Aaragon Pte Ltd
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Tel.: +65 91128044; Fax.: +65 6737 9927
GST REG. No. 73032040000E

IMPORTANT

● Please use only High Pressure Compressors which are suitable for Nitrox!!!!

● Do not compress Nitrox above 40% as this can cause serious damages to your High Pressure Compressor

● The Venting Gas (Nitrogen) from the Needle Valve must be vented to the outside if the Nitrox system is installed inside a room!! Suffocation can occur if nitrogen is allowed to collect in an enclosed space!!

● Aaragon Pte Ltd, Shall not be liable for any special, incidental or consequential damages for loss, damage or expense directly or indirectly arising from customers use or inability to use the equipment, or for personal injury or loss or destruction of any other property.

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Aaragon Nitrox System – Operation/User Manual

Step 1. Prior to starting your Nitrox System, make sure that everything is properly affixed, especially the electrical power connection and all the hosepipes.

Step 2. Turn ON the main electrical switch.

Step 3. When the main electrical switch is turned ON, the Control Display Panel on your Screw Compressor should show "**0.0 Bar Fault: Power Fail**".

Step 4. On the Screw Compressor Control Display you will see **Quit button** with red light next to it. Press on the Quit button. Screw Compressor Control Display will change from "**0.0 Bar Fault: Power Fail**" to "**0.0 Bar Ready to Start**".

Step 5. Now, go to your **Refrigeration Dryer switch** and make sure it is turned **ON**, you should see the switch lighted up in green (**Important:** Your Refrigeration Dryer should be let ON at all time as it will auto on/off when the system is running).

Step 6. Once all the above is in order, go to your **Nitrox Panel** and study the **Oxygen Monitor** and follow through with the following steps:

1. Turn **ON** the Oxygen Monitor by pressing on the on/off button.
2. Unplug (remove) the Oxygen Sensor from its blue connection socket by pulling it out and shaking the Oxygen Sensor slowly with your hand in a up and down motion until the reading on the Oxygen Monitor stops fluctuating (**Important:** Do not blow into the Oxygen Sensor).

3. Still on the Oxygen Monitor, once the reading stabilizes, **press the cal** button for 3 seconds, Oxygen Monitor will displays "**CAL**" and then change to "**20.9**" with ± 0.2.
4. Connect the Oxygen Sensor back into its blue socket.
5. Still on your Nitox Panel, take note of your Needle Valve on top of the Membrane, make sure that the Needle Valve is complete closed, (anti-clockwise to open and clockwise to close).
6. You Nitrox Panel is now ready to use!

Step 7. Once the above is in order, return to your Screw Compressor Control Display and press the **ON button**. You need to wait for the Screw Compressor to pressurize the system, this can be monitored on the Screw Compressor Control Display which should show > **8.0 Bar**. (If this is not achieved, you need to return to your Nitrox Panel and make sure that the Needle Valve is completely closed)

Step 8. When > **8.0 Bar** is achieved, you need to return to your **Nitrox Panel** and use the **Pressure Regulating Valve** to adjust the pressure to exactly **8 Bar.** The Pressure Regulating Valve need to be unlocked first with a quick pulling motion before it can be turned to adjust the pressure level. (**Anti-clockwise** to reduce pressure and **clockwise** to increase pressure).
Please note this Step has to by carried out every **50 hours** or **1 month** whichever comes first!

Step 9. Once exactly **8 Bar** is achieved, you can now adjust your required **oxygen level** by turning the **Needle Valve** accordingly, **anti-clockwise** to increase oxygen level and **clockwise** to decrease oxygen level. (**Important:** Do **NOT exceed 40% oxygen level** as this can cause damage to your High Pressure Compressor and is hazardous).

