COLTRI COMPRESSORS

EN Use and maintenance manual

ICON

ICON LSE

MINI COMPACT PETROL

MINI COMPACT

ICON PETROL

High pressure compressors for pure breathing air and technical gases.

These instructions are a translation of the original prepared in Italian.
AEROTECNICA COLTRI SpA reserves all rights on this manual including the right, at any time, to make necessary changes and improvements to its products and to the manual without any notice.
This manual is the property of AEROTECNICA COLTRI SpA. Reproduction, whole or partial, is forbidden.

IMPORTANT:
- **BEFORE USING THE COMPRESSOR READ THIS MANUAL CAREFULLY.**
- **BEFORE CARRYING OUT ANY WORK ON THE ENGINE CONSULT THE ATTACHED ENGINE USE AND MAINTENANCE MANUAL.**
- **THE COMPRESSORS ARE DELIVERED WITHOUT THE COMPRESSOR LUBRICATING OIL, COMBUSTION ENGINE LUBRICATING OIL AND FILTRATION CARTRIDGE: THESE ITEMS ARE SUPPLIED INSIDE THE PACKAGING.**

ICON

HIGH PRESSURE COMPRESSORS FOR PURE BREATHING AIR AND TECHNICAL GASES.

PORTABLES LINE:

ICON 50 LSE EM	ICON 100 LSE EM	ICON 100 LSE ET	ICON 100 SH	ICON 100 SK	MINI COMPACT 100 EM	MINI COMPACT 100 ET	MINI COMPACT PETROL 100 SH	MINI COMPACT PETROL 100 SK

Dear Customer,
Thank you for choosing an AEROTECNICA COLTRI compressor. This manual is provided together with the compressor to aid you in the use of the machine and ensure that your work produces the best possible results.
Please read all the instructions and information provided on the following pages. Ensure that the manual is at the disposal of the personnel who will be using/managing the compressor and carrying out any maintenance on it.
Should you require any clarification, when using the compressor for the first time or at any other time it is used, please remember that AEROTECNICA COLTRI is at your complete disposal.
For routine or unscheduled maintenance note that AEROTECNICA COLTRI international technical service is able to provide you with assistance and spare parts as and when required.

To ensure that your requests are dealt quickly, the following information is provided:

AEROTECNICA COLTRI®
Via Colli Storici, 177
25015 DESENZANO DEL GARDA (BS) ITALY
Tel. +39 030 9910301 Fax. +39 030 9910283
coltri.com
info@coltri.com

QUICK GUIDE

WARNING:
- **This guide is intended only as a rapid introduction to use of the compressor.**
- **This guide is not meant to replace the use and maintenance manual.**
- **This compressor must not be used before reading the entire use and maintenance manual.**

Preliminary tasks:
- Position the compressor in the selected area (see section “5”).
- If necessary connect the air intake extension (see section “5.3.2”).
- Connect up the refill hoses (see section “6.1.5”).
- Check the oil level; if the compressor is new fill the oil sump with the oil supplied with the compressor (see section “7.6”).
- Check that the cartridge is inside the filtration cartridge (see chap “7.11”).

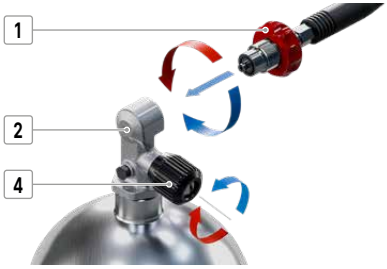
For compressors with combustion engines:
- Check fuel level and top up if necessary (see section “7.7”).

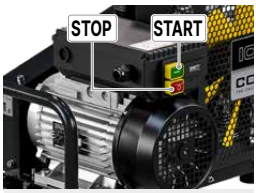
For compressors with electric motors:
- Connect the electric motor to the mains power socket (see section “5.3.3”).
- For compressors equipped with a three-phase electric motor, check that the cooling fan rotates in the direction indicated by the arrow on the cover; if it turns the other way invert two of the three phases on the mains power (see section “6.1.4”).

Bottle refill (see section “6 .4”):
- fit the hose connector 1 on the bottle connector 2 (closed);
- open the condensate discharge valve 3 on the separator;
- start the compressor;
- close the discharge;
- open the tank valve 4;
- discharge the condensate every 10-15 minutes of use.

When refill is complete:
- switch off the compressor;
- close the bottle valve 4;
- open the condensate discharge valve 3 and let all the air bleed out;
- disconnect the coupling 1 from the bottle.

Maintenance:
- After the first 5 working hours change the oil again (see section “7.6”).
- Check the lubricating oil level every 5 hours (see section “7.6”).
- Change the lubricating oil every 50 hours (see section “7.6”).
- Periodically change the air intake filter (see section “7.8”).
- Discharge the condensate (see section “7.9”).
- Periodically change the filtration cartridge (see section “7.11”).
- Check transmission belt tension and if necessary change them (see section “7.12”).
- Periodically change the hoses (see section “7.10”).





ICON EM

ICON ET

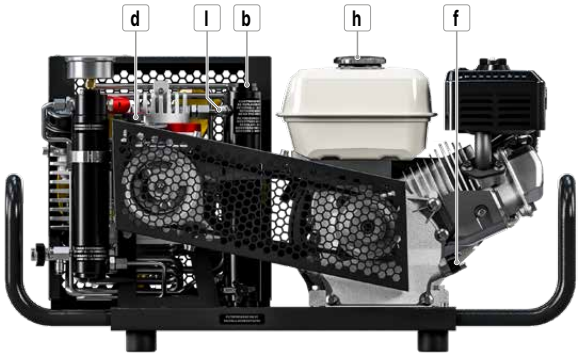
ICON SH

ICON SK

 2022 © Aerotecnica Coltri S.p.A.

HOW TO RUN FOR THE FIRST TIME

1 Insert the filter cartridge (a) into the filter body (b).
2 Fill the compressor with 0.60 liters of COLTRI OIL (c) through the oil filling pipe (d).
3 Fill the engine with 0.35 liters of HONDA 10W-30 oil (e) through the oil filling hole (f).
4 Fill the engine tank (h) with petrol (g).
5 Connect the charging hose (i) to the fitting (l).



CONTENTS

1 - GENERAL **8**
1.1 Preliminary information 8
1.2 Required operator training 8
1.3 Important information for the user 8
1.4 Foreword 8
1.5 Warranty 9
1.6 Assistance 10
1.7 Responsibility 10
1.8 Purpose of the machine 10
1.9 Where the machine may be used 12
1.10 Running in and testing the compressor 12
1.10.1 Tightening torque values 12
2 - BASIC INFORMATION ON THE COMPRESSOR **12**
2.1 Description of the compressor 12
2.2 Identification the compressor 13
2.3 General instructions 13
3 - SAFETY REGULATIONS **14**
3.1 General safety rules 14
3.1.1 Know the machine 14
3.1.2 Protective clothing 14
3.1.3 Emergency equipment 14
3.1.4 Checks and maintenance 14
3.2 General precautions 14
3.2.1 Important safety information 16
3.2.2 Accident prevention 16
3.2.3 Working safety 16
3.2.4 Noise level 16
3.2.5 Residual risk zones 16
3.3 Safety info labels: location 17
3.3.1 Safety info labels: description 17
3.4 General safety regulations 19
3.4.1 Care and maintenance 19
3.4.2 Fire extinguishers and first aid 19
3.5 Maintenance precautions 19
3.5.1 Periodic replacement of essential safety parts 19
3.5.2 Tools 20
3.5.3 Personnel 20
3.5.4 Keeping the compressor clean 20
3.5.5 Warning signs 20
4 - TECHNICAL DATA **21**
4.1 Technical characteristics 21
4.1.1 Crankcase, crankshaft, cylinder, pistons 21
4.1.2 Valves 21
4.1.3 Safety valves 21
4.1.4 Lubrication 21
4.1.5 Cooling tubes 21
4.1.6 Frame, guards 21
4.1.7 Pressure gauges 21
4.2 Machine parts 22
4.3 Technical characteristics 23
4.4 Pressure circuit 27
4.5 Wiring diagram 28
5 - HANDLING AND INSTALLATION **29**
5.1 Unpacking 29

 2022 © Aerotecnica Coltri S.p.A.

5.2 Handling 29
5.3 Installation 29
5.3.1 Positioning 30
5.3.2 Air intake extension connection 31
5.3.3 Electrical connection 32
6 - USING THE COMPRESSOR 32
6.1 Preliminary checks before using for the first time 32
6.1.1 Filling with lubricating oil 32
6.1.2 Inserting filtration cartridge 32
6.1.3 Filling the engine with lubricating oil (for internal combustion engine only) 32
6.1.4 Checking for proper electrical connection (for three-phase electric motor only) 33
6.1.5 Refill hoses connection 33
6.2 Checks to be run at the start of each working day 33
6.2.1 Lubricating oil level check 33
6.2.2 Checking that the flex hoses are in good condition 34
6.2.3 Fuel level check 34
6.2.4 Checking the safety valves 34
6.2.5 Storing technical documentation 35
6.3 Starting and shutting down 35
6.3.1 Starting and shutting down with internal combustion engine 35
6.3.2 Starting and shutting down with electric motor 36
6.3.3 Automatic shutdown with pressure switch 36
6.4 Tank refill 36
6.5 Optional 38
6.5.1 Automatic shutdown with pressure switch 38
6.5.2 Automatic condensate discharge 39
6.5.3 Hour counter (only model SH) 39
6.5.4 C_MONITOR monitoring system 39
6.5.5 Pressure maintenance valve 39
7 - MAINTENANCE 40
7.1 Foreword 40
7.2 General 40
7.3 Unscheduled work 40
7.4 Scheduled maintenance table 41
7.5 Troubleshooting 42
7.6 Checking and changing the lubricating oil 42
7.7 Checking fuel level and topping up 44
7.8 Changing the intake filter 44
7.9 Condensate discharge 45
7.10 Changing the flex hose 45
7.11 Purifier filter 46
7.12 Transmission belt 48
7.13 Safety valves 49
8 - STORAGE 49
8.1 Stopping the machine for a brief period 49
8.2 Stopping the machine for a long period 49
9 - DISMANTLING AND PUTTING OUT OF SERVICE 50
9.1 Waste disposal 50
9.2 Dismantling the compressor 50
10 - MAINTENANCE REGISTER 51
10.1 Assistance service 51
10.2 Scheduled maintenance 51
10.3 Using the compressor under heavy-duty conditions 51
10.4 The Customer Care Centre 51
10.5 Scheduled maintenance registry coupons 52

1 - GENERAL

1.1 PRELIMINARY INFORMATION

Non distruggere, non modificare, integrare solo con fascicoli aggiuntivi pubblicati dal produttore.

Machine type:
Compressore ad alta pressione per aria respirabile e/o gas tecnici

Model:
ICON LSE - ICON PETROL - MINI COMPACT - MINI COMPACT PETROL

Manufacturer's data:
AEROTECNICA COLTRI SpA
Via Colli Storici, 177
25015 DESENZANO DEL GARDA (BRESCIA) - ITALY
Telephone: +39 030 9910301
Fax: +39 030 9910283
http: coltri.com - e-mail: info@coltri.com

1.2 REQUIRED OPERATOR TRAINING

This manual must be read carefully:
- all compressor operators / maintenance personnel must read this entire manual with due care and attention and observe the instructions/ information contained herein.
- the operator must possess the required training for operation of the compressor and that he/she has read the manual.

1.3 IMPORTANT INFORMATION FOR THE USER

The information/instructions for compressor use contained in this manual only concern the AEROTECNICA COLTRI Mod.:
ICON LSE - ICON PETROL - MINI COMPACT - MINI COMPACT PETROL
The instruction manual must be read and used as follows:
- read this manual carefully, treat it as an essential part of the compressor;
- the instruction manual must be kept where it can readily be consulted by compressor operators and maintenance staff;
- keep the manual for the working life of the compressor;
- make sure updates are incorporated in the manual;
- make sure the manual is given to other users or subsequent owners in the event of resale;
- keep the manual in good condition and ensure its contents remain undamaged;
- do not remove, tear or re-write any part of the manual for any reason;
- keep the manual protected from damp and heat;
- if the manual is lost or partially damaged and its contents cannot be read it is advisable to request a copy from the manufacturer.

Important: you must understand the following symbols and their meaning.
They highlight essential information:

IMPORTANT: Refers to additional information or suggestions for proper use of the compressor.

DANGER: Refers to dangerous situations that may occur during use of the compressor: aims to ensure worker safety.

WARNING: Refers to dangerous situations that may occur during use of the compressor: aims to prevent damage to objects and the compressor itself.

1.4 FOREWORD

The regulations/instructions for use contained in this manual constitute an essential component of the supplied compressor.
These regulations/instructions are intended for an operator who has already been trained to use this type of compressor. They contain all the information necessary and essential to safety and efficient, proper use of the compressor.
Hurried or careless preparation leads to improvisation, which is the cause of accidents.
Before beginning work, read the following suggestions carefully:
- before using the compressor, gain familiarity with the tasks to be completed and the admissible working position;
- the operator must always have the instruction manual to hand;
- program all work with due care and attention;
- you must have a detailed understanding of where and how the compressor is to be used;
- before starting work make sure that safety devices are working properly and that their use is understood; in the event of any doubts do not use the compressor;
- observe the warnings given in this manual with

 2022 © Aerotecnica Coltri S.p.A.

due care and attention;
- constant and careful preventive maintenance will always ensure a high level of safety when using the compressor. Never postpone repairs and have them carried out by specialised personnel only; use only original spare parts.

1.5 WARRANTY

IMPORTANT: The materials supplied by AEROTECNICA COLTRI SpA are covered by a 1 year warranty, the validity of which begins when the compressor is put into service as proven by the delivery document.

AEROTECNICA COLTRI SpA shall repair or replace those parts it acknowledges to be faulty during the warranty period.

In replacing the faulty part AEROTECNICA COLTRI SpA shall not be liable for any other expenses sustained by the dealer or his customer such as presumed damage (present or future), lost earnings or fines.

