Pneumatic Drive Unit
Model 6 1014 0050

Techn. Doc. No. 351

Illustration can differ from the original

Operation and Maintenance Manual

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Translation of the original operation manual, compiled: 20.04.16

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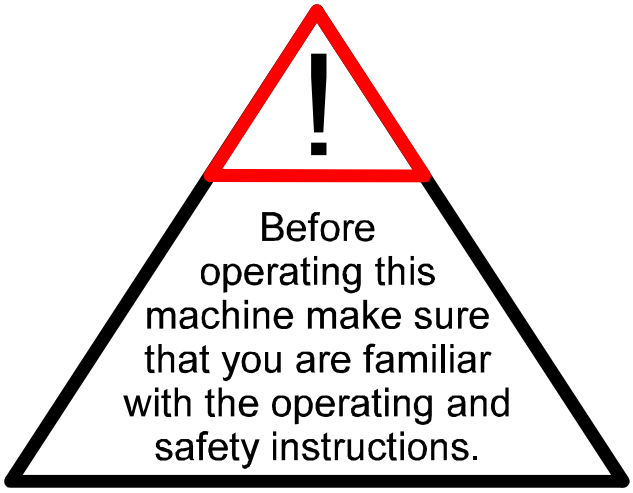


Directory

Signal Word and Symbol Definition

The signal words and symbols used in the technical documentation (safety instructions, operating booklet, etc.) have the following meaning:

This symbol has the following meaning:

DANGER
Indicates an **immediate dange**r, which causes serious injuries to any person or even death, if not avoided.

WARNING
Indicates a **threatening danger**, which can cause serious injuries to any person or even death, if not avoided.

CAUTION
Indicates a **danger or unsafe procedure** which can cause injuries to any person or material damages, if not avoided.

NOTICE
Indicates a **potentially dangerous situation** which can cause damage to the product or its surroundings, if not avoided.

WARNING – explosive atmosphere
Air and flammable substances can mix and result in an explosive atmosphere. In areas exposed to explosion hazards, supplementary instructions and directives apply. Observe the safety instructions of the owner as well.

WARNING – explosive material
Caution should be exercised when working with explosive material or in its surrounding area.

PROHIBITION – No naked flame, fire, or ignition source and no smoking
Prevent from fire and explosion hazards, which can be caused by naked flame, open ignition source or by smoking.

Eating and drinking forbidden – The prohibition sign forbids the consumption of food.

REQUIREMENT – Observe the instruction
Ensure that the operation process is adhered to and avoid accidents and expensive down times due to improper use of machines, devices and tools.
By using the mandatory sign you refer to the adherence of operation instructions.

This symbol has the following meaning:

NOTICE – Gives recommendations and important hints for handling the product
IMPORTANT – Indicates application advice and other particularly useful information.

REMARK:
In each case the symbol used does not replace the safety text. The text must always be read fully. In some cases other symbols will be used with the signal words.

Technical Specification

Type No.	**6 1014 0050**
Operating pressure/ Flow pressure	6 bar
Power	0.7 kW
Speed (under load)	100 1/min
Free speed	170 1/min
Torque	66 Nm
Tool holder female	□ 20/ 12 mm
Rotation direction (see fig.)	left
Air consumption	1.3 m^3/min
Air connection	R 1/2" female
Min. ID of hose	13 mm
Weight	4.8 kg
Noise pressure level L_{pA} (1)	89 dB (A)
Noise power level L_{WA}	100 dB (A)
Vibration (2)	< 2,5 m/s²
ATEX Classification	Ex - I M2 c T6
(1) Remark: Measurement acc. to DIN EN ISO 3744 (2) Remark: Measurement acc. to DIN EN ISO 20643	Measurement uncertainty K: 3 dB (A) Measurement uncertainty K: 1.5 m/s^2

The performance data are guide values only, they depend basically on the application, the operating pressure and the applied accessories.

Intended Use

CS Unitec machines are designed for commercial/industrial use only.
Only trained, skilled personnel are allowed to operate the machine.

The power/traction of this machine is designed for the work with various tools. Freehand working can only be performed for tools up to 100 mm. For tools with larger diameters, always work with a dead stop and ensure against rotation of the machine (danger of injury). The operator, respectively the employer

, is responsible for the appropriate use of the pneumatic drive unit.

