

Regulators and Equipment 2024



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Calgaz, the world's leading manufacturer of calibration gases and equipment is proud to offer the most comprehensive range of specialist regulators and equipment for non-refillable and high pressure gas cylinders.

Calgaz Global Regulator Range



700 Series



800 Series



1000 Series



1700 Series



2000 Series





4200 Series



Eco-Trigger Regulator



FF20 Series Regulator



R- Series

| 700 Series | Single-stage preset fixed flow rate regulator. Available in Brass, hybrid Stainless Steel/Aluminium or Stainless Steel versions. |
|----------------------------|--|
| 800 Series | Variflow regulators available in Brass/Stainless Steel versions. |
| 1000 Series | High pressure dual-stage regulator offers a high degree of accuracy and control. |
| 1700 Series | For low ppm reactive gases and high-purity gas mixtures, designed for low-flow rate and adjustable delivery pressure. |
| 2000 Series | Demand-flow regulators designed for use with pumped instruments. |
| 3850 Push Button Regulator | Single stage flow control regulator designed for delivering calibration gas to breath alcohol instruments |
| 4200 Series | Trigger regulators designed to provide aerosol capability. |
| Eco-Trigger Regulator | Regulator designed for Eco-Bump cylinder. |
| FF20 Regulator | Regulators designed to fit the 1AL aerosol type cylinder. |
| R - Series | Single and double stage regulators designed for use with High Pressure Cylinders (HPC). |

Fixed Flow Regulators



















702

705

713

715

715E*

718

718E*

725

735

| | | | PERFORMAN | NCE | | | |
|------|----------------------------|--------------------|-------------------|--------|-----------------------|---------------------|--|
| | Inlet | Outlet | Preset Fixed Flow | Stages | Max Inlet Pressure | Max Outlet Pressure | Gauge/Knob |
| 702 | CGA 600 | 4.8mm (3/16") Barb | 0.2 to 4.0 LPM | 1 | 35 Bar (500 Psi) | 4.5 Bar (65 Psi) | No gauge / No On/Off knob |
| 705 | 5/8" - UNF C-10 Connection | 4.8mm (3/16") Barb | 0.2 to 6.0 LPM | 1 | 70 Bar (1000 Psi) | 4.1 Bar (60 Psi) | 0-70 Bar (0-1000 Psi) No On/Off knob |
| 713 | CGA 600 | 4.8mm (3/16") Barb | 0.2 to 6.0 LPM | 1 | 35 Bar (500 Psi) | 4.5 Bar (65 Psi) | 0-70 Bar (0-1000 Psi) |
| 715 | 5/8" - UNF C-10 Connection | 4.8mm (3/16") Barb | 0.2 to 6.0 LPM | 1 | 70 Bar (1000 Psi) | 4.1 Bar (60 Psi) | 0-70 Bar (0-1000 Psi) |
| 715E | 5/8" - UNF C-10 Connection | 4.8mm (3/16") Barb | 0.3 to 7.0 LPM | 1 | 70 Bar (1000 Psi) | 4.1 Bar (60 Psi) | 0-70 Bar (0-1000 Psi) |
| 718 | 1/4" NPT Internal | 4.8mm (3/16") Barb | 0.2 to 6.0 LPM | 1 | 150 Bar (2200 Psi) | 4.1 Bar (60 Psi) | 0-205 Bar (0-3000 Psi) |
| 718E | 1/4" NPT Internal | 4.8mm (3/16") Barb | 0.05 to 15.0 LPM | 1 | 150 Bar (2200 Psi) | 4.5 Bar (65 Psi) | 0-315 Bar |
| 725 | 5/8" - UNF C-10 Connection | 4.8mm (3/16") Barb | 0.1 to 7.0 LPM | 1 | 70 Bar (1000 Psi) | 4.1 Bar (60 Psi) | 0-70 Bar (0-1000 Psi) |
| 735 | 5/8" - UNF C-10 Connection | 4.8mm (3/16") Barb | 0.1 to 7.0 LPM | 1 | 70 Bar (1000 Psi) | 4.1 Bar (60 Psi) | 0-70 Bar (0-1000 Psi) |
| | | | | | | | |

