

spirax sarco

MSC Manifolds for Steam Distribution and Condensate Collection

Description

The type MSC forged steel manifolds centralize steam distribution and condensate collection for up to 12 sources.

Both models have integral piston valves with a variety of connections, making them particularly well suited for tracing applications.

The compact design provides easy access for trap maintenance and monitoring, while the mounting arrangement permits quick installation.

The condensate collection manifold includes an internal siphon pipe to promote even temperature distribution and ensure single-phase discharge of condensate.

All units are hydro tested to 1.5 times design pressure, and painted with industrial heat resistant coating (gray) with a maximum temperature of 850°F

Operation

In operation the piston valve should be either fully open or fully closed. **Throttling service is not recommended.**

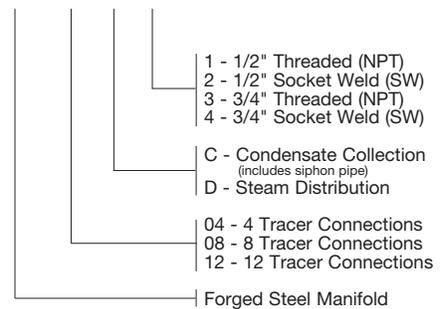
As the piston valve has such a large sealing area it is not necessary to use a valve key to ensure dead tight shut-off.

Technical Data

Body design rating	ANSI Class 300 (PN50)
PMA	740 psig @ 100°F (51 Bar g @ 38°C)
TMA	797°F @ 406 psig (425°C @ 28 bar g)
Min allowable temp	-20°F (-29°C)
PMO (Sat. steam)	600 psig @ 500°F (41 bar g @ 260°C)
Hydrotest pressure	1,110 psig (76 bar g)
N° of connections	4, 8, 12
Connection sizes	1/2", 3/4"
Connection types	NPT, SW to ANSI B16.11 Cl. 3000
Piston valve CV	2.1 (per valve - both sizes)

