

Line Ball Valve Assemblies

SPECIFICATION

Line Ball Valves c/w NISTS - HTM02-01

Medical gas line ball valves complete with lockable NIST connections and blanking spade shall be provided as a means of isolation on medical gas pipelines at positions specified in the medical gas pipeline system design. Line ball valve assemblies shall comply with NHS Health Technical Memorandum 02-01 (HTM02-01). NIST connectors shall be manufactured to BS EN 15908. Valves shall operate from the fully open to the fully closed position by manual operation of a lever through 90°. Valve nominal bores shall be equal to the nominal pipework size.

All line ball valves shall be cleaned for oxygen service. Smaller type V assemblies (15 to 54mm inclusive) shall have flat-face connectors with 'O' ring seals. The larger VF type (76 to 108mm inclusive) shall be flanged and installed with stainless steel bolts, nuts and spring washers with 3mm Viton® sealing gaskets. PTFE tape or any other thread sealing media is not acceptable.

Each Medical gas line ball valve assembly shall terminate in copper stub pipes to enable brazing direct into the distribution system using the flux less brazing technique. Valve assemblies shall incorporate a sliding lock mechanism on the handle, which can be locked in either the open or closed position using a standard padlock with a 6mm (1/4") diameter shackle. Padlocks shall be available as a standard optional item.

Each valve shall be provided with a set of "through" and "blanking" spades; and shall be coloured white and red respectively, in order to provide a physical isolation and blanking of the pipeline both upstream and downstream of the valve. The connection of the copper stub pipe to the valve body shall be fixed with a drilled brass nut. The spade shall be visible through the drilled nut when deployed. In the event of leakage of the through or blanking spade, gas shall also vent to atmosphere through the drilled brass nut connection.

Each valve assembly shall be supplied with a plastic identification tag to assist the on site management of padlock keys.

NIST Tee Assemblies

For type V valve assemblies (15 to 54mm inclusive), the gas specific NIST connection shall be provided as a separate assembly (one required both upstream and downstream of the valve). This shall be supplied as a brass NIST connection pre-brazed onto a copper tee fitting. Each NIST body shall include a plastic gas identification disc to enable clear identification on site for installation and maintenance.

NIST blanking nuts shall be capable of being padlocked onto the NIST bodies as required by HTM02-01 clause 13.64. Long shackle padlocks, individually numbered per gas type shall be available as an optional item for locking the NIST connection.

Materials

Medical gas line ball valve assemblies shall be constructed in a two-piece full-bore design with brass body, Teflon® ball seals, stem packing seal, stem 'O' ring seal and a hard-chrome plated brass ball. Vales shall be designed to have a tight shut-off and blow out proof stem for protection against pressure surges. Copper stub pipes shall be manufactured from medical grade copper pipe to BS EN 13348:2001. Copper stub pipes shall be of sufficient length to enable brazing directly into the distribution system without the need for disassembly on site.

Testing

All ball valve assemblies shall be pressure tested for valve tightness

and leakage prior to packing and shipping.

Part Numbers

HTM02-01 Type V Valve Assemblies

Part No	Description	Size
2005367	Line valve assembly with stub pipes and visible through spades	15mm
2005368	Line valve assembly with stub pipes and visible through spades	22mm
2005369	Line valve assembly with stub pipes and visible through spades	28mm
2005370	Line valve assembly with stub pipes and visible through spades	35mm
2005371	Line valve assembly with stub pipes and visible through spades	42mm
2005372	Line valve assembly with stub pipes and visible through spades	54mm

HTM02-01 Type VF Valve Assemblies c/w NISTS

Part No	Description	Size
1825636-OXY	Oxygen line valve assembly, flanged type, complete with NISTS	76mm
1825636-MA4	Medical air line valve assembly complete with NISTS	76mm
1825636-SA	Surgical air line valve assembly complete with NISTS	76mm
1825636-VAC	Vacuum line valve assembly complete with NISTS	76mm
1825936-VAC	Vacuum line valve assembly complete with NISTS	108mm

Lockable NIST Tee

Part No	Description	Size
2005560	Lockable NIST tee, O ₂	15mm
2005570	Lockable NIST tee, O ₂	22mm
2005580	Lockable NIST tee, O ₂	28mm
2005590	Lockable NIST tee, O ₂	35mm
2005600	Lockable NIST tee, O ₂	42mm
2005610	Lockable NIST tee, O ₂	54mm
2005561	Lockable NIST tee, N ₂ O	15mm
2005571	Lockable NIST tee, N ₂ O	22mm
2005581	Lockable NIST tee, N ₂ O	28mm
2005591	Lockable NIST tee, N ₂ O	35mm
2005562	Lockable NIST tee, O ₂ /N ₂ O	15mm
2005572	Lockable NIST tee, O ₂ /N ₂ O	22mm
2005582	Lockable NIST tee, O ₂ /N ₂ O	28mm
2005592	Lockable NIST tee, O ₂ /N ₂ O	35mm

