# M120 AUTOMATIC CHANGE-OVER MANIFOLD

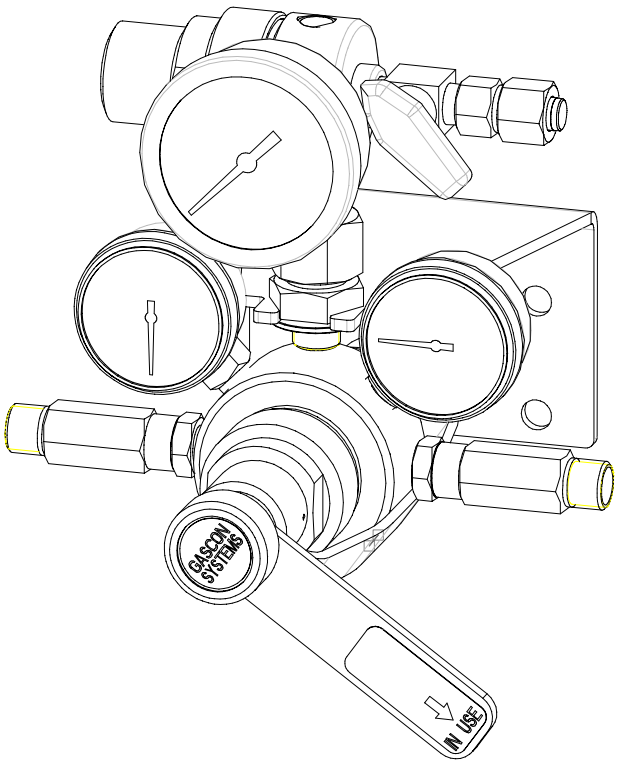
The M120 range of manifolds is a compact gas supply system for installations requiring uninterrupted **low to medium flows** of gas at constant pressure. The manifold is constructed from chrome plated brass and is for use with non corrosive gases. Models are available for industrial, medical, laboratory and high purity applications.

The manifold consists of two banks of cylinders, one on each side of the pressure control assembly. The position of the lever determines which bank of cylinders is "in use" and which is "in reserve". The manifold draws gas from the "in use" cylinder bank until it is emptied. The manifold then automatically starts drawing gas from the "in reserve" cylinder bank. When the emptied cylinder bank has been replaced the lever should be moved to the other side to reset the manifold. More detailed operating instructions are included with each manifold.

Because of the large number of options and operating requirements for manifold systems, the information contained in this leaflet should be used as a guide only. Please contact Gascon Systems to confirm your selection details.

## M120 FEATURES

- Easy to use change-over lever
- Two inlet gauges indicating supply in gas cylinder pressures at all times
- Large easy to read pipeline pressure gauge
- Pressure relief valve on primary regulators
- Test / Service Connection Point (no need to disrupt supply when checking settings)
- Modular inlet header system for expansion of systems
- Australian designed and manufactured.




## M120 ACCESSORIES

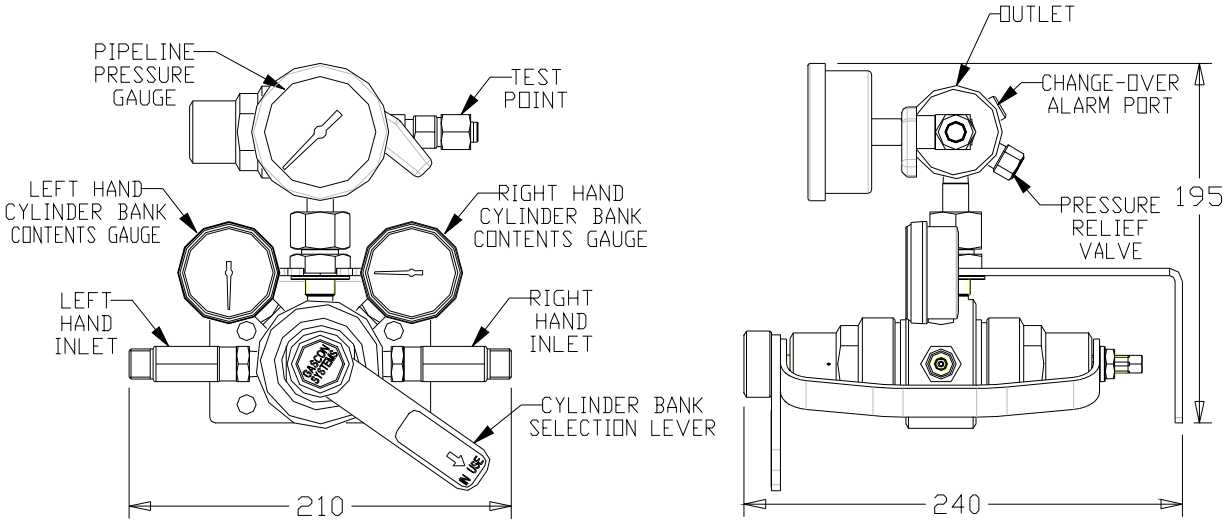
- 3-way auxiliary service facility for medical pipeline systems (refer G1135)
- Inlet purge valves for high purity applications
- Large selection of cylinder inlet leads to suit all types of applications, including copper coils, teflon and tefzel lined stainless steel flexible leads and convoluted stainless steel flexible leads
- Pressure switches for detecting cylinder change-over and/or line pressure failure
- Inlet pressure gauges with built in contact switch for detecting cylinder depletion
- Test port isolation valve (standard on medical manifolds)
- Extension kits for use with multiple cylinder banks.
- Cylinder retaining brackets

