



The Safety Company

Mine Safety Appliances Company • 1000 Cranberry Woods Dr. • Cranberry Twp. PA 16066

Calibration Kits – ATO Order Form

A - CAL

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1 Calibration Kit Number

40 - Diffusion Ultima, Ultima X & Toxgard II
sensor for:

Carbon monoxide	Hydrogen
Oxygen	IR Combustible & CO2
Hydrogen sulfide	Nitric oxide
Sulfur dioxide	Ammonia
~ Ethylene Oxide	Combustible Gas
Chlorine	* Arsine
Chlorine dioxide	Phosphine
Nitrogen dioxide	* Germane
Hydrogen cyanide	^ Diborane
Silane	+ Bromine
	+ Flourine

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

Carbon monoxide	Oxygen
Hydrogen sulfide	Sulfur dioxide
Nitric oxide	Combustible gas

43 - Pumped Ultima, Ultima X & 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
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
Nitrogen Dioxide
Solid State Refrigerants

50 - Chillgard RT, Chillgard L Series (Pumped) or
Chemgard

51 - Model 3600 for:

Carbon dioxide	and all remote sensor models (F - Regulator)
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54 - Diffusion Ultima, Ultima X, Toxgard II,
Hydrogen Chloride

2

Regulator

Kit 40 - F	Kit 46 - E
Kit 41 - E	Kit 47 - E
Kit 42 - H	Kit 48 - H
Kit 43 - H	Kit 49 - E
Kit 44 - I	Kit 50 - F
Kit 45 - E	Kit 51 - F or G or H
	Kit 54 - F

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

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

0 - None required or choose number from Item 2

6

2nd Calibration Gas Cylinder

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



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Calibration Kits – ATO Order Form (con't)

Part Number	Chemical Name	Concentration	Description	Shelf Life Months	Calibration Minutes @ 1.5LPM
10100007	AC in Air	1.25%	Acetylene		65.0
10044014 *	NH3	300 ppm	Ammonia in Air	18	38.5
10028076*	NH3	25 ppm	Ammonia in Nitrogen	18	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
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	26	38.5
710331*	CL2	2 ppm	Chlorine in Nitrogen (used for ClO2 Cal too)	6	38.5
10028066*+	CL2	10 ppm	Chlorine in Nitrogen	6	38.5
10154952	Ethylene	1.35%	Ethylene in Nitrogen		65.0
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



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Calibration Kits – ATO Order Form (cont.)

Part Number	Chemical Name	Concentration	Description	Shelf Life Months	Calibration Minutes @ 1.5LPM
10053747	HCL	10 ppm	Hydrogen Chloride in Nitrogen	6	38.5
10028072*	HCN	10 ppm	Hydrogen in Cyanide in Nitrogen	18	38.5
1400255-1^	H2S	10 ppm	Hydrogen Sulfide in Air		
1400255-2^	H2S	20 ppm	Hydrogen Sulfide in Air		
1400255-3^	H2S	25 ppm	Hydrogen Sulfide in Air		
1400255-4^	H2S	35 ppm	Hydrogen Sulfide in Air		
1400255-5^	H2S	50 ppm	Hydrogen Sulfide in Air		
1400255-7^	H2S	100 ppm	Hydrogen Sulfide in Air		
710414	H2S	5 ppm	Hydrogen Sulfide in Air	24	38.5
10028060*+	H2S	10 ppm	Hydrogen Sulfide in Nitrogen	24	38.5
10028064*	H2S	15 ppm	Hydrogen Sulfide in Nitrogen	24	38.5
10028062*	H2S	40 ppm	Hydrogen Sulfide in Nitrogen	24	38.5
10089547	H2S	250 ppm	Hydrogen Sulfide in Nitroen	24	38.5
10028038*+	Isobutylene	100 ppm	Isobutylene in Air		65.0
10028032	CH4	2.50%	Methane in Air		65.0
10075804	CH4	50%	Methane in Nitrogen		
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	24	38.5
10028074*	NO	50 ppm	Nitric Oxide in Nitrogen	18	38.5
481317#	N2	99.90%	Nitrogen (O2 zero)		65.0
710332*	NO2	5 ppm	Nitrogen Dioxide in Air	6	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



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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
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
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
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
10077765	R-404A	100 ppm	R-404A in Nitrogen		65.0
10077766	R-404A	100 ppm	R-404A in Nitrogen		65.0
1077767	R-404C	100 ppm	R-407C in Nitrogen		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	6	38.5
10028070*	SO2	10 ppm	Sulfur Dioxide in Air	24	38.5
10028042	Zero Air	20.8% Oxygen in Nitrogen	Zero Air for Chillgard RT Only Less than 1 ppm THC)		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.					
# Used as zero air for O2 Ultima sensors and all infrared instruments.					
> Used for Z Gard only.					