| MATERIALS OF CONSTRUCTION | | | | | | | | | |
|---------------------------|---------------------------|-----------------|-------------|----------------|----------------|--|--|--|--|
| | Body | Piston | Piston Seal | Seat | Weight | | | | |
| 702 | Ni-Brass | Brass | Viton | Teflon | 0.2kg (0.4lb) | | | | |
| 705 | Ni-Brass | Brass | Viton | Teflon | 0.2kg (0.4lb) | | | | |
| 713 | Ni-Brass | Brass | Viton | Teflon | 0.28kg (0.6lb) | | | | |
| 715 | Ni-Brass | Brass | Viton | Teflon | 0.24kg (0.5lb) | | | | |
| 715E | Fully plated Ni-Brass | Brass | Viton | Teflon | 0.24kg (0.5lb) | | | | |
| 718 | Ni-Brass | Brass | Viton | Kel-F | 0.32kg (0.7lb) | | | | |
| 718E | Stainless Steel | Stainless Steel | Viton | Teflon / PCTFE | 0.35kg (0.8lb) | | | | |
| 725 | Stainless Steel/Aluminium | Stainless Steel | Viton | Teflon / Peek | 0.13kg (0.3lb) | | | | |
| 735 | Stainless Steel | Stainless Steel | Viton | Teflon / PCTFE | 0.24kg (0.5lb) | | | | |

| | CYLINDERS COMPATIBILITY | | | | | | | | | |
|----------|----------------------------------|---|---|----------|----------|---|---|---|--|--|
| | 2AL 6D 6DM 7HP 8AL 10AL 5ELR 65A | | | | | | | | | |
| 702 | | | | ✓ | | | | | | |
| 705 | √ | 1 | 1 | | √ | ✓ | | | | |
| 713 | | | | √ | | | | | | |
| 715/715E | 1 | ✓ | 1 | | 1 | ✓ | | | | |
| 718/718E | | | | | | | 1 | 1 | | |
| 725 | √ | 1 | 1 | | ✓ | ✓ | | | | |
| 735 | ✓ | 1 | 1 | | 1 | 1 | | | | |

^{*} Not available from our Cambridge, MD USA facility

Variflow Regulators



| | PERFORMANCE | | | | | | | | |
|-----|-----------------|-----------------------|-----------------------------|--------|-----------------------|------------------------|--|--|--|
| | Inlet | Outlet | Variflow | Stages | Max Inlet Pressure | Max Outlet Pressure | | | |
| 801 | C 10 | 4.8mm (3/16") Barb | 0.5 Lit/Mn to 5.0 Lit/Mn | 2 | 70 Bar (1000 Psi) | 4.1 Bar (60 Psi) | | | |
| 802 | 1/4" NPT Female | 4.8mm (3/16") Barb | 0.5 Lit/Mn to 5.0 Lit/Mn | 2 | 275 Bar (4000 Psi) | 4.1 Bar (60 Psi) | | | |
| 803 | C 10 | 4.8mm (3/16") Barb | 0.5 Lit/Mn to 5.0 Lit/Mn | 2 | 70 Bar (1000 Psi) | 4.1 Bar (60 Psi) | | | |
| 804 | 1/4" NPT Female | 4.8mm (3/16") Barb | 0.5 Lit/Mn to 5.0 Lit/Mn | 2 | 275 Bar (4000 Psi) | 4.1 Bar (60 Psi) | | | |

| MATERIALS OF CONSTRUCTION | | | | | | | | | |
|---------------------------|-------------------------------------|------------------|-------|--------|-----------------|--|--|--|--|
| | Body Piston Piston Seal Seat Weight | | | | | | | | |
| 801 | Brass Forged | Brass Forged | Viton | Teflon | 0.26kg (0.57lb) | | | | |
| 802 | Brass Forged | Brass Forged | Viton | Teflon | 0.32kg (0.7lb) | | | | |
| 803 | Brass Forged /SS | Brass Forged /SS | Viton | Teflon | 0.26kg (0.57lb) | | | | |
| 804 | Brass Forged /SS | Brass Forged /SS | Viton | Teflon | 0.32kg (0.7lb) | | | | |

| | CYLINDERS COMPATIBILITY | | | | | | | | | |
|-----|-------------------------|------|----|-----|-----|------|----------|--|--|--|
| | 2AL | 5ELR | 6D | 6DM | 8AL | 10AL | 65ALR | | | |
| 801 | 1 | | 1 | 1 | 1 | 1 | | | | |
| 802 | | ✓ | | | | | / | | | |
| 803 | 1 | | 1 | 1 | 1 | 1 | | | | |
| 804 | | 1 | | | | | 1 | | | |

