

MEDICAL GAS LINE BALL VALVES



MEDICAL GAS LINE BALL VALVES

The Connect Medical Systems, Lockable Line Valve is suitable for new or existing applications, which require a system of secure but easily accessible medical gas isolation valves within a restricted area.

The unit is designed to be mounted directly into a medical or laboratory gas pipeline via the copper tail-pieces supplied, and located within wall or ceiling voids or anywhere that general access is restricted.

Valves can be provided with a blanking facility as a secondary means of isolation to provide a physical barrier to the gas supply in order to eliminate any risk of contamination during initial installation and upgrade.

Valves can be supplied with optional NIST fittings up and/or down stream, incorporating a 100% leak tight seal in the gas specific NIST connector. Other options include pressure sensors, pressure gauges, and multiple valve boxes.

General Description

The SCHÖNN range of medical gas line ball valve assemblies is supplied for use in plant rooms and for isolating areas where zone service units are unnecessary.

Type V Valve Assemblies

Type V valve assemblies incorporate a bright nickel plated brass body, manufactured in two strong, well proportioned valves to provide an effective seal under pressure. A sliding locking mechanism is fitted to the handle which can be locked using a standard padlock with a 6mm (1/4") diameter shackle. Suitable padlocks can be supplied as required.

The ball is manufactured from brass with a chrome plated finish.

The thermal insulated stainless steel handle is both vibration and shock resistant. The valve body is specially finished to incorporate parallel threads which accommodate matching adaptors. Stainless steel 'Dowty' bonded seals are fitted between each adaptor and the valve body to form an effective seal.

Copper stub pipes with SCHÖNN fittings complete the assembly which is brazed direct into the distribution system using pipeline connectors supplied.

Type VF Valve Assemblies

Type VF valve assemblies incorporate a bright nickel plated brass body manufactured in three strong, well proportioned pieces which are bolted together to provide an effective seal under pressure.

The ball is manufactured from brass with a chrome plated finish.

The white painted operating lever is manufactured in galvanized steel and is both vibration and shock resistant. The ball valve body incorporates flanged fittings which are bolted to flanged sub-assemblies incorporating copper stub pipes. Stainless steel bolts, nuts and spring washers and 3mm thick Viton rubber gaskets are used in the installation.

The copper stub pipes enable the assembly to be brazed direct into the distribution system.

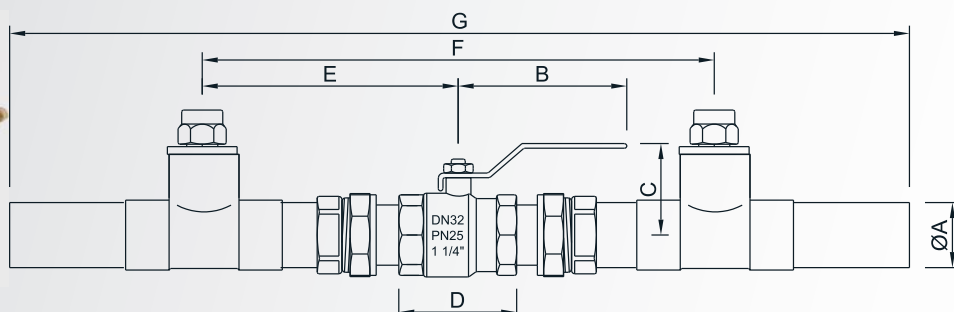
MEDICAL GAS LINE BALL VALVES



- Meets the requirements of HTM 2022, HTM02-01, C11, ISO 7396 and European Standard EN 737-3.
- High quality, quarter turn ball valve with flanged or union connections.
- Supplied with copper tail pipes for ease of installation.
- Full bore valve offering excellent flow characteristics.
- Flat faced 'O Ring' sealing surfaces.
- Robust steel lever handle, plastic coated for comfort grip.
- Effective integral locking mechanism.
- Supplied with individual random keyed padlock providing additional security.
- Available in a range of standard sizes from 15mm to 108mm, other sizes on request.
- NIST connections fitted each side of valve if required as optional extra.
- 100% leak tightness. Single or multiple valve panel mounted options.
- Easy installation, unit is provided pre-piped with corresponding tail pipes.
- Unit may incorporate local pressure switches which can be connected to remote alarm system's where requested.

