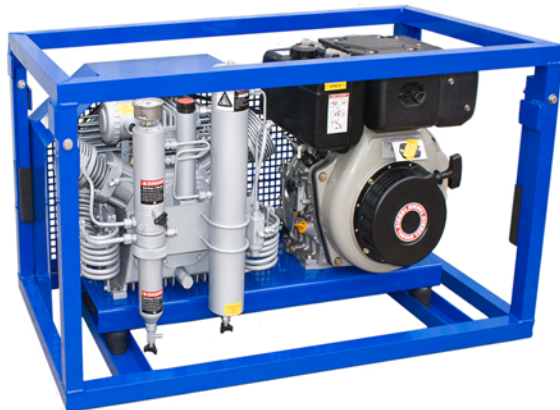


AEROTECHNICA COLTRI®

www.nuvair.com



MCH 13-16 Electric Standard
MCH 13-16 Honda Gas Standard
MCH 13-16 Yanmar Diesel Standard
MCH 13-16 Kohler Diesel Standard
MCH 13-16 Electric Tech
MCH 13-16 Honda Gas Tech
MCH 13-16 Yanmar Diesel Tech
MCH 13-16 Kohler Diesel Tech
MCH 13-16 Electric Mini Tech
MCH 13-16 Honda Gas Mini Tech
MCH 13-16 Yanmar Diesel Mini Tech
MCH 13-16 Kohler Diesel Mini Tech

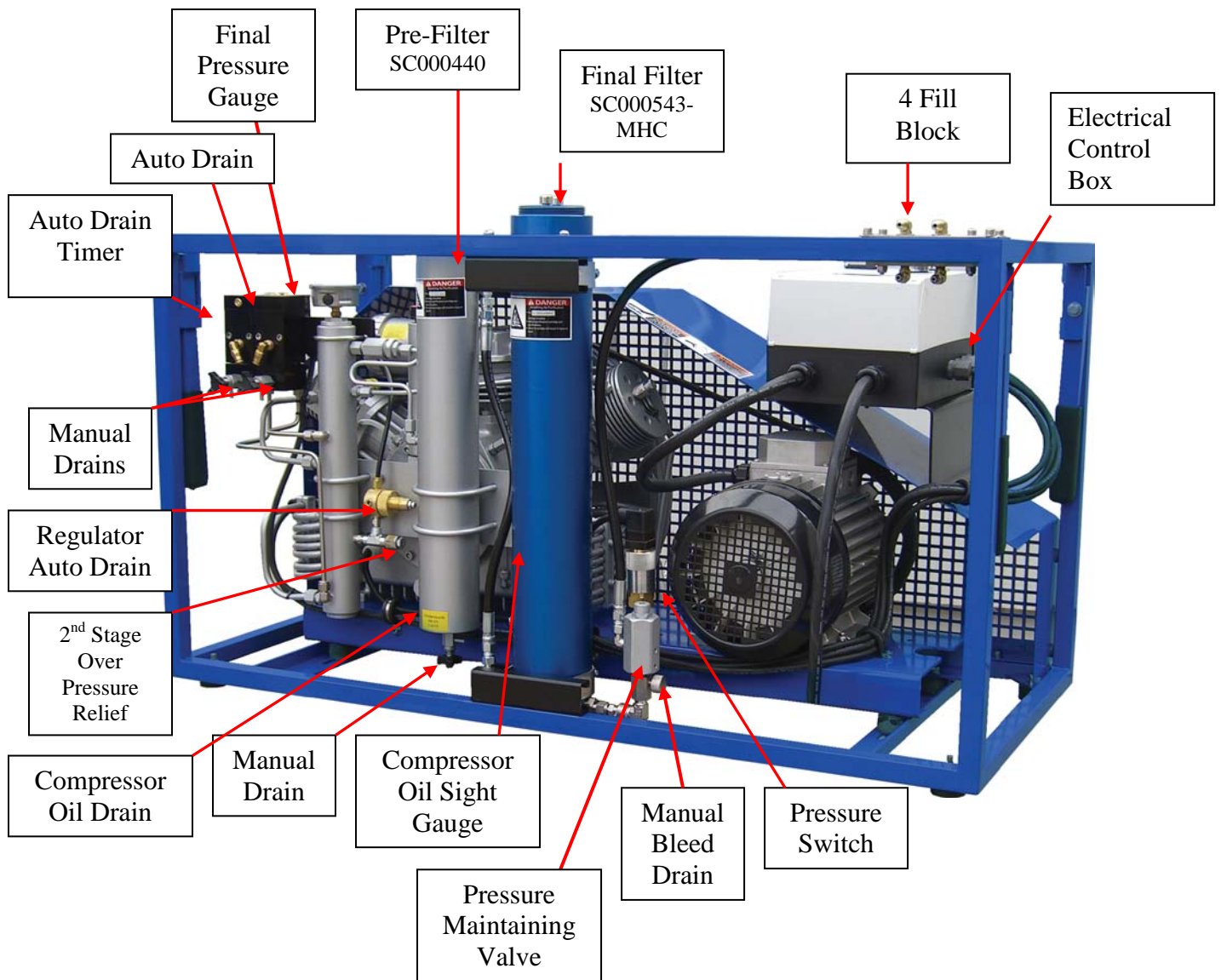
USE AND MAINTENANCE MANUAL

MCH 13-16

Standard, Tech, and MiniTech
with Electric, Gas or Diesel Motor

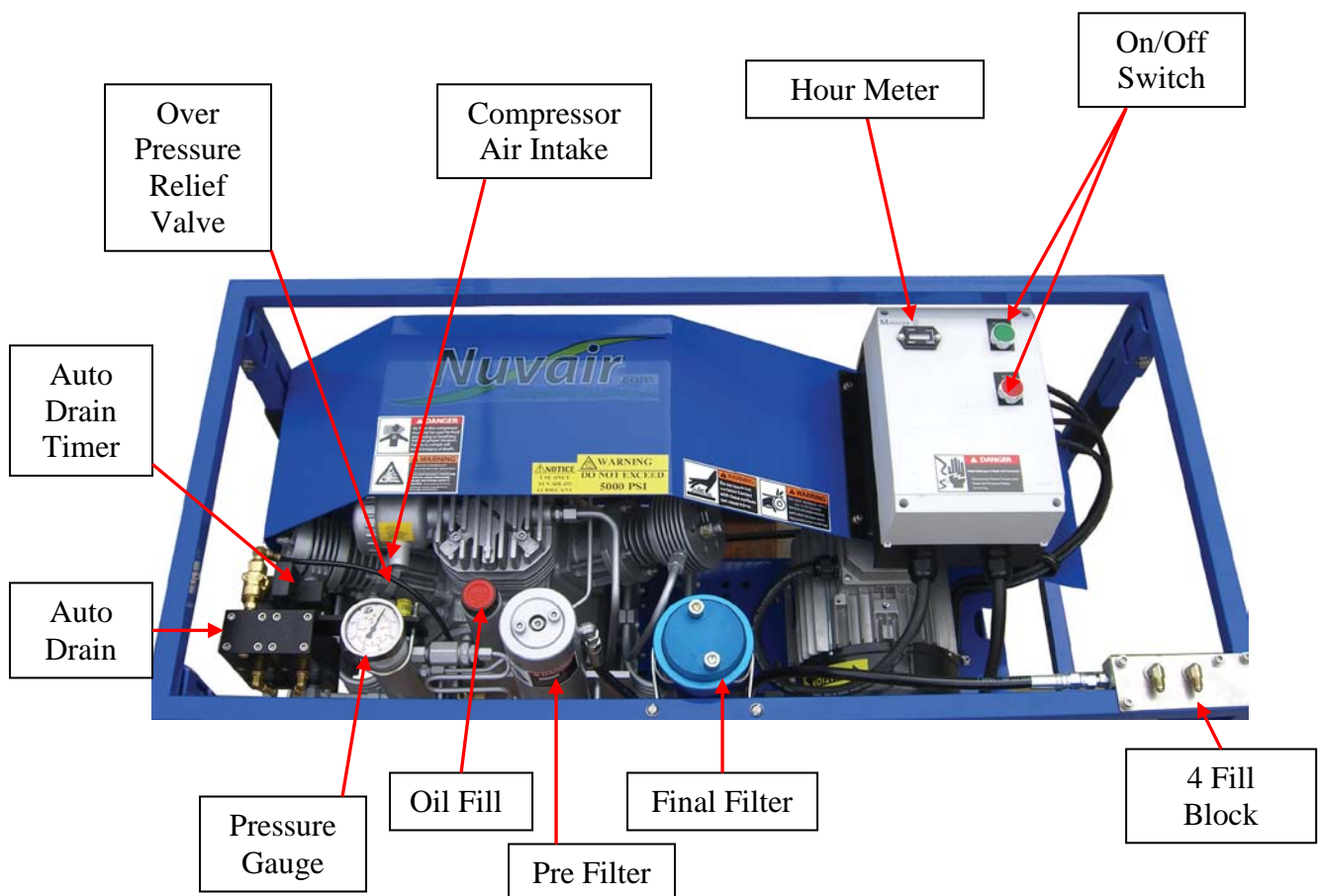
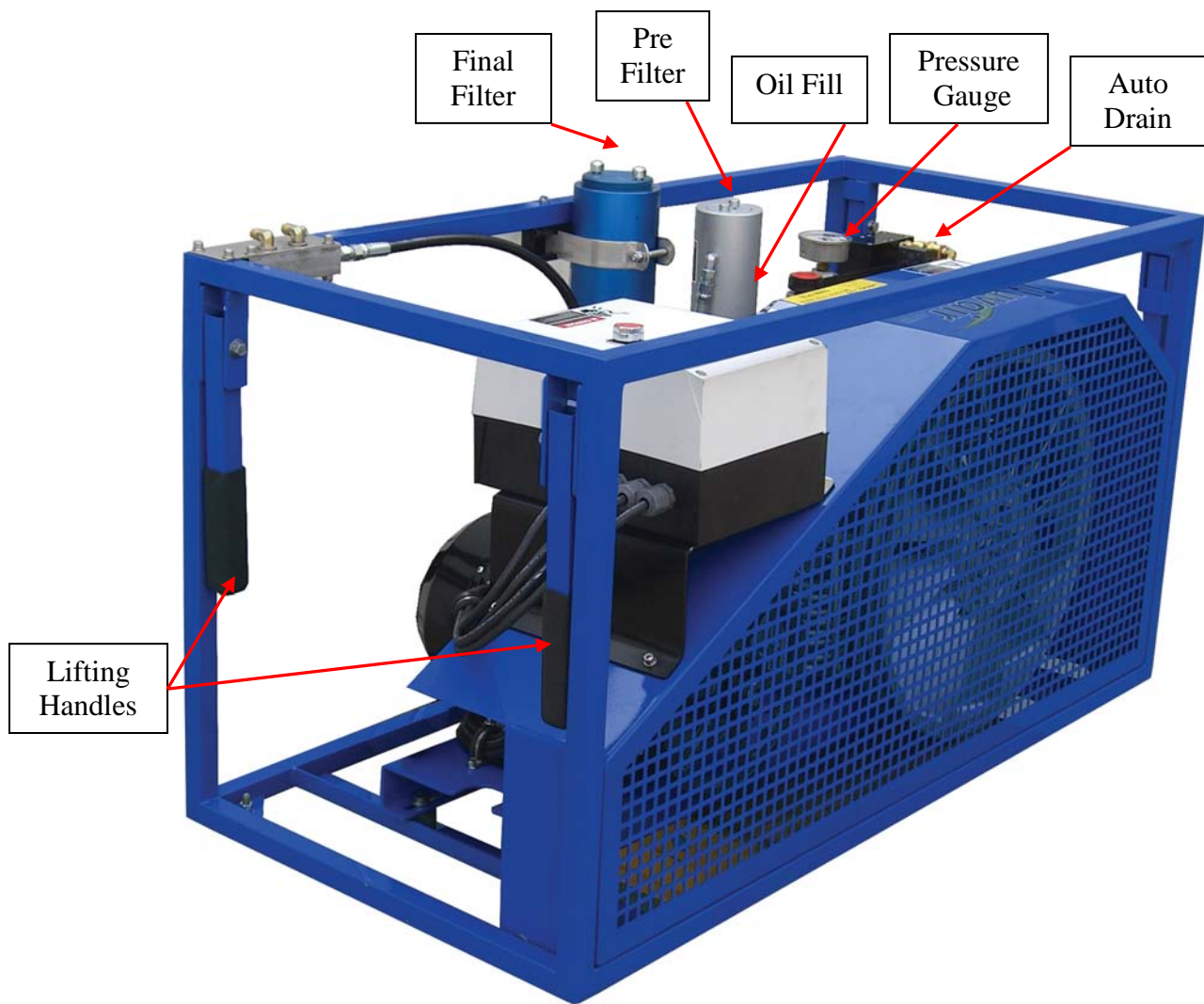
High pressure compressors for pure breathing air and technical gases

Electric Mini Tech

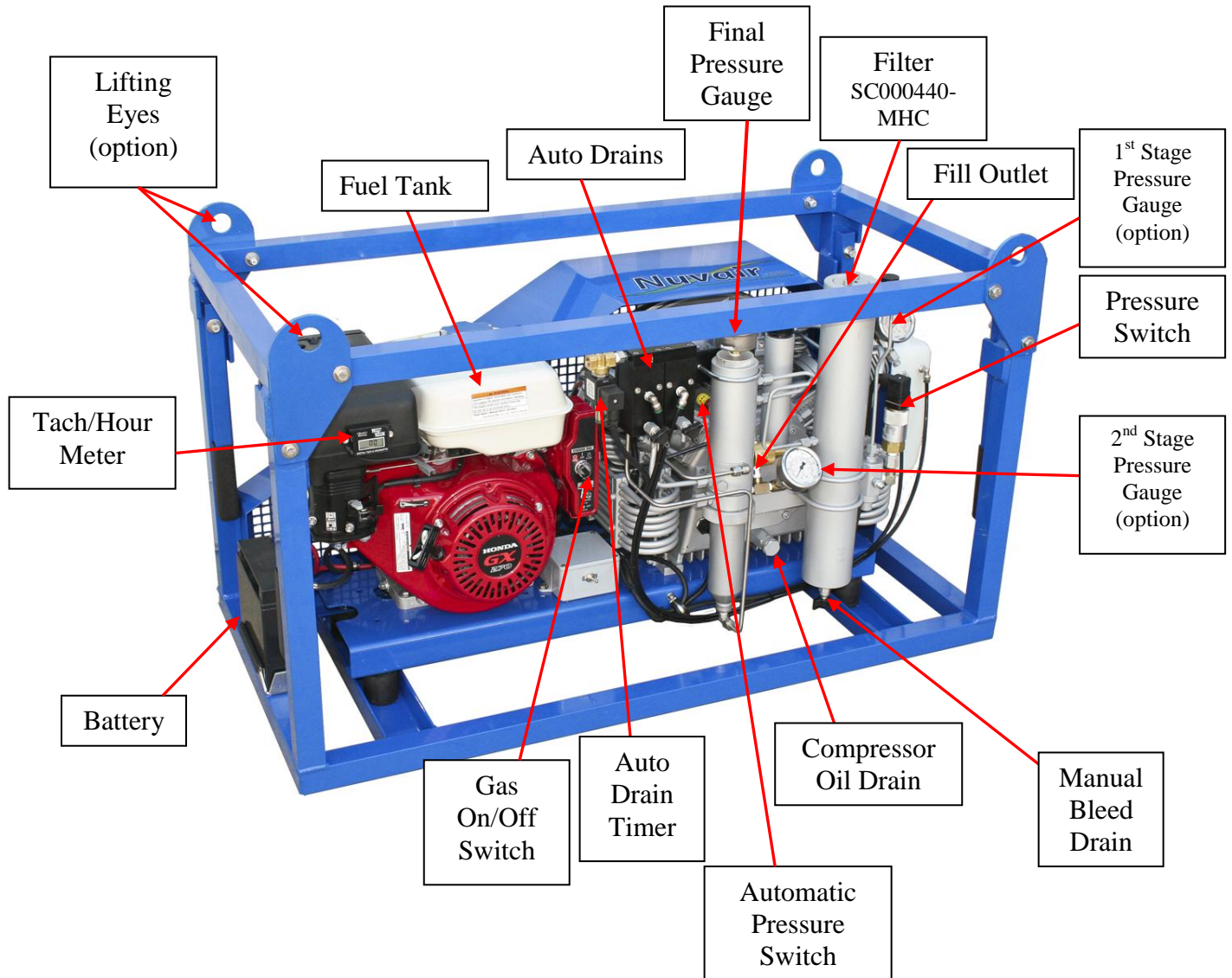


This Mini Tech has added optional equipment.

