



Calgaz catalogue and price list

Effective 1st January 2009



Contents

Introduction to this 2009 edition of the Calgaz Catalogue	3
6D, 103 litre cylinders containing Non-reactive gas mixtures	5
8AL, 58 litre cylinders containing Reactive gas mixtures	9
65AL (3AL), 650 litre cylinders containing Reactive gas mixtures	11
5E, 550 litre cylinders containing Non-reactive gas mixtures	11
6DM, 58 litre cylinders containing Non-reactive gas mixtures	11
7HP, 34 litre cylinders containing Non-reactive gas mixtures	12
7EOC, 17 litre cylinders containing Non-reactive gas mixtures	13
2AL, 34 litre cylinders containing Reactive gas mixtures	14
Calgaz regulators	15
Miscellaneous Calgaz hardware	16
Calgaz Quality	17
1.1 Gas blend accuracy	17
Cylinder Recycling Tool	18
Calgaz Warranty Statement	19
Calgaz certificate of analysis, sample	20
Calgaz user guide	21
Troubleshooting	22
1.2 'Empty' cylinders	22
1.3 Mixture accuracy with heavier hydrocarbons	22
1.4 Low concentration chlorine blends	22
Cylinder Return for Recycle Kit	24
Calgaz 'Quick reference guide'	26

All prices exclude GST

Commercial in confidence

Calgaz

Introduction to this 2009 edition of the Calgaz Catalogue

The following changes have been made to this edition:

- Price Update

All the prices listed in this catalogue exclude GST and are FIS (free into store) Australia

Products are described with the components listed according to the following convention:

- Reactive / Toxic / Flammable / Oxidising / balance gas (normally nitrogen or air).

In the tables products are sorted by **description** according to the first gas in the description in increasing concentration and then the second etc.. As a result some **products codes** are out of sequence as a result of being additions to the list.

Availability: All the products listed are available for immediate delivery from Melbourne or from Calgaz USA within ~ 3 weeks maximum.

However in some cases **minimum order quantities** are imposed on Air Liquide Australia (typically because no US customer is buying a particular product). These are as follows:

6D 8 cylinders	6DM 8 cylinders	8AL 10 cylinders
2AL 10 cylinders	7EOC 10 cylinders	7HP 10 cylinders

Mostly we know at the time of the enquiry and will advise you then. In all cases where minimum order quantities will be imposed on us, we will advise you.

Order placing: Orders may be placed by:

- on-line by email to (preferred) alavicsales@airliquide.com
- fax to 03 9290 1173 (preferred)
or 03 9290 1199

Contact:

- Availability and Order status: 03 9290 1135 (Vicki : Calgaz store direct)
- Mixture / Technical advice: 03 9290 1120 (Louise) or 03 9697 9869 (Tim)

Dispatch: Whilst we always do our best to ship your goods the day we receive your order, the earlier an order is placed the better the chance of it leaving that day. Calgaz is dispatched from Air Liquide Sunshine between 1400 and 1500hrs each day.

Every consignment is shipped with the relevant Certificate(s) of analysis(es) and MSDS(s) and is accompanied with Dangerous Goods paperwork for travel.

Delivery Service

We currently use TNT for all our normal Calgaz deliveries. Whilst we make every effort to dispatch goods as promptly as possible, the TNT Express service we use has no guaranteed delivery time.

If the delivery of an order is particularly critical please alert us as soon as possible, as we may be able to propose an alternative, but more expensive, solution.

All prices exclude GST

Commercial in confidence

Calgaz

In our experience we find that Calgaz deliveries to:

- Melbourne, Sydney and Adelaide arrive next day before midday but can take 2 days for delivery
- Brisbane arrive in 3 - 5 days
- Perth and Northern Territory arrive in 4 – 6 days
- Tasmania arrive in 3 – 5 days

Web resources

- The Calgaz web page www.Calgaz.com provides further information.
- To quickly locate MSDSs please refer to <http://alawww.as.corp.airliquide.com/pages/calgazmsds.php> where they are available as .pdf type files. The products are listed as in this catalogue.
- You are able to track your consignments using TNT's web site: http://www.tnt.com/country/en_au.html

(North America) · 821 Chesapeake Drive, Cambridge, MD 21613, U.S.A. Tel. 1-800-638-1197
(Europe) · Unit 12, Waterloo Park Ind. Est., Upper Brook Street, Stockport, Cheshire, SK1 3BP, U.K. Tel. +44-870-901-5082
(Asia) · 298 Tiong Bahru Road #20-01, Central Plaza, Singapore 168730 Tel. +65-6373-7286
(Australia) · Royal Domain Centre, 9th Floor, 380 St. Kilda Rd., Melbourne, Victoria 3004 Tel. +61-3-9697-9888



All prices exclude GST

Commercial in confidence

Calgaz

6D, 103 litre cylinders containing Non-reactive gas mixtures

Air Liquide Product code	6D CYLINDERS (3.6cu.ft. / 103 litre) Use with 715 type regulators	
003000	Calgaz 6D cylinder, 103litres	10ppm CO / AIR
003001	Calgaz 6D cylinder, 103litres	20ppm CO / AIR
003140	Calgaz 6D cylinder, 103litres	20 ppm CO / 1.0% METHANE / AIR
003002	Calgaz 6D cylinder, 103litres	25ppm CO / AIR
003003	Calgaz 6D cylinder, 103litres	35ppm CO / 0.14%PENTANE / 18%O2 / N2
003159	Calgaz 6D cylinder, 103litres	40ppm CO / 2.0% METHANE / 18%O2 / N2
003004	Calgaz 6D cylinder, 103litres	40ppm CO / 2% METHANE / AIR
003005	Calgaz 6D cylinder, 103litres	40ppm CO / 2.5% METHANE / AIR
003006	Calgaz 6D cylinder, 103litres	50ppm CO / N2
003007	Calgaz 6D cylinder, 103litres	50ppm CO / AIR
003008	Calgaz 6D cylinder, 103litres	50ppm CO / 18% O2 / N2
003009	Calgaz 6D cylinder, 103litres	50ppm CO / 1.62% METHANE / 18%O2 /N2
003010	Calgaz 6D cylinder, 103litres	50ppm CO / 2.5% METHANE / 12% O2 /N2
003011	Calgaz 6D cylinder, 103litres	50ppm CO / 2.5% METHANE / 18% O2 /N2
003012	Calgaz 6D cylinder, 103litres	50ppm CO / 2.5% METHANE / 19% O2 /N2
003013	Calgaz 6D cylinder, 103litres	50ppm CO / 2.5% METHANE / 21% O2 /N2
003014	Calgaz 6D cylinder, 103litres	50ppm CO / 2.5% METHANE / AIR
003147	Calgaz 6D cylinder, 103litres	50ppmCO/2.5%CO2/2.5%METHANE/12%O2/N2
003015	Calgaz 6D cylinder, 103litres	50ppm CO / 1.1% PROPANE / 18% O2 /N2
003016	Calgaz 6D cylinder, 103litres	50ppm CO / 1.1% PROPANE / AIR
003155	Calgaz 6D cylinder, 52litres	50ppm CO / 0.3% HEXANE / 12% O2 / N2
003017	Calgaz 6D cylinder, 103litres	60ppm CO / 1.45% METHANE / 15%O2 /N2
003018	Calgaz 6D cylinder, 103litres	100ppm CO / N2
003019	Calgaz 6D cylinder, 103litres	100ppm CO / AIR
003020	Calgaz 6D cylinder, 103litres	100ppm CO / 2.5% METHANE / 18%O2 /N2
003021	Calgaz 6D cylinder, 103litres	100ppm CO / 2.5% METHANE / 19% O2/N2
003022	Calgaz 6D cylinder, 103litres	100ppm CO / 2.5% METHANE / 21% O2/N2
003023	Calgaz 6D cylinder, 103litres	100ppm CO / 2.5% METHANE / AIR
003024	Calgaz 6D cylinder, 103litres	100ppm CO / 0.35% PENTANE / 19%O2/N2
003025	Calgaz 6D cylinder, 103litres	100ppm CO / 0.35% PENTANE / AIR
003026	Calgaz 6D cylinder, 31litres	100ppm CO / 0.48% HEXANE / AIR
003027	Calgaz 6D cylinder, 103litres	100ppm CO / 0.2% CF3CH2F(R-134A) /N2
003028	Calgaz 6D cylinder, 103litres	150ppm CO / AIR
003029	Calgaz 6D cylinder, 103litres	200ppm CO / N2
003030	Calgaz 6D cylinder, 103litres	200ppm CO / AIR
003031	Calgaz 6D cylinder, 103litres	200ppm CO / 2.5% METHANE / 18% O2/N2
003032	Calgaz 6D cylinder, 103litres	200ppmCO / 2.5%METHANE / 18.5%O2 /N2
003033	Calgaz 6D cylinder, 103litres	250ppm CO / AIR
003034	Calgaz 6D cylinder, 103litres	250ppm CO / 2.5% METHANE / 17% O2/N2
003035	Calgaz 6D cylinder, 103litres	250ppmCO / 0.35% PENTANE / 18% O2/N2
003036	Calgaz 6D cylinder, 103litres	300ppm CO / AIR
003037	Calgaz 6D cylinder, 103litres	400ppm CO / N2
003038	Calgaz 6D cylinder, 103litres	500ppm CO / AIR
003039	Calgaz 6D cylinder, 103litres	500ppm CO / 1.5% METHANE / AIR