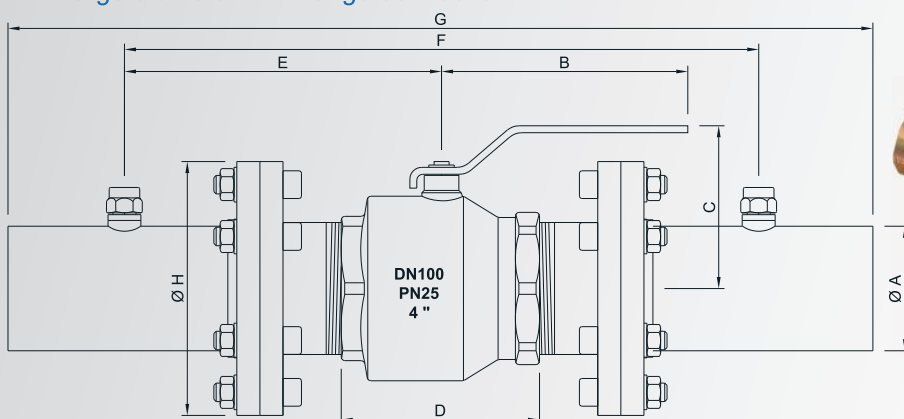
Type V Technical Drawing

— Line valve threaded connection



Type VF Technical Drawing

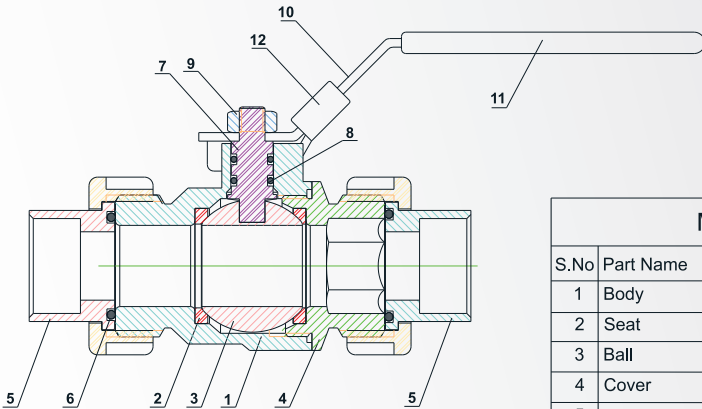
— Large diameter with flange connection



DIMENSIONS (mm)										
Valve Size	Diameter Ø (mm)	Copper Pipe Ø A (mm)	B	C	D	E	F	G	ØH	Type
R 1/2"	DN15	15	85	43	50	110	220	450		V
R 3/4"	DN20	22	85	47	58	110	220	450		V
R 1"	DN25	28	97	47	68	135	270	500		V
R 1 1/4"	DN32	35	111	60	81	155	310	520		V
R 1 1/2"	DN40	42	153	77	92	165	330	550		V
R 2"	DN50	54	153	85	108	220	440	650		V
R 3"	DN80	76	229	122	163	250	510	750	200	VF
R 4"	DN100	108	229	140	195	275	550	800	220	VF