1. Filtration life is rated at 35,000 cu ft @ 68 degrees F (about 60 hours)
2. Always leave all drains open during filter changes
3. Replacement filters are SC000440 & SC000540-MHC
4. Intake filter SC000370
5. Never mix compressor lubricants
6. The automatic pressure switch is adjustable. Set at 3800psi.

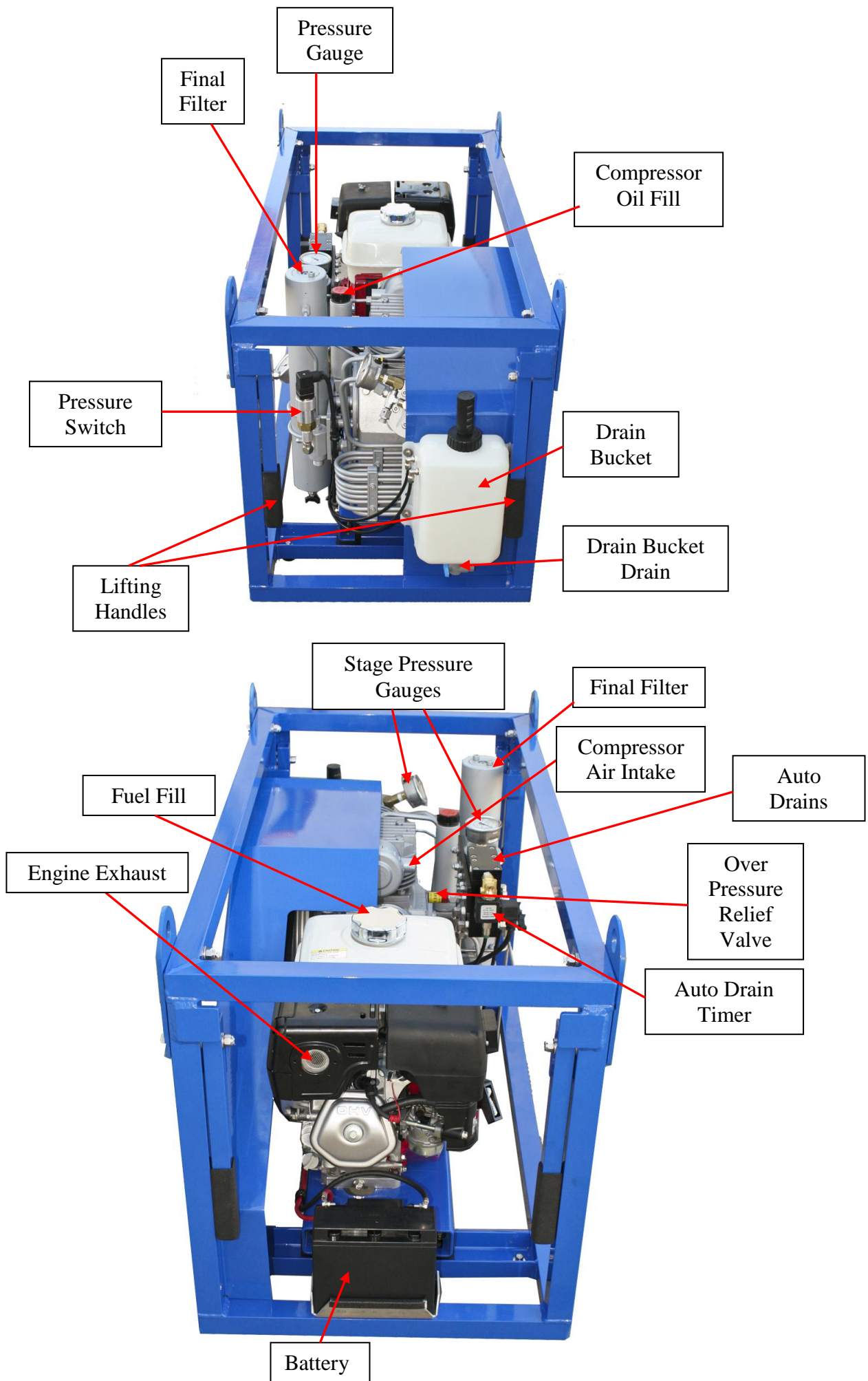


Honda Gas Mini Tech

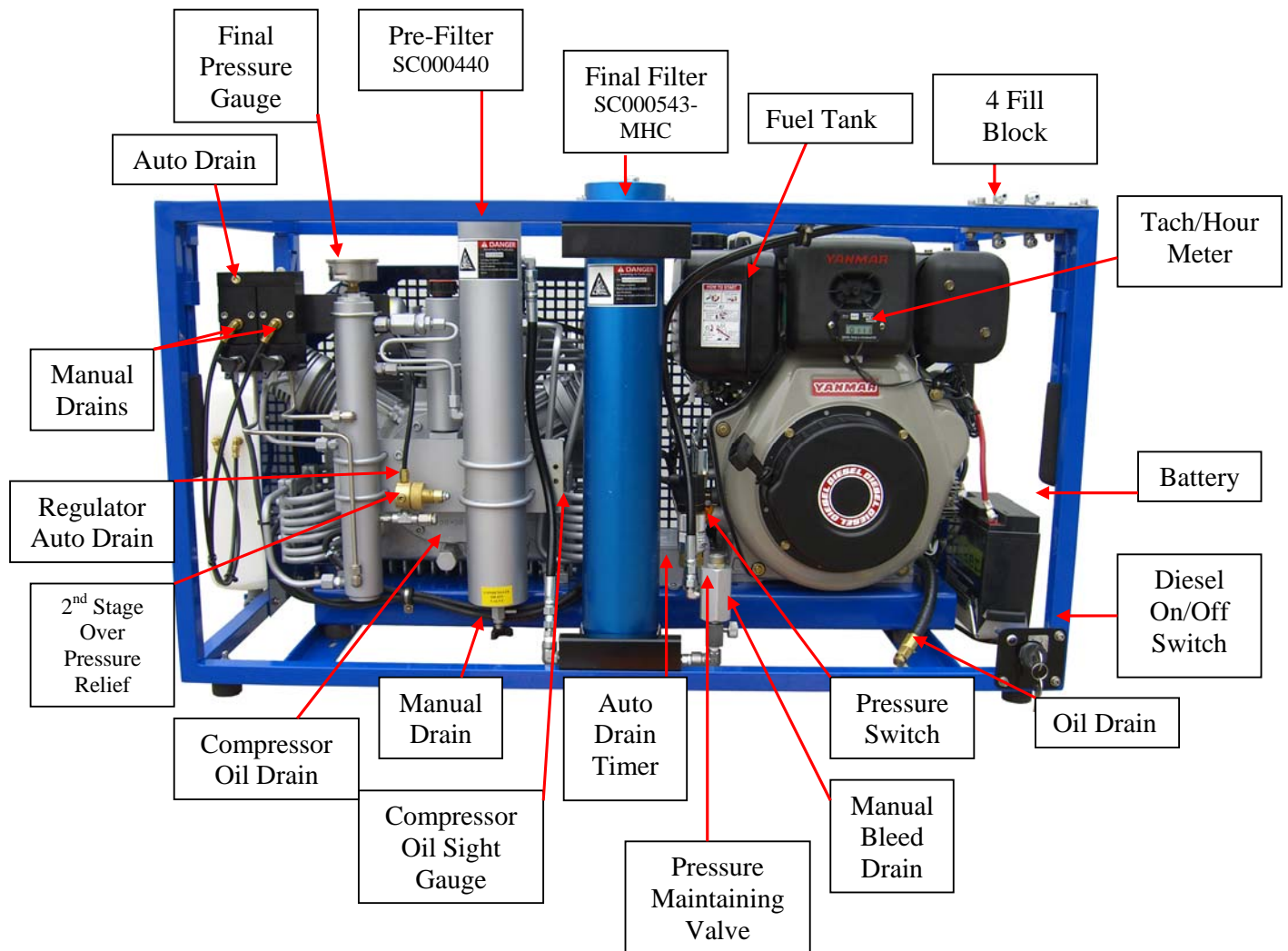


This Mini Tech has added optional equipment.

1. Always leave all drains open during filter changes
2. Replacement filters are SC000440 & SC000540-MHC
3. Intake filter SC000370
4. Never mix compressor lubricants
5. The automatic pressure switch is adjustable. Set at 3800psi.

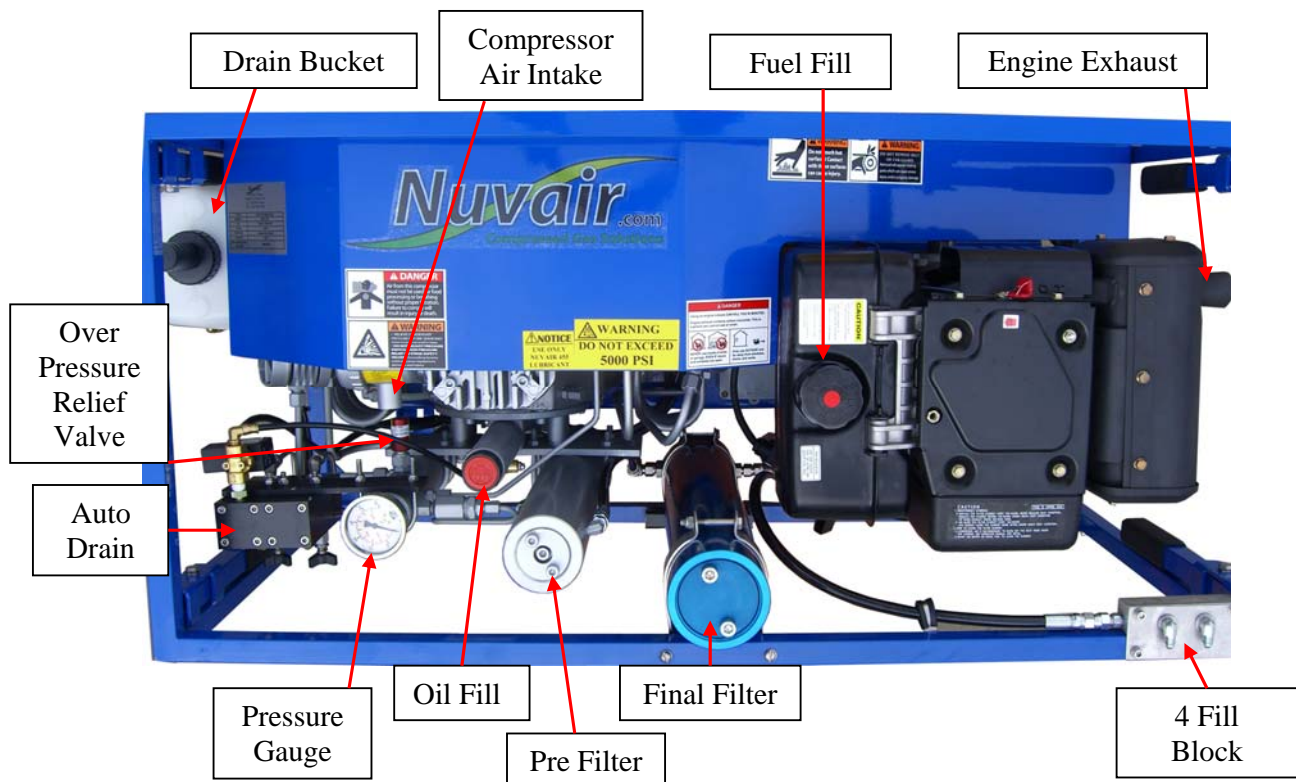
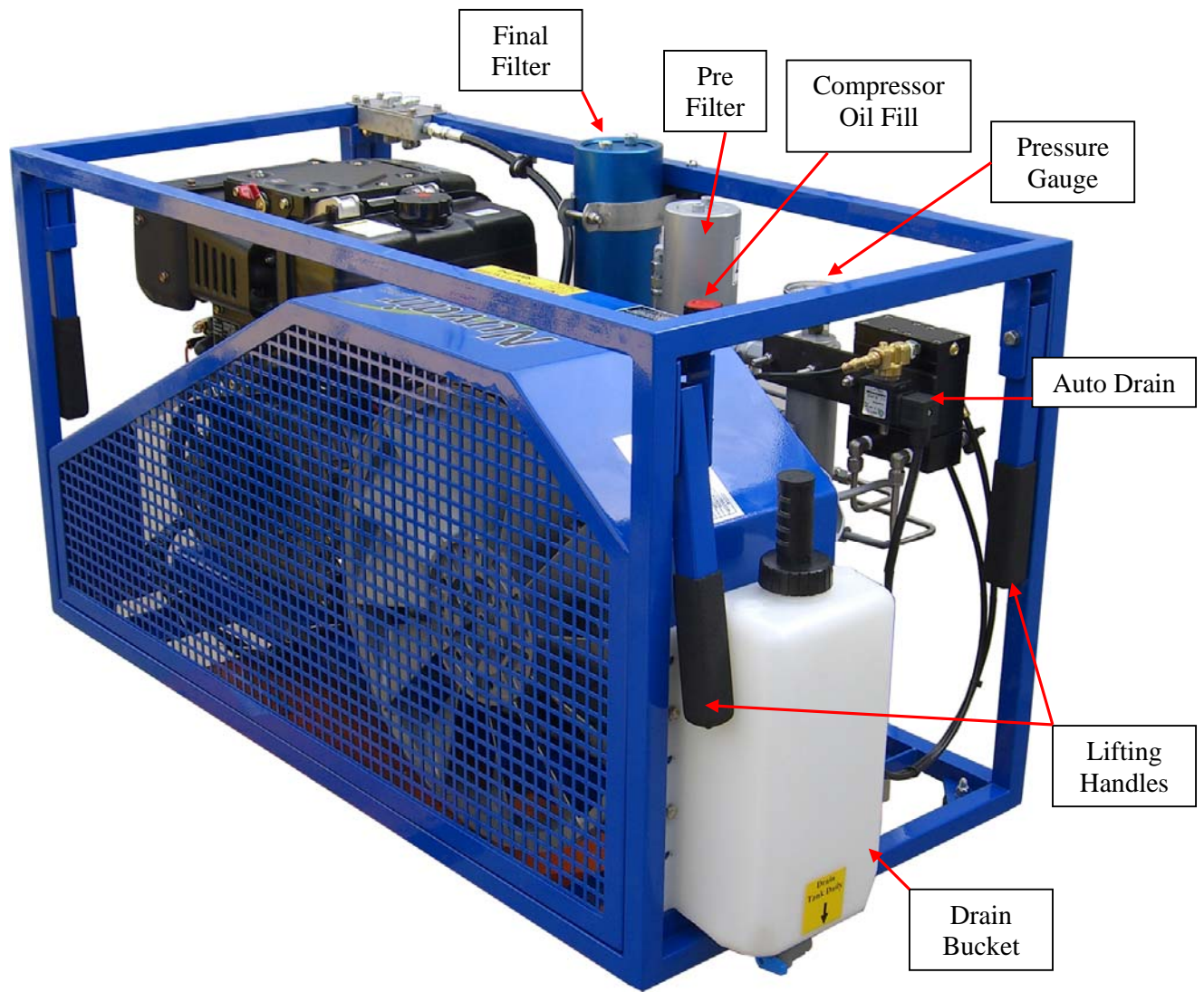


Yanmar Diesel Mini Tech



This Mini Tech has added optional equipment.

1. Filtration life is rated at 35,000 cu ft @ 68 degrees F (about 60 hours)
2. Always leave all drains open during filter changes
3. Replacement filters are SC000440 & SC000540-MHC
4. Intake filter SC000370
5. Never mix compressor lubricants
6. The automatic pressure switch is adjustable. Set at 3800psi.



MCH 13-16/SH Standard
MCH 13-16/DL Standard
MCH 13-16/DY Standard
MCH 13-16/SH Tech
MCH 13-16/DL Tech
MCH 13-16/DY Tech
MCH 13-16/SH MiniTech
MCH 13-16/DL MiniTech
MCH 13-16/DY MiniTech

HIGH PRESSURE COMPRESSORS FOR PURE BREATHING AIR AND TECHNICAL GASES

IMPORTANT



**BEFORE USING THE COMPRESSOR READ THIS
MANUAL CAREFULLY**

IMPORTANT



**BEFORE USING THE COMPRESSOR READ THE
SUPPLIED ENGINE USE AND MAINTENANCE MANUAL
CAREFULLY.**

AEROTECNICA COLTRI®

Via Colli Storici, 177
25010 SAN MARTINO DELLA BATTAGLIA (BS) ITALY
Tel. +39 030 9910301 Fax. +39 030 9910283
www.coltrisub.it www.coltrisub.com
coltrisub@coltrisub.it

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.

Should you need to contact us our fax number is: **+39 030 9910283**

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:

Manufacturer's data:

AEROTECNICA COLTRI SpA.

