



An ITW Company

Cleanflex Easy

Air Ionizing Gun

INSTALLATION AND OPERATING INSTRUCTIONS

TABLE OF CONTENTS

1. SAFETY WARNINGS	1
2. DESCRIPTION	2
3. SPECIFICATIONS.....	3
4. INSTALLATION.....	5
4.1 Control.....	5
4.2 General.....	5
4.3 Power and Compressed Air Supply	6
4.4 Connection To An External LPS Certified Power Supply.....	6
5. OPERATION	7
Product Safety.....	7
Commissioning	8
Operational Check	9
6. MAINTENANCE	10
General.....	10
Repairs	10
Disposal	10
7. TROUBLESHOOTING.....	11
8. PARTS AND ACCESSORIES.....	12
9. WARRANTY AND SERVICE	13

1. SAFETY WARNINGS

PLEASE READ INSTRUCTIONS COMPLETELY BEFORE STARTING INSTALLATION

ALL INSTALLATION AND TROUBLESHOOTING OPERATIONS MUST BE PERFORMED BY QUALIFIED TECHNICAL PERSONNEL

The following safety guidelines must be observed in order to prevent physical injury and damage to objects or to the static neutralizing bar itself:

This instruction manual uses symbols to identify dangerous situations as follows:



NOTE – Statements identified with NOTE indicate precautions necessary to avoid potential equipment failure.



CAUTION – Statements identified with CAUTION indicate potential safety hazards.



WARNING – Statements identified with WARNING indicate potential serious injury hazards.



WARNING – Indicates special information to prevent injury or significant damage to the product or the environment.



WARNING – Indicates information for preventing electric shocks.



WARNING – Important information for making the most efficient use of the product and/or for preventing damage to the product or the environment.



NOTE – Advice on how to use the product.

2. DESCRIPTION

The Cleanflex Easy ionization gun is a compressed air gun designed to clean electrostatically charged surfaces or parts. The gun produces a flow of air rich in positive and negative ions. When directing this air flow to an electrostatically charged surface, an exchange of electrons takes place, so that the surface is neutralized during blowing clean. This prevents the particles being blown off again.

The gun operates on 24V. The high voltage required for ionization is generated internally. The high voltage is present only when the gun trigger is pressed and compressed air is present in the gun. This prevents wear on the high voltage emitters, which drastically extends the gun life.

Due to the ergonomic shape of the handle, the Cleanflex Easy fits comfortably in the hand and the gun is easy to operate with the integrated trigger.

The unique design of the gun's discharge nozzle ensures that the amount of blown air is approximately 3 times greater than the amount of compressed air used. It also ensures a very low noise emission during the operation of the gun.

The Cleanflex Easy meets the criteria of the OSHA 29CFR 1910.242 (b) safety standard for reducing compressed air pressure below 30 psi for compressed air based cleaning equipment.

Thanks to the revolving head the Cleanflex Easy can be used as a "pull down" gun for use with a balancer above a workstation or as a traditional handgun.

