

We have the solution...

...the future has a name



LUBCON
Lubricant Recommendation
for Cableways

Use Lubricants which are
Successfully Applied by the
Industry.



The high efficiency of the **LUBCON** lubricants is proven by

- long service life
- good running behaviour
- high operational reliability





From the Development to the Application

The **LUBRICANT CONSULT GMBH** is one of the leading developers and manufacturers in the **lubrication engineering** sector.

To be able to meet the permanently increasing requirements of the industry and to offer continuously new or qualitatively optimised products, an innovative team is constantly occupied with the research and development of new lubricants in our own laboratories.

The extraordinary performance of the **LUBCON lubricants** is the result of the clearly defined selection of the thickener and its portion, the type of the base oil and its viscosity as well as a perfectly balanced additive package.

A **quality and environment management** introduced in June 1996, certified according to DIN EN ISO 9001 and 14001, has strictly ensured that only raw materials are used without any ingredients that are harmful to the environment.

In the production a technically sophisticated circulatory system is used to preserve the environmental resources as much as possible.

Lubricants are constructional elements that are required for a perfect operation of any ascent means. Particularly the application of state-of-the-art safety lubricants is an essential condition for a high standard of operational reliability of your cableway systems.



The **special lubricants** of **LUBCON** offer you the basis for an economic lubrication engineering under open-air weather conditions, thus offering, for instance, the possibility of a lifetime lubrication of rolling bearings.

Wear of components, e. g. in case of oscillating movements on cradle bolts, is prevented or at least reduced when using high-quality greases.

Advantages:

- low-temperature resistance
- higher service life and longer maintenance intervals
- minimised manpower
- reduced maintenance costs
- easier and cheaper disposal of lubricants
- not liable to identification marking


Important notice:


During the off-season, as a measure of preventive maintenance, it is necessary to operate all installations for at least one rope circulation per month.


For all gear drives, the oil quantity can be checked by means of a viewing glass or oil-level gauge. In case of oil changes, the oil types and respective filling quantities are indicated on the gear label.



This brochure only contains product information. For specific information please refer to our technical data and safety data sheets. The indications made represent the present state of development and knowledge of **LUBRICANT CONSULT GMBH**. Subject to change. The products are subject to severe controls of manufacture and comply in full with the specifications set forth by our company, but due to the multitude of different influencing factors, we cannot assume any warranty for the successful application in each individual case. Therefore, we recommend to perform field tests. We strictly refuse any liability.



Type of ascent means	LUBCON product	Point of lubrication	Advantages of LUBCON product
ski lift 	GRIZZLYGREASE® No. 1	open-running worm gear	best adhesive properties under open-air weather conditions; extremely long service life
	TURMOGREASE® CAK 4002 TG	roller battery bolts	no fretting corrosion
	TURMOGREASE® CAN 1002 EP TURMOGREASE® 2 PA EP	electric motors suspension tackle head cable pulley bearing pylon guide roller bearing	increased service life by factor 3-5 increased service life by factor 2
	TURMOFLUID® GV 15	hydraulic tensioning mechanism skilift cable rewinder	best low-temperature behaviour
	TURMOFLUID® GV 22	hydraulic brake system turbo-coupling	best low-temperature behaviour
	TURMOGEAR®OIL PE 150	gear drives	good low-temperature behaviour, no heating required, service life >10 years


Type of ascent means	LUBCON product	Point of lubrication	Advantages of LUBCON product
chair lift fixed 	TURMOGREASE® CAK 4002 TG	roller battery bolts cup springs wheel cradle bolts	no fretting corrosion, best corrosion protection, high wearing protection of the cup springs
	TURMOGREASE® CAN 1002 EP TURMOGREASE® 2 PA EP	electric motors suspension tackle head cable pulley bearing pylon guide roller bearing	increased service life by factor 3-5 increased service life by factor 2
	TURMOFLUID® GV 22	hydr. tensioning mechanism hydraulic brake system	best low-temperature behaviour
	TURMOGEAR®OIL PE 150	gear drives	good low-temperature behaviour, no heating required, service life >10 years