Via Colli Storici, 177

25010 SAN MARTINO DELLA BATTAGLIA (BRESCIA) - ITALY

Tel +39 030 9910301 - +39 030 9910297

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<http://www.coltrisub.it> - <http://www.coltrisub.com>

e-mail: coltrisub@coltrisub.it

DECLARATION OF CONFORMITY
Italian DPR 459 of 24th July 1996, appendix II, part A

It is hereby declared that the machine model:

- ☐ **MCH 13-16/SH Standard**
- ☐ **MCH 13-16/DL Standard**
- ☐ **MCH 13-16/DY Standard**
- ☐ **MCH 13-16/SH Tech**
- ☐ **MCH 13-16/DL Tech**
- ☐ **MCH 13-16/DY Tech**
- ☐ **MCH 13-16/SH MiniTech**
- ☐ **MCH 13-16/DL MiniTech**
- ☐ **MCH 13-16/DY MiniTech**

Serial n° _____ year _____

complies with

the provisions of Italian DPR 459/96 as per EEC directives 89/392, 93/44 and 93/68 according to the specifications of the following harmonized standards:

EN 292-1 ('91) - EN 292-2 ('91) - EN 60204-1 ('92) - ISO 3746 - ISO 11202

and also complies with

the provisions of Italian Dlgs 476/92 as per EEC directives 89/336 and 92/31 according to the specifications of the following harmonized industrial environment standards:

EN 50081-2 (August 1993)
EN 50082-2 (March 1995)

DESENZANO DEL GARDA, date _____

Chairman of the Board of Directors

Carlo Coltri



This manual is the property of AEROTECNICA COLTRI SpA. Reproduction, whole or partial, is forbidden

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 chap "5")
- If necessary connect the air intake extension (see section "5.3.2").
- 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 fuel level and top up if necessary (see section "7.7");
- Connect up the refill hoses (see section "7.13").
- Check the safety valve is working (see section "7.9");
- Switch on the compressor with the fill valve closed and check that air is discharged freely when the gauge value is equal to the over pressure relief setting (see section "6.3.1");

Bottle refill (see section "6.5"):

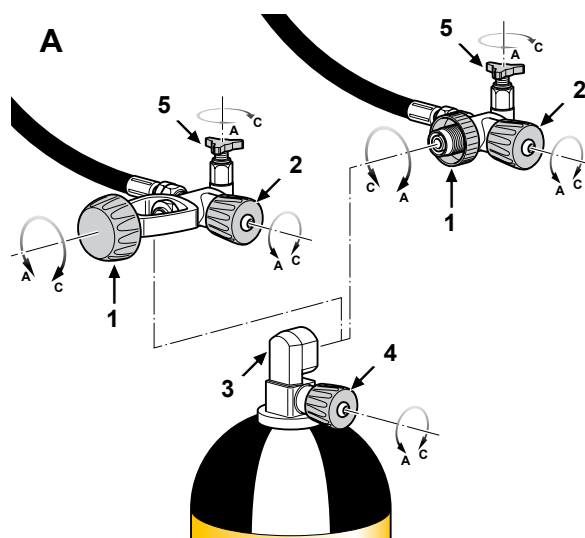
- fit the hose connector 1 on the bottle connector 3 (closed) (A);
- open the condensate discharge valve 2 and bottle valve 4;
- start the compressor (B);

When refill is complete:

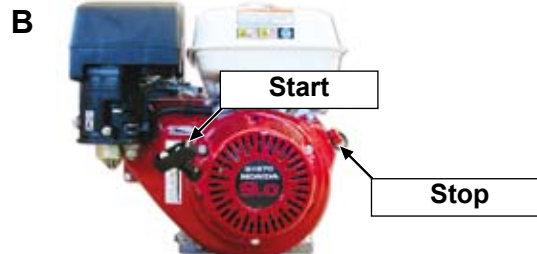
- close filling valve 2 and tank valve 4 (A);
- switch off compressor, except for models with pressure switch (B);
- bleed the pressure from the filling valve via the bleed valve 5 (A);
- disconnect the connector 1 from the bottle (A).

Maintenance:

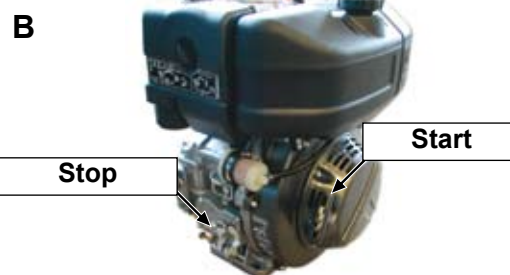
- After the first 50 working hours change the oil again (see section "7.6.3").
- Check the lubricating oil level every 5 hours (see section "7.6.2").
- For information on engine maintenance, refer to the engine use and maintenance manual supplied together with this manual.
- At the start of every working day, or when necessary, check and, where necessary, top up the fuel level (See Chap. "7.7");
- Change the lubricating oil every 250 hours (see section "7.6.3").
- Periodically change the air intake filter (see section "7.8").
- Check the safety valve at every refill (see section "7.9").
- Check transmission belt tension and if necessary change them (see section "7.11").
- Discharge the condensate (see section "7.10").
- Periodically replace the active carbon filters / molecular sieve (see section "7.12").
- Periodically replace the refill hoses (see section "7.13").



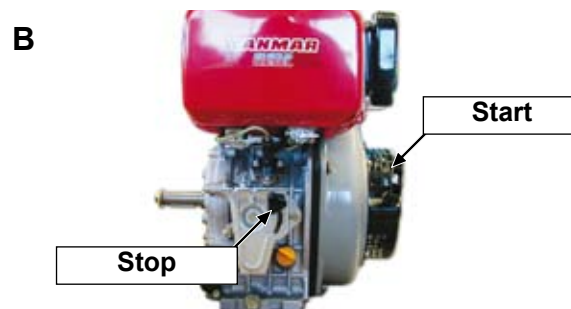
Model: MCH 13-16 with Petrol Engine



Model: MCH 13-16/DL



Model: MCH 13-16/DY



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1 - GENERAL

1.1 PRELIMINARY INFORMATION

Do not destroy or modify the manual and update it with inserts published by producer only.

Machine type: High pressure compressor for breathing air and/or technical gases

Model: **MCH 13-16/SH Standard**
MCH 13-16/DL Standard
MCH 13-16/DY Standard
MCH 13-16/SH Tech
MCH 13-16/DL Tech
MCH 13-16/DY Tech
MCH 13-16/SH MiniTech
MCH 13-16/DL MiniTech
MCH 13-16/DY MiniTech

Revision n°: 00

Manual version: 02/2008

Manufacturer's data: **AEROTECNICA COLTRI SpA**

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e-mail: coltrisub@coltrisub.it

Appendices:

- Internal combustion engine use and maintenance manual
- Safety regulations

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.
- Company owners must ensure that the operator has 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.:

MCH 13-16/SH Standard

MCH 13-16/DL Standard

MCH 13-16/DY Standard

MCH 13-16/SH Tech

MCH 13-16/DL Tech

MCH 13-16/DY Tech

MCH 13-16/SH MiniTech

MCH 13-16/DL MiniTech

MCH 13-16/DY MiniTech

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:

- 1) before using the compressor, gain familiarity with the tasks to be completed and the admissible working position;
- 2) the operator must always have the instruction manual to hand;
- 3) program all work with due care and attention;
- 4) you must have a detailed understanding of where and how the compressor is to be used;
- 5) 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;
- 6) observe the warnings given in this manual with due care and attention;
- 7) 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 the 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 San Martino della Battaglia (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

coltrisub@coltrisub.it

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

Compressors mod. MCH 13-16 equipped with petrol or diesel engines, have been designed and built for the purpose of obtaining excellent quality breathing air by drawing it from the surrounding environment. The air, free from any harmful fumes, is passed through an intake filter and, after the 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.
- Change the air purification filters regularly as described in section “7.12.2 Changing the active carbon filters”.
- Drain the condensate regularly as illustrated in section “7.10 Condensate discharge”.
- Never run the compressor when:
 - il motore è danneggiato;
 - there is evident damage;
 - the covers/guards are removed.
- All routine and unscheduled maintenance tasks must be carried out with the compressor at standstill and the pumping circuit depressurised.
- 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.

WARNING



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

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

Compressors mod. MCH 13-16 equipped with petrol or diesel engines, 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 filtration cycle, is stored in bottles constructed to contain air at high pressure. 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.+5°C - Max.+45°C / min.+41°F - Max.+113°F
Air humidity	(%)	max.80%
Tolerated weather conditions	rain	None
	hail	
	snow	
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 45°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.

A new compressor must nevertheless be used with caution during the first 5 working hours so as to complete proper running in of its components.

If the compressor is subject to an excessive workload during initial use, its potential efficiency will be prematurely compromised and functionality soon reduced. During the running in period proceed as follows:

- after starting let the compressor run on empty for 5-6 minutes.

After the first 5 hours carry out - in addition to the scheduled maintenance - the following tasks:

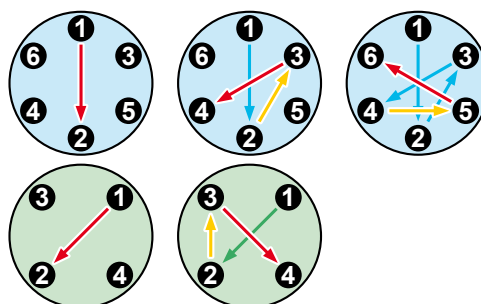
- change the compressor oil;
- check and adjust nuts and bolts.

1.10.1 Tightening torque values

The table shows tightening torques for bolts or hexagonal-head screws or socket screws lubricated with grease, except for specific cases indicated 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 bolt and 4 bolt torque sequence



2 - BASIC INFORMATION ON THE COMPRESSOR

2.1 DESCRIPTION OF THE COMPRESSOR

High pressure compressor for breathing air and technical gases.

Compatible process gases:

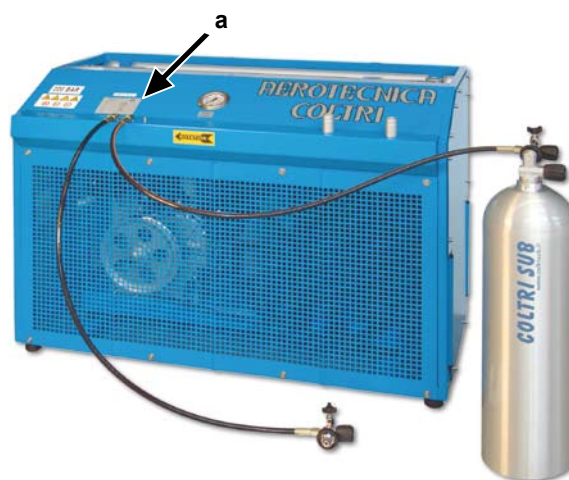
- Nitrogen
- Helium
- Nitrox 40% max O₂



2.2 IDENTIFICATION THE COMPRESSOR

Each compressor has an identification label (a) attached to its frame.

AEROTECNICA COLTRI SpA Via Colli Storici 177 25010 DESENZANO D/G (BS) ITALY Tel. 030/9910301-9910297 Fax. 030/9910283		
MODEL	MCH 13-16/SH STANDARD	
TYPE	SC000296	
S/N.	0010	
YEAR	2005	
MOTOR	HONDA	
POWER	4KW	



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 89/392 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.



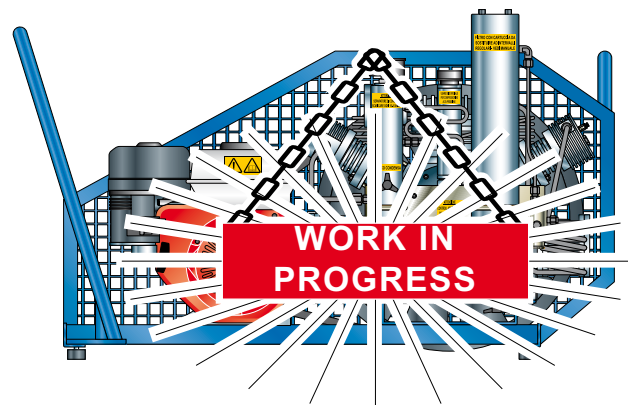
3.1.3 Emergency equipment

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 89/392 provides the following definitions (appendix 1, 1.1.1):
 - «**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.
- The employer must provide workers with detailed information on 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 worker health and safety: these include EEC directives 89/391, 89/686, 89/654, 89/655, 89/656, 86/188, 92/58 and 77/576 which all employers 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.

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.

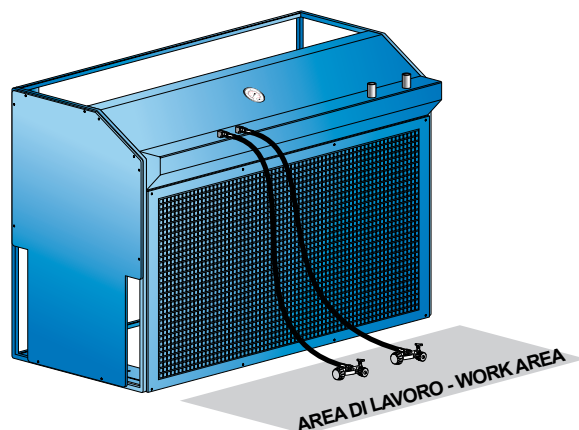
Any modification to the compressor that has not been expressly authorised by AEROTECNICA COLTRI shall exonerate the manufacturer from any civil or penal liability.

WARNING



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

The compressors have been designed and built to reduce noise pollution to a minimum. Compressor noise levels were measured in the "operator" (work) area.



IMPORTANT

- 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.
- 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.

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 Residual risk zones

DANGER

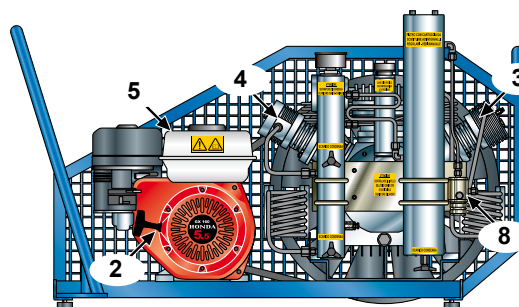
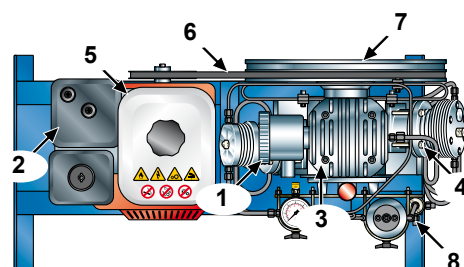


In some compressor zones there remain residual risks that were not possible to eliminate at the design stage or for which safety guards could not be provided without compromising the functionality of the compressor.
To prevent accidents all operators must be aware of the residual risks on this compressor.

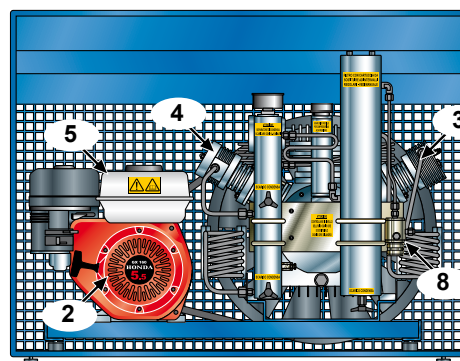
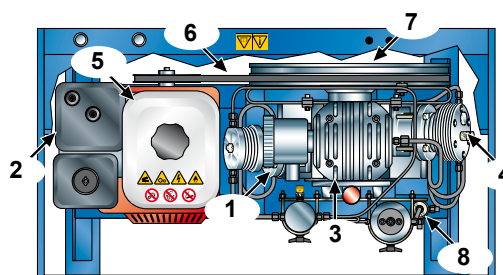
Residual risk zones:

- 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 Dangers derived from use of internal combustion engine: Observe instruction in the relevant engine manual.
- 3 Heat-related dangers in 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.
- 4 Danger deriving from noise emitted by the compressor.
- 5 Fire risk.
- 6 Risk of being crushed or dragged in the transmission belt zone.
- 7 Danger of impact/abrasion with the cooling fan.
- 8 Danger of direct contact with operator if hose breaks during bottle refill.

