

U.S. TSUBAKI RS ROLLER CHAIN

U.S. TSUBAKI ROLLER CHAIN — A SOLID DIFFERENCE

ASME/ANSI RS Roller Chain

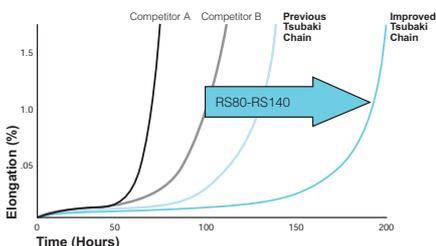


RS ROLLER CHAIN RS11 ~ RS240

Longer Wear Life

U.S. Tsubaki Roller Chain lasts up to twice as long as our previous chain in many applications. Advanced technology allows us to combine the strength, durability, and reliability of a solid bushing with our patented lube groove on the inner surface of sizes RS80 through RS140. The solid bushings are precise round cylinders, which means better contact between the pin and bushing. The lube grooves hold oil where chain needs it most. The result is longer lasting chain.

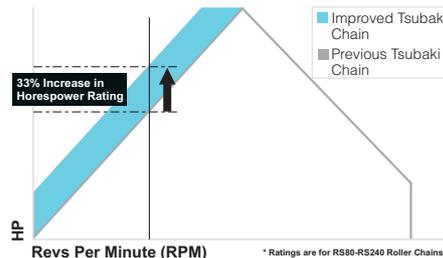
Wear Elongation Curve



Higher Horsepower Ratings

U.S. Tsubaki ASME/ANSI Chains handle up to 33 percent more horsepower so you can increase drive performance without increasing chain size. In fact, depending on your application, you may be able to transmit the same horsepower with a smaller, less costly chain. The improvement comes from a U.S. Tsubaki exclusive ring coining process for the slip fit connecting link and special processing on the two-pitch offset link.

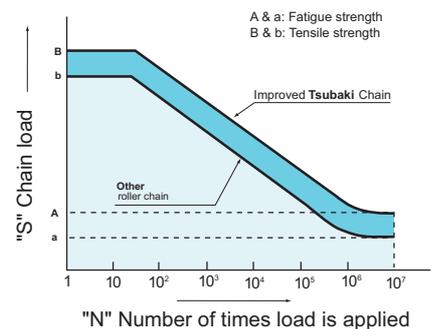
Horsepower Ratings



Greater Fatigue Strength

U.S. Tsubaki ASME/ANSI Chains are designed to have higher fatigue strength. The wider waist of the link plates puts more metal where you need it — running your application. There is less downtime because chains operate longer. Operating costs are reduced because chains perform more efficiently. These benefits go right to your bottom line.

S-N Curve



Save Time & Money

Wear in the pin-bushing joint can lead to elongation and replacement. U.S. Tsubaki's ASME/ANSI Chains have a patented lube groove that holds lubricant right where it's needed — in the pin-bushing joint. Tsubaki chains last longer, reducing maintenance, operating, and replacement costs.

U.S. TSUBAKI RS ROLLER CHAIN

Assurance of Greater Fatigue Strength

The wider waist of U.S. Tsubaki link plates ensures greater fatigue strength for all chain sizes. Fatigue strength (max. allowable load) of each size can be found in this catalog.



U.S. Tsubaki Other Brands

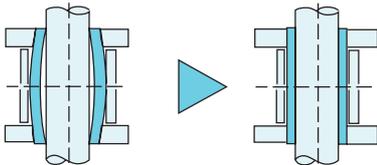
Longer Wear Life & Less Initial Adjustment

- 1) U.S. Tsubaki has decreased initial wear elongation to 0.01% and increased wear life by up to twice as long in many applications. Where initial elongation is a problem, as in precision applications or when you simply demand the best, U.S. Tsubaki roller chain is the solution.
- 2) Our original prelubricant minimizes wear elongation to enable a vast increase in the chain's wear life.
- 3) U.S. Tsubaki's lube groove bushings hold oil at the pin-bushing interface, extending the working life of the chain.

