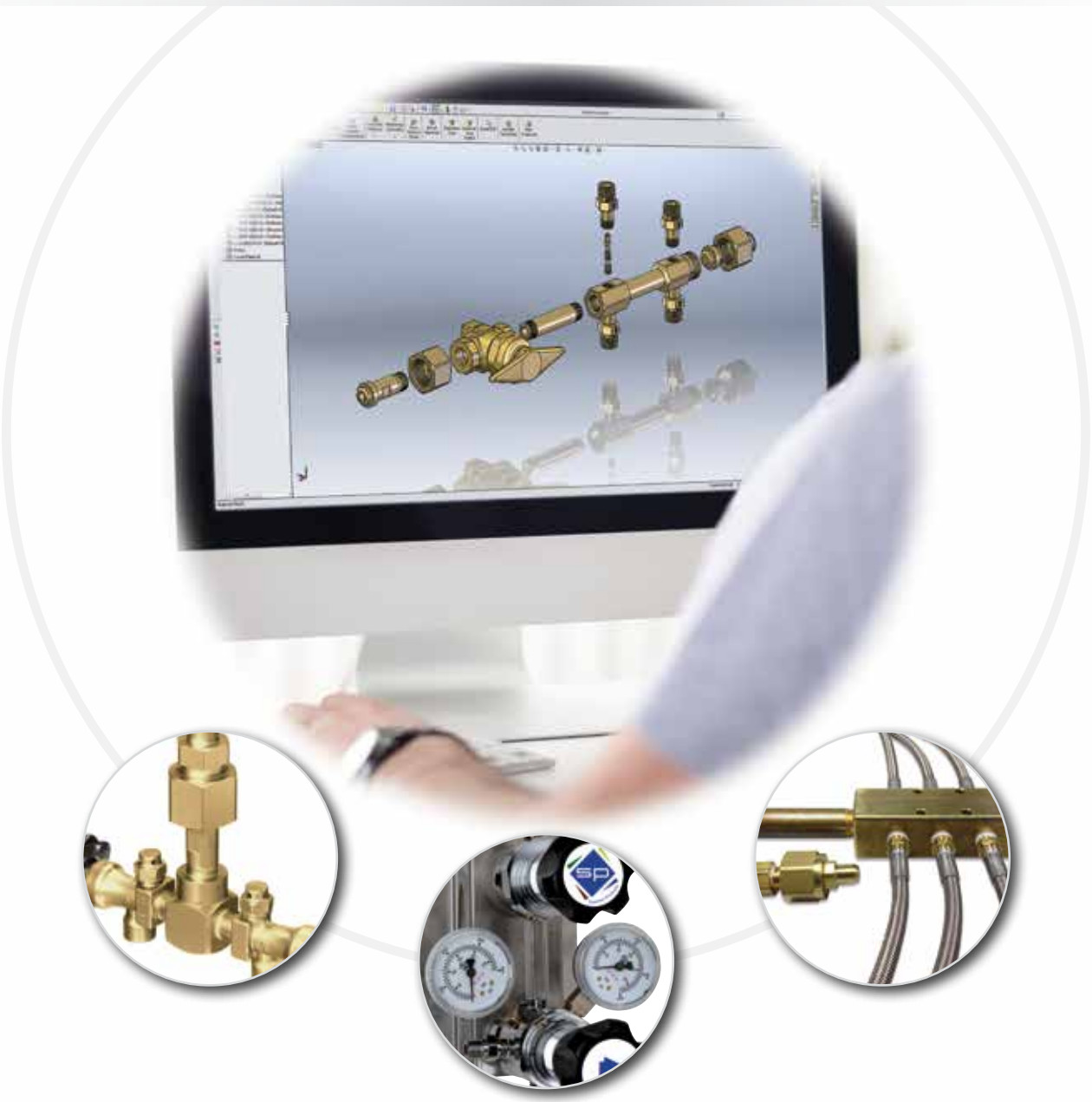
Superior Products

Redefining Gas Management Systems

GAS MANIFOLD SYSTEMS & ACCESSORIES



1946 70TH ANNIVERSARY 2016

Manifold Catalog: GMF-2016

HOW TO ORDER

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Manifold Selection Criteria

1. What gas/gas mix, CGA

2. Liquid or high pressure cylinders

3. What is the end use application

4. Required line pressure to application (PSIG)

5. Required maximum flow rate to application (SCFH)

6. Is interruption of gas service acceptable

7. Is notification of changeover or gas outage required

8. Total # of cylinders (use How To Properly Size A Manifold below)

How To Properly Size A Manifold

1. **Calculate maximum possible usage**
   Total # of welding/gas use stations X SCFH used per station = max possible usage
2. **Determine duty cycle** (Hours per day of gas use)
   8 hours/day, 16 hours/day, 24 hours/day
3. **Determine total gas usage per day**
   1. Max possible usage X **2.** Duty cycle = **3.** Total gas usage per day
4. **Determine gas volume of cylinders to be used**
   (Typical high pressure cylinder = 250 cubic feet, typical liquid = 4500 cubic feet)
5. **Determine # of cylinders needed per day**
   3. Total gas usage/day ÷ **4.** Volume of cylinders = # of cylinders/day
6. **Determine frequency of cylinder change outs desired**
   Once a day, every third day, once a week etc. Gas supplier delivery schedule will help determine.
7. **Determine size of each manifold service bank**
   5. # of cylinders per day X **6.** Frequency of changeouts = size of service bank

ABOUT SUPERIOR PRODUCTS

Established in 1948 and celebrating 70 years of providing superior products coupled with excellent customer service, **Superior Products** continues to thrive and respond to changing markets.

With this new product update and extension of our **Gas Manifold Systems and Accessories, Superior Products** offers an expanded line of compressed gas manifolds, regulators, pigtails and fittings.

Superior Products' gas manifold systems provide a reliable and safe way for large volumes of gas to be distributed. Manifold selection begins with choosing the type of manifold or control section. **Superior Products** offers header manifolds in a variety of custom configurations and options. Header manifolds include simplex, duplex, modular and simple duplex models. Partner with a manifold regulator and flexible pigtails for a complete system.

Superior Products' semi-automatic manifolds give three options for uninterrupted gas service. All semi-automatic manifolds switch from depleted bank to full bank automatically and can be used for compressed gas or gas withdrawal from liquid dewars.

All products in this catalog as designed for standard industrial gases and meet or exceed the specifications on the Compressed Gas Association (CGA) and the National Fire Protection Association (NFPA). All assemblies are tested to at least 1.5 times working pressure.