^{*} Not available from our Cambridge, MD USA facility

Fixed Pressure Regulators







1001 1002 1003

| | PERFORMANCE | | | | | | | | | |
|------|-------------|---------------|--------|-----------------------|-------------------------|---------------------------|--|--|--|--|
| | Inlet | Outlet | Stages | Max Inlet Pressure | Max Outlet Pressure | Gauge/Knob | | | | |
| 1001 | 1/4-18" NPT | 1/8" - 27 NPT | 2 | 207 Bar (3000 Psi) | 0-0.7 Bar (0-10 Psi) | 0-207 Bar (0-3000 Psi) | | | | |
| 1002 | 1/4-18" NPT | 1/8" - 27 NPT | 2 | 207 Bar (3000 Psi) | 0-3.5 Bar (0-50 Psi) | 0-207 Bar (0-3000 Psi) | | | | |
| 1003 | 1/4-18" NPT | 1/8" - 27 NPT | 2 | 207 Bar (3000 Psi) | 0-7 Bar (0-100 Psi) | 0-207 Bar (0-3000 Psi) | | | | |

| | MATERIALS OF CONSTRUCTION | | | | | | | | | |
|------|--|-----------------|-------|--------|--------------|--|--|--|--|--|
| | Body Diaphragm Piston Seal Seat Weight | | | | | | | | | |
| 1001 | Ni-Brass | Stainless Steel | Viton | Teflon | 0.63kg (1lb) | | | | | |
| 1002 | Ni-Brass | Stainless Steel | Viton | Teflon | 0.63kg (1lb) | | | | | |
| 1003 | Ni-Brass | Stainless Steel | Viton | Teflon | 0.63kg (1lb) | | | | | |

| | CYLINDERS COMPATIBILITY | | | | | | | | | |
|------|----------------------------|---|---|---|---|---|--|--|--|--|
| | 2AL 5ELR 6D 8AL 10AL 65ALR | | | | | | | | | |
| 1001 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |
| 1002 | | | | | | | | | | |
| 1003 | 1 | 1 | 1 | 1 | 1 | 1 | | | | |

Single Stage Regulators









| | PERFORMANCE | | | | | | | | | |
|------|---------------|-------------------------|----------------|-------------------|--------|----------------------|--------------------------|--|--|--|
| | Inlet | Outlet | Flow Rate | Flow Rate Control | Stages | Max Inlet Pressure | Gauge/Knob | | | |
| 1767 | 5/8" - 18 UNF | 4.8mm (3/16") Tubing | 0.1 to 6.0 LPM | Factory Preset | 1 | 70 Bar (1000 Psi) | 0-70 Bar (0-1000 Psi) | | | |
| 1768 | 5/8" - 18 UNF | 4.8mm (3/16") Tubing | 0.3 to 2.0 LPM | Adjustable | 1 | 70 Bar (1000 Psi) | 0-70 Bar (0-1000 Psi) | | | |
| 1781 | 5/8" - 18 UNF | 4.8mm (3/16") Tubing | 0.1 to 6.0 LPM | Factory Preset | 1 | 70 Bar (1000 Psi) | 0-70 Bar (0-1000 Psi) | | | |
| 1782 | 5/8" - 18 UNF | 4.8mm (3/16") Tubing | 0.3 to 2.0 LPM | Adjustable | 1 | 70 Bar (1000 Psi) | 0-70 Bar (0-1000 Psi) | | | |

