D2121

Pistol-grip Drills

Printed Matter No. 9839 0890 01
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Valid from Serial No. A1790001

Product Instructions

D2121 (750 r/min)	8421040521	

⚠ WARNING

Read all safety warnings and instructions

Failure to follow the safety warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference

Atlas Copco

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Product Information

General Information

⚠ WARNING Risk of Property Damage or Severe Injury

Ensure that you read, understand and follow all instructions before operating the tool. Failure to follow all the instructions may result in electric shock, fire, property damage and/or severe bodily injury.

- ► Read all Safety Information delivered together with the different parts of the system.
- ► Read all Product Instructions for installation, operation and maintenance of the different parts of the system.
- ► Read all locally legislated safety regulations regarding the system and parts thereof.
- ► Save all Safety Information and instructions for future reference.

Safety signal words

The safety signal words Danger, Warning, Caution, and Notice have the following meanings:

DANGER	DANGER indicates a hazardous situation which, if not avoided, **will** result in death or serious injury.
WARNING	WARNING indicates a hazardous situation which, if not avoided, **could** result in death or serious injury.
CAUTION	CAUTION, used with the safety alert symbol, indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE	NOTICE is used to address practices not related to personal injury.

Warranty

- Product warranty will expire 12 months after the product is first taken into use, but will in any case expire at the latest 13 months after delivery.
- Normal wear and tear on parts is not included within the warranty.
  - Normal wear and tear is that which requires a part change or other adjustment/overhaul during standard tools maintenance typical for that period (expressed in time, operation hours or otherwise).
- The product warranty relies on the correct use, maintenance, and repair of the tool and its component parts.
- Damage to parts that occurs as a result of inadequate maintenance or performed by parties other than Atlas Copco or their Certified Service Partners during the warranty period is not covered by the warranty.
- To avoid damage or destruction of tool parts, service the tool according to the recommended maintenance schedules and follow the correct instructions.
- Warranty repairs are only performed in Atlas Copco workshops or by Certified Service Partners.

Atlas Copco offers extended warranty and state of the art preventive maintenance through its ToolCover contracts. For further information contact your local Service representative.

For electrical motors:

- Warranty will only apply when the electric motor has not been opened.

Website

Information concerning our Products, Accessories, Spare Parts and Published Matters can be found on the Atlas Copco website.

Please visit: www.atlascopco.com.

ServAid

ServAid is a portal that is continuously updated and contains Technical Information, such as:

- Regulatory and Safety Information
- Technical Data
- Installation, Operation and Service Instructions
- Spare Parts Lists
- Accessories
- Dimensional Drawings

Please visit: https://servaid.atlascopco.com.

For further Technical Information, please contact your local Atlas Copco representative.

Safety Data Sheets MSDS/SDS

The Safety Data Sheets describe the chemical products sold by Atlas Copco.

Please consult the Atlas Copco website for more information www.atlascopco.com/sds.

Installation of Vibrating Tools

We recommend using a minimum length of 300 mm (12") of flexible hose for compressed air between a vibrating tool and the quick-action coupling.

Country of Origin

For the Country of Origin, please refer to the information on the product label.

Dimensional Drawings

Dimensions Drawings can be found either in the Dimensional Drawings Archive, or on ServAid.

Please visit: http://webbox.atlascopco.com/webbox/dimdrw or https://servaid.atlascopco.com.

