



# **DKK Aluminium Crane System**

## Aluminium Product Catalogue



◀ Rail for simultaneously moving tool and material racks at assembly lines

Guide rail for Z lifting units



◀ Monorail with curves



Double rail



Telescopic rail system ▶

## DKK Components

Rail system for components handling unit or manipulator



Guide rail installed in the floor or floor-guided lifting units



Rail system for screw handling systems with torque



Overheadcrane systems X and Y with lifting unit in Z



Cranesystems with multiple runways





# Perfect Smooth-Running

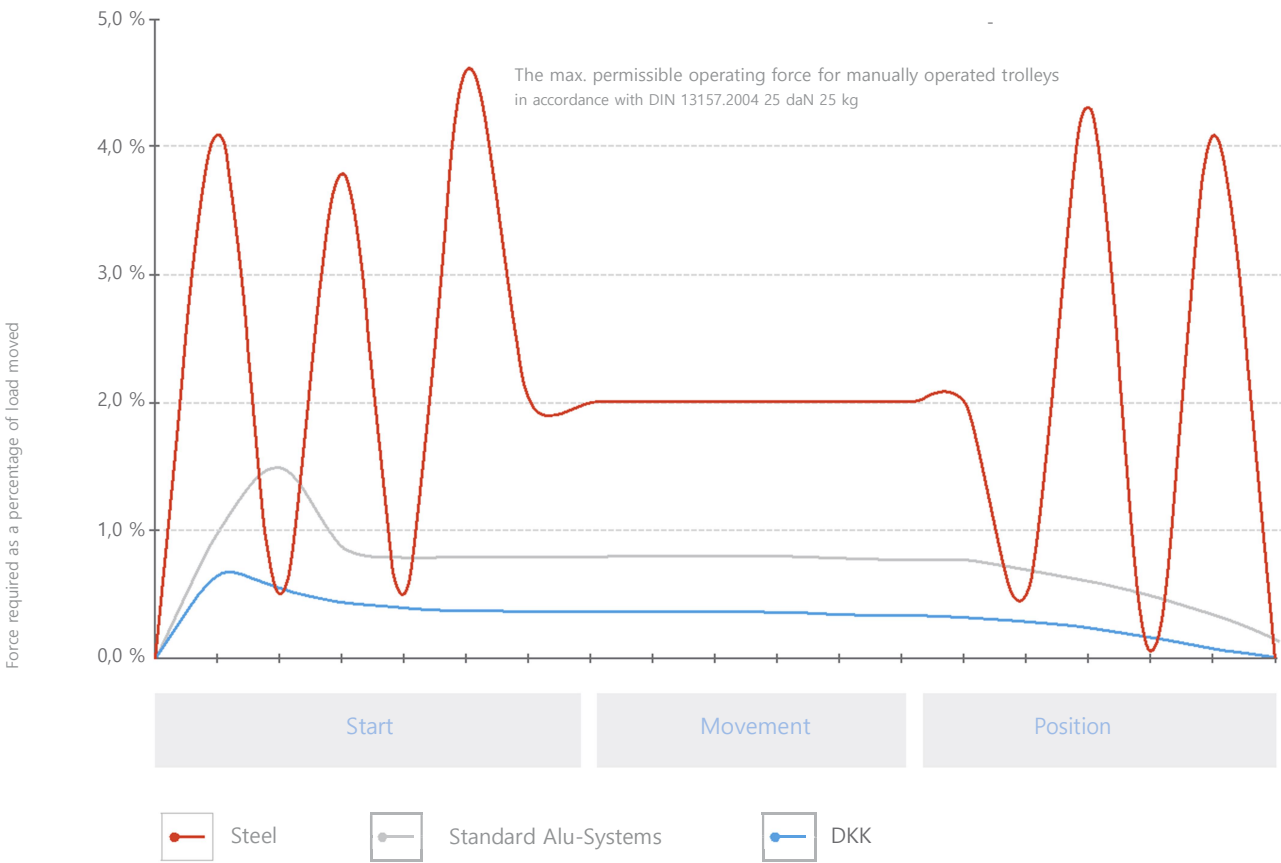
The smoother a crane system runs, the more pleasant and health preserving it is to work with. This is why DKK places particular value on optimum crane system running behavior when developing any components.

The result: DKK systems are demonstrably one of the easiest crane systems to move of those that are available on the market at this point in time.

In comparison to customary suspended runway systems, the operator of an DKK system requires only one third of the tractive power to move a load. Trolleys in the aluminium profiles also run distinctly more quietly. These are measurable and noticeable ergonomics.



# Force required when working with crane systems



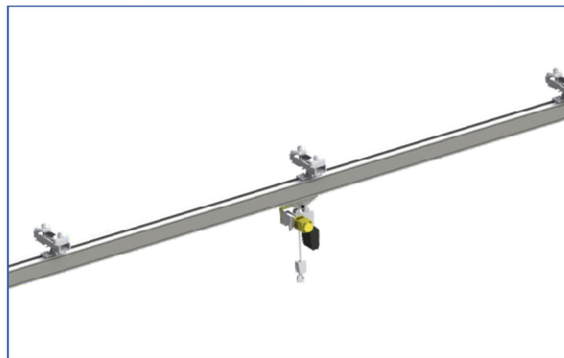
The values for DKK profiles were determined experimentally. Other values were taken from diagram publications.

| Load    | Start        | Movement     |
|---------|--------------|--------------|
| 100 kg  | 0,5 – 0,8 kg | 0,2 – 0,4 kg |
| 250 kg  | 1,3 – 1,9 kg | 0,5 – 0,8 kg |
| 500 kg  | 2,5 – 3,8 kg | 1,0 – 1,9 kg |
| 750 kg  | 3,8 – 5,6 kg | 1,5 – 2,9 kg |
| 1000 kg | 5,0 – 7,5 kg | 2,0 – 3,8 kg |

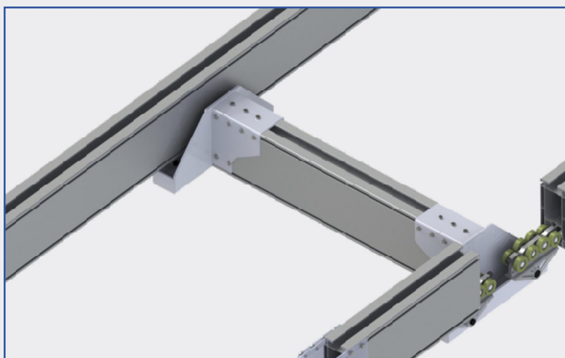
## >> Combined Mode of DKK Alu-Line System



