

# LSF19 S300-1

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Die grinder


Valid from Serial No. A0440001

## Product Instructions

LSF19 S300-1  
(30000 rpm)

8423122481



	<b>⚠ WARNING</b>
	<p><b>Read all safety warnings and instructions</b></p> <p>Failure to follow the safety warnings and instructions may result in electric shock, fire and/or serious injury.</p> <p><b>Save all warnings and instructions for future reference</b></p>

**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, <b>will</b> result in death or serious injury.
WARNING	WARNING indicates a hazardous situation which, if not avoided, <b>could</b> 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+1 months after dispatch from Atlas Copco's Distribution Center.
- 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](http://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](http://www.atlascopco.com/sds).

## Product Safety Video for Grinders

Learn more about safety features on Atlas Copco grinders and what measures the operator has to take for a safe operation. Click the link or scan the QR code below to view the video:

[https://www.youtube.com/watch?v=XK\\_dHwli8-Q](https://www.youtube.com/watch?v=XK_dHwli8-Q)



## PTFE

### **⚠ 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

## Country of Origin

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

## Dimensional Drawings

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

Please visit: <http://webbox.atlascopco.com/webbox/dimdraw> or <https://servaid.atlascopco.com>.

## Overview

### Design and Function

This die grinder is intended for mounted wheels and rotary burrs only. This model is lubricated. The machine, its attachments and accessories must only be used for the purpose for which they were designated, all other use is prohibited.

- Never use grinding wheels attached with an adapter as this machine is not fitted with a wheel guard
- Never attach circular saw blades or other cutters than the abrasive wheels or brushes specified for the tool

### 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](http://www.atlascopco.com).

# 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.
- i** 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.
- i** Make sure that the hose and couplings are clean and free from dust before connecting to the tool.
- i** Both lubricated and lubrication free products will benefit from a small quantity of oil supplied from a lubricator.

### Air Lubrication Guide

#### Recommended air lubricators:

- Atlas Copco Optimizer (1 liter) 9090 0000 04
- Q8 Chopin 46
- 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](http://www.atlascopco.com).

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

## Installation Instructions

### Visual Inspection - Tools and Accessories

Inspect the tool and its parts visually before use.

- Collet holder.
- Throttle lever.

- Lever catch.

Look for any damages or oil leakage that can compromise the safety of the tool.

## Operation

### ***Ergonomic Guidelines***

Consider your workstation as you read through this list of general ergonomic guidelines to 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 a convenient reach range by determining where parts and tools need to 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 lowering 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.
  - Take frequent breaks.
  - Avoid extreme arm or wrist postures, particularly during operations requiring a degree of force.
- Adjust for a convenient field of vision that requires minimal eye and head movements.
- Use appropriate lighting for the work task.
- Select the appropriate tool for the work task.
- In noisy environments, use ear protection equipment.
- Use high-quality inserted tools and 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 cut-off wheel is bent or not guided properly. Use the correct flange for the cut-off wheel and avoid bending the cut-off wheel during operation.
  - When drilling:

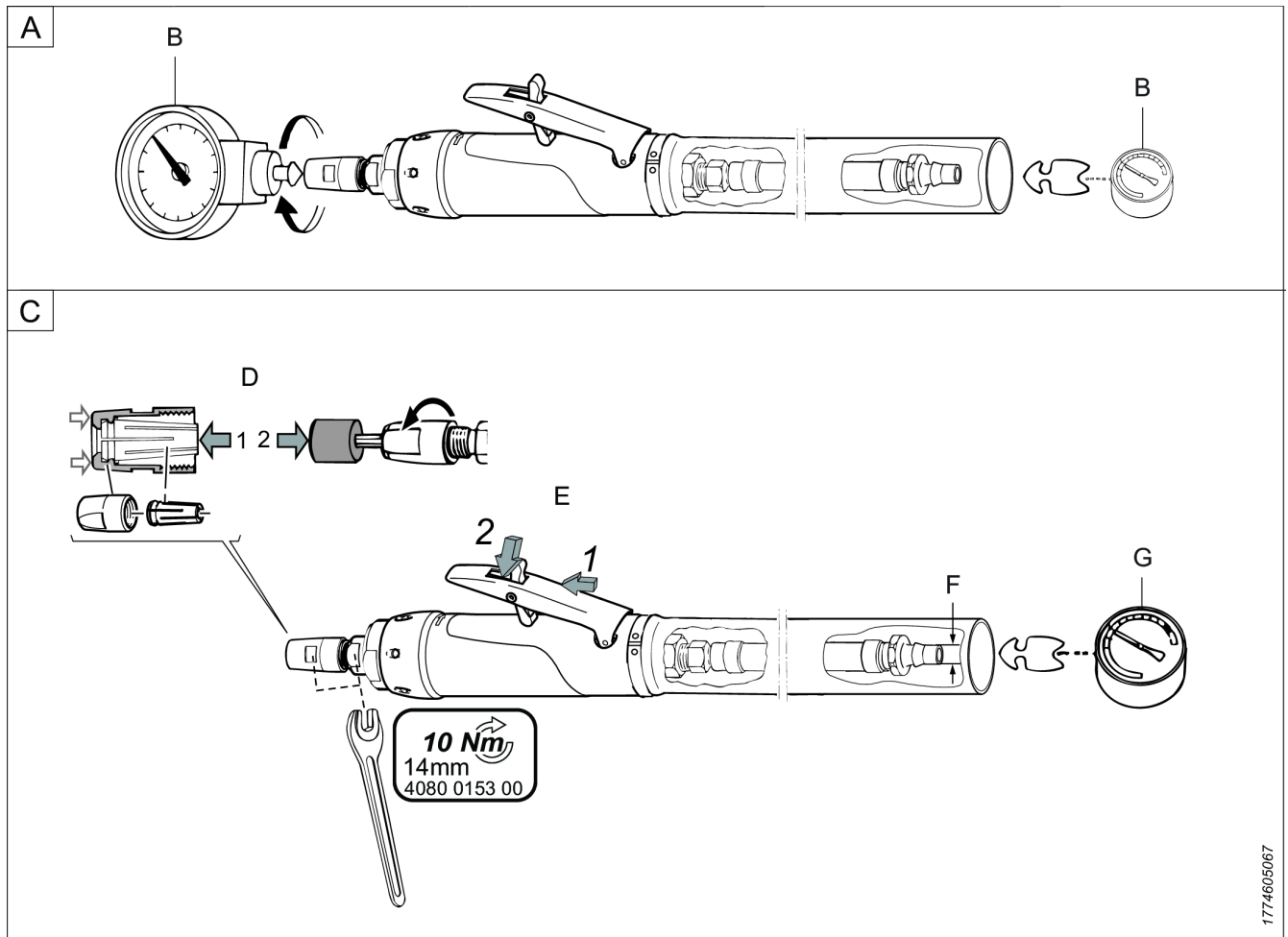
The drill might stall when the drill bit breaks through. Use support handles if the stall torque is high. The safety standard ISO11148 part 3 recommends using a device to absorb a reaction torque above 10 Nm for pistol grip tools and 4 Nm for straight tools.
  - When using direct-driven screwdrivers or nutrunners:

Reaction forces depend on the tool settings and joint characteristics. Strength and posture determine the amount of reaction force that an operator can tolerate. 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.
- In dusty environments, use a dust extraction system or wear a mouth protection mask.



## Operating Instructions

### Tool operation overview



A	Free speed check
B	Maximum speed at 6.3 bar 90 psig 30000 r/m rpm
C	Operation instructions
D	Attach collet (1) and shank (2)
E	Press safety catch forward (1) and press trigger to start (2)
F	Air hose size: 13 mm (1/2 ")
G	Maximum air pressure: - 6.3 bar (- 90 psig)

### Setting-up instructions

#### **⚠ WARNING Risk of Serious Injury or Death**

Overspeed can cause serious injury or death!

- ▶ Do not manipulate the speed of the tool.
- ▶ Do not override the maximum speed marked on the tool.

Testing of the die grinder should only be done by professional technicians. The technicians must be authorized to test this type of tool and to operate a pneumatic system in accordance with national directives.

