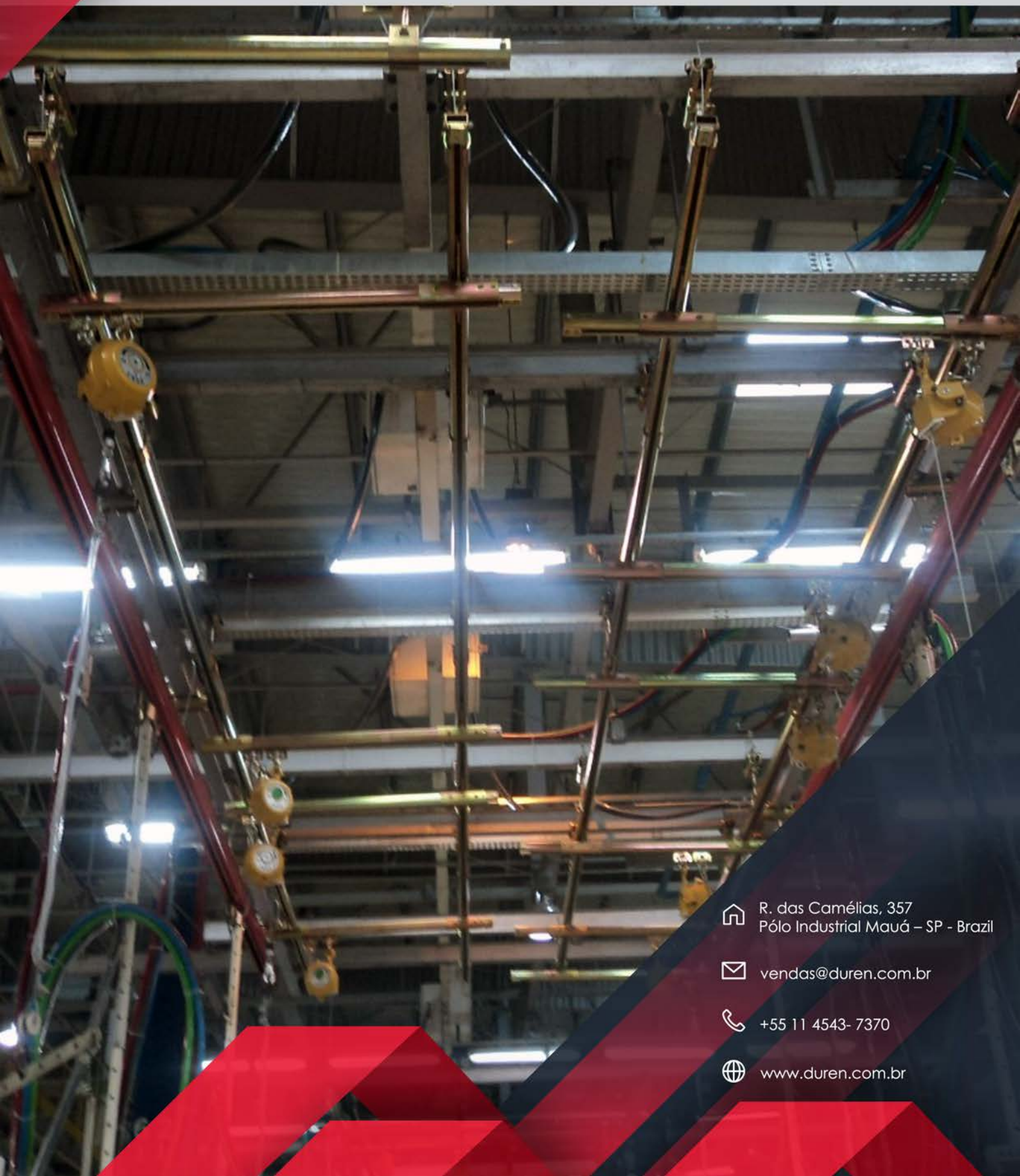
duren

MATERIALS HANDLING SOLUTIONS

CATALOG

MODULAR SYSTEM DR I



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GENERAL OVERVIEW

With the growing industrial expansion and aiming to achieve light load handling processes, combined with agility in load manipulation, Duren began activities with the construction of modular DR systems since 1995 in the national market, reaching various industrial segments with high quality and performance products.