Improper use

Any use deviating from the intended use as described is considered to be improper use. Working without personal protection equipment. Using the machine in a kind of area exposed to explosion hazards, which is prohibited for the machine.

Product Description

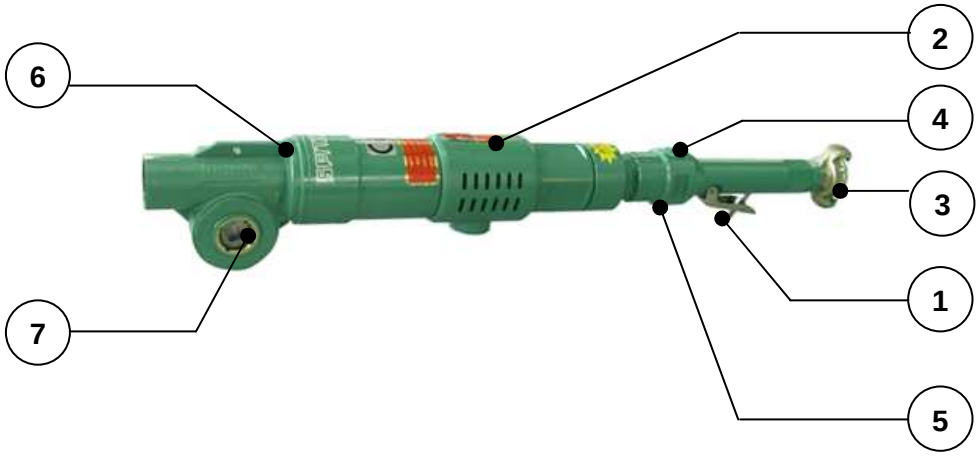


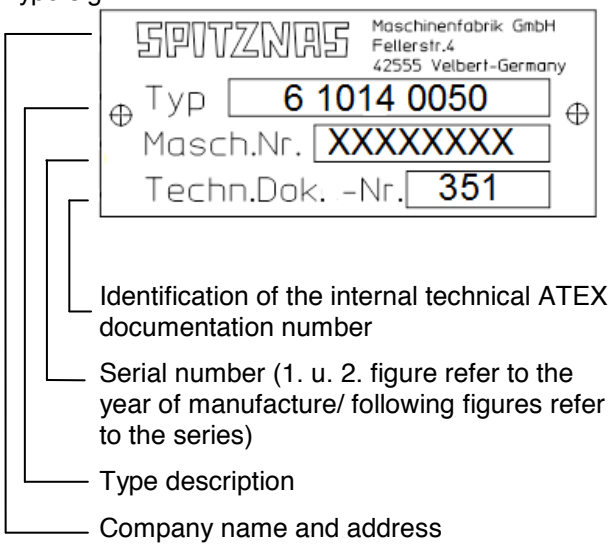
Fig. 1

1 Lever control valve
2 Motor housing
3 Air connection
4 Locking screw
5 Adjusting screw
6 Output housing
7 Drive/Tool holder

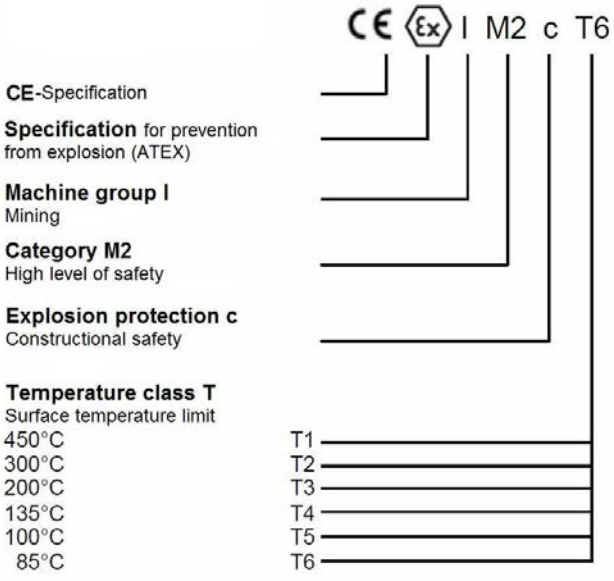
Functional principle
A drive unit converts the pneumatic energy into mechanical work. In other words, the compressed air drives the motor, which transmits the energy to the gear, whereupon the drive is rotating.