| MATERIALS OF CONSTRUCTION | | | | | | | | | |
|---------------------------|--|-----------------|--------|--------|--------------|--|--|--|--|
| | Body Diaphragm Piston Seal Seat Weight | | | | | | | | |
| 1767 | Ni-Brass | Stainless Steel | Viton | Viton | 0.63kg (1lb) | | | | |
| 1768 | Ni-Brass | Stainless Steel | Viton | Viton | 0.63kg (1lb) | | | | |
| 1781 | Ni-Brass | Stainless Steel | Buna N | Buna N | 0.63kg (1lb) | | | | |
| 1782 | Ni-Brass | Stainless Steel | Buna N | Buna N | 0.63kg (1lb) | | | | |

| CYLINDERS COMPATIBILITY | | | | | | | | |
|-------------------------|-----------------|---|---|----------|--|--|--|--|
| | 2AL 6D 8AL 10AL | | | | | | | |
| 1767 | ✓ | ✓ | ✓ | ✓ | | | | |
| 1768 | ✓ | 1 | 1 | ✓ | | | | |
| 1781 | 1 | 1 | 1 | / | | | | |
| 1782 | 1 | 1 | 1 | ✓ | | | | |

Demand Flow Regulators













DFR 2001

DFR 2003

DFR 2004

DFR 2006

DFR 2007

DFR 2008 *

| | PERFORMANCE | | | | | | | | | |
|----------|------------------|-------------------------|------------------------|--------|-----------------------|-----------------|---------------------------|--|--|--|
| | Inlet | Outlet | on-Demand Flow Rate | Stages | Max Inlet Pressure | Demand Pressure | Gauge/Knob | | | |
| DFR 2001 | 5/8 - UNF C-10 | 4.8mm (3/16") Tubing | 0 to 3 LPM | 2 | 70 Bar (1000 Psi) | 5.6mm (3" H20) | 0-70 Bar (0-1000 Psi) | | | |
| DFR 2003 | 1/4" NPT Female* | 4.8mm (3/16") Tubing | 0 to 3 LPM | 2 | 150 Bar (2200 Psi) | 5.6mm (3" H20) | 0-207 Bar (0-3000 Psi) | | | |
| DFR 2004 | 5/8 - UNF C-10 | 4.8mm (3/16") Tubing | 0 to 3 LPM | 2 | 70 Bar (1000 Psi) | 5.6mm (3" H20) | 0-70 Bar (0-1000 Psi) | | | |
| DFR 2006 | 1/4" NPT Female* | 4.8mm (3/16") Tubing | 0 to 3 LPM | 2 | 150 Bar (2200 Psi) | 5.6mm (3" H20) | 0-207 Bar (0-3000 Psi) | | | |
| DFR 2007 | CGA 600 | 4.8mm (3/16") Tubing | 0 to 3 LPM | 2 | 35 Bar (500 Psi) | 5.6mm (3" H20) | 0-35 Bar (0-500 Psi) | | | |
| DFR 2008 | 5/8 - UNF C-10 | 4.8mm (3/16") Tubing | 0 to 3 LPM | 2 | 70 Bar (1000 Psi) | 5.6mm (3" H20) | 0-70 Bar (0-1000 Psi) | | | |

^{*} Various connection including BS & CGA

| | MATERIALS OF CONSTRUCTION | | | | | | | | |
|----------|---------------------------|-----------|-----------------|-------------|--------------|--------------|--|--|--|
| | Body | Diaphragm | Piston | Piston Seal | Seat | Weight | | | |
| DFR 2001 | Ni-Brass | Buna | Ni-Brass | PTFE | Buna | 0.63kg (1lb) | | | |
| DFR 2003 | Ni-Brass | Buna | Ni-Brass | PTFE | Buna | 0.63kg (1lb) | | | |
| DFR 2004 | Ni-Brass | PVC | Ni-Brass | PTFE | Viton | 0.63kg (1lb) | | | |
| DFR 2006 | Ni-Brass | PVC | Ni-Brass | PTFE | Viton | 0.63kg (1lb) | | | |
| DFR 2007 | Ni-Brass | Buna | Ni-Brass | PTFE | Buna | 0.63kg (1lb) | | | |
| DFR 2008 | Stainless Steel | Nitrile | Stainless Steel | Viton | Teflon/PCTFE | 0.49kgs | | | |

