Operating and Maintenance Manual

# Compact Gas Control Panel



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# Intended Use

The Amico Compact Gas Control Panel is designed to provide a controlled and regulated supply of Nitrogen or Instrument Air for the operation of compatible pneumatic surgical tools. The panel allows for precise adjustment and monitoring of the delivery pressure to ensure consistent and reliable performance during surgical procedures.

# Product Description

The Compact Gas Control Panel is designed to provide controlled and adjustable gas pressure for the operation of compatible equipment. The panel incorporates a delivery pressure gauge, a self-relieving pressure regulator, and a Diameter Index Safety System (DISS) outlet connection.

The Gas Control Panel is available in two inlet connection configurations: a flexible hose assembly or a stainless-steel braided pigtail assembly. Both configurations are designed to provide a secure connection to the designated gas supply source.

The self-relieving pressure regulator allows the operator to adjust and maintain the required delivery pressure. When the regulator pressure setting is reduced, the self-relieving feature permits excess downstream pressure to vent through the regulator, allowing the outlet pressure to decrease to the newly selected setting.

The delivery pressure gauge provides a visual indication of the regulated outlet pressure, enabling the operator to monitor and verify the pressure during equipment operation. The DISS outlet provides a gas-specific connection point for compatible surgical tools and equipment.

# Operation

1. Connect the appropriate tool to the DISS outlet, ensuring that the fitting is properly aligned and securely seated. Carefully tighten the connection nut using the appropriate wrench until a secure, leak-tight connection is achieved. Do not over-tighten the nut, as excessive force may damage the fitting or sealing surfaces.

2. To adjust the pressure, slowly turn the regulator adjustment knob clockwise while monitoring the supply pressure gauge. Continue turning the knob until the gauge indicates the required operating pressure. Once the desired pressure is reached, stop adjusting the regulator and verify that the pressure remains stable before operating the equipment.

**WARNING:** OVER TURNING THE REGULATOR KNOB MAY DAMAGE THE KNOB.

3. Verify that the pressure remains within the recommended operating range during use. If necessary, gradually adjust the pressure regulator to achieve the required outlet pressure. Once adjusted, confirm that the pressure remains stable and within the specified operating limits.

# Operation

4. When the control panel is no longer in use, slowly turn the pressure regulator adjustment knob counterclockwise until the regulator pressure setting is reduced to zero (0). Verify the pressure reading on the supply pressure gauge. If residual pressure remains in the system, follow the approved pressure-relief procedure to safely depressurize the equipment. Ensure the control panel is left in a safe condition before disconnecting any tools or accessories.

**WARNING:** ENSURE ALL COMPONENTS ARE KEPT CLEAN AND DRY DURING INSTALLATION. DO NOT ALTER, MODIFY, OR TAMPER WITH THE DEVICE OR ANY OF ITS COMPONENTS, AS UNAUTHORIZED MODIFICATIONS MAY COMPROMISE THE SAFETY, PERFORMANCE, AND PROPER OPERATION OF THE UNIT. STORE THE DEVICE IN A CLEAN, DRY ENVIRONMENT UNDER NORMAL ENVIRONMENTAL CONDITIONS. AVOID EXPOSURE TO EXTREME TEMPERATURES, EXCESSIVE MOISTURE, ABRASIVE MATERIALS, HARSH CHEMICALS, OR CORROSIVE SUBSTANCES, AS THESE CONDITIONS MAY DAMAGE THE UNIT AND ADVERSELY AFFECT ITS PERFORMANCE AND SERVICE LIFE.

# Installation

### Hose

Connect the inlet hose line to the DISS connection on the back of the control panel.

### Pigtail

Connect the braided stainless-steel pigtail to the supply gas pipeline.

Mount the compact gas control panel onto the surface area, using the appropriate screws. Avoid over tightening.

The pipeline can now be pressure tested to the required testing pressure.

Please refer to NFPA 99 guidelines.