All prices exclude GST

Commercial in confidence

Calgaz

Calgaz Price list effective 1st January 2009

003040	Calgaz 6D cylinder, 103litres	500ppm CO / 2.5% METHANE / 18% O2/N2
003041	Calgaz 6D cylinder, 103litres	500ppm CO / 2.5% METHANE / AIR
003042	Calgaz 6D cylinder, 103litres	500ppmCO / 0.42% PROPANE / 18% O2/N2
003043	Calgaz 6D cylinder, 103litres	0.1% CO / N2
003044	Calgaz 6D cylinder, 103litres	0.1% CO / AIR
003045	Calgaz 6D cylinder, 103litres	0.3% CO / AIR
003046	Calgaz 6D cylinder, 103litres	1.0% CO / AIR
003141	Calgaz 6D cylinder, 103litres	300 ppm CO2 / N2
003047	Calgaz 6D cylinder, 103litres	340ppm CO2 / N2
003048	Calgaz 6D cylinder, 103litres	600ppm CO2
003049	Calgaz 6D cylinder, 103litres	0.1% CO2 / N2
003050	Calgaz 6D cylinder, 103litres	0.1% CO2 / AIR
003051	Calgaz 6D cylinder, 103litres	0.15% CO2 / AIR
003052	Calgaz 6D cylinder, 103litres	0.2% CO2 / AIR
003053	Calgaz 6D cylinder, 103litres	0.25% CO2 / N2
003054	Calgaz 6D cylinder, 103litres	0.25% CO2 / AIR
003055	Calgaz 6D cylinder, 103litres	0.3% CO2 / N2
003056	Calgaz 6D cylinder, 103litres	0.5% CO2 / N2
003057	Calgaz 6D cylinder, 103litres	0.5% CO2 / AIR
003058	Calgaz 6D cylinder, 103litres	1.0% CO2 / N2
003059	Calgaz 6D cylinder, 103litres	1.0% CO2 / AIR
003060	Calgaz 6D cylinder, 103litres	1.5% CO2 / N2
003061	Calgaz 6D cylinder, 103litres	1.5% CO2 / AIR
003062	Calgaz 6D cylinder, 103litres	2.0% CO2 / N2
003063	Calgaz 6D cylinder, 103litres	2.0% CO2 / AIR
003064	Calgaz 6D cylinder, 103litres	2.5% CO2 / N2
003065	Calgaz 6D cylinder, 103litres	2.5% CO2 / AIR
003160	Calgaz 6D cylinder, 103litres	4% CO2 / 16% O2 / N2
003066	Calgaz 6D cylinder, 103litres	5% CO2 / N2
003142	Calgaz 6D cylinder, 103litres	5% CO2 / 21% O2 / N2
003067	Calgaz 6D cylinder, 103litres	10% CO2 / N2
003143	Calgaz 6D cylinder, 103litres	10% CO2 / 12% O2 / N2
003068	Calgaz 6D cylinder, 103litres	10% CO2 / 15% O2 / N2
003144	Calgaz 6D cylinder, 103litres	10% CO2 / 21% O2 / N2
003069	Calgaz 6D cylinder, 103litres	15% CO2 / N2
003070	Calgaz 6D cylinder, 103litres	200ppm HYDROGEN / AIR
003071	Calgaz 6D cylinder, 103litres	400ppm HYDROGEN / AIR
003072	Calgaz 6D cylinder, 103litres	0.1% HYDROGEN / AIR
003073	Calgaz 6D cylinder, 103litres	0.2% HYDROGEN / AIR
003074	Calgaz 6D cylinder, 103litres	0.8% HYDROGEN / AIR
003075	Calgaz 6D cylinder, 103litres	2% HYDROGEN / AIR
003076	Calgaz 6D cylinder, 103litres	2% HYDROGEN / 3% CO2 / 20.9% O2 / N2
003153	Calgaz 6D cylinder, 103litres	10 ppm METHANE / AIR
003154	Calgaz 6D cylinder, 103litres	50 ppm METHANE / AIR
003077	Calgaz 6D cylinder, 103litres	100ppm METHANE / AIR
003078	Calgaz 6D cylinder, 103litres	500ppm METHANE / AIR
003079	Calgaz 6D cylinder, 103litres	0.25% METHANE / N2
003080	Calgaz 6D cylinder, 103litres	0.25% METHANE / AIR
003081	Calgaz 6D cylinder, 103litres	0.5% METHANE / AIR
003082	Calgaz 6D cylinder, 103litres	1.0% METHANE / AIR
003083	Calgaz 6D cylinder, 103litres	1.25% METHANE / AIR

All prices exclude GST

Commercial in confidence

Calgaz

Calgaz Price list effective 1st January 2009

003084	Calgaz 6D cylinder, 103litres	1.45% METHANE / 15% O2 / N2
003085	Calgaz 6D cylinder, 103litres	1.5% METHANE / AIR
003086	Calgaz 6D cylinder, 103litres	1.62% METHANE / 18% O2 / N2
003087	Calgaz 6D cylinder, 103litres	2.0% METHANE / AIR
003088	Calgaz 6D cylinder, 103litres	2.5% METHANE / 17% O2 / N2
003089	Calgaz 6D cylinder, 103litres	2.5% METHANE / AIR
003090	Calgaz 6D cylinder, 103litres	2.9% METHANE / AIR
003091	Calgaz 6D cylinder, 103litres	5% METHANE / N2
003092	Calgaz 6D cylinder, 103litres	12% METHANE / N2
003094	Calgaz 6D cylinder, 103litres	1.15% ACETYLENE / AIR
003093	Calgaz 6D cylinder, 103litres	1.25% ACETYLENE / AIR
003095	Calgaz 6D cylinder, 103litres	0.8% ETHYLENE / 17% O2 / N2
003096	Calgaz 6D cylinder, 103litres	1.35% ETHYLENE / N2
003097	Calgaz 6D cylinder, 103litres	1.35% ETHYLENE / AIR
003098	Calgaz 6D cylinder, 103litres	0.22% PROPANE / AIR
003099	Calgaz 6D cylinder, 103litres	0.44% PROPANE / AIR
003100	Calgaz 6D cylinder, 103litres	0.6% PROPANE / AIR
003101	Calgaz 6D cylinder, 103litres	1.1% PROPANE / 18% O2 / N2
003102	Calgaz 6D cylinder, 103litres	1.1% PROPANE / AIR
003103	Calgaz 6D cylinder, 103litres	0.9% BUTANE / AIR
003104	Calgaz 6D cylinder, 103litres	0.9% iso-BUTANE / AIR
003105	Calgaz 6D cylinder, 103litres	100ppm iso-BUTYLENE / AIR
003106	Calgaz 6D cylinder, 103litres	0.35% PENTANE / AIR
003107	Calgaz 6D cylinder, 103litres	0.35% PENTANE / 19% O2 / N2
003108	Calgaz 6D cylinder, 75litres	0.75% PENTANE / AIR
003109	Calgaz 6D cylinder, 103litres	50ppm HEXANE / AIR
003110	Calgaz 6D cylinder, 103litres	100ppm HEXANE / AIR
003111	Calgaz 6D cylinder, 103litres	300ppm HEXANE / AIR
003112	Calgaz 6D cylinder, 103litres	400ppm HEXANE / AIR
003113	Calgaz 6D cylinder, 103litres	500ppm HEXANE / AIR
003114	Calgaz 6D cylinder, 103litres	0.1% HEXANE / AIR
003115	Calgaz 6D cylinder, 103litres	0.12% HEXANE / 12% O2 / N2
003116	Calgaz 6D cylinder, 103litres	0.12% HEXANE / AIR
003117	Calgaz 6D cylinder, 77litres	0.2% HEXANE / AIR
003145	Calgaz 6D cylinder, 52litres	0.3% HEXANE / 17% O2 / N2
003118	Calgaz 6D cylinder, 52litres	0.3% HEXANE / AIR
003119	Calgaz 6D cylinder, 31litres	0.48% HEXANE / AIR
003161	Calgaz 6D cylinder, 103litres	5ppm Benzene / AIR
003121	Calgaz 6D cylinder, 103litres	100ppm TOLUENE / N2
003122	Calgaz 6D cylinder, 103litres	100ppm TOLUENE / AIR
003127	Calgaz 6D cylinder, 103litres	100ppm CF3CH2F (R-134A) / AIR
003128	Calgaz 6D cylinder, 103litres	550ppm CF3CH2F (R-134A) / AIR
003152	Calgaz 6D cylinder, 103litres	0.2% C2H2F4 (R-134A) / N2
003130	Calgaz 6D cylinder, 103litres	Zero N2 > 99%
003131	Calgaz 6D cylinder, 103litres	N2 chromatographic > 99.998%
003132	Calgaz 6D cylinder, 103litres	N2 UHP > 99.999%
003133	Calgaz 6D cylinder, 103litres	0.4% O2 / N2
003134	Calgaz 6D cylinder, 103litres	2% O2 / N2
003135	Calgaz 6D cylinder, 103litres	8% O2 / N2
003137	Calgaz 6D cylinder, 103litres	18.5% O2 / N2
003149	Calgaz 6D cylinder, 103litres	19% O2 / N2

All prices exclude GST

Commercial in confidence

Calgaz

Calgaz Price list effective 1st January 2009

003138	Calgaz 6D cylinder, 103litres	20.8% O2 / N2
003139	Calgaz 6D cylinder, 103litres	ZERO AIR <1ppm THC
003146	Calgaz 6D cylinder, 103litres	ULTRA ZERO AIR <0.1ppm THC

