

8810

Reducer
User manual



Content

Content	2
1 GENERAL.....	3
1.1 Warranty.....	3
1.2 8810 Description	4
1.3 Symbols Used	4
1.4 Scope of this manual	4
1.5 Use	4
2 Installation	5
2.1 Transport and packing	5
2.2 Assembly	5
2.3 Assembly of 8810 into panel	5
3 Operation	7
3.1 Leakage check	7
3.2 Initiation	7
3.3 Out of operation	7
3.4 Out of operation and taken out of pressurised system	7
4 Maintenance	8
5 Product Specifications	9
5.1 Pressure Ranges	9
5.2 Specifications.....	9

1 GENERAL

1.1 Warranty

During the design and manufacturing of this instrument the at most attention has been given to quality and durability.

This manual contains information needed for the safe and effective use of the capabilities of the instrument.

Please read the manual carefully before operating the instrument. By doing so possible damage to the instrument or damage caused by the incorrect use of the instrument can be avoided.

TRADINCO INSTRUMENTS warrants the instrument in accordance with the Standard Terms and Conditions of the Instrument Trade as issued by the Association bearing the name "Federation Het Instrument" (The Instrument Federation, (filed with the Clerk of Utrecht District Court on 13 January 1993 under number 16/93 and with the Chamber of Commerce and Industry in Amersfoort on 18 January 1993. A copy is available on request.

TRADINCO INSTRUMENTS warrants that this product will be free from defects in materials and workmanship for a period of 12 months from the date of shipment. If any such product proves defective during this warranty period, TRADINCO INSTRUMENTS, at its option, will either repair the defective product without charge for parts or labour, or will provide a replacement in exchange for the defective product.

In order to obtain service under this warranty, Customer must notify TRADINCO INSTRUMENTS of the defect before the expiration of the warranty period and make suitable arrangements for the performance of the service.

Customer shall be responsible for packaging and shipping of the defective product to the service centre designated by TRADINCO INSTRUMENTS, with shipping charges prepaid. If no defect can be found Customer may be charged for costs of the investigation.

This warranty does not apply to any defect, failure or damage caused by:

Improper use of the instrument.

Normal wear of the product.

Modification or repair carried out by or on behalf of the owner or by a third party.

Implementation of modifications to the product that are not supplied or implemented by TRADINCO INSTRUMENTS.

TRADINCO INSTRUMENTS and its vendors will not be liable for any indirect, special, incidental or consequential damages irrespective of whether TRADINCO INSTRUMENTS or the vendor has advance notice of the possibility of such damages.

The type number of the product, as listed on the instrument tag plate, should always be mentioned in any correspondence concerning the product.

Tradinco Instrumenten-Apparaten b.v.

Radonstraat 250

2718 TB Zoetermeer

The Netherlands

+31 79 2033133

www.tradinco.com

info@tradinco.com

1.2 8810 Description

Tradinco Instruments 8810 reducer is designed for precision control of gas pressure in closed-end systems up to 350 bar.

Rotational movement of the control knob, which compresses or decompresses the spring loaded mechanism, is transferred with a ball bearing to improve smooth operation. This results in more precision when reducing high pressurised gases.

Pressure ranges ranging from 16 to 350 bar.

Both the inlet and outlet ports are equipped with monitoring ports. The inlet port is also equipped with a 20 µ particle filter. All pressure ports have a 1/8 NPT female connection. When the controlled outlet pressure is lowered, the 8810 reducer will vent the over pressure through the internal venting system.

The 8810 reducer can be fitted into a panel.

1.3 Symbols Used



Warning for conditions or practices that could result in personal injury, loss of life and/or in damage to the product or other property.



Attention signal or remark

1.4 Scope of this manual

This manual contains information for instruments built after January 2014.




This manual is a user manual on how to operate the instrument; it is not a calibration instruction manual.

As Tradinco Instruments continuously strives to improve its products, specifications of instruments may be altered without further notice

1.5 Use

- The 8810 reducer is used to reduce a supply pressure to a set outlet pressure.
- The 8810 reducer must not be used as flow regulator and/or shut of device.

2 Installation

-  The instrument can only be installed by trained personal.
-  Check tread of the pressure ports and fittings before installation and make sure they are clean and not damaged.
-  Tapered NPT treads usually are screwed in together with Teflon tape to protect against galling and to improve sealing. It is important that no remains of the tape are able to get into the interior of the reducer.

2.1 Transport and packing

The 8810 reducer is delivered in a dust free carton box to prevent contamination in the instrument. When the 8810 reducer is transported or stored, it is advised to put it in the original carton box, or plug the pressure ports. This can also be done by sticking tape over the pressure ports, so that the mechanical workings of the instrument cannot be contaminated.

2.2 Assembly

- Connect the supply and outlet ports with 1/8 NPT male couplings into the closed-end system
- Turn the reducers fully counter clockwise.
- Supply pressure to the reducer
- Turn the control knob clockwise until the reduced test pressure is available on the outlet port.
- Check for leaks
- If any leaks are detected; turn the control knob fully counter clockwise, relief pressure of the entire pressurised system, eliminate the leaks and repeat procedure from step "Supply pressure to the reducer" until no leaks are detected.



