

# HIGH PRESSURE CYLINDER VALVES

| <b>CBA series</b><br>Commercial and POL Style Acetylene Cylinder Valves O-Ring seal type       | 8  |
|--|----|
| <b>CBO</b> series<br>Vertical Outlet Acetylene Valve with Handwheel for Collar Style Cylinders | 9  |
| CBH/CBI series<br>New Handwheel O-ring Seal B and MC Acetylene Cylinder Valves                 | 10 |
| CBB/CBC series<br>Wrench Operated Acetylene Valves   | 11 |
| <b>CBA series</b><br>Brass High Pressure Cylinder Valve for Industrial Gases O-Ring seal type  | 12 |
| <b>CBA series</b><br>O-ring Industrial Gas Cylinder Valve                                      | 13 |
| <b>P 2009 series</b><br>Residual Pressure Valve for Industrial gases                           | 15 |
| <b>P 1020 series</b><br>Residual Pressure Valve for Industrial gases                           | 16 |
| Filling Connectors for Residual Pressure valves  | 17 |
| IVIPR series<br>Valve with Integrated Pressure Regulator for Oxygen                            | 18 |
| IVIPR series<br>Valve with Integrated Pressure Regulator for Ar / CO2 Mix and Inert Gases Mix  | 19 |
| IVIPR series<br>Valve with Integrated Pressure Regulator for Acetylene                         | 20 |
| NOS series<br>Chromium Plated Brass High Pressure Cylinder Valves for Nitrogen Dioxide         | 21 |
| NOS series<br>Chromum Plated Brass High Pressure Cylinder Valves for Nitrogen Dioxide          | 22 |



## **CBA** series **Commercial and POL Style Acetylene Cylinder Valves** O-Ring seal type

#### **List Features**

- O-Ring technology provides superior leak integrityEasy operation and long service life
- 100% leak test to 1.2 times service pressure
- All markings are located on the valve neck to protect them from damage
- Large orifice size provides faster vacuum and filling rates
- Durable forged brass body manufactured by Cavagna Group
- Unique seat holder design
- Available configurations include: Inlet threads (NGT, DIN477, BS, EN, EN ISO)

#### **List Technical data**

| Pressure   |                |                 |
|--|----------------|-----------------|
| Maximum Service Pressure                         | 34,5 bar       | 500 PSI         |
| Test Pressure                                    | 60 bar         | 885 PSI         |
| Temperature - Storage                            | -50° C ÷ 65° C | -60° F ÷ 149° F |
| Temperature - Operating                          | -45° C ÷ 65° C | -50° F ÷ 149° F |
| Life Cycle                                       | 2,000 minimum  |                 |
| Torque Values for PBA Acetylene valves           |                |                 |
| Max Operating torque @ 0 PSIG inlet pressure     | 1 N/m          | 8.8 lbs / inch  |
| Max Operating torque @ 240 PSIG inlet pressure   | 1 N/m          | 8.8 lbs / inch  |
| Max Operating torque @ 2,900 PSIG inlet pressure | 2 N/m          | 17.7 lbs / inch |
| Max Overtorque                                   | 25 N/m         | 221 lbs / inch  |
| Flow Capacity (CV)                               | n/a            |                 |
| Orifice Ø:                                       | 3.5 mm         | 0.137 inch      |
|  |                |                 |



| Valve Body                | Forged Brass EN12165 alloy<br>PTEF |
|---------------------------|------------------------------------|
| Back up ring<br>Handwheel | Aluminium                          |
| Seat                      | PA 612-Zytel                       |
| O-rings                   | EPDM                               |
| Antifriction ring         | Delrin                             |
| Bonnet                    | Brass alloy conforming EN12164     |

#### **Conforms to all requirements of:**

| CGA V 9   | Standard for Gas Cylinder Valves                           |
|-----------|--|
| CGA S-1.1 | Standard for Pressure Relief Devices                       |
| CGA V-1   | Compressed Gas Cylinder Valve Outlet and Inlet Connections |
| ISO 10297 | International Standard                                     |
| ISO 14246 | International Standard                                     |

#### **Ordering Information**

| Part Number        | Туре           | CGA Outlet | Outlet Thread Size   | Inlet Thread Size |
|--------------------|----------------|------------|----------------------|-------------------|
| CBA 8 300 0        | Commercial     | 300        | .825"-14 NGO RH Ext. | 1/2" NGT          |
| CBA 1 300 0        | Commercial     | 300        | .825"-14 NGO RH Ext. | 3/4"-14 NGT       |
| CBA 6 300 0        | Commercial     | 300        | .825"-14 NGO RH Ext. | 1"-11 1/2 NGT     |
| <b>CBA</b> 1 415 0 | Canadian Style | 415        | .850"-14 NGO LH Int. | 3/4"-14 NGT       |
| CBA 8 510 0        | P.O.L.         | 510        | .885"-14 NGO LH Int. | 1/2" NGT          |
| CBA 1 510 0        | P.O.L.         | 510        | .885"-14 NGO LH Int. | 3/4"-14 NGT       |
| CBA 6 510 0        | P.O.L.         | 510        | .885"-14 NGO LH Int. | 1"-11 1/2 NGT     |



8



## **CBO** series Vertical Outlet Acetylene Valve with Handwheel For Collar Style Cylinders

#### **List Features**

- Rugged brass forged body manufactured by Cavagna Group
- O-Ring design provides industries best leak tightness and easy operation
- Compact Handwheel provides better access to the valve Handwheel and eliminates interference with cylinder collar
- Inlet screen prevents filler mass or felts from entering the valve
- Easy to read valve markings are roll stamped on the valve neck not on the wrench flats
- Soft seat design provides positive shut off

#### **List Technical data**

| <b>Pressure</b><br>Maximum Service Pressure<br>Test Pressure | 34,5 bar<br>60 bar | 500 PSI<br>885 PSI |
|--|--------------------|--------------------|
| Temperature - Storage  | -50° C ÷ 65° C     | -60° F ÷ 149° F    |
| Temperature - Operating                                      | -45° C ÷ 65° C     | -50° F ÷ 149° F    |
| Life Cycle   | 2,000 m            | ninimum            |
| Torque Values for PBA Acetylene valves                       |                    |                    |
| Max Operating torque @ 0 PSIG inlet pressure                 | 1 N/m              | 8.8 lbs / inch     |
| Max Operating torque @ 240 PSIG inlet pressure               | 1 N/m              | 8.8 lbs / inch     |
| Max Operating torque @ 2,900 PSIG inlet pressure             | 2 N/m              | 17.7 lbs / inch    |

25 N/m

3.5 mm

n/a



221 lbs / inch

0.137 inch

### **Material components**

**Max Overtorque** Flow Capacity (CV)

Orifice Ø:

| material temper   |                       |
|-------------------|-----------------------|
| Valve Body        | Forged Brass EN121645 |
| Handwheel         | Aluminium             |
| Bonnet            | Brass EN12164         |
| Seat              | PA 612 Zytel 158      |
| O-Rings           | EPDM                  |
| Back up Ring      | PTFE                  |
| Antifriction ring | Delrin                |
| Filter            | Stainless Steel       |
|                   |                       |

#### **Conforms to all requirements of:**

| CGA V 9   | Standard for Gas Cylinder Valves                           |
|-----------|--|
| CGA S-1.1 | Standard for Pressure Relief Devices                       |
| CGA V-1   | Compressed Gas Cylinder Valve Outlet and Inlet Connections |
| ISO 10297 | International Standard                                     |
| ISO 14246 | International Standard                                     |

#### **Ordering Information**

| Part Number        | Туре       | CGA Outlet | Outlet Thread Size   | Inlet Thread Size |
|--------------------|------------|------------|----------------------|-------------------|
| <b>CBO</b> 1 510 0 | P.O.L.     | 510        | .885"-14 NGO LH Int. | 3/4" NGT          |
| CBO 1 300 0        | Commercial | 300        | .825"-14 NGO RH Ext. | 3/4″ NGT          |



## **CBH/CBI** series New Handwheel O-ring Seal B and MC Acetylene Cylinder Valves

#### **List Features**

- Handwheel design permits easy access to the valve stem and bonnet to perform leak checks in compliance with DOT requirements
- Positive spindle nut seal with the valve body eliminates the need for constant tightening of packing nuts
- Robust brass Handwheel prevents breakage and corrosion associated with aluminium versions
- Self locking zinc coated steel nut affixes Handwheel to the Sturdy Brass Stem
- Proven double O-Ring technology assures positive leak tight operation extending service life
- Easy low torque operation eliminates the need for wrenches or keys
- Soft seat extends service life and reduces leakage
- Handwheel design eliminates costly valve repairs reducing overall "Cost of Ownership"

#### List Technical data

| Pressure                           |                 |                 |
|------------------------------------|-----------------|-----------------|
| Proof                              | 100 bar min     | 1,465 PSI min   |
| Test                               | 60 bar          | 885 PSI         |
| Temperature - Storage              | -50° C ÷ 65° C  | -60° F ÷ 149° F |
| Temperature - Operating            | -45° C ÷ 65° C  | -50° F ÷ 149° F |
| Life Cycle                         | 2,000 m         | ninimum         |
| Torque Values for PBH/PBI Acetyler | ie valves       |                 |
|                                    | 3 lbs/inch      | 3 lbs/inch      |
| Operating torque @ 500 PSIG        | (CGA 200)       | (CGA 520)       |
| Max Overtorque                     | 25 N/m          | 221 lbs / inch  |
| Orifice Ø:                         | (200) .133 inch | (520) .133 inch |

#### **Material components**

| Valve Body   | Forged Brass EN12165          |
|--------------|-------------------------------|
| Handwheel    | Brass EN12164                 |
| Bonnet Nut   | Brass EN12164                 |
| Seat         | PA 612 Zytel 158              |
| O-Rings      | EPDM                          |
| Back up Ring | PTFE                          |
| Fusible plug | 212° F Integral Fusible metal |
| Strainer     | AISI 304 100 mesh             |
|              |                               |

#### **Conforms to all requirements of:**

| CGA S-1.1 | Standard for Pressure Relief Devices                       |
|-----------|--|
| CGA V-1   | Compressed Gas Cylinder Valve Outlet and Inlet Connections |
| CGAV9     | Standard for Gas Cylinder valves                           |

#### **Ordering Information**

| Part Number | Gas Service | CGA Outlet | Outlet Thread Size  | Inlet Thread Size |
|-------------|-------------|------------|---------------------|-------------------|
| CBH 5 520 3 | Acetylene   | 520        | .895-18 NGO RH Ext. | 3/8-18 NGT        |
| CBI 5 200 3 | Acetylene   | 200        | .625-20 NGO RH Ext. | 3/8-18 NGT        |







## **CBB/CBC** series Wrench Operated Acetylene Valves

#### **List Features**

- Valve body made of rugged forged brass produced by Cavagna Group
- Fusible metal pressure relief device

- Large wrench flats for easy installation
  Teflon packing and anti extrusion rings prevent packing leakage
  Plated steel stem resists damage from wrenches and corrosion

#### **List Technical data**

| Pressure                |                |                 |
|-------------------------|----------------|-----------------|
| Proof                   | 100 bar min    | 1,465 PSI min   |
| Test                    | 60 bar         | 885 PSI         |
| Temperature - Storage   | -50° C ÷ 65° C | -60° F ÷ 149° F |
| Temperature - Operating | -45° C ÷ 65° C | -50° F ÷ 149° F |
| Life Cycle              | 2,000 n        | ninimum         |
|                         |                |                 |

#### **Torque Values for PBB/PBC Acetylene valves:**

See Ordering information below.