Overview

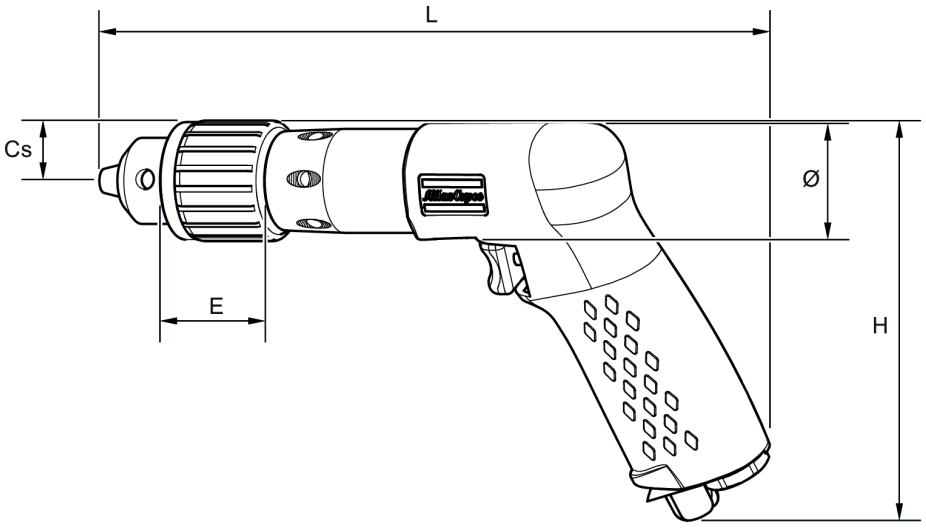
Applications

This is a drill used for all applications and industry segments.

Technical data

Ordering No	8421040521
Model	D2121
Free speed	750 r/min
Chuck capacity (if included)	2-13 mm
Power level	350 W hp
Stall torque	Nm in lb
Weight	1.4 kg lb
Air consumption at free speed	10 l/s cfm

Recommended hose size	10 mm in
Air inlet thread (NPT)	1/4 in
Air inlet thread (BSP)	- in
Maximum working pressure	- bar - psig
Sound pressure	87 dB(A)
Sound standard	ISO15744
Sound uncertainty	3 dB(A)
Vibration standard	ISO28927-5
Vibration value	2.5 m/s^2
Height (H)	mm in
Length (L)	248 mm in



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Technical Product Data

Technical Product Data can be found on either ServAid, or the Atlas Copco website.
Please visit: https://servaid.atlascopco.com or www.atlascopco.com.

Service Overview

Maintenance and service instructions

The service must only be done by authorized workshops or qualified service technicians.

⚠ WARNING Polymer hazard

The vanes in this product contain PTFE (a synthetic fluoropolymer). Due to wear, there might be PTFE particles inside the product. Heated PTFE can produce fumes which may cause polymer fume fever with flu-like symptoms, especially when smoking contaminated tobacco.

Health and Safety recommendations for PTFE must be followed when handling vanes and other components:

- ► Do not smoke when servicing this product
- ► PTFE-particles must not come in contact with open fire, glow or heat
- ► Motor components must be washed with cleaning fluid and not blown clear with an air line
- ► Wash your hands before starting any other activity

Service recommendations

Preventive maintenance is recommended at regular intervals. See the detailed information on preventive maintenance. If the product is not working properly, take it out of service and inspect it.

If no detailed information about preventive maintenance is included, follow these general guidelines:

- Clean appropriate parts accurately
- Replace any defective or worn parts

Preventive maintenance

Make sure to perform a preventive maintenance every 6 months. If it is used in heavy duty conditions or not running properly, it should be removed from operation for inspection more often.

Installation

Installation Requirements

Air Quality

- For optimum performance and maximum product life we recommend the use of compressed air with a maximum dew point of +10°C (50°F). We also recommend to install an Atlas Copco refrigeration type air dryer.
- Use a separate air filter which removes solid particles larger than 30 microns and more than 90% of liquid water. Install the filter as close as possible to the product and prior to any other air preparation units to avoid pressure drop.

For impulse/impact tools make sure to use lubricators adjusted for these tools. Regular lubricators will add too much oil and therefore decrease the tool performance due to too much oil in the motor.

Make sure that the hose and couplings are clean and free from dust before connecting to the tool.

Both lubricated and lubrication free products will benefit from a small quantity of oil supplied from a lubricator.