# Inspection and Testing

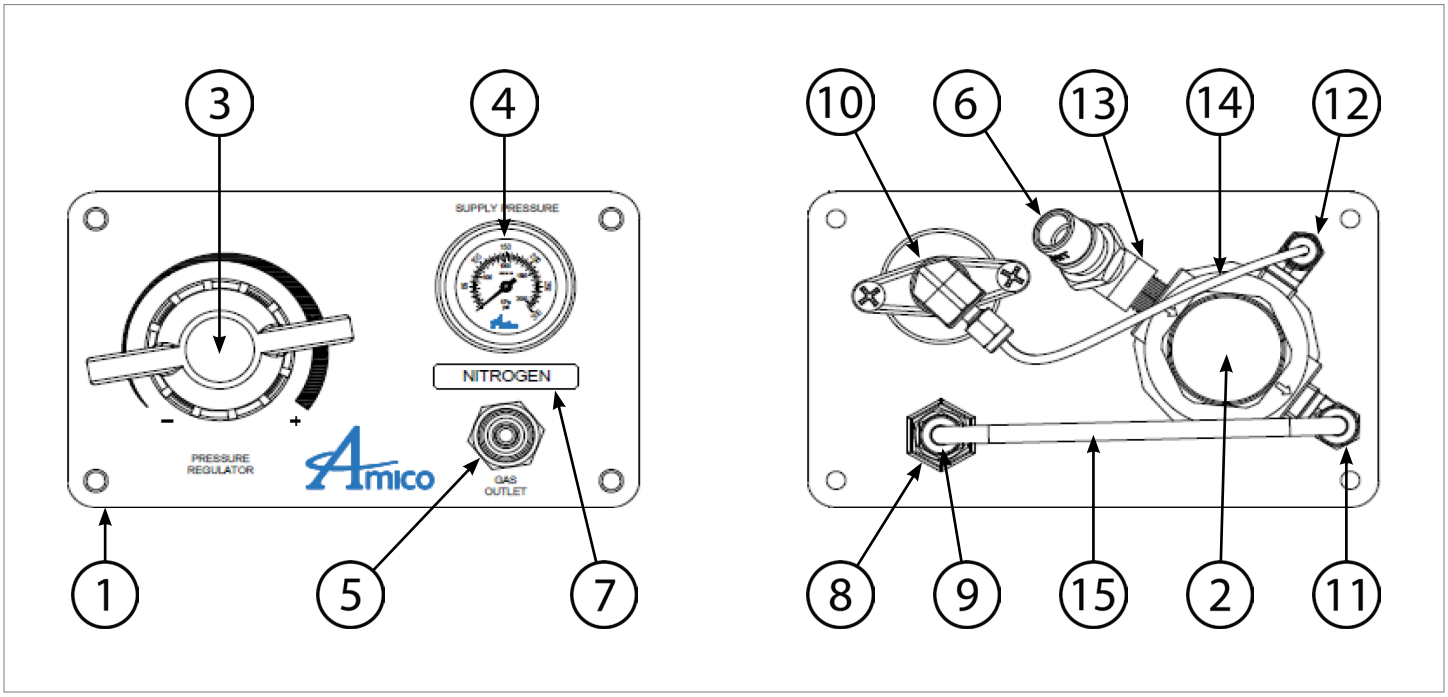
Medical Gas Outlets should be inspected periodically or at least once a year. The test should be in accordance with NFPA 99 guidelines.

Test for leaks

Ensure that no leaks exists and gauge pin is accurate.

