Midland Handling Equipment Ltd

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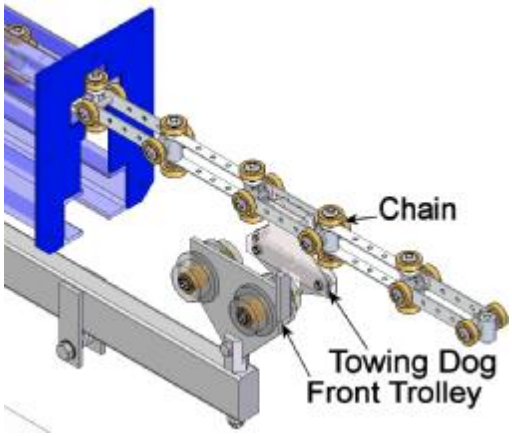
Data Sheet

Trakmaster 406TC Power & Free
Medium / Heavy duty



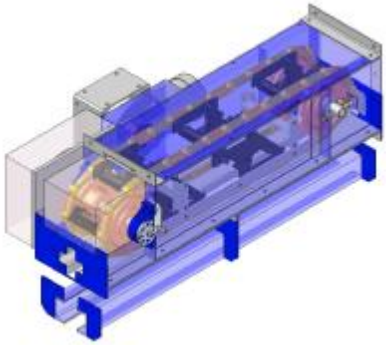
Chain

Fully bi-planer and assembled in our works from hardened steel side links, cast iron cruciform, and hardened twin ball bearing wheels fitted to both the vertical and horizontal side links with pendants at multiples of 406mm pitch. Maximum chain breaking stain is 18,000 lbs.

The conveyor carrying capacity is **625Kg** per trolley. This can be doubled to **1250Kg** by connecting two trolleys with a load bar, the doubled again to **2500**Kg by having four trolleys joined together with load bars.

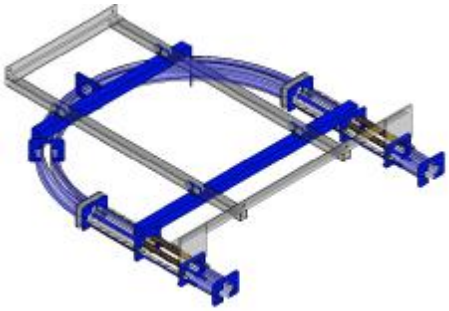
Track

The track is rolled from mild steel in 3 metre long sections maximum. Two 'top hat' track sections and two channels are welded facing each other spaced with bridge plates at 750 pitch. Vertical and horizontal track curves are rolled from the same track section. The end bridge plates have a series of holes to enable the track lengths to be bolted together in standard modules of 3000mm, shorter lengths are made to suite the circuit dimensions. Curves would be manufactured in the same way with the power track being rolled and fabricated from standard track section and surface hardened after manufacture to give a long life.



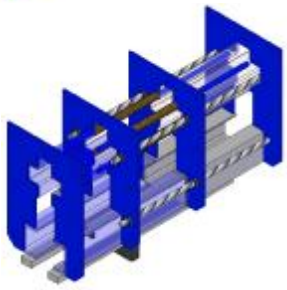
Drive Unit

A caterpillar type unit with driving dogs fitted between a pair of twin chains which in turn are driven by an in-line geared motor, incorporating a torque limiting device for overload protection. Variable speeds are achieved via an Inverter type speed controller providing 5:1 ratio or dc thyrister controllers providing 10:1 ratio.



Tension Unit / Sleeves

A spring loaded tension device would be fitted to ensure correct chain tension and to compensate for variances within the system. This can be achieved in a power only section of track with a tension unit or in a power & free section of track with a pair of tension sleeves.

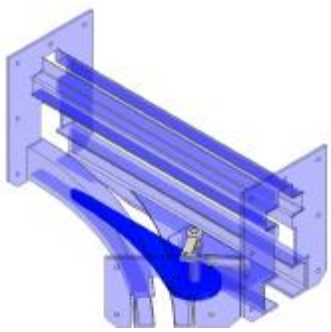


Inspection

This would be incorporated in a readily accessible position in the circuit for inspection and preventative maintenance.