The technology applied in DR modular systems allows for installations with less robustness and versatile arrangements, facilitating future layout changes for overhead material transport. The cost-benefit of using the DR Modular System compared to conventional overhead cranes or monorail systems (I-beam) offers numerous advantages in terms of installation, operation, and, especially, maintenance.

DR modular systems have great versatility in combinations of load ranges and areas for material handling. They can be employed in fully manual systems (low-friction profile dragging) as well as automated systems, adapting to customer needs.

Dimensioned according to DIN 15018, DIN 4132, DIN 18800, NBR 8800, and NBR 8400 standards, the application of DR Systems in projects and installations must comply with current Safety regulations aimed at preventing workplace accidents, in addition to the Installation (assembly instructions) and Maintenance Manuals.

2 DESCRIPTION DRI MODEL MODULE

The DRI system is composed of modular components with a load capacity of up to 250 kg. The modules allow for versatility to make modifications and/or expansions to installations.

The low friction coefficient between the trolleys and the internal wall of the profile allows for light manual movement for most applications. Applied tests prove the product's effectiveness regarding drag or push movement, ensuring efforts below the recommended by occupational medicine (20 kgf).

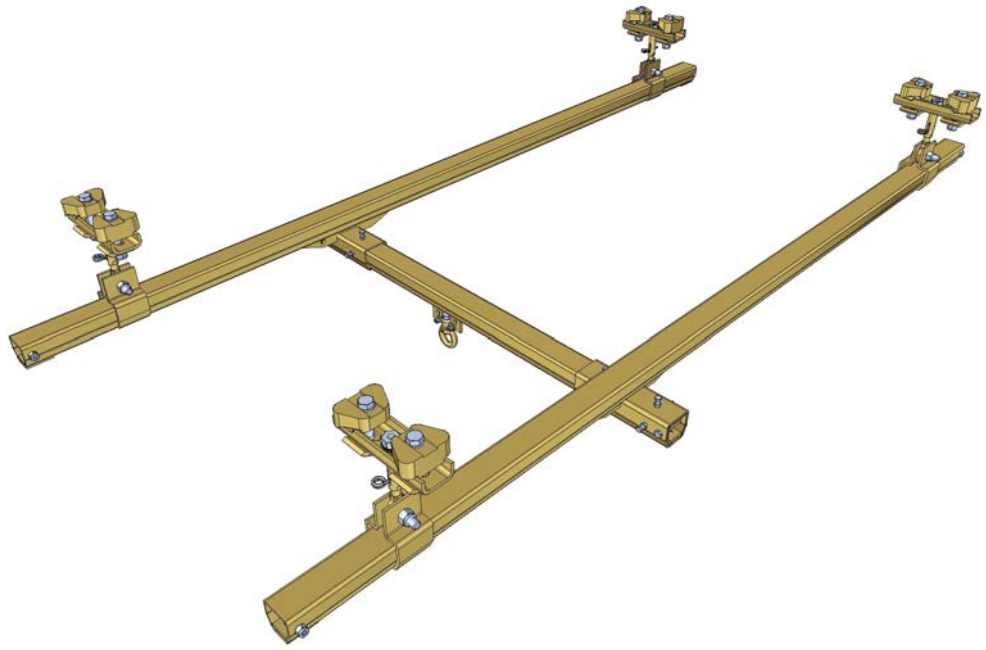
Practical results with the application of an approximate load of 60 kg show that the effort applied by the operator does not exceed 7.0 kgf.

The main applications of the product can be divided into:

Overhead Cranes

Used for load capacities up to 250 kg, its main characteristics include agile, light, and safe movement for material positioning, making it possible to cover specific areas. The crane runways (fixed by hangers) of the overhead cranes can be suspended directly by the building's roof structure, roof slab, or auxiliary metallic structures.

DRI Single Girder Overhead Crane (Monorail Overhead Crane) [1]



[1] Optional features can be added such as manual translational/transversal movement, with one or multiple monotractor systems.
Consult the DRI Single Girder Overhead Crane selection table for load capacity ranges.

