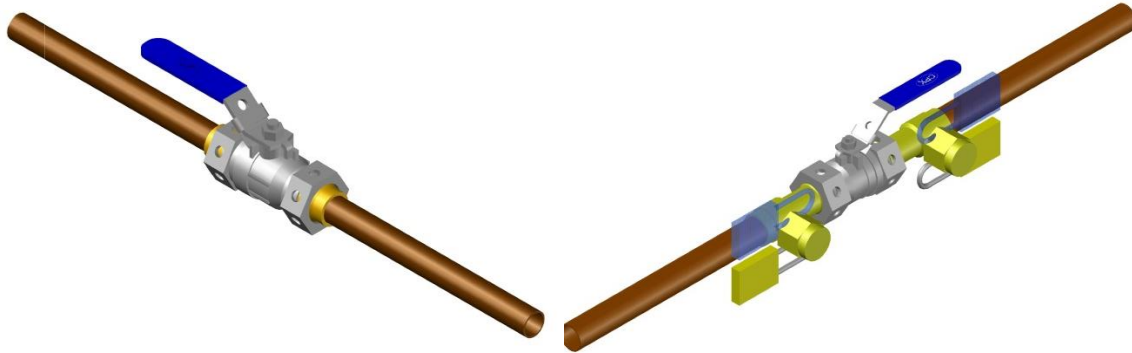


Technical Specification

Medical Lockable Line Valve

NIST Medical Lockable Line Valve



Product Description

The medical lockable line valve is intended to be used as a means of isolation on medical gas pipelines at positions specified in the design of the medical gas pipeline system in order for maintenance or major works to be undertaken. The medical lockable line valve has three variations the standard valve assembly, the NIST medical lockable line valve and the NIST medical lockable line valve with lockable NIST nuts.

The medical lockable line valve is intended to be used in conjunction with CPX NIST tee connectors to enable the line valve to conform to HTM02-01. Nickel plated nuts complete with identifying holes supplied with the CPX medical lockable line valve allow “Thru” or blank plate insertion, therefore converting to a HTM02-01 gas specific NIST valve.

The NIST medical lockable line valve includes the gas specific NIST connectors within the assembly which conform to HTM02-01 without the necessity of CPX NIST tee connectors. In addition Precision UK added an extra feature of a locking NIST nut to prevent tampering and consequently the inadvertent discharges of gas. This feature allows the NIST medical lockable line valve with lockable NIST nut to be incorporated into the hospital permit to work system. The NIST nut is lockable in 2 positions for ease of access

The medical lockable line valve should be installed at branches from risers, branches from main runs, where pipelines pass in or out of buildings, and at the connection of the pipeline to any source of supply.



Specialists in HTM02-01 Medical Gas Pipeline Equipment

The lockable line valves are built in accordance with the HTM02-01, HTM 2022, C11 and ISO7396 standard's and are suitable for Oxygen, Nitrous Oxide, Oxy-Nitrous Oxide, Medical Air, Vacuum, CO2, N2, Argon and Helium or a mixture of these gases.

Materials

The medical lockable line valve comprises of a 2-piece full bore male threaded nickel plated brass ball valve c/w chrome plated brass ball, blow out proof stem, Viton® Stem O-ring, Teflon® ball seals, 2x Locknuts with visual indicator for blanking facility and flat face copper stub pipe assemblies.

The Brass/Copper stub pipe assemblies are manufactured from medical gas copper tube compliant to BS EN 13348 and are factory soldered to brass flat face seal housings by phosphorous and silver brazed material using minimum 55% silver content, these assemblies are chemically cleaned to remove any flux and manufacturing oils, sand blasting stub pipes is not acceptable. Each stub pipe is cleaned and degreased for oxygen service and free from all particulate matter and toxic residues in accordance with HTM 02-01 and has a maximum carbon level of 0.2mg/dm².

The copper pipe stubs are of sufficient length to enable brazing directly to the medical gas pipeline system utilising flux less brazing to WKO (82)1. Flat face housing incorporate Viton® O-ring seals ensuring 100% gas tight connections.

Medical Lockable Line Valve size range:

Product Code	Type (mm)	Overall Length (mm)	Max Torque (N/m)
15LVN	15	362	30
22LVN	22	475	40
28LVN	28	475	44
35LVN	35	563	56
42LVN	42	570	60
54LVN	54	594	98
76LVN	76	785	74
108LVN	108	985	116

For gas specific NIST medical lockable line valves the gas is required to be specified i.e. 22LVN-O2.



Definition of Intended Use

The medical lockable line valve is intended to be used as a means of isolation on medical gas pipelines at positions specified in the design of the medical gas pipeline system in order for maintenance or major works to be undertaken.

The medical lockable line valve offer leak free connections as soon as they are installed to corresponding medical gas pipelines and are safe and easy to use.

The medical lockable line valve is designed to be mounted directly into a medical gas pipeline system via copper tail pipes supplied and located within wall or ceiling voids or anywhere that general access is restricted.

The copper pipe stubs are intended to be of sufficient length to enable brazing directly to the medical gas pipeline system utilising flux less brazing to WKO (82) 1.

The chrome plated valve handle is lockable in the open or closed position by way of a sliding device, the sleeve of the handle shall be blue in colour and include indication for directional arrows for open and close, the manufacturer identification mark shall be visible on the handle as per MDD/93/42/EEC Medical Device Directive, a brass padlock is provided to prevent unauthorised or inadvertent operation of the valve.

The lockable handle shall use the same size brass padlocks for the full range of ball valves from 15mm to 108mm.

The medical lockable line valve is provided with a blanking facility as a secondary means of isolation with the intention to provide a physical barrier to the gas supply in order to eliminate any risk of contamination during the initial installation or the medical gas pipeline system or any upgrade/maintenance work. Blank and thru' plates shall be manufactured from Brass, plastic is not acceptable. Visual indication of the blanking facility shall be visible through minimum 7mm orifice.

The pressure rating shall comply with HTM 02-01 guidelines, carcass testing to 18bar for pipelines with 4, 7 or 10 bar working pressures. CPX valves are rated to 25PN 2500Kpa working pressure as engraved on the valve body. All valves shall have a minimum safety factor of more than 3 times working pressure.



Quality

Medical lockable line valves are manufactured in the UK under BS EN 13485 Medical Devices: Quality Management Systems. All Lockable Line Valve Assemblies are manufactured under strict quality control procedures to ISO 9001:2008.

CE Marking

Medical lockable line valves are CE marked as a Class IIa Medical Device 93/42/EEC with notified body British Standards Institute and stamped CE 0086.

Product Cleanliness

Medical lockable line valve is cleaned and degreased for oxygen service and free from all particulate matter and toxic residues in accordance with BS EN 13348:2001 and has a maximum carbon level of 0.2mg/dm².

Each valve assembly is individually end capped and sealed in polythene bags to maintain cleanliness.

Installation Guidelines

The CPX medical lockable line valve may be installed in horizontal or vertical positions. Either way it is advisable to maintain the following sequence from left to right or top to bottom.

1. O₂
2. N₂O
3. 50% O₂/50% N₂O
4. Med AIR 4
5. Surgical AIR
6. Vacuum

The lockable line valve should be installed at a height that is easily accessible by hand. The CPX medical lockable line valve should be supported on both sides using the correct type of fixing as specified in HTM02-01. Supports should be a suitable metallic, non-ferrous material for example Brass Munsen Ring suitably treated to prevent corrosion and electrolytic action.