Track Switch

Track switches allow trolleys to be diverted into multiple lines for storage or to feed workstations. Both left and right hand track switches are available with pneumatic or manual control.



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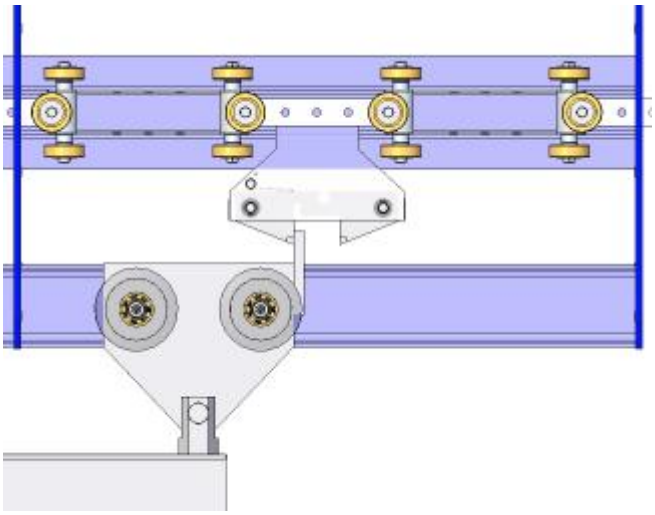
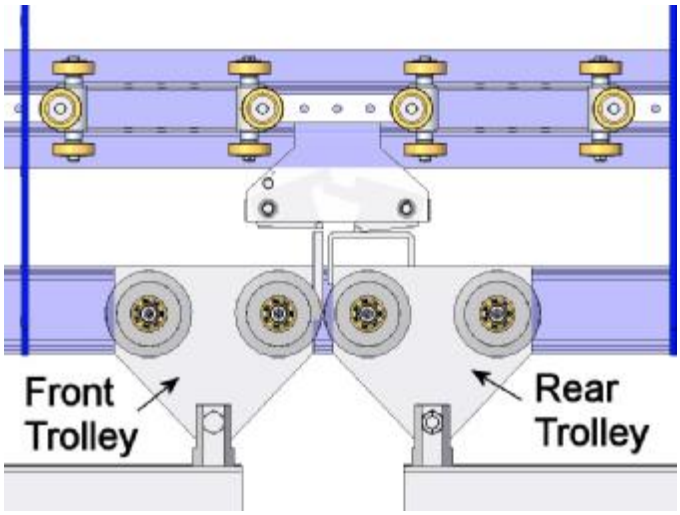
Towing Dogs

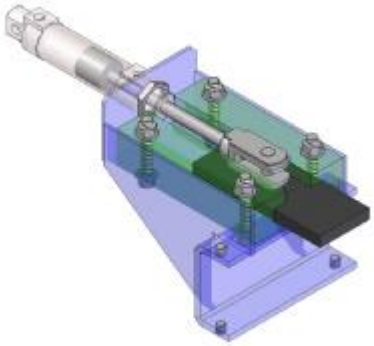
Towing dogs are set at an even pitch along the chain, they are used for towing the front trolley of a load bar unit. The front flipper raises over a peg at the front of the trolley leaving the rear flipper pushing the peg. The raised hoop on the rear of the front trolley unit will lift the front and rear flippers of the towing dog allowing the dog to pass over without any drive. The rear hoop is used to allow load bars to queue. By having a front trolley queuing behind a rear trolley unit, the raised hoop on the rear of the trolley will not allow the rear flipper to drop to drive the trolley peg, leaving the load bars stationary.

