HEAVY INDUSTRY
OUR LUBRICATION SOLUTIONS TAILORED TO YOUR NEEDS
benefits of automatic lubrication

www.ntn-snr.com
With You
**REVIEW OF APPLICATION/EQUIPMENT TYPE**

4 MAIN APPLICATIONS TO FOCUS ON:

**Electric motor lubrication**

Points to check:
- Motor manufacturer’s recommendations
- Motor speed
- Grease trap / escape port design, access and condition
- Bearing types
- Historical lubrication practices
- Requirements for safe access
- Desired service schedule
- Location of lubrication points on bearing housings

**Fan bearing and seal lubrication**

Points to check:
- Bearing types & speeds
- Seal types
- Characteristics of recommended lubricant
- Operating conditions
- Historical lubrication practices
- Requirements for safe access
- Desired service schedule
- Location of grease entry points on bearing housings

**Slurry pump lubrication**

Points to check:
- Pump manufacturer’s recommendations
- Seal types
- Characteristics of recommended lubricant
- Typical bearing operating temperatures
- Operating conditions
- Bearing types, lubrication points and grease migration directions
- Historical lubrication practices
- Desired service schedule
- Wash down procedures
- Requirements for safe access

**Conveyor pulley bearing lubrication**

Points to check:
- Bearing types & speeds
- Seal types
- Characteristics of recommended lubricant
- Operating conditions
- Historical lubrication practices
- Requirements for safe access
- Desired service schedule
- Location of lubrication points on bearing housings

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**Industry:** mining
**Application:** electric motor bearings
**Lubrication system:** NTN-SNR DRIVE BOOSTER
**Installation solution:** remote beam clamp mount

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**Industry:** power plant
**Application:** fan / blower bearings
**Lubrication system:** NTN-SNR DRIVE BOOSTER
**Installation solution:** remote beam clamp mount

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**Industry:** quarry
**Application:** slurry pump
**Lubrication system:** NTN-SNR DRIVE BOOSTER
**Installation solution:** remote beam clamp mount

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**Industry:** quarry
**Application:** conveyor bearing / seal (hybrid solution)
**Lubrication system:** NTN-SNR DRIVE BOOSTER
**Installation solution:** remote beam clamp mount
CHOICE OF INSTALLATION METHOD

REMOTE INSTALLATION DECISION MAKING

In many cases, it is safer to install remote mount lubrication systems as access can’t be free from hazards while machinery is operating.

A “YES” to any of the questions indicates that remote mounting is likely to be required.

1. Is it necessary to remove protective guards or safety cages to access the lubrication point?
2. Is it difficult or unsafe-to-access the lubrication point while equipment is running?
3. Is the lubrication point subject to severe vibration or high temperatures which may damage the lubrication system?
4. Is it necessary to get permits to access lubrication points such as those in confined spaces or located at heights?
5. Is the lubrication point exposed to excessive amounts of water, process materials or impact from solid material?

### Common mounting - DRIVE BOOSTER

**ACCESSORIES**

- A: 1 x Reducer G1/8 male x G1/4 female
- A: 1 x Reducer M6 male x G1/4 female
- A: 1 x Reducer M8x1 male x G1/4 female
- A: 1 x Reducer M10x1 male x G1/4 female

- B: 1 x Extension 45 mm G1/4 male x G1/4 female

- C: 1 x Angle 45° or 90° G1/4 male x G1/4 female

- D: 1 x Support flange
  LUBER PROTECTION BASE G1/4 male x G1/4 female

### Common mounting - READY BOOSTER

**ACCESSORIES**

- A: 1 x Reducer G1/8 male x G1/4 female
- A: 1 x Reducer M6 male x G1/4 female
- A: 1 x Reducer M8x1 male x G1/4 female
- A: 1 x Reducer M10x1 male x G1/4 female

- B: 1 x Extension 45 mm G1/4 male x G1/4 female

- C: 1 x Angle 45° or 90° G1/4 male x G1/4 female

- D: 1 x Support flange
  LUBER READY PROTECTION BASE G1/4 male x G1/4 female

### Standard duty INSTALLATION KITS

They are highly versatile and can be adapted for attachment to beam sections or square mesh safety cages.