Perfectly cylindrical inside bushing wall



- 4) Micron control has enabled U.S. Tsubaki to produce perfectly straight bushings and significantly reduce wear elongation during initial operation.



Micron Control

- 5) Improved U.S. Tsubaki roller chain sizes RS80 through RS140 have the patented PerforMax™ solid lube groove bushings and last up to twice as long in many applications. The lube groove retains oil at the critical pin-bushing contact point, extending the life of the chain.



Patented PerforMax™ solid lube groove bushing

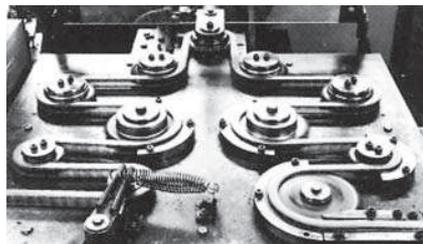
Shot Peened Parts

Link plates and rollers are shot peened for greater fatigue strength.



Factory Preloading

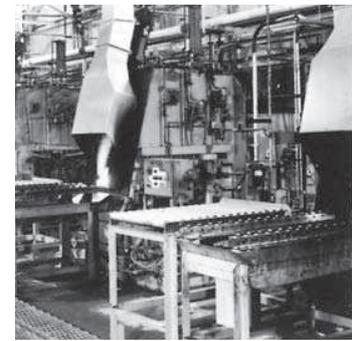
U.S. Tsubaki roller chains are continuously preloaded on multi-sprockets after final assembly as shown below. This results in minimum initial stretch.



Preloading on Sprockets

Heat Treatment Ensures Durability

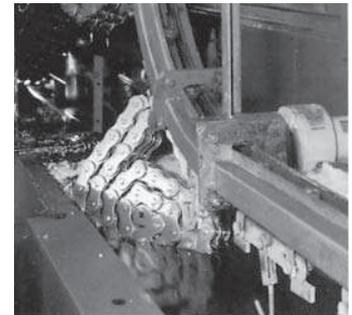
Chain durability depends to a great extent on the heat-treatment of the various parts. The use of the most advanced heat-treatment methods and equipment guarantees that U.S. Tsubaki roller chains are highly durable.



Heat Treatment

Prelubrication

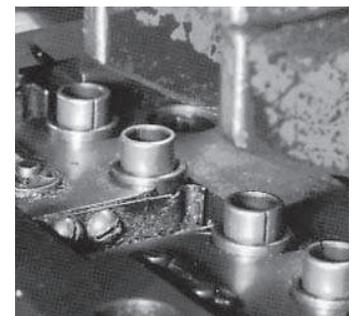
A special lubrication is applied by U.S. Tsubaki to bearing surfaces by hot dipping to extend chain life and reduce maintenance costs.



Prelubrication

A Completely Automated Manufacturing Process

The manufacture of U.S. Tsubaki roller chains employs advanced, automated techniques. The specialized equipment used in each process ensures that all parts are uniform and high quality. The photo below shows the automated positioning of curled bushings.



