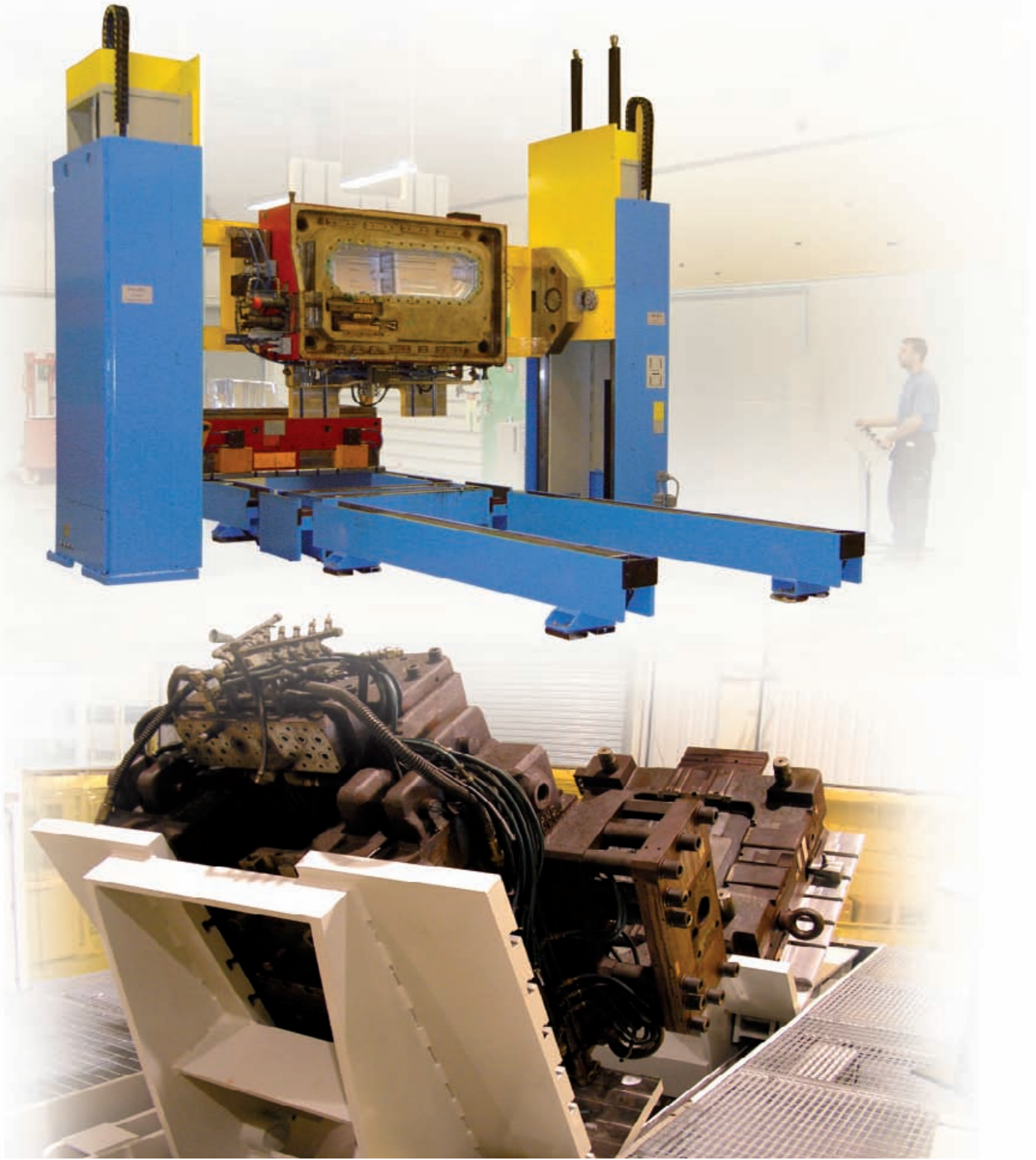


Hedin Lagan AB

DIE HANDLING



- Die Splitters for Press Dies • Die Change Carts
- Mould Splitters for Plastic Injection Moulds • Die Change Auxiliaries

Hedin Lagan AB

For more than 15 years Hedin Lagan AB at their facilities at Lagan in south of Sweden are producing Heavy Load Handling Systems for application in many industrial sectors worldwide.

