

QUICKBLOCK SYSTEM

LEAN MANUFACTURING TOOL CHANGEOVER SYSTEMS



QUICK CHANGEOVER OF DIES, MOULDS AND COILS

www.dimeco.com

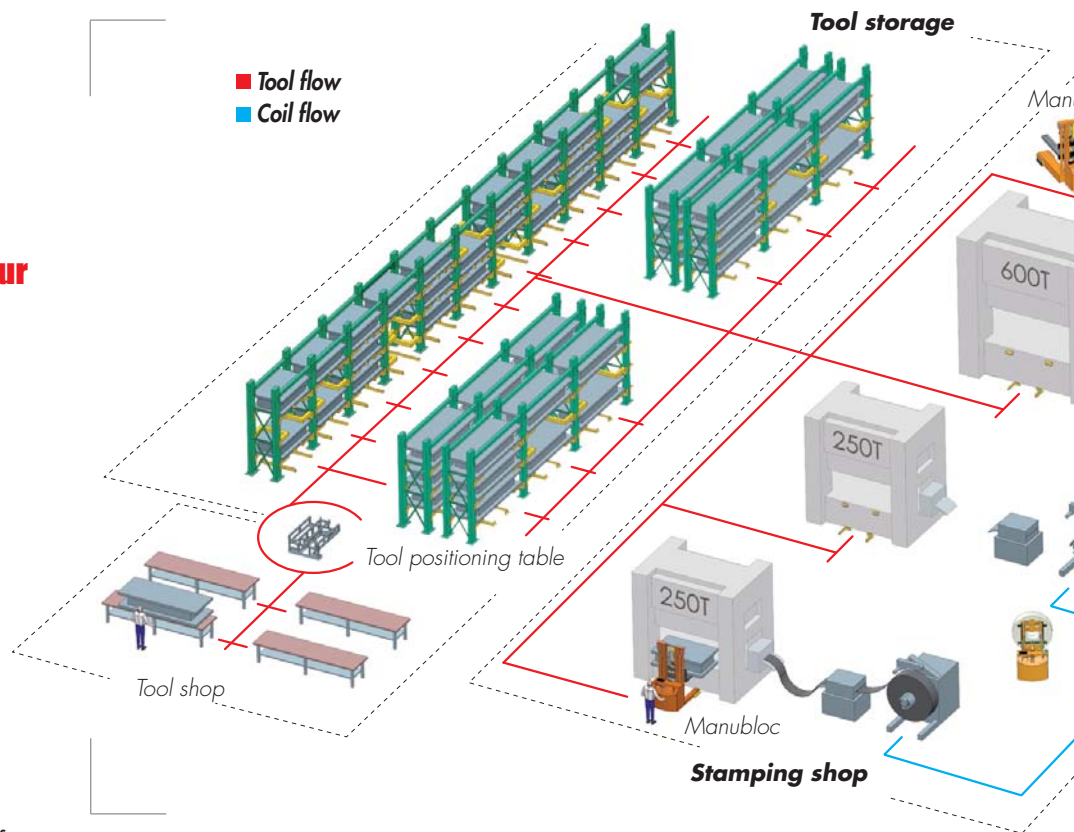
LEAN MANUFACTURING SOLUTIONS

Tooling management

With more than 20 years' experience in die-change-over-time optimisation, we are able to provide you with the best solution for your operating procedures.



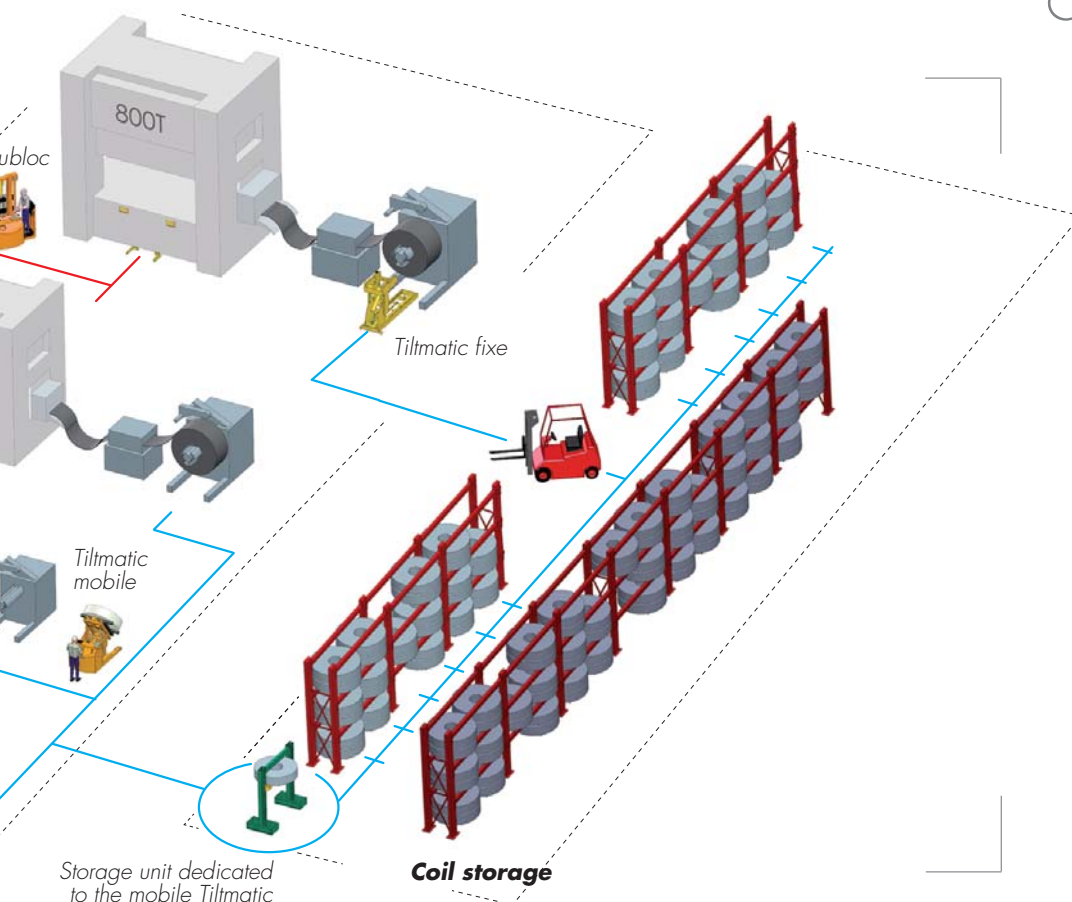
The above catalogue gives details of our LEAN MANUFACTURING tool change systems



ROTOBLOC-PSP CAN PROVIDE YOU WITH A COMPLETE SYSTEM

STORAGE	HANDLING	PRESS EQUIPMENT
		
<ul style="list-style-type: none"> - The complete range of tools is accessible at any time. - Storage capacity is increased with our Cantibloc system. - Modular storage system, suitable for use with the smallest and largest tools. 	<ul style="list-style-type: none"> - Die changeover operations are performed in just a few minutes by one operator. - Maximum operator safety: there is no manual input. - Maximum tool safety: works using a truck managed by a programmable controller. 	<ul style="list-style-type: none"> - Tools are always fitted on the press in the correct position. - Press equipment that adapts to your way of working.

Coil management



The above catalogue gives details of our LEAN MANUFACTURING coil change systems

APPLICATIONS

The equipment we produce is suitable for original equipment manufacturers and for other sub-contractors seeking to optimise productivity on their production line by applying LEAN management principles.

Our equipment is mainly designed for loading and unloading stamping presses, but is also suitable for applications in other, similar, fields.

With our wide range of models, we can propose competitive solutions for clients with several dozen presses and clients with just one or two presses. For tool handling, we can provide solutions up to 20 tonnes, and for coil handling, up to 35 tonnes.

WHAT IS LEAN MANUFACTURING ?

LEAN MANUFACTURING is an approach designed to achieve waste-free production. Several tools are used: 5S, VSM, Takttime and SMED in particular.

WHAT ARE THE BENEFITS OF THE LEAN METHOD?

Lean manufacturing aims to maximise added value and eliminate waste; direct gains are achieved immediately by using simple tools such as SMED. SMED is used to optimise die change-over times and improve productivity. Applying the SMED system reduces the time taken to change a coil or press tool to less than 6 minutes.

OPERATOR AND FACILITY SAFETY:

Operators and machines are safer when our equipment is being used.

Operator safety is increased, as they do not have to touch the tool during changeover operations.

Machine safety is also improved, as all the truck's movements are managed by a programmable controller that will only authorise movements compatible with the truck's situation.