| | CYLINDERS COMPATIBILITY | | | | | | | | |
|-------------|-------------------------|----|-----|-----|-------------|------|----------|----------|--|
| | 2AL | 6D | 6DM | 7HP | 8AL | 10AL | 5ELR | 65ALR | |
| DFR 2001 | > | 1 | 1 | | > | 1 | | | |
| DFR 2003 | | | | | | | ~ | \ | |
| DFR 2004 | √ | 1 | | | √ | 1 | | | |
| DFR 2006 | | | | | | | 1 | 1 | |
| DFR 2007 | | | | 1 | | | | | |
| DFR 2008 | √ | 1 | 1 | | 1 | 1 | | | |

^{*} Can only be shipped from our Stoke, UK facility

3850 Push Button Regulator

The easy to use PBR (Push Button Regulator) is a single stage flow control device, designed for delivering calibration gas to breath alcohol instruments and for other non-reactive gas applications. With preset flow rates up to 23 LPM the PBR is the most versatile regulator of its type on the market.

| Cylinder Compatibility | | | | | |
|---------------------------|--|--|--|--|--|
| 2AL | | | | | |
| 2ALR | | | | | |
| 6D | | | | | |
| 6DM | | | | | |
| 8AL | | | | | |
| 10AL | | | | | |
| 10ALR | | | | | |

| Gas Type Suitability |
|--------------------------|
| Ethanol |
| Non-Reactive Mixtures |
| Non-Reactive Pure Gas |

| Perfo | rmance |
|----------------------------|------------------------------------|
| Inlet | C-10 Connection (5/8 - 18" UNF) |
| Outlet | 1/8" (3.2mm) Barb |
| Fixed Flow | 0.2 to 23.0 LPM |
| Stages | 1 Stage |
| Max Outlet Pressure | 4.1 Bar (70 PSI) |
| Max Inlet Pressure | 70 Bar (1000 PSI) |
| Gauge | 0-70 Bar (0-1000 psi) |
| Weight | 0.32 Kg (0.5 LB) |
| Warranty | 24 months |
| Recommended Replacement | 2 years |
| | |



| Material of | Material of Construction | | | | |
|--------------|---------------------------------------|--|--|--|--|
| Body/Outlet | Electroless Nickel Plated Brass | | | | |
| Piston | Electroless Nickel Plated Brass | | | | |
| Cap | Aluminium | | | | |
| Piston Seal | PTFE (Teflon) | | | | |
| O-Ring Seals | Fluorocarbon (Viton) | | | | |

Trigger Regulators



| PERFORMANCE | | | | | | | |
|--------------|---------------------|-------------------------|------------------|--------|----------------------|--------------------------|--|
| | Inlet | Outlet | Fixed Flow | Stages | Max Inlet Pressure | Gauge | |
| TRIGGER 4205 | C10 (5/8" - 18 UNF) | 4.8mm (3/16") Tubing | 0.2 to 4.0 LPM | 1 | 70 Bar (1000 Psi) | None | |
| TRIGGER 4206 | C10 (5/8" - 18 UNF) | 4.8mm (3/16") Tubing | 14.0 to 18.0 LPM | 1 | 70 Bar (1000 Psi) | None | |
| TRIGGER 4210 | C10 (5/8" - 18 UNF) | 4.8mm (3/16") Tubing | 0.2 to 6.0 LPM | 1 | 70 Bar (1000 Psi) | 0-70 Bar (0-1000 Psi) | |
| TRIGGER 4211 | C10 (5/8" - 18 UNF) | 4.8mm (3/16") Tubing | 14.0 to 18.0 LPM | 1 | 70 Bar (1000 Psi) | 0-70 Bar (0-1000 Psi) | |

| MATERIALS OF CONSTRUCTION | | | | | | | | |
|---------------------------|------------------------------|-------|--------|----------------|--|--|--|--|
| | Body Piston Seal Seat Weight | | | | | | | |
| TRIGGER 4205 | Ni-Brass | Viton | Teflon | 0.35kg (0.7lb) | | | | |
| TRIGGER 4206 | Ni-Brass | Viton | Teflon | 0.35kg (0.7lb) | | | | |
| TRIGGER 4210 | Ni-Brass | Viton | Teflon | 0.35kg (0.7lb) | | | | |
| TRIGGER 4211 | Ni-Brass | Viton | Teflon | 0.35kg (0.7lb) | | | | |

