

## Identifying Cylinder Valve Connections

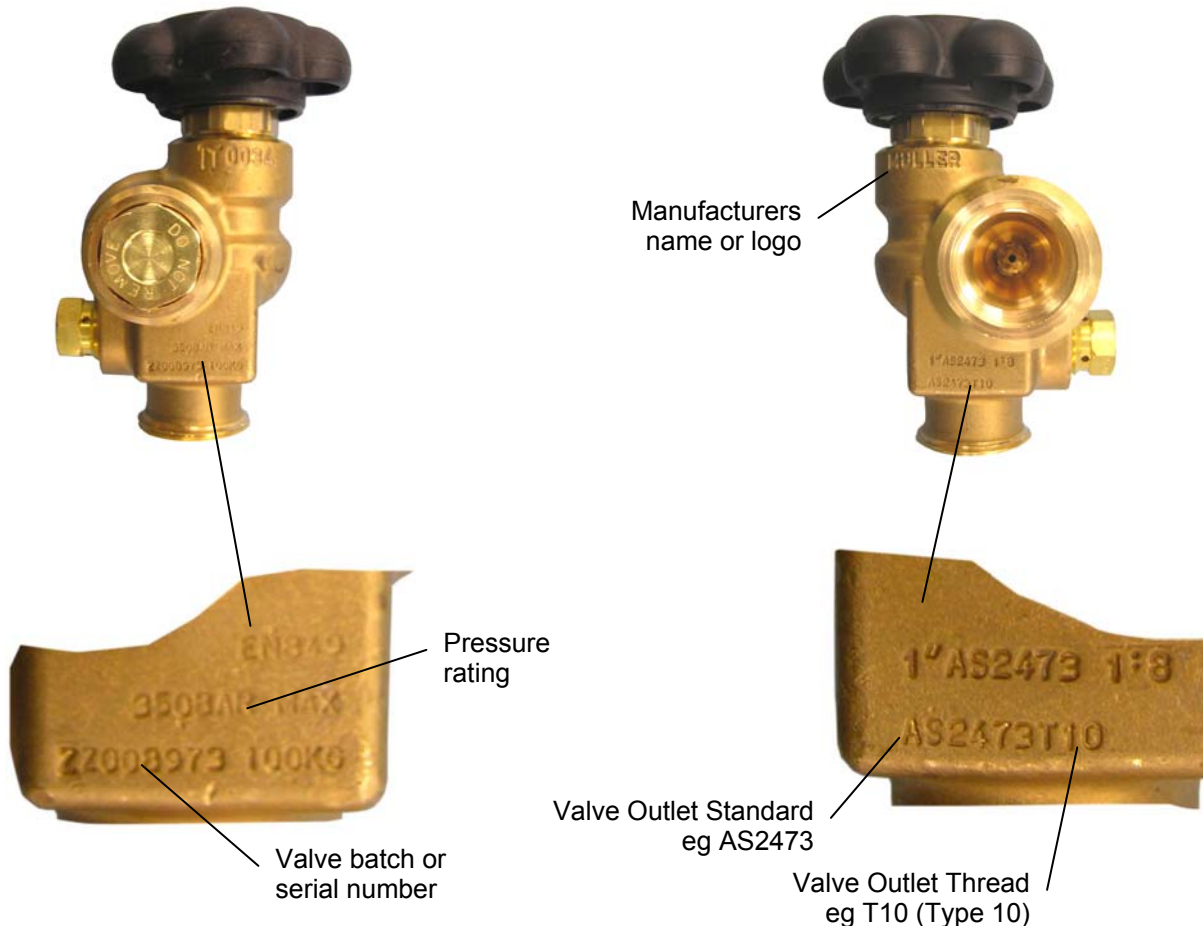
For safety reasons, the valves fitted to the gas cylinders have different outlet connections for each gas, or for each group of gases with similar properties. For some gases, or groups of gases, there may also be several different valve outlet connections to differentiate between various cylinder filling pressures.

There are two Australian Standards that detail the various cylinder valve outlet connections. They are AS2473.2 for threaded outlet connections and AS2473.3 for medical pin indexed valves. Australian threaded valve connections are referred to as Type "XX", or T"XX" connections, where "XX" is two digit number.

