

TITAN™ Oxygen Regulators



EMS TITAN™ SERIES OXYGEN EMS AND FIRE SERVICE APPLICATIONS CLICK-STYLE REGULATOR

Whether its EMS, ambulance, fire rescue or tactical medical use, Titan™ Oxygen Regulators will provide durable, impact-resistant service. With 100% brass construction, they've got the guts to withstand emergency conditions.

The Titan regulator's flow selector is inset and exceptionally durable. Six models are available, all with a nickel-plated brass body.

FEATURES:

- All brass construction in high pressure, low pressure and relief zones
- Brass internal components
- 20 micron sintered bronze inlet filter
- PTFE FEP100 pressure regulating seat
- Fluoroelastomer and silicone O-Rings
- Fasteners and springs are stainless steel
- 2 year limited warranty

TITAN SPECIFICATIONS

Part #	Description
MPR-501	CGA-540, Preset (50 psi) with 2 power take-offs
MPR-502	CGA-540, 0-25 lpm with 2 power take-offs and hose barb
MPR-801	CGA-870, 0-15 lpm with hose barb
MPR-802	CGA-870, 0-15 lpm with 2 power take-offs and hose barb
MPR-803	CGA-870, 0-25 lpm with hose barb
MPR-804	CGA-870, 0-25 lpm with 2 power take-offs and hose barb

Working pressure: 500-3000 psi

Overall dimensions: 6" long x 1.5" OD and 1.5" diameter gauge

Flow Settings	
0-25 LPM Model	0, 0.5, 1, 2, 4, 6, 8, 10, 12, 15, 20, 25
0-15 LPM Model	0, 0.5, 1, 1.5, 2, 3, 4, 5, 6, 8, 10, 15



TITAN (MPR-501)
CGA-540 Connection



TITAN (MPR-802)
CGA-870 Connection

OCTI-FLO₂ Portable Emergency Oxygen Manifold

- Used for mass casualty, EMS, and triage situations
- Oxygen delivery up to 8 patients
- Flowmeters are individually controlled
- 8 easy-to-read Click-Style flowmeters from 0-25 lpm
- Pressure gauge on manifold
- Standard DISS 1240 inlet and a 100 PSI relief valve safety feature
- Lightweight and compact durable aluminum construction
- 4 Cannulas, 8 breathing masks, and compact carrying case included
- Affordable high quality craftsmanship for years of dependable service
- 2 year limited warranty

**OCTI-FLO₂TM
Portable Emergency
Oxygen Manifold**



MDM-8

Optional Components to Complete the Emergency Oxygen Delivery System

- 0-100 PSI Regulator
- DISS 20' Oxygen Hose



M1-540-PG
(0-100 psi)



C40X-240FHTFHT
(Oxygen medical hose)

Accessories for Other EMS Applications

- Wrenches
- Replacement Parts
- Washers
- T-handles
- Post Valves

MCW - 2BC



MCW - 3P



2544-2



FME101

See page 23-26 for more information



CFM104-08

QuickClick Flowmeter
See page 27 for more information



SINGLE & TWO-STAGE OXYGEN FLOW GAUGE REGULATORS



M1-870-15FG

Single-Stage Regulator with CGA-870 Connection



M2-540-15FG

Two-Stage Regulator with CGA-540 Connection



MR-870-8FG

Single-Stage Compact Regulator with CGA-870 Swivel Yoke Inlet



FEATURES:

- Chrome-plated brass body with all brass high-pressure chamber
- Maximum inlet pressure 3000 psi
- Durable neoprene diaphragm
- Internal reseating relief valve protects against over-pressurization
- Sintered filter for additional safety and to extend regulator life
- 2" diameter gauges
- 6 year limited warranty

COMPACT MODELS (MR SERIES)

- Single-stage with CGA-870 swivel yoke to add convenience for orientation
- 1-1/2" diameter gauges

TWO STAGE MODELS:

- Two stage design for applications where flow control accuracy is critical such as calibration and testing
- First stage reduces high pressure to 170 psi; second stage reduces to provide greater accuracy at lower flow settings

