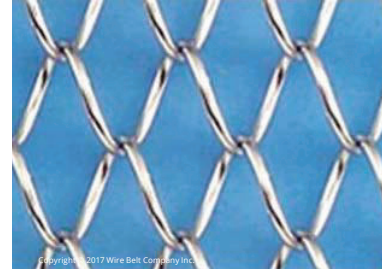


## Mesh Types

### Standard Chain Link (CL)

The assembly consists of unidirectional coils with each coil interconnecting with the next. When used as a friction driven belt the assembly may feature alternating sections of left then right hand assembled panels. Each belt panel is linked to the next opposite hand weave panel with a through wire – see below. Panelling of the belt with left & right hand coil sections help alleviate belt track off on all circuit rollers and belt supports. Many friction driven belts however are not panelled in this way and rely on their weight and the conveyor tracking system to ensure straight running of the belt.



### Rod Reinforced Chain Link (CLR) Panelled Belting:

Left and right assembly of panelled coils are linked together by a through connector pin. The alternating handing of the panelled coils balances the weave contact with the friction driven roller or idle rollers to ensure best tracking performance of the belt. Check to see if your belt is panelled in this way prior to placing an order.

NB: When driven by means of side chains and carrier cross rods there is no requirement to panel the belt assembly.



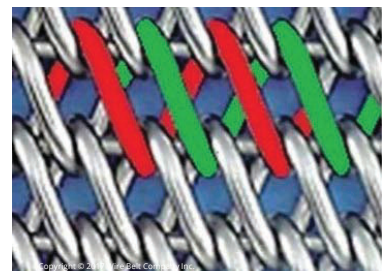
### Rod Reinforced Chain Link (CLR)

To add strength and lateral stability to the belt the intermeshing coils are linked with a through wire. This through wire is finished at the edges in a variety of styles including welded, laddered, knuckled and welded and compressed and welded. When enquiring please forward either a picture or diagram of the belt edge. The same panelling assembly as described above may be required when used solely as a friction driven belt.



### Rod Reinforced Chain Link - Duplex (CLR-Duplex)

To add even more belt strength and reduce the open area then a duplex version of the standard rod reinforced is available. The assembly consists of twin intermeshing standard coils at each position.



## Belt Edge Types

### Standard Chain Link Belts

#### **Welded Edge (W) – mesh only without reinforcing rods**

At the belt edges the coil wires are looped together and welded. This type of edge finish allows for relatively smooth finish to the belt edge and is the most economic version of this belt style.



#### **Knuckled Edge (K) – mesh only without reinforcing rods**

The end of each coil wire is bent back into a 'U' shape and then interlocked with the adjacent coil. The 'U' form is then closed securely to form a permanent link with the next coil. This formation also allows greater flexibility of the belt edges and minimises stress build up at these positions.



### Standard Rod Reinforced (mesh only) Chain Link Belts

#### **Welded Chain Link Rod Reinforced (CLR-W – IN/OUT)**

The cross rods are of two different lengths of rod to cater for the edge pattern of coil connection. The cross rods are welded to the coils in an "In – Out" pattern of assembly.



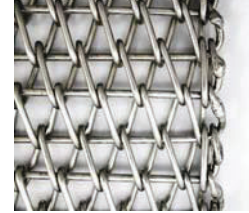
#### **Welded Chain Link Rod Reinforced (CLR-W-IN LINE)**

All cross rods are the same length with every alternate coil edge compressed to achieve an "In Line" finish.



### **Chain Link Rod Reinforced Bent Pin with welded edges (CLR-W-BENT-PIN)**

With this assembly the cross rods are bent at the ends through 90° and are welded to the preceding coil wire end. To align the edges of the belt, every alternative coil is compressed at the edges prior to welding.



### **Knuckled Chain Link 'U' Cross Rod Reinforced (CLR-K/U)**

With this style of assembly, the cross rods are constructed as pairs in a hairclip style 'U' assembly of formation. The 'U' shaped cross rods are kept in place by means of the knuckled coil edges and are inserted alternately from either side when assembling the belt.



As an option to this edge layout the tail end wire of the knuckled coil edges can also be welded back to the coil (CLR-K/U/W).

### **Rod Reinforced Duplex (mesh only) Chain Link Belts**

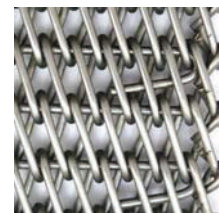
#### **Welded Duplex Chain Link (CLR-W-Duplex)**

The assembly consists of pairs of interwoven coil wires with the coil tail ends welded directly to equal length cross wires at the edges.



#### **Knuckled/Hooked Duplex Chain Link (CLR-K/H-Duplex)**

The assembly consists of pairs of interwoven coil wires which have a knuckled linked finish at the edges. The cross wires have a hooked end finish and are inserted alternately from either side when assembling the belt.



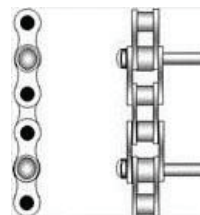
Note: If you have a special belt edge finish then please contact Wire Belt Technical Sales.

## Chain Edge Driven Mesh

Along with the above mesh edge finishes these meshes can be driven by side chains using cross rods which are located through the mesh coils and then through chains at the edges of the mesh. The types of cross rod finish at the exterior of the side chain are as follows: -

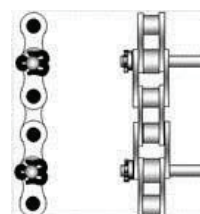
### Welded washer

This is the most common and economical style of finish to a chain edge belt and comprises of a central mesh carried through the system by means of edge chains with carrier cross rods through both mesh and edge chains. Depending upon the mesh cross wire pitch the cross rods may take the place of the through cross wire of the basic mesh. The cross rods are finished at the outside chain edges with a welded washer.