Routine and unscheduled maintenance must be carried out in compliance with the instructions contained in this manual. Should the required work not be covered by the manual or assistance be required you are advised to contact AEROTECNICA COLTRI SpA in writing, even where agreements have already been made on the phone. AEROTECNICA COLTRI SpA cannot be held liable for any delays or failure to execute work.
AEROTECNICA COLTRI SpA cannot be held liable for any damage or malfunctions caused by work carried out on the compressor by unauthorised personnel.

AEROTECNICA COLTRI SpA guarantees that its compressors are free from defects design, workmanship and th e used materials for a period of 1 year starting from the date of delivery of the compressor; should the customer note any flaws and/or defects he must report them, in writing, to AEROTECNICA COLTRI SpA within 8 days of their discovery otherwise the warranty shall be rendered null and void.
The warranty only covers flaws and faults that occur where the compressor is used properly in compliance with the instructions contained in this manual and where periodic maintenance is carried out.
The warranty does not cover faults caused by improper use of the compressor, exposure to atmospheric agents (rain etc.) or damage during transport; all materials subject to wear and those subject to periodic maintenance are not covered by the warranty and are to be paid for by the customer in full; in any event the warranty is rendered null and void if the compressor is tampered with or if work is carried out on it by
personnel who have not been authorised by AEROTECNICA COLTRI SpA.
A compressor that has been acknowledged as faulty on account of flaws in design, workmanship or used materials shall be repaired or replaced free of charge by AEROTECNICA COLTRI SpA at its plant in Desenzano del Garda (BRESCIA); costs regarding transport, delivery of spare parts and any materials subject to wear shall be met by the customer.
Should warranty-covered work need to be carried out on the customer's premises, travel and accommodation costs for personnel sent by AEROTECNICA COLTRI SpA. shall be met by the customer.
The act of taking delivery of machines and/or faulty components or the sending of technicians to assess the presumed defects and/or flaws reported by the customer does not in itself imply acknowledgement that the defect is covered by warranty.
Repairs and/or replacements made by AEROTECNICA COLTRI SpA during the warranty period do not in any way prolong the latter itself.
Acknowledgement that a defect is covered by warranty does not in itself mean that AEROTECNICA COLTRI SpA is in any way liable to award compensation.
AEROTECNICA COLTRI SpA cannot be held liable for any other direct or indirect damages imputable to compressor defects and flaws (loss of production or earnings etc.) except in cases where serious negligence is demonstrated.

1.6 ASSISTANCE

AEROTECNICA COLTRI SpA technicians are at your disposal for all routine/unscheduled maintenance work.
Please forward your request for assistance to AEROTECNICA COLTRI SpA by sending a fax or e-mail to:

Fax. +39 030 9910283
info@coltri.com

1.7 RESPONSIBILITY

AEROTECNICA COLTRI SpA considers itself exonerated from any responsibility or obligation regarding injury or damage caused by:
- failure to observe the instructions contained in this manual that concern the running, use and maintenance of the compressor;
- violent actions or incorrect manoeuvres during use or maintenance of the compressor;
- modifications made to the compressor without prior written authorisation from AEROTECNICA COLTRI SpA;
- incidents beyond the scope of routine, proper use of the compressor.

In any case, should the user impute the incident to a defect of the compressor, he/she must demonstrate that the damage has been a major and direct consequence of this “defect”.

WARNING: Maintenance and repairs must only be carried out using original spare parts.
AEROTECNICA COLTRI SpA cannot be held liable for any damages caused by failure to observe this rule.
The compressor is guaranteed as per the contractual agreements made at the time of sale.
Failure to observe the regulations and instructions for use contained in this manual shall render the warranty null and void.

1.8 PURPOSE OF THE MACHINE

The compressors have been designed and built for the purpose of obtaining excellent quality breathing air by drawing it from the surrounding environment. The air, which must be free from any harmful fumes, is passed through an intake filter and, after the pumping and filtration cycle, is stored in bottles constructed to contain air at high pressure.
The compressor can also be used to obtain other non-breathable gases for industrial use such as:
- Nitrogen
- Helium
- Nitrox 40% max O2

Any other use is inappropriate: the manufacturer cannot be held liable for any personal injury or damage to objects / the machine itself caused by improper use.

DANGER:
- **Use only tested, certified bottles: do not exceed the working pressure indicated on them.**
- **Aspirate unpolluted air.**
  Use the compressor in areas free from dust, risk of explosion, corrosion and fire.
- **It is forbidden to use the compressor with an internal combustion engine indoors.**
  Make sure that air intakes are a long way from fume exhausts.
- **Improper use could have serious consequences for the user .**
- **Do not disconnect the hose from the fittings or the clamp when it is under pressure.**
- **Drain the condensate regularly as illustrated in section “7.9 Condensate discharge”.**
- **Change the air purification filters regularly as described in section “7.11 Purifier filter”.**
- **The power lead plug must be disconnected:**
  - if there is a problem during use
  - before carrying out any cleaning or maintenance tasks.
- **Never pull the plug out by tugging the lead. Make sure the lead is not bent at a sharp angle and that it does not rub against any sharp edges. Use of extensions is not recommended.**
- **Never run the compressor when:**
  - the power lead is damaged;
  - there is evident damage;
  - the covers/guards are removed.
- **All routine and unscheduled maintenance tasks must be carried out with the compressor at standstill, the electrical power supply disconnected and the pumping circuit depressurised.**

 2022 © Aerotecnica Coltri S.p.A.

- **After switching off the compressor wait about 30 minutes before carrying out any maintenance tasks so as to prevent burns.**
- **The high pressure flex hose that connects to the bottle (also called the refill hose) must be in good condition, especially in the areas near the fittings.**
  The plastic sheath that covers the pipe must not show any signs of abrasion otherwise damp could get in, corrode the steel braid and weaken it.
  The hose must be changed periodically (yearly) or when it shows signs of wear.
  Failure to observe this rule could seriously endanger the users' safety.
  Make sure the minimum bending radius of the hose is no less than 250 mm.

To ensure maximum working efficiency, AEROTECNICA COLTRI has constructed the compressor with carefully selected components and materials. The compressor is tested prior to delivery. Continued compressor efficiency over time will also depend on proper use and maintenance as per the instructions contained in this manual.
All the components, connections and controls used in its construction have been designed and built to a high degree of safety so as to resist abnormal strain or in any case a strain greater than that indicated in the manual. Materials are of the finest quality; their introduction and storage in the company and their utilisation in the workshop are controlled constantly so as to prevent any damage, deterioration or malfunction.

DANGER:
- **Before carrying out any work on the compressor each operator must have a perfect understanding of how the compressor works, know how to use the controls and have read the technical information contained in this manual.**
- **It is forbidden to use the compressor under conditions / for purposes other than those indicated in this manual and AEROTECNICA COLTRI cannot be held liable for breakdowns, problems or accidents caused by failure to observe this rule.**
- **Check that the fittings provide a proper seal by wetting them with soapy water: eliminate any leaks.**
- **Do not attempt to repair high pressure hoses by welding them.**
- **Do not empty the bottles completely, not even during winter storage, so as to prevent damp air getting in.**
- **It is forbidden to tamper with, alter or modify, even partially, the systems and equipment described in this instruction manual, especially as safety guards and safety symbols are concerned.**
- **It is also forbidden to carry out work in any way other than that described or to neglect the illustrated safety tasks.**
- **The safety information and the general information given in this manual are highly important.**

1.9 WHERE THE MACHINE MAY BE USED

The compressor must only be used in environments having the characteristics described in the following table.

AREA OF MACHINE USE: ESSENTIAL DATA TABLE		
Temperature ambient	°C - (°F)	Min.-10°C (+14°F) Max.+40°C (+104°F)
Air humidity	%	max.80%
Tolerated weather conditions	rain hail snow	None
Max tilt angle (bank)	%	6%

Check that the area in which the compressor is to be positioned is adequately ventilated: good air exchange with no dust and no risk of explosion, corrosion or fire.
If ambient temperatures exceed 40°C air conditioning will be required.
Make sure that lighting in the area is sufficient to identify every detail (such as the writing on the info plates/stickers); use artificial lighting where daylight on its own is insufficient.

1.10 RUNNING IN AND TESTING THE COMPRESSOR

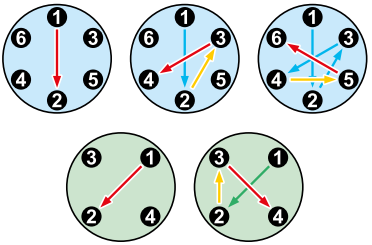
Each compressor is carefully run and tested prior to delivery.
After the first 5 hours carry out-in addition to the scheduled maintenance the following tasks:
- change the compressor oil;
- check and adjust nuts and bolts.

1.10.1 Tightening torque values

The table shows tightening torques for hexagonal-head or cylindrical-head recessed hexagonal bolts and screws, except for specific cases illustrated in the manual. Pipe connections (swivel nuts) should be finger tight plus an additional 1/2 turn.

Tightening torque values	
Thread	Max torque
M6 - 1/4"	10Nm (7ft-lbs)
M8 - 5/16"	25Nm (18ft-lbs)
M10 - 3/8"	45Nm (32ft-lbs)
M12 - 1/2"	75Nm (53ft-lbs)
M14 - 9/16"	120Nm (85ft-lbs)
M16 - 5/8"	200Nm (141ft-lbs)

6 and 4 bolt torque sequence



2 - BASIC INFORMATION ON THE COMPRESSOR

2.1 DESCRIPTION OF THE COMPRESSOR

DANGER: The compressor may be used together with Nitrox mixers up to a maximum of 40% oxygen and only with certified systems that feature an alarm system and that prevent the introduction of oxygen percentages above the permitted maximum and/or incorrect mixes.

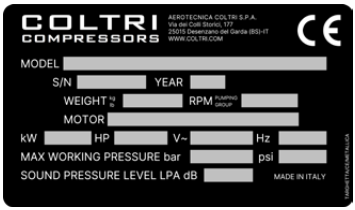
IMPORTANT: AEROTECNICA COLTRI compressors provide breathable air at high pressure in compliance with EN12021 air quality requisites.

High pressure compressor for breathing air and technical gases.
Compatible process gases:
- Nitrogen
- Helium
- Nitrox 40% max O2

 2022 © Aerotecnica Coltri S.p.A.

2.2 IDENTIFICATION THE COMPRESSOR

Each compressor has an identification label attached to its frame.



2.3 GENERAL INSTRUCTIONS

WARNING:

- **This manual must be read carefully before transporting, installing, using or carrying out any maintenance on the compressor.**
- **It must be preserved carefully in a place known to compressor users, managers and all transport/ installation/maintenance/repair/final dismantling personnel.**
- **This manual indicates the purposes for which the compressor can be used and gives instructions for its transport, installation, assembly, adjustment and use. It also provides information on maintenance tasks, ordering spare parts, residual risks and staff training.**
- **It should be born in mind that the use and maintenance manual can never replace proper experience; some maintenance jobs are particularly difficult and in this regard the manual only offers general guidelines on the most important tasks, which must be carried out by personnel with proper training (e.g. acquired during training courses run by the manufacturer).**
- **This manual is an integral part of the compressor and must be stored in a suitable container near the compressor until its final demolition. If the manual is lost or damaged a copy can be requested from the manufacturer.**
- **Make sure all users have understood the regulations for use and the meaning of the symbols on the compressor.**
- **Observance of these technical instructions can prevent accidents: instructions have been drawn up in compliance with EEC Machinery Directive 2006/42/CE and subsequent amendments.**
- **In any case always observe national safety regulations.**
- **Do not remove or damage guards, labels or notices, especially those required by law.**
- **The adhesives attached to the compressor are there for safety purposes. They must be replaced if they become illegible.**
- **This manual reflects the technical knowledge available at the time the compressor was sold and cannot be considered inadequate simply because updated at a later time on the basis of new experience.**
- **The manufacturer reserves the right to update products and manuals, without any obligation to update preceding products or manuals except in exceptional circumstances.**
- **To request or receive any updates or additions to this use and maintenance manual (which shall be considered an integral part of the manual) apply via the contact numbers given in section "1.6 Assistance".**
- **Should you have any other queries or suggestions as to how to improve the manual please contact the manufacturer.**
- **Should you sell the compressor AEROTECNICA COLTRI invites you to provide us with the details of the new owner so that any new additions to the manual can be sent on.**

3 - SAFETY REGULATIONS

3.1 GENERAL SAFETY RULES

3.1.1 Know the machine

The compressor must only be used by qualified personnel. They must have an understanding of the arrangement and function of all the controls, instruments, indicators, warning lights and the various info plates/labels.

3.1.2 Protective clothing

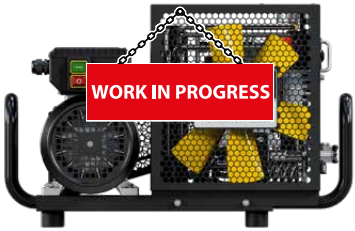
All operators must use accident prevention items such as gloves, hard hat, eye goggles, accident prevention shoes and ear defenders against noise.

3.1.3 Emergency equipment

Make sure a first aid cabinet and a CO2 fire extinguisher are near the compressor.
Keep the extinguisher fully loaded. Use according to standards in force.

3.1.4 Checks and maintenance

Apply a sign with the legend “WORK IN PROGRESS” on all sides of the compressor.
Inspect the compressor carefully every day it is used as per the check list given in this manual.



3.2 GENERAL PRECAUTIONS

The EEC Machinery Directive provides the following definitions:
«DANGEROUS ZONE»: any zone in side and/or near a machine in which the presence of an exposed person constitutes a risk for his/her security and health.
«EXPOSED PERSON»: any person wholly or partially inside a dangerous zone.
«OPERATOR»: the person(s) charged with the task of installing, running, maintaining, cleaning, repairing and transporting the machine.