Core competence is lifting, turning and transport of heavy and geometrically demanding loads. For handling of press dies and plastic injection moulds suitable die splitters / mould openers are built for carrying out maintenance work. For change of press dies die change carts are produced. Dies and moulds up to 60 tons and more can be moved.

Auxiliaries for die change like pneumatic die lifters, die change tables, die movers and others also are offered.



International Distribution Network

Hedin Lagan AB are distributing their products via their international distributors. Customer liaison and support is carried out on site, from initial inquiry through to delivery and installation.

Premitec Ltd., Preston, Lancashire, U.K., active at:
United Kingdom
Contact: info@premitec.co.uk

Seidel Handlingsysteme GmbH, active at:
Germany, Austria, Netherlands, Belgium, Luxemburg, Spain
Contact: info@seidel-handlingsysteme.de

Hedin Lagan North America, Stanley, NC, USA, active at:
USA, Canada, Mexico
Contact: PerRodin@Hedin-US.com

For Scandinavia and all countries not listed above please contact us directly at: sales@hedin.se

A Selection out of our References

Hedin Lagan AB are active with their products in many industry sectors, for example at:

- Wind Energy Systems Production
- Car Producers
- Automotive Suppliers
- Truck Production
- Aircraft Industry
- Production of Transformers, Generators a.s.o.

Also, many further customers from very different industry sectors.

Your Hedin Lagan AB Distribution Partner

Detailed Reference Lists

Detailed reference lists, divided into

- Products
- Applications
- Countries

are available via our distribution network.

Please do not hesitate to contact us.

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Easy Change of heavy Press Dies



Front Loading Design with Low Lift

The change of press dies more and more is carried out by means of die change carts, specially in case of large heavy press dies. Main reasons for this development are work safety during die change, possible saving in change time, repeatability of workflow, availability of overhead crane or fork lift as well as specific space conditions at site.

The front loading design is used on presses with very low press tables. It pushes the die to the front of the cart and onto the press table, or pulls the die onto the cart from the press table.



Side Loading Design with Low Lift

The Die Change Cart type „Side Loader with low Lift“ pushes the die sideways from its die platform onto the press table and pulls the die sideways from the press table onto its die platform.

The height of the die platform of the Die Change Truck depends on the height of the press tables of the presses at which the Die Change Cart is to be used. This height usually differs between presses. The lifting stroke in case of a low lift is usually about 250 –350 mm.

The height of the die platform as well as the lift stroke are chosen in such a way that they fit all presses to be serviced.



Front Loading Design with High Lift

The Die Change Cart type front loading with high lift is usually in operation at presses with higher press table height and also is used for storing of press dies at higher die racks. As usually minimum 2 press dies are stored one above the other, lifting heights of 2 meter mostly are requested.

A big advantage of the Die Change Carts is that they are much more manoeuvrable than a forklift, as they transport the load between their front load wheels and their rear drive wheel. Therefore they do not need the counter weight which forklift trucks usually do need, which shortens the chassis of a Die Change Cart very much and improves their turning circle.

These Die Change Carts also are available with 4-way-steering.



Rail based battery driven Die Change Cart for heavy press dies



Testing of a Die Change Cart type "Front Loader" with low stroke before delivery



A Die Change Cart type "Side Loader" with low stroke during pulling a press die out of the press



Training of an operator how to use the Die Change Cart

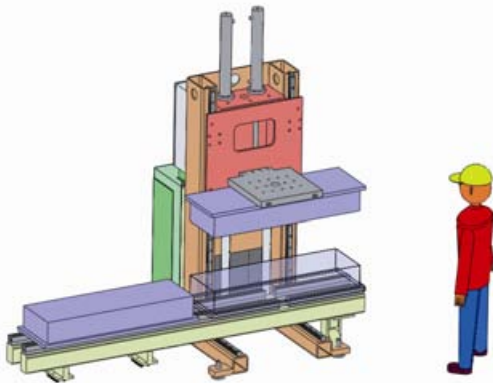


A Die Change Cart type "Front Loader" with high lift during change of press die at a press with a very low press table. In this case the high lift is needed for the die rack.



A Die Change Cart type "Front Loader" with high lift, execution by scissor lift

Safe and quick Maintenance on Press Dies of all Sizes and Weights!



