

RITSUHA

**ENGINEERED
WITH EXCELLENCE**



TRANSMISSION PARTS



**GREATER FATIGUE
STRENGTH**



HEAT RESISTANT



ANTI-CORROSION

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RITSUKA

www.ritsukaparts.com

About the company

Eastman Auto and Power Ltd is the company behind the brand –“Ritsuka”.

We are one of the top manufacturers and exporters. We engineer a massive capacity of approx. 10 lakh units of different motorcycle and automotive products every month and at the same time; master a wide range of around 100-120 different models.

The promise of quality and an unmatched product mix defines us. we can proudly say that we are one of the finest companies in the automotive industry to provide complete value to our customers.

We also strive to assure our customers that the in-house quality control team constantly monitors every aspect of business, from production to our valued customers. Our expert team ensures that each product supplied is of the highest standards. Each product is tested in our specialized testing centers to ensure that our product suits market conditions. With a focus on value in each phase, we lay emphasis on product quality, packaging as well as distribution.

We also manufacture motorcycle complete units, automotive batteries, tyres and tubes.

Know more about us and our business at

www.eastmanautogroup.com

Ritsuka - Our Brand

Our brand redefines premium for masses when it comes to motorcycle spare parts. Ritsuka is all about precision based engineering and consummate craftsmanship inspired by the Japanese philosophy of "Monozukuri". With the aim to delight a worldwide customer base. The brand is focused on offering premium quality experience and highly durable spare parts to masses. To this end, we strive for continuous innovation and thus, introduce the world of motorcycle spare parts to a new paradigm of excellence. Every part adheres to a design language reflecting superior form, function, ruggedness and value for everyone.

Ritsuka is precision

Innovation is only a beginning. What really makes Ritsuka spare parts extraordinary is an obsession with precision and the pursuit of perfection.

Ritsuka is quality

When it comes to quality, we believe in perfection. Ritsuka spare parts promise durability, longevity and top-notch quality.

Ritsuka is focused engineering

Engineering may be just another word for the world, but for us it is the world. The foundation for everything we do under our brand - Ritsuka is in-depth knowledge, at every stage.

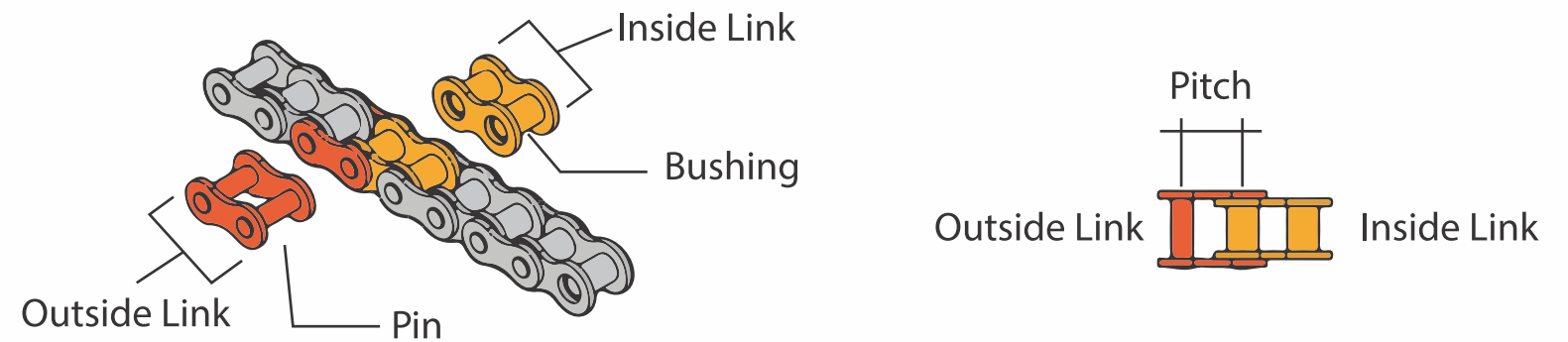
Explore Ritsuka at www.ritsukaparts.com

Chain



Product

We focus on basics of manufacturing chains to create a perfect product. A roller chain is used to connect two sprockets together and transfer torque. Roller chain is made up of a series of inner and outer links connected together to form a flexible strand. We build on our knowledge and expertise to further fortify precision and engineering. Each of the singular parts is finely manufactured with superior quality and durability, right from the exceptional raw material or enhanced processes.



Outside Links consist of two outside plates which are connected by two pins that are pressed into each plate. The pins in the outside link go through the inside of the hollow bushings when the inner and outer links are assembled. The pins can freely spin on the inside of the bushings.