#### **Material components**

| Valve Body      | Forged Brass EN12165 alloy    |
|-----------------|-------------------------------|
| Pressure Relief | 212° F Integral Fusible Metal |
| Packing Nut     | Brass EN12164                 |
| Packing         | Teflon (PTFE)                 |
| Packing Gland   | Brass EN12164 alloy           |
| Packing Washer  | Brass EN12165 alloy           |
| Stem            | Steel UNI4838                 |
| Strainer        | AISI 304 100 mesh             |

#### **Conforms to all requirements of:**

| CGA V 9   | Standard for Gas Cylinder Valves                           |
|-----------|--|
| CGA S-1.1 | Standard for Pressure Relief Devices                       |
| CGA V-1   | Compressed Gas Cylinder Valve Outlet and Inlet Connections |

#### **Ordering Information**

| Part Number | Gas Service | CGA Outlet | Outlet Thread Size  | Inlet Thread Size |
|-------------|-------------|------------|---------------------|-------------------|
| CBB 5 520 3 | Acetylene   | 520        | .895-18 NGO RH Ext. | 3/8-18 NGT        |
| CBC 5 200 3 | Acetylene   | 200        | .625-20 NGO RH Ext. | 3/8-18 NGT        |

#### **Torque Values**

| Description                              | Torque          |  |
|--|-----------------|--|
| Operating Torque @ 0 psig Inlet Pressure | 6 - 10 in lbs   |  |
| Closing Torque @ 500 psig Inlet Pressure | 6 - 10 in lbs   |  |
| Packing Nut Installation Torque          | 80 - 100 in lbs |  |
| Stem Installation Torque                 | 45 ± 5 in lbs   |  |

#### **Flow Data**

| CGA Outlet Number             | 200  | 520  |
|-------------------------------|------|------|
| Orifice Ø: Diameter (inches)  | .133 | .133 |
| Flow Constant: Cv - Full Open | n/a  | n/a  |
| Flow CFM @ 240 PSIG Inlet     | n/a  | n/a  |





11



## **CBA** series Brass High Pressure Cylinder Valve for Industrial Gases O-Ring seal type

#### **List Features**

- O-Ring technology provides superior leak integrity
- Easy operation under high pressure
- 100% leak test to 1.2 times cylinder service pressure
- All markings are located on the valve neck to protect them from damage
- Large Orifice Ø: provides faster vacuum and filling rates
- Available bursting discs for all DOT cylinders
- Durable forged brass body manufactured by Cavagna Group
- Passes stringent oxygen adiabatic compression test
- Unique seat holder design
- Standard pressure relief device thread .650-19UNS-2B
- Color coded safety device for easy burst disc identification
- Available configurations include: Inlet threads (NGT, UNF, DIN477, BS, EN, EN ISO)
   All CGA outlets available
- Available with inlet thread for DT
- Unitized "plug style" pressure relief device

#### List Technical data

| Pressure  |                |                 |
|---|----------------|-----------------|
| Maximum Service Pressure                        | 276 bar        | 4,000 PSI       |
| Temperature - Storage                           | -50° C ÷ 65° C | -60° F ÷ 149° F |
| Temperature - Operating                         | -45° C ÷ 65° C | -50° F ÷ 149° F |
| Life Cycle                                      | 2,000 n        | ninimum         |
| Torque Values for PBA Acetylene valves          |                |                 |
| Max Operating torque @ 0 PSIG inlet pressure    | 1 N/m          | 8.8 lbs / inch  |
| Max Operating torque @ 240 PSIG inlet pressure  | 1 N/m          | 8.8 lbs / inch  |
| Max Operating torque @ 2900 PSIG inlet pressure | 2 N/m          | 17.7 lbs / inch |
| Max Overtorque                                  | 25 N/m         | 221 lbs / inch  |
| Flow Capacity CV / Full open n/a                |                | /a              |
| Orifice Ø:                                      | 4 mm           | .160 inch       |

#### **Material components**

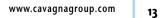
| Valve Body         | Forged Brass EN12165 alloy                      |
|--------------------|---|
| Bursting disc      | Nickel alloy or Stainless Steel                 |
| Bursting disc body | Brass (also available with 212°F fusible metal) |
| Back up Ring       | Nylon or PTFE                                   |
| Bonnet             | Brass   |
| Handwheel          | Aluminium                                       |
| Seat               | Polyamide                                       |
| O-rings            | EPDM  |
| Antifriction       | Delrin  |
| Stem               | Brass according to EN 12164 alloy               |
|                    |   |

#### Conforms to all requirements of:

| CGA V 9              | Standard for Gas Cylinder Valves   |
|----------------------|--|
| CGA S-1.1            | Standard for Pressure Relief Devices   |
| CGA V-1              | Compressed Gas Cylinder Valve Outlet and Inlet Connections   |
| ISO 10297            | International Standard   |
| ISO 14246            | International Standard   |
| CGA V-1<br>ISO 10297 | Standard for Pressure Relief Devices<br>Compressed Gas Cylinder Valve Outlet and Inlet Connections<br>International Standard |

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|  |   | rdering informat |  |  |
|--|---|------------------|--|--|
| Part Number  | Gas Service   | CGA Outlet       | Outlet Thread Size                           | Inlet Thread Size  |
| CBA 8 350 6 xxxx<br>CBA 1 350 6 xxxx<br>CBA 6 350 6 xxxx<br>CBA 3 350 6 xxxx<br>CBA 3 9 350 6 xxxx<br>CBA 1 695 6 xxxx | <b>Hydrogen</b><br>0 to 3,000 psi<br>3,000 to 5,500 psi | 350<br>695       | .825-14 NGO LH Ext.<br>1.045-14 NGO RH Int.  | 1/2".14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125"-12 UNF<br>3/4"-14 NGT |
| CBA 1 703 6 xxxx   | 5,500 to 7,500 psi                                      | 703              | 1.125-14 NGO LH Int.                         | 3/4"-14 NGT  |
| CBA 8 580 1 xxxx<br>CBA 1 580 1 xxxx<br>CBA 6 580 1 xxxx<br>CBA 3 580 1 xxxx<br>CBG 9 580 1 xxxx                       | Krypton<br>0 to 3,000 psi                               | 580              | .965-14 NGO RH Int.                          | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF               |
| CBA 1 680 1 xxxx<br>CBA 1 677 1 xxxx   | 3,000 to 5,500 psi<br>5,500 to 7,500 psi                | 680<br>677       | 1.045-14 NGO RH Int.<br>1.030-14 NGO LH Ext. | 3/4″-14 NGT<br>3/4″-14 NGT   |
| CBA 8 350 6 xxxx<br>CBA 1 350 6 xxxx<br>CBA 6 350 6 xxxx<br>CBA 3 350 6 xxxx<br>CBA 9 350 6 xxxx                       | Methane (R50)<br>0 to 3,000 psi                         | 350              | .825-14 NGO LH Ext.                          | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF               |
| CBA 1 695 6 xxxx<br>CBA 1 703 6 xxxx   | 3,000 to 5,500 psi<br>5,500 to 7,500 psi                | 695<br>703       | 1.045-14 NGO RH Int.<br>1.125-14 NGO LH Int. | 3/4"-14 NGT<br>3/4"-14 NGT   |
| CBA 8 350 6 xxxx<br>CBA 1 350 6 xxxx<br>CBA 6 350 6 xxxx<br>CBA 3 350 6 xxxx<br>CBA 9 350 6 xxxx                       | Natural Gas<br>0 to 3,000 psi                           | 350              | .825-14 NGO LH Ext.                          | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF               |
| CBA 1 695 6 xxxx<br>CBA 1 703 6 xxxx   | 3,000 to 5,500 psi<br>5,500 to 7,500 psi                | 695<br>703       | 1.045-14 NGO RH Int.<br>1.125-14 NGO LH Int. | 3/4"-14 NGT<br>3/4"-14 NGT   |
| CBA 8 580 1 xxxx<br>CBA 1 580 1 xxxx<br>CBA 6 580 1 xxxx<br>CBA 3 580 1 xxxx<br>CBA 9 580 1 xxxx                       | <b>Neon</b><br>0 to 3,000 psi                           | 580              | .965-14 NGO RH Int.                          | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF               |
| CBA 1 680 1 xxxx<br>CBA 1 677 1 xxxx   | 3,000 to 5,500 psi<br>5,500 to 7,500 psi                | 680<br>677       | 1.045-14 NGO RH Int.<br>1.030-14 NGO LH Ext. | 3/4"-14 NGT<br>3/4"-14 NGT   |
| CBA 580 1 xxxx<br>CBA 1 580 1 xxxx<br>CBA 6 580 1 xxxx<br>CBA 3 580 1 xxxx<br>CBA 9 580 1 xxxx                         | Nitrogen<br>0 to 3,000 psi                              | 580              | .965-14 NGO RH Int.                          | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF               |
| CBA 1 680 1 xxxx<br>CBA 1 677 1 xxxx   | 3,000 to 5,500 psi<br>5,500 to 7,500 psi                | 680<br>677       | 1.045-14 NGO RH Int.<br>1.030-14 NGO LH Ext. | 3/4"-14 NGT<br>3/4"-14 NGT   |
| CBA 8 346 1 xxxx<br>CBA 1 346 1 xxxx<br>CBA 6 346 1 xxxx<br>CBA 3 346 1 xxxx   | <b>Air (R729)</b><br>0 psi to 3,000 psi                 | 346              | .825"- 14 NGO RH Ext.                        | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF                                 |
| CBA 9 346 1 xxxx<br>CBA 1 347 1 xxxx<br>CBA 1 702 1 xxxx   | 3,000 to 5,500 psi<br>5,500 to 7,500 psi                | 347<br>702       | .825-14 NGO RH Ext.<br>1.125"-14 NGO RH Ext. | 1.125″ -12 UNF<br>3/4″-14 NGT<br>3/4″-14 NGT   |
| CBA 8 580 1 xxxx<br>CBA 1 580 1 xxxx<br>CBA 6 580 1 xxxx<br>CBA 3 580 1 xxxx   | Argon<br>0 to 3,000 psi                                 | 580              | .965-14 NGO RH Int.                          | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF                                 |
| CBA 9 580 1 xxxx<br>CBA 1 680 1 xxxx<br>CBA 1 677 1 xxxx   | 3,000 to 5,500 psi<br>5,500 to 7,500 psi                | 680<br>677       | 1.045-14 NGO RH Int.<br>1.030-14 NGO LH Ext. | 1.125″ -12 UNF<br>3/4″-14 NGT<br>3/4″-14 NGT   |
| CBA 8 555 1 xxxx<br>CBA 1 555 1 xxxx<br>CBA 5 555 1 xxxx<br>CBA 3 555 1 xxxx<br>CBA 3 555 1 xxxx<br>CBA 9 555 1 xxxx   | <b>Butane/Propane</b><br>Liquid Withdrawal              | 555              | .903-14 NGO LH Ext.                          | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF               |
| CBA 8 320 1 xxxx<br>CBA 1 320 1 xxxx<br>CBA 6 320 1 xxxx<br>CBA 3 320 1 xxxx<br>CBG 9 320 1 xxxx                       | Carbon Dioxide<br>(R744)                                | 320              | .825-14 NGO RH Ext.                          | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF               |