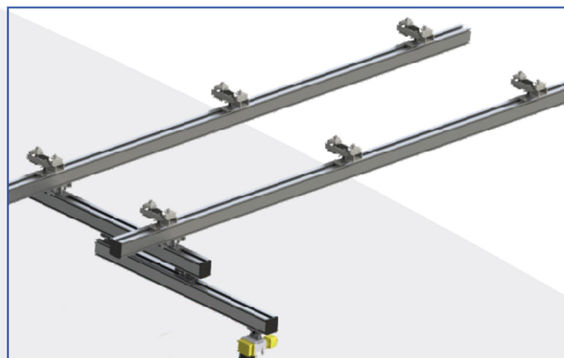
► DKK Single-girder Overhead Crane



► DKK Monorail Crane



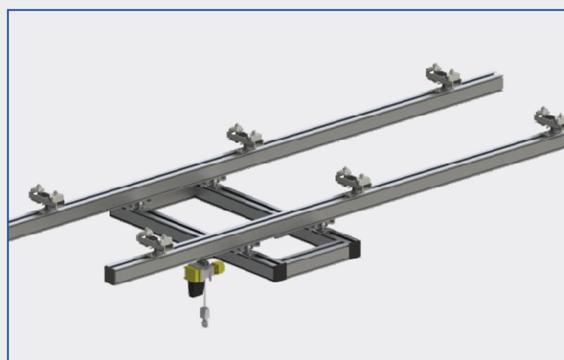
► DKK Single-girder Elevated Crane



► DKK Single-girder Elevated Telescope Crane

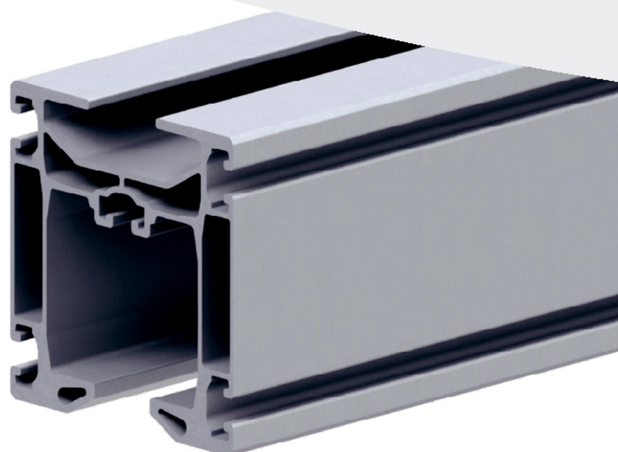
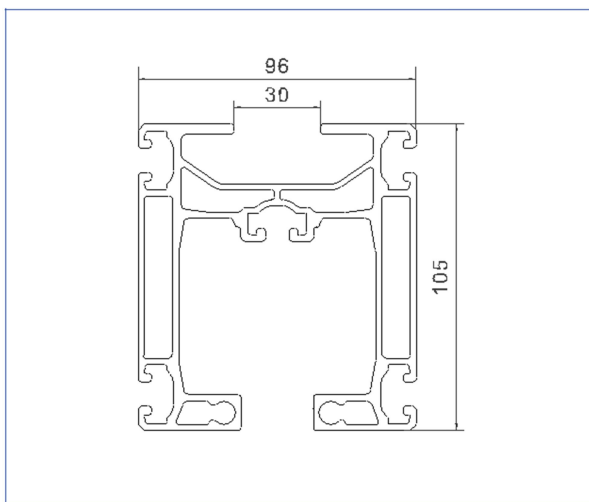


► DKK Double-girder Elevated Crane



► DKK Double-girder Overhead Crane

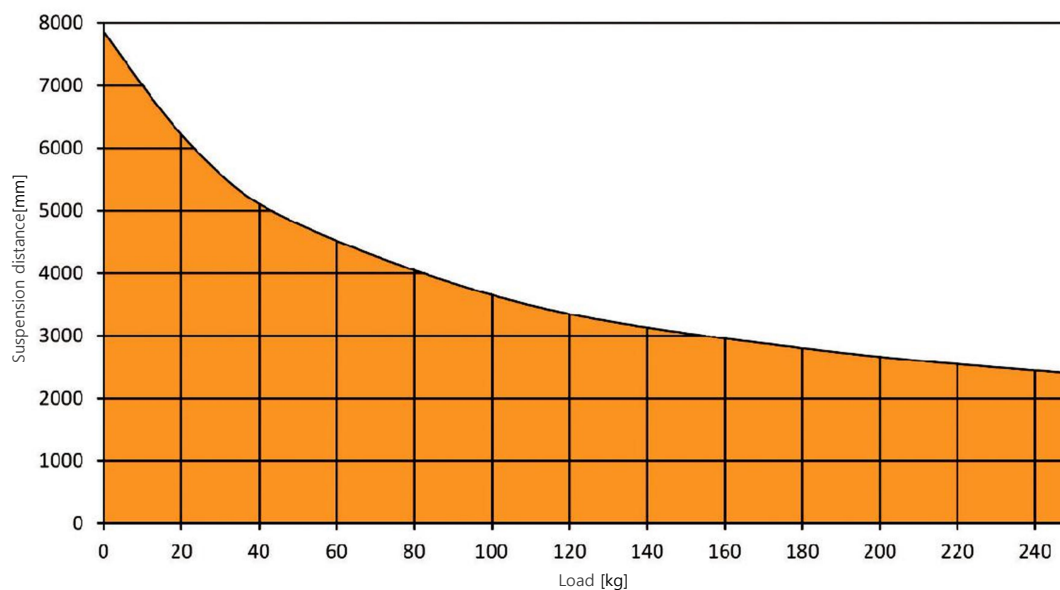
## Aluminum Rail Profile S (Max.250kg)



| Feature  | Description                               |
|--|---|
| Material data  | Natural aluminium, anodised               |
| Weight   | ca. 5,5 kg/m                              |
| Moment of plane area [I <sub>y</sub> /I <sub>z</sub> ] | 235 cm <sup>4</sup> / 214 cm <sup>4</sup> |
| Moment of resistance [W <sub>y</sub> /W <sub>z</sub> ] | 42 cm <sup>3</sup> / 44 cm <sup>3</sup>   |

