

# Flexible Packaging Roll Handling



## Roll Handling Solutions

From start to finish, film extrusion to end product, rolls need to be handled in various processes. After rewinding and slitting they need to be taken from the unloading shaft and be palletized. Further on in the roll life cycle processes like converting, laminating and (label) printing this again requires roll handling solutions. The life of a roll then ends in a final (flexible)packaging/ labeling process to create an attractive end-product for the consumer. Lifting and rotating these rolls require smart, ergonomic and cost effective solutions. That is our mission at Dotec.



Dotec R&D - Design & Production Centre

3800 m<sup>2</sup> / 40.000 ft<sup>2</sup> Facility

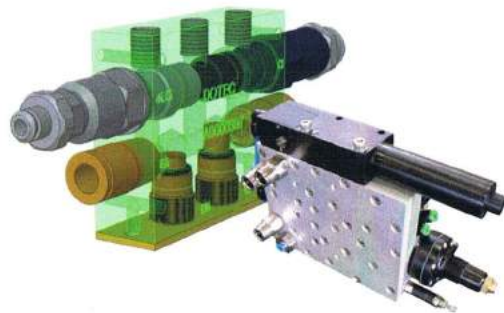


**Dotec LiftAssists** have very specific characteristics that are based on ease of operation, speed of work and ergonomics in posture. The learning curve is very short, and work becomes a pleasure. It's called The **Friendly LiftAssist®**.

### The Air-Balancer:

The air-balancer is the "muscle" of the system and makes the elastic vertical movement possible. Compressed air that is going in or is vented moves the piston (linear movement). The piston rod is connected to a ball-screw spindle that translate the linear motion into rotating, making the cable spool to turn. As a result it winds up and unwinds the balancer cable. When the movement is stopped the load is permanently supported by an air cushion and the load is "in balance".

The elastic effect is the result of the compressibility of air. This principle explains the important difference between an Air-Balancer and a Hoist.

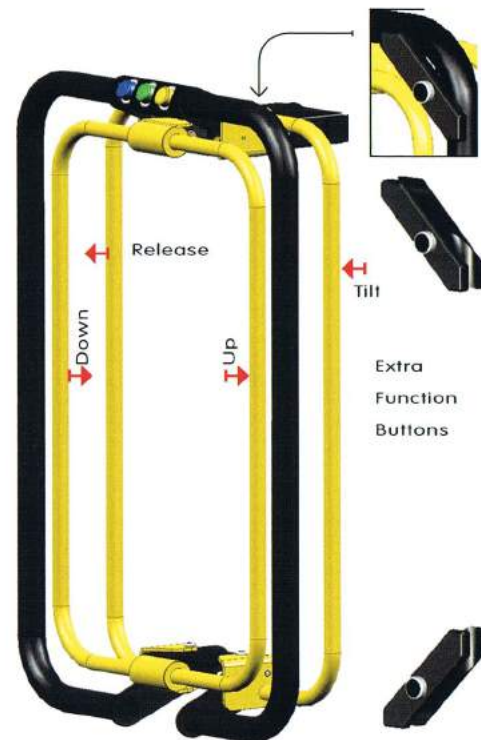
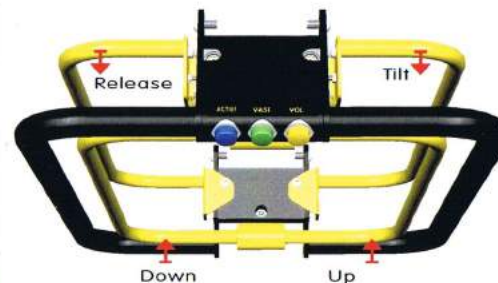


### Smart logic Controls! (Fully pneumatic)

The smart logic controls guide the process through the following stages:

Empty to loaded – moving up & down – set down – and back to empty (Release) is a semi automated sequence.

Compact valve-modules have been developed to achieve high speed reaction/response, combined with special ultra narrow and short tubing.



### Dotec ErgoHandle®

The central feature of the Dotec lift assist is the ergonomic handle, which is used to operate the lift assist. The handle can move freely up and down sliding through the hands, allowing the user to keep his eye on the load, while a mere finger touch determines both direction and speed. There is no need for (gymnastics) bending and stretching when lifting to high or low places.

