



Mine Safety Appliances Company • P.O. Box 427 • Pittsburgh, PA 15230

Calibration Kits – ATO Order Form

A – CAL

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Calibration Kit Number

40 - Diffusion Ultima & Toxgard II sensor for:
Carbon monoxide Hydrogen
Oxygen IR Combustible & CO₂
Hydrogen sulfide Nitric oxide
Sulfur dioxide Ammonia
~ Ethylene Oxide Combustible Gas

41 - Diffusion Ultima & Toxgard II sensors for:

Chlorine	* Arsine
Chlorine dioxide	Phosphine
Nitrogen dioxide	* Germane
Hydrogen chloride	^ Diborane
Hydrogen cyanide	+ Bromine
Silane	+ Flourine

42 - Pumped Ultima & Toxgard II or RSS sensors for:

Carbon monoxide	Oxygen
Hydrogen sulfide	Sulfur dioxide
Nitric oxide	Combustible gas

43 - Pumped Ultima & Toxgard II or RSS sensors for:

Chlorine	Chlorine dioxide
Nitrogen dioxide	Hydrogen chloride
Hydrogen cyanide	

44 - Ultima, Auto-calibration, MultiGard

*Cylinder holder provided instead of suitcase
p/n 710483

45 - Diffusion sensors for:

Carbon monoxide	Oxygen
Hydrogen sulfide	Nitrogen dioxide
Nitric oxide	

46 - Diffusion combustible
(non Ultima) sensors

47 - Diffusion sensors for:

Chlorine	Sulfur dioxide
Hydrogen chloride	Nitrogen dioxide

KEY:

- * Calibrate with 0.5ppm Phosphine
- ^ Calibrate with 5.0ppm Silane
- + Calibrate with 2.0 ppm Chlorine
- ~ Calibrate with 10.0 ppm SO₂

48 - Pumped Toxgard for:

Chlorine	Sulfur dioxide
Hydrogen cyanide	

49 - Z Gard for:

Carbon monoxide
R-11
R-22
R-134A

50 - Chillgard RT, Chillgard L Series or
Chemgard

51 - Model 3600 for:

Carbon dioxide and all remote
sensor models (F - Regulator)

52 - Model 3630

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Regulator

Kit 40 - F	Kit 47 - E
Kit 41 - E	Kit 48 - H
Kit 42 - H	Kit 49 - E
Kit 43 - H	Kit 50 - F
Kit 44 - I	Kit 51 - F or G or H
Kit 45 - E	Kit 52 - E
Kit 46 - E	Kit 53 - E, F, or H

Regulator types:

E - 0.25 LPM, P/N 467895
F - 1.50 LPM, P/N 467896
G - Demand Regulator, P/N 710288
H - Matched Flow, P/N 697344
I - Constant Pressure, P/N 710315

3

Calibration Gas Cylinder (Add Cylinder Price)

00000000 - None required or see
Calibration Gases, RP Type Table

4

2nd Calibration Kit Number

00 - None required or choose number from Item 1

5

2nd Regulator (Include Regulator Price Adder)

0 - None required or choose number from Item 2

6

2nd Calibration Gas Cylinder (+Cylinder Price)

00000000 - None required or see
Calibration Gases, RP Type Table

Other Accessories

813628 Nafion Tube assembly
711228 Valve remove tool "RP" cylinder
711229 Valve remove tool "R" cylinder



The Safety Company

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Calibration Kits – ATO Order Form (con't)