IMPORTANT:

- **Before carrying out any task or operation with the compressor it is compulsory to read and follow the instructions given in the use and maintenance manual. Doing so during work is too late: improper use or an erroneous manoeuvre could cause serious damage or injury.**
- **Operators should inform themselves about the risk of accident, especially risks deriving from noise, use of safety devices and the general accident prevention regulations provided for by international laws or standards or national standards within the country of use.**
  All operators must observe both international accident prevention standards and the national ones relevant to the country of use.
  Bear in mind that the European Union has issued directives concerning

 2022 © Aerotecnica Coltri S.p.A.

worker health and safety which all operator are legally obliged to comply with.
- Before carrying out any work on the compressor each operator must have a perfect understanding of how the compressor works, know how to use the controls and have read the technical information contained in this manual.
- Removing or tampering with any safety device is strictly forbidden.
- All installation, routine or unscheduled maintenance work must be carried out with the compressor at standstill and disconnected from the electrical power supply.
- Once the compressor has been cleaned the operator must check for any worn, damaged or loose parts; in this case seek assistance from the maintenance technician.
  It is especially important to check that flex hoses or other parts subject to wear are in good condition.
  Check also for any leaking of oil or other dangerous substances. If such situations arise it is forbidden to restart the compressor before the situation is resolved. If these problems are observed at the end of the refilling the operator must, before leaving the machine unattended, place a sign on the compressor indicating that maintenance work is in progress and that it must not be restarted.
- Never place hands or introduce screwdrivers, keys or other tools into moving parts.
- Never clean with flammable fluids.
- Periodically check the info plates/ labels and restore/replace them where necessary.
- The workplace must be kept clean, tidy and free from objects that might hinder movement.
- Operators must avoid carrying out “awkward” tasks in uncomfortable positions that might cause imbalance.
- Operators should be aware of the risk of entrapment caused by clothes or hair getting caught up in moving parts; wear a cap to contain long hair.
- Necklaces, bracelets and rings can also be a source of danger.
- Workplace lighting must be adequate for the work in progress. Insufficient or excessive lighting can generate risks.
- Always observe the instructions, accident prevention regulations and the warnings contained in this manual.

WARNING: It is forbidden to tamper with or replace compressor parts without obtaining prior authorisation from AEROTECNICA COLTRI.
The use of accessories, tools, materials subject to wear or spare parts other than those recommended by the manufacturer and/or illustrated in this manual can constitute a source of danger to operators and/or damage the machine.
Any modification to the compressor that has not been expressly authorised by AEROTECNICA COLTRI shall exonerate the manufacturer from any civil or penal liability.

3.2.1 Important safety information

The compressor has been designed and built according to the state of the art and complies with technical regulations in force concerning compressors for the production of high pressure breathing air. The laws, regulations, standards and directives in force for such machines have been complied with.
Materials, parts, production procedures and quality controls all comply with the strictest safety and reliability standards.
Using the compressor for the purposes described in this manual, handling it with due diligence and carrying out maintenance and overhauls according to proper working practices will ensure long lasting performance and functionality.

3.2.2 Accident Prevention

The manufacturer cannot be held liable for accidents that occur during use of the compressor as a result of the user's non-observance of the laws, regulations, standards and directives in force for high pressure compressors.
The compressor has been designed for use in weather conditions as refer to "1.9 Where the machine may be used".

3.2.3 Working safety

The manufacturer cannot be held liable for malfunction or damage if the compressor:
- is used for purposes other than that for which its is intended;
- is not handled or maintained according to the instructions specified in this manual;
- is not periodically and continually maintained as instructed or if non-original spare parts are used;
- machine parts are modified or replaced without written authorisation from the manufacturer, especially where the efficiency of safety devices has been reduced or eliminated;
- where it is used outside the admissible temperature range.

3.2.4 Noise level

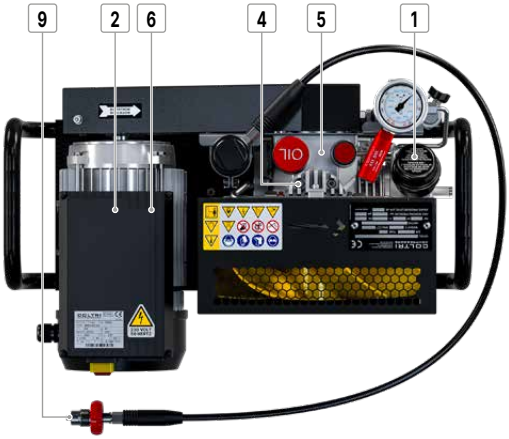
WARNING: Should the compressor be used where the daily noise exposure level is greater than 80 dBA, the operator must apply all the relevant their health and safety measures.
Where necessary operators must use personal protection such as ear defenders.

3.2.5 Residual risk zones

DANGER: In some compressor zones there remain residual risk s that were not possible to eliminate at the design stage or for which safety guards could not be provided without compromising the functionality of the compressor.
To prevent accidents all operators must be aware of the residual risks on this compressor.

Residual risk zones:
1 Danger of polluting the produced air due to the possibility of mixing exhaust fumes or lubricating oil vapours with the compressed air being produced.
2 Electrical dangers. Use the machine with suitable insulation, especially against water and humidity.
3 Dangers derived from use of internal combustion engine: Observe instruction in the relevant engine manual.
4 Heat-related dangers in exhaust pipe and compressor zone. Use the machine with suitable safety devices and after switching off the machine wait 30 minutes for the machine to cool down before carrying out maintenance work.
5 Danger deriving from noise emitted by the compressor.
6 Fire risk.
7 Risk of being crushed or dragged in the transmission belt zone.
8 Danger of impact/abrasion with the cooling fan.
9 Danger of direct contact with operator if hose breaks during bottle refill.

 2022 © Aerotecnica Coltri S.p.A.



3.3 SAFETY INFO LABELS: LOCATION

3.3.1 Safety info labels: description

1

Cooling fan direction of rotation info label.
When using the machine for the first time check that the fan rotates in the direction indicated by the arrow.
If, on a three-phase electric motor compressor, the fan rotates against the direction of the arrow invert two of the three phases on the main power lead.

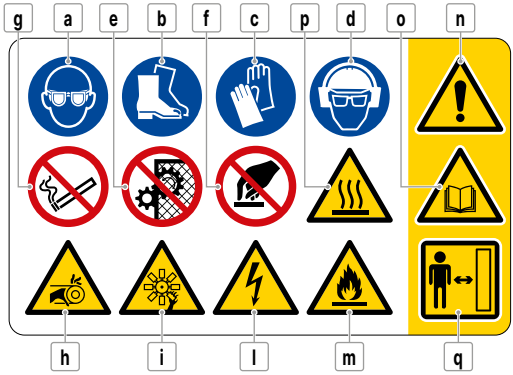
2

Condensate separator info label.

CONDENSATE SEPARATOR
SEPARATORE CONDENSA

3

a Safety goggles must be worn.
b Safety shoes must be worn.
c Safety gloves must be worn.
d Safety earphone must be worn.
e Forbidden to remove covers/guards
f Do not touch, mechanical moving parts; compressor must be switched off before any maintenance/lubrications tasks are carried out on it.
g Smoking forbidden near compressor owing to presence of gases flammable
h Hands at risk of being crushed in transmission belt zone
i Moving parts in transmission belt and cooling zone fan
l Live wires: risk of electric shock
m Risk of fire
n Warning info plates about the dangers that derive from a lack of knowledge about the compressor and its functions and the consequent risks.
o Read the use and maintenance manual carefully before using the compressor.
p Warning danger burns compressor area.
q Stand at a safe distance for non-professionals to use the compressor.



4

Lubricating oil info plate
Check oil level before starting the compressor. Use only COLTRI OIL ST755 (see “7.6 Checking and changing the lubricating oil”).

WARNING
CHECK OIL LEVEL BEFORE STARTING THE COMPRESSOR
USE ONLY COLTRI OIL ST755
CONTROLLARE IL LIVELLO DELL'OLIO PRIMA DI AVVIARE IL COMPRESSORE.
USARE SOLO OLIO COLTRI ST755

5

Oil drain label.
Indicates the position of the lubricating oil drain taps.

OIL DRAIN
SCARICO OLIO

6

Condensate discharge info plate.
Indicates position of condensate discharge valve. To discharge the condensate see “7.9 Condensate discharge”.

DRAIN CONDENSATE
EVERY 10 - 15 MINUTES
SCARICARE LA CONDENSA
OGNI 10 - 15 MINUTI

WARNING:
Excluding the version equipped with automatic condensate drain.

7

Filter pressure discharge plate.
Indicates the position of the filter pressure relief cock. To depressurize the entire circuit, see chapter "7 Maintenance".

FILTER DRAIN VALVE
VALVOLA SCARICO FILTRO

DANGER: Depressurise the entire compressor circuit before carrying out any maintenance tasks.

2022 © Aerotecnica Coltri S.p.A.

8

Cartridge change info label.
To change the cartridge refer to “7.11 Purifier filter”.

9

Intake filter cartridge change info label.
To change the intake filter cartridge refer to “7.8 Changing the intake filter”.

10

Noise info label.
Indicates the compressor noise level.

3.4 GENERAL SAFETY REGULATIONS

3.4.1 Care and maintenance

Damage and accidents are often caused by maintenance errors, such as:
- no oil,
- insufficient cleaning,
- compressed air circuit inefficiency (flex hoses damaged, loose pipes, screws etc.).

Maintenance work must be carried out with due care and attention: your safety depends on it.
Never postpone repairs.
Repairs must only be carried out by specialised or authorised personnel.
Always observe the following safety regulations, even when you become completely familiar with working procedures:
- Keep the compressor and the surrounding area clean at all times.
- Before starting work check that safety devices/ guards are in good working order.
- Make sure no-one is in the compressor danger zone. Interrupt work if anyone is in the danger zone and tell them to leave.
- Never leave the machine unattended when it is running.

3.4.2 Fire extinguishers and first aid

- Check that a fire extinguisher is present. Make sure all personnel know where it is.
- Periodically check that extinguishers are full and operators know how to use them.
- The location of the first aid cabinet must be known.
- Check the first aid cabinet periodically to make sure it contains disinfectant, bandages, medicines etc.
- Fire drills must be known.
- Make sure a phone number for emergency medical assistance is kept nearby.

In the event of fire use a CO2 extinguisher in compliance with the relevant standards in force.
Contact the fire brigade.

IMPORTANT: The provision of a fire extinguisher is the responsibility of the owner of the compressor.

3.5 MAINTENANCE PRECAUTIONS

3.5.1 Periodic replacement of essential safety parts

Periodically check the following components, which are important for accident prevention:
- compressed air system: main compressed air circuit delivery hoses;
- bottle refill system: flex hoses for bottle refill.

Even though they may appear to be in good condition, these components must be periodically replaced with new ones. Over time these components tend to deteriorate.
Should any of these parts prove to be faulty, replace or repair them ahead of schedule.

3.5.2 Tools

Use only manufacturer-recommended tools; do not use worn, damaged, poor quality or improvised tools as they can cause injury.

WARNING: The manufacturer cannot be held liable for any damage or injury caused by the use of tools that are not prescribed or modified without authorisation.

3.5.3 Personnel

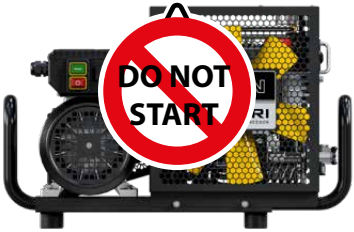
The routine maintenance tasks described in this manual must only be carried out by trained, authorised personnel.
For component maintenance/revision tasks not covered by this manual please contact AEROTECNICA COLTRI.

3.5.4 Keeping the compressor clean

Oil and grease stains, scattered tools or broken pieces constitute a danger to personnel as they may cause slips and falls. Always keep the compressor and the surrounding work area clean and tidy.
To clean the compressor, use gasoline or denatured alcohol, taking care to protect the electrical parts, plastic parts, transparent or colored. Do not use diesel, petrol or solvents as the former leave an oily film that causes dust to stick while solvents (even where weak) damage the paintwork and can lead to rust.
If the water jet gets inside the electrical parts it could, in addition to oxidising the contacts, prevent the machine being started or even cause a sudden, unexpected start.
For this reason never use water or steam jets on the compressor.

3.5.5 Warning signs

Before doing any maintenance work, stop the engine/motor and make sure the compressed air system is depressurised.
If other people start the engine or act on the control pushbuttons/keys while maintenance work is in progress there is a risk of serious injury or death.
To avoid these dangers always place warning signs around the compressor before carrying out maintenance.



 2022 © Aerotecnica Coltri S.p.A.

4 - TECHNICAL DATA

4.1 TECHNICAL CHARACTERISTICS

4.1.1. Crankcase, crankshaft, cylinders, pistons

The crankcase is made of aluminium alloy; the flanges with roller bearings on the filter sides and ball bearings on the fan side that support the crankshaft are kept oil-tight with the crankcase by O-rings between flange and crankcase and the oil retainer between flange and motor shaft.
The crankshaft and the connecting rods run on bearings with roller cages only. The connecting rods are fitted on the crankshaft with a single crank angle.
The first and second stage cylinders are made of cast iron and feature traditional multiple sealing rings. The third stage cylinder is in tempered steel with carbon-graphite sealing rings. The fourth stage cylinder is in tempered steel with a lapping coupling, without sealing rings.

4.1.2. Valves

First stage and second valves are of the lamellar type; the third and fourth stage valves are of the diaphragm type with tempered recovery spring.

4.1.3. Safety valves

The safety valves are pre-adjusted during assembly of the compressor and prevent it being damaged in the event of a malfunction. The max pressure, as a function of the valve, as follows:

3rd stage safety valve	120Bar 1450PSI
4th stage safety or final valve	232-300-330Bar 3300-4300-4700PSI

WARNING: It is strictly forbidden to carry out any adjustments to the valve to raise its factory preset pressure. Tampering with the safety valve can cause serious damage and renders the warranty null and void.

4.1.4. Lubrication

Splash lubrication occurs by oil thrower pin screwed onto the 2nd stage connecting rod.
4th stage lubrication is of the oil vapour type.

4.1.5. Cooling tubes

The cooling pipes are made of stainless steel.