**Additional functions** e.g. tilt or rotate are activated by finger-tip touch of the levers at the sides. This is done without distraction or requiring special attention, similar to the steering wheel of a car. In a very short time operating happens intuitively. In other words "the learning curve" is short.

**ZA- Logic Control:** Activated by the Ergo-Handle®, the basic ZA-logic control allows the compressed air to enter into the Balancer for the up/down-movement. The valves react "Proportional", which means that "pressing" the operating lever harder results in a "quicker" up or down movement. This makes operating the lift assist quick and dynamic, or gentle and accurate, whatever way the process requires. This gives the operator the feeling that he (or she) decides what happens or should happen, which creates positive motivation and an acceleration of the overall process.



### Center of Gravity: (CG)

An important feature in every Dotec system is the automated "Center Of Gravity" adjustment.

This unit secures the horizontal and vertical alignment under any condition. This means that an empty or loaded handler will always adjust itself into the correct position. Once adjusted for the application, it will align automatically.

## Dotec Roll Handling Solutions;

<b>FP1</b> 8/32Kg 20/70Lb	<b>RH50</b> 15/50Kg 30/110Lb	<b>FP2</b> 15/80Kg 30/175Lb	<b>RH90</b> 25/100Kg 50/220Lb	<b>RH140</b> 50/140Kg 110/300Lb	<b>RH200</b> 60/200Kg 130/450Lb	<b>RH ABC</b> 100/250Kg 220/600Lb
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**Tilting Family**

The Tilting Family provides fast and efficient roll handling operations for both roll production and packaging processes (Slitter-Rewinder-Converting-Printing-Packaging processes). Tell us about your roll handling process and we can advise you what roll handler fits your application best.

**Motorized X-Y motion**

**DOTEC**  
rollhandling.com

**WLL 1200 lbs**

**Heavy weight roll handling Cap. 550Kg/1200Lb. Single or Rotary action.**

**RH45-550**  
550Kg  
1200Lb

90° Rotation

90° stops

Single action (Probe)

**Flexo Print sleeve handling:**

- Sleeve length up to 3meter/10Ft
- Sleeve weight up to 200Kg/500Lb

**Shaft handling:**

- Length 2,2Mtr/8Ft
- Weight, 150Kg/330Lb

Watch our video's on youtube channel:dotec100

**Rotating Family**

**RH150xxL R/L**  
50/150Kg  
100/300Lb

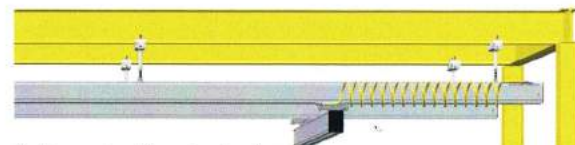
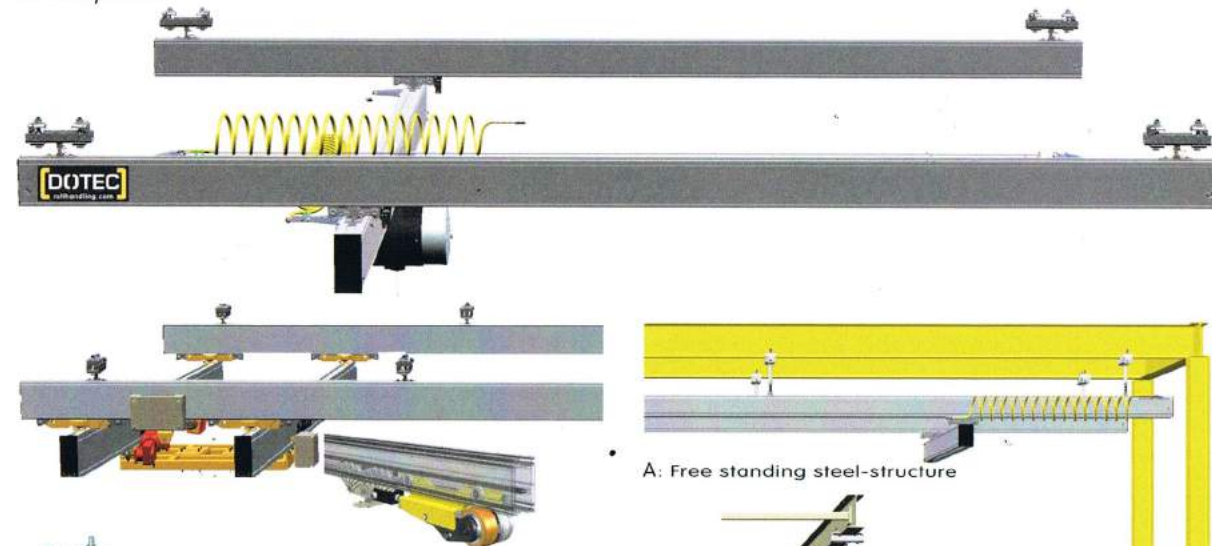
**RH150xxL WR**  
50/150Kg  
100/300Lb

