

# spirax/sarco®

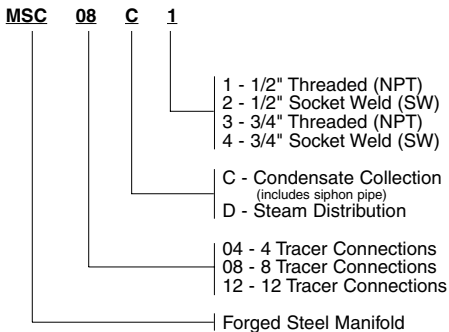
## Forged Steel Manifolds



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 hydrotested to 1.5 times design pressure, and painted with industrial heat resistant coating (grey) maximum temperature 850°F

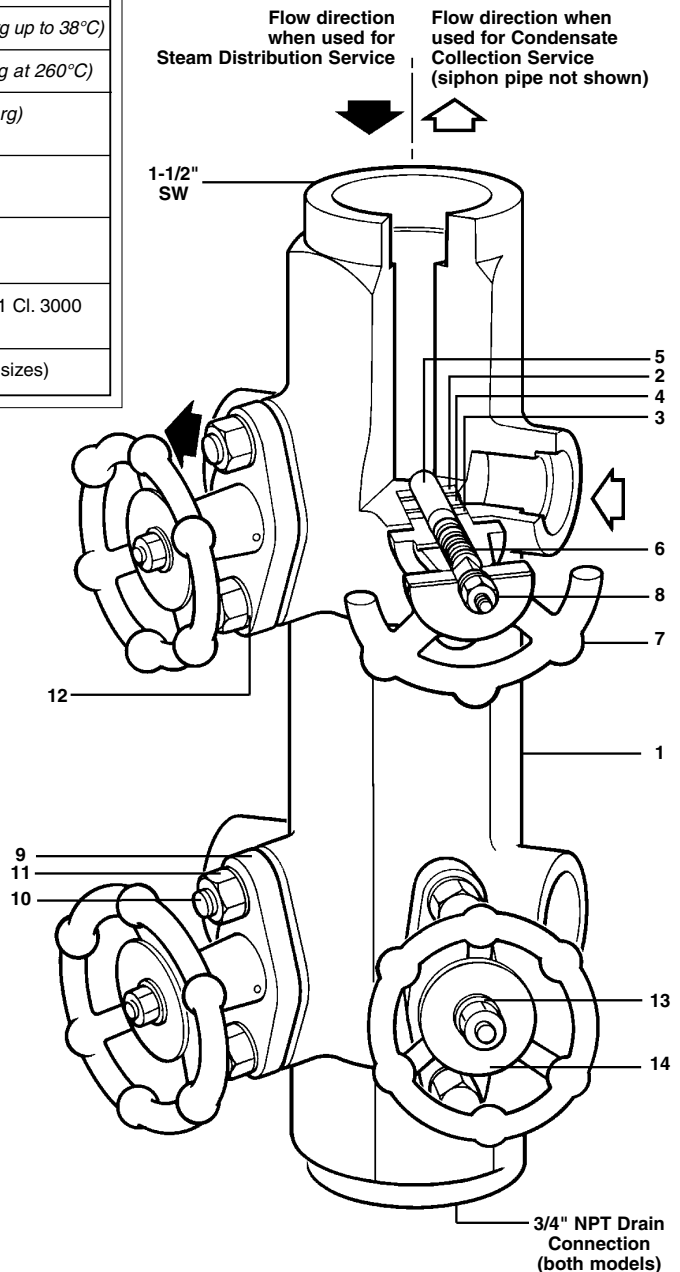
Model ⇄	MSC
<b>Body Design Rating</b>	ANSI Class 300 (PN 50)
<b>PMA</b>	740 psig up to 100°F (50 barg up to 38°C)
<b>PM0</b>	600 psig at 500°F (41 barg at 260°C)
<b>Hydrotest Pressure</b>	1,110 psig (76 barg)
<b>Number of Connections</b>	4, 8, 12
<b>Connection Sizes</b>	1/2", 3/4"
<b>Connection Types</b>	NPT, SW to ANSI B16.11 Cl. 3000
<b>Piston Valve C<sub>v</sub></b>	2.1 (per valve - both sizes)

### MANIFOLD NOMENCLATURE



### CONSTRUCTION MATERIALS

No.	Part	Material	Specification
1	Body	Carbon Steel	ASTM A105N
2	Lower Ring	Graphite and Stainless Steel	
3	Upper Ring	Graphite and Stainless Steel	
4	Lantern Ring	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
10	Studs	Steel	ASTM A193 Gr B7
11	Nuts	Steel	ASTM A194 Gr 2H
12	Washers	Steel	
13	Washer	Steel	
14	Nameplate	Stainless Steel	



MSC04D2 with socket weld tracer connections shown

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.

# Forged Steel Manifolds

## SAMPLE SPECIFICATION

Steam distribution manifold shall be a Spirax Sarco model MSC12D1. The patented piston valve upper and lower sealing rings shall be interchangeable and consist of multiple graphite and solid stainless steel layers. The manifolds shall be certified to EN10204, hydrotested to 1,110 psig (76 barg), and provided with one coat industrial heat resistant coating (grey) maximum temperature 850°F. All welding is to be performed in accordance with Section IX of the ASME Boiler & Pressure Vessel Code.

