

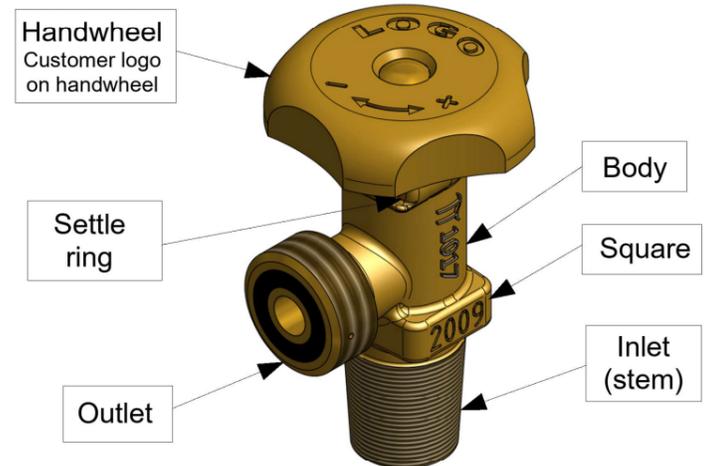
**Z6M – LPG gas cylinder valve – manually operated**

The Z6M gas valve must not be used in violation of these instruction.

1. Application

Z6M valve is an equipment of gas cylinder (from 0,5L up to 150L water capacity) for liquid petroleum gases: technical propane-butane, technical propane, technical butane. Valve can be used to fill or emptying gas cylinder. Valve is manually operated and the directions of opening and closing are marked on the handwheel by arrows with plus (Open) and minus (Close) sign. Valve is manufactured and checked on compatibility with international standard and its polish equivalent **PN-EN ISO 15995**. The valve structure is designed for use in a cylinder fitted with a shroud, protection cap or other valve cover against impacts.

| | |
|--------------------|--|
| Test pressure | 4,5MPa |
| Work temp. scope | from -20°C to +65°C |
| Valve inlet | 17E acc. PN-EN ISO 11363-1:2010 |
| Valve outlet | - standard - type G.12 (acc. PN-EN 15202:2012) formerly type E – W21.8L (with gasket in outlet) - alternative - type G.5 (acc. PN-EN 15202:2012) formerly type B – W21.8 (without gasket in outlet) - alternative - type G.4 (acc. PN-EN 15202:2012) - alternative - type G.2 (acc. PN-EN 15202:2012) |
| Valve versions | - standard - with tube (tube direction is compatible with direction of valve outlet) |
| Optional equipment | - outlet nut |
| Lifetime | 13000 openings/closings <i>Given value is correct for storage and using in room temperature and conditions</i> |

**2. Assembly**

Before assembly in gas cylinder you have to check the valve is not damaged or dirty outside or inside and the condition of the threads dimensions. Do not install a valve that is dirty inside or outside or with a damaged thread.

Each manufactured valve is checked for tightness and marked with the KJ mark after successfully passing the tightness check.

Before assembly valve in gas cylinder you should seal stem thread of the valve with PTFE tape or other equivalent, which guarantee tightness and correct valve thread engagement. For the assembly, use only this suitable tools such as torque spanner or valving machine with torque regulation, which must be calibrated according to tools producer requirements.

Grip of the tools is only allowed on valve body square 24mm.

3. Torque values

- Maximal endurance guarantee of the handwheel on closing torque - 20Nm and opening torque - 22Nm (it's not recommended to apply torque greater than 3Nm in normal work)
- Maximal guarantee torque to assembly valve in steel gas cylinder neck - 130Nm (it's not recommended to apply this value in assembly)
Note - the torque valve quoted (130Nm) is for use with PTFE tape thread sealant; for other sealants this torque can be different to make a tight connection and correct valve engagement in gas cylinder neck
- Valve should be closing with torque not exceeding 3Nm with grip on handwheel
- It's not allowed to exceed torques described in this instruction

4. Testing

Valve on each assembly must be checked for tightness test in the work pressure. To check presence of leaks it's not allowed to use the substances with ammonia. You should check all valve connections. Especially you should check the connections: cylinder-valve, body-settle ring, body-handwheel and valve outlet.