# **CBA** series Brass High Pressure Cylinder Valve for Industrial Gases O-Ring seal type Ordering Information







## **CBA** series Brass High Pressure Cylinder Valves for Industrial Gases

| Ordering Information   |   |                   |   |  |
|--|---|-------------------|---|--|
| Part Number  | Gas Service   | CGA Outlet        | Outlet Thread Size  | Inlet Thread Size  |
| CBA 8 350 6 xxxx<br>CBA 1 350 6 xxxx<br>CBA 6 350 6 xxxx<br>CBA 3 350 6 xxxx<br>CBA 9 350 6 xxxx<br>CBA 9 655 6 xxxx   | Carbon Monoxide<br>0 to 3,000 psi<br>3,000 to 5,500 psi                     | 350               | .825-14 NGO LH Ext.<br>1.045-14 NGO LH Int.                         | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF<br>3/4"-14 NGT                |
| CBA 1 703 6 xxxx   | 5,500 to 7,500 psi  | 703               | 1.125-14 NGO LH Int.  | 3/4"-14 NGT  |
| CBA 8 660<br>CBA 1 660<br>CBA 6 660<br>CBA 3 660<br>CBA 9 660  | 1,2 Dichloroethylene<br>(R1130)   | 660               | 1.030-14 NGO RH Ext.<br>(Face Washer Seal)                          | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF                               |
| CBA 8 580 1 xxxx<br>CBA 1 580 1 xxxx<br>CBA 6 580 1 xxxx<br>CBA 3 580 1 xxxx<br>CBG 9 580 1 xxxx<br>CBA 1 680 1 xxxx<br>CBA 1 680 1 xxxx<br>CBA 1 677 1 xxxx | Helium<br>0 to 3,000 psi<br>3,000 to 5,500 psi<br>5,500 to 7,500 psi        | 580<br>680<br>677 | .965-14 NGO RH Int.<br>1.045-14 NGO RH Int.<br>1.030-14 NGO LH Ext. | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF<br>3/4"-14 NGT<br>3/4"-14 NGT |
| CBA 8 326 1 xxxx<br>CBA 1 326 1 xxxx<br>CBA 6 326 1 xxxx<br>CBA 3 326 1 xxxx<br>CBA 9 326 1 xxxx   | Nitrous Oxide<br>(R744a)  | 326               | .825-14 NGO RH Ext.   | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF                               |
| CBA 8 540 1 xxxx<br>CBA 1 540 1 xxxx<br>CBA 6 540 1 xxxx<br>CBA 3 540 1 xxxx<br>CBA 9 540 1 xxxx<br>CBA 1 577 1 xxxx<br>CBA 1 701 1 xxxx                     | <b>Oxygen</b><br>0 to 3,000 psi<br>3,000 to 4,000 psi<br>4,000 to 5,500 psi | 540<br>577<br>701 | .903-14 NGO RH Ext.<br>.960-14 NGO RH Ext.<br>1.103-14 NGO RH Ext.  | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125"-12 UNF<br>3/4"-14 NGT                 |
| CBA 8 660 1 xxxx<br>CBA 1 660 1 xxxx<br>CBA 6 660 1 xxxx<br>CBA 3 660 1 xxxx<br>CBA 9 660 1 xxxx   | Sulfur Dioxide  | 660               | 1.030-14 NGO RH Int.  | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF                               |
| CBA 8 580 1 xxxx<br>CBA 1 580 1 xxxx<br>CBA 6 580 1 xxxx<br>CBA 3 580 1 xxxx<br>CBA 3 580 1 xxxx   | <b>Xenon</b><br>0 to 3,000 psi  | 580               | .965-14 NGO RH Int.   | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF                               |
| CBA 1 680 1 xxxx<br>CBA 1 677 1 xxxx   | 3,000 to 5,500 psi<br>5,500 to 7,500 psi                                    | 680<br>677        | 1.045-14 NGO RH Int.<br>1.030-14 NGO LH Ext.                        | 3/4″-14 NGT<br>3/4″-14 NGT   |

#### xxxx Denotes Pressure Relief Device burst disc rupture pressure.

#### Available with:

4 and 7 thread oversize inlets: To order change the first number "1" in the part number to "4" or "7"

example: CBA 1 320 1 xxxx becomes CBA 4 320 1 xxxx

Chromium plating: To order, change the letter "B" in the part number to letter "D" *example:* CBA 1 540 1 xxxx becomes CDA 1 540 1 xxxx

Fusible backed pressure relief devices in 165° F and 212° F nominal melting temperatures: To order, change the eigth position in the part number to "5" for 165° F and "6" for 212° F *example:* CBA 1350 1 xxxx becomes CBA 1 350 5 xxxx for 165° F or CBA 1 350 6 xxxx for 212° F



## P 2009 series Residual High Pressure Cylinder Valves for Industrial Gases

#### **List Features**

- Residual pressure valve, o-ring seal type for various gases including CO2
- Filling connector available separately

#### List Technical data

| <b>Pressure</b><br>Maximum Service Pressure                    | 230 bar                                  | 3,336 PSI                |
|--|--|--------------------------|
| Test   | 276 bar                                  | 4,000 PSI                |
| Temperature Range  | -40°C ÷ +65°C                            | -40°F ÷ +149°F           |
| Life Cycle   | 2,000 minimum                            |                          |
| Guaranteed External Tightness<br>Guaranteed Internal Tightness | leakage ≤ 6 cm³/h<br>leakage ≤ 6 cm³/h   | 0.788 scfm<br>0.788 scfm |
| Residual pressure device                                       | 2.5 to 4 bar                             | 35 to 58 PSI             |
|  | (according to customer's specifications) |                          |



#### Material components

Handwheel Aluminium Brass alloy according to EN12165 Valve Body O-ring EPDM Seat pad Polyamide Bursting disc Nickel alloy or Stainless Steel Spring Stainless steel or copper beryllium Seal Plastic Bursting disc body Brass Spindle Brass Spring retainer Brass

#### Options

Customized Handwheel logo cap Dip tube Bursting disc safety available in various settings Chromium plating Plastic Handwheel Filter Parallel thread Thread for dip tube installation

#### **Conforms to all requirements of:**

| CGA V 9   | Standard for Gas Cylinder Valves                           |
|-----------|--|
| CGA S-1.1 | Standard for Pressure Relief Devices                       |
| CGA V-1   | Compressed Gas Cylinder Valve Outlet and Inlet Connections |
| ISO 10297 | International Standard                                     |
| ISO 14246 | International Standard                                     |
| ISO 15996 | International Standard                                     |
|           |  |





## P 1020 series Residual High Pressure Cylinder Valves for Industrial Gases

#### **List Features**

- Residual pressure valve, o-ring seal type for various gases including CO2
- Filling connector available separately

#### List Technical data

| <b>Pressure</b><br>Maximum Service Pressure                    | 230 bar                                  | 3,336 PSI                |
|--|--|--------------------------|
| Test   | 276 bar                                  | 4,000 PSI                |
| Temperature Range  | -40°C ÷ +65°C                            | -40°F ÷ +149°F           |
| Life Cycle   | 2,000 minimum                            |                          |
| Guaranteed External Tightness<br>Guaranteed Internal Tightness | leakage ≤ 6 cm³/h<br>leakage ≤ 6 cm³/h   | 0.788 scfm<br>0.788 scfm |
| Residual pressure device                                       | 2.5 to 4 bar                             | 35 to 58 PSI             |
|  | (according to customer's specifications) |                          |



#### **Material components**

| Handwheel          | Aluminium                           |
|--------------------|-------------------------------------|
| Valve Body         | Brass alloy according to EN12165    |
| O-ring             | EPDM                                |
| Seat pad           | Polyamide                           |
| Bursting disc      | Nickel alloy or Stainless Steel     |
| Spring             | Stainless steel or copper beryllium |
| Seal               | Plastic                             |
| Bursting disc body | Brass                               |
| Spindle            | Brass                               |
| Spring retainer    | Brass                               |

#### Options

Customized Handwheel logo cap Dip tube Bursting disc safety available in various settings Chromium plating Plastic Handwheel Filter Parallel thread Thread for dip tube installation

#### Conforms to all requirements of:

| CGA V 9   | Standard for Gas Cylinder Valves                           |
|-----------|--|
| CGA S-1.1 | Standard for Pressure Relief Devices                       |
| CGA V-1   | Compressed Gas Cylinder Valve Outlet and Inlet Connections |
| ISO 10297 | International Standard                                     |
| ISO 14246 | International Standard                                     |
| ISO 15996 | International Standard                                     |
|           |  |





## **FILLING CONNECTORS**

for Residual Pressure valves

#### **List Features**

- The filling connectors are available in brass, in accordance with all CGA standardized cylinder valve outlets
  The connectors can be used with all the different types of residual pressure valves:
- P2009 series
- P1020 series
- The design with a special retractile pin is also available, to allow the connectors to be used with the standard valves series.

#### **Options**

Chromium plating











## IVIPR series Valve with Integrated Pressure Regulator for Oxygen

#### **List Features**

- Residual pressure valve with integrated Pressure Regulator
- Ergonomically designed with a compact, user friendly casing
- All of the user's primary functions are visible and accessible from one
- side without turning the cylinder
- Suitable for Oxygen
- Meets all the requirements of ISO 22435, EN-ISO 15996

#### List Technical data

| 230 or 300 bar                     | 3,336 or 4,350 PSI   |
|------------------------------------|--|
| 276 bar                            | 4,000 PSI  |
| adjustable 0 to 145 PSI            |  |
| -40°C ÷ +65°C                      | -40°F ÷ +149°F   |
| 2,000 minimum                      |  |
| leakage ≤ 6 cm³/h                  | 0.788 scfm   |
| leakage ≤ 6 cm³/h                  | 0.788 scfm   |
| 2.5 to 4 bar                       | 35 to 58 PSI   |
| (according to customer's specified |  |
| Q1 30 m <sup>3</sup> /h            |  |
|                                    | 276 bar<br>adjustable of<br>-40°C $\div$ +65°C<br>2,000 n<br>leakage $\le 6 \text{ cm}^3/\text{h}$<br>leakage $\le 6 \text{ cm}^3/\text{h}$<br>2.5 to 4 bar<br>(according to custo |





#### **Material components**

| Handwheel              | Aluminium                        |
|------------------------|----------------------------------|
| Valve Body             | Brass alloy according to EN12165 |
| O-ring                 | EPDM                             |
| Main shut off seat pad | PA66                             |
| Spring                 | Stainless steel AISI 302         |
| Sealing cap            | Acetal resin                     |
| Spring regulator       | Cu Be, AISI                      |
| Filter                 | Sintered Bronze                  |
| Diaphragms pressure    |                                  |
| reducer seat           | HYTREL 5526                      |
| Toroidal ring          | EPDM                             |

#### Options

Customized Handwheel logo cap Threaded connection and quick connection available according to EN 561



## IVIPR series Valve with Integrated Pressure Regulator for Ar/CO2 Mix and Inert Gases Mix

#### **List Features**

- Residual pressure valve with integrated Pressure Regulator
- Ergonomically designed with a compact, user friendly casing
- All of the user's primary functions are visible and accessible from one side without turning the cylinder
- Suitable for Ar/CO2 mix and Inert Gases Mix
- Meets all the requirements of ISO 22435, EN-ISO 15996