LV-L10

Lockable Line Ball Valves

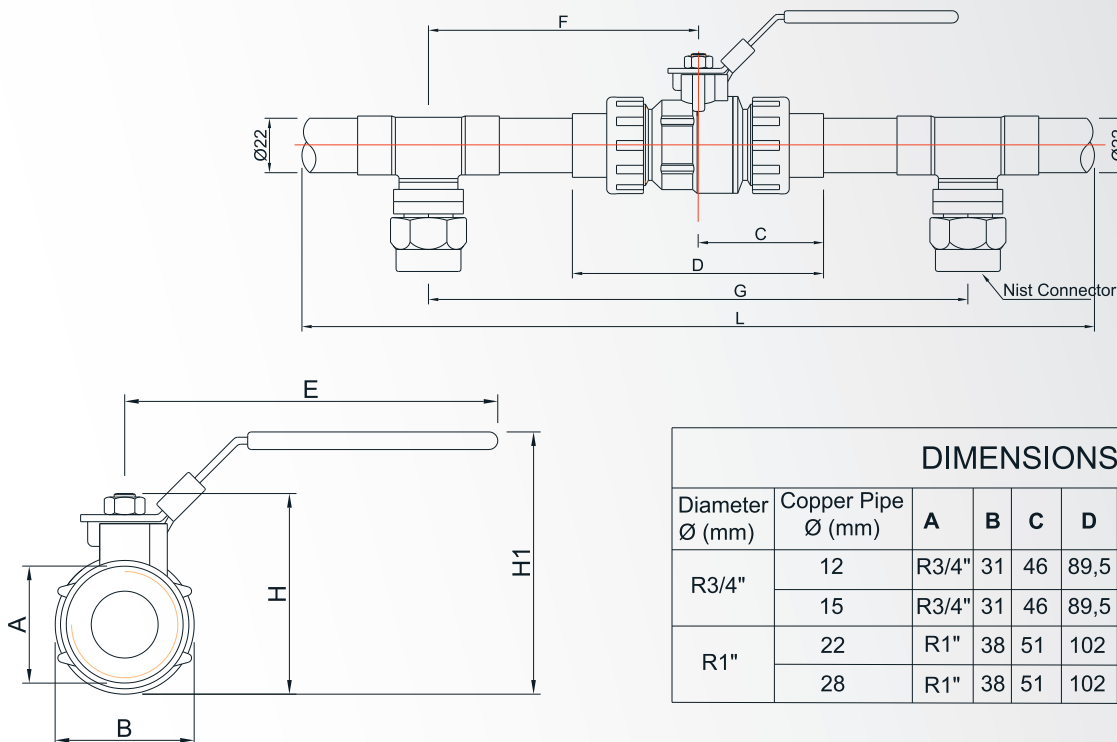


Cross Section

MATERIAL LIST		
S.No	Part Name	Material
1	Body	Forged Brass
2	Seat	Reinforced PTFE
3	Ball	Chrome Plated Brass
4	Cover	Forged Brass
5	Adapter For Copper Pipe	Forged Brass
6	Adapter Seal	Neoprene
7	Stem	Brass
8	Drive Shaft Seal	Neoprene
9	M6 Nut	304 Stainless Steel
10	Handle	304 Stainless Steel
11	Cover For Handle	Plastic
12	Locking Mechanism	304 Stainless Steel

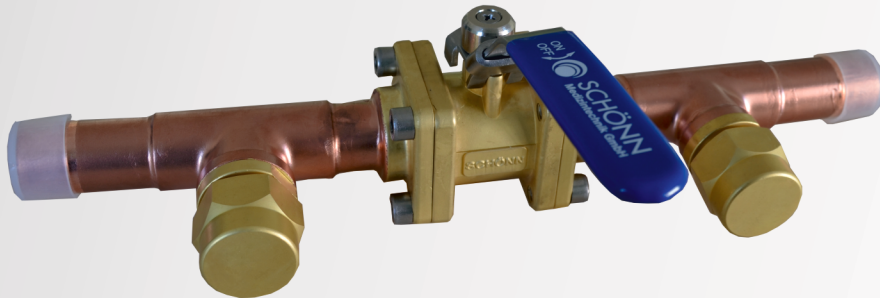


Technical Drawing

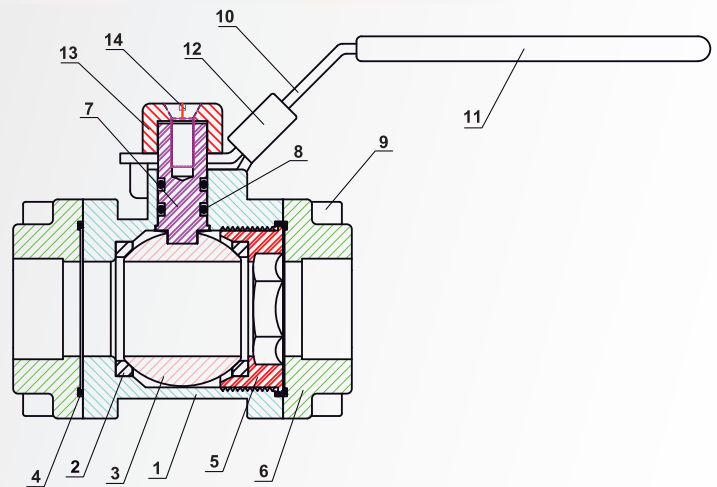


DIMENSIONS (mm)											
Diameter Ø (mm)	Copper Pipe Ø (mm)	A	B	C	D	E	F	G	H	H1	L
R3/4"	12	R3/4"	31	46	89,5	106	89	178	49	66	320
	15	R3/4"	31	46	89,5	106	89	178	49	66	320
R1"	22	R1"	38	51	102	106	93	220	57	75	350
	28	R1"	38	51	102	106	110	220	57	75	350

