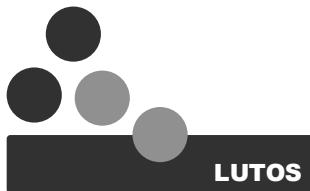


Directions for Use and Service Manual

Blower sets: DT 6/42 to DT 120/1002,
Blower sets: DT 6/42-V to DT 120/1002-V
and
Blowers: DI 6 to DI 120



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2. Specifications about a producer

Central site:
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Place of business:
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3. Signification of the plant

Design	Type
Blower sets – standard	DT 6/42 to DT 120/1002
Blower sets – vacuum	DT 6/42-V to DT 120/1002-V
Blowers	DI 6 to DI 120

4. EC Declaration of incorporation of incomplete machinery

Declarations mentioned in paragraph 4.1 is enclose in full version to this manual as an appendix I.

4.1. Declaration of incorporation of incomplete machinery

We, Atlas Copco LtD. division LUTOS, declare under our sole responsibility, that the product.....1. Machine name 2. Machine type 3. Serial number.....must not be put into service until the machine in which it is intended to be incorporated into or assembled with, is in conformity with the relevant Essential Health and Safety Requirements of the EC-Directive 2006/42/EC and its amendments on the approximation of the laws of the Members States relating to Machinery.

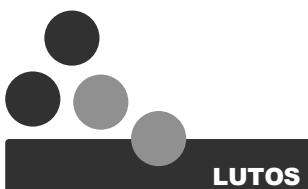
We Atlas Copco LtD. division LUTOS, hereby declare that the product which falls under the provisions of article 12.2 of the EC-Directive 2006/42/EC on the approximation of the laws of the Member States relating to machinery, as a components/quasi machine is in conformity with the relevant Essential Health and Safety Requirements of this directive. Atlas Copco LtD division LUTOS, undertakes, in response to a reasoned request by the national authorities, to transmit the relevant information on the partly completed machinery. The information on the relevant parts can be obtained prejudice to the intellectual property rights of Atlas Copco LtD. division LUTOS. This machinery complies also with the requirements of the following directives and their amendments as indicated (where applicable). 4. Directive on the approximation of laws of the Member States relating to: a. 97/23/EC – Pressure equipments b. 2009/105/EC – Simple pressure Vessel c. 2004/108/EC Electromagnetic compatibility d. 2006/95/EC – Low voltage equipment e. 2001/14/ES+2005/88/EC – Outdoor noise emission 5. The harmonized standards and technical 6. Atlas Copco LtD. division LUTOS is authorized to compile the technical file 7. Conformity of the specification to the directives; Conformity of the product to the specification and by implication to the directives 8. Issued by: Product engineering; Manufacturing 9. Name 10. Signature 11. Date.

5. General account of the blower set

5.1. Basic information

The Directions for Use and Service Manual for the DT blower sets and DI blowers (hereinafter referred to as the Manual) contain important directions to be observed throughout the machine's operating life, starting on receipt of the machine. The Manual has been compiled for complete DT blower sets produced by LUTOS (hereinafter referred to as division LUTOS); however, it also applies to separately delivered DI blowers. *Before installing and/or putting the machine into operation, you must familiarize yourself with this Manual in order to ensure trouble-free and safe operation of the machine and a long operating life.* The Manual mentions and quotes safety regulations to be considered particularly during machine operation. It is necessary that the personnel responsible for the machine operation and maintenance have this Manual at their disposal so that operation and maintenance is done in accordance with the instructions stated in this Manual. We recommend entrusting repairs and redesigns only to LUTOS specialists. If under guarantee, the machine shall be disassembled only by LUTOS specialists or persons authorized by LUTOS.

The Manual contains only instructions for use of standard blowers and blower sets designed for air transport. The instructions for use of non-standard blowers and blower sets for transport of other gases must be consulted with the Manufacturer.



The instructions stated in the Manual apply to the blower set, the Quality Certificate of which is enclosed with this Manual. If any failure occurs, immediately contact the Section for Business-technical Services (hereinafter referred to as the LUTOS service department). When contacting LUTOS about any problem, state the data from the type plate: the type and serial number of the blower set or blower.

5.2. Blower description

The LUTOS DT-series blower sets are fitted with LUTOS DI-series blowers of the Roots type with three-tooth rotors.

The LUTOS Roots blowers work on the principle of oil-free gas transport. These blowers are the most widespread type of two-rotor blowers. The axes of the rotor rotation are parallel. A synchronizing gear, both of whose wheels have the same number of teeth, moves the rotors. The synchronizing gear ensures contact-less movement of the rotors. The rotors turn against each other. Both the suction and discharge sockets run between the rotor axes. The blower transports gas without increasing the pressure. Gas is compressed in the discharge socket by the gas that has already been transported (blowers with external compression).

The rotor seals of the standard blower types are not subject to wear. Since the seals do not ensure absolute tightness of the blower, the oil levels in the covers must not exceed the stipulated limits. Otherwise, oil could leak into the blower's working space or outer space. In order to prevent oil from leaking during transport and/or handling of the blower, you must fill oil before putting the machine into operation.

Blower drive

Blowers are mostly driven by electric motors. A belt drive normally transfers the torque from the motor shaft to the blower shaft. The blower shaft is a part of one rotor.

5.3. Blower set description

Blower sets are shown in the dimensional drawings of the individual types that are enclosed with this Manual.

Main parts of the blower sets are

- A suction filter - a resonance silencer with a filter insert.
- A discharge silencer - a welded construction of the base frame and the vessel. It serves as a supporting element for the blower and is also designed to suspend and secure the pendulous motor frame.
- A pendulous motor frame - it is suspended by pins in the silencer frame. It enables the belts to be tightened by tipping the motor.
- A non-return valve – an inter-flanged type. The non-return valve of the overpressure machine type is installed at the discharge section while that of the vacuum machine type is installed at the suction section.
- A safety valve - it serves as overload protection of the blower.
 - Overpressure: if the valves are opened, air (gas) is released into the atmosphere. Directly controlled, HEROSE spring valves are used in smaller blower sets. Their opening pressure is set by spring bias. Larger types of blower sets are protected indirectly by controlled combined safety and starting valves (see the PVO valve description for more detail information).
 - Underpressure: if the underpressure set by the spring has been exceeded, the seat will lift and air will be sucked from the atmosphere into the suction pipeline. The used valves are directly controlled and spring-operated. Their opening pressure is set by spring bias
- A compensator - metal bellows.
- An electric motor - a bottom, fixed-speed or two-speed electric motor.
- A belt drive with V-shaped or toothed belts.
- A belt guard - it is made from common constructional steel.
- Bases with rubber dampers - they minimize transfer of vibrations to the bases.
- A visual indicator of suction filter clogging.
- A discharge overpressure gauge or a suction underpressure gauge.

- Optional accessories:
 - A suction pressure gauge, or an electric indicator of filter clogging instead of the visual indicator.
 - An electric motor. You can choose a fixed-speed or two-speed motor or a type of motor where a frequency converter changes the motor revolutions.
- Special accessories:
 - Pressure and temperature sensors.
 - A switchboard with a control unit, including outside pressure and temperature sensors.

5.4. PVO Combined safety and starting valves

Functions

The PVO combined valve has two functions. When the blower is starting, the valve gradually increases the air pressure, thus increasing the torque – starting valve function. When the blower is in operation, the valve protects it against overload (against pressure increase over the permissible limit) – safety valve function

Valve description

The numbers of the main parts correspond to the numbers of the positions shown in Appendix II (PVO combined valve assembly): control valve (1), mobile base (2), bottom base (3), top base (4), bellows flange (5), hose (6), guide rod (7), bellows (14), and springs (15).

Starting valve function

If there is no pressure, the main valve is open – the springs (15) lift the bottom base (3). When the blower is starting, pressure is generated in the gap between the seat and the disc. The control valve will feed the pressure into the bellows. As the bellows area is larger and the bellows power is higher than those of the seat, the bellows will close within several seconds due to gradually increasing pressure, thus enabling the blower to start with the load increasing fluently. The bellows must simultaneously press the springs (those ensuring that the unloaded valve will open). If the unloaded valve were closed, it would not serve as a starting valve. By removing the springs, you could disengage the starting valve function.

By installing a solenoid valve (a special design), you could control the blower's start-up time electrically. When the electromagnet of this valve is turned on, the inner space of the bellows is interconnected with the atmosphere and the main valve is open.

Safety valve function

During normal operation, i.e., after the blower has started, the main valve disc is closed. The control valve interconnects the spaces of the outlet pipeline and the bellows. If pressure exceeds the adjusted limit, the control valve will release it into the atmosphere. This will result in reducing the pressure in the bellows and opening the main valve disc. After the pressure has dropped, the control valve will stop releasing the pressure into the atmosphere, thus increasing the pressure in the bellows and closing the main valve disc.

5.5. Symbols used in the manual and on the blowers and blower sets

5.5.1. Cautions

<i>Caution: Read the Direction for use!</i>	<i>Caution: Wear ear protectors!</i>

Tab. 1 Cautions

5.5.2. Warnings

Warning: Overlooking these instructions might cause damage to the machine and/or slight injuries	Warning: High temperature risk

Tab. 2 Warnings

5.5.3. Forbidden

Forbidden: Do not turn on the machine!	Forbidden: Do not use a hammer!

Tab. 3 Forbidden

5.5.4. Informations

Oil filling	Suspension

Tab. 4 Informations

5.6. Description of assumed use

The blowers are used to transport and compress or to remove by suction explosive gases classified as Group 2 of Category 2 of Explosiveness Group IIA with maximum surface temperature T3 (II 2 G c IIA T3) according to Directive of European Parliament and Council No. 94/9/ES and Government Decree No. 23/2003. Since the impellers do not touch each other and there is no contact between the impellers and the casings, the gasses do not get contaminated by dirt during the transport. The transported gasses are also free of oil.

Applications

- Pumping gases
- Transporting and compressing gases

Work media

Standard blowers are designed to compress or exhaust air or non-aggressive and non-explosive gases. In order to compress or exhaust gases in explosion-hazard environments, gases with elevated humidity, and/or aggressive gases, it is necessary to use blowers and blower sets designed and produced specially for these purposes.

Suction and discharge temperature

Suction and discharge temperatures depend on the compression degree. Both temperatures are stated in the calculation of the blower set parameters. Such calculations are included in the offers of the blower sets. In standard blowers, the maximum temperature of the discharged medium is 140 °C. In order to prevent the temperature from exceeding the limit value in the discharge section (even during the highest medium compression), the intake medium temperature must be below 40 °C

Suction and discharge pressures

The suction and discharge pressures are stated on the type plates of the blower sets and in the calculations of the blower set parameters. The maximum permissible differential pressure is stated on the blower type plates. The pressure at the blower's discharge flange is referred to as p_v , the pressure at the blower's suction flange is referred to as p_s , and the pressure at the flange that connects the blower set with the pipeline system is referred to as p_3 .

Lubricant specification

The following table provides oil charge volumes for blowers:

Oil charge volumes			
Type	Drive side [l]	Gear side [l]	Total [l]
DI 6	0,07	0,1	0,17
DI 10, 20	0,1	0,15	0,25
DI 30, 40	0,2	0,45	0,65
DI 50, 60	0,55	0,7	1,25
DI 65, 66	0,75	1,4	2,15
DI 70	1,5	2,75	4,25
DI 90	1,4	2,6	4
DI 100, 110	5	6	11

Tab. 5 Oil charge volumes



The prescribed oil is fully synthetic motor (automotive) oil, class: SAE 5W-40, classification: ACEA A3/B3 and API SJ/CF. The following table indicates some of the suitable oil types:

Oil type	Oil	Manufacturer (representative)	Distributor
MOBIL SPECIAL X SAE 5W-40 API SJ/CF, ACEA A3-96, B3-96	Exxon Mobil Lubricants & specialties Europe Division of ExxonMobil Petroleum & Chemical Polderdijkweg 3 B-2030 Antwerpen, Belgium		

Tab. 6 Oil type

Use of different oils (e.g., for applications in the food-processing industry) must be consulted with the blowers Manufacturer.

Electric motor lubrication is described in the enclosed Electric Motor Manual. There are no other lubrication places in the blower sets

Maximum temperatures of the lubricating system

The maximum temperature of the oil charges must not exceed 120 °C (standard stabilization of the blower bearings).

Pulley revolutions

The maximum revolutions of the pulleys correspond to those of blowers.

The used designs of the pulley guards are tough enough to withstand any damage (break-off and/or tear) caused by broken belts.

Medium speed

- The speed in the openings for intake and exhaust of air from the machine hall: between 5 m/s and 10 m/s;
- The recommended speed in the pipeline: 22 m/s;
- The maximum speed in the discharge pipeline: 35 m/s; and
- The maximum speed in the suction pipeline: 30 m/s.

Necessary safety equipment

If the delivery contains no blower discharge pressure gauge, you must install it on the discharge pipeline. The used pressure gauge must be glycerine or with an absorber in order to ensure reliable functioning.

Recommendations for operation at a temperature of 0°C and lower

The minimum ambient temperature when the blower set operation is still stable is -10 °C. Nonetheless, blower sets can be operated for a short time at a temperature as low as -15 °C. Such restrictions apply particularly to the belts, standard types of electric motors, and PVO valves. The blower set contains no water cooling. The minimum volume of condensate that builds up in the discharge pipeline cannot affect the blower set operation.

5.7. Transport and transport data

5.7.1. Delivery

Delivered blower sets are assembled as complete units. Delivered belts are not installed on the machine. The pendulous motor frame is secured by bolts in the bottom position. Blowers are delivered without oil fillings. The delivery contains the accessories specified in the purchase contract.

5.7.2. Transport

Blower sets must be transported in protected freight space.



Blower sets must be transported with belts removed! Otherwise, the shaft or bearings could be damaged. During transport, the pendulous motor frame must be secured by appropriate bolts in the bottom position!

5.7.3. Receipt

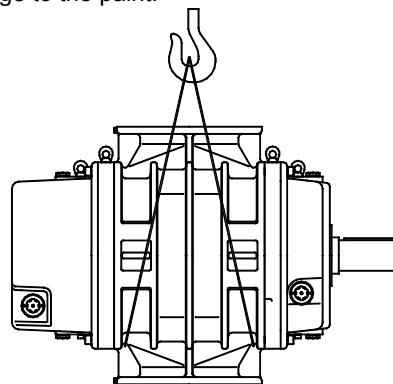
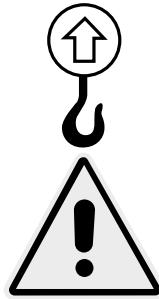
On receipt, the delivery must be checked with the delivery notes for completeness. Any potential damage caused during transport must be recorded in the presence of the carrier. The record signed by the carrier must be immediately submitted to the supplier.

5.7.4. Handling

To handle the machine, use a forklift truck and/or crane as described below.

Blower

The picture shows the handling of a blower. To handle the blower, use soft binding ropes. Steel wire ropes can be used provided they are padded in order to prevent damage to the paint.



WARNING

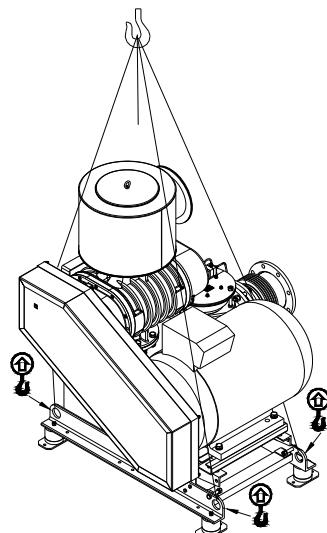
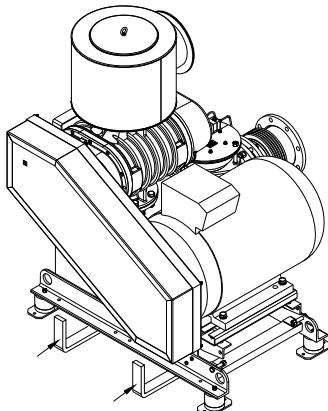
On no account should the blower be lifted with the ropes attached to the flanges!

Blower set

To handle the blower set, use a forklift truck and/or crane. The following pictures show the ideal handling of blower sets. To handle the blower set with a crane, use soft binding ropes. Steel wire ropes can be used provided they are padded in order to prevent damage to the paint. Further, you must avoid using too short binding ropes in order to prevent deformation of the suction filter during transport.