### Cotter Pin & Washer

Although less economical this type of assembly allows the customer or service personnel the ability to replace the edge drive chains when the mesh and rods are still serviceable. The assembly comprises of a central mesh carried through the system by means of edge chains with carrier cross rods through both mesh and edge chains. The cross rods are finished at the outside with a drilled hole to allow the fitment of a washer & cotter pin. It also allows the repair replacement of sections of belt without the need to grind off rod heads and weld back together.



NB: For greater width stability of rods to chain it is normal, where possible, to supply the cross rods turned down to go through the hollow pin of the edge chains.

### Various other styles of chain edge finish include:

- a. Cross rod welded flush to the hollow pin of the side chain. This is not a preferred standard but may be necessary where width between conveyor side frames & other structural parts create a limitation where "welded washer" or "washer & cotter pin" cannot be used.
- b. Cross rod welded flush through drilled hole on inner plates of roller conveyor chain.

In general the chain edge driven belts are available with 2 styles of edge chain: -

### Transmission Chain - has a small roller

The chain edge side plate can be supported either on an angle side frame, or by means of a profiled rail to go between the side plates and support on the roller. Alternatively, it can run without chain support where the mesh is supported close to the chain edge.





## CHAIN LINK CONVEYOR BELT

### Conveyor Roller Chain – has a large roller

This chain edge can be supported on a flat angle edge wear strip with the chain roller rotating freely along the conveyor length. The roller action of the chain reduces chain wear and the operational friction at this point.

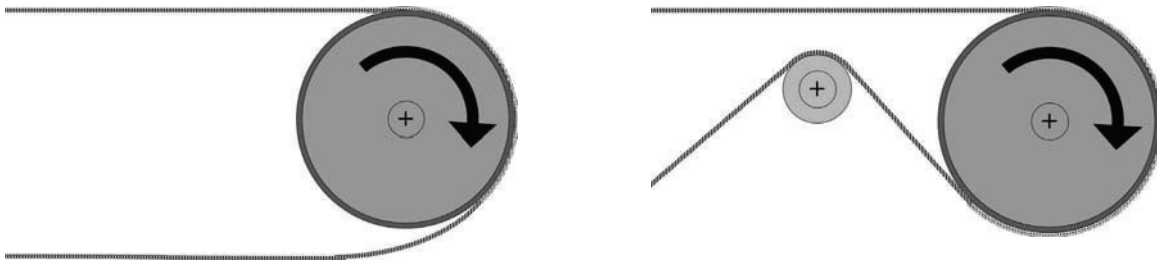


## Methods of Drive

### Friction Driven

The most common form of drive is the plain steel parallel driven roller system. This system depends on the frictional contact between the belt and roller to ensure drive of the belt.

Variations of this drive type include the lagging of the roller with such materials as rubber, friction brake lining (for high temperature), etc. The use of such friction lagging materials allow for the operational drive tension in the belt to be reduced, thus increasing the useful life of the belt.



### Chain Edge Driven

With this assembly of belt the cross-wire pitch of the belt mesh is manufactured to ensure that the chain edge is the driving medium with the belt mesh being pulled through the circuit by the chains.

## Available Specifications

The following is an extract of available specifications:

### Standard Chain Link

These are designed to suit the customer requirements but in general are available in lateral coil wire pitches varying from 5.08mm to 25.4mm, combined with a variety of wire diameters and longitudinal pitches to suit the application.

## The Trusted Metal Conveyor Belt Manufacturer™

### Rod Reinforced Chain Link (CLR)

Lateral Coil Pitch (mm)	Coil Wire Diameter (mm)	Longitudinal Cross Wire Pitch (mm)	Cross Wire Diameter (mm)
16.93/15.24	2.03	16.93/19.05	2.64
	2.64		2.95
	2.95		3.25
	3.25		4.06

### Rod Reinforced Chain Link – Duplex (CLR-D)

Lateral Coil Pitch (mm)	Coil Wire Diameter (mm)	Longitudinal Cross Wire Pitch (mm)	Cross Wire Diameter (mm)
8.47	2.03	16.93/19.05	2.64
	2.64		2.95
	2.95		3.25
	3.25		4.06
5.08	2.03	10.16	2.64

All dimensions are in millimetres (mm) and are subject to Wire Belt Company manufacturing tolerances. NB. Please contact Technical Sales if you have a specification requirement other than those listed above.

## Materials Available

### Standard Material Availability (Mesh Only)

Material	Maximum Wire Operating Temperature °C
Carbon Steel (40/45)	550
Galvanised Mild Steel	400
Chrome Molybdenum (3% Chrome)	700
304 Stainless Steel (1.4301)	750
321 Stainless Steel (1.4541)	750
316 Stainless Steel (1.4401)	800
316L Stainless Steel (1.4404)	800
314 Stainless Steel (1.4841)	1120 (Avoid use at 800-900°C)
37/18 Nickel Chrome (1.4864)	1120
80/20 Nickel Chrome (2.4869)	1150
Inconel 600 (2.4816)	1150
Inconel 601 (2.4851)	1150

Before making a selection for high temperature applications consult with our Technical Sales Engineers for the most suitable wire grade for the application as wire strength reduces at elevated temperatures.