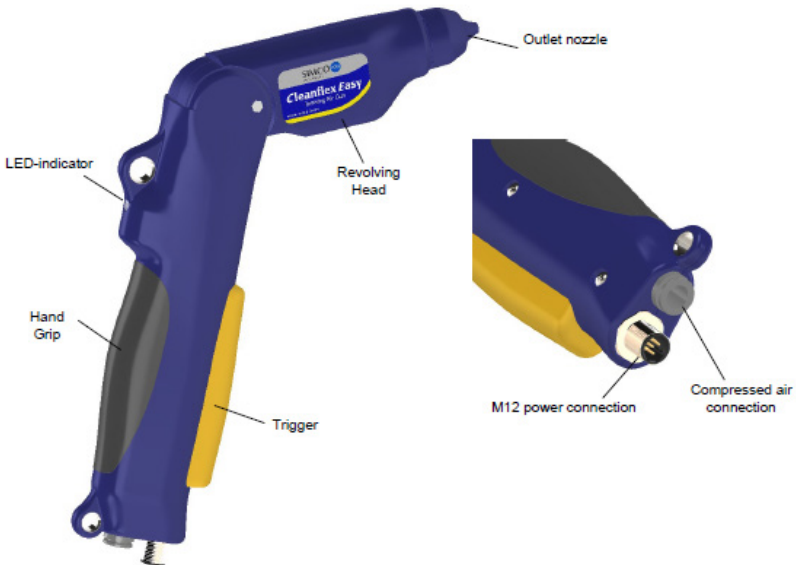


Figure 1: Cleanflex Easy

3. SPECIFICATIONS

Input Voltage	24 VDC \pm 3V
Input Current	0.5A max
Input Connection	M12, female, 5 pole
Inputs Pressure	1-7 bar (15-100 psi) clean and free from moisture and oil
Connections	Quick disconnect type for hose \varnothing 8 mm [5/16"]
Output Voltage	Internally generated
Air Consumption	See Table 1, Chapter 4.4
Noise Level	75 dBA @ 2 bar @ 60 cm from the air outlet 83 dBA @ 4 bar @ 60 cm from the air outlet 92 dBA @ 7 bar @ 60 cm from the air outlet
Intended Use	Light industry
Temperature	0-55°C
Humidity	Relative humidity \leq 90% none condensing
Indicators	Start Up = Flashing green quickly (5 Hz) Stand-By = Flashing green slowly (1 Hz) Still Alive = Flashing intermediately (every 5s) On-Signal = Continuous green Compressed air OK and high voltage is ON Error Signal = The red LED lights up in case of an internal error.
Dimensions	See image dimensions
Weight	0.3 kg (excluding power cable & compressed air hose)
Enclosure	Plastic
Accessories	Snap hook 40 x 4 mm Compressed air nipple for hose \varnothing 8 mm [5/16"]
Optional	See list for spare parts and accessories, Chapter 8
Approvals	CE

