

Evolving technologies require linear motion rolling guides and bearing products to **perform reliably in a range** of challenging environments.

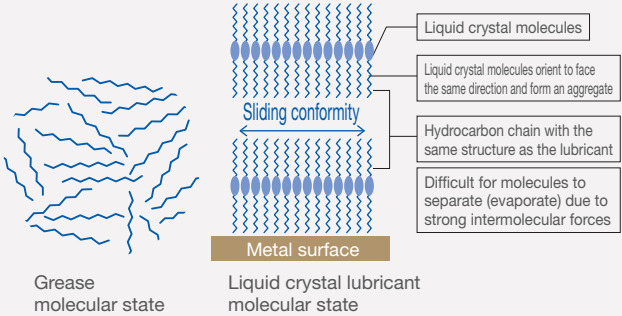
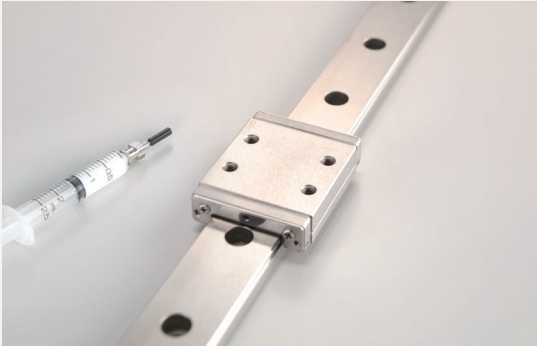
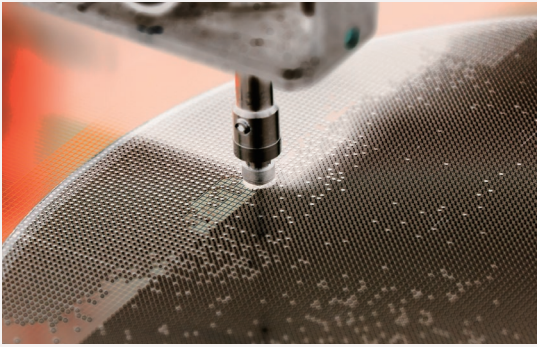
Traditionally, lubricants used in special environments, such as under vacuum, in clean environments, or at high temperatures, have utilized fluorine grease to control contamination caused by outgassing, particles and oil evaporation. And more recently, MAC grease with hydrocarbons has been used due to its excellent characteristics under vacuum. However, these special environment greases have problems in terms of lubrication performance, heat resistance and safety, giving rise to a need for a lubricant with an excellent balance of characteristics to satisfy many requirements simultaneously.

IKO developed a new line of products with a **revolutionary liquid crystal lubricant** to meet this need.

IKO developed the world's first **LCL Linear Way** prepacked with Liquid Crystal Lubricant which greatly improved lubrication performance with low dust generation and low evaporation properties, as well as low outgassing characteristics. Now, IKO expanded the products available with liquid crystal lubricant. Since the structure of the lubricant is completely different from grease, it dramatically improves the performance of linear motion rolling guides and bearing products used in special environments, resulting in increased reliability.

IKO Liquid Crystal Lubricant is **neither grease nor oil. A groundbreaking innovation!**

Liquid crystal lubricants are completely different from greases composed of base oils and thickeners. They are composed only of liquid crystal compounds, **forming a completely new type of lubricant**. Conventional grease base oils lubricate using dissimilar molecules, causing difficulties with adhesion to metal surfaces and evaporation. Liquid crystal lubricant forms molecular aggregates, improving adhesion to metal surfaces and minimizing evaporation. The IKO Liquid Crystal Lubricant used in this Series provides excellent lubrication functionality, even under high contact pressure during rolling contact, which results in extremely high performance.



## ● Manufacturing Support Models

### Linear Motion Rolling Guide Series

- Linear Way L Series
  - Linear Way E Series
  - Linear Way H Series
  - Linear Way F Series
  - Linear Roller Way Super X Series
- Remark: Applicable for stainless steel models from each series.

### Needle Roller Bearing Series

- Crossed Roller Bearings Series

## ● Availability

Liquid Crystal Lubricant Series products are made to order. Mechatronic products and products without manufacturing support model numbers may also be available for manufacture. Please contact IKO for more information.

### ⚠ Precautions for Use

- Continuous operating temperature range: 5 to 100°C (maximum operating temperature 120°C)
- The unit must be stored in a dry and clean place with low humidity and unpacked in the same environment before use, as rust prevention oil has not been applied.
- The LCL Linear Way is packed in clean condition and therefore cleaning is not necessary. Do not wipe it down, etc. after opening the package.
- Liquid Crystal Lubricant has fluorescent properties under certain ultraviolet light.
- Use gloves when handling so that the Liquid Crystal Lubricant does not touch the skin directly.
- Respective values used in tables are for reference and are not guaranteed values.