WARNING
On no account should the blower set be lifted with the ropes attached to the set bases, blower flanges, suction silencer, and/or motor

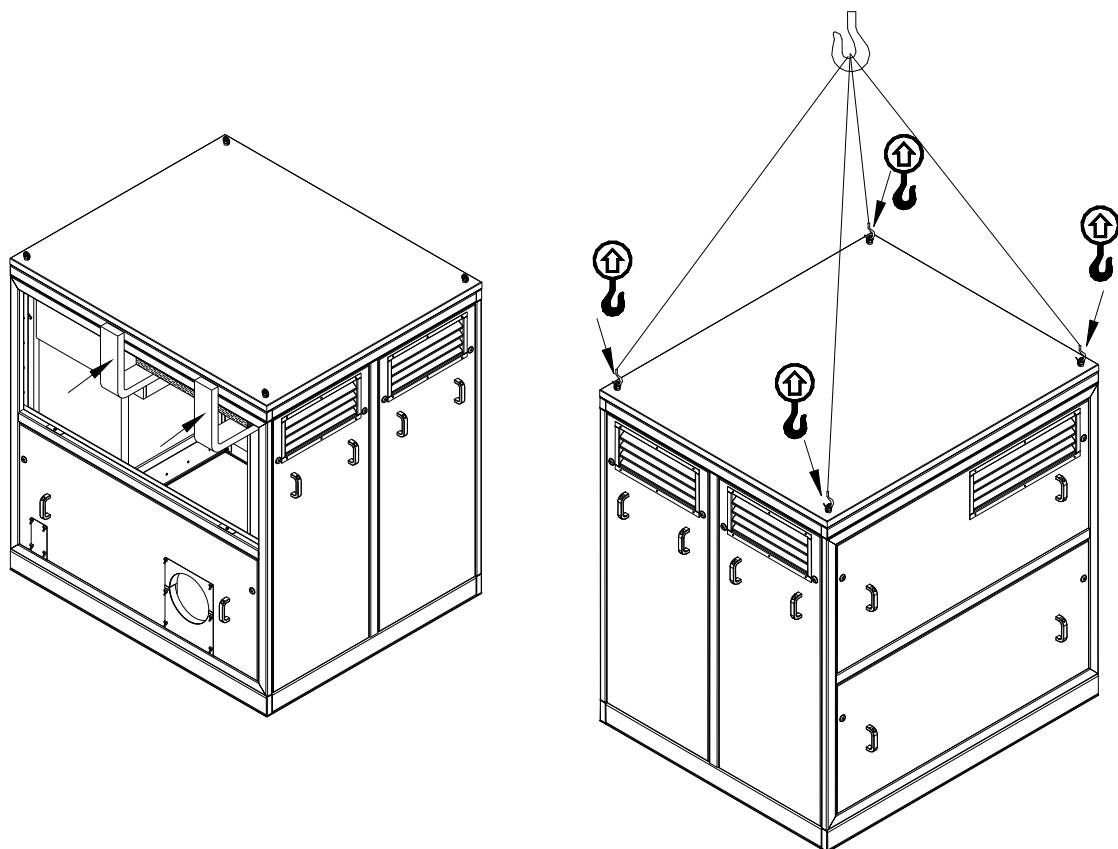


Noise damping Hoods

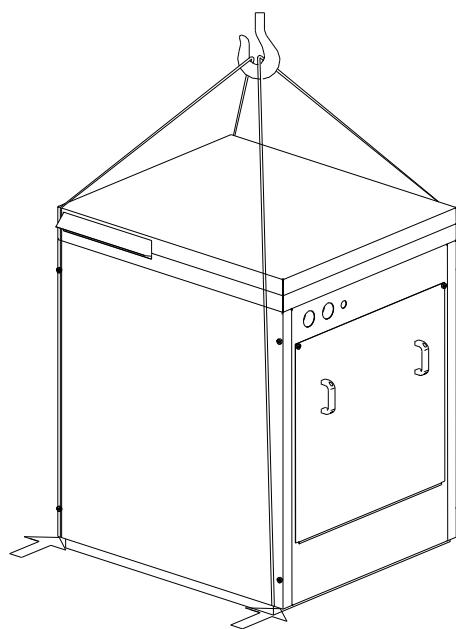
Smaller types of noise-damping hoods, in which blower sets are placed, can be handled by a crane or a forklift truck. Ropes must be placed under the bottom base as displayed in the picture - in the direction shown by the arrows. The forks of the forklift truck must also be placed in the direction shown by the arrows.

Larger types of noise-damping hoods are equipped with lifting-eye nuts. If crane handling of the hoods is impossible, they can be handled with a forklift truck. When handling the hood with a truck, you must put baulks on the truck forks (where the hood is placed) in order to prevent damage to the hood. The hood can also be disassembled into individual parts and then reassembled at the place of installation. The following pictures show the handling of noise-damping hoods.

Without a blower set



With a blower set



Motors

The handling of motors is described in the motor manual. For handling, motors are usually equipped with eye screws.

5.7.5. Operating and storage conditions

The blower set must be stored in its original packaging in a dry place and must be protected against dust. If the blower set has been stored for more than six months, you should (re)preserve it. For this purpose, you can use standard preservative agents.

Storage conditions:

Temperature: -10°C up to 40°C

Relative humidity: up to 80%

6. Installation and assembly

6.1. Assembly in the Machine hall

Service passages and the space necessary for the set assembly in the machine hall are shown in Appendix IV.

The minimum dimensions of the machine hall are based on the maximum dimensions of the blower set and the necessary 1-metre (better 1.2-metre) operation space at the sides of the sets and between the sets. The machine hall height depends on the method chosen for handling the machine(s).

When designing the machine hall, you must remember the openings for the blower sets (the delivered sets are normally assembled). You should consider equipping the machine hall with an overhead track for a crane crab or leaving enough space for a forklift truck in order to handle those blower sets to be maintained or repaired (necessity to dismantle the blower and/or motor if a failure has occurred).

The floor designed for installation must be flat and dimensioned for the machine weight and anchor length. With respect to the loading capacity, no special requirements are stipulated for the floor design since both the blowers and motors are dynamically balanced. The mechanical oscillation power of the blowers and motors are stated in Tab.9. The weight of the blower set is distributed between its individual bases. The weight of the delivered blower set is stated in its appropriate dimensional drawing.

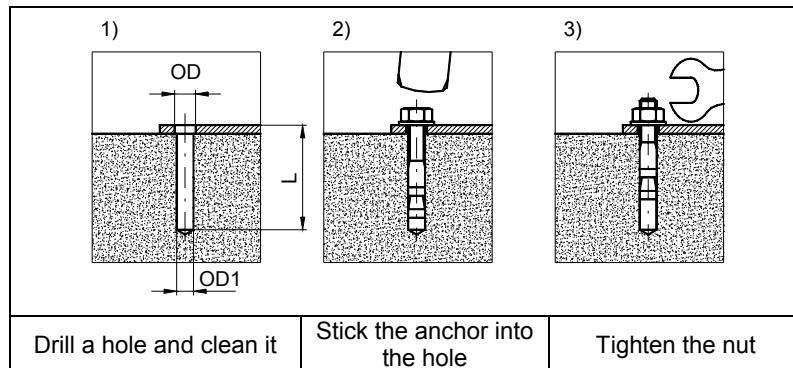
The blower set must be positioned horizontally by placing plates under the machine bases. The permitted deviation is 1 mm for 1 metre.



WARNING

After being set in its position, the blower set must be anchored to the floor. Otherwise, it could move spontaneously and thus be damaged.

Working Procedure for Anchoring Blower Sets



Blower set	Anchor	OD [mm]	OD1 [mm]	L [mm]
DT 6/42 – DT 30/42	Upat EXA M 8K	9	8	50
DT 30/72 – DT 120/1002	Upat EXA 12/15	13	12	105
K 42 – K 202	Upat EXA M 8K	9	8	50
K 302 – K 1002	Upat EXA 12/15	13	12	105

Tab. 7 Anchoring blower set

The spacings and diameters of the base holes are stated in the enclosed dimensional drawing of the blower set. The electric cable must be laid in the floor.

6.2. Requirements for connecting the pipeline

6.2.1. Connecting the pipeline to the DT blower set

Since the entire aggregate is placed on rubber dampers, the pipeline must be connected through flexible elements. Otherwise, the running blower could shake the pipeline, thus increasing the noise level. Standard blower sets are delivered with compensators for connection of the discharge section. If the blower sets are vacuum or intended to be connected to the central suction, a compensator for connection of suction is also supplied.

While overpressure blower sets contain discharge pressure gauges, vacuum blower sets contain suction pressure gauges. If either a non-standard blower set or a separate blower is delivered, a pressure gauge must be installed on the pipeline as near the discharge flange of an overpressure blower set/blower or the suction flange of a vacuum blower set/blower as possible. Due to gas pulsation, it is necessary to use pressure gauges resistant to cyclical fluctuations in the pipeline pressure, for example glycerine-charge pressure gauges. If you use an ordinary pressure gauge, an absorber must be installed between the pipeline and the pressure gauge. After setting the blower set in its position, you must open the plugs of the glycerine-charge pressure gauges in order to de-aerate them. Otherwise, they will indicate incorrect values!

For overpressure blower sets: the point on the blower's suction flange located below the suction filter must be interconnected with the button connected to the pressure gauge that is designed for measurement of filter insert clogging. Further, the point on the discharge silencer must be interconnected with the glycerine-charge pressure gauge.

6.2.2. Connecting the Pipeline to the DI blower

You must ensure that the intake medium is free of impurities.

Blowers could suck in outside air. Equipping the blower with a suction filter produced by LUTOS will suffice in order to ensure purity of the intake air.

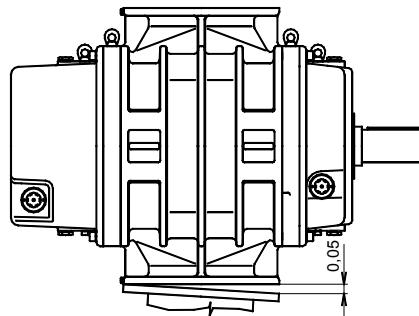
If a pipeline is to be used for transport of air to the suction part, it is suitable to equip the blower with a LUTOS suction filter (used for vacuum blower sets) in order to connect the pipeline. It is also necessary to install a compensator between the suction filter and the pipeline.

If the intake air is filtered centrally for more blowers, you must carefully clean the suction pipeline of foreign particles. A compensator must be installed between the blower and the suction pipeline. It is suitable to use a suction sieve installed as near to the blower's suction flange as possible for the first 500 operating hours. Suitable sieve densities can be derived from the following table, which provides permissible sizes of impurities for individual blower types:

Blower type	DI 6	DI 10 DI 20 DI 30 DI 40	DI 50 DI 60	DI 65 DI 66	DI 70	DI 90 DI 100 DI 110
Permissible sizes of impurities [mm]	0,01	0,05	0,07	0,09	0,1	0,2

Tab. 8 Permissible sizes of impurities

It is not permissible to load the blower sockets with the pipeline. Before being bolted together, the flanges of the pipeline and the blower must fit closely. The maximum gap in the gasket circumference can be 0.05 mm, as shown in the picture below.



After the flanged connections have been tightened, the blower must spin smoothly!

Rules for connecting the pipeline:

- ✓ The pipeline must be installed in the compensator axis.
- ✓ The pipeline must be placed on both fixed and sliding points. It is not permissible to load the compensator with the pipeline weight. The first fixed point of the pipeline must be as near to the compensator as possible.
- ✓ The pipeline diameters should not be smaller than the nominal inside diameters of the blower flanges.
- ✓ The recommended flow speed in the pipeline should be below 22 m.s⁻¹.
- ✓ If possible, large radii of pipe bends should be used (in order to reduce loss).
- ✓ The closing fittings must be installed near the branches in order to prevent impurities from accumulating in the blind pipeline branches.
- ✓ Hot (discharge) pipelines should be insulated.
- ✓ The wall openings should be flexible and the pipeline in them should be soundproofed (do not cement the pipeline in the openings).
- ✓ Compensators should be installed on long and branched pipelines.
- ✓ You should avoid the pipeline running perpendicularly into the registers. You should check the lengths of those registers where standing waves could occur for the excitation frequencies of sextuple blower revolutions (the frequency of the air pulsations).

When designing pneumatic transport, cement clarification, and similar applications where contaminated transported air (the volume between the non-return valve and the technological device) could expand after the blower has been turned off, you must consider such applications or ensure that the pollutants are separated when the air is flowing back (the mechanical non-return valves do not close immediately). Contact LUTOS in these cases.

6.3. Instructions for connecting the blower set to the power supply



WARNING

Only authorized persons with appropriate electrical qualifications are allowed to connect electrical devices.

Blowers, blower sets and electric motors are equipped with earth lugs. The protection of the standard blower set is determined by the electric motor protection (IP 55).

The wiring must meet the requirements for machinery in accordance with the 98/37/ES Directive and primarily the requirements stipulated in the EN 60204-1 Standard. Such requirements must be ensured by the electric part supplier. The standard deliveries of the LUTOS blower sets contain only the electric motor terminals. If the delivery also includes the control system, only the power cable (if not included in the delivery) must be installed and connected. More detailed instructions are given in the separate manual for the control unit.

The supply cable must not restrict the movement of the motor and its pendulous frame!

Electric motors should be connected in accordance with recommendations from their Manufacturers. The connection diagram is attached to the inside of the cover of the electric motor's terminal block. We recommend starting the electric motors in the star-delta connection (soft-start, etc.) even when the user could connect high-power electric motors directly (in the delta connection). The "soft" start saves the blower set.



WARNING

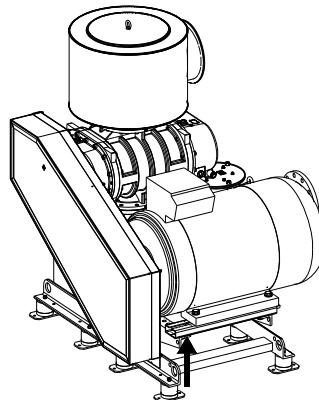
Electric motors with power of over 11 kW must not be started directly (in the delta connection) without approval from the blower's Manufacturer.

Electric equipment data

The standard deliveries of blower sets contain no wiring or control units. The basic data about the installed electric and electronic devices are stated on their type plates and in their accompanying documentation (manuals, connection diagrams, etc.). The electric part supplier must ensure conformity with the requirements of the appropriate standards, particularly the ČSN EN 30 204-1 Standard: Safety of Machinery – Electrical Equipment of Working Machines. The requirements for emission (in accordance with the ČSN EN 50081-1 1992 and ČSN EN 50 081-2 1993 Standards) of equipment with electric motors, the nominal current of which is below 16 A, were not verified because the emission of such equipment depends on the installation and properties of the equipment complex where the equipment is used. If the delivery contains a switchboard with a control unit, the unit's basic data are stated in separate operating instructions.

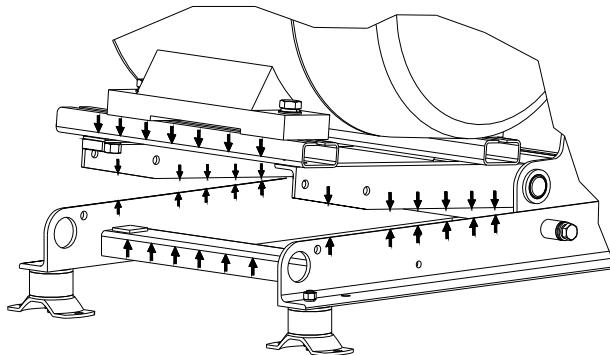
6.4. Belt installation

Due to transport of blower sets, the delivered belts are not installed and the pendulous frame with the motor is secured by bolts in the bottom position. Belts can be put on only when the blower set has been set in its position. You must first remove the bolts securing the pendulous motor frame in the transport position. In order to lift the frame, you must use a jack with the appropriate lifting capacity. An arrow shows the point to place the jack. For blower set DT 60/102 type, it is sufficient to use a screw jack with a lifting capacity of 700 kg (the type used for lifting private cars). The jack must be placed on a solid base. If the jack is placed on a smooth surface, such as a pavement or painted surface, you must secure it with a rubber pad, for example, in order to prevent it from slipping. Before starting any operation, you must prevent the lifted pendulous motor frame from falling by using suitable supports.



WARNING

When putting on the belts, be very careful you do not injure yourself by a suddenly falling pendulous motor frame that might come loose. You must hold the belt only at the place that will not be in contact with the pulley when the pendulous motor frame has been lowered. It is also forbidden to touch the blower set at the places between the edges of the subframe and the pendulous motor frame, where a cutting effect will occur when the pendulous motor frame is moving.



When gradually lowering the pendulous motor frame, you must ensure that the belts remain in the pulley grooves.

6.5. Precautionary measures

- The machine owner is obligated to observe the provisions of this Manual.
- The machine owner is obligated to maintain the minimum spaces stipulated in this Manual.
- The machine owner is obligated to see to good readability of safety labels and markings.
- The machine owner is obligated to provide operators with the protective equipment stipulated in this Manual.



6.6. Machine hall ventilation

The machine hall is warmed by the heat radiated from the motors, blowers, discharge silencer and discharge pipeline. In order to reduce the machine hall temperature, the heat must be suitably dissipated (machine hall ventilation). If the output temperature is high, it is necessary to insulate the outlet pipeline. In most cases when blower sets suck air directly from the machine hall, you must ensure forced ventilation of the machine hall.



WARNING

It is not permissible to direct flow of cool air towards any part of the blower casing. Local cooling causes thermal deformation – the blower could thus be damaged.

When designing the machine hall, you must remember sufficient openings for both cooling air intake and warmed air exhaust. It is assumed that the fans will be located in the exhaust section. Cooling air intake for the blower suction from the machine hall must be designed so that sufficient volumes of both cooling air and air sucked by the blower set are ensured. If the intake air is transported from outside by a pipeline, it will suffice to dimension the inlet opening only for the cooling air volume and fit the exhaust section with fans of the required capacity. The air speed in the openings should range between 5 m.s⁻¹ and 10 m.s⁻¹. The suction and exhaust openings must be designed so that no noise will escape from the machine hall.

Appendix III shows the ventilation diagram. Drawing of natural and forced ventilation are shown in Appendix IV.

7. Information on improper



- Standard blowers must not be operated if the direction of rotation is opposite.
- Standard blowers must not be pressure-overloaded; the maximum permissible compression ratio is 2.
- Standard blowers must not be thermally overloaded.
- Standard blowers must not be operated in explosion-hazard environments.
- The sizes of intake medium impurities must not exceed the values stated in Chapter 6.2.2

8. Information on residual risks

8.1. Health and safety protection at work

LUTOS blowers meet European Standards for health protection; nonetheless, they might endanger health. In order to prevent injuries, authorized workers must observe the following rules:

- The operators must be trained and instructed.
- All operations must be executed according to this Manual.
- No solid, liquid, and/or powdery material must be present in the suction space.
- If you are unsure or uncertain, contact LUTOS.
- **Blowers must not be handled when the machine is in operation.**
- **Blowers must not be operated when the suction part is open because the**



rotors are accessible. There is a risk of touching them.

- Do not operate the machine if **any of its guards is damaged** (belt guards, fan guards, etc.).
- Use protective gloves – the machine temperature is high when it is in operation or before it cools down.
- Since the pendulous motor frame is secured in its working position only by a belt(s), be very careful when standing in its working space. The position of this frame could change suddenly if a belt broke.
- Before maintaining and/or repairing the machine, you must disconnect it from the power supply and secure it against being turned on again.
- When detergents are being used, there is a risk of cauterizing or poisoning by fumes inhalation. Observe the directions and instructions of the detergent Manufacturers!