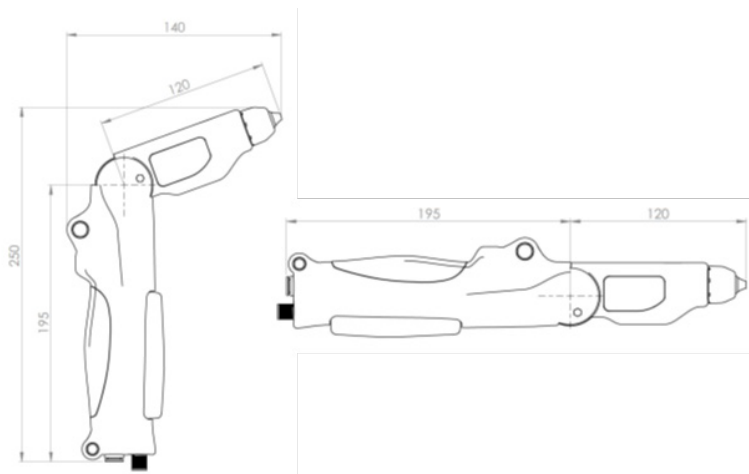


Figure 2: Cleanflex Easy Dimensions

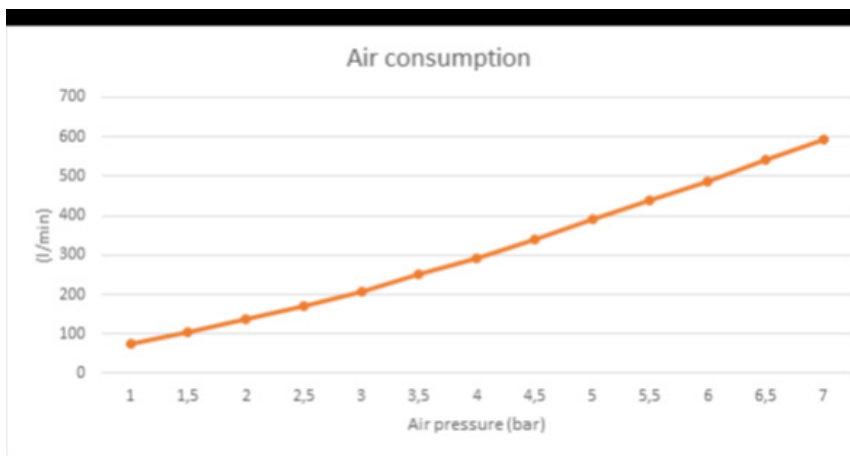


Figure 3: Air Consumption

4. INSTALLATION



WARNING –

- Disconnect the power supply before carrying out any work on the unit
- The electrical installation must be carried out by an electrical engineer with the relevant training and qualifications
- The Cleanflex Easy may only be used indoors and only for light industrial applications
- Refer to the manual for the correct power supply to be used for correct and safe gun connection
- The power supply for the Cleanflex Easy must be properly grounded. Grounding is necessary for proper operation of the equipment and prevents electric shock when touched
- The Cleanflex Easy must be powered only by a Limited Power Source (LPS) or NEC Class 2 power supply. An LPS certified power supply has a limited output power so that it always continues to generate a safe output voltage



WARNING – The 0V of the power supply output must be properly grounded (see paragraph 5.4).

The Cleanflex Easy can be powered by an existing available 24 VDC power supply at the workplace (which meets the above requirements). Gun will come kitted with an AC adapter and 120V line cord

4.1 Control

- Check that the equipment has been received undamaged and is the correct version
- Check that any necessary accessories have also been included
- Check that the packing slip data matches the data of the received product



NOTE – In case of problems and / or questions, please contact Simco-Ion or a Simco-Ion representative in your region.

4.2 General

Determine the optimal location where the gun with the power supply and the compressed air hose will be used.

The compressed air hose and the power cable can be tied together with suitable materials.

Use a standard Simco-Ion Device cable for the power cable (see accessories) or make your own connection cable with an M12 connector (see section 5.4)



NOTE – The blow-off force is reduced to 80% when using the spiral hose.

4.3 Power and Compressed Air Supply

- Make sure that the Cleanflex Easy is supplied with clean, moisture and oil-free compressed air.
- Make sure that the compressed air connection and the 24V power supply are within reach of the connecting hose and connecting cable. Both the hose and the cable must not come under tension during use.
- Manually screw the power cable with the M12 connector tightly to the gun.
- Connect the other side of the power cable to the 24V power supply. See connection data of the cable for mounting on your own 24V system.
- Insert the compressed air hose $\varnothing 8$ mm [5/16"] into the compressed air connection of the gun or use the supplied connection nipple to connect a compressed air hose of $\varnothing 8$ mm [5/16"].
- Connect the other end of the compressed air hose to the compressed air connection with suitable materials. Use a pressure regulating valve with filter to regulate the compressed air to the desired pressure.
- Refer to the manual of the 24V power supply for connecting the power supply.

4.4 Connection To An External LPS Certified Power Supply

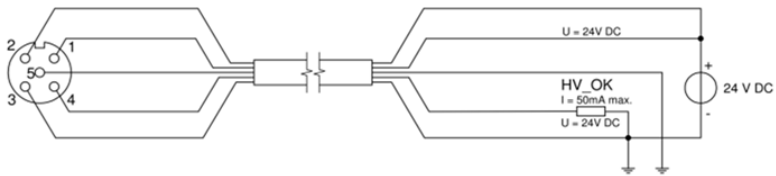


Figure 4: Wiring Supply Cable Cleanflex Easy

Pin	PIN Definition
1	24 VDC
2	24 VDC
3	0V/GND
4	HV OK
5	GND

Table 1: Overview Pin Assignment

Connect the wiring according to Figure 3 and Table 1.

For personal safety and proper operation, the grey and the blue wire must both to be connected to ground. These connections have already been done in the Simco-Ion Desktop Power Supply.