Light Die Splitter up to 1 ton load capacity as a 1-column-design

Task of Die Splitters / -Turners

Die Splitters / Die Turners for press dies are used for safe and quick maintenance on press dies.

They are available in many different designs, depending on the size and weight of the die as well as which steps the customer wants to execute during maintenance of the press dies.

Available Series

as 1-column-design:

- Light design up to 1 ton weight of die

as 2-column-design:

- Light size up to 3 tons weight of die
- Middle size up to 30 tons of weight of die
- Heavy size up to 60 tons or more weight of die



Light Die Splitter up to 3 tons load capacity as a 2-column-design

Sequence of Operation

- Positioning of the die by overhead crane or forklift truck onto the floor beams of the Die Splitter
- The Die Splitter moves the die into the center of the Die Splitter, between the two columns
- The top platen for lifting is moved down onto the die
- The upper part of the die is clamped to the top platen hydraulically and is lifted up from the bottom part of the die
- The lower part of the die is driven to the front or rear end of the floor beams and there is positioned for maintenance.
- The upper part of the die is lifted up and either is turned by 90° for doing maintenance within the top platen or is turned by 180° and will be put onto the floor beams of the Die Splitter for maintenance
- Reassembly of the press die is carried out in reverse order

Advantages of Die Splitters

- Best possible safety for maintenance operators, as there will be no need to turn dies with a weight of several tons by overhead crane.
- Safe splitting, turning, maintenance and reassembly of even most heavy press dies, without any kind of damage.
- Halves of press dies can be put into the most convenient position, for maintenance.
- Cost reduction due to quicker handling of the press dies and increased safety for both operator and die.



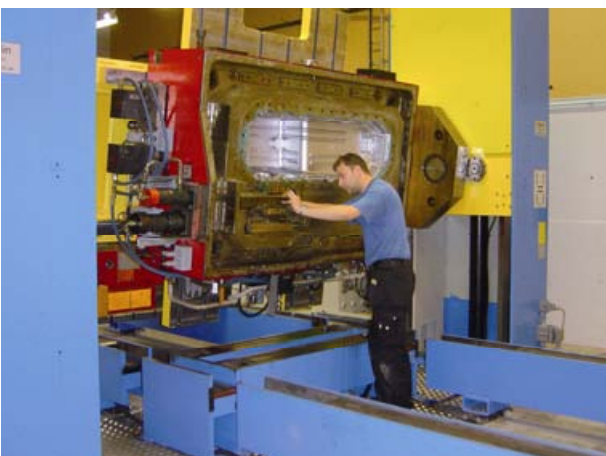
Middle size Die Splitter for press dies up to 30 tons weight



Splitting of a press die within a small Die Splitter with 2-column-design. The upper part of the die is rotated by 90°.



Light Die Splitter with feeding of the press die via die loading arms, equipped with pneumatic die lifters with rollers. Also movable die loading arms to suit wide dies.



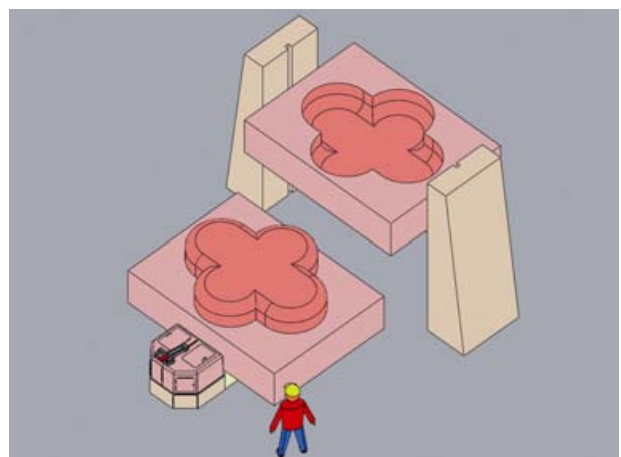
Maintenance work at an upper part of a press die, which is clamped into a midsize Die Splitter and is turned up to 90°



Turning of an upper part of a press die within a middle size Die Splitter, whilst the lower part of the press die is lying on the floor beams of the splitter, accessible for the operator



Use of a Hedin Die Splitter within the production process of an RTM production line, with heavy moulds for glassfiber products