Inside Link consists of two inside plates that are connected by two hollow bushings which are pressed into each plate. The teeth of the sprocket contact the surface of the bushings when the chain is wrapped around a sprocket. Pitch is the distance between the centres of two adjacent pins. Common pitches are 0.25", known as #25, and 0.375" (#35).

A rider's safety and comfort being the prime motive helps us manufacture the best product. Samples from the finished manufactured chains undergo rigorous testing in state-of-the-art testing labs for high speed and load to evaluate their performance, maintaining international standards. All the chains are pre-lubricated with special lubricants for ensuring long operational life.



Manufacturing

We follow precision-based production process wherein quality is imbibed at every step. Our quality consistency control ensures that benchmarks are every step of the flow and products manufactured is nothing less than perfection.

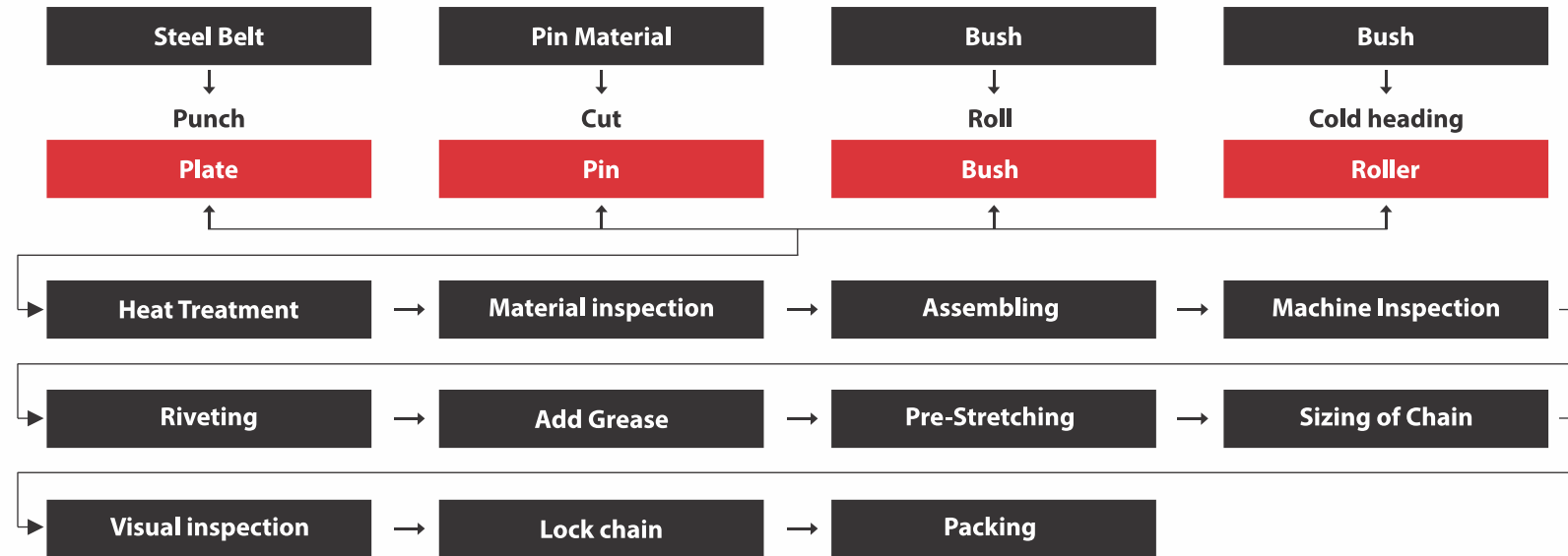
We also manufacture seal-ring chain which is superior to other branded chains. During manufacturing of seal-ring chain, we position a rubber seal ring between the inner and the outer plate of the roller chain, which keeps the dust particles out and prevents the grease from flowing out. The end benefits of such remarkable process are less elongation, silent operation, long life-span and low lubrication frequency.



CHAIN

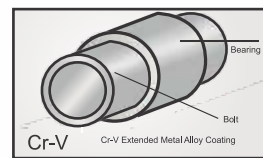


Chain manufacturing process flow

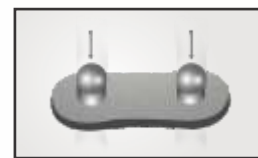


Characteristics of Ritsuka Chain / Seal Chain-Ring

Between the inner and outer plate of the roller chain there is a rubber sealing ring, which keeps out the dust particles and stops the grease from flowing out. This way we do not have to re-grease the chain again. So the advantage of the seal ring chain is less elongation, silent operation, long service life and lower frequency of lubrication.