For assistance please contact **Superior Products** customer service department at **216-651-9400.**

WARNING: Products in this catalog can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov. Wash hands after use.

GAS MANIFOLD ASSEMBLIES: Simplex, Header Extensions

Ordering Guide

1. Choose your header type

2. Add a regulator

3. Add pigtails

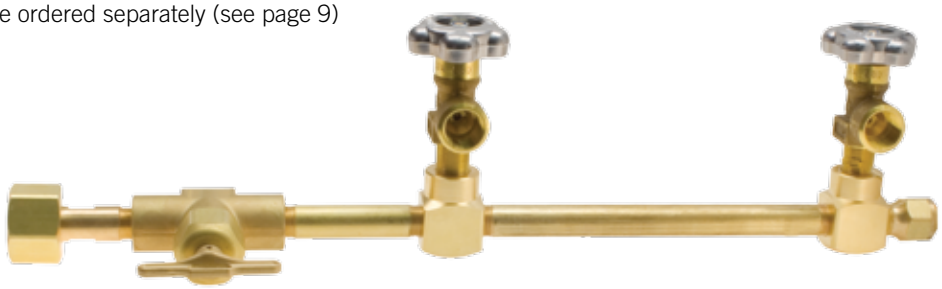
Simplex Manifolds (Left or Right Design) - GMSM Series

The Superior Simplex Manifold system is designed to provide a single source of supply from one cylinder bank. This manifold is typically used as a high pressure back-up system for liquid or bulk tank systems in both industrial and medical applications.

The simplex manifold has a master shut-off valve with a single row of cylinders. Each header consists of 1/2" pipe, 1/2" tees or crosses, header valves or inlet adaptors with check valves, master shut-off valve, end plug and mounting brackets. The end has a plug that allows for future expansion. *The outlet regulator is ordered separately based on the required delivery pressure.*

SPECIFICATIONS:

- Maximum inlet pressure: 3000 PSIG
- Manifold outlet: 1-11.5 NPS-RH or 1-11.5 NPS-LH
- 1/2" brazed pipe & tees for maximum leak protection
- Manifold regulator sold separately (see page 9)
- Pigtails must be ordered separately (see page 9)



(regulator sold separately)

GMSM-HVR-580-02

Manifold Header Extensions - GMHE Series

All Superior manifolds are expandable to meet changing application requirements. Header extensions are shipped ready for addition to existing manifolds. Unit includes 1/2" piping, 1/2" tees, header valves or inlet adaptors with check valves and a mounting bracket. The end has an NPT plug that allows for future expansion.

All pigtails for Superior manifolds must be ordered separately.

- *Specify right side extension (HVR) or left side extension (HVL)*
- *Model shown in photo is right hand header extension*

GMHE-HVR-580-02

ORDERING INFORMATION

Simplex Manifold Headers and Extensions

Type		-	Inlet Type		-	CGA #		-	# of Inlets & Layout		
						320	Carbon Dioxide				
						326	Nitrous Oxide				
						346	Air				
						350	Hydrogen/Methane		02-08		Standard 10” Centers
GMSM	Simplex Manifold	_	HVR	Header Valve, Right-Hand	_	500	Medical Mixtures	_	02-06		13” Centers for Fuel Gas
GMHE	Header Extension		HVL	Header Valve, Left-Hand		510A	Acetylene		02-12	C	Crossover 10” Centers
			CV	Check Valve		510P	Propane, Propylene		02-12	S	Staggered 5” Centers
						540	Oxygen				
						580	Nitrogen, Argon, Helium				
						590	Industrial Air				

EXAMPLES

GMSM-CV-540-03	Simplex manifold with three CGA-540 check valve inlets
GMHE-CV-540-02	Header extension with two CGA-540 check valves (May be used to extend the above header to five inlets
GMSM-HVR-580-04S	Simplex manifold with four CGA-580 header valves, right-hand side, staggered layout

Simplex Manifold Configurations

Standard Configuration

10" Centers All Gases except Fuel Gases
13" Centers Fuel Gases

Crossover Configuration

10" Centers All Gases except Fuel Gases

Staggered Configuration

5" Centers All Gases

Manifold Lengths - Simplex Headers & Header Extensions

		Number of Cylinders										
Type	Layout	2	3	4	5	6	7	8	9	10	11	12
GMSM	Standard 10” Centers	21.4	31.4	41.4	51.4	61.4	71.4	81.4				
GMSM	Standard 13” Centers	24.4	37.4	50.4	63.4	76.4						
GMSM	Staggered 5” Centers	16.4	21.4	26.4	31.4	36.4	41.4	46.4	51.4	56.4	61.4	66.4
GMSM	Crossover 10” Centers	11.4		21.4		31.4		41.4		51.4		61.4
GMHE	Standard 10” Centers	21.3	31.3	41.3	51.3	61.3	71.3	81.3				
GMHE	Standard 13” Centers	24.3	37.3	50.3	63.3	76.3						
GMHE	Staggered 5” Centers	16.3	21.3	26.3	31.3	36.3	41.3	46.3	51.3	56.3	61.3	66.3
GMHE	Crossover 10” Centers	11.3		21.3		31.3		41.3		51.3		61.3

Modular Non-Brazed Simplex Headers - GMA Series

Modular Simplex Manifold headers are a single unit design manufactured from free cutting brass bar stock. This design eliminates all brazed joints. Each unit is tested to 1.5 times working pressure and cleaned for oxygen service per CGA-G4.1. Manifold headers are shipped complete with master valve and CGA inlet connections. Headers are ordered in 2 or 3 cylinder configurations and connected together to arrive at the desired number of cylinders. Four and six cylinder version are also available in a crossover arrangement.

All modular headers feature 5" center-to-center spacing between inlets. This spacing is maintained as extensions are added. 90 degree elbow connections are available, part number GMF-3710 (see page 16). For wall brackets, order part number GMF-3611 (see page 16).