MODEL #	FLOW RANGE	INLET
SINGLE-STAGE		
M1-540-5FG	1/2-5 LPM	Nut and Nipple
M1-540-5FGH	1/2-5 LPM	Handtight Nut
M1-870-5FG	1/2-5 LPM	Yoke
M1-540-8FG	1-8 LPM	Nut and Nipple
M1-540-8FGH	1-8 LPM	Handtight Nut
M1-870-8FG	1-8 LPM	Yoke
M1-540-15FG	2-15 LPM	Nut and Nipple
M1-540-15FGH	2-15 LPM	Handtight Nut
M1-870-15FG	2-15 LPM	Yoke
MR-870-8FG	1-8 LPM	Yoke
MR-870-15FG	2-15 LPM	Yoke
PEDIATRIC SINGLE STAGE		
M1-540-PED3	1/32- 1/2 LPM	Nut and Nipple
M1-540-PED3H	1/32- 1/2 LPM	Handtight Nut
M1-870-PED3	1/32- 1/2 LPM	Yoke
M1-540-PED	1/8-1 LPM	Nut and Nipple
M1-540-PEDH	1/8-1 LPM	Handtight Nut
M1-870-PED	1/8-1 LPM	Yoke
MR-870-PED	1/8-1 LPM	Swivel Yoke
TWO-STAGE		
M2-540-5FG	1/2-5 LPM	Nut and Nipple
M2-540-5FGH	1/2-5 LPM	Handtight Nut
M2-540-8FG	1-8 LPM	Nut and Nipple
M2-540-8FGH	1-8 LPM	Handtight Nut
M2-540-15FG	2-15 LPM	Nut and Nipple
M2-540-15FGH	2-15 LPM	Handtight Nut

SINGLE-STAGE ADJUSTABLE DELIVERY PRESSURE REGULATORS

FEATURES:

- Chrome-plated brass with all brass high-pressure chamber
- Maximum inlet pressure 3000 psi
- Durable neoprene diaphragm
- Internal reseating relief valve protects against over-pressurization
- Sintered filter for additional safety and to extend regulator life
- 2" diameter gauges
- Dual scale: psi and kPa
- Outlets are DISS gas specific



M1-910-PG

Single-Stage Adjustable Regulator with CGA-910 Yoke

ADJUSTABLE SINGLE-STAGE MODELS

GAS/MODEL	DELIVERY PRESSURE	CGA INLET CONNECTION
CARBON DIOXIDE		
M1-320-PG	0 - 100 psi	320-Nut and Nipple
M1-320-PGH	0 - 100 psi	320-Handtight Nut and Nipple
M1-940-PG	0 - 100 psi	940-Yoke
NITROUS OXIDE		
M1-326-PG*	0 -100 psi	326-Nut and Nipple
M1-326-PGH*	0 -100 psi	326-Handtight Nut and Nipple
M1-910-PG*	0 -100 psi	910-Yoke
MEDICAL AIR		
M1-346-PG	0 -100 psi	346-Nut and Nipple
M1-346-PGH	0 -100 psi	346-Handtight Nut and Nipple
M1-950-PG	0 -100 psi	950-Yoke
OXYGEN		
M1-540-PG	0 -100 psi	540-Nut and Nipple
M1-540-PGH	0 -100 psi	540-Handtight Nut and Nipple
M1-870-PG	0 -100 psi	870-Yoke
NITROGEN		
M1-580-PG	0 -100 psi	580-Nut and Nipple
M1-580-PGH	0 -100 psi	580-Handtight Nut and Nipple
M1-960-PG	0 -100 psi	960-Yoke
HELIUM		
M1-580A-PG	0 -100 psi	580-Nut and Nipple
M1-580A-PGH	0 -100 psi	580-Handtight Nut and Nipple
M1-930-PG	0 -100 psi	930-Yoke
MIXTURES		
M1-500-PG	0 -100 psi	500-Nut and Nipple
M1-500-PGH	0 -100 psi	500-Handtight Nut and Nipple

*1000 psi gauge color – coded blue
See full CGA chart in back of catalog.



M1-326-PGH

Single-Stage Adjustable Regulator with CGA-326 Handtight Nut

SINGLE-STAGE PRESET REGULATORS



M1A-540-P

Single-Stage Preset Regulator with CGA-540 Nut & Nipple Inlet with Horizontal Outlet



M1-540-P

Single-Stage Preset Regulator with CGA-540 Nut & Nipple Inlet with 90° Outlet



M1A-870-P

Single-Stage Preset Regulator with CGA-870 Yoke Connection with Horizontal Outlet

FEATURES:

- Chrome-plated brass body with all brass high-pressure chamber
- Maximum inlet pressure 3000 psi
- Durable neoprene diaphragm
- Internal reseating relief valve protects against over-pressurization
- Sintered filter for additional safety and to extend regulator life
- 2" diameter gauges
- 50 psi preset
- 6 year limited warranty