### Heavy duty INSTALLATION KITS

They have been specifically designed for use in operational areas which are subject to regular wash down and water impact, such as the conditions found in coal handling preparation plants.
# CHOICE OF LUBRICATION SOLUTION AND LUBRICANT POINT

## CHOICE OF SINGLE-POINT LUBRICATION SYSTEM

<table>
<thead>
<tr>
<th></th>
<th>READY</th>
<th>SMART</th>
<th>DRIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>-20° to 60°C</td>
<td>-20° to 60°C</td>
<td>-10° to 60°C</td>
</tr>
<tr>
<td>Pressure</td>
<td>Max 5 Bar</td>
<td>Max 6 Bar</td>
<td>6 Bar</td>
</tr>
<tr>
<td>Capacity</td>
<td>60 / 125 cm³</td>
<td>125 cm³</td>
<td>120 / 250 cm³</td>
</tr>
<tr>
<td>Service</td>
<td>1, 2, 3... 12 months at +20 °C / UNIVERSAL+ without counter pressure</td>
<td>1, 2, 3... 12 months independent of operating temperature</td>
<td>1, 2, 3... 12 months independent of operating temperature and counter pressure</td>
</tr>
<tr>
<td>Hose</td>
<td>&lt; 2 meter hose extension at +20 °C with lubricant UNIVERSAL+, hose Ø 9.5 mm</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protection</td>
<td>IP 68</td>
<td></td>
<td></td>
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</tbody>
</table>

### FOR YOUR APPLICATION

- 0 limited suitability
- + suitable
- ++ very suitable

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<thead>
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<th></th>
<th>READY</th>
<th>SMART</th>
<th>DRIVE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conveyors</td>
<td>+</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Electric Motors</td>
<td>+</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Pumps</td>
<td>+</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>Blowers/Fans</td>
<td>+</td>
<td>+</td>
<td>++</td>
</tr>
</tbody>
</table>

### Regular load GREASES (high speed greases)

- Shell Gadus S2 V100 2 (Alvania RL 2) *
- Shell Gadus S5 T100 2 (Stamina RLS 2) *
- ExxonMobil MOBIL POLYREX EM *
- Castrol Spherol AP 2 *
- NTN SNR LUB UNIVERSAL +

### Multipurpose GREASES (extreme pressure greases)

- NTN SNR LUB HEAVY DUTY +
- Shell Gadus S3 V220C 2 (Albida EP 2) *

* Grease available on demand only. MOQ will apply

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1st order and reorder | 1st order | reorder | 1st order | reorder
## Selection of the Installation Kit

### Standard Duty Kits

<table>
<thead>
<tr>
<th>Installation Kit</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beam Clamp Mount</td>
<td>1-point beam clamp mount incl. 1 m hose</td>
</tr>
<tr>
<td>Cage Hanger Mount</td>
<td>1-point cage hanger mount incl. 1 m hose</td>
</tr>
</tbody>
</table>

### Components

**A Brackets**
Compact stainless steel brackets. Can be easily attached to square cage mesh using a hook attachment design or to beam sections using beam clamps.

**B Beam Clamp**
Easy-to-use beam clamps, supplied with case hardened cup head set screws and stainless steel assembly screws. 30 or 65 mm available.