Identification

Type sign



Explanation of ATEX Identification



Installation

Requirements to the air supply
The pneumatic drive unit is designed for an operation pressure of 6 bar. Pay attention that the operation pressure is not lower. For maximum performance, the values given in the table „Technical Specification“ have to be met.

The distance to the machine should not be bigger than 5 m.
The supplied compressed air has to be free from foreign objects and humidity, in order to protect the pneumatic drive unit against damage, dirt and rust formation.

Remark: For the lubrication we recommend installing an oiler or a maintenance unit upstream the machine. This ensures a proper functioning of the pneumatic drive unit. Always use acid and resin-free oil (SAE 5W - SAE 10W).

Oils of high viscosity cause vane sticking and impair the start and performance of the machine. Optimal lubrication will multiply the service life time. In winter, or if the compressed air is very moist, an antifreeze lubricant, e.g**.** "BP-Energol AX 10", "Kilfrost" or "Kompranol N 74" should be used.

Pay attention that the diameters of all lines are big enough and there are no restrictions.
There must be no buckles in the hoses.

Check the supplied flow pressure. The flow pressure has to be adjusted with the pressure control valve (see technical specifications).

Supply hoses have to be designed for a minimum operating pressure of 6 bar.
Replace hose lines regularly at preventative maintenance, even if there are no damages (observe the instructions of the manufacturer).

Always use hoses, which have an oil resistant inner surface and an abrasion-resistant outer surface. If you are next to electric conductors, always use hoses which are proved and specified to be non-conductive.

For use in areas exposed to explosion hazards always use hoses and lubricating oil, which meet the safety requirements of the owner.

Connecting the air supply to the pneumatic drive unit
Remove the locking cap from the connection 3 (see fig. 2) at the air inlet.
Screw a pneumatic hose (not contained in the scope of delivery), into the connection 3 at the air inlet.

Fig. 2

Startup

The pneumatic drive unit works optimally at an operating pressure of 6 bar, measured at the air inlet when the pneumatic drive unit is on. When connecting the machine, pay attention that the lever control valve 1 (see fig. 1) is not actuated.

Blow out the pneumatic hose before connecting the machine. Never connect a pneumatic hose being under pressure (see safety instructions for prevention of hazards caused by compressed air). First connect the machine and then connect the compressed air supply.

Warning
Tools which are inappropriate, respectively not properly fixed, can break and cause serious injury. Only use appropriate machine tools. Prior to startup check secure fixing of the tool.

Proceed startup as follows:
1. Insert the tools as deep as possible into the tool holder.
2. Connect the machine to the pneumatic air supply.
3. Actuate the starting valve to start the machine.

Insert the tool
Only use tools with square.
Ensure a clean and greaseless surface.

Ensure that there is no pneumatic hose connected, when inserting the tool.
Clean the holder of the tool and the inner square of the drive unit.
Check the secure fixing of the tool prior to startup.

Changing tools
Disconnect pneumatic hose. Wear protective gloves when changing the tool.
The tool and the drive square can strongly heat up during longer working procedures.

Before starting work

- Check oil level. If necessary, re-fill oil.
- Equip the machine with the desired tool.
- Centre the machine on a suitable support and prevent it from rotating upwards (do not hold by hand), if working with a tool having a diameter of more than100 mm. (see paragraph “use”)
- Connect the pneumatic hose (.
- Open the valve and begin the drilling or milling operation. (The speed can be regulated by opening the valve to different degrees).