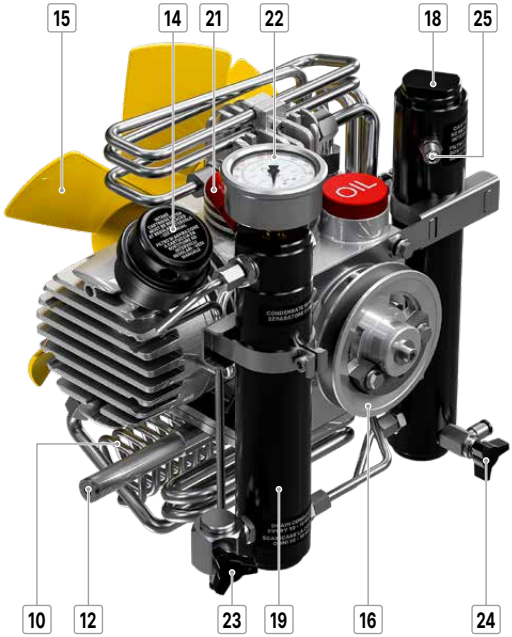
4.1.6. Frame, guards

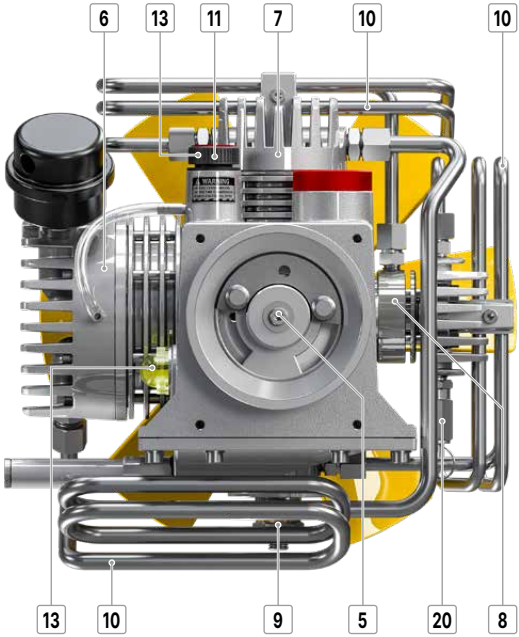
The compressor and motor are mounted on a welded steel frame that has been painted with epoxy resins.
Stainless steel frame available on request.

4.1.7. Pressure gauges

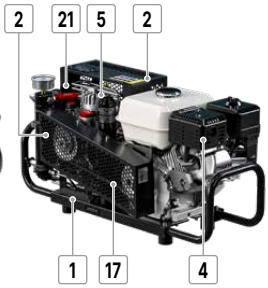
IMPORTANT: The gauges installed on AEROTECNICA COLTRI compressors have a precision class of 1.6 (±1.6% on the full scale value).

4.2 MACHINE PARTS





ICON LSE



ICON PETROL

MINI COMPACT

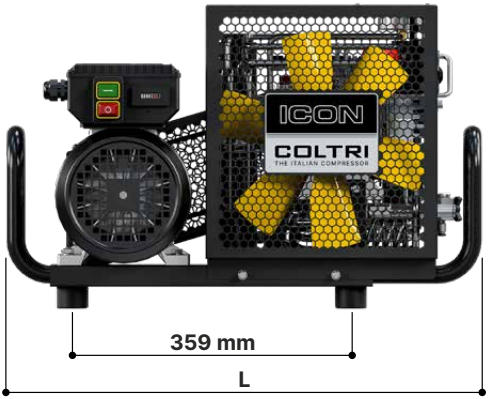
MINI COMPACT PETROL

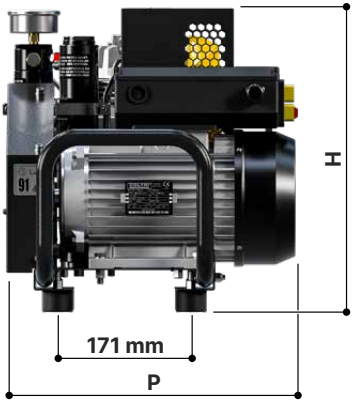
1 Frame
2 Protective casing
3 Electric motor
4 Internal combustion engine
5 Pumping group
6 1st stage
7 2nd stage
8 3rd stage
9 4th stage
10 Cooling pipes
11 Oil filler cap
12 Oil drain
13 Oil level
14 Suction filter
15 Cooling fan
16 Pulley
17 Belt
18 Purifier filter
19 Condensate separator
20 Safety valve
21 Final safety valve
22 Pressure gauge
23 Condensate discharge valve
24 Filter pressure discharge valve
25 High pressure refill hose connection

 2022 © Aerotecnica Coltri S.p.A.

4.3 TECHNICAL CHARACTERISTICS

ICON LSE



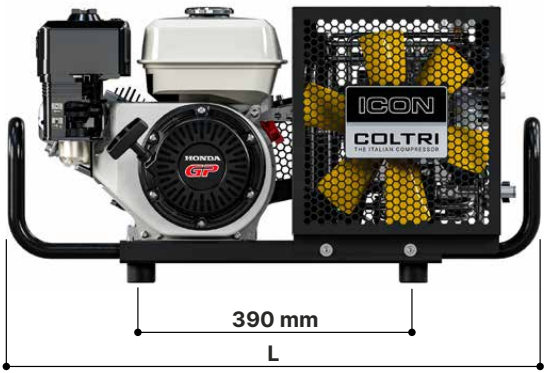


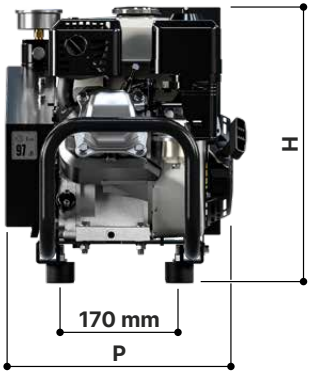
		ICON LSE 50 EM		ICON LSE 100 EM			ICON LSE 100 ET			
Electric Engine		Single phase		Single phase			Three phase			
Engine power	(kW)	1,1		2,2			3			
	(Hp)	1,5		3			4			
Engine rpm	(giri/min)(rpm)	1400		2800	3400		2800		3400	
Voltage	(V)	230	230	230	115	230	230	400	230	400
Frequency	(Hz)	50	60	50	60	60	50	50	60	60
Absorption	(A)	14	14	14	29	14	11,5	6,7	11,5	6,7
Pumping Unit	(giri/min)(rpm)	1200		2250			2250			
Working pressure	(bar)	232-300-330								
	(PSI)	3300-4300-4700								
Charging rate	(l/min)	50		100			100			
	(m^3/h)	3		6,0			6,0			
	CFM (ft3/min)	1,8		3,5			3,5			
Refill time	10l / 0-200bar (min)	60		20			20			
Noise level	Lwa guaranteed (dB)	91		91			94			
	Lwa measured (dB)	88		88			91			
	Lpa measured (dB)	68		68			71			
Dry weight	(Kg)	34		38			38			
	(lb)	75		83.8			83.8			
Dimensions (LxPxH)	(mm)	610×370×390		610×370×390			610×350×390			
	(inches)	24.0×14.6×15.4		24.0×14.6×15.4			24.0×13.8×15.4			

ATTENTION: For single-phase compressors powered by a current generator, the power of the generator (for reloads at 232bar) must be:

Compressor:	ICON LSE 50 EM (230V-1,1kW)	ICON LSE 100 EM (230V-2,2kW)
Generator:	minimum 4 kVA	minimum 8 kVA

ICON PETROL

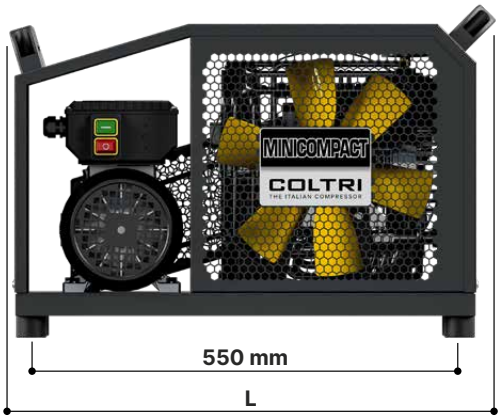


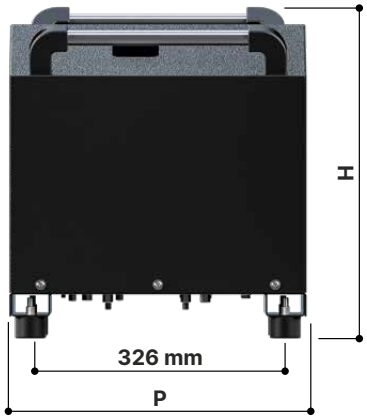


		ICON 100 SH	ICON 100 SK
Motor		Honda HP 200 petrol	Kohler SH 265 petrol
Engine power	(kW)	4,3	4,1
	(Hp)	7,7	5,5
Engine rpm	(giri/min)(rpm)	3600	3600
Pumping Unit	(giri/min)(rpm)	2800	2800
Working pressure	(bar)	232-300-330	
	(PSI)	3300-4300-4700	
Charging rate	(l/min)	100	100
	(m^3/h)	6,0	6,0
	CFM (ft3/min)	3,5	3,5
Refill time	10l / 0-200bar (min)	20	20
Noise level	Lwa guaranteed (dB)	103,5	103,5
	Lwa measured (dB)	100,5	100,5
	Lpa measured (dB)	80,5	80,5
Dry weight	(Kg)	37	37
	(lb)	81,6	81,6
Dimensions (LxPxH)	(mm)	790×350×400	790×325×440
	(inches)	31.1×13.8×15.7	31.1×12.8×17.3

 2022 © Aerotecnica Coltri S.p.A.

MINI COMPACT



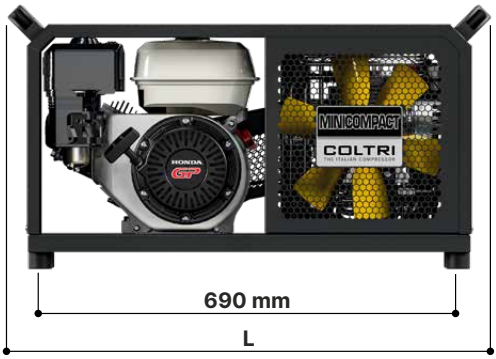


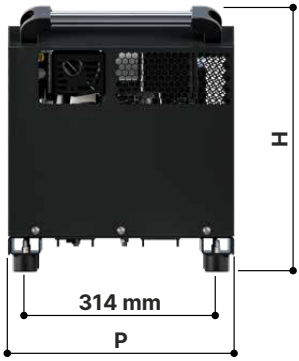
		MINI COMPACT 100 EM			MINI COMPACT 100 ET			
Electric Engine		Single phase			Three phase			
Engine power	(kW)	2,2			3			
	(Hp)	3			4			
Engine rpm	(giri/min)(rpm)	2800	3400		2800		3400	
Voltage	(V)	230	115	230	230	400	230	400
Frequency	(Hz)	50	60	60	50	50	60	60
Absorption	(A)	14	29	14	11,5	6,7	11,5	6,7
Pumping Unit	(giri/min)(rpm)	2250			2800			
Working pressure	(bar)	232-300-330						
	(PSI)	3300-4300-4700						
Charging rate	(l/min)	100			100			
	(m^3/h)	6,0			6,0			
	CFM (ft3/min)	3,5			3,5			
Refill time	10l / 0-200bar (min)	20			20			
Noise level	Lwa guaranteed (dB)	95			95			
	Lwa measured (dB)	92			92			
	Lpa measured (dB)	72			72			
Dry weight	(Kg)	47			47			
	(lb)	103.6			103.6			
Dimensions (LxPxH)	(mm)	624×380×430						
	(inches)	24.6×15.0×16.9						

ATTENTION: For single-phase compressors powered by a current generator, the power of the generator (for reloads at 232bar) must be:

Compressor:	MINI COMPACT 100 EM (230V-2,2kW)
Generator:	minimum 8 kVA

MINI COMPACT PETROL



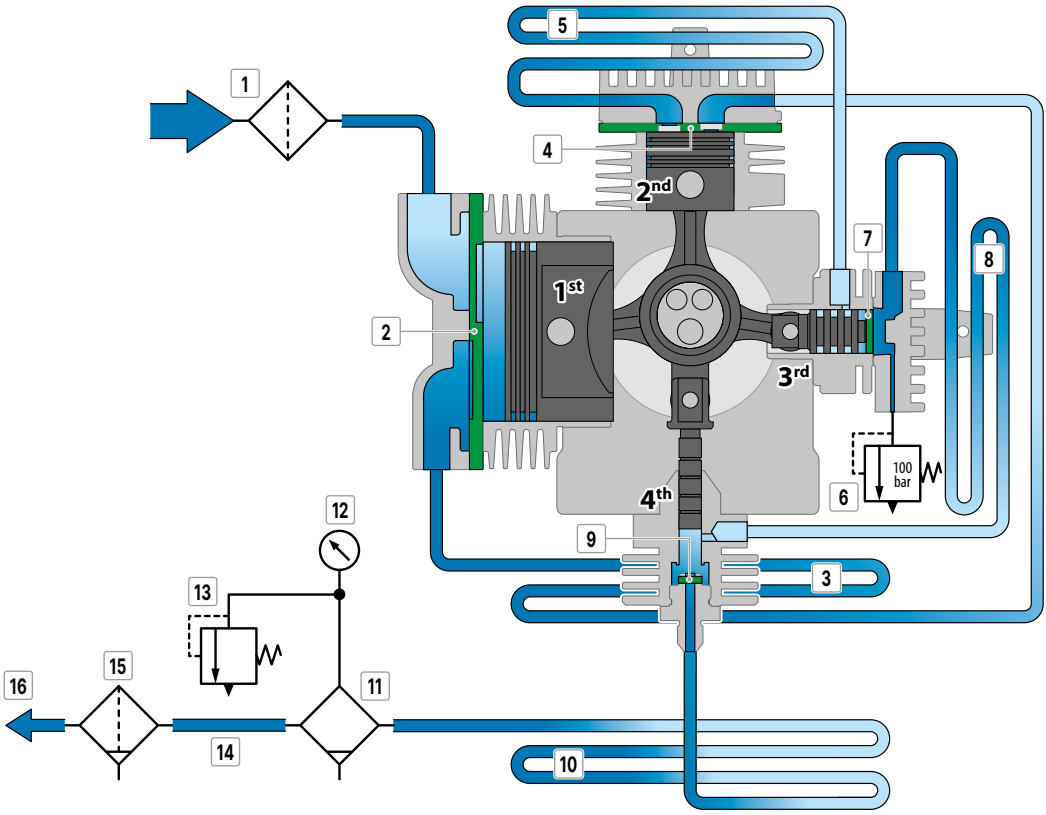


		MINI COMPACT 100 SH	MINI COMPACT 100 SK
Motor		Honda HP 200 petrol	Kohler SH 265 petrol
Engine power	(kW)	4,3	4,1
	(Hp)	7,7	5,5
Engine rpm	(giri/min)(rpm)	3600	3600
Pumping Unit	(giri/min)(rpm)	2800	2800
Working pressure	(bar)	232-300-330	
	(PSI)	3300-4300-4700	
Charging rate	(l/min)	100	100
	(m^3/h)	6,0	6,0
	CFM (ft3/min)	3,5	3,5
Refill time	10l / 0-200bar (min)	20	20
Noise level	Lwa guaranteed (dB)	103,5	103,5
	Lwa measured (dB)	100,5	100,5
	Lpa measured (dB)	80,5	80,5
Dry weight	(Kg)	53	53
	(lb)	116.8	116.8
Dimensions (LxPxH)	(mm)	800×370×440	
	(inches)	31.5×14.6×17.3	

 2022 © Aerotecnica Coltri S.p.A.