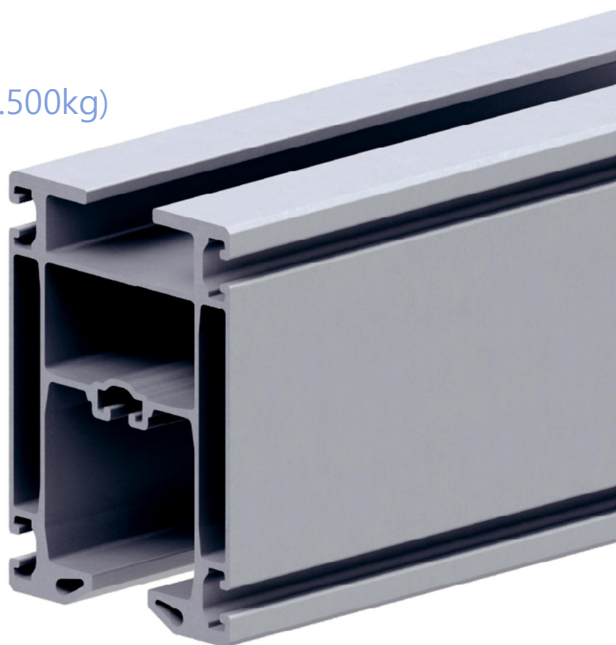
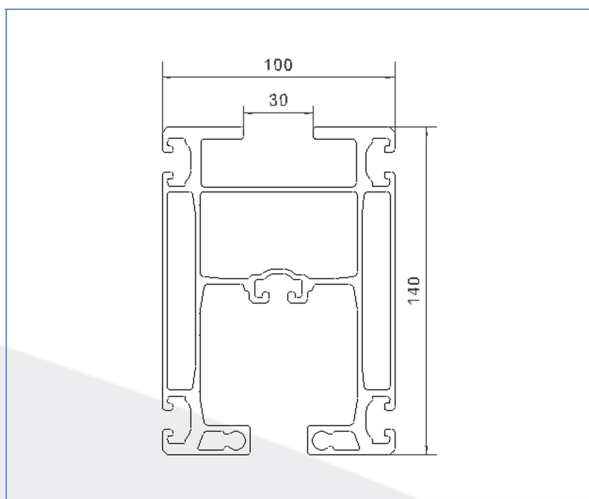
| Crane profile S | Item no. | Weight   |
|-----------------|----------|----------|
| L = 1000 mm     | 01401401 | 5,50 kg  |
| L = 2000 mm     | 01401402 | 11,00 kg |
| L = 3000 mm     | 01401403 | 16,50 kg |
| L = 4000 mm     | 01401404 | 22,00 kg |
| L = 5000 mm     | 01401405 | 27,50 kg |
| L = 6000 mm     | 01401406 | 33,00 kg |
| L = 7000 mm     | 01401407 | 38,50 kg |
| L = 8000 mm     | 01401408 | 44,00 kg |

Load chart DKK profile S





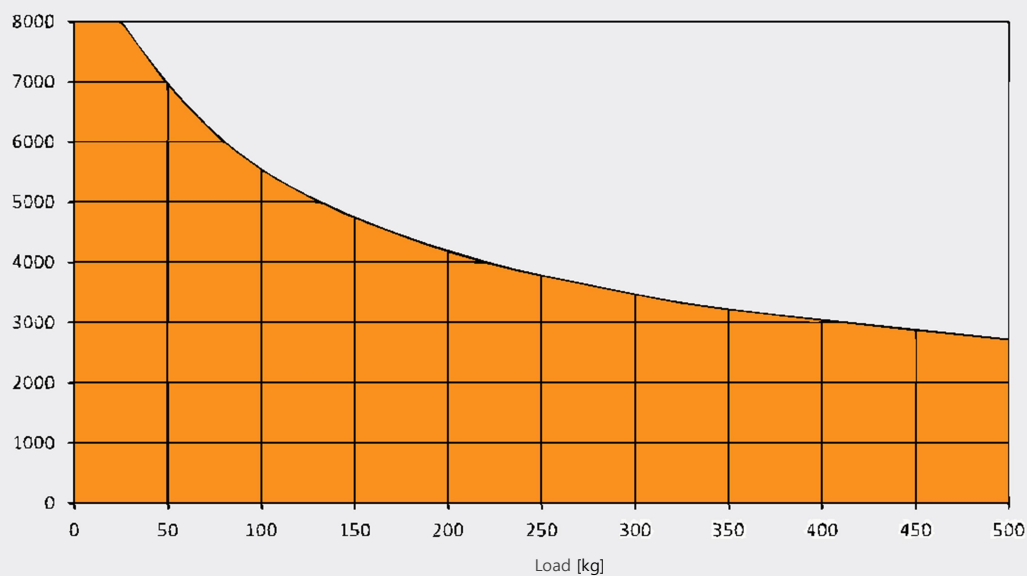
## Aluminum Rail Profile M (Max.500kg)



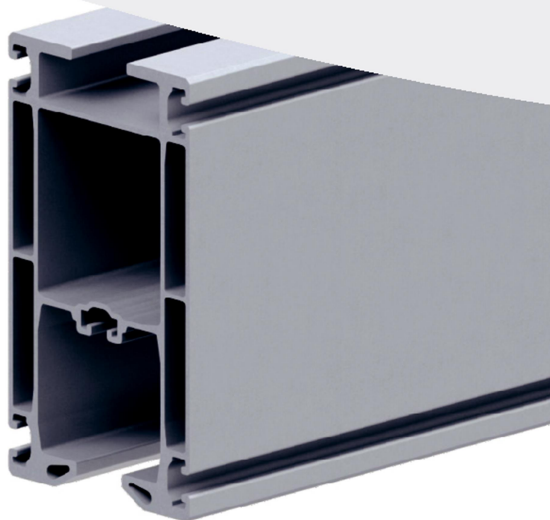
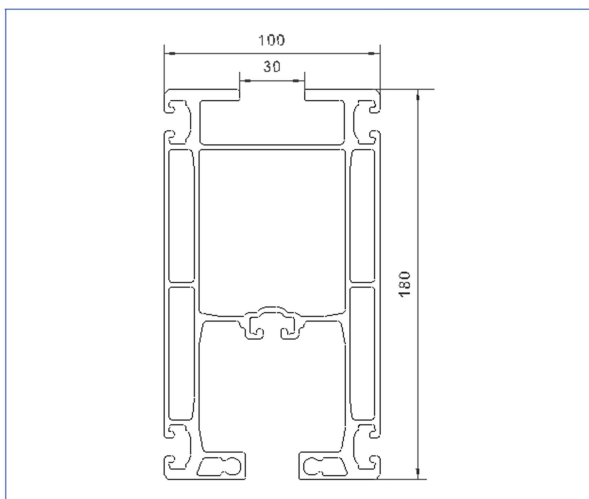
| Feature  | Description                               |
|--|---|
| Material data  | Natural aluminium, anodised               |
| Weight   | ca. 7,2 kg/m                              |
| Moment of plane area [I <sub>y</sub> /I <sub>z</sub> ] | 605 cm <sup>4</sup> / 335 cm <sup>4</sup> |
| Moment of resistance [W <sub>y</sub> /W <sub>z</sub> ] | 85 cm <sup>3</sup> / 67 cm <sup>3</sup>   |

