

BS LAMBDA LUBE FREE ROLLER CHAIN

TSUBAKI's LAMBDA Chains were the first in the industry to use a special oil-impregnated bush. Since their launch in 1988, they have been adopted for diverse industries and applications, and their performance has been highly rated. TSUBAKI has a wide line-up of lube-free, long life products that help customers reduce costs.

Technical Evolution

As a pioneer in the lube-free chain market, TSUBAKI will reveal some of the key elements behind BS LAMBDA's outstanding performance:

Sintered Bush

A special oil-impregnated sintered bush in combination with a special coated pin for long-term internal lubrication is the secret of TSUBAKI BS LAMBDA's long economic life and wear resistance.

Easy Cutting

BS LAMBDA chain can be disassembled quick and safely with an original TSUBAKI Chain Tool without damaging the bushes (RS08B-LM-1 to RS16B-LM-1).

Patented Ring Coining Process

Breakage of the chains connecting link is no issue at TSUBAKI thanks to this unique feature. By applying the patented Ring Coining process, TSUBAKI generates a cold deformation around the pin hole of the connecting link plate. This results in residual stress around the pin hole and thereby adds strength. By using this process transmission capacity is 100% of the base chain.

Special Environments

TSUBAKI BS LAMBDA has outstanding performance in temperatures up to 150°C. For temperatures above 150°C TSUBAKI has a special high-temperature BS LAMBDA available. Please contact TSUBAKI for more detailed information.

For applications in the food industry, TSUBAKI can supply BS LAMBDA chain with bushes impregnated with food grade lubricating oil (NSF-H1 and H3 certified).

When an application needs water wash downs or is exposed to moisture, and lubrication is not possible or desirable, LAMBDA N.E.P. is most efficient.

Advantages

TSUBAKI has enhanced the BS LAMBDA with the following advantages:

Save Maintenance Costs

No expensive labour costs as it is not required to manually lubricate this chain.

Save Purchasing Costs

Lower frequency of purchasing due to the high quality of the chain and its long economic life. No purchasing of lubricants or lubrication systems necessary.

Higher Productivity

No unforeseen downtime due to chain breakdown. Less time required for maintenance and therefore more time for production.

Environmental Friendly

Applications run clean thus reducing the risk of contaminating products, machines, floor etc.

Inter-Changeability

Chains:

BS LAMBDA Chains are fully interchangeable with standard BS roller chains.

Sprockets:

Standard BS roller chain sprockets can be used. However, due to the extended lifetime of BS LAMBDA chain, TSUBAKI recommends to install sprockets with hardened teeth in every LAMBDA application.