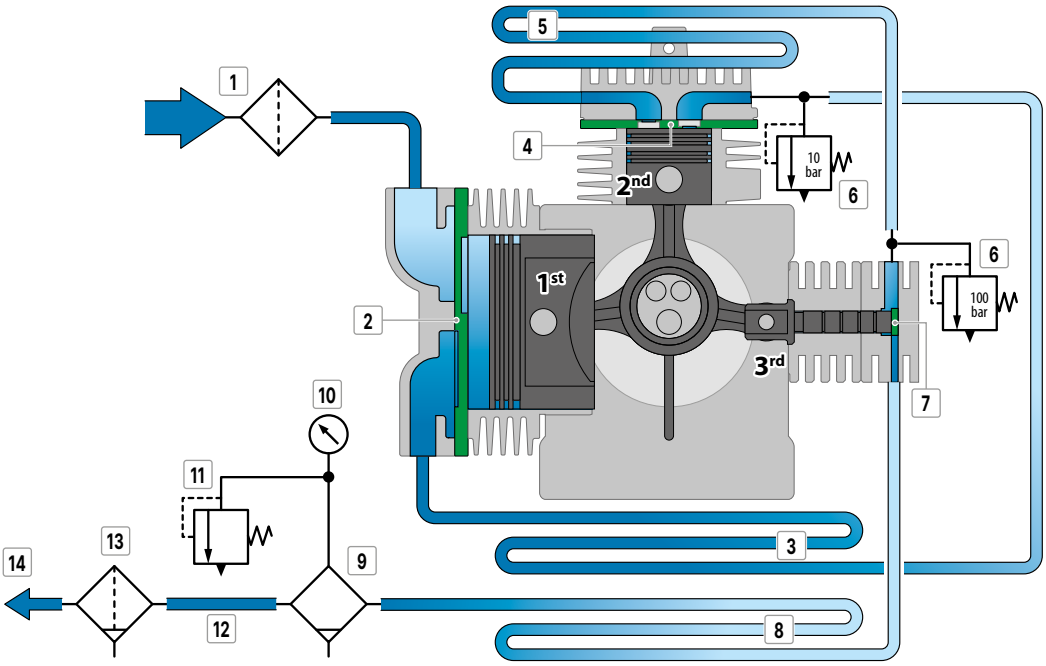
4.4 PRESSURE CIRCUIT

ICON LSE 100 - ICON PETROL - MINI COMPACT - MINI COMPACT PETROL



1 Intake filter
2 Intake/outlet valve 1st stage
3 Cooling pipe 1st-2nd stage
4 Intake/outlet valve 2nd stage
5 Cooling pipe 2nd-3rd stage
6 Safety valve
7 Outlet valve 3rd stage
8 Cooling pipe 3rd-4th stage
9 Outlet valve 4th stage
10 Final cooling pipe
11 Condensate separator
12 Pressure gauge
13 Safety valve
14 Cooling pipe separator/ filter
15 Purifier filter
16 Flex hose

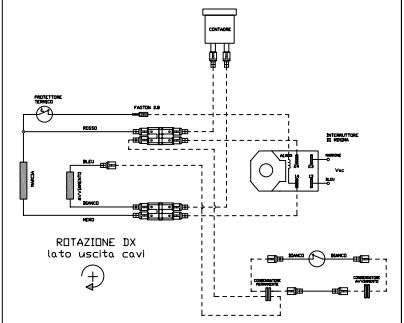
ICON LSE 50



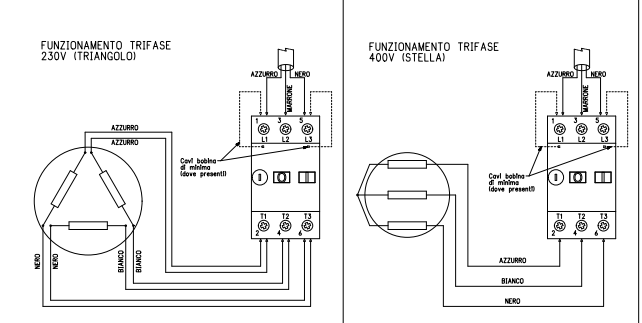
1 Intake filter
2 Intake/outlet valve 1st stage
3 Cooling pipe 1st-2nd stage
4 Intake/outlet valve 2nd stage
5 Cooling pipe 2nd-3rd stage
6 Safety valve
7 Outlet valve 3rd stage
8 Final cooling pipe
9 Condensate separator
10 Pressure gauge
11 Safety valve
12 Cooling pipe separator/ filter
13 Purifier filter
14 Flex hose

4.5 WIRING DIAGRAM

ICON 100 EM (S0100307.00)



ICON 100 ET (S0100205.00)



 2022 © Aerotecnica Coltri S.p.A.

5 - HANDLING AND INSTALLATION

5.1 UNPACKING

The compressor is packed in a cardboard box on a pallet to simplify handling and transport.
The box containing the compressor must be moved according to the instructions shown on the box itself.
The machine is supplied with the following as standard:
- 1 Refill hose 1200 mm;
- 1 Filling connection;
- 1 Can by 1 litre of lubricating oil for pumping unit;
- 1 Can by 1 litre of lubricating oil for engines (for models with combustion engines only);
- 1 Active carbon and molecular sieve filter cartridge vacuum;
- 1 Use and maintenance manual;
- 1 Use and maintenance manual internal combustion engine;
- EC declaration of conformity.

5.2 HANDLING

After separating the compressor from its packaging it can be transported to the designated placement area.
Transfer will require the use of a fork-lift or transpallet (of suitable load-bearing capacity).
To lift the compressor use the carry handles (a).
If the compressor is to be lifted manually make sure the task is done by two workers, once again using the carry handles (a).

IMPORTANT: Proceeding with the utmost care when lifting, transferring and positioning the compressor.

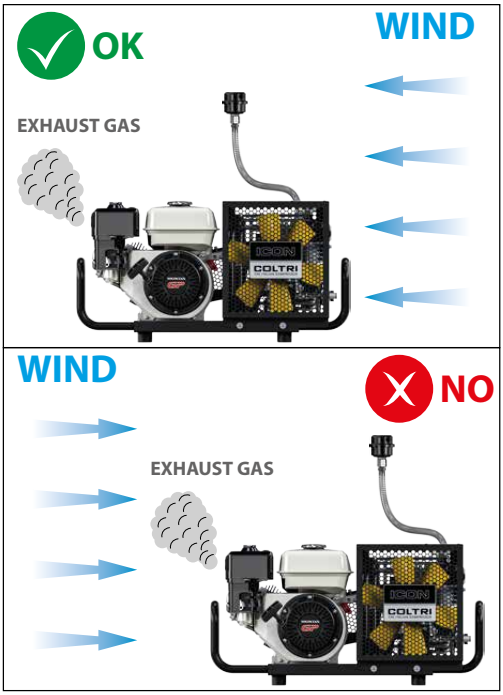
WARNING: Manual lifting of the compressor requires at least two workers and in any case no individual worker should lift more than 30 Kg.

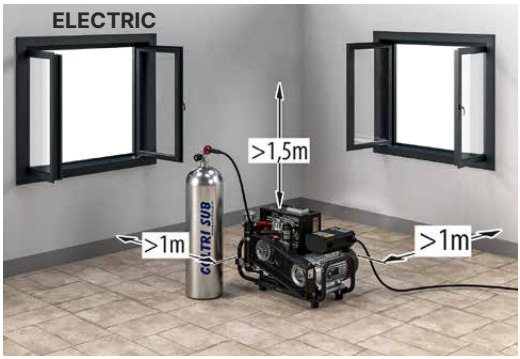
5.3 INSTALLATION

WARNING: Before proceeding with the installation tasks described below, read Chapter 3 "SAFETY REGULATIONS" carefully.

5.3.1 Positioning

- Position the compressor in the designa ted area and check it is level. For compressor dimensions please consult section 4.3 “Technical characteristics”.
- Check that the area in which the compressor is to be positioned is adequately ventilated: good air exchange (more than one window), no dust and no risk of explosion, corrosion, fire and absence of harmful or toxic fumes and gases.
- If ambient temperatures exceed +40°C air conditioning will be necessary.
- Position the compressor no closer than 1 m to surrounding walls; the gap between compressor and ceiling should be at least 1.5 m. These distances ensure proper compressor operation and proper cooling of the pumping unit.
- Make sure that lighting in the area is sufficient to identify every detail (such as the writing on the info labels); use artificial lighting where daylight is on its own insufficient.





PETROL/DIESEL

HAZARD: Combustion engine compressors must only be installed outdoors and protected from weathering. They must be positioned far from windows or in any case not in closed places in order to avoid the danger of the accumulation of exhaust gas within the premises.

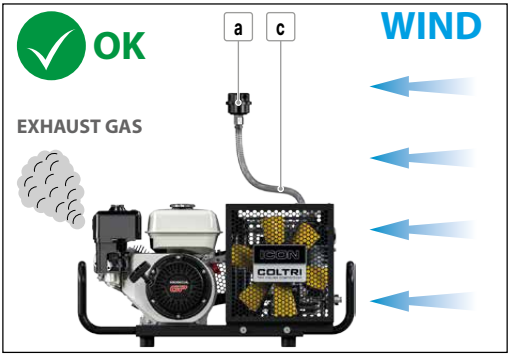
HAZARD: Check the wind direction and position the compressor so that the engine exhaust gases are not sucked in by the compressor. If the wind changes direction, reposition the compressor accordingly.

 2022 © Aerotecnica Coltri S.p.A.

5.3.2 Air intake extension connection

If the compressor is installed in an area without the necessary ventilation requisites described in section 5.3.1 “Positioning”, it will be necessary to install an air intake extension leading in from outdoors or a place with the cited ventilation requisites.

- The extension, supplied as an optional, must be connected to the intake connector.
- Remove the intake filter (a).
- Fit the extension (c).
- Fit the intake filter (a) on the other end of the extension pipe.
- Position the end of the extension with the air intake filter in a properly ventilated area sheltered from weather and exhaust fumes.
- Point the air intake against the wind.
- Check that there are no kinks or breaks along the pipe. If it is damaged replace it.



HAZARD: The air intake extension (c) must always be installed (only for SH/SK).
Check that the end of the extension is never blocked and that the air intake is always free.
During use, the compressor must always be manned by the operator to check that the exhaust gases are not sucked in by the compressor due to the change of wind direction.

WARNING: Use only a flexible pipe with internal steel braiding reinforcement so as to prevent kinks and a consequent reduction of cross-section.
Do not aspirate harmful gases or exhaust fumes.

5.3.3 Electrical connection

The compressor is supplied with an electrical lead. To connect up to the power supply just insert the plug in the mains power socket.
Check that the data on the compressor ID plate is compatible with mains power supply, especially as regards rated current and voltage.
The mains power system must have an efficient ground (earth); check that the earth resistance value complies with the protection / operational requirements of the compressor electrical system.

WARNING: Before inserting the plug, check that the electrical system complies with the standards in force in the country of installation. A proper earth (ground) system is an essential safety requisite.
An efficient compressor ground (earth) system is an essential compressor safety requisite.
The mains power connection plug must be type-approved in compliance with the relevant standards and have an ON-OFF switch (a) (not supplied).

DANGER: Check that the characteristics of the mains power are compatible with those of the compressor.

6 - USING THE COMPRESSOR

6.1 PRELIMINARY CHECKS BEFOR USING FOR THE FIRST TIME

The operator must check that the compressor is supplied with:
- use and maintenance manual;
- use and maintenance manual of internal combustion engine (where applicable).

If the compressor is sold on the customer/user must provide the purchaser with a complete, undamaged use and maintenance manual.

6.1.1 Filling with lubricating oil

At the time of delivery the compressor does not contain lubricating oil; this is supplied together with the compressor in cans contained in the packaging. For filling instructions sees section “7.6 Checking and changing the lubricating oil”.

6.1.2 Inserting filtration cartridge

At the time of delivery the compressor has no filtration cartridge fitted: the cartridge is supplied together with the compressor in a sealed vacuum-packed bag found inside the packaging.
For instructions on how to insert the filtration cartridge see section “7.11 Purifier filter”.

6.1.3 Filling the engine with lubricating oil (for internal combustion engine only)

At the time of delivery those compressor motors equipped with a combustion engine do not have any lubricating oil: this oil is supplied together with the compressor in cans found inside the packaging. For instructions on how to fill with oil see the attached engine use and maintenance manual.

 2022 © Aerotecnica Coltri S.p.A.

6.1.4 Checking for proper electrical connection (for three-phase electric motors only)

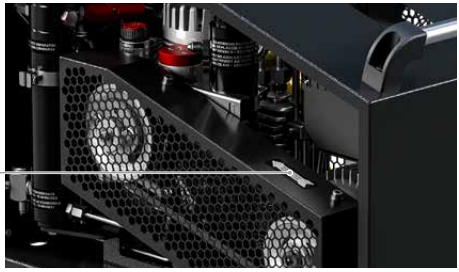
Check for proper connection of electrical phases by checking that the cooling fan rotates in the direction indicated on the arrow (a) on the fan cover.
If the direction of rotation is not as indicated by the arrow it will be necessary to disconnect the electrical power supply and invert two of the three phases on the main power lead.