Lockable Line Ball Valves

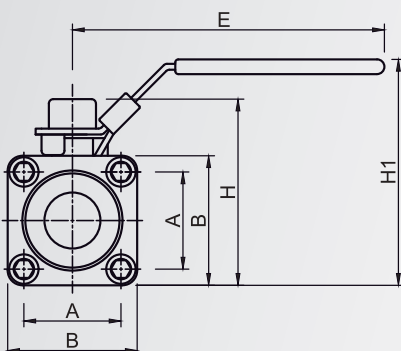
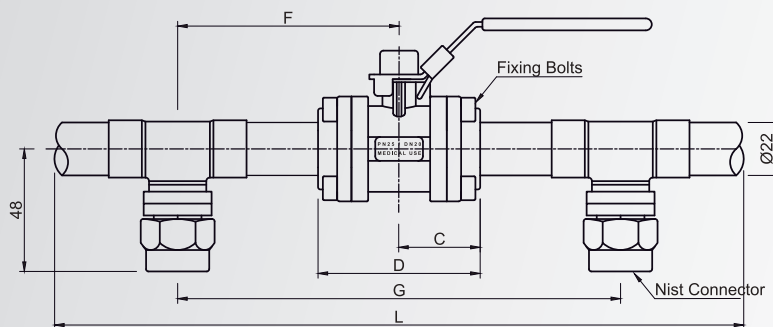


MATERIAL LIST		
S.No	Part Name	Material
1	Body	Forged Brass
2	Seat	Reinforced PTFE
3	Ball	Chrome Plated Brass
4	Body Seals	Neoprene
5	Cover	Forged Brass
6	Adapter For Copper Pipe	Forged Brass
7	Stem	Brass
8	Drive Shaft Seal	Neoprene
9	Body Bolts	304 Stainless Steel
10	Handle	304 Stainless Steel
11	Cover For Handle	Plastic
12	Locking Mechanism	304 Stainless Steel
13	Fixing Washer For Handle	Chrome Plated Brass
14	Fixing Screw For Handle	304 Stainless Steel



Cross Section

Technical Drawing

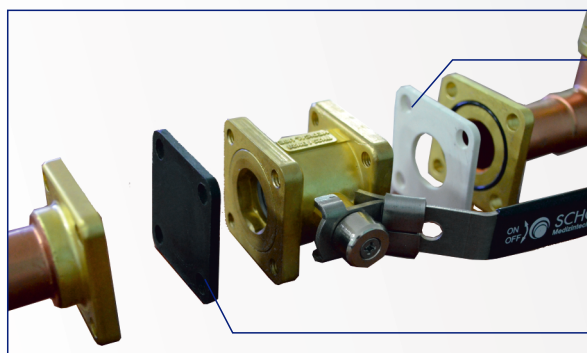


		DIMENSIONS (mm)										
Diameter Ø (mm)	Copper Pipe Ø (mm)	A	B	C	D	E	F	G	H	H1	L	Fixing Bolts
DN20	15	33	44	34	68	106	89	178	63	77	426	M6x16
	22	33	44	34	68	106	93	186	63	77	440	M6x16
	28	33	44	34	68	106	110	218	63	77	488	M6x20
DN30	35	47	58	44,5	89	106	118	236	79	92	524	M6x20
	42	47	58	44,5	89	106	164	320	79	92	624	M6x20
DN50	54	70	86	65,5	138	140	175	344	110	128	668	M8x20

■ Lockable Line Ball Valves with NIST Connectors



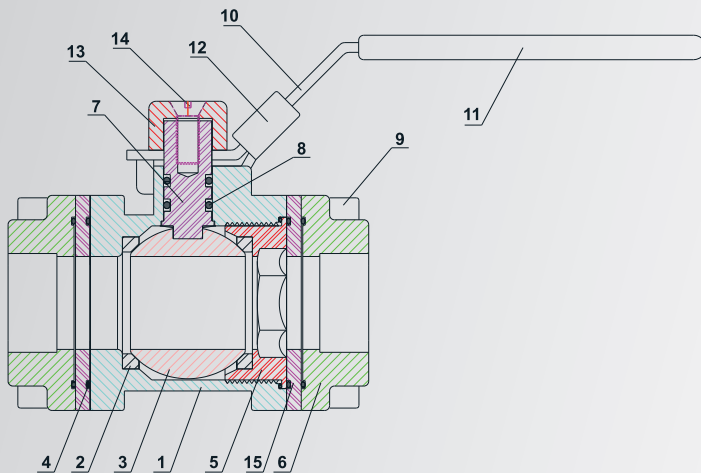
- Lockable Line Valve with Blanking Spade makes zoning easy while Testing the valve and Pipeline.
- Lockable Line Valve Blanking Spades are used red color for gas Isolation on the valve while testing.
- What color spade shall be replaced after testing to allow gas flow to the department.
- Black color Blanking Spade has been tested under 20 bar pressure.



