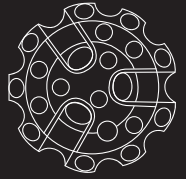


STRATUM
DRILLING SOLUTIONS



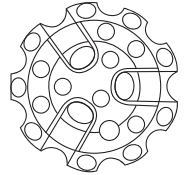
Stratum Drilling Solutions Ltd
DTH Hammer Drilling Products

SDS16 LUBRICATOR UNIT

OPERATORS INSTRUCTIONS / AND SPARE PARTS LIST



STRATUMDRILLINGSOLUTIONS.COM
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SDS16 LUBRICATOR UNIT

DIMENSIONS: 78cm x 54cm x 41cm WEIGHT: 45kg

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Subject to alteration without prior notice.

Stratum Drilling Solutions Ltd Scotland

SAFETY REGULATIONS

Before starting, read these instructions carefully

Important safety information is given at various points in these instructions.

Special attention must be paid to the safety information contained in frames and accompanied by a warning symbol (triangle) and a signal word.

DANGER

Indicates immediate hazards which WILL result in serious or fatal injury.

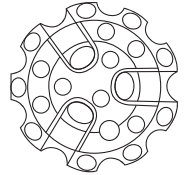
WARNING

Indicates immediate hazards or hazardous procedures which COULD result in serious or fatal injury if the warning is not observed.

CAUTION

Indicates immediate hazards or hazardous procedures which COULD result injury or damage to equipment if the warning is not observed.

Read through the operator's instructions for both the DTH hammer and the DTH oil lubrication assembly thoroughly before putting the DTH oil lubrication assembly into service. Always follow the advice given in the instructions.



DTH oil lubrication assembly air powered injection pump should ONLY be operated and maintained by a qualified, experienced and competent person.

The following general safety rules must also be observed:

- Always check that hoses, hose connections and valve connections are properly tightened and secured, and that they are not damaged. Hoses that come loose can cause serious injury.
- Local regulations concerning air hoses and connections must always be strictly observed.
- The machine must not be used for purposes other than those described by Stratum Drilling Solutions Ltd
- See "Application" section.

Application

Stratum Drilling Solutions DTH oil lubrication assemblies are designed for use with all DTH hammer applications. It is designed to be fitted In-Line with the air supply to the rig from single compressors or multi-unit air packages with air manifolds.

Description

The injection unit comprises of five main components:

1. A pneumatic piston pump assembly
2. Frame
3. A 3" inlet/ outlet manifold
4. Lockable Ball Valve
5. Oil reservoir Tank

The unit is bolted together and if required can easily be detached and mounted separately or placed on the ground. If this is the case the hoses to and from the manifold will have to be tightened to suit the application.

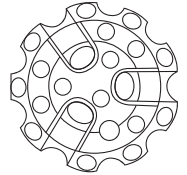


The Pump

The unit is a reciprocating piston pump powered by compressed air. It consists of a pneumatic piston and hydraulic ram, which is linked to a four way air valve, which causes the pump to reciprocate. Inlet and outlet non return valves fitted to the hydraulic cylinder turn the displacement of the ram into a pumping action. The area of the piston is greater than that of the ram and this difference in area is the pump ratio.

Oil Reservoir Tank

The oil reservoir tank has a capacity of 55 litres and is non-pressurised. This means it can be filled at any point during the drilling process.



CAUTION

Air Supply - It is very important that there are **NO** restrictions in the air supply to the Hammer so the required air volume can be delivered.

Please ask us if in doubt!

Operating Instructions

Priming the pump:

Fill the tank with a recommended DTH Hammer Oil. See "Recommended lubricants".

Calibrating the pump:

1. Switch on the air to the hammer and ensure the pump is operating.
2. Adjust the Air Flow Regulator (A) knob to get the required cycles per min. (See the chart provided)
3. Lock off the Air flow Regulator knob.
4. Before drilling commences ensure that there are signs of oil at the hammer or within the drill string.

CAUTION

First time use. When first using the DTH oil lubrication assembly please insure that the DTH hammer is **NOT** attached until the system has been blown through. This pump will need to be primed before use.

DANGER

ALWAYS check that hoses, hose connections and valve connections are properly tightened and secured, and that they are not damaged. Hoses that come loose can cause serious injury.

CAUTION

Non use of Main ball valve. If the main ball valve on the inlet to the unit is **NOT** used to control the main air supply to the hammer,

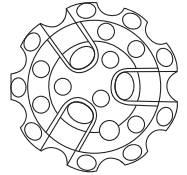
DANGER

Lifting. Take care when handling the SDS55C. Lift in accordance with the end user's company's lifting and manual handling procedure. Also observe any local regulations. Attachment points have been provided Equipment Weight - 230kg

Care & Maintenance

The service life and performance of DTH oil lubrication assembly's depends to a large extent on good operating practice and regular maintenance. The following recommendations should be observed:

- Make sure that the compressed air is always clean and dry.
- Always blow clean the air hoses before connecting them to the manifold.
- Make sure that the DTH oil lubrication assembly is stored in such a way that dirt cannot enter the Manifold.
- To keep the pump in good condition, make sure the pump is fed with filtered and lubricated air supply, and the liquid fed into the pump is free from any contaminants that could cause wear.
- Care must be taken in extreme cold conditions to prevent the risk of freezing, if water is being used as the hydraulic medium



- Check regularly that the dosage of lubricating oil into the operating air is sufficient. Check that the lubricating oil in the tank is suitable for the application that the lubricating oil in the tank is suitable for the application that the DTH oil lubrication assembly is being used for.
- If a different grade of oil is being used than previous application, make sure that system is fully „flushed out“ before the new grade of oil is applied to prevent contamination.
- On regular bases the oil reservoir tank must be flushed out to prevent build-up of residue which can occur.

A general overhaul of the DTH oil lubrication assembly should be carried out at suitable intervals depending on operating conditions.

DANGER

The power pack is fitted with a ratio of 1 :45 pump with a potential to generate pressure in excess of 1150 bar! A safety valve is fitted to the pump pre-set to release at 25 bar.

CAUTION

Re-assembly- During the re-assembly all sliding surfaces should be lubricated with general purpose grease.

Servicing of Pump

To Change the Hydraulic Seal and Air Piston O - Ring

1. Disconnect the air supply from the DTH oil lubrication assembly.
2. Unscrew the retaining nuts on the two air elbows (item 7).
3. Remove the four retaining bolts (item 28).
4. Pull the two halves of the pump apart.
5. Remove the air cylinder (item 8) by sliding it off the air piston (item 6) and pull
6. The main hydraulic seal is held on the end of the ram by a screw (item 41) and washer. This should be unscrewed using a suitable pin type face spanner.
7. You can now change the Hydraulic Seal and Air Piston O-Ring.

Care & Maintenance

Servicing the air change over valve

1. Disconnect the air supply from the DTH oil lubrication assembly
2. Separate the two halves of the pump as described above.
3. Remove the pilot bush retaining clip (item 4) and carefully pull the bush from the housing.
4. Dismantle the main air valve is done by removing the end caps (items 18 & 31) and sliding the internal seals etc.
5. The end caps will retain the pistons which should also be pulled out and examined.

Spares

When ordering spare parts, it is essential to quote the pump type and ratio and the serial number. This information can also be found on a label fixed to the pump.