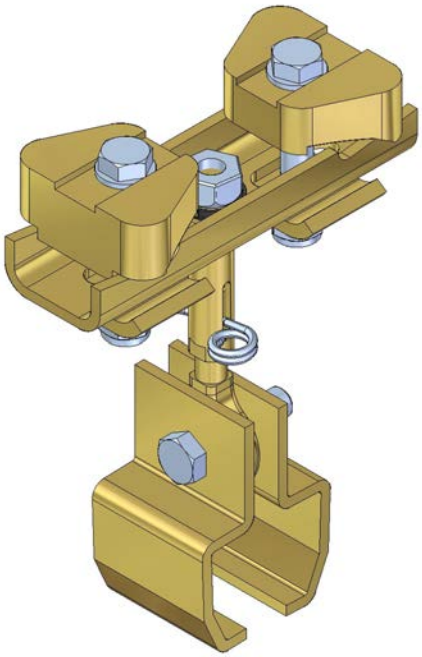
3 DRI HANGER

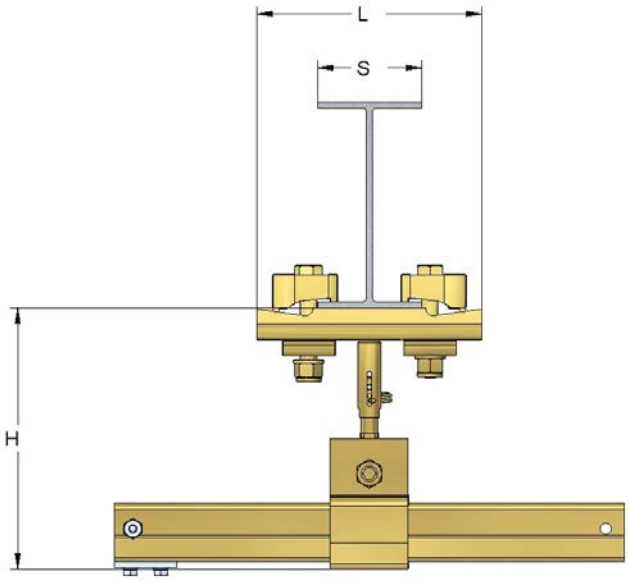
The hanger is the component whose function is to suspend the DRI structural profile using the support structure as an anchorage.

It consists of a set of clamps (grapas) fixed to the support structure by studs, designed to ensure the stability and rigidity of the system.

Constructed from SAE 1020 and finished with galvanized surface without paint.

It features a height adjustment mechanism between the base structure and the structural profile, using a threaded rod with a semi-spherical nut and secured by a steel clip.





SYMBOLISM

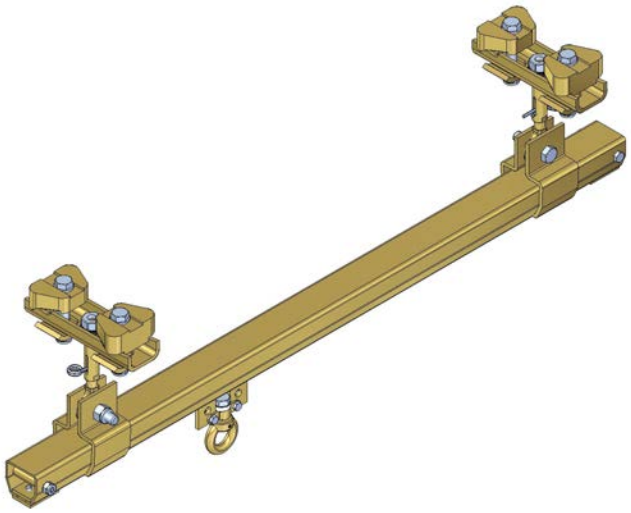
Hanger Code	S (mm)	Base	H (mm)	Rod Adjustment (mm)	Weight (kg)
01-450-04	62 ~ 138	L=250mm	110	30	4,9

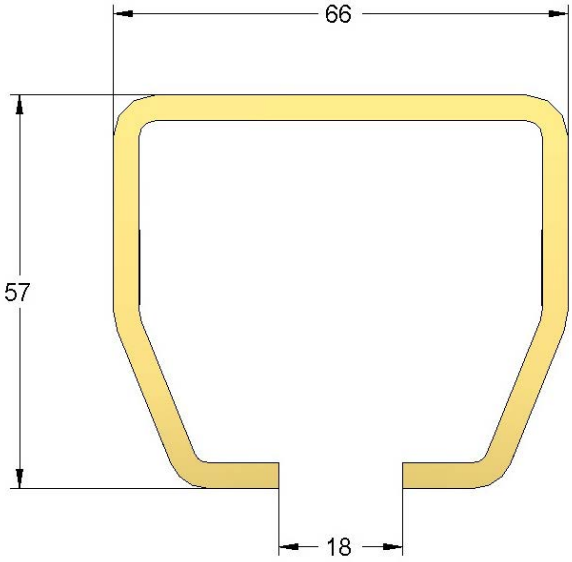
4 DRI STRAIGHT PROFILE

The straight structural profile is the component that allows the movement of trolleys, according to the required installation layout, forming the so-called "running track" or "runway."