MANIFOLD NOMENCLATURE

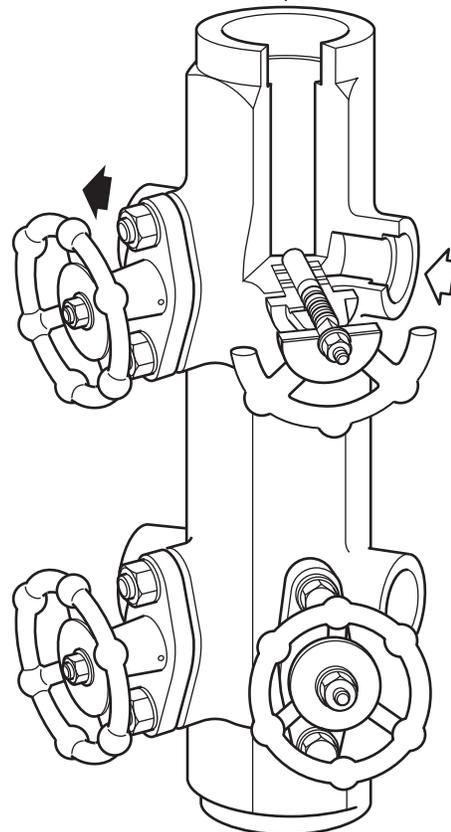
MSC 08 C 1



Alternatives

Flow direction when used for steam distribution duty

Flow direction when used for condensate collection duty

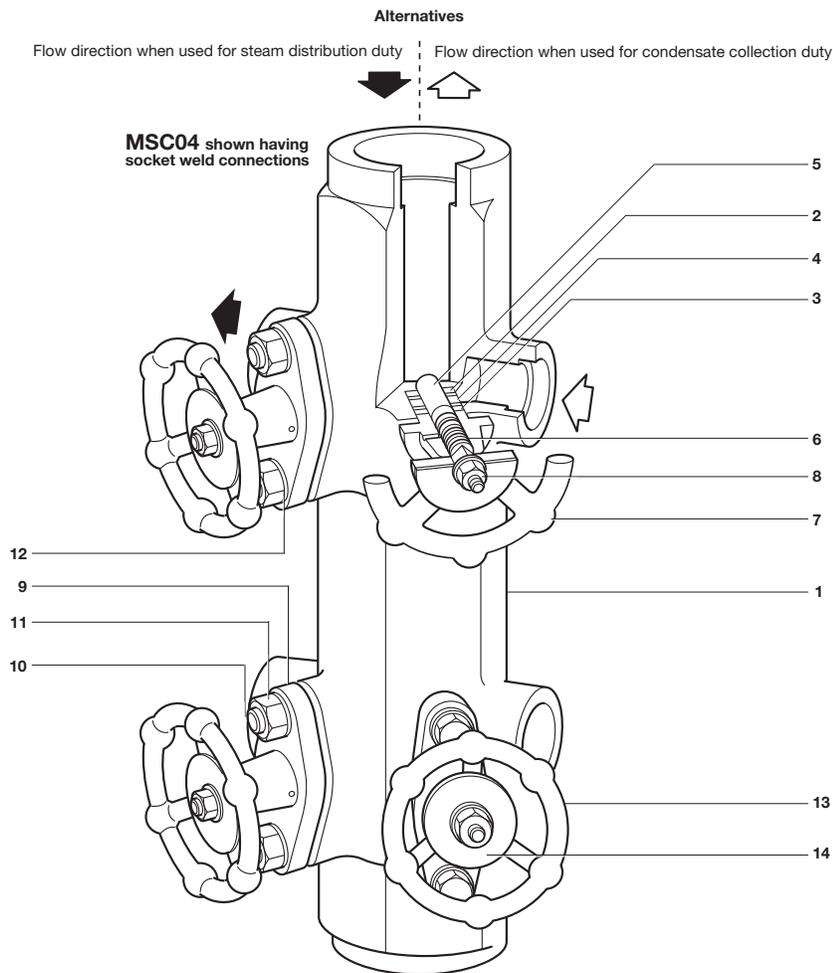


MSC04 shown having socket weld connections

Local regulation may restrict the use of this product below the conditions quoted. Limiting conditions refer to standard connections only.

In the interests of development and improvement of the product, we reserve the right to change the specification.

TI-6-804-US 3.14



Materials

No.	Part	Material	
1	Body	Carbon steel	ASTM A105N or ASTM A350 LF2
2	Lower ring	Graphite and stainless steel	
3	Upper ring	Graphite and stainless steel	
4	Lantern bush	Steel	
5	Piston	Stainless steel	ASTM A479 F316
6	Spindle	Stainless steel	ASTM A479 F410
7	Handwheel	Carbon steel	ASTM A105N
8	Handwheel nut	Steel	
9	Bonnet	Carbon steel	ASTM A105N or ASTM A350 LF2
10	Studs	Stainless steel	ASTM A193 Gr. B8
11	Nuts	Stainless steel	ASTM A194 Gr. 8
12	Washers	Stainless steel	
13	Handwheel	Stainless steel	
14	Name-plate	Stainless steel	

Spare parts

The spare parts available are detailed below. For ease of replacement an extractor tool is available for removing the sealing rings.

Available spares

Sealing ring set	2, 3
Valve internals set	2, 3, 4, 5, 6, 8, 13
Extractor tool	

How to order spares

Always order spares by using the description given in the column headed 'Available spares' and state the type and size of manifold.

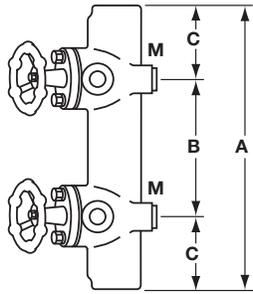
Example: 1 off Sealing ring set for an integral piston valve on a carbon steel manifold MSC04 1/2" socket weld.

TI-6-804-US 3.14

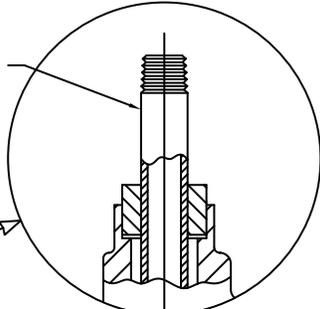
Dimensions & weights (nominal) in inches/mm and lb/kg

Type	A	B	C	D	E	F	G	H	J	K	L	M	N	Weight
MSC04	13.0 330	6.3 160	3.3 85	4.3 110	2.8 71	1.9 48	1.5 38	3.0 75	4.3 110	5.1 130	2.0 50	M12	1.8 45	22 lb 10 kg
MSC08	25.6 650	6.3 160	3.3 85	4.3 110	2.8 71	1.9 48	1.5 38	3.0 75	4.3 110	5.1 130	2.0 50	M12	1.8 45	44 lb 20 kg
MSC12	38.2 970	6.3 160	3.3 85	4.3 110	2.8 71	1.9 48	1.5 38	3.0 75	4.3 110	5.1 130	2.0 50	M12	1.8 45	66 lb 30 kg

MSC04

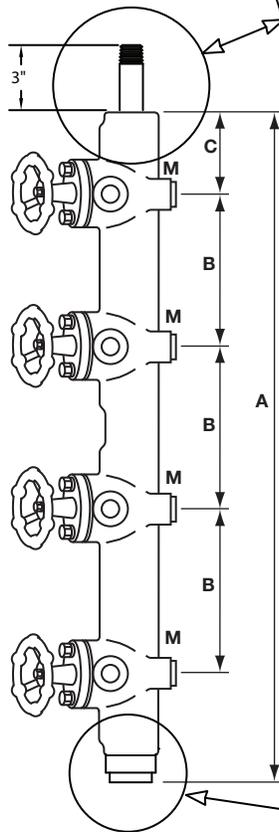


3/4" A106 PIPE
SCH. 80 M.N.P.T.
SIPHON TUBE



OUTLET DETAIL
N.T.S.