COST-EFFECTIVENESS

Apart from gains in productivity and safety, investment in this type of equipment soon pays for itself when handling noble materials, which undergo less damage.

FLEXIBILITY

A tool-handling truck, for example, can be used to change a 10-tonne press die in less than 5 minutes with no manual intervention.

One truck can be used to service a whole press shop.

FINANCING SOLUTION : RENTAL

Some of our models, such as the mobile Stackmatic®, are classified as handling gear.

This means that they are available for hire, as well as to purchase.

The company dealing with maintenance on your equipment can provide this service.

COMPLETE SOLUTION FOR TOOLS UP TO 15 TON

Stackmatic® system

Change a tool in less than 5 minutes, in complete safety and with only one operator !



SPEED :

Floor guides steer the truck into position in front of the press and straight into the storage rack. With this guide system and our tool hook system, the tool is placed at its production position on the press bed with no adjustment required.



SAFETY :

While being transported, the tool is held by the push-pull unit as well as resting on the flat surface of the forks.

When the tool is being loaded onto or unloaded from the press, the forks are hooked onto the press bed and the truck is not able to move.

In addition, a programmable controller directs all the truck's movements, authorising actions according to the truck's actual situation.

The entire process is controlled from the operator's position on the truck. The operator is positioned away from the load being moved.

ECONOMICAL STORAGE RACKS :

The Stackmatic can stack a tool directly onto a storage rack using its bayonet-type coupling system.

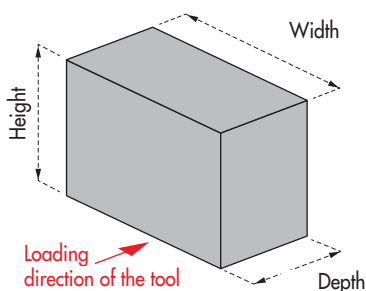
The push-pull function is not used in the storage rack, the tool is put down on the stack, as a pallet would be.

The time taken to put down and pick up the tool from the rack is kept as short as possible, and the rack's structure is subjected to very little stress.

The Stackmatic is compatible with our Cantibloc racks and with most other standard racks.



Bayonet-type coupling system. The tool is coupled onto the storage rack in concurrent operation time.



	Tools			Forks		Push-pull units		Fork height		
	Max weight kg	Tool width (TW) mm	Max Tool Depth (TD) mm	Type	Centre distance (E) Mini-Maxi	Type	Max travel mm	Min. mm without BID	Maxi mm 1-stage mast	2-stage mast
STACK.10.600	1 000		600	Flat fork	250 - 700	BAB	725	265	1 600	3 000
STACK.20.600	2 000		600	Flat fork	250 - 700	BAB	725	265	1 600	3 000
STACK.20.800	2 000		800	Flat fork	250 - 700	BAB	1 200	265	1 600	3 000
STACK.30.800	3 000		800	Flat fork	250 - 700	BAB	1 200	365	1 600	3 000
STACK.30.1000	3 000	Mini	1 000	RF	400 - 900	BAE	1 500	365	1 600	3 000
STACK.40.1000	4 000	1 x E	1 000	RF	400 - 900	BAE	1 500	415	1 600	3 000
STACK.40.1250	4 000		1 250	RF	400 - 900	BAE	1 500	415	1 600	3 000
STACK.60.1250	6 000	Maxi	1 250	RF	500 - 1000	BAE	1 500	465	1 800	3 000
STACK.80.1250	8 000	2,2 x E	1 250	RF	500 - 1000	BAE	1 800	515	1 800	2 500
STACK.80.1500	8 000		1 500	RF	700 - 1250	BAE	1 800	515	1 800	2 500
STACK.100.1250	10 000		1 250	RF	700 - 1250	BAE	2 000	515	1 800	2 500
STACK.100.1500	10 000		1 500	RF	1000 - 1500	BAE	2 000	515	1 800	2 500
STACK.125.1600	12 500		1 600	RF	1000 - 1500	VT	2 000	515	1 800	2 500
STACK.160.1600	16 000		1 600	RF	1000 - 1600	VT	2 000	515	1 800	2 500

Product : 2 000-kg capacity truck



Tool-changeover on 120-tonne mechanical press fitted with a Rotobloc-PSP hydraulic tool-clamping system.

Electric stacker for tools weighing up to 2 tonnes with storage in standard rack. 2 identical trucks shared between 7 presses.

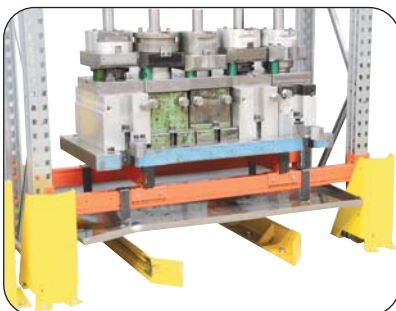
TECHNICAL DATA

Tools

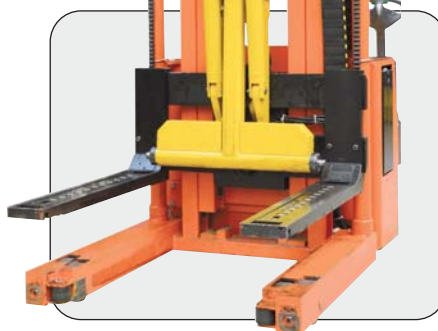
Maximum weight	2 000 kg
Maximum width/depth	1 500 x 700 mm

Truck

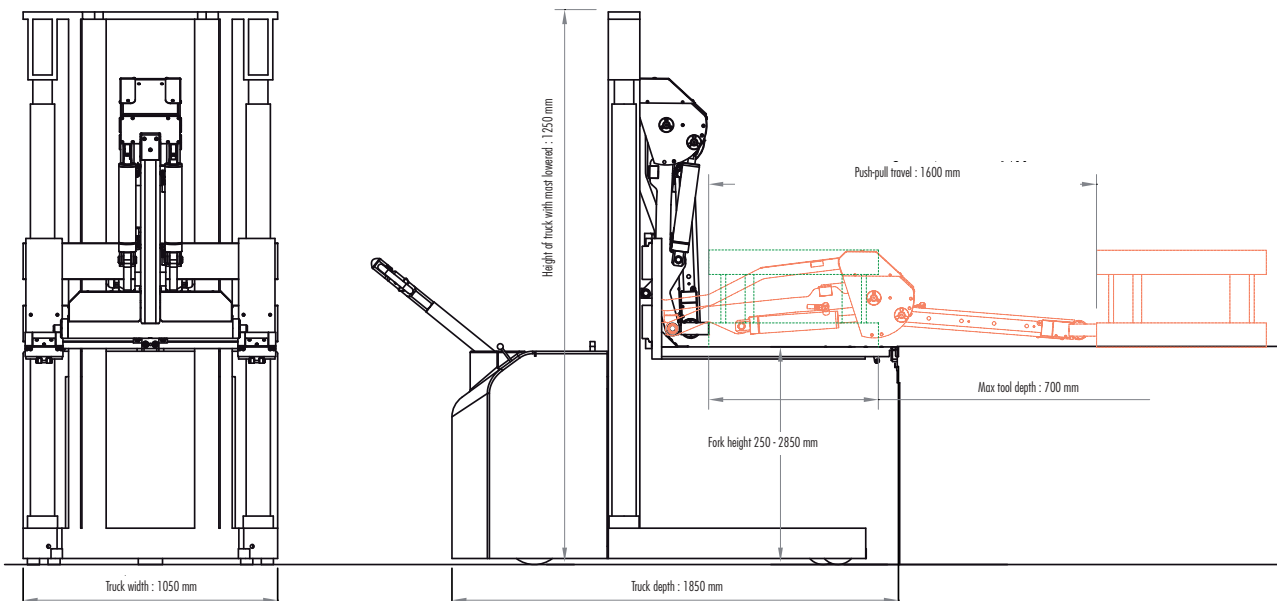
Reference	STACK 20-800
Operation	pedestrian
Lowering height	2 850 mm
Push-pull unit	push-pull arm
Forks	rollmatic forks
Bayonets	hydraulic
Side shift	no



Standard rack (flat fork + cross member)



90-tool store, accessible at any time



COMPLETE SOLUTION FOR TOOLS UP TO 15 TON

Product : 4 000-kg capacity truck

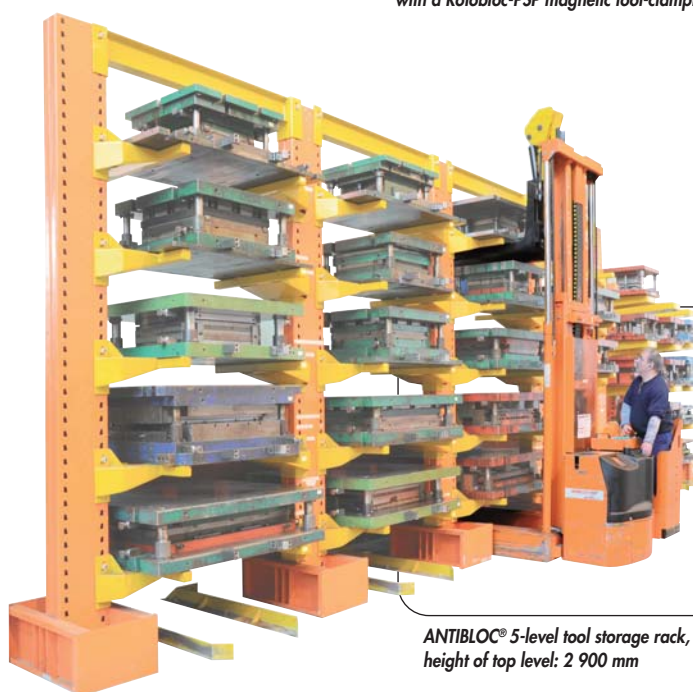
Electric stacker for tools weighing up to 4 tonnes with storage in a Cantibloc rack. 2 trucks shared between 4 presses dealing with 60 tools.