All prices exclude GST

Commercial in confidence

Calgaz

8AL, 58 litre cylinders containing Reactive gas mixtures

Air Liquide Product code	8AL CYLINDERS (2cu.ft. / 58 litre) Use with 715 type regulators	
003300	Calgaz 8AL cylinder, 58litres	2ppm CHLORINE / N2
003301	Calgaz 8AL cylinder, 58litres	5ppm CHLORINE / N2
003302	Calgaz 8AL cylinder, 58litres	10ppm CHLORINE / N2
003303	Calgaz 8AL cylinder, 58litres	100ppm CHLORINE / N2
003304	Calgaz 8AL cylinder, 58litres	10ppm HYDROGEN CHLORIDE / N2
003305	Calgaz 8AL cylinder, 58litres	5ppm SULFUR DIOXIDE / N2
003306	Calgaz 8AL cylinder, 58litres	10ppm SULFUR DIOXIDE / N2
003307	Calgaz 8AL cylinder, 58litres	10ppm SULFUR DIOXIDE / AIR
003308	Calgaz 8AL cylinder, 58litres	20ppm SULFUR DIOXIDE / N2
003309	Calgaz 8AL cylinder, 58litres	20ppm SULFUR DIOXIDE / AIR
003389	Calgaz 8AL cylinder, 58litres	35 ppm SULFUR DIOXIDE / N2
003310	Calgaz 8AL cylinder, 58litres	50ppm SULFUR DIOXIDE / N2
003311	Calgaz 8AL cylinder, 58litres	200ppm SULFUR DIOXIDE / N2
003312	Calgaz 8AL cylinder, 58litres	250ppm SULFUR DIOXIDE / N2
003384	Calgaz 8AL cylinder, 58litres	5ppm H2S/N2
003314	Calgaz 8AL cylinder, 58litres	10ppm H2S / N2
003315	Calgaz 8AL cylinder, 58litres	10ppm H2S / AIR
003316	Calgaz 8AL cylinder, 58litres	10ppmH2S/35ppmCO/0.14%PENT / 18%O2/N2
003388	Calgaz 8AL cylinder, 58litres	10ppmH2S /50ppmCO /2.5%CH4 /12%O2/N2
003317	Calgaz 8AL cylinder, 58litres	10ppmH2S/300ppmCO/1.45%CH4 /15%O2/N2
003318	Calgaz 8AL cylinder, 58litres	10ppmH2S/300ppmCO/ 2.5%CH4 /15%O2/N2
003319	Calgaz 8AL cylinder, 58litres	15ppm H2S / N2
003320	Calgaz 8AL cylinder, 58litres	20ppm H2S / N2
003321	Calgaz 8AL cylinder, 58litres	20ppmH2S/ 40ppmCO/ 0.5%CH4 /19%O2/N2
003322	Calgaz 8AL cylinder, 58litres	25ppm H2S / N2
003323	Calgaz 8AL cylinder, 58litres	25ppm H2S / AIR
003324	Calgaz 8AL cylinder, 58litres	25ppm H2S / 2.5% METHANE / 19% O2/N2
003387	Calgaz 8AL cylinder, 58litres	25ppm H2S/ 2.5%METHANE/ N2
003325	Calgaz 8AL cylinder, 58litres	25ppm H2S / 2.5% METHANE / AIR
003326	Calgaz 8AL cylinder, 58litres	25ppm H2S / 0.35%PENTANE / 19% O2/N2
003327	Calgaz 8AL cylinder, 58litres	25ppmH2S/ 50ppmCO/1.62%CH4/ 18%O2/N2
003328	Calgaz 8AL cylinder, 58litres	25ppmH2S/ 50ppmCO/ 2.5%CH4/ 12%O2/N2
003379	Calgaz 8AL cylinder, 58litres	25ppH2S/50pCO/0.5CO2/2.5CH4/12%O2/N2
003330	Calgaz 8AL cylinder, 58litres	25ppmH2S/ 50ppmCO/ 2.5%CH4/ 18%O2/N2
003331	Calgaz 8AL cylinder, 58litres	25ppmH2S/ 50ppmCO/2.5%CH4/20.9%O2/N2
003329	Calgaz 8AL cylinder, 58litres	25ppmH2S / 50ppm CO / 2.5% CH4 / AIR
003385	Calgaz 8AL cylinder, 58litres	25ppmH2S/50ppmCO/0.55%PROP/19%O2/N2
003332	Calgaz 8AL cylinder, 58litres	25ppmH2S/50ppCO/1.1%PROPANE/12%O2/N2
003333	Calgaz 8AL cylinder, 58litres	25ppmH2S/50ppCO/1.1%PROPANE/18%O2/N2
003334	Calgaz 8AL cylinder, 58litres	25ppmH2S/50ppCO/0.12%HEXANE/12%O2/N2
003335	Calgaz 8AL cylinder, 58litres	25ppmH2S/50ppmCO/0.3%HEXANE/12%O2/N2
003336	Calgaz 8AL cylinder, 58litres	25ppmH2S/ 50ppmCO / 0.3%HEXANE / AIR
003337	Calgaz 8AL cylinder, 58litres	25ppmH2S/ 100ppmCO/ 2.5%CH4/18%O2/N2

All prices exclude GST

Commercial in confidence

Calgaz

Calgaz Price list effective 1st January 2009

003338	Calgaz 8AL cylinder, 58litres	25ppmH2S / 100ppmCO / 2.5% CH4 / AIR
003339	Calgaz 8AL cylinder, 58litres	25pH2S/100pCO/25%leIPROPANE/19%O2/N2
003340	Calgaz 8AL cylinder, 58litres	25ppmH2S/ 100ppmCO/ 0.3%PENTANE/ AIR
003341	Calgaz 8AL cylinder, 58litres	25ppmH2S/100ppmCO/ 0.35%PENTANE/ AIR
003342	Calgaz 8AL cylinder, 58litres	25ppH2S/100pCO/0.35%PENTANE/19%O2/N2
003343	Calgaz 8AL cylinder, 58litres	25ppmH2S/ 100ppmCO / 0.3%HEXANE/ AIR
003344	Calgaz 8AL cylinder, 58litres	25ppmH2S / 200ppmCO / 2.5% CH4 / AIR
003345	Calgaz 8AL cylinder, 58litres	25ppmH2S/ 400ppmCO/2.5%CH4/ 12%O2/N2
003346	Calgaz 8AL cylinder, 58litres	40ppm H2S / N2
003347	Calgaz 8AL cylinder, 58litres	50ppm H2S / N2
003348	Calgaz 8AL cylinder, 58litres	50ppm H2S / AIR
003380	Calgaz 8AL cylinder, 58litres	50ppmH2S/500ppmCO/2.5%CH4/18%O2/N2
003349	Calgaz 8AL cylinder, 58litres	70ppm H2S / N2
003350	Calgaz 8AL cylinder, 58litres	100ppm H2S / N2
003351	Calgaz 8AL cylinder, 58litres	150ppm H2S / N2
003381	Calgaz 8AL cylinder, 58litres	200 ppm H2S / N2
003352	Calgaz 8AL cylinder, 58litres	250ppm H2S / N2
003386	Calgaz 8AL cylinder, 58litres	10 ppm AMMONIA/AIR
003353	Calgaz 8AL cylinder, 58litres	25ppm AMMONIA / N2
003354	Calgaz 8AL cylinder, 58litres	50ppm AMMONIA / N2
003355	Calgaz 8AL cylinder, 58litres	50ppm AMMONIA / AIR
003356	Calgaz 8AL cylinder, 58litres	100ppm AMMONIA / N2
003357	Calgaz 8AL cylinder, 58litres	100ppm AMMONIA / AIR
003358	Calgaz 8AL cylinder, 58litres	150ppm AMMONIA / N2
003359	Calgaz 8AL cylinder, 58litres	300ppm AMMONIA / N2
003360	Calgaz 8AL cylinder, 58litres	300ppm AMMONIA / AIR
003361	Calgaz 8AL cylinder, 58litres	10ppm NITRIC OXIDE / N2
003362	Calgaz 8AL cylinder, 58litres	25ppm NITRIC OXIDE / N2
003363	Calgaz 8AL cylinder, 58litres	50ppm NITRIC OXIDE / N2
003364	Calgaz 8AL cylinder, 58litres	100ppm NITRIC OXIDE / N2
003365	Calgaz 8AL cylinder, 58litres	100ppm NITRIC OXIDE/ 200ppm SO2 / N2
003366	Calgaz 8AL cylinder, 58litres	200ppm NITRIC OXIDE / N2
003367	Calgaz 8AL cylinder, 58litres	250ppm NITRIC OXIDE / N2
003368	Calgaz 8AL cylinder, 58litres	5ppm NITROGEN DIOXIDE / N2
003369	Calgaz 8AL cylinder, 58litres	5ppm NITROGEN DIOXIDE / AIR
003370	Calgaz 8AL cylinder, 58litres	10ppm NITROGEN DIOXIDE / N2
003382	Calgaz 8AL cylinder, 58litres	10 ppm NITROGEN DIOXIDE / AIR
003371	Calgaz 8AL cylinder, 58litres	25ppm NITROGEN DIOXIDE / N2
003372	Calgaz 8AL cylinder, 58litres	25ppm NITROGEN DIOXIDE / AIR
003373	Calgaz 8AL cylinder, 58litres	100ppm NITROGEN DIOXIDE / AIR
003374	Calgaz 8AL cylinder, 58litres	10ppm HYDROGEN CYANIDE / N2
003375	Calgaz 8AL cylinder, 58litres	0.5ppm PHOSPHINE / N2
003376	Calgaz 8AL cylinder, 58litres	5ppm PHOSPHINE / N2
003378	Calgaz 8AL cylinder, 58litres	5ppm ETHYLENE OXIDE / N2
003383	Calgaz 8AL cylinder, 58litres	5 ppm BENZENE / AIR

All prices exclude GST

Commercial in confidence

Calgaz

65AL (3AL), 900 litre cylinders containing Reactive gas mixtures

Air Liquide Product code	65AL CYLINDERS (23cu.ft. / 900 litre) Use with 718 type regulators	
003505	Calgaz 65AL(3AL) cyl, 900 litres	10ppmH2S/35ppCO/0.14%PENTANE/18%O2/N2
003500	Calgaz 65AL(3AL) cyl, 900 litres	25ppm H2S / N2 (CGA330)
003508	Calgaz 65AL(3AL) cyl, 900 litres	25ppmH2S/0.35% PENTANE / 19% O2 / N2
003501	Calgaz 65AL(3AL) cyl, 900 litres	25ppmH2S/ 50ppmCO/ 2.5%CH4/ 12%O2/N2
003502	Calgaz 65AL(3AL) cyl, 900 litres	25ppmH2S/50ppCO/1.1%Propane/12%O2/N2
003503	Calgaz 65AL(3AL) cyl, 900 litres	25ppmH2S/50ppCO/1.1%Propane/18%O2/N2
003504	Calgaz 65AL(3AL) cyl, 900 litres	25ppH2S/100ppCO/1.1%Propane/12%O2/N2
003507	Calgaz 65AL(3AL) cyl, 900 litres	40 PPM H2S / N2
003506	Calgaz 65AL(3AL) cyl, 900 litres	50ppmH2S/500ppmCO/2.5%CH4/18%O2/N2

5E, 550 litre cylinders containing Non-reactive gas mixtures

Air Liquide Product code	5E CYLINDERS 19.5cu.ft. / 552 litre) Use with 718 type regulators	
003551	Calgaz 5E cylinder, 552litres	50ppm CO / 2.5% METHANE / 12%O2/N2
003550	Calgaz 5E cylinder, 552litres	100ppm CO / N2
003564	Calgaz 5E cylinder, 552litres	100 ppm CO / 2.5% CH4 / 18% O2 / N2
003552	Calgaz 5E cylinder, 552litres	100ppm CO / 2.5% METHANE / 19%O2/N2
003553	Calgaz 5E cylinder, 552litres	100ppm CO / 2.5% METHANE / 21%O2/N2
003554	Calgaz 5E cylinder, 552litres	1.0% METHANE / AIR
003555	Calgaz 5E cylinder, 552litres	2.5% METHANE / AIR
003556	Calgaz 5E cylinder, 552litres	1.3% ETHYLENE / AIR
003557	Calgaz 5E cylinder, 552litres	1.35% ETHYLENE / N2
003558	Calgaz 5E cylinder, 552litres	1.35% ETHYLENE / AIR
003559	Calgaz 5E cylinder, 552litres	1.1% PROPANE / AIR
003560	Calgaz 5E cylinder, 125litres	0.3% HEXANE / AIR
003561	Calgaz 5E cylinder, 75litres	0.48% HEXANE / AIR
003562	Calgaz 5E cylinder, 552litres	N2 UHP
003563	Calgaz 5E cylinder, 552litres	ZERO AIR

