STEAM & CONDENSATE MANIFOLD

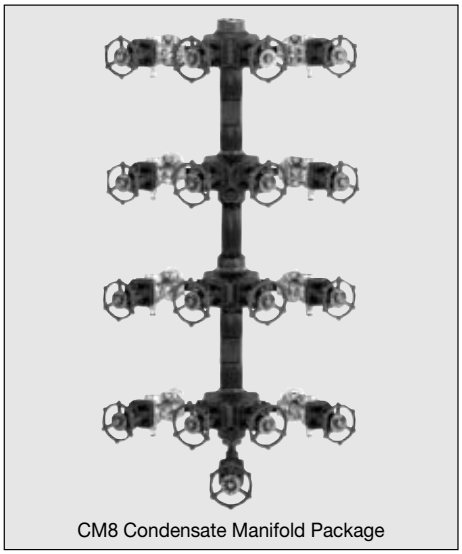
MODEL M4/SM/CM CARBON STEEL

MANIFOLDS WITH QuickTrap® STEAM TRAPS AND BELLOWS-SEALED VALVES

Features

Forged steel manifolds in all-in-one packages for steam distribution and condensate collection on tracing and other applications.

1. Rugged and versatile design minimizes installation area and easily adapts to plant requirements.
2. Each line has a built-in bellows sealed valve, minimizing installation space.
3. Good seal with stellite hardened surfaces on valve plugs and valve seats.
4. Durable stainless steel bellows eliminate gland leakage.
5. Built-in blowdown and drain connections.
6. Steam manifold and condensate manifold packages include shutoff valves and V1 trap stations.



CM8 Condensate Manifold Package

Specifications

Model			M4*	
Steam Outlet** / Condensate Inlet***	No. of Connections		4 per M4 unit	
	Connection		Screwed	Socket Welded
	Size		1/2″, 3/4″	DN 15, 20
Steam Inlet & Drain** / Condensate Outlet & Blowdown***	Connection		Socket Welded	
	Size		DN 40	
Maximum Operating Pressure (barg)		PMO	50	
Maximum Operating Temperature (°C)		TMO	400	

PRESSURE SHELL DESIGN CONDITIONS (**NOT** OPERATING CONDITIONS): Maximum Allowable Pressure (barg) PMA: 57 1 bar = 0.1 MPa
Maximum Allowable Temperature (°C) TMA: 425

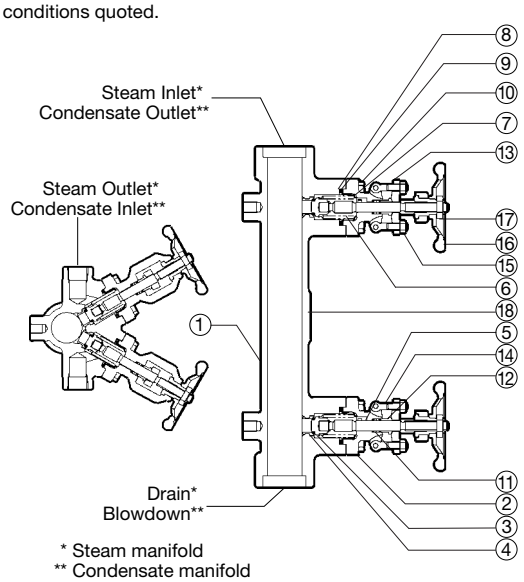
* M4 is the basic manifold; SM and CM are the manifold packages combining one or more M4 units with steam traps and valves. Specifications given here are for the M4 manifold only. Connection types/sizes and pressure/temperature ratings for the SM and CM manifold packages will vary depending on the valves and steam traps installed. See the separate Specification Data Sheets (SDS) for steam trap and valve specifications.