Construction using cold-rolled steel allows for a high-quality surface finish, greater dimensional control during the manufacturing process, and a high degree of rigidity in the profile.

Bichromated surface finish.





SYMBOLISM

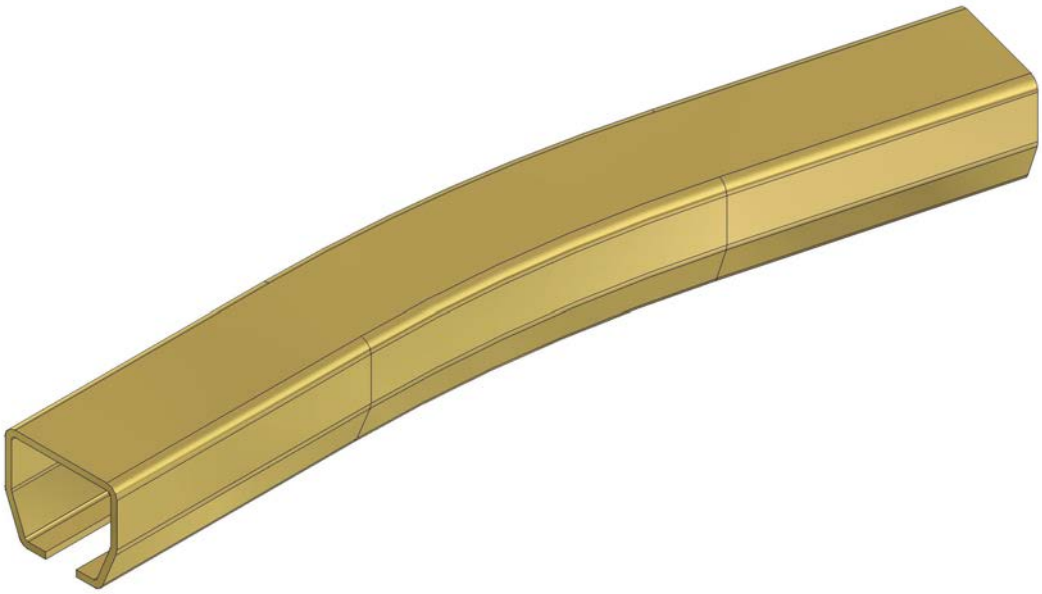
Code	L (mm)	Weight (kg)
01-450-01-01	1000	5,7
01-450-01-02	2000	11,0
01-450-01-03	3000	17,5
01-450-01-04	4000	23,0
01-450-01-05	5000	28,5
01-450-01-06	6000	34,5

Load capacity: 250kg*
*Maximum load may vary depending on the type of installation.

5 DRI CURVED STRUCTURAL PROFILE

The curved structural profile is the component that allows deviation in the course of the runway through assemblies with curves of different inclination angles such as 45°, 60°, and 90°, with a fixed radius of 1500 mm.

This component allows for layout flexibility during installation, enabling deviations around existing interfering structures/parts. It is applied in processes involving monorails.



SYMBOLISM

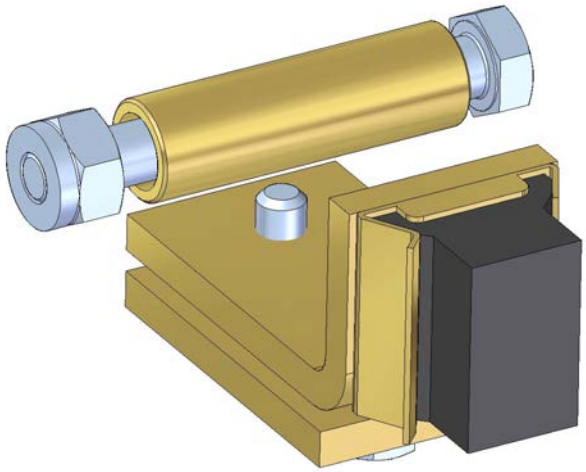
Code	Inclination angle	Radius (mm)	Weight (kg)
01-450-14	15°	750	4,8
01-450-15	30°	750	5,6
01-450-16	45°	750	6,4
01-450-17	60°	750	7,0
01-450-18	90°	750	7,8

