



CASE HISTORY: Power & free two-rail conveyor XD45/59-02



POWER & FREE CONVEYORS

The two-rail conveyor features flexibility of use and is modulated according to the different needs of a complex production cycle.

The two-rail conveyor can be of two types: overhead or floor.

In the two-rail lines (aerial), the items are placed on one or more trolleys that slide in the lower rail and are moved by means of the bi-planar chain placed in the upper rail; the connection between this and the trolleys is temporary, meaning there is the possibility to vary the hanging pitch and the speed between different parts of the line, based on the specific work goals.

The overhead two-rail conveyor (type XD 45/59 PF) is at the service of a painting plant and leads the transport units with the artefacts to be treated from the loading area, through all equipment for the various treatments, until the discharge area.

From the loading area, the cycle begins with one accumulation area, which carry in input to the pre-treatment tunnel, before of which there is a tilting unit that has the function to tilt the piece holder bar, to allow the drip of the washing liquids.

The transport unit is abandoned by the main conveyor to be dragged by the second conveyor with stop & go movement; the motion transmission occurs through a caterpillar drive unit.

During the steps of the pretreatment the main conveyor does fulfill the transport unit a series of oscillations in the forward and behind within the various stages of the tunnel. Once out of the tunnel transport units return to be dragged from the main conveyor and are towed to the area of accumulation in the drying oven. On leaving the oven, there is a second tilting unit which has the function of bringing in a horizontal position the piece holder bar. The conveyor continues towards the painting booth, before which, the transport units are abandoned by the main conveyor and towed from the third conveyor.

Along the line there are some pneumatic station, which if inserted, lower the leverage of the trolleys, allowing in this way to release the thrust teeth and to stop the transport unit at predetermined points, while the conveyor chain continues to move. When a transport unit is stopped in the station the transport unit that is oncoming, is accumulated automatically by contact between the trolleys.

For each accumulation area is provided a limit switches for intervening when the positions are filled of transport unit. Furthermore, the track is provided with anti-return stop, to avoid to the carriages, abandoned by the chain, sliding back.

To accumulate the transport unit to step closer, the front and rear trolleys are placed in two parallel tracks translating the transport unit. This is achieved through switch junction controlled mechanically. Output from the accumulation zones transport units are straightened by directing the trolleys in a single track through switch junction with free control.

ATTENTION: The conveyor can't go in reverse.

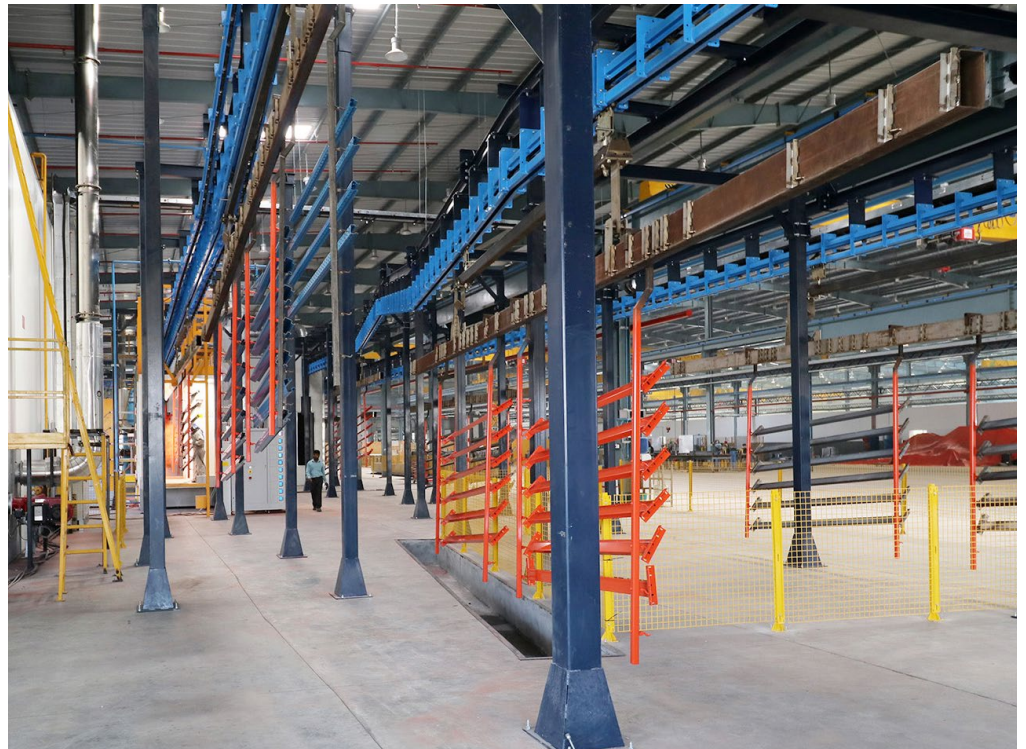
Conveyor for metal parts painting line.

