



KANADIA FYR FYTER PVT.LTD.



User's Manual Nitrogen Filling Equipment Model 2011

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CONTENTS

- TITLE.....1
- INDEX.....2

- 1. GENERAL ADVICE.....3**
- 2. PRODUCT DESCRIPTION.....4**
 - 2.1 Applications.....4**
 - 2.2 Filling Procedure.....4**
 - 2.3 Technical Details.....5**
- 3. SAFETY INSTRUCTIONS.....6**
- 4. BASIC ELEMENTS & FUNCTIONS.....7**
 - 4.1 Part List.....8**
- 5. INSTALLATION.....10**
- 6. MAINTENANCE.....11**
 - 6.1 Mechanical.....11**
 - 6.1.1 Leakage.....11**
 - 6.2 Electrical.....11**
 - 6.2.1 Power supply.....11
 - 6.2.2 Relay working.....11
 - 6.2.3 Solenoid working.....11
 - 6.2.4 Pressure transmitter calibration.....11
 - 6.2.5 Controller calibration.....12
 - 6.3 Instrumental.....12**
 - 6.3.1 Machine Pressure gauge calibration.....12
 - 6.3.2 Regulator pressure gauge calibration.....12
- 7. TROUBLESHOOTING.....13**



1. GENERAL ADVICE

- This User's Manual will facilitate the secure and effective operation of the Nitrogen Filling Equipment.
- Therefore all users have to read and to have permanent access to this manual.
- All users MUST read this manual carefully before starting the Nitrogen Filling Equipment.
- IT is portable equipment easy to relocate.
- It is easy to use due to auto stop filling.
- Precise filling is possible with digital pressure signal & pressure transducer.
- Safety release is provided for safe operation.



2. PRODUCT DESCRIPTION

2.1 Applications

- The N2 Filling Equipment is used for charging nitrogen propellant to stored Pressure fire extinguishers.
- It is also a safety interface between the nitrogen store bottle and fire extinguisher by disabling overfilling of the extinguisher. At a filling pressure of more than 18 bars the safety valve opens and the pressure escapes to the environment.



2.2 Filling Procedure

- Supply the 230 v to the KANEX N2 filling equipment keep the main switch on while equipment is in use.
- Connect the equipment with N2 bottle via pressure regulator, inlet N2 pressure is shown on equipment, it does not exceed 20 kg per cm². (In case of any mistake safety device provided in equipment will be released)
- Connect the FE bottle through flexible hose & filling gun, push the filling on button once the pressure reaches the set pressure (i.e. 15 kg per cm²) gas supply will automatically cut off, for filling the next bottle follow the same.
- Filling pressure can be set by high pressure set in digital pressure controller.
- If there is any leakage in outlet side connection or in FE, outlet pressure does not reach at set pressure equipment will not get auto stop, it will helps to identify leakage also.



- In case of any emergency push the emergency push button.

2.3 Technical Details

Nitrogen Charging Pressure	18 KG/cm ²
Machine Weight	9.98 KG
Total Weight	16.78 KG
Dimensions (L x W x H)	360mm x 260mm x 225 mm

- Manufacturer reserves the right to modify the design of the station and the Respective technical data without any prior notice.
- **The Nitrogen Filling Equipment consists of following subassemblies :**
 - Case with pressure gauges.
 - NRV with Ball valve with release output.
 - Safety valve.
 - Hose to connect nitrogen storage bottle.
 - Hose to connect fire extinguisher.
 - N2 Regulator



3. SAFETY INSTRUCTIONS

- When working with the Nitrogen Filling Station, the appropriate rules and safety regulations have to be obeyed.
- **! Notice** The User's Manual must be accessible to all users of the station.
- Protect the filling station from humidity.
- **! Warning** Never use the filling station without pressure reducer at the nitrogen input.
- Use the station only if it is in good technical condition.

The following symbols are used in this manual:

! Danger

Immediate danger, which causes injury or death.

! Warning

Possible dangerous situation, which can cause injuries or death.