Modular Headers

Number of Inlets	-	Type		-	CGA #		Inlet Type
					320 Carbon Dioxide		
GMA2 2 Cylinder Inline					**326** Nitrous Oxide		
GMA3 3 Cylinder Inline		**MHV**	Modular Header w/Master Valve		**346** Air		CGA Inlets w/o Check Valve
GMA4 4 Cyl Crossover	–	**MHE**	Modular Header Extension	–	**500** Medical Mixtures	**CV**	CGA Inlets w/Check Valve
GMA6 6 Cyl Crossover					**540** Oxygen		
					580 Nitrogen, Argon, Helium		
					590 Industrial Air		

EXAMPLES

GMA3-MHV-580CV	Modular header with master valve, 3 CGA-580 inlets w/check valves
GMA2-MHE-580CV	Modular header extension, 2 CGA-580 check valves (May be used to extend the above header to five inlets
GMA4-MHV-346	Modular header with master valve, 4 CGA-346 inlets without check valves, crossover layout

NOT AVAILABLE FOR FUEL GASES

Manifold Lengths - Modular Headers

Type	Length (inches)
GMA2-MHV & GMA4-MHV	18.5
GMA2-MHE & GMA4-MHE	11.6
GMA3-MHV & GMA6-MHV	23.5
GMA3-MHE & GMA6-MHE	16.6

GMA2-MHV-580CV

GMA3-MHE-580CV

Duplex Manifolds - GMDM Series

The Superior Duplex Manifold is designed to provide a dual source of supply via a primary and reserve bank of cylinders. Once the primary side has been depleted the reserve bank must be manually activated to return the system to working status.

The duplex manifold has two master shut-off valves allowing replacement of the exhausted bank of cylinders while the full bank of cylinders is in operation. The center section accommodates a single regulator (sold separately). The manifold is shipped with master shut off valves, brazed 1/2" pipe & tees, header valves or inlet adaptors with check valves, end plugs and mounting brackets. The last module has an NPT plug that allows for future expansion. *The outlet regulator is ordered separately based on the required delivery pressure.*

SPECIFICATIONS:

- Maximum inlet pressure: 3000 PSIG
- Manifold outlet: 1/2" NPT
- 1/2" brazed pipe & tees
- Manifold regulator sold separately (see page 9)
- Pigtails must be ordered separately (see page 9)

(regulator sold separately)

GMDM-HV-580-04

ORDERING INFORMATION

Duplex Manifolds

Type		-	Inlet Type		-	CGA #		-	# of Inlets & Layout	
						320	Carbon Dioxide			
						326	Nitrous Oxide			
						346	Air			
						350	Hydrogen/Methane			
GMDM	Duplex Manifold	_	**HV**	Header Valve	_	**500**	Medical Mixtures	_	**04-16**	Standard 10" Centers
			CV	Check Valve		**510A**	Acetylene		**04-12**	13" Centers for Fuel Gas
						510P	Propane, Propylene			
						540	Oxygen			
						580	Nitrogen, Argon, Helium			
						590	Industrial Air			

EXAMPLES

GMDM-HV-580-04	Duplex manifold with four CGA-580 header valves (two per side)
GMDM-CV-540-06	Duplex manifold with six CGA-540 check valve inlets (three per side)

Manifold Lengths - Duplex Headers (inches)

Type	Layout		Number of Cylinders 4	6	8	10	12	14	16
GMDM	Standard	10" Centers	52.8	72.8	92.8	112.8	132.8	152.8	172.8
GMDM	Standard	13" Centers	64.8	90.8	116.8	142.8	168.8		

GAS MANIFOLD ASSEMBLIES: Simple Duplex, SCMB / CPR Series

Simple Duplex Manifolds - GMSD Series

The Superior Simple Duplex manifold system is designed for those in need of a basic manifold system. The manifold is an economical system with a two cylinder capacity, one per side. The unit is furnished with two header valves, 1/2" NPT tee, a union and a mounting bracket. *The outlet regulator is ordered separately based on the required delivery pressure.*

SPECIFICATIONS:

- Maximum inlet pressure: 3000 PSIG
- Manifold outlet: 1/2" NPT
- Manifold regulator sold separately (see page 9)
- Pigtails must be ordered separately (see page 9)

GMSD-580

(regulator sold separately)

ORDERING INFORMATION

Simple Duplex Manifolds

Type	-	CGA #	
		320	Carbon Dioxide
		326	Nitrous Oxide
		346	Air
		350	Hydrogen/Methane
GMSD	-	500	Medical Mixtures
		510	Acetylene, Propane, Propylene
		540	Oxygen
		580	Nitrogen, Argon, Helium
		590	Industrial Air

Cradle Pack Manifolds - SCMB / CPR Series

Superior Products offers two cradle pack manifolds, SCMB and CPR, which fit most commercially available cylinder cradles. Both have bodies that are machined from 1.5" yellow brass bar stock and include the proper CGA valves or RPV valves and 24" pigtails. Specify the type of pigtail when ordering. Stainless steel flexible pigtails come lined with PTFE or ETFE for lighter than air gases (hydrogen and helium). Rigid pigtails are single loop copper tubing. For additional pigtail options, such as armor guard, please refer to Superior's master catalog. The modular design and removable flexible pigtails allow for quick, easy repairs. *Both SCMB and CPR cradle pack manifolds come with pigtails installed.*

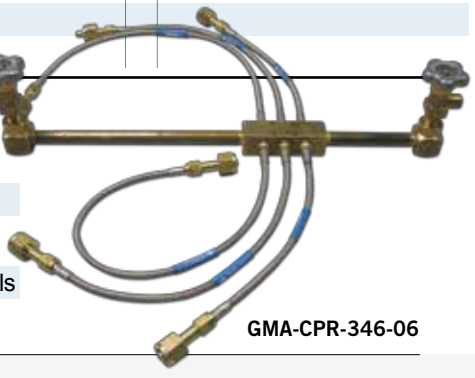
GMA-SCMB-320-12

Cradle Pack Manifolds - SCMB & CPR

Type	-	CGA #		-	# of Cylinders	-	Options	
		320	Carbon Dioxide					
		326	Nitrous Oxide					
		346	Air		06			
GMA-SCMB	–	350	Hydrogen (with rigid pigtails)	–	12	–		Flexible Pigtails
GMA-CPR		500	Medical Mixtures		18		RGD	Rigid Pigtails
		540	Oxygen					
		580	Nitrogen, Argon, Helium					
		590	Industrial Air					

EXAMPLES

GMA-SCMB-320-12	12-cylinder cradle pack, CGA-320, SCMB-style
GMA-CPR-346-06	6-cylinder cradle pack, CGA-346, CPR-style (with extensions)
GMA-SCMB-580-12-RGD	12-cylinder cradle pack, CGA-580, SCMB-style, with rigid pigtails



GMA-CPR-346-06

Manifold Regulator - GMR Series

SPECIFICATIONS:

- All brass bonnet and body construction
- High flow, 1/4" encapsulated seat
- Neoprene diaphragm
- Internal relief valve
- Maximum inlet pressure: 3000 PSIG (except acetylene)
- 1-11.5 NPS-RH or 1-11.5 NPS-LH inlet/outlet fittings
- 3/8" NPT body ports

GMR-125RH

Model	Pressure Range	Connection	Gas Service
GMR-015LH	0-15 PSI	1-11.5 NPS-LH (CGA-1350)	Fuel Gas
GMR-125LH	0-125 PSI	1-11.5 NPS-LH (CGA-1350)	Fuel Gas
GMR-125RH	0-125 PSI	1-11.5 NPS-RH (CGA-1340)	Other Than Fuel Gas
GMR-200RH	0-200 PSI	1-11.5 NPS-RH (CGA-1340)	Other Than Fuel Gas

Commonly Used Pigtails - For Use On Manifolds

Below are the common pigtails that are used on Superior manifolds. Superior gives you the option of ordering the specific pigtail you want when ordering your manifold. Pigtails may be ordered in different lengths than stated below and also in a variety of other pressure ratings and materials (armor guard, spring guard, etc.) Refer to Superior's master catalog for a complete selection of pigtails.

CGA #	GAS SERVICE	24" WITH CHECK VALVE	24" WITHOUT CHECK VALVE	24" WITH PERMANENT ENDS	RIGID COPPER WITH LOOP
320	Carbon Dioxide	PTF-320CV-320-24	PTF-320-320-24	PTFP-320-24	PT-4320
326	Nitrous Oxide	PTF-326CV-326-24	PTF-326-326-24	PTFP-326-24	PT-4326
346	Air	PTF-346CV-346-24	PTF-346-346-24	PTFP-346-24	PT-4346
350	Hydrogen/Methane	PTFT-350CV-350-24	PTFT-350-350-24	n/a	PT-4350
500	Medical Mixtures	PTF-500CV-500-24	PTF-500-500-24	PTFP-500-24	PT-4500
510	Acetylene*	PTF-510FACV-510-24	n/a	n/a	n/a
510	Propane, Propylene	PTF-510CV-510-24	PTF-510-510-24	n/a	PT-4510
540	Oxygen	PTF-540CV-540-24	PTF-540-540-24	PTFP-540-24	PT-4540
580	Nitrogen, Argon	PTF-580CV-580-24	PTF-580-580-24	PTFP-580-24	PT-4580
580	Helium	PTFT-580CV-580-24	PTFT-580-580-24	n/a	PT-4580
590	Industrial Air	PTF-590CV-590-24	PTF-590-590-24	PTFP-590-24	PT-4590

*Includes flash arresto

Ordering Guide

1. Choose your control section

2. Add pigtail kit or Add headers and pigtails

Automatic Manifold Selection Matrix

Description		SAM	GMC	GMC-HP	GMC-HL	GML	GML-HP
Use with high-pressure cylinders		•	•	•	•		
Use with liquid cylinders (gas withdrawal)		•				•	•
Maximum Inlet Pressure (PSIG)	(oxygen/inert)	3000	3000	3000	n/a	230	350
	(CO_2 / N_2O)	2000	2000	n/a	2000	230	350
	(acetylene)	400	400	n/a	n/a	n/a	n/a
	(propane/LPG)	400	400	n/a	n/a	n/a	n/a
Delivery Range (PSIG)	(oxygen/inert)	0-125	30-125	50-200	n/a	40-85	40-180
	(CO_2 / N_2O)	0-125	30-125	n/a	30-125	40-85	40-180
	(acetylene)	0-15	0-15	n/a	n/a	n/a	n/a
	(propane/LPG)	0-125	0-30	n/a	n/a	n/a	n/a
Max Flow Rate (SCFH)	(oxygen/inert)	750	1200	2000	n/a	750	800
	(CO_2 / N_2O)	25	35	n/a	500	750	800
	(acetylene)	300	500	n/a	n/a	n/a	n/a
	(propane/LPG)	500	500	n/a	n/a	n/a	n/a

Semi-Automatic Manifold - SAM Series

The SAM-125 and SAM-015 are semi-automatic switchover manifolds that prevent downtime by automatically switching gas supply from the primary cylinder bank to the reserve cylinder bank. The user resets the primary bank by simply turning the control knob to indicate the new primary supply. The unit is designed with a built-in outlet regulator to maintain a constant downstream delivery pressure. This unit is economically priced and ideal for most high pressure gases and gaseous withdrawal from liquid cylinders.

Pigtail kits are available to connect the manifold to two or four gas cylinders. To connect more than four cylinders, use a manifold header connection kit and any modular or brazed manifold headers (see pages 4-6).

SPECIFICATIONS:

- Includes line control regulator
- Inlet connections: 1/4" Male NPT
- Outlet Connection: 1/4" Female NPT
- 2" dual scale gauges
- Chrome-plated brass with stainless steel regulator diaphragms
- 9 pounds approximate weight
- Pigtail kits ordered separately (see page 11)

SPECIFICATIONS	ACETYLENE	PROPANE	CARBON DIOXIDE, NITRIOUS OXIDE	OXYGEN, INERTS, OTHER GASES
Maximum Inlet Pressure (PSI)	400	400	3000	3000
Maximum Flow Rate (SCFH)	300	500	25	750
Delivery Range (PSI)	0-15	0-125	0-125	0-125
Switchover Pressure - Right Bank (PSI)	18	180	180	180
Switchover Pressure - Left Bank (PSI)	15	150	150	150

Semi-Automatic Manifold - SAM Series

Part #	Specifications
SAM-015	0-15 PSI for acetylene
SAM-125	0-125 PSI for oxygen/inert/propane

Pigtail Kits for SAM Series

CGA #	GAS SERVICE	2-CYLINDER KIT INCLUDES 24" PIGTAILS	4-CYLINDER KIT INCLUDES 2 EACH 24" PIGTAILS, 36" PIGTAILS AND TEES
320	Carbon Dioxide	SAM-KIT-320-02	SAM-KIT-320-04
326	Nitrous Oxide	SAM-KIT-326-02	SAM-KIT-326-04
346	Air	SAM-KIT-346-02	SAM-KIT-346-04
350	Hydrogen, Methane	SAM-KIT-350-02	SAM-KIT-350-04
500	Medical Mixtures	SAM-KIT-500-02	SAM-KIT-500-04
510	Acetylene	SAM-KIT-510A-02*	SAM-KIT-510A-04*
510	Propane, Propylene	SAM-KIT-510P-02	SAM-KIT-510P-04
540	Oxygen	SAM-KIT-540-02	SAM-KIT-540-04
580	Nitrogen, Argon, Helium	SAM-KIT-580-02	SAM-KIT-580-04
590	Industrial Air	SAM-KIT-590-02	SAM-KIT-590-04