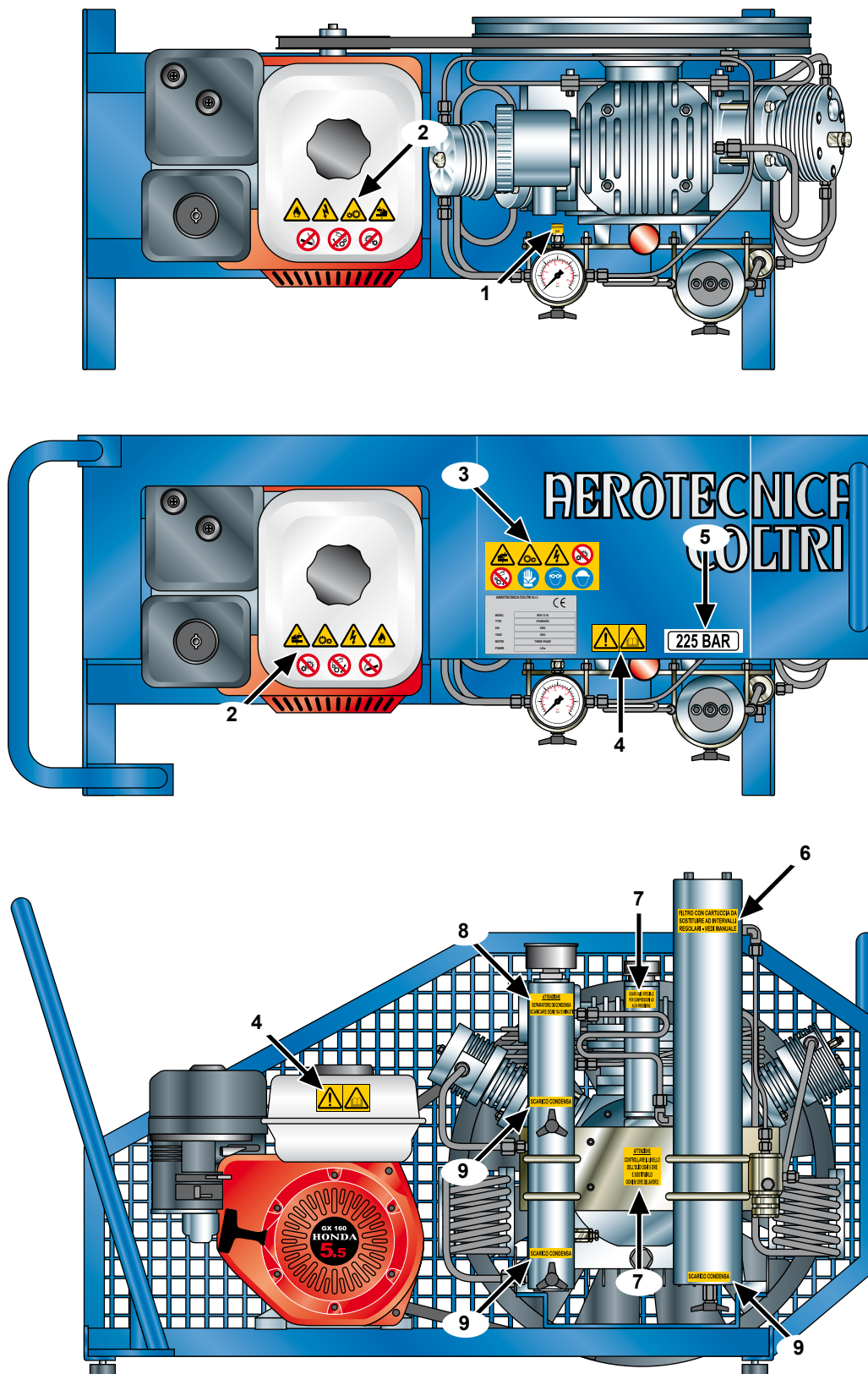
Model STANDARD



Model TECH



3.3 SAFETY INFO LABELS: LOCATION



3.3.1 Safety info labels: description

1

a Safety valve info plate

The safety valve is calibrated by the manufacturer to 225 bar, 300 bar or 330 bar.

To check the safety valve refer to "7.9 Checking the safety valve".

a

SAFETY VALVE
225 BAR

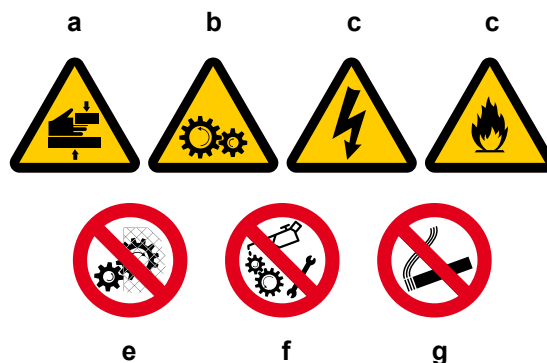
SAFETY VALVE
300 BAR

SAFETY VALVE
330 BAR

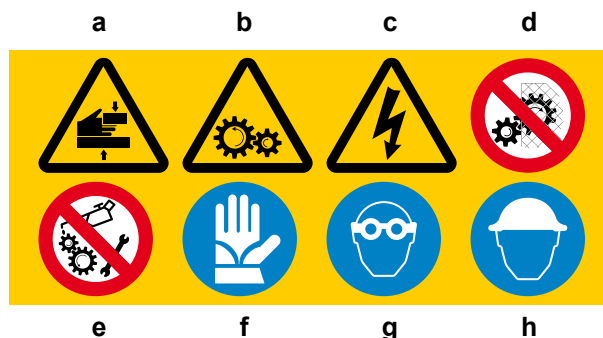
IMPORTANT

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

2

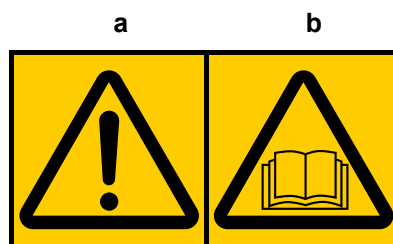
a Hands at risk of being crushed in transmission belt zone**b** Moving parts in transmission belt and cooling zone fan**c** Live wires: risk of electric shock**d** Risk of fire associated with fuel or flammable liquids**e** Forbidden to remove covers/guards**f** Forbidden to lubricate mechanical parts when they are moving: compressor must be switched off before any maintenance/lubrications tasks are carried out on it.**g** Smoking forbidden near compressor owing to presence of fuels/flammable liquids.

3

a Hands at risk of being crushed in transmission belt zone**b** Moving parts in transmission belt and cooling zone fan**c** Live wires: risk of electric shock**d** Forbidden to remove covers/guards**e** Forbidden to lubricate mechanical parts when they are moving: compressor must be switched off before any maintenance/lubrications tasks are carried out on it.**f** Safety gloves must be worn.**g** Safety goggles must be worn.**h** Hard hat must be worn.

4

- a** Warning info plates about the dangers that derive from a lack of knowledge about the compressor and its functions and the consequent risks.
- b** Read the use and maintenance manual carefully before using the compressor.
Read the supplied engine use and maintenance manual carefully.



5

- a** Maximum working pressure.



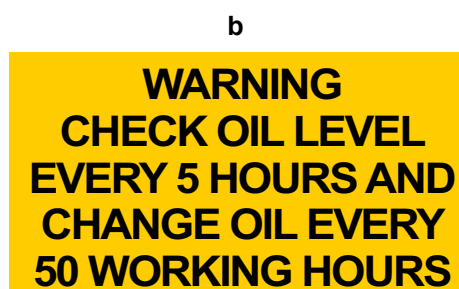
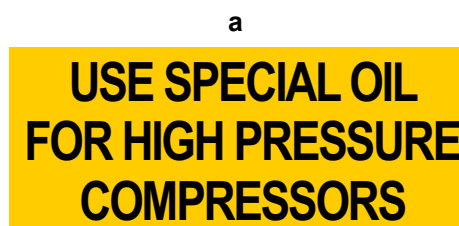
6

- a** Cartridge change info label.
Filter with active carbon molecular sieve cartridge.
To change the filter refer to “7.12.1 Filter replacement frequency calculation table” and “7.12.2 Changing the active carbon filters”.



7

- a** Special oil info plate.
Indicates that only special oils must be used for high pressure compressors.
To choose the right oil see section “7.6.1 Oil table”.
- b** Oil level check info plate.
Check lubricating oil level every 5 working hours and change it every 250 working hours.
For information on how to check see “7.6.2 Checking the oil level”.
For information on how to change the oil see “7.6.3 Changing the lubricating oil”.



8

- a Condensate separator info label.
Indicates that the condensate must be emptied via the drain valves every 10-15 minutes.

a

WARNING
CONDENSATE SEPARATOR
EMPTY EVERY 10-15 MINUTES

IMPORTANT

Except for version with automatic condensate discharge.



9

- a Condensate discharge info plate.
Indicates position of condensate discharge valve.
To discharge the condensate see “7.10 Condensate discharge”.

a

CONDENSATE DISCHARGE

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.

IMPORTANT

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



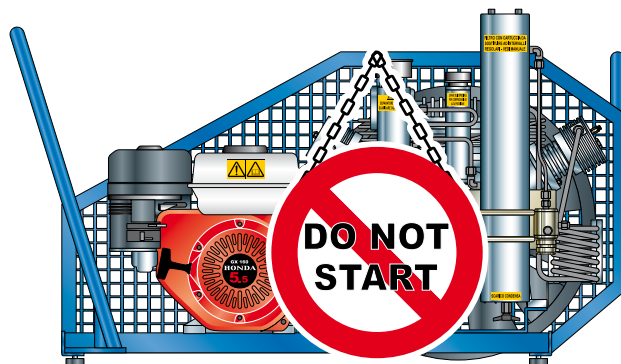
3.5 MAINTENANCE PRECAUTIONS

3.5.1 Warning signs

Prima di iniziare qualsiasi operazione di manutenzione, arrestare il motore e verificare che l'impianto dell'aria compressa non sia in pressione.

Se altre persone avviano il motore ed azionano i pulsanti di comando mentre si eseguono operazioni di manutenzione, si possono verificare pericoli di seri danni o morte.

Per evitare questi pericoli, prima di eseguire la manutenzione, appendere attorno al compressore delle targhe di attenzione.



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.

Clean the compressor with a pressurised hot water or steam jet and commercially available detergents. 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 sensors or connectors.

3.5.5 Periodic replacement of essential safety parts

Periodically check the following components, which are important for fire 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.

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 cylinders are made of cast iron, the pistons are made of aluminium and feature traditional multiple piston rings. The high pressure stage piston has a special anti-wear lining. The relative cylinder is self-lubricating.

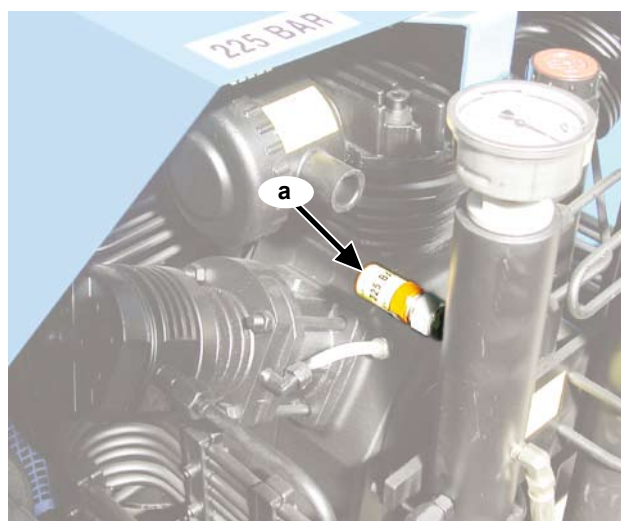
4.1.2 Valves

The heads set features outlet and intake valves. The 1st stage head is reed valve type and includes both intake and pressure. The intake and pressure valves are inserted directly in the respective threaded seats of the 2nd and 3rd stage heads. (Pressure valve of 3rd stage have no threads).

4.1.3 Safety valves

The safety valves (a) 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:

Safety valve	Adjustment pressure
1 st stage	8 Bar - (114 PSI)
2 nd stage	50 Bar - (710 PSI)
3 rd stage or final	225 Bar - (3200 PSI) 300 Bar - (4300 PSI) 330 Bar - (4700 PSI)



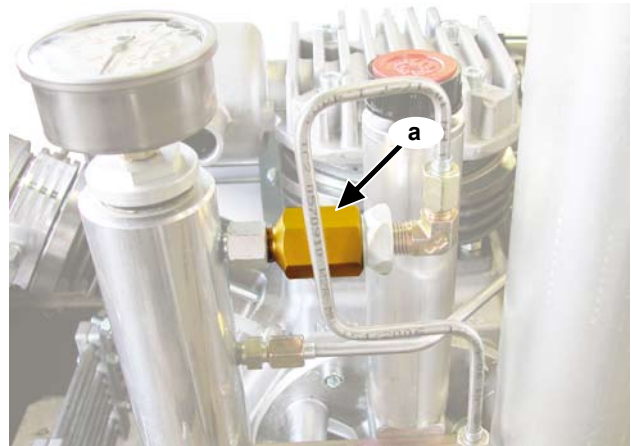
4.1.4 Pressure maintenance valve

This valve (a) is fitted after the final filter. When the compressor is switched on it keeps internal system pressure at 100 ±20 bar so as to remove as much water as possible from the air.



4.1.5 Check-valve

A check-valve (a) may be installed between the final condensate separator and the cleaning filter; its purpose is to prevent depressurisation of the cleaning filter and so allow pressure to remain constant during the condensate discharge cycles.



IMPORTANT The check-valve can be installed on request.



4.1.6 Lubrication

Splash lubrication occurs by oil thrower pins screwed onto the 2nd and 3rd stage connecting rods. Third stage lubrication is of the oil vapour type.

4.1.7 Cooling tubes

The cooling pipes are made of stainless steel.

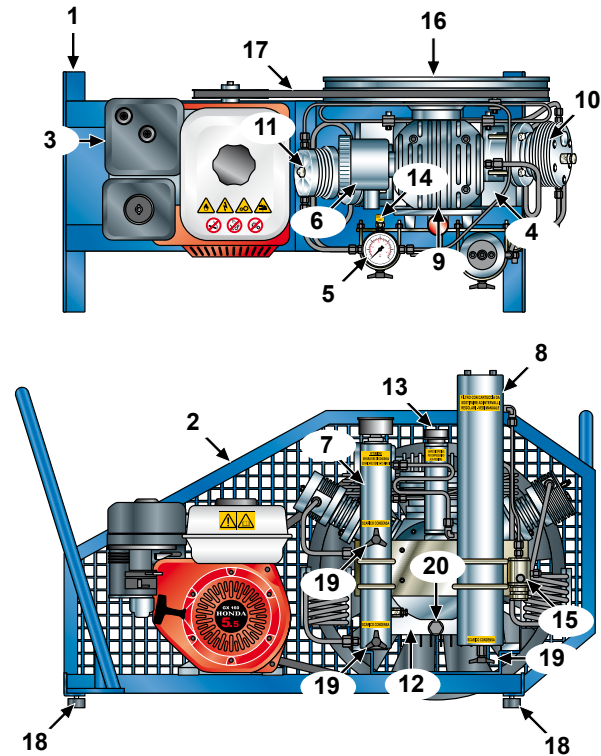
4.1.8 Frame, guards

The compressor and motor are mounted on a welded steel frame that has been painted with epoxy resins. The frame consists of painted panelling with a handle for the purpose of moving it. Stainless steel frame available on request.