The Rotating Family Presents ease of operation, particularly for wider rolls.

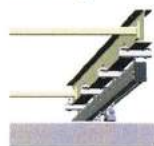
It rotates the roll through its center which enables large/wide rolls to easily being picked-up, rotated, and then placed on the pallet.

The "Balance Mode" control (option) allows to take rolls directly from the shaft.

## AL-Railsystems



A: Free standing steel-structure



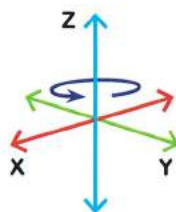
B: Ceiling Mount rail system

### One Stop Shop:

We provide Turn Key project management (FAT-SAT) for the total assignment of handling device, rail or crane and supporting (steel) structure.

Hangerkit for unique way of suspending

Motorized (pneumatically) X-Y motion for heavy applications  $\geq 300\text{Kg}/650\text{Lb}$



Our aluminium rail profiles are extruded from 6063-T66 and anodized for a smooth, clean, corrosive-free surface. The enclosed rail design reduces the accumulation of dirt and grime on the internal running surfaces, thus reducing rolling effort.

The special rail profiles, the unique way of suspending and the advanced trolley design provide a rolling resistance of  $\leq 1\%$  of the load to be moved.

## Crane Systems

### J-Type Jib Crane



### LH- Low Headroom Crane



### 700C Articulating Arm



Parking Brake on hinge



Jib cranes for short transfer applications. Aluminium-rail for the boom provide a comfortable ergonomic (lightweight) movement, 24/7. Accurate and heavy-duty pivot bearing allows smooth and free 360° rotation. End-stops & shock absorbers, can limit the radius. Parking brake (Option) secures a safe way of parking the Handler, when not in use.

### Air Balance Lifter®

The **ABL** combines Balance Lift and horizontal travel in one unit.

- Integrated Air Balancer.
- Plug & Play installation.
- 360° rotation

(For 70/150 Kg/Lb applications)

## Dotec Infrastructure:

The infrastructure is the backbone of the total system. In the design of the LiftAssist, we strive for maximum weight savings to accomplish minimum effort while moving the load from A to B. It is therefore most essential that infrastructure components, such as Rail, Trolley's and Cranes match these design rules.

It is designed for a 24/7 production environment at high frequencies.