8.2. Places of excessively hot surfaces

Excessively hot surfaces:



- **The Blower**
- **The discharge silencer**
- **The discharge pipeline**
- **The safety and starting valve**

8.3. Equipment for protecting the operators against the residual risks

- Ear protectors
- Protective glasses
- Working gloves

8.4. Waste disposal

Packaging

All packaging material is environmentally friendly and recyclable. The cardboard parts were made from waste paper. The wooden parts were not treated. The pallets can be sold to the nearest organization dealing in pallet purchase. The plastics are marked as follows:

>PE< polyethylene, e.g., the plastic film.

Blower and Blower set

- Spare parts and/or the blower must be disassembled and cleaned of petroleum products. Dispatch the parts sorted according to the used materials for professional disposal.
- If the blower is still functional, you can offer it to the production plant for redemption by mutual agreement.

Operating Oils

The recommended oils contain no polychlorinated biphenyls (PCB); for more information, see the safety data sheets of the oil Manufacturers (LUTOS can send these sheets on request). In accordance with Act No. 383/2001 Coll., the waste code for oil is 130207.

9. Operating the machine



CAUTION!

For at least the guarantee period, you must keep an operating diary where you record operating dates, maintenance, inspections, and repairs. Keeping the operating diary during the guarantee period is a precondition for accepting guarantee claims. This applies particularly to the checks stated in Tab. 11 a Tab. 12

9.1. Inspection prior to first turning on the blower set or blower

An authorized LUTOS service engineer will inspect the machine before it is first turned on. If agreed otherwise in the contract, you must follow the following steps:

Installation inspection

- Check the installation of the machine and attachment of the anchoring bolts;

- Check proper installation of all parts that could be left unattached during installation. Check especially those parts that could endanger the operators if they were not attached and/or installed; and
- Check all valves in the discharge pipeline whether they are open

Connecting elements

- Check whether all connecting elements are installed and tight.

Oil filling

Blowers are transported without oil. The approximate volumes of oil charges and the recommend types of oil are stated in Tab. 5 and Tab. 6 respectively. See Chapter 9.5.1 for more information.



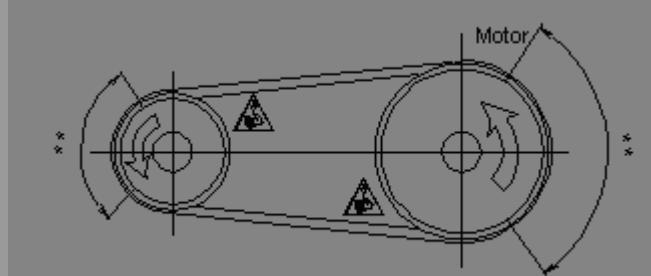
CAUTION!
On no account should oils be mixed!

Movement inspection

Check whether the blower moves smoothly (turn the pulley slowly with your hand).



WARNING!
You might be hurt when turning the pulley. You must hold the pulley at the places of contact with the belt **)



Be careful you do not crush your fingers!

Pipeline inspection

Check whether the suction and discharge sides are clear.

Inspection of the direction of rotation

Turn the blower on for **no more than 1 second**. If it were turned on for a longer time and the direction of rotation were incorrect, the blower could be damaged. The blower drive must turn in the direction indicated by the arrows!



FORBIDDEN!
Backward running will damage the blower!



FORBIDDEN!
Do not turn the blower on again when it is still running down. Otherwise, it could be seriously damaged (the blower must be turned on only when at a standstill).

9.2. First turning on the blower set or blower

If not agreed otherwise in the contract, an authorized LUTOS service engineer will first turn on the machine. Otherwise, you must follow the following steps:

- Check the functioning and adjustment of the safety valve when the machine is in operation.
- After approximately 1 minute, check the operating pressure. When the specified pressure is reached, turn off the drive unit.
- Observe the blower running down. The blower must run down smoothly, without impacts and/or sudden stop.

Safety valve functioning inspection

You should check the functioning of the safety valve and the mobility of the sealing cone during operation, at a pressure of 80% (or higher) of the opening pressure (in accordance with the requirements of the ČSN 13 4309 Standard). If HEROSE valves are used in smaller blower sets, it is necessary to check the cone mobility. You must unload the cone by loosening the knurled nut in the valve body cover. You must turn the nut until it moves with difficulty, then turn the nut a further approximately 180°. The cone will be unloaded and the safety valve will start releasing air. Then you must tighten the nut again. Larger blower sets are equipped with safety valves with control valves. After one end of the hose has been disconnected from the control valve, the "bellows" space will open into the atmosphere and the valve will open automatically. After re-connecting the hose, you must check the joint for tightness (for example, with soapy water).

9.3. Trial operation

- Check, monitor and document the operating pressure and temperature;
- Monitor the noise level and vibrations when the blower set is in operation;
- Check the temperature on the blower surface for local overheating; and
- Check the state and volume of oil in the oil level ganges

	Type Blower revolutions [1.min ⁻¹]															
	DI 6	DI 10	DI 20	DI 30	DI 40	DI 50	DI 60	DI 65	DI 66	DI 70	DI 90	DI 100	DI 110	DI 120	ELM	
	5000	6000	5600	5500	5250	5250	4600	3000	3500	3000	2600	2200	1850	2340	-	
Working values (testing room) [mm.s ⁻¹]	<2	<4	<4	<5	<5	<6,5	<6,5	<7	<7	<8	<9	<10	<10	<10	<5	
Switch off [mm.s ⁻¹]	>3	>5	>5	>6,5	>6,5	>7,5	>7,5	>8	>8	>8,5	>10	>13	>13	>13	<7,5	

Note:
The power of blower mechanical oscillation is in accordance with the ČSN ISO 10816-3 with the exception of Tab. A1 and A2.
The power of electric motors' mechanical oscillation is in accordance with the ČSN ISO 35 0000 Standard, Part 14 (IEC 34-14), Category N – normal, Category R – reduced. If the values stated in Tables 3 and 4 are exceeded, you must contact the LUTOS service department!!!

Tab. 9 Maximum oscillation power of blowers

9.3.1. Check intervals for the trial operation

- During the first two operating hours, the LUTOS serviceman records values in a report every 15 minutes, trains the permanent operators, and familiarizes them with the machine.
- During the next two operating hours, the trained permanent operators record values in the operating diary every 30 minutes.
- During another eight operating hours, the trained permanent operators hourly record values in the operating diary.

9.4. Emergency stopping controllers



WARNING!

No emergency stopping controllers are normally delivered with the LUTOS blower sets. The electric part supplier is required to ensure their installation.

9.5. Setting and adjustment instructions

9.5.1. Filling and changing the oil

The blower has two separate oil charges.

Oil is filled through the filling holes in the tops of both covers. After removing their caps, you can pour in oil. You should use a funnel so that oil will not leak uncontrollably into the surroundings, stain the belt drive, etc.

Oil is discharged through the drain holes in the cover bottoms. Used oil must be drained into sufficiently large tanks. After removing the drain hole cap, you must also remove the filling hole cap so that oil can drain freely into the tank and underpressure cannot build up when oil is being discharged. You must visually check the used oil whether it does not contain metal particles or metal dust. The presence of such substances might indicate the initial stage of malfunction of either the bearings or the gear. In such cases, you must contact the LUTOS service department.

The blower can be refilled with oil only when all the remaining oil has drained away and the drain hole cap is closed.

While the maximum oil level is in the middle of the oil level gauge, the minimum level is 3 mm lower. **The oil level measured when the machine is turned off** must be maintained within these limits. When the oil level has reached the minimum, you must immediately top up with oil. Top up with oil carefully so that its level will not be above the middle of the oil level gauge. Otherwise, oil could leak through the release openings or into the blower when the machine is in operation.



Depending on the operating conditions, the blower oil temperature could exceed 100 °C. Thus, you must drain and top it up with oil when it is cool! Otherwise, you could burn yourself.

Greases (motor):

The bearings of the smaller standard electric motors are lubricated by a permanent grease charge. The bearings of the larger electric motors must be greased. The greasing procedure is described in the directions for motor use.

9.5.2. Replacing the filter inserts of the suction filter

Increased underpressure in the blower's suction part indicates suction filter clogging (indicated by a red strip in the filter clogging sensor). If a pressure gauge is used instead of the filter clogging sensor, the working section and the state of increased underpressure are marked in green and red respectively. If the filter is clogged, you must replace its filter insert. You can order filter inserts; their part numbers are stated on their flanges or in the Certificate of Completeness and Quality.

After replacing the filter insert, you must release (by pressing) the mechanical catch of the filter clogging sensor so that the red strip indicating increased underpressure will disappear.

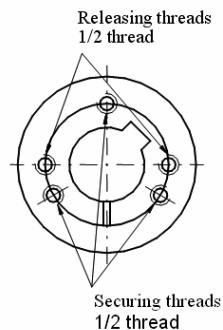
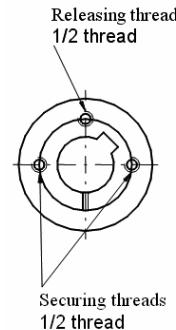
9.5.3. Pulleys and belt tension

The standard blower sets are equipped with V-belt drives. Taper Lock bushings transfer the torque from the pulleys to the shafts.

Taper Lock Clamp Bushings – Disassembly and Assembly

Disassembly procedure

Loosen and remove all bolts. Screw bolts onto the releasing threads. Tighten the bolts evenly (gradually tighten the bolts opposite one another) until the clamp bushing is released from the pulley.



Assembly Procedure

Degrease the shaft journals, clamp bushing and pulley hole. Put the clamp bushing in the pulley. Position the half threaded hole so that the holes of the bushing and the pulley fit. Oil the bolts slightly and screw them into the securing holes. Do not tighten them yet! Put the clamp bushing together with the pulley on the shaft. Now you can evenly tighten the bolts with a torque wrench. Tighten them gradually up to the stated torque (M_s) mentioned in the Tab. 10. Check the bolts for correct tightening (according to the torque) after the clamp bushings have been in operation for a short time. Put grease into the empty threaded holes to prevent dirt from collecting.

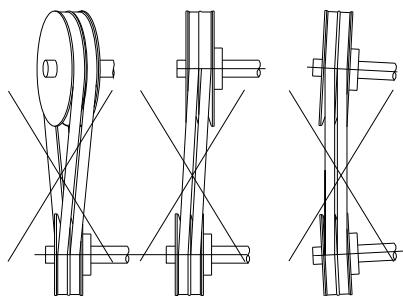
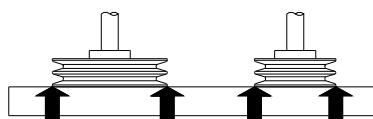
V-belt maintenance

Belts are tensioned depending on the transferred output. During operation, the optimum belt tension is ensured automatically by tilting of the pendulous motor frame.

The belt drive parameters (the sizes and types of pulleys and the number and sizes of belts) have been designed and optimized for the required gear ratio and transferred output so that the V-belts will be maximally employed. **If any functional drive belt is missing, you must always put on the belt drive a new set of belts of the same type and size. You must always use belts with a guaranteed peripheral speed of 50 m.s-1! You can find the type and length of belts in the Certificate of Completeness and Duality.**

Long operating life of the designed belt drive is assured if all conditions for regular maintenance are observed and the replaced belts are the same as those originally designed by LUTOS.

The parallelism of the shafts of both the blower and the motor and the alignment of the pulley grooves are ensured when the machine is being produced. When reassembling the pulley, you must put it on the shaft so that the faces of both pulleys are levelled. The maximum permissible deviation is 0.4% (the maximum gap between the rule and the pulley is 4 mm per one metre). When reassembling the motor, you must ensure that the shafts are parallel and the pulleys are levelled according to the picture:



.... Running without operators

Since blowers normally work without operators being present, they must be protected against overload and/or sudden failures.

The electrical part supplier is responsible for current overload protection.

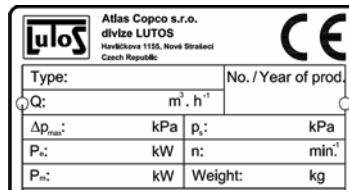
The machine owner must ensure that the machine will not be overloaded by the safety valve's being permanently relieved. This applies mainly to simultaneous operation of several blower sets (e.g., in wastewater treatment plants) when one discharge branch is closed but the volume of supplied air is not reduced to the necessary volume (by reducing the revolutions or turning off one of the blower sets). Blower set operation during which the safety valve releases air for a long time causes pressure fluctuations that significantly shorten the operating life of both the bearings and the non-return valve. They might also damage the blower.

In order to ensure thermal overload protection, it is suitable to arrange electrical control of the permissible temperatures of both the discharged air and the surroundings (a thermal sensor connected to a signalling device or machine stopping).

Torques according to the clamp bushing types								
Type	1008	1108	1210	1215	1310	1610	1615	2012
M _s [N.m]	5,6	5,6	20	20	20	20	20	31
Type	2517	3020	3030	3535	4040	4545	5050	
M _s [N.m]	48	90	90	112	170	192	271	

Tab. 10 Torques according to the clamp bushing types

9.7. Plates and labels used on blower and blower sets



The correct direction of rotation is indicated by the following arrow placed on the blower cover (near the shaft) and the belt guard



The following cardboard label is hung on the suction sensor, pressure gauge or blower itself (if delivered separately)

10. Description and instructions for safety setup and servicing which user makes yourself

10.1. Training operators

After the machine has been put into operation and transferred to the customer, it is necessary to train its operators.

Traning schedule

1) Checking the volumes and states of the oil charges, topping them up, and changing them.

These operations are executed only when the blower set is turned off. The oil volume depends on the blower type. When oil is being topped up, its level must not exceed the middle of the oil level gauge.

The operators are notified of the necessity to use the recommended oils. The procedure for changing oil and the frequency of oil changes are explained to them.

2) Checking the state of the belt drive or the coupling

3) Checking and replacing the filter inserts

The necessity of such replacements is explained. The frequency of replacements depends on the ambient dustiness and the method of the blower set use.

4) Acquainting the operators with the correct procedure for starting

The operators are warned about the potential risks.

5) Acquainting the operators with the contents and importance of the accompanying documents

Operating Instructions and Certificate of Quality and Completeness

6) Servicing the machine

The identification of failures and possible methods for removing them. The procedure for ordering servicing.

7) Transfer certificate

Both sides complete and sign the transfer certificate form:

- The copy is intended for LUTOS; and
- The original is for the customer

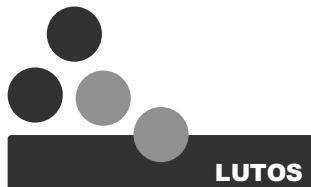
10.2. Routine maintenance and checks

Blower checks		
Operating time	Check	Lubrication
After 400 hours	Blower operation check. In a dry continental climate, preserve the rotors and cylinders after a six-week standstill. In a humid climate, preserve them sooner (see Chapter 5.7.5)	Check of the oil bath levels. First change of oil since the machine was put into operation.
After 4,000 ²⁾ hours	Check and if necessary, replace the output shaft seal of the blower element.	Check of the lubrication discs functioning (the level moves slightly). Oil change
After 20,000 ¹⁾ hours	Oscillation power measurement (bearings)	
After 40,000 ¹⁾ hours	Bearings check by oscillation power measurement. Expected replacement of the bearings.	Oil change

Notes:

¹⁾ Executed by the LUTOS servicemen.

²⁾ The oil change interval depends on the operating temperature of the oil bath (it also depends indirectly on both the input and output temperatures of the transported air). If the oil temperature does not exceed 50 °C, you can change oil annually (after 8,000 hours). If the temperature is higher than 100 °C, you must change oil four times a year (after 2,000 hours). If the temperature is 120 °C, you must change it monthly. You can detect the oil state by comparing an oil sample with new oil. Dark and/or thick oil indicates contamination or the initial stage of carbonization; i.e., you must change it. Analyzing an oil sample is more reliable



Blower set checks

Operating time	Check	Lubrication
After 400 hours	Visual checks, checks of the blower set operation, bolted connections, operating pressure, discharge temperature, noise level. Check of the safety valve functioning (check smooth operation of the PVO valve's closing piston). ²⁾ Checks of the suction filter and the suction underpressure.	
After 800 hours	Checks of the driving elements, motor operation, and belt tension.	
According to the electric motors		Addition of lubricants to the bearings according to the recommendations of the motor Manufacturers; see the instructions for motor operation and maintenance.
After 20,000 ¹⁾ hours	Expected minimal operating life of the bearings of the two-pole motors	
After 30,000 ¹⁾ hours	Expected minimal operating life of the bearings of the four-, six-, and eight-pole motors	

Notes:

¹⁾ Executed by the LUTOS servicemen

²⁾ The control PVO valve maintenance – the valve need not be maintained during routine operation. Apart from the valve functioning check (see Chapter 5.2), you must ensure that all joints are tight, particularly after reassembling or handling the valve. With respect to the PVO 200 valve, you must also check the tightness of the cap in the top base if the lifting eye was used for valve handling (check the tightness with soapy water, for example). If any leakage occurs, the pressure in the rubber bellows will drop and the valve will open. The same effect is caused by a clogged sieve or a blocked nozzle of the control valve (you must clean the sieve or blow through the nozzle).

Tab. 12 Blower set checks

WARNING!

During any service operation, the blower must be turned off and secured against being turned on. If technical conditions, cautions, and/or warnings are violated, LUTOS cannot provide a guarantee. If your operation demands are unusual, please contact LUTOS.

When contacting LUTOS, please state the following:

- The serial number and type of the blower
- The serial number and type of the blower set;
- The serial number and type of the motor;
- The failure(s); and
- The measures you have taken to remove the failure(s)

If the blower must be dispatched to the production plant, please drain oil. You should also lubricate the unpainted parts with preservative oil and put covers on the blower's suction and discharge sections. Motors to be dispatched for repair must be without pulleys and/or couplings.