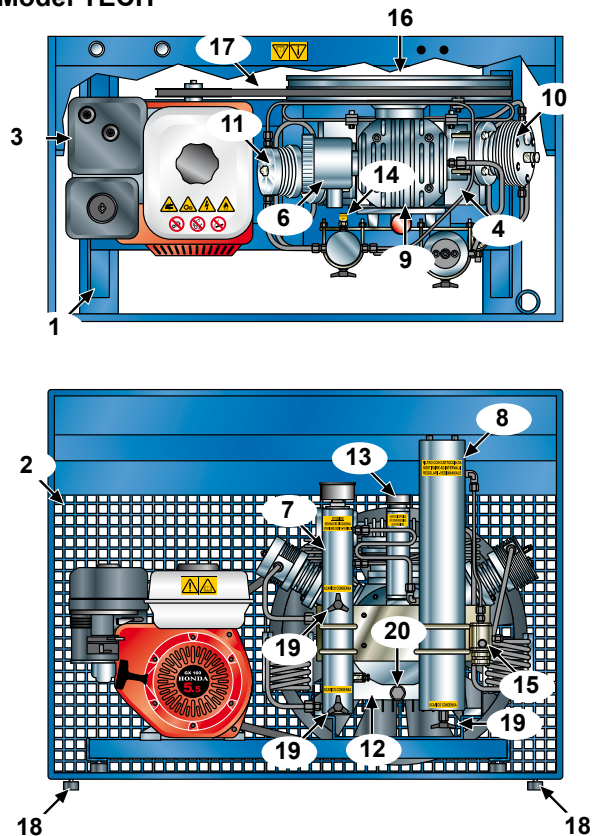
4.2 MACHINE PARTS

- 1 Frame
- 2 Cover
- 3 Motor (Petrol or Diesel)
- 4 Compressor
- 5 Pressure gauge
- 6 Air filter
- 7 Final condensate separator
- 8 Active carbon air filter / molecular sieve
- 9 1st stage
- 10 2nd stage
- 11 3rd stage
- 12 Monobloc
- 13 Oil filler plug
- 14 Safety valve
- 15 Maintenance valve
- 16 Cooling fan
- 17 Belt
- 18 Anti-vibration device
- 19 Condensate discharge valves
- 20 Oil drain plug

Model STANDARD

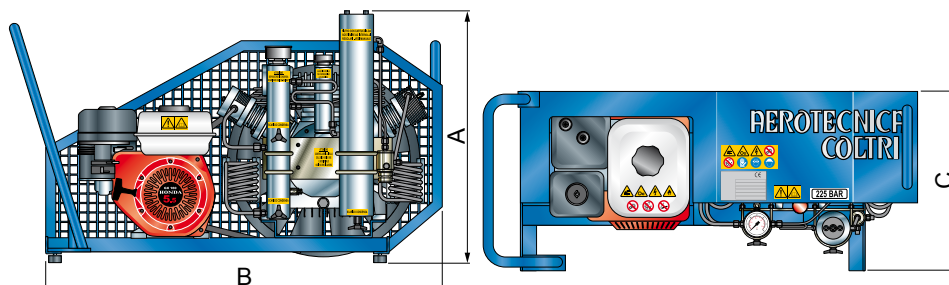


Model TECH

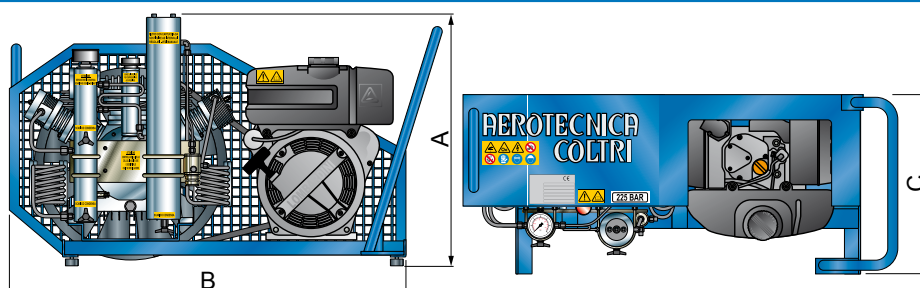


4.3 TECHNICAL CHARACTERISTICS MCH 13-16 STANDARD

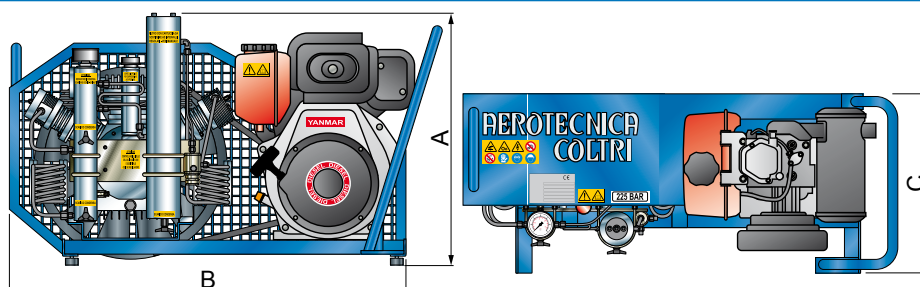
MCH 13-16/SH Standard



MCH 13-16/DL Standard



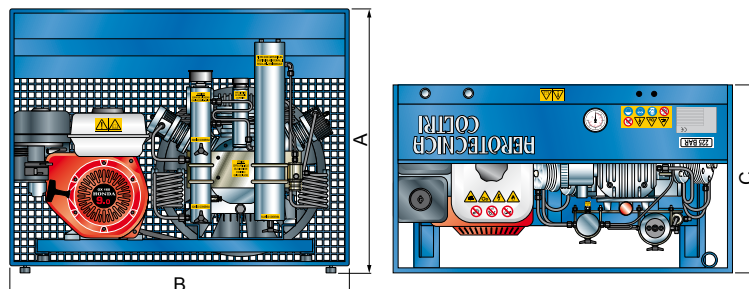
MCH 13-16/DY Standard



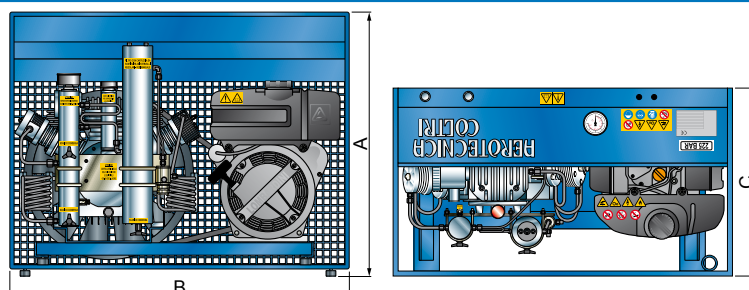
Engine	Type	MCH 13/SH	MCH 16/SH	MCH 13/DL	MCH 16/DL	MCH 13/DY	MCH 16/DY
		Honda petrol	Honda petrol	Lombardini D350 Diesel	Lombardini D400 Diesel	Yanmar L70 Diesel	Yanmar L100 Diesel
Engine power	kW	6,6	6,6	5,5	6,6	4,4	6,6
	Hp	8,9	8,9	7,5	8,9	5,9	8,9
Pumpin Unit	(Rpm)	1350	1550	1350	1550	1350	1550
Pressure 1 st stage	bar / PSI	5 / 73	5 / 73	5 / 73	5 / 73	5 / 73	5 / 73
Pressure 2 nd stage	bar / PSI	40 / 580	40 / 580	40 / 580	40 / 580	40 / 580	40 / 580
Working pressure	bar	225-300-330	225-300-330	225-300-330	225-300-330	225-300-330	225-300-330
	PSI	3200-4300-4700	3200-4300-4700	3200-4300-4700	3200-4300-4700	3200-4300-4700	3200-4300-4700
Delivery rate	l/min	215	265	215	265	215	265
	m ³ /h	13	16	13	16	13	16
	CFM	7,5	9	7,5	9	7,5	9
Refill time 10l	min.	9	8	9	8	9	8
Noise level	dB(A)ISO3746	95,6	95,6	95,6	95,6	78,7	80,3
Dry weight	kg	128	128	136	148	136	151
	lbs	282	282	300	326	300	333
Dimensions	(AxBxC)mm	650x1150x490	650x1150x490	650x1150x490	650x1150x490	650x1150x490	650x1150x490
	(AxBxC)inches	25x45x19	25x45x19	25x45x19	25x45x19	25x45x19	25x45x19

4.4 TECHNICAL CHARACTERISTICS MCH 13-16 TECH

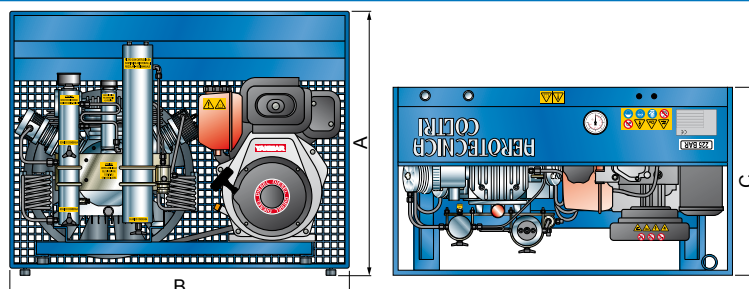
MCH 13-16/SH Tech



MCH 13-16/DL Tech



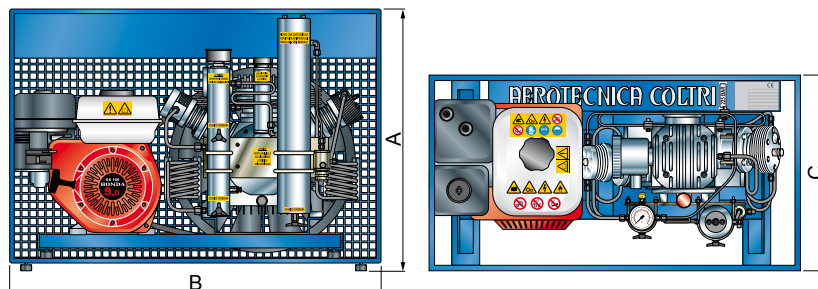
MCH 13-16/DY Tech



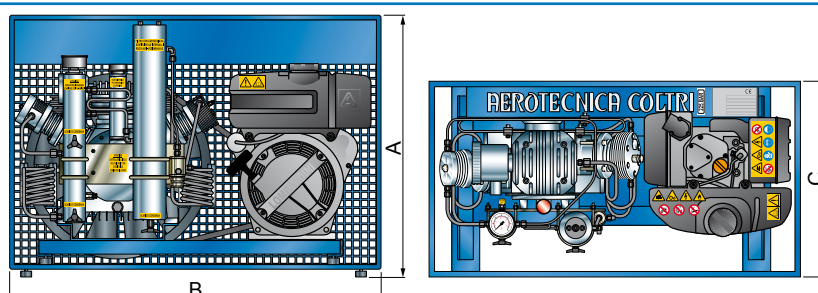
Engine	Type	MCH 13/SH	MCH 16/SH	MCH 13/DL	MCH 16/DL	MCH 13/DY	MCH 16/DY
		Honda petrol	Honda petrol	Lombardini D350 Diesel	Lombardini D400 Diesel	Yanmar L70 Diesel	Yanmar L100 Diesel
Engine power	kW	6,6	6,6	5,5	6,6	4,4	6,6
	Hp	8,9	8,9	7,5	8,9	5,9	8,9
Pumpin Unit	(Rpm)	1350	1550	1350	1550	1350	1550
Pressure 1 st stage	bar / PSI	5 / 73	5 / 73	5 / 73	5 / 73	5 / 73	5 / 73
Pressure 2 nd stage	bar / PSI	40 / 580	40 / 580	40 / 580	40 / 580	40 / 580	40 / 580
Working pressure	bar	225-300-330	225-300-330	225-300-330	225-300-330	225-300-330	225-300-330
	PSI	3200-4300-4700	3200-4300-4700	3200-4300-4700	3200-4300-4700	3200-4300-4700	3200-4300-4700
Delivery rate	l/min	215	265	215	265	215	265
	m ³ /h	13	16	13	16	13	16
	CFM	7,5	9	7,5	9	7,5	9
Refill time 10l	min.	9	8	9	8	9	8
Noise level	dB(A)ISO3746	78,7	80,3	95,5	95,5	95,7	95,7
Dry weight	kg	156	156	164	176	164	179
	lbs	344	344	361	388	361	395
Dimensions	(AxBxC)mm	790x1140x600	790x1140x600	790x1140x600	790x1140x600	790x1140x600	790x1140x600
	(AxBxC)inches	31x44x23	31x44x23	31x44x23	31x44x23	31x44x23	31x44x23

4.5 TECHNICAL CHARACTERISTICS MCH 13-16 MINITECH

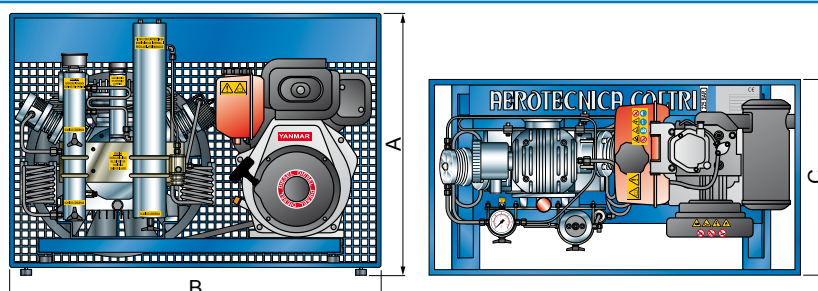
MCH 13-16/SH MiniTech



MCH 13-16/DL MiniTech

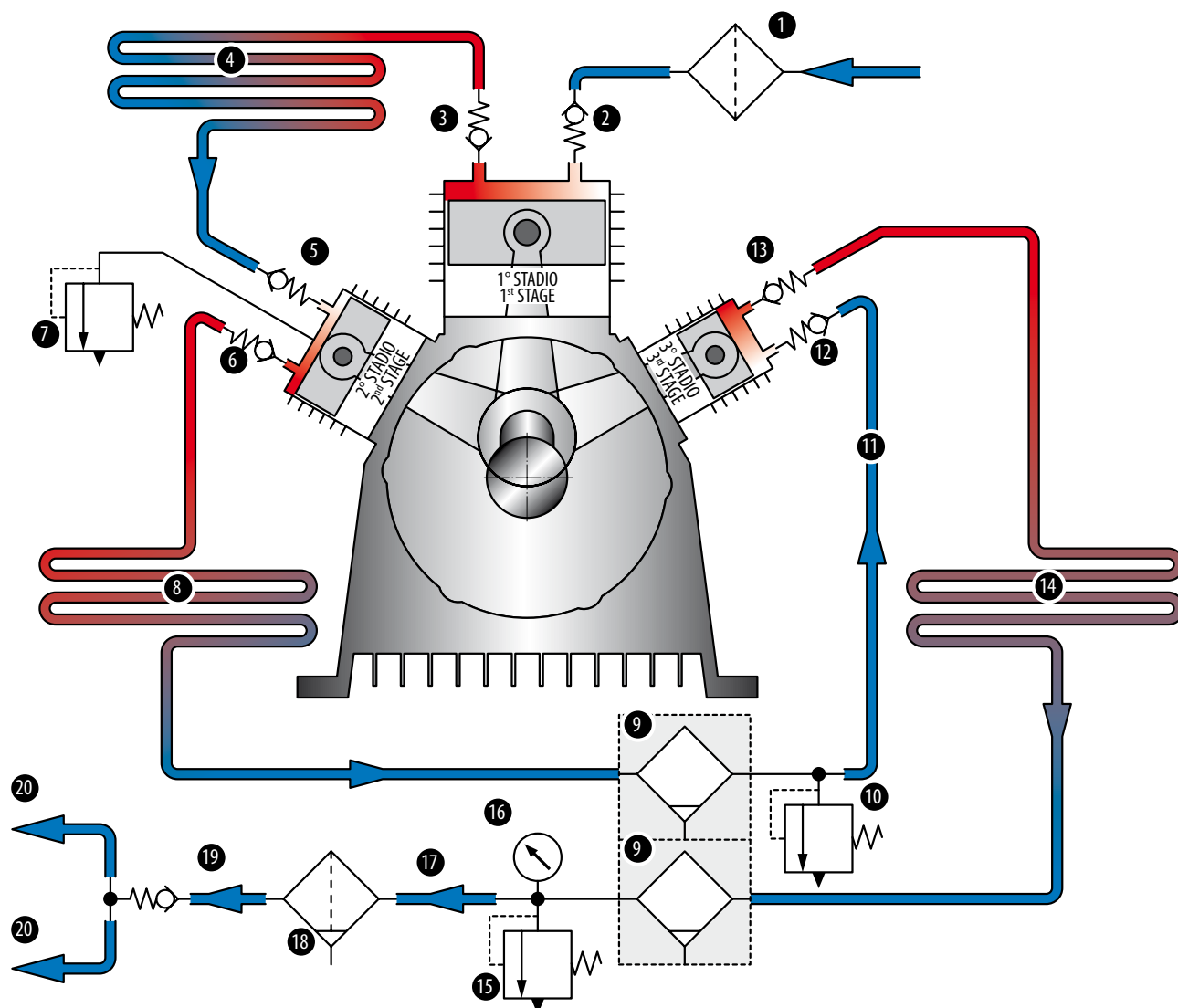


MCH 13-16/DY MiniTech



Engine	Type	MCH 13/SH	MCH 16/SH	MCH 13/DL	MCH 16/DL	MCH 13/DY	MCH 16/DY
		Honda petrol	Honda petrol	Lombardini D350 Diesel	Lombardini D400 Diesel	Yanmar L70 Diesel	Yanmar L100 Diesel
Engine power	kW	6,6	6,6	5,5	6,6	4,4	6,6
	Hp	8,9	8,9	7,5	8,9	5,9	8,9
Pumpin Unit	(Rpm)	1350	1550	1350	1550	1350	1550
Pressure 1 st stage	bar / PSI	5 / 73	5 / 73	5 / 73	5 / 73	5 / 73	5 / 73
Pressure 2 nd stage	bar / PSI	40 / 580	40 / 580	40 / 580	40 / 580	40 / 580	40 / 580
Working pressure	bar	225-300-330	225-300-330	225-300-330	225-300-330	225-300-330	225-300-330
	PSI	3200-4300-4700	3200-4300-4700	3200-4300-4700	3200-4300-4700	3200-4300-4700	3200-4300-4700
Delivery rate	l/min	215	265	215	265	215	265
	m ³ /h	13	16	13	16	13	16
	CFM	7,5	9	7,5	9	7,5	9
Refill time 10l	min.	9	8	9	8	9	8
Noise level	dB(A)ISO3746	95,6	95,6	95,5	95,5	95,7	95,7
Dry weight	kg	141	141	149	161	149	164
	lbs	311	311	328	355	328	361
Dimensions	(AxBxC)mm	640x1140x540	640x1140x540	640x1140x540	640x1140x540	640x1140x540	640x1140x540
	(AxBxC)inches	25x44x21	25x44x21	25x44x21	25x44x21	25x44x21	25x44x21

4.6 PRESSURE CIRCUIT



- 1 Intake filter
- 2 Intake valve 1st stage
- 3 Outlet valve 1st stage
- 4 Cooling pipe 1st-2nd stage
- 5 Intake valve 2nd stage
- 6 Outlet valve 2nd stage
- 7 Safety valve 1st stage
- 8 Cooling pipe 2nd-3rd stage
- 9 Condensate separator
- 10 Safety valve 2nd stage

- 11 Pipe separator/3rd stage
- 12 Intake valve 3rd stage
- 13 Outlet valve 3rd stage
- 14 Final cooling pipe
- 15 Safety valve
- 16 Pressure gauge
- 17 Pipe separator/filter
- 18 Active carbon air filter/molecular sieve
- 19 Pressure maintenance valve
- 20 Flex hoses

5 - HANDLING AND INSTALLATION

5.1 UNPACKING

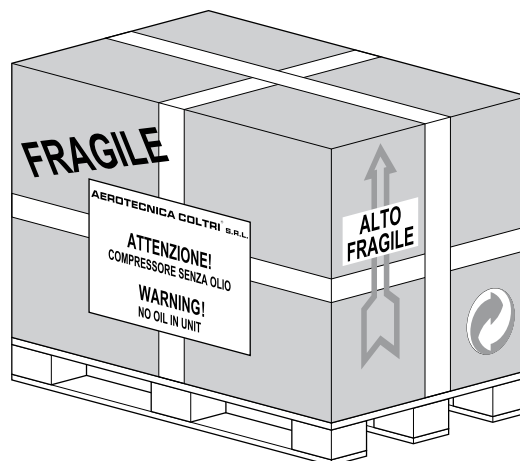
The compressors are sent fully assembled, with the flex hoses separate.