| Crane profile M | Item no. | Weight   |
|-----------------|----------|----------|
| L = 1000 mm     | 01402201 | 7,20 kg  |
| L = 2000 mm     | 01402202 | 14,40 kg |
| L = 3000 mm     | 01402203 | 21,60 kg |
| L = 4000 mm     | 01402204 | 28,80 kg |
| L = 5000 mm     | 01402205 | 36,00 kg |
| L = 6000 mm     | 01402206 | 43,20 kg |
| L = 7000 mm     | 01402207 | 50,40 kg |
| L = 8000 mm     | 01402208 | 59,60 kg |

Load chart DKK profile M



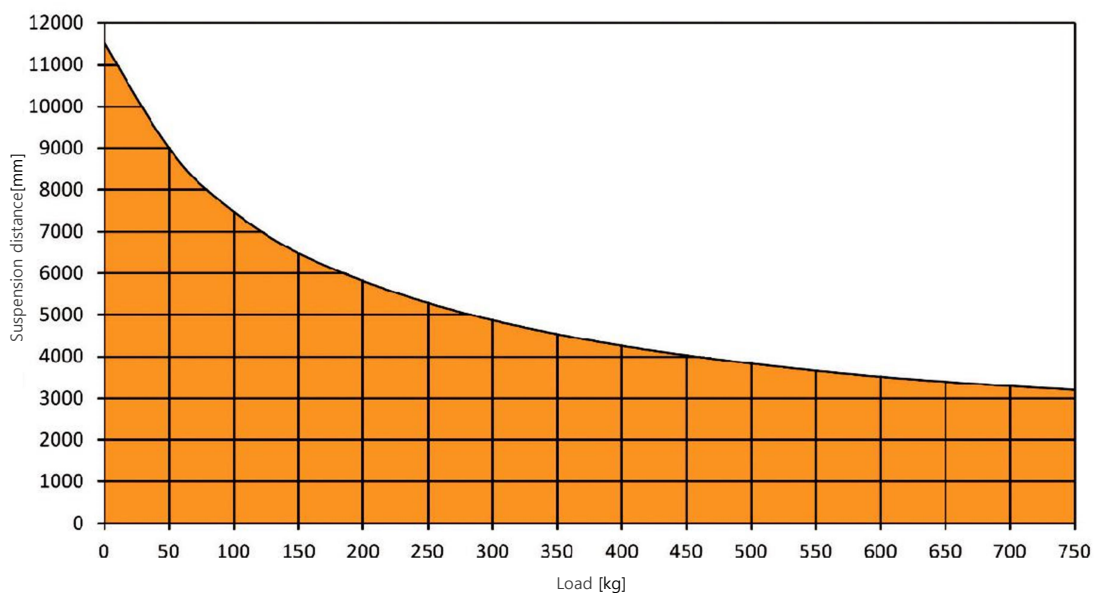
## Aluminum Rail Profile L (Max.750kg)



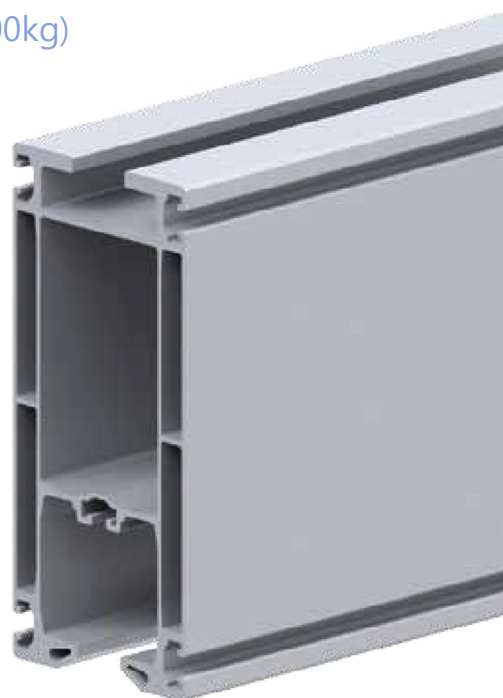
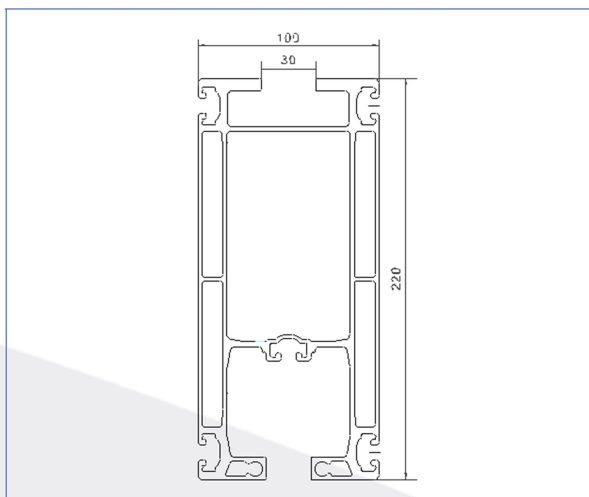
| Feature  | Description                                |
|--|--|
| Material data  | Natural aluminium, anodised                |
| Weight   | ca. 8,8 kg/m                               |
| Moment of plane area [I <sub>y</sub> /I <sub>z</sub> ] | 1211 cm <sup>4</sup> / 437 cm <sup>4</sup> |
| Moment of resistance [W <sub>y</sub> /W <sub>z</sub> ] | 133 cm <sup>3</sup> / 86 cm <sup>3</sup>   |

| Crane profile L | Item no. | Weight   |
|-----------------|----------|----------|
| L = 1000 mm     | 01403001 | 8,80 kg  |
| L = 2000 mm     | 01403002 | 17,60 kg |
| L = 3000 mm     | 01403003 | 26,40 kg |
| L = 4000 mm     | 01403004 | 35,20 kg |
| L = 5000 mm     | 01403005 | 44,00 kg |
| L = 6000 mm     | 01403006 | 52,80 kg |
| L = 7000 mm     | 01403007 | 61,60 kg |
| L = 8000 mm     | 01403008 | 70,40 kg |