DANGER: Before carrying out this task disconnect the compressor from the mains power supply.
Do not invert or disconnect the ground (earth) wire (yellow/green).

WARNING: only invert the phase cables on the plug. Never modify the electrical system of the control panel or of the motor.
The air flow generated by the fan must be directed towards the compressor and not outwardly.

ICON

MINICOMPACT



6.1.5 Refill hoses connection

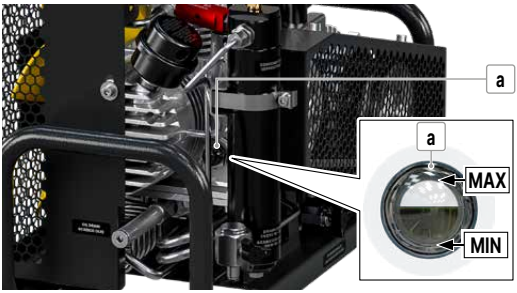
At the time of delivery the compressor has no refill hoses fitted: the refill hose is supplied together with the compressor inside the packaging.
For instructions on connection see section “7.10 Hose replacement”.

6.2 CHECKS TO BE RUN AT THE START OF EACH WORKING DAY

Inspect the exterior of the compressor (couplings, pipes, pneumatic components etc.) and check for any oil leaks. Replace parts where necessary or contact AEROTECNICA COLTRI.

6.2.1 Lubricating oil level check

Check that the lubricating oil level (a) is within acceptable limits (MIN.- MAX.).
Note that an excessive quantity of oil can cause infiltrations in the cylinders and leave deposits on the valves while too low a level prevents proper lubrication and could cause engine seizure.
If the oil level is not within the minimum and maximum limits top up or drain as described in section “7.6 Changing the lubricating oil”.



6.2.2 Checking that the refill flex hoses are in good condition

Inspect the refill hoses and make sure there are no cuts, holes, abrasions, leaks etc. If necessary replace with new hoses.

6.2.3 Fuel level check

To check the fuel level unscrew the cap (a), check that there is fuel and re-close the cap (a).
If a top-up is necessary refer to "7.7 Checking fuel level and topping up".

SH (HONDA)

SK (KOHLER)

DANGER: When topping up the fuel level make sure you do not spill any fuel as this could cause a fire. If fuel is spilt it must be wiped up immediately.
The fuel is flammable: therefore, never use naked flames when refuelling and do not use materials than can generate sparks.
Use protective gloves when topping up the fuel level.
Always make sure the fire extinguisher is at hand when topping up the fuel level.

6.2.4 Checking the safety valves

The final safety valve protects bottles and the compressor by excessive pressure; the valve setting is made at the time of testing the compressor.
The safety valve are pre-adjusted to:

NOMINAL OPERATING PRESSURE	SAFETY VALVE	
	WITHOUT PRESSURE SWITCH	WITH PRESSURE SWITCH
232 bar 3300 PSI		
	6-05-015/3/232	6-05-015/3/250
300 bar 4300 PSI		
	6-05-015/3/300	6-05-015/3/330
330 bar 4700 PSI		
	6-05-015/3/330	-

The safety valve must be tested every 50 working hours of the compressor.
To check the safety valve:
After attaching the coupling to the bottle start the compressor with the bottle valves closed.
Once you have checked, using the gauge, that the safety valve trips properly at maximum working pressure, open the valves and start the refill.
Compressor with pressure switch for automatic shutdown:
check on the gauge that the pressure switch switches off the compressor at the set pressure of the pressure switch.

IMPORTANT: The safety valves must be replaced every 5 years or 1000 hours.

DANGER:
Tampering with the safety valve to increase the pressure setting is strictly forbidden.
Tampering with the safety valve can seriously damage the compressor, cause serious injury to personnel and renders the warranty null and void.

 2022 © Aerotecnica Coltri S.p.A.

Should the safety valve fail to work properly contact the AEROTECNICA COLTRI assistance service.

6.2.5 Storing technical documentation

The use and maintenance manual and its appendices must be stored carefully and must always be kept where they can be accessed easily for immediate consultation.

WARNING: The use and maintenance manual is an integral part of the compressor and must always be handed over in the event of a change of ownership.

6.3 STARTING AND SHUTTING DOWN

6.3.1 Starting and shutting down with internal combustion engine

IMPORTANT: These tasks must be carried out by qualified personnel who have been trained to use the compressor.
Before starting the compressor read the attached engine use and maintenance manual carefully.

WARNING: Carbon monoxide is a toxic gas: Breathing it can cause loss of consciousness and death. Avoid areas or actions that will expose people to carbon monoxide.

IMPORTANT: When using the compressor with a petrol or diesel engine the accelerator should be set to the maximum speed, do not operate the engine at low speed or the accelerator set to minimum.

Before starting the engine open the condensate discharge points (f) to prevent a “strained” start.
- shift the fuel lever (a) to ON.
- if the engine is cold shift the air lever (b) to the closed position.
- if the engine is hot the choke (b) must be in the open position.
- shift the accelerator lever (c) about a 1/3 of the way from its minimum position.
- turn the shutdown switch to the ON position.
- gently pull the starter handle (d) until the cord is taut then tug it sharply.
- re-accompany the handle gently back to its original position to prevent damage to the start mechanism.
- repeat the procedure if necessary.
- if the air lever was in the closed position at the start gradually shift it to the open position as the engine warms up.
- to stop the engine in the event of an emergency turn the shutdown switch (e) to the OFF position.
- to stop the engine under routine working conditions shift the accelerator lever to MIN.
- turn the shutdown switch (e) to the OFF position.
- shift the fuel valve lever (a) to OFF.

6.3.2 Starting and shutting down with electric motor

IMPORTANT: These tasks must be carried out by qualified personnel who have been trained to use the compressor.

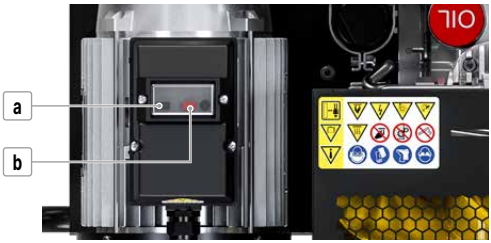
IMPORTANT: For models with three-phase electric motor check that the direction of rotation of the electric motor is as indicated by the arrow on the cover (if it is not refer to "6.1.4 Checking for proper electrical connection").

Before starting the engine open the condensate discharge (c) points to prevent a "strained" start.
- Check the voltage and that there is a proper earth contact.
- connect the compressor up to the mains power supply.
- press the start pushbutton (a), ON position.
- close the condensate discharge points.

To switch the motor off again press the start pushbutton (b), OFF position (red pushbutton).

EH (SINGLE PHASE)

ET (THREE PHASE)



IMPORTANT: For models with three-phase electric motor, use the compressor for a maximum period of 100 minutes continuous, then turn off the compressor at least 30 minutes for cooling.

6.3.3 Automatic shutdown with pressure switch

The compressor can be equipped with a pressure switch (a) so that it shuts down automatically when it reaches the pressure set by the manufacturer.
When the set pressure is reached the compressor stops.

6.4 TANK REFILL

IMPORTANT: If an emergency situation arises during refill shut down the compressor immediately (see "6.3 Starting and shutting down").
The compressor is nevertheless equipped with a safety system that shuts it down automatically when:
- **Comes into operation the safety valve without shutting down the compressor.**
- **The pressure setting on the pressure switch has been reached.**
- **The electrical power supply is temporarily cut.**
- **The electric motor overload device is tripped.**

Following an emergency shutdown always make sure the cause of the emergency has been eliminated before proceeding with another refill.

IMPORTANT: During refill the operator must be in the work area.

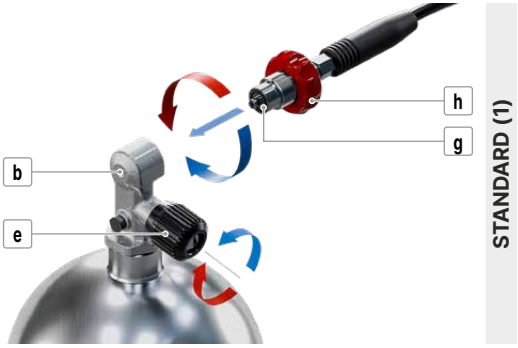
2022 © Aerotecnica Coltri S.p.A.

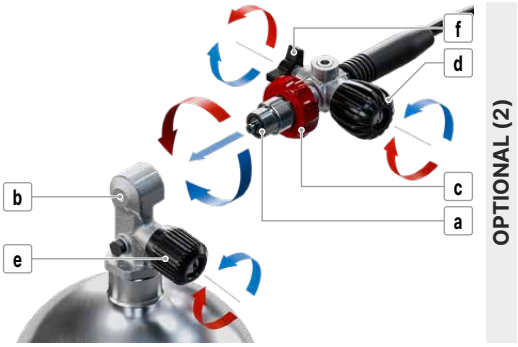
WARNING: During bottle refill those not involved in the refill procedure must maintain a safety distance of at least 3 metres. Also, it is forbidden to disconnect the hoses from the fittings or the fill valve while the machine is under pressure.

To refill bottles with standard connectors (1):
- Fit the hose connector (g) to the bottle valve (b);
- Screw in the fixing knob (h) until it is completely tightened;
- Start the compressor;
- Open the valve (e) by rotating it anticlockwise;
- When the refill has been completed shut the compressor down;
- Close the valve (e) by rotating it clockwise;
- Open the condensate drain valves (i) (see "7.9 Condensate discharge") until all the residual air in the compressor has been expelled;
- Unscrew the fixing knob (h) by rotating it anticlockwise;
- Disconnect the bottle coupling.

To refill bottles with DRV connectors (2):
- Fit the hose connector (a) to the bottle valve (b);
- Screw in the fixing knob (c) until it is completely tightened;
- Check that the bleed valve (f) is closed by rotating it clockwise;
- Open the valve (d) by rotating it anticlockwise;
- Start the compressor;
- Open the valve (e) by rotating it anticlockwise;
- When the refill has been completed shut the compressor down;
- Close valves (d) and (e) by rotating them clockwise;
- Open the bleed valve (f) by rotating it anticlockwise until all the residual air in the fitting has been expelled;
- Unscrew the fixing knob (c) by rotating it anticlockwise;
- Disconnect the bottle coupling.

The available bottle refill connectors are:



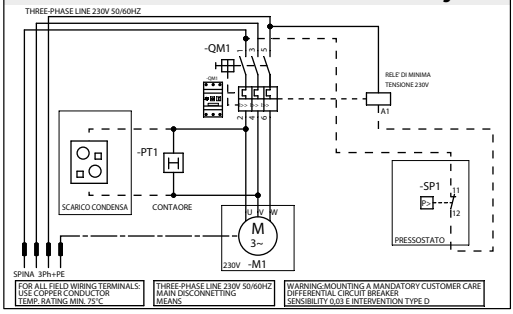


WARNING: Use only tested bottles (as proven by a test stamp and/or certificate).
The working and bottle refill pressures are shown on the bottles themselves.
It is forbidden to refill them at a pressure greater than that indicated.

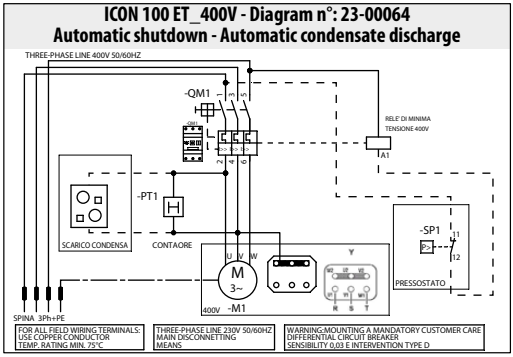
Check that the bottles to be refilled are in good condition: they must have been tested by the relevant authorities (stamped and/or certified). Run a visual check on the exterior.
Check that the refill hose and relevant fitting are in good condition.
After being refilled do not empty the bottles completely, not even during winter storage or long periods of inactivity: this will stop humidity getting in.

DANGER: Should bottles show evident signs of internal/extern al corrosion, do not refill them even if they have been tested.

ICON 100 ET_230V - Diagram n°: 23-00065
Automatic shutdown - Automatic condensate discharge

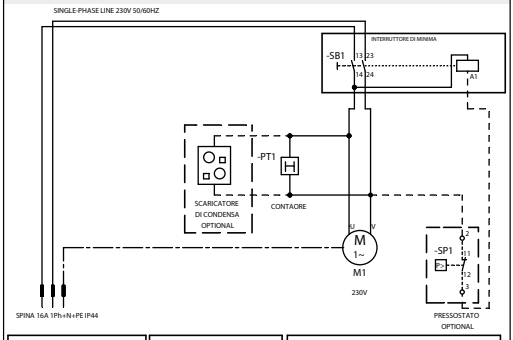


ICON 100 ET_400V - Diagram n°: 23-00064
Automatic shutdown - Automatic condensate discharge



6.5 OPTIONAL

ICON 100 EM - Diagram n°: 23-00063
Automatic shutdown - Automatic condensate discharge



6.5.1 Automatic shutdown with pressure switch

The compressor can be equipped with a pressure switch (a) so that it shuts down automatically when it reaches the pressure set by the manufacturer.
When the set pressure is reached the compressor stops.

 2022 © Aerotecnica Coltri S.p.A.

6.5.2 Automatic condensate discharge

If the compressor is equipped with an automatic condensate discharge, set the timer (a) with:
(b) DRAIN 5 seconds
(c) INTERVAL 7 minutes.

6.5.3 Hour counter (only model SH)

The hour counter (a) indicates the number of working hours of the
compressor: this provides a time reference for scheduled maintenance.

6.5.4 C_MONITOR monitoring system

The C_MONITOR (a) controls the following functions:
- CSAt Cartridge Saturation (expressed as a percentage)
- Hour Hours of operation
- bAtt Battery charge level (expressed as a percentage)
- SErH Service (expressed in hours)

6.5.5 Pressure maintenance valve

7 - MAINTENANCE

WARNING: Maintenance tasks must only be carried out by the AEROTECNICA COLTRI Customer Assistance Service or qualified personnel.