Air Lubrication Guide

Brand	Air lubrication
Atlas Copco	Optimizer (1 liter) 9090 0000 04
Q8	Chopin 46
Shell	Shell Air Tool Oil S2 A 320

Compressed Air Connection

⚠ WARNING Risk of severe injury

Air under pressure can cause injury.

- ► Always shut off the air supply when not in use or before any adjustments.
- ► Drain the hose of air pressure and disconnect the tool from air supply when not in use or before any adjustments.
- ► Always use the correct hose size and air pressure for the tool.

⚠ WARNING Compressed Air

High air pressure can cause severe damage and bodily injury.

- ► Do not exceed maximum air pressure.
- ► Make sure that there are no damaged or loose hoses or fittings.

For correct air pressure and hose size, see the Technical Product Data on - https://servaid.atlascopco.com or www.atlascopco.com.

Make sure that the hose and couplings are clean and free from dust before connecting to the tool.

Installation Instructions

Installation of Vibrating Tools

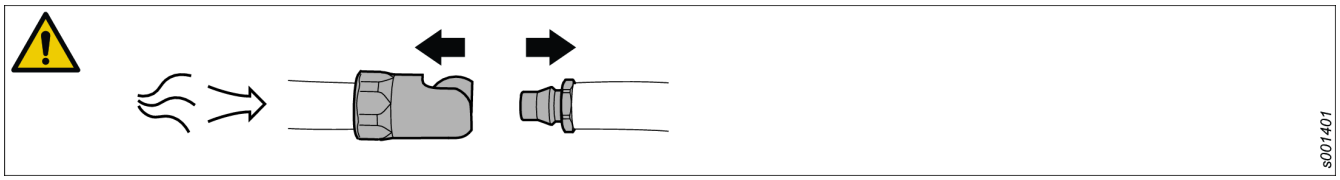
We recommend using a minimum length of 300 mm (12") of flexible hose for compressed air between a vibrating tool and the quick-action coupling.

Installing the drill

⚠ WARNING Risk of severe injury

Air under pressure can cause injury.

- ► Always shut off the air supply when not in use or before any adjustments.
- ► Drain the hose of air pressure and disconnect the tool from air supply when not in use or before any adjustments.
- ► Always use the correct hose size and air pressure for the tool.



⚠ WARNING Always wear impact-resistant eye and face protection when involved with or near the operation, repair or maintenance of the tool or when changing accessories on the tool.

⚠ CAUTION Cutting Hazard

Protect hands from drill bits and other sharp objects when changing accessories or during repair work. Sharp objects can cut and cause injuries.

- ► Always wear protective gloves when changing accessories or during repair work.
- ► Remove the protective gloves before starting the tool.

1. Position the support handle for either right- or left handed operation.
2. Drain the hose of air pressure before connecting to air supply.
3. Tighten the drill bit in place with a chuck. A keyed chuck uses a rotary key to tighten and loosen the chuck. A keyless chuck is operated by hand.

   Never drill a hole that is larger than the rated capacity for the drill.

   The motor requires no additional lubrication during operation.
4. Connect the tool to the air supply.
5. Use the appropriate drilling speed for the application.
6. To start the tool, press the trigger.

   When lubrication is recommended - only use lubricants recommended by Atlas Copco.

Operation

Ergonomic guidelines

Consider your workstation as you read through this list of general ergonomic guidelines and see if you can identify areas for improvement in posture, component placement, or work environment.