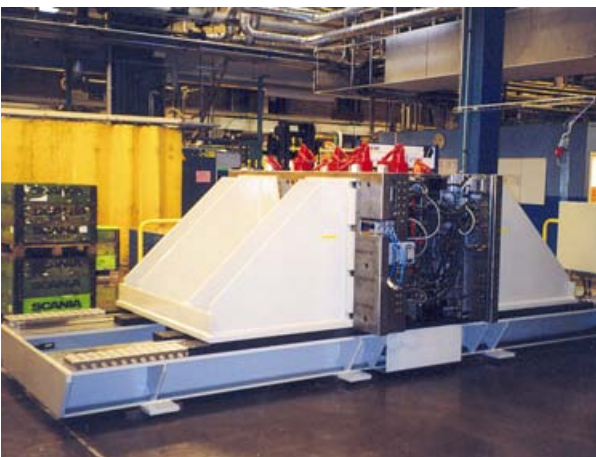


Die Splitter and Die Cart for very large dies. A very universal solution.

Safe and fast Maintenance of Plastic Injection Moulds of all sizes and weights!



Light size Mould Splitter for opening and splitting of moulds.



Middle size Mould Splitter for opening of the mould and dispersing of both halves of the mould



Heavy size Mould Splitter for opening of the mould and turning of each of the halves of the mould by 90°

Task of Splitters for Plastic Injection Moulds

The task of splitters for plastic injection moulds is safe and fast maintenance of plastic injection moulds.

They are available in a lot of different designs, depending on the size and weight of mould.

Available Series

- Series for horizontal opening of plastic injection moulds
- Series for horizontal opening of plastic injection moulds and turning of both halves of the mould by an angle of 90°
- Optional equipment as a movable 2-columns-crane for exchange of inserts and other components at the opened moulds.
- All series up to > 60 tons

Sequence of Operation of a Mould Splitter for Plastic Injection Moulds

The sequence of operation at a Mould Splitter for plastic injection moulds is as described below:

- Positioning of the mould in the Splitter by means of the overhead crane (or in case of smaller moulds by forklift truck)
- Clamping of the mould at both clamping plates within the Mould Splitter. This can be done, depending on the design of the Mould Splitter, hydraulically or by magnetic clamping
- Connecting of all hydraulic and electric connections of the mould to the Splitter, necessary for opening of the mould.
- Splitting of the mould and dispersing of both halves of the mould
- Turning of both halves of the mould by 90°, to have them available for maintenance work within the Mould Splitter
- Reassembly is carried out in reverse order

Advantages of the Mould Splitters for Plastic Injection Moulds

- Increased safety for the operators, as no moulds with weight of tons do need to be turned by overhead crane
- Safe and free-of-damage opening, turning and reassembly even of most heavy plastic injection moulds
- Plastic injection moulds can be turned into the position, most suitable for maintenance purpose
- Cost saving by faster handling of the moulds and at the same time more safety for operator and mould



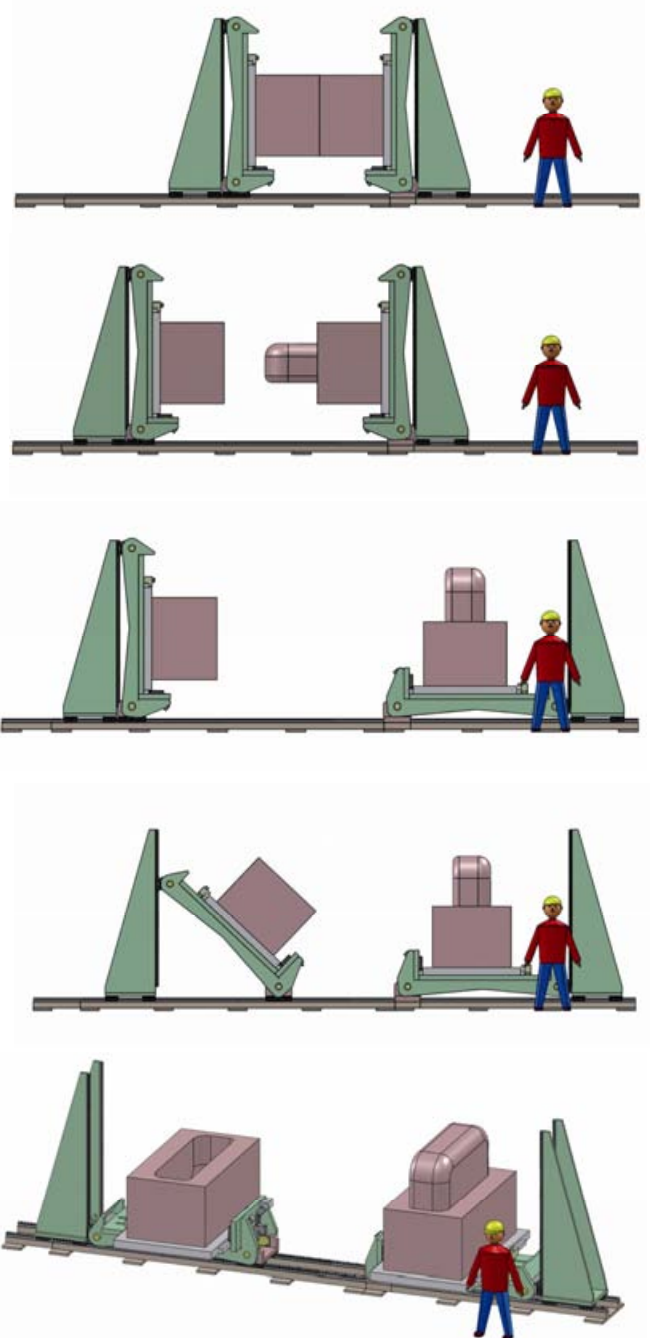
Maintenance work on an opened mould on a small Plastic Injection Mould Splitter