Type of ascent means	LUBCON product	Point of lubrication	Advantages of LUBCON product
chair lift with coupling 	GRIZZLYGREASE® No. 1	coupling operating lever	best adhesive properties, no dripping off, extremely resistant to loads
	TURMOGREASE® CAK 4002 TG	torsion bar springs cup springs wheel cradle bolts	best corrosion protection, high wearing protection
	TURMOGREASE® CAN 1002 EP TURMOGREASE® 2 PA EP	electric motors universal joints bolt of coupling device test unit of coupling force cable pulley bearing pylon guide rollers	high load carrying capacity increased service life by factors 3-5 increased service life by factor 2 long lubrication intervals
	TURMOFLUID® GV 15	Bowden wire	best penetrating capacity guaranteed smooth operation at low temperatures
	TURMOFLUID® GV 4000 TB 75	conveyor chain in cableway depot conveyor chain in cableway station	best adhesive properties, no dripping off, high wearing protection, very long relubrication intervals
	TURMOGEAR®OIL PE 150	gear drives	good low-temperature behaviour, no heating required, service life >10 years

Special Lubricants for Cableways





Type of ascent means	LUBCON product	Point of lubrication	Advantages of LUBCON product
single-cable ropeway with coupling  and endless cableway 	GRIZZLYGREASE® No. 1	coupling operating lever	best adhesive properties, no dripping off, lubrication film extremely resistant to loads
	TURMOGREASE® CAK 4002 TG	torsion bar springs cup springs wheel cradle bolts	best corrosion protection, high wearing protection
	TURMOGREASE® CAN 1002 EP TURMOGREASE® 2 PA EP	electric motors universal joints bolt of coupling device test unit of coupling force cable pulleys pylon guide rollers	very long service life increased service life by factor 3-5 increased service life by factor 2 high load carrying capacity
	TURMOFLUID® GV 15	Bowden wire (door operation for cabin)	best penetrating capacity, good low-temperature behaviour, smooth operation
	TURMOFLUID® GV 4000 TB 75	conveyor chain in cableway depot conveyor chain in cableway station	best adhesive properties, no dripping off, high wearing protection, very long relubrication intervals
	TURMOGEAR®OIL PE 150	gear drives	good low-temperature behaviour, no heating required, service life >10 years
	TURMO®PLEX ALN 1001/00	auxiliary gear drive	best low-temperature behaviour, good reflux properties of the grease

Type of ascent means	LUBCON product	Point of lubrication	Advantages of LUBCON product
double-cable ropeway with coupling 	GRIZZLYGREASE® No. 1	coupling operating lever	best adhesive properties, no dripping off, lubrication film extremely resistant to loads
	TURMOGREASE® CAK 4002 TG	cup springs wheel cradle bolts	best corrosion protection, high wearing protection
	TURMOGREASE® CAN 1002 EP TURMOGREASE® 2 PA EP	electric motors universal joints bolt of coupling device test unit of coupling force cable pulleys traction cable rollers	very long service life increased service life by factors 3-5 increased service life by factor 2 high load carrying capacity
	TURMOFLUID® GV 15	Bowden wire (door operation for cabin)	best penetrating capacity, good low-temperature behaviour, smooth operation
	TURMOFLUID® GV 4000 TB 75	conveyor chain in cableway depot conveyor chain in cableway station	best adhesive properties, no dripping off, high wearing protection, very long relubrication intervals
	TURMOGEAR®OIL PE 150	gear drives	good low-temperature behaviour, no heating required, service life >10 years
	TURMO®PLEX ALN 1001/00	auxiliary gear drive	best low-temperature behaviour, good reflux properties of the grease
	TURMOPAST® MA 40 MC	carrying rope bearing saddle dispersion lubrication	rope well sliding in the St cable guide rail, no stick-slip effect, good corrosion protection
	TURMOPAST® MAG 380	carrying rope bearing saddle grease nipple lubrication	rope well sliding in the Cu cable guide rail, no stick-slip effect of the suspension cable in the cable guide rail, good corrosion protection



Special Lubricants for Cableways

Type of ascent means	LUBCON product	Point of lubrication	Advantages of LUBCON product
to-and-fro system aerial ropeway 	TURMOGREASE® CAK 4002 TG	wheel cradle bolts traction cable coupling	best corrosion protection, high wearing protection
	TURMOGREASE® CAN 1002 EP TURMOGREASE® 2 PA EP	electric motors universal joints pulley cradle bearing cable pulleys traction cable rollers	very long service life increased service life by factors 3-5 increased service life by factor 2 high load carrying capacity
	TURMOFLUID® GV 15	suspension cable brake hydraulic longitudinal oscillation stabilizer	best penetrating capacity, good low-temperature behaviour, smooth operation
	TURMOGEAR® OIL PE 150	gear drives	good low-temperature behaviour, no heating required, service life >10 years
	TURMO® PLEX ALN 1001/00	auxiliary gear drive	best low-temperature behaviour, good reflux properties of the grease
	TURMOPAST® MA 40 MC	carrying rope bearing saddle dispersion lubrication	rope well sliding in the St cable guide rail, no stick-slip effect, good corrosion protection
	TURMOPAST® MAG 380	carrying rope bearing saddle grease nipple lubrication	rope well sliding in the Cu cable guide rail, no stick-slip effect of the suspension cable in the cable guide rail, good corrosion protection