*Includes flash arrestor

Manifold Header Connection Kits for SAM Series

Part #	CGA #	Gas Service	Description
SAM-KIT-1340	1340	Non-fuel RH Thread	Includes pigtails to connect manifold to header bar
SAM-KIT-1350	1350	Fuel Gas, LH Thread	Includes pigtails to connect manifold to header bar

Pressure Differential Switchover from High Pressure Cylinders – GMC Series

The GMC Series prevents downtime by automatically switching gas supply from the primary cylinder bank to the reserve cylinder bank. Through pressure differential, the switchover takes place without any interruption of service. A green light indicates the primary cylinder bank is functioning and the reserve bank is ready for service.

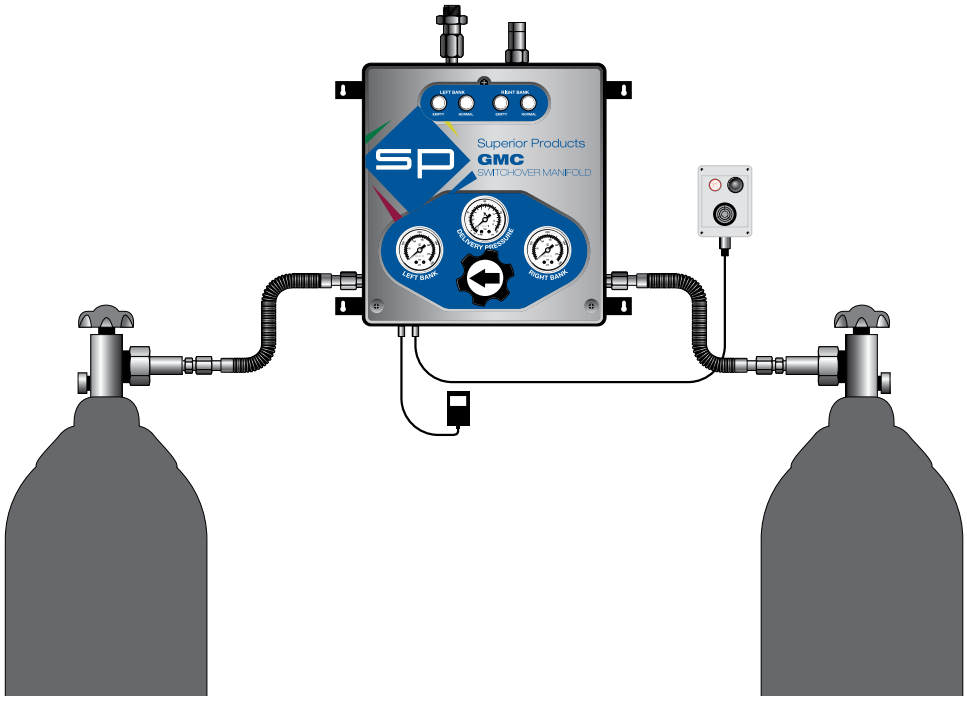
A red light alerts the user that the unit has changed over and one or both banks are depleted (except for fuel gas units). The user simply resets the primary bank by rotating the knob. All components are enclosed and protected inside a tamper-resistant case.

SPECIFICATIONS:

- Electrical: 115 Volts (AC) except fuel gas manifolds
- Manifold outlet: 1/2" NPT
- Relief valve outlet: 1/4" NPT
- Internal adjustable line pressure regulator
- Tamper-resistant case
- CO2 & N2O units available with optional heater
- Acetylene units include GMA-FKA flash arrestor
- Includes manifold union to connect to header
- Optional remote alarm available for non-fuel applications
- For pigtails (see page 9)
- For headers (see pages 4-6)

Pressure Differential Changeover for High-Pressure Cylinders

Type	-		Delivery Range
		125	30-125 PSI for Oxygen / Inert Gases
GMC	-	015	0-15 PSI for Acetylene
		030	0-30 PSI for Propane
GMC-HL	-	125	30-125 PSI w/heater for CO2/N2O/Mixtures
GMC-HP	-	200	50-200 PSI for Oxygen/Inert Gases

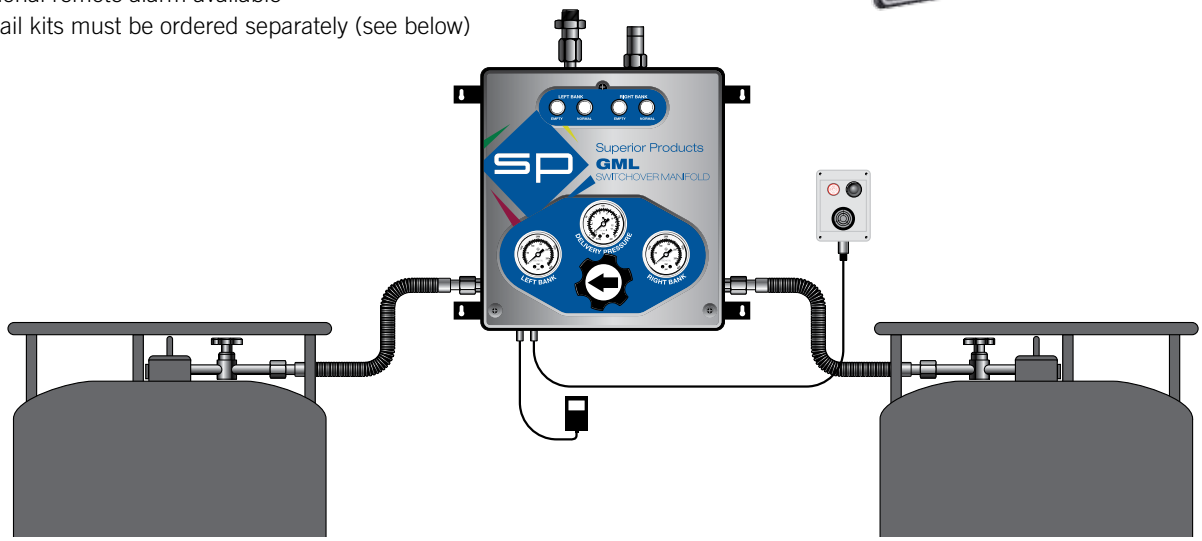


Pressure Differential Switchover for Gas Withdrawal from Liquid Cylinders – GML Series

The GML Series is designed specifically to regulate and monitor vaporized gas from cryogenic cylinders. The GML series prevents downtime by automatically switching gas supply from the primary cylinder bank to the reserve cylinder bank. Through pressure differential, the switchover takes place without any interruption of service. A green light indicates the primary cylinder bank is functioning and the reserve bank is ready for service. A red light alerts the user that the unit has changed over and one or both banks are depleted. The user simply resets the primary bank by rotating the knob. All components are enclosed and protected inside a tamper-resistant case.