Load chart DKK profile L



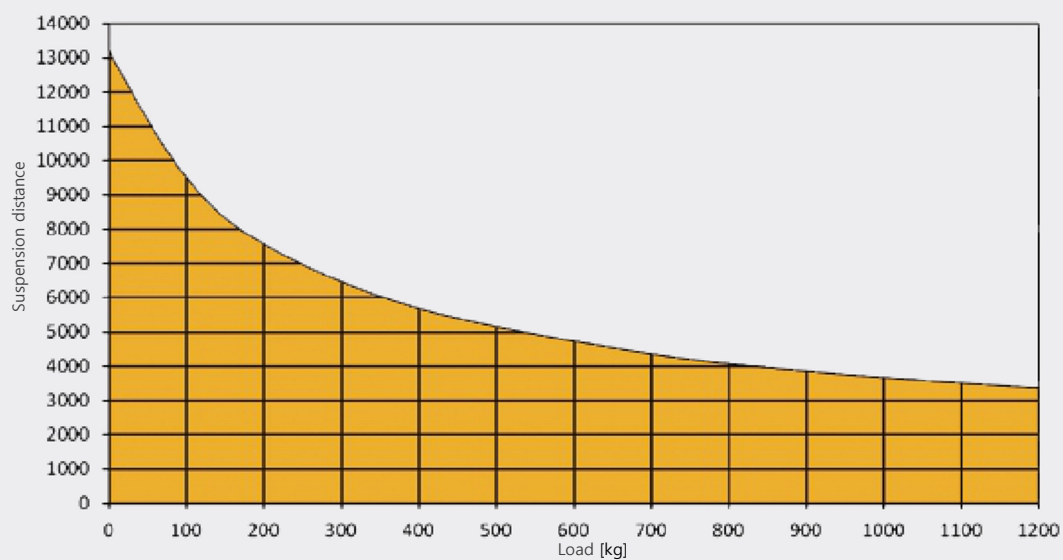
## Aluminum Rail Profile XL (Max.1200kg)



| Feature                            | Description                                |
|------------------------------------|--|
| Material data                      | Natural aluminium, anodised                |
| Weight                             | ca. 10,2 kg/m                              |
| Moment of plane area [ $I_y/I_z$ ] | 2200 cm <sup>4</sup> / 523 cm <sup>4</sup> |
| Moment of resistance [ $W_y/W_z$ ] | 197 cm <sup>3</sup> / 104cm <sup>3</sup>   |

| Crane profile XL | Item no. | Weight   |
|------------------|----------|----------|
| L = 1000 mm      | 01403701 | 10,20 kg |
| L = 2000 mm      | 01403702 | 20,40 kg |
| L = 3000 mm      | 01403703 | 30,60 kg |
| L = 4000 mm      | 01403704 | 40,80 kg |
| L = 5000 mm      | 01403705 | 51,00 kg |
| L = 6000 mm      | 01403706 | 61,20 kg |
| L = 7000 mm      | 01403707 | 71,40 kg |
| L = 8000 mm      | 01403708 | 81,60 kg |

Load chart DKK profile XL





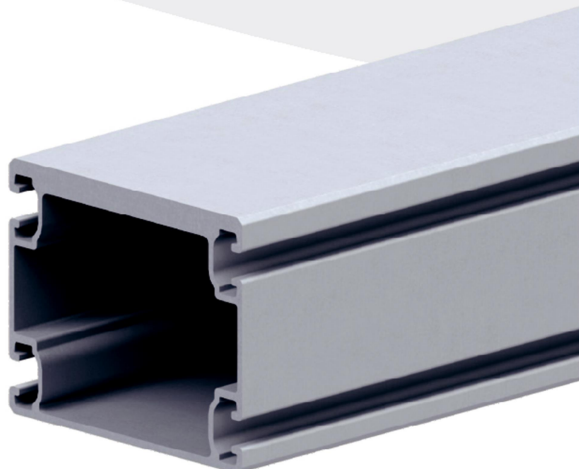
## Reinforcement profile

The reinforcement profile is primarily designed ...

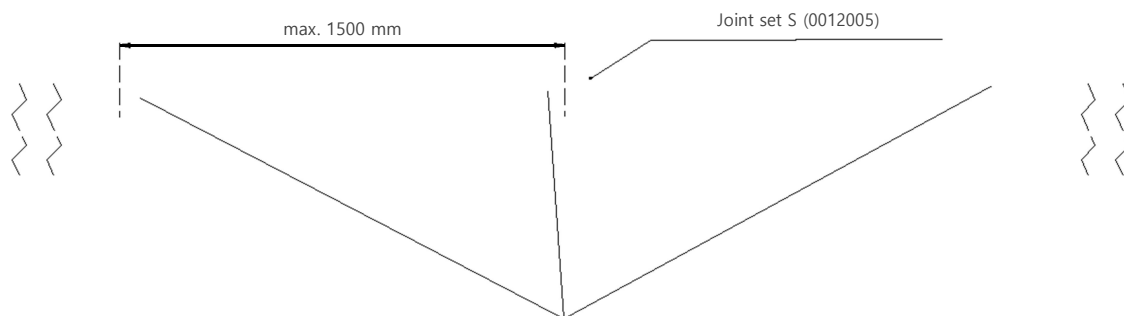
- ... to reduce deflection
- ... to increase span widths and suspension spacing

An increase in load is also possible, it cannot be greater than that of the underlying crane profile. (Load data on next page)

Connection of the reinforcement profile to the profile crane is carried out by means of joint connector plates for profile S (014075).



The reinforcement profile can be used in conjunction with the crane profiles M, L and XL. The profiles S is not compatible for this purpose.



The absolute necessary positions of the joint sets are ...