For an additional charge, the LUTOS servicemen can execute the checks of blowers and blower sets mentioned in Chapter 10.2, Tab. 11, including diagnostic measurements of the bearing state and oscillation power of the blowers and electric motors. These precautionary activities could prevent serious failures.

11. Contact addresses

11.1. Contact address

Atlas Copco Ltd.
division LUTOS
Prumyslova 10
102 00 Praha
Czech Republic

Service office

Atlas Copco Ltd.
division LUTOS
Prumyslova 10
102 00 Praha
Czech Republic

URL: www.lutos.cz

Contact person: Mr. Petr Svoboda

phone: (+420) 225 434 000

mobile: (+420) 604 245 613

e-mail: petr.svoboda@lutos.cz

12. Basic properties of tools, what machine is included

Special tools are not included to the machine.

13. Process in the case of damage or failure

13.1. Instructions for tracing simple failures

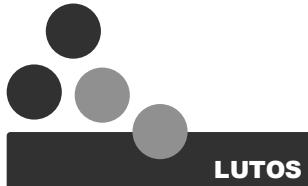
Blower operation failures can be divided into two main categories:

- Mechanical failures (bearings, toothed wheels, rotors, etc.); and
- Electrical failures (faulty drive, wiring, contactors, fuses, etc.).

If any electric failure occurs, you must notify the specialists authorized to repair such failures.

If you are unsure about the correctness of your procedure, call the LUTOS service department

FAILURE	POSSIBLE CAUSE	REMOVAL
The machine will not start	Electrical part failure	Check the wiring, contactors, fuses, thermal or other protection, and cable connection state. Check the state and functioning of the electric motor.
Oil leaks through the ventilation openings	High oil level (measured when the blower is turned off)	Drain excessive oil.
Elevated noise level, the blower makes a "metallic" sound	Blower rotor knocking, bearing failure or incorrect setting of the limit clearances	Repair by the LUTOS servicemen
High current consumption	Bearing failure or seizing of the rotors in their working space	Repair by the LUTOS servicemen
	High overpressure in the outlet pipeline	Measure the overpressure and remove the cause.
	High underpressure	Replace the filter inserts.
High temperature of the cover at the blower pulley	No oil in the blower	Repair by the LUTOS servicemen
	Bearing failure	
High temperature of the cover at the gear	No oil in the blower	Repair by the LUTOS servicemen
	Failure of the bearing or gear	
Slipping belt	Greasy belt	Clean both the belt and the pulleys and degrease them with benzine.



FAILURE	POSSIBLE CAUSE	REMOVAL
The blower is loaded immediately after start-up (applies only to blower sets with PVO valves)	Disengaged starting valve function	Set the combined safety and starting valve so that it will be open when the machine is turned off.
The blower turns spontaneously in the opposite direction when being turned off	Malfunctioning non-return valve	Check the non-return valve and replace if necessary. Disassemble the pipeline and replace the sealing ring.
The safety valve releases air when the blower is in operation	High overpressure in the outlet pipeline	Measure the overpressure in the outlet pipeline and remove the cause *) The safety valve is set for maximum + 10% of the outlet overpressure.
	Failure of the combined safety and starting valve	Remove leakage and dirt from the control valve, and/or replace the rubber bellows.
The safety valve sucks air when the blower is in operation	High underpressure in the inlet pipeline	Measure the underpressure in the inlet pipeline and remove the cause *) The safety valve is set for maximum + 10% of the underpressure.
The safety valve will not open when the full blower load is exceeded	The safety valve is clogged with dirt (applies to the Herose valves)	Disassemble and clean the valve.
An overheated blower	Dirty filter insert	Replace the filter insert.
	Overload	Maintain the load - data.
	Large piston clearances	Repair by LUTOS
No transport	Incorrectly installed non-return valve	Repair the installation.
	Slipped or broken belt	Belt failure and/or incorrectly set pulleys Blower failure
Low supplied volume	Incorrectly dimensioned blower	Compare the values with the efficiency table.
	Leaky safety valve	Check the valve setting and operating pressure.
	Slipping belt	Check visually the operation of the belt whether it runs without vibrations. Check the motor power. Recheck the belt state.
Vibration	The rotors touch each other	Check the bearings and gear setting.
	Damaged bearings	Replace the bearings and change oil
	Incorrectly aligned pulley and/or coupling	Adjust it/them and tension the belt of the belt drive.
	Loosened bolts securing the motor and/or blower	Tighten and adjust them.
	Rotor imbalance due to dirt	Clean the transport space and rotors.
x	x	x

Tab. 13 List of possible failures and methods for removing them

*) The cause might lie in a project error, for example. At a specific flow, the pipeline resistance is higher than the overpressure (required when the blower parameters were being specified). This is usually detected when the blower is first turned on and/or when the projected machines are being put into operation. Another cause might be a change in the resistance after the machine has been operated for some time. This is caused by pipeline clogging, clogging of the tanks' aeration openings in wastewater treatment plants, etc., or by operators' unfamiliarity.

14. Specifications of spare parts

Consumable spare parts (filter inserts, belts, non-return valves, and/or oil) are delivered on customer request. They are not included in the standard delivery. The production plant repairs its own blowers. We can deliver sets of spare parts for individual blower types to external service organizations. Fixtures are necessary for both smooth assembly and disassembly. Bearing replacement is usually the main reason for repair. If any specific problem arises, contact the LUTOS service department.

Parts and material necessary for routine service and simple repairs of the blower set:

- Filter inserts;
- V-belts – the belt specification is stated in the Certificate of Quality and Completeness; and
- Non-return valves.

15. Noise level

15.1. General

The equivalent levels of the sound pressure A (measured at the workplace of operators by using the A weight filter in accordance with the ČSN EN ISO 11200, ČSN ISO 7574, and ČSN ISO 3740 Standards) **are stated in the value tables in the Catalogue of LUTOS blower aggregates**. The stated values express the actual values of noise levels of blower sets without noise-damping hoods.

15.2. Vacuum blower sets

With respect to blowers working at underpressure, you must take into account the fact that the catalogue values of the equivalent levels of the sound pressure A apply only when air is diverted by the discharge pipeline from the area where the blower set operates or when an additional discharge silencer is installed behind the outlet flange. If air is discharged into the surroundings behind the discharge flange of the blower set, the values of the equivalent levels of the sound pressure A are approximately 15-20 dB higher than the values stated in the Catalogue.

15.3. Pipeline noise levels

Noise emitting from the surfaces of either the suction or discharge pipelines is not included in the values of the equivalent levels of the sound pressure A. You must pay due attention when designing pipelines so that the excitation frequency of the blower will not cause them to resonate. It is necessary to select optimum diameters, wall thickness, and material of the pipelines, and the anchoring method, including the distances of the supports for both the discharge and suction pipelines. The excitation frequency of LUTOS three-tooth blowers ranges between 100 and 500 Hz. The excitation frequency depends directly on the blower revolutions (the blower revolutions range between 1,000 and 5,000 1/min).

On customer request, we can supply an additional pipeline silencer for specific parameters of the blower. This silencer can prevent problems with noise emitted from the pipeline near, e.g., housing, tec.

15.4. Machine hall

You must also pay due attention to the pipelines in the machine hall. It is necessary to select flexible wall openings for the pipeline in order to prevent pipeline pulsation from being transferred to the walls of the machine hall. You must also pay attention to the wall material because it should absorb the emitted noise. If possible, avoid using smooth concrete walls or steel structures.

16. Applicable Regulations and Standards

Directive No. 97/9/ES	Directive for equipment and protective systems designed for the use in environment with explosion hazard
Government Decree No. 23/2003	Technical requirements on equipment and protective systems designed for the use in environment with explosion hazard
Act No. 22/1997	Technical requirements on products
Act No. 24/2004	Technical requirements on machinery
ČSN EN 13463-1	Non-electric equipment designed for the use in environment with explosion hazard – Basic methods and requirements
ČSN EN 13463-5	Non-electric equipment designed for the use in environment with explosion hazard – Protection by safety construction „c“
ČSN EN 1012-1	Compressors and vacuum pumps – Safety requirements
ČSN EN 1127-1	Explosive environments – Prevention and protection against explosion – Part 1: Basic conception and procedure
ČSN EN ISO 12100-1	Safety of mechanical equipment – Basic terminology, general design principles – Part 1: Basic terminology, methodology
ČSN EN ISO 121100-2	Safety of mechanical equipment – Basic terminology, general design principles – Part 2: Technical principles
ČSN ISO 3864	Safety colours and safety signs
ČSN EN 1012-1	Compressors and vacuum pumps – Safety requirements – Part 1: Compressors
ČSN EN 1012-1	Compressors and vacuum pumps – Safety requirements – Part 2: Vacuum pumps
ČSN EN ISO 3740	Acoustics – Determining the level of acoustic output of sources of noise – Directive for application of basic standards
ČSN EN ISO 3744	Acoustics – Determining the level of acoustic output of sources of noise by measuring acoustic pressure. Technical method in free field above reflective plane
ČSN EN ISO 3746	Acoustics – Determining the level of acoustic output of sources of noise by measuring acoustic pressure. Operating method in free field above reflective plane
ČSN EN ISO 1412-1	Safety of mechanical equipment – Assessing risks – Part 1: Principle
ČSN ISO 7000	Pictograms for the use on equipment – Register and overview
ČSN EN 953	Safety of mechanical equipment – Protective covers – General requirements on design and manufacture of fixed and moving protective covers
ČSN EN 60204-1	Safety of mechanical equipment – Electric equipment of machinery – Part 1: General requirements
ČSN ISO 10816-1	Vibrations – Assessing machine vibrations by measurements on non-rotating parts – Part 1: General directive



I. Appendix 1 – Declaration of incorporation of incomplete machinery

Declaration of incorporation of incomplete machinery

We, Atlas Copco LtD. division LUTOS, declare under our sole responsibility, that the product ...

1. **Machine name:** Air blower and Air blower set

2. **Machine type:**

Air blowers: DI 4, DI 6, DI 10, DI 20, DI 30, DI 40, DI 50, DI 60,
DI 65, DI 66, DI 70, DI 90, DI 100, DI 110, DI 120

Air blower sets: DT 4, DT 4 – V, DT 4R, DT 4R-V, DT 6, DT 6/42,
DT 6/40-V, DT 10/42, DT 10/40-V, DT 20/42,
DT 20/40-V, DT 30/42, DT 30/40-V, DT 30/72,
DT 30/70-V, DT 40/72, DT 40/70-V, DT 50/72,
DT 50/70-V, DT 50/102, DT 50/100-V, DT 60/102,
DT 60/100-V, DT 65/102, DT 65/130-V, DT 66/202,
DT 66/301-V, DT 70/202, DT 70/302, DT 70/301-V,
DT 90/302, DT 90/552, DT 90/550-V, DT 100/552,
DT 100/802, DT 100/550-V, DT 110/802,
DT 110/801-V, DT 120/1002, BAH 6/10, BAH 10/30,
BAH 20/30, BAH 30/60, BAH 40/60

Optional accessories: *Additional discharge silencer (for DT):*

PTV DN 65, PTV DN 80, PTV DN 100, PTV DN 150, PTV DN 200, PTV DN 250, PTV DN 300

Additional discharge silencer – vacuum (for DT):

PTV - V DN 65, PTV - V DN 80, PTV - V DN 100, PTV - V DN 150, PTV - V DN 200, PTV - V DN 250, PTV - V DN 300

Central suction (for DT):

TS 42-CS / TS 42-V, TS 72-CS / TS 72-V, TS 102-CS, TS 202-CS / TS 202-V, TS 302-CS /
TS 302-V, TS 802-CS

Noise-damping hoods (for BAH):

SB 10, SB 10 Solberg, SBE 10, SBE 10 Solberg, SB 30, SB 30 Solberg, SBE 30,
SBE 30 Solberg, SB 60, SB 60 Solberg, SBE 60, SBE 60 Solberg

Compensator with inlet flange (for BAH):

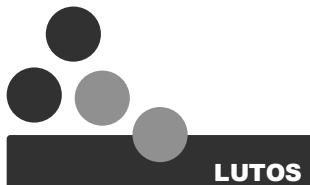
DN50 without Solberg, DN50 with Solbergem, DN65 without Solbergu, DN65 with Solbergem,
DN80 without Solbergu, DN80 with Solbergem

3. **Serial number:**

... must not be put into service until the machine in which it is intended to be incorporated into or assembled with, is in conformity with the relevant Essential Health and Safety Requirements of the EC-Directive 2006/42/EC and its amendments on the approximation of the laws of the Members States relating to Machinery.

We Atlas Copco LtD. division LUTOS, hereby declare that the product which falls under the provisions of article 12.2 of the EC-Directive 2006/42/EC on the approximation of the laws of the Member States relating to machinery, as a components/quasi machine is in conformity with the relevant Essential Health and Safety Requirements of this directive.

Atlas Copco LtD. division LUTOS, undertakes, in response to a reasoned request by the national authorities, to transmit the relevant information on the partly completed machinery. The information on the relevant parts can be obtained prejudice to the intellectual property rights of Atlas Copco LtD. division LUTOS. This machinery complies also with the requirements of the following directives and their amendments as indicated.





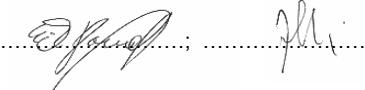
4. Directive on the approximation of laws of the Member States:

Directive on the approximation of laws of the Member States relating to:		
a.	Pressure equipment	97/23/EC
b.	Simple pressure Vessel	2009/105/EC
c.	Electromagnetic compatibility	2004/108/EC
d.	Low voltage equipment	2006/95/EC

5. The harmonized standards and technical:

ČSN EN ISO 12100 – 1	ČSN EN 1012 – 1
ČSN EN ISO 12100 – 2	ČSN ISO 7000
ČSN EN ISO 13857	IEC 60417 – DB
ČSN EN 349 + A1	ČSN EN 60204 – 1
ČSN EN ISO 13732 – 1	ČSN EN 953
ČSN EN ISO 13850	ČSN EN ISO 5167 – 1
ČSN ISO 3864	ČSN EN ISO 5167 – 2
ČSN EN 626 – 1 + A1	ČSN EN ISO 5167 – 3
ČSN EN ISO 14121 – 1	ČSN EN ISO 5167 – 4
ČSN EN 547 – 1	ISO 5388
ČSN EN 547 – 2	ČSN EN ISO 3740
ČSN EN ISO 15667	ČSN ISO 3744
ČSN ISO 10816 – 3	ČSN ISO 3746

6. Atlas Copco Ltd. division LUTOS is authorized to compile the technical file.

7. Conformity of the specification to the directives: Conformity of the product to the specification and by implication to the directives:
8. Issued by: Product engineering; Manufacturing;
Atlas Copco Ltd. division LUTOS ZPA Pecky, a.s.
9. Name: Ing. Erik Hormandl; Ing. Ales Jakoubi Michal Posik
10. Signature  
11. Date



Translations/Překlady

bg

ДЕКЛАРАЦИЯ ЗА УЧРЕДЯВАНЕ НА НЕПЪЛЕН МАШИНЫ

Ние, Atlas Copco Ltd. division LUTOS, декларирате на наша собствена отговорност, че продуктът... 1 Име на машината 2 Тип на машината 3 Серийен номер ... не трябва да се въвежда в експлоатация, докато машината, която е предназначена той да се постави в нея или съгласи към нея, не отговаря на съответните Съществени изисквания за здравеопазване и безопасност на директивата на ЕО 2006/42/EC и нейните изменения и допълнения, за близнакането на законодателства на Страните-членки по отношение на машините.

Ние, Atlas Copco Ltd. division LUTOS, декларирате на наша собствена отговорност, че продуктът Който попада под разпоредбите на член 12.2 на Директивата на ЕО 2006/42/EC за близнакането на законодателства на Страните-членки по отношение на машините, отговаря на съответните Съществени изисквания за здравеопазване и безопасност на тази директива. Ние, Atlas Copco Ltd. division LUTOS, се ангажираме в отговор на целесобразна заявка от националните власти да предаваме нужната информация за частично завършени машини. Информацията за съответните детайли може да се получи при безусловни права върху интелектуална собственост на Atlas Copco Ltd. division LUTOS. Машините съответстват и на изискванията на следните директиви и техните изменения и допълнения, както е посочено (когато е приложимо). 4. Директива за близнакането на законодателства на Страните-членки по отношение на Съответствието – приложение № 97/23/EC - Оборудване за напияне б. 2009/105/EC - Прост съд за налягане в. 2004/108/EC - Електромагнитна съвместимост г. 2006/95/EC - Оборудване за нико напряжение 5. Хармонизирани стандарти и технически. 6. Atlas Copco Ltd. division LUTOS е получило разрешение за съставяне на техническо досие. 7. Съответствие на спецификацията с директивите; Съответствие на продукта със спецификацията и по подразбиране с директивите 8. Изданено от: Инженерни на продукти; Производство 9. Име 10. Подпис 11. Дата

cs

PROHLÁŠENÍ O ZABUDOVÁNÍ NEUPLNÉHO STROJNÍHO ZAŘÍZENÍ

My, společnost Atlas Copco s.r.o., divize LUTOS, prohlašujeme na naši výhradní odpovědnost , že tento produkt... 1. Název stroje 2. Typ stroje 3. Výrobní číslo...nesmí být uveden do provozu, pokud stroj, do kterého se má zakomponovat, a nebo se kterým se má sestavit, nebude využovat příslušným základním zdravotním a bezpečnostním požadavkům směrnice Evropského společenství 2006/42/ES a jeho dodatků o přiblížení práva členských států v souvislosti sé strojním zařízením.