TECHNICAL DATA

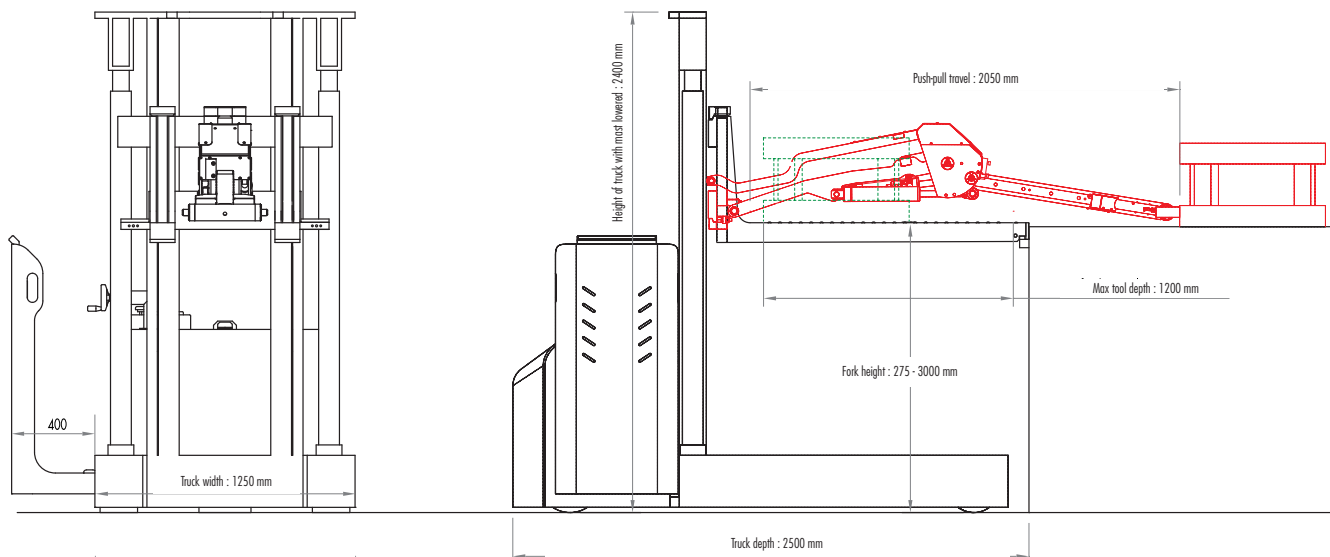
Tools	
Maximum weight	4 000 kg
Maximum width/depth	1600 x 1200 mm
Truck	
Reference	STACK 40-1200
Operation	stand-on
Lowering height	3 000 mm
Push-pull unit	push-pull arm
Forks	rollmatic forks
Bayonets	hydraulic
Side shift	yes



Tool-changeover on 6 000-tonne hydraulic press fitted with a Rotobloc-PSP magnetic tool-clamping system



ANTIBLOC® 5-level tool storage rack, height of top level: 2 900 mm



Product : 5 000-kg capacity truck



Electric stacker for tools weighing up to 5 tonnes. Fitted with additional side forks enabling tools between 700 mm and 2,500 mm to be moved.

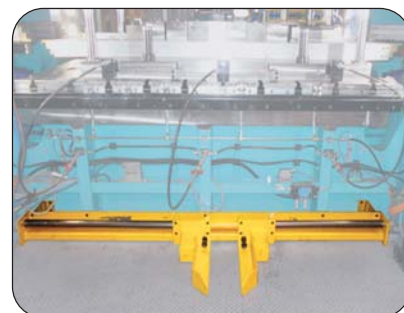
TECHNICAL DATA

Tools

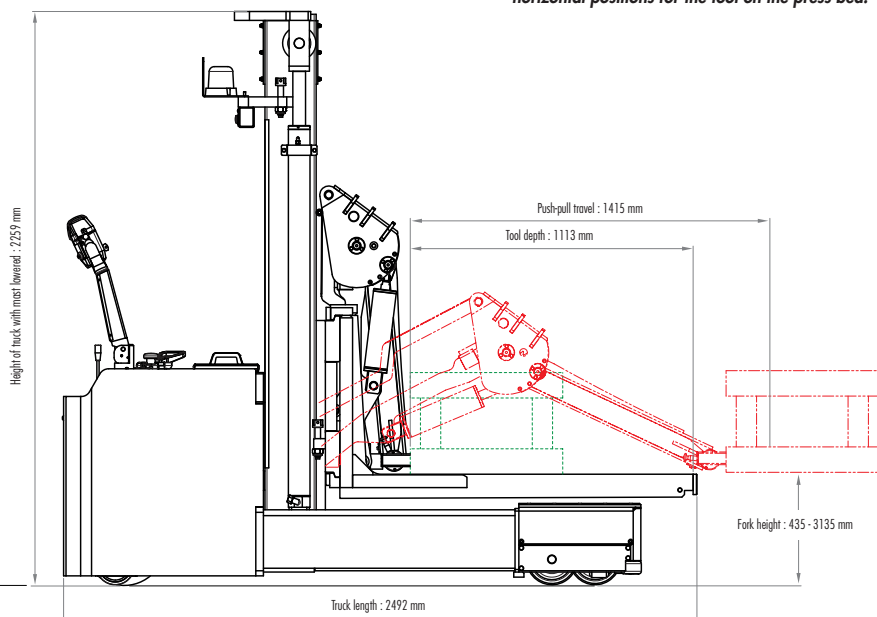
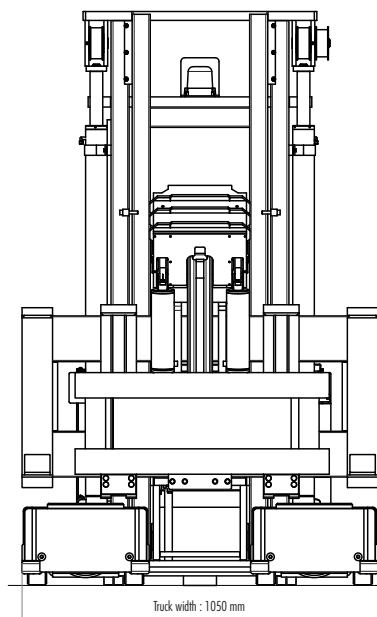
Maximum weight	5 000 kg
Maximum width/depth	2500 x 1100 mm

Truck

Reference	STACK 50-1100
Operation	pedestrian
Lowering height	2 600 mm
Push-pull unit	push-pull arm
Forks	rollmatic forks + additional side forks
Bayonets	manual
Side-shifting	yes



Adjustable floor guide used to choose different horizontal positions for the tool on the press bed.