For some gases and gas mixtures it is not uncommon for gas cylinders to be imported from overseas. In these cases the valve outlet connection may conform to another national Standard other than the Australian Standard. Other common valve Standards seen in Australia are;

Standard	Standard No	Outlet Designation	
Compressed Gas Association (USA)	CGA V-1	CGA xxx	xxx = three digit number
German Standard	DIN477	No xx	xx = one or two digit number
British Standard	BS341	No. xx	xx = one or two digit number
French Standard	AFNOR E29-650	Type x	X = a letter

Your gas supplier should be able to advise you of what cylinder valve outlet connection your gas will be supplied with. If you have a cylinder and are unsure what the outlet connection is, inspect the cylinder valve. Valves should have some markings on them that will help identify them, refer attached photos for an example of typical valve markings.



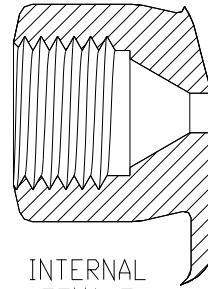
If the outlet connection cannot be determined from the valve markings you may have to describe it to somebody. To do this there are a few things to mention that will assist in identifying the valve connection.

**1. What is the gas or the gas mixture?**

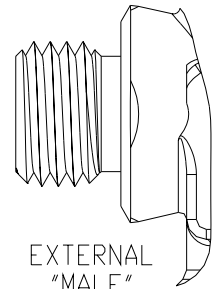
It might also be worth mentioning how the gas is supplied. This may

**2. Is the valve outlet thread male or female?**

Male is an external thread.  
Female is an internal thread.



INTERNAL  
"FEMALE"  
THREAD



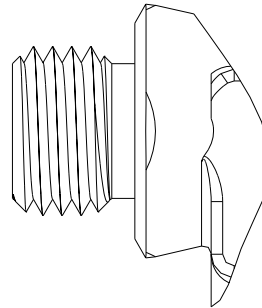
EXTERNAL  
"MALE"  
THREAD

**3. Is the thread right handed or left handed?**

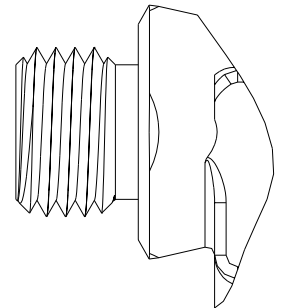
When looking side on, the grooves on a right hand thread move to the right as you follow the grooves from top to the bottom.

When looking side on, the grooves on a left hand thread move to the left as you follow the grooves from top to the bottom.

Left hand threads are often indicated by grooved notches around the valve body near the outlet connection, or the letter "LH" stamped near the outlet connection.



RIGHT HAND THREAD



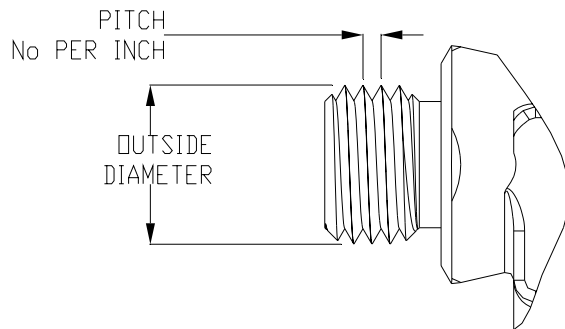
LEFT HAND THREAD

**4. What diameter is the thread?**

Measure the external diameter of male threads, or the internal diameter of female threads.

**5. What is the thread pitch?**

Using a rule or similar measuring device work out how many complete thread turns there would be in one inch of the thread. This valve is known as the T.P.I. (threads per inch).

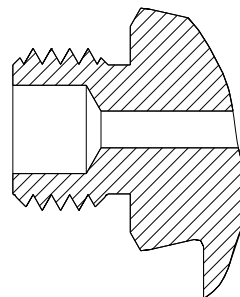


**6. How does the mating connection seal?**

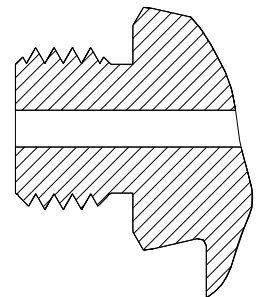
On some cylinder valves the mating part of the connection seals on an internal angled seating face. On other valves they seal on a flat end face of the valve using a sealing washer.

**7. Vertical or side outlet valve?**

When the cylinder is standing upright is the valve outlet pointing vertically upwards or horizontally sideways.



INTERNAL ANGLE  
SEATING FACE



NO INTERNAL FACE  
(FLAT END SEAL)

If all else fails take a couple of digital photos of the valve from different angles and email them to the person trying to help you identify the valve connection.