#### List Technical data

| Pressure                      |  |                    |
|-------------------------------|--|--------------------|
| Maximum Service Pressure      | 230 or 300 bar                           | 3,336 or 4,350 PSI |
| Test                          | 276                                      | 4,000 PSI          |
| Temperature Range             | -40°C ÷ +65°C                            | -40°F ÷ +149°F     |
| Life Cycle                    | 2,000 minimum                            |                    |
| Guaranteed External Tightness | leakage ≤ 6 cm³/h                        | 0.788 scfm         |
| Guaranteed Internal Tightness | leakage $\leq 6 \text{ cm}^3/\text{h}$   | 0.788 scfm         |
| Residual pressure range       | 2.5 to 4 bar                             | 35 to 58 PSI       |
|                               | (according to customer's specifications) |                    |
|                               | · 5                                      |                    |

Flow rate:

Q1 0-40 L/min





#### **Material components**

| Handwheel              | Aluminium                        |
|------------------------|----------------------------------|
| Valve Body             | Brass alloy according to EN12165 |
| O-ring                 | EPDM                             |
| Main shut off seat pad | PA66                             |
| Spring                 | Stainless steel AISI 302         |
| Sealing cap            | Acetal resin                     |
| Spring regulator       | Cu Be, AISI                      |
| Filter                 | Sintered Bronze                  |
| Diaphragms pressure    |                                  |
| reducer seat           | HYTREL 5526                      |
| Toroidal ring          | EPDM                             |
|                        |                                  |

#### Options

Customized Handwheel logo cap Threaded connection and quick connection available according to EN 561



## **IVIPR** series Valve with Integrated Pressure Regulator for Acetylene

#### **List Features**

- Valve with integrated Pressure Regulator
- Ergonomically designed with a compact, user friendly casing
- All of the user's primary functions are visible and accessible from one
- side without turning the cylinder
- Suitable for Acetylene •
- Meets all the requirements of ISO 22435 (except acetylene decomposition test)

#### List Technical data

| Pressure                      |  |                |
|-------------------------------|--|----------------|
| Maximum Service Pressure      | 25 bar                                 | 360 PSI        |
| Test                          | 30 bar                                 | 435 PSI        |
| Outlet Pressure               | adjustable (                           | ) to 17.4 PSI  |
| Temperature Range             | -40°C ÷ +65°C                          | -40°F ÷ +149°F |
| Life Cycle                    | 2,000 minimum                          |                |
| Guaranteed External Tightness | leakage ≤ 6 cm <sup>3</sup> /h         | 0.788 scfm     |
| Guaranteed Internal Tightness | leakage $\leq 6 \text{ cm}^3/\text{h}$ | 0.788 scfm     |
| Flow rate:                    | Q1 1 m <sup>3</sup> /h                 |                |

Flow rate:

#### **Material components**

| Handwheel              | Aluminium                        |
|------------------------|----------------------------------|
| Valve Body             | Brass alloy according to EN12165 |
| O-ring                 | EPDM                             |
| Main shut off seat pad | PEEK                             |
| Spring                 | Stainless steel AISI 302         |
| Sealing cap            | Acetal resin                     |
| Spring regulator       | AISI                             |
| Filter                 | Sintered Bronze                  |
| Diaphragms pressure    |                                  |
| reducer seat           | HYTREL 5526                      |
| Toroidal Ring          | EPDM                             |

#### Options

Customized Handwheel logo cap Threaded connection and quick connection available according to EN 561



# **i**VIPR



## **NOS** series

Chromium Plated Brass High Pressure Cylinder Valves for Nitrogen Dioxide - O-Ring seal type

#### **List Features**

- O-Ring technology provides superior leak integrity
  Easy operation under high pressure
- 100% leak test to 1.2 times cylinder service pressure
  Available bursting discs for all DOT cylinders
  Different inlet threads available upon request

#### **List Technical data**

#### Pressure

| Maximum Service Pressure<br>Test | 124 bar<br>149 bar | 1,800 PSI<br>2,161 PSI |
|----------------------------------|--------------------|------------------------|
| Temperature - Storage            | -50° C ÷ 65° C     | -60° F ÷ 149° F        |
| Temperature - Operating          | -45° C ÷ 65° C     | -50° F ÷ 149° F        |
| Life Cycle                       | 2,000 minimum      |                        |
| Max Overtorque                   | 9 N/m              | 79 lbs / inch          |
| Flow Capacity CV / Full open     | n/a                |                        |
| Orifice Ø:                       | 6 mm               | .260″                  |



| Valve Body         | Brass according to EN12164 alloy  |
|--------------------|-----------------------------------|
| Bursting disc      | Nickel alloy                      |
| Bursting disc body | Brass                             |
| Back up Ring       | PTFE                              |
| Bonnet             | Brass                             |
| Handwheel          | Plastic                           |
| Seat               | Polyamide                         |
| O-rings            | EPĎM                              |
| Stem               | Brass according to EN 12164 alloy |

#### **Conforms to all requirements of:**

| CGA V 9   | Standard for Gas Cylinder Valves                           |
|-----------|--|
| CGA S-1.1 | Standard for Pressure Relief Devices                       |
| CGA V-1   | Compressed Gas Cylinder Valve Outlet and Inlet Connections |

#### **Ordering Information**

| Part Number   | Gas Service     | Outlet Thread Size | Inlet Thread Size |
|---------------|-----------------|--------------------|-------------------|
|               | Nitrous Dioxide | 1/4-27 NPT         | .625-18 UNF 2A    |
| CC\$300013000 |                 | 1/4-27 NP1         | .750-16 UNF 2A    |





## NOS series

**Chromium Plated Brass High Pressure Cylinder Valves** for Nitrogen Dioxide - O-Ring seal type

#### **List Features**

- O-Ring technology provides superior leak integrity
- Easy operation under high pressure
- 100% leak test to 1.2 times cylinder service pressure
- All marking on the valve neck, protects against damage
- Large Orifice Ø: provides faster vacuum and filling rates
- Gauge port available
- Bursting discs available for all DOT cylinders
- Available configurations include: Inlet threads (NGT, UNF, DIN477, BS, EN, EN ISO)

#### **List Technical data**

#### Pressure

| Maximum Service Pressure<br>Test | 207 bar<br>249 bar | 3,000 PSI<br>3,597 PSI |
|----------------------------------|--------------------|------------------------|
| Temperature - Storage            | -50° C ÷ 65° C     | -60° F ÷ 149° F        |
| Temperature - Operating          | -45° C ÷ 65° C     | -50° F ÷ 149° F        |
| Life Cycle                       | 2,000 minimum      |                        |
| Max Overtorque                   | 25 N/m             | 221 lbs / inch         |
| Flow Capacity CV / Full open     | n/a                |                        |
| Orifice Ø:                       | 8 mm               | .315″                  |

#### **Material components**

| Valve Body         | Forged Brass according to EN12165 alloy         |
|--------------------|---|
| Bursting disc      | Nickel alloy                                    |
| Bursting disc body | Brass (also available with 212°F fusible metal) |
| Back up Ring       | Polyamide                                       |
| Bonnet             | Brass   |
| Handwheel          | Aluminium                                       |
| Seat               | Polyamide                                       |
| O-rings            | EPĎM  |
| Antifriction       | Polyamide                                       |
| Stem               | Brass according to EN 12164 alloy               |

#### **Conforms to all requirements of:**

| CGA V 9   | Standard for Gas Cylinder Valves                           |
|-----------|--|
| CGA S-1.1 | Standard for Pressure Relief Devices                       |
| CGA V-1   | Compressed Gas Cylinder Valve Outlet and Inlet Connections |

#### **Ordering Information**

| J                       |                 |                    |                   |  |
|-------------------------|-----------------|--------------------|-------------------|--|
| Part Number Gas Service |                 | Outlet Thread Size | Inlet Thread Size |  |
| <b>VOA9APA</b> 001      | Nitrous Dioxide | CGA 660            | 1.125-12 UNF 2A   |  |





# **MEDICAL EQUIPMENT**

| <b>CDA series</b><br>Chromium Plated Brass High Pressure Cylinder Valves for Medical Gases O-Ring seal type | 28 |
|---|----|
| <b>CDA series</b><br>O-ring Industrial Gas Cylinder Valve   | 30 |
| <b>P 2009 series</b><br>Residual Pressure Valve for Medical gases   | 31 |
| <b>P 1020 series</b><br>Residual Pressure Valve for Medical gases   | 32 |
| <b>PDE series</b><br>Post Medical Cylinder Valves Pin Index System O-Ring seal type                         | 33 |
| PDE R<br>Post Medical Residual Pressure Valves Pin Index System O-Ring seal type                            | 35 |
| <b>VIPROXY series</b><br>Valve with Integrated Pressure Reducer for medical Oxygen                          | 37 |
| VIPROXY 1 Touch series<br>Valve with Integrated Pressure Reducer for medical Oxygen                         | 39 |
| <b>VIPROXY Atom series</b><br>Valve with Integrated Pressure Reducer for medical Oxygen                     | 41 |
| <b>Plein Air</b><br>Pressure Regulator for medical Oxygen   | 42 |



### CDA series **Chromium Plated Brass High Pressure Cylinder Valves** for Medical Gases - O-Ring seal type



- O-Ring technology provides superior leak integrityEasy operation under high pressure
- 100% leak test to 1.2 times cylinder service pressure
- All marking on the valve neck, protects against damage
- Large Orifice Ø: provides faster vacuum and filling rates
- Available bursting discs for all DOT cylinders
- Durable forged brass body manufactured by Cavagna Group
- Passes stringent oxygen adiabatic compression test
- Color coded safety device for easy burst disc identification •
- Available configurations include: • Inlet threads (NGT, UNF, DIN477, BS, EN, EN ISO)
- All CGA outlets available
- Unitized "plug style" bursting disc

#### List Technical data

| <b>Pressure</b><br>Maximum Service Pressure<br>Test | 230 bar<br>276 bar | 3,336 PSI<br>4,000 PSI |
|---|--------------------|------------------------|
| Temperature - Storage                               | -50° C ÷ 65° C     | -60° F ÷ 149° F        |
| Temperature - Operating                             | -45° C ÷ 65° C     | -50° F ÷ 149° F        |
| Life Cycle  | 2,000 m            | ninimum                |
| Max Overtorque                                      | 25 N/m             | 221 lbs / inch         |
| Flow Capacity CV / Full open                        | n/a                |                        |
| Orifice Ø:  | 4 mm               | .160″                  |

#### **Material components**

| Valve Body<br>Bursting disc<br>Bursting disc body<br>Back up Ring<br>Bonnet<br>Handwheel<br>Seat<br>O-rings<br>Antifriction | Forged Brass according to EN12165 alloy<br>Nickel alloy<br>Brass (also available with 212°F fusible metal)<br>PTFE<br>Brass<br>Aluminium<br>Polyamide<br>EPDM<br>Delrin<br>Brass according to EN 12164 alloy |
|---|--|
| Stem  | Brass according to EN 12164 alloy  |