DANGER: Do not carry out maintenance tasks if the compressor has only just shut down; wait for the compressor to cool.
All maintenance work must be carried out with the compressor OFF and the power supply lead unplugged from the mains socket.
Depressurise the entire compressor circuit before carrying out any maintenance tasks.

To depressurise the entire compressor circuit open the drain valves (a) and (b) in sequence and collect the condensate in an appropriate recipient.

7.1 FOREWORD

To obtain the best possible performance from the compressor and ensure a long working life for all its parts it is essential that personnel follow the use and maintenance instructions with extreme diligence.
It is thus advisable to read the information below and consult the manual every time an inconvenience arises.
For further information please contact our assistance centre:

Contact the AEROTECNICA COLTRI SpA.
Maintenance Service Centre
Tel. +39 030 99 10 297
Fax. +39 030 99 10 283
e-mail: info@coltri.com

7.2 GENERAL

- Proper preservation of the compressor requires thorough cleaning.
- This type of refill station, designed and built according to the most advanced technological criteria, requires only minimum preventive and routine maintenance.
- Before carrying out any maintenance tasks, run checks and/or controls on the compressor, switch off the compressor, remove the plug from the mains socket.
- The residual pressure present in the compressor (pumping circuit) must be released.
- During disassembly and re-assembly of the compressor, always use suitable wrenches/tools so as not to damage the relevant components.
- Loosen stiff parts with a copper or plastic mallet.
- When refitting parts make sure they are clean and lubricated sufficiently.
- Compressor maintenance tasks must only be carried out by authorised personnel and recorded in the chapter “10 Maintenance register”of this manual.

7.3 UNSCHEDULED WORK

Involves repair and/or replacement of the mechanical parts of one or more compressor components:
this work normally needs doing only after some years of use. If substantial modifications are made, the manufacturer cannot be held liable for any dangers that might arise.
This work must be carried out by the assistance centre.

 2022 © Aerotecnica Coltri S.p.A.

7.4 SCHEDULED MAINTENANCE TABLE

Maintenance	Before every refill	Hours												Years			
		25	50	100	250	500	1000	1500	2000	3000	4000	5000	20000	1	5	10	15
Condensate discharge	○																
Intake filter		○		●										●			
Lubricating oil	○		●											●			
Belt wear and tension		○				●								●			
1st, 2nd, 3rd stage valves					○	●											
4th stage valves					○	●											
Condensate separator					○					●							●
HP filter					○					●							●
1st, 2nd, 3rd stage segments						●											
4th stage						●											
HP flex hoses		○				○				●					●		
Fitting/hose leak					○												
General check-up						○											
Pumping unit, general overhaul									○								
Safety valve					○							●				●	

○ = **Checking and cleaning** ● = **Change**

IMPORTANT: Maintenance interval times are indicative only and may vary according to the conditions under which the compressor is used.

7.5 TROUBLESHOOTING

Problem	Cause	Solution
• The electric motor does not start	• Phase missing	• Check fuses or condenser
• Rotation speed and flow rate decrease	• Motor power too low	• Check the motor and the line
	• The belt slips	• Restore proper belt tension
• The flow rate diminishes without rpm decreasing	• Valves not working	• Contact technical assistance
	• 4th stage piston worn	• Contact technical assistance
	• Fittings loose / leaking seals	• Check for leaks with soapy water and eliminate them
	• Intake filter clogged	• Replace
	• Intake extension kinked	• Straighten, use stiffer pipe
	• Piston or piston rings worn	• Contact technical assistance
• Air smells of oil	• Filter cartridge exhausted	• Replace
	• Piston rings worn	• Contact technical assistance
• Compressor overheats	• Direction of rotation wrong	• Correct direction of rotation
	• Cooling tubes dirty	• Contact technical assistance
	• Incomplete valve closure (causing overload of another stage)	• Contact technical assistance

7.6 CHECKING AND CHANGING THE LUBRICATING OIL

DANGER: Do not carry out these tasks if the compressor has only just shut down; wait for the compressor to cool.
Any oil spilt during the oil change could cause personnel to slip; wear protective garments and anti-slip footwear and remove any traces of oil immediately.
Both oil is classified as special wastes and must therefore be disposed of in compliance with the anti-pollution laws in force.
All maintenance work must be carried out with the compressor OFF and the power supply lead unplugged from the mains socket.

After putting the compressor into service the lubricating oil must be changed after the first 5 working hours.
The lubricating oil must be changed every 50 hours working hours or annually.

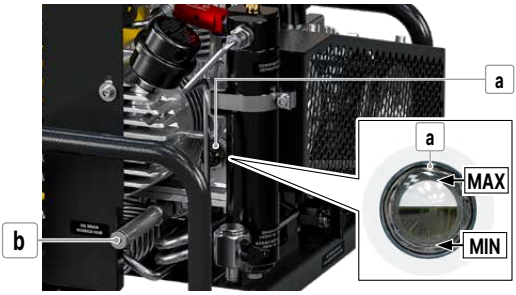
IMPORTANT: The compressor must be placed on a solid surface with a tilt of no more than 5°.

WARNING: Use only COLTRI OIL ST755. If it is impossible to find COLTRI OIL ST755 it is advisable to use a specific oil for breathable air compressors that complies with the characteristics of the table below.

 2022 © Aerotecnica Coltri S.p.A.

OIL TABLE		
Sump capacity (litres)	0,60 (600cc)	
Recommended oils	COLTRI OIL ST 755	
	RECOMMENDED OIL	
	Parameter	Requirement
	Viscosity Grade	ISO 150
	Base Oil	Synthetic
	Base type	Ester
	Performance level	DIN 51506-VLD
	Primary applications	Lubricant suitable for: Breathing air (ISO EN 12021), Nitrox, Oxygen enriched air up to max 40% O2
	Foaming (ASTM D892)	0/0 (all three sequences)
	Flash Point (ASTM D92)	250°C
	Pour Point (ASTM D97)	< -30°C
	Additives content	Antiwear, Antioxidant, Antirust, Antifoam

- unscrew the cap (c);
- open the plug (b) and let all the oil flow out;
- close the drain plug (b);
- open the cap with the rod (d);
- fill the oil sump with 0.6 litres of oil from top oil plug (see “Oil table”);
- screw the cap (c);
- close the cap with the rod (d);
- switch on the compressor and run it depressur area for 30 seconds;
- switch off the compressor and wait 5 minutes;
- check the oil level (a); if it is not between the min. and max. limits on the dipstick (a) proceed with the tasks described in paragraph “Checking the oil level”.



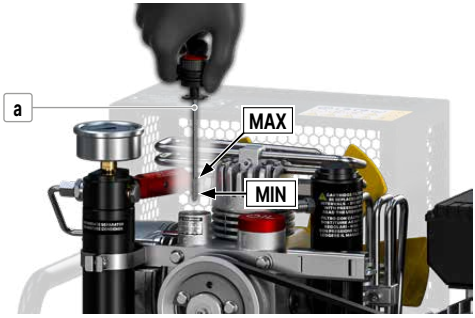
Checking the oil level

The oil level must be checked every 5 working hours of the compressor.

The oil level must be between the minimum and the maximum shown on the oil level indicator (a).

Note that an excessive quantity of oil can cause infiltrations in the cylinders and leave deposits on the valves while too low a level prevents proper lubrication and could cause engine seizure.

If the oil level is not within the minimum and maximum limits top up or drain as described in “Changing the lubricating oil”.



Changing the lubricating oil

The lubricating oil must be changed after the first 5 working hours (running in) then every 50 working hours or annually.

To change the oil proceed as described:

- position a recipient under the drain plug (b) so that the oil flows into the exhausted oil recipient (recipient capacity of at least 1 litre required);

7.7 CHECKING FUEL LEVEL AND TOPPING UP

IMPORTANT: Before carrying out any work on the engine consult the attached engine use and maintenance manual.

The fuel level must be checked at the start of every working day.
To check the fuel level:
- unscrew the cap (a);
- check that there is fuel inside the tank (b);
- re-tighten the cap (a).

To top up the fuel level:
- unscrew the cap (a);
- top up with fuel: do not fill to the brim of the tank (b) but leave a space for expansion;
- re-tighten the cap (a).

SH (HONDA)

SK (KOHLER)

DANGER: When topping up the fuel level make sure you do not spill any fuel as this could cause a fire. If fuel is spilt it must be wiped up immediately.
The fuel is flammable: therefore, never use naked flames when refuelling and do not use materials than can generate sparks.
Use protective gloves when topping up the fuel level.
Always make sure the fire extinguisher is at hand when topping up the fuel level.

7.8 CHANGING THE INTAKE FILTER

DANGER: Do not carry out these tasks if the compressor has only ju st shut down; wait for the compressor to cool. All maintenance work must be carried out with the compressor OFF and the power supply lead unplugged from the mains socket.

After putting the compressor into service the intake filter must be changed after the first 50 working hours.
The air filter must then be changed every 100 working hours or annually.
To change the filter proceed as follows:
- turn the air filter cover (a) by rotating it clockwise;
- remove the air filter cartridge (b);
- replace the cartridge with a new one;
- re-close the cover (a): screw it back on anticlockwise.

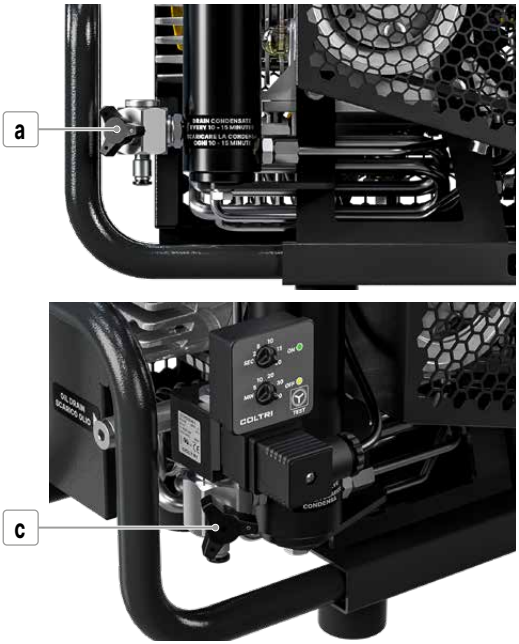
IMPORTANT: If the compressor is used in a dusty environment the filter change interval should be reduced to every 50 hours.

 2022 © Aerotecnica Coltri S.p.A.

7.9 CONDENSATE DISCHARGE

DANGER: Do not carry out these tasks if the compressor has only ju st shut down; wait for the compressor to cool. All maintenance work must be carried out with the compressor OFF and the power supply lead unplugged from the mains socket.

Condensation accumulates in the condensate separator; the condensate must be discharged every 10-15 minutes of compressor use.
To discharge the condensate open the drain valve (a) and collect the condensate in an appropriate recipient.
Close the valves.
For compressors with automatic condensate discharge the condensate must be collected at the discharge point (c) in appropriate recipients.
An outflow of condensate water with lubricating oil is normal during refills: the quantity will depend on the level of humidity in the air.
Condensate must be disposed of according to the instructions shown in section “9.1 Waste disposal”.



IMPORTANT: Every 15 years or ever 3000 hours it will be necessary to change the condensate separator body.

IMPORTANT: Every 5 years or ever 3000 hours it will be necessary to change the drain valves.

DANGER: You MUST drain the condensate at the specified intervals. Failure to observe this instruction can place staff in serious danger and could cause serious damage or injury.

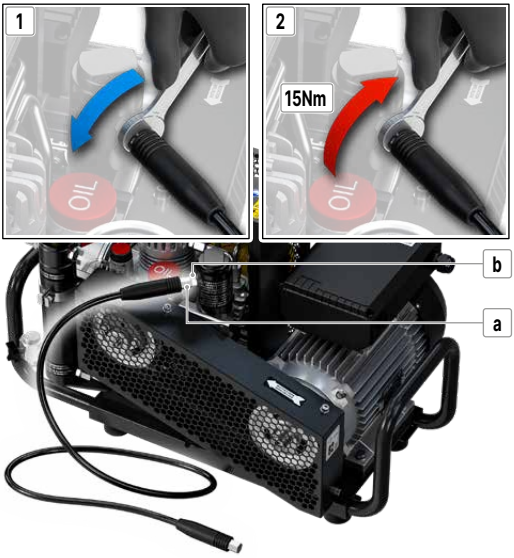
7.10 CHANGING THE FLEX HOSES

IMPORTANT: The hoses must be changed periodically (every 5 years or ever 3000 hours) or when they show signs of abrasion/wear/damage.
The bending radius of the hoses must not be less than 250 mm.

DANGER:
Do not carry out these tasks if the compressor has only just shut down; wait for the compressor to cool.
All maintenance work must be carried out with the compressor OFF and the power supply lead unplugged from the mains socket.
Vent the air from the compressor before carrying out any maintenance tasks.
Tank refill pressure is very high; therefore, before refilling the tanks check that the hoses are perfectly connected and in good condition. Check also that the valves on any unused hoses are closed properly so as to prevent the dangers that derive from hose whiplash.
When the tanks are being refilled unauthorised personnel must remain at a distance of at least 3 metres.
It is strictly forbidden to disconnect the hoses from the fittings or refill valve when the machine is under pressure.

To change the bottle refill hose proceed as follows:

- disconnect the bottle refill hoses by unscrewing the fitting (a) at its extremity (14mm wrench);
- replace the old hose with a new one;
- screw the hose onto the connector (b);
- use a dynamometric wrench to tighten the hoses on the compressor with a torque of 15 Nm.

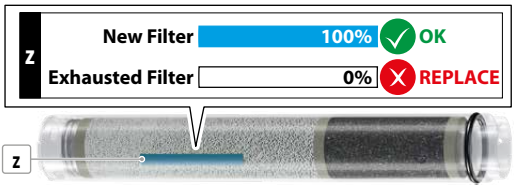


7.11 PURIFIER FILTER

WARNING: Constant and precise maintenance on the components of the filtering system, as described in this manual, guarantees that the quality of the air exiting the compressor is in compliance with the requirements specified by the EN12021 standard.

IMPORTANT: If the compressor is used in an environment where CO (exhaust fumes) may be present it is compulsory to use CO-fixing filtration cartridges; these can be supplied on request.

The filtration cartridge must be replaced at intervals calculated on the basis of the characteristics of the environment in which the compressor is locatede, or on an annual basis. To calculate these intervals refer to the table below.
The filter cartridge must in any case be replaced before the air develops an unpleasant smell or when the litmus test (z) inside the cartridge turns white or a colour other than blue.