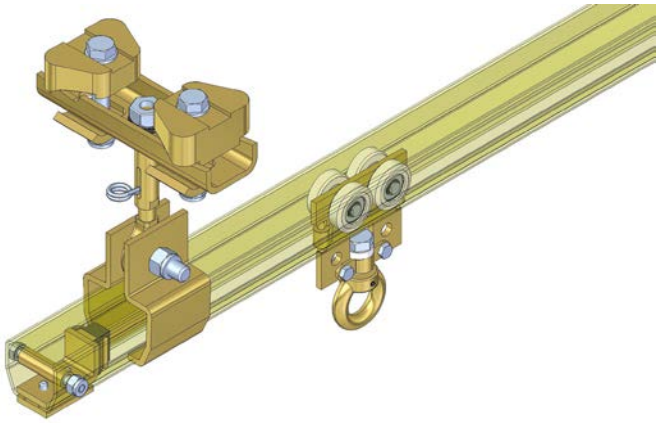
Load capacity: 250kg*
*Maximum load may vary depending on the type of installation.

6 DRI STOP ASSEMBLY

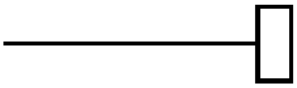
Component responsible for closing the DRI structural profiles and acting as a travel limit stop with a damping rubber.

Constructed from SAE-1020 steel plate and with rubber fixed inside the cover, it is supplied with fasteners to connect to the DRI structural profile.





SYMBOLISM



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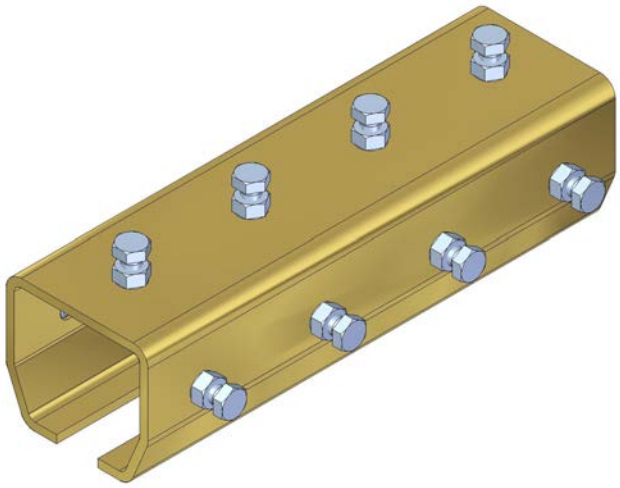
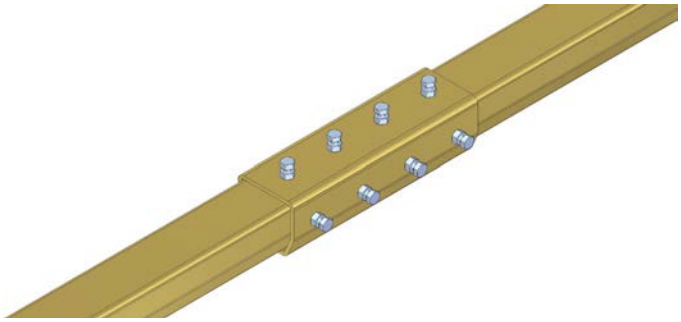
Code	Weight (kg)
01-450-02	0,5

7 DRI PROFILE CONNECTION

Component responsible for interconnecting DRI structural profiles.

Constructed from cold-rolled steel plate, it has screws positioned on the side of the profile for direct attachment to the DRI profiles.