### NIPPON THOMPSON CO., LTD. (JAPAN)

Head Office : 19-19, Takanawa 2-chome, Minato-ku, Tokyo, 108-8586, Japan  
Phone : +81 (0)3-3448-5850  
Fax : +81 (0)3-3447-7637  
E-mail : ntt@ikonet.co.jp  
URL : https://www.ikonet.co.jp/eg/  
Plant : Gifu, Kamakura



### IKO INTERNATIONAL, INC. (U.S.A.)

**East Coast Operation (Sales Head Office)**  
91 Walsh Drive,  
Parsippany, NJ, 07054,  
U.S.A.  
Phone : +1-973-402-0254  
Toll Free : +1-800-922-0337  
Fax : +1-973-402-0441  
E-mail : eco@ikonet.co.jp



**Midwest Operation**  
101 Mark Street, Unit-G,  
Wood Dale, IL, 60191,  
U.S.A.  
Phone : +1-630-766-6464  
Toll Free : +1-800-323-6694  
Fax : +1-630-766-6869  
E-mail : mwo@ikonet.co.jp

**West Coast Operation**  
9830 Norwalk Boulevard, Suite 198,  
Santa Fe Springs, CA, 90670,  
U.S.A.  
Phone : +1-562-941-1019  
Toll Free : +1-800-252-3665  
Fax : +1-562-941-4027  
E-mail : wco@ikonet.co.jp

**Silicon Valley Sales Office**  
1500 Wyatt Drive, Suite 10,  
Santa Clara, CA, 95054,  
U.S.A.  
Phone : +1-408-492-0240  
Toll Free : +1-800-252-3665  
Fax : +1-408-492-0245  
E-mail : wco@ikonet.co.jp

**Southeast Operation**  
3235 Satellite Boulevard Building 400, Suite 230,  
Duluth, GA, 30096,  
U.S.A.  
Phone : +1-770-418-1904  
Toll Free : +1-800-874-6445  
Fax : +1-770-418-9403  
E-mail : seo@ikonet.co.jp

**Southwest Operation**  
6191 N STATE HIGHWAY 161, STE 440,  
IRVING, TX 75038-2264,  
U.S.A.  
Phone : +1-972-925-0444  
Toll Free : +1-800-295-7886  
Fax : +1-972-707-0385  
E-mail : swo@ikonet.co.jp

### IKO THOMPSON BEARINGS CANADA, INC.(CANADA)

731-2425, Matheson Boulevard East, 7th floor,  
Mississauga, Ontario, L4W 5K4, Canada  
Phone : +1-647-931-3933  
E-mail : itc@ikonet.co.jp

### IKO BRASIL SERVIÇOS EMPRESARIAIS LTDA. (BRAZIL)

Rua Frei Caneca 1407,  
Condominio Edificio Barão de Monte Cedro,  
Cjs. 801/802, Consolação, São Paulo- SP  
Cep: 01307-909  
Phone : +55 (0)11-2366-3033  
E-mail : itb@ikonet.co.jp

### NIPPON THOMPSON EUROPE B.V. (EUROPE)

**The Netherlands (Sales Head Office)**  
Keersopstraat 35,  
3044 EX, Rotterdam,  
The Netherlands  
Phone : +31 (0)10-462 68 68  
E-mail : nte@ikonet.co.jp



**Germany Branch**  
Mündelheimer Weg 54,  
40472 Düsseldorf,  
Germany  
Phone : +49 (0)211-41 40 61  
Fax : +49 (0)211-42 76 93  
E-mail : ntd@ikonet.co.jp

**Regensburg Sales Office**  
Im Gewerbepark D 04,  
93059 Regensburg,  
Germany  
Phone : +49 (0)941-20 60 70  
Fax : +49 (0)941-20 60 719  
E-mail : ntdr@iko-nt.de

**U.K. Branch**  
2 Vincent Avenue, Crownhill,  
Milton Keynes, Bucks, MK8 0AB,  
United Kingdom  
Phone : +44 (0)1908-566144  
E-mail : sales@iko.co.uk

**Spain Branch**  
Autovia Madrid-Barcelona, Km. 43,700  
Polig. Ind. AIDA - Nove A-8, Ofic. 2-1ª  
19200-Azuqueca de Henares,  
(Guadalajara) Spain  
Phone : +34 949-26 33 90  
Fax : +34 949-26 31 13  
E-mail : nts@ikonet.co.jp

**France Branch**  
Bâtiment le Raphaël-Paris, Nord 2,  
22 avenue des Nations  
BP54394 Villepinte  
95943 ROISSY C.D.G Cedex  
France  
Phone : +33 (0)1-48 16 57 39  
Fax : +33 (0)1-48 16 57 46  
E-mail : ntf@ikont.eu

### IKO THOMPSON ASIA CO., LTD. (THAILAND)

Unit 305,3rd Fl., Zuellig house, 1-7 Silom Rd.,  
Silom Bangrak, Bangkok 10500, Thailand  
Phone : +66 (0)2637-5115  
Fax : +66 (0)2637-5116  
E-mail : ita@ikonet.co.jp