Part Number	Chemical Name	Concentration	Description	Shelf Life Months	Calibration Minutes @ 1.5LPM
10044014 *	NH3	300 ppm	Ammonia in Air	12	38.5
10028076*	NH3	25 ppm	Ammonia in Nitrogen	12	38.5
479265	CO2	2.50%	Carbon Dioxide in Air		65.0
479266	CO2	2000 ppm	Carbon Dioxide in Air		65.0
806735	CO2	100 ppm	Carbon Dioxide in Nitrogen		65.0
807386	CO2	1.5%	Carbon Dioxide in Nitrogen		65.0
807387	CO2	15%	Carbon Dioxide in Nitrogen		65.0
801041	CO2,CH4	1300 ppm, 2.5%	Carbon Dioxide, Methane in Nitrogen		65.0
801042	CO2,CH4	2000 ppm, 2.5%	Carbon Dioxide, Methane in Nitrogen		65.0
801043	CO2,CH4	3300 ppm, 2.5%	Carbon Dioxide, Methane in Nitrogen		65.0
801044	CO2,CH4	6600 ppm, 2.5%	Carbon Dioxide, Methane in Nitrogen		65.0
801045	CO2,CH4	1.3%, 2.5%	Carbon Dioxide, Methane in Nitrogen		65.0
801046	CO2,CH4	3.3%, 2.5%	Carbon Dioxide, Methane in Nitrogen		65.0
801047	CO2,CH4	6.6%, 2.5%	Carbon Dioxide, Methane in Nitrogen		65.0
801048	CO2,CH4	33.3%, 2.5%	Carbon Dioxide, Methane in Nitrogen		65.0
10028050	CO	50 ppm	Carbon Monoxide in Air		65.0
710882	CO	60 ppm	Carbon Monoxide in Air		65.0
10028052	CO	100 ppm	Carbon Monoxide in Air		65.0
10028054	CO	200 ppm	Carbon Monoxide in Air		65.0
10027938	CO	300 ppm	Carbon Monoxide in Air		65.0
10028048	CO	400 ppm	Carbon Monoxide in Air		65.0
10028056	CO, CH4	60 ppm CO, 2.5% CH4	Carbon Monoxide, Methane, 15% O2 in Nitrogen		65.0
10010162	CO, CH4, O2	300 ppm CO, 1.45% CH4, 15% O2	Carbon Monoxide, Methane, Oxygen in Nitrogen		65.0
804770*	CO, CH4, O2, H2S	300 ppm, 1.45%, 15%, 10 ppm	Carbon Monoxide, Methane, Oxygen, H2S in N2	9	38.5
*Note: All cylinders contain 98 liters at 1000 psi except those indicated by an *. They have 58 liters. 98 liters gives approximately 20 calibrations per cylinder. + Not to be used for Ultima sensors ✓ Used as zero air for O2 Ultima sensors and all infrared instruments. > Used for Chillgard TGM only.					



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Calibration Kits – ATO Order Form (cont.)

Part Number	Chemical Name	Concentration	Description	Shelf Life Months	Calibration Minutes @ 1.5LPM
710331*	CL2	2 ppm	Chlorine in Nitrogen (used for ClO2 Cal too)	4	38.5
10028066*+	CL2	10 ppm	Chlorine in Nitrogen	4	38.5
10028046*	H2	0.80%	Hydrogen in Air		65.0
10022386	H2	500 ppm	Hydrogen in Nitrogen		65.0
10028078*	HCL	40 ppm	Hydrogen Chloride in Nitrogen	6	38.5
10053747	HCL	10 ppm	Hydrogen Chloride in Nitrogen	6	38.5
10028072*	HCN	10 ppm	Hydrogen in Cyanide in Nitrogen	4	38.5
710414*	H2S	5 ppm	Hydrogen Sulfide in Nitrogen	9	38.5
10028060*+	H2S	10 ppm	Hydrogen Sulfide in Nitrogen	9	38.5
10028064*	H2S	15 ppm	Hydrogen Sulfide in Nitrogen	9	38.5
10028062*	H2S	40 ppm	Hydrogen Sulfide in Nitrogen	9	38.5
10028038*+	Isobutylene	100 ppm	Isobutylene in Air	9	65.0
10028032	CH4	2.50%	Methane in Air		65.0
801049	CH4	6.60%	Methane in Nitrogen		65.0
10028022	CH4, O2	1.45%, 15%	Methane, Oxygen in Nitrogen		65.0
10028020	CH4, O2, CO	1.45%, 15%, 60 ppm	Methane, Oxygen, Carbon Monoxide in Nitrogen		65.0
10028058*	CH4, O2, H2S	1.45%, 15%, 10 ppm	Methane, Oxygen, Hydrogen Sulfide in Nitrogen	9	38.5
10028074*	NO	50 ppm	Nitric Oxide in Nitrogen	4	38.5
481317v	N2	99.90%	Nitrogen (O2 zero)		65.0
710332*	NO2	5 ppm	Nitrogen Dioxide in Air	4	38.5
10028068*	NO2	10 ppm	Nitrogen Dioxide in Air	4	38.5
493580	O2	5%	Oxygen in Nitrogen		65.0
10028028	O2	20.80% in Nitrogen	Oxygen in Nitrogen, Zero Air except for 3600		65.0
804532@	Pentane	0.75%	Pentane in Air, Substitute for Ammonia		65.0
10014894	Pentane	1000 ppm	Pentane in Air		65.0
710533*	Phosphine	0.5 ppm	Phosphine in Nitrogen		38.5
711054	C3H8	0.1%	Propane in Air		65.0
10028034	C3H8	0.60%	Propane in Air (Ultima span)		65.0
*Note: All cylinders contain 98 liters at 1000 psi except those indicated by an *. They have 58 liters. 98 liters gives approximately 20 calibrations per cylinder. + Not to be used for Ultima sensors @ Used only for Chillgard RT, substitute for ammonia. v Used as zero air for O2 Ultima sensors and all infrared instruments. > Used for Chillgard TGM only.					