White color Passthrough Spade

Black color Blanking Spade

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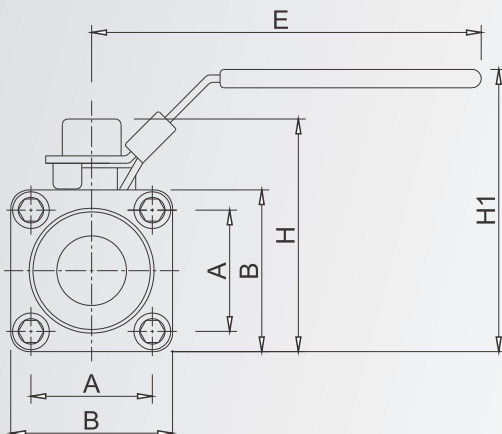
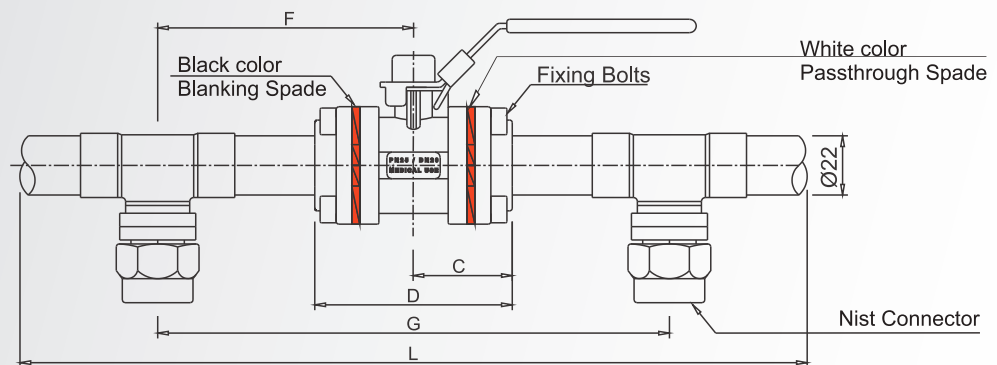


Cross Section

MATERIAL LIST

S.No	Part Name	Material
1	Body	Forged Brass
2	Seat	Reinforced PTFE
3	Ball	Chrome Plated Brass
4	Body Seals	Neoprene
5	Cover	Forged Brass
6	Adapter For Copper Pipe	Forged Brass
7	Stem	Brass
8	Drive Shaft Seal	Neoprene
9	Body Bolts	304 Stainless Steel
10	Handle	304 Stainless Steel
11	Cover For Handle	Plastic
12	Locking Mechanism	304 Stainless Steel
13	Fixing Washer For Handle	Chrome Plated Brass
14	Fixing Screw For Handle	304 Stainless Steel
14	Through / Blanking spades	Polyamide/PA6

Technical Drawing



DIMENSIONS (mm)

Diameter Ø (mm)	Copper Pipe Ø (mm)	A	B	C	D	E	F	G	H	H1	L	Fixing Bolts
DN20	15	33	44	37	74	106	93	184	63	77	426	M6x20
	22	33	44	37	74	106	96	192	63	77	440	M6x20
	28	33	44	37	74	106	113	224	63	77	488	M6x24
DN30	35	47	58	47,5	95	106	121	242	79	92	524	M6x24
	42	47	58	47,5	95	106	167	326	79	92	624	M6x24
DN50	54	70	86	68,5	144	140	178	350	110	128	668	M8x24

Design Specification

SCHÖNN Medical gas line ball valve assemblies are manufactured to the following design specification, fully tested prior to despatch and packaged individually to prevent damage during transit/storage.

Cleaning

All valves are cleaned and degreased for oxygen service and medical gas use.

Valve design specification

Design Pressure Type V: 3450 kPa (34.5 bar)

Design Pressure Type VF: 1600 kPa (16 bar)

Assembly design specification

Temperature range: Ambient

Working Pressure Type V: 2000 kPa (20 bar)

Working Pressure Type VF: 725 kPa (7.25 bar)

Performance

SCHÖNN Medical gas line ball valves provide a full bore flow, which fully satisfies the pressure drop criteria detailed in HTM 2022, HTM02-01, C11 and European Standard EN 737-3.

Designed to meet the requirements of

- HTM 02-01: Health Technical Memorandum Medical Gas Pipeline Systems.
- C11 NHS: Model Engineering Specification– Medical Gases.
- BS EN ISO 7396: Pipelines for Compressed Medical Gases and Vacuum.
- ASTM B280: Cleanliness Testing.
- Medical Device Directive 93/42/EEC (CE0086).

Size (mm)	Type	Bore (mm)
15	V	15
22	V	20
28	V	25
35	V	32
42	V	40
54	V	50
76	VF	78
108	VF	98

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