SPECIFICATIONS:

- Available up to 3 cylinders per side
- Electrical: 115 Volts (AC)
- Maximum Inlet Pressure: 230 or 350 PSI
- Manifold outlet: 1/2" NPT
- Relief valve outlet: 1/4" NPT
- GML-085 for use with 235 PSI relief valve liquid cylinders
- GML-HP-180 for use with 350 PSI relief valve liquid cylinders
- Economizer circuit helps prevent reserve cylinder from wasting gas due to venting to atmosphere
- Optional remote alarm available
- Pigtail kits must be ordered separately (see below)



Pressure Differential Changeover for Liquid Cylinder Gas Withdrawal

Type	-		Delivery Range
GML	-	085	(40-85 PSI for cylinders w/ 235 PSI relief valve)
GML-HP	-	180	(40-180 PSI for cylinders w/ 350 PSI relief valve)

Pigtail Kits for GML Series

CGA #	GAS SERVICE	2-CYLINDER KIT 2 x 72" PIGTAILS	4-CYLINDER KIT 4 x 72" PIGTAILS & 2 x Tees	6-CYLINDER KIT 6 x 72" PIGTAILS & 2 x Crosses
320	Carbon Dioxide	GML-KIT-320-02	GML-KIT-320-04	GML-KIT-320-06
326	Nitrous Oxide	GML-KIT-326-02	GML-KIT-326-04	GML-KIT-326-06
540	Oxygen	GML-KIT-540-02	GML-KIT-540-04	GML-KIT-540-06
580	Nitrogen, Argon, Helium	GML-KIT-580-02	GML-KIT-580-04	GML-KIT-580-06

- Black polyester blend perforated cover
- 3/8" ID synthetic core
- 2250 PSI working pressure

MANIFOLD ACCESSORIES

Dry Type Flash Back Arrestors - GMA-FK Series

Superior's flash arrestor kit provides flash back, reverse flow and pressure relief protection in the compact device. This unit is included with any Superior Products acetylene manifold for more than 2 cylinders. It is also available as an option for use with hydrogen or propane manifolds.

FEATURES:

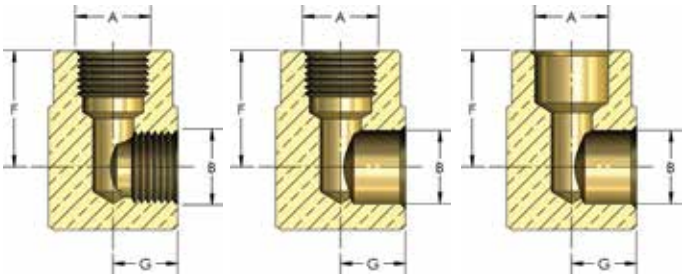
- No water or fluid to check or replenish
- Approved safety device under ANSI Z49
- Help meet OSHA & NFPA safety standards
- Built in relief valve meets NFPA 51 requirements

Part #	Type	Capacity	Inlet/Outlet	Relief Valve
GMA-FKA	Acetylene	300	1/2 NPT	15 PSIG
GMA-FKP-40	Propane	300	1/2 NPT	40 PSIG
GMA-FKP-60	Propane	300	1/2 NPT	60 PSIG
GMA-FKH	Hydrogen	300	1/2 NPT	40 PSIG

Brass Manifold Pipe and Pipe Fittings

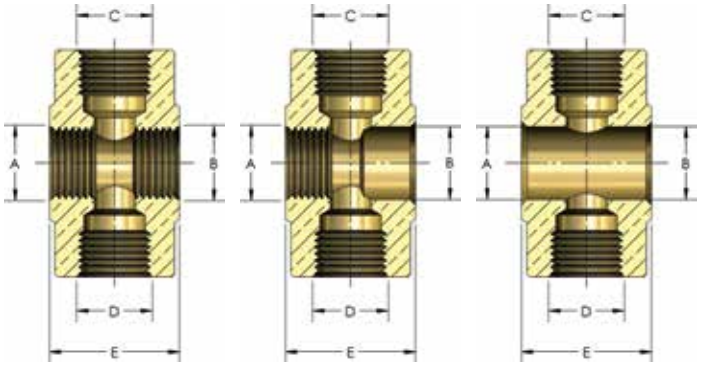
Fittings are machined from CDA-360 brass, stress relieved and cleaned for oxygen service. All measurements are in inches.

Pipe Elbows - 3,000 PSI



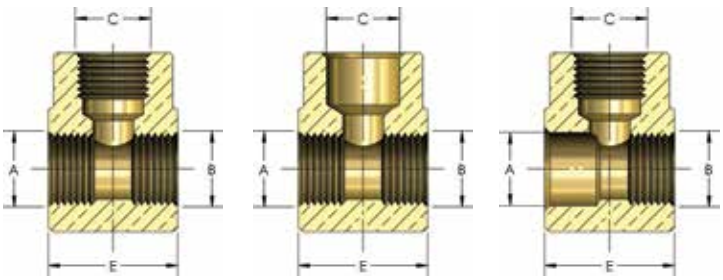
Part #	Ref. A	Ref. B	Ref. F	Ref. G
GMF-3011	1/2 - 14 NPT	1/2 - 14 NPT	1 - 5/16	3/4
GMF-3012	1/2 - 14 NPT	.843 - .847	1 - 5/16	3/4
GMF-3013	1/2 - 14 NPT	.843 - .847	1 - 5/16	3/4