#### **Conforms to all requirements of:**

| ctions |
|--------|
|        |
|        |
|        |







**CDA** series Chromium Plated Brass High Pressure Cylinder Valves

|  |  | dering Informat |  |   |
|--|--|-----------------|--|---|
| Part Number  | Gas Service  | CGA Outlet      | Outlet Thread Size                           | Inlet Thread Size   |
| CDA 8 350 6 xxxx<br>CDA 1 350 6 xxxx<br>CDA 6 350 6 xxxx<br>CDA 3 350 6 xxxx<br>CDA 9 350 6 xxxx<br>CDA 9 350 6 xxxx | Hydrogen<br>0 to 3,000 psi                           | 350<br>695      | .825-14 NGO LH Ext.                          | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF<br>2/4" 14 NCT |
| CDA 1 695 6 xxxx<br>CDA 1 703 6 xxxx   | 3,000 to 5,500 psi<br>5,500 to 7,500 psi             | 703             | 1.045-14 NGO RH Int.<br>1.125-14 NGO LH Int. | 3/4"-14 NGT<br>3/4"-14 NGT  |
| CDA 8 580 1 xxxx<br>CDA 1 580 1 xxxx<br>CDA 6 580 1 xxxx<br>CDA 3 580 1 xxxx<br>CDG 3 580 1 xxxx<br>CDG 9 580 1 xxxx | Krypton<br>0 to 3,000 psi                            | 580             | .965-14 NGO RH Int.                          | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF                |
| CDA 1 680 1 xxxx<br>CDA 1 677 1 xxxx   | 3,000 to 5,500 psi<br>5,500 to 7,500 psi             | 680<br>677      | 1.045-14 NGO RH Int.<br>1.030-14 NGO LH Ext. | 3/4"-14 NGT<br>3/4"-14 NGT  |
|  | Methane (R50)  |                 |  |   |
| CDA 8 350 6 xxxx<br>CDA 1 350 6 xxxx<br>CDA 6 350 6 xxxx<br>CDA 3 350 6 xxxx<br>CDA 3 350 6 xxxx<br>CDA 1 695 6 xxxx | 0 to 3,000 psi<br>3,000 to 5,500 psi                 | 350<br>695      | .825-14 NGO LH Ext.<br>1.045-14 NGO RH Int.  | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF<br>3/4"-14 NGT |
| CDA 1 703 6 xxxx   | 5,500 to 7,500 psi                                   | 703             | 1.125-14 NGO LH Int.                         | 3/4"-14 NGT   |
| CDA 8 350 6 xxxx<br>CDA 1 350 6 xxxx<br>CDA 6 350 6 xxxx<br>CDA 3 350 6 xxxx   | Natural Gas<br>0 to 3,000 psi                        | 350             | .825-14 NGO LH Ext.                          | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF                                  |
| CDA 9 350 6 xxxx<br>CDA 1 695 6 xxxx<br>CDA 1 703 6 xxxx   | 3,000 to 5,500 psi<br>5,500 to 7,500 psi             | 695<br>703      | 1.045-14 NGO RH Int.<br>1.125-14 NGO LH Int. | 1.125″ -12 UNF<br>3/4″-14 NGT<br>3/4″-14 NGT  |
| CDA 8 580 1 xxxx<br>CDA 1 580 1 xxxx<br>CDA 6 580 1 xxxx<br>CDA 3 580 1 xxxx<br>CDA 3 580 1 xxxx                     | Neon<br>0 to 3,000 psi                               | 580             | .965-14 NGO RH Int.                          | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF                |
| CDA 9 380 1 xxxx<br>CDA 1 680 1 xxxx<br>CDA 1 677 1 xxxx   | 3,000 to 5,500 psi<br>5,500 to 7,500 psi             | 680<br>677      | 1.045-14 NGO RH Int.<br>1.030-14 NGO LH Ext. | 3/4"-14 NGT<br>3/4"-14 NGT  |
| CDA 8 580 1 xxxx<br>CDA 1 580 1 xxxx<br>CDA 6 580 1 xxxx<br>CDA 3 580 1 xxxx<br>CDA 3 580 1 xxxx                     | Nitrogen<br>0 to 3,000 psi                           | 580             | .965-14 NGO RH Int.                          | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF                |
| CDA 1 680 1 xxxx<br>CDA 1 677 1 xxxx   | 3,000 to 5,500 psi<br>5,500 to 7,500 psi             | 680<br>677      | 1.045-14 NGO RH Int.<br>1.030-14 NGO LH Ext. | 3/4"-14 NGT<br>3/4"-14 NGT  |
| CDA 8 346 1 xxxx<br>CDA 1 346 1 xxxx<br>CDA 6 346 1 xxxx<br>CDA 6 346 1 xxxx<br>CDA 3 346 1 xxxx                     | <b>Air (R729)</b><br>0 psi to 3,000 psi              | 346             | .825"- 14 NGO RH Ext.                        | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF                                  |
| CDA 9 346 1 xxxx<br>CDA 1 347 1 xxxx<br>CDA 1 702 1 xxxx   | 3,000 to 5,500 psi<br>5,500 to 7,500 psi             | 347<br>702      | .825-14 NGO RH Ext.<br>1.125"-14 NGO RH Ext. | 1.125" -12 UNF<br>3/4"-14 NGT<br>3/4"-14 NGT  |
| CDA 8 580 1 xxxx<br>CDA 1 580 1 xxxx<br>CDA 6 580 1 xxxx<br>CDA 3 580 1 xxxx<br>CDA 9 580 1 xxxx<br>CDA 4 680 1 xxxx | <b>Argon</b><br>0 to 3,000 psi<br>3,000 to 5,500 psi | 580             | .965-14 NGO RH Int.<br>1.045-14 NGO RH Int.  | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF<br>3/4"-14 NGT |
| CDA 1 680 1 XXXX<br>CDA 1 677 1 XXXX   | ,501 to 7,500 psi                                    | 677             | 1.030-14 NGO LH Ext.                         | 3/4"-14 NGT   |
| CDA 8 555 1 xxxx<br>CDA 1 555 1 xxxx<br>CDA 6 555 1 xxxx<br>CDA 3 555 1 xxxx<br>CDA 3 555 1 xxxx                     | Butane/Propane<br>Liquid Withdrawal                  | 555             | .903-14 NGO LH Ext.                          | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF                |
| CDA 8 320 1 xxxx<br>CDA 1 320 1 xxxx<br>CDA 6 320 1 xxxx<br>CDA 6 320 1 xxxx<br>CDA 3 320 1 xxxx<br>CDG 9 320 1 xxxx | Carbon Dioxide<br>(R744)                             | 320             | .825-14 NGO RH Ext.                          | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF                |

#### **Ordering Information**







#### **Ordering Information**

| Part Number  | Gas Service   | CGA Outlet        | Outlet Thread Size   | Inlet Thread Size   |
|--|---|-------------------|--|---|
| CDA 8 350 6 xxxx<br>CDA 1 350 6 xxxx<br>CDA 6 350 6 xxxx<br>CDA 3 350 6 xxxx<br>CDA 3 350 6 xxxx   | Carbon Monoxide<br>0 to 3,000 psi   | 350               | .825-14 NGO LH Ext.  | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF                                |
| CDA 9 530 0 XXXX<br>CDA 1 695 6 XXXX<br>CDA 1 703 6 XXXX   | 3,000 to 5,500 psi<br>5,500 to 7,500 psi                                    | 695<br>703        | 1.045-14 NGO LH Int.<br>1.125-14 NGO LH Int.                       | 3/4"-14 NGT<br>3/4"-14 NGT  |
| CDA 8 660<br>CDA 1 660<br>CDA 6 660<br>CDA 3 660<br>CDA 9 660  | 1,2 Dichloroethylene<br>(R1130)   | 660               | 1.030-14 NGO RH Ext.<br>(Face Washer Seal)                         | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF                                |
| CDA 8 580 1 xxxx<br>CDA 1 580 1 xxxx<br>CDA 6 580 1 xxxx<br>CDA 3 580 1 xxxx<br>CDG 9 580 1 xxxx<br>CDG 9 580 1 xxxx<br>CDA 1 680 1 xxxx                     | Helium<br>0 to 3,000 psi<br>3,000 to 5,500 psi                              | 580<br>680        | .965-14 NGO RH Int.<br>1.045-14 NGO RH Int.                        | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125"-12 UNF<br>3/4"-14 NGT                  |
| CDA 1 677 1 xxxx<br>CDA 8 326 1 xxxx<br>CDA 1 326 1 xxxx<br>CDA 6 326 1 xxxx<br>CDA 3 326 1 xxxx<br>CDA 3 326 1 xxxx<br>CDA 9 326 1 xxxx                     | 5,500 to 7,500 psi<br>Nitrous Oxide<br>(R744a)                              | 677<br>326        | 1.030-14 NGO LH Ext.   | 3/4"-14 NGT<br>1/2"-14 NGT"<br>3/4"-14 NGT"<br>1-11 1/2 NGT<br>.750"-16 UNF"<br>1.125" -12 UNF"             |
| CDA 8 540 1 xxxx<br>CDA 1 540 1 xxxx<br>CDA 6 540 1 xxxx<br>CDA 3 540 1 xxxx<br>CDA 9 540 1 xxxx<br>CDA 9 540 1 xxxx<br>CDA 1 577 1 xxxx<br>CDA 1 701 1 xxxx | <b>Oxygen</b><br>0 to 3,000 psi<br>3,000 to 4,000 psi<br>4,000 to 5,500 psi | 540<br>577<br>701 | .903-14 NGO RH Ext.<br>.960-14 NGO RH Ext.<br>1.103-14 NGO RH Ext. | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>1.750"-16 UNF<br>1.125" -12 UNF<br>3/4"-14 NGT<br>3/4"-14 NGT |
| CDA 8 660 1 xxxx<br>CDA 1 660 1 xxxx<br>CDA 6 660 1 xxxx<br>CDA 3 660 1 xxxx<br>CDA 9 660 1 xxxx   | Sulfur Dioxide  | 660               | 1.030-14 NGO RH Int.   | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF                                |
| CDA 8 580 1 xxxx<br>CDA 1 580 1 xxxx<br>CDA 6 580 1 xxxx<br>CDA 3 580 1 xxxx<br>CDA 3 580 1 xxxx   | Xenon<br>0 to 3,000 psi   | 580               | .965-14 NGO RH Int.  | 1/2"-14 NGT<br>3/4"-14 NGT<br>1-11 1/2 NGT<br>.750"-16 UNF<br>1.125" -12 UNF                                |
| CDA 1 680 1 xxxx<br>CDA 1 677 1 xxxx   | 3,000 to 5,500 psi<br>5,500 to 7,500 psi                                    | 680<br>677        | 1.045-14 NGO RH Int.<br>1.030-14 NGO LH Ext.                       | 3/4"-14 NGT<br>3/4"-14 NGT  |

#### xxxx Denotes Pressure Relief Device burst disc rupture pressure.

#### Available with:

"4 and 7 thread oversize inlets: To order change the first number "1" in the part number to "4" or "7"

example: CBA 1 320 1 xxxx becomes CBA 4 320 1 xxxx

Chromium plating: To order, change the letter "B" in the part number to letter "D" *example:* CBA 1 540 1 xxxx becomes CDA 1 540 1 xxxx

Fusible backed pressure relief devices in 165 °F and 212 °F nominal melting temperatures: To order, change the eigth position in the part number to "5" for 165 °F and "6" for 212 °F example: CBA 1350 1 xxxx becomes CBA 1 350 5 xxxx for 165 °F or CBA 1 350 6 xxxx for 212 °F



## P2009 series Residual Pressure Valve for Medical gases

#### **List Features**

- Residual pressure valve, o-ring seal type for various gases including Oxygen.
- Filling connector available separately