Step 10. Once required oxygen level is reached, turn your High Pressure Compressor **ON**. (**Important:** You must continuously monitor the oxygen level as it may fluctuate, and you should use your Needle Valve to adjust oxygen level accordingly)

Step 11. **RECOMMENDED:** If 40% oxygen level is required, you must adjust oxygen level to 39% in Step 9 (above) before turning your **High Pressure Compressor ON** as in Step 10 (above). Once the High Pressure Compressor is turned ON, adjust the oxygen level carefully to 40% using the Needle Valve. This will ensure that the oxygen level does not exceed 40%. (**Important:** You must continuously monitor the oxygen level as it may fluctuate, and you should use your Needle Valve to adjust oxygen level accordingly)

IMPORTANT: Properly trained personnel MUST be present at all times!

SYSTEM SHUT DOWN:

After filing Nitrox tanks, the system must be shut down. Follow steps below:

1. Turn **OFF** your **High Pressure Compressor**.

2. Turn **OFF** your **Screw Compressor** by pressing the **OFF button** on the Screw Compressor Control Display. (The Screw Compressor will take approximately 3 minutes to auto shut down. The Screw Compressor Control display will show 0.0 Bar and this means your system is now depressurized. At this stage, should you need to restart your system, return to Step 3 and follow through again. For a complete shut down simply turn the **main switch OFF**.)

3. **Turn OFF** the main switch. Your system is now successfully shut down!

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Aaragon Nitrox System – Maintenance

Readjusting Pressure Maintaining Valve (PMV) (Please see also Page 6 Pos. 6)

1. To **readjust** your PMV, loosen the Nut on the PMV T-Knob using a 17mm spanner.

2. Remove the silencer from the PMV.

3. Start **(turn ON)** Screw Compressor.

4. Once the Screw Compressor is running, adjust the **Needle Valve** on the Nitrox Panel (**anti-clockwise** to decrease pressure and **clockwise** to increase pressure) until the Screw Compressor reaches **8.5 Bar**.

5. (**Important: At 8.5 Bar**, the PMV should start to blow.) If the PMV blow at **<8.5 Bar**, or if the PMV does not start to blow at 8.5 Bar, then adjustment to the PMV T-Knob is required. The PMV T-Knob can be turned **anti-clockwise** to decrease pressure and **clockwise** to increase pressure accordingly.

6. Once you have successfully set the PMV to start to blow at **8.5 Bar**, make sure the Nut on the PMV T-Knob is tighten again and run the whole test once more to re-confirm.

7. Upon successful completion of the retest, reconnect the silencer to the PMV.

8. **Only well trained personnel should attempt this task**

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Changing of the Filters

1. The **Air Filters (Blue filter Housing)** must be changed **every year** or every **250 hours,** whichever comes first. Please make sure that the filter elements are in the right sequence! **First** Fine Filter then 2x **Activated Carbon Filter**!!

2. The Screw Compressor Oil, Oil Filter, Filter for Oil/Water Seperator and Intake filter must be changed **every year** or every **500 hours**, whichever comes first.