Type of ascent means	LUBCON product	Point of lubrication	Advantages of LUBCON product
ground funicular 	TURMOGREASE® CAN 1002 EP TURMOGREASE® 2 PA EP	electric motors pulley cradle bearing cable pulleys pylon guide rollers	increased service life by factors 3-5 increased service life by factor 2
	TURMOFLUID® GV 15	double jaw rail brakes hydraulic door operation	best penetrating capacity, good low-temperature behaviour, smooth operation
	TURMOGEAR® OIL PE 150	gear drives	good low-temperature behaviour, no heating required, service life >10 years
	TURMO® PLEX ALN 1001/00	auxiliary gear drive	best low-temperature behaviour, good reflux properties of the grease
	TURMOPAST® MAG 380	passing track support expansion device for welded rails	rope well sliding, no stick-slip effect, smooth handling, high corrosion protection, affinity to metal surfaces ensures resistance to firedamp influences

Type of ascent means	LUBCON product	Point of lubrication	Advantages of LUBCON product
single-cable/double-cable/ endless cableway to-and-fro system aerial ropeway/ground funicular	TURMOGREASE® CAN 1002 EP	spherical spindles	very good corrosion protection, no freezing up
	TURMSILON® LMI 5000	rubber maintenance	no embrittling or hardening of the rubber

for all types of cable cars	PROFIOIL	cabin door locks door hinges slideways	good corrosion protection, high creeping capacity, repels moisture, protects from freezing up, avoids squealing noise
	TURMOFLUID® GV 15	hydraulic gate systems	good low-temperature behaviour
	TURMSILON® MV 1	plastic gear wheels in turnstiles	smooth operation long-term lubricating effect



Technical Information

■ Oils:

TURMOFLUID® ED 13

- fully synthetic, transparent, $V_{40} = 22 \text{ mm}^2/\text{s}$
 - service temperature range: $-35 \text{ }^\circ\text{C}$ to $+200 \text{ }^\circ\text{C}$
- Lubricating oil with good penetrating ability and corrosion protection. Good water repelling properties, therefore applicable on wet surfaces as well.

TURMOFLUID® GV 15

- fully synthetic, thin-bodied, $V_{40} = 15 \text{ mm}^2/\text{s}$
 - service temperature range: $-50 \text{ }^\circ\text{C}$ to $+130 \text{ }^\circ\text{C}$
- High-performance oil with good creeping properties, penetrates easily into inaccessible points of lubrication. This product is by far superior to commercial mineral oils. It stands out for its extreme resistance to low temperatures and the fact that it is not gumming.

TURMOFLUID® GV 22

- fully synthetic, thin-bodied, $V_{40} = 22 \text{ mm}^2/\text{s}$
 - service temperature range: $-50 \text{ }^\circ\text{C}$ to $+130 \text{ }^\circ\text{C}$
- High-performance and long-endurance oil, resistant to extreme pressure, not gumming and miscible with commercial mineral oils. It stands out for its extreme resistance to low temperatures.

TURMOFLUID® GV 4000 TB 75

- mineral, $V_{40} = 2000 \text{ mm}^2/\text{s}$
 - service temperature range: $-20 \text{ }^\circ\text{C}$ to $+200 \text{ }^\circ\text{C}$
- High-performance chain oil, especially developed for the lubrication of conveyor chains in cableway stations. Best protection against wearing, ageing and corrosion. No dripping off after evaporation of the solvent so that there is no risk of staining clothes or cabin roofs.

TURMOGEAR® OIL PE 150

- fully synthetic, $V_{40} = 148 \text{ mm}^2/\text{s}$
 - service temperature range: $-30 \text{ }^\circ\text{C}$ to $+160 \text{ }^\circ\text{C}$
 - FZG test: A/8.3/90 $^\circ\text{C}$ --- Damage loading step > 12
- High-performance gear oil, with high load carrying capacity of the lubricating film and water separation ability so that it can be used in summer as well as in winter. Increase of service life to >10 years, therefore less expenses for disposal. There is **no oil bath heating** required. Compatible with nonferrous metals.