M1A PRESET WITH HORIZONTAL OUTLET

M1 PRESET WITH 90° OUTLET

GAS/MODEL		CGA	CGA INLET
OXYGEN			
M1A-540-P	M1-540-P	540	Nut and Nipple
M1A-540-PH	M1-540-PH	540	Handtight Nut and Nipple
M1A-870-P	M1-870-P	870	Yoke
N/A	MR-870-P	870	Yoke (Compact Model)
CARBON DIOXIDE			
M1A-320-P	M1-320-P	320	Nut and Nipple
M1A-320-PH	M1-320-PH	320	Handtight Nut and Nipple
M1A-940-P	M1-940-P	940	Yoke
NITROUS OXIDE			
M1A-326-P	M1-326-P	326	Nut and Nipple
M1A-326-PH	M1-326-PH	326	Handtight Nut and Nipple
M1A-910-P	M1-910-P	910	Yoke
MEDICAL AIR			
M1A-346-P	M1-346-P	346	Nut and Nipple
M1A-346-PH	M1-346-PH	346	Handtight Nut and Nipple
M1A-950-P	M1-950-P	950	Yoke
NITROGEN			
M1A-580-PH	M1-580-PH	580	Handtight Nut and Nipple
M1A-580-P	M1-580-P	580	Nut and Nipple
M1A-960-P	M1-960-P	960	Yoke
MEDICAL GAS MIXTURES			
M1A-280-P	M1-280-P	280	Nut and Nipple
M1A-280-PH	M1-280-PH	280	Handtight Nut and Nipple
M1A-500-P	M1-500-P	500	Nut and Nipple
M1A-500-PH	M1-500-PH	500	Handtight Nut and Nipple
M1A-880-P	M1-880-P	880	Yoke
M1A-890-P	M1-890-P	890	Yoke
M1A-930-P	M1-930-P	930	Yoke
MEDICAL HELIUM			
M1A-580A-P	M1-580A-P	580	Nut and Nipple
M1A-580A-PH	M1-580A-PH	580	Handtight Nut and Nipple

See full CGA chart on inside back cover.

FEATURES:

- Chrome-plated brass body with all brass high-pressure chamber
- Maximum rated inlet pressure 3000 psi
- Durable neoprene diaphragm
- Internal reseating relief valve protects against over-pressurization
- Sintered filter for additional safety and to extend regulator life
- 2" diameter gauge
- 15 LPM Oxygen models provide 85-90 LPM flood maximum
- 7 LPM models restricted to 10 LPM maximum
- Polycarbonate inner and outer tubes provide greater accuracy and durability
- Includes plastic swivel hose barb (not shown)
- 6 year limited warranty

SINGLE STAGE MODELS

GAS/MODEL	FLOW RANGE	INLET CONNECTION
OXYGEN		
M1-540-8FM	1/2 - 7 LPM	CGA-540 Nut and Nipple
M1-540-8FMH	1/2 - 7 LPM	CGA-540 Handtight Nut and Nipple
M1-870-8FM	1/2 - 7 LPM	CGA-870 Yoke
M1-540-15FM	1/2 - 15 LPM	CGA-540 Nut and Nipple
M1-540-15FMH	1/2 - 15 LPM	CGA-540 Handtight Nut and Nipple
M1-870-15FM	1/2 - 15 LPM	CGA-870 Yoke
MEDICAL AIR		
M1-346-15FM	1 - 15 LPM	CGA-346 Nut and Nipple
M1-346-15FMH	1 - 15 LPM	CGA-346 Handtight Nut and Nipple
M1-950-15FM	1 - 15 LPM	CGA-950 Yoke
CARBON DIOXIDE		
M1-320-12FM	1/2 - 12 LPM	CGA-320 Nut and Nipple
M1-320-12FMH	1/2 - 12 LPM	CGA-320 Handtight Nut and Nipple
M1-940-12FM	1/2 - 12 LPM	CGA-940 Yoke

See full CGA chart on inside back cover

FLOWMETER FEATURES:

- Polycarbonate inner and outer tubes
- Calibrated at 50 psi inlet
- DISS 1240 outlet

REGULATOR FEATURES:

- All-Brass body and high-pressure chamber
- Internal reseating relief valve protects against over-pressurization
- 2" diameter gauge
- Sintered filter for additional safety and extended regulator life
- Durable neoprene diaphragm
- 3000 psi maximum inlet pressure
- DISS 1240 outlet



M1-540-15FM

Single-Stage Preset Flowmeter Regulator with CGA-540 Nut and Nipple Inlet



NMR-870-15FM

Single-Stage Flowmeter Regulator with CGA-870 Yoke

OXYGEN MR CONDITIONAL SLIM-LINE FLOWMETER

MODEL	FLOW RANGE	REGULATOR PRESSURE	INLET
NMR-870-15FM	1/2 - 15 LPM	50 psi preset	CGA-870 Yoke