- Take frequent breaks and change work positions frequently.
- Adapt the workstation area to your needs and the work task.
  - Adjust for convenient reach range by determining where parts or tools should be located to avoid static load.
  - Use workstation equipment such as tables and chairs appropriate for the work task.
- Avoid work positions above shoulder level or with static holding during assembly operations.
  - When working above shoulder level, reduce the load on the static muscles by reducing the weight of the tool, using for example torque arms, hose reels or weight balancers. You can also reduce the load on the static muscles by holding the tool close to the body.
  - Make sure to take frequent breaks.
  - Avoid extreme arm or wrist postures, particularly for operations requiring a degree of force.
- Adjust for convenient field of vision by minimizing movement of the eyes and head during the work task.
- Use the appropriate lighting for the work task.
- Select the appropriate tool for the work task.
- Use ear protection equipment in noisy environments.
- Use high-quality inserted tools or consumables to minimize exposure to excessive levels of vibration.
- Minimize exposure to reaction forces.
  - When cutting:

    A cut-off wheel can get stuck if the wheel is either bent or if it is not guided properly. Make sure to use the correct flanges for cut-off wheels and avoid bending the wheel during cut-off operation.
  - When drilling:

    The drill might stall when the drill bit breaks through. Makes sure you use support handles if the stall torque is too high. The safety standard ISO11148 part 3 recommends using something to absorb the reaction torque above 10 Nm for pistol grip tools and 4 Nm for straight tools.
  - When using direct-driven screw or nutrunners:

    Reaction forces depend on tool setting and joint characteristics. The ability to bear reaction forces depends on the operator’s strength and posture. Adapt the torque setting to the operator's strength and posture and use a torque arm or reaction bar if the torque is too high.
- Use dust extraction system or mouth protection mask in dusty environments.

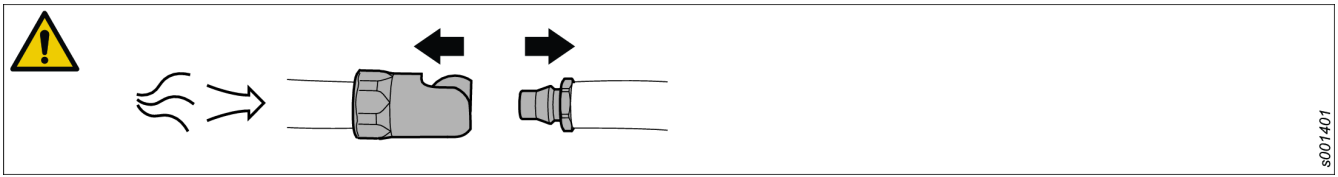
Operating Instructions

Operating the drill

⚠ **WARNING Risk of severe injury**

Air under pressure can cause injury.

- ► Always shut off the air supply when not in use or before any adjustments.
- ► Drain the hose of air pressure and disconnect the tool from air supply when not in use or before any adjustments.
- ► Always use the correct hose size and air pressure for the tool.



⚠ WARNING Risk of Severe Injury

Never operate the tool wearing loose objects. Choking, scalping or other severe bodily injuries can occur if loose clothing, jewellery, neck ware and hair is not kept away from tool or accessories.

- ► Never wear gloves when operating the tool.
- ► Keep loose clothing, jewellery, neck ware and hair away from rotating drive or accessories.

⚠ WARNING Always wear impact-resistant eye and face protection when involved with or near the operation, repair or maintenance of the tool or when changing accessories on the tool.

1. Use the approriate drill for the application.
2. Tighten the drill bit in place with a chuck. A keyed chuck uses a rotary key to tighten and loosen the chuck. A keyless chuck is operated by hand.

   ⚠ WARNING Risk of Injury

   The drill bit must fit tightly in the chuck before starting the drill. A drill bit that does not fit properly into the chuck may come loose and cause bodily injury.

   - ► Check that the drill bit fits tightly in the chuck before starting the drill.
3. Remove the rotary key before starting the tool.
4. Make sure the workpiece is securely fixed.
5. Always have a firm footing when drilling. Brace and position yourself carefully when drilling.
6. Always make sure there are no electrical wires or water lines behind the surface you are drilling into.