Three handling lines (service, pretreatment and finishing).

Overall bi-planar chain covering 543 meters.

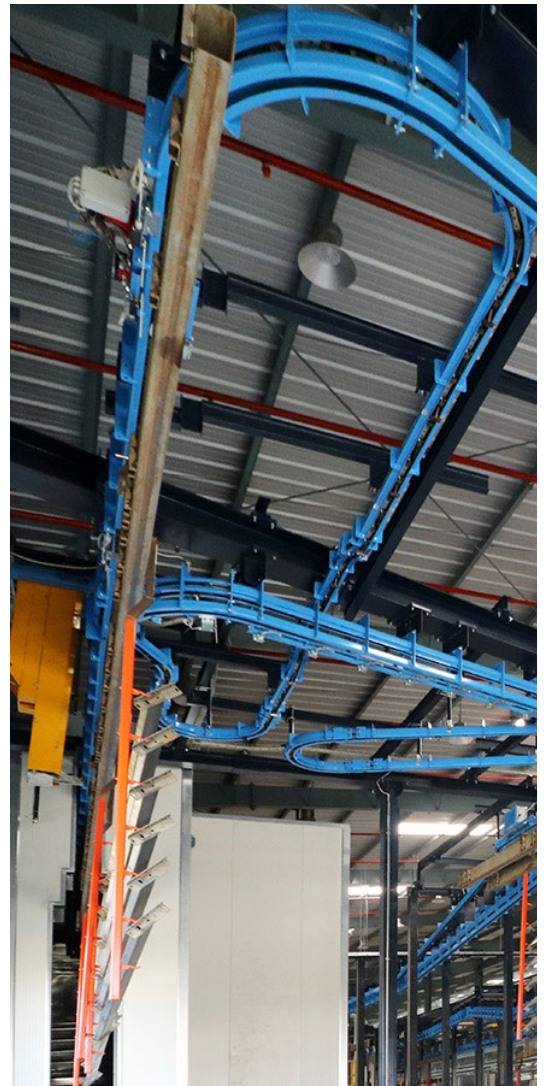
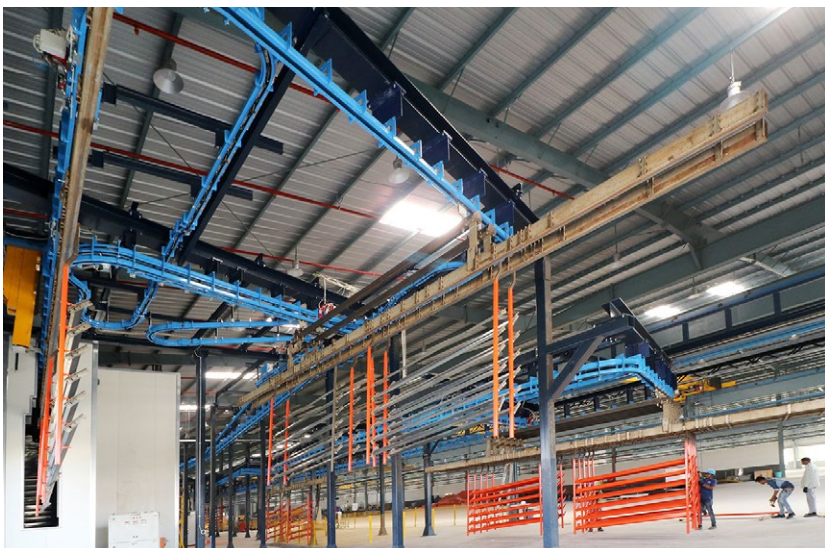
Transport unit length 12.000 mm.