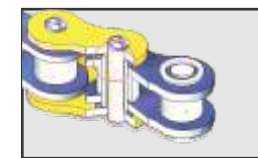
Chrome: There is a layer of metal alloy-Cr-V on the surface of the spare parts, imparts a great hardness; less wear/tear; heat-resistant; anti-corrosion



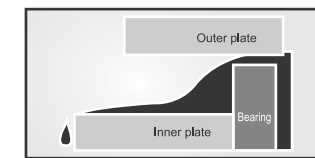
Metal plates: The holes in the plate are finally polished ball to ensure maximum resistance to fatigue breakage.



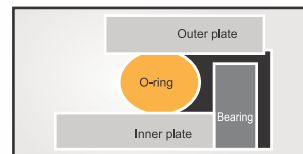
Small parts: Bond plates and rollers are shot peened for greater resistance to fatigue.



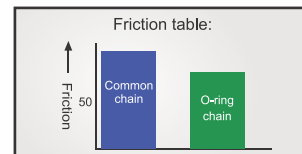
Chain profile



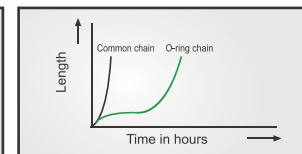
Common chain: The oil in the common chain flows easily



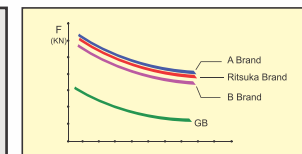
O-ring chain: The oil / grease in O-ring chain



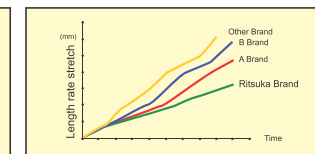
Friction table: Common chain vs. O-ring chain



Wear Resistance Table: Common chain vs. O-ring chain

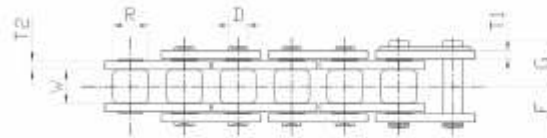
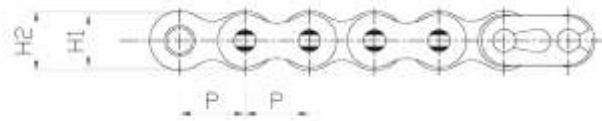


Fatigue Analysis Chart: Ritsuka against other brands



Wear analysis table: Ritsuka against other brands





Chain											
Ritsuka	Pitch	Bush Type	Width	Pin		Roller	Plate Thickness		Tensile	Application	Application By CC
Chain No.				mm	Dia	Length	Dia	Inner	Outer		
415H	12.700	Curled	4.80	3.96	14.75	7.77	1.5	1.5	16.0	Moped	50-85
420H	12.700	Curled	6.35	3.96	16.60	8.15	1.8	1.8	17.0	Moped	50-85
428H	12.700	Curled	7.85	4.45	18.40	10.16	2.0	2.0	20.6	Street	125-250
520H	15.875	Curled	6.35	5.08	18.80	10.16	2.42	2.42	30	Street	125-250
525H	15.875	Curled	7.95	5.08	20.90	10.16	2.42	2.42	30	Street	125-250
530H	15.875	Curled	9.40	5.08	22.10	11.91	2.42	2.42	30	Street	125-250

O-Ring											
Ritsuka	Pitch	Bush Type	Width	Pin		Roller	Plate Thickness		Tensile	Application	Application By CC
Chain No.				mm	Dia	Length	Dia	Inner	Outer		
428HO	12.700	Solid	7.85	4.46	21.80	8.51	2.0	2.0	22.0	Street/Off-road	125-200
5200	15.875	Solid	6.35	5.24	20.15	10.16	2.0	2.0	26.5	Street/Off-road/Sports	150-200
5300	15.875	Solid	9.40	5.25	23.40	10.16	2.0	2.0	26.5	Street/Off-road/Sports	150-200
520HO	15.875	Solid	6.35	5.26	22.00	10.16	2.42	2.42	33.0	Street/Off-road/Sports	200-350
525HO	15.875	Solid	7.95	5.27	23.50	10.16	2.42	2.42	33.0	Street/Off-road/Sports	200-350
530HO	15.875	Solid	9.40	5.28	24.95	10.16	2.42	2.42	30.0	Street/Off-road/Sports	200-350