#### **List Technical data**

| Pressure                      |  |                |
|-------------------------------|--|----------------|
| Maximum Service Pressure      | 230 bar                                | 3,336 PSI      |
| Test                          | 276 bar                                | 4,000 PSI      |
| Temperature Range             | -40°C ÷ +65°C                          | -40°F ÷ +149°F |
| Life Cycle                    | 2,000 minimum                          |                |
| Guaranteed External Tightness | leakage ≤ 6 cm <sup>3</sup> /h         | 0.788 scfm     |
| Guaranteed Internal Tightness | leakage $\leq 6 \text{ cm}^3/\text{h}$ | 0.788 scfm     |
| Residual pressure device      | 2.5 to 4 bar                           | 35 to 58 PSI   |

(according to customer's specifications)

#### **Material components**

| Handwheel          | Aluminium                           |
|--------------------|-------------------------------------|
| Valve Body         | Brass alloy according to EN12165    |
| O-ring             | EPDM                                |
| Seat pad           | Polyamide                           |
| Bursting disc      | Nickel alloy or Stainless Steel     |
| Spring             | Stainless steel or copper beryllium |
| Seal               | Plastic                             |
| Bursting disc body | Brass                               |
| Spindle            | Brass                               |
| Spring retainer    | Brass                               |
|                    |                                     |

**Options** Customized Handwheel logo cap Dip tube Bursting disc safety available in various settings Chromium plating Plastic Handwheel Filter Parallel thread Thread for dip tube installation

#### **Conforms to all requirements of:**

| Standard for Gas Cylinder Valves                           |
|--|
| Standard for Pressure Relief Devices                       |
| Compressed Gas Cylinder Valve Outlet and Inlet Connections |
| International Standard                                     |
| International Standard                                     |
| International Standard                                     |
|  |







## **P1020** series Residual Pressure Valve for Medical gases



#### **List Features**

• Residual pressure valve, o-ring seal type for various gases including Oxygen.

• Filling connector available separately

#### List Technical data

| <b>Pressure</b><br>Maximum Service Pressure<br>Test            | 230 bar<br>276 bar                     | 3,336 PSI<br>4,000 PSI   |
|--|--|--------------------------|
| Temperature Range  | -40°C ÷ +65°C                          | -40°F ÷ +149°F           |
| Life Cycle   | 2,000 m                                | inimum                   |
| Guaranteed External Tightness<br>Guaranteed Internal Tightness | leakage ≤ 6 cm³/h<br>leakage ≤ 6 cm³/h | 0.788 scfm<br>0.788 scfm |
| Residual pressure device                                       | 2.5 to 4 bar                           | 35 to 58 PSI             |

(according to customer's specifications)

#### **Material components**

| Handwheel -        | Aluminium                           |
|--------------------|-------------------------------------|
| Valve Body         | Brass alloy according to EN12165    |
| O-ring             | EPDM                                |
| Seat pad           | Polyamide                           |
| Bursting disc      | Nickel alloy or Stainless Steel     |
| Spring             | Stainless steel or copper beryllium |
| Seal               | Plastic                             |
| Bursting disc body | Brass                               |
| Spindle            | Brass                               |
| Spring retainer    | Brass                               |

#### Options

Customized Handwheel logo cap Dip tube Bursting disc safety available in various settings Chromium plating Plastic Handwheel Filter Parallel thread Thread for dip tube installation

#### **Conforms to all requirements of:**

| CGA V 9   | Standard for Gas Cylinder Valves                           |
|-----------|--|
| CGA S-1.1 | Standard for Pressure Relief Devices                       |
| CGA V-1   | Compressed Gas Cylinder Valve Outlet and Inlet Connections |
| ISO 10297 | International Standard                                     |
| ISO 14246 | International Standard                                     |
| ISO 15996 | International Standard                                     |
|           |  |







## **PDE** series Post Medical Cylinder Valves Pin Index System O-Ring seal type

#### **List Features**

- O-Ring technology provides superior leak integrity
- Easy operation under high pressure
- High quality Nickel Chromium plating protects against harmful chemicals
- 100% leak test to full cylinder service pressure
- Body made from extruded brass rod Fits all CGA specified yokes
- Passes stringent oxygen adiabatic compression test
- Unique stem design meets CGA performance criteria, designed shear point allows stem to break above the spindle nut if over torqued or shocked due to careless handling
- Aluminum cylinder valve supplied with Teflon O-Ring for fast and easy installation
- Oxygen cleaned to meet CGA G4.1 specifications
- Clean room assembly

#### **List Technical data**

| Pressure                      |                |                 |
|-------------------------------|----------------|-----------------|
| Maximum Service Pressure      | 230 bar        | 3,336 PSI       |
| Test                          | 276 bar        | 4,000 PSI       |
| Temperature range - Storage   | -50° C ÷ 65° C | -60° F ÷ 149° F |
| Temperature range - Operating | -45° C ÷ 65° C | -50° F ÷ 149° F |
| Life Cycle                    | 2,000 mi       | nimum           |

#### **Torque Values for PDE series valve**

#### Wrench operated A

| Operating torque @ 0 PSIG inlet pressure<br>Closing torque @ 3000 PSIG inlet pressure                                  | 0.3 N/m<br>0.9 - 1.3 N/m | 3 lbs/inch<br>8 - 12 lbs/inc  |
|--|--------------------------|-------------------------------|
| <b>Toggle B</b><br>Operating torque @ 0 PSIG inlet pressure<br>Closing torque @ 2000 PSIG inlet pressure               | 0.2 N/m<br>0.9 - 1.1 N/m | 2 lbs/inch<br>8 - 10 lbs/inch |
| <b>Z Valve w/ Handwheel C</b><br>Operating torque @ 0 PSIG inlet pressure<br>Closing torque @ 2000 PSIG inlet pressure | 0,2 N/m<br>0.9 - 1.1 N/m | 2 lbs/inch<br>8 - 10 lbs/inch |

#### Material components

| Valve Body         | Chromium plated Brass |
|--------------------|-----------------------|
| Bursting disc      | Nickel alloy 201      |
| Handwheel          | Aluminium             |
| Seat               | Polyamide             |
| O-Rings            | EPĎM                  |
| Anti Friction Ring | PEEK                  |
| Stem               | Chromium plated Brass |
| Inlet O-ring       | PTFE                  |
| Back up ring       | Nylon                 |
| Toggle             | Chromium Plated Brass |
|                    |                       |

#### **Conforms to all requirements of:**

| CGA V 9   | Standard for Gas Cylinder Valves                           |
|-----------|--|
| CGA S-1.1 | Standard for Pressure Relief Devices                       |
| CGA V-1   | Compressed Gas Cylinder Valve Outlet and Inlet Connections |
| ISO 10297 | International Standard                                     |
| ISO 14246 | International Standard                                     |
|           |  |



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В







| Part Number Gas Service CGA Outlet Outlet Thread Size Inlet Thread |                                     |     |                  |                              |
|--|-------------------------------------|-----|------------------|------------------------------|
| PDE 8 950 5 3360<br>PDE 3 950 5 3360                               | Air                                 | 950 | Pins #1 and #5   | 1/2-14 NGT<br>.750-16 UNF-2A |
| PDE 8 940 1 3360<br>PDE 3 940 1 3360                               | Carbon Dioxide                      | 940 | Pins #1 and #6   | 1/2-14 NGT<br>.750-16 UNF-2A |
| PDE 8 920 1 3360<br>PDE 3 920 1 3360                               | Cyclopropane                        | 920 | Pins #3 and #6   | 1/2-14 NGT<br>.750-16 UNF-2A |
| PDE 8 900 5 3360<br>PDE 3 900 5 3360                               | Ethylene                            | 900 | Pins #1 and #3   | 1/2-14 NGT<br>.750-16 UNF-2A |
| PDE 8 930 5 3360<br>PDE 3 930 5 3360                               | Helium                              | 930 | Pins #4 and #6   | 1/2-14 NGT<br>.750-16 UNF-2A |
| PDE 8 973 5 3360<br>PDE 3 973 5 3360                               | Medical Gas Mixtures                | 973 | Pins #11 and #24 | 1/2-14 NGT<br>.750-16 UNF-2A |
| PDE 8 960 5 3360<br>PDE 3 960 5 3360                               | Nitrogen                            | 960 | Pins # 1 and #4  | 1/2-14 NGT<br>.750-16 UNF-2A |
| PDE 8 910 1 3360<br>PDE 3 910 1 3360                               | Nitrous Oxide                       | 910 | Pins # 3 and #5  | 1/2-14 NGT<br>.750-16 UNF-2A |
| PDE 8 965 5 3360<br>PDE 3 965 5 3360                               | Nitrous Oxide &<br>Oxygen Mixtures  | 965 | Pin #7           | 1/2-14 NGT<br>.750-16 UNF-2A |
| PDE 8 870 5 3360<br>PDE 3 870 5 3360                               | Oxygen                              | 870 | Pins #2 and #5   | 1/2-14 NGT<br>.750-16 UNF-2A |
| PDE 8 880 5 3360<br>PDE 3 880 5 3360                               | Oxygen & Carbon<br>Dioxide Mixtures | 880 | Pins # 2 and #6  | 1/2-14 NGT<br>.750-16 UNF-2A |
| PDE 8 890 5 3360<br>PDE 3 890 5 3360                               | Oxygen & Helium<br>Mixtures         | 890 | Pins # 2 and #4  | 1/2-14 NGT<br>.750-16 UNF-2A |

#### **Ordering Information**

All valves are supplied with safety relief devices as specified by the Compressed Gas Association Standard S1.1. Safety relief devices are flush style CG-4 devices backed by 165 F fuse metal, except valves specified for Carbon Dioxide (CGA 940), Cyclopropane (CGA 920) and Nitrous Oxide (CGA 940), where a CG-1 hex style pressure relief device without fuse metal is required.

All valves are supplied with rupture discs rated for cylinders with a service pressure of 2,015 psig. Rupture discs rated for other cylinder service pressures are available upon request.