## CE Applied Standards:

**Machine Directive 2006/42/EG**

Cranes - Manually controlled load manipulating devices

**NEN-EN 14238:2004+A1 2010**

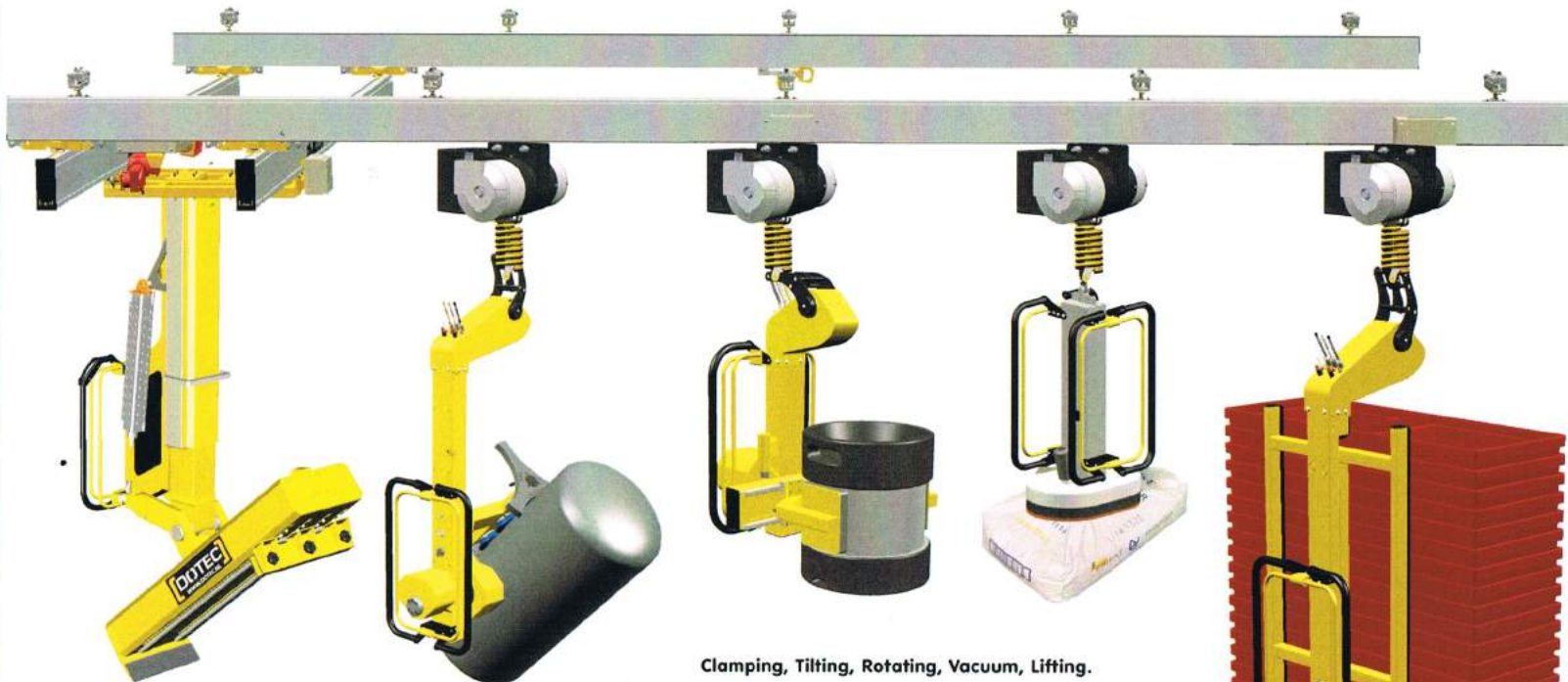
NEN-EN-ISO 12100:2010, NEN-EN-ISO 13857:2008

NEN-EN-ISO 4414: 2010 en



Dotec LiftAssists® are designed and build under strict CE legislation and therefore provide high and durable quality connected with safe working conditions for the operator. Certified Manuals are provided.

**Safety First! Made in Holland**



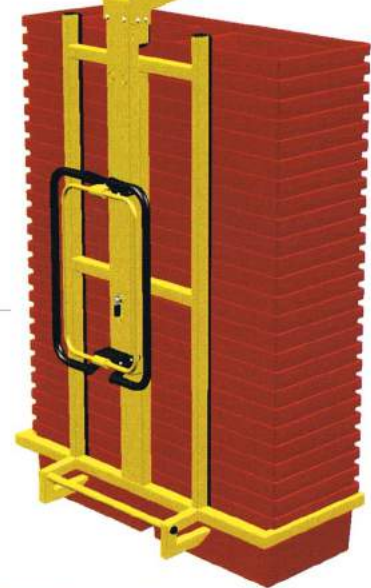
Clamping, Tilting, Rotating, Vacuum, Lifting.

## Handling Solutions (Tailored to the Job)

Health you cannot buy, but Dotec LiftAssist® you can!

Good working conditions in the logistic process are not always easy to achieve. Very often manipulators are far too bulky and oversized. They can have a kind of lazy attitude in their behavior, that is costing extra time.

Operators lose the feeling with their task and managers lose productivity due to reduced speed. It's our challenge to overcome these negative aspects with new designs and smart solutions. Every Dotec LiftAssist is sized and tailored to its job, for 15Kg up to 250KG applications. That is our mission.