### IKO THOMPSON KOREA CO.,LTD. (KOREA)

201, Worldvision Bldg., 77-1, Yeouinaru-ro,  
Yeongdeungpo-gu, Seoul, Korea  
Phone : +82 (0)2-6337-5851  
Fax : +82 (0)2-6337-5852  
E-mail : itk@ikonet.co.jp

### IKO-THOMPSON (SHANGHAI) LTD. (CHINA)

**Shanghai (Sales Head Office)**  
2301-02, 2310, MetroPlaza No.555, LouShanGuan  
Road, ChangNing District, Shanghai,  
People's Republic of China, 200051  
Phone : +86 (0)21-3250-5525  
Fax : +86 (0)21-3250-5526  
E-mail : ntc@ikonet.co.jp

**Beijing Branch**  
Room 1909, Tower C Oriental Media Center,  
Guanghua Road No. 4 Chaoyang District, Beijing,  
People's Republic of China, 100026  
Phone : +86 (0)10-6515-7681  
Fax : +86 (0)10-6515-7689  
E-mail : ntc@ikonet.co.jp

**Guangzhou Branch**  
Room 834, Garden Tower, Garden Hotel  
368 Huanshi East Road, Yuexiu District, Guangzhou,  
Guangdong  
People's Republic of China, 510064  
Phone : +86 (0)20-8384-0797  
Fax : +86 (0)20-8381-2863  
E-mail : ntc@ikonet.co.jp

**Wuhan Branch**  
Room 2300, Truroll Plaza No.72, Wusheng Road,  
Qiao kou District, Wuhan, Hubei,  
People's Republic of China, 430033  
Phone : +86 (0)27-8556-1610  
Fax : +86 (0)27-8556-1630  
E-mail : ntc@ikonet.co.jp

**Shenzhen Branch**  
Room1808, KEENSTAR Building 18,  
Chuangye 2nd Rd 248, Bao'an, Shenzhen, Guangdong,  
People's Republic of China, 518081  
Phone : +86 (0)755-2265-0553  
Fax : +86 (0)755-2298-0665  
E-mail : ntc@ikonet.co.jp

**Xian Branch**  
Room 2010, Block B, Chaoyang International Plaza,  
No. 166,  
Changle West Road, Xincheng District Xi'an, Shanxi,  
People's Republic of China, 710032  
Phone : +86 (0)29-8323-5915  
E-mail : ntc@ikonet.co.jp

**Qingdao Branch**  
Room 608, Building 47, Huarun City,  
No. 101 Shenzhen Road, Laoshan District,  
Qingdao City, Shandong  
People's Republic of China, 266100  
Phone : +86 (0)532-8670-2246  
Fax : +86 (0)532-8670-2242  
E-mail : ntc@ikonet.co.jp

**Shenyang Branch**  
2-1203 Tower I, City Plaza Shenyang NO.206,  
Nanjing North Street, Heping District,  
Shenyang, Liaoning  
People's Republic of China, 110001  
Phone : +86 (0)24-2334-2662  
Fax : +86 (0)24-2334-2442  
E-mail : ntc@ikonet.co.jp

**Ningbo Office**  
Room 3406, Zhongnongxin Building, No.181,  
Zhongshan East Road, Haishu District,  
Ningbo, Zhejiang  
People's Republic of China, 315000  
Phone : +86 (0)574-8718-9535  
Fax : +86 (0)574-8718-9533  
E-mail : ntc@ikonet.co.jp



ISO 9001 & 14001 Quality system registration certificate

CAT-2978E

Printed in Japan © 2024.6 (AK)



Low Dust Generation - Low Evaporation - Long Life

# Liquid Crystal Lubricant Series

Linear motion rolling guides and bearings prepacked with a high-performance liquid crystal lubricant.

Patented

World's first



NIPPON THOMPSON CO., LTD.



• The specifications and dimensions of products in this catalog are subject to change without prior notice. • When these products are exported, the exporter should confirm a forwarding country and a use, and, in case of falling under the customer's requirements, take necessary procedures such as export permission application. • Although all data in this catalog has been carefully compiled to make the information as complete as possible, NIPPON THOMPSON CO., LTD. shall not be liable for any damages whatsoever, direct or indirect, based upon any information in this catalog. NIPPON THOMPSON CO., LTD. makes no warranty, either express or implied, including the implied warranty of merchantability or fitness for a particular purpose. • Reproduction and conversion without permission are prohibited.

https://www.ikonet.co.jp/eg/



# The World's First! Improve machine performance with IKO Liquid Crystal Lubricant Series products.

## Environmental Benefits

Liquid Crystal Lubricant generates minimal dust and evaporation, making it highly clean. Because it is composed only of carbon, hydrogen, and oxygen, it does not contain organic fluorine compounds (PFAS) and supports halogen-free use. In addition, it does not emit toxic gases when burned.

## Vacuum Characteristics

Characteristics are excellent in vacuum environments as well. With durability more than twice that of conventional fluorine grease, outgassing characteristics at high temperatures are excellent as well.