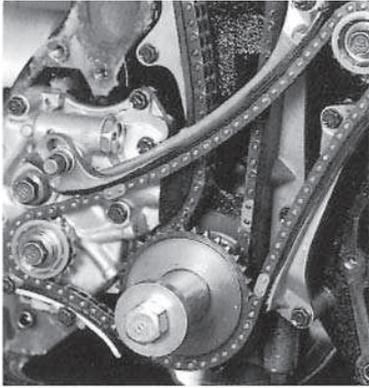
Automated Manufacturing

U.S. TSUBAKI RS ROLLER CHAIN

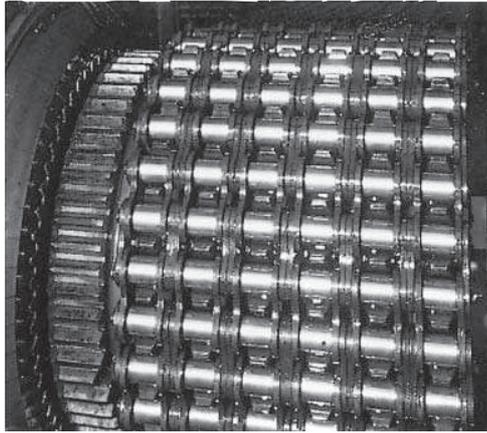
APPLICATIONS

Roller chains can be operated at speeds of up to 10,000 rpm. Even at high speeds, chain drive is quieter and smoother than a gear drive. You never have to worry about slippage as you would with a belt.

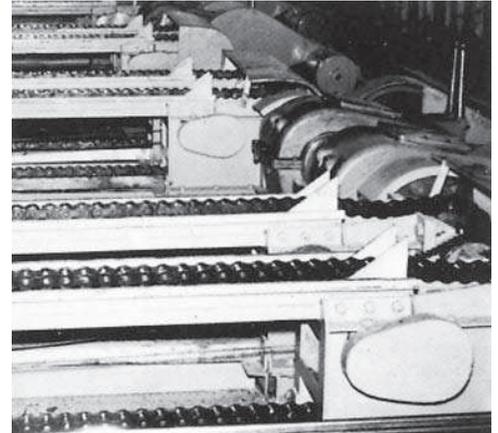
Roller chains are inherently elastic. Compared with gear drives, they soften shock and absorb vibration. They can be used in machines which are subjected to great shock or which constantly move or vibrate. Both the machine's body and bearing parts are protected against damage.



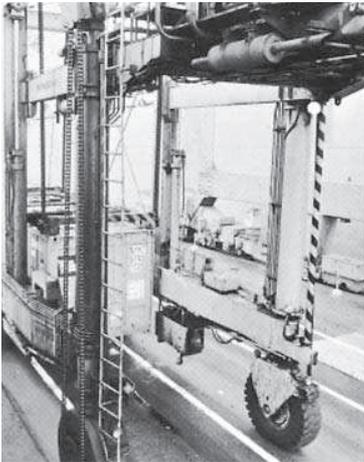
For accurate high speed drives... automobile engines



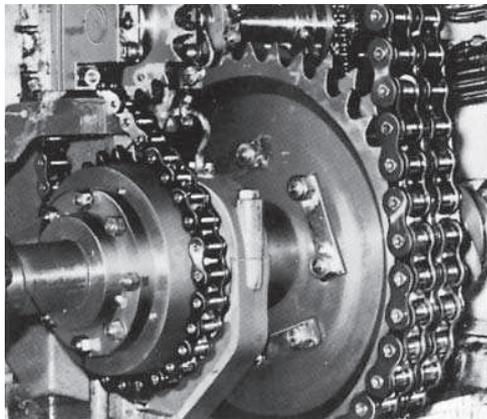
For high speed and heavy load drives... oil-well drilling equipment



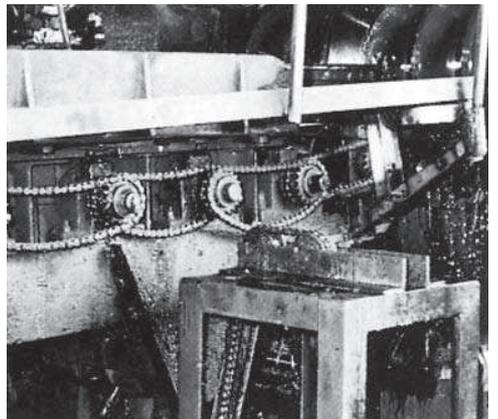
For heavy shock... draw benches



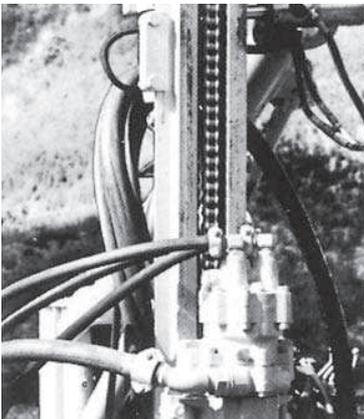
For long center distance drives... container straddle carriers