## M120 BASIC SPECIFICATIONS

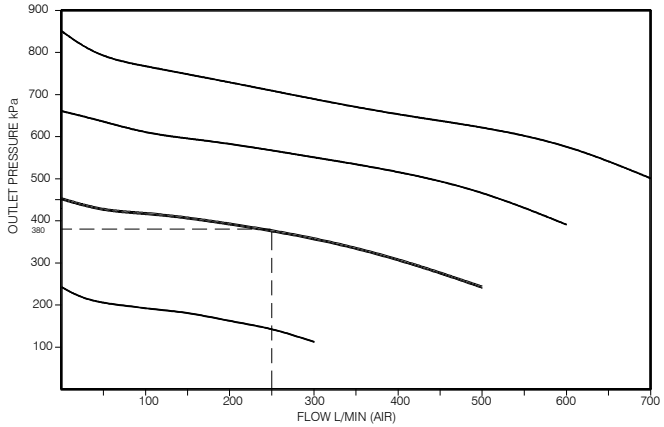
| | |
|---|---|
| Maximum Inlet Pressure | 200 Bar @ 15° C |
| Outlet Pressure Ranges | up to 6000 kPa |
| Inlet Connection | 3/8" BSP RH for industrial non-fuel gases |
| | 3/8" BSP LH for industrial fuel gases |
| | as per AS2896 for medical gases [#1] |
| Outlet Connection | 1/4" NPT Female |
| Temperature Operating Range | 0-60° C |
| Weight | 4.9 kgs |
| Basic Dimensions | 210mm x 195mm x 240mm |

#1 – older "CIG" gas specific inlets also available upon request

## BASIC DIMENSIONS




## FLOW PERFORMANCE CURVE (inlet pressure 2000kPa)




**Manifold System Design**
When selecting components, the total system design must be considered to ensure safe, trouble-free performance. Component function, material compatibility, proper installation, operation, and maintenance are the responsibilities of the system designer and user.

It is advised that system installers and users be familiar with the recommendations detailed in appropriate national standard, (eg. Australian Standards AS2896 Medical Gas Systems, and AS4289 Oxygen and Acetylene Gas Reticulation Systems).

For systems requiring higher flow capacities refer manifold models M500, M700 & M1000.

In the interests of continuous improvement, Gascon System Pty Ltd, reserves the right to change the specifications or design of any of its products without prior notice.

## ORDERING INFORMATION

**XXXX - XXX - XXX - XXX - XX**

| MODEL | | OUTLET PRESSURE (kPa) | GAS | | No. OF CYLINDERS | | OPTIONS |
|---|---|---|---|---|---|---|---|
| **M120** | Standard Manifold | User defined | AIR | Air | 1x1 | 1 cylinder per bank | **01** – Pressure Switch Change-Over |
| | | | AR | Argon | 1PxP | 1 manpack per bank | **02** – Pressure Switch Line Failure |
| **MM120** | Medical Manifold | | ACET | Acetylene | 2x2 | 2 cylinders per bank | **03** – 3-Way Auxiliary Service Facility |
| | | | $CO_2$ | Carbon Dioxide | 3x3 | 3 cylinders per bank | **04** – Inlet Purge Valves |
| **PM120** | Laboratory Manifold (Teflon lined diaphragm) | | He | Helium | 4x4 | 4 cylinders per bank | **05** – Inlet Contact Gauges |
| | | | H2 | Hydrogen | | | **06** Combined Mounting Plate for Manifold and 3 way Auxiliary Service facility |
| **HM120** | High Purity Manifold (STST diaphragm) | | LPG | Propane | | | |
| | | | $N_2O$ | Nitrous Oxide | | | |
| | | | $N_2$ | Nitrogen | | | |
| | | | OXY | Oxygen | | | |
| | | | OTHERS GASES by name or symbol | | | | |

**Note:** There is a specific model number (M200TT) for a medical turbine tool manifold assembly
M120 suitable for up to grade 3.5 gases, PM120 suitable for up to grade 4.5 gases, HM120 suitable for up to grade 5.5 gases.

### ORDER EXAMPLES

| | |
|---|---|
| M120-600-AIR-1x1 | Standard air manifold with an outlet pressure of 600kPa, one cylinder per side |
| MM120-415-OXY-3x3-01-02-03 | Medical oxygen manifold with an outlet pressure of 415kpa, 3 cylinders per side, with change-over pressure switch, line failure pressure switch and 3 way auxiliary service facility. |

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