** When used as a steam manifold, as for SM packages *** When used as a condensate manifold, as for CM packages

⚠ CAUTION To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

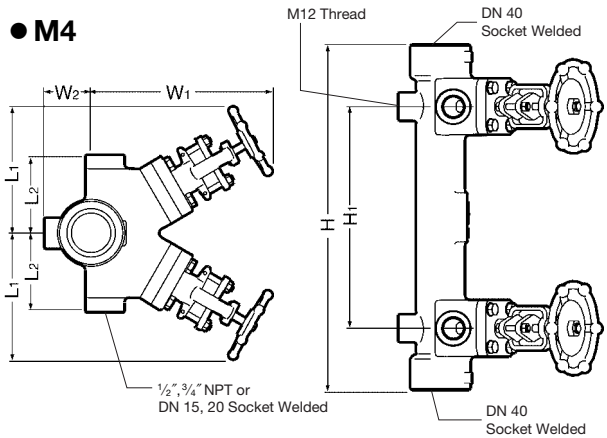
No.	Description	Material	DIN*	ASTM/AISI*
①	Body	Carbon Steel A105	1.0460	—
②R	Valve Bonnet	Carbon Steel A105	1.0460	—
③R	Valve Plug	Stainless Steel A276-304 + Stellite	—	—
④	Valve Seat	Stainless Steel A276-410 + Stellite	—	—
⑤R	Valve Stem	Stainless Steel A276-410	—	—
⑥R	Bellows	Stainless Steel SUS316L	1.4404	AISI316L
⑦R	Bellows Flange	Stainless Steel SUS316L	1.4404	AISI316L
⑧R	Lower Bonnet Gasket	Graphite/Stainless Steel SUS316	-/1.4401	-/AISI316
⑨R	Upper Bonnet Gasket	Graphite/Stainless Steel SUS304	-/1.4301	-/AISI304
⑩R	Bonnet Bolt	Alloy Steel A193 Gr.B7	1.7225	—
⑪R	Gland Packing	Graphite	—	—
⑫R	Gland Bushing	Stainless Steel A276-410	—	—
⑬R	Gland Flange	Carbon Steel A105	1.0460	—
⑭R	Gland Eye Bolt	Alloy Steel A193 Gr.B7	1.7225	—
⑮R	Gland Nut	Carbon Steel A194 Gr.2H	—	—
⑯R	Handwheel	Ductile Cast Iron FCD450	0.7040	A536
⑰R	Handwheel Nut	Carbon Steel S25C	1.1158	AISI1025
⑱	Nameplate	Stainless Steel SUS304	1.4301	AISI304

* Equivalent Materials Replacement kits available: (R) repair parts
Only components of the M4 manifold are shown here; refer to the separate Specification Data Sheet (SDS) for steam trap and valve components.
Note: The repair kit contains parts for repairing only one valve unit. Repair kits equal to the number of valve units needing repair are required.



Dimensions

● **M4**



M4 is the basic manifold; SM and CM are the manifold packages combining one or more M4 units with steam traps and valves. Dimensions given here are for a single M4 manifold only. Connection types/sizes and overall length, height and weight for the SM and CM manifold packages will vary depending on the number of M4 manifolds used and the valves and steam traps installed.

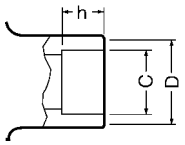
M4

(mm)

L_1*	L_2	H	H_1	W_1*	W_2	Weight (kg)
135	80	390	250	185	48	17

* At full open position

Socket Welded Connections*



(mm)

DN	ϕD	ϕC	h
15	37	21.8	13
20		27.2	
40	64	48.8	

* ASME B16.11-2005, other standards available

Manifold Packages

Manifolds are available in packages as shown.

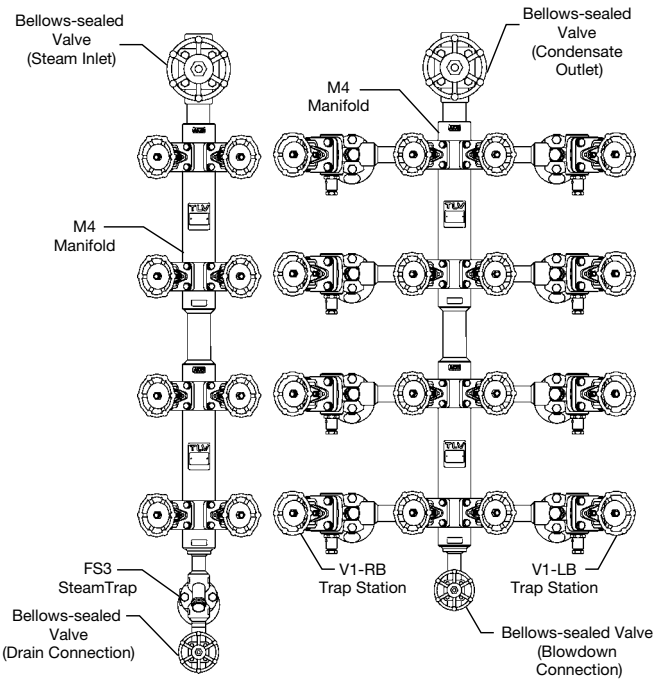
Steam manifolds include a bellows-sealed stop valve at the steam inlet, and an FS3 steam trap with a bellows-sealed stop valve at the drain connection.

Condensate manifolds include bellows-sealed stop valves at both the condensate outlet and the blowdown connections, and V1 trap stations at each condensate inlet (standard with S3 trap units, other trap units available to suit the application).

For more information, see the separate V1 and FS3 Specification Data Sheets (SDS).

Other valves and steam traps are available on request.

Manifold Package		Branches	Approximate Dimensions		
			Length (mm)	Height (mm)	Weight (kg)
Steam Manifolds	SM4	4-way	160	890	37
	SM8	8-way		1390	54
	SM12	12-way		1890	70
Condensate Manifolds	CM4	4-way	560	740	53
	CM8	8-way		1240	88
	CM12	12-way		1740	123



SM8 Steam Manifold Package

CM8 Condensate Manifold Package

Manufacturer

TLV CO., LTD.

Kakogawa, Japan

is approved by LRQA Ltd. to ISO 9001/14001

ISO 9001/ISO 14001