5. OPERATION

Product Safety

The following safety guidelines must be observed in order to avoid injuries and damage to objects or the Cleanflex Easy.



WARNING –

- Electrical installation must be carried out by a qualified electrician in accordance with national and local regulations
- The Cleanflex Easy must not be used in a fire or explosion-hazardous environment
- The Cleanflex Easy is intended solely for blowing and at the same time neutralizing electrostatically charged surfaces. Any other use is not recommended
- To guarantee the service life of the Cleanflex Easy, the gun must be supplied with clean, compressed air which is free from moisture and oil. Contamination of the high voltage emitters will reduce the gun performance and can cause the Cleanflex to malfunction
- A small amount of ozone is emitted during the internal ionization process. The ozone concentration is so low that no damage to health can occur
- When using compressed air pressure of more than 3 bar, the noise level emitted is greater than 80 dB and hearing protection is therefore mandatory
- Do not seal the air outlet opening during use. This can create a danger of ejecting objects
- To be protected from blown up dust or ejected objects, it is recommended to wear safety glasses during use



WARNING –

- Make sure that the equipment is properly earthed. Earthing is necessary to ensure proper and safe operation and to prevent electric shocks upon contact
- Never immerse or make the Cleanflex Easy wet. A short circuit will damage the gun and can cause an electric shock
- Never use a damaged gun. Touching the live parts will cause an electric shock
- Do not insert conductive parts into the blow-out opening
- High voltage equipment can be dangerous for people with pacemakers



WARNING – The device loses its warranty if:

- Without prior written approval, changes, adjustments, etc. have been made or non-original parts have been used for repair
- Dirty compressed air has been used
- The Cleanflex internal parts have become wet and the electronics have become defective
- The Cleanflex has been improperly used

Commissioning

- Supply 24V power supply and compressed air to the gun. Before first use, it is advisable to set the compressed air to, for example, 2 Bar
- The LED indicator on the gun blinks green rapidly during start-up. The gun is ready for use after approx. 5 seconds; the LED indicator slowly flashes green 1x per 3 seconds (still alive)
- Take the gun in your hand and point it at the object to be cleaned while the trigger is pressed. The LED indicator now lights up green continuously

The ionized air stream cleans and discharges the object within 1 second

- The ionization is only active when the trigger of the Cleanflex is pressed
- Release the trigger once the entire object or surface has been cleaned and discharged
- Adjust the rotatable gun head to one of the four desired positions by moving it with moderate force by hand

At the bottom of the gun is an M12 connector for the 24V power supply and the compressed air connection. Above the handle of the gun is an LED indicator displaying the status of the gun. The head of the Cleanflex Easy can be easily adjusted into four positions to adapt the shape of the gun to the application used. The built-in stop ensures that the head remains in one of the four desired positions.

As soon as the trigger is pressed in, the internal high voltage will turn on, blowing out ionized air. The shape of the discharge nozzle creates a venturi effect so that ambient air is also blown effectively in the direction of the air flow.

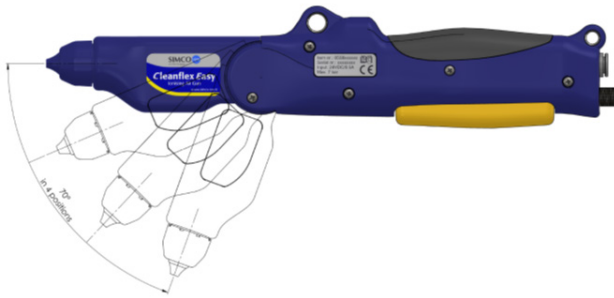


Figure 5: The 4 Positions of the Head



Figure 6: Positions In Which The Cleanflex Can Be Used

Operational Check

During use, the LED indicator lights up green continuously. If the LED indicator continues to flash (1x per 3 seconds) with the trigger pressed, the compressed air pressure is too low (<0.5 Bar). In this case you should increase the pressure.