| CYLINDERS COMPATIBILITY | | | | | | | |
|-------------------------|---|---|---|---|---|--|--|
| 2AL 6D 6DM 8AL 10AL | | | | | | | |
| TRIGGER 4205 | ✓ | 1 | ✓ | ✓ | 1 | | |
| TRIGGER 4206 | 1 | 1 | ✓ | ✓ | 1 | | |
| TRIGGER 4210 | ✓ | 1 | ✓ | ✓ | 1 | | |
| TRIGGER 4211 | 1 | 1 | ✓ | ✓ | 1 | | |

Trigger Regulators for 5ELR and 5E cylinders



| PERFORMANCE | | | | | | | |
|--------------|---------|----------------------------|------------|--------|-----------------------|-----------------------|--|
| | Inlet | Outlet | Fixed Flow | Stages | Max Inlet Pressure | Gauge | |
| TRIGGER 4223 | CGA 350 | 5.8mm (0.23") hose barb | 6.0 LPM | 2 | 207 Bar (3000 Psi) | 207 Bar (3000 Psi) | |
| TRIGGER 4226 | CGA 600 | 5/32"compression fitting | 14.0 LPM | 2 | 207 Bar (3000 Psi) | 207 Bar (3000 Psi) | |

| MATERIALS OF CONSTRUCTION | | | | | | | |
|--------------------------------|---|-------|------|----------------|--|--|--|
| Body/Bonnet Piston Seat Weight | | | | | | | |
| TRIGGER 4223 | Ni-Brass | Brass | Buna | 0.98kg (2.2lb) | | | |
| TRIGGER 4226 | TRIGGER 4226 Ni-Brass Brass Buna 0.98kg (2.2lb) | | | | | | |

| GAS SUITABILITY | | | | | | | |
|-----------------|--------------|-----------|-----------------|-----------------------------------|--|--|--|
| | Non-Reactive | H2S & SO2 | NO & NO2 | CI2 , HCL, NH3, PH3,SiH4 & HCN | | | |
| TRIGGER 4223 | Suitable | Suitable | Not recommended | Not recommended | | | |
| TRIGGER 4226 | Suitable | Suitable | Not recommended | Not recommended | | | |

| CYLINDER COMPATIBILITY | | | | | | |
|------------------------|----|------|--|--|--|--|
| | 5E | 5ELR | | | | |
| TRIGGER 4223 | 1 | / | | | | |
| TRIGGER 4226 | > | 1 | | | | |

Eco-Trigger Regulator

For use with the Eco-Bump Cylinder

The Eco-Trigger Regulator has been designed to meet the needs of the Eco-Bump cylinder. Offering a simple and easy solution for bump or function testing. Operation is by an easy to use thumb operated paddle trigger.

Cylinder Compatibility

Eco-Bump

| Gas Type Suitability | | | | | |
|----------------------|----------|--|--|--|--|
| Non- Reactive | Suitable | | | | |
| H2S | Suitable | | | | |
| Quad Mixtures | Suitable | | | | |

| Performance | | | | | |
|----------------------------|----------------------------------|--|--|--|--|
| Inlet Pressure | 1305 psig (90 bar) | | | | |
| Inlet | C10 | | | | |
| Outlet | 3/16" barbed | | | | |
| Plating | Ni-Brass | | | | |
| Flow | Fixed flow 0.5 to 5.0 LPM preset | | | | |
| Warranty | 24 months | | | | |
| Recommended Replacement | 2 years | | | | |



| Material of Construction | | | | | | |
|-----------------------------|--------------|--|--|--|--|--|
| Body/Piston | Brass Forged | | | | | |
| Bonnet | Brass Forged | | | | | |
| Body Seals/ Piston Seals | Viton | | | | | |
| Main Valve Seat | Teflon/Peek | | | | | |