Technical Information

■ Greases:

GRIZZLYGREASE® No. 1

- mineral, dark brown, **no dripping off**, $V_{40} = 800 \text{ mm}^2/\text{s}$
 - service temperature range: $-30 \text{ }^\circ\text{C}$ to $+150 \text{ }^\circ\text{C}$
 - four-ball welding load: $> 7800 \text{ N}$, NLGI class 0
- Special extreme-pressure grease, excellent suitability for the lubrication of open running gear wheels and open running worm gears. Thanks to its strong adhesion to steel, the lubricating film will **not** be washed off by driving rain.

TURMOGREASE® CAK 4002 TG

- mineral, $V_{40} = 400 \text{ mm}^2/\text{s}$
 - service temperature range: $-20 \text{ }^\circ\text{C}$ to $+150 \text{ }^\circ\text{C}$
 - four-ball welding load: 5500 N , NLGI class 2
- Special extreme-pressure grease with excellent load carrying capacity and very good water resistance. Even when exposed to water jets, it perfectly resists to being washed off. Due to its solid lubricant contents, it protects the cup springs against excessive wear.

TURMOGREASE® CAN 1002 EP

- partly synthetic, $V_{40} = 100 \text{ mm}^2/\text{s}$
 - service temperature range: $-40 \text{ }^\circ\text{C}$ to $+140 \text{ }^\circ\text{C}$
 - four-ball welding load: 2600 N , NLGI class 2
- Special extreme-pressure lubricating grease, dynamically light, therefore extremely smooth operation. Long-endurance lubricant, resistant to humidity, water and acids, ideal for lubricating points under open-air weather conditions.

TURMOGREASE® 2 PA EP

- mineral, $V_{40} = 150 \text{ mm}^2/\text{s}$
 - service temperature range: $-30 \text{ }^\circ\text{C}$ to $+160 \text{ }^\circ\text{C}$
 - four-ball welding load: 2800 N , NLGI class 2
- Special low-temperature rolling bearing grease on mineral oil basis, resistant to water thus ensuring excellent protection against corrosion and wearing.

TURMO® PLEX ALN 1001/00

- fully synthetic, $V_{40} = 100 \text{ mm}^2/\text{s}$
 - service temperature range: $-40 \text{ }^\circ\text{C}$ to $+150 \text{ }^\circ\text{C}$
 - four-ball welding load: 2400 N , NLGI class 00
- High-performance gear grease, very resistant to oxidation, provides good wearing protection and a high lubricating effect with low friction levels.

Technical Information

■ Greases:

TURMOPAST® MA40 MC

- fully synthetic, light-coloured, $V_{40} = 680 \text{ mm}^2/\text{s}$
- service temperature range: $-30 \text{ }^\circ\text{C}$ to $+170 \text{ }^\circ\text{C}$
- four-ball welding load: 4500 N, NLGI class 2

Dispersion for cable guide rails easy to apply by means of an oil can. Very good extreme pressure properties, excellent corrosion protection, prevents stick-slip of the suspension cable in the steel guide rail.

TURMOPAST® MAG 380

- fully synthetic, black, $V_{40} = 680 \text{ mm}^2/\text{s}$
- service temperature range: $-30 \text{ }^\circ\text{C}$ to $+130 \text{ }^\circ\text{C}$
- four-ball welding load: 7500 N, NLGI class 0

Smooth special grease with a high load carrying capacity and good corrosion protection, especially developed for the lubrication of the cable guide rail by means of a grease gun. Good sliding effect, no stick-slip of the suspension cable and good feeding properties in automatic lubricating systems.

■ Pastes:

TURMSILON® LMI 5000

- fully synthetic, white
- service temperature range: $-50 \text{ }^\circ\text{C}$ to $+220 \text{ }^\circ\text{C}$
- $V_{40} = 3750 \text{ mm}^2/\text{s}$, NLGI class 3

Silicone rubber maintenance product with a creamy structure, resistant to water and neutral towards elastomers.

TURMSILON® MV 1

- fully synthetic, transparent, NLGI class 1
- service temperature range: $-50 \text{ }^\circ\text{C}$ to $+200 \text{ }^\circ\text{C}$

Very adhesive silicon paste for the lubrication of small plastic gears.