Opening stroke of a middle size Plastic Injection Mould Splitter without turning function



Heavy size Plastic Injection Mould Splitter during turning of the 2nd half of a 40 tons mould after opening



Sequence of operation of a Mould Splitter for plastic injection moulds with weight up to 50 tons:

First the mould is opened and horizontally split, then both halves of the mould are turned by 90°, so that they are lying on their rear sides.

Now the mould is accessible for maintenance work.

This Mould Splitter allows safe and ergonomic work, for operator and machine, fast and repeatable.

This Mould Splitter can be enlarged by a gantry crane for change of heavy mould components, like inserts and other parts.

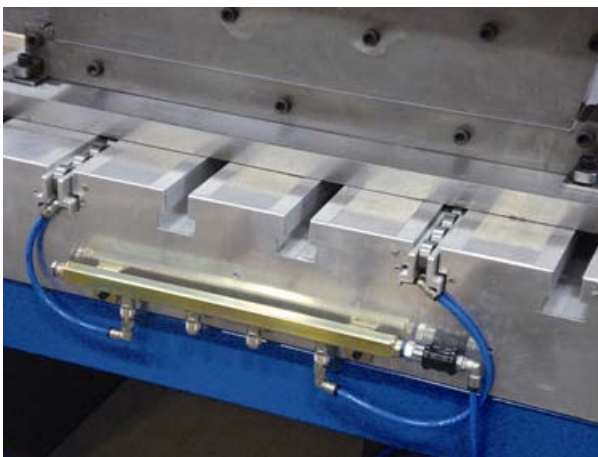
Die Change should not become a Show of Strength!



Pneumatic Die Lifters with Rollers or Balls

To change a press die without support by die lifters with rollers or balls may need, depending on the weight of the die, very big force. Even the exchange of smaller press dies by the operator can become a show of strength! To exchange big press dies without support by die lifters with rollers or balls is nearly impossible.

Usual practice is to change the press dies with support of die lifters with rollers, specially in case of heavy die weights. Die lifters with balls preferably are used for smaller die weights, due to the smaller load capacity of the balls. They do however have the advantage that the dies can be moved on them multidirectionally.



Advantages of Pneumatic Die Lifters with Rollers and Balls

- Simple installation at existing T-Slots without workintensive and expensive hydraulic installation
- Rollers with bigger diameters can be used, due to the type of construction of the die lifters
- Optimum weight distribution onto many large diameter rollers
- Small friction only, this protects the die's bearing surface
- Smaller purchase cost than for hydraulically working versions

Beside of the very simple installation of pneumatic die lifters within existing T-slots (please see photo to the left) pneumatic die lifters also can be used within T-Slot-Housings, made of aluminum, which can be installed onto die exchange tables. Please let us know your demand, we will elaborate a solution for you.