## OPERATION

The piston valves are intended to be either fully open or fully closed. Throttling service is not recommended.

## INSTALLATION

The type MSC manifolds have been designed for vertical installation. Steam traps, strainers, isolation valves, and other ancillary equipment are attached at the tracing connections provided. Threaded M12 connections have been included for attachment to a supporting structure. An optional mounting kit is available. The steam distribution manifold has a top inlet connection and a bottom drain, which should be provided with an isolation valve and steam trap. The top connection on the condensate manifold is the outlet, and the bottom drain connection should be provided with a blowdown valve. For cold weather installations, a freeze protection device is also recommended. It is recommended that the manifolds are insulated for personnel protection and to minimize radiated heat losses. An optional custom designed insulating cover is available for this purpose.

## MAINTENANCE

The integral piston valves are designed for simple replacement of the internal wear parts. Please refer to the Installation and Maintenance Instructions (IMI 6.804) for details. **CAUTION:** For personnel protection, it is imperative that the manifolds are completely isolated from the system and depressurized before any maintenance is performed.

## OPTIONAL EQUIPMENT

For ease of installation and insulation, an optional mounting kit is available which will provide a 2 in. stand-off from any adjacent structure. The kit consists of a threaded stud, spacer, and nut, designed to match the M12 mounting holes on the back of the manifold. The MSC04 requires 2 sets of fasteners, the MSC08 requires 3 sets, and the MSC12 requires 4. A custom designed one piece insulation cover is available that does not require any disassembly of the valves for installation.

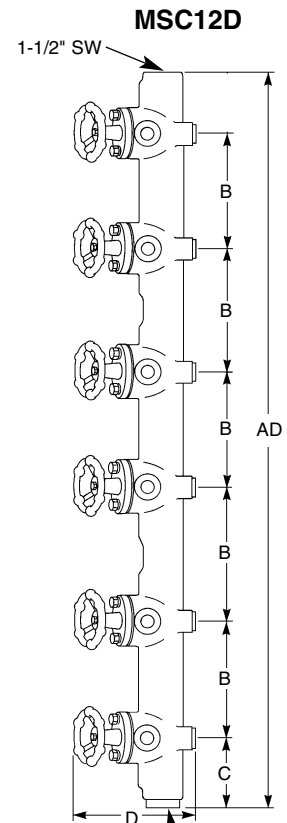
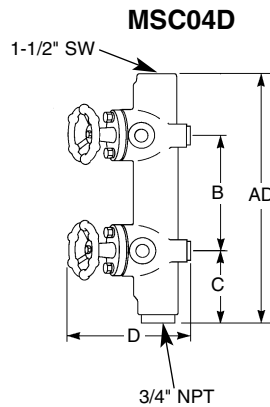
## SPARE PARTS

The available spare parts are listed below. An extractor tool is available to facilitate replacement of the sealing rings.

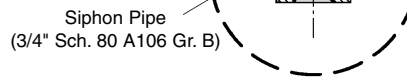
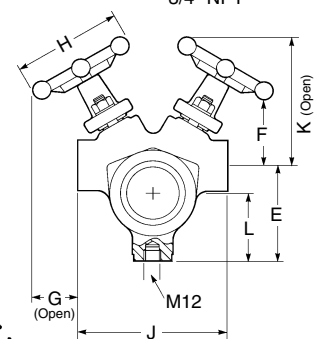
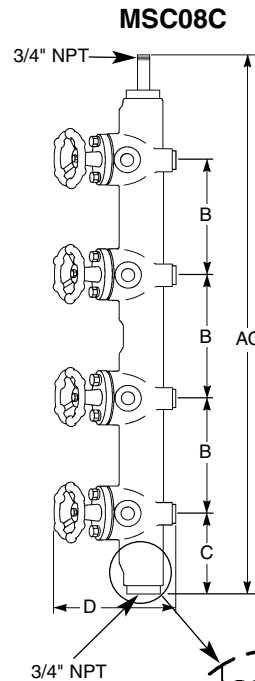
Description	Part No.
Sealing Ring Set	2,3
Complete Valve Internals Set	2,3,4,5,6,8,13
Extractor Tool	N/A

Spares are ordered by using the above description with the type of manifold. Example: "One sealing ring set for integral piston valve on MSC04D2 manifold."

## Steam Distribution (Typical)



## Condensate Collection (Typical)



	DIMENSIONS (NOMINAL) IN INCHES AND MILLIMETERS												
	AC Cond.	AD Steam	B	C	D	E	F	G	H	J	K	L	Weight
MSC04	16.75 425	13.4 340	6.25 160	3.75 95	7.5 191	2.8 71	1.9 48	1.8 45	3.0 75	4.3 110	4.7 120	2.0 50	22 lb 10 kg
MSC08	29.4 745	26.0 660	6.25 160	3.75 95	7.5 191	2.8 71	1.9 48	1.8 45	3.0 75	4.3 110	4.7 120	2.0 50	45 lb 20 kg
MSC12	41.9 1065	38.6 980	6.25 160	3.75 95	7.5 191	2.8 71	1.9 48	1.8 45	3.0 75	4.3 110	4.7 120	2.0 50	66 lb 30 kg

TI-6-804-US 01.97