

LPG Cylinder Connections

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I created this guide to help first responders that may be operating outside the U.S. identify common international LPG cylinder valves.



Global & Regional Connection Types

Connection Type	Region(s) Primarily Used	Key Features for Identification
POL / Type 21	US, Canada, Australia, UK, Argentina	Left-hand (counter-clockwise) internal threads. Requires a wrench/spanner unless fitted with a rubber bull-nose.
QCC Type 1 (ACME)	US, Canada, Mexico, Panama	Right-hand external threads. Large plastic nut for hand-tightening. Features an internal thermal shut-off.
LCC27	Australia	New standard with a large black cap. Safest version; gas will not release unless an appliance is fully connected.
35mm "Jumbo" (G.56)	Spain, Portugal, France, Ireland, Norway, Denmark, Finland, Chile	35mm diameter; no threads. Uses a spring-loaded "clip-on" collar and features a top-mounted on/off lever.
P13 / NBR 8614	Brazil	Clip-on / Automatic. A 20mm "butterfly" quick-connect valve without threads, common on 13kg domestic cylinders.
Shell (G.12)	Chile, Colombia, Europe, Africa, Middle East	Small, coarse right-hand threads. Often requires specific adapters to mate with US or Australian regulators.
Clip-On (Quick-Coupling)	Europe, SE Asia, Africa, Brazil	No threads. Spring-loaded locking mechanism. Common sizes include 20mm, 21mm, and 27mm.
Dish / Bayonet	Europe, Chile, Bolivia	10mm female fitting. Typically used for filling ports rather than appliance connection.

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Specialized Technical & Regional Details

- **35mm "Jumbo" (G.56):** These valves are self-closing and include an integrated safety relief valve (venting at 21–26 bar). The manual on/off lever allows for quick shut-off without removing the fitting.
- **QCC Type 1** (Quick Closing Coupling) is the North American standard connector for propane cylinders. It is characterized by its large, external right-handed **ACME threads** (CGA 791) on the cylinder valve and a large plastic nut on the appliance regulator.
- The **LCC27 (Leisure Cylinder Connection Type 27)** is the new Australian standard propane fitting for leisure gas cylinders (4kg and 9kg) and appliances like BBQs and patio heaters.
 - NOTE: The **LCC27** (Leisure Cylinder Connection) is the Australian standard update based on the North American **QCC Type 1** (Quick Closing Coupling). *They are physically compatible and share the same coarse, right-handed external ACME thread.*
- **Shell (G.12)** fitting is a standard threaded connection used primarily on European gas cylinders (particularly in Germany) and large refillable bottles. It is officially designated as a **W21.8 x 1/14 LH** connection according to DIN 477 and EN 15202 standards.
- **Brazil (P13):** Regulated by ABNT NBR 8614. If a regulator is knocked off, the gas flow can be high and immediate.
- **Argentina:** While POL is common, specialized brass adapters are often used for filling or connecting US-style tanks.

Critical Warnings

- **Thread Direction:** Flammable gas connections (like POL) often use **Left-Hand Threads**, indicated by a **notch on the nut**. Do not force it.
- **Compatibility:** Never use adapters or improvised shims to force a connection in an emergency; this significantly increases the risk of a high-pressure leak.

As a Planning Tool

- You could use this guide to assemble multiple propane connection options to ensure that your cache of equipment can operate using local propane resources if need be.