**C Purge Connection with Manual Valve G1/4 (optional)**
Used for convenient additions of supplementary grease, line purging and grease blockage cleaning.
LUBER PURGE w MANUAL VALVE

**D Angle 90° R1/4 male x G1/4 female**

**E Hose Connector G1/4 male**
For hose iØ 9.5 mm. Two included per lubrication point.

**F Heavy Duty Hose**
Supplied with iØ 9.5 mm : 1 m per lubrication point is included.

**G Reducing Adapter**
Three reducers R1/8, R1/4 and M10x1 included for each lubrication point.

**H Hose Spiral Guard**

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1. **Support Flange**
   READY PROTECTION BASE
   G1/4 male x G1/4 female
   Only for READY Booster. Please order separately.
SELECTION OF THE INSTALLATION KIT
HEAVY DUTY KITS

**INSTALLATION KIT HEAVY DUTY BEAM CLAMP MOUNT**

1 point beam clamp mount for DRIVE BOOSTER.
incl. 2 m hose

2 points beam clamp mount for DRIVE BOOSTER.
incl. 4 m hose

**INSTALLATION KIT HEAVY DUTY CAGE HANGER MOUNT**

1 point cage hanger mount for DRIVE BOOSTER.
incl. 2 m hose

2 points cage hanger mount for DRIVE BOOSTER.
incl. 4 m hose

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**A** Brackets incl.
1. Support flange DRIVE
2. Cover clip for protection cap
3. Protection cap DRIVE BOOSTER Heavy Duty 250 (plastic)

Compact stainless steel brackets. Can be easily attached to square cage mesh using a hook attachment design or to beam sections using beam clamps.

**B** Beam clamp
Easy-to-use beam clamps supplied with case hardened cup head set screws and stainless steel assembly screws.

30 or 65 mm available.

**B’** Cage hanger arm
(stainless steel)

**C** Purge connection with manual valve G1/4 (optional)
Used for convenient additions of supplementary grease, line purging and grease blockage cleaning.

**LUBER PURGE w MANUAL VALVE**

**D** Angle 90° R1/4 male x G1/4 female

**E** Hose connector G1/4 male
For hose iØ 9.5 mm. Two included per lubrication point.

**F** Heavy Duty hose
Supplied with iØ 9.5 mm hose 2 m per point.

**G** Reducing adapter
Three reducers R1/8, R1/4 and M10x1 included for each lubrication point.

**H** Hose spiral guard
HEAVY INDUSTRY: OUR LUBRICATION SOLUTIONS TAILORED TO YOUR NEEDS

BENEFITS OF AUTOMATIC LUBRICATION

Only appropriate lubrication can guarantee the optimal operation of bearings and the related mechanical assembly. 55% of premature bearing failures are caused by inappropriate lubrication.

Too much grease
- Increase in operating temperature
- Degradation of grease with high speed bearings
- Use of fresh grease not optimized
- Possibility to damage contact type seals

Too little grease
- Premature wear
- Under-lubrication leads to accelerated degradation of remaining grease
- Risk of contamination entry due to lack of lubricant purge

The automatic lubricator can be used to ensure the constant and regular lubrication of your bearings. The lubricator is easy to integrate and can be used to optimize lubrication without any need to modify your installations.

WHY AND WHERE DO WE NEED AUTOMATIC LUBRICATORS

1) Prevention of bearing contamination
   a. Pump seal purging
   b. Conveyor pulley bearing re-lubrication & seal purging
   c. Lubrication of bearing & seal purging at the same time

2) Improvement in safety & efficiency
   a. Remotely mounted lubrication system used for a conveyor pulley where the bearings are mounted behind a guard thereby avoiding unnecessary access
   b. Automatically relubricate equipment in confined spaces or at excess height where a permit may be required
   c. Remotely mounted lubrication systems at ground level for difficult to access equipment such as large electric motors, fans and pumps

Safety gain: Improve safety by avoiding the need to lift, handle cages or guards, to perform work at heights, or within confined spaces by providing safe to access locations for the lubricators.

Efficiency gain: Save time which would otherwise be required during shutdowns for permits, isolations, equipment preparation and other time consuming requirements.

REVIEW & SELECTION PROCEDURE
4 SIMPLE STEPS TO CHOOSE THE RIGHT LUBRICATION SOLUTION

1) Review of the application or equipment type
   2) Choice of installation method
   3) Choice of lubrication solution and lubricant type
   4) Selection of the installation kit