Increase of Load Capacity by Pressure Intensifier

The load capacity of the pneumatic die lifters with rollers, which as standard are driven by 6 bar compressed air, can be increased up to the double value by the optional available pressure intensifier, as listed in the chart below:

Pneumatic Die Lifters with Rollers are available for:

T-Slot DIN 650	Load capacity at 6 bar	max load capacity at max 12 bar
T22	1.300 kg / Meter	2.600 kg / Meter
T28	1.700 kg / Meter	3.400 kg / Meter
T36	2.700 kg / Meter	5.400 kg / Meter

Optimize your Setting Up Times and increase your Safety of Die Change Process!

Stationary Die Change Tables, manually and with Die Mover

Stationary die change tables usually are installed at the rear side of the press and are designed as a T-shape.

This type of construction allows the operator to deliver the next press die earlier, whilst the old press die still is working within the press.

As soon as the old die is pulled out of the press and pushed onto the free side of the T-shaped Die Change Table, the new prepared die can be moved sideways up to the front of the press table. After that it can be pushed into the press immediately.

The old press die can be picked up by the overhead crane or by a fork lift truck, when the new die is in production.

Stationary Die Change Tables are available for manual use as well as for motorised use with the Mark II Die Mover. Starting with a die weight of bigger than 5 tons it is recommended to motorize the Die Change Table

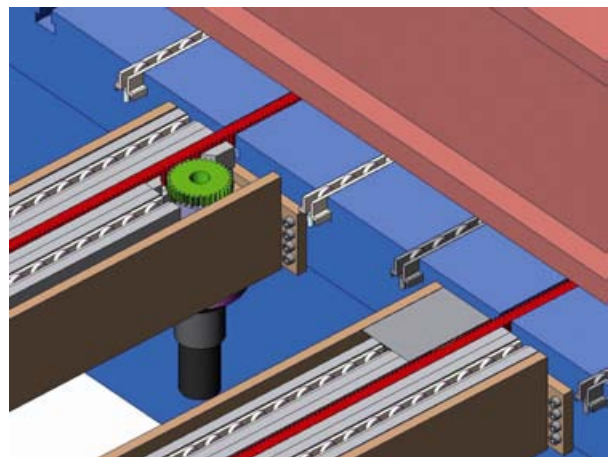


Die Mover Mark II

The Die Mover Mark II consists of 2 special rack and pinions (red marked within the drwg to the right), which are guided within the T-Slots of the press table as well as within the die loading arms or the die change table in front of the press.

The T-slots within the press table, which are not occupied with rack and pinion, as well as the T-slot-profiles to the right and left of rack and pinion within the die loading arms or the die change table in front of the press, are equipped with pneumatic die lifters with rollers.

Rack and pinion are moved with hydraulically or pneumatically driven drives (green marked within the drwg to the right), which are installed within or in front of the press table.



Working Method of the Mark II

In order to transport the press die, the pneumatic die rollers as well as the racks within the T-slots are filled with compressed air and so lift the press die.

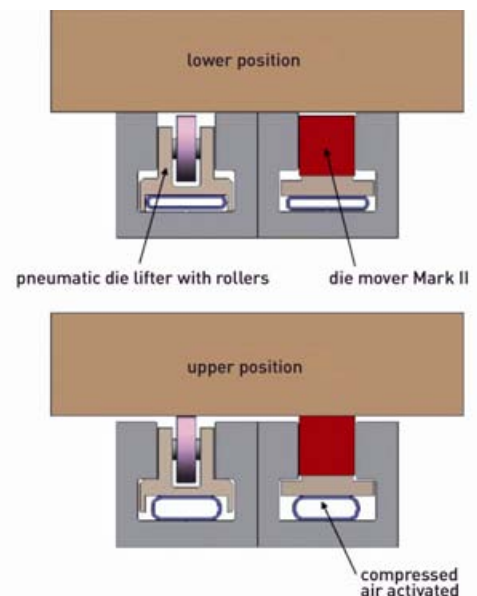
The pressure of the racks on the underside of the press die produces so much grip that the racks are able to transport the press die out of the press or into the press onto the press table, also with the aid of the pneumatically lifted die rollers.

The Mark II Die Mover is used to move press dies onto

- Die loading arms
- Die change tables
- Die change carts

and also down from there onto the press table.

Our product program also offers suitable die loading arms. Please do not hesitate to ask for details.



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Edition 2011 E