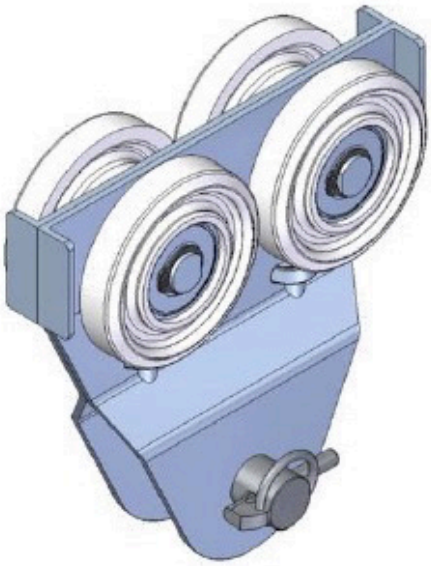
Code	Weight (kg)
01-450-13	3,5

8 DRI TROLLEY

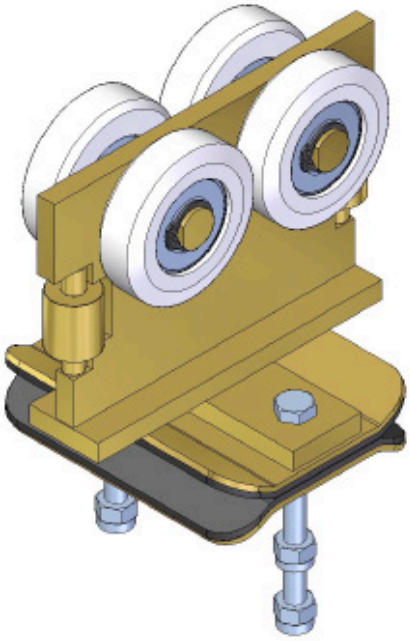
The DRI trolley is the assembly that performs translational and transverse movement on the runway.

The assembly consists of a stamped steel plate (trolley frame) where sub-components with 04 polymer wheels, shielded steel bearings, and motion transmission shafts operating with low noise levels are mounted.

It offers the option of manual drag movement with low friction between the wheels and the profile.



01-450-11



01-450-19

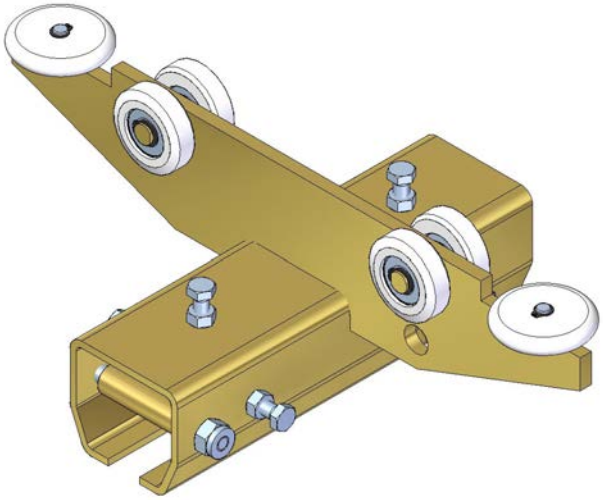
Code	Description	Weight (kg)
01-450-02	Standard trolley	6,5
01-450-19	Standard cable carrier trolley	8,0

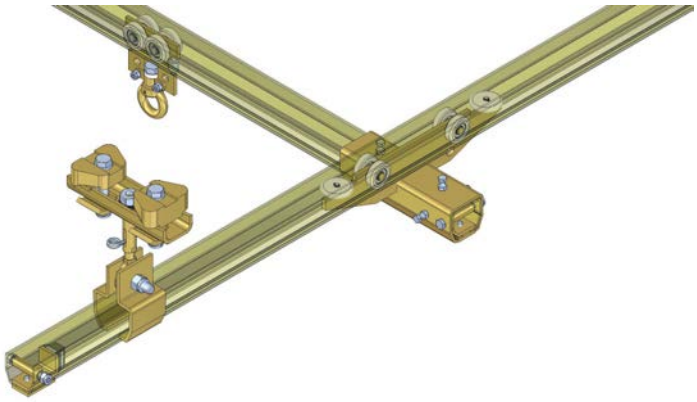
Load capacity: 250kg*
*The maximum load may vary depending on the type of installation.

9 DRI MOBILE BRIDGE CARRIAGE

This component, specially developed for manual overhead crane movement via the DRI profile, allows low-friction translational movements, moving the DRI overhead crane along the runway.

The structure, built using stamped sheet metal, features 06 fixed polymer wheels that assist in the overhead crane's movement.