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:

- two 1200 mm refill hoses with filling valves
- use and maintenance manual
- use and maintenance manual appendix (safety regulations)
- engine use and maintenance manual
- lubricating oil (2 litres)
- active carbon and molecular sieve filter cartridge.



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): the forks must be positioned in the support feet on which the europallet is positioned.

If the compressor is not on a pallet it can be handled manually via the carry handles (a) on the frame.

Model STANDARD



Model TECH and MINITECH



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

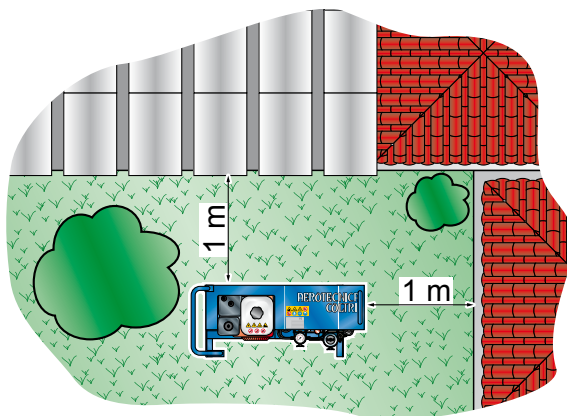
WARNING



Before proceeding with the installation tasks described below, read Chapter 3 “SAFETY REGULATIONS” carefully.

5.3.1 Positioning

- Position the compressor in the designated 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 or fire.
- If ambient temperatures exceed 45°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.



WARNING



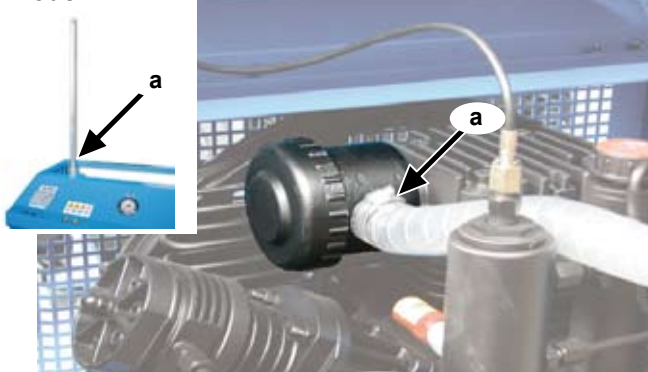
Compressors of the MCH-13-16 Standard series with internal combustion engines must only be installed outdoors.

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 (a).
- Connect extension pipe to fitting.
- Fit the supplementary intake filter on the extremity 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.

Model TECH



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.

6 - USING THE COMPRESSOR

6.1 PRELIMINARY CHECKS BEFORE USING FOR THE FIRST TIME

The operator must check that the compressor is supplied with:

- use and maintenance manual;
- the appendix to the use and maintenance manual (where applicable);
- 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 see section "7.6.3 Changing the lubricating oil".

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**.

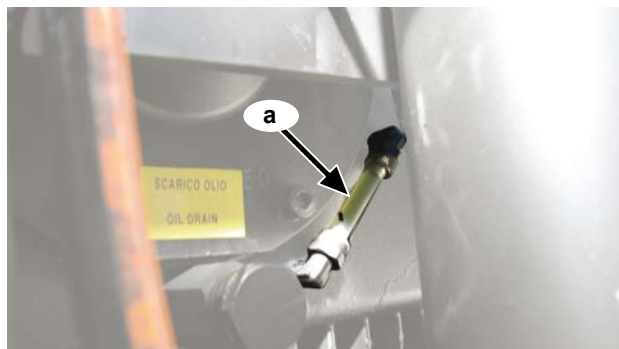
6.2.1 Lubricating oil level check

Check that the lubricating oil level (a) is within acceptable limits (i.e. must be higher than half the length of oil visual indicator tube (a)).

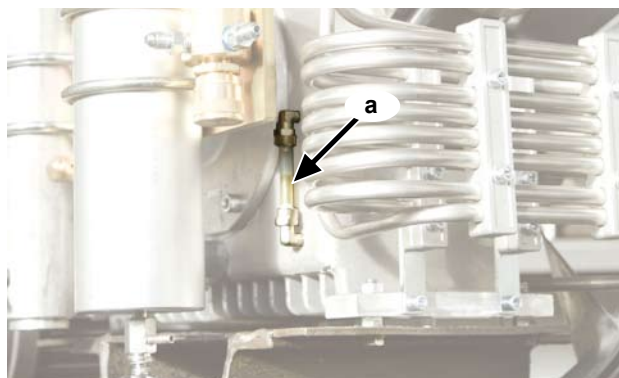
Note that an excessive quantity of oil can cause infiltrations in the cylinders and leave deposits on the valves while too low a level prevents proper lubrication and could cause engine seizure.

If the oil level is not within the minimum and maximum limits top up or drain as described in section "7.6.3 Changing the lubricating oil".

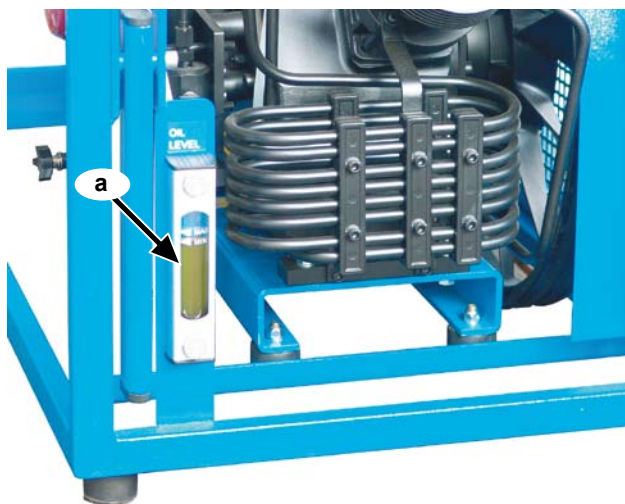
Model STANDARD and TECH



Model STANDARD and TECH produced since 2008



Model MINITECH

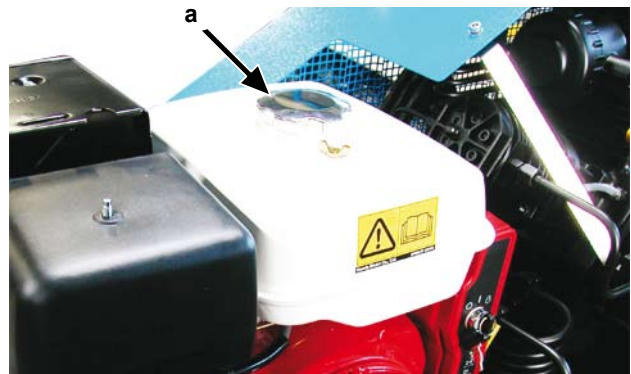


6.2.2 Checking that the refill flex hoses are in good condition

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”.



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 that 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 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 PRELIMINARY TASKS

6.3.1 Checking the safety valves

Check that safety valves are working properly by starting the compressor with the valves closed: this will raise circuit pressure fast and trip the valves when their pressure setting is reached.

The safety valve are pre-adjusted to 225 bar (3200 PSI), 300 (4300 PSI) and 330 bar (4700 PSI).

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.

IMPORTANT

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.

DANGER

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

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.

IMPORTANT

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

6.4 STARTING AND SHUTTING DOWN

IMPORTANT



Every compressor with a petrol or diesel combustion engine is provided with a use and maintenance manual relative to the installed engine; this manual is drawn up by the engine manufacturer.

Before carrying out any work/tasks read the engine use and maintenance manual carefully.

A brief, non-exhaustive description of engine start/shutdown procedures is given below.

These tasks must only be carried out by skilled personnel authorised to operate the compressor.

WARNING



Petrol and diesel engines produce carbon monoxide.

Carbon monoxide is a toxic gas. Inhalation of carbon monoxide can cause unconsciousness or death.

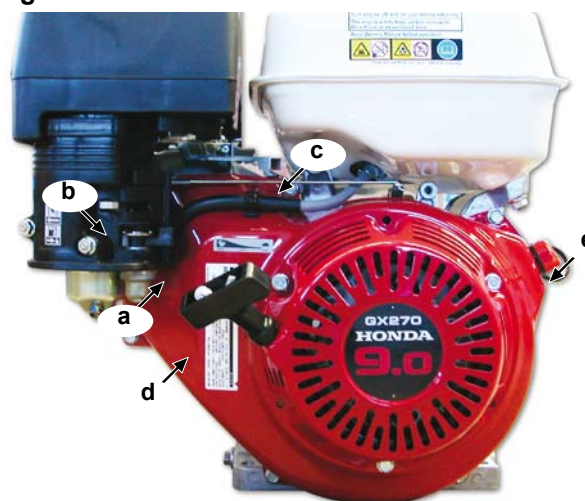
Avoid areas or actions that may involve exposure to carbon monoxide.

6.4.1 Starting and shutting down with petrol engines

Before starting open the condensate dischargers to prevent a start under strain.

- clean the air filter;
- check engine oil level;
- check fuel level and top up if necessary;
- shift the fuel tap lever (a) to the ON position;
- if the engine is cold, shift the choke lever (b) to the closed position;
- if the engine is hot the choke lever (b) must be in the open position;
- shift the accelerator lever (c) by about 1/3 from the minimum position;
- turn the on/off switch to the ON position;
- pull the start handle (d) gently until you feel a certain resistance, then pull hard;
- return the handle gently to prevent any disturbance to engine start;
- repeat the procedure if necessary;
- if the choke lever has been placed in the closed position, gradually shift it towards the open position as the engine heats up;
- to shut down the engine in an emergency, rotate the on/off switch (e) to the OFF position;
- to carry out a routine engine shutdown, shift the accelerator lever to the MIN position;
- rotate the on/off switch (e) to the OFF position;
- rotate the fuel tap lever to the OFF position.

Engine HONDA



6.4.2 Starting and shutting down with LOMBARDINI diesel engines

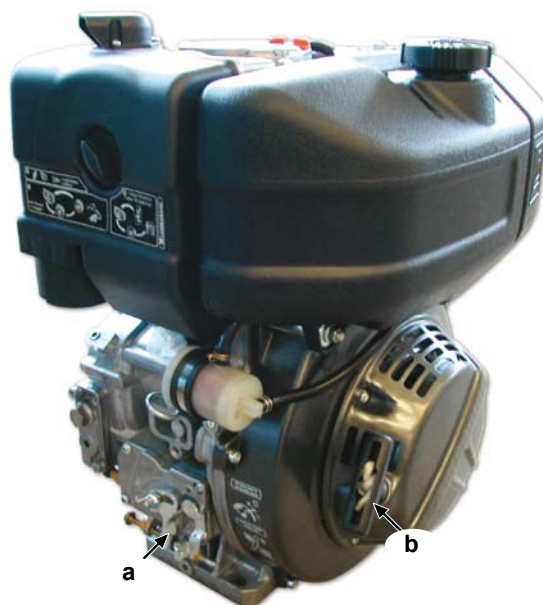
Before starting open the condensate dischargers to prevent a start under strain.

To switch on the engine:

- clean the air filter;
- check engine oil level;
- check fuel level and top up if necessary;
- bring the accelerator lever (a) into the 50% position;
- hold the grip (b), gently pull the cord to its full extension;
- let the cord rewind completely;
- start the engine by pulling the cord hard with both hands;
- let the engine idle for a few minutes.

To switch off the engine:

- let the engine idle for a few minutes;
- shift the accelerator lever (a) into position .



6.4.3 Starting and shutting down with YANMAR diesel engines

Before starting open the condensate dischargers to prevent a start under strain.

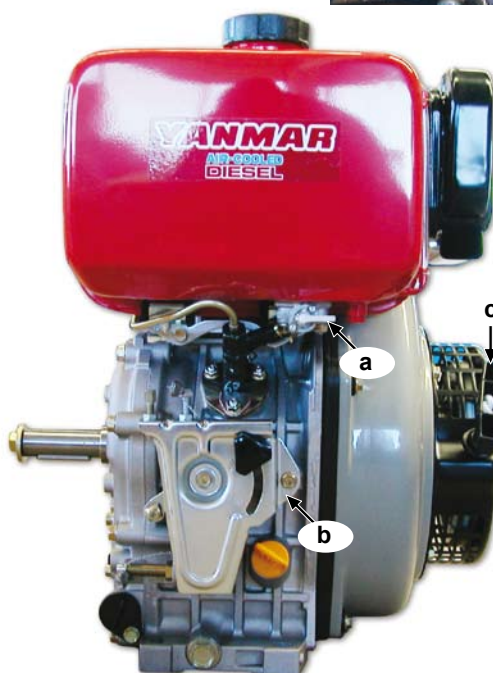
To switch on the engine:

- clean the air filter;
- check engine oil level;
- check fuel level and top up if necessary;
- bring the fuel tap (a) to the OPEN position
- bring the accelerator lever (b) to the START position;
- hold the grip (c), gently pull the cord to its full extension;
- let the cord rewind completely;
- push the decompression lever (d) down. It will automatically re-enter when the self-winder is extracted;
- start the engine by pulling the cord hard with both hands;
- let the engine idle for a few minutes.

To switch off the engine:

- let the engine idle for a few minutes;
- shift the accelerator lever (b) to the STOP position.

Close the fuel tap (a).



6.5 TANK REFILL

IMPORTANT



During refill the operator must be in the work area.

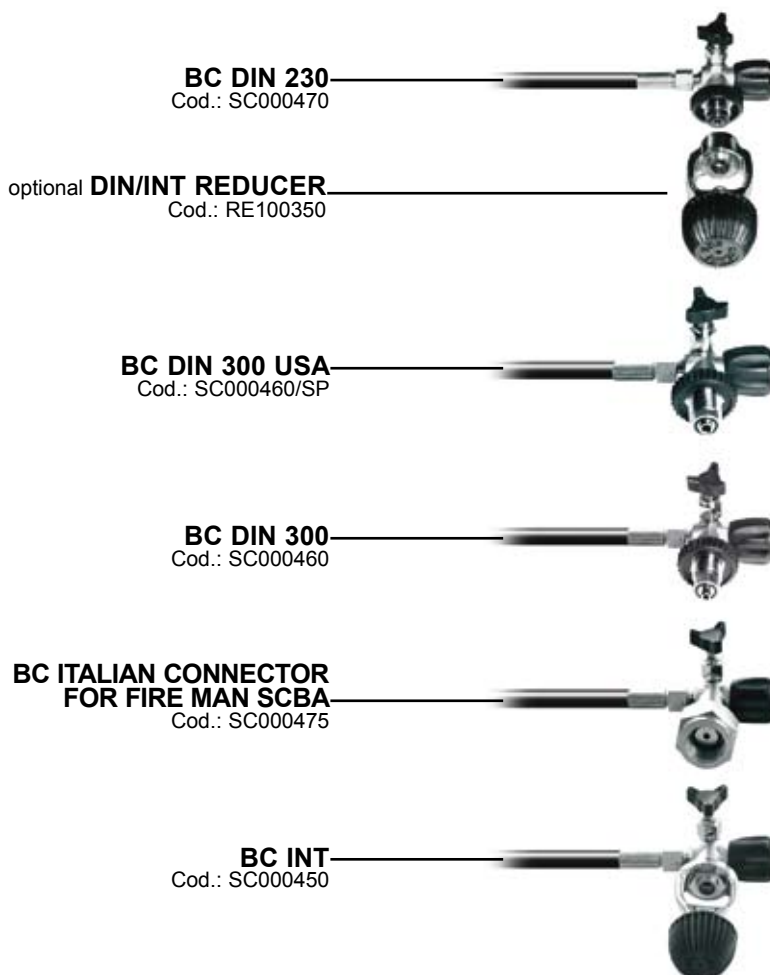
It is advisable, during the bottle refill phase, to submerge the bottles in cold water so as to reduce the pressure drop.