#### **Optional Features:**

Handwheel - example: PDE 8 890 5 3360 changes to PDU 8 890 5 3360

Chromium Plated Toggle- example: PDE 8 890 5 3360 changes to PDF 8 890 5 3360

1/8"-27 NPT gauge port - example: PDE 8 890 5 3360 changes to PDP 8 890 5 3360 (only available with toggle)



## PDE R

**Post Medical Residual Pressure Valves Pin Index System** O-Ring seal type

#### **List Features**

- O-Ring technology provides superior leak integrity
- Easy operation under high pressure
- · High quality Nickel Chromium plating protects against harmful chemicals
- 100% leak test to full cylinder service pressure
- Body made from extruded brass rod Fits all CGA specified yokes
- Passes stringent oxygen adiabatic compression test
- Unique stem design meets CGA performance criteria, designed shear point allows stem to break above the spindle nut if over torqued or shocked due to careless handling
- Aluminum cylinder valve supplied with Terlon O-Ring for fast and easy installation
- Oxygen cleaned to meet CGA G4.1 specifications
- Clean room assembly

#### **List Technical data**

#### Pressure

| Test (without b. disc)<br>Test with b. disc at 80% of set pressure<br>Residual pressure | 518 bar<br>276 bar<br>43.5 to 72.5 | 7,500 PSI<br>4,000 PSI<br>3 to 5 |  |  |  |
|---|------------------------------------|----------------------------------|--|--|--|
| Temperature range - Storage   | -50° C ÷ 65° C                     | -60° F ÷ 149° F                  |  |  |  |
| Temperature range - Operating   | -45° C ÷ 65° C                     | -50° F ÷ 149° F                  |  |  |  |
| Life Cycle  | 2,000 minimum                      |                                  |  |  |  |

#### **Torque Values for PDE series valve**

#### Wrench operated A Operating torque @ 0 PSIG inlet pressure 3 lbs/inch 0.3 N/m 8 - 12 lbs/inch 0.9 - 1.3 N/m Closing torque @ 3000 PSIG inlet pressure Toggle B Operating torque @ 0 PSIG inlet pressure 2 lbs/inch 0.2 N/m Closing torque @ 2000 PSIG inlet pressure 8 - 10 lbs/inch 0.9 - 1.1 N/m PDU C Operating torque @ 0 PSIG inlet pressure 2 lbs/inch 0.2 N/m Closing torgue @ 2000 PSIG inlet pressure 8 - 10 lbs/inch 0.9 - 1.1 N/m

#### **Material components**

| Valve Body                        | Chromium plated Brass |
|-----------------------------------|-----------------------|
| Bursting disc (If required)       | Nickel alloy 201      |
| Handwheel or toggle (if required) | Chromium Plated brass |
| Seat                              | Polyamide             |
| O-Rings                           | EPDM                  |
| Back up ring                      | Teflon®               |
| Anti Friction Ring                | PEEK                  |
| Stem                              | Chromium Plated Brass |
| Inlet O-ring                      | Teflon®               |

#### Conforms to all requirements of:

CGA V 9Standard for Gas Cylinder ValvesCGA S-1.1Standard for Pressure Relief DevicesCGA V-1Compressed Gas Cylinder Valve Outlet and Inlet ConnectionsISO 10297International StandardISO 14246International StandardISO 15996Test on RP Device



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## PDE R



**Post Medical Residual Pressure Valves Pin Index System** O-Ring seal type

**Ordering Information** 

| Ordering information                     |                                     |            |                    |                              |  |  |  |  |  |
|--|-------------------------------------|------------|--------------------|------------------------------|--|--|--|--|--|
| Part Number                              | Gas Service                         | CGA Outlet | Outlet Thread Size | Inlet Thread Size            |  |  |  |  |  |
| PDE R 8 950 5 3360<br>PDE R 3 950 5 3360 | Air                                 | 950        | Pins #1 and #5     | 1/2-14 NGT<br>.750-16 UNF-2A |  |  |  |  |  |
| PDE R 8 940 1 3360<br>PDE R 3 940 1 3360 | Carbon Dioxide                      | 940        | Pins #1 and #6     | 1/2-14 NGT<br>.750-16 UNF-2A |  |  |  |  |  |
| PDE R 8 920 1 3360<br>PDE R 3 920 1 3360 | Cyclopropane                        | 920        | Pins #3 and #6     | 1/2-14 NGT<br>.750-16 UNF-2A |  |  |  |  |  |
| PDE R 8 900 5 3360<br>PDE R 3 900 5 3360 | Ethylene                            | 900        | Pins #1 and #3     | 1/2-14 NGT<br>.750-16 UNF-2A |  |  |  |  |  |
| PDE R 8 930 5 3360<br>PDE R 3 930 5 3360 | Helium                              | 930        | Pins #4 and #6     | 1/2-14 NGT<br>.750-16 UNF-2A |  |  |  |  |  |
| PDE R 8 973 5 3360<br>PDE R 3 973 5 3360 | Medical Gas Mixtures                | 973        | Pins #11 and #24   | 1/2-14 NGT<br>.750-16 UNF-2A |  |  |  |  |  |
| PDE R 8 960 5 3360<br>PDE R 3 960 5 3360 | Nitrogen                            | 960        | Pins #1 and #4     | 1/2-14 NGT<br>.750-16 UNF-2A |  |  |  |  |  |
| PDE R 8 910 1 3360<br>PDE R 3 910 1 3360 | Nitrous Oxide                       | 910        | Pins #3 and #5     | 1/2-14 NGT<br>.750-16 UNF-2A |  |  |  |  |  |
| PDE R 8 965 5 3360<br>PDE R 3 965 5 3360 | Nitrous Oxide &<br>Oxygen Mixtures  | 965        | Pin #7             | 1/2-14 NGT<br>.750-16 UNF-2A |  |  |  |  |  |
| PDE R 8 870 5 3360<br>PDE R 3 870 5 3360 | Oxygen                              | 870        | 870 Pins #2 and #5 |                              |  |  |  |  |  |
| PDE R 8 880 5 3360<br>PDE R 3 880 5 3360 | Oxygen & Carbon<br>Dioxide Mixtures | 880        | Pins #2 and #6     | 1/2-14 NGT<br>.750-16 UNF-2A |  |  |  |  |  |
| PDE R 8 890 5 3360<br>PDE R 3 890 5 3360 | Oxygen & Helium<br>Mixtures         | 890        | Pins #2 and #4     | 1/2-14 NGT<br>.750-16 UNF-2A |  |  |  |  |  |

All valves are supplied with safety relief devices as specified by the Compressed Gas Association Standard S1.1. Safety relief devices are flush style CG-4 devices backed by 165 °F fuse metal, except valves specified for Carbon Dioxide (CGA 940) and Nitrous Oxide (CGA 940), where a CG-1 hex style pressure relief device without fuse metal is required. All valves are supplied with rupture discs rated for cylinders with a service pressure of 2,015 psig.

All valves are supplied with rupture discs rated for cylinders with a service pressure of 2,015 psig Rupture discs rated for other cylinder service pressures are available upon request.

#### **Optional Features:**

Handwheel - example: PDE R 8 890 5 3360 changes to PDU 8 890 5 3360 Chromium Plated Toggle- example: PDE R 8 890 5 3360 changes to PDF 8 890 5 3360 1/8"-27 NPT gauge port - example: PDE R 8 890 5 3360 changes to PDP 8 890 5 3360 (only available with toggle)



## VIPROXY series Valve with Integrated Pressure Reducer for medical Oxygen - 3336 PSI -

**List Features** 

- Valve with integrated pressure reducer for Medical Oxygen
- MRI compatible
- Positive pressure device incorporated
- Non return valve with synterized bronze filter integrated in the filling port
- Compensated regulator
- Synterized bronze filter in the cylinder connection
- Tested and approved in accordance with the International Standards EN-ISO 10524-3
- CE and  $\pi$  marked according to the European Directives for Medical and trasportable pressure devices
- Active gauge with fluorescent scales

#### List Technical data

| Pressure                   |               |                |  |  |  |
|----------------------------|---------------|----------------|--|--|--|
| Maximum Service Pressure   | 230 bar       | 3,336 PSI      |  |  |  |
| Outlet Pressure            | 4 bar         | 58 PSI         |  |  |  |
| Test                       | 276 bar       | 4,000 PSI      |  |  |  |
| Residual Positive Pressure | 3 - 5 bar     | 43 - 72 psi    |  |  |  |
| Temperature Range          | -40°C ÷ +65°C | -40°F ÷ +149°F |  |  |  |
| Life Cycle                 | 5,000 m       | ninimum        |  |  |  |
| Flow Rate                  | 2,400 NI/m    |                |  |  |  |
| Hose-barb Ø                | 6 mm          |                |  |  |  |



Body in forged brass Valve Main Sealing in Nylon Regulator Sealing in Nylon Elastomer in EPDM The valve is not made of any ferrous material and steel

#### Options

5 different flow scales with the following characteristics:

| Application       | l/min |     |     |     |   |   |   |   |    |    |    |    |
|-------------------|-------|-----|-----|-----|---|---|---|---|----|----|----|----|
| Baby care         | 0     | 1/4 | 1/2 | 3/4 | 1 |   | 2 |   | 3  | 4  | 5  | 6  |
| Home care         | 0     | 1/2 | 1   | 2   | 3 | 4 | 5 | 6 | 8  | 10 | 12 | 15 |
| Home care         | 0     | 1/4 | 1/2 | 1   | 2 | 3 | 4 | 6 | 8  | 10 | 12 | 15 |
| Intensive therapy | 0     | 1   | 2   | 3   | 4 | 5 | 6 | 8 | 10 | 12 | 15 | 25 |
| Intensive therapy | 0     | 1/4 | 1/2 | 1   | 2 | 3 | 4 | 6 | 8  | 10 | 15 | 25 |

Quick hospital connection, with 4 bar (58 psi) outlet pressure, in accordance with the main International Standards (DIN, BS, DISS, AFNOR, UNI)

Excess Flow valve with synterized bronze filter in the valve's inlet

Plastic protection handle complying with ISO 11117, available in green or white color Hospital bed handle available

Bursting disc

Antifilling device and non return valve in the filling port

#### Mantainance

Please refer only to the "User Maintenance Instruction" that is provided with this product. It is recommended to replace the valve when the cylinder is being retested.













# **VIPROXY** series

Valve with Integrated Pressure Reducer for medical Oxygen

- 4350 PSI -

#### **List Features**

- Valve with integrated pressure reducer for Medical Oxygen
- MRI compatible
- Positive pressure device incorporated
- Non return valve with synterized bronze filter integrated in the filling port
- Compensated regulator
- Synterized bronze filter in the cylinder connection
- Tested and approved in accordance with the International Standards EN-ISO 10524-3
- CE and π marked according to the European Directives for Medical and trasportable pressure devices
- Active gauge with fluorescent scales

#### List Technical data

| Pressure                   |               |                |  |  |  |
|----------------------------|---------------|----------------|--|--|--|
| Maximum Service Pressure   | 300 bar       | 4,350 PSI      |  |  |  |
| Outlet Pressure            | 4 bar         | 58 PSI         |  |  |  |
| Test                       | 360 bar       | 5,220 PSI      |  |  |  |
| Residual Positive Pressure | 3 - 5 bar     | 43 - 72 psi    |  |  |  |
| Temperature Range          | -40°C ÷ +65°C | -40°F ÷ +149°F |  |  |  |
| Life Cycle                 | 5,000 m       | ninimum        |  |  |  |
| Flow Rate                  | 2,400 NI/m    |                |  |  |  |
| Hose-barb Ø                | 6 mm          |                |  |  |  |

#### Material components

Body in forged brass Valve Main Sealing in Nylon Regulator Sealing in Nylon Elastomer in EPDM The valve is not made of any ferrous material and steel

#### Options

5 different flow scales with the following characteristics:

| Application       |   | l/min |     |     |   |      |   |      |    |    |    |    |
|-------------------|---|-------|-----|-----|---|------|---|------|----|----|----|----|
| Baby care         | 0 | 1/4   | 1/2 | 3/4 | 1 | 11/2 | 2 | 21/2 | 3  | 4  | 5  | 6  |
| Home care         | 0 | 1/2   | 1   | 2   | 3 | 4    | 5 | 6    | 8  | 10 | 12 | 15 |
| Home care         | 0 | 1/4   | 1/2 | 1   | 2 | 3    | 4 | 6    | 8  | 10 | 12 | 15 |
| Intensive therapy | 0 | 1     | 2   | 3   | 4 | 5    | 6 | 8    | 10 | 12 | 15 | 25 |
| Intensive therapy | 0 | 1/4   | 1/2 | 1   | 2 | 3    | 4 | 6    | 8  | 10 | 15 | 25 |

Quick hospital connection, with 4 bar (58 psi) outlet pressure, in accordance with the main International Standards (DIN, BS, DISS, AFNOR, UNI)

Excess Flow valve with synterized bronze filter in the valve's inlet

Plastic protection handle complying with ISO 11117, available in green or white color Hospital bed handle available

Bursting disc

Antifilling device and non return valve in the filling port

#### Mantainance

Please refer only to the "User Maintenance Instruction" that is provided with this product. It is recommended to replace the valve when the cylinder is being retested.