   ℹ Never drill a hole that is larger than the rated capacity for the drill.
7. Use the appropriate drilling speed for the application.
8. Start the tool by pressing the trigger.
9. Do not force the drill. If the drill slows down, change to a drill with more power, so that the drill bit can continue cutting smoothly.
10. If the drill gets caught in the material, release the trigger immediately, unplug the drill and remove the bit from the material.

ℹ When lubrication is recommended - only use lubricants recommended by Atlas Copco.

Service

Maintenance Instructions

Maintenance and service instructions

The service must only be done by authorized workshops or qualified service technicians.

⚠ WARNING Polymer hazard

The vanes in this product contain PTFE (a synthetic fluoropolymer). Due to wear, there might be PTFE particles inside the product. Heated PTFE can produce fumes which may cause polymer fume fever with flu-like symptoms, especially when smoking contaminated tobacco.

Health and Safety recommendations for PTFE must be followed when handling vanes and other components:

- ► Do not smoke when servicing this product
- ► PTFE-particles must not come in contact with open fire, glow or heat
- ► Motor components must be washed with cleaning fluid and not blown clear with an air line
- ► Wash your hands before starting any other activity

Preparations for service and maintenance

⚠ WARNING Risk of severe injury

Air under pressure can cause injury.

- ► Always shut off the air supply when not in use or before any adjustments.
- ► Drain the hose of air pressure and disconnect the tool from air supply when not in use or before any adjustments.
- ► Always use the correct hose size and air pressure for the tool.

⚠ CAUTION Cutting Hazard

Protect hands from drill bits and other sharp objects when changing accessories or during repair work. Sharp objects can cut and cause injuries.

- ► Always wear protective gloves when changing accessories or during repair work.
- ► Remove the protective gloves before starting the tool.

Service recommendations

Preventive maintenance is recommended at regular intervals. See the detailed information on preventive maintenance. If the product is not working properly, take it out of service and inspect it.

If no detailed information about preventive maintenance is included, follow these general guidelines:

- Clean appropriate parts accurately
- Replace any defective or worn parts

Preventive maintenance

Make sure to perform a preventive maintenance every 6 months. If it is used in heavy duty conditions or not running properly, it should be removed from operation for inspection more often.

Lubrication Instructions

Rust protection and cleaning

Water in the compressed air can cause rust. To prevent rust we strongly recommend to install an air dryer.

Water and particles can cause sticking of vanes and valves. This can be prevented by installing an air filter close to the product to avoid pressure drop.

Before longer standstills always protect your tool by adding a few drops of oil into the air inlet. Run the tool for 5–10 seconds and absorb any access oil at the air outlet in a cloth.

NOTICE Do not try to clear the air path using sharp tools.
The air inlet is equipped with a strainer. If this is punctured, foreign objects may harm the valves, resulting in overspeed.

Lubrication guide

Brand	General purpose, Bearings and Gears*
BP	Energrease LS-EP2
Castrol	OBEEn UF 1
Esso	Beacon EP2
Q8	Rembrandt EP2
Mobil	Mobilegrease XHP 222 NLG 2
Klüber Lub.	Klübersynth UH 1 14-151
Texaco	Multifak EP2
Molykote	BR2 Plus

* Not for angle gears.

Brand	Angle gears
Molykote	Longterm 2 Plus

Maintenance and lubrication

The throttle valve, planetary gears, needle bearings and ball bearings must be lubricated with grease when the tool is dismantled at the regular maintenance. Molycote BR2 Plus gives long intervals between lubrications.

1. Dismantle the motor, see the Dismantling and assembly section.
2. Clean the motor parts and apply a thin layer of air lubrication oil onto the vanes and inner surface of cylinder and end plates.
3. Assemble the motor and make sure that it is running free. Add two drops of oil through the air inlet and run the motor at idling speed for 5-10 seconds.

The strainer in the adapter should be cleaned regularly to prevent choking which will lead to a loss in capacity.