6DM, 58 litre cylinders containing Non-reactive gas mixtures

Air Liquide Product code	6DM CYLINDERS 2cu.ft. / 58 litre) Use with 715 type regulators	
003600	Calgaz 6DM cylinder, 58litres	H2 >99.999% UHP
003601	Calgaz 6DM cylinder, 58litres	H2 >99.95%
003602	Calgaz 6DM cylinder, 58litres	50% METHANE / N2
003603	Calgaz 6DM cylinder, 58litres	METHANE >99%
003604	Calgaz 6DM cylinder, 14litres	8% BUTANE / 15% CO2 / N2 (14 LITRES)

All prices exclude GST

Commercial in confidence

Calgaz

7HP, 34 litre cylinders containing Non-reactive gas mixtures

Air Liquide Product code	7HP CYLINDERS 1.2cu.ft. / 34 litre) Use with 713 type regulators	
003650	Calgaz 7HP cylinder, 34litres	20ppm CO / AIR
003651	Calgaz 7HP cylinder, 34litres	50ppm CO / 18% O2 / N2
003652	Calgaz 7HP cylinder, 34litres	50ppm CO / AIR
003653	Calgaz 7HP cylinder, 34litres	50ppm CO / 1.62% METHANE / 18%O2/N2
003654	Calgaz 7HP cylinder, 34litres	60ppm CO / AIR
003655	Calgaz 7HP cylinder, 34litres	100ppm CO / AIR
003656	Calgaz 7HP cylinder, 34litres	100ppm CO / 2.5% METHANE / 19%O2/N2
003657	Calgaz 7HP cylinder, 34litres	300ppm CO / AIR
003658	Calgaz 7HP cylinder, 34litres	1.5% CO2 / N2
003659	Calgaz 7HP cylinder, 34litres	4.0% CO2 / N2
003680	Calgaz 7HP cylinder, 34litres	Carbon Dioxide >100%
003660	Calgaz 7HP cylinder, 34litres	1.0% METHANE / AIR
003661	Calgaz 7HP cylinder, 34litres	2.0% METHANE / AIR
003662	Calgaz 7HP cylinder, 34litres	2.5% METHANE / AIR
003663	Calgaz 7HP cylinder, 34litres	100ppm ETHYLENE / AIR
003664	Calgaz 7HP cylinder, 34litres	500ppm ETHYLENE / N2
003666	Calgaz 7HP cylinder, 34litres	0.6% PROPANE / AIR
003667	Calgaz 7HP cylinder, 34litres	1.1% PROPANE / AIR
003668	Calgaz 7HP cylinder, 34litres	0.9% BUTANE / AIR
003669	Calgaz 7HP cylinder, 13litres	8% BUTANE / 13.8% CO2 / N2
003670	Calgaz 7HP cylinder, 34litres	10ppm iso-BUTYLENE / AIR
003671	Calgaz 7HP cylinder, 34litres	100ppm iso-BUTYLENE / AIR
003672	Calgaz 7HP cylinder, 34litres	0.35% PENTANE / AIR
003673	Calgaz 7HP cylinder, 34litres	0.75% PENTANE / 15% O2 / N2
003674	Calgaz 7HP cylinder, 34litres	0.75% PENTANE / AIR
003675	Calgaz 7HP cylinder, 34litres	0.12% HEXANE / AIR
003676	Calgaz 7HP cylinder, 34litres	Helium UHP
003677	Calgaz 7HP cylinder, 34litres	N2 Zero
003678	Calgaz 7HP cylinder, 34litres	20.8% O2 / N2
003679	Calgaz 7HP cylinder, 34litres	ZERO AIR

All prices exclude GST

Commercial in confidence

Calgaz

7EOC, 17 litre cylinders containing Non-reactive gas mixtures

Air Liquide Product code	7EOC CYLINDERS 0.6cu.ft. / 17 litre) Use with 713 type regulators	
003700	Calgaz 7EOC cylinder, 17 litres	20ppm CO / AIR
003701	Calgaz 7EOC cylinder, 17 litres	35ppm CO / 0.14% PENTANE / 18%O2/N2
003702	Calgaz 7EOC cylinder, 17 litres	50ppm CO / AIR
003703	Calgaz 7EOC cylinder, 17 litres	50ppm CO / 2.5% METHANE / 12%O2/N2
003704	Calgaz 7EOC cylinder, 17 litres	100ppm CO / AIR
003705	Calgaz 7EOC cylinder, 17 litres	100ppm CO / 2.5% METHANE / 16% O2/N2
003706	Calgaz 7EOC cylinder, 17 litres	100ppm CO / 2.5% METHANE / 19% O2/N2
003707	Calgaz 7EOC cylinder, 17 litres	200ppm CO / N2
003708	Calgaz 7EOC cylinder, 17 litres	200ppm CO / AIR
003709	Calgaz 7EOC cylinder, 17 litres	200ppm CO / 2.5% CH4 / 18.5% O2 / N2
003710	Calgaz 7EOC cylinder, 17 litres	200ppm CO / 2.5% CH4 / 19% O2 / N2
003711	Calgaz 7EOC cylinder, 17 litres	0.1% CO2 / N2
003712	Calgaz 7EOC cylinder, 17 litres	0.2% CO2 / AIR
003713	Calgaz 7EOC cylinder, 17 litres	0.5% CO2 / N2
003714	Calgaz 7EOC cylinder, 17 litres	2.0% CO2 / N2
003715	Calgaz 7EOC cylinder, 17 litres	2.5% CO2 / N2
003716	Calgaz 7EOC cylinder, 17 litres	5% CO2 / N2
003717	Calgaz 7EOC cylinder, 17 litres	5% CO2 / 20.6% O2 / N2
003718	Calgaz 7EOC cylinder, 17 litres	7% CO2 / 15% O2 / N2
003719	Calgaz 7EOC cylinder, 17 litres	10% CO2 / N2
003720	Calgaz 7EOC cylinder, 17 litres	10% CO2 / 15% O2 / N2
003721	Calgaz 7EOC cylinder, 17 litres	22% CO2 / 50% O2 / N2
003747	Calgaz 7EOC cylinder, 17 litres	40% CO2 / Methane
003722	Calgaz 7EOC cylinder, 17 litres	1% H2 / AIR
003723	Calgaz 7EOC cylinder, 17 litres	2% H2 / AIR
003724	Calgaz 7EOC cylinder, 17 litres	100ppm METHANE / AIR
003725	Calgaz 7EOC cylinder, 17 litres	2.2% METHANE / AIR
003726	Calgaz 7EOC cylinder, 17 litres	2.5% METHANE / 17% O2 / N2
003727	Calgaz 7EOC cylinder, 17 litres	2.5% METHANE / AIR
003728	Calgaz 7EOC cylinder, 17 litres	15% METHANE / 15% CO2 / N2
003729	Calgaz 7EOC cylinder, 17 litres	15% N2 / 35% CO2 / CH4
003730	Calgaz 7EOC cylinder, 17 litres	500ppm ETHYLENE / N2
003731	Calgaz 7EOC cylinder, 17 litres	1% PROPANE / AIR
003732	Calgaz 7EOC cylinder, 17 litres	1.1% PROPANE / AIR
003734	Calgaz 7EOC cylinder, 17 litres	0.9% BUTANE / AIR
003736	Calgaz 7EOC cylinder, 17 litres	100ppm iso-BUTYLENE / AIR
003737	Calgaz 7EOC cylinder, 17 litres	0.35% PENTANE / AIR
003738	Calgaz 7EOC cylinder, 17 litres	0.75% PENTANE / 15% O2 / N2
003739	Calgaz 7EOC cylinder, 17 litres	0.75% PENTANE / AIR
003740	Calgaz 7EOC cylinder, 17 litres	400ppm HEXANE / AIR
003741	Calgaz 7EOC cylinder, 17 litres	0.48% HEXANE / AIR
003742	Calgaz 7EOC cylinder, 17 litres	N2 >99.8%
003744	Calgaz 7EOC cylinder, 17 litres	N2 UHP > 99.999%
003745	Calgaz 7EOC cylinder, 17 litres	4% O2 / N2
003746	Calgaz 7EOC cylinder, 17 litres	ZERO AIR

All prices exclude GST

Commercial in confidence

Calgaz

2AL, 34 litre cylinders containing Reactive gas mixtures

Air Liquide Product code	2AL CYLINDERS (1.2cu.ft. / 34 litre) Use with 715 type regulators	
003778	Calgaz 2AL cylinders, 34 litres	5 ppm CHLORINE / N2
003770	Calgaz 2AL cylinders, 34 litres	10ppm SULFUR DIOXIDE / N2
003771	Calgaz 2AL cylinders, 34 litres	10ppm H2S / N2
003789	Calgaz 2AL cylinders, 34 litres	10ppmH2S/ 300ppmCO/ 1.45%CH4/15%O2/N2
003772	Calgaz 2AL cylinders, 34 litres	25ppmH2S/ 50ppmCO/ 1.62%CH4/18%O2/N2
003773	Calgaz 2AL cylinders, 34 litres	25ppmH2S/ 50ppmCO / 2.5%CH4/12%O2/N2
003774	Calgaz 2AL cylinders, 34 litres	25ppmH2S/50ppmCO /2.5%CH4/20.9%O2/N2
003775	Calgaz 2AL cylinders, 34 litres	25ppmH2S / 50ppm CO / 2.5% CH4 / AIR
003788	Calgaz, 2AL cylinder, 34 litres	25 ppmH2S/ 100ppmCO/2.5%CH4/18%O2/N2
003776	Calgaz 2AL cylinders, 34 litres	25ppmH2S/100ppmCO/2.5%CH4/20.9%O2/N2
003786	Calgaz 2AL cylinders, 34 litres	25pmH2S/100pmCO/.35%Pentane/19%O2/N2
003781	Calgaz 2AL cylinders, 34 litres	25ppm H2S/100ppm CO/0.35%PENTANE/AIR
003782	Calgaz 2AL cylinders, 34 litres	50 ppm AMMONIA/N2
003787	Calgaz 2AL cylinders, 34 litres	100 ppm AMMONIA / air
003779	Calgaz 2AL cylinders, 34 litres	150 ppm AMMONIA / N2
003780	Calgaz 2AL cylinders, 34 litres	300 ppm AMMONIA / Air
003777	Calgaz 2AL cylinders, 34 litres	10 ppm NITRIC OXIDE / N2
003783	Calgaz 2AL cylinders, 34 litres	50 ppm NITRIC OXIDE / N2
003784	Calgaz 2AL cylinders, 34 litres	10 ppm NITROGEN DIOXIDE / N2
003785	Calgaz 2AL cylinders, 34 litres	10 ppm HYDROGEN CYANIDE / N2