It is forbidden to repair the leakage spots of valve. If valve have leaks, any thread it's damaged or in valve is some dirt, which affected some leaks, the valve must be replaced for a new one.

5. Usage and maintenance

The condition of the valve depends on the environment, in which it worked. In each gas cylinder filling you should make sure that valve is not damaged. If the cylinder has been exposed to flames, the valve must be replaced.

Reconditioning or making valve incomplete is forbidden (inseparable construction) and is forbidden to grind down any identification marks or text (such as customer logo on handwheel) from the valve.

It's recommended to change outlet gasket on each filling of cylinder or on every damage of gasket (type and specification of gasket acc. PN-EN 15202:2012). Caps and spare parts can be obtained from suppliers of gas equipment.

6. Transport

Valve mounted in gas cylinder can be transported only under the conditions specified by the European directive ADR/RID.

Outlet of valve mounted in gas cylinder (independently of level of the gas inside the cylinder) must be protected by the outlet nut during the transport (it protects against gas leakage on unintentional opening of valve and protects against dirt).

It's not allowed to use handwheel as grip to transport the gas cylinder.

7. Identification

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|-------|--|
| | Manufacturer's logo - FAS |
| | ADR conformity mark and number of notified body |
| YY MM | Date code of manufacture, where: YY-year, MM-month |
| 17E | Identification of cylinder connection |
| KJ X | Quality Control Mark where: X is employee number |

NOTICE!

- With gas installations can work only trained personnel
- It's necessary to check condition of gas installation regularly!
- If you smell gas:**
 - Don't use phone or other electrical devices!
 - Open windows and doors, extinguish all flames, don't smoke cigarettes!
 - Close the valves of the cylinders and valves on gas equipment!
 - Immediately contact with your gas supplier from neighbour phone!
 - If you can't contact with your supplier and gas leak is enough to make an explosion, contact Fire Brigade!

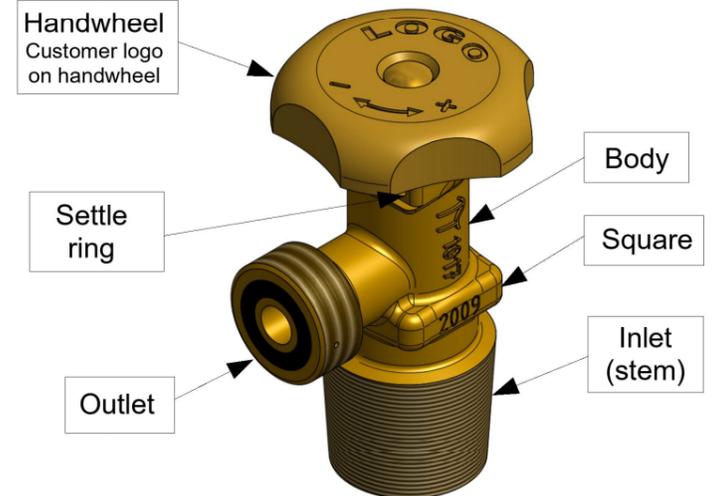
**Z6D – LPG gas cylinder valve – manually operated**

The Z6D gas valve must not be used in violation of these instructions.

1. Application

Z6D valve is an equipment of gas cylinder (from 0,5L up to 150L water capacity) for liquid petroleum gases: technical propane-butane, technical propane, technical butane. Valve can be used to fill or emptying gas cylinder. Valve is manually operated and the directions of opening and closing are marked on the handwheel by arrows with plus (Open) and minus (Close) sign. Valve is manufactured and checked on compatibility with international standard and its polish equivalent **PN-EN ISO 15995**. The valve structure is designed for use in a cylinder fitted with a shroud, protection cap or other valve cover against impacts.