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Calibration Kits – ATO Order Form (cont.)

Part Number	Chemical Name	Concentration	Description	Shelf Life Months	Calibration Minutes @ 1.5LPM
10028044	C3H8, O2, CO	0.6%, 15%, 60 ppm	Propane, Oxygen, Carbon Monoxide in Nitrogen		65.0
806905	R-11	10 ppm	R-11 in Air		65.0
803499	R-11	100 ppm	R-11 in Nitrogen		65.0
812785	R-11	30 ppm	R-11 in Nitrogen		65.0
710880>	R-11	990 ppm	R-11 in Air		65.0
804866	R-12	100 ppm	R-12 in N2		65.0
812823	R-12	30 ppm	R-12 in Nitrogen		65.0
710878>	R-12	990 ppm	R-12 in Air		65.0
813368	R-113	30 ppm	R-113 in Nitrogen		65.0
804870	R-113	100 ppm	R-113 in N2		65.0
813369	R-114	30 ppm	R-114 in Nitrogen		65.0
806904	R-123	10 ppm	R-123 in Air		65.0
812784	R-123	30 ppm	R-123 in Air		65.0
711474	R-123	50 ppm	R-123 in Nitrogen		65.0
803498	R-123	100 ppm	R-123 in N2		65.0
806907	R-134A	10 ppm	R-134A in N2		65.0
803500	R-134A	100 ppm	R-134A in N2		65.0
812787	R-134A	30 ppm	R-134A in Nitrogen		65.0
710874>	R-134A	990 ppm	R-134A in Air		80.0
806906	R-22	10 ppm	R-22 in Nitrogen		65.0
804868	R-22	100 ppm	R-22 in Nitrogen		65.0
812786	R-22	30 ppm	R-22 in Nitrogen		65.0
710876>	R-22	990 ppm	R-22 in Air		65.0
813370	R-500	30 ppm	R-500 in Nitrogen		65.0
813371	R-502	30 ppm	R-502 in Nitrogen		65.0
10014897*	Silane	5 ppm	Silane in Nitrogen		38.5
10028070*	SO2	10 ppm	Sulfur Dioxide in Air	9	38.5
10028042	Zero Air	20.8% Oxygen in Nitrogen	Zero Air for Chillgard RT Only		35.0
*Note: All cylinders contain 98 liters at 1000 psi except those indicated by an *. They have 58 liters. 98 liters gives approximately 20 calibrations per cylinder. + Not to be used for Ultima sensors. ✓ Used as zero air for O2 Ultima sensors and all infrared instruments. > Used for Chillgard TGM only.					