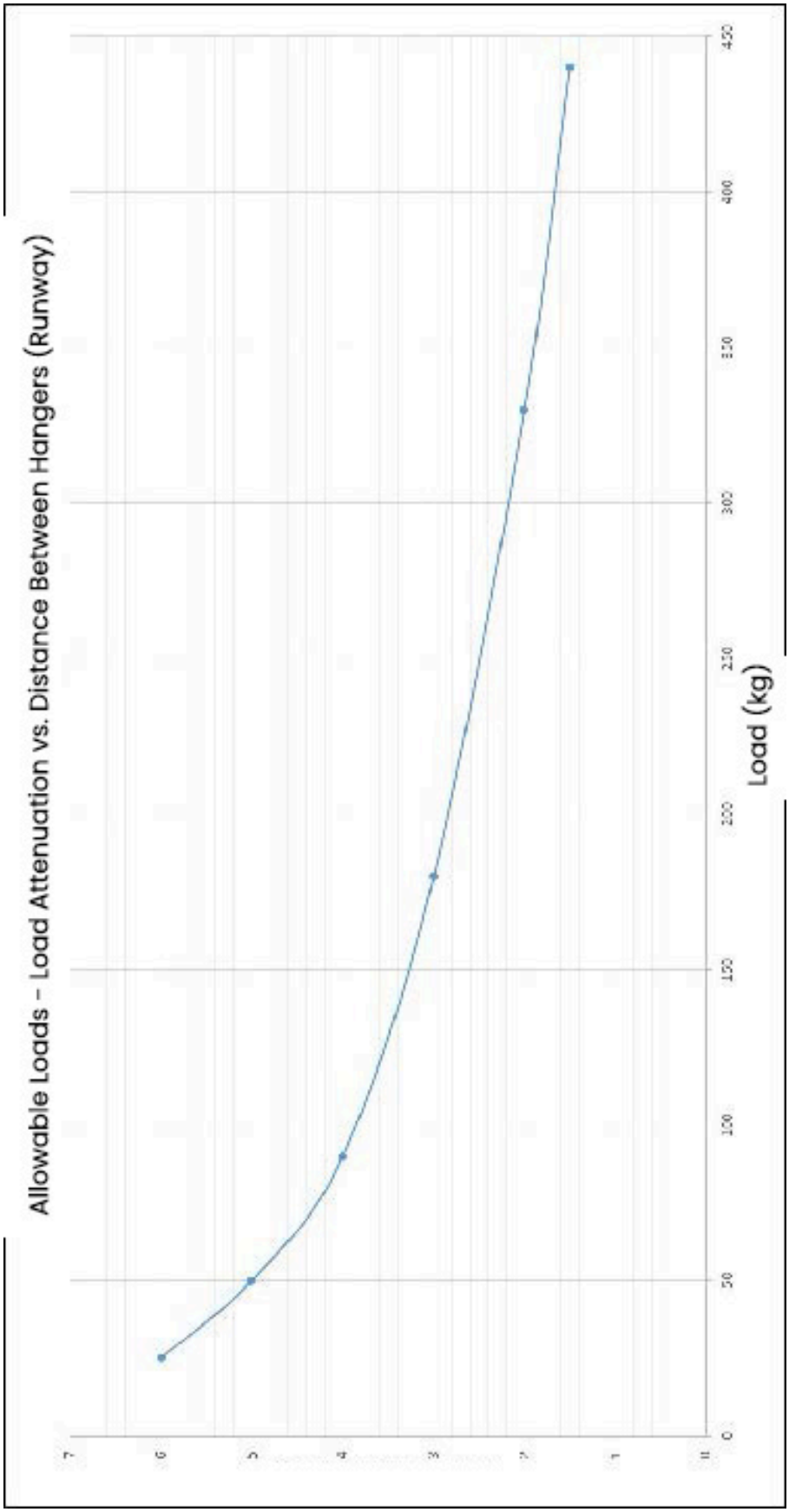




Code	Application	Load Capacity (kg)	Weight (kg)
01-450-12	Ponte	250	1,5

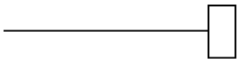
Load capacity: 250kg*
*Maximum load may vary depending on the type of installation.

10 DRI SYSTEM SIZING TABLE



11 COMPONENT SYMBOL SUMMARY

Straight Profile


Stop Cap


Curved Profile


Power Supply


Hanger


Profile Joint


Bumper


Trolley