All prices exclude GST

Commercial in confidence

Calgaz

Calgaz regulators

Air Liquide Product code	Description	
004100	Calgaz regulator	702 PRE-SET 0.4 LPM
004101	Calgaz regulator	705 PRE-SET 0.5 LPM
004102	Calgaz regulator	705 PRE-SET 1.0 LPM
004103	Calgaz regulator	713 PRE-SET 0.2 LPM
004104	Calgaz regulator	713 PRE-SET 0.25 LPM
004105	Calgaz regulator	713 PRE-SET 0.3 LPM
004106	Calgaz regulator	713 PRE-SET 0.4 LPM
004107	Calgaz regulator	713 PRE-SET 0.5 LPM
004108	Calgaz regulator	713 PRE-SET 0.75 LPM
004142	Calgaz regulator	713 PRE-SET 1.0 LPM
004109	Calgaz regulator	713 PRE-SET 1.5 LPM
004110	Calgaz regulator	713 PRE-SET MJ
004111	Calgaz regulator	715 PRE-SET 0.2 LPM
004112	Calgaz regulator	715 PRE-SET 0.25 LPM
004113	Calgaz regulator	715 PRE-SET 0.3 LPM
004114	Calgaz regulator	715 PRE-SET 0.375 LPM
004115	Calgaz regulator	715 PRE-SET 0.4 LPM
004116	Calgaz regulator	715 PRE-SET 0.5 LPM
004117	Calgaz regulator	715 PRE-SET 0.6 LPM
004118	Calgaz regulator	715 PRE-SET 0.75 LPM
004119	Calgaz regulator	715 PRE-SET 1.0 LPM
004120	Calgaz regulator	715 PRE-SET 1.5 LPM
004121	Calgaz regulator	715 PRE-SET 2.0 LPM
004144	Calgaz regulator	715 PRE-SET 4.0 LPM
004122	Calgaz regulator *requires an adaptor	718 PRE-SET 0.30 LPM
004123	Calgaz regulator *requires an adaptor	718 PRE-SET 0.50 LPM
004125	Calgaz regulator *requires an adaptor	718 PRE-SET 0.75 LPM
004126	Calgaz regulator *requires an adaptor	718 PRE-SET 1.0 LPM
004145	Calgaz regulator *requires an adaptor	718 PRE-SET 4.0 LPM
004128	Calgaz regulator *requires an adaptor	1001 VARIABLE (3000/15psi)
004129	Calgaz regulator *requires an adaptor	1002 VARIABLE (3000/100psi)
004130	Calgaz regulator *requires an adaptor	1003 VARIABLE (3000/160psi)
004131	Calgaz regulator	1764 VARIABLE FLOW RATE-brass
004132	Calgaz regulator, nickel plated brass	1781 PRE-SET 0.25 LPM
004133	Calgaz regulator, nickel plated brass	1781 PRE-SET 0.5 LPM
004134	Calgaz regulator, nickel plated brass	1781 PRE-SET 0.75 LPM
004135	Calgaz regulator	1782 VAR FLOW RATE-nickel pltd brass
004136	Calgaz regulator	2001 DFR (for 6D / 8AL)
004137	Calgaz regulator *requires an adaptor	2003 DFR 1/4" NPT inlet
004140	Calgaz regulator	2007 DFR (for 7HP / 7EOC)
004143	Calgaz regulator	4210 TRIGGER PRE-SET 0.5 LPM
004141	Calgaz regulator	4210 TRIGGER PRE-SET 1.0 LPM

*pre-assembled before dispatch

All prices exclude GST

Commercial in confidence

Calgaz

Miscellaneous Calgaz hardware

Air Liquide Product code	Description	
004213	Calgaz sundry item	TYPE 10 with O-ring, brass, 60mm
004217	Calgaz sundry item	TYPE 10 without O-ring, brass, 80mm
004218	Calgaz sundry item	TYPE 10 without O-ring, chromed,80mm
004225	Calgaz sundry item	TYPE 10 w/o O-RING, st st spigot
004241	Calgaz sundry item	Type 10 chromed nut
004240	Calgaz sundry item	St St Spigot T10, T20, CGA590
004239	Calgaz sundry item	Type 11 Brass
004214	Calgaz sundry item	TYPE 20 with O-ring, brass, 60mm
004219	Calgaz sundry item	TYPE 20 without O-ring, brass, 80mm
004220	Calgaz sundry item	TYPE 20 without O-ring, chromed,80mm
004226	Calgaz sundry item	TYPE 20 w/o O-ring, st st spigot
004242	Calgaz sundry item	TYPE 20 chromed nut
004236	Calgaz sundry item	TYPE 30 Brass
004215	Calgaz sundry item	TYPE 31 Brass
004227	Calgaz sundry item	TYPE 32 stainless steel
004221	Calgaz sundry item	TYPE 44 st st (BS-341 Fig. 14 (RH))
004222	Calgaz sundry item	BS-341 Fig. 15 (LH) stainless steel
004200	Calgaz sundry item	CGA-330 chrome-plated brass
004223	Calgaz sundry item	CGA-330 stainless steel
004228	Calgaz sundry item	CGA-350 brass
004201	Calgaz sundry item	CGA-350 chrome-plated brass
004202	Calgaz sundry item	CGA-500 chrome-plated brass
004229	Calgaz sundry item	CGA-510 without O-ring, brass, 80mm
004203	Calgaz sundry item	CGA-540 chrome-plated brass
004204	Calgaz sundry item	CGA-580 chrome-plated brass
004205	Calgaz sundry item	CGA-590 chrome-plated brass
004206	Calgaz sundry item	CGA-660 chrome-plated brass
004224	Calgaz sundry item	CGA-660 stainless steel
004208	Calgaz sundry item	CARRY CASE
004245	Calgaz sundry item	3 CYLINDER SOFT CARRY BAG
004211	Calgaz sundry item	TEFLON TUBING 1M, WITH PVC ENDS
004212	Calgaz cylinder recycling tool RC10	for 6D/8AL/2AL cyls (4250)
004216	Calgaz cylinder recycling tool RC600	for 7HP/7EOC cyls (4260)
004248	Cylinder return for recycling kit	12 cylinder box

All prices exclude GST

Commercial in confidence

Calgaz

Calgaz Quality

All Calgaz blends are prepared and certified gravimetrically. All Master blends are analyzed 100%. Lot analysis is performed on trans-filled cylinders. Certification is NIST (National Institute of Standards and Technology) weight Traceable. All cylinder lot data is maintained for historical record keeping purposes.

EVERY cylinder is pressure checked and leak checked with a mass spectrometer. The nitrogen balance gas is 'spiked' with helium which is the tracer the mass spectrometer can detect. This does not include the UHP gases which are checked separately.

1.1 Gas blend accuracy

Since all Calgaz blends are manufactured and certified gravimetrically (i.e. by weight), only 1 tolerance applies to the label concentration.

e.g. a gas blend comprising 25ppm H₂S / N₂ has a tolerance (or uncertainty) of $\pm 5\%$ (refer to the following section). This means that this blend is guaranteed to have a true concentration between 23.75 ppm and 26.25ppm during its Warranty life (12 months in this example).

Please note that the guide lines given in Section 0 must be respected to ensure the blend accuracy over the warranted life of the cylinder.

Calgaz gas blend traceability is via the NIST certified weights used to calibrate the scales used in the preparation of the gas blends.

The above contrasts with the other common method of preparation where there is a tolerance applied to the target concentration (typically 10%) and then an analytical uncertainty of the measured value (typically 2%).

e.g. for a requested concentration of 25ppm H₂S / N₂, mixtures in the range 22.5ppm to 27.5ppm (i.e. $\pm 10\%$) would be considered acceptable. For a mixture that ended up at (say) 22.7ppm, the analytical uncertainty of $\pm 2\%$ would mean that the true value lies between 22.246ppm and 23.154ppm.

8AL (58 litre) and 2AL (34 litre) cylinders for reactive gas blends

Minor components are certified to the following analytical and preparation accuracy.

- 51 – 300ppm $\pm 2\%$
- 21 – 50ppm $\pm 5\%$
- 2 – 20ppm $\pm 10\%$

6D (103litre), 5E (550 litre), 7EOC (19 litre) & 7HP (34 litre) cylinders for Non-reactive gas blends

All minor components certified to $\pm 2\%$

All prices exclude GST

Commercial in confidence

Calgaz

Cylinder Recycling Tool

Cylinder Recycling Tool for use with CALGAZ CYLINDERS

Instructions cover the following models:

Model RC4250 (external threads) for use with Calgaz 2AL ,8AL or 6D cylinders.

Model RC4260 (internal threads) for use with Calgaz 7EOC or 7HP cylinders.

READ ALL DIRECTIONS BEFORE PROCEEDING

The Calgaz cylinder recycling tool is designed to render the DOT39 cylinders listed above incapable of being refilled. Proper use of the tool will leave a visible hole in the cylinder valve area. Empty cylinders may be returned to Calgaz **prepaid** or disposed of with local recycling companies. **Calgaz only accepts cylinders of its own manufacture for recycling.**

DIRECTIONS FOR USE

1. Determine cylinder type and applicable tool to use.
2. Cylinders must be **EMPTY** before proceeding. Full cylinders must be safely relieved of pressure by use of a regulator before proceeding with deactivation of the valve. Vent contents outdoors or under a properly rated lab hood. Flammable gas mixtures must be emptied away from all possible sources of ignition. Read the MSDS if you are not sure about the flammability of the gas mixture. Some residual gas may escape during the procedure. Always wear safety glasses and proceed slowly when working with the cylinders.
3. Hold cylinder with valve away from face. Use caution when working with calibration cylinders. If you are unfamiliar with their use, contact someone who is knowledgeable.
4. Prepare the tool for use by making sure the centre punch is retracted completely into the body of the tool before beginning. The centre punch is retracted by turning it counter clockwise until it stops.
5. Screw the tool on the cylinder as you would a regulator. If working with a flammable gas mixture perform the remaining operations with the cylinder and tool immersed in a water bath to preclude friction as a possible source of ignition.
6. After the tool is connected to the cylinder, simply turn the handle clockwise (you will feel increasing resistance) until you have reached the end of its travel. You will have punched out the valve stem when you reach this point. There may be some venting during this procedure. If venting occurs, pause to allow gas pressure to dissipate. Both tools are designed with gas relief ports in the event the cylinders contain residual gas.
7. Retract and remove the tool by reversing the above procedure. After retraction there will be a visible hole in the cylinder valve. The valve stem that was punched out may rattle in the bottom of the cylinder. With the 7EOC and 7HP cylinders, the punched out valve piece may not always rattle due to it being retained by a metal fragment near the original valve stem location.

