

# LAMBDA<sup>®</sup> Chain



Easy to use — no additional lube required!

# LAMBDA<sup>®</sup> Chain solves



## No time for additional lubrication

Chains need a lot of time to lubricate.

Solved with  
LAMBDA Chain

LAMBDA Chain can be used without additional lubrication, so you can spend that time doing other work.

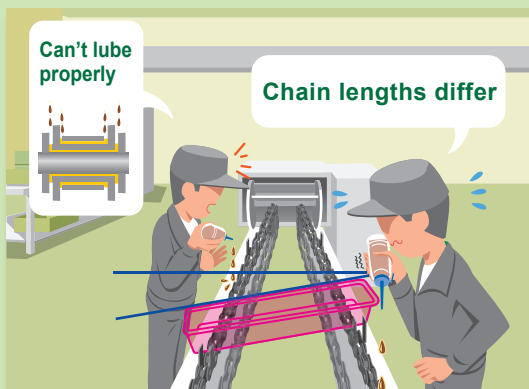


## Chains are too high up to lube

Some chains are too high up, or in hard-to-reach places, for additional lubrication, and when they are not lubricated they can suffer premature wear elongation.

Solved with  
LAMBDA Chain

LAMBDA Chain can be used without additional lubrication, making them ideal in high or hard-to-reach places.



## Can't maintain proper lubricated conditions

In order to lubricate properly, lubricant has to penetrate between outer plates, inner plates, and rollers. Any non-uniformity in conveyor applications can cause the right and left side chains to wear and elongate differently.

Solved with  
LAMBDA Chain

Oil is supplied by the special oil-impregnated sintered bushes so a lubricated state is always maintained.



## LAMBDA Chain — A lube-free chain using special oil-impregnated sintered bushes.

### Feature 1

Special oil-impregnated sintered bushes allow use without additional lubrication.

### Feature 2

Special oil-impregnated sintered bushes use NSF H1 certified lube.

Note: Be aware that non-NSF H1 anti-rust agent and assembly lube from the manufacturing process may be present on the chain.

# your worksite problems!



## Can't maintain a clean, safe workplace

Lubricating the chain attracts dust and debris, which can make the surrounding environment dirty. Also, any lube that drips on the floor can cause a slip.

Solved with  
LAMBDA Chain

LAMBDA Chain can be used without additional lubrication to help you maintain a clean workplace.



## Can't lube because it may come in contact with food

The chain runs next to food, and so any additional lubrication may come into contact with the food.

Solved with  
LAMBDA Chain

The special oil-impregnated bushes use NSF H1 certified lube. LAMBDA Chain is ideal for food equipment.

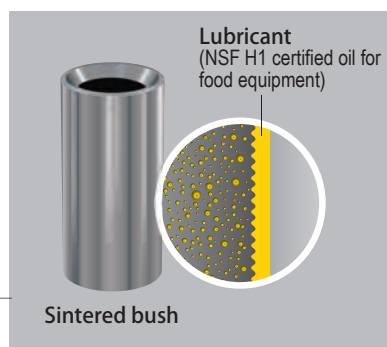
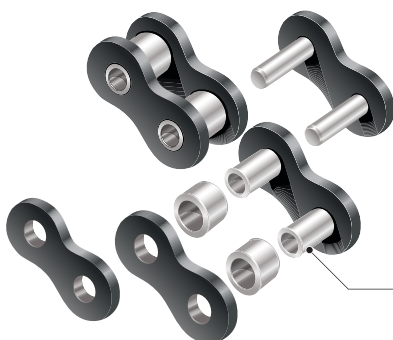


## Can't maintain a comfortable workplace

The chain makes grating sounds when it runs dry.

Solved with  
LAMBDA Chain

LAMBDA Chain maintains a lubricated state and so can minimize any abnormal sounds.



### NSF H1

- NSF International certifies the safety of lubricant for food equipment.
- NSF H1 lube is an NSF International standard that states it can be used in areas where it may come into accidental contact with food.

# LAMBDA Chain

Tsubaki is a pioneer in the industry, being the first to develop a roller chain that uses special oil-impregnated bushes. Since first being introduced in 1988, LAMBDA Chain has gained an outstanding reputation in a variety of industries and applications. It is capable of meeting a wide range of customer needs for long life in a lubrication-free environment, resulting in reduced overall long-term costs. LAMBDA Chain uses NSF H1 lubricant, so it is safe to use on food equipment.



## Long life without additional lubrication

..... Special oil-impregnated bushes provide long service life.

## Food grade lubricant

..... Sintered bushes use NSF H1 conforming lubricant.

## Compatibility

..... Compatible with standard RS Roller Chain. (Note: kW ratings will differ.)

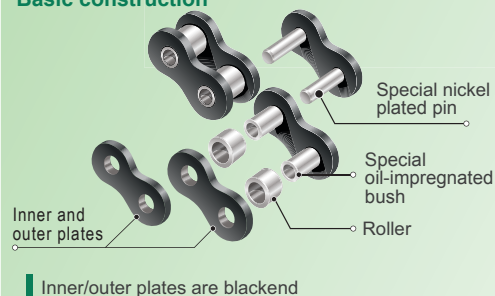
## Operating temperature range

..... -10°C to 150°C

## Sprocket

..... Can use Standard RS sprockets. Conventional double strand LAMBDA Chain requires special sprockets.

### Basic construction



# Long Life LAMBDA Chain (X-LAMBDA Chain)

The inclusion of oil-impregnated felt seals between link plates significantly improves the wear resistance of standard LAMBDA Chain. Ideal for environments where even longer replacement intervals compared to standard LAMBDA Chain are required.