My, společnost Atlas Copco s.r.o., divize LUTOS, prohlašujeme na naši výhradní odpovědnost , že tento produkt, který spadá pod ustanovení článku 12.2 Směrnice Evropského společenství 2006/42/ES je v souladu s příslušnými základními bezpečnostními a zdravotními požadavky výše uvedené Směrnici Rady o přiblížení práva členských států v souvislosti se strojním zařízením. Společnost Atlas Copco s.r.o., divize LUTOS přistupuje na základě odůvodněného požadavku státních orgánů k předání příslušných informací o částečně dokončeném strojním zařízení. Informace o příslušných součástech lze získat, nebudou-li narušena práva důležitých vlastnických společnosti Atlas Copco s.r.o., divize LUTOS. Toto zařízení využívá také požadavkům následujících směrnic a jejich dodatků (tam, kde je lze uplatnit). 4. Směrnice o přiblížení práva členských států: a. 97/23/ES - Tkakové zařízení b. 2009/105/ES - Jednoduché tkakové nádoby c. 2004/108/ES - Elektromagnetická kompatibilita d. 2006/95/ES - Nizkonapěťové zařízení 5. Použité harmonizované a technické normy 6. Atlas Copco s.r.o. divize LUTOS je oprávněn sestavit technickou dokumentaci. 7. Shoda specifikace s uvedenými směrnicemi; Shoda produktu se specifikací a ím také s uvedenými směrnicemi 8. Vydavatel: Návrh produktu; Výroba 9.Název 10.Podpis 11.Datum

da

INKPORERINGERSERKLÆRING AF UFULDSTAENDIG MASKINER

Vi, , Atlas Copco Ltd. division LUTOS, erklarer, under eget ansvar, at produkteret.... 1. Maskinens navn 2. Maskinens type 3. Serienummer ikke må tages i brug, for maskinen, som den efter hensigten skal indføjes i eller monteres med, er i overensstemmelse med de relevante væsentlige sikkerheds- og sundhedskrav i direktiv 2006/42/EF om indbyrdes tilnærmede af medlemsstaterne lovgivning vedrørende maskiner.

Vi, Atlas Copco Ltd. division LUTOS, erklarer, under eget ansvar, at produkter som falder ind under bestemmelserne i artikel 12.2 i EF-direktivet 2006/42/EF om indbyrdes tilnærmede af medlemsstaterne lovgivning vedrørende maskiner, er i overensstemmelse med de relevante væsentlige sikkerheds- og sundhedskrav i ovennævnte direktiv. Vi, Atlas Copco Ltd. division LUTOS, påtager os, som reaktion på en anmeldning fra de lokale myndigheder, at overføre de relevante oplysninger for den delvist færdiggørt maskine. Oplysninger vedr. de relevante reservedele kan indhentes uden overtrædelse af de immatrielle rettigheder tilhørende Atlas Copco Ltd. division LUTOS. Maskinen opfylder ligelægde kravene i direktivene (evt.): 4. Direktiv om indbyrdes tilnærmede af medlemsstaterne: a. 97/23/EF - Trykberende udstyr b. 2009/105/EF - Elektromagnetisk kompatibilitet d. 2006/95/ES - Nizkonapøtvøre zařízení 5. De harmoniserede standarder og tekniske. 6. Atlas Copco Ltd. division LUTOS bemindres til at udarbejde det tekniske dossier. 7. Specifikationens overensstemmelse med direktivet; Maskinens overensstemmelse med specifikationen og følgende direktiver 8. Udstedere: Produktionskonstruktion; Produktion 9. Navn 10. Underskrift 11. Dato

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ERKLÄRUNG ZUM EINBAU DER UVOLLSTÄTIGEN MACHINEN

Wir, Atlas Copco Ltd. division LUTOS, erklären hiermit in alleiniger Verantwortung, dass das Produkt.... 1. Maschinenbezeichnung 2. Maschinentyp 3. Seriennummer.... nicht in Betrieb genommen werden darf bis die Maschine, in die es eingebaut oder mit der es montiert werden soll, den entsprechenden Gesundheits- und Sicherheitsanforderungen gemäß EU-Richtlinie 2006/42/EG und deren Änderungen des Europäischen Parlaments und des Rates zur Angleichung der Rechts- und Verwaltungsvorschriften der Mitgliedstaaten für Maschinen entspricht.

Wir, Atlas Copco Ltd. division LUTOS, erklären hiermit in alleiniger Verantwortung, dass das Produkt den Gesundheits- und Sicherheitsanforderungen gemäß den Bestimmungen des Artikels 12.2 der EU-Richtlinie 2006/42/EG des Europäischen Parlaments und des Rates zur Angleichung der Rechts- und Verwaltungsvorschriften der Mitgliedstaaten für Maschinen entspricht. Wir von Atlas Copco Ltd. division LUTOS verpflichten uns, auf begründeten Antrag der nationalen Behörden hin alle relevanten Informationen zu teilweise fertig gestellten Maschinen zu übermitteln. Informationen zu den betreffenden Teilen können unbeschadet des Rechts am geistigen Eigentum von Atlas Copco Ltd. division LUTOS eingeholt werden. Die Maschinen entsprechen ebenfalls den folgenden Richtlinien und deren Änderungen (falls zutreffend). 4. Richtlinie zur Angleichung der Rechtsvorschriften der Mitgliedstaaten: a. 97/23/EG - Druckgeräte b. 2009/105/EG - einfache Druckbehälter c. 2004/108/EG - Elektromagnetische Verträglichkeit d. 2006/95/EG - Niederspannung 5. Die harmonisierten Normen und technischen 6. Atlas Copco Ltd. division LUTOS ist berechtigt, die technischen Unterlagen zusammenzustellen. 7. Konformität der Spezifikation mit den Richtlinien; Konformität des Produkts mit der Spezifikation und als Folgerung mit den Richtlinien 8. Erstellt von: Fertigungstechnik; Fertigung 9. Name 10. Unterschrift 11. Datum

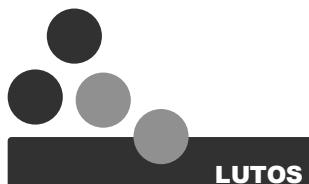
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ΔΗΛΩΣΗ ΤΗΣ ΕΝΟΣΜΑΤΩΣΗΣ ΗΜΙΤΕΛΩΝ ΜΗΧΑΝΗΜΑΤΩΝ

Εμείς, η Atlas Copco Ltd. division LUTOS, δηλώνουμε υπεύθυνα ότι το προϊόν.... 1. Ονομασία μηχανήματος 2. Τύπος μηχανήματος 3. Σειριακός αριθμός δεν πρέπει να τεθεί σε λειτουργία προτού το μηχάνημα στο οποίο προορίζεται να ενσωματωθεί ή με το οποίο προορίζεται να συναρμολογηθεί διαπιστεύεται ότι συμμορφωτά τις σχετικές ουσιώδεις απαραίτησης της Οδηγίας 2006/42/EK του Ευρωπαϊκού Συμβουλίου για την υγεία και ασφάλεια, καθώς και τον τροποποιητισμό αυτής, περί της σύγκλισης των νομοθεσιών των κρατών μελών οι οποίες σχετίζονται με μηχανήματα.

Εμείς, η Atlas Copco Ltd. division LUTOS, δηλώνουμε υπεύθυνα ότι το προϊόν εμπίπτει στις διατάξεις του Αρθρου 12.2 της Οδηγίας 2006/42/EK του Ευρωπαϊκού Συμβουλίου περί σύγκλισης των νομοθεσιών των κρατών μελών που σχετίζονται με μηχανήματα συμμορφώνονται με τις σχετικές ουσιώδεις απαραίτησης της εν λόγῳ Οδηγίας για την υγεία και ασφάλεια. Εμείς, η Atlas Copco Ltd. division LUTOS, αναλαμβάνουμε, εις απόντηση απολογημένου αιτήματος από αρμόδιες εθνικές αρχές, να μεταδόσουμε τις σχετικές πληροφορίες για τα μερικά ολοκλόρουμένα μηχάνηματα. Οι πληροφορίες για τα σχετικά εξαρτήματα μπορούν να αποκτηθούν με την επιφύλαξη των δικαιωμάτων πνευματικής ιδιοτητού της Atlas Copco Ltd. division LUTOS. Το μηχάνημα συμμορφώνεται επίσης με τις απαραίτησης των παρακάτω Οδηγιών και των τυχόν τροποποιήσεων τους, όπως αναφέρεται κατωτέρω (κατά περίπτωση). 4. Οδηγία για την προσέργηση των νομοθεσιών των κρατών μελών: a. 97/23/EG - Εξοπλισμός πίστης β. 2009/105/ΕΚ - Απλά δοχεία πίστης γ. 2004/108/ΕΚ - Ηλεκτρογεγρατική συμπατότητα δ. 2006/95/ΕΚ - Εξοπλισμός χαμηλής τάσης 5. Τα ενορμητισμένα πρότυπα και τις τεχνικές 6. Atlas Copco Ltd. division LUTOS είναι εξουσιοδοτημένο να καταρτίσει τον τεχνικό φάκελο. 7. Συμμορφωση της προδιαγραφής προς τις Οδηγίες. Συμμορφωση του προϊόντος προς την προδιαγραφή και κατ' επέκταση προς τις Οδηγίες 8. Εκδόθηκε από: Τεχνικό σχεδιαστής προϊόντος: Κατασκευή 9. Ονομα 10. Υπογραφή 11. Ημερομηνία

iii





DECLARATION OF INCORPORATION OF INCOMPLETE MACHINERY

We, Atlas Copco Ltd., division LUTOS, declare under our sole responsibility, that the product.....1. Machine name 2. Machine type 3. Serial number.....must not be put into service until the machine in which it is intended to be incorporated into or assembled with, is in conformity with the relevant Essential Health and Safety Requirements of the EC-Directive 2006/42/EC and its amendments on the approximation of the laws of the Members States relating to Machinery.

We Atlas Copco Ltd., division LUTOS, hereby declare that the product which falls under the provisions of article 12.2 of the EC-Directive 2006/42/EC on the approximation of the laws of the Member States relating to machinery, a components/quasi machine is in conformity with the relevant Essential Health and Safety Requirements of this directive. Atlas Copco Ltd., division LUTOS, undertakes, in response to a reasoned request by the national authorities, to transmit the relevant information on the partly completed machinery. The information on the relevant parts can be obtained prejudice to the intellectual property rights of Atlas Copco Ltd., division LUTOS. This machinery complies also with the requirements of the following directives and their amendments as indicated (where applicable). 4. Directive on the approximation of laws of the Member States relating to: a. 97/23/EC - Pressure equipments b. 2009/105/EC – Simple pressure Vessel c. 2004/108/EC Electromagnetic compatibility d. 2006/95/EC - Low voltage equipment 5. The harmonized standards and technical 6. Atlas Copco Ltd., division LUTOS is authorized to compile the technical file 7. Conformity of the specification to the directives; Conformity of the product to the specification and by implication to the directives 8. Issued by: Product engineering; Manufacturing 9. Name 10. Signature 11. Date

es

DECLARACIÓN DE INCORPORACIÓN DE MAQUINARIA INCOMPLETA

Atlas Copco LtD. division LUTOS declara bajo su exclusiva responsabilidad que el producto 1. Nombre de máquina 2. Tipo de máquina 3. Número de serie no debe ponerse en funcionamiento hasta que la máquina a la que se vaya a incorporar o en la que se vaya a ensamblar cumpla los requisitos de salud y seguridad esenciales de la Directiva de la CE 2006/42/CE y sus enmiendas sobre la aproximación de las legislaciones de los Estados miembros sobre máquinas.

Atlas Copco LtD. division LUTOS declara bajo su exclusiva responsabilidad que el producto sujeto a las disposiciones del artículo 12.2 de la Directiva 2006/42/CE de la CE relativa a la aproximación de las legislaciones de los Estados miembros sobre máquinas, cumple los requisitos de salud y seguridad esenciales de esta directiva. Nosotros, Atlas Copco LtD. division LUTOS, nos comprometemos a divulgar la información relevante con respecto a la maquinaria parcialmente terminada en respuesta a una solicitud pertinente de las autoridades nacionales. La información de las piezas relevantes podrá obtenerse sin perjuicio de los derechos de propiedad intelectual de Atlas Copco LtD. division LUTOS. La maquinaria cumple también los requisitos de las siguientes directivas y sus enmiendas, como se indica (si procede). 4. La Directiva relativa a la aproximación de las legislaciones de los Estados miembros: a. 97/23/CE - Equipos a presión b. 2009/105/CE - Recipientes a presión simple c. 2004/108/CE - Compatibilidad electromagnética d. 2006/95/CE - Equipo de baja tensión 5. Las normas armonizadas y técnicas 6. Atlas Copco LtD. division LUTOS está autorizado para elaborar el expediente técnico 7. Conformidad de la especificación con las directivas; Conformidad del producto con la especificación y por implicación con las directivas 8. Elaborado por: Ingeniería del producto; Fabricación 9. Designación 10. Firma 11. Fecha

et

ÜHENDAMISDEKLARATSIOON OSALISELT KOMPLEKTEERITUD MASINA

Meie, Atlas Copco LtD. division LUTOS, teatame oma täielikul vastutusel, et toodet.... 1. Masina nimetus 2. Masina tüüp 3. Seerianumber ei tohi tööle rakendada enne, kui masin, millega seda ühendatakse, on vastavuses direktiivi 2006/42/EÜ ja selle parandustele kehtestatud tervishoiu- ja ohutusnõuetega, mis kehtivad seda kohta vastavalt liikmesriigi seadusandlusele.

Meie, Atlas Copco LtD. division LUTOS , teatame oma täielikul vastutusel, et toode mür langeb Nõukogu liikmesriikide masinate kohta kehitvate seaduste ühlistamise direktiivi 2006/42/EÜ artikli 12.2 määruse alla, vastab asjakohastele üldmääritatud direktiivi Olüalistele tervise- ja ohutusnõuetele. Vastusena riigisestesse asutusest põhijadatud nõudmisi võtab Atlas Copco LtD. division LUTOS kohustuse edasaltas asjakohast teavet osaliselt komplekteleeritud masinate kohta. Asjakohaste osade kohta teabe saamine ei kahjusta Atlas Copco LtD. division LUTOS intellektuaalse omardi õigusi. Seade vastab ka järgnevate direktiivide ning nende parandustele nõuetele nagu näidatud (vajaduse korral). 4. Direktiivi õigusaktide ühlistamise kohta liikmesriikides: a. 97/23/EÜ - Rõhuvarustus b. 2009/105/EÜ - Lihtne rõhumahtut. c. 2004/108/EÜ - Elektromagnetiline ühilduvus d. 2006/95/EÜ - Madalpingevarustus 5. Ühlistatud standardid ja tehnilised 6. Atlas Copco LtD. division LUTOS on õigus koostada tehniline toimik 7. Spetsifikatsiooni vastavus direktiividele. Toote vastavus spetsifikatsioonidele ning kaudselt direktiividele 8. Valja and nud: Tootmine; Tootmine 9. Nimi 10. Allkirjitus 11. Kuupäev

fi

LIITTYMISILMOITUS KONEEN KALTAISTEN

Me, Atlas Copco LtD. division LUTOS , vakuutamme omalla vastuullamme, että tuotet.... 1. koneen nimi 2. konetyyppi 3. valmistusnumero ei saa ottaa käyttöön, ennen kuin kone, johon laite on tarkoitettu s溜allyttää tai liittää, vastaa EY-direktiivin 2006/42/EY ja sen muutosten terveys- ja työturvallisuusmääryksii, jotka liittyvät jääsenvaltioiden koneita koskevan lainsäädännön lähentämiseen.

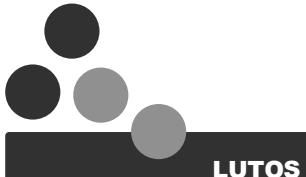
Me, Atlas Copco LtD. division LUTOS , vakuutamme omalla vastuullamme, että tuote joka kuuluu liikmesriikide koneita koskevan lainsäädännön lähentämisenstä annetun EY-direktiivin 2006/42/EY 12 artiklan 2 kohdan alakohdan alaisuuteen, tyytystää direktiivin terveys- ja työturvallisuusmääryksist. Vastauksena kansallisten viranomaisten perustelluum pyynnöön Atlas Copco Airpower N.V. sitoutuu toimittamaan puolivalmiin koneen asiamukaiset tiedot. Asiamukaisia osia koskevien tietojen toimittamisen ja eikä uudelleen myytävien osien toimittamisen välttämisen vuoksi. Kone vastaa myös seuraavien direktiivien ja niiden muutosten vaatimuksia osoitettu tavalla (tarvittaessa). 4. Direktiiviksi lainsäädännön lähentämisenstä jääsenvaltioissa: a. 97/23/EY - Painelaitteet b. 2009/105/EY - Yksimikäiset paineasiatat c. 2004/108/EY - Sähkömagnetinen yhteensopivus d. 2006/95/EY - Tiettyllä jäämitteellä toimivat laitteet 5. Yhdenmukaistetut standardit ja tekniset. 6. Atlas Copco LtD. division LUTOS on valtuuttu kokoamaan teknisen tiedoston. 7. Direktiivien mukaisuus; Tuotteen spesifikation ja direktiivien mukaisuus 8. Laatija: Tuotteen suunnittelija; Teollisuus 9. Nimi 10. Allekirjoitus 11. Päivämäärä

fr

DÉCLARATION D'INCORPORATION D'UNE QUASI-MACHINE

Nous, Atlas Copco LtD. division LUTOS, déclarons sous notre seule responsabilité, que le produit.... 1. Nom de la machine 2. Type de machine 3. Numéro de sériene doit pas être mis en service dans la machine sur laquelle il doit être monté tant que cette dernière ne sera pas déclarée conforme aux exigences de santé et de sécurité de la directive CE 2006/42/CE et de ses modifications concernant le rapprochement des législations des Etats membres relatives aux machines.