Strengthen silent chain

Ritsuka Chain No.	Pitch	Number of plates	Chain width	Pin diameter	Plate depth	Distance from hole center to tooth top	Plate thickness		Pin length max	Tensile strength	Weight per meter
	P	n	b1 min	D2 min	h2	h2	t	T	L max	Q min	q
	mm	mm	mm	mm	mm	mm	mm	mm	mm	RN	RN
EST04CF-5	6.35	2.3	3.15	2.41	6.7	2.8	l	0.8	6.1	5.2	0.165
EST04CF-7	6.35	3.4	5.2	2.41	6.7	2.8	l	0.8	8.2	9.1	0.24
EST04CF-7	6.35	4.5	7.25	2.41	6.7	2.8	l	0.8	10.3	11.8	0.312



Bush Chain

Ritsuka	Pitch	Bush diameter	With between inner plates	Pin diameter	Plate depth	Pin length	Tensile strength	Weight per meter
	p nom	d max	b1 min	b2 max	h2 max	L max	Q max	q
	mm	mm	mm	mm	mm	mm	RN	Rg/m
25H	6.35	3.3	3.18	2.31	5.9	8.8	5.2	0.17
219H	7.774	4.59	5	4.59	7.4	11.5	9.8	13/1.03
270H	8.5	5	4.75	3.28	8.2	13.1	9.8	0.42



Testing

Finished chains are thoroughly checked and tested to ensure 100% accurate fitting before dispatching. Our state-of-the-art testing machinery conducts various tests on each unit of chain to ensure perfection:

- Hardness testing machine
- Elongation testing machine
- Digital & analog tensile tester
- Fatigue testing machine
- Length accuracy test
- Chemical analysis test lab
- Metallographic analysis test machine

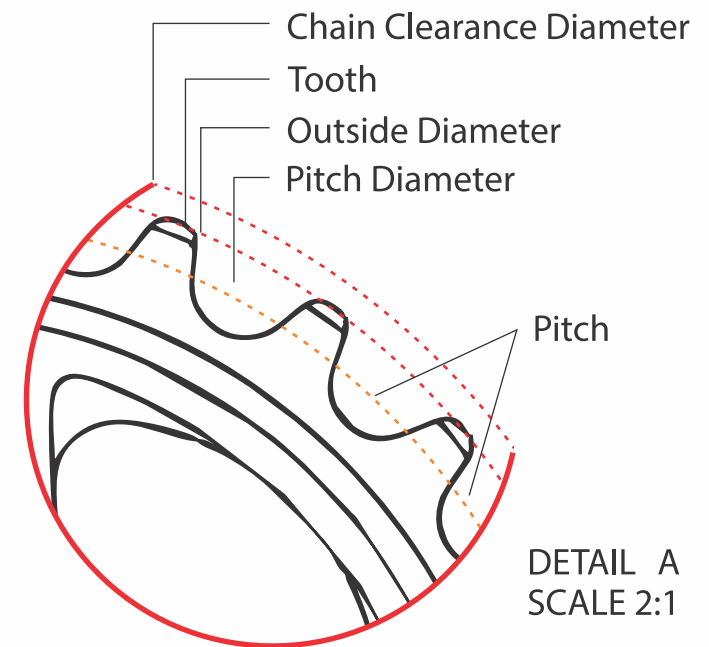
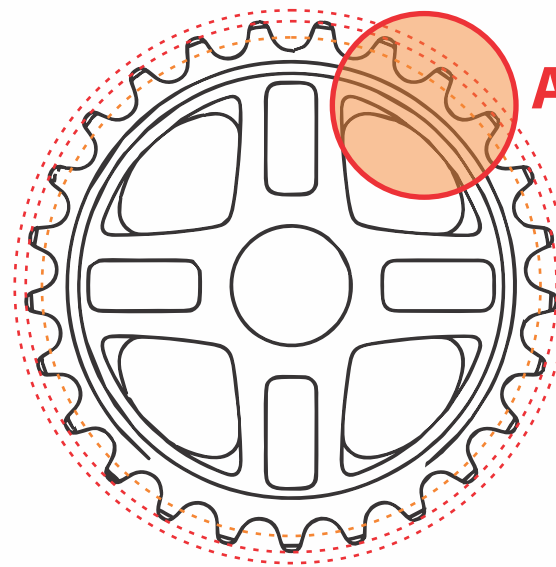


Sprocket

Product

We manufacture superior sprockets owing to excellent raw materials and our adherence to strict quality control. We employ the best grade of high carbon steel for rear sprockets and steel alloy for front sprockets. Our manufacturing units are fully equipped with state-of-the-art high accuracy machinery along with latest generation of CNC computer design and computer controlled metal cutting equipment that enable us to manufacture finest sprockets.