WARNING



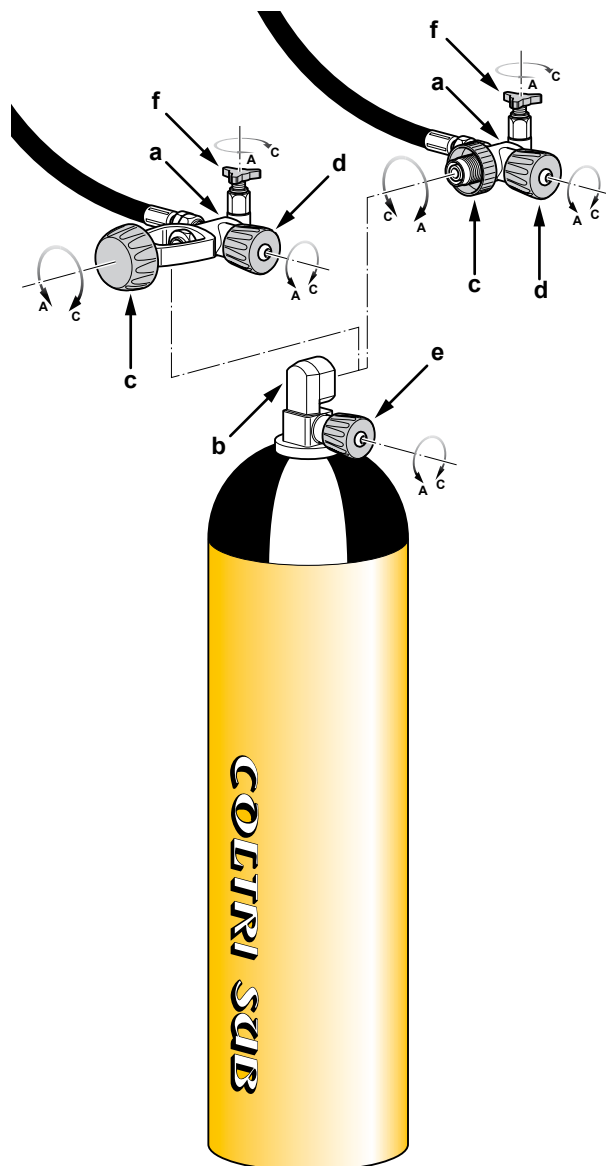
During bottle refill those not involved in the refill procedure must maintain a safety distance of at least 3 metres. Also, it is forbidden to disconnect the hoses from the fittings or the fill valve while the machine is under pressure.

The available bottle refill connectors are:



To refill bottles proceed as follows:

- 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.
- Start the compressor.
- 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.

**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.

IMPORTANT

If an emergency situation arises during refill shut down the compressor immediately (see "6.4 Starting and shutting down").

The compressor is nevertheless equipped with a safety system that shuts it down automatically when:

- The pressure setting on the pressure switch has been reached.

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

6.6 OPTIONAL ACCESSORIES

6.6.1 Electric motor

All compressors can be equipped with an electric motor (a), to be requested from AEROTECNICA COLTRI.

When requesting an electric motor you must also request the use and maintenance manual for MCH 13-16 Standard Electric compressors.

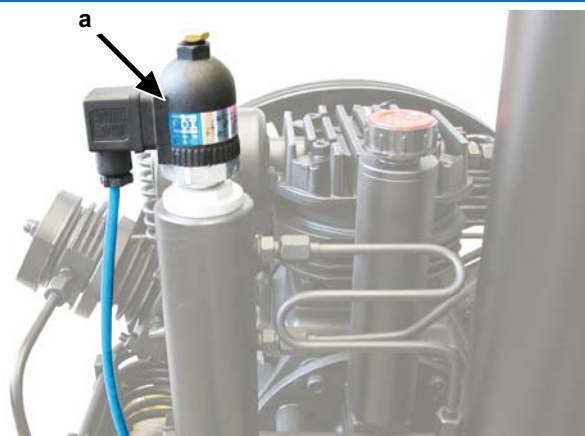


6.6.2 Automatic shutdown with pressure switch

Automatic pressure switch-controlled shutdown can be installed on compressors with petrol engines (models SH and SR).

Automatic shutdown can be installed on compressors with YANMAR Diesel engines only where they are already equipped with a solenoid valve on the tank and with electric start.

If the compressor is equipped with an automatic shutdown pressure switch (a) it will stop when the pressure set by the manufacturer is reached.



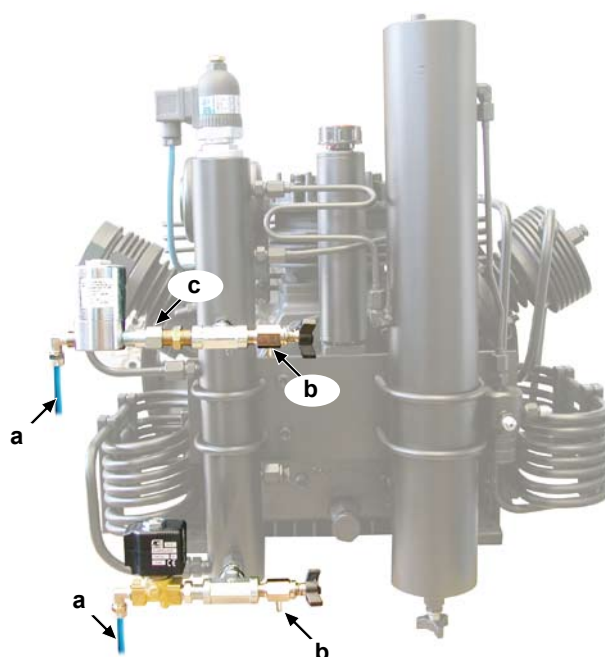
6.6.3 Automatic condensate discharge

Automatic condensate discharge can be installed on all compressors but only where they are equipped with electric start and battery.

Use a plastic hose to connect the discharge fittings (a) to a recipient/tank for collection of the condensate; check such recipient periodically to prevent it overflowing. If the condensate needs to be unloaded manually, use the discharge taps (b).

Every 250 hours it is necessary to change the SINTERED FILTER inside the solenoid valve fitting (c).

The condensate must be disposed of as per the instructions given in section "9.1 Waste disposal".



7 - MAINTENANCE

WARNING

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

DANGER

All maintenance tasks must be carried out with the compressor off.

IMPORTANT

For information on combustion engine maintenance refer to the engine use and maintenance manual provided together with this manual.

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: coltrisub@coltrisub.it

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.
- 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 "11 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.

7.4 SCHEDULED MAINTENANCE TABLE

Maintenance	5 hours	10 hours	30 hours	40 hours	50 hours	250 hours	500 hours	1000 hours	2000 hours	3000 hours	4000 hours
Condensate discharge	○	○			○						
Automatic shutdown check		○			○						
Lubricating oil level check					○						
Main functions check						○					
Clean condensate discharge valves						○					
Condensate discharge nylon							●				
Condensate discharge valves									●		
Belt wear and tension						○		●			
Cleaning the separator filter element						○	○				
Oil change						●					
1 st , 2 nd , 3 rd stage valves							○	●			
HP water/oil separator										●	
HP filter body										●	
Elastic bands 1st 2nd 3rd stage								●	●		
Check and replace HP flex hoses							○	●			
Fitting/hose leak							○				
General check-up							○				
Pumping unit, general overhaul								○			
1 st and 2 nd stage safety valves									●		
Safety valves								●			

○ Checking and cleaning ● Change

7.5 TROUBLESHOOTING

Problem	Cause	Solution
- The engine does not start	<ul style="list-style-type: none"> No fuel Engine switch is OFF Fuel tap is closed Spark plug does not spark 	<ul style="list-style-type: none"> Top up Turn switch to ON Open fuel tap Change spark plug
- Rotation speed and flow rate decrease	<ul style="list-style-type: none"> Motor power too low The belt slips 	<ul style="list-style-type: none"> Check the motor and the line Restore proper belt tension
- The flow rate diminishes without rpm decreasing	<ul style="list-style-type: none"> Valves not working 4 th stage piston worn Fittings loose / leaking seals Intake filter clogged Intake extension kinked Piston or piston rings worn 	<ul style="list-style-type: none"> Contact technical assistance Contact technical assistance Check for leaks with soapy water and eliminate them Replace filter Straighten, use stiffer pipe Contact technical assistance
- Air smells of oil	<ul style="list-style-type: none"> Filter cartridge exhausted Piston rings worn 	<ul style="list-style-type: none"> Replace Contact technical assistance
- Compressor overheats	<ul style="list-style-type: none"> Direction of rotation wrong Cooling tubes dirty Incomplete valve closure (causing overload of another stage) 	<ul style="list-style-type: none"> Correct direction of rotation Contact technical assistance Contact technical assistance

7.6 CHECKING AND CHANGING THE LUBRICATING OIL

After putting the compressor into service the lubricating oil must be changed after the first 50 working hours. The lubricating oil must be changed every 250 hours working hours or annually.

IMPORTANT

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



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/filter change could cause personnel to slip; wear protective garments and anti-slip footwear and remove any traces of oil immediately.

Both oil and filter are 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.

7.6.1 Oil table

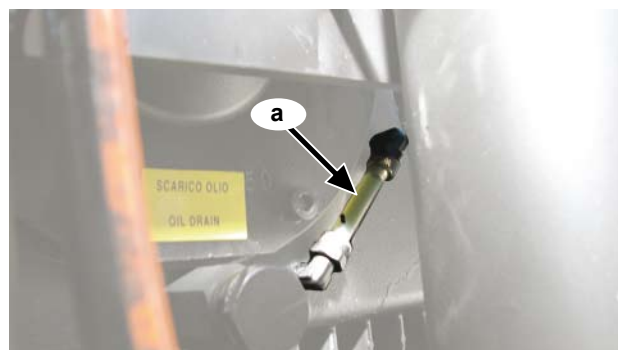
Sump capacity	litres / Quart	1,8
Recommended oils	COLTRI OIL CE750 CHEMLUBE 751 ANDEROL 755	

7.6.2 Checking the oil level

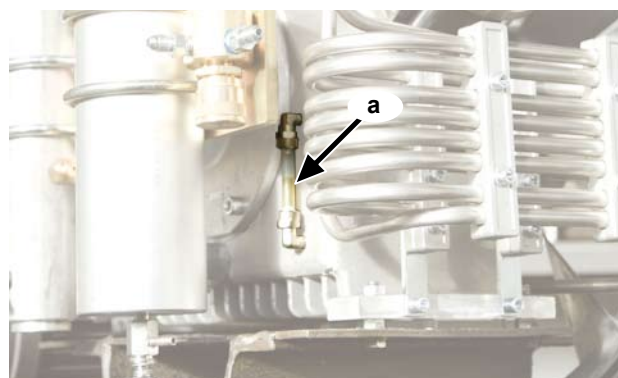
Check that the level of lubricating oil (a) is within the allowed limits (it must be above half the length of the level indicator tube (a)) Note that an excessive quantity of oil can cause infiltrations in the cylinders and leave deposits on the valves while too low a level prevents proper lubrication and could cause engine seizure.

If the oil level is not within the minimum and maximum limits top up or drain as described in section "7.6.3 Changing the lubricating oil".

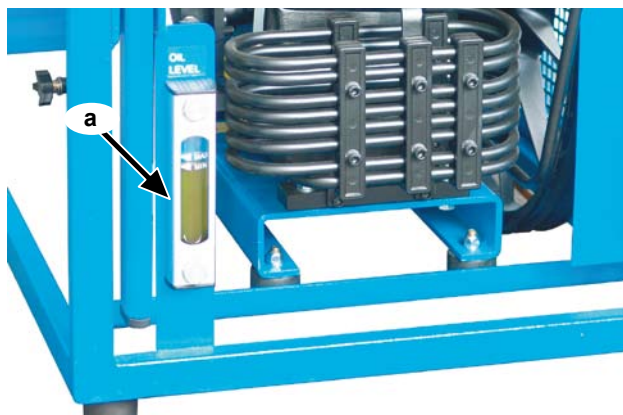
Model STANDARD and TECH



Model STANDARD and TECH produced since 2008



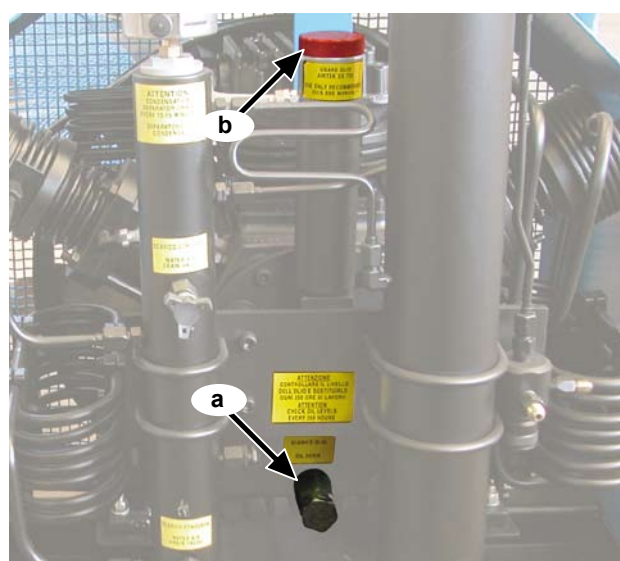
Model MINITECH



7.6.3 Changing the lubricating oil

The lubricating oil must be changed every 250 working hours or annually. To change the oil proceed as described:

- position a recipient under the drain plug (a) so that the oil flows into the exhausted oil recipient (recipient capacity of at least 3 litres required).
- open the top plug (b).
- open the plug (a) and let all the oil drain out.
- close the drain plug (a).
- fill the oil sump with 1.8 litres of oil from top oil plug (see "7.6.1 Oil table").
- close the oil top plug (b).
- switch on the compressor and run it depressure area for 30 seconds.
- check the oil level; if it is not between the min. and max. limits proceed with the tasks described above.



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.

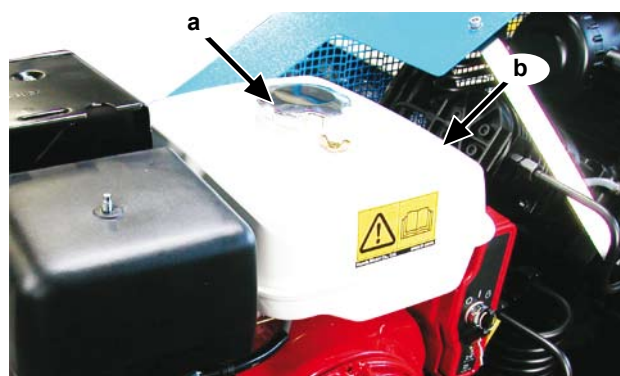
The fuel level must be checked at the start of every working day.

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).



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.

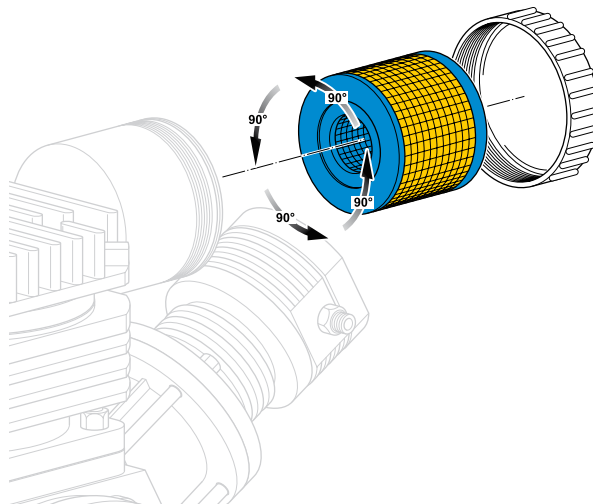
Always make sure the fire extinguisher is at hand when topping up the fuel level.

7.8 CHANGING THE INTAKE FILTER

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 250 working hours or annually.

Rotate the filtration cartridge in the filter by 90° every 50 hours.