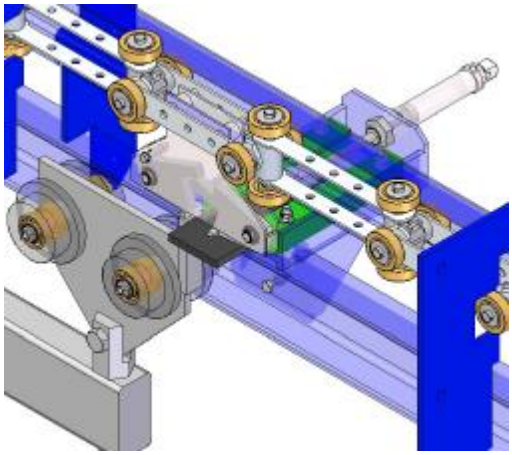




Blade Stop

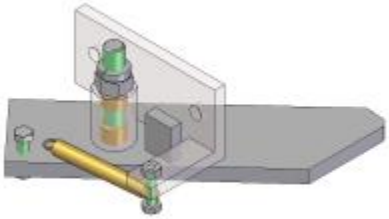
This is a pneumatically operated stop, used to allow the load bars to disengage from the drive chain, leaving the load bars stationary. The front flipper of the towing dog raises when in contact with the blade in its out position, this action lifts the rear flipper allowing the front trolley drive peg to disengage. Stop can be sited at workstations, prior to track junctions, for time delay in curing ovens and spray booths or at load and unload points.

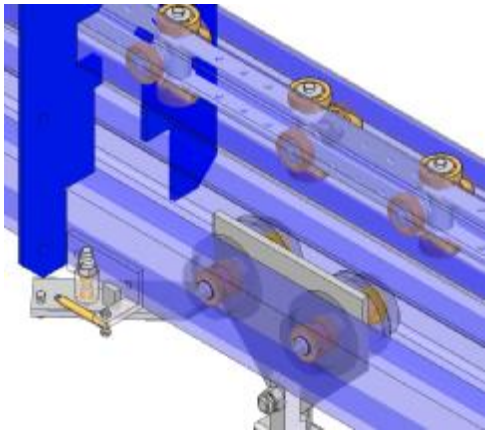




Anti Run Back

These units are used to use to prevent a load bar or trolley unit from rolling back when not engaged to the chain, this usually occurs at the end of a queue.





