

Klübersynth AR 34-401, AR 34-402

Special synthetic lubricating greases for pneumatic drives and sealing elements



Benefits for your application

- Reduces friction and wear in pneumatic components
- Low breakaway torque, even after longer periods of standstill ("Monday morning effect")
- Suitable for all types of pneumatic components, preferably those made of NBR but also of PU materials
- Wide piston speed range from approx. 0.01 to 1m/s and much more in individual cases
- Light colour, adhesive

Description

Klübersynth AR 34-401 and -402 are synthetic wide-range greases based on a special calcium soap thickener. They are free from raw materials containing heavy metals and solid lubricants. The special additives contained in these greases provide utmost performance along with operational reliability and long service life. The pneumatic components consisting of the sealing elements and the opposing friction bodies, such as piston rods or cylinder barrels, can therefore be used in a relatively wide service temperature range. This is the result of a close cooperation between Klüber Lubrication, manufacturers of pneumatic elements and joints and university research centers.

Klübersynth AR 34-401 is NSF H1 registered and therefore complies with FDA 21 CFR § 178.3570. The lubricant was developed for incidental contact with products and packaging materials in the food-processing, cosmetics, pharmaceutical or animal feed industries. The use of Klübersynth AR 34-401 can contribute to increase reliability of your production processes. We nevertheless recommend conducting an additional risk analysis, e.g. HACCP.

Application

Besides many other applications, Klübersynth AR 34-401 and -402 are mainly used for pneumatic control and sealing elements, such as ISO single-acting and double-acting pneumatic cylinders with and without piston rod, pneumatic rotary actuators, short-stroke and compact cylinders, for valves and corresponding sealing elements. Wide piston speed ranges from approx. 0.01 m/s to > 1 m/s can be achieved. Other advantages of Klübersynth AR 34 401 and -402 are low breakaway torque even after longer periods of standstill and

reduced tendency to stick-slip at very low piston speeds. This special grease is preferably used in combination with various types of piston, rod and damping seals made of NBR or PU elastomer materials. Klübersynth AR 34-402 is an approved lubricant for gas burning installations and actuators acc. to DIN EN 377 class D, for a temperature range from 0 to +140°C. A corresponding DIN-DVGW test certificate is available.

Application notes

Klübersynth AR 34-401 and -402 are applied by brush, sponge, spatula, grease gun or other conventional metering systems. For the lubrication of cylinder faces the use of round brushes or automatic greasing pistons has proven effective. It is important that after assembly the piston is moved several times over the full stroke length in order to ensure adequate wetting of the sealing elements on both sides if, for example, only one-sided lubrication was possible. A similar procedure applies to valves. Excessive lubrication of the piston seal after several piston strokes – depending on the size and circumference – may provide a more uniform grease layer. The lubricant should be applied on to a cleaned, grease-free surface.

Material safety data sheets

Material safety data sheets can be requested via our website www.klueber.com. You may also obtain them through your contact person at Klüber Lubrication.

Pack sizes	Klübersynth AR 34-401	Klübersynth AR 34-402
Can 1 kg	+	+
Bucket 25 kg	+	+

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Product data	Klübersynth AR 34-401	Klübersynth AR 34-402
Article number	017153	017033
Lower service temperature	-40 °C / -40 °F	-30 °C / -22 °F
Upper service temperature	120 °C / 248 °F	140 °C / 284 °F
Colour space	beige	beige
Density at 20 °C	approx. 0.90 g/cm ³	approx. 0.90 g/cm ³
Worked penetration, DIN ISO 2137, 25 °C, lower limit value	310 x 0.1 mm	265 x 0.1 mm
Worked penetration, DIN ISO 2137, 25 °C, upper limit value	340 x 0.1 mm	295 x 0.1 mm
Kinematic viscosity of the base oil, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 40 °C	approx. 400 mm ² /s	approx. 400 mm ² /s
Kinematic viscosity of the base oil, DIN 51562 pt. 01/ASTM D-445/ASTM D 7042, 100 °C	approx. 40 mm ² /s	approx. 40 mm ² /s
NLGI grade, DIN 51818	1	2
Shear viscosity at 25 °C, shear rate 300 s ⁻¹ , equipment: rotational viscometer, lower limit value	2 000 mPas	8 000 mPas
Shear viscosity at 25 °C, shear rate 300 s ⁻¹ , equipment: rotational viscometer, upper limit value	8 000 mPas	20 000 mPas
Copper corrosion, DIN 51811, (lubricating grease), 24h/100°C	<= 2 - 100 corrosion degree	<= 2 - 100 corrosion degree
Oil separation, DIN 51817 N, after 7 d/40 °C	<= 3.5 % by weight	<= 3 % by weight
Drop point, DIN ISO 2176, IP 396	>= 200 °C	>= 220 °C
Minimum shelf life from the date of manufacture - in a dry, frost-free place and in the unopened original container, approx.	24 months	24 months





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Klüber Lubrication – your global specialist

Innovative tribological solutions are our passion. Through personal contact and consultation, we help our customers to be successful worldwide, in all industries and markets. With our ambitious technical concepts and experienced, competent staff we have been fulfilling increasingly demanding requirements by manufacturing efficient high-performance lubricants for more than 80 years.

**Klüber Lubrication München SE & Co. KG /
Geisenhausenerstraße 7 / 81379 München / Germany /
phone +49 89 7876-0 / fax +49 89 7876-333.**

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