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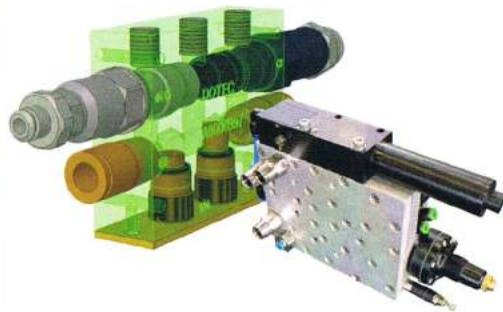
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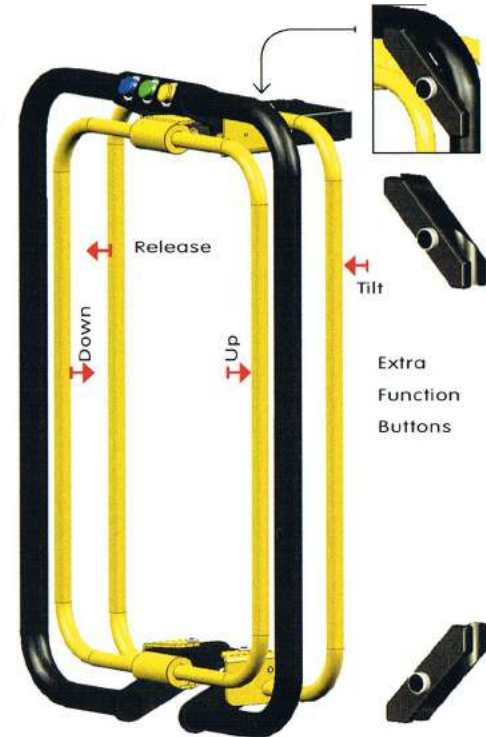
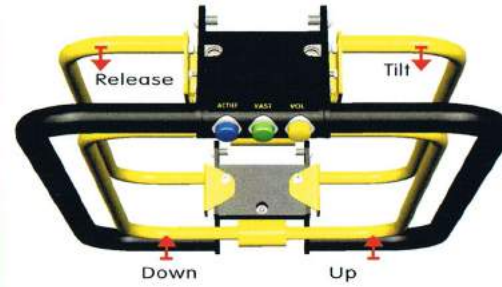
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## Air-Balance Lifter® (ABL)

Air Balance Lifter® is a fully integrated (Plug & Play) lifting system that can be featured with a variety of tools for lifting boxes, crates, buckets, bags and more.

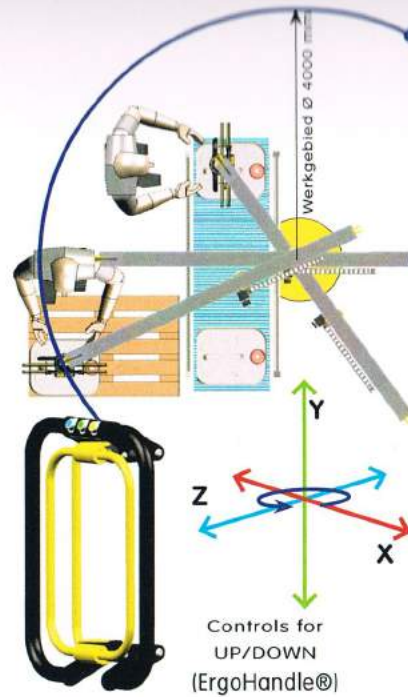
The system features full 3D motion axes using a 360° pivot bearing, horizontal movement (1660mm mm, range 2100mm) and a vertical travel of 1600mm (Stroke).

This creates a spacious area for pick up and set down all kinds of products up to a weight of 50Kg (Excluding end-effector). Ideally suited for products that arrive from the roller conveyor to be place on pallets or to bring them back into the process (Empty cans, crates. etc.)

A quick change device allow a quick, easy and efficient switch between different applications/ tools. The 4030housing connect suitable frames (Vacuum) for containers or boxes.

Installation is simple; Mount it to the floor or put on a pallet base, connect to the compressed air and the system is ready to GO (Plug & Play). The Lift & Ride unit let you move it to where you want.