■ Spray:

PROFIOIL

- partly synthetic, $V_{40} = 100 \text{ mm}^2/\text{s}$
- service temperature range: $-40 \text{ }^\circ\text{C}$ to $+200 \text{ }^\circ\text{C}$
- optimum wetting properties

Chain oil for all industrial branches, with its excellent creeping properties, it repels moisture, protects against freezing up, avoids squealing noise and protects extraordinarily against corrosion and wear.

■ Cleaner:

BIOAKTIV 101

Cold cleaning fluid, biologically degradable. To be used concentrated in case of heavy contamination. Good cleaning effect, non-combustible. After cleaning, apply corrosion protection immediately on the parts, otherwise a rust film might be formed.

The lubricant recommendation is only a guideline to your lubricant choice. Due to the variety of the operating conditions and the machinery in use **LUBCON** offers you a free charge consultancy before, during and after your purchase of **LUBCON lubricants**.

Our R & D department is of course available to you should one of your applications need a new, tailor-made product.

LUBCON philosophy:

... the right **LUBCON product** at the agreed date:

... 100 ml tubes, 400 ml sprays, 400 ml cartridges, 1 kg cans, 5 l canisters, 20 l canisters, 5 kg buckets, 25 kg buckets, 180 kg drums, 200 l drums or the 1000 l container are just a choice of the packing units possible...



Impressum/Inprint:

Design/Layout:

Dipl. Designerin Andrea Dörn
Nadja Grabowski, Marketing

Text:

Manfred Gaisberger
Nadja Grabowski

Druck/Printing:

HW-Druckservice GmbH



**EUROPE****AUSTRIA**

LUBCON AUSTRIA
Büro Linz
Pollheimer Str. 16
A-4020 Linz
Tel.: +43-7-3 26 71 63 0
Fax: +43-7-3 26 71 63 0
e-Mail: austria@lubcon.com
Internet: www.lubcon.com

BELGIUM

Van Meeuwen Special Lubricants N.V.
Parklaan 25
B-9300 Aalst
Tel.: +32-53-76 76 00
Fax: +32-53-21 52 03
e-Mail: info@vanmeeuwen.be
Internet: www.vanmeeuwen.be

CZECH REPUBLIC

LUBCON s.r.o.
Dlouhá 783
CZ-76321 Slavice
Tel.: +420-577-34 36 18
Fax: +420-577-34 20 09
e-Mail: czechrepublic@lubcon.com
Internet: www.lubcon.com

DENMARK

A.H. INTERNATIONAL A/S
Vranderupvej 156
DK-6000 Kolding
Tel.: +45-75-50 11 00
Fax: +45-75-50 20 21
e-Mail: ahi@ahi.dk
Internet: www.lubcon.dk

FINLAND

Jukka Majuri Oy
Poikkikatu 15
FIN-38200 Vammala
Tel.: +358-3-515 41 26
Fax: +358-3-511 52 20
e-Mail: jukka.majuri@lubcon.fi
Internet: www.lubcon.fi

FRANCE

LUBCON FRANCE S.A.R.L.
Parc d'activités Alpespace
161, Voie JF Champollion - Francin
F-73800 Montmélian
Tel.: +33-4-79 84 38 60
Fax: +33-4-79 84 38 61
e-Mail: france@lubcon.com
Internet: www.lubcon.com

GREAT BRITAIN

LUBCON Lubricants UK Ltd.
Unit 2, Wilmot Hall,
Golden Butts Road
Ilkley, West Yorkshire LS 29 8HS
Tel.: +44-1943-60 14 31
Fax: +44-1943-60 26 45
e-Mail: c.clayton@lubcon.com
Internet: www.lubcon.com

ITALY

LUBCON ITALIA S.R.L.
Via Trieste, 16
I-21040 Sumirago (VA)
Tel.: +39-0331-90 97 90
Fax: +39-0331-90 70 84
e-Mail: info@lubcon.it
Internet: www.lubcon.it

EUROPE**NORWAY**

NORIKO AS
Kilengt 20
N-3117 Tønsberg
Tel.: +47-33-37 85 00
Fax: +47-33-37 85 01
e-Mail: bjorn.wilhelmsen@noriko.no
Internet: www.noriko.no

POLAND

LUBCON POLSKA Sp. z o.o.
ul. Piasecka 162
PL-21-040 Świdnik
Tel.: +48-81-7 21 68 30
Fax: +48-81-7 21 68 31
e-Mail: polska@lubcon.com
Internet: www.lubcon.com