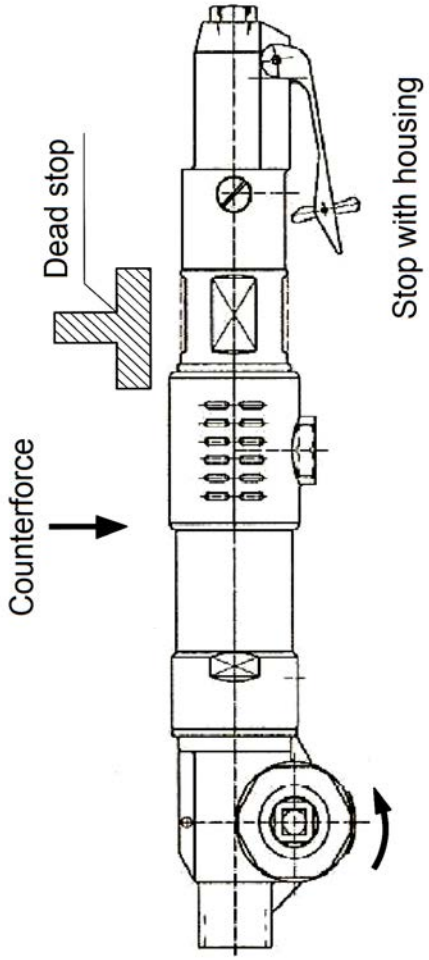


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Fig. 3

After finishing the work

- Close the valve.
- Turn off compressed air and disconnect pneumatic hose.
- Take machine out of the square.
- Remove the tool
- Clean the holder seat
- Check the oiler.

Basic Safety Instructions

Read operation instructions/safety instructions!
Before working on or with the tool, read the safety instructions and follow the instructions during operation.

Do not modify machine or machine tools and accessories after receipt. Permission from the manufacturer must be obtained before any modifications or alterations are done in compliance with all safety instructions. Use the machine only for its intended use. Observe the technical data of the equipment and the ambient temperatures. Pay attention to labels, restrictions of use and special instruction notes on the machine tools and the machine itself. Regularly check that the type plate and symbols on the machine are legible.
If necessary, contact the manufacturer to replace them. Only operators with technical knowledge, trained by authorized responsible technical personnel, may install, adjust, operate, transport and store the machine.

Owner Obligations

Generally, the machine owner is responsible for correct condition/operation of the machine and adherence to the safety regulations. The state-of-the-art machine is built according to recognized technical safety regulations. However there is still a risk of accidents to the operator or third parties or damage to the machine or other objects, when using it. All current regulations and specifications which apply to the site of operation in regards to accident prevention, installation of electrical and mechanical systems as well as radio interference must be observed.

IMPORTANT - The owner must make sure that…

- Risk assessment is carried out for the specific risks, which can occur due to any operation of the machine.
- the function of the safety equipment is regularly checked.
- the safety symbols and safety notes on the machine/ device and the operating instruction booklet are observed.
- the safety instructions and the operating instruction booklet are available completely and in legible condition on site with the machine.

The owner is obliged to only allow personnel to work on the machine who:

- are familiar with the basic work environment safety rules and accident preventing regulations. Also, those persons must have been instructed in the correct use of the machine.
- have read and understood the safety and warning notes in the operating instruction booklet as well as all other documentation pertaining to the machine.
- have been tested at regular intervals in regards to their safety-conscious operation of the machine.

Safety-conscious working
Additional to the safety instructions in this manual and the intended use, the following safety regulations have to be observed:

- Accident prevention instructions, safety and operation regulations
- Explosion protection directives
- Safety regulations for the operation with hazardous material
- Norms and laws being effective

Operator Obligations

All persons who are assigned to work with the machine are obligated to:

- always pay attention to the basic safety and accident preventing regulations.
- always read and follow the safety and warning notes in the operating instruction booklet.

Explanation of Symbols for Protective Equipment and for Accident Prevention

Use protective clothes – Protective clothes are necessary for diverse applications, e.g. protection against chemicals, heat and cold. Provide appropriate protective clothes to your staff and identify this requirement by convincing signage.

Use eye protection – whether goggles, laser safety goggles or etc. –
identify areas where eye protection has to be used, by appropriate mandatory signs.

Use ear protection – Capsule hearing protectors or hearing protectors have to be used for ear protection, depending on the sound intensity at the work place.
Provide appropriate ear protection and identify the obligation for using ear protection by appropriate mandatory signs.

Use foot protection – Foot injuries by vehicles, objects, hot material or hazardous substances can be avoided by appropriate protective shoes. Equip your staff with appropriate protective shoes and identify those requirements properly.

Use hand protection – Identify convincingly the safety requirement „Use hand protection“ by a gloves sign, respectively a gloves symbol.

Use respiratory protection – Ensure that the specified protection equipment is available and that it is used. Identify by mandatory signs, where and when respiratory masks are required.