- Do a free speed check of the tool every day and whenever the tool has been serviced. Do the free speed check with the grinding equipment removed.
- Use a pressure regulator to prevent a too high air pressure which can cause overspeed.

- Make sure that connections and the air hose are in good condition.

### **Throttle Lever with Safety Trigger**

The purpose of a throttle lever with safety trigger is to avoid unintentional start of the tool.

- ❗ Flip the safety trigger to lock/unlock the safety function. Always put the throttle lever in locked position before putting away the tool.
- Make sure that the safety trigger works correctly.
- Replace the throttle lever if it does not work correctly.
- Never remove the safety trigger or lock it with tape.

## Service

### ***Maintenance Instructions***

#### **General Service and Maintenance Safety**

Do not dismantle the tool.

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

**⚠ 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.

#### **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

#### **Replacement of Vanes**

Replace the vanes in the motor when a power drop of the tool is experienced. If the vanes are not replaced in time other motor parts may be damaged. For increased life length of the vanes use an oil lubricator to dose oil into the air inlet.

### ***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 excess 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**

**For flexible spindle extension** – When fitting the extended spindle – apply 0.5 cm<sup>3</sup> (0.03 cu in) of grease type “Lubricating Engineers LE3752” (or EP grease) at the bottom of the hole in the collet holder.

## Lubrication Guide

Use lubricants of good quality. The oils and greases listed in the lubrication table are examples of lubricants that can be recommended.

Brand	General purpose Bearings
BP	Energrease LS-EP2
Castrol	Spheerol EP L2
Esso	Beacon EP2
Q8	Rembrandt EP2
Mobil	Mobilegrease XHP 222
Shell	Alvania EP2
Texaco	Multifak EP2
Molycote	BR2 Plus

## Dismantling/Assembling Instructions

### Instructions for Vane Motors

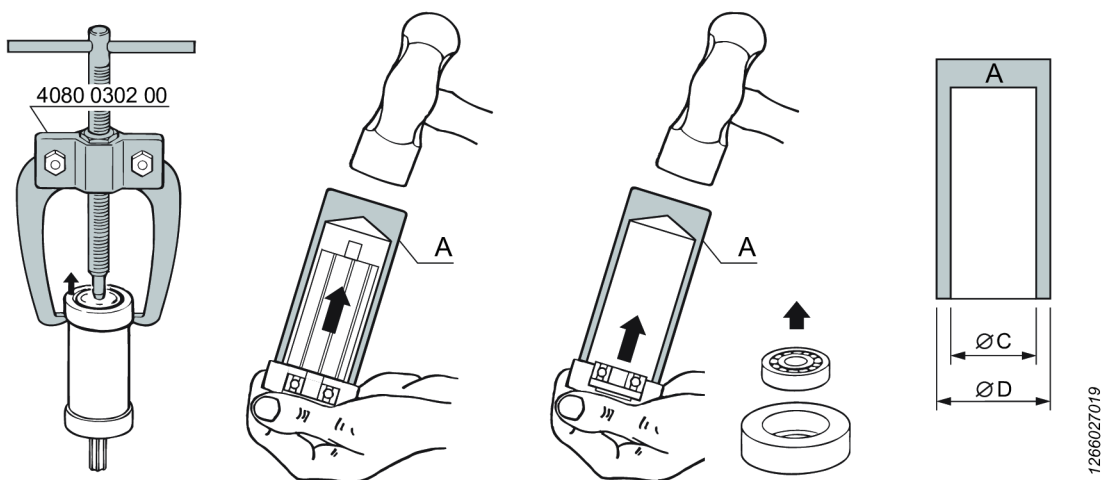
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- ▶ Wash your hands before starting any other activity