Dismantling/Assembling Instructions

Instructions for vane motor

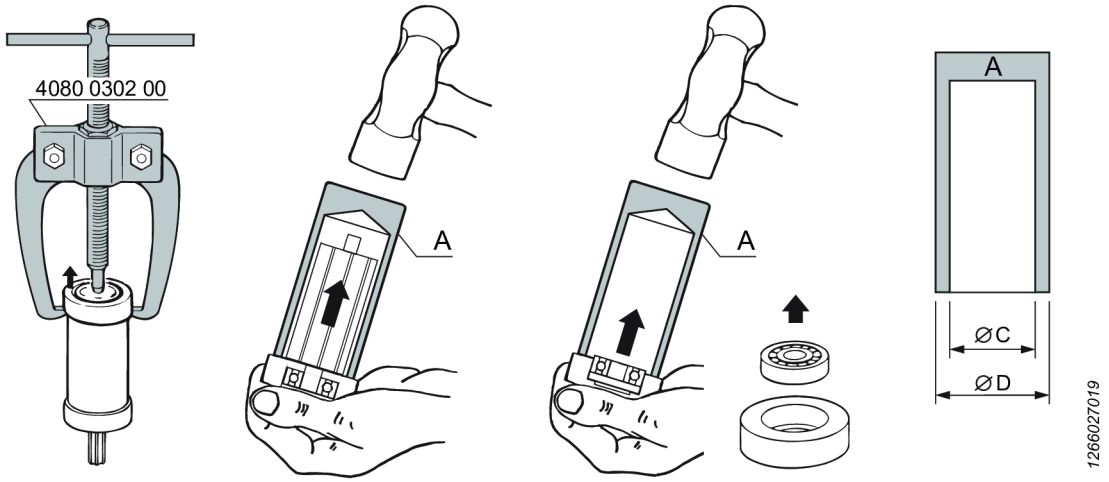
⚠ WARNING Polymer hazard

The vanes in this product contain PTFE (a synthetic fluoropolymer). Due to wear, there might be PTFE particles inside the product. Heated PTFE can produce fumes which may cause polymer fume fever with flu-like symptoms, especially when smoking contaminated tobacco.

Health and Safety recommendations for PTFE must be followed when handling vanes and other components:

- ► Do not smoke when servicing this product
- ► PTFE-particles must not come in contact with open fire, glow or heat
- ► Motor components must be washed with cleaning fluid and not blown clear with an air line
- ► Wash your hands before starting any other activity

Dismantling

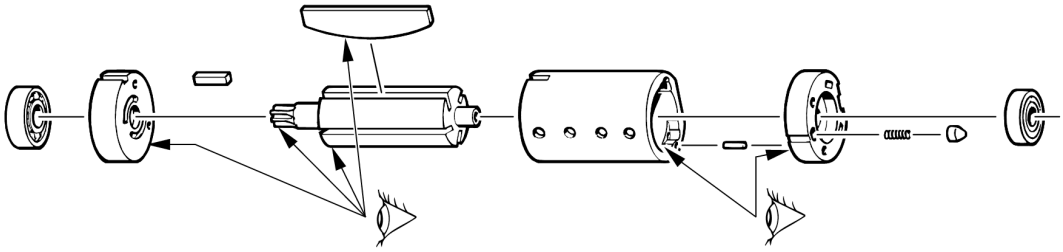


Service tools are also included in the **Basic Service Tools** set. For further information see ordering No. 9835 5485 00

Dismantling tool Mandrel A

Ordering No.	Ø D	Ø C
4080 0182 01	7	3.5
4080 0182 02	8	4.5
4080 0182 03	9	5.5
4080 0182 04	10	6.5
4080 0182 05	13	8.5
4080 0182 06	16	10.5
4080 0182 07	19	12.5
4080 0182 08	22	15.5
4080 0182 09	24	17.5
4080 0182 10	26	20.5
4080 0182 11	30	25.5
4080 0182 12	35	30.5
4080 0182 13	40	35.5
4080 0182 14	47	40.5

