

## Energy / Dragchain Systems

### General Information

#### SELF-SUPPORTING CAPACITY

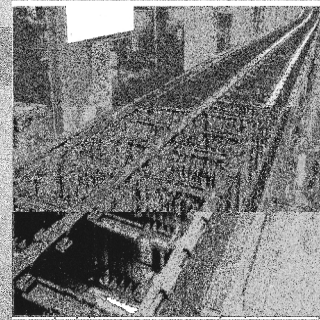
Cable chains are used more and more frequently on long travel distances as a valid alternative to the traditional systems of crossed or bars or testoon systems, and offer the following advantages:

- The possibility of combined transportation of hydraulic cables and tubes.
- The ability to operate in critical environments (humidity, textile dust, negative chemical components etc.).
- High velocities and acceleration.
- Shorter installation times.
- Drastic reduction in maintenance time.

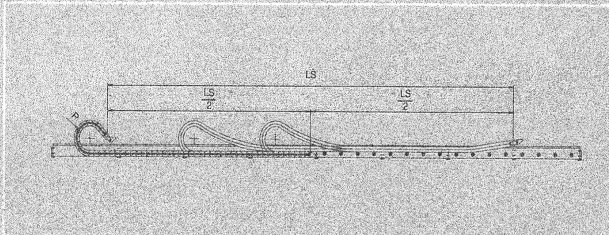
A special aspect of the cable chains in the Power Chain series is the integrated sliding skid which permits the chains to

slide on themselves. The resulting friction is reduced due to the special polymers used. The dimensions of the skid allow the chain to keep itself stable even in applications with high velocities.

On request it is possible to produce cable chains with special polyamides before operating in particularly aggressive environments. The triple pins guarantee more reliability and strength even in applications with high additional weight. The chains in the Power Chain series have been extensively tested through torsion, wear and tear tests and have passed the tensile yield stress with extremely good results.

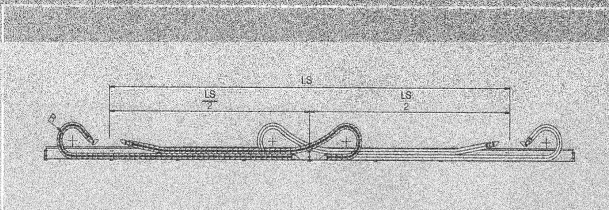


#### Single chain applications



As shown in the drawing on the left, a chain without self supporting capacity slides, for the first half of the travel distance, on its guide channels. For the second part the chain is supported by its own rollers or plates.

#### Double chain applications



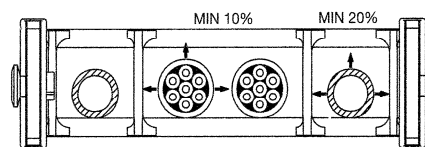
Usually, the Power Chains slide on themselves in both directions.

## General Information

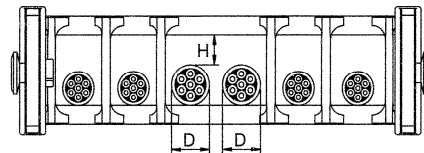
### CABLE INSTALLATION

Great care should be taken when installing the cables and hoses into the cable chains. To avoid any damage to the cables and hoses and to ensure correct operation of the cable chains application please follow the guidelines set out in

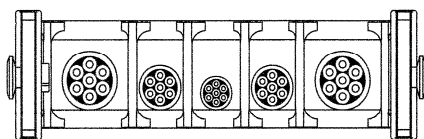
the examples below. For any questions or for more application specific information please contact your local Cavotec office.



For electric cables a clearance of at least 10% between the placement of the cable and its diameter has to be guaranteed; for hydraulic hoses the clearance should be at least 20%.



When placing cables and hoses into the cable chain, take care to place them into the appropriate separated spaces. If this is not possible ensure that the cables do not rub together ( $H < D$ ).



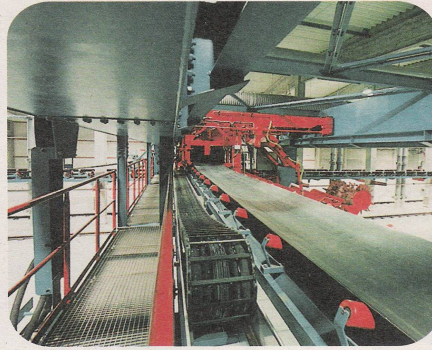
When placing cables and hoses into the cable chain, take care to place them into the appropriate separated spaces. If this is not possible ensure that the cables do not rub together ( $H < D$ ).

## Gliding, Long Travel

igus®



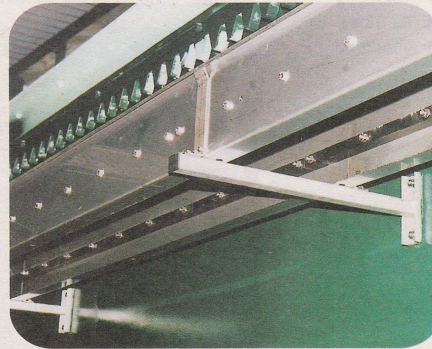
Gantry crane at shipyard - travel 185 m with igus®  
 Rol E-Chain® Series 5050R E4/4 ► chapter 7  
 i More information on crane applications: [igus-cranes.com](http://igus-cranes.com)



Compost unit, water hoses  
 and electrical cables,  
 complete system from igus®



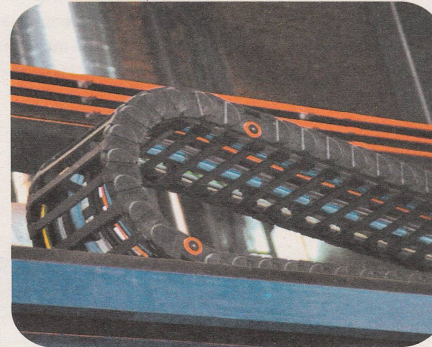
Storage and retrieval robot - the travel is 90 m,  
 the speed is more than 4 m/s - igus® chains  
 plus Chainflex® cables and guide troughs



Trough, supports and assembly kits can  
 be delivered by igus® - stainless steel  
 also available ► chapter 9



Cross-travel of 441.3 m, implemented with igus®  
 Rol E-Chain® Series 5050R E4/4 ► chapter 7



The Rol E-Chain® Energy Chains® require  
 75 % less drive power. ► chapter 9