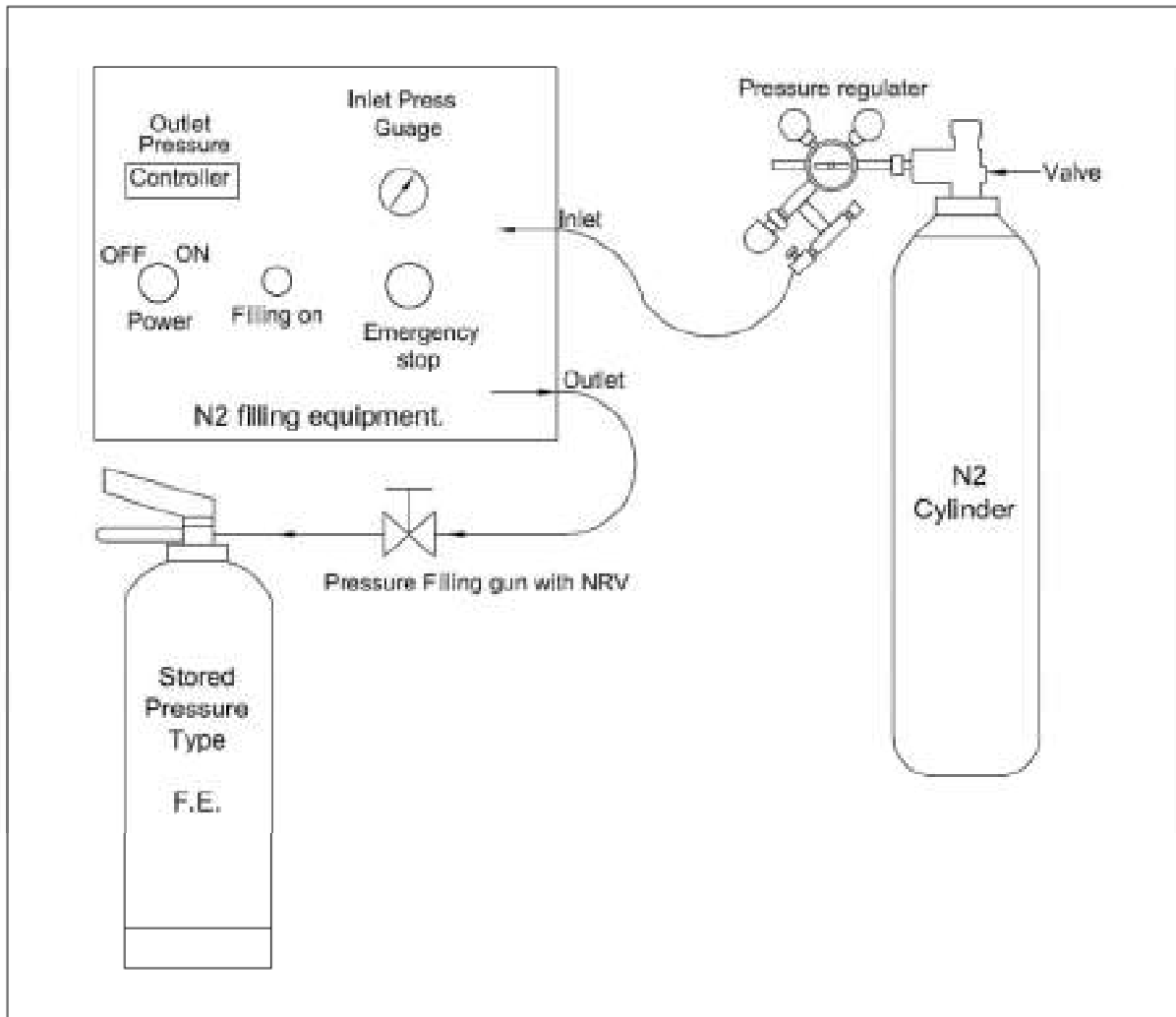
! Caution

Possible dangerous situation, which can cause small injuries or damages to property.

! Notice

Possible damaging situation to product, property or environment.

4. BASIC ELEMENTS & FUNCTIONS





4.1 Part List

- SS 304 body with good surface finish.
- Safety Valves.
- Pressure Gauge Range: 0 to 40 kg per cm², SS dial, and glycerol filled, 2.5 " dial, rear connection panel mounted.
- S.S 304 Block with O-ring fitting SS pipe & SS Fitting.
- Pressure Transducer.
- Filling Gun with NRV & 2 Hoses
- Powers supply 230 V AC to 24V DC.
- Relay Card 2 Nos.
- Pressure meter & on/Off Switch.

 **Nitrogen Filling Equipment**

- Start Push Button (With green LED)
- Emergency Switch.
- Solenoid Valve 24V DC.
- Handle.
- Rubber Pad
- Label Indicators.
- Electrical Wiring & Hardware.



5. INSTALLATION

Placement

- The Nitrogen Filling Station Equipment must be placed on an even base, e. g. on a workbench, in order to prevent it from falling over when filling.

Connections

- The black nitrogen input hose must be connected to the pressure reducer of a nitrogen storage bottle.
- This pressure reducer (available as an option) should be adjusted to a pressure which is lower than the pressure at which the safety valve opens.
- The pressure of the nitrogen storage bottle must be sufficient to fill the fire extinguishers properly.
- The Filling Gun with NRV must be connected to the fire extinguisher. Fitting adaptors are available from the manufacturer as optional items.

Closeness Check

- Closeness and all functions of the Nitrogen Filling Station were checked by the Manufacturer before shipping.

! Notice Nevertheless it is required that the closeness of the station is checked again after installation.



6. MAINTENANCE

6.1 Mechanical

6.1.1 Leakage

- Tight the all connections like N2 inlet & Outlet hoses.
- If in case leakage found inside the machine assembly then checks the internal hose connection. If leakage found then tight that connection.
- Also check the leakage during Refill the Extinguisher. If leakage was found during refill the cylinder then machine take time for refill the extinguisher.
- Check leakage as per the given Maintains Schedule.

6.2 Electrical

6.2.1 Power supply

- Check the Power supply Single Phase 240 V AC. And do not use 3 Phase connection for the machine.

6.2.2 Relay working

- Please check the Relay mounting as per the maintenance Schedule.

6.2.3 Solenoid working

- Please check the Solenoid mounting as per the maintenance Schedule.

6.2.4 Pressure transmitter calibration

- Pressure transmitter need the calibration as per the maintenance Schedule.

6.2.5 Controller calibration

- Pressure transmitter need the calibration as per the maintenance Schedule.

6.3 Instrumental

6.3.1 Machine Pressure gauge calibration

- Please Calibrate the Pressure gauge as per the Maintains Plan.

6.3.2 Regulator pressure gauge calibration

- Please calibrate the N2 Regulator's Pressure Gauges as per the Maintains Plan.



7. TROUBLESHOOTING

SR NO	PROBLEM	POSSIBLE CAUSE	REMEDY
1	Input gauge doesn't indicate pressure	Empty nitrogen storage bottle	Replace storage bottle
		Pressure reducer not properly adjusted	Adjust pressure reducer
		Broken input gauge	Replace input gauge
2	Hissing noise	Safety valve open	Adjust pressure reducer
		Leaking connections	Check connections
3	Filling pressure gauge doesn't indicate pressure	Closed filling valve	Open the valve
		Broken output gauge	Replace output gauge