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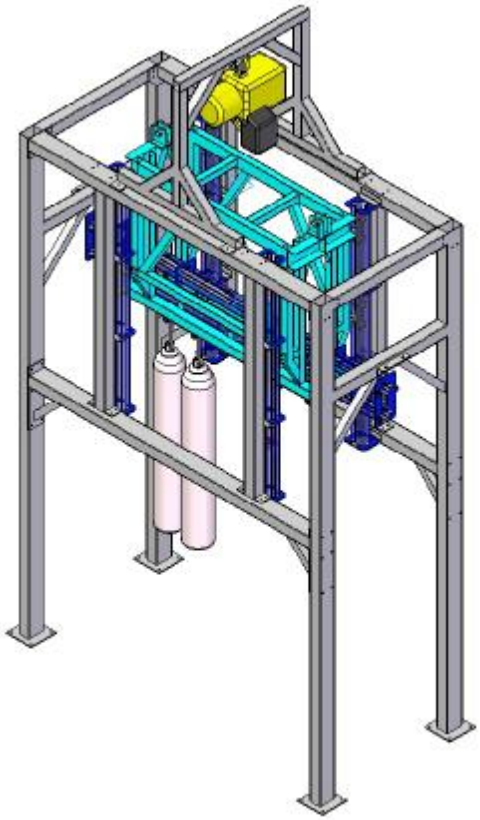
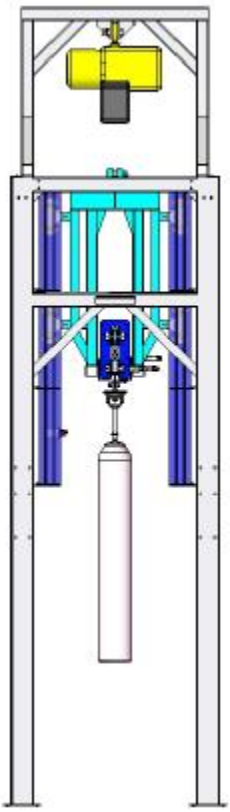
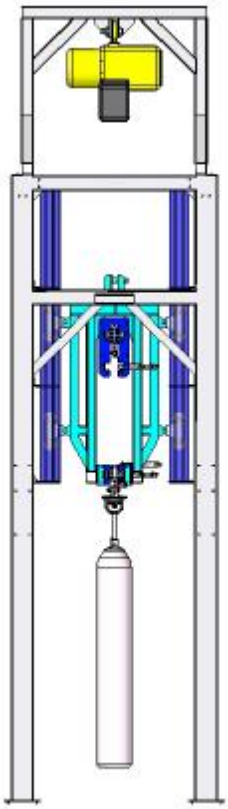
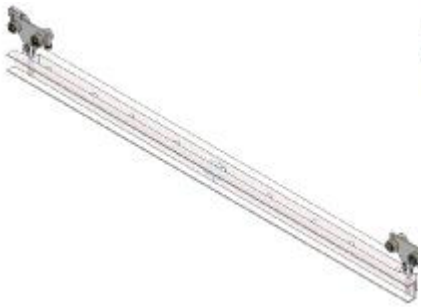
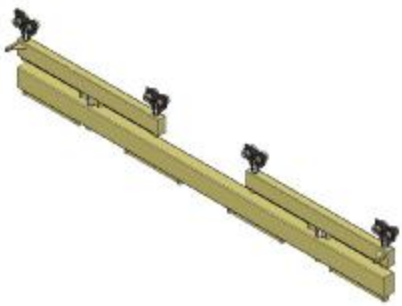
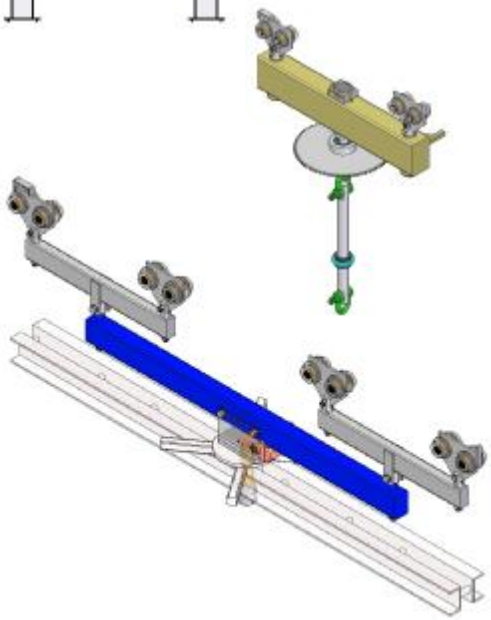
Lift Unit
The lift unit consists of a substantial self supported outer frame, housing a number of electrical hoists. These hoists work in unity to lift an inner frame, which carries the track section that is to be raised or lowered. The hoists have built in brakes to prevent any kind of unexpected drop in height. As a second safety feature the inner frame is not able to drop through the track, preventing any load from falling to the floor. On both the inlet & outlet of the drop section track there are pneumatic shot bolts that prevent a load bar entering or exiting the lift unless it is in a safe state to operate. The track may be lowered until a lower limit switch is reached then raised to full track height, at which point upper switches are reached which tell the control that the lift is now safe for a load bar to enter or exit.

Attachments, Load bars & Trolley
A wide variety of attachment can be fitted to a trolley or a load bar.

Support Structure
The conveyor would be either floor supported using square hollow section forming a rigid structure and incorporating base plates, or roof supported utilising track hanger clamps connected to tubular suspensions. Please see specification for specific proposals.

Finish
Track & steelwork finished mid blue paint, machined parts self colour or to customers own requirement.

For further help and information or to discuss a particular application please contact us, as above.