Inspection of motor parts



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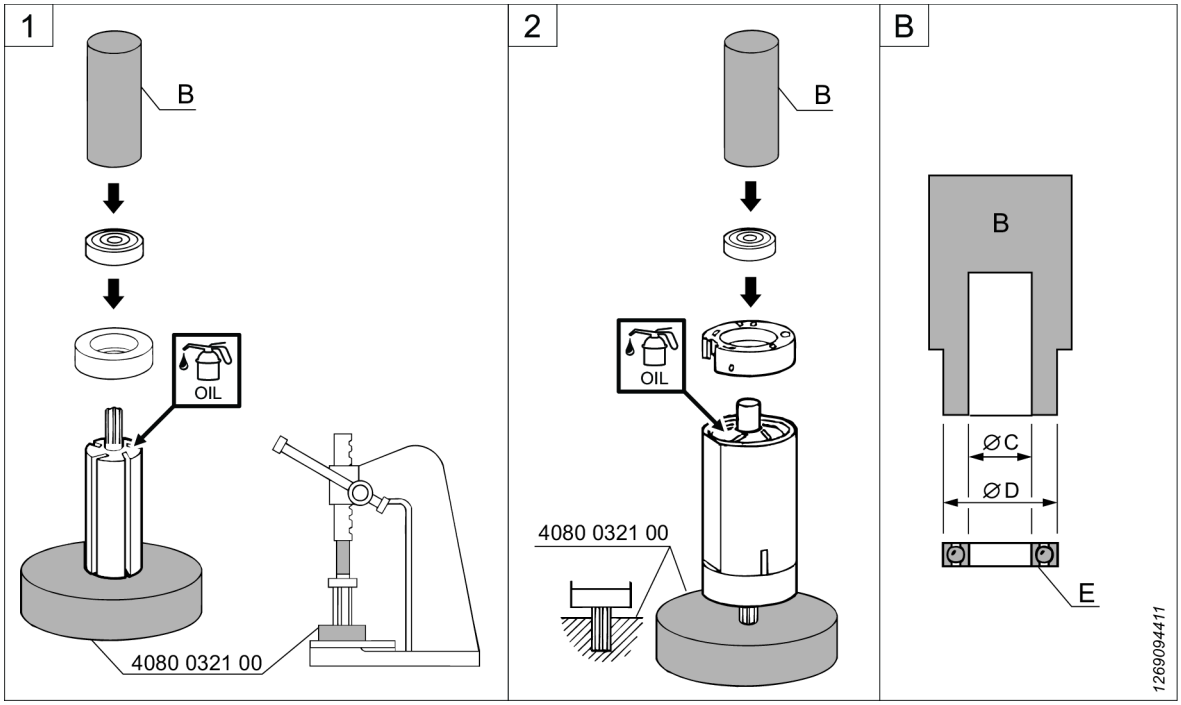
Assembling - According to Bäckströms method



E: Ball bearing

Service tools are also included in the **Basic Service Tools** set. For further information see ordering No. 9835 5485 00

Dismantling tool Mandrel B

Ordering No.	Ø D	Ø C
4080 0567 04	12.5	5.2
4080 0567 11	14.5	6.5
4080 0567 01	15.5	5.2
4080 0567 05	18.5	6.2
4080 0567 02	18.5	8.2
4080 0567 06	21.5	7.5
4080 0567 03	21.5	8.2
4080 0567 07	25.5	10.5
4080 0567 08	27.5	12.5
4080 0567 09	31.5	15.5
4080 0567 10	34.5	18.5

Troubleshooting

Troubleshooting

The table describes the most common problems, possible reasons and how to fix them. Note that some actions must be carried out by authorized workshops or qualified service technicians.