COMPLETE SOLUTION FOR TOOLS UP TO 15 TON

Product : 8 000-kg-capacity truck

**8-tonne tools loaded
and unloaded in 7 minutes!**

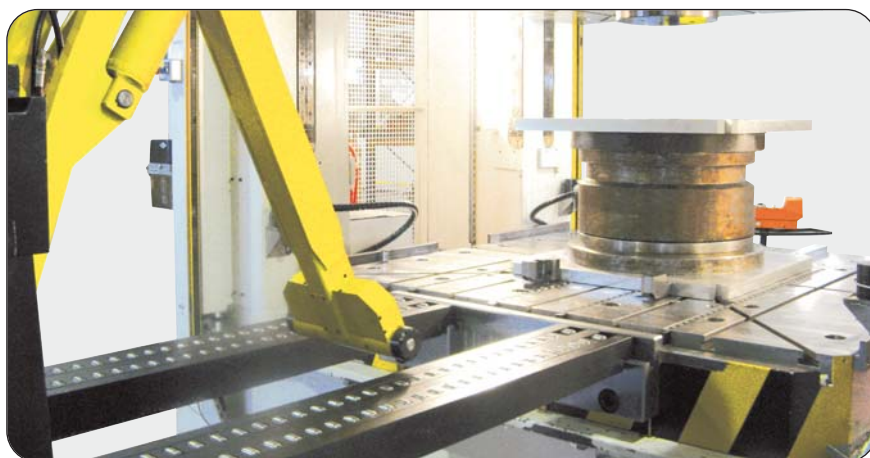
TECHNICAL DATA

Tools

Maximum weight	8 000 kg
Maximum width/depth	1800 x 1250 mm

Truck

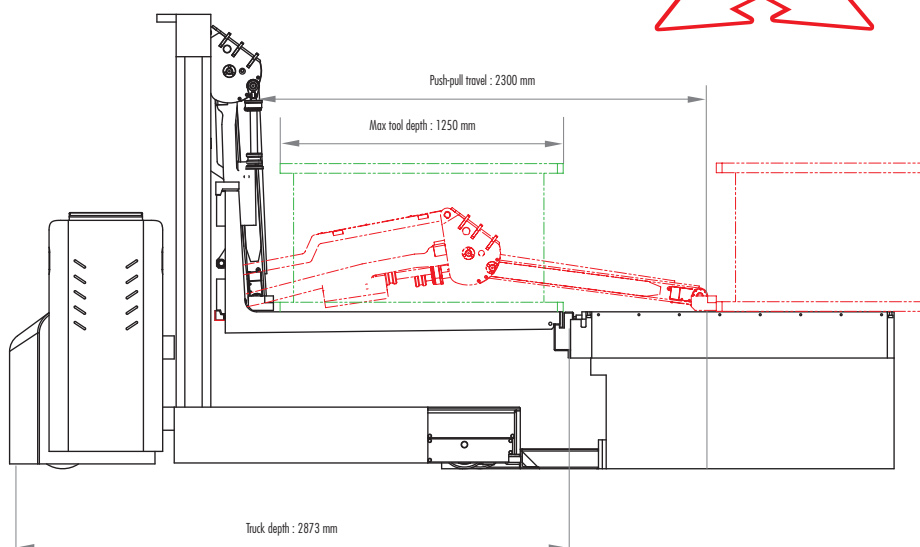
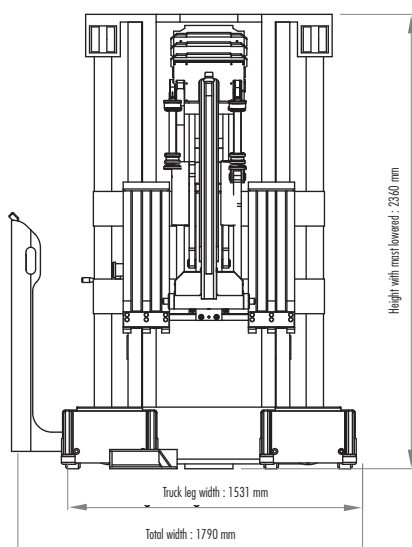
Reference	STACK 80-1250
Operation	stand-on
Lowering height	450 - 3 000 mm
Push-pull unit	push-pull arm
Forks	rollmatic forks
Bayonets	hydraulic
Side-shifting	yes



Tool loaded onto 1 000-tonne hydraulic press, fitted with Rotobloc-PSP
TRANSROLLER® rolling elements inside press table



From left to right: Cantibloc® special - Stackmatic® 80-1250 and positioning table - Maxi Cantibloc®



Product : 12 500-kg-capacity truck



Tool loaded onto 1,000-tonne mechanical press

**12.5-tonne capacity
tool-handling stacker,
and Maxi-Cantibloc
3-level rack storage.**

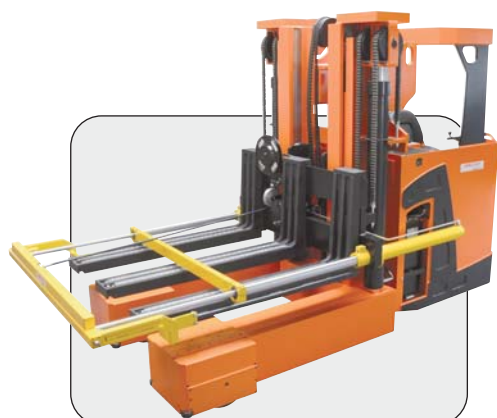
TECHNICAL DATA

Tools

Maximum weight	12 500 kg
Maximum width/depth	3500 x 1600 mm

Truck

Reference	STACK 125-1600
Operation	sit-on
Lowering height	3 000 mm
Push-pull unit	telescopic hydraulic cylinder
Forks	rollmatic forks
Bayonets	hydraulic
Side-shifting	yes



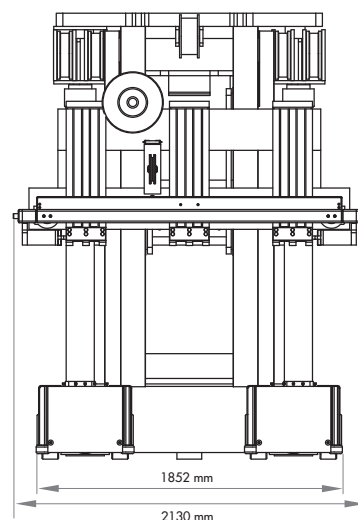
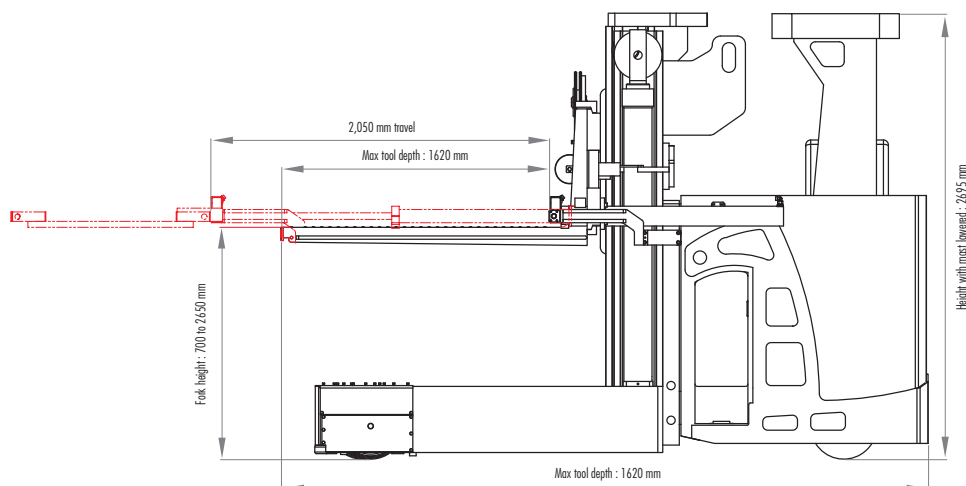
Telescopic-cylinder (VT) type push-pull system



MAXI-CANTIBLOC®, total capacity: 37.5 tonnes
(12.5 tonnes per tool)



Tool taken up and stacked, without manual
intervention



COMPLETE SOLUTION FOR TOOLS UP TO 15 TON

Adapted to your requirements

● PUSH-PULL

We can provide several push-pull systems, depending on your requirements:

- BAB (connecting rod arm) version : Compact, economic system, with travel up to 1 200 mm.
- BAE (geared version) : Compact system, with travel up to 2 200 mm.
For tools weighing more than 3 tonnes, the press and rolling tool have to be equipped with special fittings (Rotobilles and Transrollers).
- VT (telescopic cylinder) version: System developing significant power, with travel up to 2 000 mm. Bulky because of the telescopic cylinder set on each side of the box.



BAB version



BAE version



VT version

● TOOL COUPLING SYSTEM

Our bayonet coupling system is made up of 2 horizontal retractable pins. This method is used to take the tool from the storage rack in the same way as a pallet is taken using a lift truck.

There are 2 versions :

- Manually activated (standard)
- Hydraulically activated (option)

If required, we can design another couplingsystem.