Nous, Atlas Copco LtD. division LUTOS, déclarons sous notre seule responsabilité, que le produit conformément aux dispositions prévues par l'article 12.2 de la directive CE 2006/42/CE concernant le rapprochement des législations des Etats membres relatives aux machines, est conforme aux exigences essentielles en matière de santé et de sécurité de cette directive. Nous, Atlas Copco LtD. division LUTOS, acceptons de transmettre les informations pertinentes relatives à la quasi-machine en réponse à une demande argumentée des autorités nationales. Les informations relatives aux pièces pertinentes seront transmises sans porter préjudice aux droits de propriété intellectuelle d'Atlas Copco LtD. division LUTOS. Cette machine est également conforme aux directives suivantes et à leurs modifications (le cas échéant). 4. Directive concernant le rapprochement des législations des Etats membres: a. 97/23/CE - Equipements sous pression b. 2009/105/CE - Récipients à pression simple c. 2004/108/CE - Compatibilité électromagnétique d. 2006/95/CE - Appareillage à basse tension 5. Les normes harmonisées et technique. 6. Atlas Copco LtD. division LUTOS est autorisé à constituer le dossier technique. 7. Conformité de la spécification aux directives; Conformité du produit aux spécifications et, par extension, aux directives 8. Emis par: Ingénierie du produit; Fabrication 9. Désignation 10. Signature 11. Date



NYILATKOZAT BEÉPÍTÉSÉRE RÉSZBEN KÉSZ GÉP

Az alulirott Atlas Copco LtD. division LUTOS vállalat kizárolagos felelőssége tudataban kijelenti, hogy az alábbi terméket 3. Készülék neve 4. Készülék típusa 5. Gyári szám 6. mindenadig nem szabad üzembe helyezni, amíg a berendezés, amelybe beépítésre vagy amellyel összeszerelésre kerül, nem felé meg a gépekre vonatkozó tagállami jogszabályok közelítéséről szóló 2006/42/EK irányelv és módosításai vonatkozó alapvető biztonsági és egészségvédelmi követelményeinek.

Az alulirott Atlas Copco LtD. division LUTOS vállalat kizárolagos felelőssége tudataban kijelenti, hogy az alábbi termék amely a 2006/42/EK irányelv 12.2 bekezdés hatálya alá tartozik, megfelel a fenti, a gépekkel szóló tagállami jogszabályok közelítéséről szóló irányelv vonatkozó alapvető egészségügyi és biztonsági követelményeinek. Az Atlas Copco LtD. division LUTOS a nemzeti hatóságok megalapozott kérelmére alapján beleegyezik a felkész munkagépekkel történő résleges információsolgáltatásba. Az alkalmazások felhasználása nem sérteti az Atlas Copco LtD. division LUTOS szellemi tulajdonjogát. A készülék ezen kívül megfelel az alábbi irányelvnek és azok módosításainak is (adott esetben). 4. Irányelv közelítéséről szóló tagállami jogszabályok: a. 97/23/EK - Nyomástartó berendezések b. 2009/88/EK - Egyeszerű nyomástartó edények c. 2004/108/EK - Elektromágneses összeférhetőség d. 2006/95/EK - Kisfeszültségű berendezések 5. A harmonizált műszaki előírásokat. 6. Atlas Copco LtD. division LUTOS felhalalmazást kap, hogy a műszaki dokumentáció összeállítására 7. A specifikáció megfelelősége az irányelvnek; A termék megfelelősége a specifikációk és következetessége az irányelvnek is 8. Kiadta: Terméktervezés; Gyártás 9. Név 10. Aláírás Dátum

II

DICHIARAZIONE DI INCORPORAMENTO DI QUASI-MACCHINE

Noi, Atlas Copco LtD. division LUTOS, dichiariamo sotto la nostra esclusiva responsabilità che il prodotto.... 1. Denominazione della macchina 2. Tipo della macchina 3. Numero di serienon deve essere messo in servizio fino a quando la macchina in cui deve essere incorporato o assemblato non è conforme alla Direttiva 2006/42/CE sui Requisiti Essenziali ai fini della Sicurezza e della tutela salute e i relativi emendamenti sul riacvicinamento delle legislazioni degli stati membri relative alle macchine.

Noi, Atlas Copco LtD. division LUTOS, dichiariamo quindi che il prodotto che è soggetto alle disposizioni dell'articolo 12.2 della Direttiva 2006/42/CE sul riacvicinamento delle legislazioni degli stati membri relative alle macchine, come componente/quasi-macchina è conforme ai relativi Requisiti Essenziali ai fini della Sicurezza e della tutela salute della suddetta Direttiva. Atlas Copco LtD. division LUTOS, si assume l'incarico, in risposta a una richiesta motivata dalle autorità nazionali, di trasmettere le informazioni relative al macchinario parzialmente completato. Le informazioni sulle parti interessate vengono messe a disposizione fatti salvi i diritti di proprietà intellettuale di Atlas Copco LtD. division LUTOS. Inoltre la macchina è conforme ai requisiti delle direttive indicate di seguito e dei relativi emendamenti (ove applicabile). 4. La direttiva concernente il riacvicinamento delle legislazioni degli stati membri a 97/23/CE - Apparecchiatura a pressione b. 2009/105/CE - Serbatoio semplice a pressione c. 2004/108/CE - Compatibilità elettromagnetica d. 2006/95/CE - Apparecchiatura a bassa tensione 5. Le norme armonizzate e tecniche 6. Atlas Copco LtD. division LUTOS è autorizzato a costituire il fascicolo tecnico. 7. Conformità delle specifiche alle direttive; Conformità del prodotto alla specifica ed implicitamente alle direttive 8. Compilato da: Progettazione del prodotto; Produzione industriale 9. Nome 10. Firma 11. Data

III

IMONTAVIMO DEKLARACIJA IŠ DALIES SUKOMPLEKTUOTOS MAŠINOS

Mes, Atlas Copco LtD. division LUTOS, prisimdam visą atskomybę, pareiškiame, jog gaminis.... 1. Mašinos pavadinimas 2. Mašinos tipas 3. Serijos numerisnegali būti eksplloatuojamas, kol mašina, su kuria jis turi būti sujungtas ar sumontuotas, neatitink EB Direktyvoje 2006/42/EB dėl valstybių narių įstatymų, susijusių su mašinomis, suderinimo bei jos prieidose nurodytų svarbiausių sveikatos ir saugos reikalavimų.

Mes, Atlas Copco LtD. division LUTOS, prisimdam visą atskomybę, pareiškiame, jog gaminis, kuriam taikomas EB Direktyvos 2006/42/EB dėl valstybių narių įstatymų, susijusių su mašinomis, suderinimo 12.2 straipsnio nuostatos, attinksta svarbiausias minėtos direktyvos sveikatos ir saugos reikalavimus kaip komponentas/kvazi-mašina. Atsakydami į pagrįsta nacionalinių institucijų prasymą mes, „Atlas Copco LtD. division LUTOS“, išpareigojame pristatyti iš dalies sukomplektuotos įrangos duomenis. Informacija apie attinkamas dalis gali būti išgijama nepažideliant „Atlas Copco LtD. division LUTOS“ intelektualiai nuosavybės teisių. Jis taip pat atitinka toliau nurodytų direktyvų jų pakeitimų reikalavimus (jei taikoma). 4. Direktiva dėl valstybių narių teisės aktuose, suderinimo: a. 97/23/EB – Sleinis įranga b. 2009/105/EB – Paprastaisiais slėginiais indais c. 2004/108/EB - Elektromagnetiniu sudeinamumu d. 2006/95/EB – Žemos įtampos įranga 5. Darniuosis standartus ir techninius. 6. Atlas Copco LtD. division LUTOS, yra galiojtas sudaryti atitinkama techninė byla 7. Specifikacijos attinkamas direktyvoms; Gaminių attinkamas specifikacijai ir, tuo pačiu, direktyvoms 8. Išdavė: Gaminių konstravimas; Gamyba 9. Pavarde 10. Parašas 11. Data

IV

Iekļaušanas deklarācija Daļēji komplektētās mašīnas

Mēs, Atlas Copco LtD. division LUTOS, uzņemoties pilnu atbildibū, paziņojam, ka izstrādājumu,... 1. Iekārtas nosaukums 2. Iekārtas tips 3. Sērijas numursnedrīkst nodot ekspluatācijā, līdz iekārtai, kurā to ir paredzēts uztādīt vai iemontēt, neatbilstīs attiecīgajām EK Direktīvas 2006/42/EK par to dalībvalstu tiesību aktu tuvināšanu, kas attiecas uz mehānismiem, un tās grozījumu svarīgākajām veselības un drošības aizsardzības prasībām.

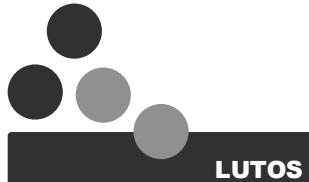
Mēs, Atlas Copco LtD. division LUTOS, ar šo paziņojam, ka izstrādājums, uz kuru attiecas EK Direktīvas 2006/42/EK par to dalībvalstu tiesību aktu tuvināšanu, kas attiecas uz mehānismiem kā uz citas iekārtas komponentiem, 8. panta 2. punkta noteikumi, atbilst šīs direktīvas svarīgākajām veselības un drošības aizsardzības prasībām. Mēs, Atlas Copco LtD. division LUTOS, pēc valsts iestāžu pamato pieprasījuma apņemamies pārstātīt attiecīgo informāciju par daļēji komplektētām mašīnām. Informāciju par attiecīgajām daļām var iegūt neskarot uzņēmuma Atlas Copco LtD. division LUTOS intelektuālā ipašuma tiesības. Iekārtas atbilst ari šādu direktīvu un to grozījumu prasībām, ja tā ir norādīts (ja piemērojams), 4. Direktīva par tiesību aktu tuvināšanu dalībvalstīs: a. 97/23/EB – Spiediena iekārtas b. 2009/105/EB - Vienkārši spiediņi c. 2004/108/EB - Elektromagnetiskās savietojamības 2006/95/EB - Žemos ītampos įranga 5. Saskaņotos standartus un tehniskos. 6. Atlas Copco LtD. division LUTOS ir pilnvarota sastādīt tehnisko lietu 7. Specifikācijas atbilstība direktīvām; Izstrādājuma atbilstība specifikācijai un reiziē ari direktīvām 8. Izdevēji: Izstrādājuma tehnoloģija; Ražošana 9. Vārds, uzvārds 10. Paraksts 11. Datums

V

DIKJARAZZJONI GHALL-INKORPORAZZJONI TAL-MAKKINARU PARZJALMENT KOMPLUT

Ahna, Atlas Copco LtD. division LUTOS, niddikjaraw b'responsabilittä unika tagħha, li l-prodott.... 1. Isem tal-magna 2. Tip tal-magna 3. Numru tas-serje ...m'għandux jintużza qabel mal-magna li fiha hu intiż li jkun inkluż jew iṁwahha magħha, ikun konformi mal-Htgħejjet Essenziali tas-Saħħa u s-Sigurta tad-Direttiva tal-KE 2006/42/KE, dwar l-apprōssimazzjoni tal-ligħiġiet ta' l-Istati Membri marbutu mal-Makkinarju, bhal komponen/kvazi magna, hu konformi mal-Htgħejjet Essenziali tas-Saħħa u s-Sigurta ta' din id-Direttiva. Ahna, Atlas Copco LtD. division LUTOS, fuq talba ragonata mill-awtoritajiet nazzjonali, ser nimpnejaw rweħha, li nittrasmietti l-informazzjoni rilevanti dwar il-makkinarju parżjalment lest. L-informazzjoni fuq il-partijiet rilevanti tista' tinkiseb suġġetta għad-drittijiet tal-proprietà intellektwal ta' l-Atlas Copco LtD. division LUTOS. Il-makkinarju hu konformi wkoll mal-Htgħejjet tad-Direttivi segwenti u l-emendi tagħhom (fejn applikabbli). 4. Id-Direttiva tista' tinkiseb suġġetta għad-drittijiet tal-ligħiġiet ta' l-Istati Membri: a. 97/23/KE - Tagħmir ta' pressjoni b. 2009/105/KE - Strumenti simpliċi ta' pressjoni c. 2004/108/KE - Kompatibilità elettromagnetica d. 2006/95/KE - Tagħmir b' vultagg baxx 5. L-standards armonizzati u teknici 6. Atlas Copco LtD. division LUTOS huwa awtorizzat li tagħmel il-fajl tekniku 7. Konformità ma' l-ispecifikazzjoni tad-Direttivi; Konformità tal-prodott ghall-ġġalli is-piċċi kollha b'implikazzjoni għad-direttivi. Ingierġi minn: Mahrug minn: Ingierġi tal-prodott; Manifattura 9. Isem 10. Firma 11. Data

V





VERKLARING VAN INTEGRATIE VAN NIET VOLTOOIDE MACHINES

Ondergetekende, Atlas Copco LtD. division LUTOS, verklaart op eigen verantwoordelijkheid dat het product.... 1. Naam van de machine 2. Machinetype 3. Serienummer ...pas in bedrijf mag worden gesteld wanneer de machine waarin het moet worden ingebouwd, of waarmee het moet worden samengebouwd, in overeenstemming is met de toepasselijke noodzakelijke gezondheids- en veiligheidsseisen van Richtlijn 2006/42/EG en de wijzigingen daarop inzake de harmonisatie van de wegegevingen der lidstaten ten aanzien van machines.

Ondergetekende, Atlas Copco LtD. division LUTOS, verklaart hierbij dat het product vallende onder de bepalingen van artikel 12.2 van de Machinerichtlijn 2006/42/EG inzake de harmonisatie van de wegegevingen der lidstaten ten aanzien van machines, als onderdeel/quasi-machine in overeenstemming is met de toepasselijke noodzakelijke gezondheids- en veiligheidsseisen van deze richtlijn. Ondergetekende, Atlas Copco LtD. division LUTOS, stelt naar aanleiding van een gemotiveerd verzoek van de nationale overheid, de relevante informatie over de gedeeltelijk voltooide machine ter beschikking. De informatie over de desbetreffende onderdelen kan worden verkregen onvermindert de intellectuele eigendomsrechten van Atlas Copco LtD. division LUTOS. De machine voldoet tevens aan de eisen die gesteld worden in de volgende richtlijnen en wijzigingen daarop zoals aangegeven (indien van toepassing). 4. Richtlijn betreffende de onderlinge aanpassing van de wegegevingen van de lidstaten: a. 97/23/EG - Drukapparatuur b. 2009/105/EG - Drukvalven van envoedige vorm c. 2004/108/EG - Elektromagnetische compatibiliteit d. 2006/95/EG - Laagspanningsproducten en elektrisch materieel 5. De geharmoniseerde normen en technische. 6. Atlas Copco LtD. division LUTOS is gemachtigd om het technisch dossier samen te stellen 7. Overeenstemming van de specificatie met de richtlijn; Overeenstemming van het product met de specificatie en als voorvloeiisel van de richtlijnen 8. Aangegeven door: Product engineering; Productie 9. Naam 10. Handtekening 11. Datum

nn

ufullstendig erklæring om innlemmelse maskiner

Vi, Atlas Copco LtD. division LUTOS, erklærer på eget ansvar at produktet.... 1. Maskinen navn 2. Maskintype 3. Serienummerikke må tas i bruk før maskinen det skal bygges inn eller monteres i, oppfyller de gjeldende grunnleggende krav vedrørende helse og sikkerhet i direktiv 2006/42/EF, med tilhørende endringer, om tilnærming av medlemsstatenes lovgivning om maskiner.

Vi, Atlas Copco LtD. division LUTOS, erklærer herved at produktet som omfattes av bestemmelserne i artikkelen 12.2 i direktiv 2006/42/EF om tilnærming av medlemsstatenes lovgivning om maskiner, som en del/nesten-maskin, er i samsvar med gjeldende grunnleggende krav vedrørende helse og sikkerhet i dette direktivet. Vi, Atlas Copco LtD. division LUTOS, påtar oss, i samsvar med en rimelig førespørsel fra de nasjonale myndighetene, å overføre den relevante informasjonen om det delvis ferdigstilte maskineriet. Informasjon om de relevante delene kan fås i overensstemmelse med den intellektuelle eiendomsretten til Atlas Copco LtD. division LUTOS. Maskinen oppfyller også kravene i følgende direktiver med endringer som angitt (hvor gjeldende). 4. Direktiv om tilnærming av lover medlemsstatene: a. 97/23/EE – trykkutstyr b. 2009/105/EE – enkle trykkskoholdere c. 2004/108/EE – elektromagnetisk kompatibilitet d. 2006/95/EE – lavspenningsutstyr 5. Den harmoniserte standarder og tekniske. 6. Atlas Copco LtD. division LUTOS er autorisert til å kompile de tekniske arkiv 7. Spesifikasjonens samsvar med direktivene; Produktets samsvar med spesifikasjonen og følge med direktivene 8. Utsteder: Produktutvikling; Fabrikasjon 9. Navn 10. Signatur 11. Dato

pl

DEKLARACJA WŁĄCZENIA MASZYNY NIEUKOŃCZONEJ

My, Atlas Copco LtD. division LUTOS, oświadczamy z pełną odpowiedzialnością, że produkt.... 1. Nazwa maszyny 2. Typ maszyny 3. Numer serjynynie może być wprowadzony do użytku, dopóki maszyna, w której ma być wbudowany lub z której ma zostać zmontowany, nie będzie zgodna z zasadniczymi wymaganiami ochrony zdrowia i bezpieczeństwa dyrektywy 2006/42/WE wraz z późniejszymi zmianami w sprawie zblżenia ustawodawstw Państw Członkowskich odnoszących się do maszyn.