3. Please adjust the Pressure Holding Valve **every year** or every **250 hours**, whichever comes first.

4. **Only well trained personnel should attempt this task.**

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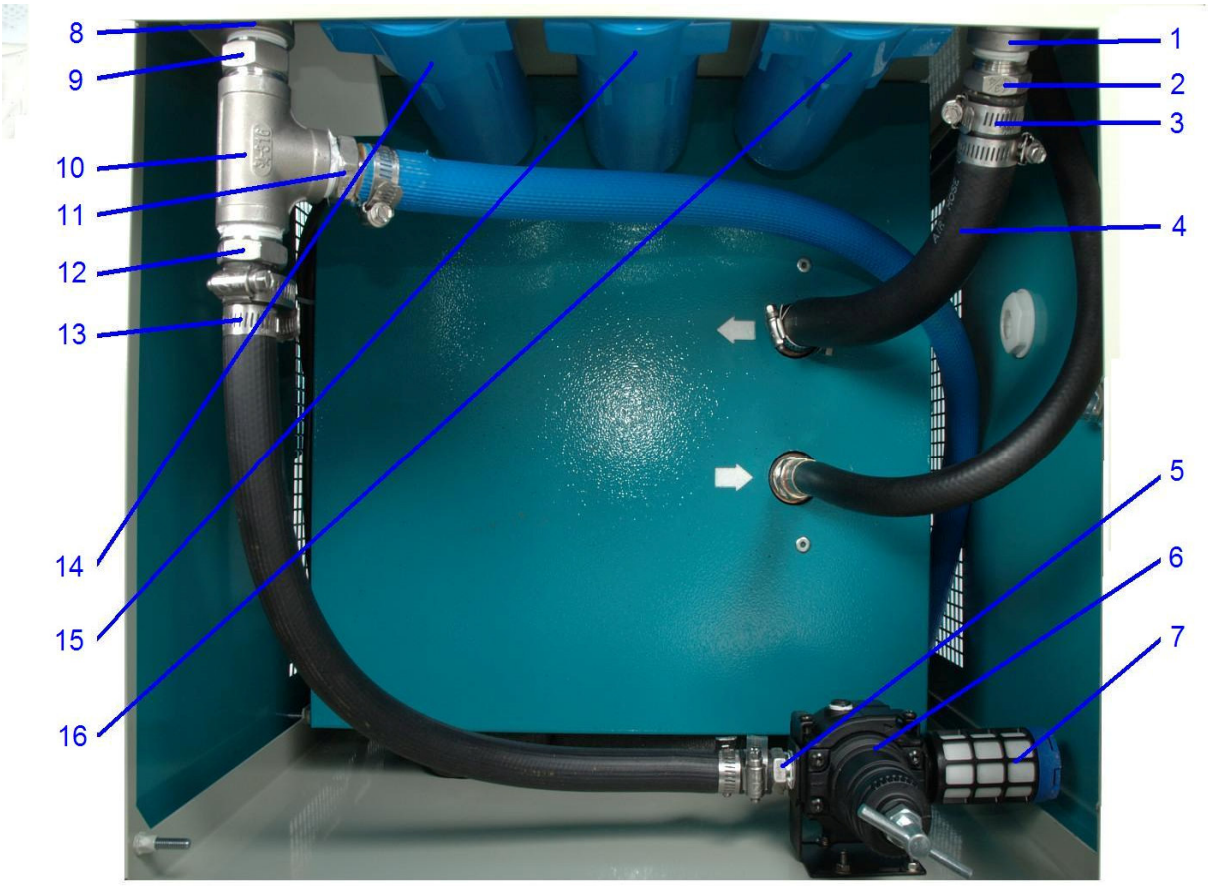

Pos.	Description	Article No.
1	Elbow ¾”	AANX-250-0201
2	Hose Connection ¾” -> ¾”	AANX-250-0202
3	Hose Clamp	AANX-250-0203
4	Hose ¾”	AANX-250-0204
5	Hose Connection 3/8” -> 5/8”	AANX-250-0205
6	Pressure Maintaining Valve	AANX-250-0206
7	Silencer	AANX-250-0207
8	Elbow ¾”	AANX-250-0208
9	Connection ¾” -> ¾”	AANX-250-0209
10	T-Joint ¾”	AANX-250-0210
11	Hose Connection ¾” -> ¾”	AANX-250-0211
12	Hose Connection ¾” -> 5/8”	AANX-250-0212
13	Hose Clamp	AANX-250-0213
14	Activated Carbon Filter	AANX-250-0214
14.1	Activated Carbon Filter Element	AANX-250-0214.1
15	Activated Carbon Filter	AANX-250-0215
15.1	Activated Carbon Filter Element	AANX-250-0215.1
16	Fine Filter	AANX-250-0216
16.1	Fine Filter Element	AANX-250-0216.1