Manually activated (standard)



Hydraulically activated (option)

● FORK FITTINGS

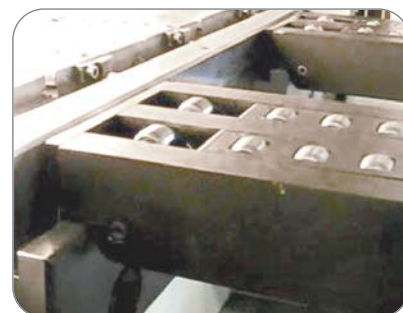
For tools with depth up to 800 mm, we can provide 2 types of forks:

- FCB flat forks.
- Rollmatic forks: retractable roller forks.
The rollers are activated automatically when the forks are coupled to the press bed.

For tools more than 800 mm deep, all our trucks are fitted with Rollmatic forks.



FCB flat forks



Rollmatic forks

● OPERATION

The Stackmatic with its basic configuration is a pedestrian type truck.

We can provide it with the following options :

- folding rear platform
- stand-on, to the side
- sit-on



Pedestrian (basic model)



Sit-on or stand-on, to the side



Standard VPLA lateral positioning guides



Folding, retractable VPLA



Box VPLA



Adjustable VPLA



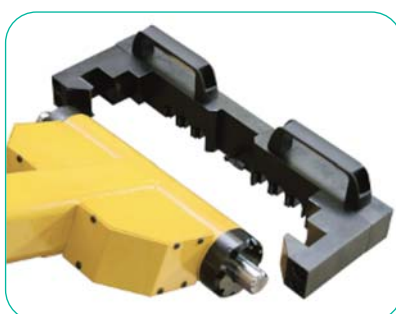
Standard CBH



Press bed extension



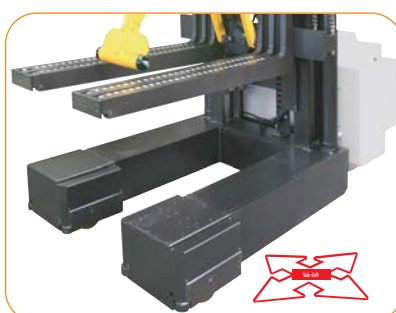
Standard CH



Removable CH



Side-shifting



● VPLA FLOOR GUIDES

To be able to load a tool onto the press in just a few minutes, the truck has to be positioned in front of the press in the same position each time.

To achieve this, the Stackmatic system includes guides set in the floor in front of the press.

The tool is then loaded onto its production position straight away.

If floor guides would be in the way, we can provide several different solutions :

- Retractable
- Box
- Adjustable.

● PRESS LEVELLING HOOKS/STOPS (CBH)

In order to load/unload the press in satisfactory conditions, the press bed and truck forks must be aligned precisely.

A hooking part therefore has to be attached to the edge of the press bed.

● TOOL HOOKS (CH)

In order to be able to fit each tool without the operator having to touch it at all with his/her hands, a hooking part has to be attached to its tool plate. The unique design of the Rotobloc-PSP tool hook enables a die to be taken from the rack and replaced in it only by stacking.

● SIDE-SHIFTING SYSTEM (BID)

We can provide a side-shifting function as an option, facilitating truck positioning in cramped conditions.

OPTIMISED TOOL STORAGE

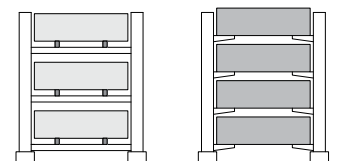
Cantibloc® rack

The tool storage system with the greatest capacity on the market !

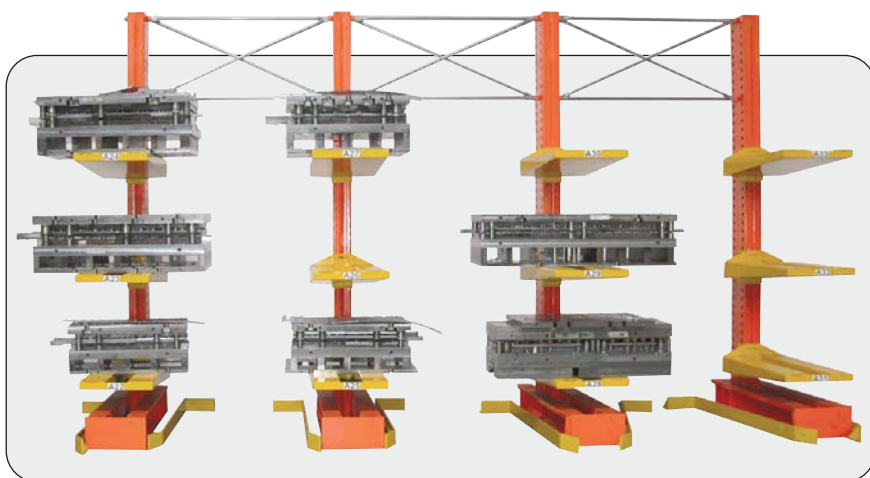
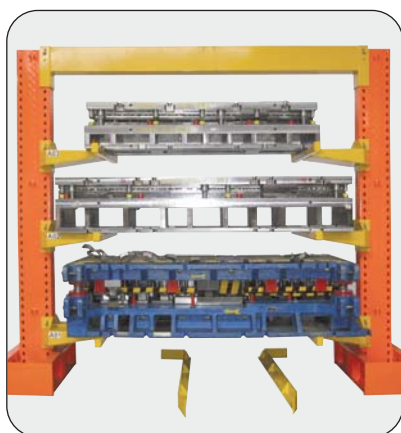
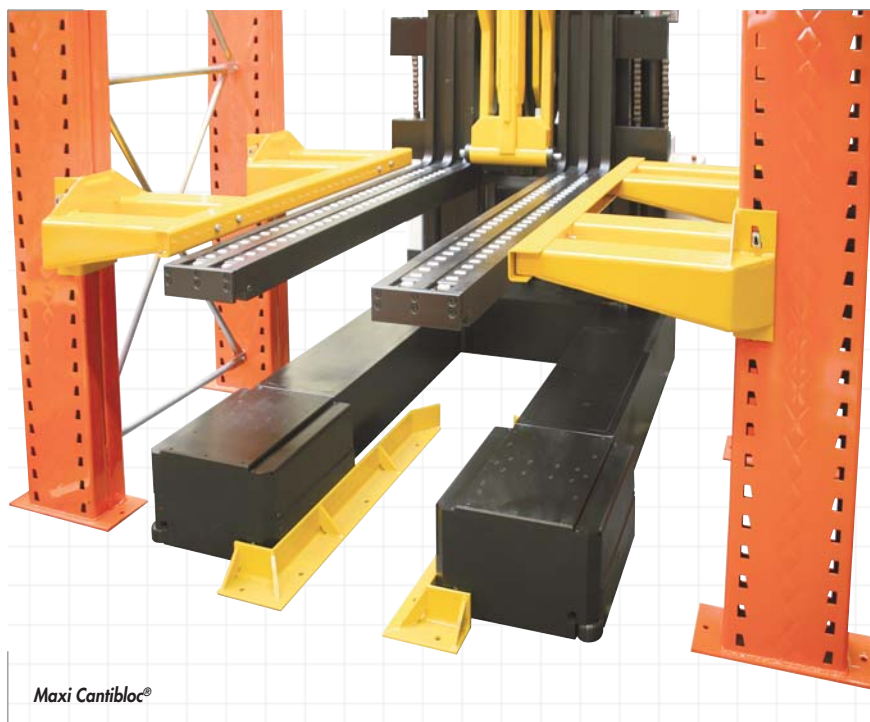
BENEFITS OF THE SOLUTION

Cantibloc® racks' cantilever design means that they can be used to stack more tools over the same height:

- conventional 3-tool rack
- 4-tool Cantibloc® rack



Using the floor guides (VPLA) set in each bay, tools can be taken from the rack straight away with no position adjustment being required. The truck is positioned instantly in the same way each time a tool is taken up or put down.



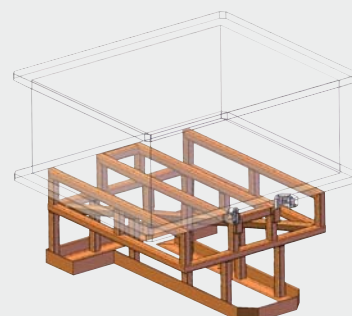
POSITIONING TABLE

During maintenance operations, tools are modified, dismantled and cleaned. They have to be repositioned before being used again.

In order to facilitate resumption of work after a tool has undergone maintenance, we can provide a positioning table, which repositions tools easily by means of pins.

This preparation table is also used to integrate new tools or little used tools into the tool flow.