# Parts List

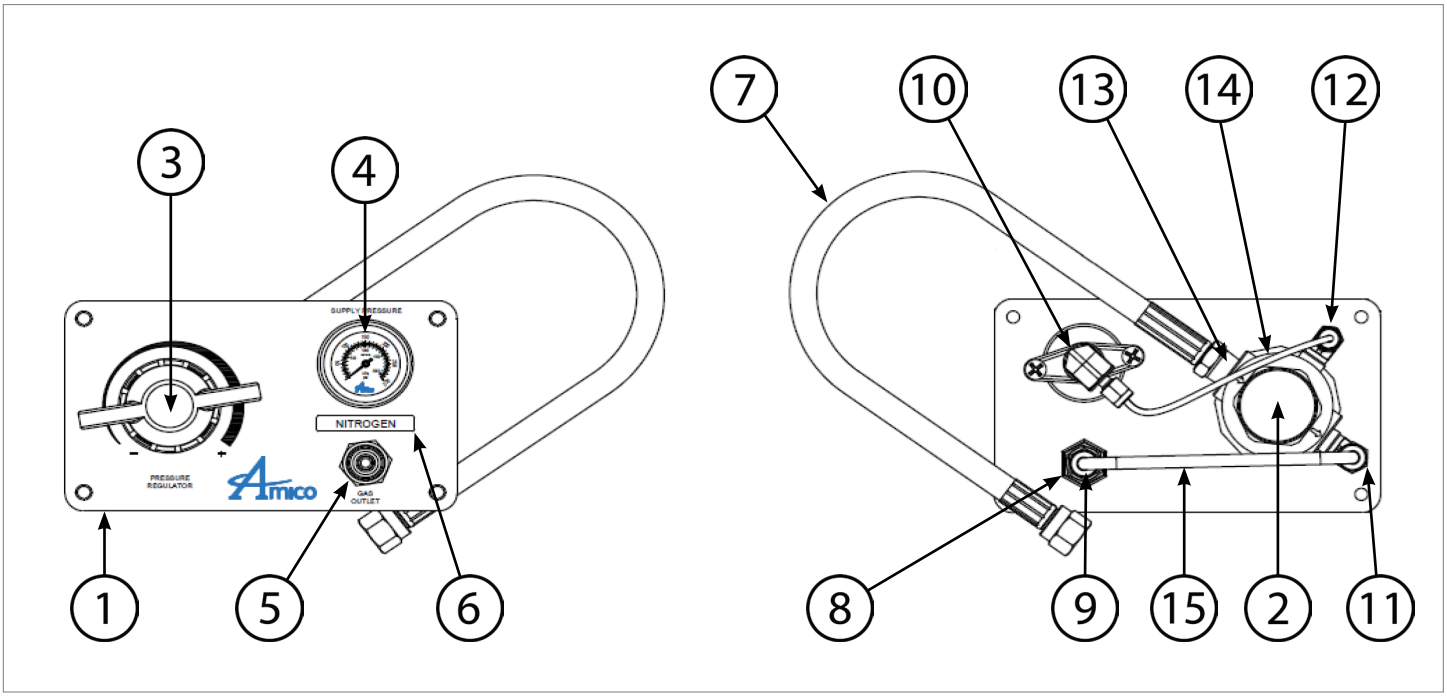
## N-CLCP-E-NIT-H




| Item | Description | Part Number |
|---|---|---|
| 1 | Control Panel Face Plate | N-CLCP-SURF-FRT |
| 2 | Regulator 0 - 300 PSI, 1/2" NPT | N-X-REGULATOR-R |
| 3 | Tee Knob for Regulator | N-X-REGKNOB |
| 4 | CGCP Gauge 300 PSI - 1.5" x 1/8" NPT CBM | N-X-GAUGE2-300 |
| 5a | DISS Demand Check Valve 1/4" MNPT - Nitrogen | S-DIS-DEMC-NIT |
| 5b | DISS Demand Check Valve 1/4" MNPT - Instrument Air | S-DIS-DEMC-IAR |
| 6a | DISS Body NIT X 1/4" MNPT | S-DIS-BODY-NIT |
| 6b | DISS Body IAR X 1/4" MNPT | S-DIS-BODY-IAR |
| 7a | Gas Label - Nitrogen | N-X-LABEL-NIT-U |
| 7b | Gas Label - Instrument Air | N-X-LABEL-IAIR-U |
| 8 | 9/16 -18 HEX Jam Nut | O-X-AMB-JHEXNUT |
| 9 | Straight Connector 1/4" FMPT x 1/4" Tube | C-X-NC-STC-0202 |
| 10 | Elbow 90° 1/8" NPTF x 1/8" Tube | N-X-ELB-ALF0808 |
| 11 | Elbow 1/4" Tube - 1/4" MNPT | N-X-ELB-90-25 |
| 12 | Elbow 90° 1/4" NPTM x 1/8" Tube | N-X-ELB-ALM2508 |
| 13 | Street Elbow Extruded - 1/4" NPT 45° | M2-X-MAN-38 |
| 14 | Copper Tubing 1/8" | M-X-MAN-14 |
| 15 | Copper Tubing 1/4" | C-X-TUBE-01 |