- ... at the end of the reinforcement profile
- ... in the center of the reinforcement profile

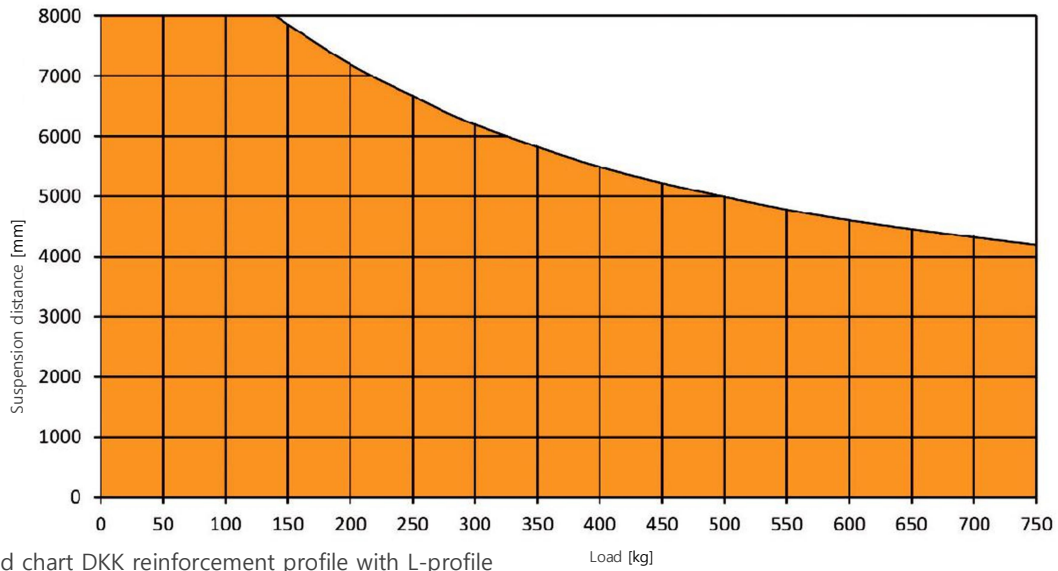
The remaining joints must be divided so that the distance is not greater than 1,500 mm.

| Feature                                      | Description                                |
|--|--|
| Material data                                | Natural aluminium, anodised                |
| Weight                                       | ca. 4 kg/m                                 |
| Moment of plane area with M profile [ly/lz]  | 2141 cm <sup>4</sup> / 511 cm <sup>4</sup> |
| Moment of plane area with L profile [ly/lz]  | 3515 cm <sup>4</sup> / 619 cm <sup>4</sup> |
| Moment of plane area with XL profile [ly/lz] | 5211 cm <sup>4</sup> / 695 cm <sup>4</sup> |

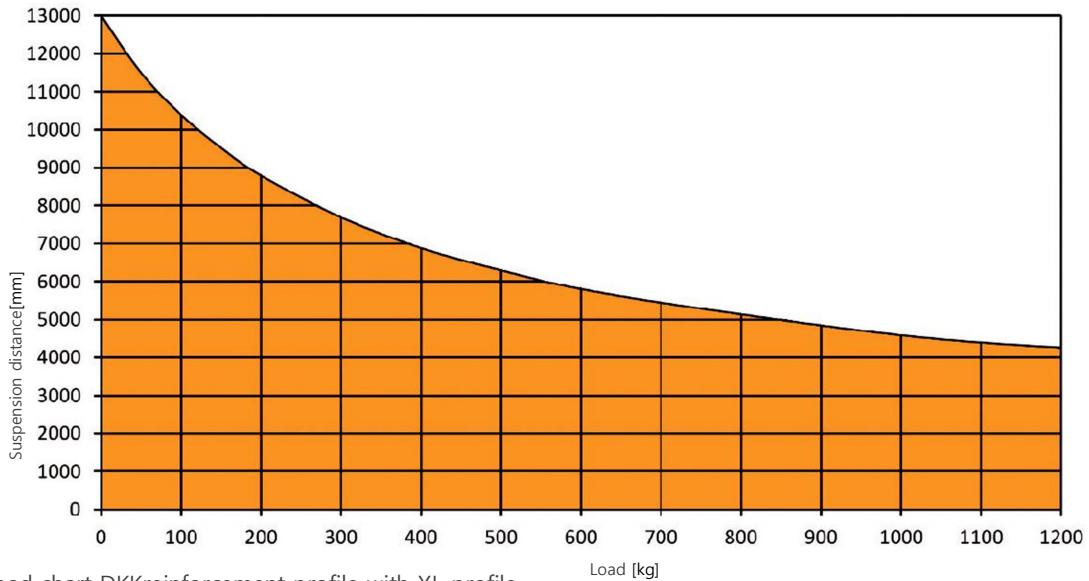
| Reinforcement profile | Item no. | Weight   |
|-----------------------|----------|----------|
| L = 1000 mm           | 01404501 | 4,00 kg  |
| L = 2000 mm           | 01404502 | 8,00 kg  |
| L = 3000 mm           | 01404503 | 12,00 kg |
| L = 4000 mm           | 01404504 | 16,00 kg |
| L = 5000 mm           | 01404505 | 20,00 kg |
| L = 6000 mm           | 01404506 | 24,00 kg |
| L = 7000 mm           | 01404507 | 28,00 kg |
| L = 8000 mm           | 01404508 | 32,00 kg |

## Reinforcement profile

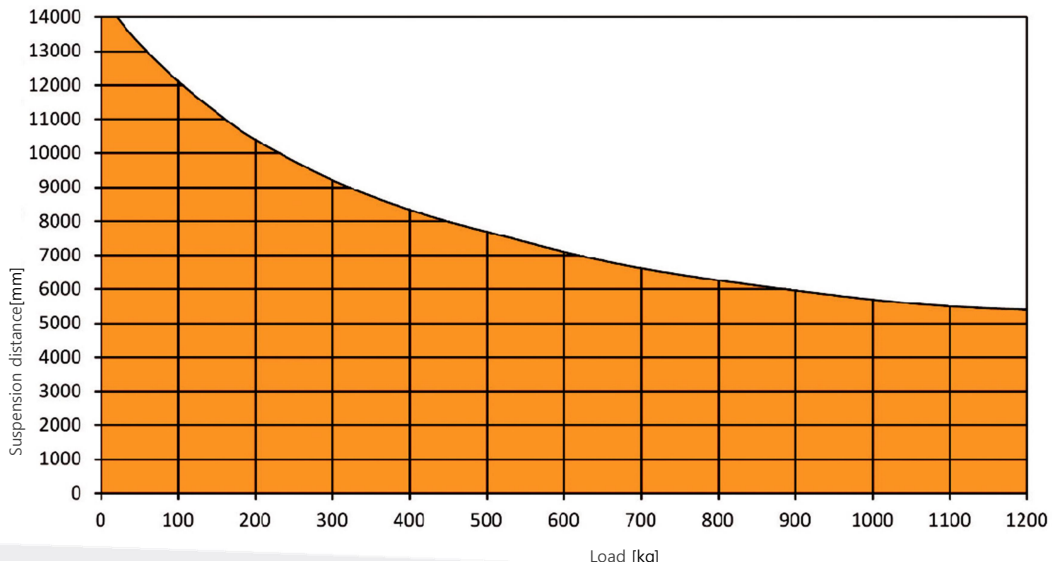
Load chart DKK reinforcement profile with M-profile



Load chart DKK reinforcement profile with L-profile



Load chart DKK reinforcement profile with XL-profile

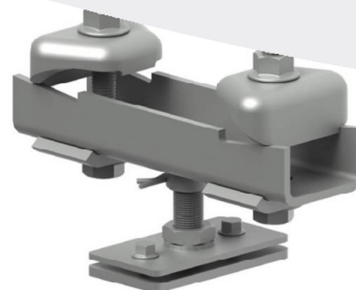


## Rigid Mountings

Most DKK crane systems that rely on precise load position or crane systems that are subject to upward forces, e.g. by manipulators, escalating devices or excessive overhang of the crane beams, are mounted using height adjustable, rigid mounting.