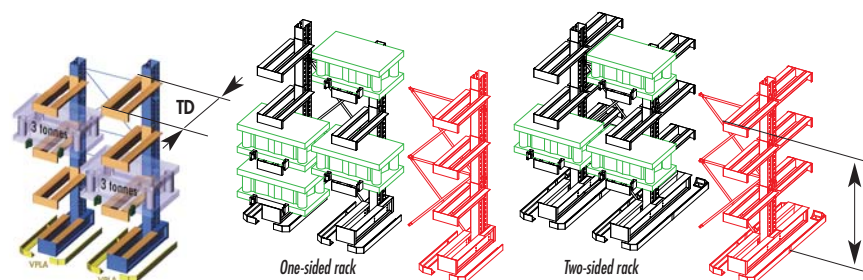
If the preparation table is not loaded using an overhead crane, it can be integrated into a storage rack. It then becomes a specific position within the rack.



Cantibloc® range

MINI CANTIBLOC®

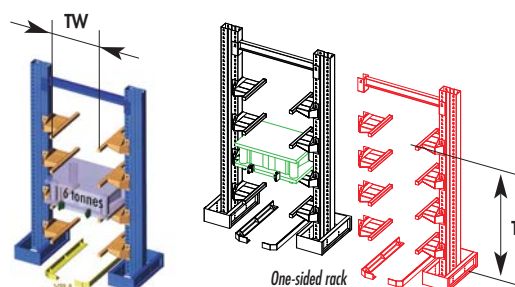
Maximum tool weight : 3000 kg



		Tools					Racks		
		Max weight kg	Tool Width (TW)		Tool Depth (TD)	Tool Height (TH)	T	Number of tools	
One-sided rack	MN CA SF 30 060-100 070	3000	Min mm	Max mm	Max mm	Max mm	mm	First bay	Additional bay
	MN CA SF 30 080-120 070	3000	600	1000	700	415	3030	10	5
Two-sided rack	MN CA DF 30 060-100 070	3000	600	1000	700	415	3030	10	5
	MN CA DF 30 080-120 070	3000	800	1200	700	415	3030	10	5

CANTIBLOC®

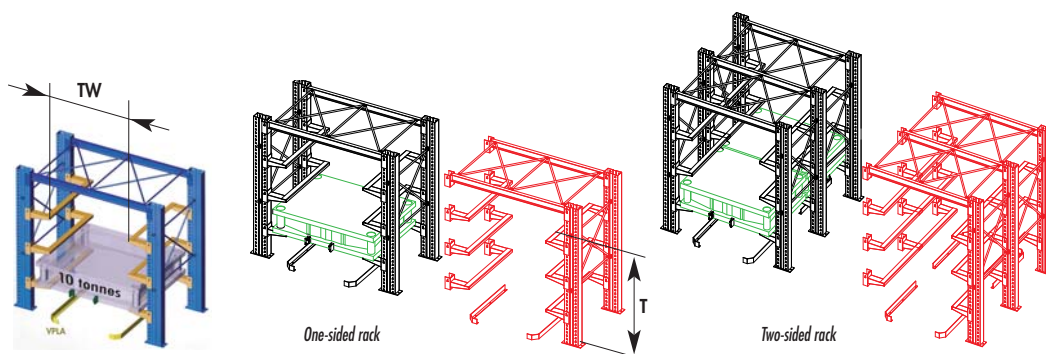
Maximum tool weight : 6000 kg



		Tools					Racks		
		Max weight kg	Tool Width (TW)		Tool Depth (TD)	Tool Height (TH)	T	Number of tools	
One-sided rack	CA SF 60 080-160	6000	Min mm	Max mm	Max mm	Max mm	mm	First bay	Additional bay
	CA SF 60 120-210	6000	800	1600	1200	400	2830	5	5
	CA SF 80 185-295	8000	1200	2100	1400	500	3230	-	-
	CA SF 80 185-295	8000	1850	2950	1600	500	3390	5	5

MAXI CANTIBLOC®

Maximum tool weight : 12500 kg



		Tools					Racks		
		Max weight kg	Tool Width (TW)		Tool Depth (TD)	Tool Height (TH)	T	Number of tools	
One-sided rack	MA CA SF 125 185-265	10 000	Min mm	Max mm	Max mm	Max mm	mm	First bay	Additional bay
	MA CA SF 125 245-325	12 500	1850	2650	1500	400	2500	5	5
	MA CA SF 125 305-385	12 500	2450	3250	1600	500	2860	5	5
Two-sided rack	MA CA SF 100 185-265	10 000	1850	2650	1500	400	2500	10	10
	MA CA SF 125 245-325	12 500	2450	3250	1600	500	2860	10	10
	MA CA SF 125 305-385	12 500	3050	3850	1600	500	2860	10	10

A MULTI-PURPOSE SOLUTION FOR TOOLS AND P

Pallmatic®

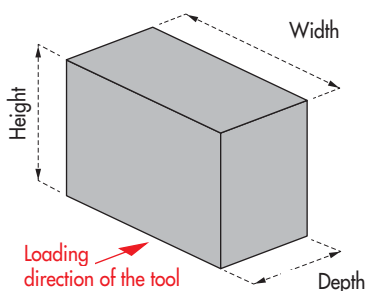
**One single truck
for loading and unloading
your tools and pallets.**

BENEFITS OF THE SOLUTION :

The Pallmatic® combines a push-pull system with standard forks and is able to load and unload tools while retaining its pallet-stacking function.

The tool changeover process is the same as with a Stackmatic®; the Pallmatic® is compatible with Cantibloc® racks.

Pallmatic® forks have a Euro-pallet centre distance, and this model is intended for use with tools whose width does not exceed 1 000 mm.



	Tool			Forks		Push-pull unit		Fork height		
	Max weight kg	Tool Width (TW) mm	Max Tool Depth (TD) Max mm	Type	Centre distance (E) Mini-Maxi	Type	Max travel mm	Mini mm without BID	Max., mm - Mast	
PALL 10.1200	1000			Flat forks	BAE	1500	85	1600	3000	4000
PALL 15.1200	1500	1000	1200							
PALL 20.1200	2000									

Product : 1 800-kg capacity Pallmatic®



3 in 1 solution :
- Pallet handling
- Tool changeover
- Tool storage

TECHNICAL DATA

Tools

Maximum weight	1 800 kg
Maximum width/depth	900 x 600 mm

Truck

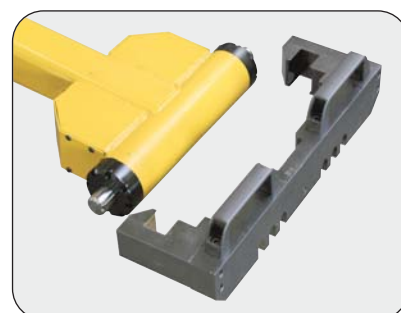
Reference	PAL18.1200
Operation	pedestrian
Lowering height	2 500 mm
Push-pull unit	push-pull arm
Tool taken from rack	by stacking
Rolling element inside press table required	no



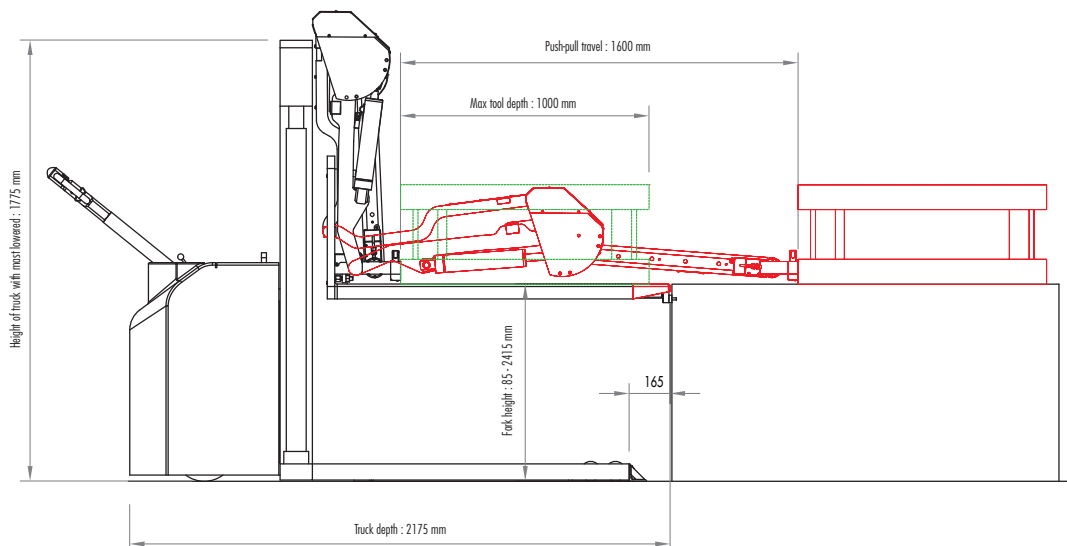
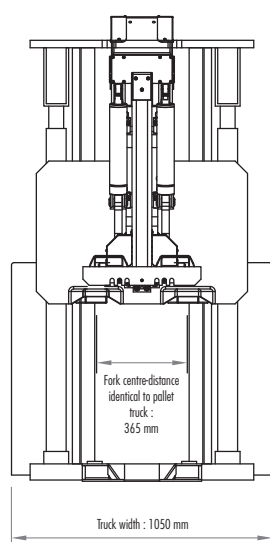
The truck retains its pallet stacking function