Quick Change coupling system



Controls for UP/DOWN (ErgoHandle®)

Lift & Ride

Pallet Base



Case Handler

(CG) Center of Gravity Unit



KLT Case

4030 Housing



Frame Change device



Vacuum frames

Watch the Air Balance Lifter on Youtube:

<https://youtu.be/EFBNAhHfOmU>

<https://youtu.be/GFdaCcMRyhE>

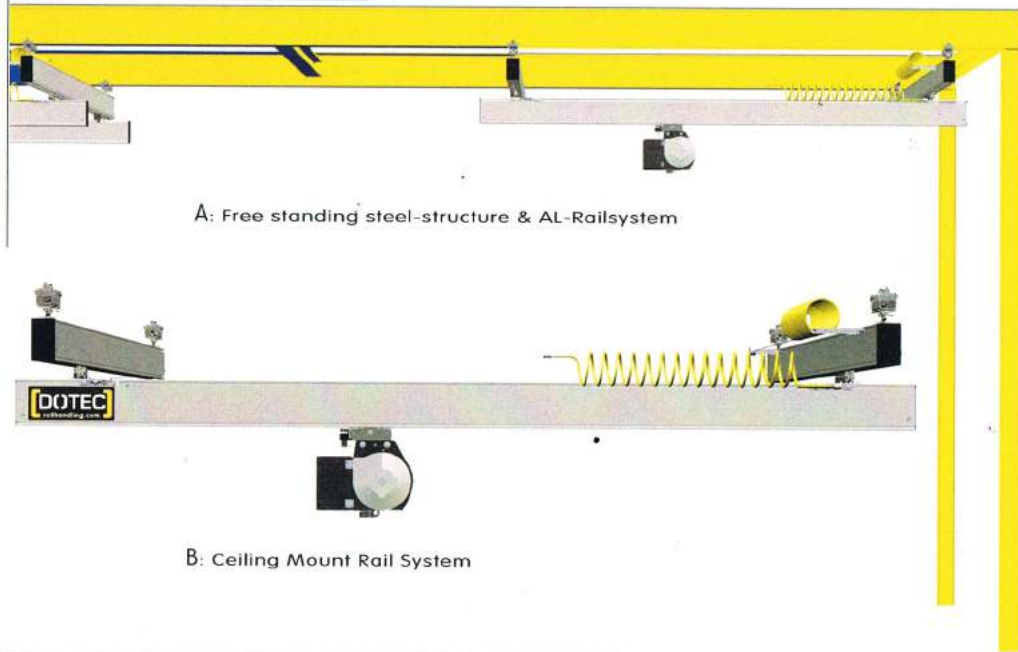
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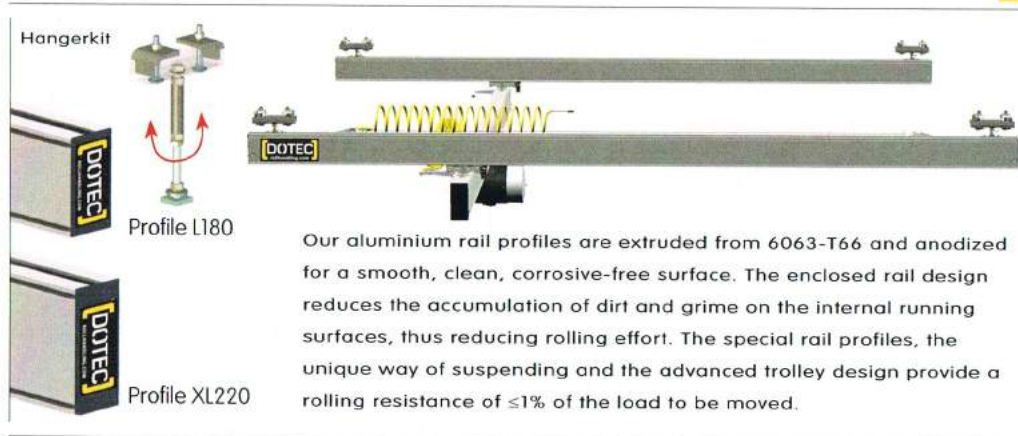
