



STEAM & CONDENSATE MANIFOLD

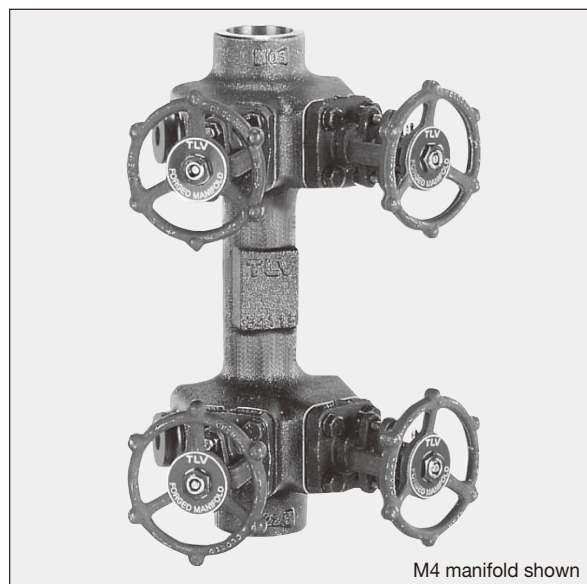
MODEL M4/M8/M12

RUGGED MANIFOLD WITH BUILT-IN BELLOWS SEALED VALVES

Features

Forged steel manifolds for steam distribution and condensate recovery 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. Complete condensate manifold packages are available, incorporating shutoff valves and steam traps.



Specifications

Model		M4		M8		M12	
Steam Outlet* / Condensate Inlet**	No. of Connections	4		8		12	
	Connection***	Screwed	Socket Welded	Screwed	Socket Welded	Screwed	Socket Welded
	Size (mm)	15, 20					
Steam Inlet* / Condensate Outlet**	Connection***	Socket Welded					
	Size (mm)	40					
Drain* / Blowdown**	Connection***	Socket Welded					
	Size (mm)	40					
Maximum Operating Pressure (MPaG) PMO		5.0					
Maximum Operating Temperature (°C) TMO		400					

* When used as a steam manifold ** When used as a condensate manifold *** Flanged connections available as an option 1 MPa = 10.197 kg/cm²
 PRESSURE SHELL DESIGN CONDITIONS (NOT OPERATING CONDITIONS): Maximum Allowable Pressure (MPaG) PMA: 5.7
 Maximum Allowable Temperature (°C) TMA: 425



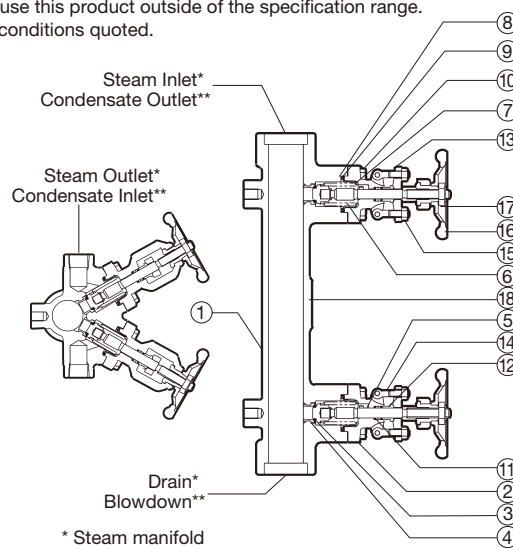
To avoid abnormal operation, accidents or serious injury, DO NOT use this product outside of the specification range. Local regulations may restrict the use of this product to below the conditions quoted.

No.	Description	Material	JIS	ASTM/AISI*
①	Body	Carbon Steel	—	A105
② ^R	Valve Bonnet	Carbon Steel	—	A105
③ ^R	Valve Plug	Stainless Steel + Stellite	—	A276-304
④	Valve Seat	Stainless Steel + Stellite	—	A276-410
⑤ ^R	Valve Stem	Stainless Steel	—	A276-410
⑥ ^R	Bellows	Stainless Steel	SUS316L	AISI316L
⑦ ^R	Bellows Flange	Stainless Steel	—	A276-316L
⑧ ^R	Lower Bonnet Gasket	Graphite/Stainless Steel	-/SUS316	-/AISI316
⑨ ^R	Upper Bonnet Gasket	Graphite/Stainless Steel	-/SUS304	-/AISI304
⑩ ^R	Bonnet Bolt	Alloy Steel	—	A193 Gr.B7
⑪ ^R	Gland Packing	Graphite	—	—
⑫ ^R	Gland Bushing	Stainless Steel	—	A276-410
⑬ ^R	Gland Flange	Carbon Steel	—	A105
⑭ ^R	Gland Eye Bolt	Alloy Steel	—	A193 Gr.B7
⑮ ^R	Gland Nut	Carbon Steel	—	A194 Gr.2H
⑯ ^R	Handwheel	Ductile Cast Iron	FCD450	A536
⑰ ^R	Handwheel Nut	Carbon Steel	S25C	AISI1025
⑱	Nameplate	Stainless Steel	SUS304	AISI304

* Equivalent

Replacement kits available: (R) repair parts

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.