BAE push-pull unit



Removable CH tool hook



SOLUTION FOR TOOLS UP TO 2 TONNES

Liftmatic®

**Ideal solution
for loading and unloading
small tools weighing
up to 2 tonnes.**

EFFORTLESS WORK :

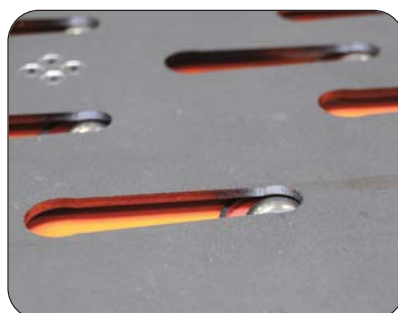
While the press is being loaded, the tool rests on balls and is moved effortlessly.
The balls are activated/deactivated by a hydraulic cylinder controlled from the operator's position.

SAFETY :

While the tool is being moved, the balls are deactivated, the tool rests on the flat plate. The truck can only move if the balls are deactivated.
The operator uses a hooking bar attached to the press bed to position the truck easily.



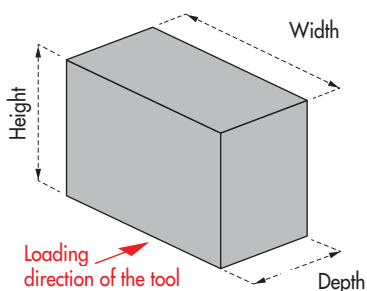
Active balls mean that the tool can be shifted easily



Inactive balls mean that the tool can be moved safely



Hooking bar attached to the press enabling the plate to be levelled easily



	Tool			Plate		Push-pull unit		Plate height	
	Max. weight kg	Max. Tool Width (TW) mm	Max. Tool Depth (TD) mm	Type	Width (E) mm	Type	Max travel mm	Mini mm	Maxi mm 1-stage most
LIFT E10 - 550	1000	1250	550	AQB	860	BAB Option	715	150	1600
LIFT E10 - 650	1000		650	AQB	860		1000		
LIFT E10 - 800	1000		800	AQB	860		1000		
LIFT E20 - 550	2000		550	AQR	860		715		
LIFT E20 - 650	2000		650	AQR	860		1000		
LIFT E20 - 800	2000		800	AQR	1060		1000		

FREUDENBERG, KOYO,
SERMETA GIANNONI, WEST PHARMACEUTICAL

Product : LIFT E10 900

LIFTMATIC®
electric, pedestrian,
1-stage mast



TECHNICAL DATA

Tool

Max. weight	1 000 kg
Maximum width/depth	500 x 1 000 mm

Truck

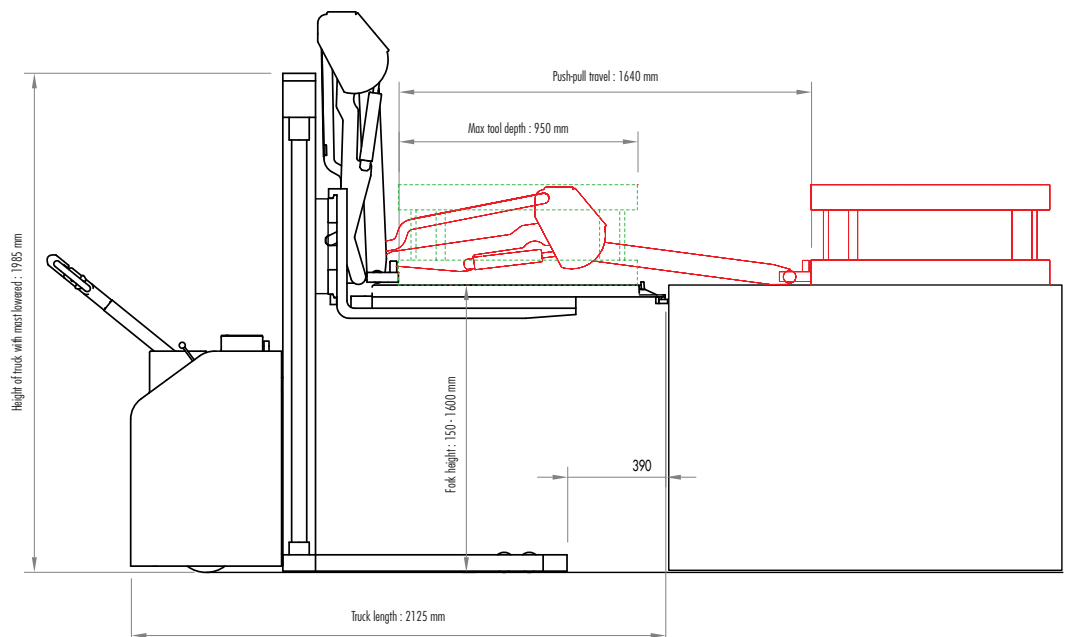
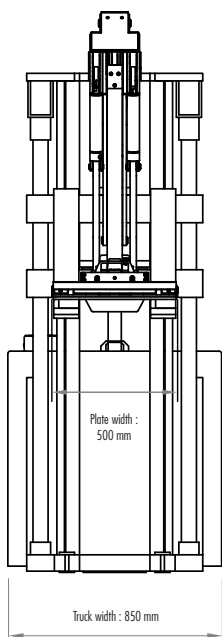
Reference	LIFT E10 900
Operation	sit-on
Plate height	1 600 mm
Push-pull unit	push-pull arm
Tool taken from rack	by pushing/pulling
Rolling element inside press table required	no



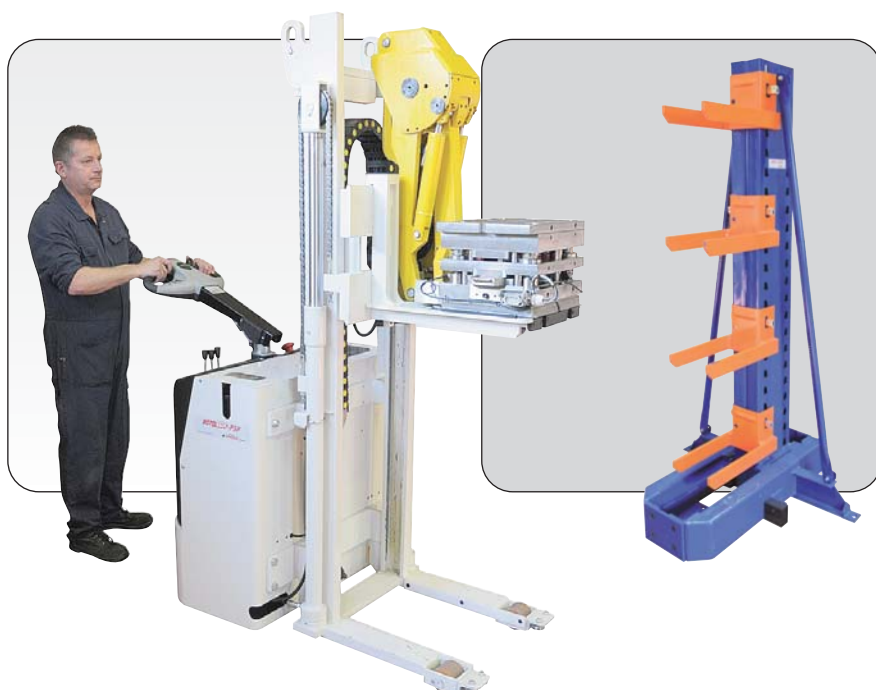
Control box



Hand operated bayonets



OUR EXPERIENCE AT YOUR SERVICE



**Truck for loading
aluminium foundry moulds**

TECHNICAL DATA

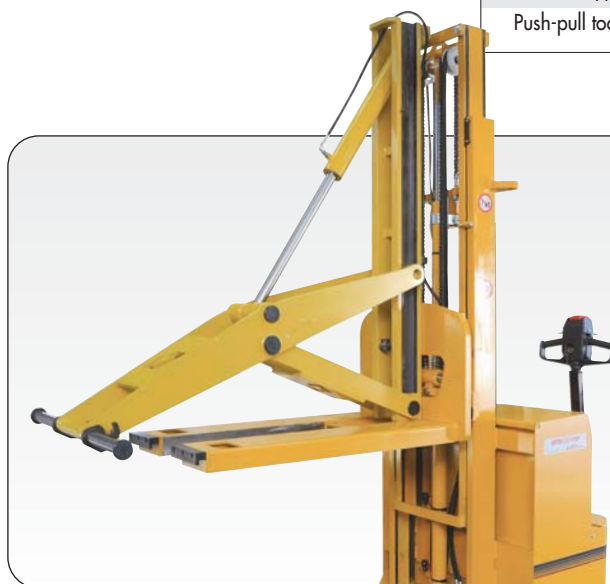
Tool

Maximum weight	5 000 kg
Tool depth	3 150 mm

Truck

Reference	LEVELMATIC 50.2400
Operation	sit-on
Plate height	730 - 845 mm
Push-pull tool loading	2 660 mm travel