# Parts List

## N-CLCP-E-NIT-P




| Item | Description | Part Number |
|---|---|---|
| 1 | CGCP Sub - Plate/Paint/Silkscreen | N-CLCP-SURF-FRT |
| 2 | Regulator 0 - 300 PSI, 1/2" NPT | N-X-REGULATOR-R |
| 3 | Knob for Watts Regulator | N-X-REGKNOB |
| 4 | CGCP Gauge 300 PSI - 1.5" x 1/8" NPT CBM | N-X-GAUGE2-300 |
| 5a | DISS Demand Check Valve 1/4" MNPT - Nitrogen | S-DIS-DEMC-NIT |
| 5b | DISS Demand Check Valve 1/4" MNPT - Instrument Air | S-DIS-DEMC-IAR |
| 6a | GCP Lamacoid - Nitrogen | N-X-LABEL-NIT-U |
| 6b | GCP Lamacoid - Instrument Air (NFPA) | N-X-LABEL-IAIR-U |
| 7 | Pigtail Braided 18" Long (3/8" ID) | N-X-PIGTAIL |
| 8 | 9/16-18 HEX Jam Nut | O-X-AMB-JHEXNUT |
| 9 | Straight Connector 1/4" FMPT x 1/4" Tube | C-X-NC-STC-0202 |
| 10 | Elbow 90° 1/8" NPTF x 1/8" Tube | N-X-ELB-ALF0808 |
| 11 | Elbow 1/4" Tube - 1/4" MNPT | N-X-ELB-90-25 |
| 12 | Elbow 90° 1/4" NPTM x 1/8" Tube | N-X-ELB-ALM2508 |
| 13 | Bushing 1/2" x 3/8" | N-X-BUSH |
| 14 | Copper Tubing 1/8" | M-X-MAN-14 |
| 15 | Seamless Copper Tube 1/4 OD, ASTM B-280 | C-X-TUBE-01 |

# Model Numbers

## Hose Connection

| Model Number | Description |
|---|---|
| N-CLCP-E-NIT-H | English - Nitrogen Compact Gas Control Panel with Hose Connection |
| N-CLCP-E-CO2-H | English - Carbon Dioxide Compact Gas Control Panel with Hose Connection |
| N-CLCP-U-INA-H | English - Instrument Air Gas Control Panel with Hose Connection |
| N-CLCP-U-LAIR-H | English - Laboratory Air Gas Control Panel with Hose Connection |
| N-CLCP-S-NIT-H | Spanish - Nitrogen Compact Gas Control Panel with Hose Connection |
| N-CLCP-S-CO2-H | Spanish - Carbon Dioxide Compact Gas Control Panel with Hose Connection |
| N-CLCP-S-INA-H | Spanish - Instrument Air Gas Control Panel with Hose Connection |
| N-CLCP-S-LAIR-H | Spanish - Laboratory Air Gas Control Panel with Hose Connection |

## Stainless - Steel Pigtail Connection

| Model Number | Description |
|---|---|
| N-CLCP-E-NIT-P | English - Nitrogen Compact Gas Control Panel with Pigtail Connection |
| N-CLCP-E-CO2-P | English - Carbon Dioxide Compact Gas Control Panel with Pigtail Connection |
| N-CLCP-U-INA-P | English - Instrument Air Gas Control Panel with Pigtail Connection |
| N-CLCP-U-LAIR-P | English - Laboratory Air Gas Control Panel with Pigtail Connection |
| N-CLCP-S-NIT-P | Spanish - Nitrogen Compact Gas Control Panel with Pigtail Connection |
| N-CLCP-S-CO2-P | Spanish - Carbon Dioxide Compact Gas Control Panel with Pigtail Connection |
| N-CLCP-S-INA-P | Spanish - Instrument Air Gas Control Panel with Pigtail Connection |
| N-CLCP-S-LAIR-P | Spanish - Laboratory Air Gas Control Panel with Pigtail Connection |

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