2005563	Lockable NIST tee, MA4	15mm
2005573	Lockable NIST tee, MA4	22mm
2005583	Lockable NIST tee, MA4	28mm
2005593	Lockable NIST tee, MA4	35mm
2005603	Lockable NIST tee, MA4	42mm
2005613	Lockable NIST tee, MA4	54mm

2005564	Lockable NIST tee, SA7	15mm
2005574	Lockable NIST tee, SA7	22mm
2005584	Lockable NIST tee, SA7	28mm
2005594	Lockable NIST tee, SA7	35mm
2005604	Lockable NIST tee, SA7	42mm
2005614	Lockable NIST tee, SA7	54mm

2005565	Lockable NIST tee, VAC	15mm
2005575	Lockable NIST tee, VAC	22mm
2005585	Lockable NIST tee, VAC	28mm
2005595	Lockable NIST tee, VAC	35mm
2005605	Lockable NIST tee, VAC	42mm
2005615	Lockable NIST tee, VAC	54mm

2005566	Lockable NIST tee, N2	15mm
2005576	Lockable NIST tee, N2	22mm
2005586	Lockable NIST tee, N2	28mm
2005596	Lockable NIST tee, N2	35mm

2005568	Lockable NIST tee, CO2	15mm
2005578	Lockable NIST tee, CO2	22mm
2005588	Lockable NIST tee, CO2	28mm
2005598	Lockable NIST tee, CO2	35mm

Padlocks

Part No	Description	Size
2004604/A	Long Shackle Padlock for NIST - No. 10	O2
2004604/B	Long Shackle Padlock for NIST - No. 20	N2O
2004604/C	Long Shackle Padlock for NIST - No. 30	N2O/O2 Mix
2004604/D	Long Shackle Padlock for NIST - No. 40	Med Air
2004604/E	Long Shackle Padlock for NIST - No. 50	Surg Air
2004604/F	Long Shackle Padlock for NIST - No. 60	VAC
2004604/H	Long Shackle Padlock for NIST - No. 80	N2
2004604/I	Long Shackle Padlock for NIST - No. 90	CO2

2003520	Padlock for locking of line ball valve handles	All
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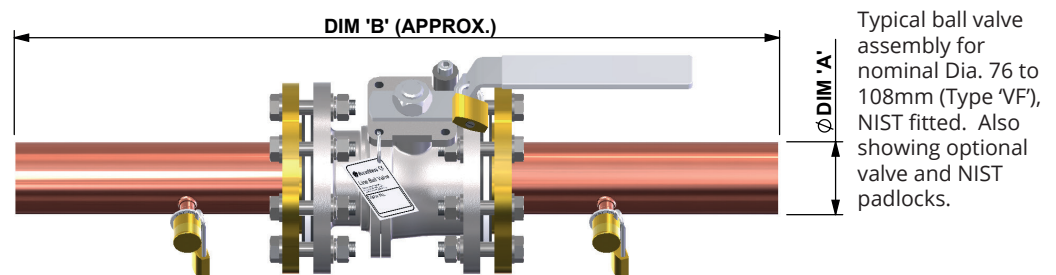
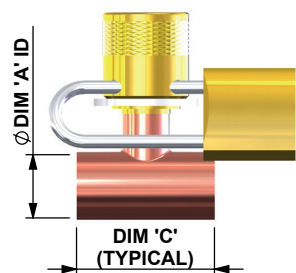
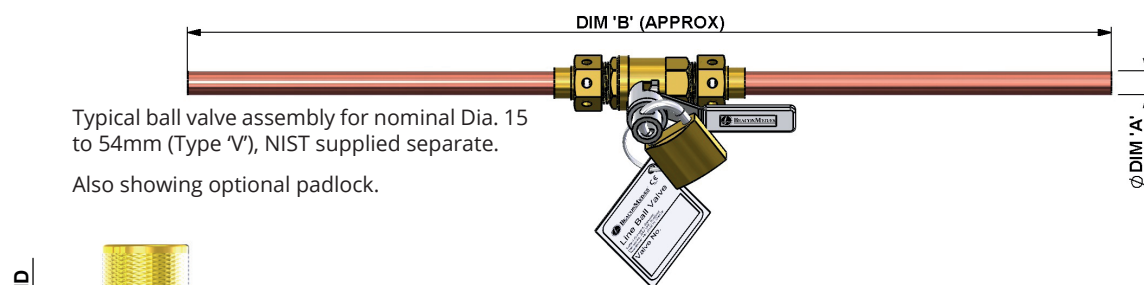
Performance and Dimensions