**Basic truck with push-pull
unit. Forks side shift
movement allow easy
positioning without
floor guide.**



TECHNICAL DATA

Tool

Maximum weight	800 kg
Maximum width/depths	1000 x 700 mm

Truck

Reference	PALL 08.700
Driver	Pedestrian
Plate height	80 - 3110 mm
Push-pull tool loading	1000 mm travel
Forks	Flat forks
Tools hooking	Manual HE10

Options

Side shift forks	±/50 mm
------------------	---------





MULTIMATIC® electric, fitted with a rotating plate

**Changing
a tool - simplicity itself !
Rotating-plate table,
with retractable rollers.
Minimum footprint.
Maximum manoeuvrability.**

TECHNICAL DATA	
Tool	
Maximum weight	2 x 400 kg
Maximum width/depth	1 000 x 575 mm
Truck	
Reference	MULTIMATIC E2x400R
Operation	pedestrian
Truck movement	electric
Lowering height	800 - 1400 mm
Plate rotation	180°

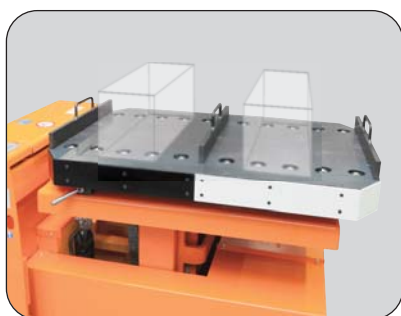


Plate for 2 tools with retractable rollers



180° rotating plate



Minimum footprint and with push-pull table

TECHNICAL DATA	
Tool	
Maximum weight	500 kg
Maximum width/depth	800 x 850 mm
Truck	
Reference	MULTIMATIC EP 1000
Driver	pedestrian
Truck movement	electric
Lowering height	880 - 1480 mm
Push-pull tool loading	925 mm travel



Compact construction for use in small workshops



OUR EXPERIENCE AT YOUR SERVICE

Solution for changeover and storage of extremely deep tools !

TECHNICAL DATA

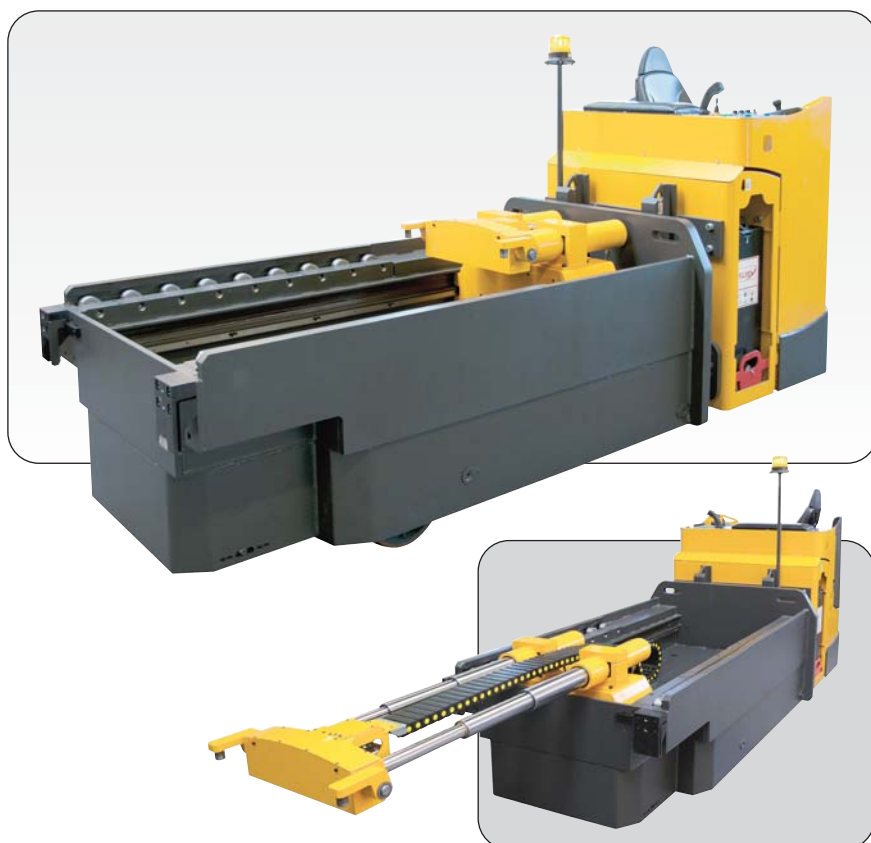
Tool	
Maximum weight	8 000 kg
Maximum width/depth	1 000 x 2 500 mm
Truck	
Reference	LEVELMATIC 80.2500
Operation	stand-on
Lowering height	700 - 1500 mm
Loading push-pull tool	2 500 mm travel



Truck for loading aluminium foundry moulds

TECHNICAL DATA

Tool	
Maximum weight	5 000 kg
Tool depth	3 150 mm
Truck	
Reference	LEVELMATIC 50.2400
Operation	sit-on
Plate height	730 - 845 mm
Push-pull tool loading	2 660 mm travel



Double push-pull system: motorised cross member + telescopic hydraulic cylinders

Plastic injection mould handling system.



TECHNICAL DATA

Tool

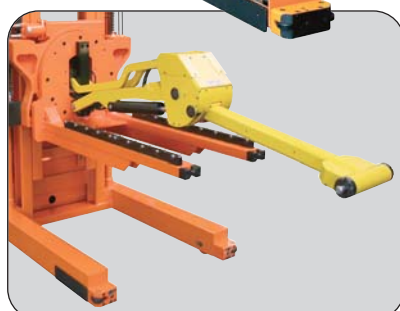
Maximum weight	8 000 kg
Maximum width/depth	1 000 x 2 500 mm

Truck

Reference	LEVELMATIC 80.2500
Operation	stand-on
Lowering height	700 - 1 500 mm
Loading push-pull tool	2 500 mm travel



The truck may be used to load each food-pack thermoforming mould half.



Truck fitted with a rotating apron (180° swing)



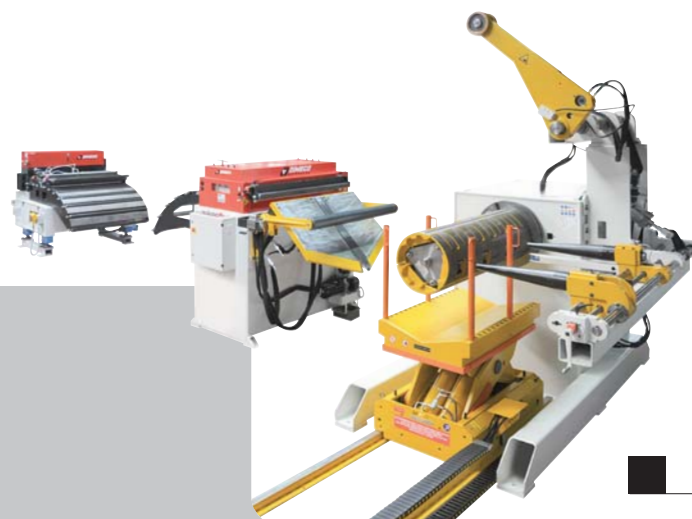
TECHNICAL DATA

Tool

Maximum weight	2 000 kg
Tool depths	1 050 mm

Truck

Reference	TURNMATIC 20.1050
Operation	stand-on
0° plate height	350 - 2 800 mm
Push-pull tool loading	1 500 mm travel
Truck movement	electric



**Press shop
automation**

**Cut-to-length and
slitting lines**



**Handling
and storage
coils**



**Equipment
for press
environment**



2, rue du chêne - Z.I. la Louvière - 25480 PIREY - FRANCE

Tél. +33 (0)3 81 48 38 00

Fax +33 (0)3 81 48 38 28

contact@dimeco.com www.dimeco.com