DANGER: Do not carry out these tasks if the compressor has only just shut down; wait for the compressor to cool.
All maintenance work must be carried out with the compressor OFF and the power supply lead unplugged from the mains socket.
Depressurise the entire compressor circuit before carrying out any maintenance tasks.
To depressurise the entire compressor circuit proceed as follows in the section "7 - Maintenance".

 2022 © Aerotecnica Coltri S.p.A.

DANGER: You MUST replace the filtration cartridge at the specified intervals. Failure to observe this instruction can place staff in serious danger and could cause serious damage or injury.

IMPORTANT: It is essential that there be a filtration cartridge (b) inside the purifier filter (d) every time the compressor is used.

IMPORTANT: Every 15 years or ever 3000 hours it will be necessary to change the filter body (d).

Filter cartridge replacement frequency calculation table *

Temperature		Filter duration (work hours)	
°C	°F	50 l/min	100 l/min
40	104	8	4
30	86	12	6
20	**68**	**20**	**10**
10	50	30	15
0	32	56	28
-5	23	88	44

* The values shown in the table were obtained with pressure maintenance valve calibrated at 200bar.

SC000340 Active carbon/Molecular sieve

SC000340/SM Molecular sieve

SC000340/CARB Active carbon

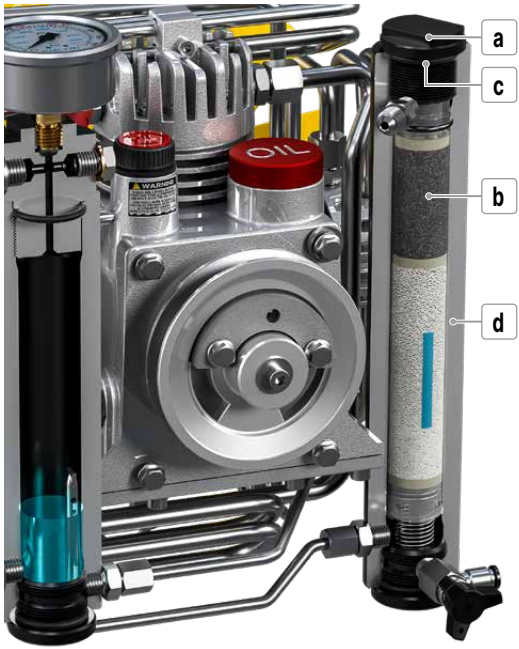
SC000340/CO-CATALYST Hopkalite/Active carbon/Molecular sieve

WARNING: The filtration cartridge are classified as special waste: they must be disposed of in compliance with the anti-pollution standards in force.

Changing the filtration cartridge

To change the filtration cartridge (b) proceed as follows:

- vent all the compressed air inside the circuit;
- unscrew the filter cap (a);
- remove the filtration cartridge (b) and replace it with a new one;
- change the O-ring (c) on the cap (a) every time the filter is changed;
- close the filter cap (a).



7.12 TRANSMISSION BELT

DANGER: Do not carry out these tasks if the compressor has only just shut down; wait for the compressor to cool. All maintenance work must be carried out with the compressor OFF and the power supply lead unplugged from the mains socket.

Checking transmission belt tension / changing belts

Belt tension must be checked monthly.

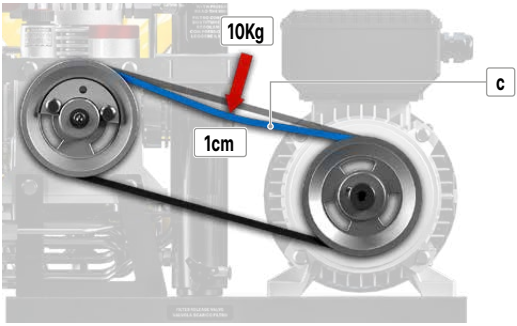
The transmission belt must be replaced annually or every 500 working hours of the compressor.

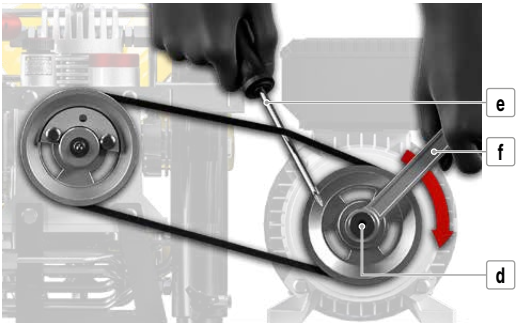
To check belt tension remove the cover (a) by removing the fixing screws (b) and exert a pressure of approximately 10 Kg on the belt (c); check that the belt does not flex by more than 1 cm with respect to its original position. If the belt is worn or close to its scheduled time for replacement change it with a new one.

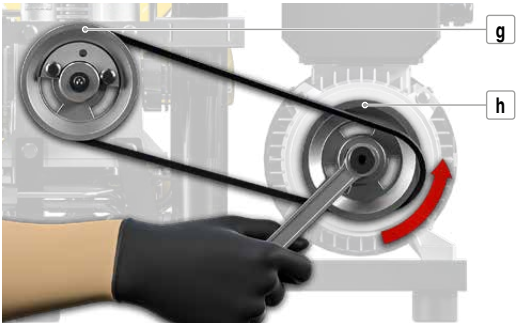
Should it flex more than this:

- put a screw with washer (d) on the motor shaft;
- Insert a screwdriver (e) between the motor pulley and the belt;
- with a wrench (f) turn the crankshaft until the belt comes out of the pulley;
- replace the belt with a new one;
- insert the belt on the groove of the compressor pulley (g) and partially on the groove of the motor pulley (h);
- turn the crankshaft until the belt enters the seat of the two pulleys (g-h) taking care not to injure your hands;
  - remove the screw with washer (d) from the motor shaft;
- re-check belt tension;
- re-fit the cover (a).

If the tension of the new belt still fails to comply with the necessary requisites contact AEROTECNICA COLTRI assistance service.



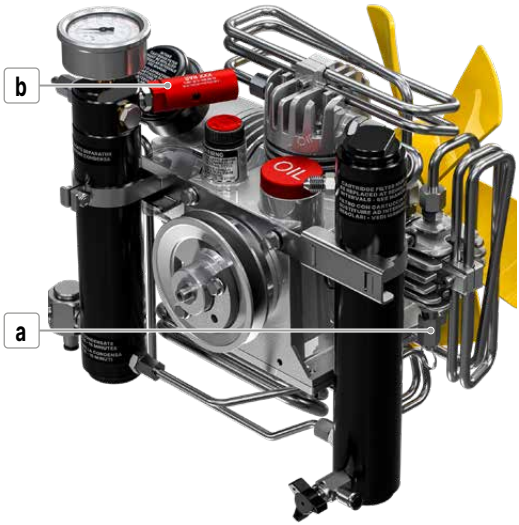




DANGER: These operations are very dangerous. Be extremely careful not to injure your hands.

 2022 © Aerotecnica Coltri S.p.A.

7.13 SAFETY VALVES



a	b
120 bar / 1740 psi	232-300-330 bar / 3300-4300-4700 psi

IMPORTANT: The safety valves (a-b) must be replaced every 10 years or 5000 hours.

DANGER:
Tampering with the safety valve to increase the pressure setting is strictly forbidden.
Tampering with the safety valve can seriously damage the compressor, cause serious injury to personnel and renders the warranty null and void.

Should the safety valve fail to work properly contact the AEROTECNICA COLTRI assistance service.

8 - STORAGE

Should the compressor not be used, it must be stored in a dry sheltered area at an ambient temperature of between +5 °C and +40 °C.
Store the compressor away from sources of heat, flames or explosive.

8.1 STOPPING THE MACHINE FOR A BRIEF PERIOD

If you do not intend to use the compressor for a brief period proceed with general cleaning.

8.2 STOPPING THE MACHINE FOR A LONG PERIOD

If you do not intend to use the compressor for a long period, extract the filtration cartridge.
Run the compressor for a few minutes without actually filling bottles so as to flush out all the residual condensate. Stop the compressor, disassemble the intake filter, restart the compressor and spray a few drops of oil into the air intake hole so that a light film of lubricant is aspirated and penetrates the interior of the compressor. Stop the compressor and refit the air intake filter. Clean the external parts: eliminate any moisture, salt or oil deposits. Protect the compressor from dust and water by storing it in a clean, dry place.
Switch off the machine via the main switch and remove the plug from the mains power socket.
Proceed with a thorough general clean of all machine parts.

For combustion engine compressors, if the compressor must stop for more than 1 month, remove the fuel from the tank, close the fuel valve and start the engine to idle until the residual internal fuel runs out.

During machine downtimes it is advisable to run the compressor for 20 minutes every 15 days.

9 - DISMANTLING AND PUTTING OUT OF SERVICE

Should you decide not to use the compressor or any of its parts any longer you must proceed with its
dismantling and putting out of service.
These tasks must be carried out in compliance with the standards in force.

WARNING: Should the compressor, or a part of it, be out of service its parts must be rendered harmless so they do not cause any danger.

WARNING: Bear in mind that oil, filters or any other compressor part subject to differentiated waste collection must be disposed of in compliance with the standards in force.

9.1WASTE DISPOSAL

Use of the compressor generates waste that is classified as special. Bear in mind that residues from industrial, agricultural, crafts, commercial and service activities not classified by quality or quantity as urban waste must be treated as special waste. Deteriorated or obsolete machines are also classified as special waste.
Special attention must be paid to filtration cartridge as they cannot be included in urban waste: observe the waste disposal laws in force where the compressor is used.
Bear in mind that it is compulsory to record loading/unloading of exhausted oils, special wastes and toxic-harmful wastes that derive from heavy/light industry processes. Exhausted oils, special wastes and toxic-harmful waste must be collected by authorised companies.
It is especially important that exhausted oils be disposed of in compliance with the laws in the country of use.

9.2 DISMANTLING THE COMPRESSOR

IMPORTANT: Disassembly and demolition must only be carried out by qualified personnel.

Dismantle the compressor in accordance with all the precautions imposed by the laws in force in the country of use. Before demolishing request an inspection by the relevant authorities and relative report.
Disconnect the compressor from the electrical system.
Eliminate any interfaces the compressor may have with other machines, making sure that interfaces between remaining machines are unaffected.
Empty the tank containing the lubricating oil and store in compliance with the laws in force.
Proceed with disassembly of the individual compressor components and group them together according to the materials they are made of: the compressor mainly consists of steel, stainless steel, cast iron, aluminium and plastic parts.
Then scrap the machine in compliance with the laws in force in the country of use.

IMPORTANT: At every stage of demolition observe the safety regulations contained in this manual carefully.

 2022 © Aerotecnica Coltri S.p.A.

10 - MAINTENANCE REGISTER

10.1 ASSISTANCE SERVICE

Customers continue to receive assistance after the purchase of a compressor.
To this end AEROTECNICA COLTRI has created an assistance network covering the entire country.

IMPORTANT: Our qualified technicians are at your disposal at any time to carry out maintenance work or repairs; we use only original spare parts so as to ensure quality and reliability.

10.2 SCHEDULED MAINTENANCE

The scheduled maintenance programme is designed to keep your compressor in perfect working order.
Some simple tasks, described in this manual, can be carried out directly by the customer; others, instead, require that the work be carried out by trained personnel. For the latter we recommend you always contact our assistance network.
This section provides a simple tool with which to request assistance and register completed scheduled maintenance work.
Start-up and maintenance checks/tasks, once completed by our qualified technician, are registered in this maintenance chapter by way of an official stamp, signature and inspection date; the number of working hours is also registered.
The maintenance schedules/coupons easily let you know when our assistance service should be contacted to carry out work.

10.3 USING THE COMPRESSOR UNDER HEAVY-DUTY CONDITIONS

Where compressors are used in particularly difficult conditions (high levels of pollution, presence of solid particulate in suspension etc.), scheduled maintenance tasks must be carried out more frequently as per the advice given by our assistance network.

10.4 THE CUSTOMER CARE CENTRE

Our qualified technicians are constantly in contact with the head offices of our company where there is an assistance network coordination and support centre, better known as the Customer Care Centre. To contact us:

Telephone: +39 030 9910301
+39 030 9910297
Fax: +39 030 9910283
http: coltri.com
e-mail: info@coltri.com

CONTACT US

10.5 SCHEDULED MAINTENANCE REGISTRY COUPONS

TYPE OF WORK AND NOTES	"ASSISTANCE" SERVICE STAMP	
	TECHNICIAN'S SIGNATURE	DATE

TYPE OF WORK AND NOTES	"ASSISTANCE" SERVICE STAMP	
	TECHNICIAN'S SIGNATURE	DATE

TYPE OF WORK AND NOTES	"ASSISTANCE" SERVICE STAMP	
	TECHNICIAN'S SIGNATURE	DATE

TYPE OF WORK AND NOTES	"ASSISTANCE" SERVICE STAMP	
	TECHNICIAN'S SIGNATURE	DATE

 2022 © Aerotecnica Coltri S.p.A.

TYPE OF WORK AND NOTES	"ASSISTANCE" SERVICE STAMP	
	TECHNICIAN'S SIGNATURE	DATE

TYPE OF WORK AND NOTES	"ASSISTANCE" SERVICE STAMP	
	TECHNICIAN'S SIGNATURE	DATE

TYPE OF WORK AND NOTES	"ASSISTANCE" SERVICE STAMP	
	TECHNICIAN'S SIGNATURE	DATE

TYPE OF WORK AND NOTES	"ASSISTANCE" SERVICE STAMP	
	TECHNICIAN'S SIGNATURE	DATE

NOTE

 2022 © Aerotecnica Coltri S.p.A.

Aerotecnica Coltri S.p.A.

Via dei Colli Storici, 177
25015 Desenzano del Garda
Brescia - Italy

Tel. +39 030 9910301
+39 030 9910297

info@coltri.com

QUALITY SYSTEM CERTIFICATION DNV ISO 9001

ENVIRONMENTAL SYSTEM CERTIFICATION DNV ISO 14001

Visit our
showroom in
Virtual Reality

coltri.com

coltri.com/showroom

COLTRI® COMPRESSORS