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|--------------------|--|
| Test pressure | 4,5MPa |
| Work temp. scope | from -20°C to +65°C |
| Valve inlet | 25E acc. PN-EN ISO 11363-1:2010 |
| Valve outlet | - standard - type G.12 (acc. PN-EN 15202:2012) formerly type E – W21.8L (with gasket in outlet) - alternative - type G.5 (acc. PN-EN 15202:2012) formerly type B – W21.8 (without gasket in outlet) - alternative - type G.4 (acc. PN-EN 15202:2012) - alternative - type G.2 (acc. PN-EN 15202:2012) |
| Valve versions | - standard - with tube (tube direction is compatible with direction of valve outlet) |
| Optional equipment | - outlet nut |
| Lifetime | 13000 openings/closings <i>Given value is correct for storage and using in room temperature and conditions</i> |

**2. Assembly**

Before assembly in gas cylinder you have to check the valve is not damaged or dirty outside or inside and the condition of the threads dimensions. Do not install a valve that is dirty inside or outside or with a damaged thread.

Each manufactured valve is checked for tightness and marked with the KJ mark after successfully passing the tightness check.

Before assembly valve in gas cylinder you should seal stem thread of the valve with PTFE tape or other equivalent, which guarantee tightness and correct valve thread engagement. For the assembly, use only this suitable tools such as torque spanner or valving machine with torque regulation, which must be calibrated according to tools producer requirements.

Grip of the tools is only allowed on valve body square 24mm.

3. Torque values

- Maximal endurance guarantee of the handwheel on closing torque - 20Nm and opening torque - 22Nm (it's not recommended to apply torque greater than 3Nm in normal work)
- Maximal guarantee torque to assembly valve in steel gas cylinder neck - 250Nm (it's not recommended to apply this value in assembly)
Note - the torque valve quoted (250Nm) is for use with PTFE tape thread sealant; for other sealants this torque can be different to make a tight connection and correct valve engagement in gas cylinder neck
- Valve should be closing with torque not exceeding 3Nm with grip on handwheel
- It's not allowed to exceed torques described in this instruction

4. Testing

Valve on each assembly must be checked for tightness test in the work pressure. To check presence of leaks it's not allowed to use the substances with ammonia. You should check all valve connections. Especially you should check the connections: cylinder-valve, body-settle ring, body-handwheel and valve outlet.

It is forbidden to repair the leakage spots of valve. If valve have leaks, any thread it's damaged or in valve is some dirt, which affected some leaks, the valve must be replaced for a new one.

5. Usage and maintenance

The condition of the valve depends on the environment, in which it worked. In each gas cylinder filling you should make sure that valve is not damaged. If the cylinder has been exposed to flames, the valve must be replaced.

Reconditioning or making valve incomplete is forbidden (inseparable construction) and is forbidden to grind down any identification marks or text (such as customer logo on handwheel) from the valve.

It's recommended to change outlet gasket on each filling of cylinder or on every damage of gasket (type and specification of gasket acc. PN-EN 15202:2012). Caps and spare parts can be obtained from suppliers of gas equipment.

6. Transport

Valve mounted in gas cylinder can be transported only under the conditions specified by the European directive ADR/RID.

Outlet of valve mounted in gas cylinder (independently of level of the gas inside the cylinder) must be protected by the outlet nut during the transport (it protects against gas leakage on unintentional opening of valve and protects against dirt).

It's not allowed to use handwheel as grip to transport the gas cylinder.

7. Identification

| | |
|-------|--|
| | Manufacturer's logo - FAS |
| | ADR conformity mark and number of notified body |
| YY MM | Date code of manufacture, where: YY-year, MM-month |
| 25E | Identification of cylinder connection |
| KJ X | Quality Control Mark where: X is employee number |

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- Immediately contact with your gas supplier from neighbour phone!
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