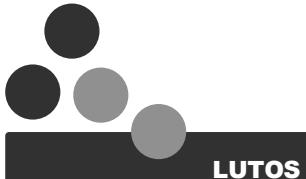
My, Atlas Copco LtD. division LUTOS, niniejszym oświadczamy, że produkt objęty przepisami artykułu 12.2 dyrektywy 2006/42/WE w sprawie zblżenia ustawodawstw Państw Członkowskich odnoszących się do maszyn jest, jako podzespoł/pseudomaszyna zgodny z odpowiednimi zasadniczymi wymaganiami ochrony zdrowia i bezpieczeństwa wyznaczonymi w tej dyrektywie. My, Atlas Copco LtD. division LUTOS, w odpowiedzi na uzasadnione żądanie władz państwowych przekazujemy odpowiednie informacje dotyczące niekompletnych maszyn. Informacje dotyczące odpowiednich części można uzyskać bez szkody dla praw własności intelektualnej firmy Atlas Copco LtD. division LUTOS. Maszyna spełnia również wymagania następujących dyrektyw wraz z późniejszymi zmianami (jeśli dotyczy). 4. Dyrektywa w sprawie zblżenia ustawodawstw Państw Członkowskich: a. 97/23/WE – Urządzenia ciśnieniowe b. 2009/105/WE — Proste zbiorniki ciśnieniowe c. 2004/108/WE — Kompatybilność elektromagnetyczna d. 2006/95/WE — Urządzenia niskiego napięcia 5. Zharmonizowanymi normami i technicznego. 6Atlas Copco LtD. division LUTOS upoważniony jest do przygotowania dokumentacji technicznej 7. Zgodność specyfikacji z dyrektywami; Zgodność produktu ze specyfikacją, a tym samym z dyrektywami 8. Wystawa: Inżynier produktu; Producent 9. Nazwa 10. Podpis 11. Data

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DECLARAÇÃO DE INCORPORAÇÃO DE UMA QUASE-MÁQUINA

Nós, Atlas Copco LtD. division LUTOS, declaramos, sob nossa exclusiva responsabilidade, que o produto.... 1. Nome da máquina 2. Tipo de máquina 3. Número de série ...não deve ser colocado em serviço até que a máquina na qual se destina a ser incorporado ou montado esteja em conformidade com os Requisitos Básicos de Saúde e Segurança da Directiva 2006/42/CE e respectivos aditamentos, respeitante à aproximação das legislações dos Estados-Membros sobre Maquinaria.

Nós, Atlas Copco LtD. division LUTOS, declaramos por este meio que o produto abrangido pelas disposições do artigo 12.2 da Directiva 2006/42/CE, enquanto componente/quase-máquina, se encontra em conformidade com os Requisitos Básicos de Saúde e Segurança da referida Directiva, respeitante à aproximação das legislações dos Estados-Membros sobre maquinaria. Nós, Atlas Copco LtD. division LUTOS, aceitamos, em resposta a um pedido fundamentado das autoridades nacionais, transmitir a informação relevante relativa à maquinaria parcialmente completa. A informação sobre as peças em questão pode ser obtida sem prejuízo dos direitos de propriedade intelectual da Atlas Copco LtD. division LUTOS. A máquina obedece também aos requisitos das directivas abaixo indicadas e seus aditamentos (quando aplicável). 4 Directiva relativa à aproximação das legislações dos Estados-Membros: a. 97/23/CE - Equipamentos sob pressão b. 2009/105/CE - Recipientes sob pressão simples c. 2004/108/CE - Compatibilidade elektromagnética d. 2006/95/CE - Equipamento de baixa tensão 5. As normas harmonizadas e técnico. 6. Atlas Copco LtD. division LUTOS está autorizada a compilar o processo técnico 7. Conformidade da especificação com as directivas; Conformidade do produto com a especificação e, por implicação, com as directivas 8. Entidade emissora: Engenharia de produtos; Fabrico 9. Nome 10. Assinatura 11. Data





Declarația de încorporare echipamentelor tehnice parțial finalize

Noi, Atlas Copco LtD. division LUTOS, declarăm pe proprie răspundere că produsul... 1 Nume echipament 2 Tip echipament 3 Număr de serienu trebuie pus în funcțiune până când mașina în care se menționează a fi incorporat sau asamblat nu este în conformitate cu cerințele esențiale în materie de sănătate și siguranță din directiva CE 2006/42/EC și modificările acesteia privind armonizarea legislațiilor statelor membre referitoare la mașini industriale.

Noi, Atlas Copco LtD. division LUTOS, declarăm pe proprie răspundere că produsul, care face obiectul prevederilor articolului 8.2., litera (a) din directiva CE 2006/42/EC privind armonizarea legislațiilor statelor membre referitoare la mașini industriale și care reprezintă o componentă/pieșă de mașină, este în conformitate cu cerințele esențiale în materie de sănătate și siguranță din această directivă. Noi, Atlas Copco LtD. division LUTOS, ne obligăm să transmitem informațiile relevante despre mașina parțial finalizată, ca răspuns la o solicitare rezonabilă a autorităților naționale. Informațiile despre componentele relevante pot fi obținute fără a prejudicia drepturile de proprietate intelectuală ale Atlas Copco LtD. division LUTOS. Acest echipament este, de asemenea, în conformitate cu cerințele următoarelor directive și ale modificărilor acestora (dacă este cazul). 4 Directiva privind proprietatea legislațiilor statelor membre: a 97/23/EC - Echipamentele sub presune b. 2009/105/EC - Recipientele simple sub presune c 2004/108/EC - Compatibilitatea electromagnetică d 2006/95/EC - Echipamentele de joasă tensiune 5. Standardele armonizate și tehnice. 6. Atlas Copco LtD. division LUTOS, este autorizat să compileze dosarul tehnic 7. Conformitatea specificațiilor cu directivele; Conformitatea produsului cu specificațiile și, implicit, cu directivele 8. Emetent: Proiectant; Fabricant 9 Nume 10. Semnatăru 11 Data

ru

неполное заявление регистрации машин

Мы, ООО Атлас Конко, департамент Лутос, заявляем, под свою исключительную ответственность, что изделие... 1. Название продукта 2. Тип оборудования 3. Серийный номер ... не должно вводиться в эксплуатацию до тех пор, пока конечное оборудование, частью, которого должен быть наш агрегат, либо оборудование, с которым наш агрегат должен быть собран в одно целое, не будет приведено в соответствие с базовыми требованиями директивы EC-2006 / 42/EC о Безопасности и Здоровье, а так же приложениям к данной директивы об объединении законодательств государств-членов, касающихся машиностроения и техники.

Мы, ООО Атлас Конко, департамент Лутос, заявляем, что продукт, который подпадает под действие положений статьи 12.2. Директивы EC 2006/42/ES о сближении законодательств государств-членов, касающийся механизмов и машиностроения, в качестве компонента / квази машины, соответствует базовым медицинским и требованиям безопасности этой директивы. Мы, ООО Атлас Конко, департамент Лутос, обзираемся в ответ на обоснованные просьбы со стороны национальных властей, передать соответствующую информацию о частичном производством оборудования. Информация о соответствующих частях оборудования, чье производство было выполнено в полной мере, может быть нанесена ущерб интеллектуальной собственности ООО Атлас Конко, департамент Лутос. Помимо этого, механизм также соответствует требованиям следующих директив и поправок к ним (там, где это применимо). 4 Директивы о сближении законодательств государств-членов: a. 97/23/ES - Давление оборудования в 2009/105/ES - Простые давлением суда д. 2006/95/ES - Низкий оборудование 5. Гармонизированных стандартов и технических. 6. Atlas Copco LtD. division LUTOS имеет право составить техническую документацию 7. Соответствие этим директивам Спецификации продукта и, следовательно, с Директивами 8. Партии: Разработка продукции, Производство 9. Название 10. Подпись 11. Свидание

sk

VYHLÁŠENIE O ZAČLENENÍ ČIASTOČNE SKOMPLETIZOVANÝCH STROJOVÝCH ZARIADENÍ

My, spoločnosť Atlas Copco LtD. division LUTOS, vyhlasujeme na našu výhradnú zodpovednosť, že tento produkt.... 1. Názov stroja 2. Typ stroja 3. Výrobné číslonesmie byť uvedený do prevádzky, kým stroj, do ktorého sa má zakomponovať, alebo s ktorým sa má zostaviť, nebude využívať príslušným základným zdravotným a bezpečnostným požiadavkám Smernice Európskeho spoločenstva 2006/42/ES a jej dodatkom o aproximácii práva členských štátov v súvislosti so strojmi zariadeniami.

My, spoločnosť Atlas Copco LtD. division LUTOS, týmto prehlasujeme, že výrobok, ktorý spadá pod ustanovenia článku 12.2 Smernice Európskeho spoločenstva 2006/42/ES je v súlade s príslušnými základnými bezpečnostnými a zdravotnými požiadavkami horeviedenej Smernice Rady o aproximácii práva členských štátov v súvislosti so strojmi zariadeniami. My, spoločnosť Atlas Copco LtD. division LUTOS, sme sa rozhodli, na základe odôvodneného požiadavky národných orgánov, odovzdáť relevantné informácie o čiastočne dokončených strojových zariadeniach. Informácie o relevantnych časťach je možné získať s príhlásením na práva duševného vlastníctva spoločnosti Atlas Copco LtD. division LUTOS. Toto strojné zariadenie využívajú aj požiadavkám nasledovných smerníc a ich dodatkov (tam, kde je možné uplatniť). 4. Smernica o aproximácii práva členských štátov: a. 97/23/ES - Tlakové zariadenia b. 2009/105/ES - Jednoduché tlakové nádoby c. 2004/108/ES - Elektromagnetická kompatibilita d. 2006/95/ES - Nizkonapäťové zariadenia 5. Použitie harmonizované a technické normy. 6. Atlas Copco LtD. division LUTOS je oprávnený zostaviť technickú dokumentáciu 7. Zhoda špecifikácie s uvedenými smernicami; Zhoda produktu so špecifikáciou a tým aj s uvedenými smernicami 8. Vydavateľ: Návrh produktu; Výroba 9. Názov 10. Podpis 11. Dátum

sl

IZJAVA O VGRADNJI DELNO DOKONČANIH STROJEV

Mi, Atlas Copco LtD. division LUTOS, s polno odgovornostjo izjavljamo, da izdelka.... 1. Ime stroja 2. Tip stroja 3. Serijska številkane smete uporabljati, dokler stroj, v katerega bo vgrajen ali s katerim bo sestavljen, ni v skladu z ustrezanimi bistvenimi zdravstvenimi in varnostnimi zahtevami v varnostnimi zahtevami Direktive 2006/42/ES in njenih dopolnil o približevanju zakonodaj držav članic v zvezi s stroji.

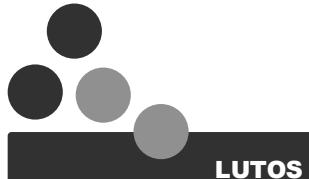
Mi, Atlas Copco LtD. division LUTOS, izjavljamo, da je izdelek, ki spada pod določbe člena 8.2.Direktive ES 2006/42/ES o približevanju zakonodaj držav članic v zvezi s stroji, kot sestavni del v skladu z ustrezanimi bistvenimi zdravstvenimi in varnostnimi zahtevami in Direktive. Mi, Atlas Copco LtD. division LUTOS, se na osnovi utemeljene zahteve državnih oblasti zavezujeamo, da bomo posredovali ustrezne informacije o delno dokončanih strojih. Informacije o ustreznih delih je mogoče pridobiti brez poseganja v pravice intelektualne lastnine družbe Atlas Copco LtD. division LUTOS. Stroj je skladen tudi z zahtevami naslednjih direktiv in njihovih dopolnil (po potrebi). 4. Direktiva o približevanju zakonodaje držav članic: a. 97/23/ES - Tlačna oprema b. 2009/105/ES - Enostavne tlačne posode c. 2004/108/ES - Elektromagnetna zdržljivost d. 2006/95/ES - Nizkonapetostna oprema 5. Usklajeni standardov in tehničnih. 6. Atlas Copco LtD. division LUTOS je pooblaščena za sestavljanje tehnične dokumentacije 7. Skladnost specifikacije z direktivami; Skladnost izdelka s specifikacijo in z direktivami 8. Izdal: Inženiring izdelka; Poizvodnja 9. Ime 10. Podpis 11. Datum

sv

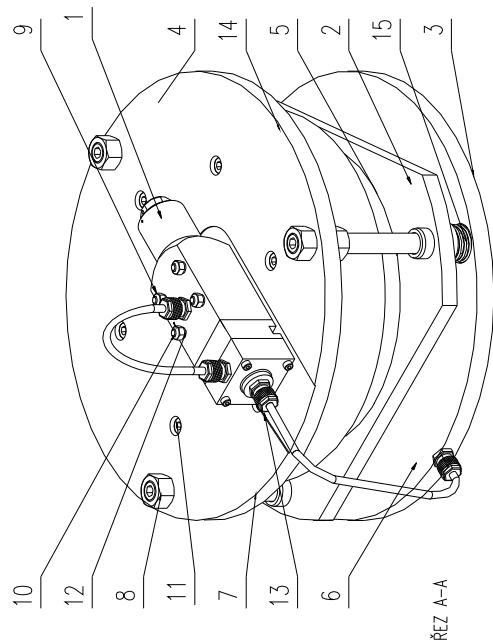
TILLVERKARDEKLARATION AV HALVFABRIKAT

Vi, Atlas Copco LtD. division LUTOS, förklarar på eget ansvar att maskinen.... 1. Maskinen namn 2. Maskintyp 3. Serienummerinte får tas i bruk förrän den maskin som den avses att byggas in i, eller monteras med, uppfyller de relevanta grundläggande hälso- och säkerhetskraven i EG-direktivet 2006/42/EG, och dess tillägg, om tillämpning om medlemsstaternas lagstiftning om maskiner.

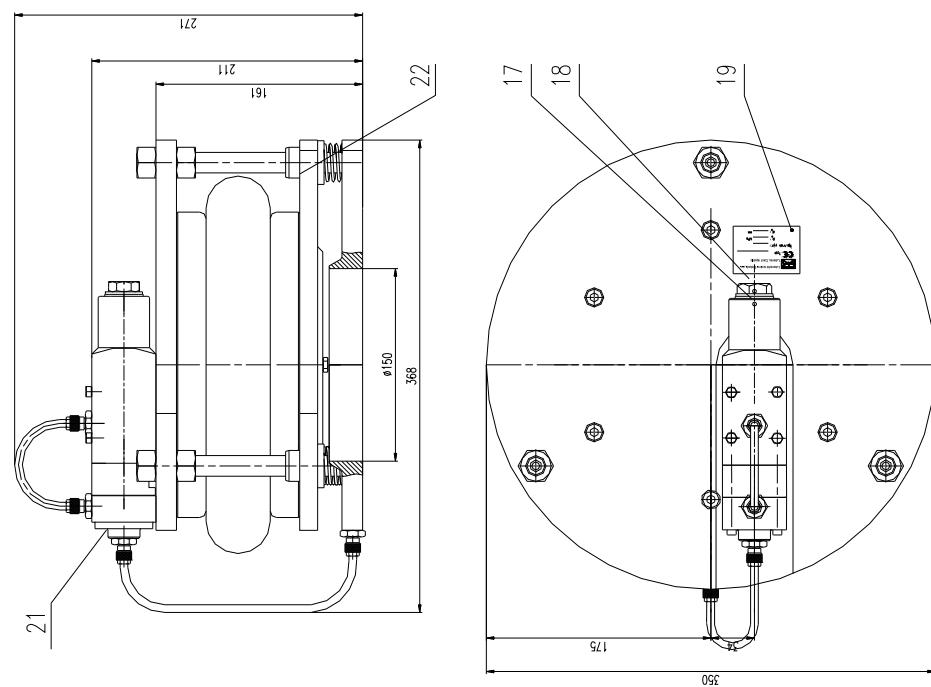
Vi, Atlas Copco LtD. division LUTOS, förklarar härmed att den produkt som omfattas av bestämmelserna i artikel 12.2 i EG-direktiv 2006/42/EG om tillämpning av medlemsstaternas lagstiftning om maskiner, som en komponent "kvävmaschin" uppfyller de relevanta grundläggande hälso- och säkerhetskraven i detta direktiv. Vi, Atlas Copco LtD. division LUTOS, är oss att till följd av en motiverad begär från de nationella myndigheterna skicka relevant information om de delvis slutfördra maskinerna. Informationen om de relevanta delarna kan erhållas utan att detta påverkar tillämpningen av de immateriella rättigheter som innehås av Atlas Copco LtD. division LUTOS. Maskinen uppfyller även kraven i följande direktiv och deras tillägg (i förekommende fall). 4. Direktiv om tillämpning av medlemsstaterna: a. 97/23/EG - Tryckutrustning b. 2009/105/EG - Enkla tryckkällor c. 2004/108/EG - Elektromagnetisk kompatibilitet d. 2006/95/EG - Lågspänningsutrustning 5. De De harmoniserade standarder och tekniska. 6. Atlas Copco LtD. division LUTOS bemhyndigas att upprätta den tekniska dokumentationen 7. Specifikationens överensstämmelse med direktiven; Produktens överensstämmelse med specifikationen och indirekt med direktiven 8. Utfärdat av: Produkten; Tillverkning 9. Namn 10. Namnteckning 11. Datum



