

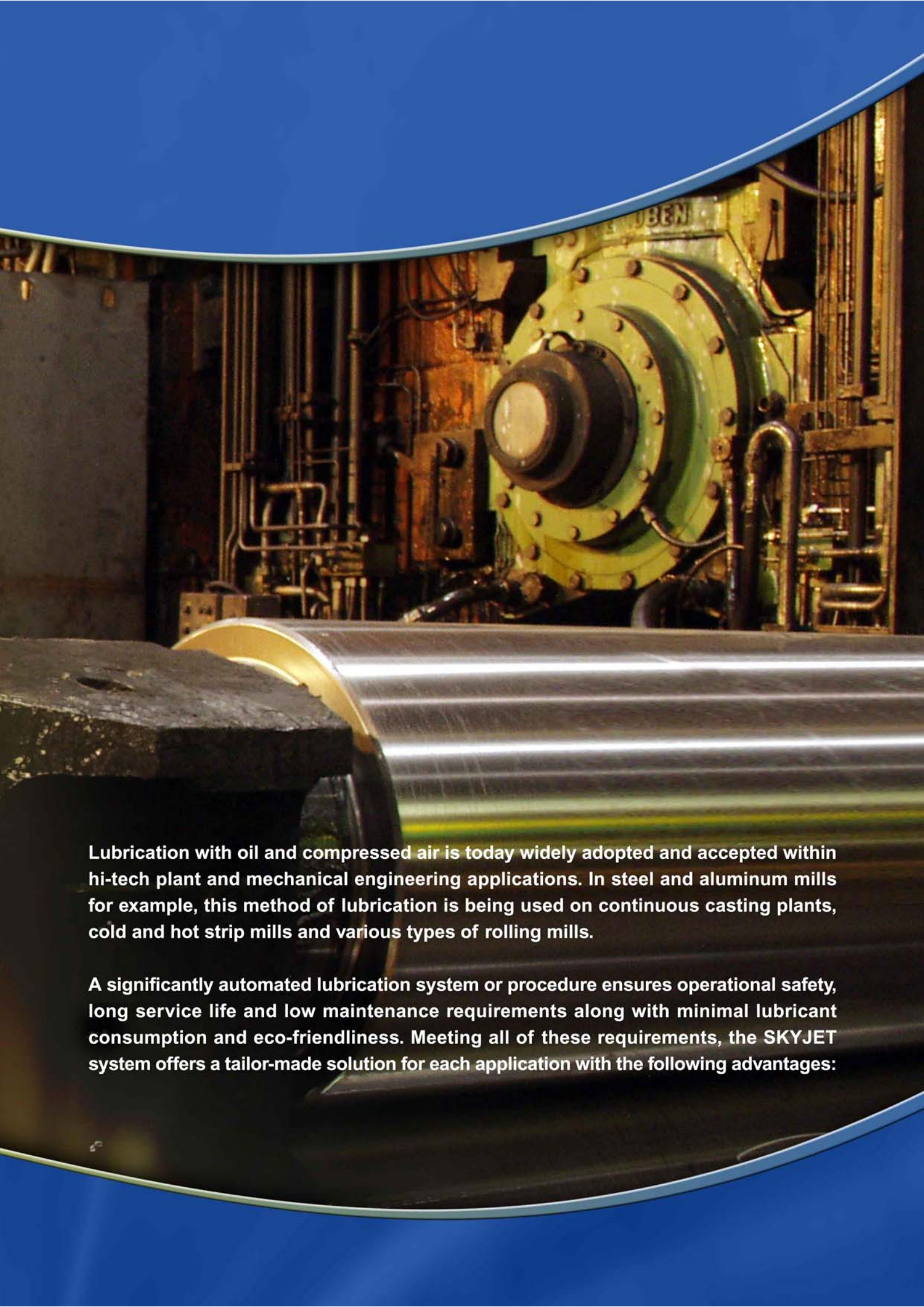
BIJUR DELIMON
INTERNATIONAL

*Lubrication
with oil and
compressed
air*

SKYJET 

AKY-JET





Lubrication with oil and compressed air is today widely adopted and accepted within hi-tech plant and mechanical engineering applications. In steel and aluminum mills for example, this method of lubrication is being used on continuous casting plants, cold and hot strip mills and various types of rolling mills.

A significantly automated lubrication system or procedure ensures operational safety, long service life and low maintenance requirements along with minimal lubricant consumption and eco-friendliness. Meeting all of these requirements, the SKYJET system offers a tailor-made solution for each application with the following advantages:

- Minimal consumption of lubricant through precise, calculated dosing.
- Precise, calculated quantities of lubricant from the SKYJET lance outlets depending on the requirements of the bearing.
- Up to a maximum of 5 outlets per SKYJET lance with a 25 mm diameter. For lances with 15 mm diameter, up to 4 outlets.
- Compact type dividers, main and sub divider, are available with up to a maximum of 6 outlets.
- Air as transporting and bearing sealing medium, hence extended bearing life and reduced maintenance and service costs.
- The air-oil mixture (macro oil particles) has excellent adhesion properties – even at the bearing surfaces.
- Improved heat removal.
- Less bearing friction in comparison to sump and grease lubrication.
- Environmentally friendly lubrication.

Permanent lubrication

The SKYJET system is based on 'permanent or continuous' lubrication. The delivered air-oil mix provides precise lubrication and sealing against dust and water, with minimal quantities of oil and air needed to achieve this. This applies in case of

- thermally highly stressed bearings,
- bearings with either very low or high circumferential speeds,
- bearings that are exposed to high temperature, dust and water (steam),
- friction points with difficult access.



SKYJET
lance



SKYJET
compact distributor



System components

Depending on the application, a SKYJET system consists of the following components:

- Oil pump station with motor and gear pump, filter unit, miscellaneous monitoring elements, float switch, optional heating system with temperature controller, shutoff valves/elements.



- Distributor cabinet assembled with a compressed air service system, progressive divider with electrical monitoring, solenoid valves for air and oil and a mixing manifold block with flow sensors.
- Air-oil divider utilising either a SKYJET compact distributor, or in combination with main distributors connected downstream within complex installations.

- Custom designed SKYJET lances for precise supply of air-oil to the lubrication points of the stands.
- Electrical controller - closed-loop with the facility to monitor and control the complete system.

All of these components are combined to form a reliable system in keeping with the customer's specific requirements.

Air pressure and air flow rate

Clean and regulated compressed-air is required at a continuous operating pressure of between 4 and 6 bar to operate the SKYJET system. The optimum pressure is 6 bar.

The total air flow rate of the system depends on the number of lubrication points. A general guideline for the air flow is 0.5 to 0.8 m³/h per bearing to layout the system.



SKYJet
distributor-
cabinet



System Monitoring

When monitoring is desired, both the lubricant supply and the air supply to the air-oil distributor can be monitored by means of different elements. Typically, pressure switches in conjunction with timers and flow meters have proved effective and reliable.

For simple visual checks, however, an air-oil line coming in the form of a transparent hose is often sufficient. When dosing the oil by means of progressive or dual line distributors, the lubricant flow can be monitored electrically by means of a limit switch attached to the motion indicators.



SKYJet
electrical control



Lubricants

Lubricating oils with a viscosity of maximal 680 cSt at 40°C are suitable. Nearly all commercial oils can be used in the range mentioned.

System sizes

System-dependent circumstances have to consider and respecting recommendations will be given by Bijur Delimon.

SKYJET
oil-pump-station

Spare-Part-Service

Maintenance-Service

Retrofit-Service

Training