Maximum load 1.000 daN for each transport unit.



TECHNICAL DETAILS

Development bi-planar chain X45 pitch 200 mm	m	355,200
Pitch between pusher teeth	mm	800
Quantity of pusher teeth	n°	444
Quantity of carrying units	n°	35
Maximum load for carrying unit	daN	1000
Working speed conveyor (at 50 Hz.)	mt/1'	6,5
Motor Power	kW	2,2x4
Working		in continuous



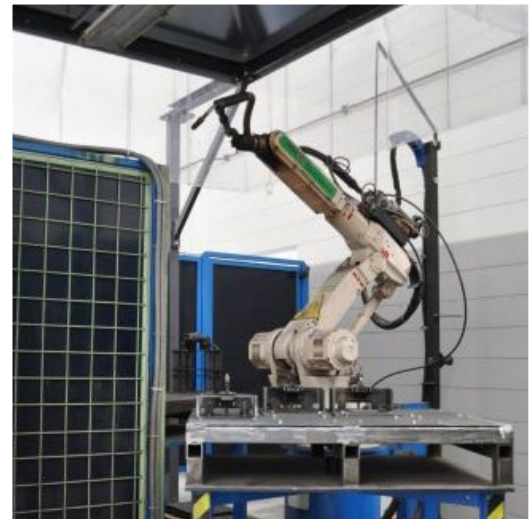
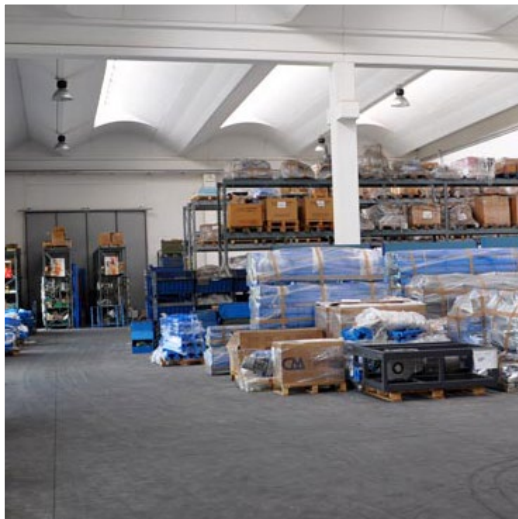
OUR COMPANY

CM Automation has been an active player in the field of industrial movement and handling since 1999 and has now become a tried and true leader in Italy.

We design, manufacture and install lines for interior movement and handling, overhead and floor conveyors, offering monorail, two-rail and manual conveyors. The flexibility that defines our company allows to meet and satisfy any and every variation or request, including the integration and supply of spare parts for our lines or even those installed by other companies.

Since 2011, following the acquisition of FA Ganci in Modena, we have been able to complete our offer by providing every type of hook, transport unit and specific accessories for painting systems and lines.

The production headquarters and facilities of CM Automation are located in Giussano, in the province of Monza Brianza just a few kilometres from Milan and Como. In the large 2,000 square meter factory, we carry out all the activities of design, production, testing and quality control of our systems and hooks.



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