Danger Zones

Operational condition ---------- Life phase	Normal function	Malfunction	Improper use	Expected use
Transport	Transport of the machine in an inoperable condition	Drop of the machine	Transport of the machine in an operable condition	unknown
Startup	Equipment of the machine with designated tools	unknown	Equipment of the machine with grinding pins or other tools	unknown
Operation	Machine only works with actuated valve	Machine runs without intended actuation	Valve is blocked in actuated condition	unknown
	Machine moves the tool	Tool blocks	unknown	unknown
Maintenance	Regular cleaning	Breakdown of the machine	unknown	unknown
	Operation at a filter unit	Breakdown of the machine	unknown	unknown

Safety Instructions for Prevention of Workplace Hazards

WARNING – The following applies unless otherwise stated in the machine's operating instructions booklet: The machine is not insulated to protect against an electrical power surge.

CAUTION – risk of injury!
Hands may be crushed, seized or otherwise injured.
Keep your hands away from areas which are marked with this symbol.

CAUTION – risk of injury!
Remove all sources of danger which could lead to slipping, tripping or falling (e.g. slippery surface, hoses, cables).
Keep the work area clean and uncluttered.

PROHIBITION – Eating, drinking and smoking are forbidden during operation.

WARNING – Explosion hazard!

Operate the machine according to the intended use only.
The machine is designed for the use in areas exposed to explosion hazards as well.
Observe the following:

- Valid local explosion protection directives.
- Technical specification of the machine.
- Markings on the machine.
- Avoid the generation of sparks.
- When operating the machine, do not push or beat against other material and hold the machine firmly and safely by hand.
- Do not slide the machine over the ground.
- If heat generation exceeds the specified surface temperature, the machine has to be stopped instantly. It only may be re-started after having eliminated the cause for the fault.
- The work area and the next working areas should always be protected from sparks.
- Flammable and explosible material has to be removed from the work area before work is started. Among others, this relates to dust deposits, cardboard, packing material, textile, wood and wooden splints, but also flammable fluids and gas.

Ensure adequate lighting.

Be extra careful in unfamiliar surroundings. There is a risk of hidden hazards such as electric lines or other supply lines. Make sure when operating the machine that no electrical cables, gas pipes or similar could be damaged. Use suitable and personal protective equipment.

Safety Instructions for Prevention of Hazards caused by Compressed Air

WARNING – Compressed air can cause severe injury. Before working on the tools (e.g. installation, changing accessories or machine tools, prior to a long standstill, maintenance, etc.) depressurize pneumatic equipment (close valve and depressurize pneumatic hose).

CAUTION – Risk of injury by whipping pneumatic hose.
Check pneumatic hoses, connection components and fittings regularly for any damages and proper fixture.

When connecting / disconnecting the machine to / from the pneumatic supply, please pay careful attention not to actuate the start lever while doing so. Never remove a pressurized pneumatic hose. Always switch the power supply off first and then depressurize the machine by pressing the valve latch. The maximum operating pressure (flow pressure) according to the technical specification must not be exceeded.
A pressure regulator should be installed, which regulates the pressure before it reaches the machine. Never direct a pneumatic hose at yourself or anyone else. Never clean your clothes with compressed air. Direct cold air away from your hands. Do not pull or carry the machine by the pneumatic hose. When using claw couplings make sure that they are fitted with a suitable lock mechanism (e. g. lock pin) and a safety chain.

Safety Instructions for Prevention of Operating Hazards

Before beginning work make sure that the hands are protected from the following hazards whilst working with the machine: impacts, crushing, hits, cuts, abrasions and heat.
The operating and maintenance personnel must be physically able to handle the bulk, weight, power and/or torque of the machine. Do not use the machine if you have taken any medication or drugs, after drinking alcohol or with any other constraints on your vision, reaction time or judgment. Work in the best possible position so that you can react with both hands to any normal or unexpected movements of the machine. Maintain a balanced body position and secure footing in order to avoid improper strain and to be able to support the reaction torque of the machine. If you cannot safely support the reaction torque of the machine, then use a torque support (e.g. linear stand, telescopic arm, holding fixture/ holder-on, support grip). Additionally observe the following:

- Operation of the machine only after having carefully read the operation manual.
- Only use tools, which are intended for the use with this machine.
- The work place has to be secured according to the instructions, in order to avoid injury to persons nearby due to projectiles coming-off. The machine is for hand-held operation only. All other parts of the body and extremities have to be kept in reasonable distance.
- If available, read the specifications of the tool manufacturer carefully and ensure that the tool is appropriate for the application and has the correct dimensions. Restrictions for use and other instructions by the manufacturer, which are contained in the documents supplied
- Ensure secure fixing of the tool before starting the work.
- If the machine blocks, higher reaction torques can occur. Blocking can be caused by: overload, tilting of the drill in the work piece or when penetrating the working material. Do not let the tool rumble on the work piece, as this will most likely increase the vibration. Reduce the contact pressure shortly before the tool gets through the material (for thin walled work pieces there is the risk that the tool hitches the work piece and lifts it.)
- It is possible that the tool keeps on running after the machine has been switched off. Deposit hand-held machines in a secure position and wait until it stops, without applying any pressure to the surface.
- Never stop the tool by hand.

Safety Instructions for Prevention of Entanglement Hazards

CAUTION – Loose clothing, personal jewellery (e.g. necklace), scarves/ ties, long hair or gloves can get caught up in the machine tool or accessories and thus cause severe injuries (lack of breath by throttling, abrasions, skin injuries and/ or cuts and lacerations).

Wear suitable, close fitting work clothing!
Wear a hair net, if you have long hair.
When handling the machine, jewellery, necklaces, etc. have to be removed or are forbidden, respectively.

Safety Instructions for Prevention of Noise Hazards

Always wear hearing protection (EN 352) – This refers to the operator, as well as to any other person within the vicinity of the machine. Observe the instructions of the employer and of the professional association.

High noise levels during operation can cause permanent hearing problems such as tinnitus (ringing, buzzing, whistling or humming in the ears), hardness of hearing or even deafness.

- Before starting work, ensure that the provided, respectively the factory-made, sound absorbers are mounted and in proper condition.
- If possible, use sound absorbing material, in order to avoid ringing noise at the work pieces.

Safety Instructions for Prevention of Vibration Hazards

Vibrations can cause disabling damage to the nerves and blood supply of the hands and arms.

- Wear warm clothing and keep your hands warm and dry when working in cold conditions. Exercise hands and fingers regularly.
- Do not hold the machine tool with the free hand.
- Use stands and/or weight balancers, if possible.
- When using a support (e.g. stand) make sure the machine is securely fixed. If no support is used, hold the machine with light but safe grip in order to support the tool's reaction torque. The tighter the grip the greater the risk from vibrations.
- Mount the machine as described in the operating instruction booklet in order to avoid unnecessary high vibrations.
- Stop work immediately, if you feel any numbness, tingling, pain or whitening of fingers or hands. Inform the employer and consult a doctor.

Safety Instructions for Prevention of Dust and Fume Hazards

Wear respiratory protection - Use respiratory protection as instructed by your employer and as required by occupational health and safety regulations. Potentially generated or disturbed dust and fumes in the working environment or from using the machine can cause ill health (e.g. cancer, birth defects, asthma and/ or dermatitis).

- Carry out risk assessment regarding dust and fume hazards and implement appropriate measures.
- Keep the working place clean.
- Keep in mind that working in certain materials may create dust and fumes causing a potentially explosive atmosphere.

Remark: Some types of metal may have toxic coatings.
Please pay particular attention to avoid skin contact and breathing in, when working with those materials.
Always use a protective mask. Ask your material supplier about special safety instructions and stick to them.

Safety Instructions for Prevention of Projectile Hazards

Wear impact-resistant safety goggles (EN 166) – This refers to the operator, as well as to the persons within the vicinity of the machine. Assess and determine the grade of protection required depending on the individual case. The risks to others should also be assessed at this time.

On overhead work, wear a safety helmet (EN 397). If a work piece, accessories, inserted tools, or the tool itself breaks, there is danger from high velocity projectiles.

- Before using the machine check all parts for damages.
- Replace damaged parts immediately.
- When working on brittle material make sure that you are protected against harmful splinters.

Safety Instructions for Prevention of Accessory Hazards

Only use machine tools, accessories and consumables, which are recommended by the manufacturer. Make sure choosing the correct size and the correct type. Only use accessories, which are in proper condition and do not touch them during operation.

WARNING – Injury due to carelessness!

ATTENTION – If the machine is fixed to suspension equipment make sure that it is secure. Never hang the machine onto the supply line.