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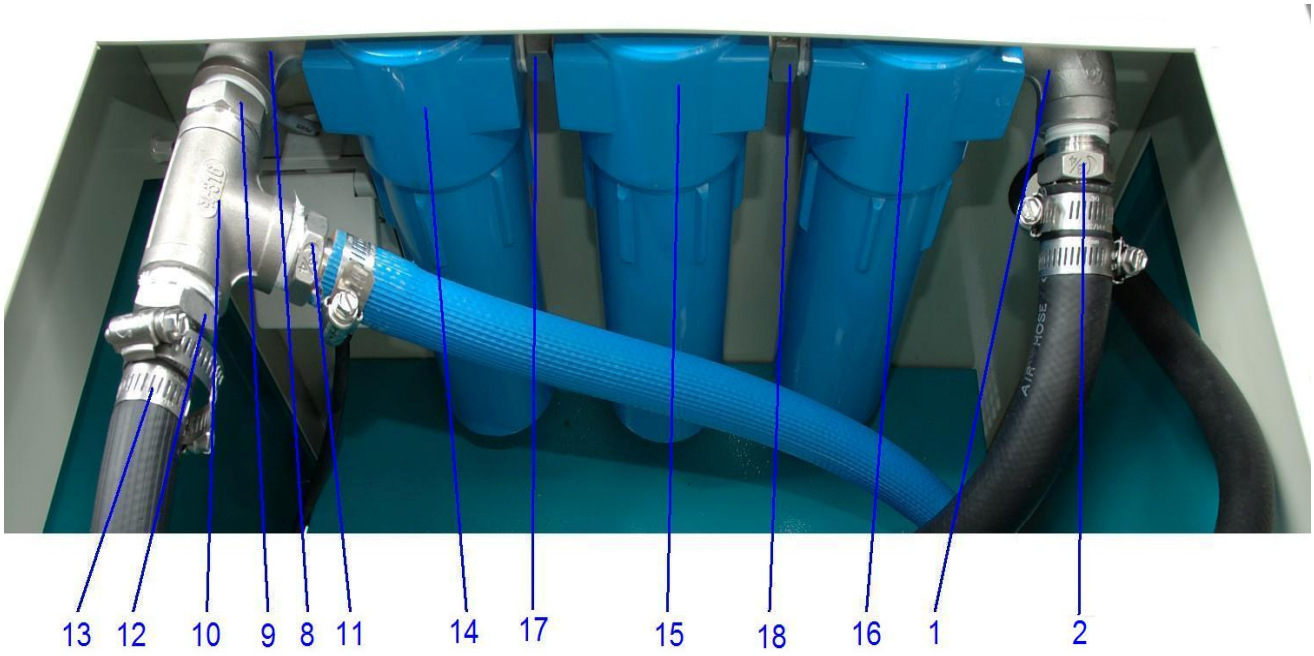

Pos.	Description	Article No.
1	Elbow ¾”	AANX-250-0201
2	Hose Connection ¾” -> ¾”	AANX-250-0202
8	Elbow ¾”	AANX-250-0208
9	Connection ¾” -> ¾”	AANX-250-0209
10	T-Joint ¾”	AANX-250-0210
11	Hose Connection ¾” -> ¾”	AANX-250-0211
12	Hose Connection ¾” -> 5/8”	AANX-250-0212
13	Hose Clamp	AANX-250-0213
14	Activated Carbon Filter	AANX-250-0214
14.1	Activated Carbon Filter Element	AANX-250-0214.1
15	Activated Carbon Filter	AANX-250-0215
15.1	Activated Carbon Filter Element	AANX-250-0215.1
16	Fine Filter	AANX-250-0216
16.1	Fine Filter Element	AANX-250-0216.1
17	Connection ¾”	AANX-250-0217
18	Connection ¾”	AANX-250-0218

