

P & M ENGINEERING
INDUSTRIAL APPLICATIONS
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Lloyd's Register
ATEX II 2 D/3 D, 94/9/EC
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Introduction of Trough chain conveyors and elevators

The en masse movement is the term used to describe the unique method of conveying bulk materials smoothly, gently, and economically. The material is being fed to the equipment and moves like a liquid through the dust sealed casing horizontally, on an inclined plane, around bends, or even on a vertical axis. The steel flights of several different profiles according to the material to be transported help the material to have the liquid characteristic. Thus this type of conveyor – elevator is NOT a scraper conveyor. There is no dragging or scraping action. The material simply moves forward in a solid placid case.



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Features of the equipment.

The casing of the equipment is totally enclosed. There are also plenty of drive possibilities. There is the option to use a speed sensor switch, an under speed safety control switch and a choke detector. The nature of the equipment allows the use of several inlets and outlets. The use of drop forged chain made of special heat treated alloy steel, case hardened to Rockwell C57-C62 with ductile core hardness of Rockwell C40 and extremely big safety factor of 25-40 guarantees long operating life of the equipment. All bearings of the en masse conveyor are double spherical roller type increasing their life up to maximum. The sprockets are heavy duty design especially designed for the application and have special lining of Hardox steel providing maximum life and the ability to use spare part only the above lining pieces. The flights are of anti-friction special steel alloys with ability to be welded or even bolted to the chain. There are plenty of options of the types of the flights according to the material to be transported. In all length of the conveyor there is a special anti-friction and hardened plastic to ease the movement of the chain and to protect any wear in the casing. The chain tensioning is being held by a special system with threated rods and poly-ethilenium plastic of high molecular weight.



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Benefits of en masse handling.

Good capital costs comparing to other forms of transportation. Low power running costs. Low cost of maintenance. Manual to full automatic operating mode. No specialized maintenance training required. Totally enclosed machines. The moving parts of the trough chain conveyor are enclosed, thus resulting to very safe equipment. These machines may convey all types of bulk and dry materials. The space needed is minimized since the en masse conveyors are very compact. The handling of the product is very gentle since the movement is in a placid column, so there is no degradation of the product.