The 20 mm range of height adjustment gives this type of mounting the ability to compensate for height differences in the steel construction, despite the rigid crane system mounting

With three different sizes available, the securing of flange widths of between 50mm-310mm is covered



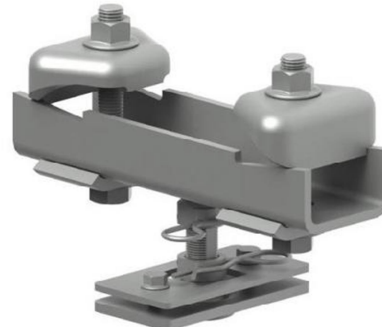
| Feature           | Rigid Mounting 50-150 | Rigid Mounting 150-250 | Rigid Mounting 250-310 |
|-------------------|-----------------------|------------------------|------------------------|
| Load Capacity     | 2000 kg               | 2000 kg                | 2000 kg                |
| Flange Width      | 50mm-150mm            | 150mm-250mm            | 250mm-310mm            |
| Height Adjustment | 92mm-112mm            | 92mm-112mm             | 92mm-112mm             |
| Weight            | 3.8 kg                | 4.3 kg                 | 4.8 kg                 |
| Item Code         | 01405900              | 01406000               | 01406100               |

## Pendular Mountings

Around 90% of all DKK crane systems are attached to the ceiling construction by pendular mounting

The type of mounting should always be your number one choice. Rigid variations should only be employed if the crane system is subject to upward forces, e.g. by manipulators, escalating devices or excessive overhang of the crane beams.

With three different sizes available, the securing of flange widths of between 50mm-310mm is covered



| Feature              | Pendular Mounting 50-150 | Pendular Mounting 150-250 | Pendular Mounting 250-310 |
|----------------------|--------------------------|---------------------------|---------------------------|
| Load Capacity        | 2000 kg                  | 2000 kg                   | 2000 kg                   |
| Flange Width         | 50mm-150mm               | 150mm-250mm               | 250mm-310mm               |
| Height Adjustment    | 92mm-132mm               | 92mm-132mm                | 92mm-132mm                |
| Weight               | 4,0 kg                   | 4,5 kg                    | 5,0 kg                    |
| Max. Ceiling Incline | 10°                      | 10°                       | 10°                       |
| Item Code            | 01405600                 | 01405700                  | 01405800                  |



## Crane Girder Suspension

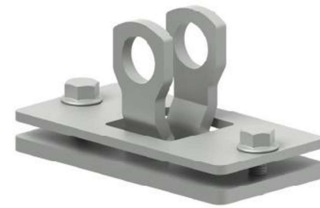
Crane girder can be secured to crane runways using the DKK crane girder suspension.

This special type of support is flexible but without play and offers the crane and the user sufficient freedom necessarily to complete the task as easily as possible. At the same time, the

precise integration of all components ensures that the system runs quietly and smoothly, independent of the direction of forces applied to the crane system.

Downward or upward loads of up to 600kg can be transferred with the crane girder suspension.

Normal crane girders are fitted using the 90° variant, Telescopic girders can be created using the 0° variant.



014080

| Designation                 | Item Code | Weight |
|-----------------------------|-----------|--------|
| Crane Girder Suspension 0°  | 01407900  | 0,6 kg |
| Crane Girder Suspension 90° | 01408000  | 0,6 kg |

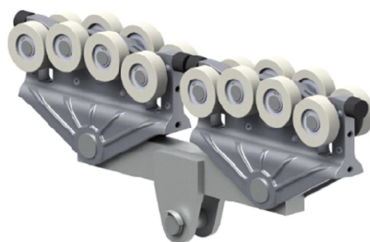
## Manual Trolleys



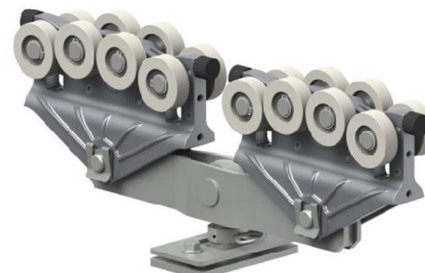
Grab Trolley 01406400



Hinge Trolley 01406400



Tandem Grab Trolley 01406600

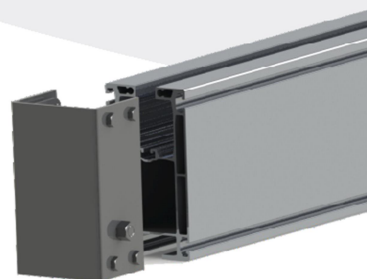


Tandem Hinge Trolley 01406500

| Designation                   | Item Code | Max. Load | Weight  |
|-------------------------------|-----------|-----------|---------|
| Grab Trolley                  | 01406200  | 600 kg    | 1,60 kg |
| Hinge Trolley (Runway)        | 01406400  | 600 kg    | 1,25 kg |
| Tandem Grab Trolley           | 01406600  | 1200 kg   | 4,20 kg |
| Tandem Hinge Trolley (Runway) | 01406500  | 1200 kg   | 3,50 kg |

## End Cap

All DKK crane profiles must be fitted with an end cover to protect against the ingress of contamination.



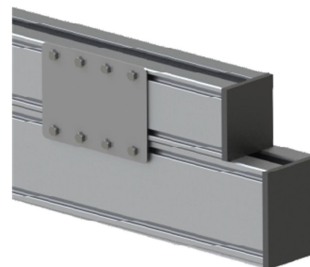
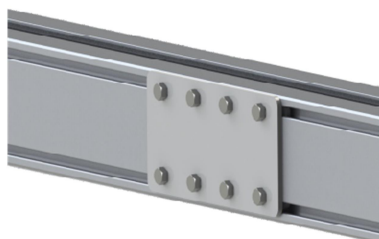
| Designation            | Item Code | Weight  | Material |
|------------------------|-----------|---------|----------|
| End Cap for S Profile  | 01406900  | 0.5 kg  | Steel    |
| End Cap for M Profile  | 01407000  | 0.65 kg | Steel    |
| End Cap for L Profile  | 01407100  | 0.85 kg | Steel    |
| End Cap for XL Profile | 01407200  | 1.03 kg | Steel    |

## Joint Set (for crane profile & reinforcement profile)

The DKK joint set for profile sizes S, M and large secured in the grooves in the side of the profile and thus allow crane runways of any length to be constructed.