Check that there are no leakages around the compressed air connections.

The Cleanflex Easy works well when enough air is blown out when the object or surface to be cleaned is clean and completely discharged. If necessary, check this with a Simco-Ion field strength meter.

6. MAINTENANCE



WARNING –

- When working on the equipment, the equipment must be voltage-free
- Electrical installation and maintenance must be carried out by a qualified electrician

General

- Ensure that the gun is kept clean and dry
- Check the connection cable and compressed air hose periodically for damage
- Clean the gun, the connection cable and the compressed air hose with a suitable cleaning agent (e.g., isopropyl alcohol)
- Let the gun dry completely before reusing

Repairs

The Cleanflex can only be repaired by Simco-Ion.

In case of problems and / or questions, please contact Simco-Ion or a Simco-Ion representative in your region.

The equipment being returned under warranty should be shipped by the purchaser to Simco-Ion, 2257 North Penn Road, Hatfield, PA 19440, transportation prepaid and insured for its replacement cost. Prior to returning any goods for any reason, contact Simco-Ion Customer Service at 215-822-6401 for a Return Authorization Number (RMA). This number must accompany all returned items.

Disposal

When disposing of the appliance, follow the local environmental regulations.

OR

Do not throw the device out with the normal waste at the end of its life, but hand it in at an official collection point.

In this way you help to protect the environment.

7. TROUBLESHOOTING

- When working on the equipment, the equipment must be voltage-free;
- The electrical installation must be carried out by an electrical engineer with the relevant training and qualifications

Signal	Problem	Cause	Solution
LED not lit	No power supply	Power supply defective	Restore power supply See H5
		Power supply not connected	
		Power supply incorrectly connected	
LED continually green	Bad discharge	Compressed air pressure set too low	Increase the pressure See H6
		Ionization component in the head worn out	Repair the gun See H10
	No discharge	Ionization component in the head defective or worn out	Repair the gun See H10
LED blinks slowly or intermittently green during use	No or insufficient compressed air from the gun	Compressed air not connected	Connect compressed air See H5
		Compressed air pressure set too low	Increase compressed air pressure See H6
		Defective valve	Repair the gun See H10
LED blinks red	Moisture in the airway	High voltage parts wet due to the use of moist compressed air	Use dry clean compressed air and blow through without supply voltage
	Defective gun	Internal defect	Repair the gun See H10

8. PARTS AND ACCESSORIES

5052009	Replacement power supply, 120V
5052010	Replacement power supply, 230V

9. WARRANTY AND SERVICE

Simco-Ion will, under this warranty, repair or replace any equipment that proves, upon our examination, to have become defective within one year from the date of purchase.

The equipment being returned under warranty should be shipped by the purchaser to Simco-Ion, 2257 North Penn Road, Hatfield PA 19440, transportation prepaid and insured for its replacement cost. Prior to returning any goods for any reason, contact Simco-Ion Customer Service at (215) 822-6401 for a Return Authorization Number. This number must accompany all returned items.

This warranty does not apply when the equipment has been tampered with, misused, improperly installed, altered, has received damage through abuse, carelessness, accident, connected to improper line voltage, or has been serviced anyone other than an authorized factory representative.

The warranty does not apply when Simco-Ion parts and equipment have been energized by other than the appropriate Simco-Ion power supply or generator, or when a Simco-Ion power supply or generator has been used to energize other than Simco-Ion parts and equipment. Simco-Ion makes no warranty, expressed or implied, nor accepts any obligation, liabilities, or responsibility in connection with the use of this product other than the repair or replacement of parts stated herein.

Information in this publication supersedes that in all previous published material. Specifications are subject to change without notice.

Simco-Ion

2257 North Penn Road
Hatfield, PA 19440

(215) 822-6401

(800) 203-3419

www.simco-ion.com

customerservice@simco-ion.com

© 2021 Simco-Ion. Printed in the U.S.A.