WARNINGS

1. Use the tools only with cylinders manufactured by Calgaz.
2. Always wear safety glasses when using these tools.
3. Use the cylinder tools in a well ventilated area.
4. Do not use wrenches or pliers to attach the tool to a cylinder, only use hand pressure.
5. Do not use the tool if it fails to engage properly with the cylinder threads, otherwise injury may occur.



All prices exclude GST

Commercial in confidence

Calgaz

Calgaz Warranty Statement

CALGAZ

PRODUCT SPECIFICATIONS & WARRANTY STATEMENT



Gas Mixture	Cylinder Size	Warranty Period
LEL Mixtures	6D, 7EOC, 7HP, 5E, 2AL, 8AL	Thirty-six months
Other non-reactive gas mixtures	6D, 7EOC, 7HP, 5E, 2AL, 8AL	Thirty-six months
C ₂ H ₅ OH	6D, 5E, 2AL, 8AL	Thirty-six months
C ₆ H ₆ /Air	6D, 7EOC, 7HP, 2AL, 8AL	Twenty-four months
H ₂ S/N ₂ or H ₂ S/Air	2AL	Twelve months
H ₂ S/N ₂ or H ₂ S/Air	8AL	Thirteen months
H ₂ S/CO/LEL/O ₂ /N ₂	2AL	Twelve months
H ₂ S/CO/LEL/O ₂ /N ₂	8AL	Thirteen months
SO ₂ /N ₂ or SO ₂ /Air	2AL, 8AL	Twelve months
NH ₃ /N ₂ or NH ₃ /Air	2AL, 8AL	Twelve months
NO/N ₂	2AL, 8AL	Twelve months
HCN/N ₂	2AL, 8AL	Twelve months
PH ₃ /N ₂	2AL, 8AL	Twelve months
SiH ₄ /N ₂	2AL, 8AL	Twelve months
ETO/N ₂	2AL, 8AL	Twelve months
CL ₂ /N ₂	2AL, 8AL	Nine months
HCl/N ₂	2AL, 8AL	Eight months
NO ₂ /N ₂ or NO ₂ /Air	2AL, 8AL	Six months
H ₂ S mixtures	1AL	Three months
Non-reactive gas mixtures	1AL	Twelve months

Mixture Tolerances

These tolerances cover all minor components of CALGAZ mixtures.

6D, 6DM, 7EOC, 7HP & 5E ± 2% (relative)

2AL & 8AL as follows: 1-20ppm ± 10% (relative)
21-50ppm ± 5% (relative)
51-100ppm ± 2% (relative)

1AL H₂S mixtures ± 20% (relative)
1AL non-reactive mixtures ± 5% (relative)

www.calgaz.com

North America

Calgaz
821 Chesapeake Drive
Cambridge, MD 21613
U.S.A.
Phone: 800-638-1197
410-228-6400
Fax: 410-228-4251

Europe/Middle East/Africa

Calgaz
Unit 12, Waterloo Park Ind. Est.
Upper Brook Street
Stockport, Cheshire, SK1 3BP
United Kingdom
Phone: +44-870-901-5082
Fax: +44-870-902-5152 or
+44-161-476-7671

Asia

Calgaz
360 Orchard Road #11-03A
International Building
Singapore 238869
Phone: +65-6736-1101
Fax: +65-6278-1397
H/P: +65-9834-0250

Additional Worldwide Locations

Japan
Chile
Australia

info@calgaz.com



All prices exclude GST

Commercial in confidence

Calgaz

Calgaz certificate of analysis, sample

ANALYSIS CERTIFICATION

METHOD OF PREPARATION : GRAVIMETRIC / PRESSURE TRANSFILLING

METHOD OF ANALYSIS : ELECTROCHEMICAL CELL, GC(FID)

ACCURACY : ± 5% RELATIVE (H₂O), ± 2% RELATIVE (CO, H₂)

LOT NO. & QTY.	COMP. 1 H ₂ O	COMP. 2 CO	COMP. 3 H ₂	COMP. 4 AIR	COMP. 5	COMP. 6	Exp. Date
68957 (9)	25PPM	100PPM	2.50%	BALANCE			04/01/03

(GAS MIXTURES MANUFACTURED WITH BALANCE CALIBRATED USING N.I.S.T. TRACEABLE WEIGHTS.)

TEST NUMBER: 185052-1, 9493, 9532

No effecting environmental conditions during analysis.

REQUESTED BY : AIR LIQUIDE AUSTRALIA LTD.

CUSTOMER PURCHASE ORDER NUMBER : HOS993272 (W.E. 3/22)

PACKING LIST NUMBER : 154802

CERTIFICATION DATE : March 28, 2002

ANALYSIS BY : Terry Anderson
Quality Technician

"We certify that all the cylinders for the Lot numbers identified herein are manufactured and tested within the requirements of CGA # par. 176.68 and that physical and chemical test reports are on file and copies will be furnished upon request."

AIR LIQUIDE AMERICA CORPORATION
821 Chesapeake Drive, Cambridge, MD 21613
Phone: (410)328-8400 Fax: (410)328-4251

All prices exclude GST

Commercial in confidence

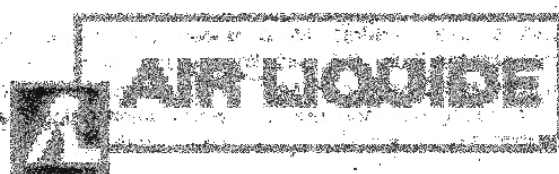
Calgaz

Calgaz user guide

Recommended Procedures for Using ppm Reactive Gas Mixtures in Non-refillable Cylinders

CALGAZ

RECOMMENDED PROCEDURES FOR USING PPM REACTIVE GAS MIXTURES IN NON-REFILLABLE 8 AL CYLINDERS



AIR LIQUIDE



Instructions

These procedures serve as guidelines for getting the maximum accuracy potential and avoiding contamination in the use of reactive gas mixtures contained in CALGAZ 8AL cylinders.

Reactive gases currently supplied in the Part Per Million (PPM) range in the 8AL cylinder include the following:

- Acetylene (C₂H₂) in a balance of Nitrogen (N₂)
- Chlorine (Cl₂) in a balance of Nitrogen (N₂)
- Hydrogen Chloride (HCl) in a balance of Nitrogen (N₂)
- Hydrogen Cyanide (HCN) in a balance of Nitrogen (N₂)
- Hydrogen Sulfide (H₂S) in a balance of Air or Nitrogen (N₂)
- Nitric Oxide (NO) in a balance of Nitrogen (N₂)
- Nitrogen Dioxide (NO₂) in a balance of Air
- Sulfur Dioxide (SO₂) in a balance of Air or Nitrogen (N₂)

Reactive gas mixtures listed above are subject to contamination from the sampling system, atmospheric moisture and Oxygen. These general instructions will aid in eliminating common operator errors when using the gas mixtures and supplied pressure regulators.

1.) Before attaching the regulator to the 8AL cylinder, make sure the regulator's on/off knob is turned ON. When the regulator is fully engaged in the cylinder turn the regulator on/off knob OFF until ready to use. This procedure will help prevent trapped atmospheric air in the regulator from being injected into the cylinder.

2.) Keep your sampling system clean and use appropriate material in the gas system. Before each filling make sure with a majority of applications. The smaller your sampling system the less chance for contamination with the gas.

3.) Do not store your cylinders with the regulator fully engaged in the cylinder valve. Use the cylinder's primary sealing mechanism, the built in valve, to ensure product quality. The regulator is not designed as a primary sealing mechanism against product contamination.

4.) Do not over tighten the regulator on/off knob when turning the regulator OFF. It will take a few seconds for the flow to stop after the regulator is turned off because the pressure is being relieved in the regulator's body.

5.) Follow your instrument manufacturer's instructions for proper calibration of your equipment. Store cylinders in a clean, cool and dry area.

All prices exclude GST

Commercial in confidence

Calgaz

Troubleshooting

1.2 'Empty' cylinders

The most frequent problem reported are cylinders supposedly delivered empty. In fact this is very rarely turns out to be the case and great care is taken at the Calgaz plant to avoid this;

- All mixtures are 'spiked' with helium (approx 0.2%) to enable leak detection to be performed in a vacuum chamber and mass spectrometer. UHP products (which cannot be helium spiked are checked differently
- EVERY SINGLE CYLINDER is pressure checked to ensure it is full before being packaged for shipment.
- The cylinder valve is an Air Liquide designed and manufactured item and controlled for good pressure integrity.

However if you do encounter this sort of problem there are some basic checks to perform.

- Has the cylinder been left with the regulator attached and the on/off tap slightly on? 0.5lpm (the typical flow rate chosen) is hard to hear, especially if there is any ambient noise. It only takes 2 hours to drain a 58 litre cylinder at this rate.
- Has the cylinder been left with the cylinder regulator attached? The primary sealing system is the cylinder valve NOT the regulator. When you have finished using a cylinder, remove the regulator to ensure tight shut off of the valve. If the regulator has been left engage we cannot guarantee that the gas will not leak out.
- Very occasionally the valve will not allow the gas to come out (an 'O' ring settles across an orifice in the valve mechanism). Connecting and disconnecting the regulator a few times will usually cure this problem.

DFR regulators

We recognize that these regulators are used on automatic calibration stations which require that the cylinder valve is left on (or that the DFR is left engaged on disposable cylinders). However we recommend, as normal with Calgaz regulators, that the cylinder valve be turned off (or DFR removed from cylinder) whenever the calibration system is not in use, for example; overnight.

1.3 Mixture accuracy with heavier hydrocarbons

In the case of some of the hexane mixtures (e.g. 003026) and (003155) the fill pressure is reduced to avoid condensation of the hexane in the event that the cylinder temperature falls below 10C (this could happen during transit in the US or during air freight. If this has occurred a false low level the hydrocarbon in question will be delivered by the cylinder.

To avoid problems caused by this effect ensure that the cylinder has been standing at room temperature for a couple of hours and then roll the cylinder backwards and forwards for 2-3 minutes. This will ensure that (a) all the hydrocarbon is in the vapour phase and (b) the vapour is uniformly distributed in the balance gas. (Note the products susceptible to this problem are labeled as such).