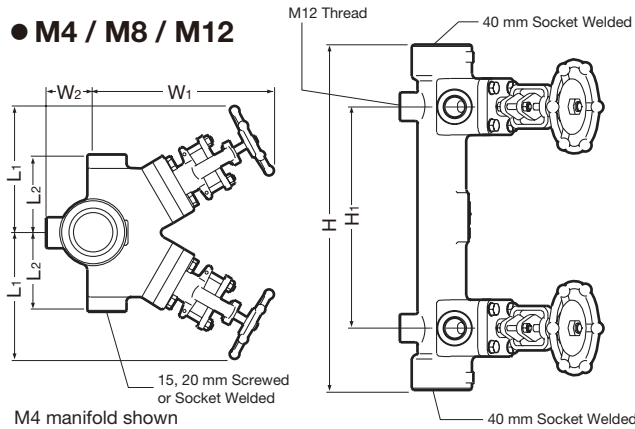


* Steam manifold
 ** Condensate manifold

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Dimensions

● M4 / M8 / M12



M4 / M8 / M12

Model	L1*	L2	H	H1	W1*	W2	Weight (kg)
M4			390				17
M8	135	80	890**	250	185**	48	34
M12			1390**				50

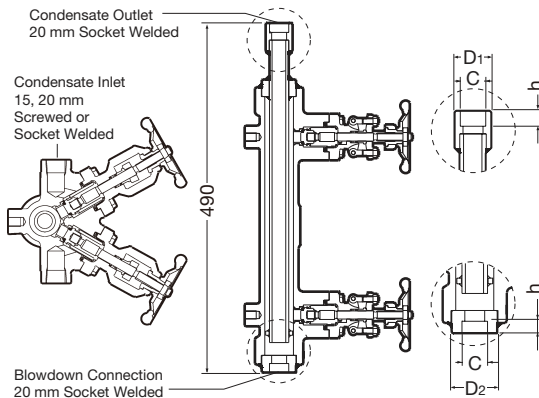
* At full open position ** Approximate

Socket Welded Connections*

Size	φD	φC		h
		JIS	ASME	
15	37	22.2	21.8	13
20		27.7	27.2	
40	64	49.1	48.8	

* JIS or ASME B16.11-2005

Optional Siphon Tube for Condensate Manifolds



M4 shown; optional siphon tubes are also available for M8 and M12

Siphon Tube Socket Welded*

Size	φD ₁	φD ₂	φC		h
			JIS	ASME	
20	37	46	27.7	27.2	13

* JIS or ASME B16.11-2005

Note: Condensate inlet connections for manifolds with siphon tubes have the same dimensions as for standard M4/M8/M12.

Optional Condensate Manifold Packages

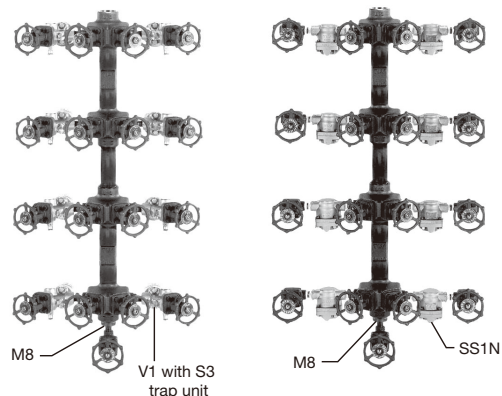
Packages are available for the M4, M8 and M12 manifolds (pictures show M8 manifold packages).

Package	Components
① With V1 Trap Stations Trap station model: Shutoff valve type: Steam trap unit: (QuickTrap*)	Right flow: V1-RB; Left flow: V1-LB Bellows-sealed valve (built in) Free Float: S3/S5/S5H Thermodynamic: P46UC Thermostatic: L21/L32
② With Steam Traps & Valves Shutoff valve type: Steam trap:	Bellows-sealed valve** Free Float: SS1** Temperature Control: LEX3N-TZ** (with built-in scale removal feature)

* For more information, see the **QuickTrap** specifications data sheet for the steam trap employing the desired trap unit (trap unit - **QuickTrap** data sheet): S3 - FS3; S5 - FS5; S5H - FS5; P46UC-FP46UC; L21 - FL21/FL32; L32 - FL21/FL32
** Other steam traps and valve types are available

Note: The operating pressure and temperature ranges of the manifold package are limited to those of the steam trap or valves used. See the specifications data sheet for the steam trap or valve, or contact TLV for more details.

① With V1 Trap Stations ② With Steam Traps & Valves



Manufacturer
TLV® CO., LTD.
Kakogawa, Japan
is approved by LRQA Ltd. to ISO 9001/14001

ISO 9001/ISO 14001