Be careful, you are working with high pressure compressed gases.

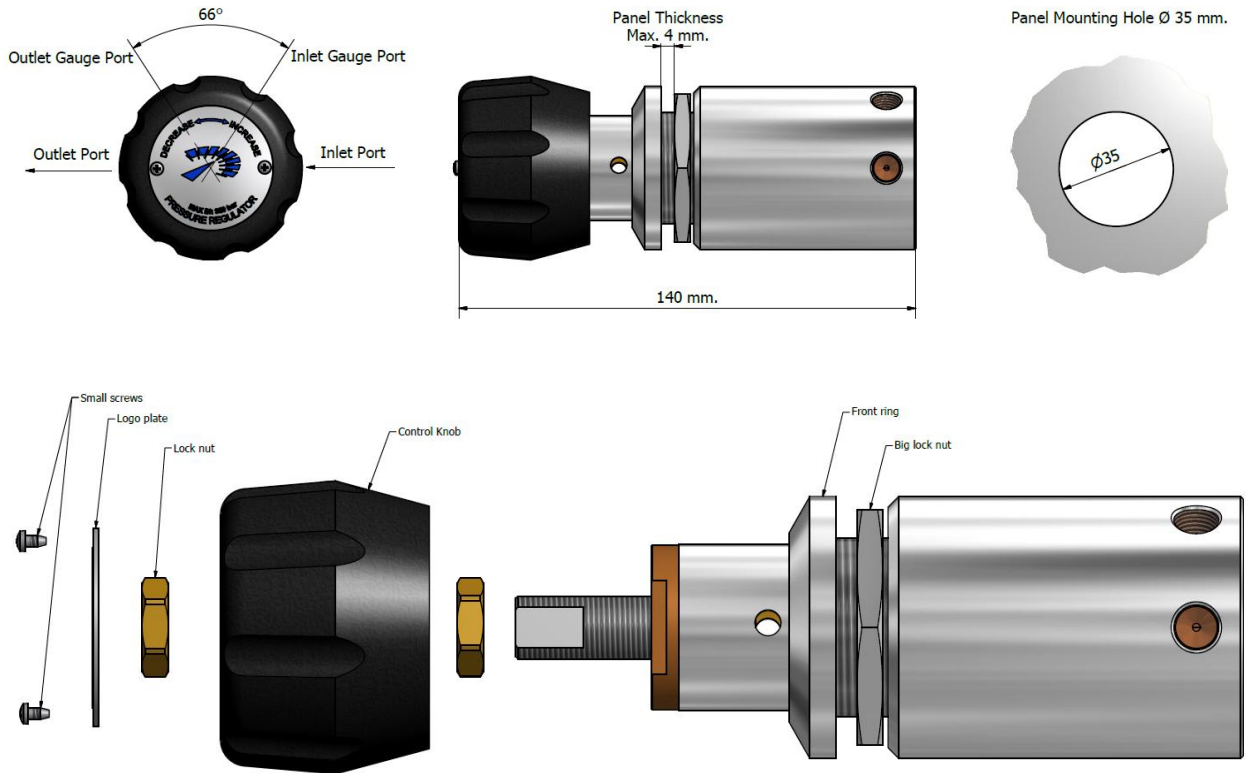
2.3 Assembly of 8810 into panel

- Remove the logo plate on the control knob by taking out the two small screws.
- Remove the lock nut
- Remove the control knob
- Remove front ring
- Cut a panel hole of 35 mm
- Fit the reducer behind the panel
- Install the front ring
- Fix the reducer with the big lock nut
- Connect the supply and outlet lines
- Turn the reducers fully counter clockwise.
- Supply pressure to the reducer
- Turn the control knob clockwise until the maximum required test pressure is available on the outlet port.
- Check for leaks

- If any leaks are detected; turn the control knob fully counter clockwise, relief pressure of the entire pressurised system, eliminate the leaks and repeat procedure from step "Supply pressure to the reducer" until no leaks are detected.
- Install the control knob with the locknut
- Install the logo plate.



Be careful, you are working with high pressure compressed gases.



3 Operation



Allways open and close valves slowly. Allways use the appropriate gases wich must be dry and clean(free of oil).



Influence of supply pressure on controlled outlet pressure.

The 8810 reducer has been designed for minimum influence of supply pressure to the controlled outlet pressure.

However controlled outlet pressure my rise up to ± 2 bar when the supply pressure is decreased from full to zero.

This behaviour in particular can be observed on installations fed from a compressed air/N₂ bottle supply.

In case process pressure fed by the 8810 reducer is critical, the operator should take care to adjust the setting / replace the supply bottle before controlled pressure problems arise.