Going over the basic anatomy of sprockets, these are rotating parts with teeth that are used in conjunction with a chain and, almost always, at least one other sprocket to transmit torque. Sprockets and chain can be used to change the speed, torque, or original direction of a motor. In order for sprockets and chain to be compatible with each other they must both have the same thickness and pitch. In order for the sprockets and chain to work effectively, all of the sprockets should be on parallel shafts with their corresponding teeth on the same plane.



- Number of teeth is the total number of projections around the whole circumference of a sprocket. For sprockets with very few teeth it is easy to simply count the number of teeth. However, for sprockets with a higher number of teeth, attempting to count the teeth may not be very practical or accurate.
- Pitch Diameter (PD) is an imaginary circle which is traced by the center of the chain pins when the sprocket rotates while meshed with chain. The ratio of the pitch diameter between sprockets can be used to calculate the gear ratio, but more commonly and much more simply the ratio of the number of teeth is used for this calculation.
- Pitch represents the amount of pitch diameter in inches per tooth. Gears with a larger pitch will have bigger teeth. Common pitches are 0.25", known as #25, and 0.375" (#35).



SPROCKET





- Outside Diameter (OD) will always be larger than the pitch diameter but smaller than the chain clearance diameter. The outside diameter does not account for the additional diameter added by the chain, so it should not be used to check for assembly interference.
- Chain Clearance Diameter is the outside diameter of a sprocket with chain wrapped around it. The chain clearance diameter will always be larger than the pitch diameter and the outside diameter. The chain clearance diameter should be used when checking for interference when placing sprockets very close to other structures.

We understand the precision and engineering of each spare part to its core and our knowledge and focussed approach leads us to craft exception sprockets for various models of motorcycle.

Manufacturing

Our high grade raw materials are primary source of our unrivalled quality. Our Sprockets undergo various international grade inspections at each stage of production that helps us in maintaining our superior quality. At our factories, good production lead time ensures quick delivery of products and our streamlined production processes aid us to attain 100% customer satisfaction and unmatched quality.

Sprocket Manufacturing Process Flow



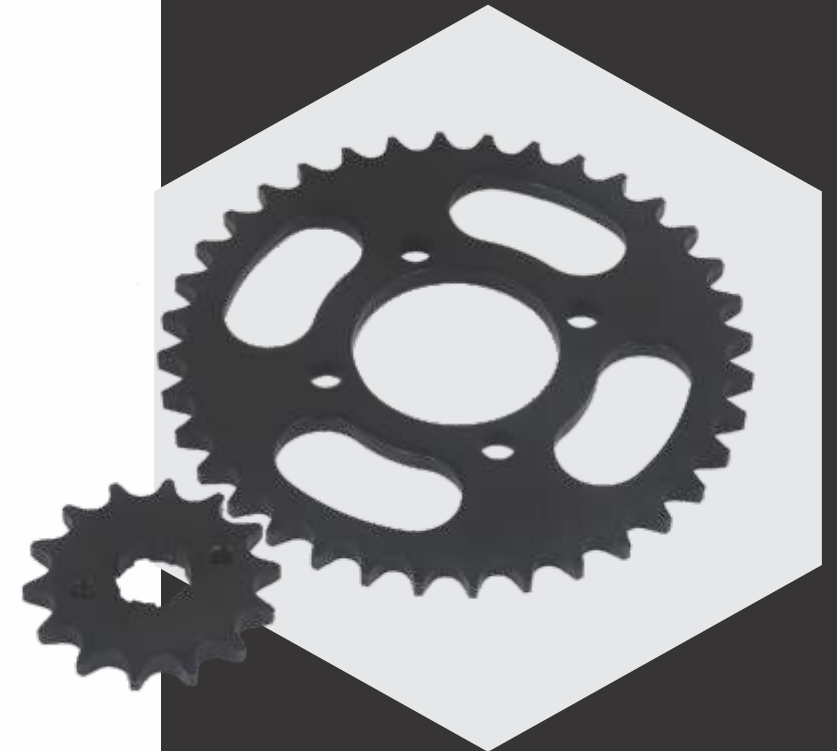
Types of finishes



Testing

Each unit manufactured in most superior manner is further tested at various parameters to make sure only the best is manufactured. Each finished unit of Sprocket is tested on following tough parameters and only the most perfect ones make their way to the markets.

- Salt Spray testing machine
- Profile Projector for teeth profile
- Fixture to Check teeth movement over Chain.
- Surface Plate with Dial Gauge/Flatness Testing



NOTES



RITSUKA

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