## VIPROXY 1 Touch series Valve with Integrated Pressure Reducer for medical Oxygen - 3336 PSI -

#### **List Features**

- 1 Touch incorporates a low torque non rotating spindle shut off valve with an integrated ten position flow setting device
- Valve with integrated pressure reducer for Medical Oxygen
- MRI compatible
- Non return valve with synterized bronze filter integrated in the filling port
- Compensated regulator
- Synterized bronze smart filter in the cylinder connection
- Tested and approved in accordance with the International Standards EN-ISO 10524-3, CGA E-18
- CE and  $\pi$  marked according to the European Directives for Medical and trasportable pressure devices
- Positive pressure device incorporated
- Active gauge with fluorescent screen

#### **List Technical data**

| 230 bar       | 2 226 001        |  |  |  |  |
|---------------|------------------|--|--|--|--|
|               | 3,336 PSI        |  |  |  |  |
| 4 bar         | 58 PSI           |  |  |  |  |
| 276 bar       | 4,000 PSI        |  |  |  |  |
| 3 - 5 bar     | 43 - 72 psi      |  |  |  |  |
| -40°C ÷ +65°C | -40°F ÷ +149°F   |  |  |  |  |
| 5,000 m       | inimum           |  |  |  |  |
| 2,400 NI/m    |                  |  |  |  |  |
| 6 mm          |                  |  |  |  |  |
|               | 5,000 m<br>2,400 |  |  |  |  |

#### **Material components**

Body in forged brass Valve Main Sealing in Nylon Regulator Sealing in Nylon Elastomer in EPDM The valve is not made of any ferrous material and steel

#### Options

5 different flow scales with the following characteristics:

| Application       | l/min |     |     |     |   |      |   |      |    |    |    |    |
|-------------------|-------|-----|-----|-----|---|------|---|------|----|----|----|----|
| Baby care         | 0     | 1/4 | 1/2 | 3/4 | 1 | 11/2 | 2 | 21/2 | 3  | 4  | 5  | 6  |
| Home care         | 0     | 1/2 | 1   | 2   | 3 | 4    | 5 | 6    | 8  | 10 | 12 | 15 |
| Home care         | 0     | 1/4 | 1/2 | 1   | 2 | 3    | 4 | 6    | 8  | 10 | 12 | 15 |
| Intensive therapy | 0     | 1   | 2   | 3   | 4 | 5    | 6 | 8    | 10 | 12 | 15 | 25 |
| Intensive therapy | 0     | 1/4 | 1/2 | 1   | 2 | 3    | 4 | 6    | 8  | 10 | 15 | 25 |

Quick hospital connection, with 4 bar (58 psi) outlet pressure, in accordance with the main International Standards (DIN, BS, DISS, AFNOR, UNI) Excess Flow valve with synterized bronze smart filter in the valve's inlet Plastic protection handle complying with ISO 11117, available in green or white color Hospital bed hook available

Russing disc

Bursting disc

Antifilling device and non return valve in the filling port

#### Mantainance

Please refer only to the "User Maintenance Instruction" that is provided with this product. It is recommended to replace the valve after 10 years starting from the printed date on the valve body.













## **VIPROXY 1 Touch** series Valve with Integrated Pressure Reducer for medical Oxygen

- 4350 PSI -

#### **List Features**

- 1 Touch incorporates a low torque non rotating spindle shut off valve with an integrated ten position flow setting device
- Valve with integrated pressure reducer for Medical Oxygen
- MRI compatible
- Non return valve with synterized bronze filter integrated in the filling port
- Compensated regulator
- Synterized bronze smart filter in the cylinder connection
- Tested and approved in accordance with the International Standards EN-ISO 10524-3, CGA E-18
- CE and  $\pi$  marked according to the European Directives for Medical and trasportable pressure devices
- Positive pressure device incorporated
- Active gauge with fluorescent screen

#### List Technical data

| Pressure                   |               |                |  |  |  |
|----------------------------|---------------|----------------|--|--|--|
| Maximum Service Pressure   | 300 bar       | 4,350 PSI      |  |  |  |
| Outlet Pressure            | 4 bar         | 58 PSI         |  |  |  |
| Test                       | 360 bar       | 5,220 PSI      |  |  |  |
| Residual Positive Pressure | 3 - 5 bar     | 43 - 72 psi    |  |  |  |
| Temperature Range          | -40°C ÷ +65°C | -40°F ÷ +149°F |  |  |  |
| Life Cycle                 | 5,000 m       | ninimum        |  |  |  |
| Flow Rate                  | 2,400 NI/m    |                |  |  |  |
| Hose-barb Ø                | 6 mm          |                |  |  |  |

#### **Material components**

Brass Forged Body Valve Main Sealing in Nylon Regulator Sealing in Nylon Elastomer in EPDM The valve is not made of any ferrous material or steel

#### Options

5 different flow scales with the following characteristics:

| Application       | l/min |     |     |     |   |      |   |      |    |    |    |    |
|-------------------|-------|-----|-----|-----|---|------|---|------|----|----|----|----|
| Baby care         | 0     | 1/4 | 1/2 | 3/4 | 1 | 11/2 | 2 | 21/2 | 3  | 4  | 5  | 6  |
| Home care         | 0     | 1/2 | 1   | 2   | 3 | 4    | 5 | 6    | 8  | 10 | 12 | 15 |
| Home care         | 0     | 1/4 | 1/2 | 1   | 2 | 3    | 4 | 6    | 8  | 10 | 12 | 15 |
| Intensive therapy | 0     | 1   | 2   | 3   | 4 | 5    | 6 | 8    | 10 | 12 | 15 | 25 |
| Intensive therapy | 0     | 1/4 | 1/2 | 1   | 2 | 3    | 4 | 6    | 8  | 10 | 15 | 25 |

Quick hospital connection, with 4 bar (58 psi) outlet pressure, in accordance with the main International Standards (DIN, BS, DISS, AFNOR, UNI) Excess Flow valve with synterized bronze smart filter in the valve's inlet Plastic protection handle complying with ISO 11117, available in green or white color Hospital bed hook available Bursting disc

Antifilling device and non return valve in the filling port

#### Mantainance

Please strictly rely on the "User maintenance instruction" It is recommended to replace the valve after 10 years starting from the printed date on the valve body.











## VIPROXY ATOM series Valve with Integrated Pressure Reducer for medical Oxygen - 4350 PSI -

**List Features** 

- The first optimized solution for home healthcare
- Compact and light design suitable for <5 L capacity cylinders
- Suitable for up to 300 bar oxygen service pressure (4350 PSI)
- Active gauge available with PSI or bar scales and fluorescent dial
- Non return valve in the filling port
- Total weight with protection cap: 900 gr. ~ (for the fully equipped version)
- Conforms all the requirement of EN-ISO 10524-3
- CE and π marked according to the European Directives for Medical and trasportable pressure devices
- List Technical data

| Pressure                      |                |                |  |  |  |
|-------------------------------|----------------|----------------|--|--|--|
| Maximum Service Pressure      | 300 bar        | 4,350 PSI      |  |  |  |
| Outlet Pressure               | 4 bar          | 58 PSI         |  |  |  |
| Test                          | 360 bar        | 5,220 PSI      |  |  |  |
| Residual Positive Pressure    | 3 - 5 bar      | 43 - 72 psi    |  |  |  |
| Temperature Range - Operating | -20°C ÷ +65°C  | -4°F ÷ +149°F  |  |  |  |
| Temperature Range - Storage   | -40°C ÷ +65°C  | -40°F ÷ +149°F |  |  |  |
| Life Cycle                    | 5,000 n        | ninimum        |  |  |  |
| Flow Rate                     | See Flow scale |                |  |  |  |
| Hose-barb Ø                   | 6 mm           |                |  |  |  |





#### **Material components**

Brass Forged Body Valve Main Sealing in Nylon Regulator Sealing in Nylon Elastomer in EPDM The valve is not made of any ferrous material or steel

#### Options

Flow Scales:

| Application | l/min |      |     |     |   |   |   |   |   |    |    |    |
|-------------|-------|------|-----|-----|---|---|---|---|---|----|----|----|
| Home care   | 0     | 1/2  | 1   | 2   | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 |
| Home care   | 0     | 1/10 | 1/4 | 1/2 | 1 | 2 | 3 | 4 | 6 | 8  | 10 | 15 |

Custom Flow Scales available upon request

Other Active gauge

Configuration available with 1 outlet. Barbed fitting for 1/4" I.D. hose or Quick

connection with pressure fixed at 4 bar (58 PSI)

Antifilling device available upon request

Filling port protection plug in metal or plastic

Excess flow device available upon request

Special dip tube or special smart filter cartridge

#### Mantainance

Please strictly rely on the "User maintenance instruction" It is recommended to replace the valve after 10 years starting from the printed date on the valve body.





#### List Features

Suitable for up to 230 bar oxygen service pressure (3,336 PSI) Inlet pressure range: Up to 230 bar Nominal outlet pressure: 4 bar Flow ranges\*: 0 to 15 lpm 0;0,5;1;2;3;4;5;6,8;10;12;15 Inlet connection: According to national standards Outlet connections: Hose barb connector and Port for quick connect outlet on request Regulatory status: Complies with Medical Devices Directive 93/42/EEC Complies with EN ISO 10524-1 Classification: Class IIb \* Flow rates expressed at 23°C and 101,3 kPa

PLEIN AIR series Pressure Regulator for Medical Oxygen - 3336 PSI -



#### **List Technical data**

| <b>Pressure</b><br>Maximum Service Pressure<br>Outlet Pressure | 230 bar<br>4 bar | 3,336 PSI<br>58 PSI |  |  |  |  |
|--|------------------|---------------------|--|--|--|--|
| Temperature Range  | -20°C ÷ +65°C    | -4°F ÷ +149°F       |  |  |  |  |
| Life Cycle   | 5,000 m          | 5,000 minimum       |  |  |  |  |
| Flow Rate  | 2,400 NI/m       |                     |  |  |  |  |
| Hose-barb Ø  | 6 r              | 6 mm                |  |  |  |  |
|  |                  |                     |  |  |  |  |



#### Material components

Chromium Plated, Brass Forged Body Control knob: Polyamide O-rings: EPDM Filter: Sintered bronze

#### Options

Flow Scale:

|   |     | l/min |   |   |   |   |   |   |    |    |    |
|---|-----|-------|---|---|---|---|---|---|----|----|----|
| 0 | 1/2 | 1     | 2 | 3 | 4 | 5 | 6 | 8 | 10 | 12 | 15 |

360° Rotable gauge Configuration available with 1 outlet. Barbed fitting for 1/4" I.D. hose or Quick connection with pressure fixed at 4 bar (58 PSI)

#### Mantainance

Please strictly rely on the "User maintenance instruction" It is recommended to replace the regulator after 10 years starting from the printed date on the regulator body.