Nominal Dia DIM 'A' (mm)	Torque (Nm)	Working Pressure (bar)	DIM 'B' (mm)	DIM 'C' (mm)
15	5.4	55	577	38
22	8	50	574	48
28	10	40	687	56
35	14	40	705	68
42	20	35	868	73
54	33	27	872	83
76	-	16	800	-
108	-	16	810	-

CE Marking

The standard range of BeaconMedæs line ball valves are 'CE' marked under the Medical Devices Directive 93/42/EEC with approval from notified body no. 0088 (Lloyd's Register Quality Assurance). Under this directive, the specified products are classified as Class IIa Medical Devices.

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Line Ball Valves - HTM2022

Medical gas line ball valves shall be provided as a means of isolation on medical gas pipelines at positions specified in the medical gas pipeline system design. Line ball valves assemblies shall comply with NHS Health Technical Memorandum No. 2022 (HTM2022) and NHS Model Engineering Specification C11. Valves shall operate from the fully open to the fully closed position by manual operation of a lever through 90°. Valve nominal bores shall be equal to the nominal pipework size.

All line ball valves shall be cleaned for oxygen service. Smaller type V assemblies (15 to 54mm inclusive) shall have flat-face connectors with 'O' ring seal. The larger VF type (76 to 108mm inclusive) shall be flanged and installed with stainless steel bolts, nuts and spring washers with 3mm Viton® sealing gaskets. PTFE tape or any other thread sealing media is not acceptable.

Each Medical gas line ball valve assembly shall terminate in copper stub pipes to enable brazing direct into the distribution system using the flux less brazing technique. Valves assemblies shall incorporate a sliding lock mechanism on the handle, which can be locked in either the open or closed position using a standard padlock with a 6mm (1/4") diameter shackle.

Each valve assembly shall be supplied with a plastic identification tag to assist the on site management of padlock keys.

Materials

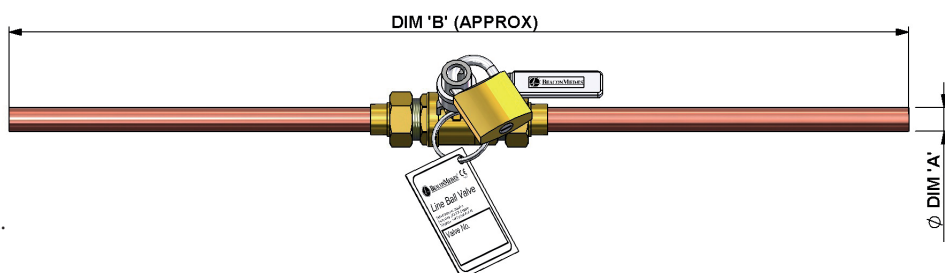
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Testing

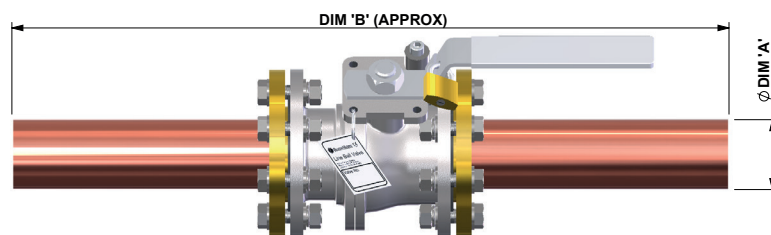
All ball valve assemblies shall be pressure tested for valve tightness and leakage prior to packing and shipping.

Typical ball valve assembly for nominal Dia. 15 to 54mm (Type 'V').

Also showing optional padlock.



Typical ball valve assembly for nominal Dia. 76 to 108mm (Type 'VF'). Also showing optional valve padlock.



Part Numbers

Part No	Description	Size
2004356	Line valve assembly with stub pipes	15mm
2004357	Line valve assembly with stub pipes	22mm
2004358	Line valve assembly with stub pipes	28mm
2004359	Line valve assembly with stub pipes	35mm
2004360	Line valve assembly with stub pipes	42mm
2004361	Line valve assembly with stub pipes	54mm
1825636	Line valve - flanged type with stub pipes	76mm
1825936	Line valve - flanged type with stub pipes	108mm
2003520	Padlock for locking of line ball valve handles	All

Performance and Dimensions

Nominal Dia DIM 'A' (mm)	Torque (Nm)	Working Pressure (bar)	DIM 'B' (mm)
15	5.4	55	570
22	8	50	567
28	10	40	680
35	14	40	697
42	20	35	858
54	33	27	859
76	-	24	800
108	-	17	810

CE Marking

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