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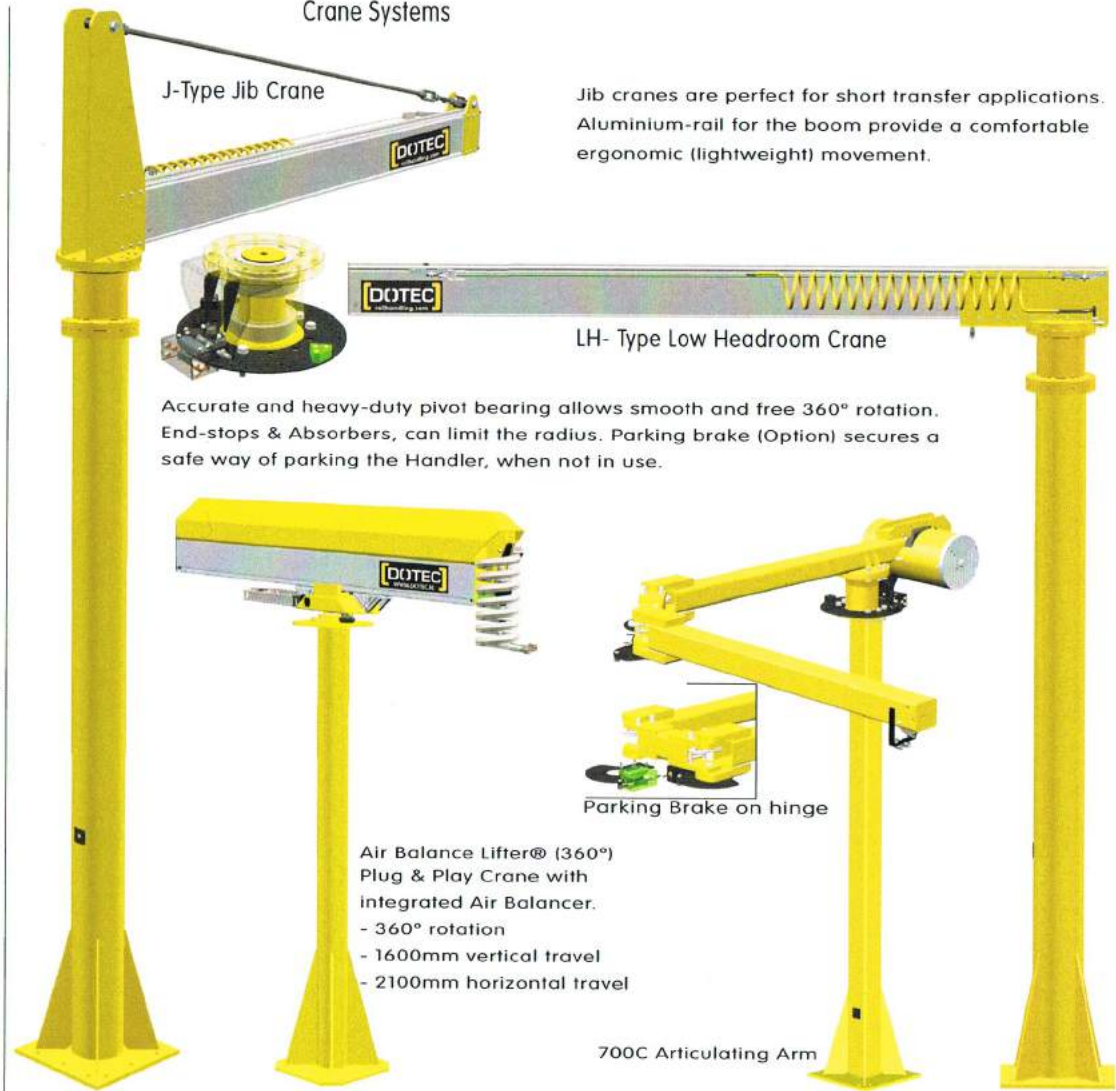
Hangerkit

Profile L180

Profile XL220

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Parking Brake on hinge

Air Balance Lifter® (360°)  
Plug & Play Crane with integrated Air Balancer.

- 360° rotation
- 1600mm vertical travel
- 2100mm horizontal travel

700C Articulating Arm

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