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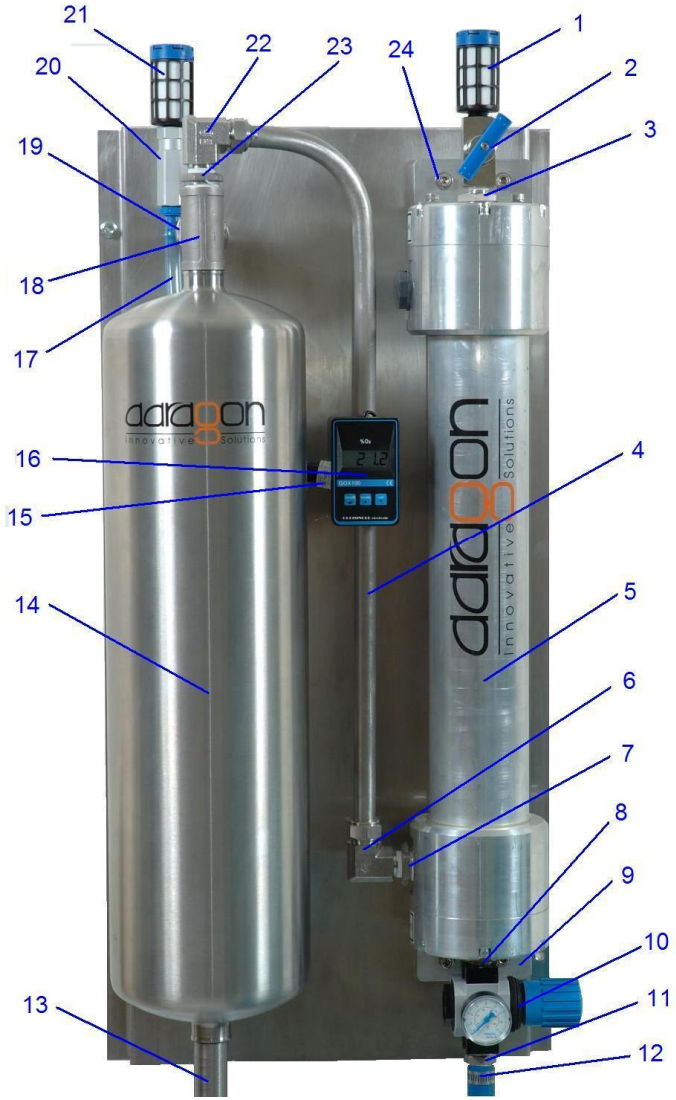

Pos.	Description	Article No.
1	Silencer	AANX-250-0101
2	Needle Valve Stainless Steel	AANX-250-0102
3	Connection ¾” -> ½”	AANX-250-0103
4	Stainless Steel Pipe 22mm	AANX-250-0104
5	Nitrox Membran	AANX-250-0105
6	Elbow ¾” -> Pipe 22mm	AANX-250-0106
7	Reducer 1” -> ¾”	AANX-250-0107
8	Connection ¾” -> ¾”	AANX-250-0108
9	Fastening Angle incl. Screws	AANX-250-0109
10	Pressure Reducer incl. Gauge	AANX-250-0110
11	Hose Connection ¾” -> ¾”	AANX-250-0111
12	Hose Clamp	AANX-250-0112
13	Hose Connection 1” -> 1 ¼”	AANX-250-0113
14	Buffer Tank Stainless Steel	AANX-250-0114
15	Oxygen Sensor	AANX-250-0115
16	Oxygen Analyzer	AANX-250-0116
17	Over Pressure Tubing 12mm	AANX-250-0117
18	T-Join 1”	AANX-250-0118
19	Over Pressure Connection set	AANX-250-0119
20	Over Pressure Valve	AANX-250-0120
21	Silencer	AANX-250-0121
22	Elbow ¾” -> Pipe 22mm	AANX-250-0122
23	Reducer 1” -> ¾”	AANX-250-0123
24	Fastening Angle incl. Screws	AANX-250-0124