Pipe Crosses - 3,000 PSI

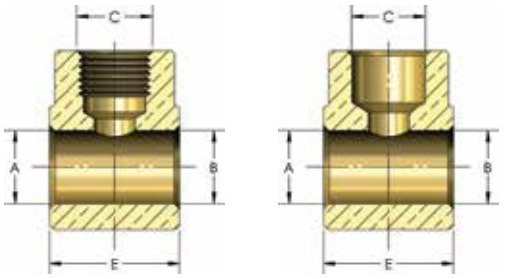


Part #	Ref. A	Ref. B	Ref. C & D	Ref. E
GMF-3041	1/2 - 14 NPT	1/2 - 14 NPT	1/2 - 14 NPT	1 - 1/2
GMF-3042	.843 - .847	1/2 - 14 NPT	1/2 - 14 NPT	1 - 1/2
GMF-3043	.843 - .847	Slip Thru	1/2 - 14 NPT	1 - 1/2

Pipe Tees - 3,000 PSI



Part #	Ref. A	Ref. B	Ref. C	Ref. E
GMF-3021	1/2 - 14 NPT	1/2 - 14 NPT	1/2 - 14 NPT	1 - 1/2
GMF-3022	1/2 - 14 NPT	1/2 - 14 NPT	.843 - .847	1 - 1/2
GMF-3023	.843 - .847	1/2 - 14 NPT	1/2 - 14 NPT	1 - 1/2



Part #	Ref. A	Ref. B	Ref. C	Ref. E
GMF-3033	.843 - .847	Slip Thru	1/2 - 14 NPT	1 - 1/2
GMF-3034	.843 - .847	Slip Thru	.843 - .847	1 - 1/2

Pipe Nipples, Threaded Ends / Pipe Lengths, Plain Ends - 3,000 PSI

FEATURES:

- Cleaned for oxygen service
- Suitable for acetylene
- Made from CDA-360 Brass
- Special lengths available upon request

Length (inches)	Unthreaded 1/2" Nominal Pipe	Threaded 1/2 - 14 NPT
1.5	n/a	GMF-3211
2	GMF-3222	GMF-3212
4	GMF-3223	GMF-3213
6	GMF-3224	GMF-3214
9.75	GMF-3225	GMF-3215
12.75	GMF-3226	GMF-3216

GMF-3224

GMF-3214

Bulk Pipe Lengths, Plain Ends

FEATURES:

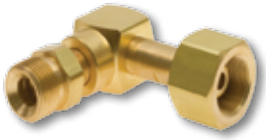
- ***NOT CLEANED*** for oxygen service
- Suitable for acetylene
- Made from CDA-360 brass

Length (feet)	Unthreaded 1/2" Nominal Pipe	Unthreaded 3/4" Nominal Pipe
6	GMF-3236	GMF-6236
12	GMF-3237	GMF-6237

NOTE: GMF-3237 and GMF-6237 must ship via common carrier

MANIFOLD FITTINGS & PIPING

Union 90°



GMF-3710

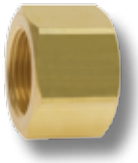
Part No.	Thread
GMF-3710	1 -11.5 NPS-RH
GMF-3711	1 -11.5 NPS-LH

Union Plug

GMA-RH-PLUG

Part No.	Thread
GMA-RH-PLUG	1 -11.5 NPS-RH-INT.
GMA-LH-PLUG	1 -11.5 NPS-LH-INT.

Union Nuts



GMF-3311

Part No.	Thread
GMF-3311	1 -11.5 NPS-RH-INT.
GMF-3312	1 -11.5 NPS-LH-INT.

Union Nipples

GMF-3326

Part No.	Thread	Length
GMF-3321	3/8 -18 NPT	2.40
GMF-3326	1/2 -14 NPT	2.94

Union Bushings

GMF-3332

Union Bushings without Filter - 3,000 PSI

Part #	Thread	Pipe Thread	Length
GMF-3331	1 -11.5 NPS-RH	3/8 -18 NPT	3.125
GMF-3332	1 -11.5 NPS-RH	1/2 -14 NPT	2.187
GMF-3335	1 -11.5 NPS-LH	3/8 -18 NPT	3.125
GMF-3336	1 -11.5 NPS-LH	1/2 -14 NPT	2.187

Wall Bracket

Image not to scale

Part No.	Description
GMF-3611	for use with GMSM, GMHE, Modular, GMDM manifolds (or any 1/2" nominal pipe)

Line Station Drops, Valves & Regulators - 200 PSI

Line Station Drops

Part #	Gas Service	No. of Outlets	Outlet Size
GMA-SSD-022V-01	Oxygen	Single	9/16 -18 RH “B” size valve
GMA-SSD-022V-02	Oxygen	Double	9/16 -18 RH “B” size valve
GMA-SSD-023V-01	Fuel Gas	Single	9/16 -18 LH “B” size valve
GMA-SSD-023V-02	Fuel Gas	Double	9/16 -18 LH “B” size valve
GMA-SSD-024V-01	Oxygen	Single	7/8 -14 RH “C” size valve
GMA-SSD-024V-02	Oxygen	Double	7/8 -14 RH “C” size valve
GMA-SSD-025V-01	Fuel Gas	Single	7/8 -14 LH “C” size valve
GMA-SSD-025V-02	Fuel Gas	Double	7/8 -14 LH “C” size valve

Station Valves

Part No.	Operating Pressure	CGA Outlet	Valve Inlet
GMV-1024	200 psi	CGA-024	1/2 -14 NGT
GMV-1025	200 psi	CGA-025	1/2 -14 NGT

GMV-1025

GSR-024-125

Station Regulators

Model	Gas Service	Delivery Pressure	Inlet Connection (“C” Size)	Outlet Connection (“B” Size)
GSR-024-015	Oxygen	0-15 PSI	7/8-14 RH-INT (CGA-024)	9/16-18 LH-EXT (CGA-022)
GSR-024-050	Oxygen	0-50 PSI	7/8-14 RH-INT (CGA-024)	9/16-18 LH-EXT (CGA-022)
GSR-024-125	Oxygen	0-125 PSI	7/8-14 RH-INT (CGA-024)	9/16-18 LH-EXT (CGA-022)
GSR-024-200	Oxygen	0-200 PSI	7/8-14 RH-INT (CGA-024)	9/16-18 LH-EXT (CGA-022)
GSR-025-001	Fuel Gas	0-1 PSI	7/8-14 LH-INT (CGA-025)	9/16-18 LH-EXT (CGA-023)
GSR-025-015	Fuel Gas	0-15 PSI	7/8-14 LH-INT (CGA-025)	9/16-18 LH-EXT (CGA-023)
GSR-025-050	Fuel Gas	0-50 PSI	7/8-14 LH-INT (CGA-025)	9/16-18 LH-EXT (CGA-023)
GSR-034-050	Inert / Air	0-50 PSI	7/8-14 RH-EXT (CGA-034)	5/8-18 RH-INT (CGA-032)
GSR-034-125	Inert / Air	0-125 PSI	7/8-14 RH-EXT (CGA-034)	5/8-18 RH-INT (CGA-032)
GSR-034-200	Inert / Air	0-200 PSI	7/8-14 RH-EXT (CGA-034)	5/8-18 RH-INT (CGA-032)