MSC08
Shown as condensate
collection manifold

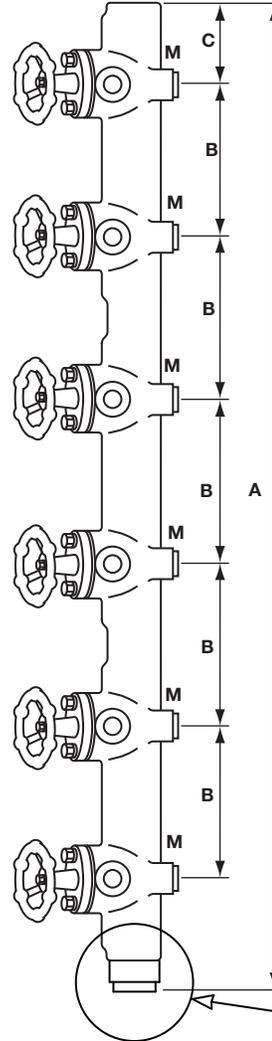


3/4" NPT 6000#
HALF COUPLING

DRAIN DETAIL
N.T.S.

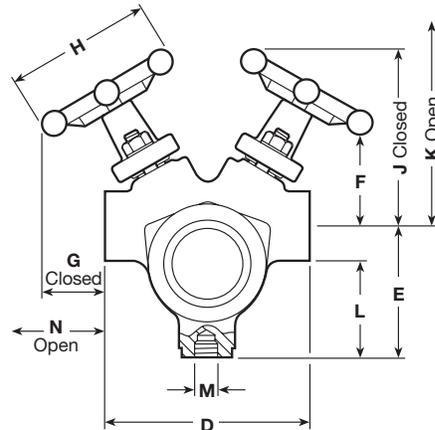
MSC12

Shown as steam
distribution
manifold



3/4" NPT 6000#
HALF COUPLING

DRAIN DETAIL
N.T.S.



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Safety information, installation and ancillaries

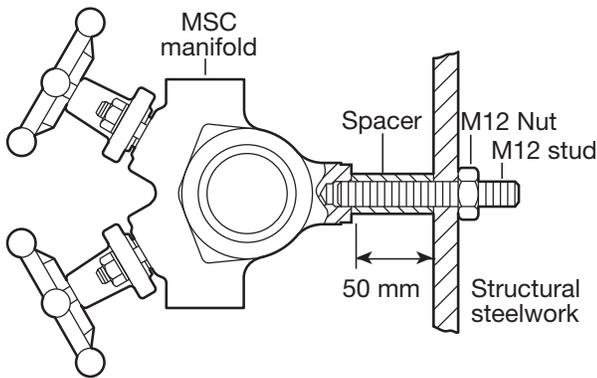
For full details see the Installation and Maintenance Instructions supplied with the product.

General

These manifolds have been designed for vertical installation. The back is provided with M12 threaded connections for ease of installation by attaching to a supporting structure. For ease of installation it is recommended that spacers are fitted to give the manifold a stand-off of at least 2" (50mm). Following installation it is recommended that the manifold is insulated to minimize radiated heat losses and to protect personnel from burn risks. For convenience the following mounting kits (comprising 50mm spacers and M12 studs and nuts) and thermal insulation blankets are available.

Ancillaries

Part Numbers	MSC04	MSC08	MSC12
Installation Kit	74287	74288	74289
Thermal Blanket (Steam)	1170063	1170263	1170463
Thermal Blanket (Condensate)	1170062	1170262	1170462



Installation view from above

Steam distribution duty

The recommended installation is with the steam inlet connection at the top of the manifold. A trap set should be fitted to the bottom of the manifold. The discharge from this trap set should ideally be returned. If it is to be discharged to atmosphere we recommend that a diffuser is fitted.

Condensate collection duty

The recommended installation is with the condensate outlet at the top. The bottom of the manifold should be fitted with a stop valve for blowdown purposes. Again, we recommend that a diffuser is fitted.

How to order

Example: 1 off Spirax Sarco MSC08 steam distribution and condensate collection manifold in A105N forged carbon steel body with integral piston valves having 8 x 1/2" socket weld connections to ANSI B 16.11 Class 3000.

Recommended tightening torques

Item	Part	 or mm		N m
8	Handwheel nut	10 A/F	M6	0.1
11	Bonnet nuts	14 A/F		5.0