## Ultra long life without additional lubrication

..... The combination of a special oil-impregnated bush and felt seal further extends service life.

## Food grade lubricant

..... Sintered bushes use NSF H1 conforming lubricant.

## Compatibility

..... Compatible with standard LAMBDA Chains. However, as the overall pin length is longer than with LAMBDA Chain, check that there will be no interference with the machinery or other equipment.

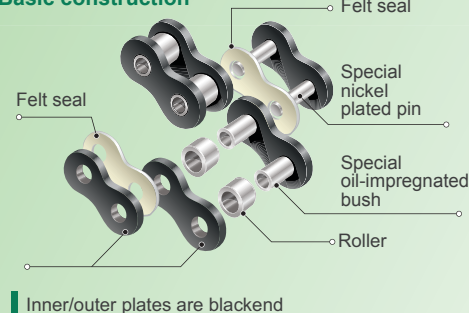
## Operating temperature range

..... -10°C to 60°C.  
..... Contact a Tsubaki representative regarding use in temperatures over 60°C.

## Sprocket

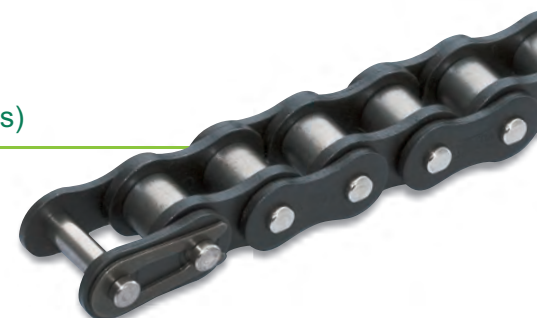
..... Can use Standard RS sprockets

### Basic construction



# LAMBDA Chain KF Series (Heat Resistant Series)

Special lubricant demonstrates performance in high-temperature environments (150°C to 230°C) and resists degradation. Demonstrates best wear resistance in the high-temperature range.



## Operating temperature range

..... -10°C to 230°C.  
..... Note: Best between 150°C to 230°C

## Food grade lubricant

..... Special sintered bushes use a high-temperature NSF H1 food grade oil.



Do not use in environments over 230°C. This will lead to a serious decrease in wear life.  
Harmful gases may be emitted in temperatures over 280°C.

# Surface Treated LAMBDA Chain

The plates and rollers have been surface treated to provide better corrosion resistance.

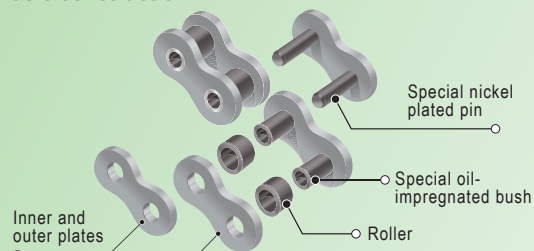
## NP Series

A special nickel plating gives this LAMBDA Chain slight corrosion resistance.

## NEP Series

A special surface coating gives this LAMBDA Chain improved corrosion resistance.

### Basic construction



#### NP Series

Inner/outer plates and rollers use a special nickel plating

#### NEP Series

Inner/outer plates and rollers use a special surface coating

# RS Double Strand Chain Compatible LAMBDA Chain

## Sprocket

Can use RS sprockets.

## Higher kW ratings

Has 20% higher kW ratings over traditional double strand LAMBDA Chain.



# LAMBDA Rollers

For top roller and outboard roller chains

LAMBDA Rollers are steel rollers with special oil-impregnated bearings inside to enable lube-free operation. They can help eliminate abnormal noises that arise from steel rollers that aren't lubricated: LAMBDA Rollers were 10 dB quieter than steel rollers under in-house test conditions.

Hear the difference for yourself in this video.



Table of Available LAMBDA Chain Sizes

	Drive Chain			Conveyor Chain	
	Single Strand	RS Double Strand Compatible	Traditional Double Strand LAMBDA Chain	Double Pitch	LAMBDA RS Attachment Chain
LAMBDA Chain Surface Treated LAMBDA Chain	RS40 – RS160-1 RF06B – RS24B	RS40 – RS160-2	RS40 – RS100-2	RF2040 – RF2120	RS35 – RS140 RS08B – RS24B
X-LAMBDA Chain	RS40 – RS120-1	—	—	RF2040 – RF2100	RS40 – RS100
KF Series LAMBDA Chain	RS40 – RS80-1	RS40 – RS80-2	RS40 – RS80-2	RF2040 – RF2080	RS40 – RS80
LAMBDA Rollers	—	—	—	RF2040 – RF2080	RS40 – RS80

Note: Other sizes also available. Contact a Tsubaki representative for more information.



### Cautions regarding use

- Dust in the bushes accelerates wear.
- Wet environments can cause the oil in the oil-impregnated bushes to leak out and lead to wear.
- Chain is coated with less anti-rust agent than with RS Roller Chain, which may lead to premature rusting.
- Do not use if the chains will come in direct contact with food or where coating/plating flakes or wear debris can contaminate food. Also, in non-food applications, either appropriately cover the chains or contact a Tsubaki representative about chain selection if usage is planned in environments where coating flakes and wear debris present problems. Though nickel is not subject to the Food Sanitation Law or the Industrial Safety and Health Law, plating on sliding parts can flake.
- Impregnated oil may spatter depending on usage conditions.

Note: Be aware that non-NSF H1 anti-rust agent and assembly lube from the manufacturing process may be present on the chain.



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