Problem	Possible reason	Action
Free speed is too slow, pressure never reaches the target.	Too low air flow in the pressurized air system.	Shorter hose to the FRL unit and/or larger diameter is needed. See Installation proposal for more information.
The tool has been in contact with water.	The pressurized air system contains condensed water.	See Service recommendations for specific environments.
The tool does not start.	No air flow to the tool.	Make sure that the air connection is correctly set.
	Motor jammed.	*
Inconsistent idling speed.	Unstable air pressure.	Make sure that the air pressure regulator is working correctly.
	Worn governor (LBB45).	*
Low power	Low air pressure.	Make sure that the air pressure is correctly set.
	Wrong lenght or dimension of air supply hose.	Make sure that the air connection is correctly set.
	Blocked filters.	Clean or change the corse and fine filter
	The humidity in the air is high.	Make sure that the compressor is working correctly.
	Too much grease in the gear box.	Make sure that the amount of grease is correct.
	Worn throttle valve	*
	Worn vanes/motor?	*
	Worn governor (LBB45)	*
Tool starts unexpectedly	Damaged throttle valve	*
	Valve pin jammed in start position.	Change pin and guide
Vibrations	Worn or damage drill bit.	Change drill bit
The motor housing istoo hot.	Too much grease in the gear box.	Make sure that the amount of grease is correct.
Abnormal sound	Not enough grease in gear housing.	Make sure that the amount of grease is correct.
	Damaged gear.	*
	Worn motor bearings.	*

*) This service must only be carried out by authorized workshop or qualified service technician.

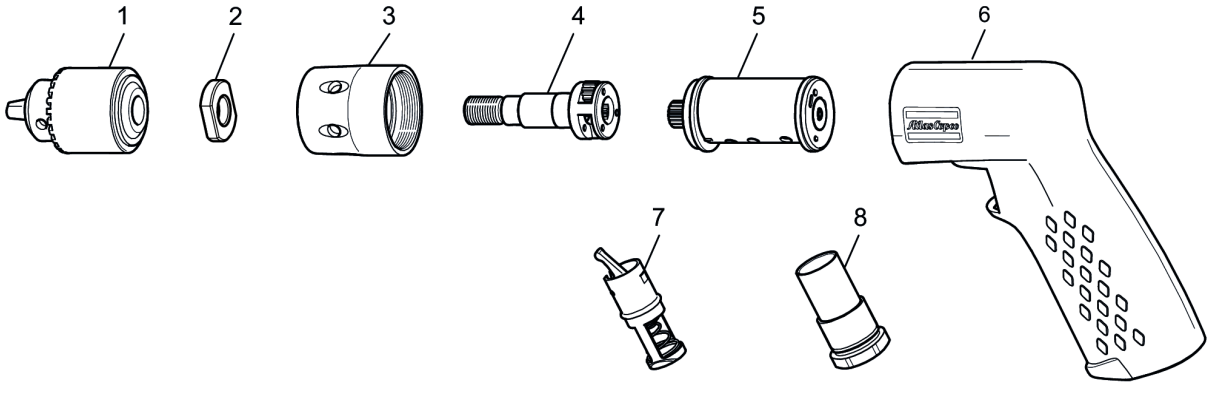
Recycling

Environmental Regulations

When a product has served its purpose it has to be recycled properly. Dismantle the product and recycle the components in accordance with local legislation.

Batteries shall be taken care of by your national battery recovery organization.

Recycling information



	Part:	Recycle as:
1	Chuck	Metal, Steel
2	Spacer ring	Metal, Steel
3	Front part	Metal, Aluminum
4	Spindle with gear	Metal, Steel
5	Vane motor	Metal, Steel*
6	Handle	Metal, Aluminum
7	Valve	Plastics, Other, POM
8	Adapter and adjacent parts	Metal, Steel

*The rotor blades (vanes) in the tool contains PTFE, the normal health and safety recommendations concerning PTFE must be observed.

Original instructions

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