CLINICAL REGULATORS 0 - 50 PSI DELIVERY RANGE



M1-500-PGB

Single-Stage Clinical Instrument Regulator with CGA-500 Nut and Nipple Inlet



M1-870-PGB

Single-Stage Clinical Instrument Regulator with CGA-870 Yoke Inlet

FEATURES:

- Chrome-plated brass body with all brass high-pressure chamber
- Maximum inlet pressure 3000 psi
- Durable neoprene diaphragm
- Internal reseating relief valve protects against over-pressurization
- Sintered filter for additional safety and to extend regulator life
- 2" diameter gauges
- OUTLET: Needle Valve with 1/8" Hose Barb (all models)
- 6 year limited warranty

PART #	CGA	INLET
M1-280-PGB	280	Nut and Nipple
M1-880-PGB*	880	Yoke
M1-890-PGB*	890	Yoke
M1-320-PGB	320	Nut and Nipple
M1-940-PGB	940	Yoke
M1-326-PGB	326	Nut and Nipple
M1-910-PGB*	910	Yoke
M1-346-PGB	346	Nut and Nipple
M1-950-PGB	950	Yoke
M1-500-PGB	500	Nut and Nipple
M1-930-PGB*	930	Yoke
M1-940-PGB*	940	Yoke
M1-973-PGB*	973	Yoke
M1-540-PGB	540	Nut and Nipple
M1-870-PGB*	870	Yoke
M1-580-PGB	580	Nut and Nipple
M1-930-PGB*	930	Yoke
M1-960-PGB*	960	Yoke

Note: For Handtight Nut add "H" to item number.

Example: M1-280-PGBH

*Handtight option not available

See full CGA chart on inside back cover

FEATURES:

- Chrome-plated brass body with all brass high-pressure chamber
- Maximum inlet pressure 3000 psi
- Durable Neoprene diaphragm
- Sintered filter for additional safety and to extend regulator life
- 2" diameter gauges
- Brass outlet shut-off valve
- External relief valve
- 1/4" male NPT outlet



MSH180346

Single-Stage
High Purity Medical Air Regulator
with CGA-346 Nut and Nipple Inlet

HIGH PURITY MODELS

MODEL	DELIVERY RANGE	MAX RATED FLOW SCFH AIR AT 2000 PSI*	INLET CONNECTION
MSH15XXX	0 - 15 psi	500 SCFH	Nut and Nipple or Yoke
MSH45XXX	0 - 45 psi	650 SCFH	Nut and Nipple or Yoke
MSH80XXX	0 - 80 psi	950 SCFH	Nut and Nipple or Yoke
MSH180XXX	0 - 180 psi	1000 SCFH	Nut and Nipple or Yoke
MSH450XXX	0 - 450 psi	1000 SCFH	Nut and Nipple or Yoke
MSH15XXX	0 - 15 psi	700 SCFH	Nut and Nipple or Yoke
MSH45XXX	0 - 45 psi	1350 SCFH	Nut and Nipple or Yoke
MSH80XXX	0 - 80 psi	2050 SCFH	Nut and Nipple or Yoke
MSH180XXX	0 - 180 psi	2750 SCFH	Nut and Nipple or Yoke
MSH450XXX	0 - 450 psi	2750 SCFH	Nut and Nipple or Yoke

*Maximum rated flow per CGA E-4 1994 at the stated inlet pressure

ORDERING EXAMPLE

Order by replacing X's in model number with desired CGA number from the Gas/ Inlet Connection chart. Example: MSH45XXX converts to MSH45320 for a Carbon Dioxide regulator with a CGA-320 nut and nipple inlet connection.

GAS/INLET CONNECTIONS

NUT & NIPPLE CGA	YOKE CGA	GAS ASSIGNMENT
280	880	Carbon Dioxide and Oxygen mixtures (CO ₂ not over 7.0%)
280	890	Helium and Oxygen mixtures (He not over 80.5%)
280	890	Nitrogen and Oxygen mixtures (O ₂ over 23.5%)
280	890	Xenon and Oxygen (O ₂ over 20%)
320	940	Carbon Dioxide
326	910	Nitrous Oxide
346	950	Medical Air
500	940	Carbon Dioxide and Oxygen mixtures (CO ₂ over 70%)
500	930	Helium and Oxygen mixtures (He not over 80.5%)
500	973	Carbon Dioxide, Oxygen and Nitrogen
500	973	Lung Diffusion Mixtures
500	973	Nonflammable, Noncorrosive Diagnostic and Medically Related Gas Mixtures
540	870	Oxygen
580	960	Nitrogen
580	930	Helium

Not all gases are available in various delivery pressure ranges.