The reducer vents into the open air when releasing pressure. When working with other gases than compressed air this can result in displacing the oxygen from the air and/or releasing toxic gases into the air. A non venting option for the 8810 reducer is available, however with this option; pressure cannot be released trough the reducer.

3.1 Leakage check

- Unload the reducer by turning the control knob fully counter clockwise.
- Close the outlet with a plug or valve
- One of the outlet ports must be connected to a pressure gauge.
- Turn on the inlet pressure supply.
- Adjust the reducer to the maximum outlet pressure by turning the control knob clockwise.
- Check the external connections for leakage.
- Check for internal leakage. Wait for 15 minutes and check if the outlet pressure stays constant. The outlet pressure must not rise.
- Close the pressure supply and vent the regulator by turning the control knob fully counter clockwise.

3.2 Initiation

- Unload the reducer by turning the control knob fully counter clockwise.
- Close all consumers downstream of the regulator.
- Open the supply pressure on the inlet.
- Adjust the outlet pressure by turning the control knob clockwise.

3.3 Out of operation

- Close the pressure supply and vent the regulator by turning the control knob fully counter clockwise.

3.4 Out of operation and taken out of pressurised system

- Close the pressure supply and vent the regulator by turning the control knob fully counter clockwise.
- Also vent the pressure supply of the reducer before dismantling the 8810 reducer out of the pressurised system.

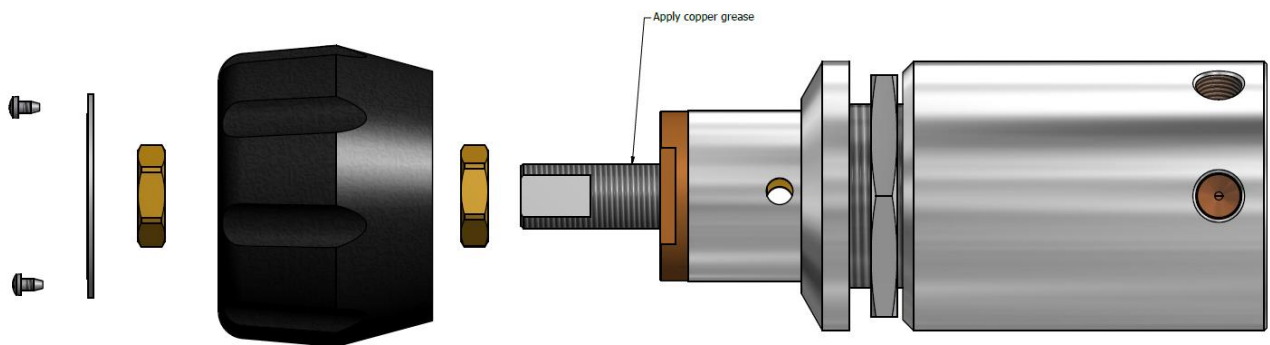
4 Maintenance

An inspection is recommended every 6 months. The reducer must be checked on outside damages and functionality.

When checking the reducer, the spindle must be creased with copper grease to ensure a smooth working of the spindle in the reducer. This is done by:

- Close the pressure supply and vent the regulator by turning the control knob fully counter clockwise.
- Remove the logo plate on the control knob by taking out the two small screws.
- Remove the nut
- Remove the control knob
- Apply copper grease at the base off the spindle.
- Put the control knob back on the spindle and turn the control knob a few times fully clockwise and counter clockwise.
- Take of the control knob and remove excess copper grease.
- Install the control knob with the locknut
- Install the logo plate.

Further overhaul and replacement of all wearing parts must be done by Tradinco Instruments. It is recommended every 5 years, more frequent maintenance may be needed when the system is used under extreme conditions.



5 Product Specifications

5.1 Pressure Ranges

ORDERING CODE	RANGE
8810 – 16	0 ÷ 16 bar
8810 – 25	0 ÷ 25 bar
8810 – 40	0 ÷ 40 bar
8810 – 60	0 ÷ 60 bar
8810 – 100	0 ÷ 100 bar
8810 – 160	0 ÷ 160 bar
8810 – 250	0 ÷ 250 bar
8810 – 350	0 ÷ 350 bar

5.2 Specifications

Media	: All gasses compatible with the materials of construction
Max rated inlet pressure	: 350 bar
Supply filter	: 20 µ
Materials of construction	: Body: brass Seats: kel-F Sensor: brass and stainless steel AISI 303 Seals: buna-n
Operating temperature	: -20° C to +75° C
Leakage	: Bubble tight
Pressure and gauge connections	: 1/8" NPT female
Dimensions	: Dia.: Ø 50mm Length: 140mm (variable 125/140mm)
Panel cut-out	: 34mm
Maximum Panel thickness	: 4mm
Length behind the panel	: 76mm
Weight	: ± 1.5 kg
Application	: Test pressure regulator

Tradinco Instrumenten-Apparaten b.v.
Radonstraat 250
2718 TB Zoetermeer
The Netherlands
+31 79 2033133
www.tradinco.com
info@tradinco.com