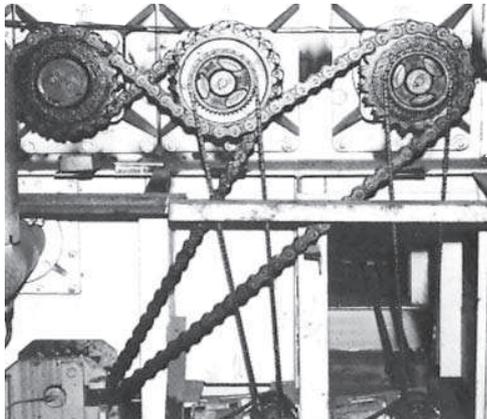
For precision drives... marine diesel engines



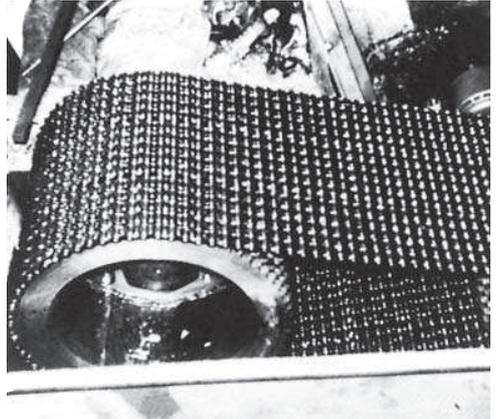
For severe conditions... tilting tables



For heavy shock... crawler drills



For multi-shaft drives... roller tables



For high speed operation... pump drives

U.S. TSUBAKI RS ROLLER CHAIN

CONNECTION OF RS ROLLER CHAIN – IMPROVED

Roller chain is normally used as a continuous length with a connecting link, resulting in an even number of pitches.

Connecting Links

Standard connecting links are used when RS roller chain is operated under normal conditions. For severe applications, press fit connecting links are suggested. In either case, a spring clip connecting link is used for RS roller chains of sizes RS60 or smaller, a cottered connecting link for sizes RS80 to RS200, and a spring pin connecting link for RS240. A cottered type connecting link is used for three to six strands of RS40 to RS60. A cottered type can be provided for single and double strands of RS40 to RS60 upon request.

Standard connecting links have a slip fit cover plate.

The wider waist of U.S. Tsubaki's cover plates provides higher fatigue strength.

Installation of press fit connecting links may be less convenient than that of standard connecting links, but performance is better. Press fit connecting links should be used in extremely high-speed or heavy duty applications.

The slip fit connecting links on improved U.S. Tsubaki chain have 25% greater fatigue strength. These connecting links are ring coined, which means improved capacity for your application.



Spring Clip Connecting Link



Cottered Connecting Link

If a continuous length has an odd number of pitches, an offset link must be used. However, the use of offset links should be avoided.

Offset Links

Both two-pitch offset links and one-pitch offset links are available for RS roller chains. U.S. Tsubaki's redesigned link plate and improved manufacturing process make our two-pitch offset links stronger than ever.

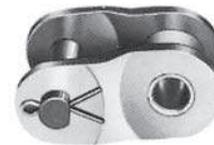
The two-pitch offset link is a combination of a roller link and an offset link connected with a riveted pin. The connecting link can be attached to either side of a two-pitch offset link.

One-pitch offset links are very handy, but pin and offset link plates have to be slip-fitted. One-pitch offset links are also weaker than plain chain and two-pitch offset links. Therefore, one-pitch offset links are not suggested, especially for frequent on-and-off operation, heavy impact loads, and high-speed driving.

Note: Only two-pitch offset links are available for RS25.



Two-Pitch Offset Link



One-Pitch Offset Link