FF20 Series Regulators

Fixed Flow Regulators for 1AL Cylinders









FF20 Septum *

FF20 Stem Flow *

FF20 Flow Meter *

FF20 Nozzle *

| PERFORMANCE | | | | | | | |
|-----------------|-------------------------------|-----------------|-----------------|--------|--------------------|------------------------------------|--|
| | Inlet | Outlet | Flow | Stages | Max Inlet Pressure | On /Off Knob | |
| FF20 Septum | 7/16" x 28 UNF -2B Aerosol | Septum | - | 1 | 11 bar | Yes | |
| FF20 Stem Flow | 7/16" x 28 UNF -2B Aerosol | 4mm Barb - HDPE | 0.25 to 1.0 LPM | 1 | 11 bar | Yes with Brass 28 bar max gauge | |
| FF20 Flow Meter | 7/16" x 28 UNF -2B Aerosol | 4mm Barb - HDPE | 0.5 to 1.0 LPM | 1 | 11 bar | Yes | |

| MATERIALS OF CONSTRUCTION | | | | | | | | |
|---------------------------|-----------------------|--------|---------|------------|----------|-----------|--------------------|--|
| | Body | Needle | Seals | Flow Meter | Plating | Knob | Weight | |
| FF20 Septum | Ni-Brass | Brass | Nitrile | - | Ni-Brass | Aluminium | 0.06kg (0.13lb) | |
| FF20 Stem Flow | Aluminium - SS 303 | SS 303 | Viton | Acrylic | Ni-Brass | Aluminium | 0.14kg (0.31lb) | |
| FF20 Flow Meter | Ni-Brass | Brass | Nitrile | Acrylic | Ni-Brass | Aluminium | 0.14kg (0.31lb) | |

| GAS SUITABILITY | | | | | | |
|-----------------|--------------|-----------|--|--|--|--|
| | Non-Reactive | H2S & S02 | | | | |
| FF20 Septum | Suitable | Suitable | | | | |
| FF20 Stem Flow | Suitable | Suitable | | | | |
| FF20 Flow Meter | Suitable | Suitable | | | | |
| FF20 Nozzle | Suitable | Suitable | | | | |

| CYLINDERS COMPATIBILITY | | | | | | |
|-------------------------|---|---|--|--|--|--|
| 1ALE 1ALU | | | | | | |
| FF20 Septum | ✓ | | | | | |
| FF20 Stem Flow | | | | | | |
| FF20 Flow Meter ✓ | | | | | | |
| FF20 Nozzle | | ✓ | | | | |

HPC Single and Two Stage Regulators







R31 *

| | Features | | | | | | |
|------|---------------|---------------------|--------------------|----------------|--------------------|-----------------------|--------------------|
| | Configuration | Inlet Pressure | Outlet Pressure | Body Port Size | Material | Stability | Weight |
| R21B | Single Stage | 200bar (2900psi) | 3.5 or 7 bar | 1/4" NPT(F) | NI-Brass | Non reactive Gases | 1.8 kg (4 lbs) |
| R21S | Single Stage | 200bar (2900psi) | 3.5 or 7 bar | 1/4" NPT(F) | Stainless Steel | Reactive Gases | 1.8 kg (4 lbs) |
| R31B | Two Stage | 200bar (2900psi) | 3.5 or 7 bar | 1/4" NPT(F) | NI-Brass | Non-Reactive Gases | 2.1 kg (4.6lbs) |
| R31S | Two Stage | 200bar (2900psi) | 3.5 or 7 bar | 1/4" NPT(F) | Stainless Steel | Reactive Gases | 2.1 kg (4.6lbs) |

Temperature Range: 40°F to 165°F (-40°C to 74°C)

Temperature Range 2 x 10 atm.cc/sec He

Connectors 1/4" NPT(F) to available with British Standard (BS), US CGA or DIN

^{*} These photos are for illustration only. The actual supply of products may differ.

^{*} Not available from our Cambridge, MD USA facility

Equipment for HPC Cylinders

Can be used with NRC's and HPC Cylinders

Calgaz HPC products can be supplied with a range of valves including BS, DIN and CGA. Cylinders are normally sold outright and so not subject to rental or the need to return.