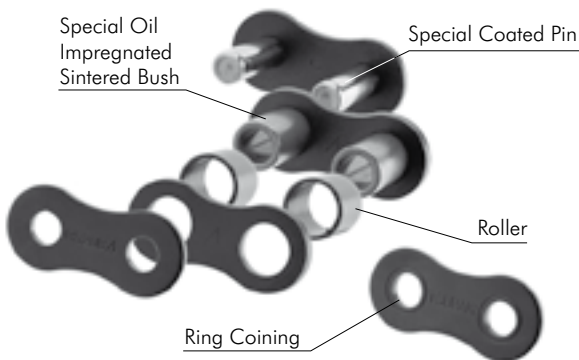
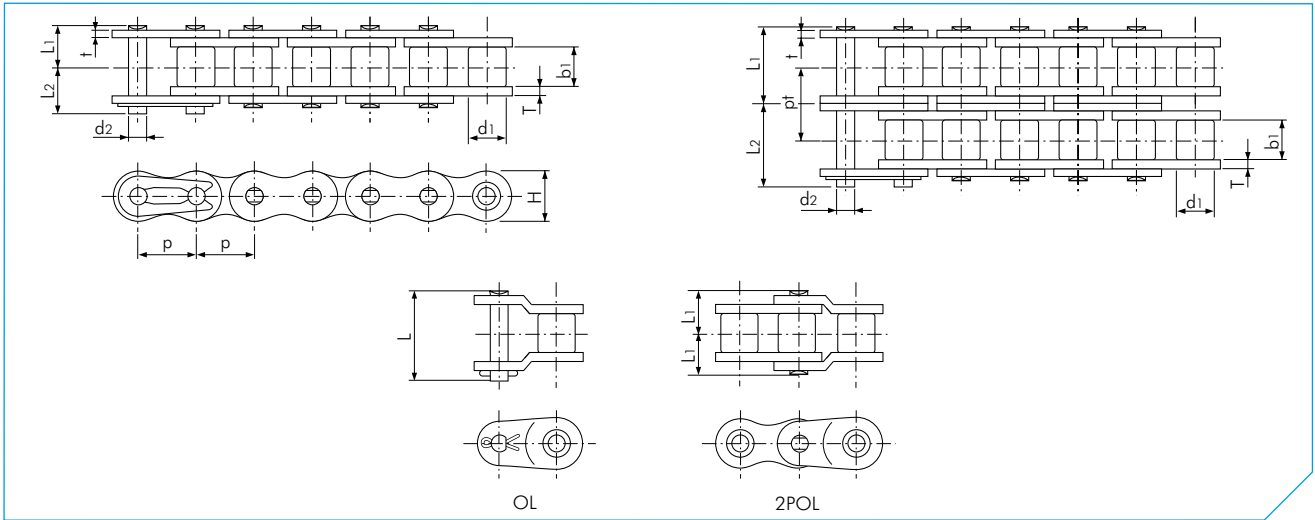


Fig. 10 Basic Construction

BS LAMBDA LUBE FREE ROLLER CHAIN



BS LAMBDA Chain

Dimensions in mm

TSUBAKI Chain No.	Pitch p	Roller Diameter d1	Inner Width b1	Pin				Link Plate			Transverse Pitch pt	Min. Tensile Strength acc. to ISO 606 kN	Approx. Mass kg/m
				Diameter d2	Length L1	Length L2	Length L	Thickness T	Thickness t	Height H (max)			
RF06B-LM-1	9.525 (3/8")	6.35	5.72	3.28	6.10	7.70	15.10	1.30	1.00	8.20	-	8.9	0.39
RF06B-LM-2					11.20	12.80	25.90				10.24	16.9	0.75
RS08B-LM-1	12.70 (1/2")	8.51	7.75	4.45	8.40	10.00	18.60	1.60	1.60	12.00	-	17.8	0.70
RS08B-LM-2					15.30	16.90	34.50				13.92	31.1	1.35
RS10B-LM-1	15.875 (5/8")	10.16	9.65	5.08	9.55	11.25	20.80	1.50	1.50	14.70	-	22.2	0.95
RS10B-LM-2					17.85	19.55	39.40				16.59	44.5	1.85
RS12B-LM-1	19.05 (3/4")	12.07	11.68	5.72	11.10	13.00	24.40	1.80	1.80	16.10	-	28.9	1.25
RS12B-LM-2					20.85	22.75	45.90				19.46	57.8	2.50
RS16B-LM-1	25.40 (1")	15.88	17.02	8.28	17.75	19.95	39.30	4.00	3.20	21.00	-	60.0	2.70
RS16B-LM-2					33.55	35.75	73.40				31.88	106.0	5.40
RS20B-LM-1	31.75 (1 1/4")	19.05	19.56	10.19	19.90	23.10	46.60	4.40	3.40	26.40	-	95.0	3.85
RS20B-LM-2					38.25	41.45	84.60				36.45	170.0	7.65
RS24B-LM-1	38.10 (1 1/2")	25.40	25.40	14.63	26.65	31.85	61.70	6.00	5.60	33.40	-	160.0	7.45
RS24B-LM-2					50.80	56.00	112.80				48.36	280.0	14.65

Note:

1. Connecting links are clip type for sizes up to RS16B-LM, and cotter type for sizes RS20B-LM to RS24B-LM.
2. RF06B-LM chain has flat shaped link plates.
3. Intermediate plate of RF06B-LM-2 and RS08B-LM-2 is a solid plate.
4. Centre sink riveting is applied for RS08B-LM-1 to RS16B-LM-1. Double stake riveting is applied to all other sizes including multi-strand chain.
5. Warning: previous generations of Lambda chain can not be connected with the above chains due to different dimensions.
6. When a single pitch offset link is used, please calculate a 35% reduction of the fatigue strength.
7. Also available in N.E.P. specification.

BS X-LAMBDA LUBE FREE ROLLER CHAIN

Ten years after introducing the number-one LAMBDA Chain to the market in 1988, TSUBAKI has developed innovative technology that sets the bar even higher for lube-free chain performance. To the user the benefits that X-LAMBDA provides mean increased productivity, reduced maintenance and a cleaner working environment.

Technical Evolution of BS LAMBDA

BS X-LAMBDA chain is a quantum leap for power transmission technology. The basic BS LAMBDA components (a special coated pin and an oil-impregnated sintered bush) come completed with special felt seals (patent pending) between inner and outer link plate that lock in lubrication while keeping dirt and abrasives out.

Because of this evolution BS X-LAMBDA chain greatly increases the performance of the BS LAMBDA chains. When your operation needs to run clean, when machines and conveyed materials must be free from contact with oil, or when lubrication is difficult, BS X-LAMBDA chain can extend the life of your operation drastically.

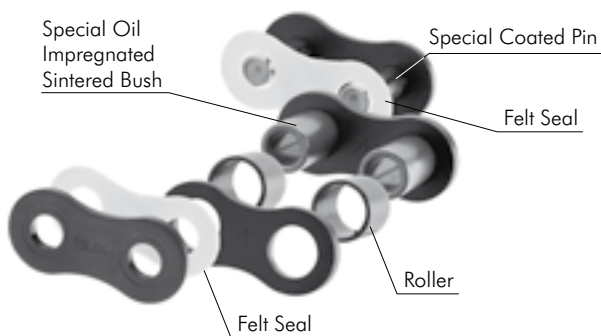


Fig. 11 Basic Construction

Advantages

Additional to all BS LAMBDA advantages, TSUBAKI has enhanced the BS X-LAMBDA with the following additional advantages:

Extended Wear Life

Even longer wear life than BS LAMBDA chain (over 5 times longer).

Applicable in Dusty Environments

Extra protection of critical areas due to the specially developed felt seal.

Connecting Method

When connecting the chain, use a BS X-LAMBDA chain connecting link (with a felt seal). As shown in Fig. 12 insert felt seals between the outer plate and the connecting link plate, then attach the link.

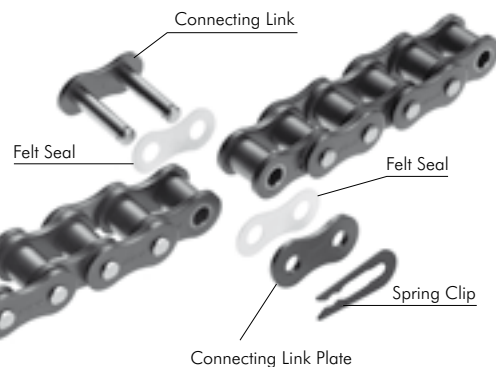


Fig. 12 Connecting Method BS X-LAMBDA

Inter-Changeability

Chains:

BS X-LAMBDA chain is interchangeable with standard BS roller chain. However, as the pins are longer than those of the standard BS roller chain, please make sure that there is no interference with the machine.

Sprockets:

Standard BS roller chain sprockets can be used. However, due to the extended lifetime of BS X-LAMBDA chain, TSUBAKI advises to install sprockets with hardened teeth in every LAMBDA application.