Combined safety and starting valves PVO



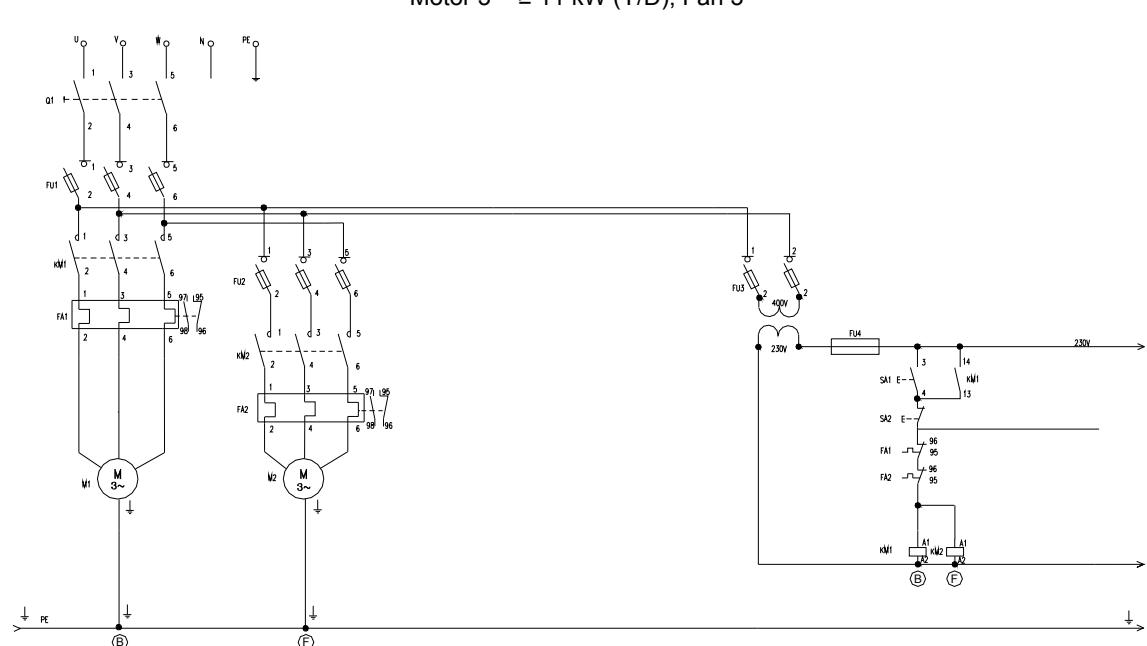
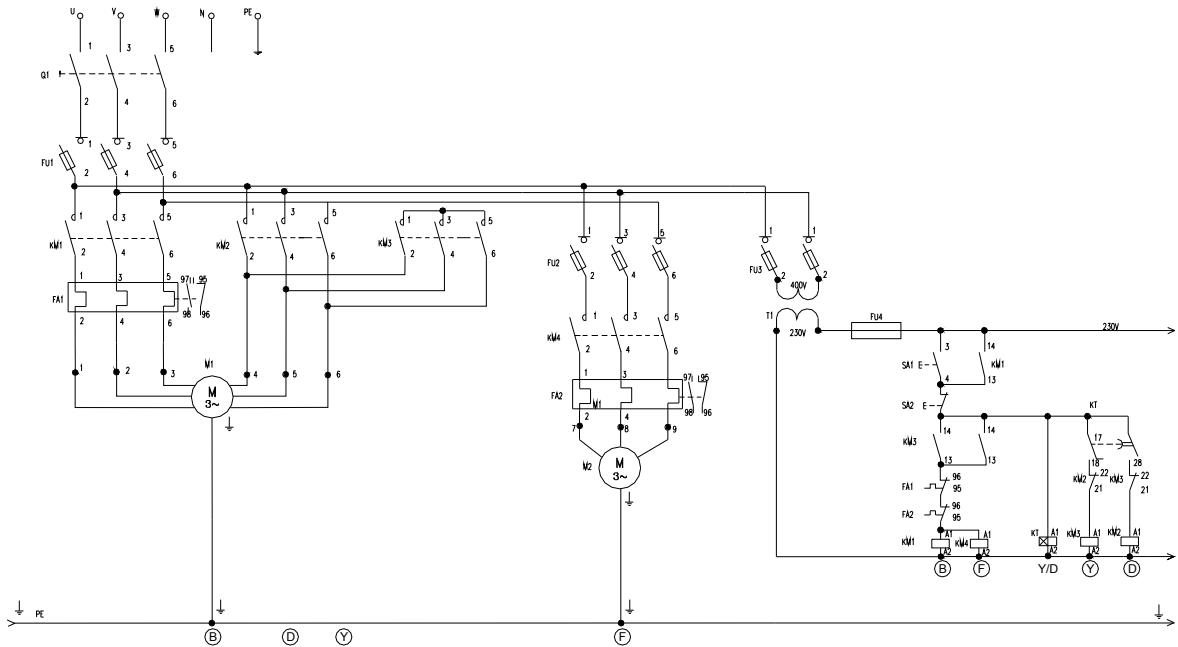
ŘEZ A-A



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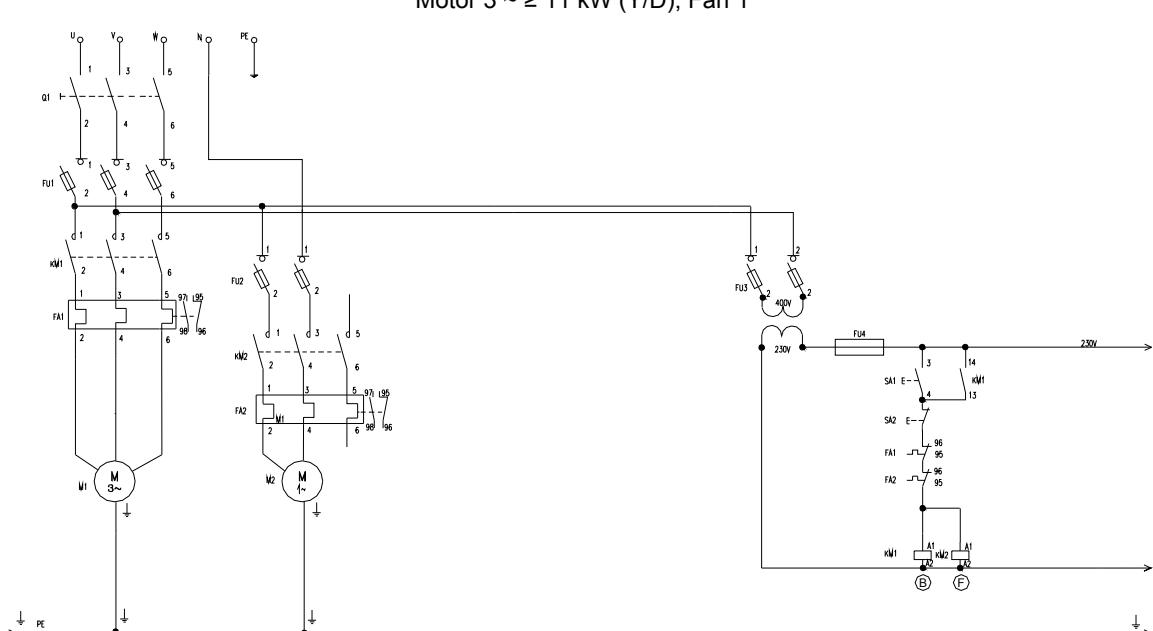
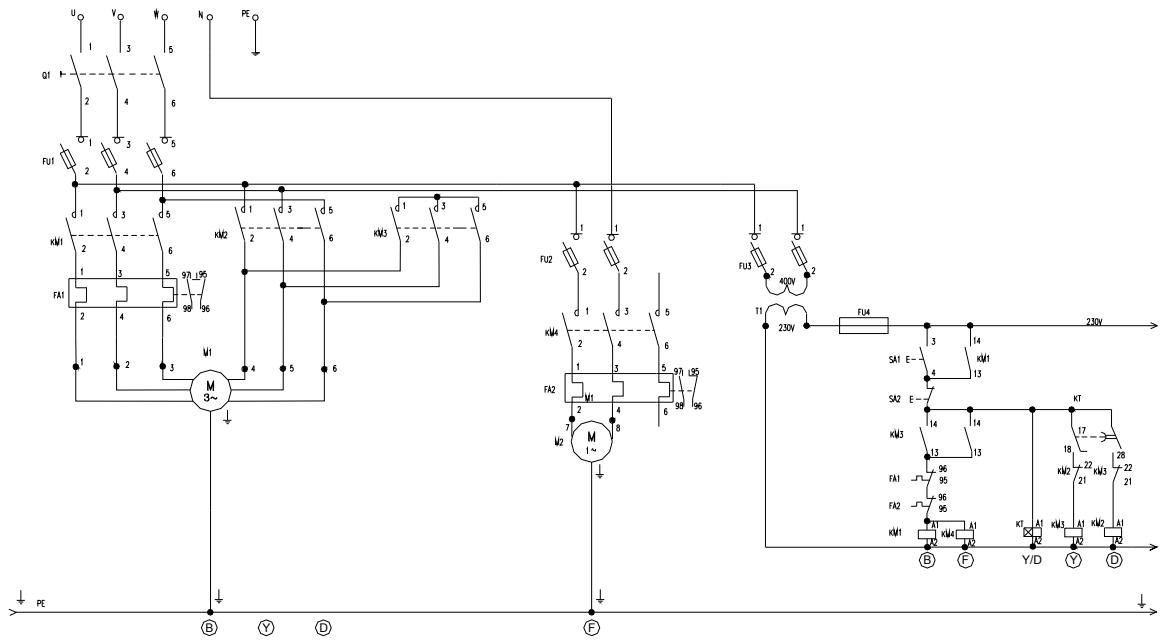
III. Appendix 3 – Schema of fan connection

A) Schema of the fan connection - Sound enclosures (3x400V)



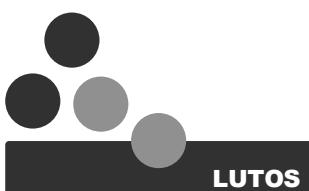
B – Powered blower; **F** – Fan

B) Schema of the fan connection - Sound enclosures (1x230V)

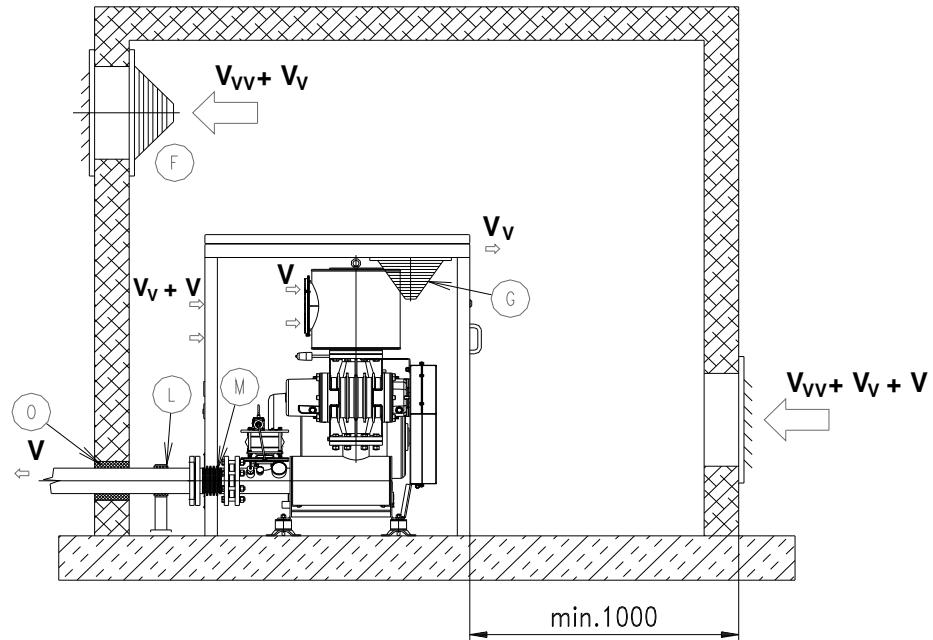


B – Powered blower; **F** – Fan

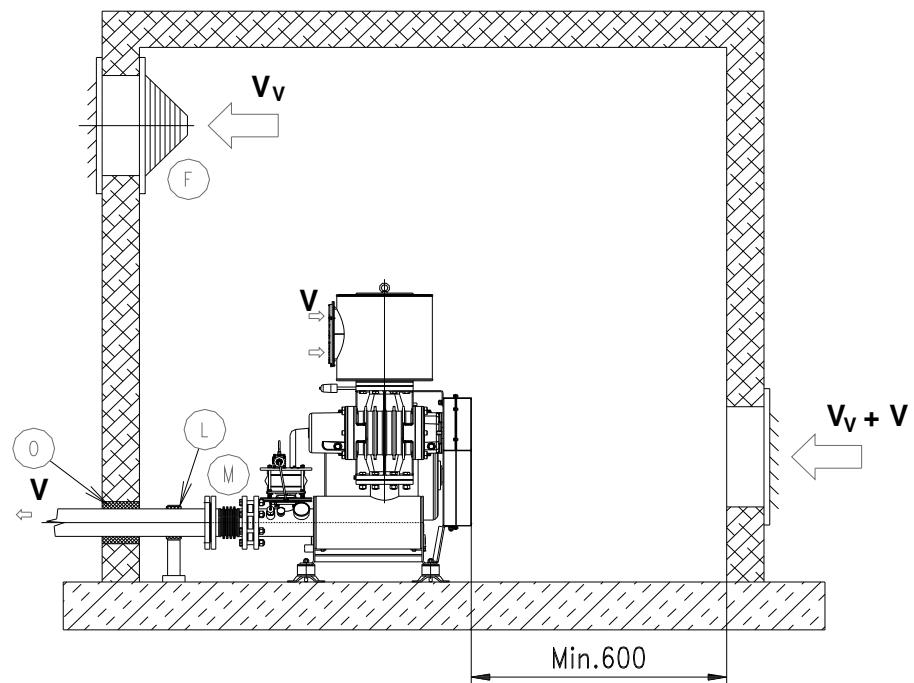
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IV. Appendix 4 – Drawing of natural and forced ventilation

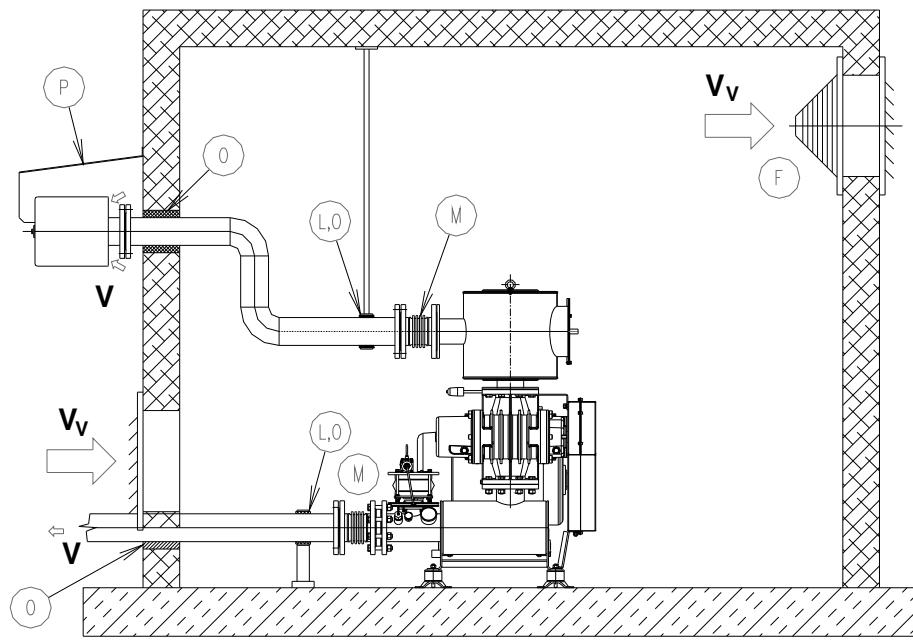


Forced ventilation, blower set in sound enclosures, suction from the machine hall

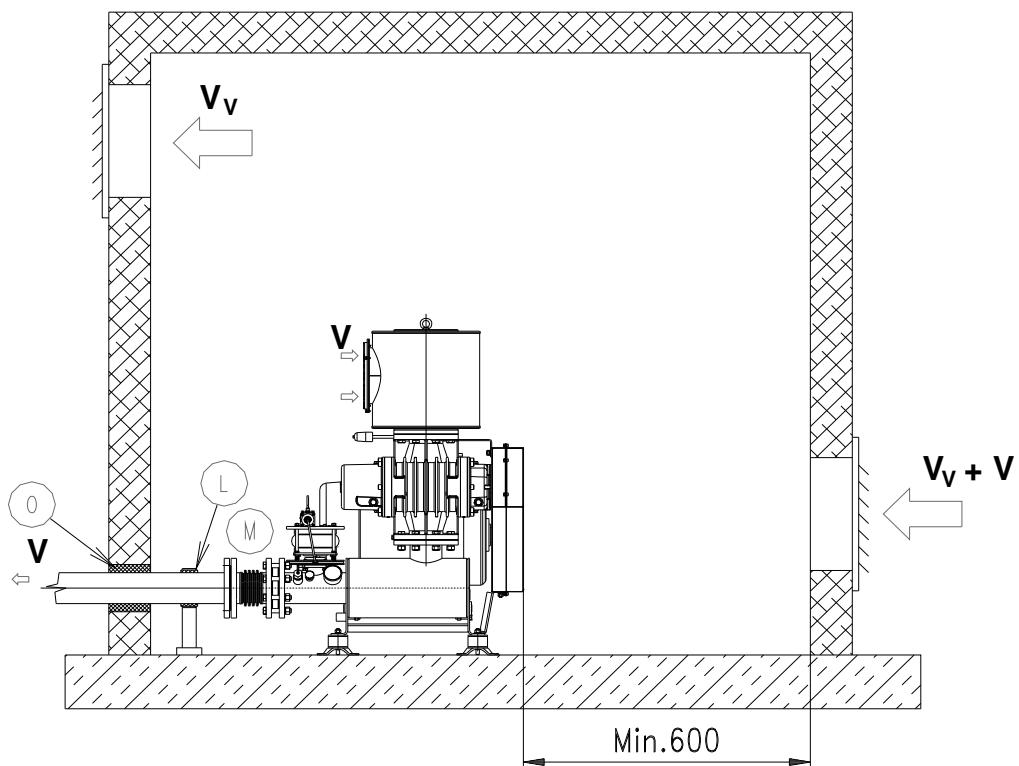


Forced ventilation, suction from the machine hall

F Fan; **G** Fan; **L** Fixed point; **M** Bellows; **N** Insulation; **O** Elastic attachment



Forced ventilation, suction from the outside



Natural ventilation, suction from the machine hall
F Fan; **L** Fixed point; **M** Bellows; **N** Insulation; **O** Elastic attachment **P** Protective mesh



V. Appendix 5 – Notes