- Separate the machine from any external energy source before changing the machine tool or an accessory.
- Avoid direct contact with the machine tool during and after use as it can be hot or sharp. Wear protective gloves!

Defective/ inappropriate gloves can lead to injury. Only wear proper hand protection, adapted to the work place requirements.

WARNING – Explosion hazard!
When operating the pneumatic drive unit in areas exposed to explosion hazards, only use accessories, respectively devices, which are ATEX approved and specified. Use low-sparking accessories.

Safety Instructions for Prevention of Transport Hazards

CAUTION – Improper Transport, danger of life due to parts falling down! Damage of the machine!

- Never carry the machine at the supply line.

ATTENTION – Separate the machine from any external energy source before transportation. Check that the machine is undamaged and in proper condition.

Wear worker's protective shoes!

Maintenance and Upkeep

Basic Safety Instructions:
WARNING – Maintenance and repair work on pneumatic equipment.
Compressed air can cause severe injury. Observe legal regulations. Take precautions for persons and environment.

Additionally, observe the following:

- Secure machine against unintentional starting and let the machine cool down to the ambient temperature
- Use suitable transport equipment, hoists or lifting accessories for moving heavy assembly groups or parts. Protection against tipping, tumbling or falling down when assembling/ disassembling the machine/parts.

CAUTION – Skin exposure to hazardous dusts may cause severe dermatitis. Dust present at the work place could be disturbed during the maintenance procedure and inhaled. Clean machine and work place before maintenance work.

WARNING – Danger of explosion! Generation of sparks during maintenance work!

Observe local safety regulations. Avoid use of force when disassembling and assembling the machine. Always do maintenance work outside areas which are not exposed to explosion hazards.

PROHIBITION - Eating, drinking and smoking are forbidden during maintenance and repair work.

NOTICE – Only use original SPITZNAS service tools, in order to avoid damages. Check the adherence to the technical specifications according to the operation manual after each maintenance work. Only use **genuine spare parts**. Otherwise you risk a decrease in machine performance and an increase in maintenance work.

IMPORTANT – There is no warranty for damages and liability is disclaimed, if **non-original spare parts** are used.

Maintenance Instruction
Generally, pneumatic machines need little maintenance. If the following rules are observed, the machine will have the expected long life-time and high reliability. Service life and performance of the machines are decisively determined by:

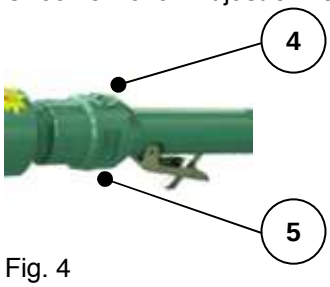
- The air purity
- The lubrication conditions and maintenance
- The **regular control of the compressed air filter**, as well as the **regular checking of the machine with regards to external damages.**

Inspection and maintenance can be done by the operator. Disassembly and re-assembly of the machine have to be executed by qualified staff only. Incorrect assembly can lead to danger of accident for the operator and to defects on the machine. Additionally to the maintenance of the pneumatic drive by means of a maintenance unit, respectively oiling via the air connection, specified before, it is a must to the check the grease in the gear and to refill it, if necessary.
The proper quantity of grease is very important from the point of good lubrication and low heat generation. The grease quantities listened in the following table must be complied with:

Grease	Quantity in grams
In the crank casing	100
In the bevel gears	40
In the spur gears	30
Grease SPITZNAS reference no. 9 9902 0130 (400 g); 9 9902 0250 (100 g)	

Gears being not sufficiently greased wear out faster, loose power and stop functioning after a certain period of time.

Check oil level/ Adjust oil volume



Unscrew locking screw 4.
Refill oil, if necessary.
Connect to compressed air supply.
Adjust oil volume with adjusting screw 5, if necessary
Optimum volume at 2-3 air bubbles.
Close filler hole with locking screw 4.

Fig. 4

After completing maintenance and repair work and before restarting production make sure that…

- All materials, tools and other equipment which are required for maintenance or repairs have been removed from the work area of the machine.
- Any fluid leaks have been removed.
- All safety devices on the machine have proper function.
- The oil level was checked, if necessary.
- Fixtures of screw connections are tight
- Removed container covers, screens or filters were reinstalled

The employer ensures that all maintenance, inspection and assembly work is done by authorized and qualified experts, who have been appropriately informed by thorough study of the operation manual.