BREATHING MIXTURE AND MEDICAL MIXTURE REGULATORS



FEATURES:

- Chrome-plated brass body with all brass high-pressure chamber
- Maximum inlet pressure 3000 psi
- Durable neoprene diaphragm
- Internal reseating relief valve protects against over-pressurization
- Sintered filter for additional safety and to extend regulator life
- 2" diameter gauges
- 6 year limited warranty



BREATHING MIXTURES AND MEDICAL MIXTURES

SINGLE STAGE ADJUSTABLE REGULATORS 0-100 psi					
CGA		PART #	INLET	DISS OUTLET	OUTLET PART #
BREATHING MIXTURES					
280	CO ₂ & O ₂ (CO ₂ not over 7%)	M1-280-PG	Nut and Nipple	1020	M02-5
880		M1-880-PG	CGA-880 Yoke	1200A	M20-5
890	He & O ₂ (He not over 80.0%)	M1-890-PG	CGA-890 Yoke	1240	M24-5
890	N ₂ & O ₂ (O ₂ over 23.5%)	M1-890-PG	CGA-890 Yoke	1240	M24-5
965	N ₂ O & O ₂ (N ₂ O 47.5 to 52.5%)	M1-965-PG	CGA-965 Yoke	1020	M02-5
890	Xe & O ₂ (O ₂ over 20%)	M1-890-PG	CGA-890 Yoke	1240	M24-5
MEDICAL MIXTURES					
940	CO ₂ & O ₂ mixtures (CO ₂ , over 7%)	M1-940-PG	CGA-940 Yoke	1080A	M08-5
930	He & O ₂ (He over 80%)	M1-930-PG	CGA-930 Yoke	1060A	M06-5
500	CO ₂ & O ₂ & N ₂	M1-500-PG	Nut and Nipple	1020	M02-5
973	LUNG DIFFUSION MIXTURES	M1-973-PG	CGA-973 Yoke	1020	M02-5
BLOOD GAS MIXTURES					
500	Nonflammable, Noncorrosive Gas Mixtures Labeled as Drugs or Medical Devices and not having another connection assignment	M1-500-PG	Nut and Nipple	1020	M02-5
973		M1-973-PG	CGA-973 Yoke	1020	M02-5

MAGNETIC RESONANCE (MR) CONDITIONAL* REGULATORS

FLOWMETER FEATURES:

- Slim-Line Flowmeter assembled with non-magnetic components
- Anodized aluminum body with brass adjustment knob
- Polycarbonate inner and outer tubes
- Calibrated at 50 psi inlet
- DISS 1240 outlet

REGULATOR FEATURES:

- Flowmeter Regulator assembled with non-magnetic components
- Maximum inlet pressure 3000 psi
- Durable neoprene diaphragm
- Internal reseating relief valve protects against over-pressurization
- Sintered filter for additional safety and to extend regulator life
- 2" diameter gauge
- All-Brass body and high-pressure chamber
- DISS 1240 outlet



FMR100
Slim Line-Flowmeter



NMR-870-15FM
Single-Stage Flowmeter Regulator



FLOWMETER MODELS

GAS	MODEL	FLOW RANGE	INLET PRESSURE	INLET CONNECTION
Oxygen	FMR100	1/2 - 15 LPM	50 psi	1/8 - 27 NPT
Oxygen	FMR103	1/2 - 15 LPM	50 psi	CGA - 022 Nut And Nipple

FLOWMETER REGULATOR MODELS

GAS	MODEL	FLOW RANGE	INLET PRESSURE	INLET CONNECTION
Oxygen	NMR-870-15FM	1/2 - 15 LPM	50 psi Preset	CGA - 870 Yoke
Oxygen	NMR-540-15FM	1/2 - 15 LPM	50 psi Preset	CGA - 540 Nut And Nipple

REGULATOR MODELS

GAS	MODEL	FLOW RANGE	DELIVERY PRESSURE	INLET CONNECTION
Oxygen	NMR-870-P		50 psi Preset	CGA - 870 Yoke
Oxygen	NMR-540-P		50 psi Preset	CGA - 540 Nut And Nipple

*The products on this page are MR conditional for use outside the bore of an MR machine under the following conditions: Static magnetic field of 3.0 Tesla or less; Spatial gradient field of 3.3 Tesla/meter or less.