* Not available from our Cambridge, MD USA facility

Stem Connectors

Range of US, UK and European adaptors

Commonly used with Reactive gases



Commonly used with Non Reactive gases



Calgaz is the world's leading manufacturer of calibration gases and equipment. We are proud to offer the most comprehensive range of specialist regulators and associated equipment for non-refillable (NRC) and high pressure (HPC) refillable gas cylinders.

As part of our range we can supply a variety of cylinder valve connectors (Stem connectors). All the connectors supplied conform to either British (BS), US (CGA) or European (DIN) standards. Calgaz is able to supply

- BS3, BS4, and BS15
- CGA330, CGA350 and CGA580
- DIN 10

All connectors are approved for a working pressure up to 200 Bar and can be supplied in Brass or Stainless Steel and are generally ¼" NPT inlet with a range of outlets to meet your requirements.

All stem connectors carry a 24 month warranty and we recommend replacing them after two years of service and can often be shipped to you the next working day.

^{*} Not available from our Cambridge, MD USA facility

Gas Tubing

Transfer of gas



TU 1596 - PVC Tubing



TU 1670 - PVC lined with Teflon (Tygon)

Calgaz supplies two types of tubing in a range of lengths including 2ft (0.6m), 3ft (1m), 10ft (3m), and 100ft (30m).

The PVC tubing is recommended for use with applications involving non-reactive gases.

For reactive gases, Tygon tubing performs better with reduced gas absorption due to the inner teflon coating.

| | Calgaz Global Standards | | | | | | |
|----------|---|-------------------------------------|---------------------------------------|--|--|--|--|
| Name | Description | Dimension | Application | | | | |
| TU -1596 | PVC Tubing | Int Dia = 4.8mm Ext Dia = 6.4mm | Non-reactive mixtures only | | | | |
| TU -1670 | PVC Tubing lined with Teflon (Tygon) | Int Dia = 4.8mm Ext Dia = 7.9 mm | Non-reactive and Reactive mixtures | | | | |

Best Practices, Storage and Warranty

Guidance Only

Introduction

This information provided is for guidance only. For detailed safety information ALWAYS refer to the appropriate SDS.

Recommended Storage

Non refillable cylinders should be firmly secured to prevent falling or being knocked-over. When a gas cylinder is empty or not being used, ensure that the regulator is removed and the valve protector cap is secured in place.

Take measures to protect cylinders against physical damage. Where flammable gases are stored, all lighting and any other electrical equipment including tools used in that area must be flameproof and suitable for a hazardous area.

Cylinders must be protected from the environment and preferably kept at room temperature approximately 21°C (70°F). Cylinders should be stored in secure, dry, well-ventilated areas, and in fire resistant rooms away from sources of heat, ignition, and direct sunlight. Cylinders should never be subjected to conditions above 50°C or below -20°C. Aluminium Cylinders that have been subjected to fire or extreme heat should be vented and disposed of immediately.

Please follow local regulations with regards to the segregation of flammable, non-flammable and oxidizing gases.

Moisture

When cylinders are stored in a cool environment there is a possibility that by moving them into a warm humid environment that moisture can form in the valve. Please take all measures to keep dry and remove any moisture from the cylinder prior to use.

When attaching a regulator please ensure the regulator is switched to the "on" position** to allow the gas to flow when the valve is depressed ensuring that any dust, debris or moisture is forced out of the valve through the cylinder and into the atmosphere. Failure to follow this process may lead to moisture entering the cylinder when the valve is open.

** Please ignore if there is no "on" position on the regulator i.e. DFR

Safety

When attaching a regulator to a non-refillable cylinder please ensure:

- There is no corrosion on the valve or regulator and that the correct regulator is selected for the application.
- The thread on the regulator is not worn, is intact and undamaged
- There is no dirt or debris in the valve or regulator including the gauge.
- That you always wear safety glasses and other necessary PPE when handling cylinders
- The cylinder is disposed of correctly and recycled as required

Non-refillable cylinders are designed for one-time use and MUST never be refilled or re-used.

Warranty

Most regulators carry a 24 month warranty and we recommend replacing them after 2 years of service. Full details can be found on the individual regulator page or www.calgaz.com.



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