DANGER



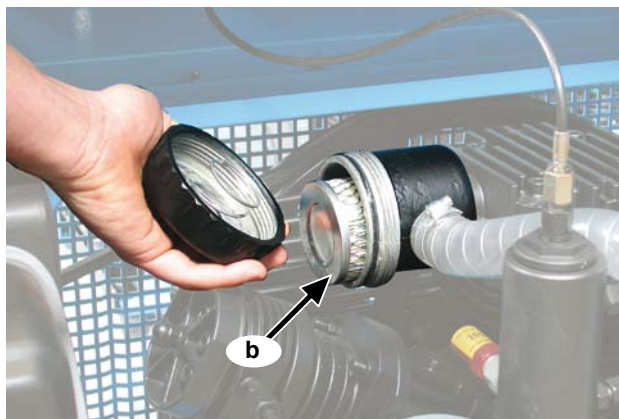
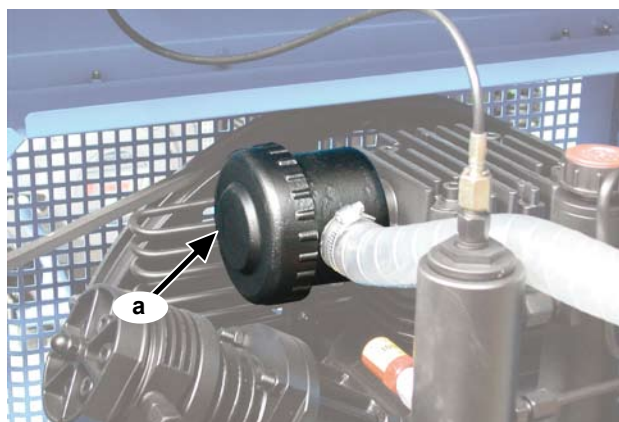
Do not carry out these tasks if the compressor has only just shut down; wait for the compressor to cool.

All maintenance work must be carried out with the compressor OFF.

The air intake filter must be changed every 250 working hours or annually.

To change the filter proceed as follows:

- turn the air filter cover (a) by rotating it anticlockwise;
- remove the air filter cartridge (b);
- replace the cartridge with a new one;
- re-close the cover (a): screw it back on clockwise.



IMPORTANT



If the compressor is used in a dusty environment the filter change interval should be reduced to every 100 hours.

7.9 CHECKING THE SAFETY VALVE

The final safety valve protects bottles from being filled with air at too high a pressure; the valve setting is made at the time of testing the compressor.

The safety valve must be tested every time bottles are refilled.

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.

IMPORTANT



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

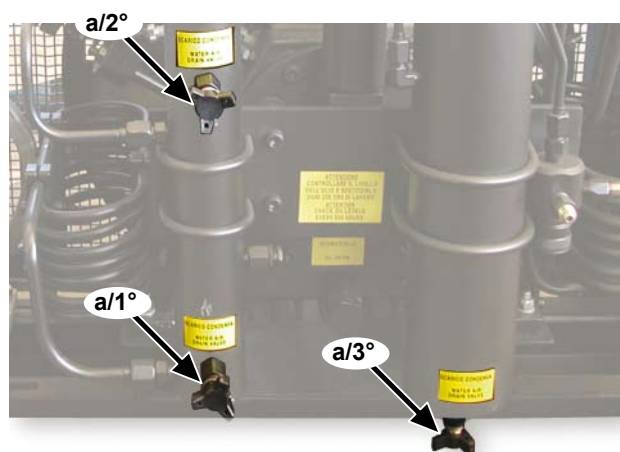
7.10 CONDENSATE DISCHARGE

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 valves (a) and collect the condensate in an appropriate recipient.

Close the valves.

Condensate must be disposed of according to the instructions shown in section "9.1 Waste disposal".



IMPORTANT



The condensate must be discharged at the end of every working day.

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.

7.11 TRANSMISSION BELT

Belt tension must be checked monthly.

The transmission belts must be replaced every 500 working hours of the compressor.

DANGER



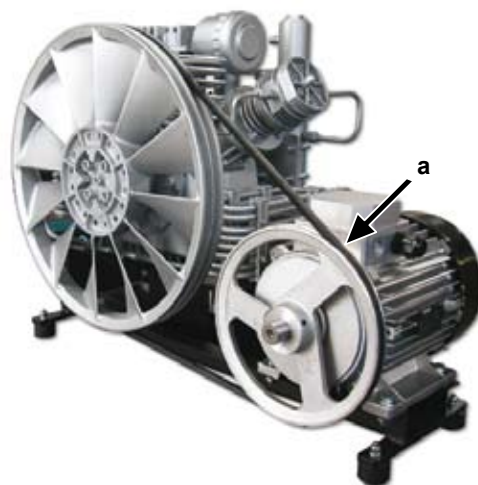
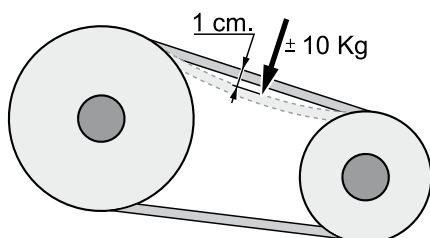
Do not carry out these tasks if the compressor has only just shut down; wait for the compressor to cool.

All maintenance work must be carried out with the compressor OFF.

7.11.1 Checking transmission belt tension

To check the tension on the belt (a) exert a pressure of approximately 10 Kg on the belt; check that the belt does not flex by more than 1 cm with respect to its original position.

Should it flex more than this replace the belt.

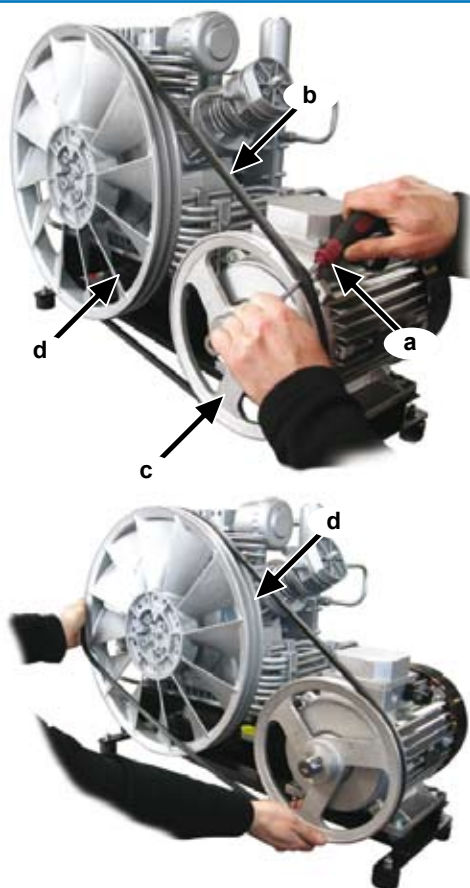


7.11.2 Changing transmission belt

To change a belt proceed as follows:

- insert a screwdriver (a) between the belt (b) and the motor pulley (c).
- take the belt out of the pulley groove.
- replace the belt with a new one, making sure that model and length are correct: check that the characteristics of the new belt are identical to the old one.
- insert the belt in the groove of the motor pulley (c).
- insert the belt in the groove of the compressor pulley (d): turn the pulley by hand until the belt slips into the pulley groove perfectly (second diagram).
- check that the belt is inserted perfectly in the grooves of both pulleys and that belt tension is correct.

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



7.12 ACTIVE CARBON FILTER / MOLECULAR SIEVE

The active carbon filter must be replaced at intervals calculated on the basis of the characteristics of the environment in which the compressor is located. To calculate these intervals refer to the table below.

The filter must nevertheless be replaced before the air becomes malodorous.

IMPORTANT



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

IMPORTANT



For compressors used in the USA and CANADA the use of LAWRENCE FACTOR filtration cartridges is recommended.

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.

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

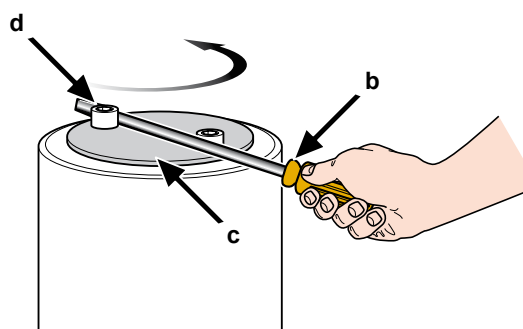
7.12.1 Filter replacement frequency calculation table

Temp. (°C)	Temp. (°F)	Correction factor	Filter duration (hours) MCH-8	Filter duration (hours) MCH-11	Filter duration (hours) MCH-13	Filter duration (hours) MCH-16	Filter duration (hours) MCH-18
50	122	0,2	(70x0,2)=14	(55x0,2)=11	(50x0,2)=10	(40x0,2)=8	(36x0,2)=7
40	104	0,34	(70x0,34)=24	(55x0,34)=19	(50x0,34)=17	(40x0,34)=14	(36x0,34)=12
30	86	0,57	(70x0,57)=40	(55x0,57)=31	(50x0,57)=28	(40x0,57)=23	(36x0,57)=20
20	68	1	70	55	50	40	36
10	50	1,2	(70x1,2)=78	(55x1,2)=66	(50x1,2)=60	(40x1,2)=48	(36x1,2)=43
5	41	1,4	(70x1,4)=98	(55x1,4)=77	(50x1,4)=70	(40x1,4)=56	(36x1,4)=50
0	32	1,6	(70x1,6)=112	(55x1,6)=88	(50x1,6)=80	(40x1,6)=64	(36x1,6)=57

7.12.2 Changing the active carbon filter / molecular sieve

To change the active carbon filters (a) proceed as follows:

- vent all the compressed air inside the circuit.
- use the tool (b) to lever the screw heads (d) on the plug (c) and rotate counter clockwise.

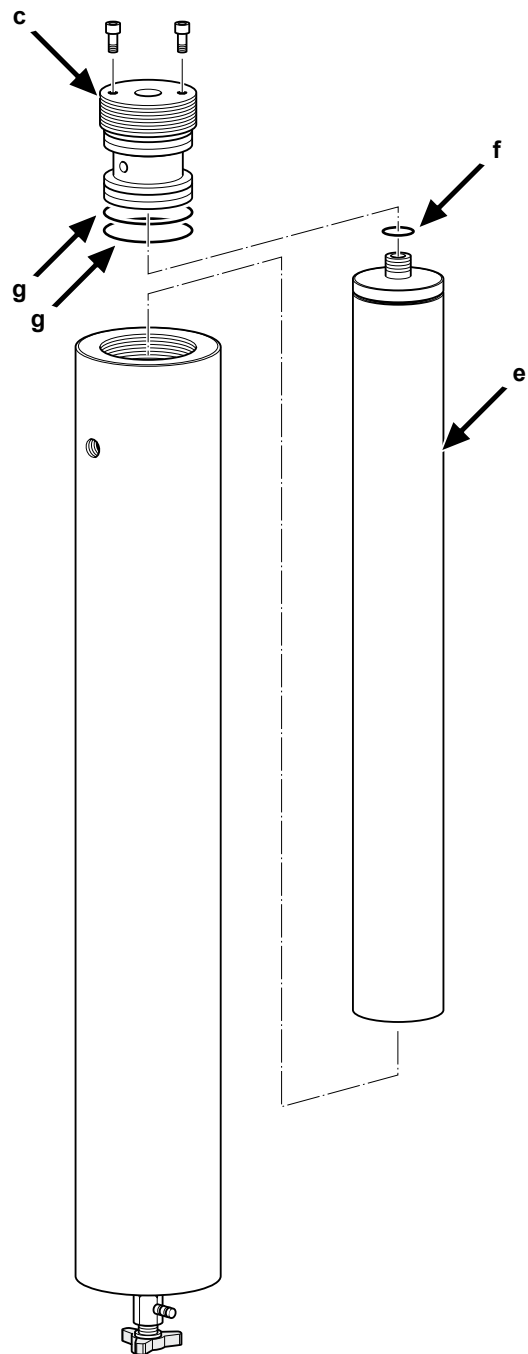
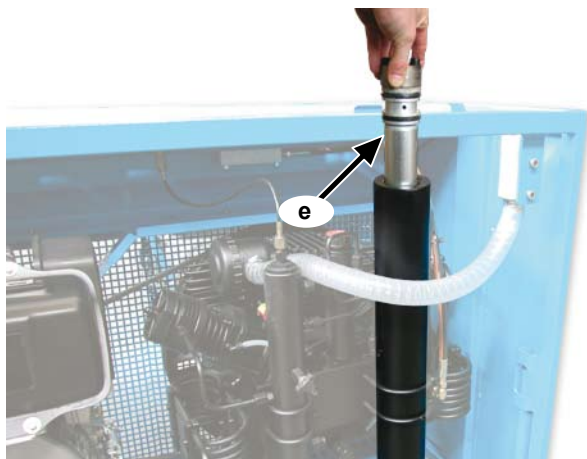
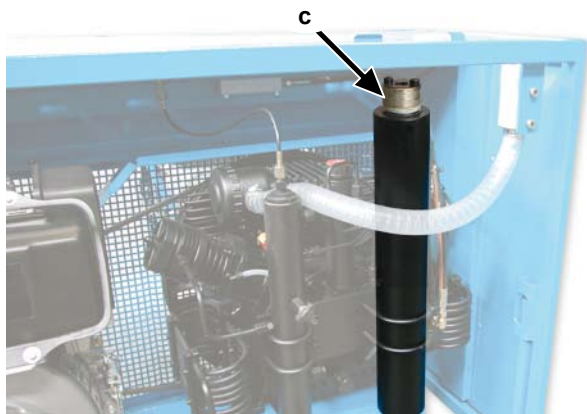


- remove the filter plug (c).
- unscrew the cartridge (e) from the plug (c).
- replace the cartridge (e) with a new one.
- screw the new cartridge onto the plug (c).
- close the filter plug (c) and tighten with the wrench (b).

There are O-rings on the filter plug and cartridge (f-g). If these O-rings deteriorate air is vented through the cap (c).

If you notice any venting replace the O-rings.

When changing the O-rings observe the precautions described at the beginning of the relevant section of the manual.

**WARNING**

The active carbon filters are classified as special waste: they must be disposed of in compliance with the anti-pollution standards in force.

IMPORTANT

It is essential that there be a filtration cartridge (e) inside the active carbon filters (a) every time the compressor is used.

7.13 CHANGING THE FLEX HOSES

IMPORTANT

The hoses must be changed periodically (every 3 years or ever 1000 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.

Vent the air from the compressor before carrying out any maintenance tasks.

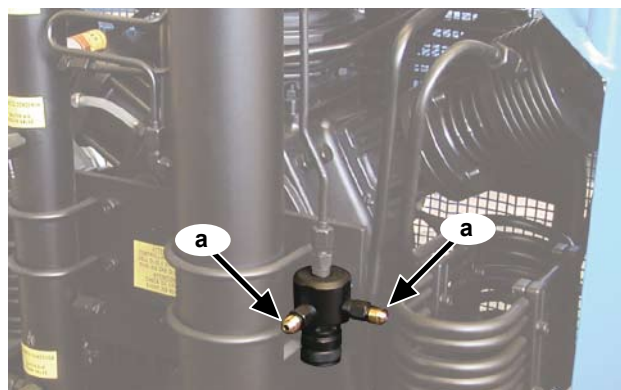
Tank refill pressure is very high; therefore, before refilling the tanks check that the hoses are perfectly connected and in good condition. Check also that the valves on any unused hoses are closed properly so as to prevent the dangers that derive from hose whiplash.

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 hoses proceed as follows:

- disconnect the bottle refill hoses by unscrewing the fittings (a) (17 mm wrench).
- replace the old hoses with new ones.
- screw the hoses onto the connectors (a).
- use a dynamometric wrench to tighten the hoses on the compressor with a torque of 15 Nm.



8 - STORAGE

Should the compressor not be used, it must be stored in a dry sheltered area at an ambient temperature of between 0 °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 active carbon filter 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 compressor.

Proceed with a thorough general clean of all compressor parts.

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.

9.1 WASTE 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 active carbon filters 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.

10 - INSTRUCTIONS FOR EMERGENCY SITUATIONS

10.1 FIRE

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

Contact the fire brigade.

11 - MAINTENANCE REGISTER

11.1 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.

11.2 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.

11.3 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.

11.4 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**

E-mail: **coltrisub@coltrisub.it**

11.5 SCHEDULED MAINTENANCE REGISTRY COUPONS

Type of work and notes	Date
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	'Assistance' service stamp
	Maintenance technician's signature

Type of work and notes	Date
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	Maintenance technician's signature

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	'Assistance' service stamp
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	'Assistance' service stamp
	Maintenance technician's signature

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	'Assistance' service stamp
	Maintenance technician's signature

Type of work and notes	Date
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	'Assistance' service stamp
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Type of work and notes	Date
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	Maintenance technician's signature

12 - NOTES

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12 - NOTES

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