1.4 Low concentration chlorine blends

The use of low level chlorine standards requires special care. Chlorine (Cl₂) readily reacts with any moisture present and will give the impression that there is no chlorine present in the cylinder. (In general if any problems are encountered with low levels of reactive species of gas the following procedure should be used.)

- Use only new regulator or one dedicated to chlorine blends only.
- Use a short length (~0.5m) of small diameter (~3mm) PTFE (e.g. Teflon) tubing (Prod Code 004211) or similar to connect the regulator to the calibration cup or instrument to be calibrated.

All prices exclude GST

Commercial in confidence

Calgaz

22/33

- Ensure cylinder, regulator and sample handling system have all been 'soaked' at room temperature for an hour or so. (Condensation will form on a cold regulator if it is brought in to a warm room).
- Purge entire sample handling system (i.e. regulator, tube and 'cup') with UHP nitrogen for ~5 minutes.
- Immediately after this purge connect the chlorine cylinder to the regulator and purge for another 2 minutes.
- The system will now deliver a representative sample to the end of the sample handling system.

All prices exclude GST

Commercial in confidence

Calgaz

Cylinder Return for Recycle Kit

A new complete service that takes the onus away from your depot.

The service provides the following for you:

- Clear instructions
- Packaging
- All Dangerous Goods paperwork
- All aspects of recycling the cylinders safely for you
- Easy invoicing
- A 'hands off' approach for your depot
- An automatic kit replenishment to your depots upon return of a full box to Air Liquide (if requested)

When dealing with Dangerous Goods it is imperative that we ensure correct paperwork and handling:

- The correct type of box that is fit for transport according to Australian standards
- A Consignment note correctly completed
- A manifest of the dangerous goods contained within the box
- An Emergency Procedure Guide with 24 hour contact details
- Dangerous Goods Diamonds on the box clearly visible

Air Liquide will be taking care of this for you.

This service alleviates your depots of the following:

- Purchasing recycling tools (\$115.00 each)
- Losing/breaking the tool and paying for replacement
- Training on safely using the recycling tool
- Finding a recycling plant
- Taking the cylinders to the recycling plant
- Preparing any dangerous goods paperwork

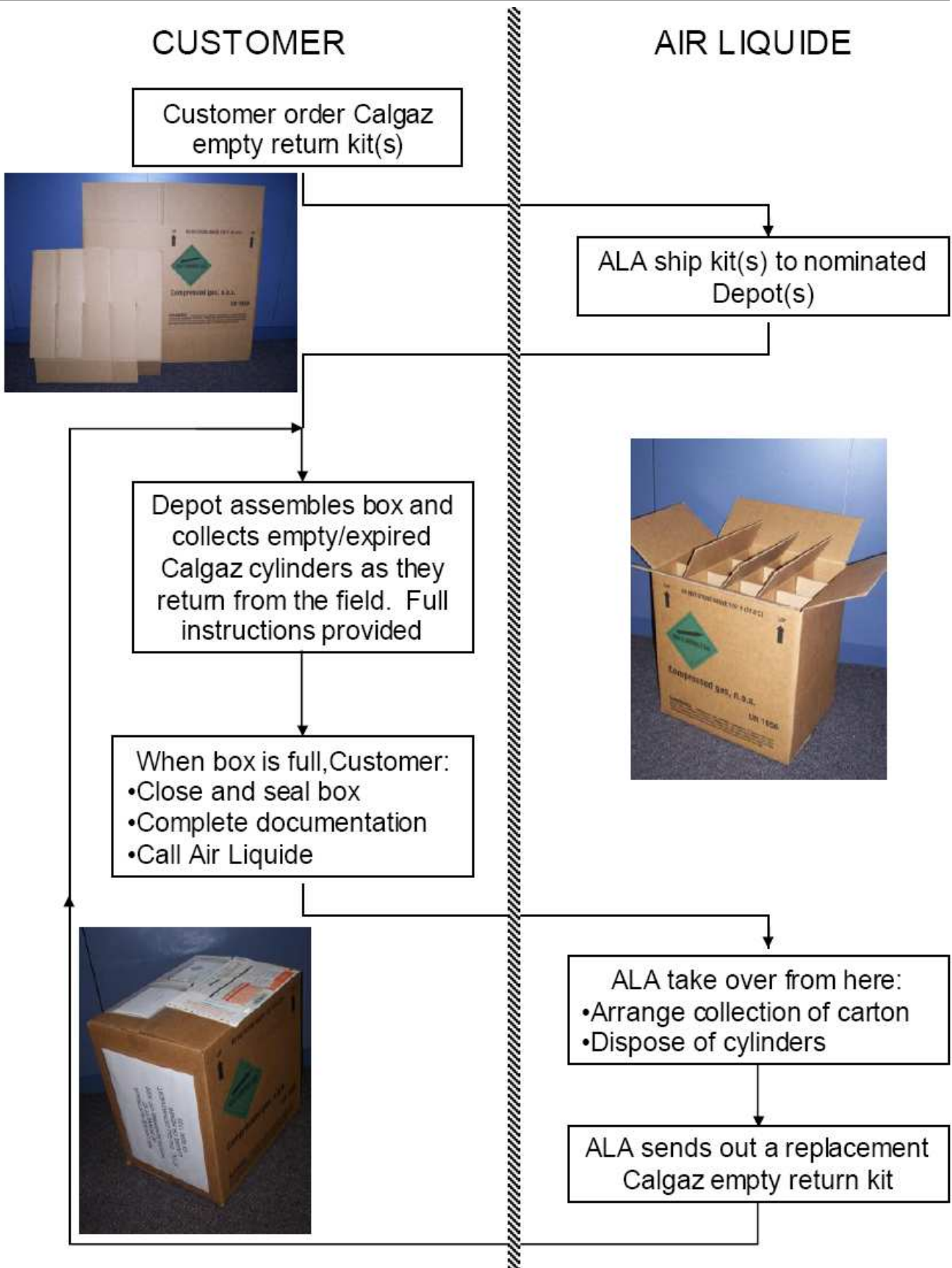
The total charge of \$416.00 + GST will be charged as one fee in advance.

The following flow chart pictures the kit in it's process.
Please contact us direct for more information if required.

All prices exclude GST

Commercial in confidence

Calgaz



All prices exclude GST

Commercial in confidence

Calgaz

Calgaz 'Quick reference guide'.

The following pages are provided by way of an overview of the Calgaz range of products and is intended to answer some of the more frequently asked questions. It comprises the following:

- Page 1 shows the entire Calgaz family of cylinders and accessories
- Pages 2 & 3, the Calgaz cylinders and what gas mixtures they are used for including the UN numbers
- Pages 4, 5 & 6, the range of Calgaz regulators, which cylinders they are used with and for which applications. Also shows the recycling tool
- Page 7 gives a conversion table of %age LEL to volume % and ppm to %
- NOTE the difference between the CGA LEL values and the Australian Standard values

All prices exclude GST

Commercial in confidence

Calgaz



All prices exclude GST
Commercial in confidence

Calgaz

“6D” Main characteristics:

- Used for ‘no n-reactive’¹ gases
- Beige colour, steel cylinder
- Nominal contents: 103 litres of gas (less for some mixtures)²
- Fill pressure: 6900 kPa (1000 psi, less for some mixtures)
- Nominal gross weight: 1.38 kg
- Dimensions: 350mm x φ 85mm
- Water capacity: 1.63 l
- Most frequently used with 715 but may be used with 2001 ‘demand flow’, 1000 series & 1700 series regulators
- UN1956
- UN1066
- UN1002



“8AL” Main characteristics:

- Used for ‘reactive’¹ gases
- Un-painted aluminum cylinder
- Nominal contents: 58 litres of gas
- Fill pressure: 3400 kPa (500 psi)
- Nominal gross weight: 0.7 kg
- Dimensions: 360mm x φ 90mm
- Water capacity: 1.84 l
- Most frequently used with 715 but may be used with 2001 ‘demand flow’, 1000 series & 1700 series regulators
- UN1956
- UN1066



“2AL” Main characteristics:

- Used for ‘reactive’¹ gases
- Un-painted aluminum cylinder
- Nominal contents: 34 litres of gas
- Fill pressure: 3400 kPa (500 psi)
- Nominal gross weight: 0.46 kg
- Dimensions: 285mm x φ 75mm
- Water capacity: 1.08 l
- Most frequently used with 715 but may be used with 2001 ‘demand flow’, 1000 series & 17 series regulators
- UN1956
- UN1066



1 **Reactive** gases are: H₂S, NH₃, Cl₂, NO, NO₂, SO₂, HCN, ETO, PH₃, HCl
 2 The pressure, and hence the volume, of some gas blends is reduced when the vapour pressure of any of the components the gas is relatively low, e.g. butane, pentane, hexane.

“7HP” Main characteristics:

- Used for ‘no n-reactive’¹ gases including some flammable gas mixtures
- Red colour, steel cylinder
- Nominal contents: 34 litres of gas (less for some mixtures)²
- Fill pressure: 3500 kPa (500 psi, less for some mixtures)
- Nominal gross weight: 0.63 kg
- Dimensions: 350 x φ 75mm
- Water capacity: 1.08 l
- Most frequently used with 713 but may be used with 2007 ‘demand flow’, 1000 series & 1700 series regulators
- UN1956
- UN1066
- UN1002



“7EOC” Main characteristics:

- Used for ‘no n-reactive’¹ gases
- Red colour, steel cylinder
- Nominal contents: 17 litres of gas (less for some mixtures)²
- Fill pressure: 1650 kPa (240 psi, less for some mixtures)
- Nominal gross weight: 0.46 kg
- Dimensions: 350 x φ 75mm
- Water capacity: 1.12 l
- Most frequently used with 713 but may be used with 2007 ‘demand flow’, 1000 series & 1700 series regulators
- UN1956
- UN1066
- UN1002



“6DM” Main characteristics:

- Used for ‘no n-reactive’, flammable gas mixtures & pure gases
- Beige colour, rounded base, steel cylinder
- Nominal contents: 58 litres of gas (less for some mixtures)
- Fill pressure: 6900 kPa (1000 psi, less for some mixtures)
- Nominal gross weight: 0.79 kg
- Dimensions: 210 mm x φ 85mm
- Water capacity: 0.92 l
- Most frequently used with 715 but may be used with 2001 ‘demand flow’, 1000 series & 1700 series regulators
- UN1954
- UN1049
- UN1971



CALGAZ

May 2004

Commercial in confidence

AIR LIQUIDE



"5E" Main characteristics:

- Used for 'non-reactive' gases
- White colour, steel cylinder fitted with CGA type valve appropriate for the contents
- Nominal contents: 5.52 litres of gas (less for some mixtures)
- Fill pressure: 15.1 MPa (2200 psi, less for some mixtures)
- Nominal gross weight: 6.4 kg
- Dimensions: 640 x φ 115mm
- Water capacity: 3.97 l
- Regulators: 718, 1000 series, 1700 series or 2003 'demand flow' regulators + appropriate 'nut & spigot'
- UN1956
- UN1066
- UN1002



"65AL" Main characteristics:

- Used for 'reactive' gases
- Un-painted 'brushed' aluminum cylinder fitted with CGA type valve appropriate for the contents
- Nominal contents: 6.30 litres of gas
- Fill pressure: 10.3 MPa (1500 psi)
- Nominal gross weight: 8.2 kg
- Dimensions: 300 x φ173mm
- Water capacity: 6.86 l
- Regulators: 718, 1000 series, 1700 series, or 2003 'demand flow' regulators + appropriate 'nut & spigot'
- UN1956



Most common Calgaz product UN numbers and their meanings

- UN1956 Compressed gas, NOS. Non toxic, non flammable gas. **95% of all Calgaz products sold would come under this classification**
- UN1954 Compressed gas; flammable gas NOS (not otherwise specified) (non toxic)
- UN1002 Air, Compressed
- UN1066 Nitrogen, compressed
- UN1971 Methane, compressed
- UN1049 Hydrogen, compressed

• Note: the hazard presented by the majority of Calgaz products is the **pressure** and **not** the toxicity or flammability of the contents

• Ref. Australian Dangerous goods code

CALGAZ

May 2004

Commercial in confidence



All prices exclude GST

Commercial in confidence

Calgaz

“715” pre-set flow regulator

- For use on 6D, 6DM, 8AL & 2AL cylinders (i.e. 500 or 1000 psi pressures)
- Flow range: 0.1 - 6 lpm
- Max outlet pressure 400 kPa (60 psi)
- Suitable for use with all Calgaz blends
- Brass construction
- Fitted with contents pressure gauge and on / off tap.



“705” pre-set flow regulator

- characteristics:**
- For use on 6D, 6DM, 8AL & 2AL cylinders (i.e. 500 or 1000 psi cylinder pressures)
 - Same as 715 but fitted with **only contents pressure gauge**
 - Flow range: 0.1 - 6 lpm
 - Max outlet pressure 400 kPa (60 psi)
 - Suitable for use with all Calgaz blends
 - Brass construction



“718” pre-set flow regulator

- For use on any cylinder with CGA or AS 2473 valves with appropriate nut and spigot
- Inlet pressure to: 20.1 Mpa (3000psi)
- Flow range: 0.1 - 6 lpm
- Max outlet pressure 400 kPa (60 psi)
- Suitable for use with all Calgaz blends
- Brass construction
- Fitted with contents pressure gauge and on / off tap.



“702” pre-set flow regulator

- characteristics:**
- For use on 7HP & 7EOC cylinders (i.e. 240 or 500 psi cylinder pressures)
 - Same as 713 but **no gauge or tap**
 - Flow range: 0.1 - 3 lpm
 - Max outlet pressure 130 kPa (20 psi)
 - Suitable for use with all Calgaz blends
 - Brass construction



“713” pre-set flow regulator

- characteristics:**
- For use on 7EOC & 7HP cylinders (i.e. 240 or 500 psi cylinder pressures)
 - Flow range: 0.1 - 3 lpm
 - Max outlet pressure 130 kPa (20 psi)
 - Suitable for use with all Calgaz blends
 - Brass construction
 - Fitted with contents pressure gauge and on / off tap.



Note: To avoid inadvertent emptying of the cylinder, remove the regulator from a cylinder after use; do not use a regulator as a cylinder shut off device.

AIR LIQUIDE



Commercial in confidence

May 2004

CALGAZ

All prices exclude GST

Commercial in confidence

Calgaz

“1764” variable flow regulator

- For use with 6D, 6DM, 8AL & 2AL cylinders
- Inlet pressures to 6900 kPa (1000psi)
- Outlet pressure: 400 kPa (60psi) max
- Flow range: 0.1 - 6 lpm
- Suitable for use with all Calgaz blends
- Brass construction (no outlet ‘barb’)
- Fitted with contents pressure gauge.



Note: To avoid inadvertent emptying of the cylinder, remove the regulator from a cylinder after use; do not use a regulator as a cylinder shut off device.

“1782” variable flow regulator

- For use with 6D, 6DM, 8AL & 2AL cylinders
- Inlet pressures to 6900 kPa (1000psi)
- Outlet pressure: 400 kPa (60psi) max
- Flow range: 0.1 - 6 lpm
- Suitable for use with all Calgaz blends
- Exterior and all wetted parts nickel plated brass.
- Intended for low ppm ammonia
- Fitted with contents pressure gauge.



“1781” pre-set flow regulator

- For use with 6D, 8AL & 2AL cylinders
- Inlet pressures to 6900 kPa (1000psi)
- Outlet pressure: 400 kPa (60psi) max
- Flow range: 0.1 - 6 lpm
- Suitable for use with all Calgaz blends
- Exterior and all wetted parts nickel plated brass
- Intended for low ppm ammonia
- Fitted with contents and regulated pressure gauge.



“1000” series 2 stage pressure regulator

- Essentially for use on cylinders with CGA or AS 2473 valves but adaptable for use with 6D, 6DM, 8AL & 2AL cylinders
- Inlet pressures to 20.6 Mpa (3000psi)
- 3 outlet pressure ranges:
 - 1001 0 - 15 psi (100kPa)
 - 1002 0 - 100 psi (650kPa)
 - 1003 0 - 160 psi (1100 kPa)
- Suitable for use with all Calgaz blends
- Nickel plated brass & stainless steel construction
- Fitted with contents and regulated pressure gauge.
- ¼ NPT female inlet port
- 1/8th NPT female outlet port



CALGAZ

May 2004

Commercial in confidence



All prices exclude GST

Commercial in confidence

Calgaz

"2001" demand flow regulator

- For use with 6D, 6DM, 8AL & 2AL cylinders & analysers incorporating their own sample pump
- Inlet pressures to 6900 kPa (1000psi)
- Flow range: 0 - 3 lpm
- Activates at negative pressures in excess of - 3" water gauge
- Suitable for use with all Calgaz blends
- Exterior and all wetted parts nickel plated brass.
- Fitted with contents pressure gauge.



"2007" demand flow regulator

- For use with 7HP & 7EOC cylinders & analysers incorporating their own sample pump
- Inlet pressures to 3500 kPa (500psi)
- Flow range: 0 - 3 lpm
- Activates at negative pressures in excess of - 3" water gauge
- Suitable for use with all Calgaz blends
- Exterior and all wetted parts nickel plated brass.
- Fitted with contents pressure gauge.



"2003" demand flow regulator

- For use with all cylinders with CGA or AS 2473 cylinder valves (nut and spigot chosen to suit) & analysers incorporating their own sample pump
- Inlet pressures to 20.6 MPa (3000psi)
- Flow range: 0 - 3 lpm
- Activates at negative pressures in excess of - 3" water gauge
- Suitable for use with all Calgaz blends
- Exterior and all wetted parts nickel plated brass.
- Fitted with contents pressure gauge.



"4210" trigger operated pre-set flow regulator

- For use with 6D, 6DM, 8AL & 2AL cylinders
- Inlet pressures to 6900 kPa (1000psi)
- Flow range: 0.2 ~ 4 lpm
- Suitable for use with all Calgaz blends
- Exterior and all wetted parts nickel plated brass
- Intended for 'bump testing' of gas detectors
- Fitted with contents pressure gauge.



Note: To avoid inadvertent emptying of the cylinder, remove the regulator from cylinder after use, do not use a regulator as a cylinder shut off device.

Cylinder recycling tool

- For use with 6D, 6DM, 8AL & 2AL cylinders
- Allows safe venting of the cylinder
- Permanently opens the cylinder valve thereby destroying 'pressure vessel' integrity and enabling simple disposal in metal recycling bin.
- Similar device available for 7EOC and 7HP cylinders



May 2004

Commercial in confidence



All prices exclude GST

Commercial in confidence

Flammability: conversion of % LEL to % by volume

The concentrations in the body of this table are % ages by volume in air	Percentage of the LEL (CGA Values)										Concentration in air, % CGA values		Concentration in air, % ASSE1779.6:20 00 values	
	50%	40%	30%	25%	20%	10%	LEL	UEL	LEL	UEL	LEL	UEL	LEL	UEL
Carbon Monoxide (CO)							12.5	74	10.9	74.0				
Hydrogen (H)	2.0%						4.0	74.5	4.0	77.0				
Methane (CH ₄)	2.5%	2.0%	1.5%			0.5%	5.0	15.4	4.4	17.0				
Ethane (C ₂ H ₆)							3.1	32	2.5	15.5				
Ethylene (C ₂ H ₄)	1.35%*		0.8%*				3.1	32	2.3	36.0				
Acetylene (C ₂ H ₂)	1.15%*						2.2	85	2.3	100				
Propane (C ₃ H ₈)	1.1%				0.42%*		2.2	95	1.7	10.9				
Butane (C ₄ H ₁₀)	0.9%*						1.8	84	1.4	9.3				
iso-Butane (C ₄ H ₁₀)	0.9%						1.8	84	1.3	9.8				
iso-Butylene (C ₄ H ₈)							1.8	88	1.6	10.0				
Pentane (C ₅ H ₁₂)	0.75%			0.35%	0.3%*	0.14%	1.4	83	1.4	7.8				
Hexane (C ₆ H ₁₄)		0.48%		0.3%	0.2%*	0.12%	1.2	7.7	1.0	8.4				
Toluene (C ₇ H ₈)							1.27	7	1.1	7.8				

%age to ppm	
0.0001%	1 ppm
0.001%	10 ppm
0.01%	100 ppm
0.1%	1000 ppm
1%	10,000 ppm
10%	100,000 ppm
100%	1,000,000 ppm

UN Nos of most common Calgaz products

- UN1956, Compressed gas, N.O.S. (non toxic, non flammable)
- UN1954, Compressed gas, flammable, N.O.S. (non toxic)
- UN1002, Air, Compressed
- UN1066, Nitrogen, compressed
- UN1971, Methane, compressed

- Lower Explosive limit (LEL) and Lower Flammability limit (LFL)
 - Upper Explosive Limit (UEL) and Upper Flammable limit (UFL)
- are, for the purposes of this document, interchangeable.
- * indicates some rounding to 'fit' into a given column



CALGAZ
May 2004

Commercial in confidence

All prices exclude GST

Commercial in confidence