### Dismantling

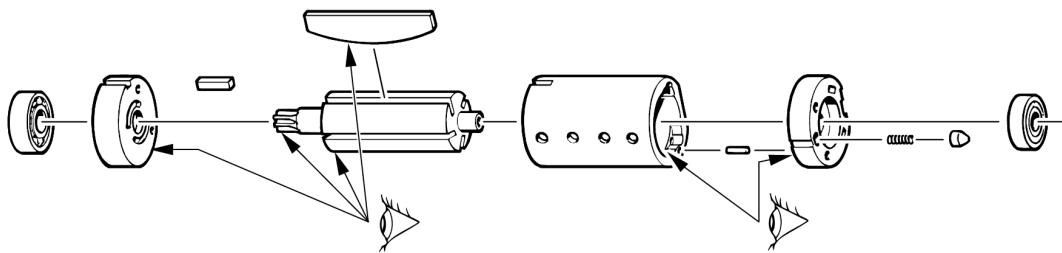


Service tools are also included in the **Basic Service Tools** set. For further information see ordering No. 9835 5485 00

**Dismantling tool Mandrel A**

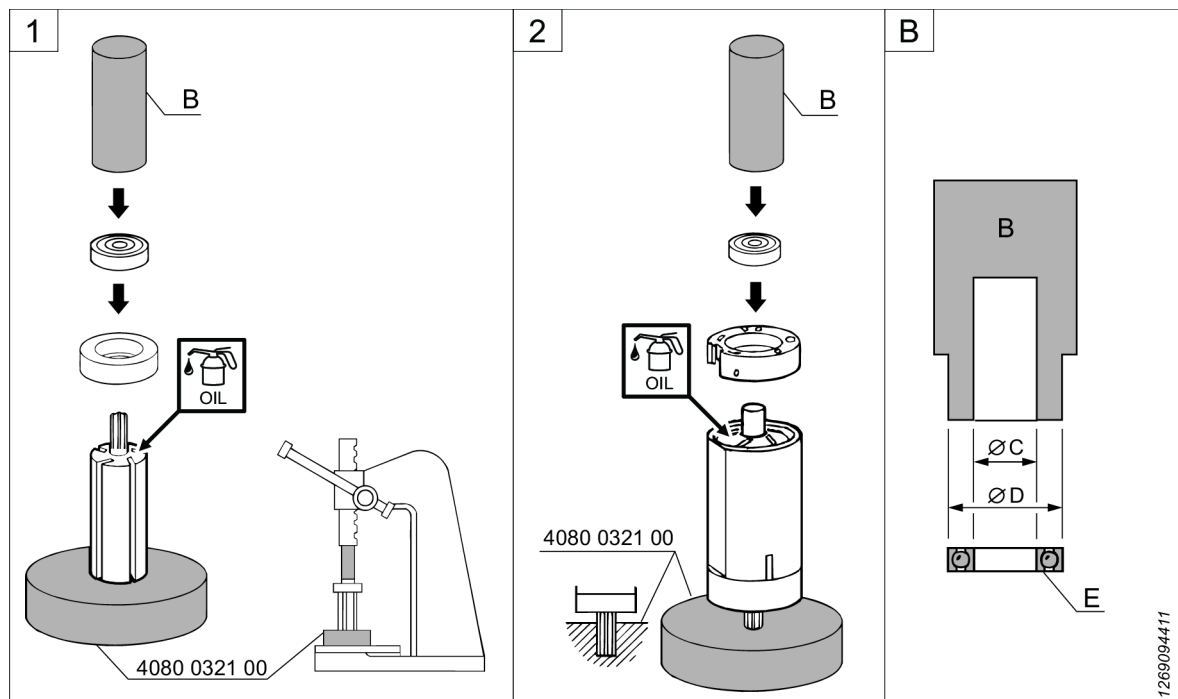
Ordering No.	Ø D	Ø C
4080 0182 01	7	3.5
4080 0182 02	8	4.5
4080 0182 03	9	5.5
4080 0182 04	10	6.5
4080 0182 05	13	8.5
4080 0182 06	16	10.5
4080 0182 07	19	12.5
4080 0182 08	22	15.5
4080 0182 09	24	17.5
4080 0182 10	26	20.5
4080 0182 11	30	25.5
4080 0182 12	35	30.5
4080 0182 13	40	35.5
4080 0182 14	47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

**Inspection of motor parts**



1269090315

**Assembling**



1269094411

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

## 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.

Original instructions



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