Disassembly- Re-assembly

Maintenance and repair
Disassembly and re-assembly should be done according to the exploded views, respectively the sectional drawings (see repair instruction). All work regarding disassembly and re-assembly, as well as maintenance and repair have to be executed by CS Unitec or skilled staff only.

DANGER – Working with the machine without appropriate preparation and disregarding of instructions. Shut down the machine properly and let it cool down to the ambient temperature.

NOTICE – Special instructions apply for the repair of explosion-proof machines.
Retrofits or modifications of the machine can affect the explosion protection. Therefore, retrofits or modifications are allowed upon agreement with the manufacturer only.
The explosion-proof machine is designed in the type of protection „c“ constructive safety. All work executed on the machine, influencing the explosion protection, e. g. repairs with mechanical machining, require an approval of an authorized expert or have to be done by the manufacturer.
The internal structure must remain unmodified.
CS Unitec Service is available for all maintenance, repair and assembly work, as well as for damages.

Storage

Unused machines and machine tools should be kept in a dry, closed room.
Keep them free from damaging influences such as damp, frost or large temperature fluctuations as well as mechanical damage. Always store the machine in a way that important machine instructions, e. g. on stickers and signs, are legible.

Disposal

Dispose worn out/defective machine tools according the local/national regulations. Fully disassemble machine for the necessary disposal. Separate materials according to local environmental specifications. Dispose environmentally hazardous greasing, cooling or cleaning agents in order to avoid environmental contamination.

Environmental Regulations

When working on or with the equipment, it is imperative to observe all legal requirements in regards to waste-disposal and proper recycling.
In particular during installation, repair and maintenance work, water damaging agents, such as

- lubricating grease and oil,
- hydraulic fluid,
- coolant,
- solvent containing cleaning agents

must not leak into the ground or reach the sewage system.
These materials must be stored, transported, contained and disposed of in suitable containers!

Troubleshooting

In case of malfunctions check, if the instructions of this technical documentation are adhered to and make necessary adjustment. The following table shows possible problems and causes:

Problem, cause, remedy

	Problem	**Cause**	**Remedy**
a	Machine does not start	not connected to pneumatic supply	Connecting and opening of the pneumatic line
b	Machine turns too slowly	too low operating pressure	increase operating pressure at the machine to 6 bar
c	Gear makes strong noise		Contact authorized expert company
d	Other trouble		Contact authorized expert company

We ask you to send the machine to the manufacturet, if necessary.

Warranty and Liability

Unless otherwise specified, our „General Sales Terms" apply. Warranty and liability claims in regards to persons or equipment damages are invalid, if one or several of the following causes apply:

- Improper use of the machine.
- Improper assembly, startup, operation or maintenance of the machine.
- Operation of the machine with defect safety devices or improperly fixed or non-functioning safety and protection devices.
- Non-observance of the instructions in the operating instruction booklet concerning transport, storage, assembly, startup, operation, maintenance and setting up of the machine.
- Independent structural alterations or settings on the machine beyond the intended purpose .
- Inadequate supervision of wear parts.
- Improperly carried out repairs, inspections or maintenance
- Catastrophic cases because of a war, acts of god or other reasons which are beyond our control.

Scope of Delivery

Check, if the scope of delivery is complete:

1 Operation and maintenance manual
1 Pneumatic Drive Unit

Declaration of conformity

as defined in the European Union Machine Directive 2006/42/EC and in the EU-ATEX-Directive 2014/34/EU for usable machines

We, the company
SPITZNAS Maschinenfabrik GmbH, Fellerstraße 4, 42555 Velbert–Langenberg,
declare that the following product

Description:	Pneumatic Drive Unit
Model:	**6 1014 0050**

in the version supplied by us, complies with the European Union Machine Directive 2006/42/EC and the EU-Directive 2014/34/EU (ATEX – group I, category M2, c T6).

Applied harmonized norms are:

DIN EN ISO 12100
DIN EN 1127-1
DIN EN 1127-2
DIN EN 13463-1
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According to section 13 (1) b) ii) of the Directive 2014/34/EU the technical documentation is deposited under reference No. 557/Ex-Ab 2240/14 at the following office:

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for the scope of
the Directive 2014/34/EU)

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