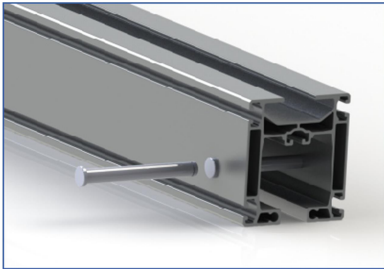
The joint set for the XS crane profile is realized by way of the upper opening in the profile.

Crane bridges can also be extended using joint sets. Please ask our consultant for a layout.

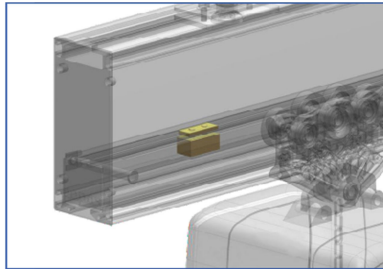


| Designation              | Item Code | Weight  |
|--------------------------|-----------|---------|
| Joint Set for Profile S  | 01407500  | 2.15 kg |
| Joint Set for Profile M  | 01407600  | 2.60 kg |
| Joint Set for Profile L  | 01407700  | 3.10 kg |
| Joint Set for Profile XL | 01407800  | 3.65 kg |

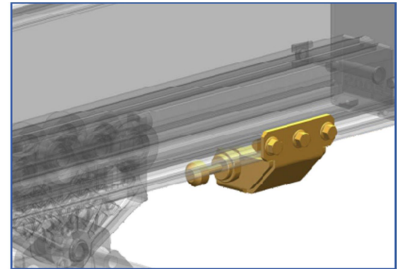
## End Stop



01408200



01408300



01408400

| Designation                       | Item Code | Weight  |
|-----------------------------------|-----------|---------|
| End Stop fixed to Profile S to XL | 01408200  | 0,10 kg |
| End Stop Adjustable               | 01408300  | 0,19 kg |
| End Stop Buffered                 | 01408400  | 0,80 kg |

## Cable Trolley

For Flat Cable



01410300



01410700



01411100

For Round Cable (Dia. 26-36mm)



01410600



01411000

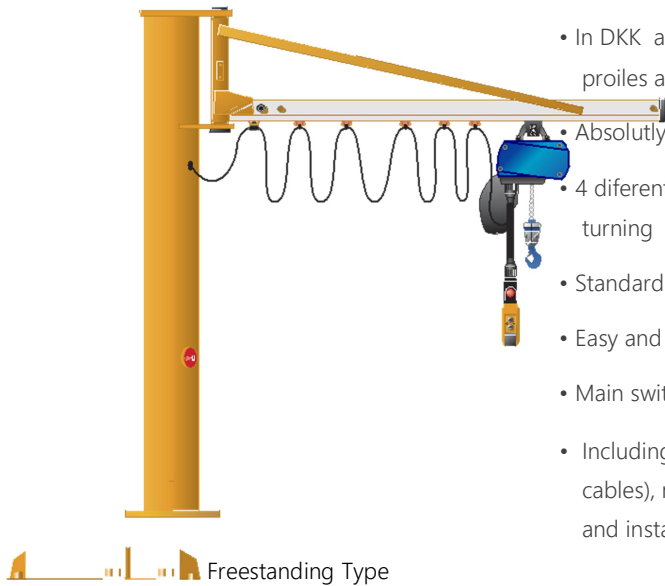


01411400



## Features

- In DKK acceptance of proile for optimal force of the proiles and low delection
- Absolutly smooth rotating
- 4 diferent proiles for an optimal price performance and light turning
- Standard DKK chain hoists or requested brand
- Easy and quick installation
- Main switch integrated in column
- Including electrical equipment (cable trolleys and cables), main switches, gab trolley for lifting equipment and installa-tion material for columns

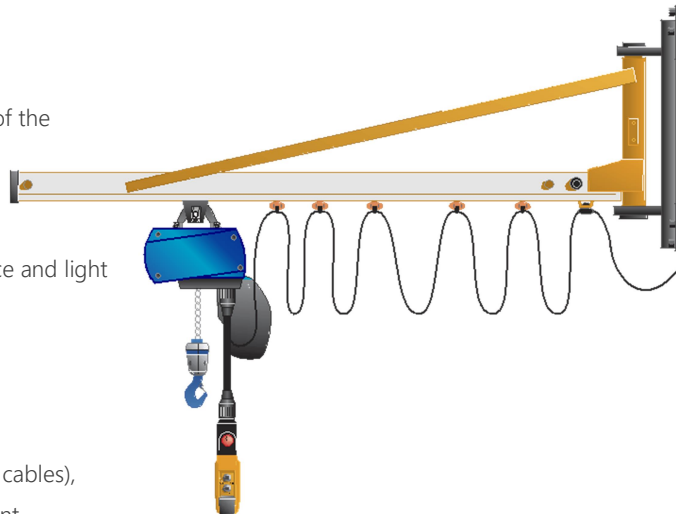


Freestanding Type

| S.W.L.   | Jib length | 3m | 4m | 5m | 6m |
|----------|------------|----|----|----|----|
| 80 kg    |            | ✓  | ✓  | ✓  | ✓  |
| 125 kg   |            | ✓  | ✓  | ✓  | ✓  |
| 250 kg   |            | ✓  | ✓  | ✓  | ✓  |
| 500 kg   |            | ✓  | ✓  | ✓  |    |
| 750 kg   |            | ✓  | ✓  |    |    |
| 1,000 kg |            |    |    |    |    |

## Features

- InDKKtive acceptance of proile for optimal force of the proiles and low delection
- Absolutly smooth rotating
- 4 diferent proiles for an optimal price performance and light turning
- standard DKK chain hoist or requested brand.
- Easy and quick installation
- Including electrical equipment (cable trolleys and cables), main switches and gab trolley for lifting equipment



Wall mounted Type

| S.W.L. | Jib length | 3m | 4m | 5m | 6m |
|--------|------------|----|----|----|----|
| 80 kg  |            | ✓  | ✓  | ✓  | ✓  |
| 125 kg |            | ✓  | ✓  | ✓  | ✓  |
| 250 kg |            | ✓  | ✓  | ✓  | ✓  |