SLOVENIJA

LUBCON d.o.o.
Adamičeva ulica 26
SLO-8000 Novo mesto
Tel.: +386-7-33 80 760
Fax: +386-7-33 80 763
e-Mail: lubcon@lubcon.si
Internet: www.lubcon.com

SPAIN

LUBRITEC, S.A.
Centre Industrial Santiga
Tallers 8, Nave 58
E-08210 Barberà del Vallès (Barcelona)
Tel.: +34-93-719 11 13
Fax: +34-93-719 12 57
e-Mail: lubritec@lubriservis.com
Internet: www.lubriservis.com

SWITZERLAND

LUBCON Lubricant Consult AG
Im Leisibühl 35
CH-8044 Zürich
Tel.: +41-44-8 82 30 37
Fax: +41-44-8 82 30 38
e-Mail: swiss@lubcon.com
Internet: www.lubcon.com

SWEDEN

TRIBOSCAND AB
Box 12131
S-102 24 Stockholm
Tel.: +46-8-37 35 01
Fax: +46-8-44 10 80 3
e-Mail: tribo@mailbox.calypso.net

THE NETHERLANDS

Van Meeuwen Smeertechniek B.V.
Korte Muiderweg 2 A
NL-1382 LR Weesp
Tel.: +31-294-49 44 94
Fax: +31-294-49 44 90
e-Mail: sales@vanmeeuwen.nl
Internet: www.vanmeeuwen.nl

TURKEY

GEOCON Ltd. Şti.
Yeni Çamlıca Mahallesi
YEDPA Ticaret Merkezi
B Caddesi No. 21-22
TR-34779 Ümraniye - İstanbul
Tel.: +90-216-4 71 04 62
Fax: +90-216-4 71 03 23
e-Mail: geocon@geocon.com.tr
Internet: www.geocon.com.tr

EUROPE**Weitere Vertretungen/Further distributors**

Bulgaria Greece
Cyprus Russia

NORTH AMERICA**UNITED STATES OF AMERICA**

LUBCON TURMO® LUBRICATION, Inc.
4665 Broadmoor SE, Suite 150
Grand Rapids, Michigan 49512
Tel.: +1-616-554-7930
Fax: +1-616-554-7936
Tel.: US + CAN 877-887-6658
e-Mail: inquiry@lubconusa.com
Internet: www.lubconusa.com

Weitere Vertretung/Further distributor

Mexico

SOUTH AMERICA**BRAZIL**

TRIBOTÉCNICA
Lubrificantes Sintéticos Ltda.
Rua Arthur Alves Bandeira,
200-Jardim Margarida
CEP 06730 000-V Gde Pta-SP-Brasil
Tel.: +55-11-4158-17 00
Fax: +55-11-4158-38 13
e-Mail: diretoria@tribotec.com.br
Internet: www.tribotec.com.br

AFRICA**SOUTH AFRICA, REPUBLIC of**

VIRITH CONVERTING MACHINERY cc
16 Korannaberg Road,
Glenvista EXT 5
P.O. Box 617, Glenvista,
Gauteng RSA 2058
Tel.: +27-11-432 12 33
Fax: +27-11-432 12 11
e-Mail: terry.s@vcmsa.co.za

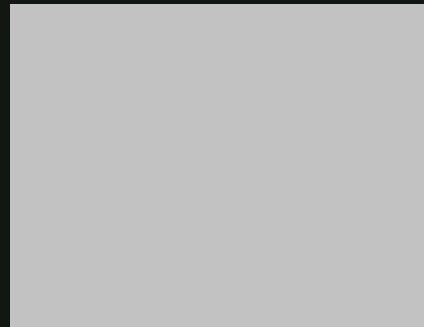
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India	Saudi Arabia
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Iran	Taiwan
Japan	Thailand
Korea	United Arabian Emirates
Malaysia	Vietnam

e-Mail: asia@lubcon.com

**LUBRICANT CONSULT GMBH**

Schmierstoffe · Schmiertechnik · Lubricants · Lubrication Engineering
Gutenbergstraße 13 · D-63477 Maintal · Postfach 200 240 · D-63469 Maintal (Germany)
Tel. +49-61 09 - 76 50-0 · Fax +49-61 09 - 76 50-51
e-Mail: webmaster@lubcon.com · www.lubcon.com