:

- Design**                      Simple shape  
 (only cylindrical shells with outwardly dished and/or flat ends are permissible)
- Material**                    Pressurized parts must be made of non-alloy steel (EN 10207), non-alloy aluminum, Or non-age-hardening aluminum alloys
- General**                    The vessels must be welded and produced in series (minimum two vessels), And must not be intended for application like firing
- Medium (Fluid)**        Air or Nitrogen
- Technical Data**
- Pressure**                     $0,5 \text{ bar} < PS \leq 30 \text{ bar}$
- Energy Content**         $50 \text{ bar} \times \text{liter} < PS \times V \leq 10.000 \text{ bar} \times \text{liter}$  (PS = service pressure, V = volume)
- Temperature**             $\geq - 50^\circ\text{C}$   
 $\leq 300^\circ\text{C}$  (steel)  
 $\leq 100^\circ\text{C}$  (aluminum)
- Stress**                      e.g. for dynamic loading, has to be stated in the operating manual (number of load cycles, etc.)
- Marking**                     $\text{CE } 98 - \text{XXX}$   
      $\downarrow$                      $\downarrow$   
     Year    Notified Inspection Body, XXX = Identification Number

**Testing and Certification**

Energy Content (Bar x Liter)	Procedure	Marking by
$50 < PS \times V \leq 200$	EC Declaration of Conformity (notified body performs initial inspection)	Manufacturer
$200 < PS \times V \leq 3000$	EC Declaration of Conformity and EC-Surveillance (notified body performs initial and regular inspections)	Manufacturer + Notified Body
$3000 < PS \times V \leq 10000$	EC-Verification (notified body performs initial verification and EC-Surveillance)	Notified Body