MANIFOLD VALVES

Ball Valves

Part #	Inlet & Outlet Size
GMV-334	1/4 female NPT
GMV-338	1/2 female NPT
GMV-3312	3/4 female NPT

Brass body, hot forged brass ball valve, 600 PSI rated

Safe for use with acetylene

GMV-338

Master Shut-Off Valves - 3,000 PSI

FEATURES:

- Forged brass body
- PTFE packing
- Kel-F seat

Part #	Inlet	Outlet
GMV-1001	1/2 -14 NPT	1/2 -14 NPT
GMV-1001V	1/2 -14 NPT	1/2 -14 NPT
GMV-1341	1-11.5 NPS-RH-EXT	1-11.5 NPS-RH-INT
GMV-11350	1-11.5 NPS-LH-EXT	1-11.5 NPS-LH-INT

GMV-1001

GMV-1001V

Manifold Valves

Part #	Operating Pressure	CGA Outlet	Valve Inlet
GMV-1300	250 PSI	CGA-300	1/2 -14 NGT
GMV-1320	3,000 PSI	CGA-320	1/2 -14 NGT
GMV-1326	3,000 PSI	CGA-326	1/2 -14 NGT
GMV-1346	3,000 PSI	CGA-346	1/2 -14 NGT
GMV-1350	3,000 PSI	CGA-350	1/2 -14 NGT
GMV-1510	250/500 PSI	CGA-510	1/2 -14 NGT
GMV-1540	3,000 PSI	CGA-540	1/2 -14 NGT
GMV-1580	3,000 PSI	CGA-580	1/2 -14 NGT
GMV-1590	3,000 PSI	CGA-590	1/2 -14 NGT
GMV-3346	3,000 PSI	CGA-346	3/4 -14 NGT
GMV-3350	3,000 PSI	CGA-350	3/4 -14 NGT
GMV-3540	3,000 PSI	CGA-540	3/4 -14 NGT
GMV-3580	3,000 PSI	CGA-580	3/4 -14 NGT
GMV-3660SS	3,000 PSI	CGA-660	3/4 -14 NGT
GMV-3680	4,700 PSI	CGA-680	3/4 -14 NGT
GMV-3702	6,400 PSI	CGA-702	3/4 -14 NGT

GMV-1580

GMV-1540

Limited Warranty

WARRANTY:

The manufacturer warrants the products sold hereunder to be free from defects in material and workmanship at the date of shipment. Please note the distinction between "defects" and "damage" as used in this warranty: defects are covered because we, the manufacturer, are responsible: however, we have no control over damage caused by such things as misuse or improper installation. Therefore, damage for any reason is not covered under this warranty.

WHAT THE MANUFACTURER WILL DO:

If you, the Buyer, meet the eligibility requirements and obligations listed below, then we shall, within thirty (30) days of receipt of a timely claim and the parts claimed to be defective, inspect the parts and repair or replace, at our option, any parts which we determine were defective at the time of shipment from us. However, if we determine that the parts were defective and also that circumstances are such as to prevent us from remedying the warranted defects by repair or replacement, then we may at our option, refund you the purchase price of the parts.

ELIGIBILITY REQUIREMENTS & OBLIGATIONS OF BUYER:

You are eligible to obtain service under this warranty if you are the original consumer purchaser, either from us directly or from a seller who stocks our product for resale. However, in order for you to obtain service under this warranty, you must do the following:

1. Contact Superior Products to obtain a QCA number for the item(s) to be returned.
2. Send a claim in writing along with samples of the parts claimed to be defective to us freight prepaid.
3. Have your claim and sample parts delivered within ninety (90) days from the date of shipment of the parts from our factory.

However, if you bought the parts for resale, or if you bought the parts from someone who bought them for resale, then you must deliver the claim and the parts to us within ninety (90) days from the date of re sale–except under no circumstances shall we honor any claim which fails to be delivered to us with the parts within one hundred and eighty (180) day from the date of shipment of the parts from our factory.

Your claim should be in typed or printed form and include the following information:

1. Your name and address;
2. The name and address of the seller of the parts;
3. The date of purchase of the parts;
4. A short description of the alleged defect;
5. Proof of the purchase of the parts, for example, a receipt or canceled check.
6. QCA number

WHAT IS NOT COVERED UNDER THIS WARRANTY (LIMITATION OF LIABILITY):
As stated above, damage for any reason is not covered under this warranty. Furthermore NO OTHER WARRANTY, WHETHER EXPRESS OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, SHALL EXIST IN CONNECTION WITH THE SALE OR USE OF OUR PRODUCTS. However, some states do not allow limitations on how an implied warranty lasts, so this limitation may not apply to you. Also, since this is a limited warranty, WE SHALL NOT, UNDER ANY CIRCUMSTANCES, BE LIABLE FOR ANY OTHER CHARGES, LABOR COSTS, OR ANY OTHER INCIDENTAL OR CONSEQUENTIAL LOSSES OR DAMAGES OF ANY KIND OR DESCRIPTION WHATSOEVER ARISING OUT OF, OR IN ANYWAY RELATING TO, ANY BREACH OF THIS WARRANTY OR CLAIMED DEFECT IN, OR NON-PERFORMANCE OF, OUR PRODUCTS. However, some states do not allow the exclusion or limitation of incidental or consequential damages, so this limitation or exclusion may not apply to you. This warranty also excludes commercial and other non-consumer purchasers other than the original consumer purchaser.

WE HAVE NO AGENTS:
We do not authorize any person to create for us any obligation of liability in connection with our products.

LEGAL RIGHTS:
This warranty gives you specific legal rights, and you may also have other rights which vary from state to state (province to province in Canada).

Your claim, along with the part(s) and QCA number written on outside of box should be sent to:

Superior Products
3786 Ridge Road
Cleveland, Ohio 44144-1175
ATTN: QCA DEPT.

⚠ WARNING: This product can expose you to chemicals including Lead, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www P65Warnings ca gov Wash hands after use

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